

Interchange Tags Reference

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1. Interchange Tag Reference

Interchange functions are accessed via the Interchange Tag Language (ITL). The pages in a catalog may be mostly HTML, but they will use ITL tags to provide access to Interchange's functions. ITL is a superset of MML, or Minivend Markup Language. Minivend was the predecessor to Interchange.

These tags perform various display and modification operations for the user session. There nearly 100 standard predefined tags, and the `UserTag` facility allows you to create tags that perform your own functions and can be just as powerful as the built-in tags.

This document covers Interchange versions 4.7 through 4.9.

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2. Tag Syntax

ITL tags are similar to HTML in syntax, in that they accept parameters or attributes and that there are both *standalone* and *container* tags.

We will call an attribute a *parameter* if it may be called positionally or if it must be included (see the [parameter](#) and [attribute](#) sections below).

A standalone tag has no ending element, e.g.:

```
[value name]
```

This tag will insert the user's name, providing they have given it to you in a form. A container tag has both a beginning and an ending element, as in:

```
[if value name]  
You have a name. It is [value name].  
[/if]
```

2.1. Standard Syntax

The most common syntax is to enclose the tag with its parameters and attributes in [square brackets]. If the tag has an end tag, the tag and its end tag will delimit contained body text:

```
[tagname parameters attributes]Contained Body Text[/tagname]
```

Caveat — macros: Some macros look like tags or end tags. For example, [/page] is a macro for . This allows you to conveniently write [page href]Target[/page], but 'Target' is not treated as contained body text.

When using the [tagname ...] syntax, there must be no whitespace between the left bracket ('[') and the tagname.

If a tag name includes an underscore or dash, as in [item list], a dash is just as appropriate (i.e. [item-list]). The two forms are interchangeable, except that an ending tag must match the tag (i.e., don't use [item-list] list [/item_list]).

2.2. HTML–Comment

ITL also allows you to use '<!--[' and ']'-->' as interchangeable alternatives to plain square brackets: [tagname] and <!--[tagname]--> are equivalent.

This allows you make your raw tags appear as comments to HTML browsers or editors. You might want to do this if your editor has trouble with ITL tags when editing Interchange page templates, or alternatively, if you want to use one .html file both as an Interchange template and as a static page delivered directly by your web server, without Interchange processing.

To properly HTML–comment contained body text, place your comment–style brackets appropriately, for example:

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```
<!--[tagname] Contained Body Text [/tagname]-->
```

Note that you must include whitespace between the HTML comment delimiters and the square brackets if you wish to actually comment out tag output in the browser. For example, if `[value name]` expands to 'Bill':

```
'<!--[value name]-->' becomes 'Bill'
'<!-- [value name] -->' becomes '<!-- Bill -->'
```

2.2.1. Technical notes

While `'<!--['` and `'['` are completely interchangeable, the Interchange parser does not replace `']-->'` with `']'` unless it also sees `'<!--['` at least once somewhere on the page. (This is a small parsing speed optimization.)

See the [Template Parsing Order](#) appendix if you are modifying the special administrative interface pages and intend to use this syntax.

2.3. Named vs. Positional Parameters

There are two styles of supplying parameters to a tag: named and positional.

In the named style you supply a parameter name=value pair just as most HTML tags use:

```
[value name="foo"]
```

The positional-style tag that accomplishes the same thing looks like this:

```
[value foo]
```

The parameter name is the first positional parameter for the `[value]` tag. Some people find positional usage simpler for common tags, and Interchange interprets them somewhat faster. If you wish to avoid ambiguity you can always use named calling.

In most cases, tag parameters specified in the positional fashion work the same as named parameters. However, there are a few situations where you need to use named parameters:

1. If you want to specify a parameter that comes positionally after a parameter that you want to omit, e.g. omit the first parameter but specify the second. The parser would have no way of knowing which is which, so you just specify the second by name. This is rare, though, because the first positional parameters are usually required for a given tag anyway.
2. When there is some ambiguity as to which parameter is which, usually due to whitespace.
3. When you need to use the output of a tag as the parameter or attribute for another tag.

2.3.1. Interpolating parameters

If you wish to use the value of a tag within a parameter of another tag, you cannot use a positional call. You must also double-quote the argument containing the tag you wish to have expanded. For example, this will not work:

```
[page scan se=[scratch somevar]]
```

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To get the output of the `[scratch somevar]` interpreted, you must place it within a named and quoted attribute:

```
[page href=scan arg="se=[scratch somevar]"]
```

Note that the argument to **href** ('scan') did not need to be quoted; only the argument to **arg**, which contained a tag, needed the quotes.

2.4. Universal Attributes

Universal attributes apply to all tags, though each tag specifies its own default for the attribute. The code implementing universal attributes is external to the core routines that implement specific tags.

2.4.1. interpolate

This attribute behaves differently depending upon whether the tag is a *container* or *standalone* tag. A container tag is one which has an end tag, i.e. `[tag] stuff [/tag]`. A standalone tag has no end tag, as in `[area href=somepage]`. (Note that `[page ...]` and `[order ..]` are **not** container tags.)

For container tags (interpolated)

- If true ("interpolate=1"), the Interchange server will first process any tags within the body text before passing it to the enclosing tag.
- If false ("interpolate=0"), the enclosing tag will receive the raw body text.

For standalone tags (reparsed)

- If true, the server will process the *output* of the tag. This is identical to the behavior of the reparse attribute (see below for explanation and examples).

(Note: The mixing of 'interpolate' and 'reparse' logic occurred because 'interpolate' already worked this way when 'reparse' was added to Interchange. This may be fixed in a later release...)

Most standalone tags are not reparsed by default (i.e., interpolate=0 by default). There are some exceptions, such as the include tag.

Interpolation example:

Assuming that name is 'Kilroy',

```
[log interpolate=1][value name] was here[/log]
[log interpolate=0][value name] was here[/log]
```

the first line logs 'Kilroy was here' to *catalog_root/etc/log*, while the second logs '[value name] was here'.

Reparsing example:

Suppose we set a scratch variable called 'now' as follows:

```
[set name=now interpolate=0][time]%A, %B %d, %Y[/time][set]
```

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If today is Monday, January 1, 2001,

```
[scratch name=now interpolate=0]
[scratch name=now interpolate=1]
```

the first line yields

```
[time]%A, %B %d, %Y[/time]
```

while the second yields

```
Monday, January 1, 2001
```

2.4.2. reparse

If true ("reparse=1"), the server will process any tags in the text output by the reparsed tag.

Reparse applies only to container tags (those with an end tag). The `interpolate` attribute controls reparsing of the output of standalone tags (see above).

Most container tags will have their output re-parsed for more Interchange tags by default. If you wish to inhibit this behavior, you must explicitly set the attribute **reparse** to 0. Note that you will almost always want the default action. The only container ITL tag that doesn't have `reparse` set by default is [mvasp].

Example:

Assuming that name is 'Kilroy',

```
1.  [perl reparse=0]
    my $tagname = 'value';
    return "[$tagname name] was here\n"
[/perl]

2.  [perl reparse=1]
    my $tagname = 'value';
    return "[$tagname name] was here\n"
[/perl]
```

expands to

```
1.  [value name] was here

2.  Kilroy was here
```

2.4.3. send

Deprecated

2.5. Tag-specific Attributes

Each tag may accept additional named attributes which vary from tag to tag. Please see the entry for the tag in question for details about tag-specific attributes.

2.6. Attribute Arrays and Hashes

Some tags allow you to pass an array or hash as the value of an attribute. For an ordinary tag, the syntax is as follows:

```
attribute.n=value

attribute.hashkey=value
```

where *n* is an integer array index. Note that you cannot use both an array and a hash with the same attribute — if you use **attribute.*n***, you cannot also use **attribute.key** for the same attribute.

Here is an example of an attribute array:

```
search.0="se=hammer
        fi=products
        sf=description"
search.1="se=plutonium
        fi=products
        sf=comment "
```

The `[page]` tag, for example, treats a search specification array as a joined search, automatically adding the other relevant search fields, including the 'co=yes' to indicate a combined search ([joined searches](#) are described in the Interchange database documentation).

Note that it is up to the tag to handle an array or hash value properly. See the documentation for the specific tag before passing it an attribute array or hash value.

2.6.1. Perl calls

Before passing attributes to a tag, the Interchange parser would convert the above example to an anonymous array reference. It would use the resulting arrayref as the value for the 'search' attribute in this example.

If you were passing the above example directly to a tag routine within a `[perl]` block or a `usertag`, you must actually pass an anonymous array as the value of the attribute as follows:

```
my $arrayref = [ "se=hammer/fi=products/sf=description",
                 "se=plutonium/fi=products/sf=description", ];

$Tag->routine( { search => $arrayref, } );
```

Similarly to use a hash reference for the 'entry' attribute:

```
my $hashref = { name    => "required",
                 date    => 'default="%B %d, %Y"', };

$Tag->routine( { entry => $hashref } );
```


3. Looping tags and Sub-tags

Certain tags are not standalone; these are the ones that are interpreted as part of a surrounding looping tag like `[loop]`, `[item-list]`, `[query]`, or `[search-region]`.

`[PREFIX-accessories]`
`[PREFIX-alternate]`
`[PREFIX-calc]`
`[PREFIX-change]`
`[PREFIX-code]`
`[PREFIX-data]`
`[PREFIX-description]` (Note `safe-data` and `ed()` escape)
`[PREFIX-discount]`
`[PREFIX-discount-subtotal]`
`[PREFIX-field]` (Optimization note— one query per field if you use this; we optimize around this if only one products table)
`[PREFIX-increment]`
`[PREFIX-last]`
`[PREFIX-line]` (tab-delimited list of parameters returned)
`[PREFIX-modifier]`
`[PREFIX-next]`
`[PREFIX-param]`
`[PREFIX-pos]`
`[PREFIX-price]`
`[PREFIX-quantity]`
`[PREFIX-subtotal]`
`[if-PREFIX-data]`
`[if-PREFIX-field]`
`[if-PREFIX-param]`
`[if-PREFIX-pos]`
`[modifier-name]`
`[quantity-name]`

PREFIX represents the prefix that is used in that looping tag. They are only interpreted within their container and only accept positional parameters. The default prefixes:

<i>Tag</i>	<i>Prefix</i>	<i>Examples</i>
<code>[loop]</code>	loop	<code>[loop-code]</code> , <code>[loop-field price]</code> , <code>[loop-increment]</code>
<code>[item-list]</code>	item	<code>[item-code]</code> , <code>[item-field price]</code> , <code>[item-increment]</code>
<code>[search-list]</code>	item	<code>[item-code]</code> , <code>[item-field price]</code> , <code>[item-increment]</code>
<code>[query]</code>	sql	<code>[sql-code]</code> , <code>[sql-field price]</code> , <code>[sql-increment]</code>

Sub-tag behavior is consistent among the looping tags. Subtags are parsed during evaluation of the enclosing loop, *before* any regular tags within the loop.

There are two types of looping lists: ARRAY and HASH.

An array list is the normal output of a `[query]`, a search, or a `[loop]` tag. It returns from 1 to N return fields, defined in the `mv_return_fields` or `rf` variable or implicitly by means of a SQL field list. The

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two queries below are essentially identical:

```
[query sql="select foo, bar from products"]
[/query]

[loop search="
    ra=yes
    fi=products
    rf=foo,bar
"]
```

Both will return an array of arrays consisting of the `foo` column and the `bar` column. The Perl data structure would look like:

```
[
  ['foo0', 'bar0'],
  ['foo1', 'bar1'],
  ['foo2', 'bar2'],
  ['fooN', 'barN'],
]
```

A hash list is the normal output of the `[item-list]` tag. It returns the value of all return fields in an array of hashes. A normal `[item-list]` return might look like:

```
[
  {
    code      => '99-102',
    quantity => 1,
    size      => 'XL',
    color     => 'blue',
    mv_ib     => 'products',
  },
  {
    code      => '00-341',
    quantity => 2,
    size      => undef,
    color     => undef,
    mv_ib     => 'products',
  },
]
```

You can also return hash lists in queries:

```
[query sql="select foo, bar from products" type=hashref]
[/query]
```

Now the data structure will look like:

```
[
  { foo => 'foo0', bar => 'bar0' },
  { foo => 'foo1', bar => 'bar1' },
  { foo => 'foo2', bar => 'bar2' },
  { foo => 'fooN', bar => 'barN' },
]
```


3.1. PREFIX-accessories

```
[PREFIX-accessories arglist]
```

Except for the usual differences that apply to all subtags (such as parsing order), these are more or less equivalent for an array-type list:

```
[accessories code=current_item_code arg=arglist]
[item-accessories arglist]
```

See the [\[accessories\]](#) tag for more detail. Note that you must use the comma-delimited list to set attributes -- you cannot set named attributes with the usual 'attribute=value' syntax.

If the list is a hash list, i.e. an [\[item-list\]](#), then the value of the current item hash is passed so that a value default can be established.

3.2. PREFIX-alternate

```
[PREFIX-alternate N] DIVISIBLE [else] NOT DIVISIBLE [/else][PREFIX-alternate]
```

Set up an alternation sequence. If the item-increment is divisible by 'N', the text will be displayed. If an '[else]NOT DIVISIBLE TEXT[/else]' is present, then the NOT DIVISIBLE TEXT will be displayed.

For example:

```
[item-alternate 2]EVEN[else]ODD[/else][item-alternate]
[item-alternate 3]BY 3[else]NOT by 3[/else][item-alternate]
```

There are some additional primitives:

<i>Tag</i>	<i>Description</i>
[item-alternate first_only]	Only true on first item
[item-alternate last_only]	Only true on last item
[item-alternate except_last]	True except on last item
[item-alternate except_first]	True except on first item
[item-alternate 0]	Same as "first_only"
[item-alternate -1]	Same as "except_last"

In the common case where you want to separate by a comma or other joiner:

```
You have the following items:
[item-list]
    [item-code][item-alternate except_last], [/item-alternate]
[/item-list]
```

3.3. PREFIX-calc

```
[PREFIX-calc] 2 + [item-field price] [/PREFIX-calc]
```

Executes Perl code in the tag body. This is equivalent to the `[calc] ... [/calc]` tag pair, except it's calculated at loop time instead of later when the rest of the page is parsed.

3.4. PREFIX-change

[PREFIX-change][condition] ... [/condition] TEXT [/PREFIX-change]

Sets up a breaking sequence that occurs when the contents of [condition] [/condition] change. The most common one is a category break to nest or place headers.

The region is only output when a field or other repeating value between [condition] and [/condition] changes its value. This allows indented lists similar to database reports to be easily formatted. The repeating value must be a tag interpolated in the search process, such as [PREFIX-field] or [PREFIX-field database field]. If you need access to ITL tags, you can use [PREFIX-calc] with a \$Tag-foo()> call.

Of course, this will only work as you expect when the search results are properly sorted.

The value to be tested is contained within a `[condition]value[/condition]` tag pair. The `[PREFIX-change]` tag also processes an `[else] [/else]` pair for output when the value does not change.

Here is a simple example for a search list that has a field `category` and `subcategory` associated with each item:

```
<TABLE>
<TR><TH>Category</TH><TH>Subcategory</TH><TH>Product</TH></TR>
[search-list]
<TR>
  <TD>
    [item-change cat]

    [condition][item-field category][!condition]

    [item-field category]
  [else]
    &nbsp;
  [/else]
[/item-change cat]
</TD>
  <TD>
    [item-change sub]

    [condition][item-field subcategory][!condition]

    [item-field subcategory]
  [else]
    &nbsp;
  [/else]
[/item-change sub]
</TD>
</TR>
</TABLE>
```

```
<TD> [item-field name] </TD>
[/search-list]
</TABLE>
```

The above should put out a table that only shows the category and subcategory once, while showing the name for every product. (The ` ` will prevent blanked table cells if you use a border.)

3.5. PREFIX-code

```
[PREFIX-code]
```

The key or code of the current loop. In an `[item-list]` this is always the product code; in a loop list it is the value of the current argument; in a search it is whatever you have defined as the first `mv_return_field` (rf).

3.6. PREFIX-data

```
[PREFIX-data table field]
```

Calls the column `field` in database table `table` for the current `[PREFIX-code]`. This may or may not be equivalent to `[PREFIX-field field]` depending upon whether your search table is defined as one of the `ProductFiles`.

3.7. PREFIX-description

```
[PREFIX-description]
```

The description of the current item, as defined in the `catalog.cfg` directive `DescriptionField`. In the demo, it would be the value of the field `description` in the table `products`.

If the list is a hash list, and the lookup of `DescriptionField` fails, then the attribute `description` will be substituted. This is useful to supply shopping cart descriptions for on-the-fly items.

3.8. PREFIX-discount

```
[PREFIX-discount]
```

The price of the current item is calculated, and the difference between that price and the list price (quantity one) price is output. This may have different behavior than you expect if you set the `[discount]` tag along with quantity pricing.

3.9. PREFIX-discount-subtotal

```
[PREFIX-discount-subtotal]
```

Inserts the discounted subtotal of the ordered items.

3.10. PREFIX-field

```
[PREFIX-field]
```

Looks up a field value for the current item in one of several places, in this order:

1. The first ProductFiles entry.
2. Additional ProductFiles in the order they occur.
3. The attribute value for the item in a hash list.
4. Blank

A common user error is to do this:

```
[loop search="
    fi=foo
    se=bar
"]

[loop-field foo_field]
[/loop]
```

In this case, you are searching the table `foo` for a string of `bar`. When it is found, you wish to display the value of `foo_field`. Unless `foo` is in ProductFiles and the code is not present in a previous product file, you will get a blank or some value you don't want. What you really want is `[loop-data foo field]`, which specifically addresses the table `foo`. See also [PREFIX-param] and [PREFIX-pos].

3.11. PREFIX-increment

```
[PREFIX-increment]
```

The current count on the list, starting from either 1 in a zero-anchored list like [loop] or [item-list], or from the match count in a search list.

If you skip items with [PREFIX-last] or [PREFIX-next], the count is NOT adjusted.

3.12. PREFIX-last

```
[PREFIX-last] CONDITION [/PREFIX-last]
```

If `CONDITION` evaluates true (a non-whitespace value that is not specifically zero) then this will be the last item displayed.

3.13. PREFIX-line

```
[PREFIX-line start_column]
```

Returns all array values from the current looping row in a single string, with each value separated by a tab, roughly equivalent to this:

```
[PREFIX-pos 0](tab)[PREFIX-pos 1](tab)[PREFIX-pos 2](tab)[...]
```

for however many fields were returned in that row.

This is useful as a quick way to see all your results at a glance and verify your search specification.

If the optional `start_column` attribute is given, the output starts with that column instead of column 0.

3.14. PREFIX-modifier

```
[PREFIX-modifier attribute]
```

If the item is a hash list (i.e. `[item-list]`), this will return the value of the attribute.

3.15. PREFIX-next

```
[PREFIX-next] CONDITION [/PREFIX-next]
```

If `CONDITION` evaluates true (a non-whitespace value that is not specifically zero) then this item is skipped.

3.16. PREFIX-param

```
[PREFIX-param name]
```

Returns the value of the column name associated with the looping tag row. Each looping list returns an array of `return fields`, set in searches with `mv_return_field` or `rf`. The default is only to return the code of the search result, but by setting those parameters you can return whichever columns you wish.

In a `[query]` ITL tag you can select multiple return fields with something like:

```
[query prefix=prefix sql="select foo, bar from baz where foo='buz'"]  
  [prefix-code] [prefix-param foo] [prefix-param bar]  
[/query]
```

In this case, `[prefix-code]` and `[prefix-param foo]` are synonyms, as `foo` is the first returned parameter and becomes the code for this row. Another synonym is `[prefix-pos 0]`.

Mixed case field names in your SQL tables will be forced to lower case in the `[prefix-param name]` tag if the underlying Database does that (as with most SQL types). For example if your query is

```
[query prefix=prefix sql="select Foo, Bar from baz where Foo='buz'"]
```

then you must use:

```
[prefix-param foo] and [prefix-param bar]
```

to display your results, rather than:

```
[prefix-param Foo] and [prefix-param Bar]
```

Note that the following code is invalid:

```
[query prefix=prefix sql=|
```

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```
SELECT  table1.foo,
        table2.bar
FROM    table1, table2
WHERE   table1.code = table2.code
AND     table1.foo = 'buz'
|]
[prefix-param table1.foo] [prefix-param table2.bar]
[/query]
```

The problem with the above code is that DBI doesn't support column names such as `table1.foo` in its resultsets. The following query syntax is fully supported by DBI and therefore by Interchange:

```
[query prefix=prefix sql=|
  SELECT  table1.foo AS foo,
          table2.bar AS bar
  FROM    table1, table2
  WHERE   table1.code = table2.code
  AND     table1.foo = 'buz'
|]
[prefix-param foo] [prefix-param bar]
[/query]
```

3.17. PREFIX-pos

[PREFIX-pos N]

Returns the value of the array parameter associated with the looping tag row. Each looping list returns an array of `return fields`, set in searches with `mv_return_field` or `rf`. The default is only to return the code of the search result, but by setting those parameters you can return whichever columns you wish.

[PREFIX-pos N] outputs the data from the *N*th column as returned (starting with zero). [PREFIX-param] lets you access the data by column name instead of by number.

In a [query ...] ITL tag you can select multiple return fields with something like:

```
[query prefix=prefix sql="select foo, bar from baz where foo='buz'"]
  [prefix-code] [prefix-param foo] [prefix-param bar]
[/query]
```

In this case, [prefix-code] and [prefix-param foo] are synonyms, as `foo` is the first returned parameter and becomes the code for this row. Another synonym is [`prefix-pos 0`]. [`prefix-pos 1`] is the same as [prefix-param bar]. The following code will produce exactly the same output as the above:

```
[query prefix=prefix sql="select foo, bar from baz where foo='buz'"]
  [prefix-pos 0] [prefix-pos 0] [prefix-pos 1]
[/query]
```

Note that if you use the [PREFIX-pos] tag, you may have to review your column numbers whenever you modify the columns you select. For this reason, queries that make use of the [PREFIX-param] tag may be easier to maintain and will be less prone to future surprises.

3.18. PREFIX-price

[PREFIX-price]

The price of the product identified by the current code, formatted for currency. If Interchange's pricing routines cannot determine the price (i.e. it is not a valid product or on-the-fly item) then zero is returned. If the list is a hash list, the price will be modified by its `quantity` or other applicable attributes (like `size` in the demo).

3.19. PREFIX-quantity

```
[PREFIX-quantity]
```

The value of the `quantity` attribute in a hash list. Most commonly used to display the quantity of an item in a shopping cart [[item-list](#)].

3.20. PREFIX-subtotal

```
[PREFIX-subtotal]
```

The [[PREFIX-quantity](#)] times the [[PREFIX-price](#)]. This does take discounts into account.

3.21. if-PREFIX-data

```
[if-PREFIX-data table field] IF text [else] ELSE text [/else] [/if-PREFIX-data]
```

Examines the data field, i.e. [[PREFIX-data table field](#)], and if it is non-blank and non-zero then the IF text will be returned. If it is false, i.e. blank or zero, the ELSE text will be returned to the page.

This is much more efficient than the otherwise equivalent [`if type=data term=table::field::[PREFIX-code]`].

You cannot place a condition; i.e. [`if-PREFIX-data table field eq 'something'`]. Use [`if type=data ...`] for that.

Careful, a space is not a false value!

3.22. if-PREFIX-field

```
[if-PREFIX-field field] IF text [else] ELSE text [/else] [/if-PREFIX-field]
```

Same as [[if-PREFIX-data ...](#)] except uses the same data rules as [[PREFIX-field](#)].

3.23. PREFIX-modifier-name

```
[PREFIX-modifier-name attribute]
```

Outputs a variable name which will set an appropriate variable name for setting the attribute in a form (usually a shopping cart). Outputs for successive items in the list:

1. `attribute0`
2. `attribute1`
3. `attribute2`

etc.

[PREFIX-modifier-name quantity] would be the same as [PREFIX-quantity-name].

3.24. PREFIX-quantity-name

[item-quantity-name]

Outputs for successive items in the list:

1. quantity0
2. quantity1
3. quantity2

etc.

[PREFIX-modifier-name quantity] would be the same as [PREFIX-quantity-name].

4. Tags

Each ITL tag is show below. Calling information is defined for the main tag, sub-tags are described in [Looping tags and Sub-tags](#).

4.1. accessories

A Swiss-army-knife widget builder, this provides access to Interchange's product option attributes (e.g., to choose or access product options such as a shirt's size or color).

Can build selection objects (radio, check, select boxes, etc), forms or hyperlinks, or can simply return a value.

Or more -- see also [Looping tags and Sub-tags](#).

4.1.1. Summary

```
[accessories code arg]
[accessories code=os28044 arg="size, radio, ... " other_named_attributes] deprecated
[accessories code=os28044 attribute=size type=radio ... other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>code</u>	Value of the master key in the product (or specified other) table	<i>none</i>
<u>arg</u>	Positionally interpreted comma-delimited list of values for the following attributes: "attribute, type, column, table, name, outboard, passed"	<i>none</i>
<i>Attributes</i>		<i>Default</i>
<u>attribute</u>		<i>none</i>
<u>type</u>	One of select, value, text, textarea, hidden, password, combo, move_combo, reverse_combo, show, options, labels, checkbox, radio, links	select
<u>column</u>		<i>attribute</i>
<u>table</u>		products
<u>name</u>		mv_order_attribute
<u>outboard</u>		<i>none</i>
<u>passed</u>		<i>none</i>
<u>key</u> (alias for code)		<i>none</i>
<u>row</u> (alias for code)		<i>none</i>
<u>base</u> (alias for table)		products
<u>database</u> (alias for table)		products
<u>db</u> (alias for table)		products
<u>col</u> (alias for column)		<i>attribute</i>
<u>field</u> (alias for column)		<i>attribute</i>
<u>delimiter</u>		comma (',')
<u>prepend</u>		<i>none</i>

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<u>append</u>	<i>none</i>
<u>extra</u>	<i>none</i>
<u>js</u>	<i>none</i>
<u>rows</u>	<i>varies with type; often 4</i>
<u>cols</u>	<i>varies with type; often 40</i>
<u>width</u>	<i>none</i>
<u>default</u>	<i>none</i>
<u>price</u>	<i>none</i>
<u>price data</u>	<i>none</i>
<u>contains</u> (type=radio or check)	<i>none</i>
<u>joiner</u> (type=links)	<i>none</i>
<u>href</u> (type=links)	<i>none</i>
<u>template</u> (type=links)	<i>none</i>
<u>form</u> (type=links)	<i>mv_action=return</i>
<u>empty</u> (type=links)	<i>none</i>
<u>secure</u> (type=links)	<i>none</i>
<u>new</u>	<i>none</i>
<u>interpolate</u> (reparse)	<i>No</i>

<i>Other Characteristics</i>	
Invalidates cache	<i>No</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>

Tag expansion example:

```
[accessories os28044 size]
---
<SELECT NAME="mv_order_size"><OPTION VALUE="10oz">10oz\
<OPTION VALUE="15oz">15oz<OPTION VALUE="20oz">20oz</SELECT>
```

ASP-like Perl call:

```
$Tag->accessories( { code    => '[[EXAMPLE_SKU]]',
                    arg      => 'color, radio'
                    table    => 'special_products', } );
```

or similarly with positional parameters,

```
$Tag->accessories($code, $arg, $attribute_hash_reference);
```

4.1.1.1. See Also

Looping tags and Sub-tags.

4.1.2. Description

This is the swiss-army-knife widget builder for providing access to Interchange's product option attributes (e.g., to choose or access product options such as a shirt's size or color).

Interchange allows you to choose item attribute values for each ordered item — you can attach a size, color, or other modifier to a line item in the shopping cart. You can also resubmit previous attribute values via hidden fields on a form.

The `catalog.cfg` file directive *UseModifier* is used to set the name of the modifier or modifiers. For example

```
UseModifier          size color
```

will attach both a size and color attribute to each item code that is ordered.

Important Note — You may not use the following names for attributes:

item group quantity code mv_ib mv_mi mv_si

You can also set modifier names with the `mv_UseModifier` scratch variable — `[set mv_UseModifier] size color [/set]` has the same effect as above. This allows multiple options to be set for products. Whichever one is in effect at order time will be used. Be careful; you cannot set it more than once on the same page. Setting the `mv_separate_items` or global directive *SeparateItems* places each ordered item on a separate line, simplifying attribute handling. The scratch setting for `mv_separate_items` has the same effect.

The modifier value is accessed in the `[item-list]` loop with the `[item-param attribute]` tag, and form input fields are placed with the `[modifier-name attribute]` tag. This is similar to the way that quantity is handled.

Note: You must be sure that no fields in your forms have digits appended to their names if the variable is the same name as the attribute name you select, as the `[PREFIX-modifier-name size]` variables will be placed in the user session as the form variables `size0`, `size1`, `size2`, etc.

Interchange will automatically generate the select boxes when the `[accessories code="os28044" attribute="size"]` or `[item-accessories size]` tags are called. They have the syntax:

```
[item-accessories attribute, type, column, table, name, outboard, passed]

[accessories code=sku
  attribute=modifier
  type=select
  column=db_table_column_name
  table=db_table
  name=varname
  outboard=key
  passed="value=label, value2*, value3=label 3"]

[accessories js=| onChange="set_description(simple_options, variant)"; |
  type=select
  name="[item-param o_group]"
  passed="---choose--, [item-param o_value]" ]
```

Notes:

1. The 'attribute' attribute is required.
 2. See the type attribute for a list of types.
 3. The trailing '*' in value2 will mark it as the default ('SELECTED') value in the select widget (see below).
-

When called with an attribute, the database is consulted and looks for a comma-separated list of item attribute options. They take the form:

```
name_a=Label Text1, default_name=Default Label Text*, name_b, etc.
```

The label text is optional — if none is given, the **name** will be used (as in 'name_b' above).

If an asterisk is the last character of the label text, the item is the default selection. If no default is specified, the first will be the default. An example:

```
[item-accessories color]
```

This will search the product database for a field named "color". If an entry "beige=Almond, gold=Harvest Gold, White*, green=Avocado" is found, a select box like this will be built:

```
<SELECT NAME="mv_order_color">
<OPTION VALUE="beige">Almond
<OPTION VALUE="gold">Harvest Gold
<OPTION SELECTED>White
<OPTION VALUE="green">Avocado
</SELECT>
```

In combination with the `mv_order_item` and `mv_order_quantity` session variables, you can use this to allow a customer to enter an item attribute during an order.

If used in an item list, and the user has changed the value, the generated select box will automatically retain the current value the user has selected.

The value can then be displayed with `[item-modifier color]` on the order report, order receipt, or any other page containing an `[item-list]`.

4.1.2.1. Emulating with a loop

You can also build widgets directly, without using the `accessories` tag. You may have to do so if you need more control of the content than the tag offers. Below is a fragment from a shopping basket display form which shows a selectable size with "sticky" setting and a price that changes based upon the modifier setting. (Note that this example would normally be contained within the `[item-list][/item-list]` pair.)

```
<SELECT NAME="[loop-modifier-name size]">
[loop option="[loop-modifier-name size]" list="S, M, L, XL"]
<OPTION> [loop-code] -- [price code="[item-code]" size="[loop-code]"]
[/loop]
</SELECT>
```

Interchange Tags Reference

The output of the above would be similar to the output of [item-accessories size, select] if the product database field `size` contained the value `S`, `M`, `L`, `XL`. The difference is that the options in the loop emulation show the adjusted price in addition to the size within each option value.

4.1.2.2. Hash Lists -- Technical Note

As a technical note, some of the features of this tag work differently depending upon whether it was called with an '\$item' hash reference, for example, as [item-accessories] within an [item-list].

In this context, the tag will have access to ancillary data from the item (including, perhaps, a user's chosen item attribute value). For example, if building a TEXTAREA widget within an [item-list], the widget will show the chosen item attribute value. On the other hand, within an array list such as a [search-list] in a [search-region], the widget would be empty.

If you really know what you're doing, you can pass it the item hash reference within a [perl] tag like this:

```
$Tag->accessories( $code,
                  undef,          # 'arg' parameter value
                  $named_attribute_hashref,
                  $item_hashref );
```

See also [Looping tags and Sub-tags](#) for information about hash-context and array-context in looping tags.

4.1.2.3. code

This is the master key of the specified table (commonly sku in a product table). If no table is specified, the tag uses the products table by default.

You should not specify a `code` when looping on [item_accessories] because it internally sets 'code' to the key for the current item in the loop.

4.1.2.4. arg

Deprecated after Interchange 4.6

This allows you to pass values for some of the more commonly used attributes in the manner of the [item-accessories] tag, as a comma-delimited positional list:

```
arg="attribute, type, column, table, name, outboard, passed"
```

Whitespace within the list is optional.

If you leave out one or more of the above attributes, be sure to keep the comma(s) if you are setting anything after it in the list:

```
arg="attribute, type, , table"
```

The above examples show the attribute names for clarity; you would actually use the values. Hence, the previous example might actually be something like the following:

```
arg="color, radio, , products"
```

Interchange Tags Reference

Although you must use such a comma-delimited list to pass attributes to the `[item-accessories]` tag, please use named attributes instead for the `[accessories]` tag. The 'arg' attribute is deprecated.

For detail about a specific attribute, please see its subheading below.

4.1.2.5. attribute

Despite the name, this has nothing to do with tag attributes. You can set attributes for *items* in a database table (typically the products table) with the `UseModifier` configuration directive. Typical are size or color.

This selects the item attribute the tag will work with.

4.1.2.6. type

This determines the action to be taken. One of:

Action	Description
select	Builds a dropdown <SELECT> menu for the item attribute, with the default item attribute value SELECTED. The accessories tag builds a select widget by default if type is not set.
display	Shows the label text for *only the selected option* if called in <code>Hash List</code> context (e.g., within an <code>[item-list]</code>). Ignored otherwise (i.e., the tag will build the default <SELECT> menu).
show	Returns the list of possible attributes for the item (without labels or any HTML widget). For example, if sku os28044 is available in several sizes: [accessories os28044 size,show] ----- Sm=10oz, Med=15oz*, Lg=20oz
options	This shows the attribute options as a newline delimited list: [accessories os28044 size,options] ----- Sm Med Lg
labels	This shows the attribute option labels: [accessories os28044 size,options] ----- 10oz 15oz* 20oz
radio	Builds a radio box group for the item, with spaces separating the elements.
radio nbsp	Builds a radio box group for the item, with separating the elements.
radio break	Builds a radio box group for the item, with ' ' separating the radio button/label pairs from one another.
radio left n	Builds a radio box group for the item, inside a table, with the checkbox on the left side. If "n" is present and is a digit from 2 to 9, it will align the options in that many columns.

Interchange Tags Reference

	<p>You can also set FONT SIZE like this:</p> <pre>type="radio left n fontsize"</pre> <p>where $-9 \leq m \leq 9$</p>
radio right n	<p>Builds a radio box group for the item, inside a table, with the checkbox on the right side. If "n" is present and is a digit from 2 to 9, it will align the options in that many columns.</p> <p>You can also set FONT SIZE like this:</p> <pre>type="radio right n fontsize"</pre> <p>where $-9 \leq m \leq 9$</p>
check	Builds a checkbox group for the item, with spaces separating the elements.
check nbsp	Builds a checkbox group for the item, with ' ' separating the checkbox/label pairs from one another.
check break	Builds a checkbox group for the item, with ' ' separating the checkbox/label pairs from one another.
check left n	<p>Builds a checkbox group for the item, inside a table, with the checkbox on the left side. If "n" is present and is a digit from 2 to 9, it will align the options in that many columns.</p> <p>You can also set FONT SIZE like this:</p> <pre>type="check left n fontsize"</pre> <p>where $-9 \leq m \leq 9$</p>
check right n	<p>Builds a checkbox group for the item, inside a table, with the checkbox on the right side. If "n" is present and is a digit from 2 to 9, it will align the options in that many columns.</p> <p>You can also set FONT SIZE like this:</p> <pre>type="check right n fontsize"</pre> <p>where $-9 \leq m \leq 9$</p>
textarea_XX_YY	<p>A textarea with XX columns and YY rows. The textarea will contain the selected item attribute value if used in <u>Hash List</u> context (e.g., within an <u>[item-list]</u>).</p> <p>If you simply use 'type=textarea', the size will default to 4 rows by 40 columns, unless you have set the <u>rows</u> or <u>cols</u> tag attributes.</p>
text_YY	<p>A text box with YY width in characters. The HTML tag's VALUE will be set to the selected item attribute value if used in <u>Hash List</u> context (e.g., within an <u>[item-list]</u>).</p> <p>If you simply use 'type=text', the width will default to 60, unless you have set the <u>cols</u> tag attribute.</p>
combo	Special type, used with nullselect filter, for selecting from a list or inputting a new value
reverse_combo	Special type, used with last_non_null filter, for selecting from a list or inputting a new value -- differs from combo in order of presentation
move_combo	

Interchange Tags Reference

	Special type, used with <code>null_to_space</code> or <code>null_to_comma</code> filter, for selecting multiple non-ordered values from a list or inputting into a textarea
<code>links</code>	Produces a series of links based on the option values. The base form value is passed via the <code>form</code> parameter, just like in an <code>[area ...]</code> or <code>[page ...]</code> tag, and the value is named with the passed <code>NAME</code> attribute.
<code>value</code>	Returns the selected value if called in <code>Hash List</code> context (e.g., within an <code>[item-list]</code>), or nothing otherwise.
<code>hidden</code>	Creates a hidden form field. The hidden field's <code>VALUE</code> will be set to the selected item attribute value if used in <code>Hash List</code> context (e.g., within an <code>[item-list]</code>).
<code>password_YY</code>	<p>A password box with <code>YY</code> width in characters. The HTML tag's <code>VALUE</code> will be set to the selected item attribute value if used in <code>Hash List</code> context (e.g., within an <code>[item-list]</code>).</p> <p>If you simply use <code>'type=password'</code>, the width will default to 12, unless you have set the <code>cols</code> tag attribute.</p>

The default is 'select', which builds an HTML select form entry for the attribute.

Some types build widgets that use the `ROWS=m`, `COLS=n`, or certain other HTML attributes. For these, you can define widget rows and columns within the string that sets the type; for example, `type="textarea_6_33_wrap=virtual"` specifies a TEXTAREA widget with `ROWS=6`, `COLS=33`, and `WRAP=virtual`. You should resort to this only when you cannot use the named parameters, for example within an `[item-accessories]` tag. Otherwise, use the `rows=m` and `cols=n` tag attributes instead.

The result of setting conflicting values in the `type` string and the `rows` or `cols` attributes is undefined.

The following list shows syntax for type strings, where *rows* is the number of rows and *cols* is the number of columns.

- **text**
 - ◆ `textarea` (default is 4 rows, 40 columns, like `'textarea_4_40'`)
 - ◆ `textarea_rows_cols`
 - ◆ `text_cols`
 - ◆ `textarea rows=rows cols=cols wrap=WRAP value`
- **password**
 - ◆ `password` (default is 12 columns, like `'password_12'`)
 - ◆ `password_cols`
- **combo** (similarly for **reverse_combo** and **move_combo**)
 - ◆ `combo` (default is 1 row, 16 columns, like `'combo_1_16'`)

In any of the option building types, you can append the string `ranges` and a special option processing will be done — any option matching the pattern `[A-Za-z0-0]..[A-Za-z0-0]` will be expanded into a comma separated range between the bounds. The same behavior is accomplished by passing the `accessories` tag option `ranges`. For example:

```
[accessories name=foo type=select ranges=1 "A..C,1..5,10,20"]
  and
[accessories name=foo type="select ranges" passed="A..C,1..5,10,20"]

will both output:
```


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```
<select NAME="foo">
<option VALUE="A">A
<option VALUE="B">B
<option VALUE="C">C
<option VALUE="1">1
<option VALUE="2">2
<option VALUE="3">3
<option VALUE="4">4
<option VALUE="5">5
<option VALUE="10">10
<option VALUE="15">15
<option VALUE="20">20
</select>
```

The above applies to any of the option building types — `check`, `combo`, `combo_move`, `labels`, `multiple`, `options`, `radio`, `reverse_combo`, and `select`. It will refuse to produce more than 5000 options — that limit can be changed with `Limit option_list N` in `catalog.cfg`, where `N` is an integer greater than 0.

4.1.2.7. column

The column of the table corresponding to the attribute will traditionally have the same name as the attribute, though it need not.

This specifies the table column that contains an item's attribute values. The tag will find item attribute names and values in a comma-delimited list of `name=value` pairs stored in this field of an item's table entry. If unspecified, the column name will default to the name given for the `attribute` attribute.

For example, if an item in the products table has a `'size'` attribute, and each item's comma-delimited list of available sizes is stored in the `'how_big'` column, then you would need to specify `"column=how_big"` because the tag's default column choice (`size`) would be missing or used for some other purpose.

4.1.2.8. table

This is the database table containing the item's attribute values. It defaults to the first products file where the item code is found.

If you have configured your database so that the attributes are kept in a different table from other item data, `code` should be set to the master key in this table. See `outboard`) if you are using `item-accessories` and cannot specify `code=key`.

4.1.2.9. name

This sets the name of the form variable to use if appropriate for the widget being built. Defaults to `'mv_order_attribute'` — i.e. if the attribute is `size`, the form variable will be named `mv_order_size`.

If the variable is set in the user session, the widget will "remember" its previous setting. In other words, `value name` will contain the previous setting, which the widget will use as its default setting. See also the `default` attribute.

4.1.2.10. outboard

If calling the item–accessories tag, and you wish to select from an outboard database table whose master key is different from the item code, you can pass the key the tag should use to find the accessory data.

4.1.2.11. passed

You can use this to pass your own values to the widget the tag will build. If you have set `passed` to a list of widget options, then the tag will simply build a widget of the specified type with your values instead of fetching an attribute value list from the database.

For example, to generate a select box with a blank option (perhaps forcing a select), the value of blue with a label of **Blue**, and the value of green with a label of **Sea Green**, do:

```
[accessories type=select
      name=color
      passed="---select--*, blue=Blue, green=Sea Green"]
```

This will generate:

```
<SELECT NAME="color"><OPTION VALUE=" " SELECTED>---select--\
<OPTION VALUE="blue">Blue\
<OPTION VALUE="green">Sea Green</SELECT>
```

Note: trailing backslashes (\\) in the above example indicate line continuation and are not part of the tag output.

4.1.2.12. delimiter

The list of attribute values will be a delimited string. This allows you to specify an alternative delimiter if the list is not comma–delimited (the default).

4.1.2.13. prepend

You can set a string to prepend to the returned output of the tag. Note that this is *not* a list to prepend to the fetched attribute value list, which is treated within the tag.

For example,

```
[accessories code=os28044
      type=select
      attribute=size
      append="Append Me<br>"
      prepend="Prepend Me" ]
---
Prepend Me<SELECT NAME="mv_order_size">\
<OPTION VALUE="10oz">10oz\
<OPTION VALUE="15oz">15oz\
<OPTION VALUE="20oz">20oz</SELECT>Append Me<br>
```

4.1.2.14. append

You can set a string to append to the returned output of the tag. Note that this is *not* a list to append to the fetched attribute value list, which is treated within the tag.

4.1.2.15. extra

Setting the 'extra' attribute appends its value as the last attribute of the HTML output tag. The following example illustrates the append, extra and js options:

```
[accessories code=os28044
      type=select
      attribute=size
      append="Append Me<br>"
      extra="Last=Extra"
      js="javascript_here" ]
---
<SELECT NAME="mv_order_size" javascript_here Last=Extra>\
<OPTION VALUE="10oz">10oz\
<OPTION VALUE="15oz">15oz\
<OPTION VALUE="20oz">20oz</SELECT>Append Me<br>
```

4.1.2.16. js

This allows you to place javascript within the start tag of the HTML output. See the example given above for extra.

js has no default, except when 'type=move_combo', where the default is:

```
onChange="addItem(this.form.Xname,this.form.name) "
```

4.1.2.17. rows

The tag will pass the number you choose through to the HTML 'ROWS=*n*' attribute in HTML widgets that accept it.

For some types, you can also define widget rows and columns within the string that sets the type; for example, type="textarea_6_33_wrap=virtual" specifies a TEXTAREA widget with ROWS=6, COLS=33, and WRAP=virtual. You should resort to this only when you cannot use the named parameters, for example within an [item-accessories] tag.

The result of setting conflicting values in the type string and the rows=*n* attribute is undefined.

4.1.2.18. cols

The tag will pass the number you choose through to the HTML 'COLS=*n*' attribute in HTML widgets that accept it.

See also 'rows' above.

4.1.2.19. width

This is a quasi-alias for 'cols' that only works with the 'text' and '<password>' types. Use 'cols' instead.

4.1.2.20. default

Sets the default attribute option in the widget returned by the tag. This will override a default indicated with a trailing '*' in the database or 'passed' string. This will also override the default of a user's previous selection

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when the tag would otherwise have preserved it.

For example the following selects blue by default rather than green as it would otherwise have done,

```
[accessories type=select
    name=color
    passed="blue=blue, green=Sea Green*"
    default="blue"]
---
<SELECT NAME="color"><OPTION VALUE="blue" SELECTED>blue\
<OPTION VALUE="green">Sea Green</SELECT>
---
```

Obscure technical note: the tag ignores the 'default' attribute if it has an item hash reference — see [Hash Lists](#) above.

4.1.2.21. price

When combined with the `price_data` tag attribute, this allows you to force prices for item attributes. You probably do not want to use this; just let the tag pick up prices from your database table(s) when appropriate.

If you are passing attribute values, you can use this to control the displayed price in the widget.

```
[accessories type=check
    name=color
    price=1
    price_data="blue=20, green=50"
    passed="blue=Blue, green=Sea Green*"]
---
<INPUT TYPE="checkbox" NAME="color"
    VALUE="blue" >&nbsp;Blue&nbsp;($20.00)
<INPUT TYPE="checkbox" NAME="color"
    VALUE="green" CHECKED>&nbsp;Sea Green&nbsp;($50.00)
```

4.1.2.22. price_data

4.1.2.23. contains

Requires '`type=radio`' or '`type=check`'.

Used to determine whether a substring match of the value will cause a radio box or check box to be selected. If true, the match will happen whether the value is on a word boundary or not — if false, the value must be on a word boundary. (When we speak of a word boundary, it is in the Perl sense — a word character [A-Za-z0-9_] followed or preceded by a non-word character, or beginning or end of the string.)

4.1.2.24. joiner

Requires '`type=links`'.

With `type=links`, the accessories tag returns a link for each option. This allows you to override the default string ('
') that joins these links. You can use Perl's metacharacter escapes, such as '\n' for newline or '\t' for tab.

4.1.2.25. href

Requires 'type=links'.

This sets the base HREF for the link in a `links` type. Default is the current page.

4.1.2.26. template

Requires 'type=links'.

Allows you to override the standard Interchange template for a hyperlink. You probably don't need to use this — grep the code to grok it if you do (see '`sub build_accessory_links`').

4.1.2.27. form

Requires 'type=links'.

This sets the base value for the form in a `links` type. Default is `mv_action=return`, which will simply set the variable value in the link.

For example, to generate a series of links — one per item attribute value passed — that set the variable "color" to the corresponding passed value (blank, blue, or green), do this:

```
[accessories type=links
              name=color
              passed="---select--, blue=Blue, green=Sea Green"]
```

This will generate something like the following:

```
<A HREF="VENDURL/MV_PAGE?mv_action=return&color=blue">Blue</A><BR>
<A HREF="VENDURL/MV_PAGE?mv_action=return&color=green">Sea Green</A>
```

where `VENDURL` is your Interchange URL for the catalog `MV_PAGE` is the current page.

If you want the empty "`---select---`" option to show up, pass an `empty=1` parameter.

4.1.2.28. empty

Requires 'type=links'.

Setting '`empty=1`' includes a hyperlink for the empty "`---select---`" option. See the example in `form` above; if `empty=1` had been specified, three links would have been generated.

4.1.2.29. secure

Requires 'type=links'.

Setting `secure=1` causes the generated link(s) to point to your secure Interchange URL.

4.1.2.30. new

Requires 'type=combo' or 'reverse_combo'.

You can use this to set a value in place of the 'New' or 'Current' option in a combo box. For example, if item 'os28044' has size attribute values of "Sm=10oz, Med=15oz, Lg=20oz":

```
[accessories code=os28044 attribute=size type=combo new="my_new_value"]
---
<INPUT TYPE=text NAME="mv_order_size" SIZE=16 VALUE="">
<SELECT NAME="mv_order_size" SIZE="1">
<OPTION VALUE="my_new_value">my_new_value
<OPTION VALUE="Sm">10oz
<OPTION VALUE="Med">15oz
<OPTION VALUE="Lg">20oz</SELECT>
```

Or, with the default new value:

```
[accessories code=os28044 attribute=size type=combo]
---
<INPUT TYPE=text NAME="mv_order_size" SIZE=16 VALUE="">
<SELECT NAME="mv_order_size" SIZE="1">
<OPTION VALUE="">&lt;--- New
<OPTION VALUE="Sm">10oz
<OPTION VALUE="Med">15oz
<OPTION VALUE="Lg">20oz</SELECT>
```

Default is no VALUE with option text set to '<--- New' for a combo box or 'Current --->' for a reverse_combo box.

4.2. and

4.2.1. Summary

Parameters: **type term op compare**

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **no**

Note: This tag has special positional parameter handling.

```
[and type term op compare]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>	Alias for type	DEFAULT_VALUE
<u>comp</u>	Alias for compare	DEFAULT_VALUE
<u>compare</u>		DEFAULT_VALUE
<u>op</u>		DEFAULT_VALUE

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<u>operator</u>	Alias for op	DEFAULT_VALUE
<u>term</u>		DEFAULT_VALUE
<u>type</u>		DEFAULT_VALUE
Attributes	Default	
<u>interpolate (reparse)</u>	<i>No</i>	
Other _Characteristics		
Invalidates cache	<i>no</i>	
Container tag	<i>No</i>	
Has Subtags	<i>No</i>	
Nests	<i>Yes</i>	

Tag expansion example:

```
[value name=fname set="Mike" hide=1]
[value name=lname set="" hide=1]

...

[if value fname]
[and value lname]
    Both first and last name are present.
[else]
    Missing one of "fname" and "lname" from $Values.
[/else]
[/if]

---
Missing one of "fname" and "lname" from $Values.
```

ASP-like Perl call:

Not applicable. The [and ...] tag only is used with [if ...], and Perl logic obviates the [if ...] tag.

4.2.2. Description

The [and ...] tag is only used in conjunction with [if ...]. Example:

```
[if value fname]
[and value lname]
    Both first and last name are present.
[else]
    Missing one of "fname" and "lname" from $Values.
[/else]
[/if]
```

See the description of the [if] tag.

4.2.2.1. compare

4.2.2.2. op

4.2.2.3. term

4.2.2.4. type

4.3. area

Alias: **href**

Expands to the URL for an Interchange page or action, including the Interchange session ID and supplied arguments. This is very similar to the page tag — these are equivalent:

```
[page href=dir/page arg=mv_arg]TargetName</A>
<A HREF="[area href=dir/page arg=mv_arg]">TargetName</A>
```

4.3.1. Summary

```
[area href arg]
[area href=dir/page arg=page_arguments other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
href	Path to Interchange page or action <i>Special arguments</i> ♦ ' <u>scan</u> ' links to a search (using search arguments in arg) ♦ 'http://...' external link (requires form attribute)	process
arg	Interchange arguments to page or action	<i>none</i>
<i>Attributes</i>	<i>Default</i>	
<u>form</u>	<i>none</i>	
<u>search</u>	<i>No</i>	
<u>secure</u>	<i>No</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other_Characteristics</i>		
Invalidates cache	<i>No</i>	
Macro	<i>No</i>	
Has end tag	<i>No</i>	

Tag expansion example:

```
[area href=dir/page.html arg="arg1=AA/arg2=BB"]
www.here.com/cgi-bin/mycatalog/page.html?mv_session_id=6CZ2whqo&\
mv_pc=1&mv_arg=arg1%3dAA/arg2%3dBB
```

ASP-like Perl call:

```
$Tag->area( { href => "dir/page",
              arg  => "arguments", } );
```


or similarly with positional parameters,

```
$Tag->area($href, $arg, $attribute_hash_reference);
```

4.3.1.1. See Also

[page](#)

4.3.2. Description

The `area` tag is very similar to the [\[page\]](#) tag. It produces the URL to call an Interchange page, but it differs from `page` in that it does not supply the surrounding `<A HREF ...>` notation. This can be used to get control of your HREF items, perhaps to place an ALT string or a Javascript construct.

It was originally named `area` because it also can be used in a client-side image map.

The `area` tag has an alias of `href`. The two links below are identical in operation:

```
<A HREF="[area href=catalog]" ALT="Main catalog page">Catalog Home</A>
<A HREF="[href href=catalog]" ALT="Main catalog page">Catalog Home</A>
```

The optional `arg` is used just as in the [\[page\]](#) tag.

4.3.2.1. form

The optional `form` argument allows you to encode a form in the link.

```
<A HREF="[area form="mv_order_item=os28044
                mv_order_size=15oz
                mv_order_quantity=1
                mv_separate_items=1
                mv_todo=refresh"]"> Order 15oz Framing Hammer</A>
```

See the description of the [\[page\]](#) tag for more detail.

4.3.2.2. search

Interchange allows you to pass a search in a URL. There are two ways to do this:

1. Place the search specification in the named `search` attribute.
 - ◆ Interchange will ignore the `href` parameter (the link will be set to 'scan').
 - ◆ If you give the `arg` parameter a value, that value will be available as [\[value mv_arg\]](#) within the search display page.
2. Set the `href` parameter to 'scan' and set `arg` to the search specification.
 - ◆ Note that you can use this form positionally — the values go into `href` and `arg`, so you do not have to name parameters.

These are identical:

```
<A HREF="[area scan
                se=Impressionists
                sf=category]">Impressionist Paintings</A>
```

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```
<A HREF="[area href=scan
    arg="se=Impressionists
    sf=category"]">Impressionist Paintings</A>

<A HREF="[area search="se=Impressionists
    sf=category"]">Impressionist Paintings</A>
```

See the description of the [page](#) tag for more detail.

4.3.2.3. secure

4.3.2.4. Examples

Tag expansion example:

```
[area href=dir/page.html arg="arg1=AA/arg2=BB"]

www.here.com/cgi-bin/mycatalog/page.html?mv_session_id=6CZ2whgo&\
mv_pc=1&mv_arg=arg1%3dAA/arg2%3dBB
```

Positional call example:

```
<A HREF="[area ord/basket]">Check basket</A>
```

Named call example:

```
<A HREF="[area ord/basket]">Check basket</A>
```

4.4. assign

Allows you to assign numeric values to preempt calculation of one or more of the following tags:

[\[handling\]](#), [\[salestax\]](#), [\[shipping\]](#), and [\[subtotal\]](#)

The assignment is persistent within a user's session until you clear it, an assigned tag will return your value instead of calculating a value.

Warning — please be sure you understand the dependencies within the pricing system before using the `assign` tag. In particular, you must have the value `mv_shipmode` set to assign to `shipping`, and likewise you must set `mv_handling` to assign to `handling`. The `salestax` and `subtotal` settings don't require any session variables be set.

4.4.1. Summary

```
[assign tag_name=value tag_name=value ...]
[assign clear=1]
```

Attributes	Description	Default
clear	Clears all pending 'assign' tag assignments	<i>none</i>
handling	Assigns an override value for [handling] tags	<i>none</i>
salestax	Assigns an override value for [salestax] tags	<i>none</i>

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<u>shipping</u>	Assigns an override value for [<u>shipping</u>] tags	<i>none</i>
<u>subtotal</u>	Assigns an override value for [<u>subtotal</u>] tags	<i>none</i>
<i>Other_Characteristics</i>		
Invalidates cache	<i>No</i>	
Container tag	<i>No</i>	

ASP-like Perl call:

```
$Tag->assign( { shipping => 2.99, } );
```

4.4.1.1. See Also

[handling], [salestax], [shipping], [subtotal], [Shipping]

4.4.2. Description

The `assign` tag allows you to assign numeric override values to one or more of the following tags:

[handling], [salestax], [shipping], and [subtotal]

An assigned tag will return your value rather than calculating its own until you clear the assignment.

Assignment is persistent within the user's session (unless cleared) and affects only that user.

Assigning an empty string clears the tag's assignment. You can also clear all pending assignments at once with the clear attribute.

For example, the following eliminates `salestax` and sets `shipping` to \$4.99 regardless of weight and destination:

```
[assign salestax=0 shipping=4.99]
```

This restores the [salestax] tag and eliminates handling charges:

```
[assign salestax="" handling=0]
```

This restores the normal behavior to the [shipping] and [handling] tags:

```
[assign clear=1]
```

Assignment affects only the value returned by a tag. Other behavior, such as formatting for the local currency, is not affected by the assignment.

Note — you will get an error in the error log (and any pending assignment for the specified tag will be cleared) if you try to assign a value other than a number or the empty string ("").

4.4.2.1. clear

Setting this to a true value clears all pending assignments (i.e., all assignable tags return to normal behavior).

4.4.2.2. shipping

This sets the total value of shipping, rounded to locale-specific fractional digits. Always active if assigned a numeric value. See the [\[shipping\]](#) tag for detail about rounding, etc.

4.4.2.3. handling

This option sets the total value of handling, rounded to fractional digits.

Important note

The [\[handling\]](#) tag is unlike the others in that it will be inactive (despite your assignment) unless the [\[value mv_handling\]](#) variable is true (i.e., a nonzero, non-blank value).

4.4.2.4. salestax

This preempts the salestax calculation. The assigned value is not rounded.

4.4.2.5. subtotal

This preempts the cart subtotal derived from prices. The assigned value is not rounded.

Note that you cannot assign to [\[total-cost\]](#) — it will always be the sum of the four above.

Before using the `assign` tag, please be sure you understand the dependencies within the pricing system, such as the relationship between [\[total-cost\]](#) and assigned tags.

4.5. attr-list

This tag is intended for use within embedded perl rather than as a standalone tag within a template (i.e., the `[attr-list ...]` syntax does not apply).

The `$Tag->attr_list($template, $hashref)` usage provides a shorthand for accessing values of a hash within embedded perl. It also allows you to control defaults or set up conditional values.

4.5.1. Summary

```
$Tag->attr_list($template, $hashref)
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
hash		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
interpolate	No	
reparse	Yes	
<i>Other Characteristics</i>		
Invalidates cache		no
Container tag		NA (Though the template is technically body text)

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Has Subtags	<i>No</i>
Nests	<i>No</i>

Tag expansion example (ASP-like Perl call):

```
[perl tables=products]
  my %opt = ( hashref => 1,
             sql      => 'select * from products', );

  my $ary_of_hash = $Db{products}->query(\%opt);

  my $template = <<EOF;
    {sku} - {description} - {price|Call for price}
    {image?}<IMG SRC="{image}">{/image?}
    {image:}No image available{/image:}
    <br>
    More body Text here
    <br>
  EOF
EOF

  foreach my $ref (@$ary_of_hash) {
    $out .= $Tag->attr_list($template, $ref);
  }
  return $out;
[/perl]
---
```

os28113 - The Claw Hand Rake - Call for price

More body Text here

os28006 - Painters Brush Set - 29.99
No image available

More body Text here

...

4.5.2. Description

Tags an attribute list with values from a hash. Designed for use in embedded Perl.

Tags according to the following rules:

4.5.2.1. {key}

Inserts the value of the key for the reference. In a database query, this is the column name.

4.5.2.2. {key|fallback string}

Displays the value of {key} or if it is zero or blank, the fallback string (i.e., default).

4.5.2.3. {key true string}

Displays `true string` if the value of {key} is non-blank, non-zero, or displays nothing if the key is false.

4.5.2.4. {key?} true text {/key?}

Displays `true text` if the value of {key} is non-blank, non-zero, and nothing otherwise.

4.5.2.5. {key:} false text {/key:}

Displays `false text` if the value of {key} is blank or zero, and nothing otherwise.

4.5.2.6. hash

This is the hash reference whose keys will be expanded within the template (see above).

4.6. banner

Implements random or rotating banner ads. See also [Banner/Ad rotation](#).

4.6.1. Summary

```
[banner category]
[banner category=my_category other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>category</u>		default
<i>Attributes</i>	<i>Default</i>	
<u>table</u>	banner	
<u>r_field</u> (unweighted)	rotate	
<u>b_field</u>	banner	
<u>separator</u> (unweighted)	':'	
<u>delimiter</u> (unweighted)	'{or}'	
<u>weighted</u>	No	
<u>once</u> (weighted)	No	
<u>c_field</u> (weighted)	category	
<u>w_field</u> (weighted)	weight	
<u>interpolate</u> (reparse)	No	
<i>Other_Characteristics</i>		
Invalidates cache	No	
Container tag	No	

Tag expansion example:

```
[banner category=my_category]
```

ASP-like Perl call:

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```
$Tag->banner( { category => $key, } );
```

or similarly with positional parameters,

```
$Tag->banner($category, $attribute_hash_reference);
```

4.6.1.1. See Also

[Banner/Ad rotation](#)

4.6.2. Description

Implements random or rotating banner ads. See [Banner/Ad rotation](#) in the Interchange Template documentation.

You will need a banner ad table (typically called 'banner') which contains banner data. The following is an example:

<i>code</i>	<i>category</i>	<i>weight</i>	<i>rotate</i>	<i>banner</i>
m_3	cat1	7	0	my banner 3
m_1	cat1	1	0	my banner 1
default			1	Default 1{or}Default 2{or}Default 3
m_2	cat1	2	0	my banner 2
t_1	cat2	4	0	their banner 1
t_2	cat2	1	0	their banner 2

4.6.2.1. category

Default: category="default"

This specifies the category for weighted ad, or the table row (i.e., code value) for an unweighted ad.

4.6.2.2. table

Default: table="banner"

Setting 'table="my_banner_table"' forces the tag to refer to 'my_banner_table' rather than the default 'banner' table for banner ad information.

4.6.2.3. r_field

Default: r_field="rotate"

Unweighted ads only.

A table row may include multiple banners in the 'banner' column. The column specified by r_field contains a boolean that determines whether to rotate banners. In the above table example, 'Default 1', 'Default 2' and 'Default 3' would rotate.

4.6.2.4. **b_field**

Default: `b_field="banner"`

This specifies the column containing the banner descriptor(s). The default is 'banner'. Note that an entry might be a delimited list of banner descriptors to rotate (see [delimiter](#) below).

4.6.2.5. **separator**

Default: `separator=":"`

Unweighted ads only.

This sets the separator within the table key (i.e., code) for multi-level categorized ads. See [Banner/Ad rotation](#).

4.6.2.6. **delimiter**

Default: `delimiter="{or}"`

Unweighted ads only.

This specifies the delimiter between rotating banner descriptors in the 'banner' column.

4.6.2.7. **weighted**

The `banner` tag will not apply weighting from the table unless you set `weighted=1`. Note that the tag will behave as if you gave it a standard unweighted entry — it will look for a matching row rather than a matching category.

4.6.2.8. **once**

Weighted ads only.

If the option `once` is passed (i.e., [`banner once=1 weighted=1`]), then the banners will not be rebuilt until the `total_weight` file is removed. See [Banner/Ad rotation](#).

4.6.2.9. **c_field**

Default: `c_field="category"`

Weighted ads only.

This specifies the column containing the banner category for weighted ads. The `banner` tag will display ads from rows in the table whose category matches the category given in the tag, with frequency corresponding to the weights in the table.

4.6.2.10. **w_field**

Default: `w_field="weight"`

Weighted ads only.

This specifies the column containing the banner weight.

4.7. bounce

4.7.1. Summary

Parameters: **href if**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

None. This tag doesn't work with embedded Perl due to special processing.

```
[bounce href if]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>href</u>		DEFAULT_VALUE
<u>if</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		
Invalidates cache	no	
Container tag	No	
Has Subtags	No	
Nests	Yes	

Tag expansion example:

```

[bounce href if]
---
TAG RESULT

```

ASP-like Perl call:

None. This tag doesn't work with embedded Perl due to special processing.

4.7.2. Description

The [bounce ...] tag is designed to send an HTTP redirect (302 status code) to the browser and redirect it to another (possibly Interchange–parsed) page.

It will stop ITL code execution at that point; further tags will not be run through the parser. Bear in mind that if you are inside a looping list, that list will run to completion and the [bounce] tag will not be seen until the loop is complete.

Example of bouncing to an Interchange parsed page:

```
[if !scratch real_user]
[bounce href="[area violation]"]
[/if]
```

Note the URL is produced by the [area ...] ITL tag.

Since the HTTP says the URL needs to be absolute, this one might cause a browser warning:

```
[if value go_home]
[bounce href="/"]
[/if]
```

But running something like one of the Interchange demos you can do:

```
[if value go_home]
[bounce href="__SERVER_NAME__/" ]
[/if]

[if value go_home]
[bounce href="/"]
[/if]
```

4.7.2.1. href

4.7.2.2. if

4.8. calc

Calculates the value of the enclosed arithmetic expression.

4.8.1. Summary

```
[calc] Expression [/calc]
```

No parameters

No **attributes** (though you can break it if you set 'interpolate=0')

<i>Other_Characteristics</i>	
Invalidates cache	<i>No</i>
Has Subtags	<i>No</i>

Container tag	<i>Yes</i>
Nests	<i>No</i>

ASP-like Perl call:

There is never a reason to call this tag from within Perl or ASP code. Simply do the calculation directly.

4.8.2. Description

Calculates the value of the enclosed arithmetic expression.

Use it as follows: `[calc] Expression [/calc]`

The enclosed region where the arguments are calculated according to normal arithmetic symbols. For instance:

```
[calc] 2 + 2 [/calc]
```

will expand to:

```
4
```

The `[calc]` tag is really the same as the `[perl]` tag, except that it doesn't accept arguments, interpolates surrounded Interchange tags by default, and is slightly more efficient to parse.

Tip: The `[calc]` tag will remember variable values inside one page, so you can do the equivalent of a memory store and memory recall for a loop.

ASP Note: There is never a reason to call this tag from within Perl or ASP code.

4.9. calcn

Calculates the value of the enclosed arithmetic expression.

4.9.1. Summary

```
[calcn] Expression [/calcn]
```

No parameters**No attributes**

<i>Other_Characteristics</i>	
Invalidates cache	<i>No</i>
Has Subtags	<i>No</i>
Container tag	<i>Yes</i>
Nests	<i>No</i>

ASP-like Perl call:

Interchange Tags Reference

There is never a reason to call this tag from within Perl or ASP code. Simply do the calculation directly.

4.9.2. Description

Equivalent to the `[calc]` tag, except that it does not interpolate by default.

NOTE: This tag was introduced in Interchange 4.9 and is therefore not available in earlier versions.

4.10. cart

4.10.1. Summary

Parameters: **name**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->cart(  
  {  
    name => VALUE,  
  }  
)
```

OR

```
$Tag->cart($name);  
[cart name]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		
Invalidates cache	YES	
Container tag	No	
Has Subtags	No	
Nests	Yes	

Tag expansion example:

```
[cart name]  
---
```

TAG RESULT

ASP-like Perl call:

```
$Tag->cart( { name => VALUE_name
}, $body );
```

or similarly with positional parameters,

```
$Tag->cart(name, $attribute_hash_reference, $body);
```

4.10.2. Description

Sets the name of the current shopping cart for display of shipping, price, total, subtotal, shipping, and nitems tags.

4.10.2.1. name**4.11. catch**

The page content contained within the `[catch label][catch]` block executes if the correspondingly labelled `try` block fails.

You can also return a result based on the error message caught in the try block with paired subtags, like this:

```
[error message]body text[/error message]
```

Note that this feature excises *all* tag/entag pairs if interpolation is turned off, so the `catch` tag interpolates by default.

See also `try`.

4.11.1. Summary

```
[try my_label]
  Body text to return if no error
[/try]
.
.
.
[catch label=my_label other_named_attributes]
  [/Pattern matching error message 1/]
    Return this if error 1 occurs
  [/Pattern matching error message 1/]

  [/Pattern matching error message 2/]
    Return this if error 2 occurs, etc.
  [/Pattern matching error message 2/]

  Default body text to process if try block caused an error
[/catch]
```

Parameters	Description	Default
------------	-------------	---------

Interchange Tags Reference

label	The label shared by the paired <code>try</code> and <code>catch</code> blocks		'default'
Attributes	Default		
<u>interpolate</u>	<i>Yes</i>		
<u>reparse</u>	<i>Yes</i>		
Other_Characteristics			
Invalidates cache		<i>No</i>	
Container tag		<i>Yes</i>	
Has Subtags		<div>[Error message text]</div> <div>body</div> <div>[/Error message text]</div>	

Tag expansion example

Ignoring whitespace, the following would return division result if successful, 0 on a division by zero, or an error message:

```
[set divisor]0[/set]
[try label=div]
  [perl] eval(1 / [scratch divisor]) [/perl]
[/try]
[catch div]
  [/Illegal division by zero/]
  0
  [/Illegal division by zero/]
  [/eval "string" trapped by operation mask/]
  Perl Safe error
  [/eval "string" trapped by operation mask/]
  Other division error
[/catch]
---
```

Perl Safe error

ASP-like Perl call:

```
$Tag->catch( { label => I<'my_label'>, },
             $body );
```

or similarly with positional parameters,

```
$Tag->catch($label, $attribute_hash_reference, $body);
```

4.11.1.1. See Also

try

```
[catch]
```

Attributes	Default
<u>interpolate (reparse)</u>	<i>No</i>
Other_Characteristics	

Invalidates cache	<i>No</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[catch]
---
TAG RESULT
```

ASP-like Perl call:

```
$Tag->catch( {
}, $body );
```

or similarly with positional parameters,

```
$Tag->catch(, $attribute_hash_reference, $body);
```

4.11.2. Description

The page content contained within the `[catch label][catch]` block executes if the correspondingly labelled `try` block fails. The catch block executes in place on the page if triggered (*i.e.*, it does not return its result in place of the try block).

You can also return a result based on the error message caught in the try block with paired subtags, like this:

```
[/error message/]special catch block for the error[/error message/]
```

The error message to use in the special block will generally be part of the entry the error generates in your error log. For example, a division by zero error generates something like the following in the error log:

```
127.0.0.1 4cU3Pgsh:127.0.0.1 - [24/May/2001:14:45:07 -0400]\
tag /cgi-bin/tag72/tag Safe: Illegal division by zero\
at (eval 526) line 2.
```

(note that trailing backslashes in the example indicate a continued line).

4.11.2.1. label

This is the label specifying the corresponding `try` block. Defaults to 'default'.

4.12. cgi

Returns the the current value of the named CGI input variable. HTML-escapes Interchange tags in the result for security.

Can also set a new CGI value within the current page.

4.12.1. Summary

```
[cgi name]
[cgi name=cgi_var_name other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>	This is the name of the CGI variable whose value you want.	<i>None</i>
<i>Attributes</i>	<i>Default</i>	
<u>set</u>	<i>none</i>	
<u>hide</u>	<i>No</i>	
<u>filter</u>	<i>none</i>	
<u>keep</u> (with filter)	<i>No</i>	
<u>enable_html</u>	<i>No</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other_Characteristics</i>		
Invalidates cache	<i>Yes</i>	

Tag expansion example:

Assuming CGI variable 'foo' = 'bar',

```
---
[cgi foo]
---
bar
```

ASP-like Perl call:

```
$Tag->cgi( { name => var_name } );

# or if you simply want the value:
$CGI->{var_name};

# or:
$CGI::values{var_name};
```

or similarly with positional parameters,

```
$Tag->cgi($name, $attribute_hash_reference);
```

4.12.2. Description

Displays the value of a CGI variable **submitted to the current page**. This is similar to [\[value ...\]](#), except it displays the transitory values that have been submitted with the current request.

For instance, if you access the following URL:

```
http://VENDURL/pagename?foo=bar
```

bar will be substituted for `[cgi foo]`.

This is the same as `$CGI->{foo}` in embedded Perl.

4.12.2.1. name

This is the name of the CGI variable whose value you want.

4.12.2.2. set

You can change a value with '*set=new_value*'. The tag will return the CGI value you set unless you also set the hide=1 attribute.

Note that this is only available in new-style tags, for safety reasons.

4.12.2.3. hide

Setting *hide*=1 suppresses the tag's return value, which can be useful with the set attribute.

4.12.2.4. filter

See the filter tag for a list of filters.

Setting '*filter="filter"*' modifies the named CGI variable with the specified filter.

4.12.2.5. keep (with filter)

Set *keep*=1 if you want the tag to return a filtered result but do not want the filter to modify the CGI value itself in the `$CGI::values` hash.

4.12.2.6. default

This sets a return value in case the named CGI variable is missing or otherwise false. The following will expand to "Using default":

```
[cgi name=myname set=0 hide=1]
[cgi name=myname default="Using default"]
```

4.12.2.7. enable_html

Any '<' characters will normally be converted into '<' for safety reasons. This conversion can be disabled using '*enable_html*=1'.

4.13. checked

4.13.1. Summary

Parameters: **name value**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. This may mean that there are parameters not shown here.

Interchange Tags Reference

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->checked(  
  {  
    name => VALUE,  
    value => VALUE,  
  }  
)
```

OR

```
$Tag->checked($name, $value, $ATTRHASH);  
[checked name value other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>case</u>		DEFAULT_VALUE
<u>cgi</u>		DEFAULT_VALUE
<u>default</u>		DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<u>multiple</u>		DEFAULT_VALUE
<u>value</u>		DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		<i>No</i>
<i>Other_Characteristics</i>		
Invalidates cache		<i>YES</i>
Container tag		<i>No</i>
Has Subtags		<i>No</i>
Nests		<i>Yes</i>

Tag expansion example:

```
[value name=example set=neato]  
<INPUT TYPE=checkbox NAME=neato VALUE=1 [checked name=neato value=1]>  
<INPUT TYPE=checkbox NAME=silly VALUE=1 [checked name=silly value=1]>  
<INPUT TYPE=checkbox NAME=neato VALUE=1 CHECKED>  
<INPUT TYPE=checkbox NAME=silly VALUE=1 >
```

4.13.2. Description

You can provide a "memory" for drop-down menus, radio buttons, and checkboxes with the `[checked]` and `[selected]` tags.

```
<INPUT TYPE=radio NAME=foo  
  VALUE=on [checked name=foo value=on default=1]>  
<INPUT TYPE=radio NAME=foo  
  VALUE=off [checked name=foo value=off]>
```

Interchange Tags Reference

This will output CHECKED if the variable `var_name` is equal to `value`. Not case sensitive unless the optional `case=1` parameter is used.

The `default` parameter, if true (non-zero and non-blank), will cause the box to be checked if the variable has never been defined.

Note that CHECKBOX items will never submit their value if not checked, so the box will not be reset. You must do something like:

```
<INPUT TYPE=checkbox NAME=foo
      VALUE=1 [checked name=foo value=1 default=1]>
[value name=foo set=""]
```

By default, the Values space (i.e. `[value foo]`) is checked -- if you want to use the volatile CGI space (i.e. `[cgi foo]`) use the option `cgi=1`.

Use the parameter `default=1` to specify that this checkbox should be marked CHECKED if the value/CGI variable has never been set.

If the parameter `multiple=1` is set, the `value` parameter can contain multiple (stacked) values that should be checked, separated by ASCII null characters ("`\0`" in Perl).

4.13.2.1. case

4.13.2.2. cgi

4.13.2.3. default

4.13.2.4. name

4.13.2.5. multiple

4.13.2.6. value

4.14. control

Returns named scratchpad field or copies named scratch variable to scratchpad. Returns value specified by 'default' attribute if scratchpad variable is undefined or empty. Calling without a name moves to next scratchpad. Calling without a name and 'reset=1' returns to first scratchpad page.

4.14.1. Summary

```
[control name default other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>default</u>	Value to return if scratchpad variable missing or empty	DEFAULT_VALUE
<u>name</u>	Name of scratchpad variable to set or return	DEFAULT_VALUE
<u>reset</u>	Resets scratchpad (i.e. <code>\$_::Control</code> array) by setting special scratch variable 'control_index' to 0. Control_index is an index into the <code>\$_::Control == \$Vend::Session->{control}</code> array of hashrefs.	DEFAULT_VALUE

Interchange Tags Reference

	• (must not specify name; may specify default)	
<u>set</u>	Copies named scratch variable (i.e., from \$::Scratch) to scratchpad with current control index.	DEFAULT_VALUE
Attributes	Default	
<u>interpolate (reparse)</u>	<i>No</i>	
Other_Characteristics		
Invalidates cache	<i>no</i>	
Container tag	<i>No</i>	
Has Subtags	<i>No</i>	
Nests	<i>Yes</i>	

Tag expansion example:

```
[control name default]
---
TAG RESULT
```

ASP-like Perl call:

```
$Tag->control( { default => VALUE_default
                name => VALUE_name
            }, $body );
```

or similarly with positional parameters,

```
$Tag->control(name,default, $attribute_hash_reference, $body);
```

4.14.2. Description

Returns named scratchpad field or copies named scratch variable to scratchpad. Returns value specified by 'default' attribute if scratchpad variable is undefined or empty. Calling without a name moves to next scratchpad. Calling without a name and 'reset=1' returns to first scratchpad page.

4.14.2.1. default

Value to return if scratchpad variable missing or empty

4.14.2.2. name

Name of scratchpad variable to set or return

4.14.2.3. reset

Resets scratchpad (i.e. \$::Control array) by setting special scratch variable 'control_index' to 0. Control_index is an index into the \$::Control == \$Vend::Session->{control} array of hashrefs.

- (must not specify name; may specify default)

4.14.2.4. set

Copies named scratch variable (i.e., from \$::Scratch) to scratchpad with current control index.

4.15. control_set

Bulk-sets scratchpad variables on the scratchpad page specified by 'index'. Note that, unlike [control], this does not copy values from scratch.

4.15.1. Summary

This example sets var_one, var_two and var_three in the scratchpad on page 5 (index begins with 0).

```
[control_set index=4]
  [var_one]var_one_value[/var_one]
  [var_two]var_two_value[/var_two]
  [var_three]var_three_value[/var_three]
[/control_set]
```

Parameters: **index**

Positional parameters in same order.

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [control_set] FOO [/control_set]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->control_set(
  {
    index => VALUE,
  },
  BODY
)
```

OR

```
$Tag->control_set($index, $ATTRHASH, $BODY);
[control_set index other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>index</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	

Interchange Tags Reference

<u>reparse</u>	<i>Yes</i>	
<i>Other Characteristics</i>		
Invalidates cache		<i>no</i>
Container tag		<i>Yes</i>
Has Subtags		<i>No</i>
Nests		<i>No</i>

Tag expansion example:

```
[control_set index]
---
  TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->control_set( { index => VALUE_index
}, $body );
```

or similarly with positional parameters,

```
$Tag->control_set(index, $attribute_hash_reference, $body);
```

4.15.2. Description

Bulk-sets scratchpad variables on the scratchpad page specified by 'index'. Note that, unlike [control], this does not copy values from scratch.

4.15.2.1. index

4.16. counter

4.16.1. Summary

Parameters: **file start date sql**

Positional parameters: **file**

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->counter(
{
  file => VALUE,
  sql => VALUE,
  start => VALUE,
  date => 'local' || 'gmt',
}
)
```

Interchange Tags Reference

OR

```
$Tag->counter($file, $ATTRHASH);
```

Attribute aliases

```
name ==> file  
[counter file]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>file</u>		DEFAULT_VALUE
<u>name</u>	Alias for file	DEFAULT_VALUE
<u>sql</u>	Asserts a SQL-based counter	DEFAULT_VALUE
<u>date</u>	Asserts a date-based counter	DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		
Invalidates cache	YES	
Container tag	No	
Has Subtags	No	
Nests	Yes	

Tag expansion example:

```
[counter file]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->counter( { file => VALUE_file, sql => 'table:seq', start => VALUE, } );
```

or similarly with positional parameters,

```
$Tag->counter(file, $attribute_hash_reference);
```

4.16.2. Description

Manipulates a persistent counter, by default incrementing it and returning the new value.

The counter value is stored in the specified file. If the file name begins with a "/" then it is an absolute path. Otherwise, it is relative to VendRoot. The default file is etc/counter. If the file does not exist, it is created and initialized to the value of the start parameter.

If the optional sql attribute is used, a SQL sequence will be used. Currently MySQL and Postgres are supported. The sequence must already exist. If no bypass parameter is sent, the table in the sequence callout (explained below) will be used and must be an Interchange table (i.e. set up with Database setting). If bypass is set, then the DSN for the sequence will be passed in the dsn parameter.

If the optional date attribute is used, a date-based counter will be made. It takes the form of the date in YYYYMMDD followed by the start value, by default 0001. When the date changes, the counter will flip

over to the next day and the beginning `start` value.

WARNING: This tag may not work under Safe, i.e. in embedded Perl.

Additional parameters:

4.16.2.1. `decrement=1`

Causes the counter to count down instead of up. This option is not applicable to SQL counters.

4.16.2.2. `start=50`

Causes a new counter to be created and to start from 50 (for example) if it did not exist before. This option is not applicable to SQL counters.

4.16.2.3. `value=1`

Shows the value of the counter without incrementing or decrementing it. This option is not applicable to SQL counters.

4.16.2.4. `sql="table:sequence"`

The table and sequence name of the SQL counter.

If the type of database is Postgres, the `table` is used to derive the database and the sequence will be a named sequence independent of the table; the sequence is incremented and accessed by "SELECT nextval('sequence_name')".

If the type of database is MySQL, an `AUTO_INCREMENT` key column is assumed and an insert of 0 followed by "select last_insert_id()" will increment then access the counter.

4.16.2.5. `date="local"`

Specifies the counter will be date-based with local time.

4.16.2.6. `date="gmt"`

Specifies the counter will be date-based with GMT.

4.16.2.7. `file`

4.16.3. SQL Counter Examples

To set up a Postgres counter, simply create a named sequence in the database:

```
CREATE SEQUENCE "foo" start 1 increment 1 maxvalue 2147483647 minvalue 1 cache 1
```

You will want to make sure you have an Interchange table that uses that database ("sometable" in the below example).

Then access it with:

Interchange Tags Reference

```
[counter sql="sometable:foo"]
```

You can create as many sequences as you like.

To set up a MySQL counter, add a table to your MySQL database in catalog.cfg or other place like dbconf/mysql:

```
Database sequence_name sequence_name.txt dbi:mysql:test_foundation
Database sequence_name COLUMN_DEF "id=int NOT NULL AUTO_INCREMENT PRIMARY KEY"
```

Make sure you set up the sequence.txt file if you want Interchange to create the table for you. Otherwise you can create the table yourself from a mysql client:

```
mysql> create table sequence_name(id int NOT NULL AUTO_INCREMENT PRIMARY KEY);
```

Then access it with:

```
[counter sql="sequence_name:sequence_name"]
```

Alternatively, you can create the table without Interchange definition as long as it is in the same database as an Interchange table:

```
mysql> create table sequence_name(id int NOT NULL AUTO_INCREMENT PRIMARY KEY);
```

Then access it by calling the Interchange-defined table name followed by the table that has the AUTO_INCREMENT key:

```
[counter sql="products:sequence_name"]
```

To set up an Oracle counter, create a sequence:

```
SQL> CREATE SEQUENCE foo START WITH 10000 INCREMENT BY 1
      MAXVALUE 2147483647 MINVALUE 1 CACHE 2;
```

Then access via a table already connected to Oracle, in below sometable:

```
[counter sql="sometable:foo"]
Database sequence_name sequence_name.txt dbi:mysql:test_foundation
Database sequence_name COLUMN_DEF "id=int NOT NULL AUTO_INCREMENT PRIMARY KEY"
```

Make sure you set up the sequence.txt file if you want Interchange to create the table for you. Otherwise you can create the table yourself from a mysql client:

```
mysql> create table sequence_name(id int NOT NULL AUTO_INCREMENT PRIMARY KEY);
```

Then access it with:

```
[counter sql="sequence_name:sequence_name"]
```

Alternatively, you can create the table without Interchange definition as long as it is in the same database as an Interchange table:

```
mysql> create table sequence_name(id int NOT NULL AUTO_INCREMENT PRIMARY KEY);
```

Interchange Tags Reference

Then access it by calling the Interchange–defined table name followed by the table that has the AUTO_INCREMENT key:

```
[counter sql="products:sequence_name"]
```

4.17. currency

4.17.1. Summary

Parameters: **convert noformat**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Interpolates **container text** by default.

This is a container tag, i.e. [currency] FOO [/currency]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP–like Perl call:

```
$Tag->currency(  
    {  
        convert => VALUE,  
        noformat => VALUE,  
    },  
    BODY  
)
```

OR

```
$Tag->currency($convert, $noformat, $BODY);  
[currency convert noformat]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>convert</u>		DEFAULT_VALUE
<u>noformat</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other Characteristics</i>		
Invalidates cache		no
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[currency convert noformat]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->currency( { convert => VALUE_convert
                 noformat => VALUE_noformat
               }, $body );
```

or similarly with positional parameters,

```
$Tag->currency(convert,noformat, $attribute_hash_reference, $body);
```

4.17.2. Description

When passed a value of a single number, formats it according to the currency specification. For instance:

```
[currency]4[/currency]
```

will display:

```
4.00
```

or something else depending on the *Locale* and *PriceCommas* settings. It can contain a `[calc]` region. If the optional "convert" parameter is set, it will convert the value according to `PriceDivide` for the current locale. If *Locale* is set to `fr_FR`, and *PriceDivide* for `fr_FR` is 0.167, the following sequence

```
[currency convert=1] [calc] 500.00 + 1000.00 [/calc] [/currency]
```

will cause the number 8.982,04 to be displayed.

4.17.2.1. convert

4.17.2.2. noformat

4.18. data

4.18.1. Summary

Main Parameters: **table field key**

Positional parameters in same order.

Additional parameters: hash foreign value

The attribute hash reference is passed to the subroutine after the parameters as the last argument. **This may mean that there are parameters not shown here.**

Must pass named parameter `interpolate=1` to cause interpolation.

Interchange Tags Reference

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->data(  
    {  
        table => VALUE,  
        field => VALUE,  
        key => VALUE,  
    }  
)
```

OR

```
$Tag->data($table, $field, $key, $ATTRHASH);
```

Attribute aliases

```
base ==> table  
code ==> key  
col ==> field  
column ==> field  
database ==> table  
name ==> field  
row ==> key  
[data table field key other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>	Alias for table	DEFAULT_VALUE
<u>code</u>	Alias for key	DEFAULT_VALUE
<u>col</u>	Alias for field	DEFAULT_VALUE
<u>column</u>	Alias for field	DEFAULT_VALUE
<u>database</u>	Alias for table	DEFAULT_VALUE
<u>field</u>		DEFAULT_VALUE
<u>hash</u>		DEFAULT_VALUE
<u>key</u>		DEFAULT_VALUE
<u>name</u>	Alias for field	DEFAULT_VALUE
<u>row</u>	Alias for key	DEFAULT_VALUE
<u>table</u>		DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>

<i>Other_Characteristics</i>	
Invalidates cache	<i>no</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

Interchange Tags Reference

```
[data table field key]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->data( { field => VALUE_field
             key  => VALUE_key
             table => VALUE_table
           });
```

or similarly with positional parameters,

```
$Tag->data(table,field,key, $attribute_hash_reference);
```

4.18.2. Description

Syntax: [data table=db_table column=column_name key=key filter="uc|lc|name|namecase|no_white|etc."* append=1* foreign="foreign_key_column"* value="value to set to"* increment=1*]

Returns the value of the field in a database table, or from the `session` namespace. If the optional **value** is supplied, the entry will be changed to that value. If the option `increment*` is present, the field will be atomically incremented with the value in **value**. Use negative numbers in `value` to decrement. The `append` attribute causes the value to be appended; and finally, the `filter` attribute is a set of Interchange filters that are applied to the data 1) after it is read; or 2) before it is placed in the table.

If a DBM-based database is to be modified, it must be flagged writable on the page calling the write tag. Use [tag flag write]products[/tag] to mark the `products` database writable, for example. **This must be done before ANY access to that table.**

In addition, the [data ...] tag can access a number of elements in the Interchange session database:

<code>accesses</code>	Accesses within the last 30 seconds
<code>arg</code>	The argument passed in a [page ...] or [area ...] tag
<code>browser</code>	The user browser string
<code>cybercash_error</code>	Error from last CyberCash operation
<code>cybercash_result</code>	Hash of results from CyberCash (access with usertag)
<code>host</code>	Interchange's idea of the host (modified by DomainTail)
<code>last_error</code>	The last error from the error logging
<code>last_url</code>	The current Interchange path_info
<code>logged_in</code>	Whether the user is logged in (add-on UserDB feature)
<code>pageCount</code>	Number of unique URLs generated
<code>prev_url</code>	The previous path_info
<code>referer</code>	HTTP_REFERER string
<code>ship_message</code>	The last error messages from shipping
<code>source</code>	Source of original entry to Interchange
<code>time</code>	Time (seconds since Jan 1, 1970) of last access
<code>user</code>	The REMOTE_USER string
<code>username</code>	User name logged in as (UserDB feature)

Note: Databases will hide session values, so don't name a database "session". or you won't be able to use the [data ...] tag to read them. Case is sensitive, so in a pinch you could call the database "Session", but it would be better not to use that name at all.

4.18.2.1. field

The name of the field whose value you want to fetch. Required unless returning the entire row in combination with the hash option.

4.18.2.2. foreign

To select a data element based on a foreign key, specify the foreign key column in this field. Allows selection of a data element or record based on a column that is not the primary key.

If the key is not unique, returns the first selected element.

From this table named "foo":

sku	name	partno	group	subgroup
AB	Item 1	1	A	1
AC	Item 2	2	A	2
AD	Item 3	3	B	1
AE	Item 4	4	C	1

These calls:

```
[data table=foo col=name key=AB]
[data table=foo col=name key=1 foreign=partno]
```

would both return "Item 1".

If the foreign parameter is a hash value, a single value matching the query—by—example set up by the hash is returned. For instance, from our example table "foo", the following

```
[data table=foo col=name key=1 foreign.group=A foreign.subgroup=2]
```

would return "Item 2".

If the query needs to be optimized in a particular order, you need to use custom code or the array form of foreign. In our table "foo", the following

```
[data table=foo col=name key=1 foreign.0="group=A" foreign.1="subgroup=2"]
```

also returns "Item 2".

4.18.2.3. hash

The hash option causes the data tag to return its results (the entire row, if you omit the field parameter) as a reference to a hash with column names as keys into the values of the row.

An example:

```
$row_hash = $Tag->data({
    table => 'products',
    key   => 'os28004',
    hash  => 1,
});
```

Interchange Tags Reference

You could then access desired values this way:

```
$out = 'Price: ' . $row_hash->{price};
```

4.18.2.4. key

The key that identifies the row containing the value(s) you want to fetch. Required.

4.18.2.5. table

The name of the Interchange-defined table you want to fetch data from. Required.

4.19. default

4.19.1. Summary

Parameters: **name default**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. This may mean that there are parameters not shown here.

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->default(  
  {  
    name => VALUE,  
    default => VALUE,  
  }  
)
```

OR

```
$Tag->default($name, $default, $ATTRHASH);  
[default name default other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>default</u>		DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		No
<i>Other Characteristics</i>		
Invalidates cache		YES

Interchange Tags Reference

Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[default name default]
---
  TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->default( { default => VALUE_default
               name  => VALUE_name
             }, $body );
```

or similarly with positional parameters,

```
$Tag->default(name,default, $attribute_hash_reference, $body);
```

4.19.2. Description

Returns the value of the user form variable `variable` if it is non-empty. Otherwise returns `default`, which is the string "default" if there is no default supplied. Got that? This tag is DEPRECATED anyway.

4.19.2.1. default

4.19.2.2. name

4.20. description

4.20.1. Summary

Parameters: **code base**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->description(
  {
    code => VALUE,
    base => VALUE,
  }
)
```


Interchange Tags Reference

)

OR

```
$Tag->description($code, $base);  
[description code base]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>		DEFAULT_VALUE
<u>code</u>		DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		No
<i>Other _Characteristics</i>		
Invalidates cache		no
Container tag		No
Has Subtags		No
Nests		Yes

Tag expansion example:

```
[description code base]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->description( { base => VALUE_base  
                  code => VALUE_code  
}, $body );
```

or similarly with positional parameters,

```
$Tag->description(code,base, $attribute_hash_reference, $body);
```

4.20.2. Description

Expands into the description of the product identified by code as found in the products database. This is the value of the database field that corresponds to the `catalog.cfg` directive `DescriptionField`. If there is more than one products file defined, they will be searched in order unless constrained by the optional argument **base**.

This tag is especially useful for multi-language catalogs. The `DescriptionField` directive can be set for each locale and point to a different database field; for example `desc_en` for English, `desc_fr` for French, etc.

4.20.2.1. base

4.20.2.2. code

4.21. discount

4.21.1. Summary

Parameters: **code**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [discount] FOO [/discount]. Nesting: NO

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->discount(
    {
        code => VALUE,
    },
    BODY
)
```

OR

```
$Tag->discount($code, $BODY);
[discount code]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>code</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other_Characteristics</i>		
Invalidates cache		YES
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[discount code]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->discount( { code => VALUE_code
```

```
}, $body );
```

or similarly with positional parameters,

```
$Tag->discount(code, $attribute_hash_reference, $body);
```

4.21.2. Description

Product discounts can be set upon display of any page. The discounts apply only to the customer receiving them, and are of one of three types:

1. A discount for one particular item code (code/key is the item-code)
2. A discount applying to all item codes (code/key is ALL_ITEMS)
3. A discount applied after all items are totaled
(code/key is ENTIRE_ORDER)

The discounts are specified via a formula. The formula is scanned for the variables \$q and \$s, which are substituted for with the item *quantity* and *subtotal* respectively. In the case of the item and all items discount, the formula must evaluate to a new subtotal for all items *of that code* that are ordered. The discount for the entire order is applied to the entire order, and would normally be a monetary amount to subtract or a flat percentage discount.

Discounts are applied to the effective price of the product, including any quantity discounts.

To apply a straight 20% discount to all items:

```
[discount ALL_ITEMS] $s * .8 [/discount]
```

or with named attributes:

```
[discount code=ALL_ITEMS] $s * .8 [/discount]
```

To take 25% off of only item 00-342:

```
[discount 00-342] $s * .75 [/discount]
```

To subtract \$5.00 from the customer's order:

```
[discount ENTIRE_ORDER] $s - 5 [/discount]
```

To reset a discount, set it to the empty string:

```
[discount ALL_ITEMS][discount]
```

Perl code can be used to apply the discounts. Here is an example of a discount for item code 00-343 which prices the *second* one ordered at 1 cent:

```
[discount 00-343]
return $s if $q == 1;
my $p = $s/$q;
my $t = ($q - 1) * $p;
$t .= 0.01;
return $t;
[/discount]
```

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If you want to display the discount amount, use the [item-discount] tag.

```
[item-list]
Discount for [item-code]: [item-discount]
[/item-list]
```

Finally, if you want to display the discounted subtotal in a way that doesn't correspond to a standard Interchange tag, you can use the [calc] tag:

```
[item-list]
Discounted subtotal for [item-code]: [currency][calc]
                                     [item-price noformat] * [item-quantity]
                                     [/calc][currency]
[/item-list]
```

4.21.2.1. code

4.22. dump

Dumps client connection information, cart contents, query value, contents of environment, session, and CGI with Data::Dumper to the page. This is useful for debugging.

4.22.1. Summary

No parameters.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->dump(
{
}
)
```

OR

```
$Tag->dump($);
[dump]
```

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>no</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>

Nests	<i>Yes</i>
-------	------------

Tag expansion example:

```
[dump]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->dump( {
}, $body );
```

or similarly with positional parameters,

```
$Tag->dump(, $attribute_hash_reference, $body);
```

4.22.2. Description

Dumps client connection information, cart contents, query value, contents of environment, session, and CGI with Data::Dumper to the page. This is useful for debugging.

4.23. ecml

Uses ECML (Electronic Commerce Markup Language) module to map Interchange forms/userdb to ECML checkout

4.23.1. Summary

```
[ecml name function other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>function</u>	ecml function (default = 'widget')	DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other Characteristics</i>		
Invalidates cache	<i>no</i>	
Container tag	<i>No</i>	
Has Subtags	<i>No</i>	
Nests	<i>Yes</i>	

Tag expansion example:

```
[ecml name function]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->ecml( { function => VALUE_function
              name   => VALUE_name
```

Interchange Tags Reference

```
}, $body );
```

or similarly with positional parameters,

```
$Tag->ecml(name,function, $attribute_hash_reference, $body);
```

4.23.2. Description

This package implements the ECML standard for the Interchange demo. ECML stands for "Electronic Commerce Modeling Language", but at this writing it is a simple standard for naming variables so that "electronic wallets" can pre-fill-in your checkout form based on users past purchase from other companies.

It translates into ECML from the following Interchange variables:

<i>ECML</i>	<i>Interchange variable</i>
Ecom_BillTo_Online_Email	b_email
Ecom_BillTo_Postal_City	b_city
Ecom_BillTo_Postal_CountryCode	b_country
Ecom_BillTo_Postal_Name_First	b_fname
Ecom_BillTo_Postal_Name_Last	b_lname
Ecom_BillTo_Postal_Name_Middle	b_mname
Ecom_BillTo_Postal_Name_Prefix	b_title
Ecom_BillTo_Postal_Name_Suffix	b_name_suffix
Ecom_BillTo_Postal_PostalCode	b_zip
Ecom_BillTo_Postal_StateProv	b_state
Ecom_BillTo_Postal_Street_Line1	b_address1
Ecom_BillTo_Postal_Street_Line2	b_address2
Ecom_BillTo_Postal_Street_Line3	b_address3
Ecom_BillTo_Telecom_Phone_Number	b_phone_day
Ecom_ConsumerOrderID	mv_order_number
Ecom_Payment_Card_ExpDate_Day	mv_credit_card_exp_day
Ecom_Payment_Card_ExpDate_Month	mv_credit_card_exp_month
Ecom_Payment_Card_ExpDate_Year	mv_credit_card_exp_year
Ecom_Payment_Card_Name	c_name
Ecom_Payment_Card_Number	mv_credit_card_number
Ecom_Payment_Card_Protocol	payment_protocols_available
Ecom_Payment_Card_Type	mv_credit_card_type
Ecom_Payment_Card_Verification	mv_credit_card_verify
Ecom_ReceiptTo_Online_Email	r_email
Ecom_ReceiptTo_Postal_City	r_city
Ecom_ReceiptTo_Postal_CountryCode	r_country
Ecom_ReceiptTo_Postal_Name_First	r_fname
Ecom_ReceiptTo_Postal_Name_Last	r_lname
Ecom_ReceiptTo_Postal_Name_Middle	r_mname

Interchange Tags Reference

Ecom_ReceiptTo_Postal_Name_Prefix	r_title
Ecom_ReceiptTo_Postal_Name_Suffix	r_name_suffix
Ecom_ReceiptTo_Postal_PostalCode	r_zip
Ecom_ReceiptTo_Postal_StateProv	r_state
Ecom_ReceiptTo_Postal_Street_Line1	r_address1
Ecom_ReceiptTo_Postal_Street_Line2	r_address2
Ecom_ReceiptTo_Postal_Street_Line3	r_address3
Ecom_ReceiptTo_Telecom_Phone_Number	r_phone
Ecom_SchemaVersion	ecml_version
Ecom_ShipTo_Online_Email	email
Ecom_ShipTo_Postal_City	city
Ecom_ShipTo_Postal_CountryCode	country
Ecom_ShipTo_Postal_Name_Combined	name
Ecom_ShipTo_Postal_Name_First	fname
Ecom_ShipTo_Postal_Name_Last	lname
Ecom_ShipTo_Postal_Name_Middle	mname
Ecom_ShipTo_Postal_Name_Prefix	title
Ecom_ShipTo_Postal_Name_Suffix	name_suffix
Ecom_ShipTo_Postal_PostalCode	zip
Ecom_ShipTo_Postal_StateProv	state
Ecom_ShipTo_Postal_Street_Line1	address1
Ecom_ShipTo_Postal_Street_Line2	address2
Ecom_ShipTo_Postal_Street_Line3	address3
Ecom_ShipTo_Telecom_Phone_Number	phone
Ecom_TransactionComplete	end_transaction_flag

Once the form variables are input and sent to Interchange, the [ecml function=mapback] tag will cause the input results to be mapped back from the ECML names to the Interchange names.

If you only have a name variable in your UserDB, the module will attempt to split it into first name and last name for ECML purposes and map the results back. If you have fname and lname, then it will not.

4.23.2.1. function

ecml function (default = 'widget')

4.23.2.2. name

4.24. either

The [either]this[or]that[/either] implements a check for the first non-zero, non-blank value. It splits on [or], and then parses each piece in turn. If a value returns true (in the Perl sense: non-zero, non-blank) then subsequent pieces will be discarded without interpolation.

4.24.1. Summary

```
[either]
  This
[or]
  That
[or]
  The other
[/either]
```

No parameters.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [either] FOO [/either]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->either(
  {
  },
  BODY
)
```

OR

```
$Tag->either($BODY);
[either]
```

<i>Attributes</i>	<i>Default</i>
<u>interpolate</u>	<i>No</i>
<u>reparse</u>	<i>Yes</i>
<i>Other_Characteristics</i>	
Invalidates cache	<i>no</i>
Container tag	<i>Yes</i>
Has Subtags	<i>No</i>
Nests	<i>No</i>

Tag expansion example:

```
[either]
---
  TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->either( {
}, $body );
```


or similarly with positional parameters,

```
$Tag->either(, $attribute_hash_reference, $body);
```

4.24.2. Description

NO Description

4.25. error

4.25.1. Summary

Parameters: **name**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. This may mean that there are parameters not shown here.

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->error(
{
    name => VALUE,
}
)
```

OR

```
$Tag->error($name, $ATTRHASH);
[error name other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		
Invalidates cache	no	
Container tag	No	
Has Subtags	No	
Nests	Yes	

Tag expansion example:

```
[error name]
```

```
---  
    TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->error( { name => VALUE_name  
}, $body );
```

or similarly with positional parameters,

```
$Tag->error(name, $attribute_hash_reference, $body);
```

4.25.2. Description

```
[error var options]  
    var is the error name, e.g. "session"
```

The [error ...] tag is designed to manage form variable checking for the Interchange submit form processing action. It works in conjunction with the definition set in `mv_order_profile`, and can generate error messages in any format you desire.

If the variable in question passes order profile checking, it will output a label, by default **bold** text if the item is required, or normal text if not (controlled by the `<require>` parameter. If the variable fails one or more order checks, the error message will be substituted into a template and the error cleared from the user's session.

(Below is as of 4.03, the equivalent in 4.02 is [if type=explicit compare="[error all=1 keep=1]" ... [/if].)

To check errors without clearing them, you can use the idiom:

```
[if errors]  
<FONT SIZE="+1" COLOR=RED>  
    There were errors in your form submission.  
</FONT>  
<BLOCKQUOTE>  
    [error all=1 show_error=1 joiner="<BR>"]  
</BLOCKQUOTE>  
[/if]
```

The options are:

4.25.2.1. all=1

Display all error messages, not just the one referred to by `<var>`. The default is only display the error message assigned to `<var>`.

`text=<optional string to embed the error message(s) in>`

place a "%s" somewhere in 'text' to mark where you want the error message placed, otherwise it's appended on the end. This option also implies `show_error`.

4.25.2.2. **joiner=char**

Character used to join multiple error messages. Default is '\n', a newline.

4.25.2.3. **keep=1**

keep=1 means don't delete the error messages after copy; anything else deletes them.

4.25.2.4. **show_error=1**

show_error=1 means return the error message text; otherwise just the number of errors found is returned.

4.25.2.5. **show_label=1**

show_label=1 causes the field label set by a previous [error] tag's std_label attribute (see below) to be included as part of the error message, like this:

```
First Name: blank
```

If no std_label was set, the variable name will be used instead. This can also be used in combination with show_var to show both the label and the variable name.

show_label was added in 4.7.0.

4.25.2.6. **show_var=1**

show_var=1 includes the name of the variable the error was found in as part of the error message, like this:

```
email: 'bob#nothing.net' not a valid email address
```

4.25.2.7. **std_label**

std_label=<label string for error message>

used with 'required' to display a standardized error format. The HTML formatting can be set via the global variable MV_ERROR_STD_LABEL with the default being:

```
<FONT COLOR=RED>{LABEL}<SMALL><I>(%s)</I></SMALL></FONT>
```

where {LABEL} is what you set std_label to and %s is substituted with the error message. This option can not be used with the text= option.

4.25.2.8. **required=1**

Specifies that this is a required field for formatting purposes. In the std_label format, it means the field will be bolded. If you specify your own label string, it will insert HTML anywhere you have {REQUIRED: HTML}, but only when the field is required.

4.25.2.9. name

4.26. export

Exports a database to a delimited text file (see also [import](#)).

4.26.1. Summary

```
[export table other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>	Alias for table	DEFAULT_VALUE
<u>database</u>	Alias for table	DEFAULT_VALUE
<u>delete</u>	If 'verify' attribute also set, deletes column specified by 'field' attribute rather than adding a column.	DEFAULT_VALUE
<u>field</u>	The column to add (or delete if delete and verify are true)	DEFAULT_VALUE
<u>file</u>	Filename to export to. Note that the NoAbsolute directive and other conditions may affect actual location of the output file.	DEFAULT_VALUE
<u>sort</u>	Output sorted rows (usage: sort="sort_field:sort_option") (see search/form variable 'mv_sort_option' for sort options)	DEFAULT_VALUE
<u>table</u>	The table to export	DEFAULT_VALUE
<u>type</u>	Specifies the [line, record] delimiter types. Either NOTES or one of the following: <pre> my %Delimiter = (2 => ["\n", "\n\n"], 3 => ["\n%%\n", "\n%%%\n"], 4 => ["CSV", "\n"], 5 => [' ', "\n"], 6 => ["\t", "\n"], 7 => ["\t", "\n"], 8 => ["\t", "\n"], LINE => ["\n", "\n\n"], '%%%' => ["\n%%%\n", "\n%%%\n"], '%%' => ["\n%%\n", "\n%%\n"], CSV => ["CSV", "\n"], PIPE => [' ', "\n"], TAB => ["\t", "\n"],); </pre> <ul style="list-style-type: none"> • If using NOTES <ul style="list-style-type: none"> ◆ notes_separator (defaults to "\f") ◆ notes_field (defaults to "notes_field") 	DEFAULT_VALUE
<u>verify</u>	must be true when deleting a column	DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		

Invalidates cache	<i>YES</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[export table]
---
1
```

ASP-like Perl call:

```
$Tag->export( { table => VALUE_table
}, $body );
```

or similarly with positional parameters,

```
$Tag->export(table, $attribute_hash_reference, $body);
```

4.26.2. Description

Exports 'table' to a delimited text file. See also [import](#) tag which imports files into databases.

4.26.2.1. delete

If 'verify' attribute also set, deletes column specified by 'field' attribute rather than adding a column.

4.26.2.2. field

The column to add (or delete if delete and verify are true)

4.26.2.3. file

Filename to export to. Note that the NoAbsolute directive and other conditions may affect actual location of the output file.

4.26.2.4. sort

Output sorted rows (usage: sort="*sort_field:sort_option*") (see search/form variable 'mv_sort_option' for sort options)

4.26.2.5. table

The table to export

4.26.2.6. type

Specifies the [line, record] delimiter types. Either NOTES or one of the following:

```
my %Delimiter = (
    2 => [ "\n", "\n\n" ],
```

```

3 => [ "\n%%\n", "\n%%\n" ],
4 => [ "CSV", "\n" ],
5 => [ '|', "\n" ],
6 => [ "\t", "\n" ],
7 => [ "\t", "\n" ],
8 => [ "\t", "\n" ],
LINE => [ "\n", "\n\n" ],
'%%%' => [ "\n%%\n", "\n%%\n" ],
'%%' => [ "\n%%\n", "\n%%\n" ],
CSV => [ "CSV", "\n" ],
PIPE => [ '|', "\n" ],
TAB => [ "\t", "\n" ],
);

```

- If using NOTES
 - ◆ notes_separator (defaults to "\f")
 - ◆ notes_field (defaults to "notes_field")

4.26.2.7. verify

must be true when deleting a column

4.27. field

4.27.1. Summary

Parameters: **name code**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```

$Tag->field(
{
  name => VALUE,
  code => VALUE,
}
)

```

OR

```

$Tag->field($name, $code);

```

Attribute aliases

```

col ==> name
column ==> name

```

Interchange Tags Reference

```
field ==> name
key ==> code
row ==> code
[field name code]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>code</u>		DEFAULT_VALUE
<u>col</u>	Alias for name	DEFAULT_VALUE
<u>column</u>	Alias for name	DEFAULT_VALUE
<u>field</u>	Alias for name	DEFAULT_VALUE
<u>key</u>	Alias for code	DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<u>row</u>	Alias for code	DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>no</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[field name code]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->field( { code => VALUE_code
              name => VALUE_name
            }, $body );
```

or similarly with positional parameters,

```
$Tag->field(name,code, $attribute_hash_reference, $body);
```

4.27.2. Description

Expands into the value of the field *name* for the product identified by *code* as found by searching the products database. It will return the first entry found in the series of *Product Files*, the products database. If you want to constrain it to a particular database, use the [data base name code] tag.

Note that if you only have one ProductFile products, which is the default, [field column key] is the same as [data products column key].

4.27.2.1. code

4.27.2.2. name

4.28. file

4.28.1. Summary

Parameters: **name type**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->file(
    {
        name => VALUE,
        type => VALUE,
    }
)
```

OR

```
$Tag->file($name, $type);
[file name type]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<u>type</u>		DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		<i>No</i>
<i>Other Characteristics</i>		
Invalidates cache		<i>no</i>
Container tag		<i>No</i>
Has Subtags		<i>No</i>
Nests		<i>Yes</i>

Tag expansion example:

```
[file name type]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->file( { name => VALUE_name
```



```

                                type => VALUE_type
}, $body );

```

or similarly with positional parameters,

```
$Tag->file(name,type, $attribute_hash_reference, $body);
```

4.28.2. Description

Inserts the contents of the named file. The file should normally be relative to the catalog directory — file names beginning with / or .. are not allowed if the Interchange server administrator has set *NoAbsolute* to Yes.

The optional `type` parameter will do an appropriate ASCII translation on the file before it is sent.

4.28.2.1. name

4.28.2.2. type

4.29. filter

4.29.1. Summary

Parameters: **op**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter `interpolate=1` to cause interpolation.

This is a container tag, i.e. `[filter] FOO [/filter]`. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```

$Tag->filter(
{
    op => VALUE,
},
    BODY
)

```

OR

```

$Tag->filter($op, $BODY);
[filter op]

```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
-------------------	--------------------	----------------

Interchange Tags Reference

<u>op</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
<i>Other_Characteristics</i>		
Invalidates cache		<i>no</i>
Container tag		<i>Yes</i>
Has Subtags		<i>No</i>
Nests		<i>No</i>

Tag expansion example:

```
[filter lc]UPPER CASE YOU WANT TO SEE AS LOWER CASE[/filter]
```

Produces:

```
upper case you want to see as lower case
```

ASP-like Perl call:

```
$Tag->filter( { op => VALUE_op  
, $body } );
```

or similarly with positional parameters,

```
$Tag->filter(op, $attribute_hash_reference, $body);
```

4.29.2. Description

Applies any of Interchange's standard filters to an arbitrary value, or you may define your own. The filters are also available as parameters to the `cgi`, `data`, and `value` tags.

Filters can be applied in sequence and as many as needed can be applied.

Here is an example. If you store your author or artist names in the database "LAST, First" so that they sort properly, you still might want to display them normally as "First Last". This call

```
[filter op="name namecase"]WOOD, Grant[/filter]
```

will display as

```
Grant Wood
```

Another way to do this would be:

```
[data table=products column=artist key=99-102 filter="name namecase"]
```

Filters available include:

4.29.2.1. Length filter

If you pass just a numeric argument, filter will return only first N characters. For example:

```
[filter 5]Interchange[/filter]
```

results in:

"Inter"

By appending a ".", you can direct Interchange to append an ellipsis:

```
[filter 5.]Interchange[/filter]
```

results in:

"Inter..."

```

    if (/^(\d+)(\.*?)$/) {
        substr($value, $1) = $2 ? '...' : ''
        if length($value) > $1;
    }
    next;
}

```

4.29.2.2. cgi

Returns the value of the CGI variable. Useful for starting a filter sequence with a seed value.

```

'cgi' => sub {
    return $CGI::values(shift);
},

```

4.29.2.3. digits

Returns only digits.

```

'digits' => sub {
    my $val = shift;
    $val =~ s/\D+//g;
    return $val;
},

```

4.29.2.4. digits_dot

Returns only digits and periods, i.e. [0–9]. Useful for decommifying numbers.

```

'digits_dot' => sub {
    my $val = shift;
    $val =~ s/[^\d.]+//g;
    return $val;
},

```

4.29.2.5. dos

Turns linefeeds into carriage–return / linefeed pairs.

```
'dos' => sub {
    my $val = shift;
    $val =~ s/\r?\n/\r\n/g;
    return $val;
},
```

4.29.2.6. entities

Changes < to <; " to "; etc.

```
'entities' => sub {
    return HTML::Entities::encode(shift);
},
```

4.29.2.7. gate

Performs a security screening by testing to make sure a corresponding scratch variable has been set.

```
'gate' => sub {
    my ($val, $var) = @_;
    return '' unless $::Scratch->{$var};
    return $val;
},
```

4.29.2.8. lc

Lowercases the text.

```
'lc' => sub {
    return lc(shift);
},
```

4.29.2.9. lookup

Looks up an item in a database based on the passed table and column. Call would be:

```
[filter op="uc lookup.country.name"]US[/filter]
```

This would be the equivalent of [data table=country column=name key=US].

```
'lookup' => sub {
    my ($val, $tag, $table, $column) = @_;
    return tag_data($table, $column, $val) || $val;
},
```

4.29.2.10. mac

Changes newlines to carriage returns.

```
'mac' => sub {
    my $val = shift;
```

Interchange Tags Reference

```
$val =~ s/\r?\n|\r\n?/\r/g;
return $val;
},
```

4.29.2.11. name

Transposes a LAST, First name pair.

```
'name' => sub {
    my $val = shift;
    return $val unless $val =~ /,/;
    my($last, $first) = split /\s*,\s*/, $val, 2;
    return "$first $last";
},
```

4.29.2.12. namecase

Namecases the text. Only works on values that are uppercase in the first letter, i.e. [filter op=namecase]LEONARDO da Vinci[/filter] will return "Leonardo da Vinci".

```
'namecase' => sub {
    my $val = shift;
    $val =~ s/([A-Z]\w+)/\L\u$1/g;
    return $val;
},
```

4.29.2.13. no_white

Strips all whitespace.

```
'no_white' => sub {
    my $val = shift;
    $val =~ s/\s+//g;
    return $val;
},
```

4.29.2.14. pagefile

Strips leading slashes and dots.

```
'pagefile' => sub {
    $_[0] =~ s:^[./]+::;
    return $_[0];
},
```

4.29.2.15. sql

Change single-quote characters into doubled versions, i.e. ' becomes ".

```
'sql'      => sub {
    my $val = shift;
    $val =~ s/':':g; # '
    return $val;
},
```

4.29.2.16. strip

Strips leading and trailing whitespace.

```
'strip' => sub {
    my $val = shift;
    $val =~ s/^\s+//;
    $val =~ s/\s+$//;
    return $val;
},
```

4.29.2.17. text2html

Rudimentary HTMLizing of text.

```
'text2html' => sub {
    my $val = shift;
    $val =~ s|\r?\n\r?\n|<P>|;
    $val =~ s|\r?\n|<BR>|;
    return $val;
},
```

4.29.2.18. uc

Uppercases the text.

```
'uc' => sub {
    return uc(shift);
},
```

4.29.2.19. unix

Removes those crufty carriage returns.

```
'unix' => sub {
    my $val = shift;
    $val =~ s/\r?\n/\n/g;
    return $val;
},
```

4.29.2.20. urlencode

Changes non-word characters (except colon) to %3c notation.

```
'urlencode' => sub {
    my $val = shift;
    $val =~ s|[^w:]|sprintf "%%%02x", ord $1|eg;
    return $val;
},
```

4.29.2.21. value

Returns the value of the user session variable. Useful for starting a filter sequence with a seed value.

```
'value' => sub {
    return $::Values->(shift);
},
```

```
},
```

4.29.2.22. word

Only returns word characters. Locale does apply if collation is properly set.

```
'word' => sub {
    my $val = shift;
    $val =~ s/\W+//g;
    return $val;
},
```

You can define your own filters in a [GlobalSub](#) (or Sub or ActionMap):

```
package Vend::Interpolate;

$Filter{reverse} = sub { $val = shift; return scalar reverse $val };
```

That filter will reverse the characters sent.

The arguments sent to the subroutine are the value to be filtered, any associated variable or tag name, and any arguments appended to the filter name with periods as the separator.

A `[filter op=lookup.products.price]99-102[/filter]` will send ('99-102', undef, 'products', 'price') as the parameters. Assuming the value of the user variable `foo` is `bar`, the call `[value name=foo filter="lookup.products.price.extra"]` will send ('bar', 'foo', 'products', 'price', 'extra').

4.29.2.23. op

4.30. flag

Controls Interchange flags. For example, flags affect database access and transactions for those databases able to support these features. See also the [\[tag\]](#) tag.

4.30.1. Summary

`[flag type]`

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
build	Forces build of static Interchange page specified by the name attribute	DEFAULT_VALUE
checkhtml		DEFAULT_VALUE
commit	Attempts to commit transactions	DEFAULT_VALUE
flag	Alias for type	DEFAULT_VALUE
name	Alias for type	DEFAULT_VALUE
read	Flags the table read-only	DEFAULT_VALUE
rollback	Attempts to rollback transactions	DEFAULT_VALUE
show	Normally, the <code>[flag]</code> tag returns nothing to the page. Setting 'show=1' causes the tag to return status, if any.	DEFAULT_VALUE
table	Alias for tables	DEFAULT_VALUE

Interchange Tags Reference

<u>tables</u>	The name of the table to flag • 'table' is an alias	DEFAULT_VALUE
<u>transactions</u>	Reopens the database in transactions mode if <u>Safe.pm</u> is not active (e.g., in a global subroutine, usertag or [<u>perl</u> global=1] tag). The limitation exists because it is not possible to reopen a database within <u>Safe.pm</u> .	DEFAULT_VALUE
<u>type</u>		DEFAULT_VALUE
<u>value</u>	The boolean value of the flag	DEFAULT_VALUE
<u>write</u>	Flags the table writable by default (or read-only if you also set the value=0 attribute)	DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>YES</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[flag type]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->flag( { type => VALUE_type
}, $body );
```

or similarly with positional parameters,

```
$Tag->flag(type, $attribute_hash_reference, $body);
```

4.30.2. Description

The `flag` tag controls database access and transactions.

If a DBM-based database is to be modified, it must be flagged writable on the page calling the `write` tag.

For example, you can call

```
[flag type=write value=1 table=products]
```

to mark the `products` DBM database writable. **This must be done before ANY access to that table.**

Note that SQL databases are always writable if allowed by the SQL database itself, and in-memory databases will never be written.

Using `[flag build]` forces static build of a page, even if it contains dynamic elements.

4.30.2.1. build

Forces build of static Interchange page specified by the name attribute

4.30.2.2. checkhtml

4.30.2.3. commit

Attempts to commit transactions

4.30.2.4. read

Flags the table read-only

4.30.2.5. rollback

Attempts to rollback transactions

4.30.2.6. show

Normally, the [flag] tag returns nothing to the page. Setting 'show=1' causes the tag to return status, if any.

4.30.2.7. tables

The name of the table to flag

- 'table' is an alias

4.30.2.8. transactions

Reopens the database in transactions mode if Safe.pm is not active (e.g., in a global subroutine, usertag or [perl global=1] tag). The limitation exists because it is not possible to reopen a database within Safe.pm.

4.30.2.9. type

4.30.2.10. value

The boolean value of the flag

4.30.2.11. write

Flags the table writable by default (or read-only if you also set the value=0 attribute)

4.31. fly-list

4.31.1. Summary

Parameters: **code base**

Positional parameters in same order.

Interchange Tags Reference

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [fly-list] FOO [/fly-list]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->fly_list(  
    {  
        code => VALUE,  
        base => VALUE,  
    },  
    BODY  
)
```

OR

```
$Tag->fly_list($code, $base, $BODY);  
[fly-list code base]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>		DEFAULT_VALUE
<u>code</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other_Characteristics</i>		
Invalidates cache		no
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[fly-list code base]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->fly_list( { base => VALUE_base  
                code => VALUE_code  
            }, $body );
```

or similarly with positional parameters,

```
$Tag->fly_list(code,base, $attribute_hash_reference, $body);
```

4.31.2. Description

Syntax: `[fly-list prefix=tag_prefix* code=code*]`

Defines an area in a random page which performs the flypage lookup function, implementing the tags below.

```
[fly-list]
  (contents of flypage.html)
[/fly-list]
```

If you place the above around the contents of the demo flypage, in a file named `flypage2.html`, it will make these two calls display identical pages:

```
[page 00-0011] One way to display the Mona Lisa </a>
[page flypage2 00-0011] Another way to display the Mona Lisa </a>
```

If you place a `[fly-list]` tag alone at the top of the page, it will cause any page to act as a flypage.

By default, the prefix is `item`, meaning the `[item-code]` tag will display the code of the item, the `[item-price]` tag will display price, etc. But if you use the prefix, i.e. `[fly-list prefix=fly]`, then it will be `[fly-code]`; `prefix=foo` would cause `[foo-code]`, etc.

4.31.2.1. base

4.31.2.2. code

4.32. fly-tax

4.32.1. Summary

Parameters: **area**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->fly_tax(
  {
    area => VALUE,
  }
)
```

OR

Interchange Tags Reference

```
$Tag->fly_tax($area);  
[fly-tax area]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>area</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		
Invalidates cache	no	
Container tag	No	
Has Subtags	No	
Nests	Yes	

Tag expansion example:

```
[fly-tax area]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->fly_tax( { area => VALUE_area  
, $body } );
```

or similarly with positional parameters,

```
$Tag->fly_tax(area, $attribute_hash_reference, $body);
```

4.32.2. Description

Builds a tax rate from TAXAREA, TAXRATE, and TAXSHIPPING Variable values, and the SalesTax directive value.

4.32.2.1. area

4.33. goto

Skips page content between [goto *name*] and [label *name*]. Note that the goto tag is not interpreted in the standard way, and you cannot use the '\$Tag->goto()' Perl syntax. Note also that skipping endtags with goto will probably break your page.

4.33.1. Summary

```
[goto name=label_name if=condition]  
  content to skip  
[label name=label_name]
```

or positionally,

```
[goto name if]  
  content to skip
```

Interchange Tags Reference

[label name]

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>	The name set in the corresponding [label] tag	<i>none</i>
<u>if</u>	Condition for goto. Should evaluate to truth value before tag is parsed.	<i>true</i>
Other Characteristics		
Container tag	No, but you use it like this: [goto name= <i>label_name</i> if= <i>condition</i>] <i>body text</i> [label <i>label_name</i>]	
Has Subtags	[label] interpreted by goto	

ASP-like Perl call:

No Perl call available (Note that this tag is not parsed in the standard way).

4.33.2. Description

Skips page content between [goto *name*] and [label *name*]. Note that the goto tag is not interpreted in the standard way, and you cannot use the '\$Tag->goto()' Perl syntax. Note also that skipping endtags with goto will probably break your page.

The correspondingly named [label] tag marks the end of the page content the goto should skip. Note that the [label] tag is not an end tag, but simply a marker for the end of the text to skip.

Technical note (Interchange 4.8): This tag may not work properly if you have more than one goto/label pair on a page.

4.33.2.1. name

This should match the name set in a [label] tag *after* the goto tag in the page (i.e., don't create loops).

4.33.2.2. if

Condition for goto. If the argument to 'if' is true, the tag will skip the text between the goto and <label>. Note that the tag itself does not evaluate the condition. The condition must evaluate to a true or false value before the goto tag processes it.

For example, this will not execute the goto:

```
[set go]0[/set]
[goto name="there" if="[scratch go]"]
```

4.34. handling

4.34.1. Summary

Parameters: **mode**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. This may mean that there are parameters not shown here.

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->handling(
{
    mode => VALUE,
}
)
```

OR

```
$Tag->handling($mode, $ATTRHASH);
```

Attribute aliases

```

    carts ==> cart
    modes ==> mode
    name ==> mode
    tables ==> table
[handling mode other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>carts</u>	Alias for cart	DEFAULT_VALUE
<u>mode</u>		DEFAULT_VALUE
<u>modes</u>	Alias for mode	DEFAULT_VALUE
<u>name</u>	Alias for mode	DEFAULT_VALUE
<u>tables</u>	Alias for table	DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		<i>No</i>
<i>Other Characteristics</i>		
Invalidates cache		<i>YES</i>
Container tag		<i>No</i>
Has Subtags		<i>No</i>
Nests		<i>Yes</i>

Tag expansion example:

Interchange Tags Reference

```
[handling mode]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->handling( { mode => VALUE_mode
}, $body );
```

or similarly with positional parameters,

```
$Tag->handling(mode, $attribute_hash_reference, $body);
```

4.34.2. Description

Calculates and inserts handling costs. Accepts the same noformat and convert arguments as the shipping tag.

4.34.2.1. cart

4.34.2.2. mode

4.34.2.3. table

4.35. harness

Test harness block. Similar to try/catch. Interprets the body text and checks the return value against expected and explicitly bad cases.

Returns DIED, OK, or NOT OK message along with your result if not the expected value.

4.35.1. Summary

```
[harness other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>expected</u>	Tagname for delimiting your expected return value (default "OK")	DEFAULT_VALUE
<u>name</u>	This will appear in your output message (useful for distinguishing harness tags from one another) (default "testnnn")	DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
<i>Other_Characteristics</i>		
Invalidates cache	<i>no</i>	
Container tag	<i>Yes</i>	
Has Subtags	<i>No</i>	
Nests	<i>No</i>	

Tag expansion example:

```
[harness]
```

```
---
  TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->harness( {
}, $body );
```

or similarly with positional parameters,

```
$Tag->harness(, $attribute_hash_reference, $body);
```

4.35.2. Description

Test harness block. Similar to try/catch. Interprets the body text and checks the return value against expected and explicitly bad cases.

Returns DIED, OK, or NOT OK message along with the harness name and your result if not the expected value.

4.35.2.1. expected

Tagname for delimiting your expected return value (default "OK")

4.35.2.2. name

This will appear in your output message (useful for distinguishing harness tags from one another) (default "testnnn")

4.36. href

Alias for [\[area\]](#) tag.

4.37. html-table

Builds an HTML table

4.37.1. Summary

```
[html-table other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>columns</u>	Whitespace-delimited list of columns	DEFAULT_VALUE
<u>delimiter</u>	Line delimiter to use if tag body is delimited text rather than an array reference (default "\t")	DEFAULT_VALUE
<u>fc</u>	HTML attributes for <TD> in the first cell	DEFAULT_VALUE
<u>fr</u>	HTML attributes for <TR> in the first row	DEFAULT_VALUE
<u>record_delim</u>	Record delimiter to use if tag body is delimited text rather than an array reference (default "\n")	DEFAULT_VALUE

Interchange Tags Reference

<u>td</u>	HTML attributes for <TD>		DEFAULT_VALUE
<u>th</u>	HTML attributes for <TH>		DEFAULT_VALUE
<u>tr</u>	HTML attributes for <TR>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>		
<u>interpolate</u>	<i>No</i>		
<u>reparse</u>	<i>Yes</i>		
<i>Other Characteristics</i>			
Invalidates cache		<i>no</i>	
Container tag		<i>Yes</i>	
Has Subtags		<i>No</i>	
Nests		<i>No</i>	

Tag expansion example:

```
[html-table]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->html_table( {
}, $body );
```

or similarly with positional parameters,

```
$Tag->html_table(, $attribute_hash_reference, $body);
```

4.37.2. Description

Builds an HTML table

4.37.2.1. columns

Whitespace-delimited list of columns

4.37.2.2. delimiter

Line delimiter to use if tag body is delimited text rather than an array reference (default "\t")

4.37.2.3. fc

HTML attributes for <TD> in the first cell

4.37.2.4. fr

HTML attributes for <TR> in the first row

4.37.2.5. record_delim

Record delimiter to use if tag body is delimited text rather than an array reference (default "\n")

4.37.2.6. td

HTML attributes for <TD>

4.37.2.7. th

HTML attributes for <TH>

4.37.2.8. tr

HTML attributes for <TR>

4.38. if**4.38.1. Summary**

Parameters: **type term op compare**

THIS TAG HAS SPECIAL POSITIONAL PARAMETER HANDLING.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [if] FOO [/if]. Nesting: NO

Invalidates cache: **YES**

Called Routine:

Called Routine for positional:

ASP-like Perl call:

Not applicable. Any [if ...] call can be better and more efficiently done with Perl.

Attribute aliases

```
base ==> type
comp ==> compare
condition ==> compare
operator ==> op
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>	Alias for type	DEFAULT_VALUE
<u>comp</u>	Alias for compare	DEFAULT_VALUE

Interchange Tags Reference

<u>compare</u>		DEFAULT_VALUE
<u>condition</u>	Alias for compare	DEFAULT_VALUE
<u>op</u>		DEFAULT_VALUE
<u>operator</u>	Alias for op	DEFAULT_VALUE
<u>term</u>		DEFAULT_VALUE
<u>type</u>		DEFAULT_VALUE
Attributes	Default	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
Other Characteristics		
Invalidates cache		<i>YES</i>
Container tag		<i>Yes</i>
Has Subtags		<i>No</i>
Nests		<i>No</i>

Tag expansion example:

```
[if type term op compare]
---
  TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->if( { compare => VALUE_compare
          op => VALUE_op
          term => VALUE_term
          type => VALUE_type
        }, $body );
```

or similarly with positional parameters,

```
$Tag->if(type,term,op,compare, $attribute_hash_reference, $body);
```

4.38.2. Description

Named call example: [if type="type" term="field" op="op" compare="compare"]

Positional call example: [if type field op compare]

negated: [if type="!type" term="field" op="op" compare="compare"]

Positional call example: [if !type field op compare]

Allows conditional building of HTML based on the setting of various Interchange session and database values. The general form is:

```
[if type term op compare]
[then]
```

If true, this is printed on the document.
The [then] [/then] is optional in most cases. If ! is prepended to the type

Interchange Tags Reference

setting, the sense is reversed and
this will be output for a false condition.

```
[/then]
[elsif type term op compare]
    Optional, tested when if fails
[/elsif]
[else]
    Optional, printed when all above fail
[/else]
[/if]
```

The `[if]` tag can also have some variants:

```
[if type=explicit compare=`$perl_code`]
    Displayed if valid Perl CODE returns a true value.
[/if]
```

You can do some Perl-style regular expressions:

```
[if value name =~ /^mike/]
    This is the if with Mike.
[elsif value name =~ /^sally/]
    This is an elsif with Sally.
[/elsif]
[elsif value name =~ /^pat/]
    This is an elsif with Pat.
[/elsif]
[else]
    This is the else, no name I know.
[/else]
[/if]
```

While named parameter tag syntax works for `[if ...]`, it is more convenient to use positional calls in most cases. The only exception is if you are planning on doing a test on the results of another tag sequence:

```
[if value name =~ /[value b_name]/]
    Shipping name matches billing name.
[/if]
```

Oops! This will not work. You must do instead

```
[if base=value term=name op="=~" compare="/[value b_name]/"]
    Shipping name matches billing name.
[/if]
```

or better yet

```
[if type=explicit compare=`
    $Values->{name} =~ /$Values->{b_name}/
`]
    Shipping name matches billing name.
[/if]
```

Interchange also supports a limited `[and ...]` and `[or ...]` capability:

```
[if value name =~ /Mike/]
[or value name =~ /Jean/]
Your name is Mike or Jean.
```

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```
[/if]

[if value name =~ /Mike/]
[and value state =~ /OH/]
Your name is Mike and you live in Ohio.
[/if]
```

If you wish to do very complex AND and OR operations, you will have to use `[if explicit]` or better yet embedded Perl/ASP. This allows complex testing and parsing of values.

There are many test targets available:

4.38.2.1. config Directive

The Interchange configuration variables. These are set by the directives in your Interchange configuration file (or the defaults).

```
[if config CreditCardAuto]
Auto credit card validation is enabled.
[/if]
```

4.38.2.2. data database::field::key

The Interchange databases. Retrieves a field in the database and returns true or false based on the value.

```
[if data products::size::99-102]
There is size information.
[else]
No size information.
[/else]
[/if]

[if data products::size::99-102 =~ /small/i]
There is a small size available.
[else]
No small size available.
[/else]
[/if]
```

4.38.2.3. discount

Checks to see if a discount is present for an item.

```
[if discount 99-102]
Item is discounted.
[/if]
```

4.38.2.4. explicit

A test for an explicit value. If Perl code is placed between a `[condition]` `[/condition]` tag pair, it will be used to make the comparison. Arguments can be passed to import data from user space, just as with the `[perl]` tag.

```
[if explicit]
[condition]
    $country = '[value country]';
    return 1 if $country =~ /u\.?s\.?a?/i;
[/condition]
[/if]
```

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```
        return 0;
[/condition]
You have indicated a US address.
[else]
You have indicated a non-US address.
[/else]
[/if]
```

This example is a bit contrived, as the same thing could be accomplished with `[if value country =~ /u\.?s\.?a?/i]`, but you will run into many situations where it is useful.

This will work for *Variable* values:

```
[if type=explicit compare="__MYVAR__"] .. [/if]
```

However, note that the 'compare' option is equivalent to the `[condition]` block in that both evaluate as Perl code. That means you need to watch out when you put in user-supplied values (so that users can't inject Perl code on your server) and data from your own variables or tables which may look different than you expected.

For example, say you're in a loop checking whether at least one of the fields 'foo' and 'bar' has a value ("true" according to Perl):

```
[if type=explicit compare="[loop-param foo][loop-param bar]"]
```

Most of the time this works fine. But if 'foo' contains a string beginning with '0', such as '0009', Perl will try to interpret it as an octal number, where the digit '9' is invalid, resulting in this unexpected error in the catalog error log:

```
Bad if 'explicit    0009': Illegal octal digit '9' at (eval 155) line 1, at end of line
```

A safer way to check is:

```
[if type=explicit compare="q{[loop-param foo][loop-param bar]}"]
```

Although then your data should not contain a `}`. To be extra safe you can surround your interpolated data with a `[filter X] ... [/filter]` tag pair appropriate for the quoting method you've used.

4.38.2.5. file

Tests for existence of a file. Useful for placing image tags only if the image is present.

```
[if type=file term="/home/user/www/images/[item-code].gif"]
<IMG SRC="[item-code].gif">
[/if]
```

The `file` test requires that the *SafeUntrap* directive contains `ftfile` (which is the default).

4.38.2.6. items

The Interchange shopping carts. If not specified, the cart used is the main cart. Usually used as a litmus test to see if anything is in the cart, for example:

```
[if items]You have items in your shopping cart.[/if]
```

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```
[if items layaway]You have items on layaway.[/if]
```

4.38.2.7. ordered

Order status of individual items in the Interchange shopping carts. If not specified, the cart used is the main cart. The following items refer to a part number of 99–102.

```
[if ordered 99-102] Item 99-102 is in your cart. [/if]
  Checks the status of an item on order, true if item
  99-102 is in the main cart.
```

```
[if ordered 99-102 layaway] ... [/if]
  Checks the status of an item on order, true if item
  99-102 is in the layaway cart.
```

```
[if ordered 99-102 main size] ... [/if]
  Checks the status of an item on order in the main cart,
  true if it has a size attribute.
```

```
[if ordered 99-102 main size =~ /large/i] ... [/if]
  Checks the status of an item on order in the main cart,
  true if it has a size attribute containing 'large'.
```

To make sure it is exactly large, you could use:

```
[if ordered 99-102 main size eq 'large'] ... [/if]
```

4.38.2.8. pragma

The Interchange Pragma settings, set with the [the catalog.cfg manpage](#) directive Pragma or with [pragma name].

```
[if pragma dynamic_variables]
  __THE_VARIABLE__
[else]
[data table=variable column=Variable key=THE_VARIABLE]
[/else]
[/if]
```

4.38.2.9. scratch

The Interchange scratchpad variables, which can be set with the [set name]value[/set] element.

```
[if scratch mv_separate_items]
ordered items will be placed on a separate line.
[else]
ordered items will be placed on the same line.
[/else]
[/if]
```

4.38.2.10. session

the Interchange session variables. of particular interest are *login*, *frames*, *secure*, and *browser*.

4.38.2.11. validcc

a special case, takes the form `[if validcc no type exp_date]`. evaluates to true if the supplied credit card number, type of card, and expiration date pass a validity test. does a Luhn-10 calculation to weed out typos or phony card numbers. Uses the standard `CreditCardAuto` variables for targets if nothing else is passed.

4.38.2.12. value

the Interchange user variables, typically set in search, control, or order forms. Variables beginning with `mv_` are Interchange special values, and should be tested/used with caution.

The *field* term is the specifier for that area. For example, `[if session logged_in]` would return true if the `logged_in` session parameter was set.

As an example, consider buttonbars for frame-based setups. It would be nice to display a different buttonbar (with no frame targets) for sessions that are not using frames:

```
[if scratch frames]
  __BUTTONBAR_FRAMES__
[else]
  __BUTTONBAR__
[/else]
[/if]
```

Another example might be the when search matches are displayed. If you use the string `'[value mv_match_count] titles found'`, it will display a plural for only one match. Use:

```
[if value mv_match_count != 1]
  [value mv_match_count] matches found.
[else]
  Only one match was found.
[/else]
[/if]
```

The *op* term is the compare operation to be used. Compare operations are as in Perl:

```
== numeric equivalence
eq  string equivalence
>  numeric greater-than
gt  string greater-than
<  numeric less-than
lt  string less-than
!= numeric non-equivalence
ne  string non-equivalence
```

Any simple perl test can be used, including some limited regex matching. More complex tests are best done with `[if explicit]`.

4.38.2.13. [then] text [/then]

This is optional if you are not nesting if conditions, as the text immediately following the `[if ...]` tag is used as the conditionally substituted text. If nesting `[if ...]` tags you should use a `[then][/]then]` on any outside conditions to ensure proper interpolation.

4.38.2.14. [elseif type field op* compare*]

named attributes: [elseif type="type" term="field" op="op" compare="compare"]

Additional conditions for test, applied if the initial [if ..] test fails.

4.38.2.15. [else] text [/else]

The optional else-text for an if or [if-field] conditional.

4.38.2.16. [condition] text [/condition]

Only used with the [if explicit] tag. Allows an arbitrary expression **in Perl** to be placed inside, with its return value interpreted as the result of the test. If arguments are added to [if explicit args], those will be passed as arguments are in the [perl] construct.

4.38.2.17. compare**4.38.2.18. op****4.38.2.19. term****4.38.2.20. type****4.39. import****4.39.1. Summary**

Parameters: **table type**

Positional parameters in same order.

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Interpolates **container text** by default.

This is a container tag, i.e. [import] FOO [/import]. Nesting: NO

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->import(
    {
        table => VALUE,
        type => VALUE,
    },
    BODY
```

)

OR

```
$Tag->import($table, $type, $ATTRHASH, $BODY);
```

Attribute aliases

```
base ==> table
database ==> table
[import table type other_named_attributes]
```

Parameters	Description	Default
base	Alias for table	DEFAULT_VALUE
database	Alias for table	DEFAULT_VALUE
table		DEFAULT_VALUE
type		DEFAULT_VALUE
Attributes	Default	
interpolate	No	
reparse	Yes	
Other_Characteristics		
Invalidates cache		YES
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[import table type]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->import( { table => VALUE_table
               type => VALUE_type
             }, $body );
```

or similarly with positional parameters,

```
$Tag->import(table,type, $attribute_hash_reference, $body);
```

4.39.2. Description

Named attributes:

```
[import table=table_name
  type=(TAB|PIPE|CSV|%%|LINE)
  continue=(NOTES|UNIX|DITTO)
  separator=c]
```

Interchange Tags Reference

Import one or more records into a database. The `type` is any of the valid Interchange delimiter types, with the default being defined by the setting of the database *DELIMITER*. The table must already be a defined Interchange database table; it cannot be created on the fly. (If you need that, it is time to use SQL.)

The `type` of `LINE` and `continue` setting of `NOTES` is particularly useful, for it allows you to name your fields and not have to remember the order in which they appear in the database. The following two imports are identical in effect:

```
[import table=orders]
code: [value mv_order_number]
shipping_mode: [shipping-description]
status: pending
[/import]

[import table=orders]
shipping_mode: [shipping-description]
status: pending
code: [value mv_order_number]
[/import]
```

The `code` or `key` must always be present, and is always named `code`.

If you do not use `NOTES` mode, you must import the fields in the same order as they appear in the ASCII source file.

The `[import] TEXT [/import]` region may contain multiple records. If using `NOTES` mode, you must use a separator, which by default is a form-feed character (^L).

4.39.2.1. table

4.39.2.2. type

4.40. include

4.40.1. Summary

Parameters: **file locale**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

Not applicable.

Interchange Tags Reference

```
[include file locale]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>file</u>		DEFAULT_VALUE
<u>locale</u>		DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		<i>No</i>
<i>Other _Characteristics</i>		
Invalidates cache		<i>no</i>
Container tag		<i>No</i>
Has Subtags		<i>No</i>
Nests		<i>Yes</i>

Tag expansion example:

```
[include file locale]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->include( { file => VALUE_file
                locale => VALUE_locale
}, $body );
```

or similarly with positional parameters,

```
$Tag->include(file,locale, $attribute_hash_reference, $body);
```

4.40.2. Description

Same as [file name] except interpolates for all Interchange tags and variables. Does NOT do locale translations.

4.40.2.1. file

4.40.2.2. locale

4.41. index

Creates an index for the specified table.

4.41.1. Summary

```
[index table other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>	Alias for table	DEFAULT_VALUE
<u>basefile</u>	Database filename. Exports the table to this filename if old or missing	DEFAULT_VALUE

Interchange Tags Reference

	before indexing. See also the <u>export</u> tag for additional relevant attributes such as delimiter type, etc.	
<u>col</u>	alias for fields	DEFAULT_VALUE
<u>columns</u>	alias for fields	DEFAULT_VALUE
<u>database</u>	Alias for table	DEFAULT_VALUE
<u>export_only</u>	Just do the export if necessary (not the index).	DEFAULT_VALUE
<u>extension</u>	Index file extension (default "idx")	DEFAULT_VALUE
<u>fields</u>	field(s) to index	DEFAULT_VALUE
<u>fn</u>	alias for fields	DEFAULT_VALUE
<u>show_status</u>	Return '1' to the page if successful	DEFAULT_VALUE
<u>spec</u>	The index specification	DEFAULT_VALUE
<u>table</u>		DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>YES</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[index table]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->index( { table => VALUE_table
}, $body );
```

or similarly with positional parameters,

```
$Tag->index(table, $attribute_hash_reference, $body);
```

4.41.2. Description

Creates an index for the specified table.

4.41.2.1. basefile

Database filename. Exports the table to this filename if old or missing before indexing. See also the export tag for additional relevant attributes such as delimiter type, etc.

4.41.2.2. col

alias for fields

4.41.2.3. columns

alias for fields

4.41.2.4. export_only

Just do the export if necessary (not the index).

4.41.2.5. extension

Index file extension (default "idx")

4.41.2.6. fields

field(s) to index

4.41.2.7. fn

alias for fields

4.41.2.8. show_status

Return '1' to the page if successful

4.41.2.9. spec

The index specification

4.41.2.10. table

4.42. item-list

4.42.1. Summary

Parameters: **name**

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [item-list] FOO [/item-list]. Nesting: NO

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

NOTE: This would not usually be used with embedded Perl -- a better

Interchange Tags Reference

choice would normally be:

```
                for(@$Items) { CODE }

$Tag->item_list(
    {
        name => VALUE,
    },
    BODY
)
```

OR

```
$Tag->item_list($name, $ATTRHASH, $BODY);
```

Attribute aliases

```
        cart ==> name
[item-list name other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>cart</u>	Alias for name	DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other_Characteristics</i>		
Invalidates cache		YES
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[item-list name]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->item_list( { name => VALUE_name
}, $body );
```

or similarly with positional parameters,

```
$Tag->item_list(name, $attribute_hash_reference, $body);
```

4.42.2. Description

Within any page, the [`item-list cart*`] element shows a list of all the items ordered by the customer so far. It works by repeating the source between [`item-list`] and [`/item-list`] once for each item ordered.

Interchange Tags Reference

NOTE: The special tags that reference item within the list are not normal Interchange tags, do not take named attributes, and cannot be contained in an HTML tag (other than to substitute for one of its values or provide a conditional container). They are interpreted only inside their corresponding list container. Normal Interchange tags can be interspersed, though they will be interpreted *after* all of the list-specific tags.

Between the `[item-list]` markers the following elements will return information for the current item:

4.42.2.1. `[if-data table column]`

If the database field `column` in table *table* is non-blank, the following text up to the `[/if-data]` tag is substituted. This can be used to substitute IMG or other tags only if the corresponding source item is present. Also accepts an `[else]else text[/else]` pair for the opposite condition.

4.42.2.2. `[if-data ! table column]`

Reverses sense for `[if-data]`.

4.42.2.3. `[/if-data]`

Terminates an `[if-data table column]` element.

4.42.2.4. `[if-field fieldname]`

If the products database field *fieldname* is non-blank, the following text up to the `[/if-field]` tag is substituted. If you have more than one products database table (see [ProductFiles](#)), it will check them in order until a matching key is found. This can be used to substitute IMG or other tags only if the corresponding source item is present. Also accepts an `[else]else text[/else]` pair for the opposite condition.

4.42.2.5. `[if-field ! fieldname]`

Reverses sense for `[if-field]`.

4.42.2.6. `[/if-field]`

Terminates an `[if-field fieldname]` element.

4.42.2.7. `[item-accessories attribute*, type*, field*, database*, name*]`

Evaluates to the value of the Accessories database entry for the item. If passed any of the optional arguments, initiates special processing of item attributes based on entries in the product database.

4.42.2.8. `[item-code]`

Evaluates to the product code for the current item.

4.42.2.9. `[item-data database fieldname]`

Evaluates to the field name *fieldname* in the arbitrary database table *database*, for the current item.

4.42.2.10. [item-description]

Evaluates to the product description (from the products file) for the current item.

In support of OnFly, if the description field is not found in the database, the `description` setting in the shopping cart will be used instead.

4.42.2.11. [item-field fieldname]

Evaluates to the field name *fieldname* in the products database, for the current item. If the item is not found in the first of the ProductFiles, all will be searched in sequence.

4.42.2.12. [item-increment]

Evaluates to the number of the item in the match list. Used for numbering search matches or order items in the list.

4.42.2.13. [item-last]tags[/item-last]

Evaluates the output of the Interchange tags encased inside the tags, and if it evaluates to a numerical non-zero number (i.e. 1, 23, or -1) then the list iteration will terminate. If the evaluated number is **negative**, then the item itself will be skipped. If the evaluated number is **positive**, then the item itself will be shown but will be last on the list.

```
[item-last][calc]
  return -1 if '[item-field weight]' eq '';
  return 1 if '[item-field weight]' < 1;
  return 0;
[/calc][item-last]
```

If this is contained in your [item-list] (or [search-list] or flypage) and the weight field is empty, then a numerical -1 will be output from the `[calc][calc]` tags; the list will end and the item will **not** be shown. If the product's weight field is less than 1, a numerical 1 is output. The item will be shown, but will be the last item shown. (If it is an [item-list], any price for the item will still be added to the subtotal.)

4.42.2.14. [item-modifier attribute]

Evaluates to the modifier value of `attribute` for the current item.

4.42.2.15. [item-next]tags[/item_next]

Evaluates the output of the Interchange tags encased inside, and if it evaluates to a numerical non-zero number (i.e. 1, 23, or -1) then the item will be skipped with no output. Example:

```
[item-next][calc][item-field weight] < 1[/calc][item-next]
```

If this is contained in your [item-list] (or [search-list] or flypage) and the product's weight field is less than 1, then a numerical 1 will be output from the `[calc][calc]` operation. The item will not be shown. (If it is an [item-list], any price for the item will still be added to the subtotal.)

4.42.2.16. [item-price n* noformat*]

Evaluates to the price for quantity *n* (from the products file) of the current item, with currency formatting. If the optional "noformat" is set, then currency formatting will not be applied.

4.42.2.17. [item-discount-price n* noformat*]

Evaluates to the discount price for quantity *n* (from the products file) of the current item, with currency formatting. If the optional "noformat" is set, then currency formatting will not be applied. Returns regular price if not discounted.

4.42.2.18. [item-discount]

Returns the difference between the regular price and the discounted price.

4.42.2.19. [item-discount_subtotal]

Inserts the discounted subtotal of the ordered items.

4.42.2.20. [item-quantity]

Evaluates to the quantity ordered for the current item.

4.42.2.21. [item-subtotal]

Evaluates to the subtotal (quantity * price) for the current item. Quantity price breaks are taken into account.

4.42.2.22. [item-modifier-name attribute]

Evaluates to the name to give an input box in which the customer can specify the modifier to the ordered item.

4.42.2.23. [quantity-name]

Evaluates to the name to give an input box in which the customer can enter the quantity to order.

4.42.2.24. name

4.43. label

The page label for goto. See [goto] tag for description. Note that this is not a standard tag, but is simply a marker used by goto.

Parameter: **name**

```
[goto name=label_name if=condition]
  content to skip
[label name=label_name]
```

4.43.1. Summary

NO SUMMARY SECTION

```
[label]
```

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>No</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[label]
---
  TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->label( {
}, $body );
```

or similarly with positional parameters,

```
$Tag->label(, $attribute_hash_reference, $body);
```

4.43.2. Description

NO DESCRIPTION SECTION

4.44. log

Log contained text to specified file.

4.44.1. Summary

```
[log file other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>arg</u>	Alias for file	DEFAULT_VALUE
<u>create</u>	Set create=1 to create the file if not present	DEFAULT_VALUE
<u>delim</u>	Line delimiter	DEFAULT_VALUE
<u>file</u>	name of file to log to. 'file=">filename"' also sets 'create' attribute.	DEFAULT_VALUE
<u>hide</u>	Suppress status otherwise returned by tag to the page.	DEFAULT_VALUE
<u>process</u>	Processing (if any) to apply to the content while logging	DEFAULT_VALUE

Interchange Tags Reference

	<ul style="list-style-type: none"> • nostrip (don't strip leading/trailing whitespace and convert "\r\n" to "\n") 	
<u>record_delim</u>	Record delimiter	DEFAULT_VALUE
<u>type</u>	Log type <ul style="list-style-type: none"> • text (ordinary text file) • quot (delimited entries) • error (add Interchange error formatting and time/location stamps) 	DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
<i>Other_Characteristics</i>		
Invalidates cache	<i>no</i>	
Container tag	<i>Yes</i>	
Has Subtags	<i>No</i>	
Nests	<i>No</i>	

Tag expansion example:

```
[log file]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->log( { file => VALUE_file
}, $body );
```

or similarly with positional parameters,

```
$Tag->log(file, $attribute_hash_reference, $body);
```

4.44.2. Description

Log contained text to specified file.

4.44.2.1. create

Set create=1 to create the file if not present

4.44.2.2. delim

Line delimiter

4.44.2.3. file

name of file to log to. 'file=">filename"' also sets 'create' attribute.

4.44.2.4. hide

Suppress status otherwise returned by tag to the page.

4.44.2.5. process

Processing (if any) to apply to the content while logging

- nostrip (don't strip leading/trailing whitespace and convert "\r\n" to "\n")

4.44.2.6. record_delim

Record delimiter

4.44.2.7. type

Log type

- text (ordinary text file)
- quot (delimited entries)
- error (add Interchange error formatting and time/location stamps)

4.45. loop

4.45.1. Summary

Parameters: **list**

Positional parameters in same order.

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [loop] FOO [/loop]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

NOTE: This would not usually be used with embedded Perl -- a better choice would normally be:

```
for(@list) { CODE }

$Tag->loop(
{
  list => VALUE,
},
```

Interchange Tags Reference

```
    BODY
)
```

OR

```
$Tag->loop($list, $ATTRHASH, $BODY);
```

Attribute aliases

```
    arg ==> list
    args ==> list
[loop list other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>arg</u>	Alias for list	DEFAULT_VALUE
<u>args</u>	Alias for list	DEFAULT_VALUE
<u>list</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other Characteristics</i>		
Invalidates cache		no
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[loop list]
---
  TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->loop( { list => VALUE_list
}, $body );
```

or similarly with positional parameters,

```
$Tag->loop(list, $attribute_hash_reference, $body);
```

4.45.2. Description

Returns a string consisting of the LIST, repeated for every item in a comma-separated or space-separated list. Operates in the same fashion as the [item-list] tag, except for order-item-specific values. Intended to pull multiple attributes from an item modifier — but can be useful for other things, like building a pre-ordained product list on a page.

Loop lists can be nested reliably in Interchange by using the prefix="tag" parameter. New syntax:

```
[loop list="A B C"]
  [loop prefix=mid list="[loop-code]1 [loop-code]2 [loop-code]3"]
```

Interchange Tags Reference

```
[loop prefix=inner list="X Y Z"]  
    [mid-code]-[inner-code]  
[/loop]  
[loop]  
[ /loop]
```

You can do an arbitrary search with the `search="args"` parameter, just as in a one-click search:

```
[loop search="se=Americana/sf=category"]  
    [loop-code] [loop-field title]  
[/loop]
```

The above will show all items with a category containing the whole word "Americana", and will work the same in both old and new syntax.

Ranges are accepted when you pass a list if you set the `ranges` option:

```
[loop list="A..Z" ranges=1][loop-code] [/loop]
```

The above lists all of the characters from A to Z. Any Perl incrementing variable list will work, but most commonly a range would be something like 1..100. You can mix regular sets — 1..5 10 20 would produce the list 1 2 3 4 5 10 20.

If you surround the repeating text section with a `[list] [/list]` anchor, the `more-list`, `ml=N`, and `on-match / no-match` processing is done just as in `[query]` and `[search-region]`.

Using the `acclist` option will parse Interchange option lists, as used in product options. The value is available with `[loop-code]`, the label with `[loop-param label]`. If the size data for SKU TS-007 was set to the string `S=Small, M=Medium, L=Large, XL=Extra Large` then you could produce a select list of options this way:

```
[loop list="[data products size TS-007]" acclist=1]  
    [on-match]<SELECT NAME=mv_order_size>[/on-match]  
        [list]<OPTION VALUE="[loop-code]"> [loop-param label]</OPTION>[/list]  
    [on-match]</SELECT>[/on-match]  
[/loop]
```

Of course the above is probably more easily produced with `[accessories code=TS-007 attribute=size]`, but there will be other uses for the capability. For instance:

```
<SELECT NAME=Season>  
[loop acclist=1  
    list="  
        Q1=Winter,  
        Q2=Spring,  
        Q3=Summer,  
        Q4=Fall  
    "> <OPTION VALUE="[loop-code]"> [loop-param label]</OPTION>  
[/loop]
```

If your parameter list needs to have spaces in the parameters, surround them with double or single quotes and set the `quoted=1` option: in product options. If the size data for SKU TS-007 was set to the string `S=Small, M=Medium, L=Large, XL=Extra Large` then you could produce a select list of options this way:

Interchange Tags Reference

```
[loop list="[data products size TS-007]" acclist=1]
  [on-match]<SELECT NAME=mv_order_size>[/on-match]
    [list]<OPTION VALUE="[loop-code]"> [loop-param label]</OPTION>[/list]
  [on-match]</SELECT>[/on-match]
[/loop]
```

A nice shortcut is available when using [loop] to generate <OPTION> lists inside HTML <SELECT>...</SELECT> blocks, when you want the user's last selection to be chosen by default on subsequent page views. Interchange simplifies this with functions that output "SELECTED" (surrounded by appropriate whitespace) for an <OPTION> if a certain value is set to the <OPTION VALUE="...">. (It sounds more complicated than it really is.)

For example, consider:

```
<select name=search_cat>
[loop
  search="
    fi=cat
    st=db
    ra=yes
    rf=name
    tf=name
    un=1
  "
]
<option[selected search_cat [loop-code]>[loop-code]
[/loop]
</select>
```

When the user returns to the page, their last selection will be chosen as the default. (Assuming the value search_cat was set after the search, which is normally is with standard searches.)

[loop] offers the option attribute, which can give loops that parse faster and are easier to write. The following example is equivalent to the one above:

```
<select name=search_cat>
[loop
  option=search_cat
  search="
    fi=cat
    st=db
    ra=yes
    rf=name
    tf=name
    un=1
  "
]
<option>[loop-code]
[/loop]
</select>
```

It works equally well when option values are explicitly specified:

```
<option value="[loop-code]">So-called "[loop-code]"
```

See also the ictemplates documentation in the section "Checks and Selections."

4.45.2.1. [if-loop-data table column] IF [else] ELSE [/else][if-loop-field]

Outputs the IF if the column in table is non-empty, and the ELSE (if any) otherwise.

See [if-PREFIX-data].

4.45.2.2. [if-loop-field column] IF [else] ELSE [/else][if-loop-field]

Outputs the IF if the column in the products table is non-empty, and the ELSE (if any) otherwise. Will fall through to the first non-empty field if there are multiple ProductFiles.

See [if-PREFIX-field].

4.45.2.3. [if-loop-param param] IF [else] ELSE [/else][if-loop-param]

Only works if you have named return fields from a search (or from a passed list with the lr=1 parameter).

Outputs the IF if the returned param is non-empty, and the ELSE (if any) otherwise.

See [if-PREFIX-param].

4.45.2.4. [if-loop-pos N] IF [else] ELSE [/else][if-loop-pos]

Only works if you have multiple return fields from a search (or from a passed list with the lr=1 parameter).

Parameters are numbered from ordinal 0, with [loop-pos 0] being the equivalent of [loop-code].

Outputs the IF if the returned positional parameter N is non-empty, and the ELSE (if any) otherwise.

See [if-PREFIX-pos].

4.45.2.5. [loop-accessories]

Outputs an [accessories ...] item.

See [PREFIX-accessories].

4.45.2.6. [loop-change marker]

See [PREFIX-change].

4.45.2.7. [loop-code]

Evaluates to the code for the current item.

See [PREFIX-code].

4.45.2.8. [loop-data database fieldname]

Evaluates to the field name *fieldname* in the arbitrary database table *database*, for the current item.

See [\[PREFIX-data\]](#).

4.45.2.9. [loop-description]

Evaluates to the product description (from the products file, passed description in on-fly item, or description attribute in cart) for the current item.

See [\[PREFIX-description\]](#).

4.45.2.10. [loop-field fieldname]

Evaluates to the field name *fieldname* in the database, for the current item.

See [\[PREFIX-field\]](#).

4.45.2.11. [loop-increment]

Evaluates to the number of the item in the list. Used for numbering items in the list.

Starts from integer 1.

See [\[PREFIX-increment\]](#).

4.45.2.12. [loop-last]tags[/loop-last]

Evaluates the output of the Interchange tags encased inside, and if it evaluates to a numerical non-zero number (i.e. 1, 23, or -1) then the loop iteration will terminate. If the evaluated number is **negative**, then the item itself will be skipped. If the evaluated number is **positive**, then the item itself will be shown but will be last on the list.

```
[loop-last][calc]
  return -1 if '[loop-field weight]' eq '';
  return 1 if '[loop-field weight]' < 1;
  return 0;
[/calc][[/loop-last]
```

If this is contained in your `[loop list]` and the weight field is empty, then a numerical -1 will be output from the `[calc]/[calc]` tags; the list will end and the item will **not** be shown. If the product's weight field is less than 1, a numerical 1 is output. The item will be shown, but will be the last item shown.

4.45.2.13. [loop-next]tags[/loop-next]

Evaluates the output of the Interchange tags encased inside, and if it evaluates to a numerical non-zero number (i.e. 1, 23, or -1) then the loop will be skipped with no output. Example:

```
[loop-next][calc][loop-field weight] < 1[/calc][[/loop-next]
```

If this is contained in your `[loop list]` and the product's weight field is less than 1, then a numerical 1 will be output from the `[calc]/[calc]` operation. The item will not be shown.

4.45.2.14. [loop-price n* noformat*]

Evaluates to the price for optional quantity n (from the products file) of the current item, with currency formatting. If the optional "noformat" is set, then currency formatting will not be applied.

4.45.2.15. list**4.46. mail**

Mail contained text to recipient specified by 'to' using the program specified with the SendMailProgram catalog directive.

4.46.1. Summary

[**mail** to other_named_attributes]

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>extra</u>	Additional headers (these will also be added to 'raw' messages)	DEFAULT_VALUE
<u>hide</u>	Suppress tag return value. This would otherwise be the 'success' attribute setting.	DEFAULT_VALUE
<u>raw</u>	Send it raw without creating headers and checking content, recipient, subject, etc.	DEFAULT_VALUE
<u>show</u>	The tag will return the final message with headers in the page	DEFAULT_VALUE
<u>success</u>	Tag return value if successful (default is 1).	DEFAULT_VALUE
<u>to</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other_Characteristics</i>		
Invalidates cache		YES
Container tag		Yes
Has Subtags		No
Nests		No

ASP-like Perl call:

```
$Tag->mail( { to => VALUE_to
}, $body );
```

or similarly with positional parameters,

```
$Tag->mail(to, $attribute_hash_reference, $body);
```

4.46.2. Description

Mail contained text to recipient specified by 'to' using the program specified with the SendMailProgram catalog directive.

4.46.2.1. extra

Additional headers (these will also be added to 'raw' messages)

4.46.2.2. hide

Suppress tag return value. This would otherwise be the 'success' attribute setting.

4.46.2.3. raw

Send it raw without creating headers and checking content, recipient, subject, etc.

4.46.2.4. show

The tag will return the final message with headers in the page

4.46.2.5. success

Tag return value if successful (default is 1).

4.46.2.6. to**4.47. mvasp**

Executes the ASP-style perl code contained by the tag. The code will run under the restrictions of the [Safe](#) module. This is very similar to the [perl](#) tag, except that the standard '<%' and '%>' ASP delimiters allow you to mix HTML and perl code.

4.47.1. Summary

```
[mvasp tables] ASP here [/mvasp]
[mvasp tables="db1 db2 ..." other_named_attributes] ASP here [/mvasp]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
tables	Database tables to be made available to ASP Perl code	<i>none</i>
table	Alias for tables	<i>none</i>
<i>Attributes</i>	<i>Default</i>	
failure	<i>none</i>	
no_return	<i>Always true</i>	
subs	<i>No</i>	
arg="subs"	<i>Same as subs</i>	
global	<i>No</i>	
file	<i>none</i>	
interpolate	<i>No</i>	
reparse	<i>No</i>	
<i>Other_Characteristics</i>		
Invalidates cache	<i>Yes</i>	

Has Subtags	<i><% and %></i>
Container tag	<i>Yes</i>
Nests	<i>No</i>

Tag expansion example:

```
[mvasp tables="products" failure="ASP Broke <BR>"]
  <P>This is HTML</p>
  <% my $sku = $Values->{code}; %>
  <P>More HTML</p>
  <% my $result = "Looked up SKU $sku. It is a ";
    $result .= $Tag->data('products', 'description', $sku );
    $Document->write( "$result <br>\n" ); %>
  <P>Still more HTML</p>
[/mvasp]
---
```

```
<P>This is HTML</p>

<P>More HTML</p>
Looked up SKU os28044. It is a Framing Hammer <br>

<P>Still more HTML</p>
```

4.47.1.1. See Also

[perl](#), [Interchange Programming](#)

4.47.2. Description

Executes the ASP-style perl code contained by the tag. The code will run under the restrictions of the [Safe](#) module. This is very similar to the [perl](#) `no_return=1` tag, except that the standard '`<%`' and '`%>`' ASP delimiters allow you to mix HTML and perl code.

See the [perl](#) tag and [ASP-Like Perl](#) sections for more detail.

4.47.2.1. tables

Whitespace-separated list of database tables to make available within the ASP-Perl code. See [perl](#) tag.

4.47.2.2. failure

The value the tag should return in case the perl code fails the eval. See [perl](#) tag.

4.47.2.3. no_return

The return value of the perl code is always suppressed. If you want output from the ASP code sections, you must explicitly write it with the `&HTML` or `$Document->write()` functions.

You can also retrieve the return value of the perl code from the session hash via `[data session mv_perl_result]`. See [perl](#) tag.

4.47.2.4. subs

Enable GlobalSub routines (requires catalog directive AllowGlobal). See perl tag.

4.47.2.5. global

Turn off Safe protection (requires catalog directive AllowGlobal). See perl tag.

4.47.2.6. file

Prepend the contents of the specified file or FileDatabase entry to the perl code before eval'ing it. See perl tag.

4.47.2.7. Examples

See the ASP-Like Perl section of Interchange Programming.

4.48. nitems

Returns the total number of items ordered. Uses the current cart if none specified.

4.48.1. Summary

[**nitems** name]

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>compare</u>	Regular expression the specified qualifier attribute's value must match to be counted. This replaces the truth value comparison. <ul style="list-style-type: none"> • Default: None (uses truth value of the specified qualifier attribute) 	DEFAULT_VALUE
<u>name</u>	Cart name <ul style="list-style-type: none"> • Default: current cart 	DEFAULT_VALUE
<u>qualifier</u>	An item attribute that must be true in order to count the item. <ul style="list-style-type: none"> • Default: None 	DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>YES</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

[**nitems** name]

```
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->nitems( { name => VALUE_name
}, $body );
```

or similarly with positional parameters,

```
$Tag->nitems(name, $attribute_hash_reference, $body);
```

4.48.2. Description

Expands into the total number of items ordered so far. Takes an optional cart name as a parameter.

4.48.2.1. compare

Regular expression the specified qualifier attribute's value must match to be counted. This replaces the truth value comparison.

- Default: None (uses truth value of the specified qualifier attribute)

4.48.2.2. name

Cart name

- Default: current cart

4.48.2.3. qualifier

An item attribute that must be true in order to count the item.

- Default: None

4.49. options

Builds HTML widgets as defined in the options table for selecting options associated with a given product. This tag handles simple, matrix or modular options. See also the [accessories](#) tag.

Here is an illustrative example from the 'tools' sample data set of the foundation catalog:

```
===
[options code=os28005]
---
<input type=hidden name=mv_item_option value="logo">
  <SELECT NAME="mv_order_logo">
    <OPTION VALUE="c">Construct Something
    <OPTION VALUE="y" SELECTED>Your Logo</SELECT><BR>
  <input type=hidden name=mv_item_option value="color">
    <INPUT TYPE="radio" NAME="mv_order_color" VALUE="BLK" >&nbsp;Black
    <INPUT TYPE="radio" NAME="mv_order_color" VALUE="BEIGE" >&nbsp;Beige
    <INPUT TYPE="radio" NAME="mv_order_color" VALUE="WHITE" >&nbsp;White<BR>
  <input type=hidden name=mv_item_option value="bristle">
```

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```
<SELECT NAME="mv_order_bristle">
<OPTION VALUE="synthetic">Synthetic
<OPTION VALUE="camel">Camel Hair</SELECT>
```

===

4.49.1. Summary

[options code]

Parameters	Description	Default
<u>bold</u>	Boldfaces the labels if the 'label' option is set. • Default: False	DEFAULT_VALUE
<u>code</u>	Product key (usually sku). • No default	DEFAULT_VALUE
<u>joiner</u>	The joiner for the widgets. • Default: 	DEFAULT_VALUE
<u>label</u>	Shows labels for the options with the widgets. The following example (using another item from the 'tools' data) illustrates the price and label attributes: === [options code=os28011 label=1 price=1] --- Handle <input type=hidden name=mv_item_option value="handle"> <SELECT NAME="mv_order_handle"> <OPTION VALUE="W">Wood handle <OPTION VALUE="E">Ebony handle (\$20.00)</SELECT> Blade material <input type=hidden name=mv_item_option value="blade"> <SELECT NAME="mv_order_blade"> <OPTION VALUE="P">Plastic blade (\$-1.22) <OPTION VALUE="S" SELECTED>Steel blade <OPTION VALUE="T">Titanium blade (\$100.00)</SELECT> === (again, the output has been reformatted to fit the page). • Default: False	DEFAULT_VALUE
<u>price</u>	Boolean. If set and the options have prices, the HTML widget(s) will show the prices. This is like the <u>price</u> attribute of the accessories tag. Note that the <u>price_data</u> setting comes from the 'price' column of the options table. Technical note— If your options table has different mappings, you can control this with \$::Variable→{MV_OPTION_TABLE_MAP}	False
<u>table</u>	Table to use for option attributes. • Default: 'options'	DEFAULT_VALUE

Interchange Tags Reference

td	<p>Results as table rows. For example, compare the following example from the 'tools' sample data set with the earlier example:</p> <pre> === [options code=os28005 td=1] --- <td><input type=hidden name=mv_item_option value="logo"> <SELECT NAME="mv_order_logo"> <OPTION VALUE="c">Construct Something <OPTION VALUE="y" SELECTED>Your Logo</SELECT></td> <td><input type=hidden name=mv_item_option value="color"> <INPUT TYPE="radio" NAME="mv_order_color" VALUE="BLK" >&nbsp;&nbsp;&nbsp;Black <INPUT TYPE="radio" NAME="mv_order_color" VALUE="BEIGE" >&nbsp;&nbsp;&nbsp;Beige <INPUT TYPE="radio" NAME="mv_order_color" VALUE="WHITE" >&nbsp;&nbsp;&nbsp;White</td> <td><input type=hidden name=mv_item_option value="bristle"> <SELECT NAME="mv_order_bristle"> <OPTION VALUE="synthetic">Synthetic <OPTION VALUE="camel">Camel Hair</SELECT></td> === </pre> <p>(Note that the output was reformatted to fit this page)</p>	DEFAULT_VALUE
-----------	---	---------------

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>no</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```

[options code]
---
TODO: (tag result)

```

ASP-like Perl call:

```

$Tag->options( { code => VALUE_code
}, $body );

```

or similarly with positional parameters,

```

$Tag->options(code, $attribute_hash_reference, $body);

```

4.49.2. Description

NO DESCRIPTION SECTION

4.49.2.1. bold

Boldfaces the labels if the 'label' option is set.

- Default: False

4.49.2.2. code

Product key (usually sku).

- No default

4.49.2.3. joiner

The joiner for the widgets.

- Default:

4.49.2.4. label

Shows labels for the options with the widgets.

The following example (using another item from the 'tools' data) illustrates the price and label attributes:

```
===
[options code=os28011 label=1 price=1]
---
Handle<BR>


```

(again, the output has been reformatted to fit the page).

- Default: False

4.49.2.5. price

Boolean. If set and the options have prices, the HTML widget(s) will show the prices. This is like the price attribute of the accessories tag.

Note that the price_data setting comes from the 'price' column of the options table.

Technical note— If your options table has different mappings, you can control this with

\$.:Variable->{MV_OPTION_TABLE_MAP}

- Default: False

4.49.2.6. table

Table to use for option attributes.

- Default: 'options'

4.49.2.7. td

Results as table rows. For example, compare the following example from the 'tools' sample data set with the earlier example:

```
===
[options code=os28005 td=1]
---
<td><input type=hidden name=mv_item_option value="logo">
  <SELECT NAME="mv_order_logo">
    <OPTION VALUE="c">Construct Something
    <OPTION VALUE="y" SELECTED>Your Logo</SELECT></td>
<td><input type=hidden name=mv_item_option value="color">
  <INPUT TYPE="radio" NAME="mv_order_color" VALUE="BLK" >&nbsp;Black
  <INPUT TYPE="radio" NAME="mv_order_color" VALUE="BEIGE" >&nbsp;Beige
  <INPUT TYPE="radio" NAME="mv_order_color" VALUE="WHITE" >&nbsp;White</td>
<td><input type=hidden name=mv_item_option value="bristle">
  <SELECT NAME="mv_order_bristle">
    <OPTION VALUE="synthetic">Synthetic
    <OPTION VALUE="camel">Camel Hair</SELECT></td>
===
```

(Note that the output was reformatted to fit this page)

4.50. or**4.50.1. Summary**

Parameters: **type term op compare**

THIS TAG HAS SPECIAL POSITIONAL PARAMETER HANDLING.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **no**

Called Routine:

Called Routine for positional:

ASP-like Perl call:

```
$Tag->or(
  {
    type => VALUE,
    term => VALUE,
```

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```

        op => VALUE,
        compare => VALUE,
    }
)

```

OR

```
$Tag->or($type, $term, $op, $compare);
```

Attribute aliases

```

        base ==> type
        comp ==> compare
        operator ==> op
    [or type term op compare]

```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>	Alias for type	DEFAULT_VALUE
<u>comp</u>	Alias for compare	DEFAULT_VALUE
<u>compare</u>		DEFAULT_VALUE
<u>op</u>		DEFAULT_VALUE
<u>operator</u>	Alias for op	DEFAULT_VALUE
<u>term</u>		DEFAULT_VALUE
<u>type</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other Characteristics</i>		
Invalidates cache	<i>no</i>	
Container tag	<i>No</i>	
Has Subtags	<i>No</i>	
Nests	<i>Yes</i>	

Tag expansion example:

```

    [or type term op compare]
---
    TODO: (tag result)

```

ASP-like Perl call:

```

$Tag->or( { compare => VALUE_compare
          op => VALUE_op
          term => VALUE_term
          type => VALUE_type
        }, $body );

```

or similarly with positional parameters,

```
$Tag->or(type,term,op,compare, $attribute_hash_reference, $body);
```

4.50.2. Description

NO Description

4.50.2.1. compare

4.50.2.2. op

4.50.2.3. term

4.50.2.4. type

4.51. order

Expands into a hypertext link which will include the specified item in the list of products to order and display the order page.

4.51.1. Summary

```
[order code quantity]Link Text</A>
[order code=os28044 quantity=2]Link Text</A>
```

<i>Parameters</i>		<i>Description</i>	<i>Default</i>
code		This is the unique identifier for the item, typically the SKU in the products table	<i>none</i>
quantity		Quantity to order	1
<i>Attributes</i>	<i>Default</i>		
code	<i>No</i>		
page	<i>SpecialPage order</i>		
cart	<i>main cart</i>		
base	<i>ProductFiles array</i>		
area	<i>off</i>		
<u>interpolate (reparse)</u>	<i>No</i>		
<i>Other Characteristics</i>			
Invalidates cache		<i>No</i>	
Container tag		<i>No</i>	
Has end tag		<i>No</i> ([/order] is a macro for < /A >)	

Tag expansion example:

```
[order os28044 2]Buy Framing Hammer[/order]
---
<A HREF="http://localhost.localdomain/cgi-bin/tag72/ord/basket?
mv_session_id=6CZ2whqo&mv_pc=1&mv_action=refresh&
mv_order_item=os28044&mv_order_quantity=3">Buy Framing Hammer</A>
```

ASP-like Perl call:

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```
$Tag->order($code, $quantity);
```

4.51.2. Description

Expands into a hypertext link which will include the specified code in the list of products to order and display the order page.

code should be a product code listed in one of the "products" databases. The optional argument **base** constrains the order to a particular products file. If not specified, all tables defined as ProductFiles will be searched in sequence for the item.

The optional argument **cart** selects the shopping cart where the item will be placed.

page allows you to specify a different order page than the default one specified by SpecialPage order.

4.51.3. How to Order an Item

Interchange can either use a form-based order or a link-based order to place an item in the shopping cart. The `order` tag creates a link-based order.

You can use the area tag with form variables if you need more control, for example, to change frames for the order:

```
<A HREF="[area href=ord/basket
    form="mv_order_item=os28044
        mv_order_quantity=2
        mv_action=refresh"]"
TARGET=newframe> Order Framing Hammer</A>
```

This can also be done more easily with the `area` option to the `order` tag:

```
<A HREF="[order code=os28044 quantity=2 area=1]"
TARGET=newframe> Order Framing Hammer</A>
```

To order with a form, you set the form variable `mv_order_item` to the item-code/SKU and use the refresh action:

```
<FORM ACTION="[process]" METHOD=POST>
<INPUT TYPE=hidden NAME="mv_todo" VALUE="refresh">
<INPUT TYPE=hidden NAME="mv_order_item" VALUE="os28044">

Order <INPUT NAME="mv_order_quantity" SIZE=3 VALUE=1> Framing Hammer

<INPUT TYPE=submit VALUE="Order!">
</FORM>
```

Groups of items may be batched:

```
<FORM ACTION="[process]" METHOD=POST>
<INPUT TYPE=hidden NAME="mv_todo" VALUE="refresh">

<INPUT TYPE=hidden NAME="mv_order_item" VALUE="TK112">
<INPUT NAME="mv_order_quantity" SIZE=3> Standard Toaster
```

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```
<INPUT TYPE=hidden NAME="mv_order_item" VALUE="TK200">
<INPUT NAME="mv_order_quantity" SIZE=3> Super Toaster

<INPUT TYPE=submit VALUE="Order!">
</FORM>
```

Items that have a quantity of zero (or blank) will be skipped. Only items with a positive quantity will be placed in the basket.

Attributes like size or color may be specified at time of order. See the [accessories](#) tag for detail.

4.52. page

Expands to a hyperlink to an Interchange page or action, including surrounding <A HREF ...>. The URL within the link includes the Interchange session ID and supplied arguments. The optional [/page] is simply a macro for .

If you do not want the <A HREF ...>, use the [area](#) tag instead — these are equivalent:

```
[page href=dir/page arg=mv_arg]TargetName</A>
<A HREF="[area href=dir/page arg=mv_arg]">TargetName</A>
```

4.52.1. Summary

```
[page href arg]
[page href=dir/page arg=page_arguments other_named_attributes]
```

Parameters	Description	Default
href	Path to Interchange page or action <i>Special arguments</i> ♦ 'scan' treats arg as a search argument ♦ 'http://...' external link (requires form attribute)	process
arg	Interchange arguments to page or action	none
base	alias for arg	none
Attributes	Default	
extra	none	
form	none	
search	No	
secure	No	
interpolate (reparse)	No	
Other Characteristics		
Invalidates cache	No	
Macro	No	
Has end tag	No ([/page] is a macro for)	

Tag expansion example:

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```
[page href=dir/page.html arg="arg1=AA/arg2=BB"]
```

```
<a href="www.here.com/cgi-bin/mycatalog/page.html?mv_session_id=6CZ2whqo&\n mv_pc=1&mv_arg=arg1%3dAA/arg2%3dBB">
```

ASP-like Perl call:

```
$Tag->page( { href => "dir/page",\n              arg  => "arguments", } );
```

or similarly with positional parameters,

```
$Tag->page($href, $arg, $attribute_hash_reference);
```

Using arrayref for joined search (see also [Attribute Arrays and Hashes](#))

```
my $searchref = [ "se=hammer/fi=products/sf=description",\n                  "se=plutonium/fi=products/sf=description", ];\n\n$Tag->page( { href    => 'scan',\n              search => $searchref, } );
```

4.52.1.1. See Also

[area](#)

4.52.2. Description

The `page` tag inserts a hyperlink to the specified Interchange page or action. For example, `[page shirts]` will expand into

```
<a href="http://www.here.com/cgi-bin/mycatalog/shirts?mv_session_id=6CZ2whqo&mv_pc=1">
```

The catalog page displayed will come from "shirts.html" in the pages directory.

The additional argument will be passed to Interchange and placed in the `{arg}` session parameter. This allows programming of a conditional page display based on where the link came from. The argument is then available with the tag `[data session arg]`, or the embedded Perl session variable `$Session->{arg}`. Spaces and some other characters will be escaped with the %NN HTTP-style notation and unescaped when the argument is read back into the session.

For better performance, Interchange can prebuild and cache pages that would otherwise be generated dynamically. If Interchange has built such a static page for the target, the `page` tag produces a link to the cached page whenever the user has accepted and sent back a cookie with the session ID. If the user did not accept the cookie, Interchange cannot use the cache, since the link must then include the *mv_session_id* argument in order to preserve session.

4.52.2.1. extra

4.52.2.2. form

The optional `form` argument allows you to encode a form in the link.

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```
[page form="mv_order_item=os28044
      mv_order_size=15oz
      mv_order_quantity=1
      mv_separate_items=1
      mv_todo=refresh"] Order 15oz Framing Hammer</A>
```

The two form values *mv_session_id* and *mv_arg* are automatically added when appropriate. The form value *mv_arg* receives the value of the tag's *arg* parameter.

This would generate a form that ordered quantity one of item number os28044 with size 15oz. The item would appear on a separate line in the shopping cart, since *mv_separate_items* is set. Since the *href* is not set, you will go to the default shopping cart page — alternatively, you could have set *mv_orderpage=yourpage* to go to *yourpage*.

All normal Interchange form caveats apply — you must have an action, you must supply a page if you don't want to go to the default, etc.

You can theoretically submit any form with this, though none of the included values can have newlines or trailing whitespace. If you want to do something like that you will have to write a UserTag.

If the parameter *href* is not supplied, *process* is used, causing normal Interchange form processing.

If the *href* points to an *http://* link, then no Interchange URL processing will be done, but the URL will include *mv_session_id*, *mv_pc*, and any arguments supplied with the *arg* attribute:

```
[page href="http://www.elsewhere.net/cgi/script"
      form="cgi_1=ONE
          cgi_2=TWO"
      arg="Interchange argument"]External link</A>

<A HREF="http://www.elsewhere.net/cgi/script?\\
mv_session_id=6CZ2whqo&mv_pc=1&mv_arg=Interchange%20argument&\\
cgi_1=ONE&cgi_2=TWO">External link</A>
```

4.52.2.3. search

Interchange allows you to pass a search in a URL. There are two ways to do this:

1. Place the search specification in the named *search* attribute.
 - ◆ Interchange will ignore the *href* parameter (the link will be set to 'scan').
 - ◆ If you give the *arg* parameter a value, that value will be available as [value *mv_arg*] within the search display page.
2. Set the *href* parameter to 'scan' and set *arg* to the search specification.
 - ◆ Note that you can use this form positionally — the values go into *href* and *arg*, so you do not have to name parameters.

These are identical:

```
[page scan
      se=Impressionists
      sf=category]
  Impressionist Paintings
</a>
```

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```
[page href=scan
      arg="se=Impressionists
          sf=category"]
  Impressionist Paintings
</A>

[page search="se=Impressionists
            sf=category"]
  Impressionist Paintings
</a>
```

Here is the same thing from a non-Interchange page (e.g., a home page), assuming '/cgi-bin/mycatalog' is the CGI path to Interchange's vlink):

```
<A HREF="/cgi-bin/mycatalog/scan/se=Impressionists/sf=category">
  Impressionist Paintings
</A>
```

Sometimes, you will find that you need to pass characters that will not be interpreted positionally. In that case, you should quote the arguments:

```
[page href=scan
      arg=|
          se="Something with spaces"
      |]
```

See the [Search and Form Variables](#) appendix for a listing of the form variables along with two-letter abbreviations and descriptions.

They can be treated just the same as form variables on the page, except that they can't contain spaces, '/' in a file name, or quote marks. These characters can be used in URL hex encoding, i.e. %20 is a space, %2F is a /, etc. — &sp; or will not be recognized. If you use one of the methods below to escape these "unsafe" characters, you won't have to worry about this.

You may specify a one-click search in three different ways. The first is as used in previous versions, with the scan URL being specified completely as the page name. The second two use the "argument" parameter to the [page . . .] or [[area](#) ...]> tags to specify the search (an argument to a scan is never valid anyway).

4.52.2.4. secure

4.52.2.5. Original syntax

If you wish to do an OR search on the fields category and artist for the strings "Surreal" and "Gogh", while matching substrings, you would do:

```
[page scan se=Surreal/se=Gogh/os=yes/su=yes/sf=artist/sf=category]
  Van Gogh -- compare to surrealists
</a>
```

In this method of specification, to replace a / (slash) in a file name (for the sp, bd, or fi parameter) you must use the shorthand of ::, i.e. sp=results::standard. (This may not work for some browsers, so you should probably either put the page in the main pages directory or define the page in a search profile.)

4.52.2.6. Ampersand syntax

You can substitute & for / in the specification and be able to use / and quotes and spaces in the specification.

```
[page scan se="Van Gogh"&sp=lists/surreal&os=yes&su=yes&sf=artist&sf=category]
  Van Gogh -- compare to surrealists
</a>
```

Any "unsafe" characters will be escaped.

4.52.2.7. Multi-line syntax

You can specify parameters one to a line, as well.

```
[page scan
  se="Van Gogh"
  sp=lists/surreal
  os=yes
  su=yes
  sf=artist
  sf=category
] Van Gogh -- compare to surrealists </a>
```

Any "unsafe" characters will be escaped. You may not search for trailing spaces in this method; it is allowed in the other notations.

4.52.2.8. Joined searches

You can also specify a joined search using an attribute array (see [Attribute Arrays and Hashes](#)):

```
[page href=scan
  search.0="se=fragrant
           fi=products
           sf=smell"
  search.1="se=purple
           sf=color"
  search.2="se=perennial
           sf=type"]
```

The search routine called by the page tag automatically adds the other relevant search specification elements, including the 'co=yes' to indicate a combined search ([joined](#) searches are described in the Interchange database documentation).

4.52.2.9. [/page]

This is not an actual end tag, but simply a macro that expands to . The following two lines are equivalent:

```
[page shirts]Our shirt collection[/page]
[page shirts]Our shirt collection</A>
```

Tip: In large pages, just use the tag for a small performance improvement.

4.53. perl

Executes the perl code contained by the tag. The code will run under the restrictions of Perl's Safe module by default. The tag expands to the value returned by the enclosed code (i.e., printing to STDOUT or STDERR is useless).

See also Interchange Programming.

4.53.1. Summary

```
[perl tables] Code here [/perl]
[perl tables="db1 db2 ..." other_named_attributes] Code here [/perl]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
tables	Database tables to be made available to ASP Perl code	<i>none</i>
table	Alias for tables	<i>none</i>
<i>Attributes</i>	<i>Default</i>	
<u>failure</u>	<i>none</i>	
<u>no_return</u>	<i>No</i>	
<u>subs</u>	<i>No</i>	
<u>arg</u> ="subs"	<i>Same as subs</i>	
<u>global</u>	<i>No</i>	
<u>file</u>	<i>none</i>	
<u>number_errors</u>	<i>none</i>	
<u>eval_label</u>	<i>none</i>	
<u>short_errors</u>	<i>none</i>	
<u>trim_errors</u>	<i>none</i>	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
<i>Other Characteristics</i>		
Invalidates cache	<i>Yes</i>	
Has Subtags	<i>No</i>	
Container tag	<i>Yes</i>	

Tag expansion example:

```
[perl tables="products" failure="Perl code error <BR>"]
my $result = "Looked up SKU $Values->{code}. It is a ";
$result .= $Tag->data('products', 'description', $Values->{code} );
return ("$result <br>\n");
[/perl]
```

```
---
Looked up SKU os28044. It is a Framing Hammer <br>
```

ASP-like Perl call: (e.g., to use it like a runtime eval() within your code)

```
$Tag->perl( { tables => "products", },
           $code );
```

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or similarly with positional parameters,

```
$Tag->perl( $ables, $attribute_hash_reference );
```

4.53.1.1. See Also

See also [Interchange Programming](#), [\[calc\]](#), and [\[mvasp\]](#).

4.53.2. Description

This tag allows you to embed perl code within an Interchange page. The code will run under the restrictions of Perl's [Safe](#) module by default. Perl's 'warnings' and 'strict' pragmas are both turned off, and [Safe](#) will block you from turning them on, since it blocks Perl's 'use' command. (This is not usually a problem, since you should probably use an alternative such as a usertag if your code is complex enough to need `strict`.)

The tag expands to the value returned by the enclosed code (i.e., printing to STDOUT or STDERR is useless).

```
[perl]
    $name      = $Values->{name};
    $browser   = $Session->{browser};
    return "Hi, $name! How do you like your $browser?
[/perl]
```

Object references are available for most Interchange tags and functions, as well as direct references to Interchange session and configuration values.

<i>Object</i>	<i>Description</i>
<code>\$CGI->{key}</code>	Hash reference to raw submitted values
<code>\$CGI_array->{key}</code>	Arrays of submitted values
<code>\$Carts->{cartname}</code>	Direct reference to shopping carts
<code>\$Config->{key}</code>	Direct reference to <code>\$Vend::Cfg</code>
<code>\$DbSearch->array(@args)</code>	Do a DB search and get results
<code>\$Document->header()</code>	Writes header lines
<code>\$Document->send()</code>	Writes to output
<code>\$Document->write()</code>	Writes to page
<code>\$Scratch->{key}</code>	Direct reference to scratch area
<code>\$Session->{key}</code>	Direct reference to session area
<code>\$Tag->tagname(@args)</code>	Call a tag as a routine (UserTag too!)
<code>\$TextSearch->array(@args)</code>	Do a text search and get results
<code>\$Values->{key}</code>	Direct reference to user form values
<code>\$Variable->{key}</code>	Config variables (same as <code>\$Config->{Variable}</code>);
<code>&HTML(\$html)</code>	Same as <code>\$Document->write(\$html)</code> ;
<code>&Log(\$msg)</code>	Log to the error log

For full descriptions of these objects, see [Interchange Perl Objects](#).

4.53.2.1. tables

This should be a whitespace-separated list of database tables you want to make available within the Perl code.

If you wish to use database values in your Perl code, the tag must pre-open the table(s) you will be using. Here is an example using the products table:

```
[perl tables=products]
  my $cost = $Tag->data('products', 'our_cost', $Values->{code});
  $min_price = $cost * ( 1 + $min_margin );
  return ($min_price > $sale_price) ? $min_price : $sale_price;
[/perl]
```

If you do not do this, your code will fail with a runtime Safe error when it tries to look up 'our_cost' in the products database with the data tag.

Even if you properly specify the tables to pre-open, some database operations will still be restricted because Safe mode prohibits creation of new objects. For SQL, most operations can be performed if the `Safe::Hole` module is installed. Otherwise, you may have to set the global=1 attribute to use data from SQL tables.

Interchange databases can always be accessed as long as they are pre-opened by using an item first.

Technical note:

Safe objects (including database handles) may persist within a page, and the `perl` tag does not necessarily destroy objects created earlier in the page. As a result, your code may work even though you did not set 'tables' properly, only to break later when you change something elsewhere on the page.

For example, this will work because the first call to [accessories ...] opens the (default) products table:

```
[accessories code=os28044 attribute=size]

[perl]
  return $Tag->accessories( { attribute => 'size',
                           code       => 'os28085' } );
[/perl]
```

If you remove the first [accessories ...] tag, then the `$Tag->accessories` call will fail with a Safe error unless you also set 'tables=products' in the `perl` tag.

The moral of this story is to ensure that you pass all necessary tables in the `perl` tag.

4.53.2.2. failure

If your code contains a compile or runtime error and fails to evaluate (i.e., `eval($code)` would set `$@`), the tag will return the value set for the `failure` attribute. The error will be logged as usual.

For example,

```
[perl failure="It Broke"]
  my $cost = $Tag->data('products', 'our_cost', $Values->{code});
  $min_price = $cost * ( 1 + $min_margin );
  return ($min_price > $sale_price) ? $min_price : $sale_price;
```

```
[/perl]
```

will return 'It Broke' because the `$Tag->Data(...)` call will fail under the Safe module (see tables above).

4.53.2.3. no_return

If `no_return=1`, this attribute suppresses the return value of the perl code.

You can retrieve the return value from the session hash via `[data session mv_perl_result]` until it gets overwritten by another perl tag.

If `no_return` is set, the perl tag *will* return any output explicitly written with the `&HTML` or `$Document->write()` functions.

Note:

If `no_return` is *not* set, then the `$Document->write()` buffer is not returned (unless you use `$Document->hot(1)` or `$Document->send()`, in which case the contents of the write buffer will probably appear before anything else on the page). See Interchange Perl Objects for more detail.

Here is an example:

```
[perl tables=products no_return=1]
  my $cost = $Tag->data('products', 'our_cost', $Values->{code});
  $min_price = $cost * ( 1 + $min_margin );
  &HTML( ($min_price > $sale_price) ? $min_price : $sale_price );
  return ($min_price > $sale_price) ? 'too low' : 'ok';
[/perl]
```

This will put the same price on the page as our earlier example, but

`$Session->{mv_perl_result}` will be either 'too low' or 'ok'.

The `[mvasp]` tag is very similar to `[perl no_return=1]`.

4.53.2.4. subs

If you have set the AllowGlobal catalog directive, setting `subs=1` will enable you to call GlobalSub routines within the enclosed perl code. Note that this can compromise security.

4.53.2.5. global

If you have set the AllowGlobal catalog directive, setting `global=1` will turn off Safe protection within the tag.

The code within the tag will then be able to do anything the user ID running Interchange can. This seriously compromises security, and you should know what you are doing before using it in a public site. It is especially dangerous if a single Interchange server is shared by multiple companies or user IDs.

Also, full 'use strict' checking is turned on by default when in global mode. You can turn it off by using 'no strict;' within your code. Note that any strict errors will go to the Interchange error logs, and the tag itself will fail silently within the page.

4.53.2.6. file

This prepends the contents of the specified file or `FileDatabase` entry to the enclosed perl code (if any), then executes as usual.

For example,

```
[perl file="my_script.pl"][/perl]
```

would execute `mymyscript.pl` and expand to its return value.

Absolute filenames (or filenames containing `'./'`) are prohibited by the `NoAbsolute` catalog directive.

If the filename is not absolute, Interchange first looks for a file in the current directory, then in the list set with the `TemplateDir` catalog directive. If it fails to find a file by that name, it then looks for an entry by that name in the database specified with the `FileDatabase` catalog directive.

4.53.2.7. file

Add line numbers to the source code displayed in the `error.log`, amazingly useful if some of the perl is being generated elsewhere and interpolated.

4.53.2.8. eval_label

Set to a string, will replace the (eval ###) in the error message with this label, handy to quickly track down bugs when you have more than one perl block in the page, especially if you are using `short_errors`.

4.53.2.9. short_errors

If set to a true value, syntax errors and the like in perl tags will log just the error, not the whole source code of the block in question, handy when you have the code open in an editor anyway and don't want the error itself to get scrolled away when running `'tail -f error.log'`.

4.53.2.10. trim_errors

If set to a number, and the error produced includes a line number, then only that number of lines before and after the broken line itself will be displayed, instead of the whole block.

4.54. price

4.54.1. Summary

Parameters: **code**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. **This may mean that there are parameters not shown here.**

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->price(
    {
        code => VALUE,
    }
)
```

OR

```
$Tag->price($code, $ATTRHASH);
```

Attribute aliases

```
base ==> mv_ib
[price code other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>base</u>	Alias for mv_ib	DEFAULT_VALUE
<u>code</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other_Characteristics</i>		
Invalidates cache	<i>no</i>	
Container tag	<i>No</i>	
Has Subtags	<i>No</i>	
Nests	<i>Yes</i>	

Tag expansion example:

```
[price code]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->price( { code => VALUE_code
}, $body );
```

or similarly with positional parameters,

```
$Tag->price(code, $attribute_hash_reference, $body);
```

4.54.2. Description

Arguments:

```
code      Product code/SKU
base      Only search in product table *base*
```

4.54. price

Interchange Tags Reference

quantity	Price for a quantity
discount	If true(1), check discount coupons and apply
noformat	If true(1), don't apply currency formatting

Expands into the price of the product identified by code as found in the products database. If there is more than one products file defined, they will be searched in order unless constrained by the optional argument **base**. The optional argument **quantity** selects an entry from the quantity price list. To receive a raw number, with no currency formatting, use the option `noformat=1`.

Interchange maintains a price in its database for every product. The price field is the one required field in the product database — it is necessary to build the price routines.

For speed, Interchange builds the code that is used to determine a product's price at catalog configuration time. If you choose to change a directive that affects product pricing you must reconfigure the catalog.

Quantity price breaks are configured by means of the *CommonAdjust* directive. There are a number of CommonAdjust recipes which can be used; the standard example in the demo calls for a separate pricing table called `pricing`. Observe the following:

```
CommonAdjust pricing:q2,q5,q10,q25, ;products:price, ==size:pricing
```

This says to check quantity and find the applicable column in the pricing database and apply it. In this case, it would be:

2-4	Column *q2*
5-9	Column *q5*
10-24	Column *q10*
25 up	Column *q25*

What happens if quantity is one? It "falls back" to the price that is in the table `products`, column `price`.

After that, if there is a size attribute for the product, the column in the pricing database corresponding to that column is checked for additions or subtractions (or even percentage changes).

If you use this tag in the demo:

```
[price code=99-102 quantity=10 size=XL]
```

the price will be according to the `q10` column, adjusted by what is in the `XL` column. (The row is of course 99–102.) The following entry in `pricing`:

code	q2	q5	q10	q25	XL
99-102	10	9	8	7	.50

Would yield 8.50 for the price. Quantity of 10 in the `q10` column, with 50 cents added for extra large (XL).

Following are several examples based on the above entry as well as this the entry in the `products` table:

code	description	price	size
99-102	T-Shirt	10.00	S=Small, M=Medium, L=Large*, XL=Extra Large

NOTE: The examples below assume a US locale with 2 decimal places, use of commas to separate, and a dollar sign (\$) as the currency formatting.

Interchange Tags Reference

TAG	DISPLAYS
-----	-----
[price 99-102]	\$10.00
[price code="99-102"]	\$10.00
[price code="99-102" quantity=1]	\$10.00
[price code="99-102" noformat=1]	10
[price code="99-102" quantity=5]	\$9.00
[price code="99-102" quantity=5 size=XL]	\$9.50
[price code="99-102" size=XL]	\$10.50
[price code="99-102" size=XL noformat=1]	10.5

Product discounts for specific products, all products, or the entire order can be configured with the [discount ...] tag. Discounts are applied on a per-user basis — you can gate the discount based on membership in a club or other arbitrary means.

Adding [discount 99-102] \$s * .9[/discount] deducts 10% from the price at checkout, but the price tag will not show that unless you add the discount=1 parameter.

```
[price code="99-102"]          -->  $10.00
[price code="99-102" discount=1] -->  $9.00
```

See *Product Discounts*.

4.54.2.1. base

4.54.2.2. code

4.55. process

This is a shortcut for the 'process' action, expanding to your catalog URL and session ID. It is analogous to the [area](#) tag for the 'process' page, but is more limited. The following expansion is illustrative:

```
[process target=targetframe]
---
http://www.here.com/cgi-bin/mycatalog/process.html?\
id=6CZ2whqo" TARGET="targetframe
```

(the trailing backslash indicates continuation, i.e., the result should be only one line)

Note the mismatched quotes in the expansion. Your surrounding HTML should supply the containing quotes, like this:

```
<A HREF="[process target=targetframe]">...
```

Aliases: **process_target**, **process_order**

4.55.1. Summary

```
[process target secure]
[process target=targetframe secure=1 other_named_attributes]
```

Parameters	Description	Default
target	The target frame or window	None

Interchange Tags Reference

secure	Boolean. If true (secure=1), the URL will link to your secure server.	<i>No</i>
Attributes	Default	
<u>interpolate (reparse)</u>	<i>No</i>	
Other Characteristics		
Invalidates cache	<i>No</i>	
Container tag	<i>No</i>	

Tag expansion example:

```
[process targetframe 1]
---
http://secure.here.com/cgi-bin/mycatalog/process.html?\
id=6CZ2whqo" TARGET="targetframe
```

ASP-like Perl call:

```
$Tag->process( { target => 'frametarget',
                secure => 1, } );
```

or similarly with positional parameters,

```
$Tag->process($target, $secure, $attribute_hash_reference);
```

4.56. process-search

This is an exact alias for [area<C search>].

4.57. query

Passes SQL statements through to SQL databases, or allows SQL queries via Interchange's database abstraction into non-SQL databases and text files. The latter requires the Perl SQL Statement module (included with Bundle::Interchange from CPAN).

4.57.1. Summary

```
[query sql]
[query sql="SQL_query_text" other_named_attributes]
```

Parameters	Description	Default
<u>sql</u>	The SQL statement. <ul style="list-style-type: none"> Passed directly through to an SQL database. For a non-SQL table, the tag interprets your SQL first. See the <u>SQL Statement</u> module for limitations and detail. 	<i>none</i>
<u>query</u>	Alias for <u>sql</u>	<i>none</i>
Attributes	Default	
<u>table</u>	products	
<u>base</u> (alias for <u>table</u>)	products	
<u>type</u> (row_count, html, list, textref)	<i>none: uses arrayref="" if no type</i>	

Interchange Tags Reference

<u>arrayref</u>	<i>arrayref="" if no type given</i>
<u>hashref</u>	<i>none</i>
<u>more</u> (type=list)	<i>No</i>
<u>xx</u> form var. abbrev. (type=list)	<i>see form variable</i>
<u>_</u> (type=list)	<i>sql</i>
<u>list_prefix</u> (type=list)	<i>list</i>
<u>random</u> (type=list)	<i>No</i>
<u>safe_data</u> (type=list)	<i>No</i>
<u>label</u> (type=list)	<i>current</i>
<u>form</u> (type=list)	<i>none</i>
<u>wantarray</u>	<i>No</i>
<u>interpolate</u>	<i>No</i>
<u>reparse</u>	<i>Yes</i>
<u>Other Characteristics</u>	
Invalidates cache	<i>No</i>
Container tag	<i>Yes</i>
Has <u>subtags</u>	<i>Yes</i>
Nests	<i>No</i>

Tag usage example:

This will list sku, description and price for ten products per page, followed by hyperlinks to the other pages of the list. Note that you may interpolate Interchange tags in the usual way if you double-quote the SQL statement.

```
[query sql="select sku, description, price from products where price < [value mv_arg]"
  type=list
  more=1
  ml=10]

[on_match]Matched<br>[/on_match]
[no_match]Not Found<br>[/no_match]

[list]
  [sql-code] [sql-param description] [sql-price]
[/list]

[more_list]
  Matches [matches] of [match-count] shown.<BR>
  [more]
[/more_list]
[/query]
```

ASP-like Perl call:

```
my $sql = "select * from products order by price";
my $result_array = $Tag->query( { sql => $sql, },
                                $body );
my ($same_results, $col_name_hash, $col_name_array) =
    $Tag->query( { sql => $sql, },
                $body );
```

Interchange Tags Reference

```
my $result_hasharray = $Tag->query( { sql      => $sql,
                                     hashref => 'my_results', },
                                     $body );
```

or similarly with positional parameters,

```
$Tag->query( $sql, $attribute_hash_reference, $body);
```

4.57.2. Description

The query tag allows you to make SQL queries. If you are using an SQL database table, the tag will pass your SQL statement directly to the database and return the result.

If your table is not in an SQL database (for example, GDBM, text, LDAP, and in-memory tables), Interchange will internally convert it to an Interchange search specification with the Perl [SQL Statement](#) module (included with Bundle::Interchange from CPAN). This means that you can use simple SQL queries regardless of the underlying database implementation.

4.57.2.1. Subtags

For list queries (type=list), the following subtags are available:

<i>Subtag</i>	<i>Usage</i>
on_match	<pre>[on_match] do this if something matched [/on_match]</pre>
no_match	<pre>[no_match] do this if nothing matched [/no_match]</pre>
list	<pre>[<u>list_prefix</u>] do this for each matched item [/list_prefix]</pre> <p>The 'list' subtag defines a region where you can use any of the looping subtags that work in array-list context (see Looping tags and Sub-tags).</p> <p>The default looping tag prefix will be 'sql'. Note however that you can override this by setting the <u>prefix</u> attribute in the enclosing query tag.</p> <p>Similarly, the <u>list_prefix</u> attribute renames the [list] subtag itself to the value you set (see list_prefix below).</p>
more_list	<pre>[more_list] [more] [/more_list]</pre> <p>The 'more_list' and 'more' subtags are used when paginating the query results (see 'more' attribute). The [more] subtag will expand to a list of links to the other pages of the query results.</p>

See also the example at the end of the Summary section above.

4.57.2.2. Perl and ASP usage

If you are calling `$Tag->query` within a `perl` tag (or whenever the code is secured by the [Safe.pm](#) module), you must be sure to set the `tables` attribute properly in the enclosing `perl` tag (see the [perl](#) tag documentation for detail).

The [types](#) that return text to a page (i.e., `row_count`, `html`, and `textref`) work as usual, returning an appropriate string. Note that you may also have access to the results as an array reference in `$Vend::Interpolate::Tmp->{"}` for the life of the page.

If you do not set a [type](#), the tag will return a reference to an array of array references, since the default with no [type](#) is `arrayref=""`.

If you call `$Tag->query` in scalar context and set [arrayref](#) or [hashref](#), it will return your results as a reference to an array of either arrayrefs or hashrefs, respectively (i.e., the same data structures you would get from Perl's DBI.pm module with `fetchall_arrayref`).

In list context, the first returned element is the aforementioned reference to your results. The second element is a hash reference to your column names, and the third element is an array reference to the list of column names.

The following examples should be illustrative:

```
[perl tables=products]
  my $sql = "select sku, price, description from products
            where price < 10 order by price";

  my $results = $Tag->query( { sql => $sql, } );
  my ( $same_results, $col_name_hashref, $col_name_arrayref )
    = $Tag->query( { sql => $sql, } );

  my $hash_results = $Tag->query( {      sql => $sql,
                                     hashref => 'my_results' } );

  # $Vend::Interpolate::Tmp->{my_results} == $hash_results
  # $Vend::Interpolate::Tmp->{' '} == $results == $same_results

  my $out = "The returned structure is\n";
  $out .= $Tag->uneval( $results );

  #loop through each row & display the fields
  foreach my $row (@$hash_results) {
    $out .= "<p>sku: " . $row->{sku}
          . "<br>price: " . $row->{price};
          . "<br>description: " . $row->{description};
  }
  return $out;

[/perl]
```

Technical Note: The `$Tag->query()` call works a bit differently in GlobalSubs and UserTags than within a [perl](#) tag. Specifically, in a GlobalSub or global UserTag, if you call `query()` in list context and want the three references (i.e., results, column hash and column array), then you need to set the `'wantarray=1'` attribute in the `query()` call. See the [wantarray](#) attribute.

4.57.2.3. sql

This is the text of your SQL statement. The standard Interchange quoting rules apply. For example, use double quotes (") if you want to interpolate Interchange tags within your SQL statement, backticks (`) to calculate a value, *etc.*

```
[query sql="select description, price from products
      where price < [value mv_arg]" ...]
...
[/query]
```

4.57.2.4. table

The table attribute sets the database to use for the query. The default will typically be the database containing the 'products' table (unless you have changed the first entry in \$Vend::Cfg->{ProductFiles}).

4.57.2.5. type

If you are not setting the `'arrayref'` or `'hashref'` attributes, then the type attribute defines the way the query will return its results. The type should be one of the following:

Type	Returns
html	The html type returns the results in an html table. You will need to supply the enclosing <code><TABLE ...></code> and <code></TABLE></code> html tags. The following is an example of typical usage: <pre><TABLE> [query sql="select * from products where price > 12 order by price" type=html] [/query] </TABLE></pre>
list	This allows you to use subtags to control the query output and pagination. See the Subtags section above for detail.
row_count	This causes the tag to return the number of rows in the query result.
textref	This causes the tag to return a the query results as a serialized array of arrays that Perl can evaluate with its <code>eval()</code> function. Here is an illustrative example: <pre>my \$rows = eval(\$Tag->query({ sql => "select * from products" type => "textref" })); my \$r3_c0 = \$rows->[3]->[0];</pre>

If you do not specify a type, the tag will create an arrayref as if you had set `'arrayref=""`.

4.57.2.6. arrayref and hashref

If you set `'arrayref=keyname'` or `'hashref=keyname'`, the query will not return results to the page. Instead, it will place the results of your query in the \$Vend::Interpolate::Tmp hash. Using `'arrayref=my_query'` sets \$Vend::Interpolate::Tmp->{my_query} to refer to an array of array references, while `'hashref=my_query'` creates an array of hash references.

Interchange Tags Reference

Note that this is useful only if you intend to access the results within Perl code (for example, within a `[perl]` tag), since there is no direct output to the returned page.

The `$Vend::Interpolate::Tmp` hash persists only for the life of the template page being processed. If you need the query results array reference to outlive the page, you will have to save the reference somewhere more persistent such as the `$Session` hash:

```
$Session->{my_query} = $Vend::Interpolate::Tmp->{my_query};
```

Beware the impact on performance if you do this with large result sets.

Technical note --- the string returned by the 'textref' type will **eval()** to the 'arrayref' data structure.

4.57.2.7. more

Requires 'type=list'.

You must set `more=1` to properly paginate your results from `list` queries (see 'type=list' above. If you do not set `more=1`, then the links to later pages will merely redisplay the first page of your results.

4.57.2.8. form variable abbreviations

Requires 'type=list'.

See the Search and Form Variables appendix for a list of form variables. Note that you must use the two-letter abbreviation rather than the full form variable name.

A few deserve special mention:

<i>Abbr</i>	<i>Name</i>	<i>Description</i>
ml	mv_matchlimit	Sets number of rows to return. If paginating (<u>more=1</u>), sets rows returned per page.
fm	mv_first_match	Start displaying search at specified match
sp	mv_search_page	Sets the page for search display
st	mv_searchtype	Forces a specific search type (text, glimpse, db or sql), overriding the default determined from your database implementation.

4.57.2.9.

Requires 'type=list'.

Setting 'prefix=foo' overrides the default prefix of 'sql' for loop subtags within a list region (see Looping tags and Sub-tags).

See the list_prefix attribute below for an illustrative example.

4.57.2.10. list_prefix

Requires 'type=list'.

Interchange Tags Reference

Setting 'list_prefix=bar' overrides the default region tagname of 'list'. The best way to show this is by example. Compare the following two examples of list queries, the first using the defaults and the second with explicitly set prefix and list_prefix.

```
[query sql="select sku, description, price from products
      where price < 20"
      type=list
      more=1
      ml=10]

[on_match]Matched<br>[/on_match]
[no_match]Not Found<br>[/no_match]

[list]
  [sql-code] [sql-param description] [sql-price]
[/list]

[more_list]
  [more]
[/more_list]
[/query]
---
```

```
[query  sql="select sku, description, price from products
      where price < 20"
      type=list
      prefix=foo
list_prefix=bar
      more=1
      ml=10]

[on_match]Matched<br>[/on_match]
[no_match]Not Found<br>[/no_match]

[bar]
  [foo-code] [foo-param description] [foo-price]
[/bar]

[more_list]
  [more]
[/more_list]
[/query]
```

4.57.2.11. random

Requires 'type=list'.

You can use the 'random' attribute to randomly select a set of rows from the whole result set of your query. In other words, setting 'random=*n*', where *n* > 0, causes the [list] region to loop over *n* randomly chosen rows rather than the full query result set.

The example below would display three randomly chosen products priced under 20.

```
[query sql="select * from products
      where price < 20"
      type=list
      random=3]

[list]
  [sql-code] [sql-param description] [sql-price]
```

```
[/list]
```

```
[/query]
```

4.57.2.12. safe_data

Requires 'type=list'.

Note — you should not set this unless you need it and know what you are doing.

Setting 'safe_data=1' allows the [sql-data] tag to return values containing the '[' character. See also [Looping tags and Sub-tags](#).

Beware of reparsing issues.

4.57.2.13. label

Requires 'type=list'.

If you are setting up multiple simultaneously active search objects within a page, this allows you to distinguish them. The default label is 'current'. Most people will not need this.

4.57.2.14. form

Requires 'type=list'.

You can use this to pass one CGI form variable in the pagination links of a [more-list]. For example, 'form="foo=bar"' to include '&foo=bar' in the URL of each of the pagination links.

Note that the variable will not be available in the initial result set since the query returns the first page directly (i.e., you did not follow a pagination link).

4.57.2.15. wantarray

This is relevant only when calling \$Tag->query(...) within global Perl code such as a globalsub or global usertag where \$MVSAFE::Safe is not defined. In these cases, setting 'wantarray=1' allows the call to

```
$Tag->query( { wantarray => 1, ... }, ... );
```

to return references as it would if called within an ordinary [[perl](#)] tag. Note that it does not force list context if you call \$Tag->query in scalar context.

Here is another example of the use of the array references, from a UserTag:

```
my $sku = 'os28044';
my $sql = qq{select description, price from products where sku = '$sku'};
my $table = 'products';

my ($results, $col_name_hashref, $col_name_arrayref) = $Tag->query({
    wantarray => 1,
    sql => "$sql",
    table => "$table"});
```

Interchange Tags Reference

```
my $out;

# this will get the first field (description)..
$out = 'description: ' . $results->[0]->[0];

# and this the second field (price)..
$out .= '<br>price: ' . $results->[0]->[1];

# this will tell us the position in the $results array of the price field..
$out .= '<br>position of price field: ' . $col_name_hashref->{price};
return $out;
```

If the [query] returns more than one row, the second row's description field would be:

```
$results->[1]->[0]
```

Technical note -- the ordinary [query ...] ... [/query] usage forces scalar context on the query call and suppresses the return value for those types that would return references if \$Tag->query were called within a [perl] tag. The wantarray option is needed because global subs and usertags are also affected by this unless you set wantarray.

Example of a nested query:

```
[query
  ml=99
  type=list
  sp="@@MV_PAGE@"
  sql=|
    SELECT  foo1, foo2, foo3
    FROM    bar
    WHERE   someothercol = 'bang'
  |]
[list]

  Here is [sql-param foo1] from outer <br>

[query
  prefix=usr
  list_prefix=detail
  ml=1
  type=list
  sp="@@MV_PAGE@"
  sql=|
    SELECT  flip
    FROM    flap
    WHERE   flog = 'flan'
  |]

[usr-on-match]
  something was found in the inner!
[/usr-on-match]

[detail]

  Here is [usr-param flip] from inner <br>

  Here is [sql-param foo2] from outer!! <br>

[/detail]
```

Interchange Tags Reference

```
[/query]

    Here is [sql-param foo3] from outer!!! <br>

[/list]
[on-match]
    Something was found in the outer query<br>
[/on-match]
[no-match]
    Nothing was found in the outer query<br>
[/no-match]
[more-list]
    <br>[matches] in the outer query<br>
[/more-list]
[/query]
```

Notice the use of 'prefix' and 'list_prefix' on subsequent inner queries.

4.58. read-cookie

Returns the value of the named cookie. Returns nothing if the cookie does not exist.

4.58.1. Summary

```
[read-cookie name]
[read-cookie name=mycookie]
```

<i>Attributes</i>	<i>Description</i>		<i>Default</i>
<u>name</u>	The name of the cookie whose value you want		<i>none</i>
<i>Attributes</i>	<i>Default</i>		
<u>interpolate (reparse)</u>	<i>No</i>		
<i>Other Characteristics</i>			
Invalidates cache	<i>Yes</i>		
Container tag	<i>No</i>		

Usage example:

```
[read-cookie name=MV_SESSION_ID]
---
6CZ2whqo
```

ASP-like Perl call:

```
$Tag->read_cookie( { name => $name, } );
```

or similarly with positional parameters,

```
$Tag->read_cookie( $name );
```

4.58.2. Description

This tag expands to the value of the named cookie (or nothing if the cookie does not exist).

Interchange Tags Reference

See the Netscape specification at http://www.netscape.com/newsref/std/cookie_spec.html if you need more cookie-specific detail.

4.58.2.1. name

This is the name of the cookie whose value you want to retrieve.

4.58.2.2. Parsing an HTTP_COOKIE string

If you pass this tag a second parameter within a Perl call, it will use your value as the HTTP_COOKIE string (ignoring the real one). This only applies if you pass the values positionally within a perl call since there is no name for the HTTP_COOKIE string input:

```
$Tag->read_cookie('MV_SESSION_ID', "MV_SESSION_ID=UnHyadQj:127.0.0.1; ...");
```

4.59. restrict

Restrict tag execution in a region. If a restricted tag is encountered, it is simply output.

4.59.1. Summary

```
[restrict tag1 tag2]
[restrict policy=deny enable="page area value"]
```

<i>Attributes</i>	<i>Description</i>	<i>Default</i>
<u>policy</u>	Whether to allow or deny by default.	deny
<u>enable</u>	Tags to enable when default policy is deny.	<i>none</i>
<u>disable</u>	Tags to disable. Overrides enable.	<i>none</i>

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>Yes</i>
Container tag	<i>No</i>

Usage example:

```
[read-cookie name=MV_SESSION_ID]
---
6CZ2whqo
```

ASP-like Perl call:

N/A. Cannot be called effectively.

4.59.2. Description

Restrict tag execution in a region. If a restricted tag is encountered, it is simply output. It can be used to allow certain tags in a user-editable region, while denying dangerous tags. Or it can be used to restrict all tag execution in a region.

4.59.2.1. policy

Default is `deny`, which makes most sense. You then specifically enable certain ITL tags. If you set `allow` by default, you must be very careful that you really are disabling all of what you consider to be dangerous tags.

4.59.2.2. enable

A space-separated or comma-separated list of tags to disable when the default policy is `deny`. Has no effect when the default policy is `allow`, and any tags passed in the `disable` parameter override the `enable`.

4.59.2.3. disable

A space-separated or comma-separated list of tags to disable when the default policy is `allow`. If you have a list of tags that are enabled, perhaps stored in a scratch variable, you can disable some of those tags since this takes precedence over the `enable`.

4.60. row

4.60.1. Summary

Parameters: **width**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Interpolates **container text** by default.

This is a container tag, i.e. `[row] FOO [/row]`. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->row(
  {
    width => VALUE,
  },
  BODY
)
```

OR

```
$Tag->row($width, $BODY);
[row width]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>width</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	

Interchange Tags Reference

<u>interpolate</u>	<i>No</i>
<u>reparse</u>	<i>Yes</i>
<i>Other_Characteristics</i>	
Invalidates cache	<i>no</i>
Container tag	<i>Yes</i>
Has Subtags	<i>No</i>
Nests	<i>No</i>

Tag expansion example:

```
[row width]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->row( { width => VALUE_width
}, $body );
```

or similarly with positional parameters,

```
$Tag->row(width, $attribute_hash_reference, $body);
```

4.60.2. Description

Formats text in tables. Intended for use in emailed reports or `<PRE></PRE>` HTML areas. The parameter *nn* gives the number of columns to use. Inside the row tag, `[col param=value ...]` tags may be used.

4.60.2.1. [col width=nn wrap=yes|no gutter=n align=left|right|input spacing=n]

Sets up a column for use in a `[row]`. This parameter can only be contained inside a `[row nn] [/row]` tag pair. Any number of columns (that fit within the size of the row) can be defined.

The parameters are:

<code>width=nn</code>	The column width, I<including the gutter>. Must be supplied, there is no default. A shorthand method is to just supply the number as the I<first> parameter, as in <code>[col 20]</code> .
<code>gutter=n</code>	The number of spaces used to separate the column (on the right-hand side) from the next. Default is 2.
<code>spacing=n</code>	The line spacing used for wrapped text. Default is 1, or single-spaced.
<code>wrap=(yes no)</code>	Determines whether text that is greater in length than the column width will be wrapped to the next line. Default is I<yes>.
<code>align=(L R I)</code>	Determines whether text is aligned to the left (the default), the right, or in a way that might display an HTML text input field correctly.

4.60.2.2. [/col]

Terminates the column field.

4.60.2.3. width**4.61. saletax****4.61.1. Summary**

Parameters: **name noformat**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->saletax(
    {
        name => VALUE,
        noformat => VALUE,
    }
)
```

OR

```
$Tag->saletax($name, $noformat);
```

Attribute aliases

```
cart ==> name
[saletax name noformat]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>cart</u>	Alias for name	DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<u>noformat</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		
Invalidates cache	YES	
Container tag	No	
Has Subtags	No	

Nests	<i>Yes</i>
-------	------------

Tag expansion example:

```
[salestax name noformat]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->salestax( { name => VALUE_name
                noformat => VALUE_noformat
            }, $body );
```

or similarly with positional parameters,

```
$Tag->salestax(name,noformat, $attribute_hash_reference, $body);
```

4.61.2. Description

Expands into the sales tax on the subtotal of all the items ordered so far for the cart, default cart is `main`. If there is no key field to derive the proper percentage, such as state or zip code, it is set to 0. If the `noformat` tag is present and non-zero, the raw number with no currency formatting will be given.

4.61.2.1. name

4.61.2.2. noformat

4.62. scratch

4.62.1. Summary

Parameters: **name**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->scratch(
    {
        name => VALUE,
    }
)
```

OR

```
$Tag->scratch($name);
[scratch name]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other Characteristics</i>		
Invalidates cache	<i>YES</i>	
Container tag	<i>No</i>	
Has Subtags	<i>No</i>	
Nests	<i>Yes</i>	

Tag expansion example:

```
[scratch name]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->scratch( { name => VALUE_name
}, $body );
```

or similarly with positional parameters,

```
$Tag->scratch(name, $attribute_hash_reference, $body);
```

4.62.2. Description

Returns the contents of a scratch variable to the page. (A scratch variable is set with a [set] value [/set] container pair.)

4.62.2.1. name

4.63. scratchd

Deletes the named scratch variable and returns its value before the deletion. For example,

```
[scratchd varname_to_delete]
```

deletes the scratch variable *varname_to_delete*.

See also the [scratch](#) and [set](#) tags.

4.63.1. Summary

```
[scratchd P_PARAM]
[scratchd N_PARAM other_named_attributes]
```

Interchange Tags Reference

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
name	Name of scratch variable to delete	<i>None</i>
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other Characteristics</i>		
Invalidates cache	<i>Yes</i>	
Container tag	<i>No</i>	

Tag expansion example:

```
[set myvar]This is myvar[/set]
.
.
.
[scratchd myvar]
---
This is myvar
```

ASP-like Perl call:

```
$Tag->scratchd($name, $attribute_hash_reference);
```

4.63.2. Description

Deletes the named scratch variable and returns its value before the deletion.

4.64. search-list

Formats results returned by a search. Must be enclosed within a search-region. Has sub-tags (see Looping tags and Sub-tags).

4.65. search-region

4.65.1. Summary

Parameters: **arg**

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [search-region] FOO [/search-region]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

Interchange Tags Reference

```
$Tag->search_region(  
    {  
        arg => VALUE,  
    },  
    BODY  
)
```

OR

```
$Tag->search_region($arg, $ATTRHASH, $BODY);
```

Attribute aliases

```
args ==> arg  
params ==> arg  
search ==> arg  
[search-region arg other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>arg</u>		DEFAULT_VALUE
<u>args</u>	Alias for arg	DEFAULT_VALUE
<u>params</u>	Alias for arg	DEFAULT_VALUE
<u>search</u>	Alias for arg	DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other Characteristics</i>		
Invalidates cache		no
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[search-region arg]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->search_region( { arg => VALUE_arg  
}, $body );
```

or similarly with positional parameters,

```
$Tag->search_region(arg, $attribute_hash_reference, $body);
```

4.65.2. Description

NO Description

4.65.2.1. arg**4.66. selected****4.66.1. Summary**

Parameters: **name value**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. This may mean that there are parameters not shown here.

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->selected(
{
    name => VALUE,
    value => VALUE,
}
)
```

OR

```
$Tag->selected($name, $value, $ATTRHASH);
[selected name value other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>case</u>		DEFAULT_VALUE
<u>cgi</u>		DEFAULT_VALUE
<u>default</u>		DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<u>multiple</u>		DEFAULT_VALUE
<u>value</u>		DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>YES</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

Interchange Tags Reference

```
[value name=example set=neato]
<OPTION[selected example neato]>Neato
<OPTION[selected example silly]>Silly
---
<OPTION SELECTED>Neato
<OPTION>Silly
```

4.66.2. Description

You can provide a "memory" for drop-down menus, radio buttons, and checkboxes with the [checked] and [selected] tags.

This will output SELECTED if the variable var_name is equal to value. If the optional MULTIPLE argument is present, it will look for any of a variety of values. Not case sensitive unless the optional case=1 parameter is used.

Here is a drop-down menu that remembers an item-modifier color selection:

```
<SELECT NAME="color">
<OPTION [selected color blue]> Blue
<OPTION [selected color green]> Green
<OPTION [selected color red]> Red
</SELECT>
```

Here is the same thing, but for a shopping-basket color selection:

```
<SELECT NAME="[item-modifier-name color]">
<OPTION [selected [item-modifier-name color] blue]> Blue
<OPTION [selected [item-modifier-name color] green]> Green
<OPTION [selected [item-modifier-name color] red]> Red
</SELECT>
```

By default, the Values space (i.e. [value foo]) is checked -- if you want to use the volatile CGI space (i.e. [cgi foo]) use the parameter cgi=1.

Use the parameter default=1 to specify the option that should be marked SELECTED if the value/CGI variable has never been set.

If the parameter multiple=1 is set, the value parameter can contain multiple (stacked) values that should be selected, separated by ASCII null characters ("\0" in Perl).

4.66.2.1. case

4.66.2.2. cgi

4.66.2.3. default

4.66.2.4. name

4.66.2.5. multiple

4.66.2.6. value**4.67. set****4.67.1. Summary**

Parameters: **name**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [set] FOO [/set]. Nesting: NO

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->set(
    {
        name => VALUE,
    },
    BODY
)
```

OR

```
$Tag->set($name, $BODY);
[set name]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other_Characteristics</i>		
Invalidates cache		YES
Container tag		Yes
Has Subtags		No
Nests		No

ASP-like Perl call:

```
$Tag->set( { name => VALUE_name
}, $body );
```

or similarly with positional parameters,

Interchange Tags Reference

```
$Tag->set(name, $attribute_hash_reference, $body);
```

4.67.2. Description

Sets a scratch variable to *value*.

Most of the `mv_*` variables that are used for search and order conditionals are in another namespace — they can be set by means of hidden fields in a form.

You can set an order profile with:

```
[set checkout]
name=required
address=required
[/set]
<INPUT TYPE=hidden NAME=mv_order_profile VALUE="checkout">
```

A search profile would be set with:

```
[set substring_case]
mv_substring_match=yes
mv_case=yes
[/set]
<INPUT TYPE=hidden NAME=mv_profile VALUE="substring_case">
```

Any of these profile values can be set in the OrderProfile files as well.

4.67.2.1. name

4.68. set-cookie

Sets browser cookie(s) with the specified attributes.

4.68.1. Summary

```
[set-cookie named_attributes]
```

Parameters must be named (no positional usage except in Perl call)

<i>Attributes</i>	<i>Description</i>	<i>Default</i>
<u>name</u>	The name you give the cookie	<i>none</i>
<u>value</u>	The value (automatically html-escaped by Interchange)	<i>none</i>
<u>expire</u>	Expiration date as "Wdy, DD-Mon-YYYY HH:MM:SS GMT"	<i>none</i>
<u>domain</u>	Overrides the domain(s) set in CookieDomain	<i>Domain(s), if any, defined in the CookieDomain directive</i>
<u>path</u>	legal URL paths for the cookie	<i>URL path(s) to your catalog, including aliases</i>

<i>Other Characteristics</i>	
Invalidates cache	<i>Yes</i>
Container tag	<i>No</i>

Usage example:

```
[set-cookie name=mycookie
            value="the value"
            expire="Tue, 03-Apr-2001 17:00:00 GMT"]
---
```

This tag returns no value in the page

ASP-like Perl call:

```
$Tag->set_cookie( { name    => $name,
                   value   => $value,
                   expire  => $expire,
                   domain  => $domain,
                   path    => $path, } );
```

or similarly with positional parameters,

```
$Tag->set_cookie( $name, $value, $expire, $domain, $path );
```

4.68.2. Description

This tag sets one or more browser cookies with your specified name, value, and expiration. (Interchange will set more than one cookie if needed to ensure that the cookie is visible from all Catalog URL path aliases and CookieDomains.)

See the Netscape specification at http://www.netscape.com/newsref/std/cookie_spec.html for more cookie-specific detail.

If you need access to the cookie from outside of your Interchange catalog, you can also set the domain and URL paths for which the cookie will be valid. If you need the cookie only within your catalog and the domains specified by the CookieDomain directive, you probably should not override the Interchange domain and path defaults.

4.68.2.1. name

This is the name of the cookie. This is the key you will use when reading the cookie later.

4.68.2.2. value

This is the value to store in the cookie.

4.68.2.3. expire

Persistent cookies (that outlive a browser session) require an expiration date. There are two ways to set it — relative times and absolute times.

absolute

Interchange Tags Reference

The date must be a string of the form:

"Wdy, DD–Mon–YYYY HH:MM:SS GMT"

and the timezone must be GMT.

relative

Supply a period in the form NN sec | min | hours | days | weeks.

Example:

```
[set-cookie name=THE_COOKIE value=foo expire="7 days"]
```

If you do not supply a date (either absolute or relative), the cookie will disappear when the user closes the browser.

4.68.2.4. domain

The value you set will override the Interchange default domain(s). You might set this if you need access to the cookie from outside the Interchange catalog, but it is usually better to set the CookieDomain directive in your catalog.

The default is to use your catalog's domain or all CookieDomain values.

4.68.2.5. path

The value you set will override the Interchange default URL path(s).

The default is to set a cookie with a path for each catalog alias (see the Catalog directive). This ensures that the cookie will be visible regardless of how the end user returns to your catalog.

4.68.3. Tips

You can use the time tag in conjunction with the set-cookie tag to set the expiration date to an absolute date.

```
[set-cookie
  name=mycookie
  value="the value"
  expire="[time gmt=1 adjust='+2190']%a, %m-%b-%Y %H:%M:%S GMT[/time]"
]
```

In the example above, the adjustment of +2190 will set a cookie expiration of 2190 hours forward from the current date.

You can use the

4.69. seti

4.69.1. Summary

Parameters: **name**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Interpolates **container text** by default.

This is a container tag, i.e. [seti] FOO [/seti]. Nesting: NO

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->seti(
    {
        name => VALUE,
    },
    BODY
)
```

OR

```
$Tag->seti($name, $BODY);
[seti name]value[/seti]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other Characteristics</i>		
Invalidates cache		YES
Container tag		Yes
Has Subtags		No
Nests		No

Tag expansion example:

```
[seti name]value[/seti]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->seti( { name => VALUE_name
}, $body );
```

or similarly with positional parameters,

```
$Tag->seti(name, $attribute_hash_reference, $body);
```

4.69.2. Description

Equivalent to the `[set]` tag, except that it interpolates by default.

4.69.2.1. name

4.70. setlocale

Sets locale and/or currency for the current page. Can be made persistent for the user with the 'persist' option. Resets default locale if called without arguments. See also Setting the Locale in the template documentation.

4.70.1. Summary

`[setlocale]`

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>currency</u>	The currency format to use. • Default: [scratch mv_currency] (see also 'persist' attribute)	DEFAULT_VALUE
<u>locale</u>	The locale to use. • Default: [scratch mv_locale] (see also 'persist' attribute)	DEFAULT_VALUE
<u>persist</u>	Setting 'persist=1' also sets the scratch variables, mv_locale and mv_currency to specified locale and currency. This makes the locale settings persistent for the user's session. Otherwise (persist=0), the setlocale tag affects the remainder of the current page only.	DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other Characteristics</i>		
Invalidates cache	no	
Container tag	No	
Has Subtags	No	
Nests	Yes	

Tag expansion example:

```
[setlocale]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->setlocale( {
}, $body );
```

or similarly with positional parameters,

Interchange Tags Reference

```
$Tag->setlocale(, $attribute_hash_reference, $body);
```

4.70.2. Description

Immediately sets the locale to `locale`, and will cause it to persist in future user pages if the `persist` is set to a non-zero, non-blank value. If the `currency` attribute is set, the pricing and currency-specific locale keys and Interchange configuration directives are modified to that locale. If there are no arguments, it sets it back to the user's default locale as defined in the scratch variables `mv_locale` and `mv_currency`.

This allows:

Dollar Pricing:

```
[setlocale en_US]
[item-list]
[item-code]: [item-price]<BR>
[/item-list]
```

Franc Pricing:

```
[setlocale fr_FR]
[item-list]
[item-code]: [item-price]<BR>
[/item-list]
```

```
[comment] Return to the user's default locale [/comment]
[setlocale]
```

4.70.2.1. currency

The currency format to use.

- Default: [scratch mv_currency] (see also 'persist' attribute)

4.70.2.2. locale

The locale to use.

- Default: [scratch mv_locale] (see also 'persist' attribute)

4.70.2.3. persist

Setting '`persist=1`' also sets the scratch variables, **mv_locale** and **mv_currency** to specified locale and currency. This makes the locale settings persistent for the user's session. Otherwise (`persist=0`), the `setlocale` tag affects the remainder of the current page only.

4.71. shipping

Returns the cost of shipping the items in the cart via the shipping mode set with the **mode** parameter. See also the [Shipping](#) section of the Database documentation.

4.71.1. Summary

[shipping mode]

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>add</u>	Adds the argument to add as data for a shipping.asc file (in \$Vend::Cfg->{ScratchDir}/) and sets it.	DEFAULT_VALUE
<u>cart</u>	<ul style="list-style-type: none"> • Alias: carts Comma-delimited list of names of carts to calculate shipping cost for. • Default: current cart 	DEFAULT_VALUE
<u>carts</u>	Alias for cart	DEFAULT_VALUE
<u>convert</u>	Applies the conversion (if any) set with the <u>PriceDivide</u> catalog configuration directive. <ul style="list-style-type: none"> • Default: True 	DEFAULT_VALUE
<u>default</u>	Resets shipping mode to default of [value mv_shipmode]	DEFAULT_VALUE
<u>file</u>	Filename to read shipping from (default is usual shipping database, e.g., shipping.asc)	DEFAULT_VALUE
<u>format</u>	Format for results with label attribute. <ul style="list-style-type: none"> • Default: '<OPTION VALUE="%M"%S>%D (%F)' • For example, <pre>[shipping mode="FLAT" label=1 format="My Format Desc %D Price %F"]</pre> 	DEFAULT_VALUE
<u>handling</u>	Boolean— use [value mv_handling] rather than [value mv_shipping] as first default for mode . Note that this attribute matters only if you do not specify the mode in the tag. <ul style="list-style-type: none"> • Note that this is set by the <u>handling</u> tag (which calls the shipping tag internally). You should probably use the handling tag rather than setting this directly. • Default: False 	DEFAULT_VALUE
<u>hide</u>	Suppresses output	DEFAULT_VALUE
<u>label</u>	By default, returns HTML <OPTION ...> widget for shipping mode(s), including description and cost. You can override the widget with the format attribute. Note that label overrides noformat . <ul style="list-style-type: none"> • Here is an example from the foundation checkout.html page: <pre>[shipping label=1 mode= [data table=country key='[default country US]' col=shipmodes]]</pre> 	DEFAULT_VALUE
<u>mode</u>		DEFAULT_VALUE

Interchange Tags Reference

	<ul style="list-style-type: none"> Aliases: name, modes Whitespace, null or comma delimited list of modes for which to calculate shipping cost. See also <code>mv_shipmode</code>. Default: [value <code>mv_handling</code>] if handling=1 or [value <code>mv_shipmode</code>] or 'default' 	
<u>modes</u>	Alias for mode	DEFAULT_VALUE
<u>name</u>	Alias for mode	DEFAULT_VALUE
<u>noformat</u>	Returns result as a number rather than a string formatted for the current locale's currency. <ul style="list-style-type: none"> Default: True 	DEFAULT_VALUE
<u>reset_message</u>	Boolean. Blanks the session's current shipping message (i.e., <code>\$Session->{ship_message}</code>).	DEFAULT_VALUE
<u>reset_modes</u>	Clears list of modes in <code>\$Vend::Cfg->{Shipping_line}</code> <ul style="list-style-type: none"> Default: False 	DEFAULT_VALUE
<u>table</u>	<ul style="list-style-type: none"> Alias: tables Whitespace-delimited list of tables containing shipping data required for perl or query calculations (e.g., in the 'PERL' field of your shipping database — see Shipping). You must specify the tables to get past the Perl 'Safe.pm' protection. For example, you will get 'Safe' errors if you refer to an SQL table without specifying it here. Default: None 	DEFAULT_VALUE
<u>tables</u>	Alias for table	DEFAULT_VALUE

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>YES</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[shipping mode]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->shipping( { mode => VALUE_mode
}, $body );
```

or similarly with positional parameters,

```
$Tag->shipping(mode, $attribute_hash_reference, $body);
```


4.71.2. Description

This tag calculates the shipping cost for items in the current cart via the specified shipping mode (usually set in the `mv_shipmode` variable). See the [Shipping](#) section of the Database documentation for detail.

It also has options to build a selection widget (usually `SELECT` or `RADIO` types) with embedded cost data.

4.71.2.1. Rounding

Note that the tag rounds the calculated shipping cost to a locale-specific number of fractional digits (e.g., to the nearest penny, or 2 digits after the decimal point in the USA).

4.71.2.2. add

Adds the argument to **add** as data for a shipping.asc file (in `$Vend::Cfg->{ScratchDir}/`) and sets it.

4.71.2.3. cart

- Alias: **carts** Comma-delimited list of names of carts to calculate shipping cost for.
- Default: current cart

4.71.2.4. convert

Applies the conversion (if any) set with the [PriceDivide](#) catalog configuration directive.

- Default: True

4.71.2.5. default

Resets shipping mode to default of [value `mv_shipmode`]

4.71.2.6. file

Filename to read shipping from (default is usual shipping database, e.g., `shipping.asc`)

4.71.2.7. format

Format for results with **label** attribute.

- Default: '`<OPTION VALUE="%M"%S>%D (%F)`'
- For example,

```
[shipping mode="FLAT"
  label=1
  format="My Format Desc %D Price %F"]
```

4.71.2.8. handling

Boolean— use [value `mv_handling`] rather than [value `mv_shipping`] as first default for **mode**. Note that this attribute matters only if you do not specify the **mode** in the tag.

Interchange Tags Reference

- Note that this is set by the `[handling]` tag (which calls the `shipping` tag internally). You should probably use the `handling` tag rather than setting this directly.
- Default: False

4.71.2.9. `hide`

Suppresses output

4.71.2.10. `label`

By default, returns HTML `<OPTION ...>` widget for shipping mode(s), including description and cost. You can override the widget with the **format** attribute. Note that **label** overrides **noformat**.

- Here is an example from the foundation checkout.html page:

```
[shipping
  label=1
  mode=[data table=country key='[default country US]' col=shipmodes]|
]
```

4.71.2.11. `mode`

- Aliases: **name**, **modes** Whitespace, null or comma delimited list of modes for which to calculate shipping cost. See also `mv_shipmode`.
- Default: `[value mv_handling]` if **handling=1** or `[value mv_shipmode]` or 'default'

4.71.2.12. `noformat`

Returns result as a number rather than a string formatted for the current locale's currency.

- Default: True

4.71.2.13. `no_state`

Bypasses the state lookup for `[shipping widget=TYPE]` and `[shipping possible=1]`.

4.71.2.14. `possible`

Returns all possible modes for the selected country and state, based on the `country` and `state` tables.

Does a query to find the `shipmodes` column of the state based on the user value `state`, and/or the `shipmodes` column of the country based on the value `country`

NOTE: You can set the following, though most will use the Interchange defaults:

<code>state_table</code>	state table for lookup (default "state")
<code>country_table</code>	country table for lookup (default "country")
<code>state_modes_field</code>	shipmodes field in state table (default "shipmodes")
<code>country_modes_field</code>	shipmodes field in country table (default "shipmodes")
<code>country_table</code>	country table for lookup (default "country")
<code>state_var</code>	state variable in user session (default "state")
<code>country_var</code>	country variable in user session (default "country")
<code>shipmode_var</code>	shipmode variable in user session (default "mv_shipmode")

4.71.2.15. reset_message

Boolean. Blanks the session's current shipping message (i.e., `$Session->{ship_message}`).

4.71.2.16. reset_modes

Clears list of modes in `$Vend::Cfg->{Shipping_line}`

- Default: False

4.71.2.17. resolve

Returns the one shipping mode to set as a default, based on the best information available. Usually selects the first in the list based on country or state.

4.71.2.18. table

- Alias: **tables** Whitespace-delimited list of tables containing shipping data required for perl or query calculations (e.g., in the 'PERL' field of your shipping database — see [Shipping](#)). You must specify the tables to get past the Perl '[Safe.pm](#)' protection. For example, you will get '[Safe](#)' errors if you refer to an SQL table without specifying it here.
- Default: None

4.71.2.19. widget

Returns a pre-configured widget for shipping mode selection. Will select the modes from `[shipping possible=1]`, but will also do shipping calculations to see if they are valid.

If there is no weight, zip, country, or other needed information, it will return "not enough information".

In other words, `[shipping widget=select]` might return to the page:

```
<select name="mv_shipmode">
  <option value="upsg" SELECTED>UPS Ground (&#36;4.20)
  <option value="upsb">UPS 2nd Day Air (&#36;8.76)
</select>
```

4.72. shipping-desc

Returns the shipping description for the specified shipping **mode**. See the [Shipping](#) section of the Database documentation. See also `shipping.asc` database for shipping modes.

Alias: **shipping-description**

The two tags below are identical in operation:

```
[shipping-desc mode]
[shipping-description mode]
```

4.72.1. Summary

```
[shipping-desc mode]
[shipping-desc mode=shipping_mode]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
mode	Shipping mode. This is a key into the shipping.asc database. See Shipping documentation.	mv_shipmode, or 'default' if mv_shipmode not set
<i>Other Characteristics</i>		
Invalidates cache	Yes, but only if no mode given	
Container tag	<i>No</i>	

Tag expansion example:

```
[shipping-desc 1DM]
---
UPS Next Day Air Early AM
```

ASP-like Perl call:

```
$Tag->shipping_desc( $mode );
```

4.73. soap

4.73.1. Summary

Parameters: **call uri proxy**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. **This may mean that there are parameters not shown here.**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->soap(
{
    call => VALUE,
    uri => VALUE,
    proxy => VALUE,
}
)
```

OR

```
$Tag->soap($call, $uri, $proxy, $ATTRHASH);
[soap call uri proxy other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>call</u>		DEFAULT_VALUE
<u>proxy</u>		DEFAULT_VALUE
<u>uri</u>		DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		<i>No</i>
<i>Other Characteristics</i>		
Invalidates cache		<i>YES</i>
Container tag		<i>No</i>
Has Subtags		<i>No</i>
Nests		<i>Yes</i>

Tag expansion example:

```
[soap call uri proxy]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->soap( { call => VALUE_call
              proxy => VALUE_proxy
              uri => VALUE_uri
            }, $body );
```

or similarly with positional parameters,

```
$Tag->soap(call,uri,proxy, $attribute_hash_reference, $body);
```

4.73.2. Description

NO Description

4.73.2.1. call

4.73.2.2. proxy

4.73.2.3. uri

4.74. strip

Strips leading and trailing whitespace from the contained body text.

4.74.1. Summary

```
[strip]
  Body text to strip
[/strip]
```

No parameters.

<i>Other Characteristics</i>	
Invalidates cache	<i>No</i>
Container tag	<i>Yes</i>
Has Subtags	<i>No</i>

ASP-like Perl call:

```
$Tag->strip($BODY);
```

or even better, just do it directly like this

```
$BODY =~ s/^\\s+//;
$BODY =~ s/\\s+$//;
```

4.75. subtotal

4.75.1. Summary

Parameters: **name noformat**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->subtotal(
{
    name => VALUE,
    noformat => VALUE,
}
)
```

OR

```
$Tag->subtotal($name, $noformat);
```

Attribute aliases

```
cart ==> name
[subtotal name noformat]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>cart</u>	Alias for name	DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE

Interchange Tags Reference

<u>noformat</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	<i>No</i>	
<i>Other Characteristics</i>		
Invalidates cache	<i>YES</i>	
Container tag	<i>No</i>	
Has Subtags	<i>No</i>	
Nests	<i>Yes</i>	

Tag expansion example:

```

[subtotal name noformat]
---
TODO: (tag result)

```

ASP-like Perl call:

```

$Tag->subtotal( { name => VALUE_name
                  noformat => VALUE_noformat
                }, $body );

```

or similarly with positional parameters,

```

$Tag->subtotal(name,noformat, $attribute_hash_reference, $body);

```

4.75.2. Description

Positional: [subtotal cart* noformat*]

mandatory: NONE

optional: cart noformat

Expands into the subtotal cost, exclusive of sales tax, of all the items ordered so far for the optional `cart`. If the `noformat` tag is present and non-zero, the raw number with no currency formatting will be given.

4.75.2.1. name

4.75.2.2. noformat

4.76. tag

4.76.1. Summary

Parameters: **op arg**

Positional parameters in same order.

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Interchange Tags Reference

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [tag] FOO [/tag]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->tag(  
  {  
    op => VALUE,  
    arg => VALUE,  
  },  
  BODY  
)
```

OR

```
$Tag->tag($op, $arg, $ATTRHASH, $BODY);
```

Attribute aliases

```
description ==> arg  
[tag op arg other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>arg</u>		DEFAULT_VALUE
<u>description</u>	Alias for arg	DEFAULT_VALUE
<u>op</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<u>attach_only</u>	No	
<i>Other_Characteristics</i>		
Invalidates cache	no	
Container tag	Yes	
Has Subtags	No	
Nests	No	

Tag expansion example:

```
[tag op arg]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->tag( { arg => VALUE_arg  
           op => VALUE_op  
}, $body );
```


or similarly with positional parameters,

```
$Tag->tag(op,arg, $attribute_hash_reference, $body);
```

4.76.2. Description

Performs any of a number of operations, based on the presence of `arg`. The arguments that may be given are:

4.76.2.1. export database file* type*

Exports a complete Interchange database to its text source file (or any specified file). The integer `n`, if specified, will select export in one of the enumerated Interchange export formats. The following tag will export the products database to `products.txt` (or whatever you have defined its source file as), in the format specified by the *Database* directive:

```
[tag export products][tag]
```

Same thing, except to the file `products/new_products.txt`:

```
[tag export products products/newproducts.txt][tag]
```

Same thing, except the export is done with a PIPE delimiter:

```
[tag export products products/newproducts.txt 5][tag]
```

The file is relative to the catalog directory, and only may be an absolute path name if *NoAbsolute* is set to `No`.

4.76.2.2. flag arg

Sets an Interchange condition.

The following enables writes on the `products` and `sizes` databases held in Interchange internal DBM format:

```
[tag flag write]products sizes[tag]
```

SQL databases are always writable if allowed by the SQL database itself -- in-memory databases will never be written.

The `[tag flag build][tag]` combination forces static build of a page, even if dynamic elements are contained. Similarly, the `[tag flag cache][tag]` forces search or page caching (not usually wise).

4.76.2.3. log dir/file

Logs a message to a file, fully interpolated for Interchange tags. The following tag will send every item code and description in the user's shopping cart to the file `logs/transactions.txt`:

```
[tag log logs/transactions.txt]
[item-list][item-code] [item-description]
[/item-list][tag]
```

The file is relative to the catalog directory, and only may be an absolute path name if *NoAbsolute* is set to `No`.

4.76.2.4. mime description_string

Returns a MIME-encapsulated message with the boundary as employed in the other mime tags, and the `description_string` used as the Content-Description. For example

```
[tag mime My Plain Text]Your message here.[/tag]
```

will return

```
Content-Type: TEXT/PLAIN; CHARSET=US-ASCII
Content-ID: [sequential, lead as in mime boundary]
Content-Description: My Plain Text
```

```
Your message here.
```

When used in concert with `[tag mime boundary]`, `[tag mime header]`, and `[tag mime id]`, allows MIME attachments to be included — typically with PGP-encrypted credit card numbers. See the demo page etc/report for an example. Adding the attribute `attach_only=1` to the tag call will set the content disposition to "attachment" (vs. inline).

4.76.2.5. mime boundary

Returns a MIME message boundary with unique string keyed on session ID, page count, and time.

4.76.2.6. mime header

Returns a MIME message header with the proper boundary for that session ID, page count, and time.

4.76.2.7. mime id

Returns a MIME message id with the proper boundary for that session ID, page count, and time.

4.76.2.8. show_tags

The encased text will not be substituted for with Interchange tags, with `<` and `[` characters changed to `&#lt;` and `[`, respectively.

```
[tag show_tags][value whatever][/tag]
```

4.76.2.9. time

Formats the current time according to POSIX `strftime` arguments. The following is the string for Thursday, April 30, 1997.

```
[tag time]%A, %B %d, %Y[/tag]
```

4.76.2.10. touch

Touches a database to allow use of the `tag_data()` routine in user-defined subroutines. If this is not done, the routine will error out if the database has not previously been accessed on the page.

```
[tag touch products][/tag]
```

4.76.2.11. arg**4.76.2.12. op****4.77. time****4.77.1. Summary**

Parameters: **locale**

Positional parameters in same order.

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [time] FOO [/time]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->time(
    {
        locale => VALUE,
    },
    BODY
)
```

OR

```
$Tag->time($locale, $ATTRHASH, $BODY);
[time locale other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>adjust</u>	Temporarily adjust the time for display purposes.	<i>none</i>
<u>gmt</u>	Display time as GMT.	<i>none</i>
<u>locale</u>	Format the time according to the named locale.	<i>none</i>
<u>tz</u>	Use the passed timezone to display the time.	<i>none</i>
<u>zerofix</u>	Strips leading zeroes from numbers.	<i>none</i>
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
<i>Other_Characteristics</i>		
Invalidates cache		<i>no</i>
Container tag		<i>Yes</i>

Interchange Tags Reference

Has Subtags	<i>No</i>
Nests	<i>No</i>

Tag expansion example:

```
[time locale]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->time( { locale => VALUE_locale
}, $body );
```

or similarly with positional parameters,

```
$Tag->time(locale, $attribute_hash_reference, $body);
```

4.77.2. Description

Formats the current time according to POSIX strftime arguments. The following is the string for Monday, January 1, 2001.

```
[time]%A, %B %d, %Y[/time]
```

See the `strftime` man page for information on the arguments (which are the same as modern UNIX date commands).

Accepts the following options:

4.77.2.1. adjust

If you wish to temporarily adjust the time for display purposes, you can pass an `adjust` parameter with the number of hours (plus or minus).

```
[time]%c[/time]
[time adjust="-3"]%c[/time]
```

Will display:

```
Mon 01 Jan 2001 11:29:03 AM EST
Mon 01 Jan 2001 08:29:03 AM EST
```

If the number ends in zero and has 3 digits or more, it is assumed that the number is in timezone format (i.e +500) the local time or from GMT:

```
[time]%c[/time]
[time adjust="-330"]%c[/time]
[time adjust="-300"]%c[/time]
```

Will display:

```
Mon 01 Jan 2001 11:29:03 AM EST
Mon 01 Jan 2001 07:59:03 AM EST
```

Interchange Tags Reference

```
Mon 01 Jan 2001 08:29:03 AM EST
```

If you want to force the number to be just a number of hours, add the `hours` parameter:

```
[time]%c[/time]
[time adjust="100" hours=1]%c[/time]
```

Will display:

```
Mon 01 Jan 2001 11:29:03 AM EST
Fri 05 Jan 2001 15:29:03 PM EST
```

If `adjust` is an Interchange time duration with a suffix of `sec`, `min`, `hrs`, `days`, or `weeks`, that will be used.

```
[time]%c[/time]
[time adjust="2 days">%c[/time]
```

Will display:

```
Mon 01 Jan 2001 11:29:03 AM EST
Wed 03 Jan 2001 11:29:03 AM EST
```

Note that the time zone does not change — you should either pick a format which doesn't display zone, use the `tz` parameter, or manage it yourself.

NOTE: You can adjust time globally for an Interchange installation by setting the `$ENV{TZ}` variable on many systems. Set `TZ` in your environment and then restart Interchange:

```
## bash/ksh/sh
TZ=PST7PDT; export TZ
interchange -restart

## csh/tcsh
setenv TZ PST7PDT
interchange -restart
```

On most modern UNIX systems, all times will now be in the PST zone.

4.77.2.2. `gmt`

If you want to display time as GMT, use the `gmt` parameter:

```
[time]%c[/time]
[time gmt=1]%c[/time]
```

will display:

```
Mon 01 Jan 2001 11:33:26 AM EST
Mon 01 Jan 2001 04:33:26 PM EST
```

Once again, the zone will not be set to GMT, so you should pick a format string which doesn't use zone, use the `tz` parameter, or manage it yourself.

4.77.2.3. locale

Format the time according to the named `locale`, assuming that `locale` is available on your operating system. For example, the following:

```
[time locale=en_US]%B %d, %Y[/time]
[time locale=fr_FR]%B %d, %Y[/time]
```

should display:

```
January 01, 2001
janvier 01, 2001
```

4.77.2.4. tz

Use the passed timezone to display the time. Will adjust for hours difference.

Example:

```
[time tz=GMT0]
[time tz=CST6CDT]
[time tz=PST8PDT]
```

will display:

```
Mon 01 Jan 2001 04:43:02 PM GMT
Mon 01 Jan 2001 10:43:02 AM CST
Mon 01 Jan 2001 08:43:02 AM PST
```

Note that the first alphabetical string is the zone name when not under daylight savings time, the digit is the number of hours displacement from GMT, and the second alphabetical string is the zone name when in daylight savings time. NOTE: This may not work on all operating systems.

4.77.2.5. zerofix

Strips leading zeroes from numbers.

4.78. timed-build

4.78.1. Summary

Parameters: **file**

Positional parameters in same order.

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Must pass named parameter `interpolate=1` to cause interpolation.

This is a container tag, i.e. `[timed-build] FOO [/timed-build]`. Nesting: NO

Interchange Tags Reference

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->timed_build(  
    {  
        file => VALUE,  
    },  
    BODY  
)
```

OR

```
$Tag->timed_build($file, $ATTRHASH, $BODY);  
[timed-build file other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>auto</u>	Turn on automatic region processing.	<i>none</i>
<u>file</u>	Name of the cache file.	<i>none</i>
<u>if</u>	Conditional display of the cached region.	<i>none</i>
<u>minutes</u>	Number of minutes after which the timed build should be repeated.	60
<u>period</u>	Alternative way of expressing time.	<i>none</i>
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
<i>Other_Characteristics</i>		
Invalidates cache	<i>no</i>	
Container tag	<i>Yes</i>	
Has Subtags	<i>No</i>	
Nests	<i>No</i>	

Tag expansion example:

```
[timed-build file]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->timed_build( { file => VALUE_file  
, $body } );
```

or similarly with positional parameters,

```
$Tag->timed_build(file, $attribute_hash_reference, $body);
```

4.78.2. Description

Allows you to build CPU-intensive regions of ITL tags on a timed basis.

Interchange Tags Reference

In the simplest case, surround a region of ITL with `[timed-build]` and `[/timed-build]`:

```
[timed-build]
    Built at [time]%c[/time].
[/timed-build]
```

If a `file` parameter is not passed, saves to the directory *timed* in catalog root, with the file name of the current page. If the `minutes` parameter is not passed specifying how often the page should be rebuilt, then it will not be rebuilt until the output file is removed.

Accepts the following parameters:

4.78.2.1. auto

Turns on automatic region processing. The text of the `timed-build` region is processed to determine a unique checksum or digest (using MD5), and that file name is checked in the directory `tmp/auto-timed` (assuming `ScratchDir` is set to `tmp`). If no number of minutes is supplied, 60 is assumed.

This is designed to automatically build regions of commonly used areas without having to manage the file name yourself.

Implies `login=1`, but will still abort if no session ID cookie has been sent. Use `force=1` to ignore cookie status.

4.78.2.2. file

Name of the file to save the results in. Relative to catalog root. The directory must exist.

4.78.2.3. if

Allows you to only display the cached region when the `if` parameter is true. For example, you can do:

```
[timed-build if="[value timed]"]
ITL tags....
[/timed-build]
```

The cached region will only be displayed if the variable `timed` is set to a non-zero, non-blank value. Otherwise, the ITL tags will be re-interpreted every time.

4.78.2.4. minutes

The number of minutes after which the timed build should be repeated. If set to 0, it will be built once and then not rebuilt until the output file is removed.

4.78.2.5. period

Alternative way of expressing time. You can pass a string describing the rebuild time period:

```
[timed-build period="4 hours"]
ITL tags....
[/timed-build]
```


Interchange Tags Reference

This is really the same as `minutes=240`. Useful for passing seconds:

```
[timed-build period="5 seconds"]
ITL tags....
[/timed-build]
```

The region will be rebuilt every 5 seconds.

Performance Tip: use minutes of .08 instead; avoids having to parse the period string.

If you have the `StaticDir catalog.cfg` parameter set to a writable path, you can build a cached static version of your catalog over time. Simply place a `[timed-build]` tag at the top of pages you wish to build statically. Assuming the catalog is not busy and write lock can be obtained, the StaticDBM database will be updated to mark the page as static and the next time a link is made for that page the static version will be presented.

4.79. tmp

4.79.1. Summary

Parameters: **name**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Interpolates **container text** by default.

This is a container tag, i.e. `[tmp] FOO [/tmp]`. Nesting: NO

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->tmp(
    {
        name => VALUE,
    },
    BODY
)
```

OR

```
$Tag->tmp($name, $BODY);
```

```
[tmp name]value[/tmp]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	<i>Yes</i>	

Interchange Tags Reference

<u>reparse</u>	<i>Yes</i>	
<i>Other Characteristics</i>		
Invalidates cache		<i>YES</i>
Container tag		<i>Yes</i>
Has Subtags		<i>No</i>
Nests		<i>No</i>

Tag expansion example:

```
[tmp name]value[/tmp]
```

ASP-like Perl call:

```
$Tag->tmp( { name => VALUE_name  
, $body  });
```

or similarly with positional parameters,

```
$Tag->tmp(name, $attribute_hash_reference, $body);
```

4.79.2. Description

Sets a `Scratch` variable to the value specified in the tag body. This is just as the `[seti]` tag would do it, except that the *name* is added to the list of `Scratch` keys that are to be deleted immediately after the current page has been processed and served. This saves session write time in many cases.

This tag interpolates automatically. (Interpolation can be turned off with `interpolate=0`.) See also: `[tmpn]`.

IMPORTANT NOTE: the `[tmp ...][/tmp]` tag is not appropriate for setting order profiles or `mv_click` actions. If you want to avoid that, use a profile stored via the `catalog.cfg` directive `OrderProfile`.

4.79.2.1. name

4.80. tmpn

4.80.1. Summary

Parameters: **name**

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter `interpolate=1` to cause interpolation.

This is a container tag, i.e. `[tmpn] FOO [/tmpn]`. Nesting: NO

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->tmpn(
    {
        name => VALUE,
    },
    BODY
)
```

OR

```
$Tag->tmpn($name, $BODY);

[tmpn name]value[/tmp]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate</u>	No	
<u>reparse</u>	Yes	
<i>Other Characteristics</i>		
Invalidates cache		YES
Container tag		Yes
Has Subtags		No
Nests		No

ASP-like Perl call:

```
$Tag->tmpn( { name => VALUE_name
}, $body );
```

or similarly with positional parameters,

```
$Tag->tmpn(name, $attribute_hash_reference, $body);
```

4.80.2. Description

Equivalent to the `[tmp]` tag, except that it does not interpolate by default.

NOTE: This tag was introduced in Interchange 4.9 and is therefore not available in earlier versions.

4.80.2.1. name

4.81. total-cost

4.81.1. Summary

Parameters: **name noformat**

Interchange Tags Reference

Positional parameters in same order.

Pass attribute hash as last to subroutine: **no**

Must pass named parameter interpolate=1 to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->total_cost(  
    {  
        name => VALUE,  
        noformat => VALUE,  
    }  
)
```

OR

```
$Tag->total_cost($name, $noformat);
```

Attribute aliases

```
    cart ==> name  
[total-cost name noformat]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>cart</u>	Alias for name	DEFAULT_VALUE
<u>name</u>		DEFAULT_VALUE
<u>noformat</u>		DEFAULT_VALUE
<i>Attributes</i>	<i>Default</i>	
<u>interpolate (reparse)</u>	No	
<i>Other_Characteristics</i>		
Invalidates cache	YES	
Container tag	No	
Has Subtags	No	
Nests	Yes	

Tag expansion example:

```
    [total-cost name noformat]  
---  
    TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->total_cost( { name => VALUE_name  
                  noformat => VALUE_noformat  
}, $body );
```

or similarly with positional parameters,

Interchange Tags Reference

```
$Tag->total_cost(name,noformat, $attribute_hash_reference, $body);
```

4.81.2. Description

Expands into the total cost of all the items in the current shopping cart, including sales tax (if any).

4.81.2.1. name

4.81.2.2. noformat

4.82. tree

4.82.1. Summary

Parameters: **table master subordinate start**

The attribute hash reference is passed after the parameters but before the container text argument. **This may mean that there are parameters not shown here.**

Must pass named parameter interpolate=1 to cause interpolation.

This is a container tag, i.e. [tree] FOO [/tree]. Nesting: NO

Invalidates cache: **no**

Called Routine:

ASP-like Perl call:

```
$Tag->tree(  
    {  
        table => VALUE,  
        master => VALUE,  
        subordinate => VALUE,  
        start => VALUE,  
    },  
    BODY  
)
```

OR

```
$Tag->tree($table, $master, $subordinate, $start, $ATTRHASH, $BODY);
```

Attribute aliases

```
sub ==> subordinate  
[tree table master subordinate start other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>master</u>		DEFAULT_VALUE
<u>start</u>		DEFAULT_VALUE
<u>sub</u>	Alias for subordinate	DEFAULT_VALUE

Interchange Tags Reference

<u>subordinate</u>		DEFAULT_VALUE
<u>table</u>		DEFAULT_VALUE
Attributes	Default	
<u>interpolate</u>	<i>No</i>	
<u>reparse</u>	<i>Yes</i>	
Other Characteristics		
Invalidates cache		<i>no</i>
Container tag		<i>Yes</i>
Has Subtags		<i>No</i>
Nests		<i>No</i>

Tag expansion example:

```
[tree table master subordinate start]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->tree( { master => VALUE_master
              start => VALUE_start
              subordinate => VALUE_subordinate
              table => VALUE_table
            }, $body );
```

or similarly with positional parameters,

```
$Tag->tree(table,master,subordinate,start, $attribute_hash_reference, $body);
```

4.82.2. Description

Provides iterative list capability for binary trees. It produces hash-based rows use the same tags as [\[item-list\]](#); sets some additional hash key entries to describe the tree and provide display control.

Works on a data set with the structure:

```
parent  child
99      a
a       b
a       c
a       d
a       x
x       y
x       z
99      m
99      n
99      o
o       e
o       f
o       g
```

Sets several keys which assist in walking and displaying the tree.

4.82.2.1. mv_level

Level of the item. If it is in the first level, it is 0. Sublevels are infinite (except for performance).

4.82.2.2. mv_increment

Increment label for the item. Normally goes from 1...n, but can be changed to A...Z or a...z in outline mode.

4.82.2.3. mv_children

If in autodetect mode, set to the number of children this branch has. If a leaf, set to 0.

4.82.2.4. mv_spacing

A multiple of level times the spacing option. Useful for setting width of spacer images.

The above sample data placed in a table named "tree" would produce:

a	mv_level=0, mv_increment=1, mv_children=4
b	mv_level=1, mv_increment=1, mv_children=0
c	mv_level=1, mv_increment=2, mv_children=0
d	mv_level=1, mv_increment=3, mv_children=0
x	mv_level=1, mv_increment=4, mv_children=2
y	mv_level=2, mv_increment=1, mv_children=0
z	mv_level=2, mv_increment=2, mv_children=0
m	mv_level=0, mv_increment=1, mv_children=0
n	mv_level=0, mv_increment=2, mv_children=0
o	mv_level=0, mv_increment=3, mv_children=3
e	mv_level=1, mv_increment=1, mv_children=0
f	mv_level=1, mv_increment=2, mv_children=0
g	mv_level=1, mv_increment=3, mv_children=0

from the tag call:

```
<table>
[tree  start=99
      table=tree
      master=parent
      subordinate=child
      autodetect=1
      spacing=4
      full=1]
<tr>
<td>
[if-item-param mv_level]
      [item-calc]
          return '&nbsp;' x [item-param mv_spacing];
      [/item-calc]
[/if-item-param]
[item-param child]
</td>
<td>
      mv_level=[item-param mv_level],
      mv_increment=[item-param mv_increment],
      mv_children=[item-param mv_children]
</td>
</tr>
[/tree]
```

</table>

Accepts the following parameters:

4.82.2.5. table

Database table which contains the tree. Must be a valid Interchange table identifier.

4.82.2.6. master

The column which is used to determine the parent of the item.

4.82.2.7. subordinate

The child column, which determines which items are sub-items of the current one. Used to re-query for items with its value in `master`.

4.82.2.8. start_item

The first item to be followed, i.e. the `master` value of all the top-level items.

4.82.2.9. autodetect

Specifies that the next level should be followed to detect the number of child items contained. Not recursive; only follows far enough to determine the children of the current item.

4.82.2.10. full

Specifies that all items should be followed. Essentially the same as specifying `memo` and passing the `explode` variable, but not dependent on them. Useful for building lists for inclusion in embedded Perl, among other things.

4.82.2.11. stop

An optional `stop` field which, when the value is true, can stop the following of the branch.

4.82.2.12. continue

An optional `continue` field which, when the value is true, can force the branch to be followed.

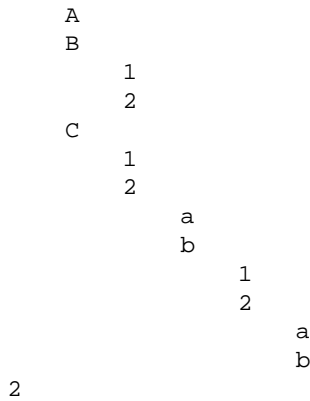
4.82.2.13. sort

The column which should be used for ordering the items — determines the order in which they will be displayed under the current parent.

4.82.2.14. outline

Sets outline mode, where `mv_increment` will be displayed with letter values or numeral values. If set to specifically 1, will produced outline increments like:

1



4.82.2.15. memo

Indicates that the collapse/explode/toggle features are to be used, and names a `Scratch` variable where the values should be stored.

4.82.2.16. collapse

The name of a variable in the user's session which will determine that the tree should be "collapsed". When collapsed, the child items will not be followed unless they are set to be followed with `toggle`. Zeros all toggles.

Requires `memo` to be set if values are to be retained.

4.82.2.17. toggle

The name of a variable in the user's session which will determine that the current item should be either followed or not followed. The first time the `toggle` variable corresponding to its primary key is passed, the item will be expanded. The next call will "collapse" the item.

Requires `memo` to be set if values are to be retained.

4.82.2.18. explode

The name of a variable in the user's session which will determine that the tree should be "exploded". When exploded, all child items are followed and the full tree can be displayed.

Requires `memo` to be set if values are to be retained.

4.82.2.19. pedantic

When set to a true value, and an endless tree is detected (i.e. the child branch contains a parent) then the error will be logged to the catalog error log and the tree call will return with an error.

If `pedantic` is not set (the default), the current leaf will be shown but never followed. This allows partial display of the tree.

4.82.2.20. log_error

When set to a true value, and an endless tree is detected (i.e. the child branch contains a parent) then the error will be logged to the catalog error log. No logging done by default.

4.82.2.21. show_error

When set to a true value, and an endless tree is detected (i.e. the child branch contains a parent) then the error will be returned in the page. Errors are NOT shown by default.

In addition to the above values, all valid options for a list tag are in force. For example, you can set a "SELECTED" value on an option list with `option=1`, set the tag prefix with `prefix`, etc.

4.82.2.22. master**4.82.2.23. start****4.82.2.24. subordinate****4.82.2.25. table****4.83. try**

Allows you to trap errors. Interchange processes the body text of the `[try][/try]` block and returns it normally if it does not generate an error. If it does generate an error, Interchange executes the `[catch][/catch]` block.

See also '[catch](#)'.

4.83.1. Summary

```
[try label=my_label other_named_attributes]
  Body text to return if no error
[/try]
.
.
.
[catch my_label]
  Body text to return if try block caused an error
[/catch]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>label</u>	The label shared by the paired <code>try</code> and <code>catch</code> blocks	'default'
<i>Attributes</i>	<i>Description</i>	<i>Default</i>
<u>status</u>	Returns 0 (failed) or 1 (succeeded) instead of page output	<i>none</i>
<u>hide</u>	Suppresses page output	<i>No</i>
<u>clean</u>	Suppress <code>try</code> block output if it has an error	<i>No</i>
<u>interpolate</u>	See Interpolating Parameters	<i>No</i>
<u>reparse</u>	See Interpolating Parameters	<i>Yes</i>
<i>Other_Characteristics</i>		

Invalidates cache	<i>No</i>
Container tag	<i>Yes</i>

Tag expansion example:

```
[set divisor]0[/set]
[try label=div]
  [calc] 1 / [scratch divisor] [/calc]
[/try]
[catch div]Division error[/catch]
---
```

Division Error

ASP-like Perl call:

```
$Tag->try(    { label => I<'try_catch_label'>,
               status => 1, },
            $try_body );

$Tag->catch(  { label => I<'try_catch_label'>, },
            $catch_body )
```

or similarly with positional parameters,

```
$Tag->try($label, $attribute_hash_reference, $try_body);
$Tag->catch($label, $attribute_hash_reference, $catch_body);
```

4.83.1.1. See Also

[catch](#)

4.83.2. Description

Allows you to trap errors. Interchange processes the body text of the [try][try] block and returns it normally if it does not generate an error. If it does generate an error, interchange executes the [catch][catch] block. The catch block executes where it is on the page (*i.e.*, it does not replace the output of the try block).

Note that the catch block must occur after the [try] block in the document.

4.83.2.1. label

The try and catch blocks are matched by this label.

Technical note:

The try tag will also place a result in the \$Session object. For example, the following returns the 'Illegal division by zero...' error message if it occurs:

```
[try label=divide][calc] 1 / [scratch divisor] [/calc][try]

[catch divide]
  [calc]$Session->{try}{divide}[/calc]
[/catch]
```

Interchange Tags Reference

The `$Session->{try}{divide}` object will be set to the empty string (") if there was no error, or it will contain the error message if there was an error.

The `[perl]` and `[calc]` tags also set `$Session->{try}->{active_label}` on errors.

4.83.2.2. status

Suppresses `try` block output and returns 1 if no error or 0 if an error occurred instead. Executes the `catch` block as usual in case of an error.

4.83.2.3. hide

Suppresses `try` block output (regardless of success or failure). Executes the `catch` block as usual in case of an error.

4.83.2.4. clean

Setting `'clean=1'` will cause the `try` block to suppress its output only if it has an error. Otherwise (`clean=0` or not set), the `try` block will return whatever partial output it has completed before the error. The `catch` block will work as usual.

4.84. update

Forces an update of the specified interchange function. Function may be one of the following:

- **cart** (updates current or named cart)
- **process** (updates order or search)
- **values** (updates user-entered fields)
- **data** (updates database, using current **mv_** CGI form variables)

4.84.1. Summary

[**update** function]

Parameters	Description	Default
<u>function</u>	<ul style="list-style-type: none">• cart<ul style="list-style-type: none">◆ Updates current or named cart (see name attribute)• process<ul style="list-style-type: none">◆ Updates an order or a search page• values<ul style="list-style-type: none">◆ Updates user-entered fields• data<ul style="list-style-type: none">◆ Updates database, using current mv_ CGI form variables, for example:<ul style="list-style-type: none">◇ mv_data_table Table to update◇ mv_data_key Key into table◇ mv_data_fields Fields to update (space or null delimited)◇ mv_data_function One of the following:	DEFAULT_VALUE

Interchange Tags Reference

	<ul style="list-style-type: none"> · delete · update · insert · delete <p>◇ etc.</p>	
<u>name</u>	Cart name to update (if 'function=cart')	DEFAULT_VALUE
	<ul style="list-style-type: none"> • Default: current cart 	

<i>Attributes</i>	<i>Default</i>
<u>interpolate (reparse)</u>	<i>No</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>YES</i>
Container tag	<i>No</i>
Has Subtags	<i>No</i>
Nests	<i>Yes</i>

Tag expansion example:

```
[update function]
---
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->update( { function => VALUE_function
}, $body );
```

or similarly with positional parameters,

```
$Tag->update(function, $attribute_hash_reference, $body);
```

4.84.2. Description

Forces an update of the specified interchange function. Function may be one of the following:

- **cart** (updates current or named cart)
- **process** (updates order or search)
- **values** (updates user-entered fields)
- **data** (updates database, using current **mv_** CGI form variables)

4.84.2.1. function

- cart
 - ◆ Updates current or named cart (see name attribute)
- process
 - ◆ Updates an order or a search page
- values
 - ◆ Updates user-entered fields
- data
 - ◆ Updates database, using current **mv_** CGI form variables, for example:
 - ◇ **mv_data_table** Table to update

Interchange Tags Reference

- ◇ **mv_data_key** Key into table
- ◇ **mv_data_fields** Fields to update (space or null delimited)
- ◇ **mv_data_function** One of the following:
 - delete
 - update
 - insert
 - delete
- ◇ etc.

4.84.2.2. name

Cart name to update (if 'function=cart')

- Default: current cart

4.85. userdb

4.85.1. Summary

Parameters: **function**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. This may mean that there are parameters not shown here.

Invalidates cache: **YES**

Attribute aliases

```
name ==> nickname
table ==> db
[userdb function other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>function</u>		DEFAULT_VALUE
<u>name</u>	Alias for nickname	DEFAULT_VALUE
<u>table</u>	Alias for db	DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>interpolate (reparse)</u>		<i>No</i>
<i>Other_Characteristics</i>		
Invalidates cache		<i>YES</i>
Container tag		<i>No</i>
Has Subtags		<i>No</i>
Nests		<i>Yes</i>

Tag expansion example:

```
[userdb function]
---
```

```
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->userdb({
    function => VALUE
});
```

or similarly with positional parameters,

```
$Tag->userdb(function, $attribute_hash_reference);
```

4.85.2. Description

Interchange provides a [userdb . . .] tag to access the UserDB functions.

```
[userdb
    function=function_name
    username="username"*
    password="password"*
    verify="password"*
    oldpass="old password"*
    shipping="fields for shipping save"
    billing="fields for billing save"
    preferences="fields for preferences save"
    force_lower=1
    param1=value*
    param2=value*
    hide=1
    show=1
    ...
]
```

* Optional

It is normally called in an mv_click or mv_check setting, as in:

```
[set Login]
mv_todo=return
mv_nextpage=welcome
[userdb function=login]
[/set]

<FORM ACTION="[process]" METHOD=POST>
<INPUT TYPE=hidden NAME=mv_click VALUE=Login>
Username <INPUT NAME=mv_username SIZE=10>
Password <INPUT NAME=mv_password SIZE=10>
</FORM>
```

There are several global parameters that apply to any use of the userdb functions. Most importantly, by default the database table is set to be *userdb*. If you must use another table name, then you should include a database=table parameter with any call to userdb. The global parameters (default in parentheses):

database	Sets user database table (userdb)
hide	Hide the return value of certain functions (including login, new_account, save, load)
show	Show the return value of certain functions

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	or the error message, if any (0)
force_lower	Force possibly upper-case database fields to lower case session variable names (0)
billing	Set the billing fields (see Accounts)
shipping	Set the shipping fields (see Address Book)
preferences	Set the preferences fields (see Preferences)
bill_field	Set field name for accounts (accounts)
addr_field	Set field name for address book (address_book)
pref_field	Set field name for preferences (preferences)
cart_field	Set field name for cart storage (carts)
pass_field	Set field name for password (password)
time_field	Set field for storing last login time (time)
expire_field	Set field for expiration date (expire_date)
acl	Set field for simple access control storage (acl)
file_acl	Set field for file access control storage (file_acl)
db_acl	Set field for database access control storage (db_acl)

4.85.2.1. function

4.85.2.2. name

4.85.2.3. table

4.86. value

Returns the the current value of the named form input field. HTML-escapes Interchange tags in the result for security.

Can also set a new value within the current page.

4.86.1. Summary

[**value** name]
[**value** name=*form_var_name* *other_named_attributes*]

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>	This is the name of the form variable whose value you want.	<i>None</i>
<i>Attributes</i>	<i>Default</i>	
<u>set</u>	<i>none</i>	
<u>hide</u>	<i>No</i>	
<u>filter</u>	<i>none</i>	
<u>keep</u> (with filter)	<i>No</i>	
<u>scratch</u>	<i>No</i>	
<u>default</u>	<i>none</i>	
<u>enable_html</u>	<i>No</i>	
<u>interpolate</u> (reparse)	<i>No</i>	
<i>Other Characteristics</i>		
Invalidates cache	<i>Yes</i>	

Tag expansion example:

Assuming form variable 'foo' = 'bar',

```
[value foo]
---
bar
```

ASP-like Perl call:

```
$Tag->value( { name => var_name } );

# or if you simply want the value:
$Values->{var_name};
```

or similarly with positional parameters,

```
$Tag->value($name, $attribute_hash_reference);
```

4.86.2. Description

Usage example:

```
<INPUT TYPE="text" NAME="name" VALUE="[value name]">
<INPUT TYPE="text" NAME="name" VALUE="[value name=name]">
```

Expands into the current value of the named customer/form input field. When the value is returned, any Interchange tags present in the value will be escaped. This prevents users from entering Interchange tags in form values, which would be a serious security risk.

4.86.2.1. name

This is the name of the form variable whose value you want.

4.86.2.2. set

You can change a value with 'set=new_value'. The tag will return the value you set unless you also set the hide=1 attribute.

Use this to "uncheck" a checkbox or set other form variable values to defaults. If you simply want a place to store your own data, use the set and scratch tags instead.

Note that this is only available in new-style tags, for safety reasons.

4.86.2.3. hide

Setting hide=1 suppresses the tag's return value, which can be useful with the set attribute.

4.86.2.4. filter

See the filter tag for a list of filters.

Setting 'filter="filter"' modifies the named value with the specified filter.

4.86.2.5. keep (with filter)

Set `keep=1` if you want the tag to return a filtered result but do not want the filter to modify the form value itself in the `$::Values` hash.

4.86.2.6. scratch

Setting `'scratch=1'` places a copy of the value in the `$::Scratch` hash. An illustrative example:

```
foo is [value name=foo scratch=1] in the Values hash
foo is now also [scratch foo] in the Scratch hash
```

4.86.2.7. default

This sets a return value in case the named value is missing or otherwise false. The following will expand to "Using default":

```
[value name=myname set=0 hide=1]
[value name=myname default="Using default"]
```

4.86.2.8. enable_html

Any `'<'` characters will normally be converted into `'<'` for safety reasons. This conversion can be disabled using `'enable_html=1'`.

4.87. value-extended

4.87.1. Summary

Parameters: **name**

Positional parameters in same order.

The attribute hash reference is passed to the subroutine after the parameters as the last argument. This may mean that there are parameters not shown here.

Must pass named parameter `interpolate=1` to cause interpolation.

Invalidates cache: **YES**

Called Routine:

ASP-like Perl call:

```
$Tag->value_extended(
{
  name => VALUE,
})
```

OR

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```
$Tag->value_extended($name, $ATTRHASH);  
[value-extended name other_named_attributes]
```

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>name</u>		DEFAULT_VALUE
<i>Attributes</i>		<i>Default</i>
<u>umask</u>		<i>none</i>
<u>interpolate (reparse)</u>		<i>No</i>
<i>Other Characteristics</i>		
Invalidates cache		<i>YES</i>
Container tag		<i>No</i>
Has Subtags		<i>No</i>
Nests		<i>Yes</i>

Tag expansion example:

```
[value-extended name]  
---  
TODO: (tag result)
```

ASP-like Perl call:

```
$Tag->value_extended( { name => VALUE_name }, $body );
```

or similarly with positional parameters,

```
$Tag->value_extended(name, $attribute_hash_reference, $body);
```

4.87.2. Description

Named call example:

```
[value-extended  
  name=formfield  
  outfile=filename*  
  umask=octal*  
  ascii=1*  
  yes="Yes"*  
  no="No"*  
  joiner="char|string"*  
  test="isfile|length|defined"*  
  index="N|N..N|*"   
  file_contents=1*  
  maxsize=length*  
  elements=1*  
]
```

Expands into the current value of the customer/form input field named by field. If there are multiple elements of that variable, it will return the value at index; by default all joined together with a space.

If the variable is a file variable coming from a multipart/form-data file upload, then the contents of that upload can be returned to the page or optionally written to the outfile.

4.87.2.1. **name**

Specify which value variable to deal with. If no other parameters are present, then the value of the variable will be returned. If there are multiple elements, then by default they will all be returned joined by a space. If `joiner` is present, then they will be joined by its value.

In the special case of a file upload, the value returned is the name of the file as passed for upload.

4.87.2.2. **joiner**

The character or string that will join the elements of the array. Will accept string literals such as `"\n"` or `"\r"`.

4.87.2.3. **test**

Three tests: `isfile` returns true if the variable is a file upload. `length` returns the length. `defined` returns whether the value has ever been set at all on a form.

4.87.2.4. **index**

The index of the element to return if not all are wanted. This is useful especially for pre-setting multiple search variables. If set to `*`, will return all (joined by `joiner`). If a range, such as `0 . . 2`, will return multiple elements.

4.87.2.5. **file_contents**

Returns the contents of a file upload if set to a non-blank, non-zero value. If the variable is not a file, returns nothing.

4.87.2.6. **maxsize**

The maximum file size allowed, in bytes. If a file of greater size than `maxsize` is uploaded, the tag will return false and an error will be logged.

4.87.2.7. **outfile**

Names a file to write the contents of a file upload to. It will not accept an absolute file name; the name must be relative to the catalog directory. If you wish to write images or other files that would go to HTML space, you must use the HTTP server's `Alias` facilities or make a symbolic link.

4.87.2.8. **umask**

Permission mask (in octal) to apply to the uploaded file's permission bits. You may want to set this to make a file world-readable, or to keep it from being group-readable. See the UNIX `chmod(1)` manpage for details.

4.87.2.9. **ascii**

To do an auto-ASCII translation before writing the `outfile`, set the `ascii` parameter to a non-blank, non-zero value. Default is no translation.

4.87.2.10. yes

The value that will be returned if a test is true or a file is written successfully. Defaults to 1 for tests and the empty string for uploads.

4.87.2.11. no

The value that will be returned if a test is false or a file write fails. Defaults to the empty string.

5. User-defined Tags

To define a tag that is catalog-specific, place *UserTag* directives in your `catalog.cfg` file. For server-wide tags, define them in `interchange.cfg`. Catalog-specific tags take precedence if both are defined — in fact, you can override the base Interchange tag set with them. The directive takes the form:

```
UserTag tagname property value
```

where `tagname` is the name of the tag, `property` is the attribute (described below), and `value` is the value of the property for that `tagname`.

The user tags can either be based on Perl subroutines or just be aliases for existing tags. Some quick examples are below.

An alias:

```
UserTag product_name Alias      data products title
```

This will change `[product_name 99-102]` into `[data products title 99-102]`, which will output the `title` database field for product code 99-102. Don't use this with `[item-data ...]` and `[item-field ...]`, as they are parsed separately. You can do `[product-name [item-code]]`, though.

A simple subroutine:

```
UserTag company_name Routine    sub { "Your company name" }
```

When you place a `[company-name]` tag in an Interchange page, the text `Your company name` will be substituted.

A subroutine with a passed text as an argument:

```
UserTag caps      Routine    sub { return "\U@" }
UserTag caps      HasEndTag
```

The tag `[caps]`This text should be all upper case[/caps] will become `THIS TEXT SHOULD BE ALL UPPER CASE`.

Here is a useful one you might wish to use:

```
UserTag quick_table HasEndTag
UserTag quick_table Interpolate
UserTag quick_table Order    border
UserTag quick_table Routine <<EOF
sub {
    my ($border,$input) = @_;
    $border = " BORDER=$border" if $border;
    my $out = "<TABLE ALIGN=LEFT$border>";
    my @rows = split /\n+/, $input;
    my ($left, $right);
    for(@rows) {
        $out .= '<TR><TD ALIGN=RIGHT VALIGN=TOP>';
        ($left, $right) = split /\s*:\s*/, $_, 2;
        $out .= '<B>' unless $left =~ /</;
        $out .= $left;
    }
}
```

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```
$out .= '</B>' unless $left =~ /</;
$out .= '</TD><TD VALIGN=TOP>';
$out .= $right;
$out .= '</TD></TR>';
$out .= "\n";
}
$out .= '</TABLE>';
}
EOF
```

Called with:

```
[quick-table border=2]
Name: [value name]
City: [value city][if value state], [value state][if] [value country]
[/quick_table]
```

As is the case with `[perl]` tag, user tags run under the Perl [Safe.pm](#) module with warnings disabled. Unlike `[perl]` tags, however, user tags use Perl's 'strict' pragma.

The properties for UserTag are:

5.1. Alias

An alias for an existing (or other user-defined) tag. It takes the form:

```
UserTag tagname Alias    tag to insert
```

An Alias is the only property that does not require a *Routine* to process the tag.

5.2. attrAlias

An alias for an existing attribute for defined tag. It takes the form:

```
UserTag tagname attrAlias    alias attr
```

As an example, the standard Interchange `value` tag takes a named attribute of name for the variable name, meaning that `[value name=var]` will display the value of form field `var`. If you put this line in `catalog.cfg`:

```
UserTag value attrAlias    identifier name
```

then `[value identifier=var]` will be an equivalent tag.

5.3. CanNest

Notifies Interchange that this tag must be checked for nesting. Only applies to tags that have *HasEndTag* defined, of course. NOTE: Your routine must handle the subtleties of nesting, so don't use this unless you are quite conversant with parsing routines. See the routines `tag_loop_list` and `tag_if` in `lib/Vend/Interpolate.pm` for an example of a nesting tag.

```
UserTag tagname CanNest
```


5.4. HasEndTag

Defines an ending [/tag] to encapsulate your text — the text in between the beginning [tagname] and ending [/tagname] will be the last argument sent to the defined subroutine.

```
UserTag tagname HasEndTag
```

5.5. Implicit

This defines a tag as implicit, meaning it can just be an attribute instead of an attribute=value pair. It must be a recognized attribute in the tag definition, or there will be big problems. Use this with caution!

```
UserTag tagname Implicit attribute value
```

If you want to set a standard include file to a fixed value by default, but don't want to have to specify [include file="/long/path/to/file"] every time, you can just put:

```
UserTag include Implicit file file=/long/path/to/file
```

and [include file] will be the equivalent. You can still specify another value with [include file="/another/path/to/file"].

5.6. Interpolate

The behavior for this attribute depends on whether the tag is a container (i.e. HasEndTag is defined). If it is not a container, the Interpolate attribute causes the **the resulting HTML** from the UserTag to be re-parsed for more Interchange tags. If it is a container, Interpolate causes the contents of the tag to be parsed **before** the tag routine is run.

```
UserTag tagname Interpolate
```

5.7. InvalidateCache

If this is defined, the presence of the tag on a page will prevent search cache, page cache, and static builds from operating on the page.

```
UserTag tagname InvalidateCache
```

It does not override [tag flag build][/tag], though.

5.8. Order

The optional arguments that can be sent to the tag. This defines not only the order in which they will be passed to *Routine*, but the name of the tags. If encapsulated text is appropriate (*HasEndTag* is set), it will be the last argument.

```
UserTag tagname Order param1 param2
```

5.9. PosRoutine

Identical to the Routine argument — a subroutine that will be called when the new syntax is not used for the call, i.e. `[usertag argument]` instead of `[usertag ARG=argument]`. If not defined, *Routine* is used, and Interchange will usually do the right thing.

5.10. Routine

An inline subroutine that will be used to process the arguments of the tag. It must not be named, and will be allowed to access unsafe elements only if the `interchange.cfg` parameter *AllowGlobal* is set for the catalog.

```
UserTag tagname Routine sub { "your perl code here!" }
```

The routine may use a "here" document for readability:

```
UserTag tagname Routine <<EOF
sub {
    my ($param1, $param2, $text) = @_;
    return "Parameter 1 is $param1, Parameter 2 is $param2";
}
EOF
```

The usual *here documents* caveats apply.

Parameters defined with the *Order* property will be sent to the routine first, followed by any encapsulated text (*HasEndTag* is set).

Note that the UserTag facility, combined with AllowGlobal, allows the user to define tags just as powerful as the standard Interchange tags. This is not recommended for the novice, though — keep it simple. 8–)

6. Standard Usertags

The distribution includes a number of prebuilt usertags in the `usertag` directory in the Interchange software directory. Some of these are used by the foundation catalog or its administrative interface.

6.1. bar_button

Displays content based on current page. Could be used for building e.g. menu bars.

6.1.1. Summary

```
[bar-button page current]...[selected]...[/selected][bar-button]
[bar-button page=page current=current-page]...[selected]...[/selected][bar-button]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

Parameters	Description	Default
<u>page</u>	Name of page for which this bar-button is defined	<i>none</i>
<u>current</u>	Name of the current page	Current page: MV_PAGE
Other Characteristics		
Invalidates cache	<i>No</i>	
Macro	<i>No</i>	
Has end tag	[/bar-button]	

Tag expansion example:

To build a simple '3-button' menu bar one could put the following on each of the pages. The results of this code for page2 are shown below.

```
<table><tr>
[bar-button page=page1]
<TD><A HREF="[area page1]">PAGE-1</A></TD>
[selected]
<TD bgcolor="red"><A HREF="[area page1]"><B>PAGE-1-selected</B></A></TD>
[/selected]
[/bar-button]
[bar-button page=page2]
<TD><A HREF="[area page2]">PAGE-2</A></TD>
[selected]
<TD bgcolor="red"><A HREF="[area page2]"><B>PAGE-2-selected</B></A></TD>
[/selected]
[/bar-button]
[bar-button page=page3]
<TD><A HREF="[area page3]">PAGE-3</A></TD>
[selected]
<TD bgcolor="red"><A HREF="[area page3]"><B>PAGE-3-selected</B></A></TD>
[/selected]
[/bar-button]
</tr></table>
```

```
---
PAGE-1    PAGE-2-selected    PAGE-3
```

ASP-like Perl call:

```
$Tag->button_bar( { page => $page,
                   current => $current,
                   body => $body } );
```

or similarly,

```
$Tag->area($page, $current, $body);
```

6.1.1.1. See Also

bar_link routine

6.1.2. Description

Displays content based on current page. The content between the [selected]/[selected] tags will be displayed only if the name of the current page matches the name that was passed to the page parameter (page=page-name). The default content will be displayed when there is no match.

6.1.2.1. page

The name of the page for which this definition of the bar-button is defined.

6.1.2.2. current

The name of the current page. Defaults to current page MV_PAGE.

6.2. button**6.3. convert_date**

This tag converts a given date format into another format.

6.3.1. Summary

```
[convert_date day* other_named_attributes[/convert_date]
[convert_date day=n* other_named_attributes[/convert_date]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
days	The number of days from or before today	<i>none</i>
<i>Attributes</i>	<i>Default</i>	
<u>format</u>	%d-%b-%Y %I:%M%p' or '%d-%b-%Y'	
fmt – Alias for format	<i>none</i>	
<u>raw</u>	<i>none</i>	

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<u>zerofix</u>	<i>none</i>
<i>Other Characteristics</i>	
Invalidates cache	<i>No</i>
Macro	<i>No</i>
Has end tag	[/convert_date]

Tag expansion example:

```

a. [convert-date][ /convert-date]
b. [convert-date 1][ /convert-date]
c. [convert-date -1][ /convert-date]
d. [convert-date]2001-5-1[ /convert-date]
e. [convert-date]2001-05-01[ /convert-date]
f. [convert-date]20010515[ /convert-date]
g. [convert-date raw=1]2001-05-18[ /convert-date]
h. [convert-date fmt="%d-%m-%Y"]2001-05-18[ /convert-date]
i. [convert-date]200 1 - --051 =9[ /convert-date]
j. [convert-date]2001 - --05 -20 11 1 5[ /convert-date]
k. [convert-date raw=1]2001-05-21 11:15[ /convert-date]
---
a. 18-May-2001 03:15AM (todays day and time)
b. 19-May-2001 03:15AM (today + 1 day)
c. 17-May-2001 03:15AM (today - 1 day)
d. 01-May-2001
e. 01-May-2001
f. 15-May-2001
g. 20010518
h. 18-05-2001
i. 19-May-2001
j. 20-May-2001 11:15AM
k. 200105211115

```

ASP-like Perl call:

```

$Tag->convert_date( { days => 1 } );

$Tag->convert_date( { body => "2001-05-19 15:35",
                      format => "%d-%m-%Y %H:%M", } );

```

or similarly with positional parameters,

```

$Tag->convert_date( 1 );

```

6.3.2. Description

This tag converts almost any given date format into another, possibly user defined, format.

6.3.2.1. days

Number of days from or before today's date and time. Will only be used if nothing is supplied between the tags.

6.3.2.2. format

POSIX time format string of your choice. See Unix `strftime(3)` manpage for complete details.

6.3.2.3. raw

If this option is set to true, will display given date in raw format, e.g. `yyyymmdd` or `yyyymmddHHMM`.

6.3.2.4. zerofix

Strips leading zeroes from numbers.

6.4. db_date

This tag returns the time of last access of the database source file.

6.4.1. Summary

```
[db_date table* format*]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>table</u>	Table name.	products
<u>format</u>	POSIX time format string	%A %d %b %Y
<i>Other Characteristics</i>		
Invalidates cache	<i>No</i>	
Macro	<i>No</i>	
Has end tag	<i>No</i>	

Tag expansion example:

```
[db-date]
[db-date cat]
[db-date table=cat format="%d %b %Y"]
---
```

```
Wednesday 02 May 2001 (products.txt)
Wednesday 03 May 2001 (cat.txt)
03 May 2001 (cat.txt)
```

ASP-like Perl call:

```
$Tag->db_date( { table => cat,
                 format => "%d %b %Y", } );
```

or similarly with positional parameters,

```
$Tag->db_date( "cat", "%d %b %Y" );
```

6.4.2. Description

This tag returns the time of last access of the database source file.

6.4.2.1. table

Table name. Defaults to products if not specified.

6.4.2.2. format

POSIX time format string. See Unix `strftime(3)` manpage for details. Defaults to '%A %d %b %Y' when not specified.

6.5. delete_cart

This tag deletes a cart from the userdb.

6.5.1. Summary

```
[delete_cart nickname]
[delete_cart nickname="cart-name"]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>nickname</u>	Must be an existing nickname	<i>none</i>
<i>Other Characteristics</i>		
Invalidates cache		<i>No</i>
Macro		<i>No</i>
Has end tag		<i>No</i>

Tag expansion example:

```
[delete_cart mycart]
[delete_cart nickname="mycart"]
```

ASP-like Perl call:

```
$Tag->delete_cart( { nickname => "mycart", } );
```

or similarly with positional parameters,

```
$Tag->delete_cart( "mycart" );
```

6.5.1.1. See Also

[userdb](#), [load_cart](#), [save_cart](#) and [pages templates/components/saved_carts_list_small](#), [pages/saved_carts.html](#) for more examples.

6.5.2. Description

Deletes a cart with name nickname from the user database. Basically the same as [userdb function=delete_cart nickname=mycart].

6.5.2.1. nickname

Nickname of cart to be deleted.

6.6. email

This tag takes a recipient address and a body text and uses the SendmailProgram with -t option to send email.

6.6.1. Summary

```
[email to subject* reply* from* extra*]Your message[/email]
[email to=to_address subject=subject reply=reply_address
  from=from_address extra=extra_headers]Your message[/email]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

Parameters	Description	Default
to	Email address of recipient	<i>none</i>
subject	Subject line	String: <no subject>
reply	Email address to be used for the reply-to header	<i>none</i>
from	Senders email address	First address in MailOrderTo configuration variable
extra	Additional headers to be included	<i>none</i>
Other Characteristics		
Invalidates cache		<i>No</i>
Macro		<i>No</i>
Has end tag		[/email]

Tag expansion example:

```
[email
  to="foo@bar.com"
  subject="Greetings"
  from="bar@foo.com"
]
Hello World
[/email]
```

ASP-like Perl call:

```
$Tag->email( { to => $to,
               from => $from,
               subject => $subject,
               reply => $reply,
```


Interchange Tags Reference

```
extra => $extra,  
body => $body } );
```

or similarly,

```
$Tag->email($to, $subject, $reply, $from, $extra, $body);
```

6.6.1.1. See Also

[email_raw](#) and [etc/mail_receipt](#), [pages/process_return.html](#), [pages/stock-alert-added.html](#) for examples.

6.6.2. Description

Will send the content between the [email][/email] tags as an email to the recipient (to) using the SendmailProgram with -t option.

6.6.2.1. extra

Extra headers to be included. Example: Errors-To: errors@yourdomain.com

6.6.2.2. from

Email address identifying the sender of the message. Will use the first email address of the MailOrderTo configuration variable if it is not supplied.

6.6.2.3. reply

Email address to be used for the Reply-to header. No Reply-to header will be present if this parameter is omitted.

6.6.2.4. subject

Short text describing the content of the message. The Subject line of an email message. The string <no subject> will be substituted if this parameter is omitted.

6.6.2.5. to

Valid email address(es) of the recipient(s). This parameter is required.

6.7. email_raw

This tag takes a raw email message, **including headers**, and uses the SendmailProgram with -t option.

6.7.1. Summary

```
[email_raw]Your message including headers[/email_raw]
```

<i>Other_Characteristics</i>	
Invalidates cache	<i>No</i>
Macro	<i>No</i>

Has end tag	<code>[/email_raw]</code>
-------------	---------------------------

Tag expansion example:

```
[email_raw]
From: foo@bar.com
To: bar@foo.com
Subject: baz
```

```
The text of the message.
[/email_raw]
```

The headers must be at the beginning of the line, and the header must have a valid To: or it will not be delivered.

ASP-like Perl call:

```
$Tag->email_raw( { body => $body } );
```

or similarly,

```
$Tag->email_raw($body);
```

6.7.1.1. See Also

[email](#)

6.7.2. Description

Will send the content between the `[email_raw]``[/email_raw]` tags as a raw email message to the recipient specified in the supplied headers using the SendmailProgram with `-t` option.

6.8. fedex_query**6.9. formel****6.10. fortune**

This tag uses the `fortune(1)` command to display a random saying.

Options:

```
short=yes|no*  Select only short (< 160 chars) fortunes
a=1           Select from all fortunes, even potentially offensive ones.
o=1           Select only from potentially offensive fortunes.
raw=1         Don't do any HTML formatting
```

Example:

```
[fortune short=yes]
```

6.11. get-url

Fetch a URL and return the contents.

6.11.1. Summary

```
[get-url url]
[get-url url="valid-url" strip=1*]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

Parameters	Description	Default
<u>url</u>	Must be a valid URL. Meaning, you have to supply the protocol. Example <ul style="list-style-type: none"> ◆ http://demo.icdevgroup.org/ ◆ ftp://ftp.icdevgroup.org/ 	<i>none</i>
Attributes	Default	
<u>strip</u>	<i>none</i>	
Other Characteristics		
Invalidates cache		<i>No</i>
Macro		<i>No</i>
Has end tag		<i>No</i>

Tag expansion example:

```
[get-url http://demo.icdevgroup.org/]
[get-url url="http://demo.icdevgroup.org/" strip=1]
```

ASP-like Perl call:

```
$Tag->get_url( { url => "http://demo.icdevgroup.org/", } );

$Tag->get_url( { url => "http://demo.icdevgroup.org/",
                  strip => 1, } );
```

or similarly with positional parameters,

```
$Tag->get_url( "http://demo.icdevgroup.org/" );
```

6.11.2. Description

Uses the LWP libraries (LWP::Simple) to fetch a URL and returns the contents.

6.11.2.1. strip

If the strip option is set, strips everything up to <body> and everything after </body>.

6.11.2.2. url

Must be a valid URL (including protocol).

6.12. load_cart

This tag loads a cart by name from the userdb.

6.12.1. Summary

```
[load_cart nickname]
[load_cart nickname="cart-name"]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

Parameters	Description	Default
<u>nickname</u>	Must be an existing nickname. Nickname is constructed from: <ul style="list-style-type: none"> ◆ a name part ◆ time modified (time the cart was saved by save_cart tag) ◆ type (c for cart, r for recurring) 	<i>none</i>
Other Characteristics		
Invalidates cache		<i>No</i>
Macro		<i>No</i>
Has end tag		<i>No</i>

Tag expansion example:

```
[load_cart mycart:990102732:c]
[load_cart nickname="mycart:990102732:c"]
```

ASP-like Perl call:

```
$Tag->load_cart( { nickname => "mycart:990102732:c", } );
```

or similarly with positional parameters,

```
$Tag->load_cart( "mycart:990102732:c" );
```

6.12.1.1. See Also

userdb, delete_cart, save_cart and pages templates/components/saved_carts_list_small, pages/saved_carts.html for more examples.

6.12.2. Description

Loads a cart with name nickname from the user database. It will be merged with the current cart. Basically the same as [userdb function=get_cart nickname=cartname merge=1].

6.12.2.1. nickname

Nickname of cart to be loaded. See above.

6.13. loc

6.14. rand

6.15. reconfig

6.16. reconfig_time

6.17. reconfig_wait

6.18. save_cart

This tag saves the current cart or recurring order in the userdb under a given name.

6.18.1. Summary

```
[save_cart nickname recurring]
[save_cart nickname="cart-name" recurring=1]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>nickname</u>	Label for the cart.	<i>none</i>
<u>recurring</u>	Set to true if recurring. Set to false, or omit if cart.	<i>none</i>
<i>Other Characteristics</i>		
Invalidates cache		<i>No</i>
Macro		<i>No</i>
Has end tag		<i>No</i>

Tag expansion example:

```
[save_cart mycart]
[save_cart nickname=mycart recurring=1]
```

ASP-like Perl call:

```
$Tag->save_cart( { nickname => mycart,
```

Interchange Tags Reference

```
recurring => 1, } );
```

or similarly with positional parameters,

```
$Tag->save_cart( "mycart", "1" );
```

6.18.1.1. See Also

[userdb](#), [delete_cart](#), [load_cart](#) and [pages templates/components/saved_carts_list_small](#), [pages/saved_carts.html](#) for more examples.

6.18.2. Description

Saves the current cart with name nickname in the user database. Basically the same as [userdb function=set_cart nickname=cartname]

6.18.2.1. nickname

Nickname for the current cart to be saved. You can use same nickname for different carts. An index will be added if there are more carts with the same nickname.

6.18.2.2. recurring

Set to true if recurring. Set to false, or simply omit it, if it is a cart.

6.19. summary

This tag calculates column totals.

6.19.1. Summary

```
[summary amount]  
[summary amount=n.nn other_named_attributes]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

Parameters	Description	Default
amount	Numerical value to be added to previous total	none
Attributes	Default	
currency	none	
format	none	
hide	none, no hiding	
name	ONLY0000, internal use only	
reset	none	
total	none	
Other Characteristics		
Invalidates cache		No

Macro	<i>No</i>
Has end tag	<i>No</i>

Tag expansion example:

```
[loop list="10 20 30.5"]
  [summary amount="[loop-code]" hide=1]
[/loop]
[summary total=1 format="%.3f"]
[summary total=1 currency=1]
---
```

60.500
\$60.50

ASP-like Perl call:

```
$Tag->summary( { amount => 10.5,
                  hide => 1, } );

$Tag->summary( { amount => 25,
                  name  => mytotal,
                  currency => 1, } );
```

or similarly with positional parameters,

```
$Tag->summary( 10.5, $attribute_hash_reference );
```

6.19.1.1. See Also

templates/components/cart, pages/ord/checkout.html for more examples.

6.19.2. Description

The summary tag provides you with an easy way to calculate and display totals. The display of the amounts is fully customizable. You can hide display, or you can show the amounts with the proper currency formatting according to the locale, or you can define your own formatting. Any number of summaries can be kept on a page.

6.19.2.1. currency

The amount or total will be displayed according to the currency formatting of the current locale if this attribute is set to true (non blank or zero).

6.19.2.2. format

You can choose any formatting of the amount you like. Just set the format attribute to the desired formatting string (%s, %.2f etc.). When both, currency and format attributes are set, the format attribute will take precedence. So it doesn't make much sense to set them both at the same time.

6.19.2.3. hide

Will suppress the display of amount when set to true.

6.19.2.4. name

You can calculate as many totals as you like on the same page. Just supply a different label for each summary.

6.19.2.5. reset

Will erase the total(s) if set to true. Be careful though. It will reset ALL totals when you have no name attribute supplied. If you have provided a label for the name attribute then it will only reset the total for that particular label. All others won't be touched.

6.19.2.6. total

Will show the total instead of the amount if set to true.

6.20. table_organize

Takes an unorganized set of table cells and organizes them into rows based on the number of columns.

6.20.1. Summary

```
[table-organize cols* other_named_attributes]
  [loop ....] <td> [loop-tags] </td> [/loop]
[/table-organize]
```

```
[table-organize cols=n* other_named_attributes]
  [loop ....] <td> [loop-tags] </td> [/loop]
[/table-organize]
```

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>cols</u>	Number of columns.	2
columns	Alias for cols.	2
<i>Attributes</i>	<i>Default</i>	
<u>caption</u>	none	
<u>columnize</u>	none	
<u>embed</u>	none	
<u>filler</u>	 	
<u>limit</u>	none	
<u>pretty</u>	none	
<u>rows</u>	none	
<u>table</u>	none	
<u>td</u>	none	
<u>tr</u>	none	
<i>Other_Characteristics</i>		
Invalidates cache		No

Interchange Tags Reference

Macro	<i>No</i>
Has end tag	<code>[/table-organize]</code>

Tag expansion example:

This example produces a table that (1) alternates rows with background colors "#EEEEEE" and "#FFFFFF", and (2) aligns the columns right, center, left:

```
[table-organize
  cols=3
  pretty=1
  tr.0='bgcolor="#EEEEEE"'
  tr.1='bgcolor="#FFFFFF"'
  td.0='align=right'
  td.1='align=center'
  td.2='align=left'
]
[loop list="1 2 3 1a 2a 3a 1b"] <td> [loop-code] </td> [/loop]
[/table-organize]
---
```

```
<tr bgcolor="#EEEEEE">
  <td align=right>1</td>
  <td align=center>2</td>
  <td align=left>3</td>
</tr>
<tr bgcolor="#FFFFFF">
  <td align=right>1a</td>
  <td align=center>2a</td>
  <td align=left>3a</td>
</tr>
<tr bgcolor="#EEEEEE">
  <td align=right>1b</td>
  <td align=center>&nbsp;</td>
  <td align=left>&nbsp;</td>
</tr>
```

If the attribute `columnize=1` is present, the result will look like:

```
<tr bgcolor="#EEEEEE">
  <td align=right>1</td>
  <td align=center>1a</td>
  <td align=left>1b</td>
</tr>
<tr bgcolor="#FFFFFF">
  <td align=right>2</td>
  <td align=center>2a</td>
  <td align=left>&nbsp;</td>
</tr>
<tr bgcolor="#EEEEEE">
  <td align=right>3</td>
  <td align=center>3a</td>
  <td align=left>&nbsp;</td>
</tr>
```

See the source for more ideas on how to extend this tag.

ASP-like Perl call:

```
$Tag->table_organize( { cols => 3,
```

Interchange Tags Reference

```
pretty => 1, }, $BODY );
```

or similarly with positional parameters:

```
$Tag->table_organize( $cols, $attribute_hash_reference, $BODY );
```

6.20.1.1. See Also

pages/flypage.html, pages/quantity.html, templates/components/best_horizontal, templates/components/cart, templates/components/cross_horizontal, templates/components/random, templates/components/random_vertical, templates/components/upsell

6.20.2. Description

Takes an unorganized set of table cells and organizes them into rows based on the number of columns; it will also break them into separate tables.

If the number of cells are not on an even modulus of the number of columns, then "filler" cells are pushed on.

6.20.2.1. cols (or columns)

Number of columns. This argument defaults to 2 if not present.

6.20.2.2. rows

Optional number of rows. Implies "table" parameter.

6.20.2.3. table

If present, will cause a surrounding <TABLE> </TABLE> pair with the attributes specified in this option.

6.20.2.4. caption

Table <CAPTION> container text, if any. Can be an array.

6.20.2.5. td

Attributes for table cells. Can be an array.

6.20.2.6. tr

Attributes for table rows. Can be an array.

6.20.2.7. columnize

Will display cells in (newspaper) column order, i.e. rotated.

6.20.2.8. pretty

Adds newline and tab characters to provide some reasonable indenting.

6.20.2.9. filler

Contents to place in empty cells put on as filler. Defaults to " ".

6.20.2.10. limit

Maximum number of cells to use. Truncates extra cells silently.

6.20.2.11. embed

If you want to embed other tables inside, make sure they are called with lower case <td> elements, then set the embed tag and make the cells you wish to organize be <TD> elements. To switch that sense, and make the upper-case or mixed case be the ignored cells, set the embed parameter to "lc".

```
[table-organize embed=lc]
  <td>
    <TABLE>
      <TR>
        <TD> something
      </TD>
    </TR>
  </TABLE>
</td>
[/table-organize]
```

or

```
[table-organize embed=uc]
  <TD>
    <table>
      <tr>
        <td> something
      </td>
    </tr>
  </table>
</TD>
[/table-organize]
```

The "tr", "td", and "caption" attributes can be specified with indexes; if they are, then they will alternate according to the modulus.

The "td" option array size should probably always equal the number of columns; if it is bigger, then trailing elements are ignored. If it is smaller, no attribute is used.

6.21. title_bar

Creates a quick title bar.

6.21.1. Summary

```
[title-bar width size color]My title[/title-bar]
[title-bar width=600 size=5 color="#ff0000"]My title[/title-bar]
```

Interchange Tags Reference

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>color</u>	Background color the bar. Defaults to ◆ variable HEADERBG or ◆ #444444	HEADERBG or #444444
<u>size</u>	Font size	6
<u>width</u>	Width of the title bar	500

<i>Other_Characteristics</i>	
Invalidates cache	<i>No</i>
Macro	<i>No</i>
Has end tag	[/title-bar]

Tag expansion example:

```
[title-bar 600 5 red]My title[/title-bar]  
[title-bar width=600 size=5 color="#ff0000"]My title[/title-bar]
```

ASP-like Perl call:

```
$Tag->title_bar( { body => "My Title", } );  
  
$Tag->title_bar( { width => 400,  
                  color => "#0000ff",  
                  body => "My title", } );
```

or similarly with positional parameters,

```
$Tag->title_bar( 600, 5, "red", "My title" );
```

6.21.2. Description

Quickly adds a title bar to your pages without having to type the html each time. Background color, width of the bar and size of the text can be customized by setting the appropriate parameter. The text color defaults to variable HEADERTEXT or when its not present to white.

6.21.2.1. color

Sets the background color of the bar. You can set the color as 'red', '#ff0000', or 'bgcolor="#ff0000"'.

6.21.2.2. size

Determines the size of the text. Parameter should be set to a value accepted by the HTML tag size attribute.

6.21.2.3. width

Sets the width of the bar.

6.22. ups_query**6.23. usertrack****6.24. var****6.25. xml-generator**

This is a quick and dirty tag that generates XML tags based upon one of two types of data (delimited and session).

6.25.1. Summary

```
[xml-generator type* other_named_attributes][/xml-generator]
[xml-generator type=value* other_named_attributes][xml-generator]
[xml-generator type=value* other_named_attributes][[/xml-generator]
```

*Optional

Positional parameters: The first line shows the usage with positional parameters (given in order). The second line shows usage with named parameters.

<i>Parameters</i>	<i>Description</i>	<i>Default</i>
<u>type</u>	Data type. Delimited or session	delimited
<i>Attributes</i>	<i>Default</i>	
<u>attributes</u>	none	
<u>dbdump</u>	none	
<u>delimiter</u>	\t	
<u>field_names</u>	 	
<u>separator</u>	\n	
<u>toplevel_tag</u>	'table' for delimited type and 'session' for other type	
<u>record_tag</u>	record	
<u>field_tag</u>	field	
<u>key_name</u>	none	
<u>spacer</u>	[\s,]+	
<u>no_second</u>	none	
<u>skip_empty</u>	none	
<i>Other_Characteristics</i>		
Invalidates cache	No	
Macro	No	
Has end tag	[/xml-generator]	

Interchange Tags Reference

Tag expansion example:

```
[xml-generator type=delimited
    attributes="date"
        date="[tag time]%d-%b-%Y[/tag]"
    toplevel_tag=products
]code      description      price
[query list=1
    sql="select sku, description, price from products"
    prefix=xml][xml-code] [xml-param description] [xml-param price]
[/query]
[/xml-generator]
---
<products date="18-May-2001">
    <record key="os28113">
        <code>os28113</code>
        <description>The Claw Hand Rake</description>
        <price>14.99</price>
    </record>
    <record key="os28006">
        <code>os28006</code>
        <description>Painters Brush Set</description>
        <price>29.99</price>
    </record>
    ...
</products>
```

ASP-like Perl call:

```
$Tag->xml_generator( {type => delimited,
                    toplevel_tag => apex, }, $BODY );
```

or similarly with positional parameters,

```
$Tag->xml_generator( $type, $attribute_hash_reference, $BODY );
```

6.25.2. Description

6.25.2.1. type

delimited

Accepts a delimited and separated (default is TAB delimiter and newline separator) list of records such as that generated by an '[item-list]', '[sql]', or '[loop search=""]' ITL tag.

session

When the type is not delimited, it can contain any hash reference into the Interchange session. Examples are:

values	The form values
scratch	Scratch values
errors	Error values
other	Any other Session key, for example "source" for [data session source]

Interchange Tags Reference

If the value is a hash, then it will be sent as an XML record with the top level equal to "session", and a second_level tag equal to the hash name, and keys as separate XML container tags. If the parameter "that is equal to the type" is given, only those fields will be shown. Otherwise the entire hash will be shown. For example, this tag:

```
[xml-generator type="values" values="fname lname"][/xml-generator]
```

will generate:

```
<session>
  <values>
    <fname>First</fname>
    <lname>Last</lname>
  </values>
</session>
```

if it is a scalar, then only the second level will be done:

```
[xml-generator type="cybercash_id"][/xml-generator]
```

will do the equivalent of:

```
<session>
  <cybercash_id>[data session cybercash_id]</cybercash_id>
</session>
```

So bringing it all together, the following:

```
[xml-generator type="values scratch source"
  values="fname lname"
  scratch="downloads"][/xml-generator]
```

will generate:

```
<session>
  <values>
    <fname>First</fname>
    <lname>Last</lname>
  </values>
  <scratch>
    <downloads>0</downloads>
  </scratch>
  <source>Partner1</source>
</session>
```

6.25.2.2. no_second

Prevents the second-level tags from being generated. Extending the last example in the "session" type above, this

```
[xml-generator type="values scratch source"
  no_second=1
  values="fname lname"
  scratch="downloads"][/xml-generator]
```

will generate:

```
<session>
  <fname>First</fname>
  <lname>Last</lname>
  <downloads>0</downloads>
  <source>Partner1</source>
```

```
</session>
```

6.25.2.3. attributes

The attributes (if any) to pass on to the top level tag. For instance,

```
[xml-generator
  attributes="date"
  date="[tag time]%d-%b-%Y[/tag]"
  toplevel_tag=order
][/xml-generator]
```

will generate a toplevel tag pair of:

```
<order date="18-Mar-2001">
</order>
```

6.25.2.4. dbdump

Will dump all tables in the catalog when this attribute is set true. Used attributes are "toplevel_tag", "record_tag", "field_tag", and "skip_empty" or default values ('table', 'record', 'field' respectively).

Output format:

```
<database name="catalogname">
  <toplevel_tag name="tablename1">
    <record_tag key="value of first field-1">
      <field_tag name="fieldname1">fieldvalue1</field_tag>
      <field_tag name="fieldname2">fieldvalue2</field_tag>
    </record_tag>
    <record_tag key="value of first field-2">
      <field_tag name="fieldname1">fieldvalue1</field_tag>
      <field_tag name="fieldname2">fieldvalue2</field_tag>
    </record_tag>
  </toplevel_tag>
  <toplevel_tag name="tablename2">
    <record_tag key="value of first field-1">
      <field_tag name="fieldname1">fieldvalue1</field_tag>
      <field_tag name="fieldname2">fieldvalue2</field_tag>
    </record_tag>
  </toplevel_tag>
</database>
```

Important note: All tables are read into memory. So be warned, this could be a real memory hog.

Ton Verhagen's proposal:

1. Add option to select tables. E.g. dump_tables="products cat area" and/or
2. Add option to select an output file. E.g. dump_file="tabledump.XML". Send output to file line by line.

6.25.2.5. delimiter

Character used as delimiter of fields in delimited data type. Defaults to a tab character.

6.25.2.6. field_names

Space or comma-delimited list of field names to be used for delimited data type. Should be in the same order as in the data list provided (between the tags).

Another way of providing the field names would be:

```
[xml-generator .....]fieldname-1    fieldname-2    fieldname-3
  [field value list
    delimited by option delimiter and
    separated by option separator][ /xml-generator]
```

Note: Field name list **must** be tab delimited.

Ton Verhagen's humble opinion: This should change in future versions! Use option delimiter instead.

6.25.2.7. separator

Character used as line separator in list between [xml-separator][xml-separator] tags and in output 'session' data type. Defaults to a newline, "\n".

6.25.2.8. toplevel_tag

The toplevel tag name to use. Defaults to "table" for the 'dbdump mode' and delimited type, and "session" for the other.

6.25.2.9. record_tag

Defines the tag name for the record tag. Defaults to 'record'. Used for 'dbdump mode' and delimited type.

6.25.2.10. field_tag

Defines the tag name for the field tag. Defaults to 'field'. Only used in 'dbdump mode'.

6.25.2.11. key_name

Only used in delimited data type. Defines fieldname to determine key value in "record_tag".

```
<record_tag key="value of field with name defined by key_name"> ....
```

6.25.2.12. spacer

Character used as delimiter in type parameter definition and corresponding attributes. Defaults to '[\s,]+' (one or more whitespace or comma).

```
[xml-generator type="values|scratch"
  values="value1|value2"
  scratch="scratch1|scratch2"
  spacer="|"
][ /xml-generator]
```

6.25.2.13. skip_empty

Only used in dbdump mode (dbdump=1). Will skip empty fields if this attribute is set true.

A. Template Parsing Order

A.1. Standard Parsing

Under normal circumstances, the template page containing tags and HTML is parsed in the following order:

1. Any content in MV_AUTOLOAD is prepended to the template page.
2. Any [pragma] tags anywhere in the text are processed, and the specified pragmas are set.
 - ◆ Since [pragma] tags are preprocessed before any other content, reparse will not catch them, nor will they work if included in variables. Also, the specified pragma will apply to the entire template (not just the section after the tag).
 - ◆ If you want to apply a pragma with a variable or only to part of a document, you must use [tag pragma="..."] instead.
3. Variables (macros) are processed in the following order:
 1. @@VARNAME@@ global variables
 2. @_VARNAME_@ local or global variables
 3. __VARNAME__ local variables
4. Interchange comments are stripped.
5. False–endtag macros are expanded (e.g., [/page] and [/order]).
6. '<!--[tagname]-->' escapes are converted to [tagname]
 - ◆ This can be a convenience for your HTML editor if it has trouble with tags using the standard [tagname] syntax.
 - ◆ However, if you want to HTML–comment out an Interchange tag in content that will be fed raw to a browser, you must include whitespace between the HTML comment delimiters and the tag, like this, '<!-- [tagname] -->'.
7. The main tag parser is called.
 - ◆ Some tags parse recursively (depending upon reparse and interpolate settings, of course).
 - ◆ Some tags (e.g., [loop]) process PREFIX–tags in their contained body text. Hence, the PREFIX–tags are not handled recursively.
 - ◆ Some tags are interpreted in the lib/Vend/Parse.pm:start routine. You cannot call them with the '\$Tag->tagname()' syntax. They are:
 - ◇ The [goto] tag. Note also that the [goto] tag handles the [label] tag.
 - ◇ The [bounce] tag.
8. Image paths substitution on the HTML output occurs.

A.2. Nonstandard parsing within the admin interface

Parsing of content via the specialized [regenerate] usertag included with the administrative interface does not obey the above order. The MV_AUTOLOAD and '<!--[tagname]-->' escapes are skipped. There are some other more subtle differences as well; in the very unlikely event that you need to check this in the

source code, compare the 'interpolate_html' and 'cache_html' routines in Interpolate.pm.

A.3. Nonstandard parsing of Subtags

Subtags are parsed within the containing array-list or hash-list context created by the containing tag (see Looping tags and Sub-tags).

- All subtags at an earlier precedence level are treated before any in the next level.
- Within the same level, tags are processed in the order they appear on the page.
- Any standard tags are processed during 'interpolate' (before) or 'reparse' (after) phases of processing the containing tag.

Technical note

Processing within a hash- or array-list is actually done as a series of global regular expression substitutions on the page. Each substitution replaces one tag with the output of the subroutine(s) associated with it.

In array-list context, subtags are processed in the following order:

1. Check for **PREFIX-line** and prepare for it if present (does not process **PREFIX-line** at this time)
2. **PREFIX-sub** definitions processed
3. **if-PREFIX-*** nesting resolved
4. **PREFIX-alternate** processed
5. **if-PREFIX-param** processed
6. **if-PREFIX-pos** processed
7. **PREFIX-pos** processed
8. **if-PREFIX-field** processed
9. **PREFIX-line** processed
10. **PREFIX-increment** processed
11. **PREFIX-accessories** processed
12. **PREFIX-options** processed
13. **PREFIX-code** processed
14. **PREFIX-description** processed
15. **PREFIX-field** processed
16. **PREFIX-price** processed
17. **PREFIX-change** processed
18. **PREFIX-calc** processed
19. **PREFIX-exec** processed
20. **PREFIX-filter** processed
21. **PREFIX-last** processed
22. **PREFIX-next** processed
23. User's previous HTML widget **SELECTED** settings restored
24. Reparse standard tags in output of above (if reparse enabled for the containing tag)

In hash-list context, subtags are processed in the following order:

1. **PREFIX-sub** definitions processed
2. **if-PREFIX-*** nesting resolved
3. **PREFIX-alternate** processed
4. **PREFIX-line** processed

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5. **if**-PREFIX-**param** processed
6. **if**-PREFIX-**field** processed
7. **if**-PREFIX-**modifier** processed (**if**-PREFIX-**param** and **if**-PREFIX-**modifier** are functionally identical except for parse order)
8. PREFIX-**increment** processed
9. PREFIX-**accessories** processed
10. PREFIX-**options** processed
11. PREFIX-**sku** processed
12. PREFIX-**code** processed
13. PREFIX-**quantity** processed
14. PREFIX-**modifier** processed
15. PREFIX-**param** processed
16. PREFIX-**quantity**-**name** processed
17. PREFIX-**modifier**-**name** processed
18. PREFIX-**subtotal** processed
19. PREFIX-**discount**-**subtotal** processed
20. PREFIX-**code** processed again differently (operating on new instances of PREFIX-**code** in output of above?)
21. PREFIX-**field** processed
22. PREFIX-**description** processed
23. PREFIX-**price** processed
24. PREFIX-**discount**-**price** processed
25. PREFIX-**difference** processed
26. PREFIX-**discount** processed
27. PREFIX-**change** processed
28. PREFIX-**tag** processed (***) CHECK THIS TAG NAME (***)
29. PREFIX-**calc** processed
30. PREFIX-**exec** processed
31. PREFIX-**filter** processed
32. PREFIX-**last** processed
33. PREFIX-**next** processed
34. User's previous HTML widget SELECTED settings restored
35. Reparse standard tags in output of above (if reparse enabled for the containing tag)

B. Search and Form Variables

B.1. Variable Names

B.1..1. other

<i>Name</i>	<i>scan</i>	<i>Type</i>	<i>Description</i>
mv_all_chars	ac	S	Turns on punctuation matching
mv_arg[0-9]+		A	Parameters for mv_subroutine (mv_arg0,mv_arg1,...)
mv_base_directory	bd	S	Sets base directory for search file names
mv_begin_string	bs	S	Pattern must match beginning of field
mv_case	cs	S	Turns on case sensitivity
mv_cartname		O	Sets the shopping cart name
mv_check		A	Any form, sets multiple user variables after update
mv_click		A	Any form, sets multiple form variables before update
mv_click		XA	Default mv_click routine, click is mv_click_arg
mv_click <i>name</i>		XA	Routine for a click <i>name</i> , sends click as arg
mv_click_arg		XA	Argument name in scratch space
mv_coordinate	co	S	Enables field/spec matching coordination
mv_column_op	op	S	Operation for coordinated search
mv_credit_card*		O	Discussed in order security (some are read-only)
mv_dict_end	de	S	Upper bound for binary search
mv_dict_fold	df	S	Non-case sensitive binary search
mv_dict_limit	di	S	Sets upper bound based on character position
mv_dict_look	dl	S	Search specification for binary search
mv_dict_order	do	S	Sets dictionary order mode
mv_doit		A	Sets default action
mv_email		O	Reply-to address for orders
mv_exact_match	em	S	Sets word-matching mode
mv_failpage	fp	O,S	Sets page to display on failed order check/search
mv_field_file	ff	S	Sets file to find field names for Glimpse
mv_field_names	fn	S	Sets field names for search, starting at 1
mv_first_match	fm	S	Start displaying search at specified match
mv_head_skip	hs	S	Sets skipping of header line(s) in index
mv_index_delim	id	S	Delimiter for search fields (TAB default)
mv_matchlimit	ml	S	Sets match page size
mv_max_matches	mm	S	Sets maximum match return
mv_min_string	ms	S	Sets minimum search spec size
mv_negate	ne	S	Records NOT matching will be found
mv_nextpage	np	A	Sets next page user will go to
mv_numeric	nu	S	Comparison numeric in coordinated search
mv_order_group		O	Allows grouping of master item/sub item

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mv_order_item		O	Causes the order of an item
mv_order_number		O	Order number of the last order (read-only)
mv_order_quantity		O	Sets the quantity of an ordered item
mv_order_profile		O	Selects the order check profile
mv_order_receipt		O	Sets the receipt displayed
mv_order_report		O	Sets the order report sent
mv_order_subject		O	Sets the subject line of order email
mv_orsearch	os	S	Selects AND/OR of search words
mv_profile	mp	S	Selects search profile
mv_record_delim	dr	S	Search index record delimiter
mv_return_all	ra	S	Return all lines found (subject to range search)
mv_return_delim	rd	S	Return record delimiter
mv_return_fields	rf	S	Fields to return on a search
mv_return_file_name	rn	S	Set return of file name for searches
mv_return_spec	rs	S	Return the search string as the only result
mv_save_session		C	Set to non-zero to prevent expiration of user session
mv_search_field	sf	S	Sets the fields to be searched
mv_search_file	fi	S	Sets the file(s) to be searched
mv_search_line_return	lr	S	Each line is a return code (loop search)
mv_search_match_count		S	Returns the number of matches found (read-only)
mv_search_page	sp	S	Sets the page for search display
mv_searchspec	se	S	Search specification
mv_searchtype	st	S	Sets search type (text, glimpse, db or sql)
mv_separate_items		O	Sets separate order lines (one per item ordered)
mv_session_id	id	A	Suggests user session id (overridden by cookie)
mv_shipmode		O	Sets shipping mode for custom shipping
mv_sort_field	tf	S	Field(s) to sort on
mv_sort_option	to	S	Options for sort
mv_spelling_errors	er	S	Number of spelling errors for Glimpse
mv_substring_match	su	S	Turns off word-matching mode
mv_successpage		O	Page to display on successful order check
mv_todo		A	Common to all forms, sets form action
mv_todo.map		A	Contains form imagemap
mv_todo.checkout.x		O	Causes checkout action on click of image
mv_todo.return.x		O	Causes return action on click of image
mv_todo.submit.x		O	Causes submit action on click of image
mv_todo.x		A	Set by form imagemap
mv_todo.y		A	Set by form imagemap
mv_unique	un	S	Return unique search results only
mv_value	va	S	Sets value on one-click search (va=var=value)

B.2. Abbreviations

The two-letter abbreviations are mapped with these letters:

<i>Abbr</i>	<i>Long name</i>
DL	mv_raw_dict_look
MM	mv_more_matches
ac	mv_all_chars
ar	mv_arg
bd	mv_base_directory
bs	mv_begin_string
ck	mv_cache_key
co	mv_coordinate
cs	mv_case
cv	mv_verbatim_columns
de	mv_dict_end
df	mv_dict_fold
di	mv_dict_limit
dl	mv_dict_look
do	mv_dict_order
dr	mv_record_delim
em	mv_exact_match
er	mv_spelling_errors
fi	mv_search_file
fm	mv_first_match
fn	mv_field_names
hs	mv_head_skip
id	mv_session_id
il	mv_index_delim
ix	mv_index_delim
lb	mv_search_label
lo	mv_list_only
lr	mv_line_return
lr	mv_search_line_return
ml	mv_matchlimit
mm	mv_max_matches
mp	mv_profile
ms	mv_min_string
ne	mv_negate
np	mv_nextpage
nu	mv_numeric
op	mv_column_op

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os	mv_orsearch
pc	mv_pc
ra	mv_return_all
rd	mv_return_delim
rf	mv_return_fields
rn	mv_return_file_name
rr	mv_return_reference
rs	mv_return_spec
se	mv_searchspec
sf	mv_search_field
si	mv_search_immediate
sp	mv_search_page
sq	mv_sql_query
st	mv_searchtype
su	mv_substring_match
tf	mv_sort_field
to	mv_sort_option
un	mv_unique
va	mv_value

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