



**easy template system**

version 3.06a

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## Introduction

ETS is a template system written with PHP that enables you to transform a set of data to any type of document.

For example, ETS can transform a list of product descriptions retrieved from a database to a HTML page. It can also construct SQL statements, ASCII data, XML documents...

ETS provides 2 functions to match a set of data with templates:

- `sprintt` which returns the built template as a string,
- `printt` which prints it out.

ETS supplies:

- array management,
- various conditional elements,
- access to any level in the data tree from any level in the template,
- data formatting,
- size reducing,
- integrated debug messages.

ETS works with 2 elements: the data tree and templates. The data tree contains every data that will be available. Templates define the way the data tree will be presented. You can compare it to a XML document transformed with a XSLT template: it's exactly the same concept.

ETS can manage recursive templates, allows a complete reshuffle of the template with exactly the same data tree, is extremely valuable when working with database because of the implicit use of templates...

... It's a powerful tool that will help you efficiently to build documents.

## PHP functions

ETS provides 2 functions. Here are their prototypes:

```
void printt(mixed datatree, mixed containers [, string entry])  
    Output a built template
```

```
string sprintt(mixed datatree, mixed containers [, string entry])  
    Return a built template
```

`datatree` can be an object, an array of objects or a NULL value. The object must be organized to store scalar values in object properties and lists in arrays. An object can contain children objects. NULL value is used to build a template without any data.

`containers` can be an array or a string. If it's an array, each element will be considered as a container name. If it's a string, it may contain one container name or a list of container names separated by commas.

`entry` defines the main template defined in containers. It's "main" by default. It's useful when you want to define several independent sets of templates in the same container.

## Quick reference

The following table presents elements provided by ETS.

<i>Element</i>	<i>Description</i>
{name}	Places an outer template or the value of a variable
{variable:template}	Places an outer template with a different name
{mask:name} ... {/mask}	Defines a template and, if inner, places it
{set:variable} ... {/set}	Places a content when a variable is set (not missing)
{set:variable:value} ... {/set}	Places a content when a variable has a specific value
{mis:variable} ... {/mis}	Places a content when a variable is missing
{mis:variable:value} ... {/mis}	Places a content when a variable has not a specific value or is missing
{php} ... {/php}	Places a content which will be parsed as PHP code
{const:template}	Places an outer template
{if:test} ... {/if}	Places a content if a test is TRUE
{choose} ... {/choose}	Provides multiple conditions in conjunction with when-test and else elements
{when:test} ... {/when}	Places a content if a test is TRUE so disables other when-test or else siblings
{else} ... {/else}	Places a content if all when-test or when-value siblings are FALSE
{choose:variable} ... {/choose}	Provides multiple conditions in conjunction with when-value and else elements
{when:value} ... {/when}	Places a content if the variable of the choose parent has the value of this element so disables other when-value or else siblings
{call:template} ... {/call}	Places an outer template with arguments
{arg:name} ... {/arg}	Defines an argument of a call element
{repeat:n} ... {/repeat}	Places a content several times
{include:container}	Includes outer templates of a container
{insert:container}	Places the content of a container as text
{eval:container}	Places the content of a container as a template part
{safe:container}	Places the content of a container as a template part with restrictions
{reduce:value}	Defines a size reducing behaviour
{* ... *}	Defines a comment section
{# ... #}	Defines a section where the text is not parsed

# Tutorial

You will discover in this tutorial many examples that gradually introduce you to essentials of ETS.

## 1. Scalar variables

Consider this data tree which contains general elements of a HTML page:

```
$page->title = 'Home page';  
$page->lastmodified = 'Thursday, January 23, 2003';
```

This template file, `ets.tpl`, contains the presentation of these data:

```
{mask:main}  
<html>  
  <head>  
    <title>{title}</title>  
  </head>  
  <body>  
    <h1>{title}</h1>  
    <hr>  
    <div align="center">Last modified: {lastmodified}</div>  
  </body>  
</html>  
{/mask}
```

If you run `printt($page, 'ets.tpl');` you will get:

```
<html>  
  <head>  
    <title>Home page</title>  
  </head>  
  <body>  
    <h1>Home page</h1>  
    <hr>  
    <div align="center">Last modified: Thursday, January 23, 2003</div>  
  </body>  
</html>
```

### What happened?

ETS found the main template defined between tags `{mask:main}` and `{/mask}`,  
ETS found the tag `{title}` twice and the tag `{lastmodified}` in main,  
ETS replaced `{title}` with the value of `$page->title` and `{lastmodified}` with the value of `$page->lastmodified`,  
ETS printed out the result.

### Why did it happen?

The first level of the data tree, the root, corresponds to the first level of the template tree, the main template. In this example, the object `$page` corresponds to the template `main`. Then, every property of `$page` can be placed in the template `main`. In this example, the property `title` corresponds to the tag `{title}` and `lastmodified` to `{lastmodified}`.

## 2. Objects

We now add partner information to the previous data tree and group them in an object:

```
$page->title = 'Home page';
$page->lastmodified = 'Thursday, January 23, 2003';

$page->partner->name = 'foobar.com';
$page->partner->id = 123;
```

The template file, `ets.tpl`, is modified to show these new data:

```
{mask:main}
<html>
  <head>
    <title>{title}</title>
  </head>
  <body>
    <h1>{title}</h1>
    <hr>
    <div align="center">Last modified: {lastmodified}</div>
    {mask:partner}<div>with our partner {name} ({id})</div>{/mask}
  </body>
</html>
{/mask}
```

If you run `printt($page, 'ets.tpl');` again, you will get now:

```
<html>
  <head>
    <title>Home page</title>
  </head>
  <body>
    <h1>Home page</h1>
    <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
    <div>with our partner foobar.com (123)</div>
  </body>
</html>
```

### What happened?

...

ETS found the inner template `partner` between tags `{mask:partner}` and `{/mask}`.

ETS replaced `{name}` with the value of `$page->partner->name` and `{id}` with the value of `$page->partner->id`.

...

### Why did it happen?

When ETS detects a template in another one, it changes the current level then begins again the process for the new level.

In this example, it changes from `$page` to `$page->partner` for data and from `main` to `partner` for templates. Then, every property of `$page->partner` are placed in the template `partner`. In this example, the property `id` corresponds to the tag `{id}` and `name` to `{name}`.

### 3. Arrays

We now want to add menu data to the previous data tree. If we apply the principle of our previous example, we can add these data like this:

```
$page->menu1->url = "download.php";
$page->menu1->label = "Downloads";
$page->menu2->url = "links.php";
$page->menu2->label = "Links";
```

and so, create two new templates in the main template.

There's a better way to do it.

Instead of two new objects, we create an array of objects:

```
$page->title = 'Home page';
$page->lastmodified = 'Thursday, January 23, 2003';

$page->partner->name = 'foobar.com';
$page->partner->id = 123;

$page->menu[1]->url = "download.php";
$page->menu[1]->label = "Downloads";
$page->menu[2]->url = "links.php";
$page->menu[2]->label = "Links";
```

Then we create one new template:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <body>
    <h1>{title}</h1><hr>
    {mask:menu}<a href="{url}">{label}</a> {/mask}<hr>
    <div align="center">Last modified: {lastmodified}</div>
    {mask:partner}<div>with our partner {name} ({id})</div>{/mask}
  </body>
</html>
{/mask}
```

ETS will produce:

```
<html>
  <head><title>Home page</title></head>
  <body>
    <h1>Home page</h1><hr>
    <a href="download.php">Downloads</a> <a href="links.php">Links</a> <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
    <div>with our partner foobar.com (123)</div>
  </body>
</html>
```

#### What happened?

...

ETS found the inner template menu between tags {mask:menu} and {/mask}.

For each element of the array menu, ETS replaced {url} with the value of the property url and {label} with label.

...

#### Why did it happen?

When ETS detects that a template corresponds to an array instead of an object, it does the same than for an object but for each element of this array then concatenates built templates.

## 4. Outer templates

We want now to print information about our partner at the bottom and at the top of the page. We don't add new data but just rearrange the template file like this:

```
{mask:main}
<html>
  <head>
    <title>{title}</title>
  </head>
  <body>
    <h1>{title}</h1>
    <hr>
    {partner}
    <hr>
    {mask:menu}<a href="{url}">{label}</a> {/mask}
    <hr>
    <div align="center">Last modified: {lastmodified}</div>
    {partner}
  </body>
</html>
{/mask}

{mask:partner}
<div>with our partner {name} ({id})</div>
{/mask}
```

ETS will produce:

```
<html>
  <head>
    <title>Home page</title>
  </head>
  <body>
    <h1>Home page</h1>
    <hr>
    <div>with our partner foobar.com (123)</div>
    <hr>
    <a href="download.php">Downloads</a> <a href="links.php">Links</a>
    <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
    <div>with our partner foobar.com (123)</div>
  </body>
</html>
```

### What happened?

...

ETS found the tag {partner} twice.

ETS replaced {name} with the value of \$page->partner->name and {id} with the value of \$page->partner->id in the outer template partner.

ETS replaced {partner} by the built template partner.

...

### Why did it happen?

When ETS detects that a tag corresponds to an object instead of a scalar variable, it looks for an outer template with the same name then does placements for each property of the object exactly like a inner template.

It works the same way when the corresponding variable is an array but the template is duplicated for each element of the array.



## 5. Constant elements

We want now to change the basic `<hr>` tag with a wonderful image we found on the web. We don't add new data but just rearrange again the template file like this:

```
{mask:main}
<html>
  <head>
    <title>{title}</title>
  </head>
  <body>
    <h1>{title}</h1>
    {const:separator}
    {partner}
    {const:separator}
    {mask:menu}<a href="{url}">{label}</a> {/mask}
    {const:separator}
    <div align="center">Last modified: {lastmodified}</div>
    {partner}
  </body>
</html>
{/mask}

{mask:partner}
<div>with our partner {name} ({id})</div>
{/mask}

{mask:separator}
<br>
{/mask}
```

ETS will produce:

```
<html>
  <head>
    <title>Home page</title>
  </head>
  <body>
    <h1>Home page</h1>
    <br>
    <div>with our partner foobar.com (123)</div>
    <br>
    <a href="download.php">Downloads</a> <a href="links.php">Links</a>
    <br>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
    <div>with our partner foobar.com (123)</div>
  </body>
</html>
```

### What happened?

...

ETS found the tag `{const:separator}` three times.

ETS replaced each `{const:separator}` with the content of the outer template separator.

...

### Why did it happen?

When ETS detects a constant element, it looks for an outer template with this name then replaces the constant element with the content of the template.

If the outer template contains tags, they are parsed at the same level and not at the next one. In this example, `{title}` would be replaced by "Home page" like others `{title}` tags of the template main.

## 6. Alternate tags

We want now to get two different templates with partner's data.

The template file is now:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <body>
    <h1>{title}</h1>
    <hr>
    {partner:partner1}
    <hr>
    {mask:menu}<a href="{url}">{label}</a> {/mask}
    <hr>
    <div align="center">Last modified: {lastmodified}</div>
    {partner:partner2}
  </body>
</html>
{/mask}

{mask:partner1}
<p>with our partner {name}</p>
{/mask}

{mask:partner2}
<div>with our partner {name} ({id})</div>
{/mask}
```

ETS will produce:

```
<html>
  <head><title>Home page</title></head>
  <body>
    <h1>Home page</h1>
    <hr>
    <p>with our partner foobar.com</p>
    <hr>
    <a href="download.php">Downloads</a> <a href="links.php">Links</a>
    <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
    <div>with our partner foobar.com (123)</div>
  </body>
</html>
```

### What happened?

...

ETS found the alternate tag {partner:partner1}.

ETS replaced {name} with the value of \$page->partner->name in the template partner1.

ETS replaced {partner:partner1} with the built template partner1.

...

### Why did it happen?

When ETS finds an alternate tag (two names separated by a colon), it changes the active level using the first name then uses the outer template defined by the second name. Next, every property of the new level are placed. In this example, the property name corresponds to the tag {name}.

## 7. PHP elements

Imagine now that we want in the second template of partner, the name to be in capitals.

Here is our new again template file:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <body>
    <h1>{title}</h1>
    <hr>
    {partner:partner1}
    <hr>
    {mask:menu}<a href="{url}">{label}</a> {/mask}
    <hr>
    <div align="center">Last modified: {lastmodified}</div>
    {partner:partner2}
  </body>
</html>
{/mask}

{mask:partner1}
<p>with our partner {php}strtoupper({name}){/php}</p>
{/mask}

{mask:partner2}
<div>with our partner {name} ({id})</div>
{/mask}
```

ETS will produce:

```
<html>
  <head><title>Home page</title></head>
  <body>
    <h1>Home page</h1>
    <hr>
    <p>with our partner FOOBAR.COM</p>
    <hr>
    <a href="download.php">Downloads</a> <a href="links.php">Links</a>
    <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
    <div>with our partner foobar.com (123)</div>
  </body>
</html>
```

### What happened?

...

ETS found the PHP element defined between tags {php} and {/php}.

After placements in it, ETS places the result of the PHP code contained in the element.

...

### Why did it happen?

When ETS finds a PHP element, it calls PHP to parse its content and places the result. The PHP code must be written to stand for a scalar value. It is not recommended to use PHP elements to do something else than formatting data to preserve the separation logic.

## 8. Missing values

We want the template to be valid even if, for some specific contexts, there is no partner information to print out.

Here is the data tree, without partner's data.

```
$page->title = 'Home page';
$page->lastmodified = 'Thursday, January 23, 2003';

$page->menu[1]->url = "download.php";
$page->menu[1]->label = "Downloads";
$page->menu[2]->url = "links.php";
$page->menu[2]->label = "Links";
```

We don't modify the template file:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <body>
    <h1>{title}</h1>
    <hr>
    {partner:partner1}
    <hr>
    {mask:menu}<a href="{url}">{label}</a> {/mask}
    <hr>
    <div align="center">Last modified: {lastmodified}</div>
    {partner:partner2}
  </body>
</html>
{/mask}

{mask:partner1}
<p>with our partner {php}strtoupper({name}){/php}</p>
{/mask}

{mask:partner2}
<div>with our partner {name} ({id})</div>
{/mask}
```

ETS will produce:

```
<html>
  <head><title>Home page</title></head>
  <body>
    <h1>Home page</h1>
    <hr>
    <hr>
    <a href="download.php">Downloads</a> <a href="links.php">Links</a>
    <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
  </body>
</html>
```

### What happened?

...

ETS found the tag {partner:partner1}.

ETS didn't find partner in the data tree to match with the template so deleted the tag.

...

### Why did it happen?

When ETS finds a simple tag, an alternate tag or an inner template which doesn't match with any data of the data tree, it deletes the element.

## 9. Simple conditional elements

We want now to print out a message when partner is missing.

We keep the same data tree, but modify the template file:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <body>
    <h1>{title}</h1>
    <hr>
    {partner:partner1}{mis:partner}<b>No partner</b>{/mis}
    <hr>
    {mask:menu}<a href="{url}">{label}</a> {/mask}
    <hr>
    <div align="center">Last modified: {lastmodified}</div>
    {partner:partner2}
  </body>
</html>
{/mask}

{mask:partner1}
<p>with our partner {php}strtoupper({name}){/php}</p>
{/mask}

{mask:partner2}
<div>with our partner {name} ({id})</div>
{/mask}
```

ETS will print out:

```
<html>
  <head><title>Home page</title></head>
  <body>
    <h1>Home page</h1>
    <hr>
    <b>No partner</b>
    <hr>
    <a href="download.php">Downloads</a> <a href="links.php">Links</a>
    <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
  </body>
</html>
```

### What happened?

...

ETS found the template partner between tags {mis:partner} and {/mis}.

ETS didn't find partner in the current level of the data tree so placed the content of this element.

...

### Why did it happen?

When ETS finds a missing element, it places it if the corresponding data is not set, is null or doesn't exist.

The set element {set:partner} ... {/set} would be placed if partner was not missing.

ETS also provides {mis:variable:value} ... {/mis} which is placed when variable is different to value or variable is missing and {set:variable:value} ... {/set} which is placed when variable has a value of value.

## 10. Choose-variable elements

We want now to specify a style for each known partner.

Partner's data are back:

```
$page->title = 'Home page';
$page->lastmodified = 'Thursday, January 23, 2003';

$page->partner->name = 'foobar.com';
$page->partner->id = 123;
```

Here is the new template file:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <style>
    {mask:partner}
      {choose:id}
        {when:120} body { color:red; } {/when}
        {when:123} body { color:blue; } {/when}
        {else} body { color:black; } {/else}
      {/choose}
    {/mask}
  </style>
  <body>
    <h1>{title}</h1>
    <hr>
    {mask:partner}<p>with our partner {name}</p>{/mask}
    <hr>
    <div align="center">Last modified: {lastmodified}</div>
  </body>
</html>
{/mask}
```

ETS will produce:

```
<html>
  <head><title>Home page</title></head>
  <style>
    body { color:blue; }
  </style>
  <body>
    <h1>Home page</h1>
    <hr>
    <p>with our partner foobar.com</p>
    <hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
  </body>
</html>
```

### What happened?

...

ETS found the choose-variable element between tags {choose:id} and {/choose}.

ETS placed the content of the when-value element between tags {when:123} and {/when}.

...

### Why did it happen?

When ETS finds a choose-variable element, it places the content of the when-value element which corresponds to the value of the variable. If no when-value element corresponds, ETS places the else element.

## 11. Other conditional elements

ETS provides two other conditional elements.

### If element

The if element `{if:test} ... {/if}` is used when you want to do more complex conditions. The part `test` of the tag `{if:test}` contains any valid PHP condition using simple tags.

Here is a valid if element:

```
{if: {id} > 99 and {name} != 'foobar.com'} ... {/if}
```

### Simple choose element

The simple choose element `{choose} ... {choose}` is used when you've got to construct a condition sequence if-elseif-else.

Here is a valid simple choose element:

```
{choose}
  {when: {id} < 100} ... {/when}
  {when: {id} == 100} ... {/when}
  {else} ... {/else}
{/choose}
```

Note: these two element types are very useful in complex situations but there are twice slower than others conditional elements. So they should be used if simpler ones can't.

## 12. Call elements

Here is the extraction of a template file:

```
...
<td width="{const:a_width}"><a href="index.php?sort=a&{const:param}">{aa}</a></td>
<td width="{const:b_width}"><a href="index.php?sort=b&{const:param}">{ab}</a></td>
<td width="{const:c_width}"><a href="index.php?sort=c&{const:param}">{ac}</a></td>
...
{/mask}
```

We want to use the same template with different data because the template is heavily used and supposed to often change.

And here is the new one, once the template is modified to used a template:

```
...
{call:td}{arg:ta}{const:a_width}{/arg}{arg:tb}a{/arg}{arg:tc}{aa}{/arg}{/call}
{call:td}{arg:ta}{const:b_width}{/arg}{arg:tb}b{/arg}{arg:tc}{ab}{/arg}{/call}
{call:td}{arg:ta}{const:c_width}{/arg}{arg:tb}c{/arg}{arg:tc}{ac}{/arg}{/call}
...
{/mask}

{mask:td}
<td width="{ta}"><a href="index.php?sort={tb}&{const:param}">{tc}</a></td>
{/mask}
```

The two constructs will produce the same output. For example:

```
...
<td width="30"><a href="index.php?sort=a&par1=1&par2=2">One</a></td>
<td width="40"><a href="index.php?sort=b&par1=1&par2=2">Two</a></td>
<td width="30"><a href="index.php?sort=c&par1=1&par2=2">Three</a></td>
...
{/mask}
```

### What happened?

...

ETS found the call element between tags `{call:td}` and `{/call}`.

ETS built the outer template `td` using built arguments of the call element.

ETS replaced the call element by the built template `td`.

...

### Why did it happen?

When ETS detects a call element, it places the called outer template then places argument elements of the call element.

If the call element hasn't any argument, you can use a constant element instead.



## 13. Path (part 1)

Menu data are now back and we want to trace the active partner when a visitor clicks our links.

Here is the data:

```
$page->title = 'Home page';
$page->lastmodified = 'Thursday, January 23, 2003';

$page->partner->name = 'foobar.com';
$page->partner->id = 123;

$page->menu[1]->url = "download.php";
$page->menu[1]->label = "Downloads";
$page->menu[2]->url = "links.php";
$page->menu[2]->label = "Links";
```

Here is the new template file:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <body>
    <h1>{title}</h1><hr>
    {menu}<hr>
    <div align="center">Last modified: {lastmodified}</div>
  </body>
</html>
{/mask}

{mask:menu}
<a href="{url}?p={//partner/id}">{label}</a>
{/mask}
```

ETS will produce:

```
<html>
  <head><title>Home page</title></head>
  <body>
    <h1>Home page</h1><hr>
    <a href="download.php?p=123">Downloads</a> <a href="links.php?p=123">Links</a><hr>
    <div align="center">Last modified: Thursday, January 23, 2003</div>
  </body>
</html>
```

### What happened?

...

ETS found the tag `{//partner/id}` in the outer template menu.

ETS replaced it with the value of `$page->partner->id`.

...

### Why did it happen?

When ETS finds an absolute path (a path that begins with and double slash) in a valid element, it starts again from the root of the data tree to find the corresponding property. In this example, ETS looks for `$page->partner->id`.

ETS also manages relative paths. In part 10, you could use `{choose:partner/id} ... {/choose}` instead of `{mask:partner}{choose:{id} ... {/choose}{/mask}` in the main template to jump to the property `id` of the level `partner` of the current level.

Absolute and relative paths accepts also index to specify a particular element of an array. For example, `{ / /nameA[ 3 ] /nameB }` places `nameB` property of the fourth element of `nameA`.

You can also use system indexes `_first` and `_last` which represent first and last elements of the array.

Relative and absolute paths are available for simple tags, alternate tags, template and simple conditional elements, but also for the test part of complex conditional elements.

## 14. Path (part 2)

Imagine finally you want to display label's partners based on an indexed array...

Here is the data:

```
$page->title = 'Path using ..';

$page->mypartners[0]->id = 0;
$page->mypartners[1]->id = 3;

$page->partners[1]->id = 1;
$page->partners[1]->label = 'foobar.com';
$page->partners[2]->id = 2;
$page->partners[2]->label = 'foo.bar';
$page->partners[3]->id = 3;
$page->partners[3]->label = 'foobar 1';
```

Here is the new template file:

```
{mask:main}
<html>
  <head><title>{title}</title></head>
  <body>
    <h1>{title}</h1><hr>
    {mask:mypartners}
      {mask://partners}
        {if: {id} == {../../id} }<p>{label}</p>{/if}
      {/mask}
    {/mask}
  </body>
</html>
{/mask}
```

ETS will produce:

```
<html>
  <head><title>Path using ..</title></head>
  <body>
    <h1>Path using ..</h1><hr>
    <p>foobar.com</p>
    <p>foobar 1</p>
  </body>
</html>
```

### What happened?

...

ETS found the tag {../../id} in the test part of the if element.

ETS replaced the tag with the value of the variable id of the current element of the array mypartners.

...

### Why did it happen?

When ETS finds a parent element in a path, it goes back to the parent of the current template and retrieved associated level to define the new active level.

To bypass a template starting with //, you must use .. twice.

ETS creates numbers of elements when working with arrays: you can use `_start`, `_previous`, `_next` and `_end` to access respectively to the first, the previous, the next or the last element of the array which the current element belongs to. There's also `_parent` which is a alias for ..

# Reference

You will find here the complete description of each element of ETS.

## 1. Simple tag element

Places an outer template or the value of a variable.

### Syntax

{name}

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Test of if and when-test elements Any element aside from call, choose and choose-variable elements
<i>Child elements</i>	None

### Rules

if the parent element is a test of a conditional element  
    if the variable `name` is a string  
        place the escaped string between double quotes  
    else if the variable `name` is boolean  
        place `TRUE` or `FALSE`  
    else if the variable `name` is numeric  
        place the value  
    else if the variable is missing  
        place `NULL`  
    else  
        disappear  
else  
    if the outer template `name` exists  
        if the variable `name` is scalar  
            place the content of the template  
        else if the variable `name` is an object  
            place the content of the template  
            change the current level to `name`  
        else if the variable `name` is an array  
            for each element of the array  
                place the content of the template  
                change the current level to `name`  
        else  
            disappear  
    else  
        if the variable `name` is scalar  
            place the value of this variable  
        else  
            disappear

## Remarks

FALSE values and empty strings stand for scalar value in a test of a conditional element, PHP element and evaluated elements and for missing elsewhere. NULL values, non-existing variables, empty arrays and empty objects are always missing.

Strings are placed with double quotes and are escaped to accept carriage returns and tabulations in PHP elements and evaluated part of elements. There are not otherwise.

This element accepts absolute and relative paths for `name`.

Spaces, tabs and end of lines placed as values are not affected by `reduce` directive.

## Examples with scalar variables

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<code>{mask:main}{a}{/mask}</code>	<code>\$ets-&gt;a = 4;</code>	4
<code>{mask:main}{b}{/mask}</code>	<code>\$ets-&gt;b = NULL;</code>	(none)

## Examples with outer templates

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<code>{mask:main}   {c} {/mask} {mask:c}c with {d}{/mask}</code>	<code>\$ets-&gt;c = 1; \$ets-&gt;d = 2;</code>	c with 2
<code>{mask:main}   {e} {/mask} {mask:e}e with {f}{/mask}</code>	<code>\$ets-&gt;e-&gt;f = 2;</code>	e with 2
<code>{mask:main}   {e} {/mask} {mask:e}Content of e{/mask}</code>	<code>\$ets-&gt;a = 1;</code>	(none)

## Examples in tests

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<code>{if: {a} == 4 }a == 4{/if}</code>	<code>\$ets-&gt;a = 4;</code>	a == 4
<code>{if: {a} }a is TRUE{/if}</code>	<code>\$ets-&gt;a = TRUE;</code>	a is TRUE
<code>{if: {a} == 'ets' }ETS{/if}</code>	<code>\$ets-&gt;a = 'ets';</code>	ETS
<code>{if: {a} == 1 }a == 1{/if}</code>	<code>\$ets-&gt;not_a = 1;</code>	(none)
<code>{if: {a[1]/b} == 2}b == 2{/if}</code>	<code>\$ets-&gt;a[0]-&gt;b = 1; \$ets-&gt;a[1]-&gt;b = 2;</code>	b == 2

## Examples in evaluated part of elements

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<code>{repeat: {a} / 10}*{/repeat}</code>	<code>\$ets-&gt;a = 30;</code>	***
<code>{mask:main} {b:{c}} {/mask}  {mask:d}-{e}-{/mask}</code>	<code>\$ets-&gt;b-&gt;e = ' '; \$ets-&gt;c = 'd';</code>	- -

## 2. Alternate tag element

Places an outer template with a different name.

### Syntax

```
{variable:template}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	In <code>template</code> , PHP code, simple tags

### Rules

```
place simple tags in template
if template is a valid PHP code that stands for a string value
    if the outer template template exists
        if the variable variable is scalar
            place the content of the template
        else if the variable variable is an object
            place the content of the template
            change the current level to variable
        else if the variable name is an array
            for each element of the array
                place the content of the template
                change the current level to name
        else
            disappear
    else variable is scalar
        place the value of this variable
    else
        disappear
else if template produces a fatal error
    halt the script
else
    disappear
```

### Remarks

FALSE values, empty strings, NULL values, non-existing variables, empty arrays and empty objects stand for missing in `variable`.

This element accepts absolute and relative paths for `variable`.

About simple tags in `template`:

- FALSE values and empty strings stand for scalar value,
- strings are placed with double quotes and are escaped to accept carriage returns and tabulations.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

## Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{mask:main}   {a:b} {/mask} {mask:b}b with {a}{/mask}</pre>	<pre>\$ets-&gt;a = 1;</pre>	b with 1
<pre>{mask:main}   {c:d} {/mask} {mask:d}c with {e}{/mask}</pre>	<pre>\$ets-&gt;c-&gt;e = 1;</pre>	c with 1
<pre>{mask:main}   f = {f:xx} {/mask}</pre>	<pre>\$ets-&gt;f = 1;</pre>	f = 1

### 3. Template element

Defines a template and, if inner, places it.

#### Syntax

```
{mask:name} ... {/mask}
```

#### Template tree

<i>Number of occurrences</i>	Unique name if outer Unlimited if inner
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements if inner None if outer
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

#### Rules

if the variable name is scalar  
    place the content of the template  
else if the variable name is an object  
    place the content of the template  
    change the current level to name  
else if the variable name is an array  
    for each element of the array  
        place the content of the template  
        change the current level to name  
else  
    disappear

#### Remarks

This element accepts absolute and relative paths for name for inner templates. They don't in outer templates.

#### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{mask:main}   {mask:a}Content of a{/mask} {/mask}</pre>	<pre>\$ets-&gt;a = 1;</pre>	Content of a
<pre>{mask:main}   {mask:b}Content of b{/mask} {/mask}</pre>	<pre>\$ets-&gt;b-&gt;a = 1;</pre>	Content of b
<pre>{mask:main}   {mask:c}Content of c{/mask} {/mask}</pre>	<pre>\$ets-&gt;c[0]-&gt;a = 1; \$ets-&gt;c[1]-&gt;a = 1; \$ets-&gt;c[2]-&gt;a = 1;</pre>	Content of c Content of c Content of c
<pre>{mask:main}   {mask:d}Content of d{/mask} {/mask}</pre>	<pre>\$ets-&gt;d = '';</pre>	(none)
<pre>{mask:main}   {mask:e}Content of e{/mask} {/mask}</pre>	<pre>\$ets-&gt;e[0][0]-&gt;a = 1; \$ets-&gt;e[0][1]-&gt;a = 1; \$ets-&gt;e[1][0]-&gt;a = 1; \$ets-&gt;e[1][1]-&gt;a = 1;</pre>	Content of e Content of e Content of e Content of e



<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{mask:main}   {mask:f}     1st f       {mask://f}2nd f{/mask}     {/mask}   {/mask}</pre>	<pre>\$ets-&gt;f[0]-&gt;a = 1;</pre>	<pre>1st f 2nd f</pre>

## 4. Set element

Places a content when a variable is set (not missing).

### Syntax

```
{set:variable} ... {/set}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

```
if variable is not missing
    place the content of the element
else
    disappear
```

### Remarks

FALSE values, empty strings, NULL values, non-existing variables, empty arrays and empty objects stand for missing.

This element accepts absolute and relative paths for `variable`.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<code>{set:a}a is not missing{/set}</code>	<code>\$ets-&gt;a = TRUE;</code>	a is not missing
<code>{set:b}b is not missing{/set}</code>	<code>\$ets-&gt;b = NULL;</code>	(none)
<code>{set:c}c is not missing{/set}</code>	<code>\$ets-&gt;c = FALSE;</code>	(none)
<code>{set:d}d is not missing{/set}</code>	<code>\$ets-&gt;d = '';</code>	(none)
<code>{set:e}e is not missing{/set}</code>	<code>\$ets-&gt;e-&gt;a = 1;</code> <code>\$ets-&gt;e-&gt;b = 2;</code>	e is not missing

## 5. Set-value element

Places a content when a variable has a specific value.

### Syntax

```
{set:variable:value} ... {/set}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

```
if variable has a value of value
    place the content of the element
else
    disappear
```

### Remarks

{set:variable:NULL} or {set:variable:} don't work. Use {mis:variable} instead.

This element accepts absolute and relative paths for *variable*.

*value* accepts simple strings without spaces, single and double quotes strings.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
{set:a:3}a == 3{/set}	<code>\$ets-&gt;a = 3;</code>	a == 3
{set:b:value}b == 'value'{/set}	<code>\$ets-&gt;b = 'value';</code>	b == 'value'
{set:c:"val ue"}c == "val ue"{/set}	<code>\$ets-&gt;c = 'value';</code>	(none)
{set:d:4}d == 4{/set}	<code>\$ets-&gt;d = NULL;</code>	(none)

## 6. Missing element

Places a content when a variable is missing.

### Syntax

```
{mis:variable} ... {/mis}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

```
if foo is missing
    place the content of the element
else
    disappear
```

### Remarks

FALSE values, empty strings, NULL values, non-existing variables, empty arrays and empty objects stand for missing.

This element accepts absolute and relative paths for `variable`.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
{mis:a}a is missing{/mis}	<code>\$ets-&gt;a = TRUE;</code>	(none)
{mis:b}b is missing{/mis}	<code>\$ets-&gt;b = NULL;</code>	b is missing
{mis:c}c is missing{/mis}	<code>\$ets-&gt;c = FALSE;</code>	c is missing
{mis:d}d is missing{/mis}	<code>\$ets-&gt;d = '';</code>	d is missing

## 7. Missing-value element

Places a content when a variable has not a specific value or is missing.

### Syntax

```
{mis:variable:value} ... {/mis}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

```
if variable has not a value of value or is missing
    place the content of the element
else
    disappear
```

### Remarks

{mis:variable:NULL} or {mis:variable:} don't work. Use {set:variable} instead.

This element accepts absolute and relative paths for *variable*.

*value* accepts simple strings without spaces, single and double quotes strings.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
{mis:a:3}a != 3{/mis}	<code>\$ets-&gt;a = 3;</code>	(none)
{mis:b:value}b != 'value'{/mis}	<code>\$ets-&gt;b = 'value';</code>	(none)
{mis:c:"val ue"}c != "val ue"{/mis}	<code>\$ets-&gt;c = 'value';</code>	c != "val ue"
{mis:d:4}d != 4{/mis}	<code>\$ets-&gt;d = NULL;</code>	d != 4

## 8. PHP element

Places a content which will be parsed as PHP code.

### Syntax

```
{php} ... {/php}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Simple tags, PHP code

### Rules

if the content is a valid PHP code and stands for a scalar value  
    place the representation of this value  
else if the content is produces a fatal error  
    halt the script  
else  
    disappear

### Remarks

PHP element should be used to format values only.

About simple tags in a PHP element:

- FALSE values and empty strings stand for scalar value,
- strings are placed with double quotes and are escaped to accept carriage returns and tabulations.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function. When the code produces a parse error or something else, the script doesn't halt but the PHP element disappears.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
{php}sprintf('%.2f', {price}){/php}	<code>\$ets-&gt;price = 4.3;</code>	4.30
{php}date('Y', {date}){/php}	<code>\$ets-&gt;date = time();</code>	2003
{php}strtolower({string}){/php}	<code>\$ets-&gt;string = 'LOWER';</code>	lower
{php}sprintf('%.2f', {price}){/php}	<code>\$ets-&gt;price = NULL;</code>	(none)
Before {php}missing_function({label}){/php} After	<code>\$ets-&gt;label = 'abc';</code>	(none)

## 9. Constant element

Places an outer template.

### Syntax

```
{const:template}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	In <code>template</code> , PHP code, simple tags

### Rules

```
place simple tags in template
if template is a valid PHP code that stands for a string value
    if the outer template template exists
        place its content
    else
        disappear
else if template produces a fatal error
    halt the script
else
    disappear
```

### Remarks

This element doesn't change the current level.

This element is independent from the data tree.

About simple tags in `template`:

- `FALSE` values and empty strings stand for scalar value,
- strings are placed with double quotes and are escaped to accept carriage returns and tabulations.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{mask:main}   {const:a} {/mask}  {mask:a}Content of a{/mask}</pre>	<pre>\$ets-&gt;not_a = 1;</pre>	Content of a
<pre>{mask:main}   {const:b} {/mask}  {mask:not_b}Content{/mask}</pre>	<pre>\$ets-&gt;price = 3;</pre>	(none)

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{mask:main}   {const:c} {/mask}  {mask:c}c with {d}{/mask}</pre>	<pre>\$ets-&gt;d = 1;</pre>	<pre>c with 1</pre>



## 10. If element

Places a content if a test is TRUE.

### Syntax

```
{if:test} ... {/if}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	In <code>test</code> , PHP code, simple tags In content, text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

place simple tags in `test`

if `test` is a valid PHP code that stands for the boolean value `TRUE`

    place its content

else if `test` produces a fatal error

    halt the script

else

    disappear

### Remarks

About simple tags in an if element:

- `FALSE` values and empty strings stand for scalar value,
- strings are placed with double quotes and are escaped to accept carriage returns and tabulations.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<code>{if: {a} == 4 }a == 4{/if}</code>	<code>\$ets-&gt;a = 4;</code>	<code>a == 4</code>
<code>{if: {a} }a is TRUE{/if}</code>	<code>\$ets-&gt;a = TRUE;</code>	<code>a is TRUE</code>
<code>{if: {a} == 'ets' }ETS{/if}</code>	<code>\$ets-&gt;a = 'ets';</code>	<code>ETS</code>
<code>{if: {a} == 1 }a == 1{/if}</code>	<code>\$ets-&gt;not_a = 1;</code>	<code>(none)</code>
<code>{if: {a[1]/b} == 2}b == 2{/if}</code>	<code>\$ets-&gt;a[0]-&gt;b = 1;</code> <code>\$ets-&gt;a[1]-&gt;b = 2;</code>	<code>b == 2</code>

## 11. Choose element

Provides multiple conditions in conjunction with when-test and else elements.

### Syntax

```
{choose} ... {/choose}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	when-test element, else element and comment

### Rules

```
for each when-test child
  place simple tags in test
  if test is a valid PHP code that stands for the boolean value TRUE
    place its content
    exit
  else if test produces a fatal error
    halt the script
if an else child exists
  place its content
  exit
else
  disappear
```

### Remarks

Choose element defines a container to organize a sequence of multiple tests parsed like if/elseif/.../else.

When-test children are evaluated in order from the top to the bottom until a test is TRUE.

Else element must be unique in each choose element but can be defined anywhere in the choose element.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{choose}   {when:{a} &lt; 2}singular{/when}   {else}plural{/else} {/choose}</pre>	<pre>\$ets-&gt;a = 2;</pre>	plural
<pre>{choose}   {when:{a} &lt; 0}negative{/when}   {when:{a} &lt; 9}a &lt; 9{/when}   {else}a &gt;= 9{/else} {/choose}</pre>	<pre>\$ets-&gt;a = 2;</pre>	a < 9

## 12. When-test element

Places a content if a test is TRUE so disables other when-test or else siblings.

### Syntax

```
{when:test} ... {/when}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Choose element
<i>Child elements</i>	In test, PHP code, simple tags In content, text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

See choose element.

### Remarks

About simple tags in an when-test element:

- FALSE values and empty strings stand for scalar value,
- strings are placed with double quotes and are escaped to accept carriage returns and tabulations.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{choose}   {when:{a} &lt; 0}negative{/when}   {when:{a} &lt; 9}a &lt; 9{/when}   {when:{a} &lt; 99}9 &lt; a &lt; 99{/when}   {else}a &gt;= 99{/else} {/choose}</pre>	<pre>\$ets-&gt;a = 2;</pre>	a < 9
<pre>{choose}   {when:{a} &lt; 0}negative{/when}   {else}nul{/else}   {when:{a} &gt; 0}positive{/when} {/choose}</pre>	<pre>\$ets-&gt;a = 2;</pre>	positive

### 13. Else element

Places a content if all when-test or when-value siblings are FALSE.

#### Syntax

```
{else} ... {/else}
```

#### Template tree

<i>Number of occurrences</i>	One per choose or choose-variable element
<i>Parent elements</i>	Choose or choose-variable element
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

#### Rules

See choose and choose-variable elements.

#### Remarks

Else element provides a default content for choose and choose-variable elements.

#### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{choose}   {when:{a} &lt; 0}negative{/when}   {when:{a} &lt; 9}a &lt; 9{/when}   {when:{a} &lt; 99}9 &lt; a &lt; 99{/when}   {else}a &gt;= 99{/else} {/choose}</pre>	<pre>\$ets-&gt;a = 2;</pre>	a < 9
<pre>{choose}   {else}useless tags{/else} {/choose}</pre>	<pre>\$ets-&gt;a = 1;</pre>	useless tags

## 14. Choose-variable element

Provides multiple conditions in conjunction with when-value and else elements.

### Syntax

```
{choose:variable} ... {/choose}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	when-value element, else element and comment

### Rules

```
if the variable variable is scalar
  for each when-value child
    if the variable variable has the value of this element
      place its content
      exit
    if there an else child exists
      place its content
      exit
  else
    disappear
else
  disappear
```

### Remarks

Choose-variable element defines a container to organize a sequence of multiple tests parsed like switch/case/default.

When-value children are evaluated in order from the top to the bottom until a test is **TRUE**.

Else element must be unique in each choose-variable element but can be defined anywhere in the choose element.

This element accepts absolute and relative paths for *variable*.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{choose:partner/id}   {when:1}partner #1{/when}   {when:2}partner #2{/when}   {when:3}partner #3{/when}   {else}no partner{/else} {/choose}</pre>	<pre>\$sets-&gt;partner-&gt;id = 2;</pre>	partner #2
<pre>{choose:label}   {when:'the fox'}1{/when}   {when:'the dog'}2{/when}   {else}0{/else} {/choose}</pre>	<pre>\$sets-&gt;label = 'the dog';</pre>	2

## 15. When-value element

Places a content if the variable of the choose parent has the value of this element so disables other when-value or else siblings.

### Syntax

```
{when:value} ... {/when}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Choose-variable element
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

See choose-variable element.

### Remarks

{when:NULL} or {when:} don't work. Use {mis:variable} out of choose-variable parent instead.

This element accepts absolute and relative paths for `variable`.

`value` accepts simple strings without spaces, single and double quotes strings.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{choose:partner/id}   {when:1}partner #1{/when}   {when:2}partner #2{/when}   {when:3}partner #3{/when}   {else}no partner{/else} {/choose}</pre>	<pre>\$ets-&gt;partner-&gt;id = 2;</pre>	partner #2
<pre>{choose:label}   {when:'the fox'}1{/when}   {when:'the dog'}2{/when}   {else}0{/else} {/choose}</pre>	<pre>\$ets-&gt;label = 'the dog';</pre>	2

## 16. Call element

Places an outer template with arguments.

### Syntax

```
{call:template} ... {/call}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	In <code>template</code> , PHP code, simple tags In content, argument element, comment

### Rules

```
place simple tags in template
if template is a valid PHP code that stands for a string value
    if the outer template template exists
        place its content
        for each argument child of the call element
            add the built argument to the data tree
    else
        disappear
else if template produces a fatal error
    halt the script
else
    disappear
```

### Remarks

Call element is parsed like a function call and works like constant element plus defines a container where to define arguments.

Call element doesn't change the current level.

Be careful when choosing the name of an argument to not overwrite existing data. Choose for example a prefix like `a_`.

About simple tags in `template`:

- `FALSE` values and empty strings stand for scalar value,
- strings are placed with double quotes and are escaped to accept carriage returns and tabulations.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

**Example**

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>... {call:color}{arg:a_id}1{/arg}{/call} {call:color}{arg:a_id}2{/arg}{/call} {const:color} ... {/mask}  {mask:color} {set:a_id:1}red{/set} {set:a_id:2}blue{/set} {mis:a_id}black{/mis} {/mask}</pre>	<pre>\$ets-&gt;a = 1;</pre>	<pre>red blue</pre>



## 17. Argument element

Defines an argument of a call element.

### Syntax

```
{arg:name} ... {/arg}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Call element
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

See call element.

### Remarks

Argument element is built then used as a scalar variable in the called outer template.

Argument element doesn't change the current level.

{arg:name}{/arg} will produce the same result than if it is not defined because it defines a empty string which stands for a missing variable.

### Example

See call element.

## 18. Repeat element

Places a content several times.

### Syntax

```
{repeat:n} ... {/repeat}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Text, comment, cdata and any element aside from argument, when-value, when-test and else elements

### Rules

if *n* is a valid PHP code that stands for an integer value  
    loop *n* times  
        place the content  
else if *n* produces a fatal error  
    halt the script  
else  
    disappear

### Remarks

When possible, ETS creates a system variable, `_count`, which contains the current loop.

If the number of loops is negative or zero, repeat element disappears.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### Example

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{mask:graph} {repeat:{val} / 100}*{/repeat} {/mask}</pre>	<pre>\$ets-&gt;graph[0]-&gt;val = 300; \$ets-&gt;graph[1]-&gt;val = 100; \$ets-&gt;graph[2]-&gt;val = 600; \$ets-&gt;graph[3]-&gt;val = 150;</pre>	<pre>*** * ***** *</pre>
<pre>{repeat: {pages} } { _count}{if: { _count} &lt; {pages} }, {/if} {/repeat}</pre>	<pre>\$ets-&gt;pages = 4;</pre>	<pre>1, 2, 3, 4</pre>

## 19. Include element

Includes outer templates from a container.

### Syntax

```
{include:container}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements if inner None if outer
<i>Child elements</i>	In container, PHP code, simple tags

### Rules

place simple tags in container

if `container` is a valid PHP code that stands for a string value

    include the content of `container`

else if `container` produces a fatal error

    halt the script

else

    disappear

### Remarks

If inner, the content of the container is parsed only when needed; if outer, it's parsed immediately.

Include element doesn't place the content of the container where it's declared. It adds outer templates defined in the container to available outer templates list. Thus, it's an alternative management of container names as argument of `printt` or `sprintt`.

If the container is a file name, a relative path starts from the location of the PHP script that calls ETS.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### Example

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{include:library.tpl}  {mask:main}   {set:page:search}     {include:search.tpl}   {/set}   {body} {/mask}</pre>	<pre>\$ets-&gt;page = 'search';</pre>	<pre>... &lt;h1&gt;Search&lt;/h1&gt; &lt;br&gt; 5 results found&lt;br&gt; ...</pre>

## 20. Insert element

Places the content of a container as text.

### Syntax

```
{insert:container}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	In container, PHP code, simple tags

### Rules

place simple tags in container

if container is a valid PHP code that stands for a string value

    insert the content of container as text

else if container produces a fatal error

    halt the script

else

    disappear

### Remarks

Insert element inserts the content of a container only when needed and where it's declared.

If the container is a file name, a relative path starts from the location of the PHP script that calls ETS.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{set:intro} {insert:'file.txt'} {/set}</pre>	<pre>\$ets-&gt;intro = FALSE;</pre>	(none)
<pre>{set:license} {insert:'lgpl.txt'} {/set}</pre>	<pre>\$ets-&gt;license = TRUE;</pre>	GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999  Copyright (C) 1991, 1999 Free Software Foundation, Inc. ...

## 21. Eval element

Places the content of a container as a template part.

### Syntax

```
{eval:container}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	In container, PHP code, simple tags

### Rules

place simple tags in container

if container is a valid PHP code that stands for a string value

    insert the content of container as template part

else if container produces a fatal error

    halt the script

else

    disappear

### Remarks

Eval element works like include element because its content is parsed and works like insert element because its content is placed where it's declared.

Eval element inserts the content of a container only when needed.

If the container is a file name, a relative path starts from the location of the PHP script that calls ETS.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### Examples

<i>Template</i>	<i>PHP code</i>	<i>Result</i>
<pre>{set:intro} {eval:'file.ets'} {/set}</pre>	<pre>\$ets-&gt;intro = FALSE;</pre>	(none)
<pre>{set:license} {eval:'lgpl.ets'} {/set}</pre>	<pre>\$ets-&gt;license = TRUE; \$ets-&gt;title = 'ETS';</pre>	ETS ----- GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999
lgpl.ets		Copyright (C) 1991, 1999 Free Software Foundation, Inc. ...
<pre>    {title}     -----     GNU LESSER GENERAL PUBLIC     LICENSE     Version 2.1, February</pre>		

## 22. Safe element

Places the content of a container as a template part with restrictions.

### Syntax

```
{safe:container}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Text, comment, cdata, simple tags, set, set-value, missing, missing-value and template elements

### Rules

```
place simple tags in container
if container is a valid PHP code that stands for a string value
    insert the content of container as template part
else if container produces a fatal error
    halt the script
else
    disappear
```

### Remarks

Safe element works like eval element but only accepts, in the called container, elements which haven't a part that can be PHP code.

It can be used when a site contains public and private containers or when you can't make sure that some containers are well-formed.

ETS produces a notice message when safed containers contains unauthorized elements.

Warning: as indicated in rules, when the evaluated code produces a fatal error, the script halts. This means that you will get an empty result. It happens generally when you're calling a missing function.

### 23. Reduce element

Defines a size reducing behaviour.

#### Syntax

```
{reduce:value}
```

#### Template tree

<i>Number of occurrences</i>	One
<i>Parent elements</i>	None
<i>Child elements</i>	None

#### Rules

if `value` is OFF or NOTHING

    don't change the built document

else if `value` is SPACE or SPACES

    remove whitespaces from the beginning and end of each line of the built document

else if `value` is CRLF or ON or ALL

    remove whitespaces from the beginning and end of each line of the built document

    remove carriage returns of the built document

#### Remarks

This directive must be placed out of any template. If more than one reduce directive is specified, the last one will be used.

The default behaviour for size reducing is to do nothing.

Whitespaces stand for spaces and tabulations.

You can also use comments to suppress specific white spaces.

Whitespaces and carriage returns of cdata sections are not affected.

#### Examples

<i>Template</i>	<i>Result</i>
<pre>{reduce:nothing} {mask:main}{*  * }x  y {/mask}</pre>	<pre>x  y</pre>
<pre>{reduce:spaces} {mask:main}  x  y {/mask}</pre>	<pre>x y</pre>
<pre>{reduce:all} {mask:main}  x  y {/mask}</pre>	<pre>xy</pre>

## 24. Comment

Defines a comment section.

### Syntax

```
{* ... *}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from PHP element
<i>Child elements</i>	Ignored

### Remarks

Comments are not part of the built template.

Comments can also be specified between outer templates: these parts of containers are ignored by ETS.

Comments can be nested.

Apart from a debug process, don't leave useless big comments in a container; it slows down ETS because all comments are read.

### Examples

<i>Template</i>	<i>Result</i>
The root template: {mask:main} {const:ets} {* the main template {* nested but works too! *} *} {/mask}  Another template: {mask:ets} ABC {/mask}	ABC
Active: {mask:main} A {/mask}  Backup: {* {mask:main} B {/mask} *}	A



## 25. Cdata

Defines a section where the text is not parsed.

### Syntax

```
{# ... #}
```

### Template tree

<i>Number of occurrences</i>	Unlimited
<i>Parent elements</i>	Any element aside from call, choose, choose-variable and PHP elements
<i>Child elements</i>	Anything becomes text

### Remarks

In some situations, for example, in a CSS section or a javascript section of a HTML document, you can safely use characters { and } if these sections are written between {# and #}. These characters define a cdata section. In other words, these sections will be considered by ETS as text.

Cdata can be nested.

To avoid parsing, you can also add a space, tab or carriage return after { . In this case, ETS doesn't generate an error and considers this content as text.

Spaces, tabs and end of lines are not affected by reduce directive in cdata.

### Examples

<i>Template</i>	<i>Result</i>
{# div{color:blue;} #}	div{color:blue;}
div { color:blue; }	div { color:blue; }
div{color:blue;}	(parse error)

## 26. System variables

When a level is an element of an array, ETS creates system variables for this level which can be used as other ones.

These variables are:

<i>Name</i>	<i>Data type</i>	<i>Description</i>
<code>_key</code>	Mixed	Actual key of the element
<code>_index</code>	Integer	Numbers the element from 0
<code>_rank</code>	Integer	Numbers the element from 1
<code>_odd</code>	Boolean	TRUE if <code>_rank</code> is odd
<code>_even</code>	Boolean	TRUE if <code>_rank</code> is even
<code>_first</code>	Boolean	TRUE if the element is the first of the array
<code>_last</code>	Boolean	TRUE if the element is the last of the array
<code>_middle</code>	Boolean	TRUE if <code>_first</code> is FALSE and <code>_last</code> is FALSE
<code>_not_first</code>	Boolean	TRUE if <code>_first</code> is FALSE
<code>_not_middle</code>	Boolean	TRUE if <code>_middle</code> is FALSE
<code>_not_last</code>	Boolean	TRUE if <code>_last</code> is FALSE
<code>_not_even</code>	Boolean	TRUE if <code>_even</code> is FALSE
<code>_not_odd</code>	Boolean	TRUE if <code>_odd</code> is FALSE

### Examples

This example shows how to alternate color of lines in a table and use a different color for the first line.

```
{mask:main}
  {set:line}
  <table>
    {mask:line}
    <tr>
      <td bgcolor="{const:color}">{id}</td>
      <td bgcolor="{const:color}">{label}</td>
    </tr>
    {/mask}
  </table>
  {/set}

  {mis:line}<b>No data</b>{/mis}
{/mask}

{mask:color}{choose}
  {when:{_first}}#00FF00{/when}
  {when:{_odd}} #FFFFFF{/when}
  {when:{_even}} #C0C0C0{/when}
{/choose}{/mask}
```

This example shows how to calculate the number of elements in an array and add a "s" if there is more than 1 element.

```
{mask:main}
  {mask:array}{set:_last}{_rank} element{const:s} in array{/set}{/mask}
{/mask}

{mask:s}{if: {_rank} > 1}s{/if}{/mask}
```

## 27. Path

In a data path, ETS accepts different operators and names shown in the following table:

Name	Description
/	Child level in the data tree
//	Root level of the data tree
..	Level of the data tree used in the parent template
_parent	Alias of ..
_start	First element of the current array in the data tree
_previous	Previous element of the current array in the data tree
_next	Next element of the current array in the data tree
_end	Last element of the current array in the data tree

### Example

Template	Data tree	Result view																																								
<pre>{mask:main}   &lt;table border="1"&gt;     {mask:b}     &lt;tr&gt;       &lt;td&gt;{_start/c}&lt;/td&gt;       &lt;td&gt;{_previous/_previous/c}&lt;/td&gt;       &lt;td&gt;{_previous/c}&lt;/td&gt;       &lt;td&gt;&lt;b&gt;{c}&lt;/b&gt;&lt;/td&gt;       &lt;td&gt;{_next/c}&lt;/td&gt;       &lt;td&gt;{_next/_next/c}&lt;/td&gt;       &lt;td&gt;{_end/c}&lt;/td&gt;       &lt;td&gt;{../a}&lt;/td&gt;     &lt;/tr&gt;   &lt;/mask&gt; {/mask}</pre>	<pre>\$ets-&gt;a = 'a'; \$ets-&gt;b[0]-&gt;c = 1; \$ets-&gt;b[1]-&gt;c = 2; \$ets-&gt;b[2]-&gt;c = 3; \$ets-&gt;b[3]-&gt;c = 4; \$ets-&gt;b[4]-&gt;c = 5;</pre>	<table border="1"> <tbody> <tr> <td>1</td> <td></td> <td></td> <td><b>1</b></td> <td>2</td> <td>3</td> <td>5</td> <td>a</td> </tr> <tr> <td>1</td> <td></td> <td>1</td> <td><b>2</b></td> <td>3</td> <td>4</td> <td>5</td> <td>a</td> </tr> <tr> <td>1</td> <td>1</td> <td>2</td> <td><b>3</b></td> <td>4</td> <td>5</td> <td>5</td> <td>a</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td><b>4</b></td> <td>5</td> <td></td> <td>5</td> <td>a</td> </tr> <tr> <td>1</td> <td>3</td> <td>4</td> <td><b>5</b></td> <td></td> <td></td> <td>5</td> <td>a</td> </tr> </tbody> </table>	1			<b>1</b>	2	3	5	a	1		1	<b>2</b>	3	4	5	a	1	1	2	<b>3</b>	4	5	5	a	1	2	3	<b>4</b>	5		5	a	1	3	4	<b>5</b>			5	a
1			<b>1</b>	2	3	5	a																																			
1		1	<b>2</b>	3	4	5	a																																			
1	1	2	<b>3</b>	4	5	5	a																																			
1	2	3	<b>4</b>	5		5	a																																			
1	3	4	<b>5</b>			5	a																																			

## **28. Error handling**

ETS checks PHP error level reporting before displaying a message.  
ETS follows the 3 error levels of PHP.

### **Notice**

ETS displays a message and continues to parse containers or match data and templates.

Notice messages are:

- container not found
- duplicated reduce element
- invalid value for reduce element
- datatree is not an array, an object or null (given as argument)
- wrong element in safe container

### **Warning**

ETS displays a message and stops parsing the outer template which causes the message.

Warning messages are:

- wrong element in another or at root
- unexpected closing tag
- unexpected character or space in tag
- end of comment or cdata not found
- closing tag not found
- duplicated templates
- else element duplicated

### **Error**

ETS displays a message and halts the script

Error messages are:

- entry mask not found
- containers are not array or string (given as argument)

## 29. User-level templates storage

If you don't want to use the standard way to retrieve template contents provided by ETS, you can set your own.

In this case, you must define a function named `ets_source_read_handler` which needs one argument, the id of the template container, and returns the content of the container or `FALSE` on error.

For example, if you store template containers in a MySQL database, this function could be:

```
function ets_source_read_handler($id)
{
    $content = FALSE;
    mysql_connect('myhost', 'myuser', 'mypassword');
    mysql_select_db('mydatabase');
    $id = mysql_escape_string($id);
    $h = mysql_query("select content from ets_source where id = '$id'");
    if ($o = mysql_fetch_object($h)) {
        $content = $o->content;
    }
    mysql_free_result($h);
    return $content;
}
```

When this function is defined, ETS uses it each time it needs to retrieve the content of a container; those given as argument of `print` and `sprintt` and those used by `include` or `insert` elements as well.

### 30. Cache system

In complement to the user-level templates storage, you can optionally store and re-use compiled template containers so ETS will not have to parse containers each time it uses them before playing with a data tree.

To define a complete cache system, you must define 2 functions in addition to `ets_source_read_handler`: `ets_cache_read_handler` and `ets_cache_write_handler`.

`ets_cache_read_handler` needs one argument, the id of the container, and returns the compiled container or `FALSE` when the compiled container is obsolete or on error.

`ets_cache_write_handler` needs two arguments, the id of the template container and the compiled content of the container, and doesn't return anything.

The cache system provided by ETS will automatically refresh compiled containers each time a source container is modified.

ETS never compiles containers which are used by insert elements because there are not template containers but only data containers.

Here is a complete set of functions which can be used to implement a file-based cache system:

```
// read a compiled container and check if it's not obsolete
function ets_cache_read_handler($id)
{
    $content = FALSE;
    if (@filetime("ets/$id.ets") > @filetime("tpl/$id.html")) {
        if ($handle = @fopen("ets/$id.ets", 'rb')) {
            $size = @filesize("ets/$id.ets");
            $content = @fread($handle, $size);
            fclose($handle);
        }
    }
    return $content;
}

// write a compiled container
function ets_cache_write_handler($id, $content)
{
    if ($handle = @fopen("ets/$id.ets", 'wb')) {
        @fwrite($handle, $content);
        fclose($handle);
    }
}

// read a source container
function ets_source_read_handler($id)
{
    $content = FALSE;
    if ($handle = @fopen("tpl/$id.html", 'rb')) {
        $size = @filesize("tpl/$id.html");
        $content = @fread($handle, $size);
        fclose($handle);
    }
    return $content;
}
```

In this example, source templates containers are stored in the directory `tpl` and compiled ones in `ets`.

Before using this cache system, you must fill the directory `tpl` with original templates files.

Here is a MySQL-based cache system:

```
// read a compiled container and check if it's not obsolete
function ets_cache_read_handler($id)
{
    $content = FALSE;
    mysql_connect('myhost', 'myuser', 'mypassword');
    mysql_select_db('mydatabase');
    $id = mysql_escape_string($id);
    $h = mysql_query("select c.content from ets_cache c inner join " .
        "ets_source s on c.id = s.id and s.date < c.date where c.id = '$id'");
    if ($o = mysql_fetch_object($h)) {
        $content = $o->content;
    }
    mysql_free_result($h);
    return $content;
}

// write a compiled container
function ets_cache_write_handler($id, $content)
{
    mysql_connect('myhost', 'myuser', 'mypassword');
    mysql_select_db('mydatabase');
    $id = mysql_escape_string($id);
    $content = mysql_escape_string($content);
    $h = mysql_query("select id from ets_cache where id = '$id'");
    $o = mysql_fetch_object($h);
    mysql_free_result($h);
    if ($o) {
        mysql_query("update ets_cache set content = '$content' where id = '$id'");
    } else {
        mysql_query("insert into ets_cache (id, content) values ('$id', '$content')");
    }
}

// read a source container
function ets_source_read_handler($id)
{
    $content = FALSE;
    mysql_connect('myhost', 'myuser', 'mypassword');
    mysql_select_db('mydatabase');
    $id = mysql_escape_string($id);
    $h = mysql_query("select content from ets_source where id = '$id'");
    if ($o = mysql_fetch_object($h)) {
        $content = $o->content;
    }
    mysql_free_result($h);
    return $content;
}
```

In this example, the table `ets_source` contains source containers and `ets_cache` compiled ones and have this structure:

```
CREATE TABLE ets_cache (
  id varchar(100) NOT NULL default '',
  date timestamp(14) NOT NULL,
  content text NOT NULL,
  PRIMARY KEY (id)
) TYPE=MyISAM;

CREATE TABLE ets_source (
  id varchar(100) NOT NULL default '',
  date timestamp(14) NOT NULL,
  content text NOT NULL,
  PRIMARY KEY (id)
) TYPE=MyISAM;
```

Before using this cache system, you must fill the table `ets_source` with original templates containers.

Here is a Turck-MMCache-based cache system.

According to Turck MMCache site ([http://www.turcksoft.com/en/e\\_mmc.htm](http://www.turcksoft.com/en/e_mmc.htm)):

"Turck MMCache is a free open source PHP accelerator, optimizer, encoder and dynamic content cache for PHP."

"[Turck MMCache] has been tested under PHP 4.1.0-4.3.2 under Linux and Windows with Apache 1.3 and 2.0"

To use MMCache, you must install and configure it as explained on its site.

```
// read a compiled container and check if it's not obsolete
function ets_cache_read_handler($id)
{
    $content = FALSE;
    if (mmcache_get("T_$id") > @filetime("tpl/$id.html")) {
        $content = mmcache_get("C_$id");
    }
    return $content;
}

// write a compiled container
function ets_cache_write_handler($id, $content)
{
    mmcache_put("T_$id", time());
    mmcache_put("C_$id", $content);
}

// read a source container
function ets_source_read_handler($id)
{
    $content = FALSE;
    if ($handle = @fopen("tpl/$id.html", 'rb')) {
        $size = @filesize("tpl/$id.html");
        $content = @fread($handle, $size);
        fclose($handle);
    }
    return $content;
}
```

In this example, source templates containers are stored in the directory `tpl` and compiled ones in memory.



## 31. Miscellaneous

### Simplified closing tags

Every closing tag can be simplified with `{/}`:

`{/mask}` is equivalent to `{/}`,  
`{/set}` is equivalent to `{/}`,  
`{/when}` is equivalent to `{/}`,  
and so on.

### External presentation logic

In some situations, the presentation logic can be stored outside templates containers. In this case, ETS provides several ways to exploit it:

- you can use variable template names in alternate tag, constant and call elements,
- you can use variable container names in include, insert and eval elements.

This example shows a way to use the template name stored in the variable `tpl1` to present the level data:

```
{data:{tpl1}}
```

This example shows a way to use a directory and a file defined in the data tree to include a file:

```
{include: {/directory} . '/' . {filename} }
```

### Functions `mis` and `set`

To check if data are missing or not, you can use two functions provided by ETS which mimic the behaviour of missing and set elements: `mis(value)` and `set(value)`.

These two examples are equivalent:

```
{mis:var1}{mis:var2}var1 and var2 are missing{/mis}{/mis}
```

```
{if: mis({var1}) && mis({var2})}var1 and var2 are missing{/if}
```

These functions are useful to check the state of two or more variables with the `||` operator of PHP. This example is harder to define with only `mis` elements:

```
{if: mis({var1}) or mis({var2})}var1 or var2 is missing{/if}
```

### Escapes

For a value of `set-value`, `mis-value` or `when-value`:

- in a no-quote string, use `\}` to escape `}`
- in a single-quoted string, use `\'` to escape `'`
- in a double-quoted string, use `\"` to escape `"`

In the evaluated part of any element, use `\}` to escape `}`.

# Version history

## **Version 3.06a (2004-05-26)**

Fix: cache system was broken

## **Version 3.06 (2004-05-14)**

Introduce sprints and printts which accept template content as parameters (thanks to Axel Tietje)  
Extend sprint and print to accept handler names as parameter (used by sprints and printts)  
Spaces, tabs and ends of line in data are not affected by reduce directives any longer.

## **Version 3.05c (2004-03-05)**

Fix: directive reduce worked the same with spaces or all

## **Version 3.05b (2003-12-12)**

Spaces, tabs and ends of line are not affected by reduce directive in cdata sections.

## **Version 3.05a (2003-08-08)**

Fixes and clean up

## **Version 3.05 (2003-07-23)**

Accept empty containers (0 byte or without template)  
Accept null containers (which can be several)  
Check PHP error level before displaying an error  
Go on parsing when a notice or a warning is found  
Accept empty string as container name  
Introduce safe element which works like eval but with restrictions (basically, no PHP code is evaluated in templates)

## **Version 3.04a (2003-04-25)**

Fix a tiny bug (display of a notice message)

## **Version 3.04 (2003-03-31)**

Modify alternate tag, const and call elements to accept string expressions in template name  
Modify include, insert, eval to accept string expressions in container name  
fix a warning message for stored reduce directive  
introduce eval element which works like include but for mask parts  
fix text stored in choose and call elements when using simplified closing tag

## **Version 3.03 (2003-03-12)**

introduce complete but optional cache of parsed templates with user-level handler functions  
introduce user-level handler function used to delegate reads of templates  
introduce `_start`, `_next`, `_previous`, `_end` and `_parent` (`../id` is the same than `_parent/id`)  
fix behaviour of parent element of a path (`..`)  
introduce `mis(variable)` and `set(variable)` which works like respectively missing and set element and can be used in if elements

## **Version 3.02a (2003-03-03)**

fix: blank page when no reduce directive

### **Version 3.02 (2003-02-28)**

- update documentation
- introduce `{insert:file_name}` which places a file content but doesn't parse it
- introduce `{include:file_name}` which adds outer templates of included file
- fix colon character in value
- introduce `{repeat:n}` which repeats its content n times
- introduce simplified closing tag `{/}`
- fix line number of error messages when there's more than 1 file
- error message when more than 1 use of reduce element
- error message when a file is missing
- more strict syntax when parsing templates (so more error messages)
- great cleaning of code

### **Version 3.01 (2003-02-19)**

- Introduce access to data of the parent template with `..` in path
- Introduce management of missing outer templates with alternate tags to avoid calls to a template with the same name (i.e. `{variable:template}` places the value of variable if template doesn't exist)
- Suppress infinite loops of const elements detection because it's not conclusive in some contexts.

### **Version 3.00 (2003-02-01)**

- Introduce `{call:foo} ... {/call}` which works like `{const:foo}` with arguments
- introduce `{choose} ... {/choose}` which works like `if/elseif/.../else` (cf. doc)
- introduce `{choose:foo} ... {/choose}` which works like `switch/case/default` (cf. doc)
- introduce `{if: test } ... {/if}` where test may contain tags (with simple, relative or absolute paths)
- enhance debugging information on parsing error
- introduce cdata blocks `{# ... #}` to avoid their parsing (can be nested too)
- accept now nested comments
- `{var:foo}` and `{var:foo:bar}` don't work any more, use `{set:foo}` and `{set:foo:bar}` instead
- `{val:foo}` doesn't work any more, use `{foo}` instead
- remove the ability to propagate the value of a variable (scope) (it's a construct limit) but introduce access to a specific element from the root (ex. `{//foo/bar}`)
- accept now outer template from variable (depending on the type of the variable)
- introduce access to a specific element of an array (ex. `{set:foo/bar[3]/foobar}`) then introduce system index `[_first]` and `[_last]`
- introduce call to an outer template with a different name than the corresponding data `{variable:template}`
- really detect infinite loop in circular const
- MASK and STRING properties of a data level doesn't work any more (this concept doesn't allow several inner templates corresponding to the same level in the datatree and puts presentation logic in the data tree)
- introduce reduce directive but remove reduce parameter of `printrt` (reduce behavior belongs to presentation logic)
- introduce new system variable `_middle`, `_not_first`, `not_middle`, `not_last`
- accept now non printable characters (spaces, tabs, carriage returns...) before `}` of every tag
- accept now single or double quoted strings in the value part of elements like `{set:foo:...}` `{mis:foo:...}` and `{when:foo}`
- accept now relative and absolute path (every data can be accessed from everywhere)
- accept now multiple definition of inner templates matching with the same level in the datatree
- Closing tags are simplified (`{/mask}` instead of `{/mask:main}`)
- ETS becomes "template driven" instead of "data driven" (ETS was completely rewritten)

### **Version 2.04a (2002-11-28)**

fix: manage values which contain preg special character '/'

### **Version 2.04 (2002-11-25)**

introduce mask for specific missing values of a variable  
introduce mask for specific values of a variable  
introduce scope of variables  
introduce new system tags for arrays : \_first and \_last  
accept now NULL as data tree  
introduce new system tag for arrays : \_key  
change license (LGPL instead of GPL)  
fix: when you reuse the same data tree with several templates, ETS kept old masks  
introduce size reducing parameter  
accept now variables in constant masks  
reintroduce nested constant masks  
introduce the prefix 'const:' for constant tags then remove verbose flag for all functions  
clear out left tags because they correspond to missing variables  
clear out missing level tags when the level is not missing  
accept now constant mask nested in variable masks  
accept now nested variable masks

### **Version 2.03 (private release only)**

introduce system tags for arrays : \_index, \_odd, \_even and \_rank  
php stuff at level step

### **Version 2.02 (2002-06-17)**

introduce mask of missing variable {mis:varname} ... {/mis:varname}  
introduce php mask {php} ... {/php}  
introduce comment {\* ... \*}  
store unfound masks (faster)  
introduce mask of variable {var:varname} ... {/var:varname}  
use single quote instead of double in preg expressions  
the second parameter of printt can now be an array instead of a list in a string  
change conditions to be format like "constant-operator-variable" (e.g. if (FALSE === \$test))  
prevent infinite loops in constant masks process  
modify error handler to produce errors according to PHP error settings  
modify error handler output to be HTML'd

### **Version 2.01 (private release only)**

add error handler  
cache of masks becomes a global variable instead of a static variable of the function \_ets\_mask

### **Version 2.00 (2002-06-04)**

masks and variables names follow the same rules than PHP variables  
constant masks  
use implicit masks assuming they had the same name than the corresponding object or array  
main mask name is 'main'  
sprintt now has only two parameters: the data tree and an optional comma separated files list  
tags can't contain spaces  
give up array notation, give up file masks  
blocks become masks

**Version 1.28 (private release only)**

rearrange examples (cosmetic)  
modify example templates to use new block tags  
rearrange documentation  
modify block tags because olders could produce non-well-formed templates (i.e, <ets:foo> becomes {block:foo})  
complete header printt function

**Version 1.27 (2002-05-17)**

modify header  
modify prefix of private functions  
fix detection of nested blocks  
fix unused placeholder deletion  
add test.php and test.html in package

**Version 1.26 (2002-05-01)**

authorize non-printable characters before the closing character (>) of ets tags

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