fhem floorplan

Installation Guide

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Note:

fhem.cfg –lines have grey background.

floorplanstyle.css –lines have blue background.

If you enjoy this functionality, please mail a screenshot of your finished floorplan to the author:

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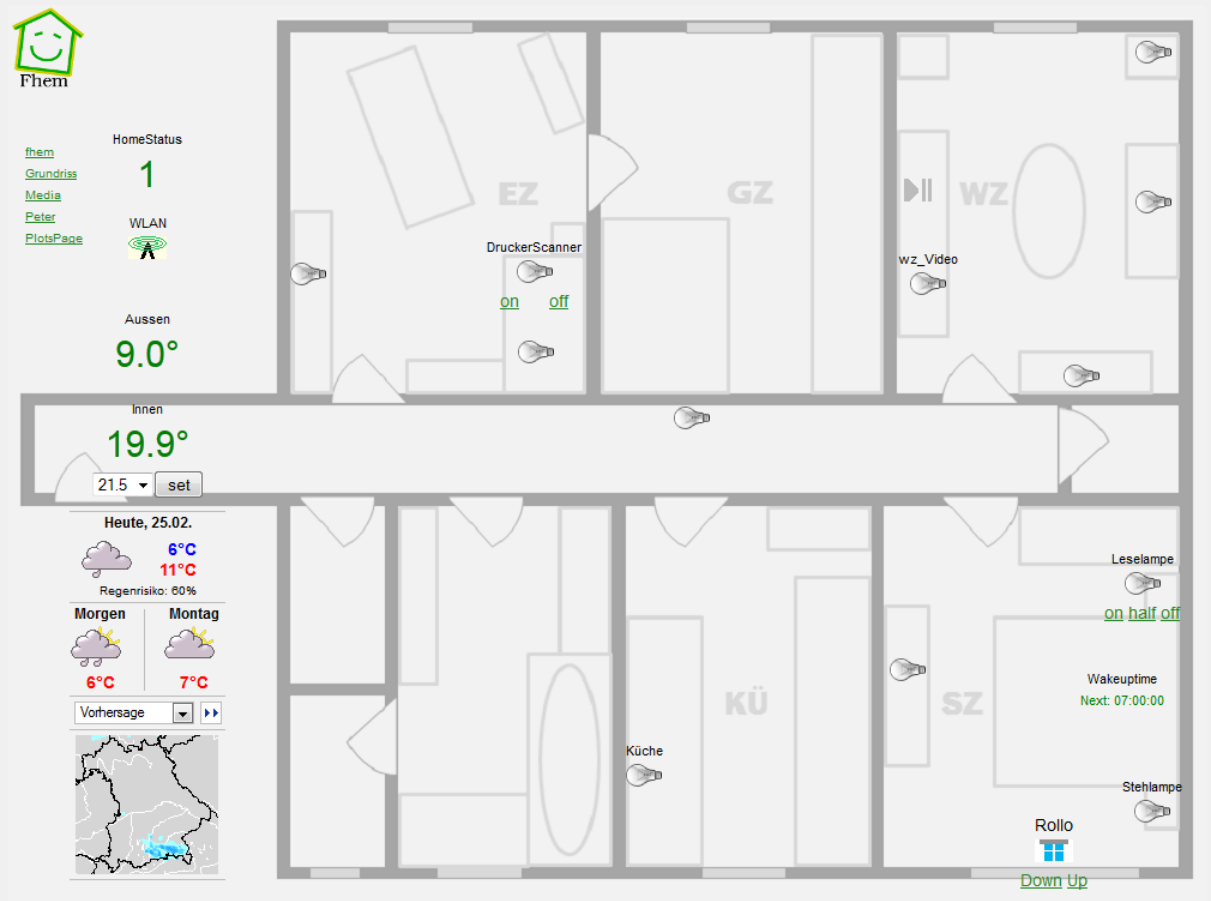
Step-by-step set-up guide

This is a step-by-step guideline how to set up a floorplan. An example implementation shows the features.

The example given sets up a floorplan called Grundriss, which can e.g. look like this:



Preparations

Define a floorplan

To start, define a new floorplan:

```
define <name> FLOORPLAN
```

Example:

```
define Grundriss FLOORPLAN
```

You can create several floorplans, e.g. House, Basement, Groundfloor, FirstFloor, Roof.
Or create a customized floorplan per person in your house.

Open your floorplan for the first time

From your fhem startscreen, navigate to the new menu item ‘Floorplans’, then choose your floorplan.

The floorplan user-attribute

You will only see a blank screen with the fhem-icon and a navigation menu on the left.

However, a userattribute *userattr fp_<name>* has now been added to your list of userattributes:

```
attr global userattr Audio Wohnung floorplan fm_fav fm_groups fm_name fm_order room
structexclude webCmd fp_Grundriss
```

This attribute manages which devices appear where on the screen and how they will be displayed.

Assign background-picture

Store the background-picture to be used for your screen. Save a png picture with theprefix fp_ and the name of your floorplan in your modpath (the directory which holds all the .pm-files, e.g. fhem/FHEM).

fhem\FHEM\fp_Grundriss.png

Please mind the filename is case sensitive. Also mind that only .png can be used.

The background picture in the example screenshots has been created with MS PoeerPoint.

Of course, your background-picture does not need to show a floorplan layout. You might just as well use a photo and then display any measured values on it, e.g. for use in a digital picture frame.

The best picture size depends on where you want to use the floorplan: for iPads, use e.g. 1024*768 (or a little bit below). For browser-usage only, you may want to fill your entire screen, so the picture-size then depends on your screen-resolution. The background-picture used in the example has 1000x750px.

Opening your floorplan in the browser again, you now see the background-picture (maybe you need to hit F5). If the background picture does not display, check the folder to be used.

Arrange display of devices

How devices will look like

Every device will be displayed in a (usually invisible) table. The number of rows depends on the style you choose.

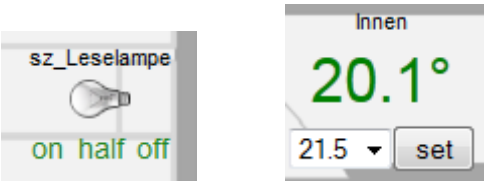
Style 0 – Icon only (devicestate)

This is probably the style used most for this graphical interface. The icon is clickable and will switch your device. Rather than displaying its name, set it to the appropriate spot on your floorplan.

Style 1 – Name and state/icon (devicename and devicestate)

If you wish the name to be displayed with theswitchable icon (or: the state of the device), choose style 1. The description will be the devicename, alias or the name of the device as stated in the fhem-define-statement.

Style 2 – Name, state/icon and commands (devicename, devicestate and devicecommands)



Style 2 will display the name, icon/state and any commands available for the device. Use the attributes webCmd and eventmap to adapt the commandlist to your liking. E.g. for a dimmer, you may want to add a 50% dimlevel.

For devices with a reading ‘measured-temp’ (e.g. FHT), style 2 adds the choice of desired temperature and its set button.

For a longer list of examples, please refer to the chapter “Example devices: Screenshot & definition”.

Arranging devices

To make a device appear on your floorplan, the special “Arrange Mode” exists, which allows to arrange your floorplan conveniently. To activate it, just set the attribute

```
attr <floorplan> fp_arrange 1
```

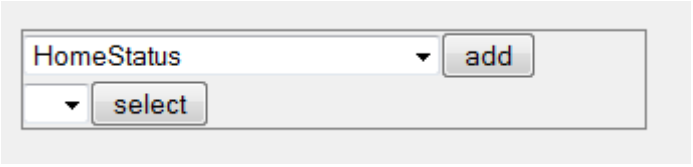
This attribute switches the “Arrange-Mode” on or off. Mind: it is an attribute of the floorplan itself, not of any device displayed on it.

If your floorplan should also have a fhem-commandline-field, set the following attribute:

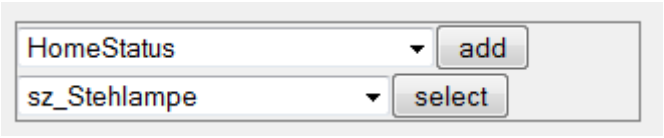
```
attr <floorplan> commandfield 1
```

Now navigate back to your floorplan (fhem main menu, ‘Floorplans’, <yourfloorplan>).

In Arrange-Mode, you now see 2 drop-down-boxes at the bottom of the page:

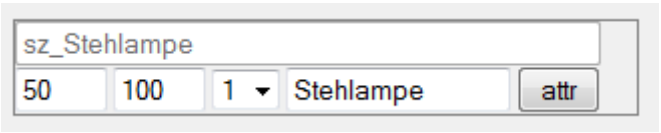


From the upper box, now choose the device you want to add to your floorplan, then click add.



Your device now gets displayed at the default-position 50 pixels from top, 100 pixels from left.

The device is now available in the lower list. Select it there, then click select .



The lower fields are Top, Left, Style and Text (explanation below).

Set the values to your liking. Clicking the attr button will update your configuration with an attribute as shown below:

```
attr <device> fp_<name>  <top>,<left>[,<style>[,<description>]]
```

<top> is the y-position in pixels from the top of your screen.

<left> is the x-position in pixels from the left of your screen.

<style> is one of <blank>, 0, 1, 2. <blank> will be handled like 0. It is therefore optional.

<description> is an alternative description used in your floorplan only. It is optional.

Mind: no blanks are to be set between the parameters or within the Text-field!

Examples are:

```
attr ez_Schreibtisch   fp_Grundriss 285,430
attr HomeStatus        fp_Grundriss 110,75,1
attr ez_DruckerScanner fp_Grundriss 190,405,2,DruckerScanner
```

You can assign the attributes either using the Arrange-Mode, by typing the into the command-line-field, or by changing them in the detail-view of your device. To make a device disappear from the floorplan, navigate to the detail-view of the device and delete the *fp_<name>*-attribute.

Mind: Only once you save your configuration, attributes will be saved to your fhem.cfg.

Here is the list of attributes assigned to achieve the floorplan as shown at the beginning of this document:

```
attr HomeStatus fp_Grundriss 110,75,1
attr ez_Schreibtisch fp_Grundriss 285,430
attr ez_LichtRegal fp_Grundriss 220,230,0
attr ez_DruckerScanner fp_Grundriss 190,405,2,DruckerScanner
attr sz_Leselampe fp_Grundriss 460,900,2
attr sz_Stehlampe fp_Grundriss 650,940,0
attr sz_LichtRegal fp_Grundriss 550,730,0
attr wz_Licht fp_Grundriss 160,940
attr wz_LampeKlein fp_Grundriss 290,880
attr wz_Wandbeleuchtung fp_Grundriss 30,920
```

#**Hint**: a specific WLAN.on.png and WLAN.off.png have been stored in the fhem/FHEM-folder.

```
attr whg_WLAN fp_Grundriss 180,75,1,WLAN
```

#**Hint**: FHT-devices can be displayed easily.

```
attr ez_FHT fp_Grundriss 330,75,2,Innen
attr ku_Downlight fp_Grundriss 620,520
attr ko_LichtKorridor fp_Grundriss 330,560
```

#**Hint**: eventmap has been used to turn the on/off-commands into down/up.

```
attr sz_Rollo fp_Grundriss 665,850,2,Rollo
attr sz_Rollo eventMap on:Down off:Up
```

#**Hint**: A weblink has been defined to switch over to the fhem standard frontend.

```
define Home weblink link http://<ip>:8083/fhem
attr Home fp_Grundriss 50,70
```

#**Hint**: an iframe has been used to display the weatherforecast.

```
define Wetter weblink iframe http://www.wetteronline.de/cgi-bin/hpweather?PLZ=80331
attr Wetter htmlattr width="220" height="330" frameborder="0" marginheight="0"
marginwidth="0"
attr Wetter fp_Grundriss 420,25
```

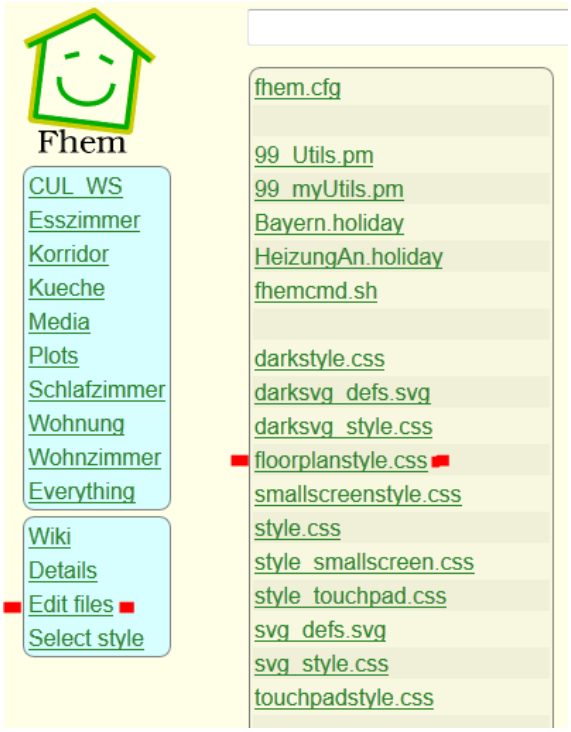
#**Hint**: a dummy-device has been used to store the formatted value of an S300TH-device.

```
attr ez_Aussentemperatur_dummy fp_Grundriss 260,75,2,Aussen
define ez_Aussentemperatur_setzen notify ez_S300TH:T:.* {fhem ("set
ez_Aussentemperatur_dummy ".sprintf("%2.1f", int(2*%EVTPART1)/2)."°");}
attr wakeup fp_Grundriss 560,900,1,Wakeuptime
```

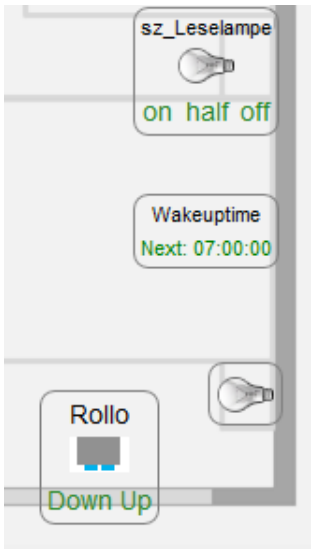
#**Hint**: This is a Play/Pause-button triggering an FS20-IRF to Play/Pause a Player.

```
attr wz_IRmacminiPlayPause fp_Grundriss 150,740
```

Formatting devices - floorplanstyle.css



A special css-file is available for this purpose. From the fhem-webfrontend (usual port), choose the menu Edit Files, then choose floorplanstyle.css.



Hint: For testing purposes, set the border of the device-tables to 1px to ease choice of location:

```
.fp_Grundriss                {border:1px solid gray;}
```

The css-file allows to format groups of devices and/or specific devices.

`class`	holds the devicetype and fp_<name>
`id`	holds the original devicename as stated in the define.

Tip: Keep one browser-window open with your standard fhem webfrontend to update the css-file, have another browser window with your floorplan which you can then refresh to test any attribute changes.

Here's the example used for the floorplan shown at the beginning of this document:

```
body     { background-color: #F0F0F0;
           font-family:Arial, sans-serif;
           font-size:9px; background-image:url(Grundriss.bak.png);
           background-repeat:no-repeat;  }
#menu.fp-list   { position:absolute; top:120px;left:20px; width:140px; font-
size:11px;  }
#logo    { position:absolute; top: 10px; left: 10px;
           width:64px;  height:67px; background-image:url(fhem_smallscreen.png); }
#fp_menu    { position:absolute; top:120px;left:20px; width:140px; font-size:11px;
}
#menu    { position:absolute; top:120px; left:20px; width:140px; }
#menu.floorplan   { position:absolute; top:120px; left:20px; width:140px; font-
size:11px; }
#fpmenu.fp_arrange   { position:absolute; bottom:20px; left:20px; width:310px;
font-size:9px; border:1px solid gray;}
#hdr     { position:absolute; top:10px; left:180px; }
#content { position:absolute; top:50px; left:180px; bottom:10px; right:10px; text-
align:center}

a {  color: #278727; }
img {  border-style: none; }
table { -moz-border-radius:8px; border-radius:8px; }

.fp_Grundriss   {border:0px solid gray;}

.devicename     {font-size: 11px; text-align:center; }
.devicestate    {text-align:center; }
.devicecommands {font-size:14px; text-align:center; }

#sz_Rollo.devicename     {font-size:14px;}
#sz_Rollo.devicecommands {font-size:12px; text-align:center; }
#ez_Aussentemperatur_dummy.devicestate  {color:green; font-size:30px; }
#HomeStatus.devicestate  {color:green; font-size:30px; }
table.dummy              {width:100px; }
table.FHT                {width:100px; }
#wakeup.devicestate      {color:green; font-size:11px; }
#ez_FHT.devicestate      {color:green; font-size:30px; }
#Home.fp_Grundriss       {font-size:14px; width:100px; }
#Home.fp_Media           {font-size:14px; text-align:left; }
#Media                   {font-size:14px; }
#Grundriss               {font-size:14px; text-align:left; }

h2,h3,h4 { color:#52865D; line-height:1.3;
           margin-top:1.5em; font-family:Arial,Sans-serif; }
```

The most important styles are:

.fp_<name>	defines the default format for all outputs.
.devicename	will format all devicenames unless defined otherwise for a specific device
.devicestate	will format all device-states whenever they are displayed as text, not as icon.
.devicecommands	will format all commands displayed underneath the icons/states.

Using different file formats for background-pictures

Instead of using the .png –file as stated at the beginning of this document, you can assign the background-picture using css:

```
body     { background-color: #F0F0F0; font-family:Arial, sans-serif; font-size:9px;
background-image:url(fp_Grundriss.jpg); background-repeat:no-repeat;  }
```

Note: this has not been tested successfully – postponed to a later version. For now, please convert your picture to .png .

Using other icons

Fhem allows using your own icons. There is an easy way to do this:

1. Icons are stored in your modpath, e.g. fhem/FHEM
2. The filename format is
   <devicename>.<state>.[jpg|jpg|gif]
   Example: sz_Rollo.on.jpg, sz_Rollo.off.jpg,
   When these files are not found, fhem uses the standard icons <type>.<<state>.[jpg|jpg|gif] , e.g. FS20.on.jpg , FS20.off.jpg
3. Use any picture. For a consistent overall display, use the same size as existing icons, e.g. by copying FS20.on.jpg to your future icon name, then edit it without changing the size.

Using several floorplans

When using several floorplans, you still have only one css-file available. If you want to format the same device differently on the different floorplans, here is an example. The example is to show how you can address styles differently per floorplan. Usually,all you need to do is to add the class *fp_<name>* to assign a definition differently per floorplan – like for .devicecommands below:

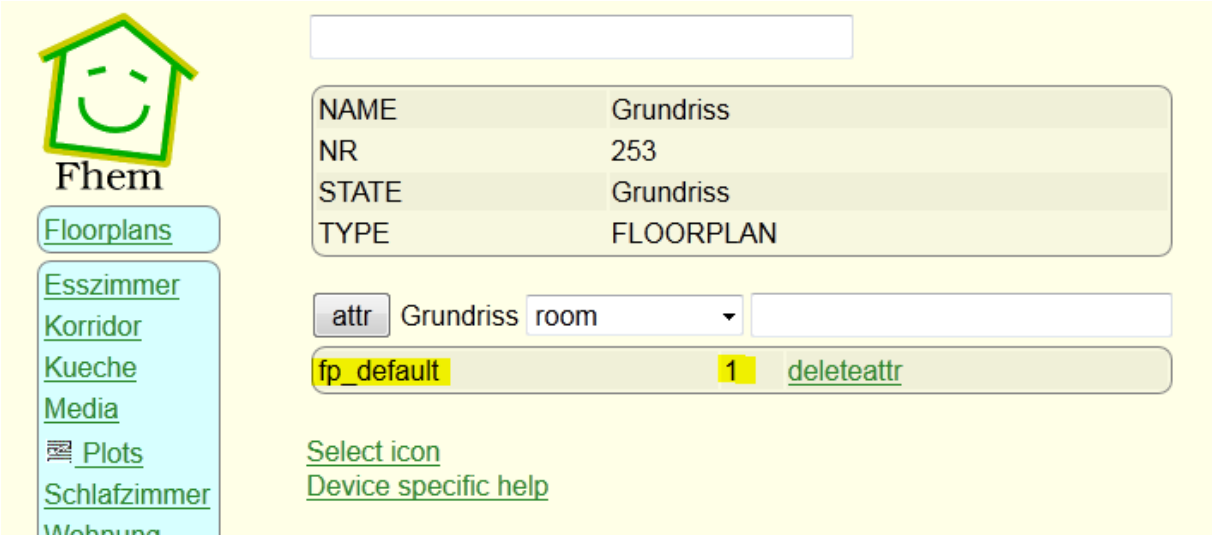
```
body[name~=Grundriss]      { background-color: #F0F0F0;
                             font-family:Arial, sans-serif;
                             font-size:9px;
                             background-image:url(Grundriss.png);
                             background-repeat:no-repeat;  }
#logo    { position:fixed; top:10px; left:20px;
           width:100px;  height:105px; background-image:url(fhem.png); }
#content { position:absolute; top:10px; left:10px; bottom:10px; right:10px; text-
align:center}

a {  color: #278727; }
img {  border-style: none; }
table { -moz-border-radius:8px; border-radius:8px; }


.fp_Grundriss             {border:0px solid gray;}

.devicename.fp_Grundriss      {font-size: 11px; text-align:center; }
.devicestate.fp_Grundriss     {text-align:center; }
.devicecommands.fp_Grundriss {font-size:14px; text-align:center; }
.devicecommands.fp_FirstFloor {font-size:8px; color:grey; text-align:center; }

#sz_Rollo.devicename.fp_Grundriss      {font-size:14px;}
#sz_Rollo.devicecommands.fp_Grundriss {font-size:12px; text-align:center; }
#ez_Aussentemperatur_dummy.devicestate.fp_Grundriss  {color:green; font-size:30px;
}
#HomeStatus.devicestate.fp_Grundriss  {color:green; font-size:30px; }
table.dummy.fp_Grundriss              {width:100px; }
table.FHT.fp_Grundriss                {width:100px; }
#wakeup.devicestate.fp_Grundriss      {color:green; font-size:11px; }
#ez_FHT.devicestate.fp_Grundriss      {color:green; font-size:30px; }
#Home                                 {font-size:14px; width:100px; }
```

Default floorplan

To ski the choice of floorplans when clicking the 'Floorplans' link on the fhem page, assign the fp_default-attribute to one of your floorplans. Doing so will skip the initial choice of floorplans and bring you ti the default floorplan directly. In that floorplan, you can switch to another floorplan using the menu on the left.

```
attr <floorplan-name> fp_default 1
```

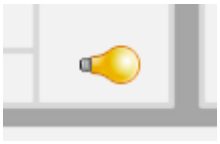
You can set this attribute conveniently in the details-view of your floorplan:



Example devices: Screenshot & definition

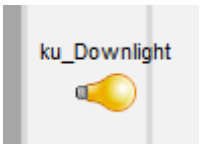
Here are some examples with how they look on the screen, their attribute and their css-format.

Icon only



```
define ez_LichtRegal FS20 6969 01
attr ez_LichtRegal fp_Grundriss 220,230,0
attr ez_LichtRegal model fs20st
attr ez_LichtRegal room Esszimmer
```

Description and icon




```
define ku_Downlight FS20 696e 00
attr ku_Downlight fp_Grundriss 620,520,1
attr ku_Downlight model fs20st
attr ku_Downlight room Kueche
```

Description, icon and commands

```
define sz_Leselampe FS20 696b 00
attr sz_Leselampe fp_Grundriss 460,900,2,Leselampe
attr sz_Leselampe webCmd on:dim50%:off
attr sz_Leselampe eventMap on:on dim50%:half off:off
attr sz_Leselampe model fs20di
attr sz_Leselampe room Schlafzimmer
```

Description and state

```
define HomeStatus dummy
attr HomeStatus fp_Grundriss 110,75,1
```

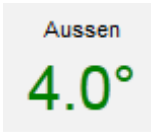
```
#HomeStatus.devicestate  {color:green; font-size:30px; }
```

FHT-temperature

```
define ez_FHT FHT 5151
attr ez_FHT fp_Grundriss 330,75,1,Innen
attr ez_FHT retrycount 3
attr ez_FHT room Wohnung,Esszimmer
```

```
#ez_FHT.devicestate      {color:green; font-size:30px; }
```

S300TH-temperature



S300TH-readings can be displayed directly, however they will appear in their usul T: x H:y –format. To format the display nicely, a dummy-devie can be used.

This is the S300TH-device. It does not display on the floorplan.

```
define ez_Aussensensor CUL_WS 1
attr ez_Aussensensor model S300
attr ez_Aussensensor room Wohnung,Esszimmer
```

S300TH-dummy – this will be displayed on the screen::

```
define ez_Aussentemperatur_dummy dummy
attr ez_Aussentemperatur_dummy fp_Grundriss 260,75,2,Aussen
attr ez_Aussentemperatur_dummy room Esszimmer
```

Here's a notify that will use the S300TH-reading and write it to the dummy in formatted shape:

```
define ez_Aussentemperatur_setzen notify ez_Aussensensor:T:.* {fhem ("set
ez_Aussentemperatur_dummy ".sprintf("%2.1f", int(2*%EVTPART1)/2)."°"); }
```

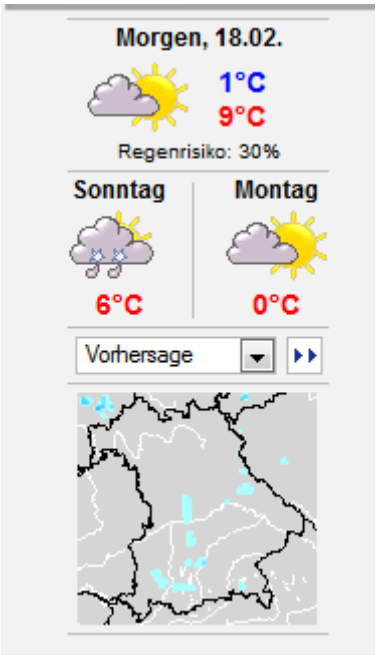
```
#ez_Aussentemperatur_dummy.devicestate  {color:green; font-size:30px; }
```

Weblinks

```
define Home weblink link http://fritz.box:8083/fhem
attr Home fp_Grundriss 50,75,0,Home
```

```
#Home                    {font-size:14px; width:100px; }
```

Including iframes, e.g. weather preview




```
define Wetter weblink iframe http://www.wetteronline.de/cgi-bin/hpweather?PLZ=80331
attr Wetter fp_Grundriss 420,25
attr Wetter htmlattr width="220" height="330" frameborder="0" marginheight="0" marginwidth="0"
attr Wetter room Plots
```