TYP03 CMS 8.6 - What's New

Summary of the new features, changes and improvements

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TYP03 CMS 8.6 - What's New

Chapter Overview

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Introduction The Facts



TYP03 CMS 8.6 - The Facts

Release date: 14 February 2017

Release type: Sprint Release

■ Slogan: "Polishing"





System Requirements

■ PHP: version 7

■ MySQL: version 5.5 to 5.7

■ Disk space: min 200 MB

■ PHP settings:

■ memory_limit >= 128M

max_execution_time >= 240s

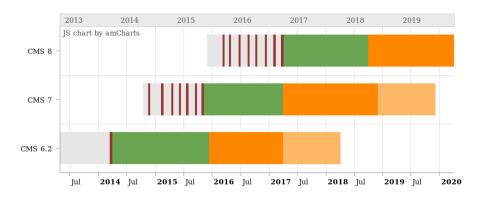
max_input_vars >= 1500

lacktriangle compilation option --disable-ipv6 must \underline{not} be used

The backend requires Microsoft Internet Explorer 11 or later, Microsoft Edge, Google Chrome, Firefox, Safari or any other modern, compatible browser



Development and Release Timeline





TYP03 CMS Roadmap

Release dates and their primary focus:

```
22/Mar/2016
■ v8.0
                      Adding last minute things
■ v8.1 03/May/2016
                      Cloud Integration
        05/Jul/2016
■ v8.2
                      Doctrine Prerequisites
         30/Aug/2016
                      Rich Text Editor
■ v8.3
         18/0ct/2016
                      Doctrine Migration + Upgrades
■ v8.4
         20/Dec/2016
■ v8.5
                       New RTE + Integrator Support
        14/Feb/2017
■ v8.6
                      Polishing
        04/Apr/2017
■ v8.7
                      LTS Preparation
```

```
https://typo3.org/typo3-cms/roadmap/
https://typo3.org/news/article/kicking-off-typo3-v8-development/
```



Installation

 Official classic installation procedure under Linux/Mac OS X (DocumentRoot for example /var/www/site/htdocs):

```
$ cd /var/www/site
$ wget --content-disposition get.typo3.org/8.6
$ tar xzf typo3_src-8.6.0.tar.gz
$ cd htdocs
$ ln -s ../typo3_src-8.6.0 typo3_src
$ ln -s typo3_src/index.php
$ ln -s typo3_src/typo3
$ touch FIRST_INSTALL
```

- Symbolic links under Microsoft Windows:
 - Use junction under Windows XP/2000
 - Use mklink under Windows Vista and Windows 7



Upgrade to TYP03 CMS 8.x

- Upgrades only possible from TYPO3 CMS 7.6 LTS
- TYPO3 CMS < 7.6 LTS should be updated to TYPO3 CMS 7.6 LTS first
- Upgrade instructions:

```
http://wiki.typo3.org/Upgrade#Upgrading_to_8.6
```

Official TYP03 guide "TYP03 Installation and Upgrading":

```
http://docs.typo3.org/typo3cms/InstallationGuide
```

- General approach:
 - Check minimum system requirements (PHP, MySQL, etc.)
 - Review deprecation_*.log in old TYP03 instance
 - Update all extensions to the latest version
 - Deploy new sources and run Install Tool -> Upgrade Wizard
 - Review startup module for backend users (optionally)



PHP Version 7

- PHP 7.0 is the minimum requirement for TYPO3 CMS 8.x
- TYP03 will support subsequent PHP 7 releases as they come out
- This version raise gives a significant performance boost to the overall system
- Not only backend editors will notice a more fluent interface, but the new all-time record for a full cached page call in the frontend is below 7 milliseconds now, which is approximately 40% faster compared to running the very same website with PHP version 5.5
- We also started using new features from this PHP version, for instance the cryptographically secure pseudo-random generators are in active use already



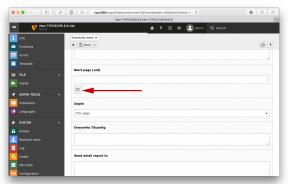
Chapter 1:

Backend User Interface



Scheduler Page Browser

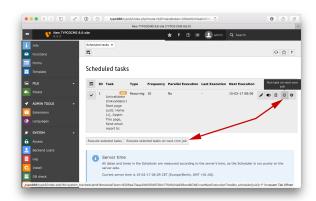
To improve the usability of the **EXT:linkvalidator** scheduler task, the page browser was added to select the start page.





Run Manually Executed Tasks on Next Cron-run

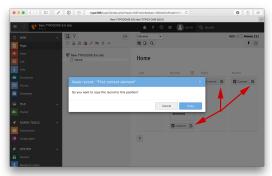
There is a new action icon to mark a task to be run by cron. Also a new button "Execute selected tasks on next cron job" has been added to mark all selected actions to be run by next cron job.





Paste Icons and Modal

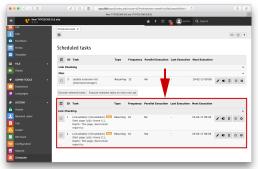
As soon as the normal clipboard contains an item, a single paste icon becomes available in the page module. When the user clicks on the icon, a modal pops up to have the user confirm the action.





Folding of Scheduler Task Groups

When task groups are used, the tasks are displayed grouped in the list of tasks. Clicking on the row with the group title hides or shows the tasks of the group now.





Page Module Notice "Content is also shown on"

When page content is inherited from a different page via "Show content from page", a notice is displayed on the page that is pulling in content to a different page.

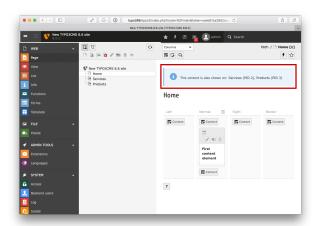




Image Manipulation - Multiple Cropping Variants

The Image-Manipulation tool is now capable of handling multiple crop variants (if configured). Users can also select a focus area, which is always inside the crop area and mark the area in the image which must be visible

for the image to transport its meaning. To give editors a hint which area of the image is used by other DOM-Elements like headlines, when selecting a crop area, it is possible to define multiple so called cover areas.





Delete Similar Errors from sys_log

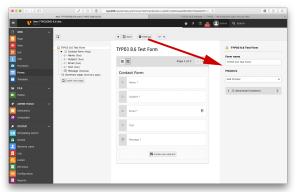
The log module of TYPO3 now shows a button to delete multiple errors at once based on the details field of the sys_log table. This comes in handy when you fixed an error that spammed the log before.





EXT:form: add form settings button to module header

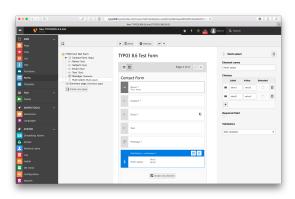
A new button has been added to the module header of the form editor. Clicking on this button shows the form settings within the inspector.





EXT:form: Add multiselect inspector editor

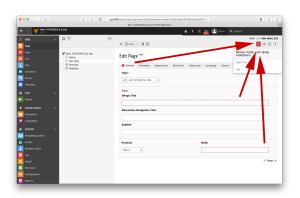
A new inspector editor, i.e. a new field type of the form editor, has been added. If applied, multi-select fields can be added to the inspector. A multi-select field allows the selection of multiple meta properties for a field and stores them in the defined property path.





Show list of failed input elements in FormEngine

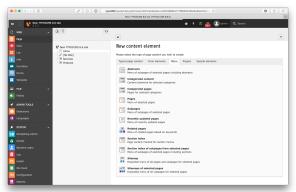
When validating input fields of the FormEngine fails, a button is now rendered into the button bar in the module document header. Clicking the button renders a list of all input elements whose validation failed. Clicking onto a field in that list automatically focuses the field in the form.





Dedicated content elements for menus

For better maintainability the currently existing content element menu has been split into dedicated content elements.





TSconfig & TypoScript

Chapter 2: TSconfig & TypoScript



TSconfig & TypoScript

Section Frame for CSS Styled Content replaced with Frame Class

- The functionality provided by Section Frame has been streamlined with Fluid Styled Content and is now available as Frame Class.
- For this, the TypoScript keys now use the right part from the CSS class csc-frame- instead of numbers.

■ Before:

```
tt_content.stdWrap.innerWrap.cObject.key.field = section_frame
tt_content.stdWrap.innerWrap.cObject.5 =< tt_content.stdWrap.innerWrap.cObject.default
tt_content.stdWrap.innerWrap.cObject.5.20.10.value = csc-frame csc-frame-ruler-before
```

After:

```
tt_content.stdWrap.innerWrap.cObject.key.field = frame_class
tt_content.stdWrap.innerWrap.cObject.ruler-before =< tt_content.stdWrap.innerWrap.cObject.default
tt content.stdWrap.innerWrap.cObject.ruler-before.20.10.value = csc-frame csc-frame-ruler-before
```



Chapter 3:

In-Depth Changes



Page Browser for scheduler tasks

- Scheduler tasks that need a page uid can now add a button for the page browser popup.
- In the ValidatorTaskAdditionalFieldProvider two additional fields have to be added.
- If the additional field browser is set to page then the SchedulerModuleController adds a button for calling the page browser popup to the field.

```
'browser' => 'page',
```

■ The pageTitle contains the title of the page that is shown next to the browse button.

```
'pageTitle' => $pageTitle,
```



Synchronized field values in localized records (1/2)

- The localized record overlay behaviour has been changed to make localization-rows standalone.
- Previously, if fields in TCA columns were set to 110n_mode exclude or mergeIfNotBlank, the localized record overlay did not contain values, and those values were "pulled up" from the underlying default language records.



Synchronized field values in localized records (2/2)

This has been changed, the DataHandler now copies those values over to the localized record and synchronizes them if the default language record is changed.

```
'columns' => [
...
'header' => [
  'label' => 'My header',
  'config' => [
    'type' => 'input',
    'behaviour' => [
        'allowLanguageSynchronization' => true,
      ],
    ],
   ],
],
],
```



Image Manipulation Tool (1/6)

- The imageManipulation TCA type is now capable of handling multiple crop variants if configured.
- It is also possible to define an initial crop area. If no initial crop area is defined, the default selected crop area will cover the complete image.
- Crop areas are defined relatively with floating point numbers. The coordinates and sizes must be specified for that.



Image Manipulation Tool (2/6)

The following example configures two crop variants, one with the id "mobile", one with the id "desktop". The array key defines the id, which will be used when rendering an image with the image view helper.

```
'config' => [
  'type' => 'imageManipulation',
  'cropVariants' => [
  'mobile' => [
      'title' => 'Mobile',
      'allowedAspectRatios' => [
      'title' => '4:3' => [
      'title' => '4:3',
      'value' => 4 / 3
    ],
    ...
  ],
  'desktop' => [
    ...
  ],
  ],
  ],
  ],
  ],
]
```



Image Manipulation Tool (3/6)

The below example has an initial crop area in the size of the previous image cropper provided by default.



Image Manipulation Tool (4/6)

- Users can also select a focus area, when configured.
- The focus area is always inside the crop area and mark the area in the image which must be visible for the image to transport its meaning.

```
'config' => [
  'type' => 'imageManipulation',
  'cropVariants' => [
  'mobile' => [
    'title' =>
    'LLL:EXT:ext_key/Resources/Private/Language/locallang.xlf:imageManipulation.mobile',
    'focusArea' => [
        'x' => 1 / 3,
        'y' => 1 / 3,
        'width' => 1 / 3,
        'height' => 1 / 3,
        'height' => 1 / 3,
        ],
      ],
    ],
    ],
    ],
],
```



Image Manipulation Tool (5/6)

- Very often images are used in a context, where there are overlayed with other DOM elements like a headline.
- To give editors a hint which area of the image is affected, when selecting a crop area, it is possible to define multiple cover areas.
- These areas are shown inside the crop area. The focus area cannot intersect with any of the cover areas.



Image Manipulation Tool (6/6)

■ To render crop variants, the variants can be specified as argument to the image view helper:

```
<f:image image="{data.image}" cropVariant="mobile" width="800" > </f:image>
```



Default Content Element Changed for Fluid Styled Content

- The default content element has been streamlined with CSS Styled Content and has been changed to "Text"
- To restore the configuration you need to set the default content element manually to your preferred choice. You can do this by simply overriding the configuration again in your Configuration/TCA/Overrides/tt_content.php file.

```
$GLOBALS['TCA']['tt_content']['columns']['CType']['config']['default'] = 'textmedia';
$GLOBALS['TCA']['tt_content']['columns']['CType']['config']['default'] = 'header';
```



TCA Changes (1/2)

- The TCA on field level has been changed.
- Nearly all column types are affected.
- In general, the sub-section wizards is gone and replaced by a combination of new renderType and a new set of configuration options.
- Wizards are now divided into three different kinds: fieldInformation, fieldControl and fieldWizard.



TCA Changes (2/2)

Example:

```
'fieldControl' => [
  'editPopup' => [
    'disabled' => false,
],
  'addRecord' => [
    'disabled' => false,
    'options' => [
        'setValue' => 'prepend',
],
],
'listModule' => [
    'disabled' => false,
],
],
```

■ You find further details at docs.typo3.org



Introduce Session Storage Framework

- A new session storage framework has been introduced
- The goal of this framework is to create interoperability between different session storages (called "backends") like database, file storage, Redis, etc.
- The following session backends are available by default:
 - \TYPO3\CMS\Core\Session\Backend\DatabaseSessionBackend
 - \TYPO3\CMS\Core\Session\Backend\RedisSessionBackend



CLI Support for T3D Imports

- EXT: impexp now allows to import data files (T3D or XML) via the command line interface through a Symfony Command.
- Usage:
 - ./typo3/sysext/core/bin/typo3 impexp:import [<options>] <file>
 <pageId>
- Options:
 - --updateRecords: Force updating existing records
 - --ignorePid: Don't correct page ids of updated records
 - --enableLog: log all database action



Implement Hook in typolink for Modification of Page Params

- A new hook has been implemented in ContentObjectRenderer::typoLink for links to pages. With this hook you can modify the link configuration, for example enriching it with additional parameters or meta data from the page row.
- You can now register a hook via:

```
$GLOBALS['TYPO3_CONF_VARS']['SC_OPTIONS']['typolinkProcessing']
['typolinkModifyParameterForPageLinks'][] = \Your\Namespace\Hooks\MyHook::class;
```

Usage:

```
public function modifyPageLinkConfiguration(
    array $linkConfiguration, array $linkDetails, array $pageRow) : array
{
    $linkConfiguration['additionalParams'] .= $pageRow['myAdditionalParamsField'];
    return $linkConfiguration;
}
```



Hook to Add Custom TypoScript Templates (1/2)

- A new hook in TemplateService allows to add or modify existing TypoScript templates.
- You can now register a hook via the following code in the extensions ext_localconf.php file:

```
$GLOBALS['TYP03_CONF_VARS']['SC_OPTIONS']['Core/TypoScript/TemplateService']
['runThroughTemplatesPostProcessing']
```

EXT:my_site/Classes/Hooks/TypoScriptHook.php (1/2)

```
namespace MyVendor\MySite\Hooks;
class TypoScriptHook
{
    /**
    * Hooks into TemplateService after
    * @param array $parameters
    * @param \TYPO3\CMS\Core\TypoScript\TemplateService $parentObject
    * @return void
    */
```



Hook to Add Custom TypoScript Templates (2/2)

■ EXT:my_site/Classes/Hooks/TypoScriptHook.php (2/2)

```
public function addCustomTypoScriptTemplate($parameters, $parentObject)
 // Disable the inclusion of default TypoScript set via TYPO3 CONF VARS
 $parameters['isDefaultTypoScriptAdded'] = true:
 // Disable the inclusion of ext_typoscript_setup.txt of all extensions
  $parameters['processExtensionStatics'] = false:
 // No template was found in rootline so far, so a custom "fake" sys_template record is added
  if ($parentObject->outermostRootlineIndexWithTemplate === 0) {
    $row = [
      'uid' => 'my_site_template',
      'config' =>
    '<INCLUDE TYPOSCRIPT: source="FILE:EXT:mv site/Configuration/TypoScript/site setup.t3s">'.
      'root' => 1.
      'pid' => 0
    $parentObject->processTemplate($row, 'sys_' . $row['uid'], 0, 'sys_' . $row['uid']);
}
```



Plugin Preview with Fluid

- The page TSconfig to render a preview of a single content element in the Backend has been improved by allowing the rendering of plugins via Fluid as well
- All properties of the tt_content record are available in the template directly (e.g. UID via {uid})
- Any data of the flexform field pi_flexform is available with the property pi_flexform_transformed as an array.

```
mod.web_layout.tt_content.preview.list.simpleblog_bloglisting =
    EXT:simpleblog/Resources/Private/Templates/Preview/SimpleblogPlugin.html
```



Template Paths in BackendTemplateView

BackendTemplateView now allows overwriting of template paths to add your own locations for templates, partials and layouts in a BackendTemplateView based backend module.

```
$frameworkConfiguration =
$this->configurationManager->getConfiguration(
    ConfigurationManagerInterface::CONFIGURATION_TYPE_FRAMEWORK
);
$viewConfiguration = [
'view' => [
'templateRootPaths' => ['EXT:myext/Resources/Private/Backend/Templates'],
    'partialRootPaths' => ['EXT:myext/Resources/Private/Backend/Partials'],
    'layoutRootPaths' => ['EXT:myext/Resources/Private/Backend/Layouts'],
    ],
};
$this->configurationManager->setConfiguration(
    array_merge($frameworkConfiguration, $viewConfiguration)
);
```



Miscellaneous

- The TCA config setting maxitems for type=select and type=group fields is now an optional setting that defaults to a high value (99999) instead of 1 as before.
- Accessing TYP03 functionality from the command line has been simplified. Single commands no longer require single users in the database, instead all cli command use the username _cli_. This user is created on demand by the framework if it does not exist at the first command line call. The _cli_ user has admin rights and no longer needs specific access rights assigned to perform specific tasks like manipulating database content using the DataHandler.



Chapter 4:

Extbase & Fluid



Widget Identifier Extended

- The parameter customWidgetId has been introduced for fluid widgets. This string is used in the widget identifier in addition to the nextWidgetNumber.
- The widget identifier is used to create the GET parameter names.
- A good value for the customWidgetId is contentObjectData.uid to ensure no collisions happen.
- Allows to use the same fluid widget more than once on one page in different content elements.

```
<f:widget.paginate customWidgetId="{contentObjectData.uid}" ...> </f:widget.paginate>
```



FlashMessageViewHelper

- The FlashMessageViewHelper has been refactored and no longer inherits from the TagBasedViewHelper
- Remove the tag specific attributes and style the default output. If you need custom output use the possibility to render FlashMessages yourself, for example:



Removal of Fluid Styled Content Menu ViewHelpers (1/3)

- Fetching data directly in the view is not recommended and the temporary solution of menu ViewHelpers has been replaced by its successor, the menu processor that is based on HMENU.
- Menu ViewHelpers have been moved to the compatibility7 extension, and are replaced in the core menu content elements.



Removal of Fluid Styled Content Menu ViewHelpers (2/3)

■ Before:



Removal of Fluid Styled Content Menu ViewHelpers (3/3)

After:



New Fluid ViewHelper f:variable

- A new ViewHelper f:variable has been added in Fluid 2.2.0, which is now minimum required dependency for TYPO3 CMS
- The ViewHelper allows variables to be assigned in the template:

```
<f:variable name="myvariable">My variable's content</f:variable>
<f:variable name="myvariable" value="My variable's content"></f:variable>
{f:variable(name: 'myvariable', value: 'My variable\'s content')}
{myoriginalvariable -> f:variable(name: 'mynewvariable')}
```



New Default Layout for Fluid Styled Content (1/2)

- Previously, there have been three layouts you could choose from when you were defining your own custom content elements or overriding an existing template.
- To provide a better maintainability and ease of use of overrides we are reducing these to a single layout that is named Default with all sections optional and fallbacks if the section is not set. Also we are introducing the "DropIn" concept.
- The Default layout consists of five predefined sections that can be utilized to shape the output for your content rendering. In most cases you will not have to care about other section than Main. The sections will be rendered in that exact ordering: Before, Header, Main, Footer, After



New Default Layout for Fluid Styled Content (2/2)

- The sections Before and After are so called "DropIn" sections
- DropIns have been introduced to be able to place additional functionality to all content elements without overriding layouts or templates
- DropIns are basically placeholders/empty partials that are meant to be overridden if necessary
- DropIn Locations:
 - Resources/Private/Partials/DropIn/Before/All.html
 - Resources/Private/Partials/DropIn/After/All.html



Chapter 5:

Deprecated/Removed Functions



Optional Fluid TypoScript Template removed

- The static include file "Fluid: (Optional) default ajax configuration (fluid)" was meant as an example/showcase on how to use Fluid Widgets in FE. It is outdated and therefore removed.
- Instead include the needed file manually in your TypoScript template:

```
page.includeJSLibs {
   jquery = https://code.jquery.com/jquery-3.1.1.slim.min.js
   jquery.external = 1
   jquery.integrity = sha256-/SIrNqv8h6QGKDuNoLGA4iret+kyesCkHGzVUUVOshc=
   jqueryUi = https://code.jquery.com/ui/1.12.1/jquery-ui.min.js
   jqueryUi.external = 1
   jqueryUi.integrity = sha256-VazP97ZCwtekAsvgPBSUwPFKdrwD3unUfSGVYrahUqU=
}

page.includeCSSLibs {
   jqueryUI = https://code.jquery.com/ui/1.12.1/themes/smoothness/jquery-ui.css
   jqueryUI.external = 1
}
```



Lowlevel VersionsCommand Parameters Changed (1/2)

- The existing CLI command within EXT:lowlevel for showing and cleaning up versions (from EXT:version / EXT:workspaces) has been migrated to a Symfony Console command.
- The command previously available via
 ./typo3/cli_dispatch.phpsh lowlevel_cleaner versions is
 now available via ./typo3/sysext/core/bin/typo3
 cleanup:versions and allows the following CLI options to be set:
 - lacktriangledown -v and -vv to show more detailed information on the records affected
 - --pid=23 or -p=23 to only find versions with page ID 23 (otherwise "0" is taken)

Continued on next slide



Lowlevel VersionsCommand Parameters Changed (2/2)

Continued

- **...**
- --depth=4 or -d=4 to only clean recursively until a certain page tree level
- lacktriangledown --dry-run to only show the records to be changed / deleted
- --action=nameofaction to clean up versioned records, one of the following actions are possible:
 - versions_in_live: Delete versioned records in the live workspace
 - published_versions: Delete versions of published records
 - invalid_workspace: Move records inside a non-existing workspace ID into the live workspace
 - unused_placeholders: Remove placeholders which are not used anymore from the database



Default Layouts for Fluid Styled Content Changed

- The content element layouts for Fluid Styled Content have been changed to provide a better maintainability and to be more flexible.
- Previously available content element layouts ContentFooter, HeaderFooter and HeaderContentFooter have been dropped and replaced with a single Default layout that is more flexible.

```
$GLOBALS['TCA']['tt_content']['columns']['CType']['config']['default'] = 'textmedia';
$GLOBALS['TCA']['tt_content']['columns']['CType']['config']['default'] = 'header';
```



TypoScript Standard Header (1/2)

- The TypoScript standard header rendering definition lib.stdHeader has been introduced in CSS Styled Content to reference it across multiple content elements to simplify maintenance.
- For Fluid Styled Content a workaround for compatibility with CMS 7 has been introduced to simplify migration. However, it only renders the header and misses all frames, and additional options are necessary to generate a streamlined rendering output if the content element layout was not implemented correctly.



TypoScript Standard Header (2/2)

Output now:

```
tt_content.simple_content = COA
tt_content.simple_content {
   10 < lib.stdHeader
   20 = TEXT
   20.field = bodytext
}
</neader>
</nl>
```



Miscellaneous (1/4)

- The following method has been removed: FlashMessage->getMessageAsMarkup()
- EXT:felogin doesn't add default CSS styles anymore because it may break the frontend output, for example if CSS frameworks are used.
- The frontend specific TypoScript setup for EXT: form isn't loaded automatically anymore and must be added manually through static includes. With this change a TYPO3 integrator can easier decide where the extension TypoScript is included.
- The setting noCopy has been removed without replacement from the list of possible values of the TCA column property 110n_mode.
- The setting mergeIfNotBlank has been removed without replacement from the list of possible values of the TCA column property 110n_mode.



Miscellaneous (2/4)

- The TypoScript setting config.sys_language_softMergeIfNotBlank has been removed without any replacement. This is a result of removing the TCA setting mergeIfNotBlank from the list of possible values for 110n_mode.
- The database field pages.url_scheme functionality has been moved to the compatibility7 extension. The field allows to force the HTTP or HTTPS protocol for a specific page to be set by an editor in the page properties on a per-page basis. However, it is common today to ensure (if a SSL certificate is available) to use HTTPS for a whole website or even only for a specific area (inc. subpages) to force the protocol.



Miscellaneous (3/4)

- The function QuickEdit in the page module has been moved to EXT:compatibility7 and will not be developed further.

 See TYPO3 Extension Repository (TER).
- In order to streamline CSS Styled Content and Fluid Styled Content, several options of CSS Styled Content have been dropped without replacement: TCA image_compression, TCA image_effects, TCA image_noRows, TypoScript IMAGE noRows, TypoScript IMAGE noCols, TypoScript IMAGE noRowsStdWrap, TypoScript IMGTEXT captionAlign
- The field select_key of the table tt_content is not used in the core and has been removed.



Miscellaneous (4/4)

- The following methods and properties within FlashMessage::class have been marked as deprecated:
 - FlashMessage->classes
 - FlashMessage->icons
 - FlashMessage->getClass()
 - FlashMessage->getIconName()
- Method ArrayUtility::inArray() has been marked deprecated
- CSS Styled Content is now deprecated (will be removed with TYPO3 CMS version 9)



Sources and Authors

Chapter 6: Sources and Authors



Sources and Authors

Sources

TYP03 News:

■ http://typo3.org/news

Release Infos:

- http://wiki.typo3.org/TYPO3_CMS_8.6.0
- INSTALL.md and ChangeLog
- typo3/sysext/core/Documentation/Changelog/8.6/*

TYP03 Bug-/Issuetracker:

■ https://forge.typo3.org/projects/typo3cms-core

TYP03 and Fluid Git Repositories:

- https://git.typo3.org/Packages/TYPO3.CMS.git
- https://github.com/TYP03/Fluid



Sources and Authors

TYPO3 CMS What's New Team:

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