

TYPO3 Education Booster Box

Intellectual Output 4: Education Booster

Prepared by

Verein Business Angels, TYPO3 Association, HTL Rennweg Vienna, Liceul Tehnologic Grigore Moisil Braila

"The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."







Congratulations on receiving your starter box

General

The content of this box allows you to jumpstart into teaching TYPO3 in your educational facility.

It provides everything you need to set up your first lectures, up to a point where your trainees are able to edit the content of a TYPO3 site themselves.

How to use this box

The sheets you find in this box are meant be used as step-by-step guide. Pick up the sheet right behind this one: "Chapter I - Setup and first steps" A chapter is your main starting point for lectures. It features multiple Learning Units, numbered from 1 to a maximum of 6.

Each learning unit is designed to take 30 minutes on average. (This can vary greatly depending on the previous knowledge of your trainees and your own additional input, etc.)

How to use connectors

You might have spotted the light-blue and dark-green circles on the chapter sheet already. These are so-called connectors.

Each connector features a brand in the headline, for example:



This tells you who created this sheet. Connectors might be created by various members of the TYPO3 Community, or related partners and friends.

Pick up the sheet from the TYPO3 Education Committee, featuring a light-blue 1 on the right-hand side, and match it with the one on the chapter sheet:



Now you can see, which skills are related to Learning Unit 1 (light-blue circle) of the Chapter I sheet. It is easy to distinguish

Education-Connectors



from Business-Connectors.

Business connectors let you and your students meet up with professionals from the industry. Ask the SkillDisplay team for leads in your area.





Chapter I - Setup and first steps

General

This first chapter tackles what a Content Management System (CMS) actually is, as well as setting everything up for working with the CMS.

Everyone is invited to choose their preferred setup guide for working with the system, depending on the personal level of knowledge.

Various variants are available, check out the Introduction sheet to see how our Education-Connectors work if you didn't so so already.

Expected total time

Basic: 120 minutes Advanced: Up to 1 day

Introduction

What is a Content Management System and what can you do with it? What are the specifics of a CMS like TYPO3?

Setup

How can you register for a ready-to-use TYPO3 instance on the web? (basic) Or how can you create a local installation on your own PC? (advanced)

Tools and Roles

Which tasks and roles do exist for users?

Are you confident with the tool needed for working as a CMS Editor?

Making yourself at home

How can you access the control center of the CMS? What are the most important steps to set your own user preferences?

01

02

01

03

, 04



Chapter II - Publishing content

General

The second chapter is about the basic possibilities of editing content and the fundamental concepts, which any editor should be familiar with when putting up their own articles.

Everyone is invited to choose their preferred setup guide for working with the system, depending on the personal level of knowledge.

Various variants are available, check out the introduction sheet to see how our Education-Connectors work if you didn't so already.

Expected total time

180 minutes

Getting familiar with the Back End

After setting up TYPO3 and the own account, it's time to explore the Back End.
Which sections exist and which functionalities are tied to them?

What we can put on our website and who owns it
A good website has more than text. Images, Videos, Documents - what can you
put on your website? Can you use any photo you find on the web?

How people with special needs and robots see our website
We have to consider for whom we create our content. How can we aid people
with special needs? How does our site get found in search engines?

The pages we want to show to our guests

A website usually features more than a single page. Welcome, Contact, Imprint...

How can we create our own page structure?

Managing our assets (like photos)

How can we handle a lot of assets on our website? How do we organize them?

What if we use them in multiple occurrences?

Bringing it all together

The stage is set - everything is prepared. How can we benefit from our preparations and insert content elements (combining text with media, etc.)?

Empowered by SKILLDISPLAY

05

06

07

80

09

06

05

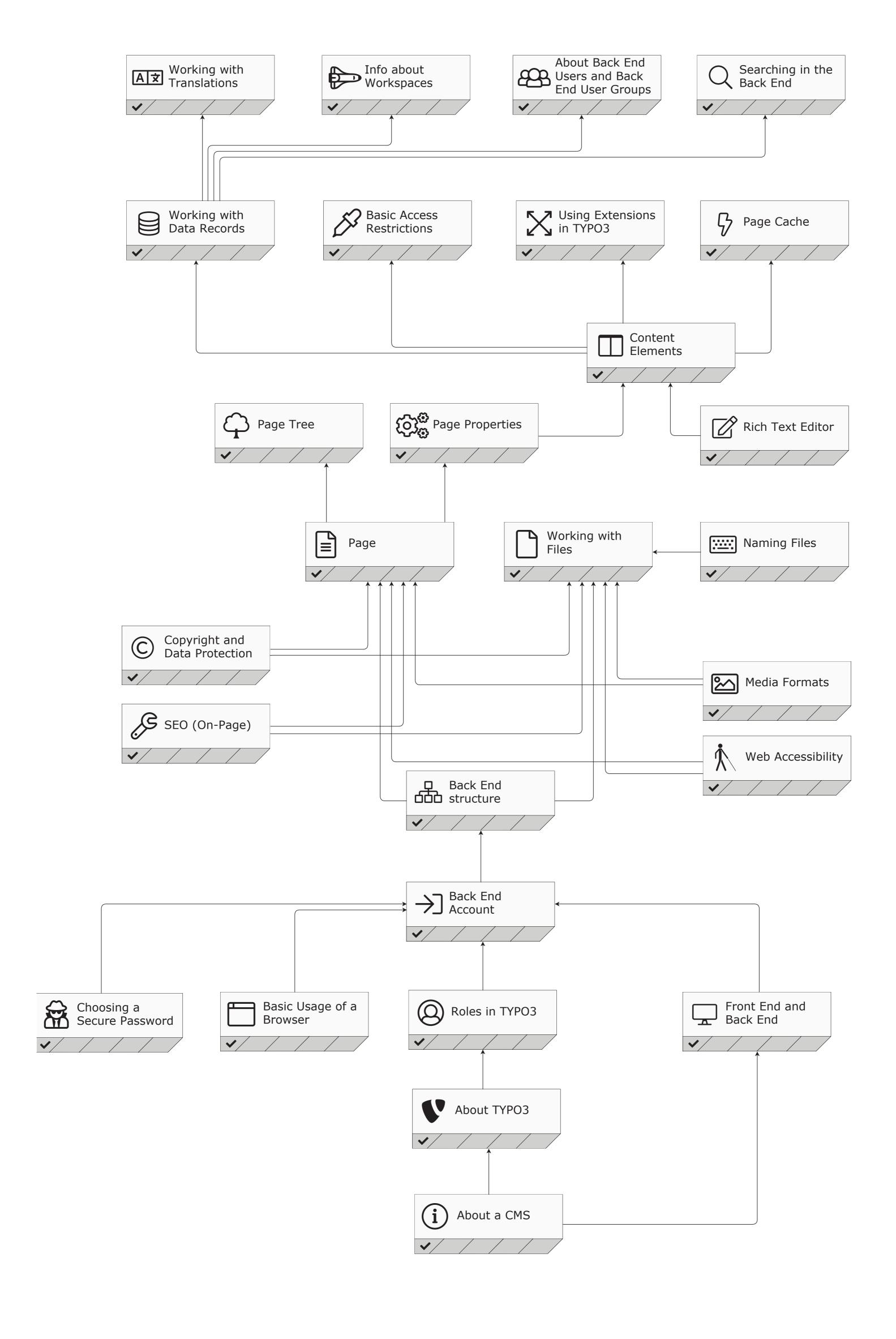
07

08

09

10

TYPO3 CMS Certified Editor v8 LTS







::: empowered by :::
SKiLLDiSPLAY



Introduction



Description:

Introduction to the basic concept of a content management system (CMS).

Goals:

I can explain what a CMS is.

I can explain how content and design are separated in a CMS.







Description:

Knowing the tool is an important task to become a specialist. Get an overview of the TYPO3 system and the unique features.

Goals:

I know what TYPO3 is.

I know broadly which system requirements have to be met to work with TYPO3. I know the TYPO3 vocabulary and can name the essential components.









Tools and Roles



Description:

For best results, tasks in TYPO3 are assigned to corresponding specialists.

Goals:

I know the roles in TYPO3 and their corresponding tasks.

I know the tasks assigned to me according to my role.

I know whom to ask for issues that are not part of my role.





Basic Usage of a browser





Ability to use a browser.

Goals:

I can use a browser to reach a URL. I can use forms with a browser.







03



Making yourself at home

Front End and Back End

Description:

The basic concept of front end and back end in a CMS.

Goals:

I can explain the difference between front end and back end.

The knowledge about technical requirements of a browser when working with TYPO3.







Choosing a Secure Password

Description:

Basic knowledge about web security.

Goals:

I know the guidelines for choosing a secure password.







 \rightarrow Back End Account

Description:

Login and logout from TYPO3 back end and user account settings.

Goals:

I know how to login into the back end.

I know what to do when I lost my credentials.

I know where to view and edit my user account details.









Getting familiar with the Back End



Description:

Back end areas and their names.

Goals:

I know the structure of the back end.

I can find the module bar and explain the general tasks related to the modules.

I can explain the difference between page tree and file tree.

I can point out the working area and explain what it is used for.

I know where the top bar is located and which functions I can find here.

I know where the tool bar is located and which functions I can find here.

I know where the context bar is located and which functions I can find here.









What we can put on our website and who owns it



Description:

Overview of common media formats used on the web and their restrictions.

Goals:

I know which media formats can generally be used in web applications. I know which media formats can be used in TYPO3.







(C) Copyright and Data Protection

Description:

Knowledge about copyrights and data protection.

Goals:

I am aware of the existence of copyright and can act accordingly. I am aware of the existence of data protection rules and can act accordingly. I know about restrictions using external resources.









How people with special needs and robots see our website



Description:

Knowledge about web accessibility and methods for people with disabilities to use the web.

Goals:

I know what web accessibility is and who defines the rules for web accessibility.

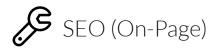
I know how to improve the use of web pages for people with disabilities.

I know to handle content and structure for people with disabilities properly.









Description:

Basic knowledge of search engine optimisation (SEO), particularly on-page optimisation.

Goals:

I can explain what SEO means.

I can explain and use meta-tags for pages and images.

I can explain and use headline structures.









The pages we want to show to our guests



Description:

Usage of different page types.

Goals:

I can create, edit, hide, copy, move and delete pages. I can use the module "Functions" to create multiple pages in a single work step. Further goals are available on the platform.



SKILLDISPLAY Find out more about this skill







😭 Page Properties

Description:

Usage of page properties for SEO and content manipulation.

Goals:

I know the most important page settings: Title, Subtitle, Navigation title, Files and Resources, Metadata (Description, Content, Keywords), Enable, Hide in Menu.



SKILL DISPLAY Find out more about this skill







Page Tree

Description:

Basic knowledge about the page tree.

Goals:

I know the structure of the page tree.

I can use the page tree operations: Filter, Drag & Drop (Create, Copy, Delete).



SKILLDISPI AY Find out more about this skill





08



Managing our assets (like photos)

Naming Files

Description:

The knowledge about file naming conventions.

Goals:

I know about recommendations for and advantages of using proper file names.

I know which characters are recommended for use in file names.





Working with Files



The knowledge about organising and managing files.

Goals:

I can create, copy, move and delete files.

I can detect if specific files are currently in use.

I know about metadata and where to edit metadata of files.

I know about and can take advantage of the extended view.

I know about the consequences of using inappropriate file names in TYPO3.







09



Bringing it all together



Description:

Overview of the basics and functions provided by the included text editor.

Goals:

I know about the functionality of the rich text editor (RTE) and can take advantage of it. I can enrich text semantically and optically (strong, emphasis, etc.).

I know about the use of the most important structure elements (lists, tables, etc.).

I know how the editor handles existing formatting when pasting text from the clipboard.









Content Elements

Description:

Working with content elements.

Goals:

I can create and edit the most important content element types (text with media, header, file links, records).

I know the difference between the uploaded files from the module file list and those inserted into content elements.

I know the implications of field header and type (semantic meaning, front end results).

I can use the image cropper to manipulate images.

I know how to embed videos.











What is a Content Management System (CMS)?

This chapter deals with the basic concepts of Content Management Systems (CMS).

Goals

I can explain what a CMS is.
I can explain how content and design are separated in a CMS.

Topics

- 1. What is a CMS and what can you do with such a system?
 - 2. Content Management Application (CDA) and Content Delivery Application (CDA)
 - 3. Common Components of a CMS/WCMS
 - 4. Content Types

Expected Time
Basic: 15 min



What is a Content Management System (CMS)?





Extensions

This chapter deals with the possibilities to enhance the functionality of the core system.

Goals

I can explain what an extension/plugin of a CMS is.

Topics

- 1. What is an extension?
- 2. Example of available extensions for some popular CMS.

Expected Time
Basic: 5 min



Extensions



User Management

This chapter deals with the principles of handling users and their access rights.

Goals

I can explain what user management means and why it is necessary in a CMS.

I can explain the basic concepts of granting access rights to users.

I can explain the difference between Front End and Back End Users.

I know some basics to avoid security problems.

I know what a usergroup is and how I can use it in a CMS.

Topics

- 1. Front End users
- 2. Back End users
- 3. Security issues
- 4. Groups/Roles

Expected Time
Basic: 15 min



User Management





Caching

This chapter deals with the principles of caching content.

Goals

I can explain what caching means. I can explain the advantages of caching.

Topics

- 1. What does caching mean?
- 2. Which different caching technologies do exist?
 - 3. Advantages of caching
 - 4. Disadvantages of caching

Expected Time
Basic: 15 min



Caching





Publishing Content

This chapter deals with the principles of publishing content.

Goals

I can explain what publishing means.
I can explain the possibilities common Content Management Systems offer for publishing.

Topics

- 1. What does publishing mean?
- 2. Options for publishing content.

Expected Time
Basic: 15 min



Publishing Content





Search Engine Optimization with a CMS

This chapter is about search engine optimization with a CMS.

Goals

I can explain what SEO is. I can explain the main issues for SEO with a CMS.

Topics

- 1. What is search engine optimization?
 - 2. Search engine friendly URLs?
- 3. Editing possibility of the meta-information
 - 4. Preventing duplicate content
 - 5. Sitemap and robots.txt
 - 6. SEO tools

Expected Time Basic: 30 min



Search Engine Optimization with a CMS





Templates in a CMS

This chapter deals with the concept of templates in a CMS.

Goals

I can explain what a template is. I can explain the advantages of templating.

Topics

- 1. What is a template?
- 2. Advantages of templates
 - 3. Template switching
 - 4. Content templates

Expected Time
Basic: 15 min



Templates in a CMS





Content Editing

This chapter deals with the possibilities of content editing.

Goals

I can explain the difference between a simple text-editor and a WYSIWYG-editor.

I know what Front End editing means.

Topics

- 1. Text-Editor
- 2. WYSIWYG-Editor
- 3. Frontend Editing

Expected Time Basic: 15 min



Content Editing

jweiland.net

You want to try out TYPO3?

Use our free DEVELOPER plan with a ready installed demo website.

Even though the hosting plan is called DEVELOPER, you can use it as an editor. The DEVELOPER plan is also ideal for testing our TYPO3 hosting without obligation.

Ready-to-use TYPO3 project

In addition to an empty TYPO3 project, our free sample project is also installed. This template can be used as a template for your own homepage. So you can log in to the website and start creating your content in TYPO3 right away. You don't have to worry about programming or similar things.

Changing the plan is possible at any time

A change of the plan is possible at any time and uncomplicated. All settings and access data remain unchanged. Thus the hosting plan can always be adapted to your requirements.

Provider change - quite simple!

You are currently with another provider and want to change to us? With our free transfer service this is very easy. Your e-mail mailboxes can also be transferred easily and securely with our mail transfer service.

TYPO3 support by our experts

Since 2002 we have specialized on TYPO3. Our customers benefit from our several years of experience in many TYPO3 projects. All of our support staff are Certified TYPO3 Integrators and thus proven TYPO3 experts. Challenge them with your questions! With hundreds of free video instructions and tutorials on TYPO3, we are happy to share our know-how.

More information at jweiland.net/typo3-hosting.html



Have fun with TYPO3!





Hosting a TYPO3 setup workshop

General

This is a step-by-step checklist for inviting tech-savvy students from an educational facility to your premises in order to get to know them, introduce them to the community and help them setting up TYPO3.

1. Set the maximum number of participants.

How much space do you have? How many people will be actively supporting from your company? A good rule of thumb is a maximum of 5 students per expert from your company.

2. Setup a schedule

Example:

10:00 - 10:30 Meet & Greet

10:30 - 10:45 Introducing our company

10:45 - 11:00 Students introduce themselves

11:00 - 12:30 Hands-on: Setting up TYPO3 - how we do it in our company

12:30 - 13:30 Lunch Break

13:30 - 15:00 Expert support for setting up the students TYPO3

15:00 - 15:30 WrapUp & next Meeting (see Skill review workshop)

3. Create a checklist on what the students have to bring with them

Usually you'll want to host an "advanced" workshop for the best students in the class (how to create a TYPO3 installation on your own device).

Do all the students need own laptops? Are preinstallations required?

Try to keep the prerequisites as basic as possible. Alternatively check out one of the business connectors of a hoster or platform solution specialist in this box and use this as a basis for setting up TYPO3 in your workshop.

4. Set the workshop date & perform the workshop

If you already are cooperating with an educational facility contact your partner and schedule a meeting for the workshop. Mind that you should ideally plan the workshop at least 2 months in advance, as the educators also have to coordinate the appointment with the students. If you are not yet partner of an educational facility, contact the SkillDisplay team for leads in your area.

Have fun at the workshop and let us know about your experience!





Hosting a TYPO3 skill review workshop

General

Chances are good, that you helped students from an educational facility near you to set up their very own TYPO3 instance. With that as a base they were able to acquire a number of TYPO3 skills over the course of a couple of lectures at your educational partner facility.

Getting recognition from professionals

The students did put a lot of work into their installation, getting familiar with the backend, considering special needs, creating pages and content.

Wouldn't it be great if they could get a verification from business professionals for everything they achieved? It would!

- Students can exactly show what they can do, and that they did prove that under the supervision of a business professional (YOU)
- If some of the students obtain official certification everyone will be able to see that YOU played a part in supporting them on the SkillDisplay platform

1. Setting up the task

You can find all the skills the students should have obtained by now via checking out the available SkillDisplay education connector sheets for chapter I and II in your box.

Then create a task involving those skills.

Example:

The students have to create an own page, which contains a teaser for a specific product. (e.g.: a playtoy for cats). You provide them with an image under Creative Commons Attribution 4.0 International and they have to include it properly.

They have to make sure the page is accessible and search engine optimized (as Editor) The images have to be stored in a way, so other editors can easily find/use them.

2. Confirming skills

Let the students either request a group SkillUp (Allows to grant/deny verifications for all involved skills with a single click) or single SkillUps for each involved skill (allows you to be more specific). If you are not yet able to grant business verifications on the SkillDisplay platform - contact the SkillDisplay team.

3. Schedule and host the workshop

Check the "Hosting a TYPO3 setup workshop" sheet for a reference.

Have fun at the workshop and let us know about your experience!

SKILL UP

Become eligible to issue Education Verifications

Receive a free SkillDisplay Education Test account.

Contact us at partners@skilldisplay.eu

with

Subject: Free SkillDisplay Education Membership Your institute's logo as SVG (2:1 ratio)

and receive educational verification permissions for the following skills:

About a CMS About TYPO3 Roles in TYPO3

as a perfect kickstart for: verifying student skills when coaching/teaching



SKILL UP

Become eligible to issue Business Verifications

Receive a free SkillDisplay Business Test account.

Contact us at partners@skilldisplay.eu

with
Subject: Free SkillDisplay Business Membership
Your companies logo as SVG (2:1 ratio)

and receive business verification permissions for the following skills:

About a CMS

About TYPO3

Roles in TYPO3

as a perfect kickstart for: verifying student skills when hosting a workshop tracking in house skills of employees







Appendix: HTL3R learning material

All learning material which is available as download by scanning the QR codes on the HTL3R created sheets is included in this appendix for your convencience.



What is a CMS

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	15.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the basic concept of a content management system (CMS).

Goals

I can explain what a CMS is.

I can explain how content and design are separated in a CMS.

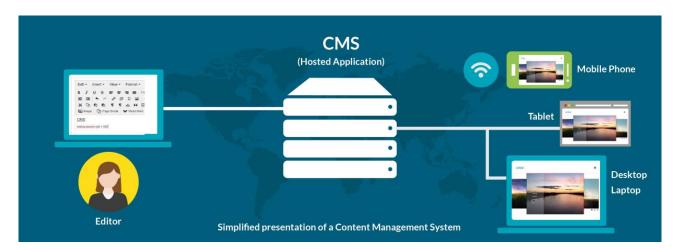
1 What is a Content Management System (CMS)?

Content has been managed for many years in the media industry. All the systems - from simple files to sophisticated audiovisual content in a broadcast environment - are labeled Content Management Systems (CMS). In the last decades Web Content Management Systems (WCMS or WCM) were getting more and more important and made it easier to maintain and organize the content of a website in an effective manner. We are now focussing on Web Content Management Systems.

A few years ago, the only way for you to develop a website, was to write all the HTML and CSS codes by hand. Imagine, your website is growing and you have 30 single HTML-pages (which is still a very small site). Now you recognize, that you have to change your site structure and you would like to modify your menu. This means not only that you need to know HTML and CSS, perhaps also Javascript or PHP, you also have to change every single HTML-page to update your menu on all pages.

A Content Management System will allow you to build your website without being an expert in HTML, CSS and Co. A CMS allows you to modify the menu on one single place and all your webpages are updated. Of course your website will contain images, videos, audio-content or forms to interact with your visitors. With a CMS you may create or modify your web pages in a way you know from editing text in Word or similar text editing programs.



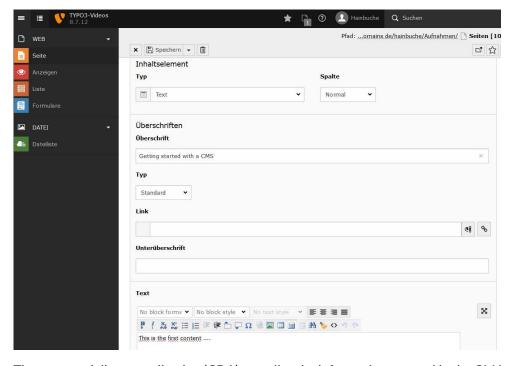


As you may enter content in a CMS without HTML/CSS-knowledge, the content and the presentation of the content (design) has to be separated. With the content management application (CMA) you are able to enter/modify/delete/organize your content. This part is also called backend (system) or admin panel. The content delivery application (CDA) is responsible for displaying your content to the visitors of your site.

1.1 CMA/CDA

The content management application (CMA) is a graphical user interface that allows a user to add, modify and remove content from a website. There are no skills of HTML or CSS necessary.

The following screenshot shows, how you can enter a Text element using the open source CMS TYPO3.



The content delivery application (CDA) compiles the information entered in the CMA and updates the website. The screenshot below shows how the entered content is being displayed to the visitors of the website.







AUFNAHMEN

GETTING STARTED WITH A CMS

LISTENMODUL

Grundlagen

This is the first content

Das Listenmodul ist sehr leistungsfähig und vielseitig nutzbar. Schauen Sie einfach das TYP03-Video an!

- Seiten
- Inhalte
- V RTE
- Ansichten
- Dateiliste
- Tipps
- Extensions

1.2 Common Components of a CMS/WCMS

Features can vary widely amongst the various CMS offerings. Most of the systems offer the following core functions:

- Management of your content
 - A CMS offers you the possibility to enter content, modify or delete content. It means also organizing data types, storing data in a data repository or a database (see CMA).
- Distribution and publishing of your content
 - Once the content is entered, you usually need to publish it. An important feature for many authors or editors is the preview-function, which allows you to see, how the content looks after publishing. If the content has been published, it has to be compiled (content+design=webpage) and distributed to your visitors. State of the art systems display the content according the size of the target screen, which means that the web page looks different on a desktop and on a mobile phone (responsive design).
- Indexing, search and retrieval
 - Your website needs to be searchable. It allows your users to quickly find what they were looking for. It makes your users lives easier. It should be possible to search within text-fields as well as within downloadable pdf-files and it should allow users to search by attributes such as publication dates, keywords or author.
- User Management
 - If your website is growing, you probably need some help for entering and organizing all the content. Or imagine the website of international companies with thousands of employees in different countries with various languages. In such an environment content management will be done by a lot of employees. Thus, you will need to control publishing, and to grant access to specific parts of your website.
- **Analytics and Reports**
 - After some time your website is online, you may want to know, which articles are liked mostly or what phrases or keywords the users use in your search bar, how are they interacting with your content or which devices they use. Gathering information about how your site is used is crucial to refine your content strategy.
- Templates/Themes
 - We noticed, that a CMS separates the content from the design. The design part is represented by templates or themes. With a template/theme you may change the look of a site all at once. Even if your site has thousands of pages, you can change the look of all your pages with just a few clicks. The





separation of content and design allows also specialization. While the web designers take care of the look of your site, the authors or editors may concentrate on the content.

SEO-Tools (Search Engine Optimization) Having a great website is useless if the users cannot find it. Therefore, your website need to be "friendly" to the search engines of Google and Co. A CMS should support you in preparing your site with the appropriate information for the search engine bots and to create search engine friendly URLs.

1.3 Content Types

The content of your website consists of hundreds or thousands of different elements:

- Text
- Images or graphics
- Videos
- Audio
- **Files**
- etc.

Content elements are structured. Let's take some contact information. Each contact data consists of a predefined set of fields: Name, address, email, telephone number, etc. These structured elements are called content types. They define sets of default fields for editors to add content on a CMS. Other examples of content types are:

- Article: headline, sub-headline, text, images, author, creation date, publishing date, language,
- Download: file, file name, description, size of the file, file-type, access rights ...
- Product: name, price, description, size, weight, colour, packaging unit, shipping costs ...

Tags

Introduction, CMS

Glossary

Admin panel see Backend (system)

Backend (system) Graphical User Interface which allows Editors to enter/modify/

delete/organise the web content.

CDA Content Delivery Application, part of a CMS that delivers a

webpage (created or modified within the CMA) to the user

CMA Content Management Application, part of a CMS that allows a

user to add, modify or delete content

CMS Content Management System

compile here: transformation of computer code and content elements

(text, images...) to a HTML-page, which can be displayed to the

Content type A Content Type is a pre-defined collection of data fields.







Database A usually large collection of data organized especially for rapid

search and retrieval

Data repository Partitioning of data, where partitioned data types are stored

together

Technology that makes web pages look well on a variety of Responsive Design

> devices and screen sizes. The goal of responsive design is to build web pages that detect the visitor's screen size and orientation

and change the layout accordingly.

Search engine bot Small computer program that systematically browses the World

Wide Web, typically for the purpose of building the databases of

Google, Bing and Co.

Search engine friendly URL (SEF) A search engine friendly URL is a web address that is easy to read

and includes words that describe the content of the webpage.

SEO (Search Engine Optimization) Techniques used to increase the amount of visitors to a website

by obtaining a high-ranking placement in the search results page

of Google, Bing and Co.

Template Predesigned resource that shows the structure for the

comprehensive layout and display features of any website.

Theme see Template

WCM Web Content Management System (see also WCMS) **WCMS** Web Content Management System (see also WCM)

Image Credits

Icon vector parts designed by Freepik, composition Gerhard Sturm

Copyright



1 Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

NonCommercial — You may not use the material for commercial purposes.

■ NoDerivatives — If you remix, transform, or build upon the material, you may not distribute the modified material.



Extensions and Plugins

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	22.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the extension of the functionality of Content Management Systems.

Goals

I can explain what an extension of a CMS is.

1 Extensions and Plugins

The core functionality of a CMS is not able to cover all the different needs. Thus, a lot of Content Management Systems open their system to suppliers of extensions. With this modular concept, it is possible to concentrate on the core functionality while specific needs are covered by external partners.

The installation and integration of such extensions are usually easy and can be done quickly. After you have installed the core system for your CMS, you can install your choice of extensions. Some extensions are free, some have to be paid. The commercial partners often offer a subscription for 6 months or a year. During this subscription-period you get all the updates of the extensions free.

The number of extensions vary strong between the Content Management Systems (22.8.2018):

•	WordPress	56.150
•	Drupal	41.316
•	Joomla	7.970
•	TYPO3 (7LTS)	1.300

For the website owner, it is important that there are no issues with installed extensions when the core system needs updating. It is therefore important to check whether the manufacturer of an extension is serious and has received appropriate reviews. Otherwise, you can quickly experience nasty surprises.

Tags

Introduction, Extensions, Plugins





Glossary

Extension

An extension of a CMS extends the functionality of the system. There are different names in use: Module, Extension, Add-on, Plugin, Component.

Copyright

- https://creativecommons.org/licenses/by-nc-nd/4.0/
- Attribution You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- NonCommercial You may not use the material for commercial purposes.
- **NoDerivatives** If you remix, transform, or build upon the material, you may not distribute the modified material.



User Management

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	17.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the principles of handling users and their access rights.

Goals

I can explain what user management means and why it is necessary.

I can explain the basic concepts of granting access rights to users.

I can explain the difference between Frontend and Backend Users.

I know some basics to avoid security problems.

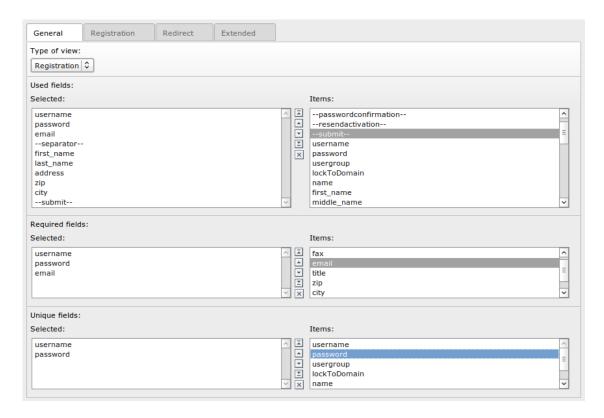
I know what a usergroup is and how I can use it in a CMS.

1 User Management

The user management of a CMS distinguishes two different types of users, the visitors of your website (frontend) and the persons, who enter the content (backend users).

In the font-end, you may allow a guest/visitor to see all your blog posts, but some specific downloads or a special area of your site you may offer only to users who pay for it. In a company or organization, there is often a public area and an area with restricted access for employees or members (intranet). In WordPress this role is called subscriber, in Joomla it's a guest and with TYPO3 the groups may be created according your own needs. A Role defines a set of tasks a user assigned to the role is allowed to perform.





Screenshot: User Management of Frontend Users with the CMS TYPO3

More important as the frontend users are the backend users, as they may modify your website. Thus security is very important for a CMS. In addition, Content Management Systems are some of the most common targets of hacking on the Internet today. To avoid problems, some basic principles have to be considered:

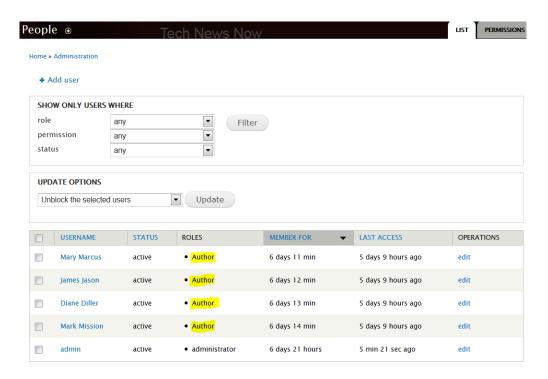
- Use a strong password: see https://www.symantec.com/connect/articles/simplest-security-guidebetter-password-practices
- Have a firewall in place: see https://www.incapsula.com/blog/cms-security-tips.html
- Make regular backups of your CMS
- Keep your system up to date: if a security hole has been found, it may be fixed by installing the latest patches
- Get a SSL-certificate: the https protocol is set up and allows secure connections from the web server to the web browsers of your visitors.

In the backend most of the CMS have several roles/gourps implemented or they offer a possibility to set up roles and/or user groups. The names are different and also the responsibilities associated to the roles. A contributor may create, post and update content, including words and images, but only content assigned to them. An Editor may have the ability and responsibility to review and publish content (=making it visible to the public). Below you can see the predefined roles for backend users of some popular Content Management Systems:

- Drupal: Contributer, Editor, Site Administrator
- Joomla: Author, Editor, Publisher, Manager, Administrator, Super User
- TYPO3: Simple Editor, Advanced Editor, Admin
- WordPress: Contributer, Author, Editor, Administrator, Super Admin







Screenshot: User Management with the CMS Drupal

But what if you wanted to modify the permissions of an existing user role? Most CMS offers the possibility to modify the predefined user groups/roles. If you have specific needs in defining your access levels, please check whether the CMS you choose is able to modify the predefined groups.

After creating a new user, you usually have to assign that user to a group/role. By doing this the user inherits all the rights from the user group/role. Special care should be taken to the admin/site admin/super admin-groups. As these users have far-reaching access rights and possibilities within a CMS, there should be only one or very few users, associated with these groups. Take also care, not to use the standard name for an admin account (like "admin"), as this makes it much easier to hack the account.

Tags

Introduction, User management

Glossary

Backend User User, who is using the Graphical User Interface (GUI) of a CMS to

enter, modify or organise the content of a site

Frontend User visitor/guest of a website

Group/User Group a group of users with the same access rights and responsibilities Intranet

Internal network of an organization/company based on internet

technology

publish content put content online, make content visible to the public

defines a set of tasks a user is allowed to perform



Role





Image Credits

- Frontend User Configuration TYPO3: https://docs.typo3.org/typo3cms/extensions/datamints_feuser/FrontendUserManagement/Introduct ion/Screenshots/Index.html
- User Management Drupal: https://www.drupal.org/files/admin_people_users_author_role_2.PNG

- https://creativecommons.org/licenses/by-nc-nd/4.0/
- Attribution You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- NonCommercial You may not use the material for commercial purposes.
- NoDerivatives If you remix, transform, or build upon the material, you may not distribute the modified material.



Caching

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	24.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the principles caching.

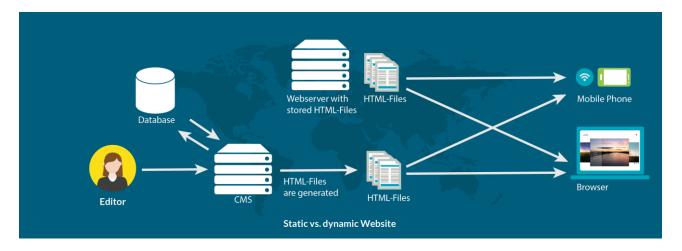
Goals

I can explain what caching means. I can explain the advantages of caching.

1 Caching

53% of users stop when the loading time is more than 3 seconds. Consequently, since July 9, 2018, Google has been including the load times of (mobile) websites in the ranking factors. But even with the visitors, the mood worsens with every delay and productivity drops. 1

With the help of caching, valuable time can be saved especially when using content management systems. While static sites can deliver the web pages directly via the web server, the so-called dynamic web sites must first generate the HTML pages. Several database queries can be necessary before an HTML page can be delivered to a browser or to a mobile phone. If a lot of users access the website at the same time, the response time can increase significantly.



¹ Quelle: https://blog.searchmetrics.com/de/2018/07/10/google-speed-update/







Caching is storing data temporarily, which is particularly useful in database or CM systems. It tries to load as little content as possible from the database. Without loss of quality, the loading time should be optimized by caching.

Technologically, the following options are available:

- Page Cache: Here, static files are generated, simulating a static website. If a document is changed by an editor, the static file is also regenerated and stored. The generated pages can be stored in the main memory or in the file system, whereby the main memory is much faster.
- Browser Caching: This technique attempts to cache as many files as possible through the browser on the local client. If graphics or pages are "cached" by the browser, for example, when reloading an HTML page, the graphics are loaded directly from the browser cache and do not have to be reloaded from the server. The browser cache can be done via CMS caching extensions or through settings in the .htaccess file. The refresh interval should be set accordingly (eg 30 days).
- Database Caching: This is a server-side technique that allows data to be temporarily stored in a database. This saves calculation-time, but you still need to access the database. With complex calculations in the queries, this can nevertheless improve the response time.
- When users access a website worldwide, a content delivery network (CDN) can increase access speed. A CDN provides cached copies of web content (videos, web pages, images ...) all over the world. To reduce response times, the CDN uses the nearest location to the customer.

Advantages of caching:

- Shortening the response time and thereby improving the user experience
- Reduce Backend System Costs: Reducing the number of requests to the database server can save
- Foreseeable performance: the number of database queries can be predicted more easily and thus more easily adapted to the volume of users.

Disadvantages of caching

- Information is no longer retrieved live. Depending on the setting of the cache parameters, page content may be outdated. This can be remedied by setting the expiration date appropriately or manually clearing
- Not all content can be cached: personalized information (shopping cart, individual calendars, personalized content) must be reloaded on every call. This means that, on the one hand, the CMS must be able to set these exceptions and, on the other hand, a site admin must also exclude these sites from caching.

Tags

Introduction, Caching, Performance

Glossary

Ranking faktor criteria applied by search engines when evaluating web pages in

order to compile the rankings of their search results

Page Cache temporary stored data to increase the HTML-page to the client

Browser Cache temporary stored data at the client

Content Delivery Network (CDN) geographically distributed network of proxy servers and their

data centers

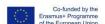






Image Credits

• Icon vector designed by Freepik, composition Gerhard Sturm

- https://creativecommons.org/licenses/by-nc-nd/4.0/
- **1** Attribution You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- NonCommercial You may not use the material for commercial purposes.
- NoDerivatives If you remix, transform, or build upon the material, you may not distribute the modified material.



Publishing and Workflows

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	17.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the principles of publishing content.

Goals

I can explain what publishing means.

I can explain the possibilities common Content Management Systems offers for publishing.

1 Publishing content

To publish content means to make the content available to people. It is the final step in the work with a CMS (from working in your CMS to saving to your web server) and the page being live on a development or production server.

The Publish action may be available for:

- Articles, blog entries, pages
- Content items like contact information, events, project information, products ...
- Images, documents or other files
- **Folders**
- Sites
- Extensions like modules, widgets, plugins

When you have entered all your content and the site development has tested successfully functionality and design you need to publish the whole site. This is the moment where people can see your website for the first time. Smaller sites will mostly publish directly while sites with sensible content or a bigger audience will use a staging environment, before publishing it on the production-server.





Some Content Management Systems offer also some useful options for publishing. You may set a "Start Publishing"-date and "Finish Publishing"-date. With this option you are able to schedule your publishing which may be quite useful for some situations. Imagine you have entered an event which takes place on June 15. The day after the information about the event is getting useless and it is better to take it offline. With such a scheduling-function you do not have to take care, that the content will be set offline. On the other hand, you made an announcement that some information will be available at a certain date. With the scheduling-options you may finish your announcement as soon you have all the details and set the appropriate date. The content will be published automatically at the date/time you have set. Some systems also allow to set/modify the creation date, which may be useful if the article order has been set by creation date.



As the organization gets bigger the requirements for publishing also gets more sophisticated. If you have several content producers you may want to check the articles before putting them online. With a workflow established within your Content Management System you will get a notice, that there are new articles to be checked and published. In a more collaborative process, there will be a picture editor who is responsible to find or create appropriate images or graphics for an article. Or you have a multilingual site and each content item has to be translated into several other languages. In this case you may have several steps from the creation till publishing. The possibility of defining workflows within your Content Management System helps you to keep your work efficient and more comfortable than using various technical systems.

As content may be published, it can also be unpublished. The content will not be deleted, it will just be taken offline.

Tags

Introduction, Publishing, Workflow

Glossary

Production server

to publish content

A server to deploy and host live websites. The site should have undergone extensive development and testing before. put content online, make content visible to the public







A server that is used to test a website in a production-similar Staging server

environment before being set live

Workflow Sequence the content creation process through which a content

> item passes from initiation to completion. Each workflow contains states, possible transitions and item conditions.

States States can be regarded as steps within a workflow.

Image Credits

Icon vector designed by Freepik, composition Gerhard Sturm

- https://creativecommons.org/licenses/by-nc-nd/4.0/
- Attribution You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- NonCommercial You may not use the material for commercial purposes.
- NoDerivatives If you remix, transform, or build upon the material, you may not distribute the modified material.



Search Engine Optimization with a CMS

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	24.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the search engine optimization with a Content Management System

Goals

I can explain what SEO is. I can explain the main issues for SEO with a CMS.

1 Search Engine Optimization

If you have now brought your own content into the web with the help of a CMS and the site looks good by using a professional template, you are still not done yet. Finally, your website is intended to attract visitors to the website in order to present services or to sell products. So we would be on the subject of search engine optimization or the interaction of a CMS and search engines. Search Engine Optimization is about helping search engines like Google, Bing etc. understand your content. ¹

Current content management systems support the editors in preparing the content for the search engines. But still, the optimization has to be done by an editorial member and is not done automatically by the CMS or any extension. Search engine optimization is subject to very complex and rapid changes, which is why one must presuppose a more intensive study of the subject.

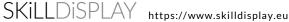
What support do current content management systems offer in search engine optimization?

1.1 SEO friendly URLs

A CMS typically returns URLs with cryptic letter-number combinations (e.g., www.mysite.com/index.php?view = article&id=1:getting-started&catid=2&itemid=101). In order to be able to operate SEO in a reasonable manner, speaking URLs (e.g. www.mysite.php/online-marketing/seo/seo-whitepaper.html), and reasonable virtual path structures in the URL tree (/online-marketing/seo in this example) including editing options compelling nowadays.

¹ see some references below (Links)

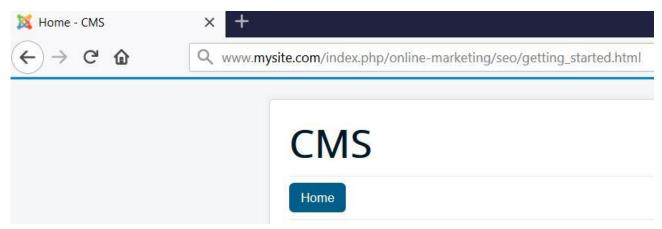








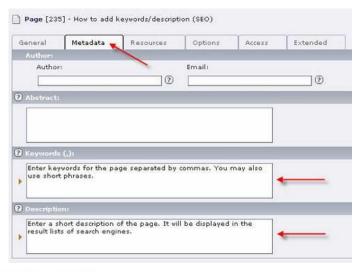
Screenshot: Standard-URL in a CMS



Screenshot: Search-Engine-Friendly-URL in a CMS

1.2 Editing possibility of the meta-information

A CMS must be able to edit the meta-information per page. Certain automatisms, such as the automatic filling of the title tag with the heading of the article is good as a fallback, yet this information must be configurable and editable.



Screenshot: TYPO3 - How to add keywords/description

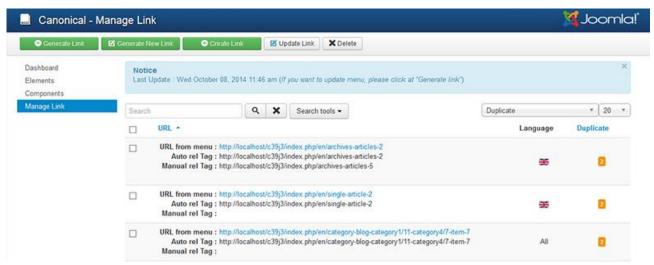


SKILLDISPLAY https://www.skilldisplay.eu



1.3 Preventing Duplicate Content

This is a problem with some CMS systems. Due to programming or architectural deficiencies, some CMS allow access to the same page via different URLs (duplicate content). This "duplicate content" worsens the PageRank.

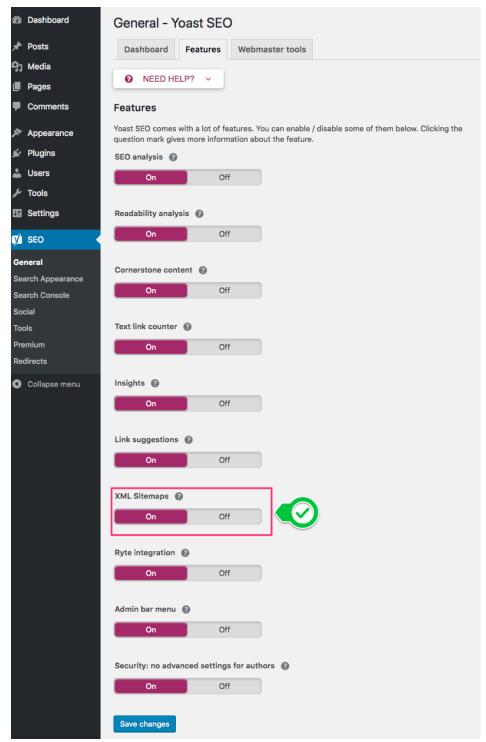


Screenshot: Extension for the CMS Joomla to manage duplicate content

1.4 Automatic generation of sitemap and robots.txt

The purpose of robots.txt is to exclude CMS-internal files and directories for search engine robots, since they are only necessary for their own operations, but have nothing to do with search engine indexes. The Sitemap.xml serves to list all published page URLs. This way, the corresponding pages are found better. Importantly, these sitemaps are always up to date, e.g. if an article was deleted (placed offline).





Screenshot: Extension for the CMS WordPress to support SEO; highlighted: switch for generating XML Sitemaps



1.5 SEO Tools

They are often installed as extension to the CMS. SEO add-ons consist of page speed tools, keyword management tools, rich snippet tools, automated SEO-tagging or events structured data among others.

Regardless of the SEO tools and the possibilities within the content management systems in the field of onpage optimization, above all high-quality content is of importance. The content should not be copied but has been written specifically for the target group and ideally the user should get the best results for every request without having to adjust the search several times.

Great SEO doesn't begin with content; it begins with selecting the right CMS for that content.²

Tags

SEO, Extension

Glossary

Crawl

Crawler

Canonical URL The term "canonical" is used with duplicated content. If you have

a single page accessible by multiple URLs, or different pages with

similar content, the search engines see these as duplicate

versions of the same page. With a canonical link element, which can be inserted into the <head>-section of a web page, you can tell the search engines, that multiple pages should be considered as one. A canonical URL is the URL that you want visitors to see.

Process of looking for new or updated web pages by a Crawler. Automated software that crawls (fetches) pages from the web

and indexes them.

Duplicate Content Content that appears on the internet in more than one place.

Duplicate content can lead to penalties of search engines such as

Google and Bing.

Index Search engines like Google stores all web pages that they know

about in their index. The index entry for each page describes the

content and location (URL) of that page.

Meta Information Meta information are HTML attributes that provide concise

> information about the specific webpage like description, author, keywords etc. The metadata can be used by browsers (how to display content or reload page), search engines (keywords), or

other web services.

SEO Search engine optimization: helping search engines like Google,

Bing etc. understand your content

Search-Engine-Friendly-URL (SEF) Human-readable or clean URLs. They make sense to both humans

and search engines and do not contain cryptic characters

² see: https://www.klipfolio.com/blog/seo-content-management-system







A list of all relevant HTML-Pages of a web site; for use by search Sitemap

engines and other crawlers, there is a structured format, the XML

Sitemap

Speaking URL see Search-Engine-Friendly-URL

Image Credits

- Canonical URL: https://www.cmsplugin.com/products/components/4-canonical-url
- Meta-Information: TYPO3-Support: How to add keywords/description: http://www.typo3support.com/more-answers/how-to-add-keywordsdescription-seo/
- Sitemap: https://yoast.com/what-is-an-xml-sitemap-and-why-should-you-have-one/

- https://creativecommons.org/licenses/by-nc-nd/4.0/
- Attribution You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- NonCommercial You may not use the material for commercial purposes.
- NoDerivatives If you remix, transform, or build upon the material, you may not distribute the modified material.



Templates

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	20.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the concept of templates in a CMS.

Goals

I can explain what a template is. I can explain the advantages of a template.

1 Templates

It was already mentioned that one characteristic of a CMS is the separation of content and design. As the content is entered in the admin panel of a CMS, the design comes from templates or themes. A template is a set of files which offers you the design of a web page. The template is pre-formatted in some way. For example, you might use a template in Microsoft Word that is formatted as a business letter. It is similar with a Content Management System. Usually you enter plain text in your admin panel of your CMS. You have a default template assigned to your website which "creates" the design of your site. Some CMS allow also to associate a second template to one specific page, but usually you assign the template to all pages of a site. The template defines where your content is placed, which font in which size will be chosen for your headline and for your continuous text. It defines the size of your images, the colours, etc. Some templates may also add some functionality to your system.



Using a template for a CMS has numerous advantages:

Separation of content and design: complete separation of content and presentation, especially when CSS is used for layout.





- Consistency and clarity: Using a template means also, that all your content items look the same. You have a consistent look of your site. This is especially important, when you have a lot of contributors entering content for your site or if your contributors do not know HTML and CSS.
- Redesign: A new template, and hence a completely new look at a web site can be applied instantly. This can even have different locations/positioning of content as well as other colors and graphics. Usually you do not have to change your content, the new look is defined by a new template.
- Time saving: An editor does not have to take care of the design of his content which saves a lot of time.
- Specialization: Everybody does what he/she can do best. The designers take care of the look and feel of your site, the editors enter the content.
- Customer satisfaction: the professional look and feel of your website helps you to increase your customer satisfaction.

A CMS is usually able to handle several templates which allow a switch to another design with the same content. It is even possible, that a user may choose from several designs/templates.

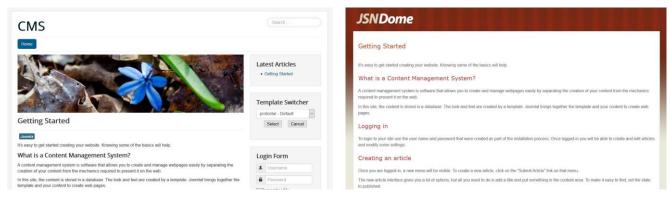


Illustration: The same content with two different templates which can be chosen by the user by one click (Template Switcher on the right column in the left image)

Some CMS allow the installation of new templates by uploading a zip-file while other CMS expect an uploaded and unpacked file on a specific place on your webserver. Usually you need also to publish the template or to set the template as default template.

The term "template" is also used for predefined content items in the content creation process. Some systems allow the usage of templates to easily and quickly enter content items. These (content) templates are custom html files that contain content for inserting into articles.

Tags

Introduction, Templates





Glossary

Template 1) a set of files which offer you the design of a webpage; the term

template is used by TYPO3 and Joomla

2) a custom html file that contains content for inserting into articles; the template should help to quickly add a specific

content which is often used

see template, Theme is used by Drupal and Wordpress Theme

Image Credits

Icon vector designed by Freepik, composition Gerhard Sturm

Copyright

https://creativecommons.org/licenses/by-nc-nd/4.0/

1 Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

NonCommercial — You may not use the material for commercial purposes.

NoDerivatives — If you remix, transform, or build upon the material, you may not distribute the modified material.



Content Editing

VERSION	DATE	AUTHOR	CHANGE	
V 0.1	23.8.2018	Gerhard Sturm	First draft	
V 1.0	27.8.2018	Gerhard Sturm	Review	

Description

Introduction to the possibilities of content editing.

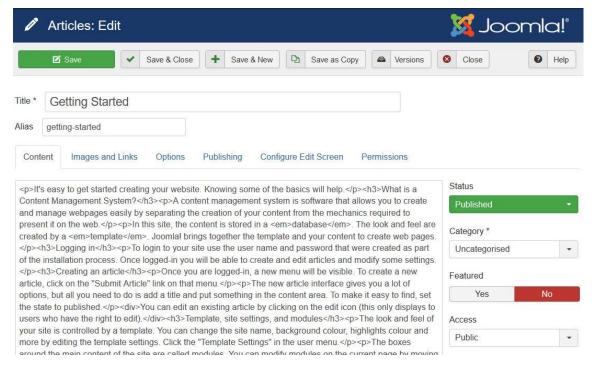
Goals

I can explain the difference between a simple text editor and a WYSIWYG-editor. I know what frontend editing means.

1 Content Editing

1.1 Text-Editor

While a simple text editor allows you to capture and edit text, you cannot do much more with it. Alone the input of the HTML tags is very tedious, because there is no support from the editor (color coding, automatic closing of a tag, indentations ...). Entering a link or an image is hard, as you should know all the details (url, file name...). Should the CMS of your choice only provide a simple text editor, it is recommended to install a WYSIWYG editor.



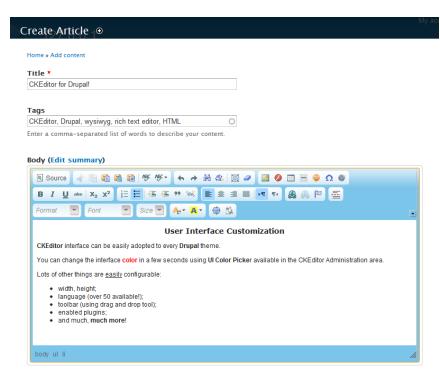
Screenshot: Simple Text-Editor in Joomla



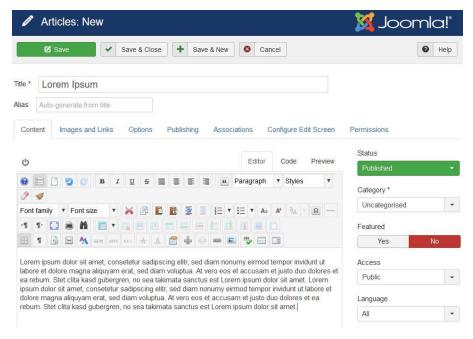


1.2 WYSIWYG-Editor

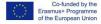
Meanwhile, almost all content management systems offer so-called WYSIWYG editors for content editing. A WYSIWYG editor works much like a standard word processor and offers a variety of useful features. This supports the editors, for example, in the creation of links, the integration of images or tables, the formatting of text (if desired and permitted) or the assignment of CSS classes.



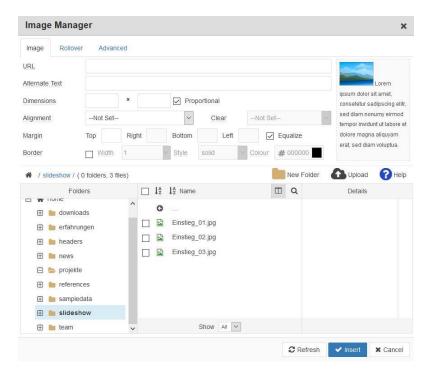
Screenshot: WYSIWYG-Editor CK-Editor for Drupal (also used in TYPO3)



Screenshot: WYSIWYG-Editor JCE for Joomla



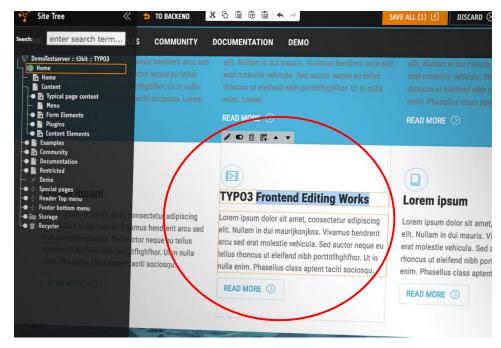




Screenshot: Image-Manager within the JCE-Editor for Joomla

1.3 Frontend Editor

Some systems also allow editing directly in the frontend. According to the rights, the editor gets a simple WYSIWYG editor after the login with the text elements and can thus directly edit the finished website and see the results immediately.



Screenshot: Frontend-Editing with TYPO3







Tags

Introduction, Editor, WYSIWYG

Glossary

WYSIWYG-Editor "What You See Is What You Get,"

> A WYSIWYG-editors shows what Web pages will look. This means that an editor can move text and images around the page to make it appear exactly how he or she wants before publishing the page on the Web. When the page is published, it should appear nearly the same on the Web as the way it looked in the

editor.

Frontend Editing Editing of the final webpage with an additional small WYSIWYG-

Editor displayed.

Image Credits

CK Editor for Drupal: https://ckeditor.com/blog/CKEditor-for-Drupal-Released/

Front End Editing with TYPO3: https://typo3.org/article/status-of-the-frontend-editor/

- https://creativecommons.org/licenses/by-nc-nd/4.0/
- Attribution You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- NonCommercial You may not use the material for commercial purposes.
- NoDerivatives If you remix, transform, or build upon the material, you may not distribute the modified material.