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My English skills are terrible, so my daughter proposed:

Write the English version first, even if it is terrible and then translate it into German.

That's what I did and suddenly I needed someone to proofread all my English concoctions. I found a few people while writing and now I want to give them a big fat thank you for their help:



Christine Graf motivated Hagen, made coffee, pasta, salad, organized wine, opened the window for fresh air and translated some chapters. Besides all of that, she runs cocoate.com and creates and manages European educational projects for adults. http://twitter.com/christinegraf



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Nadine Loeffler is an experienced foreign language correspondent for the English language. She resided and worked in the U.S. for nearly ten years, where she graduated from college with her second degree in Early Childhood Education. She works as a translator and also has more than ten years of combined experience teaching English to students in the U.S. as well as English as a foreign language to students in Germany. Furthermore, she is a successful online student mentor with Brevard Community College in Cocoa, Florida. http://twitter.com/nadine loeffler



Thilo Petry is an experienced IT expert with 15 years of working experience. He is a senior consultant in software testing and is very familiar with content management systems like Joomla! and WordPress, and has been working with Joomla for many years. He has developed websites for general aviation and industrial companies as well as many other of his customers. He is also an experienced trainer in IT related tools and systems. http://twitter.com/dynamicflight



Isabell Schulz is the one to which the quote above belongs to, and helped translate and correct some of the chapters, plus sent an occasional motivational hug. Currently, she works in Sweden and is involved in the Drupal community. http://twitter.com/murgeys

1.1. What is Joomla!?

Joomla! is a free system for creating websites. It is an open source project, which, like most open source projects, is constantly in motion. It is unpredictable, sometimes indescribable, partially controversial, quite often very sexy, at times a little sleepy and provincial. Nevertheless, or perhaps because of these reasons, it has been extremely successful for five years now and popular with millions of users worldwide.

The **word** Joomla! is a derivative of the word Jumla from the African language of Swahili and means "all together."

The **Project** Joomla! is the result of a heated discussion between the Mambo Foundation, which was founded in August 2005, and its then-development team. Joomla! is a development of the successful system Mambo. Joomla! is used all over the world for simple homepages and for complex corporate websites as well. It is easy to install, easy to manage and very reliable.

The Joomla! team has organized and reorganized itself throughout the last five years.

- From 2005 to 2009, Joomla! 1.0 was further developed up to version 1.0.15 and that development was officially laid off in September 2009.
- From 2005 until now, Joomla 1.5 is still being developed, was introduced as a stable version in January 2008, and further developed to version 1.5.22.
- From 2008 until now, Joomla 1.6 is still being developed. A stable version has been available since January 2011.

The users of the Joomla! system remained faithful. Many transferred from their website from Mambo to Joomla! and they have learned a lot over the years. Many users have also been added in the last few years, and there are still people in the world who do not know the system. Joomla!, together with Drupal and Wordpress, is the most used open source web content management system in the world.

In *Figure 1*, Joomla! and Wordpress are on the same level according to Google search volume trend. Joomla! and Wordpress are searched three times as often as Drupal. However, the search volume has been declining since late 2010.

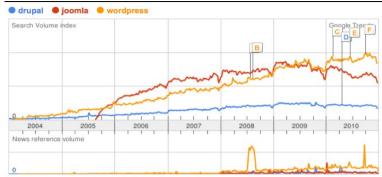


Figure 1: Google Trend 2011-01-04 worldwide Drupal, Joomla!, Wordpress

It was time for Joomla! to release a stable 1.6 version. The situation in Germany is different (Figure 2). Joomla! has almost twice as large of a search volume as Wordpress and Wordpress almost four times as much as Drupal.

Scale is based on the average traffic of drupal from Germany in all years. Learn more



Figure 2: Google Trend 2011-01-04 Germany - Drupal, Joomla!, Wordpress

Here are a few statistics from Google Trend (Table 1):

1.2.Country	Drupal	Joomla!	Wordpress
Germany	1,00	6,80	3,80
France	1,00	6,40	3,50
UK	1,00	2,60	3,30
Italy	1,00	6,50	3,50
Spain	1,00	3,90	3,60
Switzerland	1,00	9,20	3,10
USA	1,00	1,60	3,00
China	1,00	1,40	4,60

Table 1 Google Trend - Drupal, Joomla!, Wordpress

There are significant national differences in the use of content management systems. In Germany, for example, TYPO3 also plays a role. The search volume is comparable to Joomla!. In the U.S., the ratio Joomla! - TYPO3 is 1.0 to 0.01, which indicates an impact more or less not measurable.

In Febuary 2011, 2.7 % of the entire web is powered by Joomla!

The range of Joomla! websites goes from very simple homepages to complex business applications and projects based on the Joomla! Framework. What makes Joomla! so successful and in which ways you can use it, I am going to describe in this book

1.3.Who am I?

My name is Hagen Graf, I'm 46 years old, and I live in *Fitou* [1], France. I am married to the woman of my dreams and have four daughters. My work consists of many different activities such as teaching, advising, listening, testing, programming, understanding structures, developing new applications, questioning and always trying something new. Actually, my work can be done completely online but sometimes clients may have reservations about fully online projects, which is why I am on the road a lot. Being on the road means meeting clients in different countries with different languages and cultures, long car, bus or train rides as well as very short response times to customer inquiries by e-mail, Facebook messages and tweets. This way of working has implications for what I once used to call "the

office". I need to be able to have access from anywhere in the world to my e-mails, pictures, videos, tweets, and documents. My office is located where I am.

1.4. Who are you?

Of course, I do not know what exactly you do but many people whom I have worked with work in a similar way that I do. Employees of larger companies. however, often cannot or may not work as flexibly for various reasons. Your own experience with computers is probably similar to mine. Many of us started with an older PC and a windows system at school or at home, and then got to know from experience the harsh reality of office applications, data loss, lack of memory, hard drive, and printer configuration adventures. The wonderful relationships between these things have been changed with the user-centered way of working of the Web 2.0 and the use of smart phones, but this does not necessarily make it easier. If you do not love messing with passion at night with your operating system or telephone or sorting your photos, music and moving them all from one device to another, then you are probably just like me - happy when your devices and applications are working, when you can access your data on the Internet and all is working smoothly. If you work from a home office, a smooth work environment becomes particularly important. Non-functioning soft- and hardware can quickly turn your situation into a nightmare.

I distinguish between the following types of users:

- **Visitors:** They visit a website and they do not care much about the system you used for creating the site.
- Users: They use the website. They create content using pre-defined procedures.
- Website Designers: They install a Joomla! site on a server, create
 categories, content, links and menu modules, configure templates and
 languages, are all-rounders and usually have the sole responsibility for the
 website.
- CSS Designers: They often like to work exclusively with files that have the extension .css.
- HTML Designers: They give CSS Designers the foundation they need for their work. In Joomla!, they create the so-called template overrides.
- Developers: They know the programming languages PHP and JavaScript and like to use them. They enhance the Joomla! core with additional functions.
- Architects: They think about security, speed and code quality.

The website designer plays a special role in this list. He usually has to cover all other roles, which constitutes a real challenge. As I am writing this book, I often find myself thinking about the website designer.

1.5. What does our software environment look like?

Parallel to the work processes just described above, software has been developed that supports exactly this way of working. Browser-based applications like e-mail services, online banking, group calendar, document management systems, communities, dating services, online auctions and, of course, the Web 2.0 networking platforms are becoming more convenient, sophisticated and user-friendly.

Web 2.0 [2] is still a buzz word. Its potential has long not fully been exhausted, and has just started changing the newspaper and book market. I suspect the German car industry will be the next to jump on the train. Tesla Motors [3] and Local Motors [4] were born in the Internet. Tesla focused on start-up culture while Local Motors focused on Open Source and Crowd Sourcing [5]. The word 'start-up' does not exist in the German Wikipedia (as of 1/4/2011) but there is a note in an article about setting up a company [5].

The data of already established services such as YouTube (videos), Flickr (photos), Twitter (tweets) is processed as raw material. The year of 2011 is also the year of location based services (LBS). WHERE was my photo taken? WHERE was the video recorded?, WHERE did I twitter and WHERE am I at the moment? And who else but me is at this place?

What is especially interesting about the use of online communities and the linkage of all these online networks is that a "virtual layer" or "social graph" arises about my life, which can be utilized by others. The commercial use of this social graph is currently being hotly debated.

Back to Joomla!

Most of the services described above can interact through interfaces (programming interfaces, APIs) and can be integrated into your own site. For companies like Twitter, the requests to use such APIs play a much larger role than their actual website itself

Mobile phones converge with other mobile devices to smart phones. Ever since the launch of the iPhone and iPad, these devices have been seriously noticed and have had a lasting effect on the telephone and communications market. Today, using your smart phone, you can access web pages, fill in and send forms, send and receive emails, take and send pictures as well as videos, listen to music, check in at a place of your choice and see which of your friends are already there and much more.

Your web site should also be legible on a smart phone!

The stationary PC is getting smaller, laptops are becoming more efficient while netbooks are becoming cheaper and more common. Further developments are predominantly focused on wireless connection technologies, miniaturization of components, storage of data with no moving parts as well as battery life and performance.

Everything's going mobile!

1.6. What does this mean for your website?

In the world I just described, a company, an institution, a club, an organization, yes, probably everyone, needs a web presence that is user-friendly and flexible. A presence - one that goes with time, can easily be changed via a web browser, one that replaces your filing cabinet and leather address book, a presence that can communicate with the different devices and can be extended easily.

I assume your website is already the place where you explain what you do or what your company does. This is your place where you maintain your custumer relations 24 hours per day, seven days a week.

Your website probably contains a collection of applications and data summarizing your activities. Your site should also contain interfaces to allow other applications to use them

Until recently, the creation of a website was a difficult thing to do. While you did not have to be a renowned specialist, a combination of perseverance and having fun with what you are doing were necessary to produce appealing results. You had to create static HTML pages in an HTML editor and then upload them via file transfer protocol to a server. To create even the simplest interactivity such as a contact form or a forum, you had to learn a programming language.

It is more than understandable that many people did not take this hardship on themselves and handed over the creation of a website to a web agency or did not even start the project in the first place.

Thanks to Facebook and kits such as Google Sites, creating simple web pages has become relatively easy but if you want something individual, you should become familiar with a content management system.

Joomla! offers everything you need to create your own, individual website.

1.7. What is this book about?

First of all, it is about Joomla! and how to use it. Joomla! is a tool with lots of possibilities and you can use the system in a huge variety of configurations, depending on your ideas and wishes. In order to allow comfortable access, I have structured the book as follows:

- 1. This Introduction
- 2. Showcase
- 3. Installation
- 4 Structures and Terms
- 5. What's New in Joomla! 1.6?
- 6. Managing Content

- 7. Website and Content Configuration
- 8. Templates
- 9. Navigation
- 10. Users and Permissions
- 11. Extension Management
- 12. Core Extensions
- 13. Modules
- 14. Plug-Ins
- 15. Multi-Language Websites
- 16. Working with Templates
- 17. Search Engine Optimization
- 18. Upgrade from Joomla! 1.5 to Joomla! 1.6
- 19. Resources

1.8. What will you be able to do after reading this book?

Although you are a beginner, you will be able to manage your own Joomla! website via a web browser. If you are somehow familar with HTML, CSS and image editing, you will be able to customize a template for your website.

1.9. Any further questions?

Don't hesitate! Of course, I can't deliver technical support. The Joomla! forums provide a wealth of knowledge and you will definitely find answers to your questions there. If you have comments or questions about the book, however, please feel free to leave them

Links:

- [1] http://goo.gl/maps/3dU6
- [2] http://en.wikipedia.org/wiki/Web 2.0
- [3] http://www.teslamotors.com/
- [4] http://www.local-motors.com/
- [5] http://en.wikipedia.org/wiki/Crowd sourcing
- [6] http://de.wikipedia.org/wiki/Unternehmensgr%C3%BCndung

2.Showcase

What do websites look like when they were created with Joomla?

This question can't be answered easily as most websites are based on the Joomla! software, but the design of the website is created by an agency and then "transformed" into a Joomla! template. Therefore, the exterior of a website can be deceiving. Nevertheless, here are some screenshots to give you an idea.

2.1. Guggenheim Museum New York



Website [1], Description [2], Creator [3]

2.2.A Car Dealer



Website [4], Description [5], Creator [6]

2.3.A Pizza Franchise



Website [7], Description [8], Creator [9]

2.Showcase

2.4.A Dancing School



Website [10], Description [11], Creator [12]

2.5.A Bed and Breakfast



Website [13] Description [14] Creator [15]

2.6.A Photographer



melinda borbély

«ARCHITECTURE «COMMERCIAL »LOVES «PORTRAIT «WEDDING

Website [16] Description [17] Creator: Roland Jungwirth

2.7.And?

These websites look how websites are supposed to look. :-) If I had not told you that they were created with Joomla!, you probably would not have noticed it consciously.

2.8. How to find Joomla! Pages?

I will show a few ways to find websites made with Joomla!.

joomla.org

Just have a look at the project site! I found the sites featured above in the <u>Joomla! Showcase</u> [18]. You will find 2,000 websites sorted by category. There is a site of the month, an overview with top-rated sites, and much more.

2.Showcase

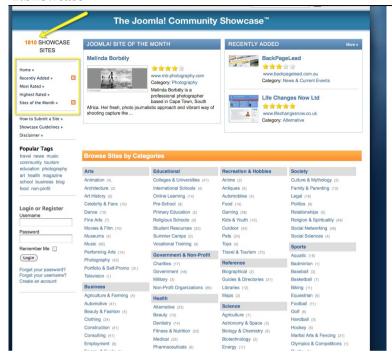


Figure 7: Joomla! Showcase

Google

You can search for the term <u>com_content</u> [19]. The component "content" uses this term in the URL of the page. Nowadays, this kind of searching is not really effective because of the various search engine optimized URLs' but the result is still impressive.

2.9. Check out the website more closely

If you are on a website and want to know whether it was created with Joomla!, have a look at the source code. In the header section, you should find this line:

<meta name="generator" content="Joomla! - Open Source
Content Management" />

2.Showcase

You can also just type the URL of the link to the administration area:

http://example.com/administrator

Here the example of Guggenheim: [20]



Figure 8: Administration of the Guggenheim Museum

Go ahead and ask your friends

I tweeted [21]

[En] Seeking Websites (business, ngo, community, home) built with Joomla, Wordpress o. Drupal, please RT + and post url #zero2hero

and promptly received answers:

- @codingfish @hagengraf http://www.italobikes.com #zero2hero #joomla #community
- @tederion @hagengraf ups, Joomla-Websites NGO: http://is.gd/dOETL
 http://is.gd/dOEXO Business: http://is.gd/dOETL

2.10.Any other ideas?

Do you know any other ways of detecting Joomla! sites? Feel free to leave comments[22].

Links:

- [1] http://www.guggenheim.org/
- [2] http://community.joomla.org/showcase/component/mtree/arts/museums/theguggenheim-museum.html
- [3] http://www.pentagram.com
- [4] http://www.roadstershop.com/
- [5]

http://community.joomla.org/showcase/component/mtree/business/automotive/roads ter-shop.html

- [6] http://www.papertower.com/
- [7] http://marcos.com/
- [8] http://community.joomla.org/showcase/sites/business/food-and-
- beverage/marcos-pizza.html
- [9] http://zunostudios.com/
- [10] http://www.compagnieantares.com/
- [11] http://community.joomla.org/showcase/sites/arts/dance/compagnie-antares.html
- [12] http://www.kinesphere.fr/
- [13] http://www.lamaisondelucy.com/
- [14] http://community.joomla.org/showcase/sites/business/food-and-

beverage/marcos-pizza.html

- [15] http://www.magnoliawebgroup.com/
- [16] http://www.mb-photography.com/

http://community.joomla.org/showcase/component/mtree/arts/photography/melindaborbely.html

- [18] http://community.joomla.org/showcase/
- [19] http://www.google.de/search?q=com_content
- [20] http://www.guggenheim.org/administrator/
- [21] http://twitter.com/hagengraf/status/19554973733
- [22] http://cocoate.com/node/2163

Thanks to the web installer, Joomla! can be installed in only a few minutes. In order to install Joomla! on your local PC, it is necessary to set up your "own internet", for which you'll need a consisting supported browser, a web server, a PHP environment and as well a Joomla" supported database system. We call this a LAMP stack [1] (or XAMP) and a client server system. The Joomla! files will be copied to this system and configured with the Joomla! web installer.

3.1. Minimum system requirements:

- an installed and functioning web server, like Apache or Microsoft IIS, version 1.13.19.
- the PHP scripting language, version 5.2.4. PHP support for MySQL and Zlib must be compiled into PHP. Zlib is a library that allows PHP to read file packages that are compressed with the ZIP-based technique.
- the MySQL database system, version 3.23.x or higher, for Unicode character sets MySQL 4.1.x.

Installation variants

You need all the components mentioned above to install a Joomla! system for yourself. PC, browser, and Internet connection are usually available. There are a number of options for web server, PHP interpreter, and database.

You can:

- set the system up locally on your PC
- set the system up on a server in a company's Intranet
- rent a virtual server from a provider
- rent or purchase a server from a provider (with root access)

You can also:

Have the web server and database located on computers that are physically separated from each other.

You can also, of course, use different:

- brands of web servers
- versions of PHP interpreters

Versions of MvSOL databases

And on top of that, you can install and operate all these components on various operating systems.

This freedom in choice of resources can sometimes confuse a layman. Therefore, we will discuss a few typical scenarios.

Local Test Environment

If you are at home or in your office, for example, and want to set up a Joomla! website, you may use any of the following operating systems.

Windows Operating System

For a Windows operating system you can use either of two web servers:.

You take a pre-configured package (XAMPP), unpack it on your computer, and everything you need is there (http://apachefriends.org).

Linux Operating System

Here it depends on the distribution version you have. All the distributions allow simple installation (with a click of the mouse) of the Apache, PHP, and MySQL packages. At times, depending on distribution, they may already be pre-installed. So you can use the programs contained in the distribution or a preconfigured package (XAMPP); extract it on your computer and everything you need is there (http://apachefriends.org).

Mac OS X Operating System

In Mac OS X operating system, you have a default web server (Apache) in your system that you have to activate, but unfortunately not PHP and no MySQL.

So you can use the installed Apache web server and install the missing software or the pre-configured XAMPP package for Mac OS X. Another complete package by the name of MAMP is also very popular with the Mac OS X environment (http://www.mamp.info).

Production Environment

You have several options here as well.

Rented Virtual Server

You rent a web-space package with database, PHP support, and often also your domain name from a provider. In this case you have a functional environment and you can install your Joomla! into it. Consult your provider as to the version choices (PHP, MySQL). Sometimes providers offer Joomla! pre-installed with various templates. IIf this is the case, all you have to do is activate Joomla! with a click of the mouse and it is ready for you.

Your Own Server

You rent a server from a provider and install the operating system of your choice. You are the administrator of the system and you can work on it, just like on your PC at home

Before you venture into the wilderness of the Internet, you should first practice on your local computer. This has the advantage that there are no connection fees, it is very fast, and you can practice at a leisurely pace.

You may even have a small local network at home where you can install Joomla! on one computer and access it from another.

Remember that there are probably more current versions on the respective project sites on the Internet.

3.2. Stumbling stones

This topic is very complex because there is a vast number of providers and an even greater number of installed web server, PHP, MySQL versions and web space management tools. Crunchpoints during the installation often consist of:

- an activated PHP Safe Mode, preventing you to upload files,
- 'forbidden' rewrite paths with the Apache web server because the so-called Apache Rewrite Engine (mod rewrite) is not activated,
- the directory permissions on Linux and OSX, which are set differently than in Windows.

Basically, the easiest way that almost always works, is the following:

- Download the current file package from joomla.org to your home PC and unzip everything into a temporary directory.
- Load the unpacked files via FTP onto your rented server or to the
 directory of your local installation. The files must be installed in the
 public directory. These directories are usually called htdocs, public_html
 or html. If there already are other installations in that directory, you can
 specify a sub directory in which your Joomla! files should be installed.

Many web hosts allows you to link your rented domain name to a directory.

You have to find out the name of your database. In most cases, one or
more databases are included in your web hosting package. Sometimes, the
names of the user, database and password are already given; sometimes
you have to set them up first. Usually you can do this in a browser-based
configuration interface. You will need the database access information for
Joomla's web installer.

3.3. Joomla! web installer

Download Joomla! 1.6 at joomla.org and unpack the files into your root folder of the web server (e.g.: /htdocs). From now on, everything is going to go really fast because the Joomla! web installer is working for you. Go to URL http://localhost/.

Step 1 – Selecting a language

The web installer appears with a selection of languages. Choosing the language is the first of seven installation steps. Set the desired language, and click the Next button (*Figure 1*).



Figure 1: Installer – Select language

Step 2 – Installation check

The *Installation check* (*Figure 2*) should help you verify whether your server environment is suitable for the installation of Joomla! or not.



Figure 2: Installer - Installation check

It's a good sign if you see mostly green test results. Depending on your configuration, there can be differences. The Joomla! Installer considers the configuration settings of the web server (in our case Apache), PHP, and the operating system. When using Unix Systems (Linux, Mac OS X), you have to pay attention to *file permissions* [1]. This is particularly important for the file *configuration.php*. This file will be generated at the end of the installation with your personal values. If the installer can not write in the folder, Joomla! can not create the file and the installation will fail. In this case, try to configure the rights and then click the button *repeat check*. Then, click the *Next* button and you will get to the step *license*.

Step 3 – License

Each software product is somehow licensed. Joomla! is licensed according to the GNU General Public License, version 2.0 (*Figure 3*).



Figure 3: Installer – License

Step 4 – Database

In the fourth step *database configuration*, your data base parameters will be requested (*Figure 4*). You can create any number of databases in your local server environment. You have a MySQL user with the name *root*. The user root is the MySQL administrator and can, therefore, do everything in your MySQL system. The password depends on your server environment (no password is needed with XAMPP, with MAMP the password is root).



Figure 4: Installer – database configuration

Enter the following values into your local installation:

computer name: localhost

user name: root

• password: [only you know that]

Now select the database name. In a productive environment on a database server with a provider, you probably have a fixed quota of databases and the database credentials are predefined. If you have root permission on your MySQL server, you can enter a name of a new database. Joomla! will then create that database.

By clicking the green triangle at *advanced settings*, additional options will appear. You can select whether the tables of any existing Joomla! installation in this database should be cleared or saved and marked with the prefix bak.

The *MySQL table prefix* is really practical. In front of each table name generated by the web installer, it writes the text that you typed in the appropriate field. As a default, the web installer suggests *jos*. This has a simple reason. Sometimes you may only be able to get one MySQL database from your provider. If you want to run two or more Joomla! sites, you have a problem, as the tables do not differ from each other. With the *table prefix* it is possible to distinguish several tables (*jos mueller*

oder *jos_schulze_*). Here, you should use the default *jos_*. The prefix is also used to indicate saved data (*bak*); see above.

Step 5 - FTP-configuration

In order to avoid problems with access rights and possibly turned on PHP Safe Mode, you have the possibility to use the FTP functions of PHP for the upload and file handling. This is not necessary in a local installation. If you have installed Joomla! on a virtual server with your provider, you can enter the FTP data provided by your ISP. If your provider allows this function, it is advisable for security reasons, to create different FTP accounts for users and for the Joomla! installation. Activate the FTP account just for that Joomla! directory (*Figure 5*).

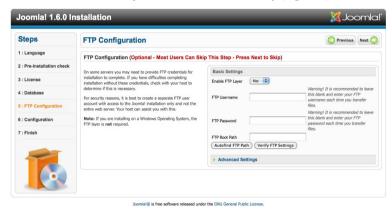


Figure 5: Installer – FTP-configuration

Step 6 - Configuration

The main configuration is divided into three steps.

In the first part of the configuration the name of your site is requested. This name will appear in the title bar of the browser window when someone accesses your site. The name is also used at various other places, such as in confirmation emails to registered users. For our example page, I'll use the name Joomla! (*Figure 6*). In the second part, the name, e-mail address and administrator password are requested. Writing down the password on a piece of paper is probably best (but do not stick it on the screen or under the keyboard :-)).

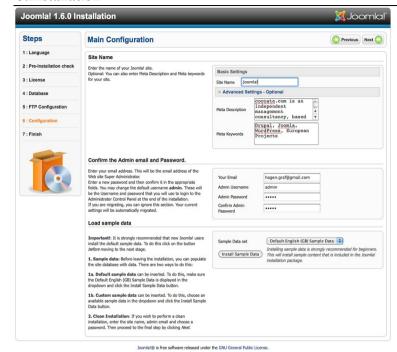


Figure 6: Installer – Configuration – Name, E-Mail, Password

In the third part, you specify the type of data your Joomla! installation should contain.

Installation of sample data

The data is the most important thing in your installation. Joomla! allows (and strongly recommends for beginners) the installation of sample data. You will be provided with a small manual about Joomla! and many examples to experiment safely. Click the button *install sample data*. The installer will load the data into your database and change the display (*Figure 7*). This process is somewhat unimpressive but necessary for installing sample data. The button will disappear and a small text box will be visible.

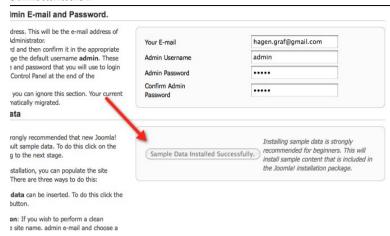
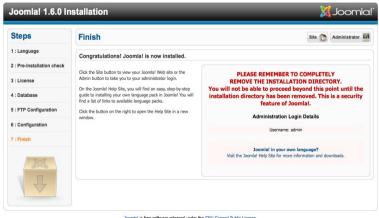


Figure 7: Installer - Configuration - Sample data

Click on the button *NEXT* and the data will be transferred.

Step 7 – Completion

In the seventh and final step you will be congratulated on having successfully installed Joomla! (Figure 8). Congratulations from me as well! You will now see an advisory in bold letters appearing in the display, prompting you to delete the directory called 'Installation'. You should follow this advisory because your Joomla! website will otherwise not run properly.



Joomla! is free software released under the GNU General Public License.

Figure 8: Installer – Completion

Note: A file named configuration.php has been created in your document directory. If you would like to repeat the installation, you will need to delete the file *configuration.php* before deleting the *installation directory*. The Joomla! installer will start anew when you pull up the URL in your browser, where your Joomla! files are located.

Now that you have fully installed Joomla! you can begin configuring your website and content. You have the choice between the buttons *Site* (see website) and *Admin* (administration interface). Go ahead and have a look at your newly created website and click on *Site*. In case you have not yet deleted the *installation directory*, you will once again receive a friendly reminder to do so now and then refresh the page. The result looks very impressive (*Figure 9*).

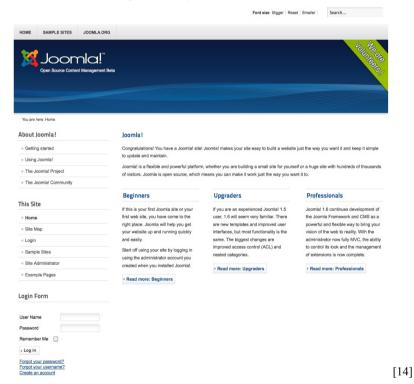


Figure 9: Your website directly after installation

Have a look around, browse through a few options and try to familiarize yourself with your new site. Many features of Joomla! are being used on this website filled with sampla data. Next, we are going to look at these in detail!

3.4. Unpublish Example Data

If you are installing Joomla! 1.6 for the first time, I recommend you also install the example data. Take your time and explore the website and how it all comes together. The example data show you how the website looks with content and comes with short explanations of the example content and modules. To get a brief overview, read the 50 pages behind the menu item "Using Joomla!".

Now that you have seen enough, you would probably love to configure your website according to your needs and wishes.

3.5. How to get an empty Joomla! ?

To get an empty version, you can:

- Install a fresh Joomla! 1.6 without example data:
 Create a new folder in your local web directory (/htdocs) and install the
 new Joomla!. Now you have two complete Joomla! installations. This
 approach is very helpful for training purposes.
- 2. Delete the example data in your administration area.
- 3. Unpublish the example data. Please watch the video attached, in which I am going to show you how to do that.

If you decide to follow step 2 or 3, you will need to login in the administration area. There you can delete and/or unpublish the example data and menu items.

Menu manager

Go to the Menu Manager in the *Top Menu* (Menus -> Top), click the check boxes on the left side above the menu items to choose all of them, and then click the icon *Unpublish*. After you have done this, you will see a red icon on each menu item (*Figure 10*). If you now go back to your website (refresh it), you will notice that the top menu is no longer visible. Repeat the same procedure with the *Main Menu* and the *About Joomla!* menu. Make sure you choose all menu items, except the Home/Frontpage item. This menu item cannot be deleted because you need a frontpage. In the lower area, you may change the number of displayed menu items (*Figure 11*).

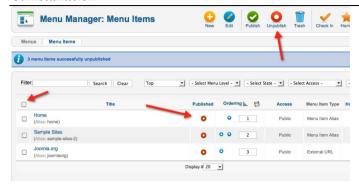


Figure 10: Menu manager I

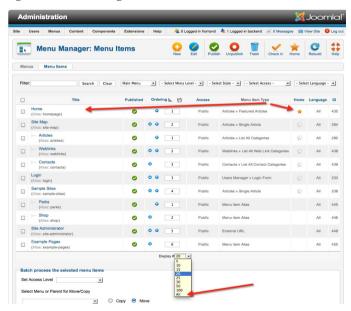


Figure 11: Menu manager II

Article manager

Use the same procedure as described above. Open the article manager and choose all content items to unpublish or delete them.

Cache

To make sure that all data will disappear from you site, you have to clear the entire cache (*Site Maintenance -> Clear Cache*). Again, choose all content and delete it.

Empty Website

Your Joomla! is now "empty" (Figure 12).

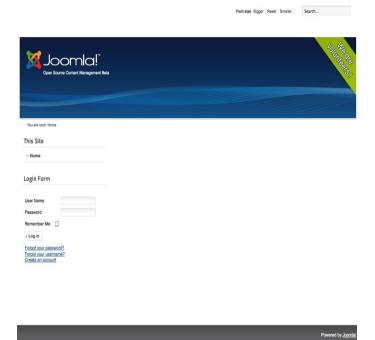


Figure 12: Joomla! without example data

Links:

[1] http://en.wikipedia.org/wiki/LAMP_%28software_bundle%29

4. Structures and Terms

I would like to explain and clarify some structures and terms before we begin with the configuration.

4.1.Frontend

With the frontend we mean the areas of the website as visitors or registered users see it. A registered user normally works only in the frontend. It is like in a store, where the goods are displayed in shop windows and on shelves. Here you can have a look around.

4.2.Backend

This is your administration area, therefore, we call it just administration. You can give registered users the right to work in your backend. This privilege is mostly limited to several employees, who should administer some tasks on the website. You can access the administration login via /administrator.

http://localhost/administrator

There you can register with your login details and choose your preferred language. (*Figure 1*).



Figure 1: Joomla! Administration registration

Once logged in successfully, you'll have access to the administration, which is structured according to your user rights. (*Figure 2*).

4.Structures and Terms



Figure 2: Administration

You may access each function either by using the combined menu tab system or by simply clicking an icon on the start screen.

4.3. Files

Joomla! consists of hundreds of files. Images, PHP scripts, CSS files, JavaScript files and a many more.

You probably already noticed this when you unpacked the compressed package and copied it into the htdocs folder. Basically, you have already installed two Joomla! packages: one for the frontend and one for the backend. The 'Backend Joomla!' is located in the *administrator* folder (*Figure 3*).

This folder is addressed when you call /administrator in the browser. Inside that folder are other folders like *cache*, *components*, *language*, *modules* and *templates*. The specific backend files are stored in these directories.

You will find the same folder names again outside the *administrator* folder. These folders contain the frontend files. These are not really two Joomla! packages, but there is a clear separation between backend and frontend files.

For example, all files uploaded with the *Media Manager* will be saved in the */media* folder. All files have to be saved with a backup.

	⊙ # #		•
Name	▲ Date Modified	Size	Kind
■ administrator	14 décembre 2010 15:53	Size	Folder
	14 décembre 2010 15:53		Folder
cuerre			
components	14 décembre 2010 15:53		Folder
▶ iii help	14 décembre 2010 15:53		Folder
includes includes	14 décembre 2010 15:53		Folder
index.php	12 décembre 2010 23:49	4 KB	TextWument
language	15 décembre 2010 09:05		Folder
manifests	14 décembre 2010 15:53		Folder
modules	14 décembre 2010 15:53		Folder
templates	14 décembre 2010 15:54		Folder
cache 🚞 cache	14 décembre 2010 15:54		Folder
components 📄	14 décembre 2010 15:54		Folder
🐒 configuration.php	Today, 17:48	4 KB	TextWument
htaccess.txt	5 septembre 2010 21:27	4 KB	Plain Text
images images	14 décembre 2010 15:54		Folder
includes includes	14 décembre 2010 15:54		Folder
🐒 index.php	12 décembre 2010 23:49	4 KB	TextWument
installation	14 décembre 2010 15:54		Folder
joomla.xml	14 décembre 2010 15:54	4 KB	Text document
language	15 décembre 2010 09:06		Folder
libraries	14 décembre 2010 15:54		Folder
LICENSE.txt	12 décembre 2009 09:44	20 KB	Plain Text
logs 📄	14 décembre 2010 15:54		Folder
▶ 🚞 media	14 décembre 2010 15:53		Folder
modules	14 décembre 2010 15:54		Folder
plugins	14 décembre 2010 15:54		Folder
README.txt	22 juillet 2010 01:05	8 KB	Plain Text
robots.txt	12 août 2009 13:12	4 KB	Plain Text
templates	14 décembre 2010 15:54		Folder
tmp	14 décembre 2010 15:54		Folder

Figure 3: Joomla! 1.6 files and folder

4.4.Database

Additionally to files (graphics, documents, system files, etc.) Joomla! also needs a database. During the installation procedure, the Joomla! web installer creates 33 tables in your specified database (*Figure 4*). In these tables, all content will be managed.

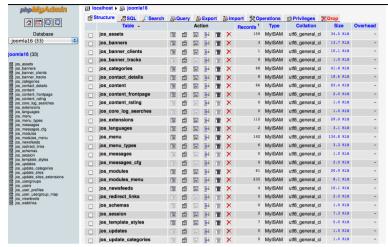


Figure 4: The Joomla! data base tables

When I say content, I mean texts and configuration settings. The tables in the screenshot are displayed by means of phpMyAdmin. phpMyAdmin is a part of XAMPP and MAMP and is available via

http://localhost/phpMyAdmin

Usually, no changes need to be made in these tables. In case you forget your admin password, phpMyAdmin is very helpful.

This software can also be used for backing up your database by creating a so-called SQL dump, as your tables have to be secured regularly.

4.5. Elements of Joomla!

The structure of Joomla! is simple, sophisticated and efficient.

Joomla! assumes that you want to write an article. An article usually consists of a title, text and some configuration settings.

Article

Articles can be displayed in single or list view.

On the frontpage of your your recently installed Joomla! website you will see these four articles (*Figure 5*).

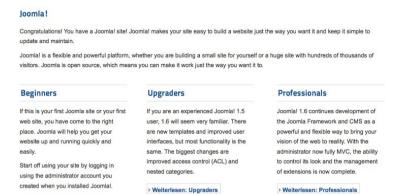


Figure 5: Article on frontpage

> Weiterlesen: Beginners

The articles are sorted in a certain manner. The first article is displayed by using the full width of the website. The other articles are placed below in three columns. If the articles are too long, you may insert a *read more* link. This representation is a list view. By clicking on the *read more* link you will be redirected to the single representation of that article (*figure 6*). The type of display can be changed by setting *options* in the backend, however, only by the user with corresponding access rights.

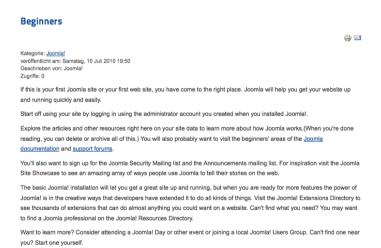


Figure 6: single display of an article

Articles can be published (*publish*) or not published (*unpublish*). You can feature articles on your frontpage, you can archive them or put them in the trash and retrieve them. You can copy and move them.

Categories

In order to display articles clearly, you may create categories, and then assign an article to them. Each article can be assigned to exactly one category (*Figure 7*). The categories can be nested to any depth. Articles from one or multiple categories can be assigned to one menu item and displayed in various ways. By clicking on the menu item, all articles from different categories will be shown. This principle is used by online newspapers, for example. You click on *Sports* and get all categorized articles for this topic. If the newspaper discerns between different forms of sports, they will use nested category trees:

- Sports
 - Football
 - Handball
- Politics
 - Domestic
 - Europe
 - World

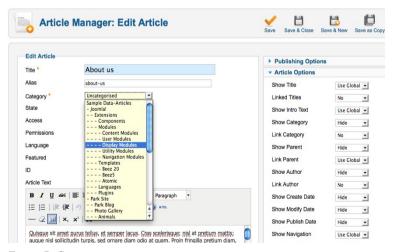


Figure 7: Category assignment

Heer

Users are needed to produce content. At least one user is registered on each Joomla! site, namely the one you created during the installation, with the rights to configure everything on your site. Depending on the user's rights, he can work in frontend and/or backend to write an article. Each user requires a username, an email address and a password. Every user can be assigned to any user group as well as to any access level. This enables the user to create articles that are only visible to certain user groups.

Navigation

To find your way around the website, you will need navigation with corresponding links. In Joomla! we call this a *menu*. You may create as many menus as desired and nest them into as many different ways as you wish. Each menu is a module which can be positioned on a provided area in the template.

Module

A module is something that you can position next to an article. A menu, for example, is a module. The small registration block on the left side is also a module. You can create as many modules with smart functions as you need and position them on the predefined area in the template.

Templates

A template is the graphical pattern for your website. It mostly consists of HTML and CSS files. Joomla! delivers several templates for you to choose from. Templates are configurable, which allows you to upload a different logo, change the background color, etc. Each template provides areas where modules can be positioned (*Figure 8*).

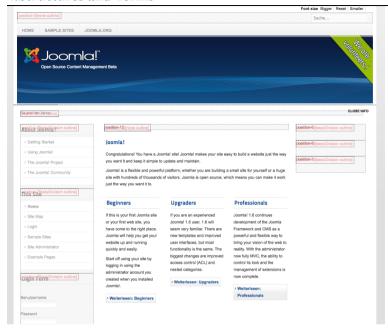


Figure 8: Template Positions

You can group modules around one or more articles.

Plug-ins

A plug-in provides practical services but is usually invisible to the visitors of the site. A wysiwyg editor, for example, is a plug-in. Plug-ins are extensions, which can be installed unlimited amount of times. The core package already consists of numerous useful plug-ins.

Components

Components are the little surprise packages that help you create nearly anything on your site. You want to have a booking system for workshops? A platform for properties? A forum? An image gallery? You just have to install the right component!

The Joomla! core package already comes with some components, e.g., the contact component, which enables you to integrate contact forms into your site. There are thousands of components to enhance your Joomla! 1.6 system.

Options

You will need individual configuration settings for your website; we call them options. These options are applied to the whole website, for users, categories, modules, components. You will always find an icon named *Options* like, e.g., that one (*Figure 9*), which provides you with the possibility to see the position of modules (*Figure 8*) by inserting http://localhost/index.php?tp=1
The initial tp stands for template position.

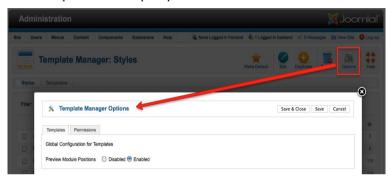


Figure 9: Options

Other structures

Other structures for user interfaces, templates and technical relations are also available. For the time being, you are well equipped by remembering the described structures above.

What is the difference between Joomla! 1.5 and Joomla 1.6?

The biggest changes are a completely new user rights management and the possibility to create nested categories. In addition to that, there are many "small things" that make switching to Joomla! 1.6 attractive. The biggest "small thing" is probably that the source code has been simplified, reduced and is therefore more consistent now. Developers can now be more confident with the behavior of the Joomla! 1.6 framework.

5.1. New access concept

The *Access Control List* (ACL) has completely been changed in Joomla 1.6. The existing user groups used in Joomla! 1.5 are still the same in Joomla! 1.6 but they can be enhanced and renamed. Unlimited access levels can also be defined there. User groups can be assigned to access levels (*Figure 1*) and different groups can then be assigned to various access levels.

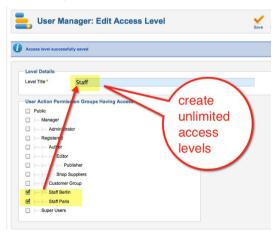


Figure 1: user groups refers to access level

5.2. New category system

There will no longer be any sections. Categories can be nested as deeply as you would like. (Figure 2)

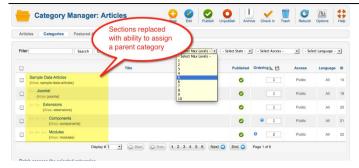


Figure 2: Nested Categories

5.3. Multiprocessing

Copy and move operations, and the allocation of access levels can now be done in a batch process (*Figure 3*).



Figure 3: Multiprocessing

Users can be activated in batch processes.

5.4. Updates per mouse click

A simple feature. The system detects available updates and initiates them by clicking on the corresponding button.

5.5. Templates

There have been many changes in the area of templates. There are two administrator templates and three website templates. The **Blue Stork** template is the new standard for the administrator area; an alternative is **Hathor** (*Figure 4*). **Beez2** is the default website template and **Atomic** (*Figure 5*) is a good base for your own template project.



Figure 4: Hathor Administrator Template

Joomla!

Joomla!

Congratulations! You have a Joomla! site! Joomla! makes your site easy to build a website just the way you want it and keep it simple to update and maintain.

Joomla! is a flexible and powerful platform, whether you are building a small site for yourself or a huge site with hundreds of thousands of visitors. Joomla is open source, which means you can make it work just the way you want it to.

Beginners

If this is your first Joomla site or your first web site, you have come to the right place. Joomla will help you get your website up and running quickly and easily.

Start off using your site by logging in using the administrator account you created when you installed Joomlal. Weiterlesen: Beginners

Figure 5: Atomic Website Template

Beez2 is now standard

The XHTML-conform template **Beez** developed by Angie Radtke is now the chosen standard template once you have installed Joomla!. This means, Joomla! 1.6 is accessible by default.

Beez5 is based on HTML5

The new **Beez5** template is compliant with the new HTML5 standard. HTML5 succeeds HTML4 and is currently still being developed.

Template styles

Sometimes you may want to display a template with different options. You may want to create a page with a red background and another page with a blue one. Therefore, you will need *template styles*. Create as many versions (*styles*) of a template with different settings as you like and assign them to a menu link.

Module templates

Modules can now have different layouts which have to be applied in the template.

5.6. Multilingualism

Joomla! now offers the possibility to create articles, categories and modules in several languages. With the new language switcher plug-in module you can filter the entire site for the selected language.

5.7. Creation of a consistent user interface

This feature sounds simple but is difficult to implement. The Joomla! team has tried to simplify the user interface in all areas and has created a more consistent shape. A successful example is the general save dialogue.

If you are in editing mode, you will see articles, categories and modules as shown in *Figure 6*.

- Save: content will be saved, you remain in editing mode
- Save & Close: content will be saved, you leave the editing mode
- Save & New: content will be saved; a new, empty editing mask appears
- Save as copy: content will be saved as a copy, you remain in the editing mask



Figure 6: Save dialogue in article

The parameters known from Joomla! 1.5 are now called options - continuously.

5.8. Minimum requirements

The minimum requirements regarding your server environment and concerning your visitors' web browsers have increased

- Browser:
 - Internet Explorer, version 7 or higher
 - Firefox, version 3 or higher
 - Safari, version 4 or higher
- Server:
 - PHP: minimum version PHP 5 2 4
 - MySQL: minimum version 5.04

5.9.Legacy Mode

The legacy mode from Joomla! 1.5 is no longer necessary. Legacy mode allowed the execution of components originally developed for Joomla 1.0, which have 'only' been adapted to Joomla! 1.5. The procedure of adapting old components is offset by the development of 'native' Joomla! 1.5 and 1.6 components, which use the Joomla! Framework

5.10. Search engine optimization

- You can now use unicode in URLs, which means you may now use special characters like 'ö' and 'ä' or Arabic or Hebrew characters in the URL.
- You can allocate meta text and keywords to categories.

 A title of a site will be displayed following the name of the website in the browser.



Figure 7: Page title in browser

5.11. Modules

- Modules can be published time-controlled.
- The assignment options to menu items have been extended.

5.12. New editor

Code Mirror is the new editor, which is supplied in addition to TinyMCE. It is not a WYSIWYG editor but offers a convenient way to work with 'code-like' content, which will be displayed in color and structured (*Figure 8*).

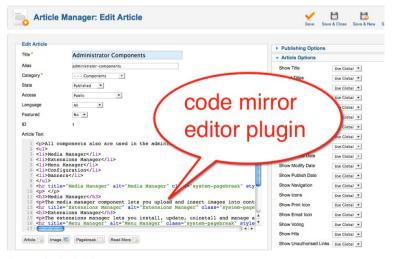


Figure 8: Code Mirror

5.13. Components

- The new redirect component enables redirections to URLs in order to avoid '404 not found' errors.
- The new search component provides an overview of the searched keywords and display results.
- The *survey component* has been eliminated.

5.14.Configuration

The basic configuration has been "purified" and many options can now be set in the appropriate manager, e.g., the user options.

5.15. Cookie settings

The cookie settings now allow the storage of browser cookies in one place. This is important, for example, when working with country-specific sub domains.

All changes and news can be read in the documentation wiki [1] of Joomla!.

Links:

[1] http://docs.joomla.org/What%27s_new_in_Joomla_1.6

A content management system is made for managing content - who would have thought?!

So the next question is: What is content?

In media production and publishing, content is information and experiences that may provide value for an end-user/audience in specific contexts (*Wikipedia* [1]).

Ok, I see, but what is it that provides value?

This question is indeed very hard to answer and quite individual but I think you now get the idea of content and a content management system like Joomla!.

A content management system is useful for managing information that provides value for your audience (*Hagen Graf* :--)).

6.1.Types of content

In core Joomla! you have *articles*, *categories*, *web links*, *banners*, *contacts* and *feeds*. I am not sure whether creating value with banners is possible but banners are also a kind of content. Modules can be used for content creation as well. Often you may want to enrich your content with files like photos and other media types. For this Joomla! has its *Media manager*. This is what Joomla! core provides as your toolbox to manage all these bits and pieces to create value to your audience. I am going to cover these tools in the next chapters.

If this isn't enough for you, you can enhance Joomla! with so-called <u>content</u> <u>construction kits</u> [2] like <u>K2</u> [3], <u>FlexiContent</u> [4] or <u>CCK jSeblod</u> [5] and many other extensions, but that's another book entirely. :-)

Links:

- [1] http://en.wikipedia.org/wiki/Content %28media%29
- [2] http://extensions.joomla.org/extensions/news-production/content-construction
- [3] http://getk2.org/
- [4] http://www.flexicontent.org/
- [5] http://www.jseblod-cck.com/

6.2. How to create an 'About Us' Page

To give you a first real challenge, let's create a first page on your new website. It will be an *about us* page on which you can write about your company, your project, or yourself. Most of the time, a page like this contains a title, text and perhaps a few images.

Static vs. Dynamic content

An "about us" page is usually created once, is accessible via a menu link, and in the future all you will have to do is change it as you go. It has a static character. A press release or blog entry, however, have a dynamic character.

- For static pages, in contrast to dynamic pages, the creation date and author do not really matter.
- Static pages are usually accessible via a menu link whereas dynamic pages can be accessed through lists.

The plan

The 'about us' page should consist of the following components:

- a title,
- a text.
- an image.
- The page should not appear on the front page.
- We want a link to the page in the top horizontal menu (top).

This may sound simple at first :-).

Go ahead and log into the administration interface!

Step 1 - Create content

Go to the $Article\ Manager\ (Content \rightarrow Article\ Manager)$. There you might still see your unpublished sample data (Figure 1).

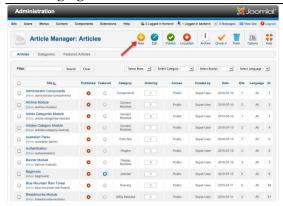


Figure 1: Article manager

Click the icon to get to the appropriate form and then add the title and text. In the upper pane, below the title, select "uncategorized" as a category. This category was created by installing the *example data*. The field *Featured* indicates whether the content should be displayed in the *featured blog layout*, which is mostly used as the front page. This still works in Joomla! 1.6 but the terms can easily be misunderstood. Select *No*. In the editor window, you may now enter your text. Joomla! comes with the default editor *TinyMCE* (*Figure 2*).

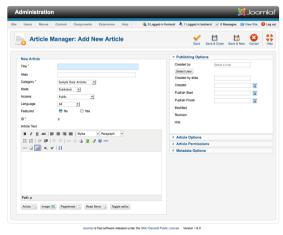


Figure 2: Article edit form

Inserting an image from a URL

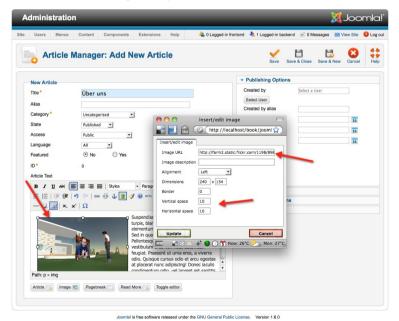
As a first example we are going to use an already existing image on the web. For example, this one:

http://farm2.static.flickr.com/1198/898250237 78a0e75cba m.jpg (Figure 3)



Abbildung 3: Example image

Move the cursor to the position in the text at which you would like to insert the image. Click on the image icon in the editor toolbar and paste the URL of the image to the pop-up window. Configure the image with a left alignment and use 10 pixels vertical and horizontal space (*Figure 4*).



.....

Hagen Graf - cocoate.com - February 2011

The image will appear in your editor window. Click *Save* and your item is stored. There are several ways to save it:

- Save Item is saved. Form is not closed. Used for saving when you still
 want to continue working.
- Save & Close Item is saved and form will be closed.
- Save & New Item is saved, form will be closed and a new empty article form is called

Exit the form.

Step 2 - Creating a Menu Link

The post has been created but is not appearing on the website. For it to appear, we need a link! Click the *New* icon in the *Menu manager* in the top menu ($Menu \rightarrow Top$). Click the 'Select' button next to the field *Menu item type*. A window with various links will pop up. Click on the link *single article* (*Figure 5*).

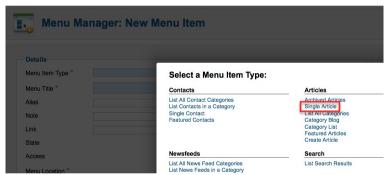


Figure 5: Assign an article to a menu item

Now you need to choose the desired article. Click the button Select / Change in the right pane (Select Article) to select it. You will see a search box with all articles. In case you can't find your article on the page right away, you can filter the list by typing a part of the article's title in the search box and then clicking on the title of the correct article in the result list (*Figure 6*).



Figure 6: Menu type - single article - select article

Enter a title for the link "About us" and make sure that *top* is selected in the *menu location*. We can leave the remaining options with their settings for now.

Step 3 - 'About us' on the website

If you now load the frontend website, you will discover the new link in the top menu. Click it and you will see the *about us* content - congratulations on having created your first page (*Figure 7*).



Figure 7: About us page

Step 4 - Image Upload

If your image is not already available on the Internet, you will need to upload it from your PC. Let's go through the example together. Go to the *Article Manager* ($Content \rightarrow Article manager$). If you can't find your article, locate it easily by using the search box. Select the article's title and the edit form will open. Delete the linked image from the text.

Below the editor window you will find the *Image* button. This button launches a dialog box to upload an image. You can choose between existing images or upload new ones (*Figure 8*).

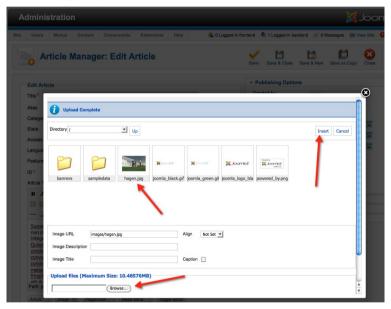


Figure 8: Image upload

Once the image has been inserted into the text, the formatting can be changed by using the *image icon* in the editor's toolbar. This separation of functions in Joomla! was purposely chosen because you have the possibility to use different editors. The Joomla! *Image* button will always remain the same but the image formatting in the editor might differ.

Attention: Joomla! uses the images as they are. The images will not be resized!

6.3.A Typical Article

The following items usually have to be taken into consideration when it comes to creating an article on your website:

- 1. a text with one or more images
- 2. a teaser text for list views with a *read more* link pointing to the full article page
- 3. the article should appear on the front page and needs no menu link
- 4. nice to have: a scheduled publication date
- 5. nice to have: a printer-friendly version for visitors who would like to print the article
- 6. nice to have: an option to forward the article by email

Start

The article should appear on the front page of your website. If you deleted, did not install or change your sample data, your Joomla! front page will look like the one in *Figure 1* (*Figure 1*). It is, of course, not a bad thing if posts should appear. :-)

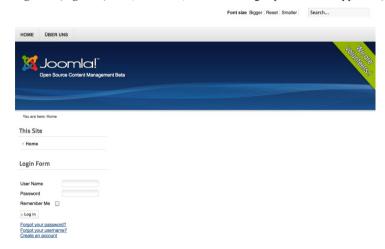


Figure 1: Empty website

When you log into the administration area, you will see an icon called *Add New Article*.

You may either click on this icon or access the form via the main navigation Content \rightarrow Article Manager \rightarrow Add New Article (Figure 2)

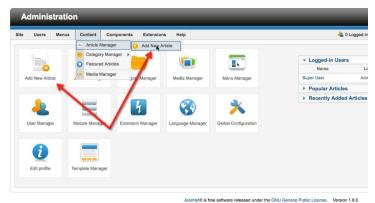


Figure 2: Administration area

Article form

You are now in the article form, in which you will probably write all articles you will ever write in Joomla!. A very important place! The form is structured as in *Figure 3*.

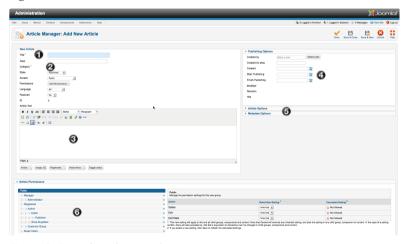


Figure 3: Entry form for contributions

The minimum requirement for an article is a title (1), a category (2), and a text (3). If you look at the form more closely, you will notice the help texts that appear when you move the mouse across the description of a field. I have marked the areas in the form in *Figure 3* with six digits.

- 1. The most important part is the **title** or headline. The title appears as a headline on the website (usually in the biggest size of the HTML headline tags <h1>) and in the browser bar at the top (you can enable or disable this behavior). The title is the foundation for the alias field below. The alias is automatically generated by Joomla! when you save the article and the way it looks is configurable as well. Basically, the purpose of an alias is to have a simple, short and legible URL in the browser address bar, which can easily be used in e-mails or chats as well. In the example of http://example.com/first-article first-article is the alias.
- 2. This is about the classification or categorization of the article. Every item MUST be assigned to a category. If you explicitly do not want to categorize the article, you can assign the category uncategorized. This is especially useful for more static content pages like legal notices and the About Us page. In this area, other important attributes can be configured, including State (published or not), who has Access (Access, Permission depends on various settings), Language and Featured. Featured replaces the former attribute frontpage and ensures that the items are in a predefined blog layout for your website frontpage. The article ID is created after saving and consists of a serial number.
- 3. In this section you can write your text, which should be of value to your audience. Sounds really easy, doesn't it?!:-)

 Technically, you are dealing with a WYSIWYG editor (*What You See Is What You Get*) here. The editor converts your written text into HTML text format. Joomla! uses the TinyMCE [1] editor as default configuration. TinyMCE is an independent open source project, which has so many functions that you could write a separate book about it. (*May not be a bad idea*)

It basically works like any other word processor: write text, highlight text, then click on a toolbar icon and the function is applied or a dialog box opens.

The buttons below the input area are unusual and can be confusing at times. These buttons are Joomla! specific and only have an indirect relationship with the editor. The Joomla! core comes with five of these very practical additional buttons.

You can add more buttons by adding Joomla! extensions:

- 1. **Article**: allows you to link to other existing Joomla! articles
- 2. **Image**: You can insert an existing image or photo from the *Media Manager* or upload a new image.
- 3. **Pagebreak**: inserts a pagebreak in your article

- 4. **Read More**: allows you to stipulate where to place the *read more* link
- 5. **Toggle Editor**: switches the editor on and off. If it is off, you will see the HTML code of your article.
- 4. What was called *Parameter* in Joomla! 1.5, is now called *Options* in Joomla! 1.6, like, for example, the *Publishing Options*. Here you can specify who wrote the article (*Created by*). The user who created the article is usually allowed and responsible for making changes to the article later. Which name is really shown below the title at the webpage is configured in *Created by Alias*. The three fields below allow you to schedule the publishing. Simply enter the appropriate dates and Joomla! takes care of the rest.
- 5. In this section you can configure many options by switching them on and off. You can change the article layout to suit the reader's and search engine's needs. Just start experimenting it's the best way to learn.
- 6. The sixth and final area concerns the permissions for this article. This selection will help us in many places in Joomla! 1.6 and I will cover this in chapter *Users and Permissions* on page 100.

Sample article

Let's create the article outlined above together:

A text with one or more images

Just write your text. To add an image or images, there are numerous possibilities:

- The image is already available online, for example, on Flickr [23].
 In this case, click the *image* icon in the editor toolbar and copy the image URL to the dialog box.
- 2. The image is already in the Joomla! *Media Manager*. In this case, click the *image* button below to select the image and insert it into your text (*Figure 4*).

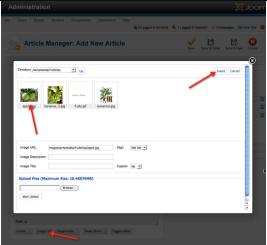


Figure 4: Insert Image from media field

3. The picture is on your hard disk.

This is the most complex case. Basically, you will also use the image button below the text. There you will find an upload dialogue through which you can upload your image "easily". Remember that Joomla! will **NOT** resize the image. If you upload a photo from your digital camera, it will be displayed in its full original size (width > 3000 pixels). **You have to resize the image before uploading**.

If all goes well - congratulations!

If it doesn't work, this could be due to many things, such as lack of permissions in the directories of the media manager. At best, you will get an error message.

Once you have inserted the image from the media, you can select and format it by clicking the image icon in the editor's toolbar.

A teaser text for list views with a read more link to the full article

This is easy. Move the cursor to the position at which the *read more* link should appear and click on the *read more* button below the text area.

The article should appear on the frontpage and needs no menu link

Select Yes in the field Featured in Area 2.

A scheduled publication would be nice

Avoid this at first, so you don't have to wait for the article to appear on your website:-). If you would like to try it later with a different article, simply fill the fields *Start Publishing* and *Finish Publishing* with the appropriate information or select the dates by clicking the calendar icon.

A printer-friendly version of the article

If you do not know at this point where the global settings are located, have a look at the chapter *Website and Content Configuration (Page 82)* and verify the current settings. In area 5, you may switch the *Show Printer* icon to 'show'.

Forwarding of the article by e-mail

Simply set the options in area 5, switch the *Show Email Icon* to *show*.

Result

After saving you can reload your site and will see your article on the frontpage as in *Figure 5*.



Figure 5: Article on the frontpage

Links:

[7] http://tinymce.moxiecode.com/

6.4. Structure Your Content with Categories

Joomla! articles can be categorized. Generally spoken, categorization is the process of recognizing, differentiating and understanding something through abstraction. This may sound rather complicated but proves very useful when managing several articles

Joomla! offers the possibility of creating as many categories as you wish. It is possible to build nested categories and an article can be related to one of these categories.

Newspapers, for example, use categories to better differentiate between their articles. Here is an example from a <u>Joomla! template</u> [1] (*Figure 1*).

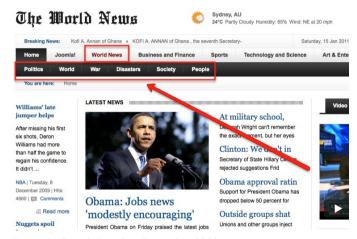


Figure 1: Gavick Template December 2009

They are using the category *World News* and under this category there are additional categories like *Politics, World, War, Disasters* and *more.* Sometimes two levels are sufficient like in this example; sometimes you may need more. In Joomla! 1.5 it was not possible to have more than two levels. With Joomla! 1.6 you can have as many levels as you want. Joomla! no longer has sections - only categories.

In the Category Manager (Administration \rightarrow Content \rightarrow Category Manager), you can manage your category tree and filter up to 10 levels (Figure 2).

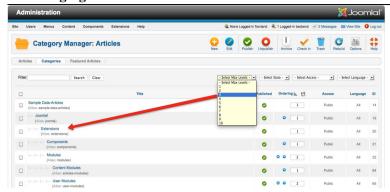


Figure 2: Category Manager

Like an article, a category consists of a title, a description and many other attributes and options. It can have an additional image that can be used in different layouts. The image can be selected in the basic settings. A category can also contain images in the description (*Figure 3*).

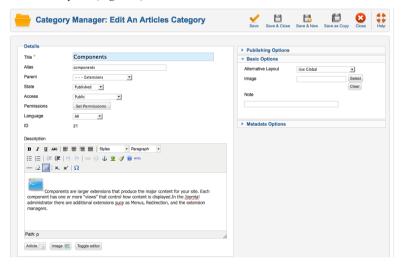


Figure 3: Category Edit Form

When you access your Joomla! website you can see exactly these categories in the example data. The navigation uses links to the categories to show all the articles and sub categories (*Figure 4*). Even the breadcrumb navigation reflects this structure.

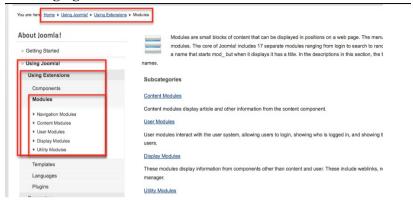


Figure 4: Categories as menu links on the website

In the *Menu Manager (Administration* \rightarrow *Menu* \rightarrow *About Joomla!*), you can see these menu items, which link to the articles in a category (*Figure 5*).

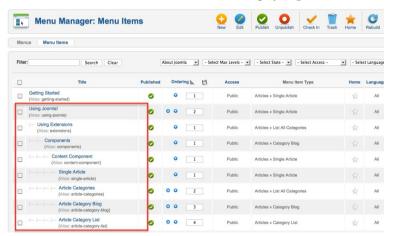


Figure 5: Categories as menu links on the website

You can choose from different layouts for the articles. In *Figure 5* you can see which layout is used for which link. You can select the layout in the edit form of a menu item (*Figure 6*).

Possible layouts:

- a list of all categories
- a blog layout (like on the frontpage)

a category list

Depending on the layout you have plenty of options to configure the appearance and behavior of sub categories and articles.

Select a Menu Item Type: Contacts Articles List All Contact Categories Archived Articles List Contacts in a Category Single Article Single Contact List All Categories Featured Contacts Category Blog Category List Featured Articles Create Article Newsfeeds List All News Feed Categories List Search Results List News Feeds in a Category Single News Feed Users Manager Login Form User Profile Edit User Profile

Figure 6: Category layouts

6.5.A list of all categories

This layout lists all the sub categories from one chosen category (Figure 7).

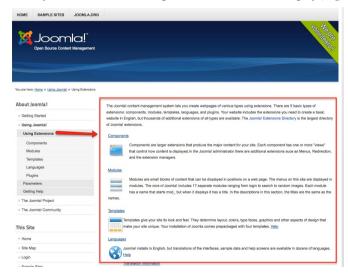


Figure 7: Layout All Categories

In this case the category description from the top level category *Extensions* is shown. One level of sub categories with their descriptions is also shown on the page, even empty categories. The articles in the top level category are hidden. Example: $Administration \rightarrow Menus \rightarrow About Joomla! \rightarrow Using Extensions \rightarrow Edit.$

6.6.A blog layout (like on the frontpage)

The blog layout lists all the articles from one chosen category (Figure 8).

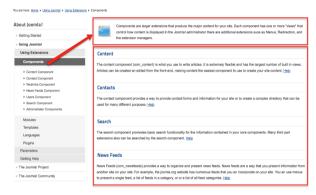


Figure 8: Layout Blog

In this case the category description from the category *Components* is shown. All the articles related to *Components* are shown with their teaser text in one column. More columns are also possible. The first seven articles in the top level category are hidden. Example: $Administration \rightarrow Menus \rightarrow Components \rightarrow Edit (Figure 9)$.

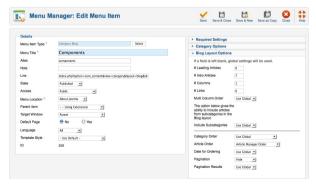


Figure 9: Layout Blog settings

6.7.A category list

The category list layout lists all the articles from one chosen category in a table structure (Figure 10).

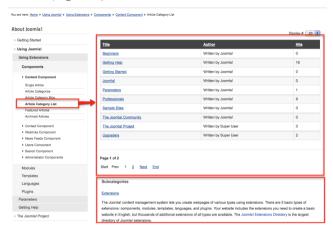


Figure 10: Layout Category List

In this case the category description from the category named *Joomla!* is shown. All the articles related to *Joomla!* are shown in a configurable table. You can choose to have parts of the table hidden and various sorting options are available. Example: $Administration \rightarrow Menus \rightarrow Components \rightarrow Article\ Category\ list \rightarrow Edit.$

Conclusion

The category system in Joomla! 1.6 is very powerful and easy to use. You can easily structure your entire website by using a set of nested categories in a very user-friendly way. One article can be assigned to one category.

Links

[1] http://demo.gavick.com/joomla15/dec2009/

6.8. Media Manager

The media manager is Joomla!'s little <u>Digital Asset Management System</u> [1] (DAM). If you are managing content, you will need a place to store the files. Files are all the images, PDFs and whatever you decide to mention in your content. Usually these digital assets consist of the file and additional meta data. In this case, we need an easy-to-use tool to manage our files. Let's have a look at what is possible with the Joomla! core media manager.

How it works

To me it looks more like a file manager. Everyone knows the Windows explorer or the OSX finder. In Joomla! they call it "media manager". It has a base directory where all the files are stored. You can look at your files in two different ways using your browser: via a *Thumbnail View* (*Figure 1*) and a *Detailed View* (*Figure 2*). It is possible to navigate through the folders by clicking on them.



Figure 1: Media Manager - Thumbnail View

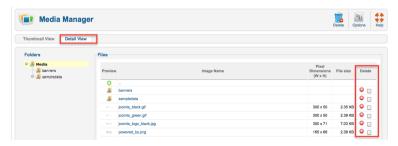


Figure 2: Media Manager - Detailed View

You can create as many additional folders as you wish. In the *Detailed View*, you are able to delete folders and files. You'll find the same structure in the Joomla!

administration backend as you can see in your FTP client (*Figure 3*), but you have to be careful: In core Joomla! you will also find a *media* directory. This directory is **NOT** the home of the media manager.

The home of the media manager in core Joomla! is the *images* directory.

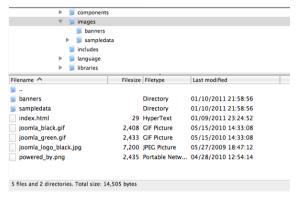


Figure 3: Media manager directory in ftp client

When you look in the toolbar you will discover the *Options* icon - go ahead and click on it (*Figure 4*).

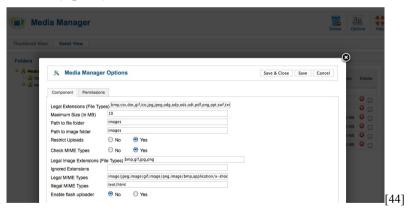


Figure 4: Media manager options

If you go through the options, you will notice that you can limit file types by extension, maximum size of a file and you can also separate *images* from *files*. Well, an image is a file, too, but I like the idea of separating them. The thumbnail view, e.g., makes a lot more sense for images but not for non-image files. The biggest advantage of that separation is the possibility to *Restrict Uploads* to users lower than the manager role. You can allow registered users to upload images but you do

not have to give permission to upload other files. This is, in some cases, very useful. The next options you see are <u>MIME</u> [2] types, nowadays often called *Internet Media Type*. If you are a Windows user, you usually only distinguish different file types by their extension. *Internet Media Type* is another way to recognize the type of a file even without a file extension. You can permit or forbid as many file types as desired.

The *Flash Uploader* is one of the most sophisticated features that is often forgotten about. In Joomla! 1.5 it didn't always work properly but the version coming with Joomla! 1.6 is excellent for uploading more than one file at a time. The *Flash Uploader* simply works and is easy to use! Try it! (*Figure 5*).

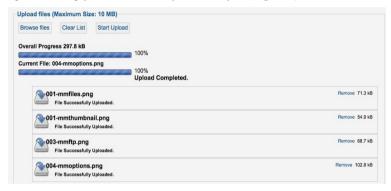


Figure 5: Media manager Flash Uploader

As you notice, the Joomla! media manager is no <u>rocket science</u> [3] but it is a reliable, easy to use tool to manage your images and other files.

If you need a more sophisticated product, Joomla! offers other solutions in the extension directory in the <u>category File Management</u> [3].

Media manager and the editor

Now you know about the central place of your files but how can you manage to connect them to your content?

Anywhere you see an editor in Joomla!, it is usually possible to add media from the media manager by clicking the image button below. We have already talked about this in Chapter *A Typical Article (page 58) (Figure 6)*.

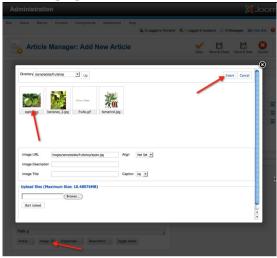


Figure 6: Media manager in content areas

Media Manager in other places

There are other places where the media manager plays a role, like in categories. It is possible to link an image to a category (*Figure 7*).



Figure 7: Media manager in category

This image will appear in a list of categories if you configure it in the *Menu Items Options*.

Links:

- [1] http://en.wikipedia.org/wiki/Digital asset management
- [2] http://en.wikipedia.org/wiki/Mime_type
- [3] http://www.urbandictionary.com/define.php?term=rocket+science
- [4] http://extensions.joomla.org/extensions/core-enhancements/file-management

6.9.Contact Form

With a contact form the following question arises: "Is this content?". I think it is and have, therefore, written it as a sub chapter of the *Managing Content chapter*, page 51.

On a contact form it first becomes obvious that something like a CMS is being used. Manually created HTML pages cannot send emails as this requires a script language like PHP, for example, and a configured server. PHP scripts can be embedded as contact forms into HTML pages, but then that part of the website will often look different from the rest of the site. In Joomla! the contact form is already integrated and you "only" have to configure it.

Ususally, if your Joomla! is running on a web server at your provider, you won't have problems with sending emails. Locally, it's a bit more difficult because you would have to set up a mail server first. Generally, this is not a problem but it isn't really necessary. ;-)

Joomla! sends emails in different ways. You will see an overview of this in *Global Configuration* \rightarrow *Server* (*Figure 1*). Naturally, you would use the standard activated PHP Mail function (read more at page 82: Website and Content Configuration).

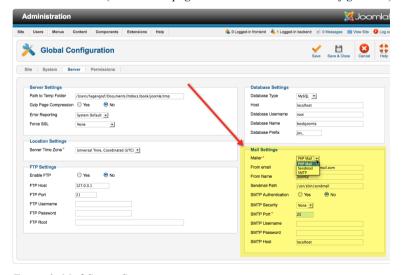


Figure 1: Mail Server Settings

Creating a contact

In order to include a contact on your site you need at least:

- · a contact category
- a contact
- a link in a menu

Maybe you still have a category from the example data (Sample-data contact). If not, go ahead and create one. In the next step you will create a new contact. To do so, open $Components \rightarrow Contacts$ in your administration area and click on the icon New. Then fill in the appearing form (Figure 2). I have labeled some areas in the screenshot for better orientation.

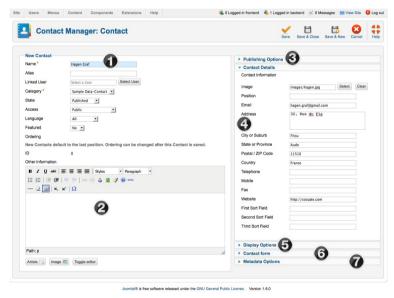


Figure 2: Create contact

- 1. The first and last name of the contact person, or the name of the department or company if it is not a person. The contact can be connected with an existing user account. He has to be assigned to a category, should be public (State = Published) and presumably not appear on the frontpage (Featured = No).
- The text area can be used for additional information, e.g. opening hours or jurisdiction.

- The *Publishing Options* relate to the user who can later make changes to that content, who created the content, and the timing for publishing. The latter is used rather seldomly for 'normal' websites.
- 4. In *Contact Details* there are numerous fields available, which you can choose to fill in or leave blank.
- 5. In *Display Options* you decide which fields will be displayed. This area is important as you specify here whether a contact form will be shown or not (*Show Contact Form*). You can also specify whether the sender should receive an email copy and you'll be able to configure some spam protection settings (*Banned E-Mail*, *Banned Subject*, etc). Against "real" spammers, however, this protection is rather "pathetic".
- 6. In the field *Contact Redirect*, you can enter another email address to which the contents of the form should be sent.
- 7. The *Metadata Options* are, like the *Publishing Options*, available on each single page (*Read more: Search engine optimization TO DO*).

Creating a menu item

You now have a contact but still no form on your website. That is exactly what we are going to create in this next step. Due to the fact that you can link nestable categories to contacts, you may either have a single contact form or many of them. It is definitely possible to create a contact form for each employee of a big company like Volkswagen (approx. 370,000 employees). How does such a dynamic CMS display this on a website?

To manage this, Joomla! has its own *Menu Manager* with different layouts. In the *Menu Manager*; you get to decide whether you want to have a list of contacts or categories or just a single contact form. At first glance this may seem somewhat confusing but it is well thought out and helpful.

Let's link a single form in the menu for the contact we have just created. Open *Menus - Top* and click the *New* icon. You need three things for a menu link:

- 1. the *Menu Item Type* (type of link) for displaying the site and, depending on your choice, a contact or a category
- 2. a text displayed as a link
- 3. the menu, in which the link should appear

For number 1, click on the *Select* button next to the field *Menu Item Type*. A window will open and you will see a choice of types. Click *Single Contact* (*Figure 3*).

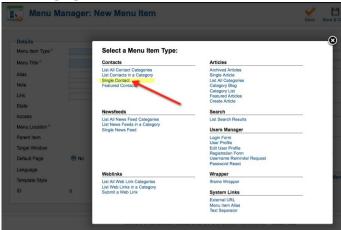


Figure 3: Choice of menu types

The window will close again. Since you only want one contact, you will now have to choose the contact in *Required Settings* (*Figure 4*).

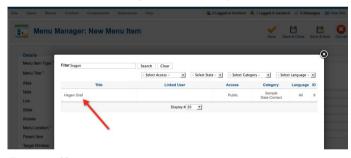


Figure 4: Choose contact

At last, insert the text for the link (*Menu Title*) and then save everything. The menu is already registered correctly by opening the form. On your website, an additional link in the *Top Menu* should be appearing, which is linked to the corresponding contact (*Figure 5*). You can get to the actual contact form by clicking the plus sign in the right field. Now you can send messages via your website.

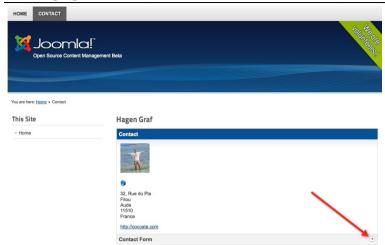


Figure 5: Contact at website

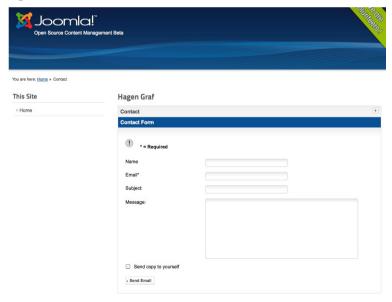


Figure 6: Contact form

6.10.Statuses, Trash and Check-Ins

In Joomla! your content can have several statuses. Depending on the type of content there can be a minimum of three statuses: **published**, **unpublished** and **trash**. What does that mean? After saving your fresh content for the first time, it exists in the Joomla! database and depending on its status, it will appear (or not) in different areas of your website.

The usual life cycle of content in Joomla! is:

- 1. unpublished until you are finished with editing and reviewing
- 2. *published* or *scheduled* (and possibly *featured* on the frontpage)
- 3. still *published* but may be removed from the frontpage
- 4. archived

Sometimes it is necessary to *unpublish* content and sometimes you may put it into the *trash*. The content itself will, of course, continue to exist. It has not been deleted. You can filter most of the tables in the administration interface by the desired statuses and assign different statuses to your content as often as you would like.

Unpublished

No website visitor is able to see the content. It is the phase in which you edit and review your content.

Published

It depends on the users' and visitors' permissions whether they will be able to view the content but generally the content on your website should be visible because it has been published!

Featured

The *featured* 'feature' is a switch you can use for your most important and latest content and is usually shown at the frontpage. It is an additional status because it is only relevant to articles. This is why it is possible for an article to be *unpublished* and *featured*.

Archived

There will come a time when you'll start thinking about an archive for your articles. Just set the status to *archived* and you've almost created an archive. Joomla! knows

the creation date of your articles and offers an archive module to be shown on your site. The archive module is included in the example data. If it is not available, just create one in $Modules \rightarrow New \rightarrow Archived Articles$. Your articles will then be shown like in Figure 1. Read more at page 129 in chapter Modules.



Figure 1: Joomla! Archive

Trash

The second last status is *trash*. If a content item ends up here it still exists and can be retrieved. You can place modules, menu items, categories, articles, contacts, and even more content in your trash. You can see the contents of your trash can by filtering it (*Figure 2*).

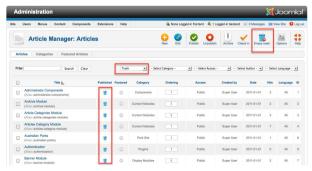


Figure 2: Trash

In the filtered view the *Trash* icon changes to *Empty trash*. This is your opportunity to delete content.

Check In

The *Check In* icon in Joomla! may not be the kind you know from Foursquare [1] or other location-based services. It is a security feature for editing your content. As soon as a user starts editing content, Joomla! locks this content for all other users. The advantage of this behavior is that changes by another user cannot be overwritten. That's a very convient feature. One big problem, however, appears when the user editing the content accidentally closes the browser window, allows the session to expire or the power plant shuts off the power or ... you get my point :-).

Then the content is locked and no one else can edit it!

No one else (except a user with proper permission, e.g. you as the administror) can *check in* the content again to allow others to edit it. Unfortunately, you will only notice unchecked content by a small lock being displayed near the title (*Figure 2*) or by a cry for help from one of your users :-).



Figure 3: Check In

Links:

[1] http://en.wikipedia.org/wiki/Foursquare_%28social_network%29

Joomla! has different levels of configurating options. These options are transmitted from the highest to the lowest level.

- · Global configuration
- Options for articles, components, modules, plug-ins, languages and templates

7.1. Global Configuration

In the *Global Configuration* section you can define all the settings that are valid for the entire website. Most values of the variables are saved in the *configuration.php* file. Vital information like user name, database name and password for the database server, for instance, and 'lesser' parameters such as the pre-determined length of displayed lists are stored in this file. The work area is divided into four tabs:

- Site Settings
- System Settings
- Server Settings
- Permissions

The work area of every tab consists of dozens of fields, check boxes, switches and text areas.

The easiest way to get a glimpse is to move your mouse across the labels to read the help text, which appears in a small yellow tooltip (*Figure 1*).

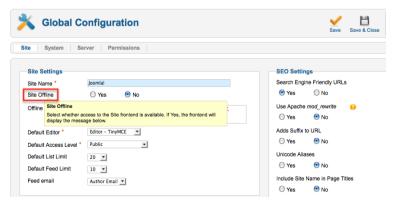


Figure 1: Tooltips

Most of the options are self-explanatory. I'll mention a few settings that are new in Joomla! 1.6 with greater detail.

7.2. Site Settings

The *Site settings* have a new field for setting the default access level for new users. Configurable access levels are a new feature (*Read more on page 100: Users and Permissions*).

The *Metadata settings* now contain the option to add *Content Right* data. Joomla! will add your data to the meta declaration *rights* in your HTML code. Depending on your search engine optimization (SEO) 'religion', it is good or bad to have this declaration in your meta profile. Now Joomla! serves both:-)

<meta name="rights" content="© 2011 cocoate.com EURL, France" $\!\!\!\!/>$

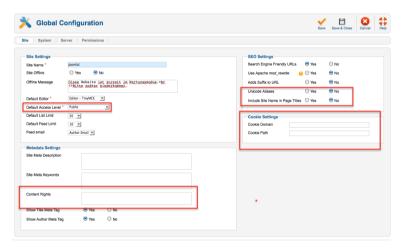


Figure 2: Site settings

In SEO settings, the new options are

- Unicode Aliases
 You set aliases for article titles. With this feature, URLs like
 http://example.com/所有一起 are possible.
- Include Site Name in Page Titles
 With this feature the article title will appear in the browser's document
 title bar

Cookie settings are a wonderful feature for evaluating a cookie on different sub domains. You will need this feature if you have a site (example.com) and one or more sub domains (blog.example.com) and you want to offer your users the service to login on example.com and post on blog.example.com. Without this feature, the user should login again to post something on blog.example.com.

7.3. System Settings

The user and media settings are no longer in this area. You will now find them in the *User* and *Media Manager*.

The cache settings are different because the underlying cache system was rewritten and now provides more possibilities. In general, a cache makes your sites faster by storing parts of the HTML in files. The web server can deliver these files extremly fast. It is possible to cache pages, component views and modules. You can purge and clear the cache in $Site \rightarrow Maintenance$.

7.4. Server Settings

All the server settings are the same as in Joomla! 1.5. Nevertheless, I'll mention the option *Force SSL*. This option is getting more and more attention. You can offer your users a completely secured traffic. It is necessary to have SSL configured in your web server and you need a SSL certificate.

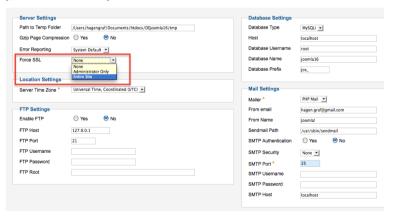


Figure 3: Server settings - SSL

7.5. Permissions

Here is the place to set your global permissions for your user groups. Fortunately, it is not always necessary to change the default settings. If you change the setting for a group, it will apply to this and all sub groups, components and content. Basically you allow, deny and inherit the permissions *Site Login*, *Admin Login*, *Super Admin*, *Access Component*, *Create*, *Delete*, *Edit*, *Edit State* and *Edit Own*. Every group has their own set of permissions (*Figure 4*).

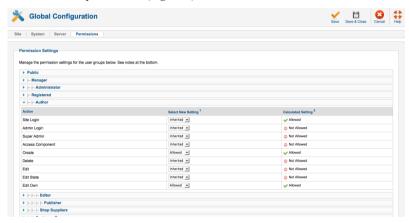


Figure 4: Global group permissions

7.6.Options for content, components, modules, plug-ins, languages, templates

In every manager, you'll find an *Options* icon where you can launch a configuration form. In some cases the options window has an additional permissions tab, e.g. the *Category* and the *Article Manager*. In this permissions tab, you can use your global permissions for the whole website or you can change them depending on your needs for all categories and articles.

In both cases you'll also find a *Text Filter* tab (*Figure 5*). The text filter is a concept, which allows you to search contributed text for patterns like HTML tags and filter them. It's possible to set different filters for different groups. Let's say a registered user is allowed to post text with HTML tags inside but without an iframe. Only your individual group 'iframers' has the right to post iframes!

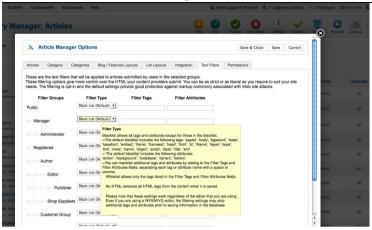


Figure 5: Article options - Text Filter

The template is one of the most important pieces of a website. It provides the appearance, the design. It motivates new visitors to stay on your site and explore. Regular visitors and users appreciate being on a site with a beautiful and useful design. Think of other products, for instance. A car needs a good engine and tires but one of the most important reasons for buying one is often the design. Even if the design is not the main reason, it is often a trigger to contemplate the idea of purchasing and may cause a buyer to consider more tangible reasons. If the design is well-made, people expect the rest to be well-made, too. (*Figure 1*, *Figure 2*)!



Figure 1: Car with stickers (Richardmasoner [1][2])



Figure 2: Red car (FotoSleuth [3][4])

Both of these cars are made for different target groups. They are an example of different approaches in design.

Web design is somewhat like a handcraft. Possessing skills in techniques like HTML, CSS, JavaScript, PHP, image editing and many others is imperative. Joomla! is only one more tool in your toolbox.

A good template is not only about colors and graphics. The shape and positioning of the content is just as important. The website has to be user-friendly and reliable. Exactly this challenge reminds me of the two cars again.

Web design is still a young profession. A web designer often has to deal with low bandwith, incompatible browsers, inexperienced content editors and other people involved in the process of creating a 'good' website. The creation of a Joomla! website is often a process, in which everyone involved learns a lot. Good web design is hard work. :-)

8.1. Joomla! and templates

Joomla! is known for its quality and simplicity. In Joomla! a single page is generated by the HTML output of one *component*, several *modules* and the template. Each page is accessible via a unique URL. Take the front page as an example. The content component produces the HTML output for the articles in the middle (*Figure 3*). The blocks next to the articles are different *modules*. You can combine the HTML output from **one** *component* with the HTML output of **any number of** *modules*. Existing *modules* can also be reused on other pages.

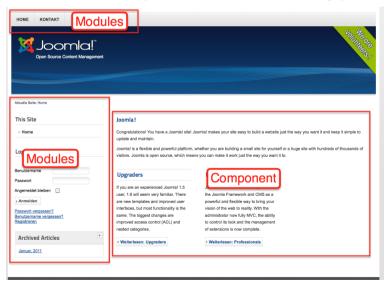


Figure 3: Joomla! front page

8.2. Positions

You must know, of course, at which point you can assign modules at all. For this purpose, each template provides so-called *positions*. In order to see these *positions* you have to enable the *Preview Module Positions* switch (*Extension - Template Manager - Options*). After that, you can access your website by using the parameter tp=1 (http://localhost/index.php?tp=1). You'll see the emphasized module positions and their names (*Figure 4*). In *Extensions - Module Manager* you can assign one of these positions to a module. If you need the module at different positions, you may also copy it.

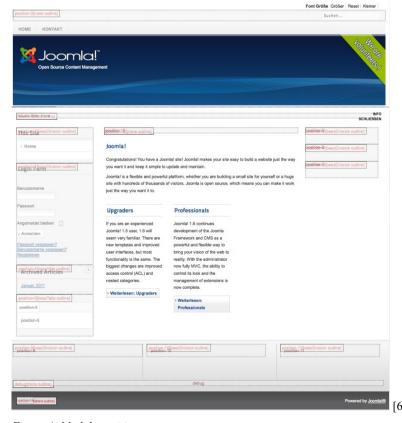


Figure 4: Module positions

8.3. Core Templates

Joomla! core comes with three site templates and two administrator templates. You can see a preview in *Extensions* \rightarrow *Template Manager* \rightarrow *Tab Templates (Figure 5)*.

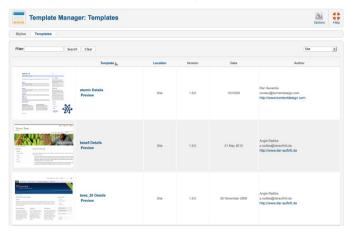


Figure 5: Site templates

The Atomic template is an example of what a basic template looks like. In the chapter *Create a New Template Using Atomic, page 158*, we will use this template as a base to create our own template. The *Beez5* template is the HTML 5 Version of *Beez2*. Also for the Administration, another template is available. (*Figure 6*)

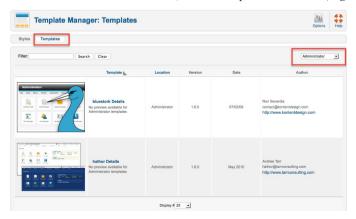


Figure 6: Admin templates

Styles

Styles are a new feature in Joomla! 1.6. They offer the possibility to create and use different versions of one template. A template has a minimum of one style. In this style, configurations can be made depending on the template, such as changing the colors or uploading the header logo. You may set the default style for your site in $Extensions \rightarrow Template\ Manager \rightarrow Styles$. You can filter between Site and $Administrator\ Styles$ by choosing the location filter. The default template Beez2 comes with two predefined styles: $default\ and\ Parks\ Site$.

You can create additional styles by copying them. Each style can be assigned to a menu item. If you would like a green background on your site when people click on *menu item A*, for example, and a blue background when they click on *menu item B*, you can assign the corresponding styles (*Figure 7*).

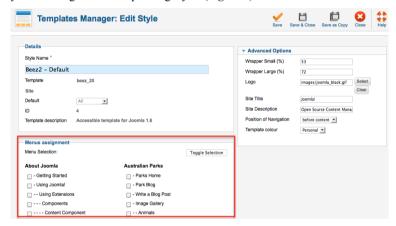


Figure 7: Assign a style to a menu item

You will find more on templates in the chapter Working with Templates (page 149).

Links:

- [1] http://www.flickr.com/photos/bike/201402884
- [2] http://www.flickr.com/photos/bike/
- [3] http://www.flickr.com/photos/51811543@N08/4978639642
- [4] http://www.flickr.com/photos/51811543@N08/

Every site needs an easy to understand navigation, otherwise it will not be possible for a user to find what he is looking for. This may sound simple but is not easily done. In a perfect world it should be possible to access any page on a website with two or three clicks. Another fact is, that often, if not always, your visitors will come from a search engine or social media site and will land anywhere on your site but your frontpage. This is a reason to think about a "Home" button on every page!

A website often has a primary and a secondary navigation. The primary navigation is usually at the top or on the left or right side. Secondary navigation is at the bottom or at the top, but mostly a bit smaller than the primary navigation. It contains links like contact, about us and legal notices. The idea behind this is to have these links at the site but not at a very important position.

As a general rule, do not put more than four to eight links in a navigation level.

9.1.Breadcrumbs

A 'breadcrumb trail' is a navigation aid. The term comes from the trail of breadcrumbs left by <u>Hansel and Gretel</u> [1] in the Brothers Grimm fairytale. Usually breadcrumbs are positioned horizontally on the top of a web page. Two structures are used:

- showing links back to each previous page the user clicked through to get to the current page
- · showing the parent pages of the current one

Breadcrumbs are a way to prevent visitors from feeling lost on your site. Ideally visitors should always know where they are on the site and how to go back. Joomla! provides a breadcrumb module for this task and most templates have a breadcrumb position reserved for it (*Figure 1*).

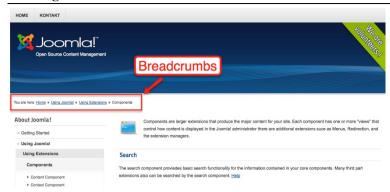


Figure 1: Breadcrumbs

9.2. Joomla! Menus

Joomla navigations are created by so-called menus. You can create as many menus as you need for your website. Each menu may contain any number of nested menu items and you can even filter the level. A menu item is assigned to a component or an external URL. Modules and template styles can be assigned to menu items. In the example data, a few menus are shown that have already been created.

Let's have a look at two examples of primary navigation with static pages and dynamic categories.

9.3. First example: a static catalog or book structure

Sometimes you need a navigation for a book, a catalog or a guide. You'll find this configuration in the example data in the *About Joomla!* menu. Let's say we're writing a short book consisting of three chapters. The navigation should be linked to all pages and look like *figure 2*.

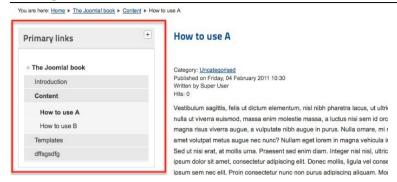


Figure 2: Static book structure

Preparation

Create a book structure with a few chapters.

- The Joomla book
 - Introduction
 - Content
 - How to use A
 - How to use B
 - Templates

Before creating menu items, you have to create individual articles (pages) first. Go to $Content \rightarrow Article\ Manager \rightarrow Add\ new\ article\ (Figure\ 3)$. You may assign the uncategorized category to these articles or you can create a book category in advance and assign it to the chapters.

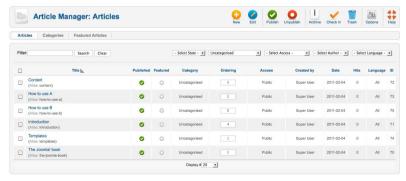


Figure 3: Six 'book chapters'

Step 1: Creating the menu

You can use an already existing menu as your *primary links* or you can create a new one by accessing $Menus \rightarrow Menu\ Manager \rightarrow Add\ new\ Menu$ and filling out the form (*Figure 4*).



Figure 4: Add new menu

Step 2: Creating the menu items

Go to *Menus* → *Primary links* and add the six articles as links. Choose *Single Article* as *Menu Item Type*. Select the article and enter a *Menu Title* (*Figure 5*). If you have forgotten how to do that, have a look at the chapter *How to create an 'About Us' Page (page 52)*.

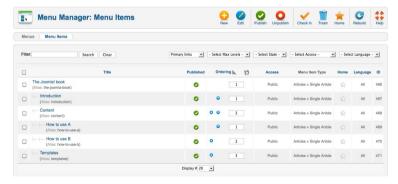


Figure 5: Primary menu items

Step 3: Creating and assigning the module

This step is a bit tricky. You now have the articles, the menu and the menu items but you'll also need a module to position on your site. Let's go ahead and create one. Go to $Extensions \rightarrow Modules \rightarrow New Module$ and fill in the form. In the Field Select

Menu in Basic Settings, choose Primary links. Select Yes in the field Show Sub menu items (Figure 6).

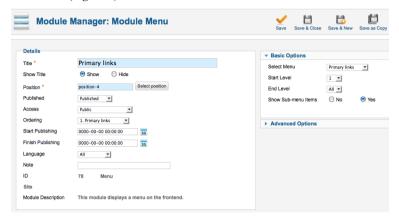


Figure 6: Primary links module

The last step is the template position. Click the *Select position* button, filter for template *Beez_20* and choose position-4. Save everything and you're done.



Figure 7: Select template position

9.4. Second example: Linking to categories (News magazine)

It is possible to link to a few pages like in the first example but what will you do if you have thousands of articles? The answer is easy in Joomla! 1.6: Build a structure with categories, assign the articles and link it to a category layout.

Preparations

We'll need a few categories with articles:

Categories:

- News
 - World
 - Africa
 - Europe
 - Technology
 - Internet
 - Cars

Create them or use existing categories (*Read more: Structure Your Content with Categories, page 64*).

Step 1: The menu

It's up to you how to continue. The easiest way is to use the existing *Primary Links* menu. But if you want, you can create a *News* Menu, like me.

Step 2: The menu items

When dealing with categories you have to think about what should be shown after you have clicked on the link. The expected behavior in our case is

- Category News = all news should come up
- Category News → World = we want world news only

and so on (Figure 8).

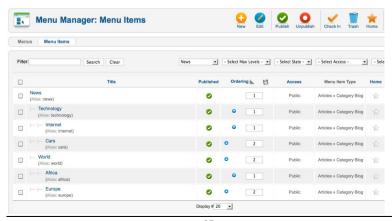


Figure 8: Menu items in News menu

To achieve the expected behavior, create a menu item with the type *Category Blog*. In *Required settings*, choose your newly created category *News*. In *Blog Layout Options*, choose *Include Sub Categories - All* and # *Leading Articles = 0*. Continue with creating nested menu items for each additional category and you're done (*Figure 9*).

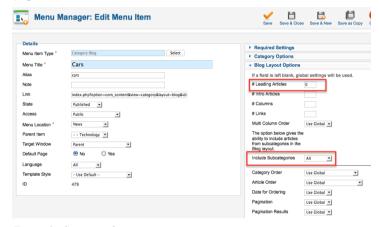


Figure 9: Category Options

Now you can handle thousands of articles. Your navigation is prepared for that and your visitors will understand the system immediately (*Figure 10*).

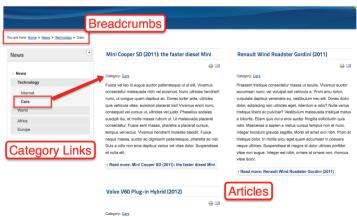


Figure 10: Articles in category structure

Some tweaking

As you have seen, there are nearly infinite possibilities of setting options. Many things are possible and there is usually a way to achieve your goals. Concerning the navigation design, it is possible to filter the level of the menu items in the module. It is possible, for example, to put

- the first level of our *News* menu at the top position and the second and third level in the the left or right sidebar
- the whole menu on top and use drop down menus (depending on the capabilities of the template)

If you play around a bit, you will find a solution for nearly every case. The Joomla! navigation system may be a bit complex on one hand but is very powerful on the other.

Links:

[1] http://en.wikipedia.org/wiki/Hansel_and_Gretel

People simply try to use the Joomla! website that you have created for them - in an active or passive way. The better the experience, the better the website will be perceived. Joomla! - as every CMS differentiates between visitors and registered users with different permissions. Visitors usually arrive via search engines or social media site recommandations and can become users by registrating. Already registered users mostly know what they are looking for and come to your site with certain expectations.

The more users your site has, the more complex the topic users and permissions becomes. In versions preceding Joomla! 1.6, there was a static system consisting of user groups, permissions and access levels that could not be changed. With Joomla! 1.6, the old system is still alive as the default configuration of a very powerful so-called access control list (ACL).

Every site access will be evaluated by a Permission Group, even an access from a visitor. After registering on your Joomla! website, the user will automatically become a member of a Permission Group. The group has predefined permissions and belongs to an access level. One Access Level can have any number of Permission Groups. One group can have any number of users/visitors. Permissions can be passed down and overwritten in several places.

Let's begin by having a look at the registration process.

10.1.Registration and Login

The first registration process in your website's life cycle was completed with the installation of Joomla!. In the last step you were prompted for a user name, an email address and a password. The person who installed Joomla! is now the super duper administrator, who has permission to do everything on the site. This is why every Joomla! website has at least one user account. It's up to this user only to modify the behavior of the site in *Users - User Manager - Options (Figure 1)*.

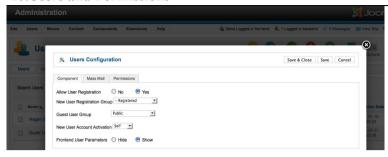


Figure 1: User options

On your Joomla! site, you can create as many users as you would like. You can also allow visitors to register themselves. Depending on the their permissions, users can create their own content and/or view content that has been created for them in particular.

User options

The form has three tabs

Component

In this area you are able to configure whether a registration is possible or not. One of the new features in Joomla! 1.6 is the possibility to configure in which user group the guests are in and in which user group the registered users are in by default.

Mass mail

It is possible to send a mass mail to your users. In this tab you can configure the static email settings.

Permissions

In this tab you can manage the permission settings for every user group.

Log in

Visitors can register on the website. Joomla!, therefore, offers a login module, which can be positioned at the site (*Figure 2*).



Figure 2: Login module

This module can be configured with many additional features like customized text, SSL encryption and login / logout redirection. Have a closer look at *Extensions - Module Manager* (*Figure 3*).

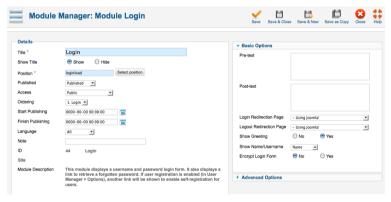


Figure 3: Login module options

The advantage of the form, which is delivered by login module, is that there is no necessity for the user to click a link before the log in form appears. If this behavior is not necessary or you don't want to have the login form as a module, it is also possible to create the form via a component. Therefore you have to create menu items with the appropriate menu item types concerning your needs (*Figure 4*).

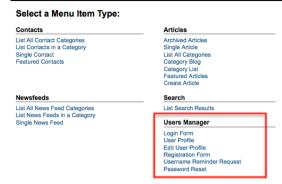


Figure 4: Menu item types for users

Additional profile fields

In the past it was only possible with additional extensions, to have additional fields in the registration form. To solve that issue and to connect the user data to the contact component, Joomla! 1.6 core comes with a plug-in called *User Profiles*. In *Extensions - Plug-in Manager* you can activate and configure the plug-in (*See also Contact component*) The module provides several additional fields, even a *Terms of service* option, which user have to check during the registration process to accept the terms of service (*Figure 5*).



Figure 5: Additional profile fields

10.2.User groups

The idea of a user group is to create sets of permissions.

"If you want to be an author on our site, you'll need the following permissions."

Instead of assigning these permissions to every user they are assigned to a group. The user can be assigned to one or more groups. Imagine you have 10.000 users in four different groups. It's easy for the administrator to manage the permissions for the groups. Without groups you have to change every user account manually. If you use groups you only have to change permissions once!

In Joomla! 1.6 it's up to you to configure any number of user groups. In *User Manager - Groups*, you have an overview of all the groups, which are in core Joomla! (*Figure 6*).

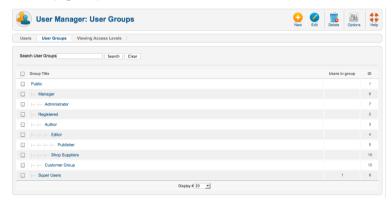


Figure 6: User group

The default setup is the same as it was for Joomla! 1.5. If your are happy with the structure it is not necessary to change anything.

Default permissions for website front end user groups

Registered group

A registered user can log in, edit his own credentials and see parts of the site that non-registered users cannot see.

Author group

The author can do everything that a registered user can. An author can also write articles and modify his or her own content. There is generally a link in the user menu for this.

Editor group

The editor can do everything that an author can. An editor can also write and edit all articles that appears in the front end.

Publisher group

The publisher can do everything that an editor can. A publisher can also write articles and edit every piece of information that appears in the front end. In addition, a publisher can decide whether articles are published or not

Default permissions for website back end user groups

Manager group

A manager can create content and can see various pieces information about the system. He or she is not allowed to:

- Administer users
- Install modules and components
- Upgrade a user to super administrator or modify a super administrator
- Work on the menu item Site | Global Configuration
- Send a mass mailing to all users
- Change and/or install templates and language files

• Administrator

An administrator is not allowed to:

- Upgrade a user to super administrator or modify a super administrator
- Work on the menu item Site | Global Configuration
- Send a mass mailing to all users
- Change and/or install templates and language files

Super Administrator or Super user

This user is allowed to execute all functions in Joomla! administration. Only a super administrator can add other super administrators.

10.3. Access levels

User groups can be assigned to access levels. So we have a user, connected to a group, connected to an access level (*Figure 7, Figure 8*)

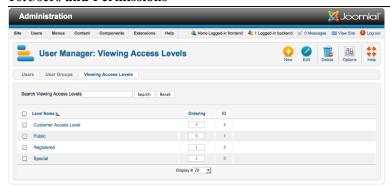


Figure 7: Access levels

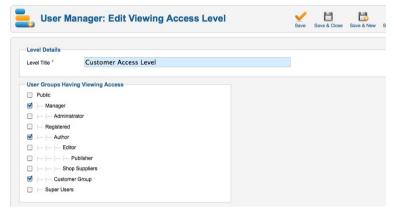


Figure 8: Groups assigned to an access level

Why access levels?

As we have seen, access levels are a bundle of groups. With the combination of group permissions and access levels it is possible to solve every use case. In an article e.g. you can limit the accessibility to an access level (*Figure 9*).

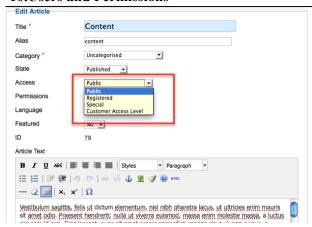


Figure 9: Access levels in an article

The new system is a big step forward for Joomla!. Many users suffered from the lack of configurable groups, access level and permissions.

Now everything is possible in the field of permissions!

11.Extension Management

There is a lot in the core package of Joomla!. Words like *components*, *modules*, *plug-ins*, *templates* and *languages* you have already heard before. Besides these well known parts, Joomla! also consists of lesser known parts like *libraries* and *packages*. Additional *components*, *modules*, *plugins* and *languages* are listet in the Joomla! extension directory [1]. The Joomla! project has no central place for templates und libraries. The reason for this is simple. Libraries are developed outside of the Joomla project and many were also used by other open source projects. Templates are something very individual and are, therefore, available on the websites of their designers. A central directory especially for templates would be helpful in the future.

With the rewritten extension manager in Joomla! 1.6 you can install, update, discover und manage extensions directly from your Joomla! administration.

11.1. Managing extensions

Let's have a look at all your installed 110 extensions in $Extensions \rightarrow Extension$ $Manager \rightarrow Manager$. You can filter this list by various parameters. Some extensions are protected. Your Joomla! installation would no longer work if you uninstalled these protected extensions (*Figure 1*).



Figure 1: Table with all installed extensions

In this area you can enable, disable and uninstall extensions. Enabling and disabling works just like a light switch. You simply switch the extension on and off, all the related data are still kept. If you unistall an extension, it will be deleted. Often extensions, usually components, create additional database tables while installing.

11.Extension Management

It's up to the component de-installation routines, whether these tables will be deleted or not during de-installation. Check the manual or readme file in advance to avoid suprises.

The last icon in the toolbar is the cache icon. Every extension is able to cache data. You can clear this cache separately for every extension. If your Joomla! site attracts lots of visitors and you don't want to clear the whole cache for performance reasons, you may need this function.

If you filter the list for **libraries**, you will find these four articles with the corresponding version number:

- 1. *Joomla! Application Famework*, which is the real 'core' of the Joomla! 1.6 core package. All the other extensions are built upon this framework.
- 2. PHPMailer [2] is a class, written in PHP for sending emails. This is used in the mail to component.
- 3. <u>SimplePie [3]</u> is a class, written in PHP for managing RSS ans Atom feeds. This is used in the *newsfeeds* component.
- phputf8 [4] is a <u>UTF-8</u> [5]-capable library of functions mirroring PHP's own string functions. You can get an idea what this library does by reading <u>UTF-8</u> and <u>PHP</u> [6].

If you filter the list for packages, you will find nothing in Joomla! core. If you installed a language other than English, you will find that language package there.

11.2. Updating extensions

In this area, third-party extensions and the version of Joomla! core itself are listed. Here you can check for available extension updates available by clicking the *Find Updates* icon. If Joomla! finds an extension update and you want to update automatically, you have to fill in the FTP settlings form in *Global Configuration* \rightarrow *Server* \rightarrow *FTP settlings*. Then select the extension you wish to update and click the *Update* icon. The process is fully automatic and you are going to receive messages and hints, depending on the extension, while updating.

11.3.Installing extensions

You can install extensions in three different ways (Figure 2):

11.Extension Management

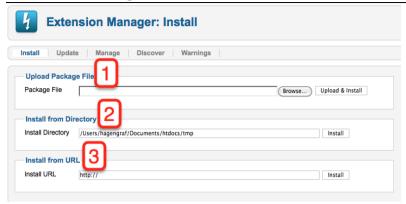


Figure 2: Installing extensions

1. Upload a Package file

If you have downloaded a zip file to your local PC that contains a Joomla! extension, you can use this option to upload and install your extension.

2. Install from Directory

If you have uploaded a zip file at your document root directory on your web server that contains a Joomla! extension, you can use this option to extract and install your extension.

3. Install from URL

If you know the URL of a zip file that contains a Joomla! extension, you can use this option to download, extract and install your extension.

11.4. Finding Extensions

Sometimes things are go wrong during the installation process, like files being too big, permissions not being set correctly or for other strange reasons. In this area, Joomla! tries to find extensions, which are not installed but nevertheless exist in the file directory. If one or more extensions are discovered, you can install them by using the FTP feature. Don't forget the correct FTP credentials in *Global Configuration* \rightarrow *Server* \rightarrow *FTP settings*.

By using the discover operation, you can install multiple extensions at the same time!

11.Extension Management

11.5.Warnings

Error messages related to installations and updates will appear in this area. If you can't solve the problem by yourself, google the message text, you'll usually find a solution or at least some advice.

Links:

- [1] http://extensions.joomla.org/
- [2] http://phpmailer.worxware.com/
- [3] http://simplepie.org/
- [4] http://sourceforge.net/projects/phputf8/
- [5] http://en.wikipedia.org/wiki/UTF-8
- [6] http://www.phpwact.org/php/i18n/utf-8

As we have already seen in the extension manager, the Joomla! 1.6 package consists of many built-in extensions. We have already come in touch with a few of them. As a website user, you probably don't care much about the extension you are using as long as you find that it is working. As an administrator, however, you have to know exactly what is going on. We have already looked at several Joomla! extensions like the *content* extension, which allows you to write and manage articles as well as publish them in different ways on the website. The *user* extension relates to users, the *category* extension to categories and so on.

In the following chapters, I am going to cover the functionality of additional extensions that are part of the Joomla! 1.6 core. In the *Components* menu, you will see *Banners*, *Contacts*, *Messaging*, *Newsfeeds*, *Redirects*, *Search* and *Weblinks*. We will have a look at these components including related modules and plugins, and last but not least, the *Mass Mail Users* feature of the *User* component, which allows you to send mass mails to all users.

12.1.Banners

The banner component provides the option to display advertising banners on your site. A banner can consist of graphics or custom HTML code. Every time your site is accessed, a different banner will be displayed from your banner administration. You can click on these banners and they are linked to the client's site. The banner component offers client, category, and banner administration as well as detailed analyses. I will guide you through a complete real life example in this chapter.

If you would like to sell advertisements on your website, there are three things you will need: clients, banners and pages on your website to display the banners. Oh, I forgot one. You also need traffic on your site. The more traffic, the better.

Depending on the contract terms you have with your clients, you may also need a tracking overview with all the impressions and clicks.

Let's begin with the client. I live in a tourist area and local businesses want to advertise their services. Joomla! offers yearly, monthly, weekly, daily and unlimited subscriptions. You can configure the default subscription type in *Components - Banner - Options*.

My client would like to pay a monthly fee to appear on all pages with three different rotating banners. I add the client in *Components - Banner - Clients - New* and fill in the form (*Figure 1*).



Figure 1: Adding a client

Before I can create individual banners, I have to create a banner category first. The categories are very useful because later on in the banner module, I can choose from which client and which category a banner should be displayed (*Components - Banner - Categories*).

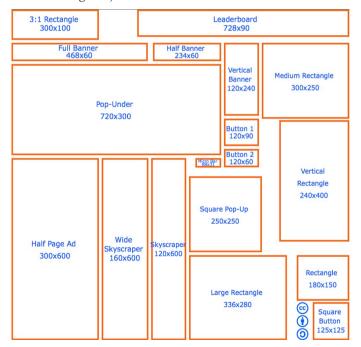


Figure 2: Standard web banner sizes[1]

 \overline{I} am free to choose the size of each banner but normally you will use the standard web banner sizes. (*Figure 2*)

The client would like to have three banners in leaderboard size (728 x 90 pixels). I'll create them in *Components - Banner - Banner*. I choose the category and the client, upload the banner and fill in the size. In *Publishing Options* I can configure several options, e.g., the start and finish date for publishing the banner. This is especially useful for time-limited subscription plans. There is also an option for re-setting clicks and impressions (*Figure 3*, *Figure 4*).

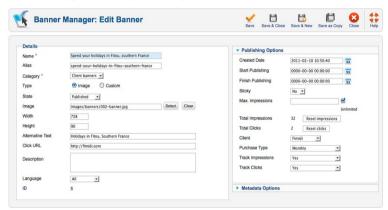


Figure 3: Adding banner form

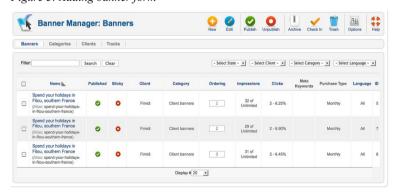


Figure 4: Banners in Administration

The next step is to create and/or activate one or more banner modules. For each banner size I need one module. In my case, all the banners are the same size, so one module will suffice. I go to *Extensions - Modules* and filter for *Banners*. At the moment there is nothing there, so I create a module by clicking the *New* icon.

Depending on the template, I have to choose a position. In my case I'll choose *position 12* from the *Beez2* template. The banner will then appear above the content. In *Basic Settings* you can configure a lot more. It is also possible to show the module in your content (*Read more: Modules, page 129*).

The *Search by Tag* field is an interesting feature. When it is used, the banner will be displayed when banner keywords (set in banner) and page keywords (set in article and other places) match. Another option to control the visibility of the module and the banners is the *Menu Assignment*. One very important feature is the possibility to write a header and/or footer text. In some countries advertisements have to be labeled (*Figure 5*).

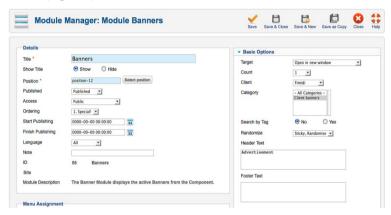


Figure 5: Banners module

The banner will now appear on the website. Depending on the configuration and the amount of banners, a different banner will appear each time you refresh the page. The banner itself is linked to the client's website and if you move the mouse across the image, a tool tip with the banner title will be shown.

I have just decided to create a demo website for the book, where you can see the examples and soon become a banner client. :-)

http://joomla16.cocoate.com (Figure 6).

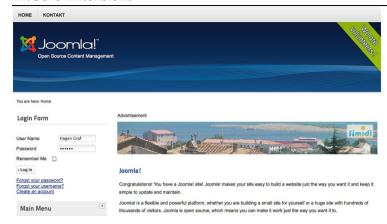


Figure 6: Banners on website

If set correctly, all impressions and clicks of the banner will now be tracked by the banner component. These trackings can be viewed in *Components - Tracks* and filtered by date, client, category and type (clicks or impressions) (*Figure 7*).

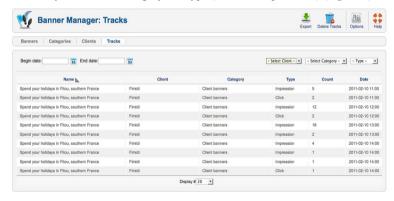


Figure 7: Banner tracking

Links:

[1] http://adzaar.com/docs/standard ad sizes

12.2.Contacts

Every website needs a contact form. Depending on the provider of the website sometimes you may need only one, sometimes more of these forms. If it is a website for a company with more than one department, they may want to have a contact form for every department. Perhaps you would like to display a contact form for every employee or every user account.

All of this can be done by using the Joomla! contact component.

As we have already seen (*Read more: Contact Form*, *page 74*), it's quite easy to set up a simple contact form. Simply create a contact, assign it to a category and create a menu item.

Example

If several contact forms are needed, you should think about the underlying structure. Similar to article categories, it is possible to assign contact categories to menu items. As a result, you will see a list of contacts assigned to that category. If you click on the name or the title of these contacts, you will see more details and the form itself.

I have tried different scenarios with the contact component and the possibilities are amazing! As everywhere in Joomla! 1.6 you have the option to create nested categories and different menu item types. In options (*Components - Contact - Options*), you can, for example, configure the appearance of the contact form (*Slider*, *Tab*, *no formatting*) and set an impressive number of other parameters.

As an example I have created a contact area for our company with three contact forms for different kinds of inquiries and a contact form for each team member. By clicking on the links, the contact form and additional details will appear (Figure 1).

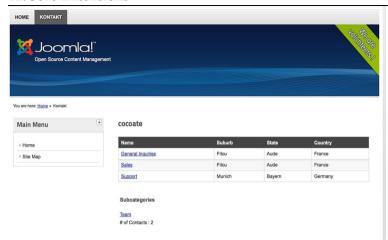


Figure 1: Contact area

For this example, I have created two categories: *cocoate* and *team*. The *team* category is a sub category of *cocoate*. It would have been possible to add an image and a description but I have decided to fill the title field only (*Figure 2*).



Figure 2: Contact categories

For each contact form I need a contact with an email address. Contacts can be assigned to users or stand alone. In this case, I have created three stand alone contacts related to the *cocoate* category without linking them to a user. I have also created two contacts related to the *team* category and additionally related to an existing user account (*Figure 3*).



Figure 3: Contacts

If any of the data changes, such as a phone number, for example, it would be nice for related users to be able to make these changes directly from their user profile on the website without having to access the administrator area. For this task Joomla! provides the *User-Profile* plug-in. You just have to activate it in *Extensions - Plug-ins*. In the user profile, a new area is displayed for the profile fields, which is connected to the contact component.

12.3.Messaging

Messages is a core component of Joomla and a built-in private messaging system for backend users. It allows you to send and receive messages to other users with permission to access the administrator area.

The messaging component is very easy to use; however, users often forget the possibility to configure the component in *Components - Messages - My Settings*. You can have the system email you every new message, delete them after an x amount of days, and you can also lock your inbox.

12.4. Newsfeeds

Feeds are very handy. It is possible to subscribe to different kind of news and information. Unfortunately even today, often people don't use them for some inexplicable reasons. Thirty years ago you had to buy and read a newspaper to get to know the 'News'. Fifteen years ago you opened your browser and visited one website after another to get to know the "News". Today, you can still do both but it's also possible to use a feed aggregator. Google's reader and the dynamic bookmark toolbar of your browser (e.g. Firefox) are quite popular. The Joomla! 1.6 Newsfeeds component is an aggregator as well. Not as sophisticated like Google's reader, but also quite useful.

The news feed component allows you to collect feeds from other sites and publish it on your site.

In today's world of social media everyone probably has dozens of user accounts. Often videos and images are stored on youtube.com and flickr.com. In a company, the situation is even more complex. Imagine how much information is available as newsfeeds about a project like Joomla! or about your company.

A feed reader on our website

In the next example, we want to build a feed reader on our website. I'll try to collect all the bits and pieces which are created around our company and list them in a table. We have a vimeo account for our videos, a flickr account for images, several twitter accounts and that's still not all:-)

First, I create a newsfeeds category called cocoate in *Components* \rightarrow *Newsfeeds* \rightarrow *Categories* and afterwards for every feed an entry in *Components* \rightarrow *Newsfeeds* \rightarrow *Feeds* (*Figure 1*). The single problem is often finding the correct feedlink. For example, our vimeo video feed link looks like this:

http://vimeo.com/cocoate/videos/rss. The Flickr feed link of our photos looks more complicated (http://api.flickr.com/services/feeds/photos_public.gne?id=17963290@N00&lang=en-us&format=rss_200).

In the publishing options you have to enter how many feed entries you want to show and the number of seconds before the cache is refreshed. Joomla! only stores the amount of items which you configured in its cache. This is an important detail because in some countries it is not allowed to store the content from a public newsfeed in your database.

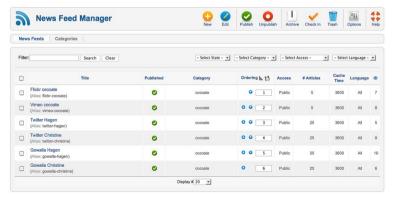


Figure 1: A collection of newfeeds

Finally, you have to create a menu item in a menu of your choice. The *Newsfeeds* component comes with three different layouts:

- 1. List of all News Feed Categories
- 2. List of News Feed in a Category
- 3. Just a Single Newsfeed

I chose the second one because I have all my feeds in one category. On the website, Joomla! aggregates my feeds, e.g. the Vimeo video feed (*Figure 2*)



Figure 2: News feed data

When you create a news feed, you can configure in *Display Options* among other things whether you want to display the feeds image or not. Also, you can limit the number of characters of the content which should be displayed. This feature is very useful if the feed contains longer articles or if you use the *Feed Display* module. You can create one in *Extensions - Modules - New*. Here is e.g. the New York Times feed (http://feeds.nytimes.com/nyt/rss/HomePage). Configure the module at *position-4* and configure the *Basic Options* (*Figure 3*).

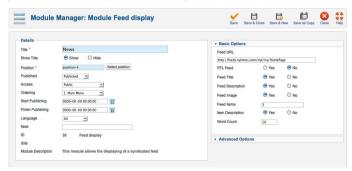


Figure 3: News feed module

The result on the webpage will look like in *Figure 4*.

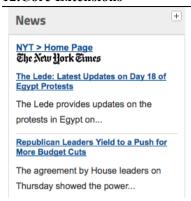


Figure 4: News feed module on website

12.5. Redirects

This component is currently (2011-02-14) not working - [#24524] Redirect is Not Working with SEF [1]

The redirect manager is a wonderful idea. It redirects a visitor to a valid page when he enters a path on your website that doesn't exist. It is possible that it existed before and was added to the search index of a search engine, or someone stored it at another website. This problem usually occurs after relaunching a website.

The redirect component is very convenient. If someone tries to access a path that doesn't exist, Joomla! will show the 404 - not found page and simultaneously create a new entry in the redirect manager.

When accessing *Components - Redirects*, you'll see these links (*Figure 1*). The *System - redirect* plug-in has to be activated in *Extensions* \rightarrow *Plug-ins*.



Figure 1: Redirect Manager

You can now edit the links and add a new redirect URL. The next time the old path is accessed, the redirect component ensures that the visitor is redirected to the new address. You may create redirects on your own if you are aware of any old paths that no longer exist.

The component uses the web server's rewrite system. Currently, only Apache is supported with an installed $mod_rewrite$. In $Site \rightarrow System\ Information$ you can see which web server you are using. (Figure 2)



Figure 2: System Information

When using Apache, go to Global Configuration \rightarrow Site \rightarrow SEO Settings \rightarrow Use Apache mod_rewrite and switch it to Yes. Afterwards, rename the file htaccess.txt to htaccess. In some cases renaming the file may not be possible because the file starts with a dot. I use my ftp client or the shell for renaming the file (Figure 3).



Figure 3: .htaccess

Links:

[1] http://joomlacode.org/gf/project/joomla/tracker/? action=TrackerItemEdit&tracker item id=24524

12.6.Search

People expect to be able to search content on your website.

Joomla! uses full text search. Full text means that Joomla! searches for all keywords you enter in the search box directly in the database.

This may sound obvious to most people, but it isn't. Many search engines first create a search index consisting of words used on your website. During the actual search, the search index is browsed for matches. These matches are linked to the actual content. The search result page is based on these matches and links.

Index-based search is faster than full text search but the index has to be updated with every website change; otherwise the new content cannot be found. In order to compensate for the performance advantage of the index-based search function, Joomla! is highly configurable.

Search Term Analysis

To get a a first glimpse of what visitors are searching for on your site, you have to switch on the statistics feature ($Components \rightarrow Search \rightarrow Options$: Gather Search Statistics - Yes). Then all the terms will be recorded and listet in Components - Search. Don't forget to also switch on Show Search results (Figure 1).



Figure 1: Search statistics

User interface

You can choose between a search box appearing on various pages of your website or a link to a search form. The search extension provides a search module for the single box and a search layout for menu items. The search module is activated by default and most templates provide a special search position for it. It offers numerous options, including text configuration of the buttons as well as setting the box width (*Figure 2*).

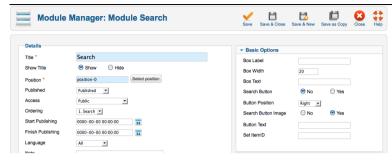


Figure 2: Search module

The search result page consists of a more detailed search form at the top of the page and the search results below (*Figure 3*).

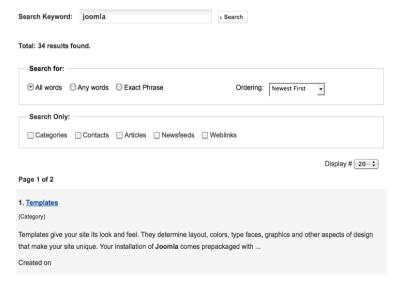


Figure 3: Search result page

The user can configure search settings (all keywords, any keywords, exact phrase) and change the order in which the results are displayed. The search can also be limited to different content items like *articles* and *categories*.

Behind the scenes

You are able to configure the search in the existing search plug-ins. Have a look at *Extensions - Plug-in Manager* and filter for type *search* (*Figure 4*).



Figure 4: Search Plug-ins

For every *search only* checkbox in the search form there is a plug-in. You can change the order of the plug-ins, activate or deactivate them. You can also configure several options for every plug-in, e.g., whether it should search in archived articles or not.

Each additionally installed extension may contain a search plug-in and integrate itself into the search process.

With this plug-in-based search structure, Joomla!'s search component is easy to use and easy to extend!

12.7. Weblinks

With the web links component, you can create a link list or a download section that you can integrate into your website. To do so, Joomla! provides the nested categories system and counts the individual hits on the links. This component is useful for link catalogs. Add as many web link categories as you need, create as many web links as you have, then connect both by assigning categories. Add a menu link, choose a layout and configure the options.

The web links component provides three menu item type layouts: List All Web Link Categories, List Web Links in a Category and Submit a Web Link. We have already seen the first two layouts in articles and categories. By using the third one, you can involve your users in the creation of a joint catalog. Create a menu item 'Submit a Web Link' in the user menu and set the permissions in Components \rightarrow Web Links \rightarrow Options to allow registered users to create links. The Options area provides six tabs full of configurable details.

The example data includes a link catalog (Figure 1).

Joomla! Specific Links



Subcategories
Other Resources

Figure 1: Link catalog

In the module manager, you'll find a web links module, which shows links from a category on your website.

12.8.Mass Mail Users

Sometimes you want to send a message via email to all of your users. Sometimes you want to send that message only to a group of users or only to those having access to the backend. Sending emails is always a bit delicate. Nobody wants to be a SPAMMER and nobody wants to receive SPAM, so be careful!

In order to use the mass mail user component, you have to configure Joomla! for sending emails in *Global Configuration* \rightarrow *Server* \rightarrow *Mail settings*. You may then configure the *Subject Prefix* and the *Mailbody Suffix* in *Users* \rightarrow *Mass Mail Users: Options - Mass Mail.*

The user interface of the *Mass Mail Users* component is easy to understand. You can choose the user group of those users who should receive the email. You can determine whether the sub user groups should also receive emails, whether the email is in html format or plain text, and whether all recipients are listed in the email or marked as BCC (*Blind Carbon Copy*). The message has a subject line and a mail body. You can use html but no wysiwyg editor is provided (*Figure 1*).

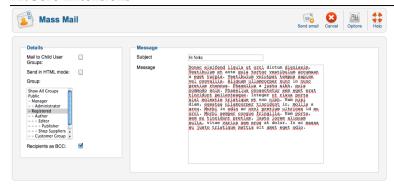


Figure 1: Mass mail form

Storing mass mails in Joomla! is not possible. After filling in the form, click the send email icon. Now the emails are being sent.

A module is a content element that can be positiond next to an article. A menu, for example, is a module. The small registration block on the left side is also a module. You can create as many modules with smart functions as you need and position them on the predefined area in the template.

Modules are design elements in every template. Most of the time the search and the breadcrumb module have predefined positions in a template. This is also true for the navigation module in the header area, often called "top" position.

13.1. Similarities of all modules

Every module has

- a title which can be displayed as a headline or hidden,
- a **position** in a template,
- a switch to **publish** the module,
- an ordering index for sorting modules at the same position, usually used in sidebars.
- a scheduling feature with a start and end date,
- the option to assign a language to it. Will only appear when the user selects this language (Read more: Multi-Language Websites, page 143)
- the option to add a **note** to the module
- the same menu assigment system as in templates. You can limit the
 appearance of the module.

13.2.Advanced Options

In Advanced Options, you can

- choose from different template layouts if the template offers this feature.
- add a module class suffix, which adds a text to the CSS class of the module. This is useful for individual styling.
- use the cache system by switching it on or off and set a time before the module is re-cached

13.3.Core modules

The Joomla! 1.6 package contains 23 different module types. I will list and shortly describe them in alphabethical order.

(The descriptions are partly taken from the Joomla! help).

- We already used the **Archived Articles** module in the chapter *Statuses*, *Trash and Check-Ins (page 79)*, which offers a list of months and is linked to the archived articles.
- Articles Categories displays a list of categories from one parent category.
- Articles Category displays a list of articles from one or more categories.
- Articles Newsflash will display a fixed number of articles from a specific category or a set of categories. You can configure ordering, number of articles, read more link and many more
- The Articles Related Articles module displays other articles that are related to the one currently being viewed. These relations are established by the Meta Keywords.
 - All the keywords of the current article are compared with all the keywords of all other published articles. For example, you may have an article on "Breeding Parrots" and another on "Hand Raising Black Cockatoos". If you include the keyword "parrot" in both articles, then the *Related Items Module* will list the "Breeding Parrots" article when viewing "Hand Raising Black Cockatoos" and vice versa.
- The **Banners** module displays the active banner, which we already used in chapter *Banners* (page 112)
- The Breadcrumbs module display the navigation breadcrumbs, which were used in chapter Navigation (page 92).
- The Custom HTML module allows you to write your own HTML code and displays it in an appropriate module position. In Basic Options this module, has the usefull Prepare Content feature. Joomla! offers the possibility to apply additional functions to article content, like email cloaking, via the plug-in mechanism (Read more: Plug-Ins page 133). If you turn on the Prepare Content, the HTML content you added to the module will be treated as any article content.
- The Feed display module enables the display of a syndicated feed. We used it in chapter Newsfeeds (page 119).
- The Footer module shows the Joomla! copyright information. You are allowed to deactivate it but your are also invited to keep at on your website!
- The Language Switcher module is new in Joomla! 1.6 It displays a list of available content languages for switching between them. Read more about this feature in the chapter *Modules (page 129)*.

- The Latest News module shows a list of the most recently published articles. Filtering options are: by category, author and featured articles.
- The Latest Users module displays the latest registered users. You can link
 to the user profile, limit the amount of users and you may choose between
 different types of user information to be shown.
- The **Login module** displays a username and password login form. It also displays a link to retrieve a forgotten password. If user registration is enabled (*User Manager* → *Options*), another link will be shown to enable self-registration for users. It is possible, for example, to add additional text to the form, to redirect your user after login and logout, and to encrypt the login form using SSL, which has to be provided by the web server.
- The Menu module is a container, which displays menu items of an
 existing menu. A menu can consist of nested menu items. You can filter
 these items by the start and end level, e.g., all the links from the second
 and third level. It is also possible to decide whether the sub menu item
 should be shown or not.
- The Most Read Content module shows a list of the currently published articles, which have the highest number of page views. You can filter by category and limit the number of articles.
- The **Random Image** module displays a random image from your chosen directory. Usually, you will use the media manager to stores these images. You can configure the file type of the image, a URL to redirect to if the image is clicked upon and you can adjust the width and the height of the images. However, be careful with the last option. Joomla! does not resize the original image; it only sets attributes in the *img* tag.
- The **Search** module displays a search box. You may configure the design of the box, the position and the text of the button. We already covered the search module in chapter *Search* (page 124).
- The **Statistics** module shows information about your server installation together with statistics on the website users, number of articles in your database and the number of web links you provide.
- The **Syndication Feeds** module creates a syndicated feed for the page where the module is displayed. It displays the an icon. You can enter a text to be displayed near the icon and choose the feed format (RSS 2.0, Atom 1.0).
- The **Weblinks** module displays weblinks from a category defined in the Weblinks component (*Read more in chapter Weblinks, page 126*).
- The Who's Online module displays the number of anonymous users (e.g. guests) and registered users (ones logged in) that are currently accessing the website.
- The Wrapper module shows an iFrame window at a specified location.
 You configure the URL where the external website is located, switch



A plug-in adds specific capabilities to a component. The term plug-in is also used in other places. For example, plug-ins are commonly used in web browsers to play videos. A well-known plug-in example is Adobe's Flash Player. A good example for the use of plug-ins in Joomla! is the Search component (page 124). Five search plug-ins work together to find content from different Joomla! components.

Joomla! has eight plug-in types: authentication, content, editors-xtd, editors, extension, search, system and user. These are also the names of the website sub directories where the plug-in files are located. For example, plug-ins with a type of authentication are located in the website directory plugins/authentication. It is not possible and not necessary to create a plug-in in the administrator area like we have seen in the modules chapter. A plug-in has to be installed via the

Extension Management (page 108).

14.1. Authentication

Authentication in Joomla! is the process of verifying whether a user should be permitted to do something on the site. Authorization, which is always the process that follows authentication, verifies that an authenticated user has permission to do something. You authenticate with your username and password, and you are authorized by being a member of a permission group. (read more: Users and Permissions, page 100). Joomla! offers three possibilities for authentication (*Figure I*). Be careful with deactivating plug-ins. You must have at least one authentication plug-in enabled or you will lose all access to your site.



Figure 1: Authentication Plug-ins

Joomla!

TThe plug-in provides the standard behavior for Joomla!. You fill in the login form with your username and password and your login information is then verified.

GMail

If you activate the GMail plug-in, users will be able to log onto your site by using their GMail address and password. Prior registration is not necessary. With the first login, the *System plug-in Joomla!* will create a user account in its database. The GMail password is stored encrypted in the database, so your users GMail accounts cannot be hacked. This plug-in facilitates the login process for your users. Unfortunately, there is no advisory in the login form that loging in with GMail is possible. You'll have to add additional text or find another creative solution.

LDAP

The *Lightweight Directory Access Protocol (LDAP)*[1] is an application protocol for reading and editing data from directory service. It is used in companies for managing department affiliation as well as employee phone numbers.

```
dn: cn=John Doe,dc=example,dc=com
cn: John Doe
givenName: John
sn: Doe
telephoneNumber: +1 888 555 6789
telephoneNumber: +1 888 555 1232
mail: john@example.com
manager: cn=Barbara Doe,dc=example,dc=com
objectClass: inetOrgPerson
objectClass: organizationalPerson
objectClass: person
objectClass: top
```

In order to use this plug-in for authentication, you will need an LDAP Server (OpenLDAP) and you have to configure the LDAP plug-in with the server specific data. You will find a good tutorial at joomla.org: *LDAP from Scratch*[2].

14.2.Content

Besides the *Joomla!* content plug-in, all other content plug-ins are related to the text you insert into an article. The Custom HTML can use the content plug-ins as well (*Figure 2*).(Read more: Modules)

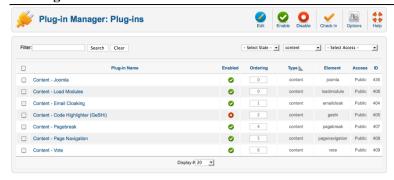


Figure 2: Content Plug-ins

Joomla

The Joomla plug-in has two tasks:

- 1. When you attempt to delete a category, it verifies whether the category is 'empty'. Empty means, no article or sub category is assigned to it. You can turn this feature off in *Basic Settings*.
- 2. If a new article is submitted via the frontend, the plug-in will send an email to all those users for whom *Send Email* is turned on (*User Manager Edit User*). This feature can be turned off in *Basic Settings*.

Loading Modules

This plug-in loads the HTML output of all modules assigned to a template module position into an article. All you have to do is write {loadposition position-14} in the space where the modules should displayed. This feature is especially useful for putting banner ads into the content.

Email Cloaking

This plug-in transforms an email address entered into the content in the form of name@example.com into a link, and cloaks the email address by means of JavaScript. The advantage of this is that email address collection programs can't read your email address very easily.

Code Highlighter

The GeSHi plug-in makes *Syntax Highlighting* possible and creates an impressive listing on your website if you embed the code to be formatted within + HTML tags:

```
  if ($number > 0)
  {
    echo $number;
  }
  else{
    $number++;
  }
```

Pagebreak

The Pagebreak plug-in takes care of pagebreaks in articles. Just like the *Image* plug-in, it is easy to integrate into the content. Besides a simple pagebreak, various headers and page titles can also be defined. You can set pagebreaks using the pagebreak dialog. The page break will be displayed in the text window as a simple horizontal line. In the HTML code, the pagebreak looks like this:

```
<hr title="Page Title" alt="Table of Contents Alias"
class="system-pagebreak" />
```

This plug-in integrates the *Next* and *Previous* functions under the articles.

Page Navigation

This plug-in integrates the *Next* and *Previous* functions under the articles.

Vote

This plug-in adds voting functionality to articles.

14.3. Editors-xtd

The four editors-xtd plug-ins generate the buttons below the editor window (*Figure 3*).



Figure 3: Editor-xtd Plug-ins

Article

Displays a button for linking the actual article to other existing articles. After clicking the button, a pop-up will be displayed allowing you to choose the article to link to.

Image

This plug-in displays a button for inserting images into an article. After clicking the button, a pop-up will open allowing you to choose an image from the media directory or upload new files and configure its properties.

Pagebreak

Provides a button to enable a pagebreak to be inserted into an article. A pop-up allows you to configure the settings to be used. The plug-in has to be activated together with the *Content - Pagebreak* plug-in.

Readmore

Enables a button which allows you to easily insert the *Read more* link into an article.

14.4.Editors

Joomla! core comes with two editors (*Figure 4*). In *Global Configuration - Site* you can set the default editor for your website. Additionally, you can assign a different editor to every user account (*User - Manager*).



Figure 4: Editor Plug-ins

CodeMirror

CodeMirror [3] is a JavaScript library that can be used to create a relatively pleasant editor interface for code-like content — computer programs, HTML markup, and the like. This plug-in has to be activated if you want to offer textarea fields with the CodeMirror editor. You can configure the behavior of the editor in *Basic Settings*.

None

This plug-in has to be activated if you want to offer textarea fields without an editor.

TinyMCE

TinyMCE [4] is a platform-independent web-based Javascript HTML WYSIWYG editor control. It is the default editor in Joomla!

14.5.Extension

The extension plug-in type is related to tasks concerning the managing of Joomla! extensions.

Joomla

This plug-in manages the update sites for extensions.

14.6.Search

The Search plug-ins for *Contents, Weblinks, Contacts, Categories*, and *Newsfeeds* can be activated when needed. They implement the search function of the Search component (page 124). These plug-ins have to be activated if you are trying to obtain search results from the respective sections. If you want to search additional

components, the respective plug-ins for those have to be available as well (*Figure 5*).



Figure 5: Search Plug-ins

14.7.System

System plug-ins are deeply integrated in the Joomla! framework, and they usually affect the behavior of the entire website (*Figure 6*).



Figure 6: System Plug-ins

Language Filter

This plug-in filters the displayed content depending on the language desired. It has to be enabled only when the *Language Switcher* module is published (read more: Modules, page 129)

P3P Policy

The *Platform for Privacy Preferences Project (P3P)* [5], is a protocol allowing websites to declare their intended use of information they collect about browsing users. The system P3P policy plug-in allows Joomla! to send a customized string of P3P policy tags in the HTTP header. This is needed for the sessions to work properly with certain browsers, i.e. Internet Explorer 6 and 7.

Cache

This module provides page caching. You can configure whether you would like to use the client's browser for caching pages.

Debug

This makes the debug function available, which is very important to programmers. You can configure the parameters to determine which information to display.

Log

This plug-in makes the system log files available.

You can determine the location of the log file in *Global Configuration - System - System Settings*.

This is an example of such a log file (/logs/error.php):

Redirect

Provides the redirect feature in conjunction with the Redirects component.

Remember Me

This is a method for saving access data locally in a cookie in the client browser. Once a user visits your website again, the data is already in the form. This storage is only enabled by explicitly marking a checkbox below the login form.

SEF

SEF is the acronym for *Search Engine Friendly*. This plug-in creates search engine friendly URLs for content elements, which can be configured in *Global Configuration - SEO Settings*.

Logout

The system logout plug-in enables Joomla! to redirect the user to the home page if he chooses to logout while being on a protected access page.

14.8.User

User plug-ins are related to user specific functions (*Figure 7*).



Figure 7: User Plug-ins

Profile

The user profile plug-in gives you the opportunity to ask the user for additional profile fields, which can be configured in *Basic Settings*. It can also be combined with the contact creator plug-in to automatically create a contact item for every user (*also see Users and Permissions, page 100*).

Contact Creator

A plug-in to automatically create contact information for new users. It works in conjunction with the profile plug-in (also see Users and Permissions, page 100).

Joomla!

This plug-in creates a user in the database after the first successful authentication.

Links:

- [1] http://en.wikipedia.org/wiki/Ldap
- [2] http://community.joomla.org/component/zine/article/507-developer-ldap-from-scratch-sam-moffatt.html
- [3] http://codemirror.net/
- [4] http://tinymce.moxiecode.com/
- [5] http://en.wikipedia.org/wiki/P3p

15.Multi-Language Websites

I live in Europe. Europe has 23 official languages. If you are going to create websites in regions like this, you have to think about multilingualism. Two things are especially challenging when it comes to creating multi-language websites: the translation of the static Joomla! text strings as well as the translation of the content items. While the first challenge can normally be overcome easily, the second one presents the real challenge.

The Joomla! 1.6 core is now available in 23 languages (*February 2011*). Joomla! 1.5 is available in 51 languages and more languages are expected to come soon. More than 50 languages are in preparation [1].

Let's build a multi-language website by using Joomla! 1.6 core in this chapter.

15.1.Joomla! language packages

You can download the translation packages from Joomla Code [2] or the Joomla! extension directory [3] und install them using the extension manager (*Read more: Extension Management, page 108*). I have done this with the German as well as the French language package. After installation you will find the three installed languages (*Figure 1*) by visiting *Extensions* \rightarrow *Language Manager* in the backend.



Figure 1: Installed languages

Language Configuration

As of now, it is still necessary to have a look at the language configuration to see whether the languages are published ($Extension \rightarrow Language\ Manager \rightarrow Installed$) and the language content attributes are correct ($Figure\ 2$). Have a look at ($Extension \rightarrow Language\ Manager \rightarrow Content$). If there is no content item for the installed language, create one by clicking the new icon. This is what happened to me after I had installed the French language package.

15.Multi-Language Websites

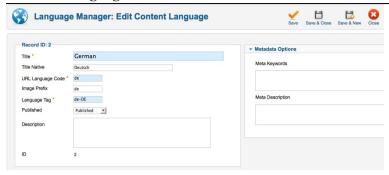


Figure 2: Edit content language

15.2.Language Filter plugin

For Joomla! to be able to distinguish between the different languages, the *System - Language Filter* plug-in (*Extensions* → *Plug-Ins*) has to be activated. You are able to configure the language to be shown to the visitor, whether it is the language version of your website or the client's browser setting, by simply using the Options settings. Another configuration setting is the *Automatic Language Change*. If enabled, the content language will automatically be changed to the frontend language settings.

Every user can configure his *frontend language* once he is logged in in the frontend. Most of the time, there is a user menu that, depending on your rights, provides you with different menu items. In this user menu, you will also find the *Your profile* link. By clicking on the link, you will then be able to view and edit your profile data. In the profile edit form under *Basic Settings*, users can choose among other configurations and set their *frontend language* (*Figure 1*). You may use the default website language or one of the available content languages. Depending on these settings, the language plug-in will allow you to view the website in the corresponding language.



Figure 3: User profile - Basic Settings

15. Multi-Language Websites

15.3. Language Switcher module

By activating the *Language Switcher* module, you have the possibility to switch between languages in the frontend, regardless of whether you are a visitor or a logged in user. In Basic Settings you can add text and choose whether you would like the languages to be displayed with the language name or the flag icon. I am sure some third party templates will provide special templates positions for this module in the near future. In the default template Beez2, *position-7* works well in combination with the flags.



Figure 4: Language Switcher

15.4. Multi-language content items

As I have previously mentioned, each content item, such as an article, can be assigned to a language. The difficulty now lies in creating all these content items in all source and target languages (*Figure 5*).

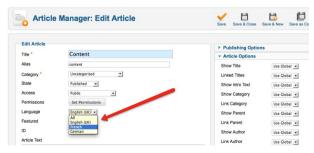


Figure 5: Language field

15.Multi-Language Websites

You can create content items in any language but, unfortunately, Joomla! 1.6 does not yet offer a translating workflow, which means that you have to pay attention to avoid mistakes.

15.5.A multi-language website

My example website consists of

- a front page with articles,
- a blog,
- an 'About Us' page,
- a contact form.

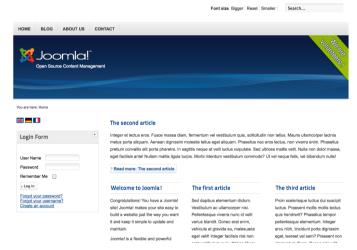


Figure 6: Example website

All content items have to be available in different languages (*Figure 6*). You will find this example website at http://joomla16.cocoate.com.

Front page

I create a few articles for each language with the attribute featured (*Read more: A Typical Article, page 58*) and one front page menu item for every language (*Home, Front Page, Accueil*). In *Basic Settings*, I configure the amount of articles and columns being displayed. I assign the attribute *home* to each of these menu items by clicking the *home* icons (*Figure 6*). When clicking the breadcrumbs 'home' link, you will be redirected to one of the three front pages depending on the language (*Figure 7*).

15.Multi-Language Websites



Figure 7: A frontpage for each language

A blog

In my case I already have a blog at cocoate.com, so I use the newsfeeds component for displaying the external blog entries. I create a feed item for each language and the corresponding menu items (*Read more: Newsfeeds, page 119*).

An 'About Us' page

I create an 'About Us' page as described in chapter *How to create an 'About Us' Page (page 52)* for every language.

A contact form

I use a single contact form for genaral inquiries. I only need one contact item, so it is not necessary to assign a language. Only if contact data differs in different languages, e.g., different address or email, will it be necessary to create one contact item for each language.

Login form

On each page a login form will be visible. I have copied the English login module twice, configured the menu assignent, changed the title and assigned the correct language. Now it is possible to login and register at my site.

User menu

I used the existing user menu, which provides you with a link to your profile as well as for creating an article or weblinks. (*Figure 8*).

15.Multi-Language Websites

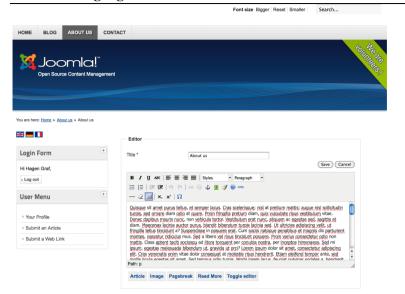


Figure 8: Front-end editing

As you can see, creating a multi-language website with core Joomla! 1.6 is quite simple!

Links:

- [1] http://joomlacode.org/gf/project/joomla/scmsvn/?action=browse&path=%2Fdevelopment%2Ftrunk%2Finstallation%2Flanguage%2F
- [2] http://joomlacode.org/gf/project/jtranslation1 6/frs/
- [3] http://extensions.joomla.org/extensions/languages/translations-for-joomla

To be able to work with templates, you will not only need good design skills but also have an understanding of HTML and CSS. Some browsers, unfortunately, will not display the latest versions, which is why other versions are still quite common.

The next challenge is the neverending discussion between developers and designers about 'how to do things the right way'. Designers depend on developers because they need HTML markup with a possibility to add CSS classes. Developers also depend on designers because without a well-designed template the best component will be difficult to use.

Joomla! has built-in solutions for both challenges!

The Beez Template also exists as an XHTML and a HTML5 version and the suitable HTML markup and CSS classes are created with so-called *Overrides*. *Overrides* means that a designer can override the HTML output the developer's extension produces, without changing the original source code.

Another important agent in the template industry is 'Joe Webmaster'. Often, he only wants to change the header graphic, the colors, the width and a few other options.

Joomla! again has the perfect solution for doing this and it is called *Template Style*. *Template Style* means that you can create any number of copies of an existing *Template Style* to configure your own set of options and assign it to all or various menu items. Have a look back at the chapter *Templates (page 87)* and come back for a deeper insight.

16.1. Create Your Own Style

In the chapter about *Multi-Language Websites(page 143)*, we built a website based on the *Beez2* template. Now I would like to create my own style and change a few options in *Extensions - Template Manager - Beez2 default*. These changes are as follows:

- Style name: Beez2 cocoate
- Logo: I do not want a logo, so I click the Clear Button
- Site Title: Joomla! 1.6
- Site Description: cocoate consulting, coaching, teaching
- Template color: Nature

I save the style as a copy by clicking the Save as Copy icon (Figure 1).



Figure 1: Individual template style

My website now has a totally different look (*Figure 2*). It is possible to create different styles for different parts of the website using the menu assignment feature.



Figure 2: Website with Beez2 style

Creating different styles with available options is the easiest solution and often the best and fastest. When a Joomla! update becomes available, your individual styles will still be accessible in the new version. You are still working with the core package of Joomla! 1.6 without any additional extensions!

16.2. Customizing Existing Templates

If you are reading this chapter, I assume you have already created a *template style*, figured out how to work with all of the available template options, but would still

like to have more possibilities. Welcome to the world of HTML and CSS! I'll also assume that you know these two abbreviations. If not, have a look at wikipedia for HyperText Markup Language (HTML) [1] and Cascading Styles Sheets (CSS) [1].

In Joomla! it is possible to edit all CSS used by the template within the Joomla! template manager. Go to *Extensions - Template Manager - Templates* and click on the link *beez_20 Details*. There, you will be able to make changes in the *beez2* template as well as access all modifiable files (*Figure 3*).

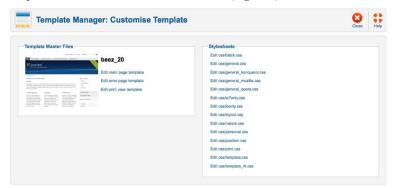


Figure 3: Beez2: Customize Template

The editable CCS files are the files that are located in the file system in the folder httdocs/templates/[template_name]/css. Click on the linked name of the CSS file and a form will open, in which you can edit the file content by using the <code>CodeMirror</code> editor. Besides the CSS files, you can also edit the three main template files:

• Main page

htdocs/templates/[template name]/index.php

Error page

If an error occurs while opening a Joomla! site, this template is used for the page.

htdocs/templates/[template name]/error.php

· Print view

This template is responsible for the output when you access the print view. htdocs/templates/[template name]/component.php

More template pieces like the files for the *core overrides* are located in *htdocs/templates/[template_name]/html*. The *core overrides* cannot be edited from the administrator backend.

The changes you make here will change the core *Beez2* files. This is something to keep in mind in case of updates.

16.3.Overrides

You have already created a style, changed the CSS files and the main page of your template and you are still unhappy with the result? :-) Then this is the perfect time to discuss overrides. In Joomla! there are two kinds of overrides: *template overrides* and *alternative layouts*.

16.4. Template overrides

Let's assume you want to change the layout of the search result page. A component like the search component has a default template layout, which is stored in the file httpdocs/components/com_search/views/search/tmpl/default.php. This file makes the search page look the way it looks. Add a few words to the file, save it and you will immediately see the result! For example, add

I have changed something :-)

in line 13 and see what happens (Figure 4).

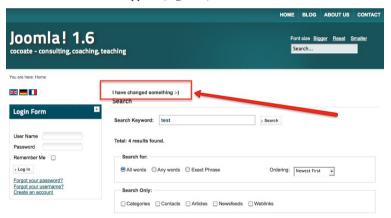


Figure 4: Changes in the HTML output

The result is good for your motivation because it was so easy and is displayed in every template. However, it is not good for your reputation because you have just changed core code. With the next Joomla! update, your changes will be gone!

A better alternative would be to use *template overrides* in each template. Copy the changed file to your template folder to */httpdocs/templates/*

[template_name]/html/com_search/search/default.php and remove the changes in the original file. The result on the webpage is the same but, behind the scenes, you

have overridden the original .../default.php file with your desired content layout - without changing core code - well done!

This system was introduced in the year of 2007 with the release of Joomla! 1.5 and still works very well today.

16.5. Alternative layouts

In Joomla! 1.6 the overrides have an enhancement called *alternative layouts*. I am sure you have already seen the *Alternative Layout* field in the edit form of articles, modules and categories (*Figure 5*).



Figure 5: Alternative layout in an article

Why do we need alternative layouts? Imagine, you are an administrator or webmaster and a template comes with three alternative layouts for an article. Sometimes it is a 'normal article', sometimes it should look like a product, and sometimes like a book page. You only have to choose which layout you would like to use. That sounds like a great feature and, of course, it is.

The technique is the same as with template overrides. You have to create a folder with the same name as the component or module and a subfolder for the view. There are two differences:

- 1. Obviously the file name has to be something other than *default.php* as this one has already been reserved for template overrides.
- 2. The alternative layout is, of course, not automatically selected.

Additionally to the alternative layout, menu item types can be added to the layout and the option items of that article can be controlled by defining them in an xml file with the same name as the alternative layout file (Figure 6).

Select a Menu Item Type:



Figure 6: Additional menu item types

The creation of these files are no beginner's topic but I am sure third-party templates will soon make use of these new possibilities (*Figure 7*).

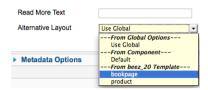


Figure 7: Additional layouts in an article

16.6.Angie Radtke About Her Beez Template

Nearly one year ago, Angie Radtke, creator of the Beez template, wrote this blog entry. The switch between XHTML and HTML5 is now implemented as two seperate Beez templates. One based on XHTML and the other on HTML5.

Joomla 1.6, Beez and the Stage of Affairs

Written by: Angie Radtke [1] - Mar 28, 2010

The Community is still waiting for the new release of Joomla 1.6.

Users are anxious to have Acl and the new category system. But some other things will be changed too. The backend has some changes, new modules have been added, and the HTML – Output changed.

I care about the output, the implementation of standards and the Beez template.

Layout tables are the past. The output structure in 1.6 is similar to the Beez output in 1.5. CSS- class names are more readable and understandable.

For template designers this is a big advantage. The standard output is clean and well-structured. Template overrides are no longer needed to provide clean HTML code that is compatible with the latest standards.

The new Beez template has been developed to take advantage of the changes in 1.6.

The following is only a short overview to give you an idea. If you are curious, you can look at the actual state at http://test5.run-digital.com [4].

Key Features:

- configurable output XHTML versus HTML5
- accessibility
- 2 available designs: nature or personal
- position of the navigation column is configurable
- modules can be displayed in accessible tabs

- fading in and out of modules
- fading in and out of the column

XHTML versus Html 5

The web is making large steps toward HTML5. The group around Ian Hickson has made huge progress in the last few months and browser manufacturers can't help but rush to not be left behind. In my blog I have often talked about HTML5 and its possibilities. Since XHTML is still the most widely used and well-known mark-up language, it will continue to be the default option in Joomla! 1.6.

However, if anyone would like to use HTML 5 instead, the Beez5 is for you.

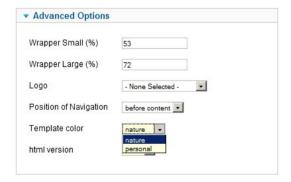
Accessibility

Beez 2.0 contains all the accessibility features of the 1.5 version, according to WCAG 2:

- high color contrasts
- skip links
- semantics
- keyboard navigation

Layout and Design

In the backend, two designs are available to choose from: nature and personal

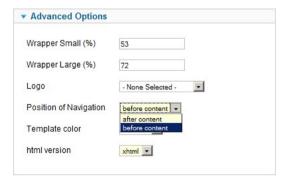


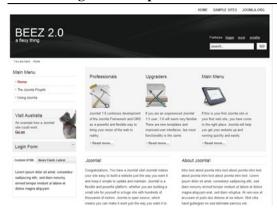


The basis for this is the structure of the CSS files. *Position.css* and *layout.css* are used for positioning and distances, whereas personal.css and nature.css are used for the design, depending on the choice of style.

Position of the navigation column

Depending on the website's concept it may become necessary to place the navigation before or after the actual content. This could be rendered necessary either for design reasons or for improving search engine compatibility and access. Here, Beez offers the otpion of choosing between both variants in both styles in the backend.





Accessible Tabs

Presenting content in tabs is becoming more and more popular. Up until now, external modules were required to do this but their output isn't fully accessible.

Beez offers a solution using WAI-ARIA techniques.

"WAI-ARIA is a specification that provides a means of describing roles, states, and properties for custom widgets so that they are recognizable and usable by assistive technology users."

On the first view there is nothing to see in the source code. This is because the code is added automatically with JS in the DOM. For fun, you can use Firebug to look at what will be added to the source code.

Wai-Aria is also used for assigning site areas in relation to their functionality. (landmark roles)

Implementation within the templates

To display Joomla! modules in tabs, we need nothing more than Beez itself. Template designers already know the template function:

```
<jdoc include .... >
```

This function adds dynamic content. This content can be modules as well as components. The following code in Beez automatically displays all modules on position "position 5" in tabs.

```
<jdoc:include type="modules" name="position-5" style="beezTabs"
headerLevel="2" id="3" />
```

The important thing is in the attribute "style", which is responsible for the output and carries out the corresponding function in beez/html/modules.php. The ID is very important if more than one tab area is used. For each of these areas, an individual ID has to be assigned. It's important that the ID is a number and not a string.

Fading modules and columns

The fading in and out of parts of the site and modules can make a site more user-friendly. Beez offers two possibilities. The user is able to hide or show a column with additional information. Some modules can be set up to fade in or out while the headline remains visible. Wai-Aria is also being used here.

The info column uses the following code:

```
<div id="close">
<a href="#" onclick="auf('right')">
<span id="bild">
<?php echo JText::_('TEXTRIGHTOPEN'); ?>
</span>
</a>
</div>
```

The modules

```
<jdoc:include type="modules" name="position-8" style="beezHide"
headerLevel="3" state="0" />
```

The style used here gives the user the ability to show and hide the module content.

The *state="0"* attribute ensures that the module is closed with the first loading of the website. It can be opened through the user interaction.

If the template designer chooses *state="1"*, the module will initially be open and can be closed by the user. The actual status is located in a cookie, so it works on all pages.

16.7. Create a New Template Using Atomic

The Atomic template is a skeleton for your own template. It consists of:

• /htdocs/templates/atomic

component.php - the print view template

error.php - the error page template

favicon.ico - the website icon (Favicon [5])

index.html - a security file displaying a blank page when the directory is entered directly (also has to be configured by the webserver but usually is) index.php - the templete main page

templateDetails.xml - The configuration file containing all information about files, options and positions is necessary to show the template in the template manager and to later create an installable zip package.

template_preview.png - the template preview image, displayed in template manager

template_thumbnail.png - the template thumbnail image, displayed in template manager

/htdocs/templates/atomic/css

the folder for CSS files

• /htdocs/templates/atomic/html

the folder for *Override* files - Atomic provides a few *Overrides* for modules.

/htdocs/templates/atomic/images the folder for images

- /htdocs/templates/atomic/js
 the folder for Java script files
- /htdocs/templates/atomic/languages
 the folder for language files Atomic comes with English base language

Main template file index.php

files.

The file name of this layout file has to be *index.php* since Joomla! searches for embedded <*jdoc*> and PHP commands. All necessary HTML markup is already built-in and commented. You can change the content of the file according to your needs.

To get an idea, let's do a quick walkthrough:

In line 24 you can choose whether you want to use the blueprint CSS framework or not

In *line 50, 56, 62* and more you see that the template provides positions with special names (*atomic-search*, *atomic-topmenu*, ...). If you want to use these names you have to assign your modules to these positions. If you want to change the names, you may do that in the *templatedetails.xml* file.

In *line 48* you will see:

```
echo $this->baseurl ?>/templates/<?php echo $this->template ?>/js/template.js
```

Joomla! knows the values in *baseurl* as well as the name of your template and you can access them when needed.

In line 48 you will see:

```
echo $app->getCfg('sitename');
```

It will tell you the name of your site.

In line 50 you will see:

```
if($this->countModules('atomic-search')) ...
```

It counts the amount of modules at the position *atomic-search*. It is used to adjust your layout to different situations.

In line 52 you will see:

```
<jdoc:include type="modules" name="atomic-search"
style="none" />
```

This is a <jdoc> command, which only exists as a name space in Joomla!. It is used to insert the HTML output of the given type into the attributes. In this case it means the output of all modules assigned to the template position *atomic search*. The style attribute is called *module chrome* and can have these values

- **table** The output is displayed in a table.
- horz The output is displayed horizontally in a cell of a surrounding table
- **xhtml** The output is in in an XHTML-compliant <div> element.
- rounded The output is in a format in which round corners can be displayed. The class of the element is renamed from moduletable to module.
- none no formatting
- **outline** the display type for the position preview (2tp=1)
- **Template specific style** Some templates, like Beez, have their own styles. See chapter *Angie Radtke About Her Beez Template, page 154*.

You will find a complete list of styles in the Joomla! documentation - What is module chrome [6].

Other <jdoc> types are:

```
<jdoc:include type="head" />
<jdoc:include type="message" />
```

```
<jdoc:include type="component" style="none" />
```

Every page needs a *head*, sometimes a *message* (after saving) and, of course, a *component*. One *component* can be displayed per page. The *component* can make use of the module chrome as well.

The *error* and the *print view* template files work exactly like the *main* template file.

CSS Folder

You will find three files in this folder

- 1. The css/template.css file with predefined commented CSS commands. If you don't use the blueprint framework, you have to uncomment a few of them. The lines are specifically marked.
- The file css/template_ie.css is empty. Here you can add style overrides for Internet Explorer.
- 3. The file css/template_rtl.css is empty as well. You can add style overrides for right to left languages.

Blueprint framework

Blueprint is a CSS framework designed to reduce development time and ensure cross-browser compatibility.

A few sentences taken from the *readme* file:

Welcome to Blueprint! This is a CSS framework designed to cut down on your CSS development time. It gives you a solid foundation to build your own CSS commands. Here are some of the out-of-the-box features BP provides:

- * An easily customizable grid
- * Sensible default typography
- * A typographic baseline
- * Perfected browser CSS reset
- * A stylesheet for printing
- * Powerful scripts for customization
- * Absolutely no bloat!

You will find demos and tutorials on the project website - http://www.blueprintcss.org/ [7].

Links:

- [1] http://en.wikipedia.org/wiki/Html
- [2] http://en.wikipedia.org/wiki/CSS
- [3] http://www.der-auftritt.de/wissen/Joomla-1.6-Beez-and-the-conditions-of-the-things.html
- [4] http://test5.run-digital.com/
- [5] http://en.wikipedia.org/wiki/Favicon
- [6] http://docs.joomla.org/What is module chrome%3F
- [7] http://www.blueprintcss.org/

17. Search Engine Optimization

Every website owner usually wants to be seen on the first search results page in search engines like Google and social networks like Facebook. Unfortunately, there is not enough space on the first search results page for all the websites and businesses in the world, and users would quickly lose trust in search engines if it were possible to appear on the first page just by optimizing the site for search engines.

Around this topic, an industry of consultants has grown offering search engine optimization services.

I see two possibilities for optimizing a website. The first is to help the search engines by using 'HTML standards' and telling the 'truth' about your site and the second is to find other ways:-). This chapter covers the first possibility.

Search engine optimization (SEO) is the process of improving the visibility of a website or a web page in search engines via the "natural" or un-paid ("organic" or "algorithmic") search results. Wikipedia [1]

Search engine users like to click on natural, un-paid search results instead of paid ads. People try to avoid clicking ads. Google e.g. uses the *PageRank* [2] algorithm to measure the 'importance' of a site, which is added to its search index.

17.1.Getting indexed

Search engines use so-called web crawlers. Once they visit your website, they follow each link on the frontpage and add all those pages to the search index. Keep in mind that web crawlers don't 'see' the site. They are not a human being, they do not use a browser to render your page, they simply look at your HTML code. Sometimes the number of possible URLs they find is so high that it becomes difficult for them to follow them all. This often happens with lists of content items with the possibility of filtering the display or those having a page navigation. Endless combinations of parameters are possible and only a few will return unique content.

Once your website is finished, one of the first steps for you is to say "hi" to the robots of your choice and give them more information about your site. Search engines are very interested in knowing about your website because it makes their life easier, too. Try *Google Webmaster Tools* [3] and the *Bing Webmaster Toolbox* [4].

17. Search Engine Optimization

17.2.Help your robot

The robot is now visiting your website. It cannot see, it cannot read. You have to help your robot using various methods!

- The robot looks for keywords (words people usually search) in your content, so be aware of that when you write a text. Sometime peoples write content based on recent events on the web to receive a better ranking. Don't write the 455th blog entry about the awesome features of the new iPhone:-). Be careful not to lower the quality of your content through the extensive use of keywords or techniques, like hidden keywords in the same color of the background. The robots are not silly; they simply need a little help.
- The robot also looks at keywords in meta tags. You should also place your keywords there. Joomla! offers options for adding keywords and other meta tags to your content in nearly every edit form.
- One of the main ideas of HTML markup is linking. Use this idea to link to other parts of your website from within your content.
- Other websites could link to your site (backlinks). The more sites link to
 your site, the better. Links directly to your main page are 'more important'
 than links to pages within your site (deep links). Avoid paid links and
 comment links from other sites that have a completely different context
 from yours!
- URL normalization [5] is used to avoid 'robot confusion'.

 Joomla! provides several methods in the SEO Settings (see chapter Website and Content Configuration, page 82) and an Alias field below every title in an edit form for creating an individual path.

It is possible to extend that list as long as you want. The two methods which are technically important are the meta tags and the URLs. Joomla! covers both in a good way, additionally Joomla! provides the Redirects *component (page 122)* which helps to avoid 404 pages.

17.3.My personal view

If you are using a CMS like Joomla! 1.6 and a template like Beez2, your HTML output is technically perfect.

As I already said in the chapter Managing Content (page 51)

A content management system is useful for managing information that provides value for your audience

If you create useful information with value for you audience within your website, be sure, every search engine will notice that.

17. Search Engine Optimization

By the way, ever heard of the *Nigritude Ultramarine* [6]?

Links:

- [1] http://en.wikipedia.org/wiki/Search_engine_optimization
- [2] http://en.wikipedia.org/wiki/PageRank
- [3] http://www.google.com/webmaster/tools/
- [4] http://www.bing.com/toolbox/webmasters
- [5] http://en.wikipedia.org/wiki/URL normalization
- [6] http://en.wikipedia.org/wiki/Nigritude ultramarine

18.Upgrade from Joomla! 1.5 to Joomla! 1.6

How can you upgrade a Joomla! 1.5 website to Joomla! 1.6 without loss of data or similar disasters?

There are two ways to complete the update:

- You can update the existing Joomla! 1.5 website by using an additional component. This component loads all the necessary files with one click to your Joomla! 1.5 website and automatically converts them to Joomla! 1.6.
- 2. You can create an empty Joomla! 1.6 website and insert the data from the Joomla! 1.5 website manually.

In this chapter I will describe the first possibility.

18.1.Auto upgrade

Before you begin, please answer the following questions with a loud and clear YES.

Does your server environment meet the minimum requirements for Joomla! 1.6?

PHP, version 5.2.4 or higher (Not for Joomla 1.6 but for the upgrade component, you will need the CURL module in PHP.)

MySQL, version 5.0.4 or higher

Is the installed template available for Joomla! 1.6, or are you able to change it manually?

- Template changes for Joomla 1.6 [2]
- Joomla! Documentation Upgrade Tutorial[3]
- Joomla! 1.6 Template Tutorial[4]

Are you able to create a local copy of your site?

Are all the installed extensions available for Joomla! 1.6?

At the moment, there are 700 Extensions available for Joomla! 1.6.[1] Under *Extensions - Install / Uninstall* you can see the list of installed components, modules, plugins and templates (*Figure 1*).

18. Upgrade from Joomla! 1.5 to Joomla! 1.6

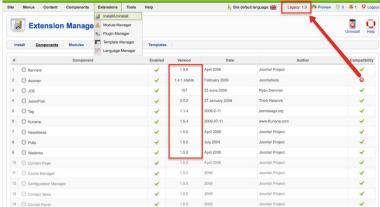


Figure 1: Overview of installed components

Are you experienced enough to change small snippets of code with instruction :-)?

If you feel comfortable and answered all the questions with yes ... let's go!

Step 1: Back-up

Before you do anything else, please do a backup of your site. You are probably already using *Akeeba Backup* [5]. The extension is available for version Joomla! 1.5 and 1.6. If not, install it and do a back-up of your site!

Step 2: Create a local copy of your site

If you set up a local copy manually, you will need to

- copy your files
- dump your MySQL database, create a local database and import the dump into the local one
- change configuration.php

You can also implement the process with Akeeba backup, which allows you to create a zip package of your site. To again create a website from this package, you will need the *Akeeba Kickstarter*.[5]

- Place the kickstart files and the zip package of your website in the local folder of your website (*htdocs*).
- Create an empty database for your Joomla! 1.5
- Launch kickstart.php. Presumably, the URL will look like http://localhost/kickstart.php. Then follow the instructions.

18. Upgrade from Joomla! 1.5 to Joomla! 1.6

Step 3: Upgrade component

There is an upgrade component by Matias Aguirre . The following data will be transfered:

- Users
- Categories
- Content / Articles
- Banners
- · Menus and Structure
- Modules
- Contacts
- Newsfeeds
- Weblinks

Download[6] and install the component in your local Joomla! 1.5 installation. Launch it and start the upgrade - that's it. :-)

Here is a good video from the YouTube Joomla! Channel, describing the use of this component [7].

The component creates a folder with the name *jupgrade* and installs the Joomla! 1.6 variant of your 1.5 website in this new folder (http://localhost/jupgrade). The Joomla! 1.6 core template is activated.

Language files

If you use Joomla! in a language other than English, you first have to install the correct language files [8].

Template

Customize your template and activate it.

18.2. My experience and some links

- Here is the *upgrade thread* [9] from the Joomla! forum.
- Roger Perren produced a manual for the migration from 1.5 -> 1.6 as a
 PDF in the German language (*Migrationsanleitung 1.5 -> 1.6* [10]),
 which was among other things, my base for this short chapter. I tried the
 upgrade of a Joomla! 1.5! website, which consisted only of core elements
 and it worked for me without any problems.
- It is also possible, BUT NOT REALLY GOOD, BECAUSE FORMER JOOMLA! 1.5 FILES WILL REMAIN AND THAT IS A SECURITY

18. Upgrade from Joomla! 1.5 to Joomla! 1.6

NIGHTMARE, to copy the Joomla! 1.6 files into your Joomla! 1.5 version.[11]

Links:

- [1] http://extensions.joomla.org/extensions/advanced-search-results/258643
- [2] http://www.slideshare.net/chrisdavenport/template-changes-for-joomla-16
- [3] http://docs.joomla.org/Tutorial:Upgrade Joomla 1.5 Template to Joomla 1.6
- [4] http://www.akeebabackup.com
- [5] http://community.joomla.org/blogs/community/1257-16-templates.html
- [6] http://www.matware.com.ar/downloads/joomla/jupgrade.html
- [7]http://www.youtube.com/watch?v=cAufYW9SBm8
- [8] http://community.joomla.org/translations/joomla-16-translations.html
- [9] http://forum.joomla.org/viewtopic.php?p=2371638
- [10] http://www.blueforce.ch/services/dateien.html
- [11] http://www.joomlablogger.net/blog/joomla-news/migration-from-joomla-15-to-16-easy/

19.Resources

This book was a beginning. I hope you enjoyed reading it. My intention was to guide you through Joomla! 1.6. Not everything was covered because that would have been too much.

I think we could use a developer book and a template designer book to dip deeper into these topics. Nobody knows what the future holds in store!

What kind of useful resources are there for you to learn more about Joomla! or to get in touch with the Joomla! community?

19.1.Community

As it is written on the back of this book, Joomla! is backed by a worldwide community. If you like this idea, come and join us!

- Become a member of http://community.joomla.org/.
- Read the community magazine at http://magazine.joomla.org/.
- Maybe there is a Joomla! user group near you that you can join. http://community.joomla.org/user-groups.html
 If not, start one yourself!
- Twitter: http://twitter.com/joomla
- Facebook Group: http://www.facebook.com/joomla

19.2.Documentation

http://docs.joomla.org/

19.3. Security Checklist

• http://docs.joomla.org/Security_Checklist_1_-_Getting_Started

19.4. Joomla! Extensions

 The Joomla! extension directory provides more than 6,000 extensions http://extensions.joomla.org/

19.Resources

19.5. Joomla! Templates

- There is no central directory for free templates.
- There is no central directory for commercial templates.

Anyway, there are a lot of template clubs and professionals that provide Joomla! templates. Just search the web and you will most certainly find something that suits you.

19.6.Events

- Joomla! is known for its Joomla! days.
 A Joomla! day is a one- or two-day event organized by and for the community. A list of Joomla! days can be found here http://community.joomla.org/events.htm
- There is an international Joomla! conference in Europe called *jandbeyond*. Go to_http://jandbeyond.org/ for more information.

19.7.The Future

- The community plans a six month release cycle, based on the ideas people post in the Joomla! idea pool.
- The next releases will be Joomla 1.7 in July 2011 and Joomla! 1.8 in January 2012, but of course, it depends on how the community will support implementing these ideas!
- The Joomla! developer network is always looking for people like you:-) http://developer.joomla.org/

19.8.Training

http://resources.joomla.org/directory/support-services/training.html

19.9.Commercial Support

• http://resources.joomla.org/

19.10. Hosting

http://resources.joomla.org/directory/support-services/hosting.html

19.Resources

19.11.Certificates

At the moment there is no possibility to get certified in Joomla!.

You see, there is enough work left for you, your friends and the rest of the world :-).



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The European educational projects focus on the promotion of lifelong learning with the goal of social integration. Particular emphasis is placed on learning methods in order to learn how to learn, the conception and realization of cross-generational learning strategies and local community development.



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