

Bachelor's thesis

Degree Programme in Business Information Technology

Information Systems Management

2011

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# DOCUMENTATION OF SALO REGION ROTARY CLUBS WEBSITE



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Developing web applications running on Joomla CMS (content management system) is nowadays a common trend in the WWW .Due to Joomla CMS ease of updating content, advanced system access rights, free technical support, inexpensive cost of development, are among some of the benefits. Many organizations are moving to Joomla environment in order to use these benefits.

Salo Region Rotary Clubs were in need of an online system that they could use to store the previous clubs' documents. They requested a system that would address that need and many others developed on the Joomla CMS Platform.

The aim of this thesis was to document that developed system. While documenting the system, the thesis discusses how to get started with Joomla, how to develop the system on Joomla platform, how to test for major bugs, description of the main processes in Salo Region Rotary Clubs website and how it works.

As a result, Salo Region Rotary Clubs have a website that is up and running. Easy to use and meeting their needs together with an illustration how to work with Joomla CMS.

## KEYWORDS:

Content management system, system design, website testing.

# CONTENT

<b>LIST OF ABBREVIATIONS</b>	<b>6</b>
<b>1 INTRODUCTION</b>	<b>7</b>
<b>2 THEORETICAL BACKGROUND</b>	<b>7</b>
2.1 Content management system	7
2.2 Creating a content management system	7
2.3 Joomla as content management system	9
2.4 Installation of Joomla using the JumpBox method	10
2.5 Information architecture of Joomla	11
<b>3 PROJECT DEFINITION</b>	<b>13</b>
3.1 Background information	13
3.2 Current system	13
3.3 General system requirements	14
<b>4 SYSTEM DESIGN</b>	<b>15</b>
4.1 System specification	15
4.2 Site maps	16
4.3 Information architecture of the website	19
4.4 Database schema	19
<b>5 DESCRIPTION OF THE REAL SYSTEM</b>	<b>22</b>
5.1 Main system screen captures	22
<b>6 TESTING AND IMPLEMENTATION</b>	<b>24</b>
6.1 Load impact	25
6.2 Browser test	26
6.3 Response time test	27
6.4 Broken link test	28
6.5 Result	28
<b>7 EVALUTION</b>	<b>29</b>
7.1 System implementation challenges and solutions	29
7.2 System improvements	30
<b>SOURCE MATERIAL</b>	<b>31</b>

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## **APPENDICES**

Appendix 1. Joomla 1.5 database schema

Appendix 2. Windows JumpBox

Appendix 3. Uploading files to the system

Appendix 4. Adding an event to the calendar

Appendix 5. Template Source code

## **TABLES**

TABLE 1. SECTIONS

TABLE 2. CONTENT

TABLE 3. CATEGORIES RATING

TABLE 4. CATEGORIES

TABLE 5. SUMMARY OF TEST RESULTS

## **FIGURES**

Figure 1. First level site map.

Figure 2. Second level site map.

Figure 3. Page layout.

Figure 4. Response time testing.

## PICTURES

Picture 1. Locating JumpBox

Picture 2. Installation of VMware

Picture 3. Configuration page

Picture 4. Configuration process

Picture 5. Configured page leading you to the Joomla admin page

Picture 6. Configuration process

Picture 7. Joomla admin control panel

Picture 8. Basic end user admin panel

Picture 10. Image of the home page

Picture 11. Screen shot of registration pages

Picture 12. Add event screen shot page

Picture 13. Upload file pages

Picture 14. Locate the upload file

Picture 15. Selecting files to be uploaded

Picture 16. File uploaded

Picture 17. Screen shot of adding an event page

Picture 18. Adding an event to the system

Picture 19. Screen shot of the event added

Picture 20. Load impact test

Picture 21. Browser test

Picture 22. Broken link test

## LIST OF ABBREVIATIONS

SEF Search engine friendly.

# 1 INTRODUCTION

This thesis can be logically categorized into a theory and practical part. The theory part explores the core concepts of a content management system and what a CMS system contains. Explored in the theory parts are also the advantages of developing applications on a CMS, how to work with it and an overview of Joomla CMS features. The practical part is a documentation of a Salo Region Rotary Clubs website which gives a brief background information about what the clubs are and why they needed an online system. The most important part is how the system was built, how the information was accrued, what documents were used in design, an explanation of main system features on how they work, what was tested and finally what needs to be improved.

I felt it was vital to write this document to act as a quick guide to those who want to have an overview on CMS, specifically focusing on Joomla. It was mandatory to write this system document part after developing the system to act as an explanation of what the systems build was and what it contained and how the main part of the system work.

The theory part of this document will benefit those who want to get started with a content management system and how to set up Joomla CMS on their local PC before transferring their application online. The system documentation part will benefit the system maintenance team, if someday there might be a need of migrating from the current platform to another or maintain it. The thesis can also act as a manual for the end users on how to work with the system.

This project had three players. My lecturer who I could consult for help on the project. A fellow student who had a role of translating the content and gathering information for the website to be developed and a club representative who was in charge of content and providing tools for web development.

## 2 THEORETICAL BACKGROUND

### 2.1 Content management system

A content management system can be defined as a system that manages content. A CMS comes with a number of tools. An editor (usually WYSIWYG) which means "what you see is what you get,") ,some security tools for granting access to the content in the system and some rights to modify the content, a database where content is stored and retrieved when needed and some workflow, which dictates how content is managed in the system.

The website is made of templates which in the front end present the content that the users will be viewing and in the back end are scripts of codes hidden from the end user. In many cases programmers, designers and editors do work together to make sure that a good site is created. A designer is responsible for the create and feel aspect, programmers deal with the codes, and editors are in command of the content that will be viewed.

In a content management system restriction on how content is viewed by a specific class of users is mandatory. Normally, a user management system handles the creation of users and assigning them permissions to access content. Navigation and search mechanisms are responsible of how content is retrieved and made easier to be viewed by the end user. "For a content management system to be useful, content should be dynamic and should be displayed to particular users, based on navigation choices or specific queries".(Christianson C, Cochran J. 2009, 7-8)

### 2.2 Creating a content management system

To build a web CMS you need pages, access controls, a database, style sheets, templates, output standards.

Designers visualize how their web pages will look like to the end user. How the images, text, links and other sections of the web pages will be arranged.

A basic web page is likely to have a header, text. Images wrapped in between the text and footer. More sophisticated sites might possess different types of pages, and each of those pages having its own sections of content. In many cases, the structure of your databases will be determined by your web content.

Protecting your website against unauthorized access is vital. That is why it's essential to have access controls determining how someone can be granted rights to enter the system and modify the content. The basic concept of creating access controls is that of users and groups. Major operating system such as Windows, Linux, UNIX, and Fedora controls their systems that way.

Database is designed to offer an organized mechanism for storing, managing and retrieving information that is stored in a CMS. When queries requesting for information are run, they do retrieve content from a database, update them and then store them back for future retrieval. A database is made of pages and tables for users.

Style sheets are responsible for arranging content in the system final front end. Having an appropriate style layout in your website can result to view content easily, which is a big advantage to you and your viewers. The fundamental to having a good web content management system is investing in well styled sheets.

A template is accountable for the basic structure of a website. Using HTML, CSS and JavaScript can help in creating a good structure of your website. What is important is how well content is made available to the end users after it has been retrieved from the database.(Cartwright D. 2005 )

### 2.3 Joomla as content management system

Joomla is an open-source management system which is freely available to the public to use it for their personal or commercial gains. Due to Joomla advantages, it is used all over the world to develop online applications.

For instance, it is used to develop government applications, small business websites, organizational websites, website or portals, personal or family home pages, intranets and extranets, online magazines among the long list.

The following are some of the major features of Joomla.

**Installation and administration:** Installing and configuring Joomla is relatively simple. Joomla web-based installer enables it to be installed through a few steps. It has also been noted to have a rich graphical interface for administering and configuring websites.

**Separation between front end and back end:** The back and the front end has been vividly separated & protected with the security authentication mechanism. The back end belongs to the administration and management of tasks while the front end belongs to the end user. It's possible to submit content to both the front and back end.

**Access control:** Authenticating and management of tasks depends of which kind of user a group is in Joomla. Administrators can create groups and give rights of editing or writing content. Publishers have a right of writing, submitting, editing content written by themselves or the authors, while authors have a right of only writing and submitting specific content.

**Extensibility through plugins, components and modules:** Among the biggest features of Joomla is its extensibility feature. Joomla CMS has a huge library of plugins, components and modules, which makes it possible for the users to add some functionality best for the websites. Joomla developers have made frameworks that allow them to build applications and run them on the same CMS. Nowadays, we have a lot of extensions available in Joomla library, and they can be downloaded from one source: <http://extensions.Joomla.org>.

Search engine friendly URLs: Joomla content management system has a capability of generating search engine friendly URLs from its core library of components.

There are also third party extensions that are capable of managing and generating SEF(Search Engine Friendly) URLs in the CMS (Suhreed S. 2009. 10).

Listed below are some of the online applications and websites that were developed on Joomla CMS as of September 2011 (Joomla org 2011).

- YLE 1 online newspaper <http://yle.fi/uutiset/> .
- Harvard University (Educational) – <http://gsas.harvard.edu>.
- The Green Maven (Eco-resources)  
<http://www.greenmaven.com>.

#### 2.4 Installation of Joomla using the JumpBox method

There are many ways of installing Joomla on a PC. However, the method of using a JumpBox server is also efficient. A JumpBox is software that makes using server software simple and faster. A JumpBox packages an application's software, dependencies and application data into a single virtual computer that enables you to focus on the application rather than the details of getting the application to run. With the JumpBox, you can work offline and upload your work online when done unlike normal cases whereby you can only access your Joomla application when you access your domain provided by your ISP (JumpBox 2011).

JumpBox relies on a virtualization concept. This basically means running a virtual computer inside another computer. To install a JumpBox server, download visualization software. There is plenty visualization software, which run on different operating systems. If you work on Windows or Linux platform, then use VMware, and if you are using Mac use the Virtual Box virtualization

software as recommended by the Jump Box developers. To install Joomla CMS using Windows JumpBox refer to Appendix 3.

## 2.5 Information architecture of Joomla

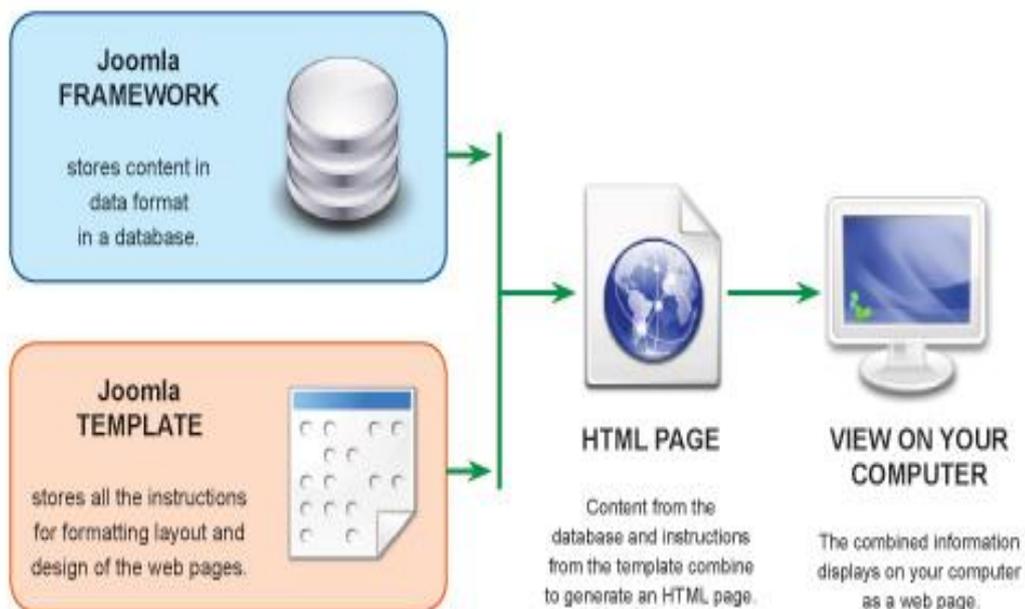
Joomla CMS has an advanced Information Architecture. This is to ensure that the content is organized consistently and efficiently. The whole system can be broken into three logical parts.

Joomla Framework – stores content in the data format in a database.

Joomla template- stores all the instructions for formatting the layout and design of the web pages.

HTML page- this contains content pulled from the database and instructions from the template combined to generate an HTML page.

Below is a summary image of how content is served into web pages.



Picture 9. Image on how content is served up into web pages

On the HTML page, Joomla content can be displayed in two ways;

Uncategorized –this would refer to the content that has not been put into any category. In many cases, uncategorized content is untraceable.

Categorized -this is content that has been put into categories. Categorized content is easy to trace in a website.

Joomla content is also organized in a hierarchy of sections, categories and articles respectively.

Sections: The top hierarchy of content in Joomla is composed of sections. The simplest way of illustrating the concept of section is as a container inside another container. The big container refers to a section, and the smaller container refers to categories. Section can also be thought as a parent while categories can be thought as children.

Categories: Categories are the second bigger tier after sections in Joomla CMS hierarchy. Categories can be thought as the children of the sections. A category cannot exist without a section. Categories can also be thought to have one or more children know as articles.

Articles: The lowest tier of content in Joomla hierarchy is articles. When articles are created, they are added in the categories. Articles cannot exist without a category. Normally, the article is what we think as the pages of the website which hold the main content.(Brenelz Inc 2011 )

## 3 PROJECT DEFINITION

### 3.1 Background information

“Salon Alueen Rotaryklubit” is a rotary club organization located in western Finland. This organization is composed of three individual rotary clubs (Salo, Perniö and Uskela) and all the clubs have close to 150 members summing up from all the clubs. The organization has members from diverse professions, and they do meet weekly to share ideas and discuss club affairs. The Major activity of the organization is to implement successful projects that address the needs of its community. The clubs are focused on improving welfare and helping the rotary club international foundation by participating in programs such as youth exchange program. Members of the organization are in additional involved in social services and campaigns, for instance, eradication of Polio, which has been their active agenda since 1980s. More information about the specific club history and activities can be found at <http://www.rotarysalo.fi>.

### 3.2 Current system

Currently, some of the clubs’ activities are partially manual. The secretary takes memos during the meetings and emails each member the summary of the discussions, including the agendas to be discussed in the next meeting then a copy is saved in the organization files. In case, a new member joins the club and wants to know the previous activities of the club, he has to contact the secretary who goes through the club files and provides the member with the required information. This process is tiresome and sometimes it can be time consuming depending on the bulk of documents to be searched through. If a member misses at club meetings and wants to get details of what was discussed, he has to make an inquiry from the members who attended the meeting since the secretary only documents the summary.

### 3.3 General system requirements

To help determine what the system needs and requirements were, we held the meetings with the organization club representatives, conducted interviews, and participated in the organization meetings to see how the clubs run. We also read through their previous websites to gather the information we needed to develop the new website.

It was proposed that the website should be efficient, easy to learn and use. The system should be publicly accessible and registered members should have privileges of accessing and retrieving stored club documents such as memos, participation lists, budgets, activity calendars and other related documents when needed. They also wanted the overall system to include an email system and a CMS.

I consolidated the problems and wishes to be achieved in the proposed new system into one word to view the overall mental picture of the system needs and requirements as follows.

**Accessibility** – The club members want a system that they can be able to access from any location and have access to their club information as well as the latest club activities, provided that they are connected to the internet. Besides that only authorized members can view specific club documents. The public can see general information about the club and for the club members. They can view more information when they are logged in to the system.

**Bulkiness**- When it comes to retrieval of past records, the bulkiness requires someone to go through a bulk of papers and files. The automated online system will facilitate the faster retrieval of data saving time and increasing efficiency.

**Cost**- There is cost incurred in printing. With mass printing, this cost is significant. Electronic recording saves paper work as well as the cost incurred in the same. The online system will reduce that since you can access information without having to print it unless it's necessary.

Time- A search can be done faster with just a click than having to go through all files manually in trying to retrieve some information.

Protocol- Sometimes members of one club have a need to access documents of other club branches to help them in discussion or decision making. In such a case, a secretary or a committee panel has to make a request to the other club branch to provide them with the required documents. This is a long process which should be made shorter and effective. In the new system, the secretary has access rights to the documents of the other clubs, and that is accessed when he signs online.

Awareness- The club wants to make the general public, sponsors, and the internet community to be aware that it exists and learns its activities hence the need of an online system. Every year the club receives exchange students from different parts of the world. There is a need for those students to access information easily prior to moving to Finland.

Workload- There is a need for club members to be able to get a meeting agenda prior to the meeting. In the current system, the secretary has to email each club member the meeting agenda or print them out during the meeting and hand out each member a copy at the end of the meeting. This system has downfalls because it's time consuming, involves a lot of work on printing and arranging the papers in the right order. "Salon Alueen Rotaryklubit" proposes the need to automate this system in order to curb the above mentioned anomalies in the current system.

## **4 SYSTEM DESIGN**

### 4.1 System specification

The system should be able to upload PDF files and other documents. It should contain different access levels. It was suggested that the website be developed on the Joomla CMS platform and also contain an Email system.

## 4.2 Site maps

Creating site maps before web pages are designed to show clearly how pages are linked to each other. This comes with a number of advantages. Search engine spiders crawl through your pages, they do so by index. A well-made site map enables the crawlers to find more accurate and updated searches to the user. The faster the crawlers are able to navigate through your pages the better the result delivered. Having a site map also enables developers to locate content package easily when maintaining a website than having to go through each page to locate specifically the one they are interested in. For all those reasons we developed the site maps showing how a page links to each other on the first-level site map.

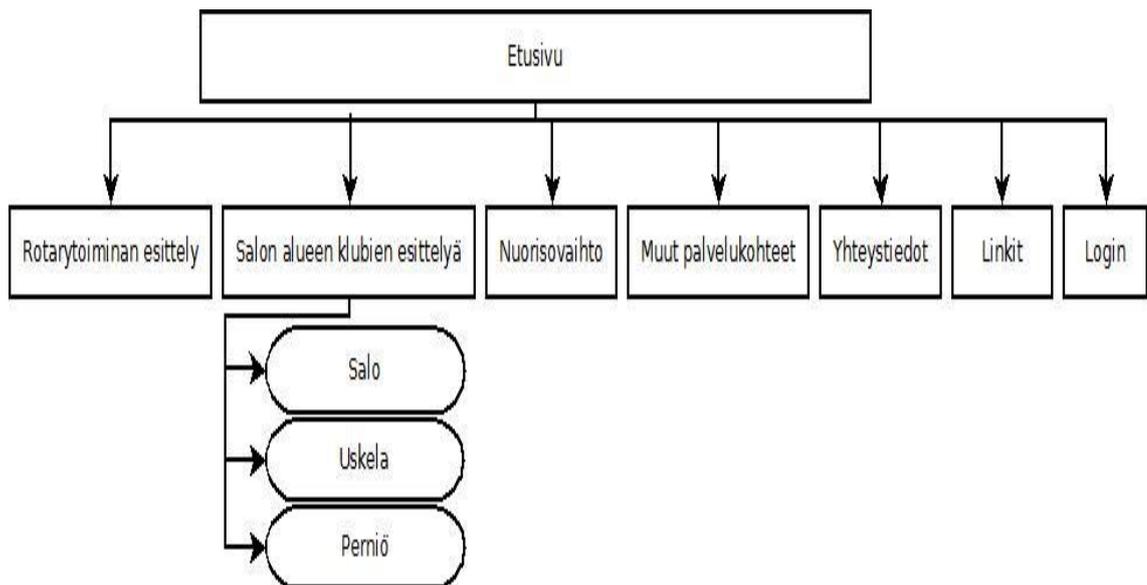


Figure 1. First level site map.

The second level site map below is an opened up version of the first level site map. It shows in detail how the parent links relate to child links.

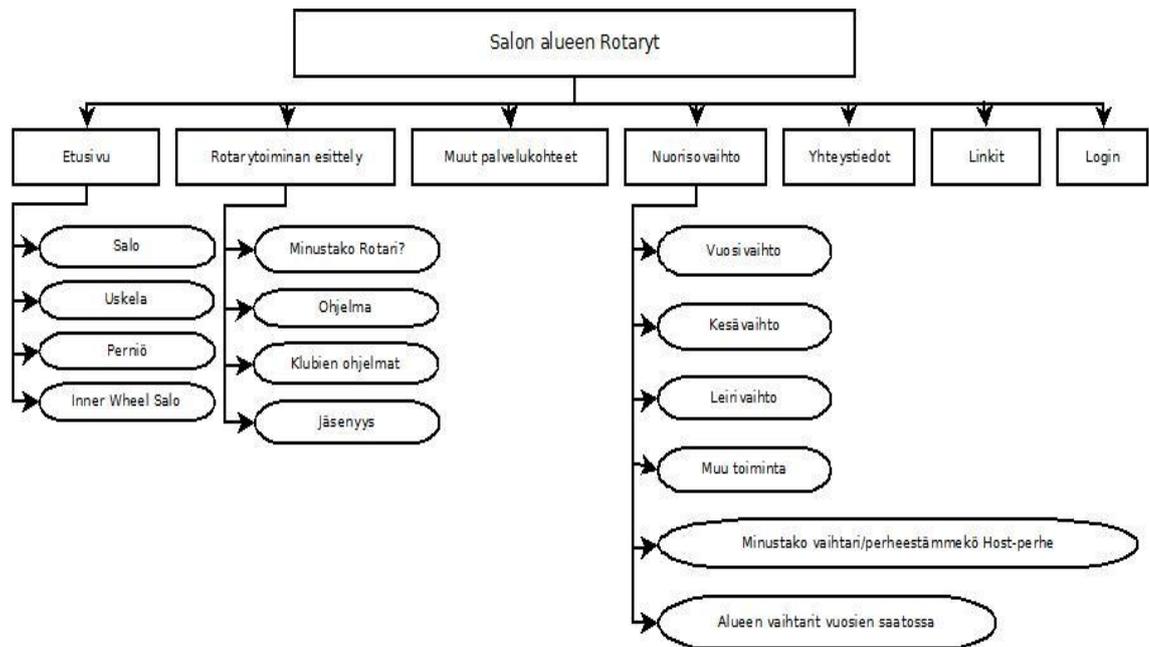


Figure 2. Second level site map.

Figure 3 shows specification of a three columned page layout. It is a summary of how modules are arranged in the visualized page. Right and left module is where components such as login are placed. A middle section called main is where content is placed. User 3 refers to the header of the page where the logo is placed. Top module section is where the main page menus are arranged while breadcrumb is where the title of the page visited appears. For details on how each component is arranged refer to appendix 5. Template source code.

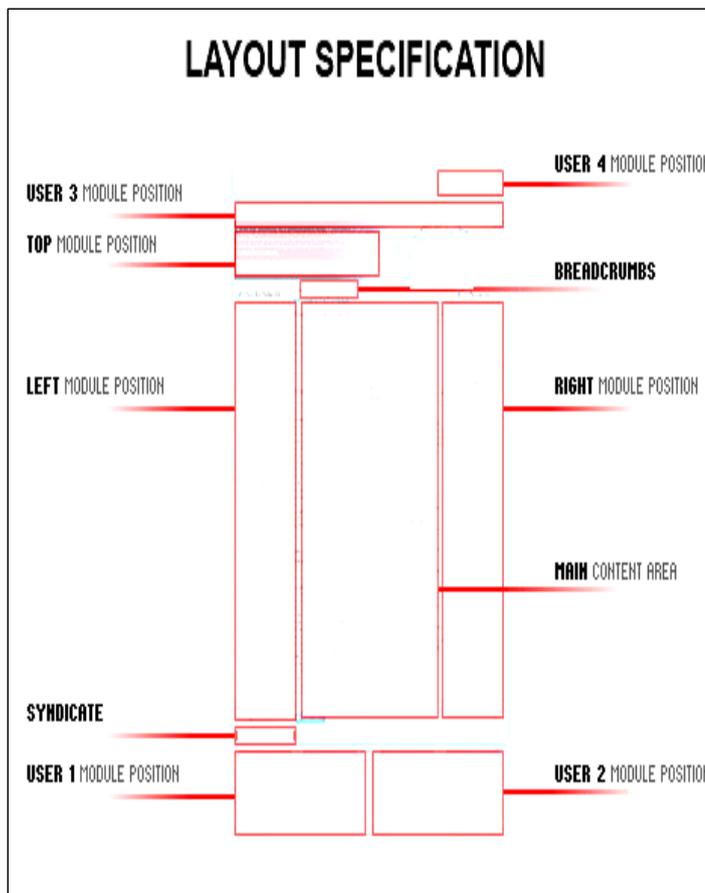


Figure 3. Page layout.

### 4.3 Information architecture of the website

The Salo Region Rotary Clubs website was built on categorized basis information architecture hierarchy. The main club sections are (Home – klubi;Rotarytoiminta; Nuorisovaihto; Yhteystiedot; Web Links; FAQ;News Feeds). Home section categories are (Salon klubi;Perniön klubi;Uskelan klubi;Inner Wheel Salo). In each category, we have relevant articles that change now and again as the system is updated.

On the right side of the website front page a calendar is displayed .This calendar contains all the events planned in that year . It is possible to view weekly ,monthly or daily events from the calendar .Above the calendar is where latest event are displayed. Latest event is a summary of events from the calendar that are due to happen . This is meant to remind the club members of events that are about to happen without having to go to the event calendar for details . The middle section of the website front page, lays the content that clubs wants to view first. This content can be changed depending on what the clubs wish to display to the public on their front page .

### 4.4 Database schema

Websites that are built on Joomla CMS adopt its DB schema. This is because the system has a default database schema and the only changes, a web developer can do to the system is to populate it with content, or he can write an extension that has customized interface name, but the core will remain same. Refer to Appendix 1 to view how each table is related to the other. Following are tables extracted from a DB schema for Joomla 1.5.(Torkil J 2011)

Table 1.Sections

**jos\_core\_acl\_aro\_sections**

```
PRI | NULL| auto_increment |
| value| varchar(230) | NO| UNI |||
| order_value | int(11)| NO|| 0||
| name| varchar(230) | NO|||
| hidden| int(11)| NO| MUL | 0||
```

Table 2.Content

**jos\_content**

```
+-----+-----+-----+-----+-----+
| Field| Type| Null | Key | Default| Extra|
+-----+-----+-----+-----+-----+
| id| int(11) unsigned | NO| PRI | NULL| auto_increment |
| title| text| NO|||
| alias| varchar(255)| NO|||
| title_alias| text| NO|||
| introtext| mediumtext| NO|||
| fulltext| mediumtext| NO|||
| state| tinyint(3)| NO| MUL | 0||
| sectionid| int(11) unsigned | NO| MUL | 0||
| mask| int(11) unsigned | NO| MUL | 0||
|catid| int(11) unsigned | NO| MUL | 0||
| created| datetime| NO|| 0000-00-00 00:00:00 ||
| created_by| int(11) unsigned | NO|| 0||
| created_by_alias | text| NO|||
| modified| datetime| NO|| 0000-00-00 00:00:00 ||
| modified_by| int(11) unsigned | NO|| 0||
| checked_out| int(11) unsigned | NO| MUL | 0||
| checked_out_time | datetime| NO|| 0000-00-00 00:00:00 ||
| publish_up| datetime| NO|| 0000-00-00 00:00:00 ||
| publish_down| datetime| NO|| 0000-00-00 00:00:00 ||
| images| text| NO|||
| urls| text| NO|||
| attribs| text| NO|||
| version| int(11) unsigned | NO|| 1||
| parentid| int(11) unsigned | NO|| 0||
| ordering| int(11)| NO|| 0||
| metakey| text| NO|||
| metadesc| text| NO|||
| access| int(11) unsigned | NO| MUL | 0||
```

Table 3.Categories rating.

**jos\_content\_rating**

Field	Type	Null	Key	Default	Extra
content_id	int(11)	NO	PRI	0	
rating_sum	int(11) unsigned	NO		0	
rating_count	int(11) unsigned	NO		0	
lastip	varchar(150)	NO			

Table 4 .Categories

**jos\_categories**

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
parent_id	int(11)	NO		0	
title	text	NO			
name	text	NO			
alias	varchar(255)	NO			
image	varchar(255)	NO			
section	varchar(150)	NO	MUL		
image_position	varchar(90)	NO			
description	text	NO			
published	tinyint(1)	NO		0	
checked_out	int(11) unsigned	NO	MUL	0	
checked_out_time	datetime	NO		0000-00-00 00:00:00	
editor	varchar(150)	YES		NULL	
ordering	int(11)	NO		0	
access	tinyint(3) unsigned	NO	MUL	0	
count	int(11)	NO		0	
params	text	NO			

## 5 DESCRIPTION OF THE REAL SYSTEM

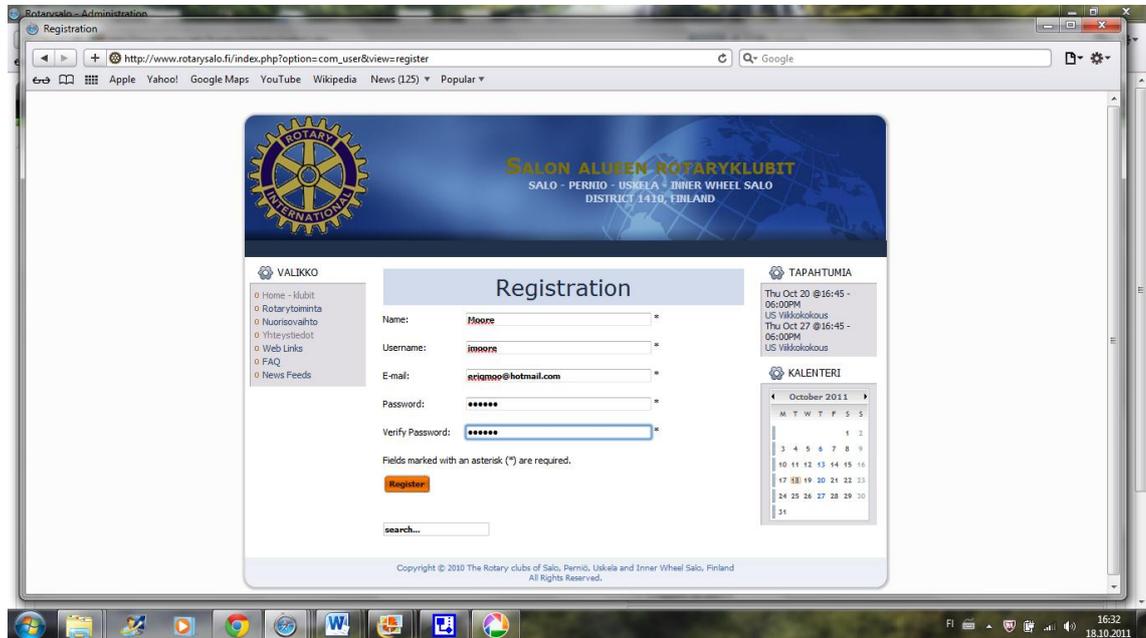
### 5.1 Main system screen captures

Shown below in Picture 10 is how the home page looks like.



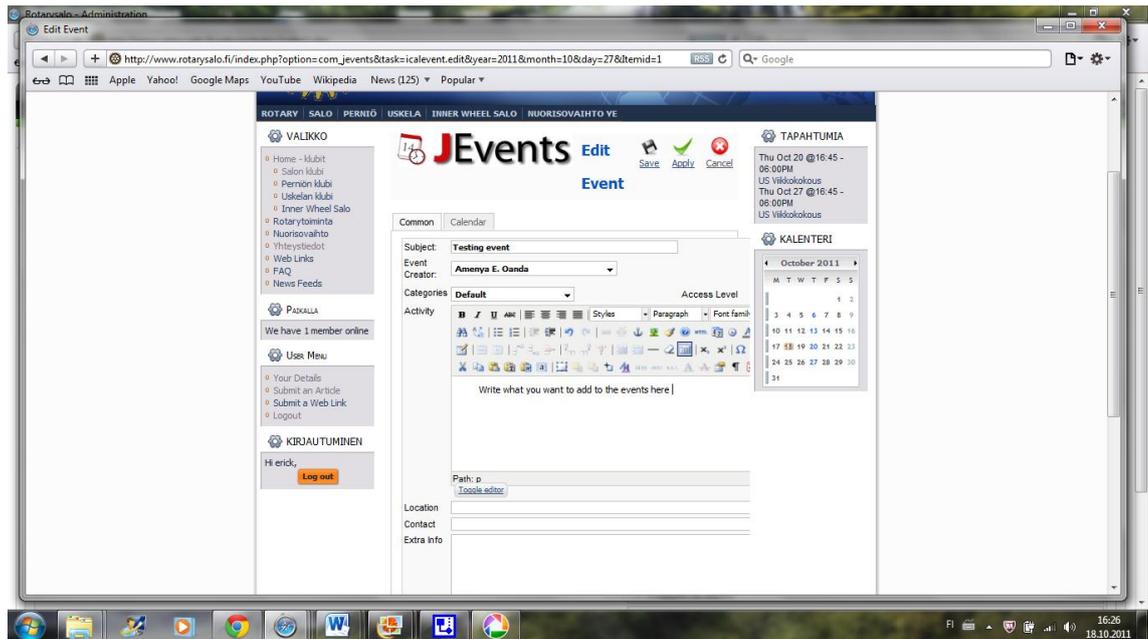
Picture 10. Image of the home page

Picture 11 shows the registration page. As it explains itself it is where a user fills in their registration details.



Picture 11. Screen shot of registration page

Picture 12 shows how to add an event to the page. This is where the admin creates some events and publishes them to the front end. Refer to Appendix 4 for a step by step instructions on how to add an event to the calendar.



Picture 12. Add event screen shot page

Adding a file in the website is also explained in the user manual. Refer to Appendix 5 for instructions on how to add files to the website.

## 6 TESTING AND IMPLEMENTATION

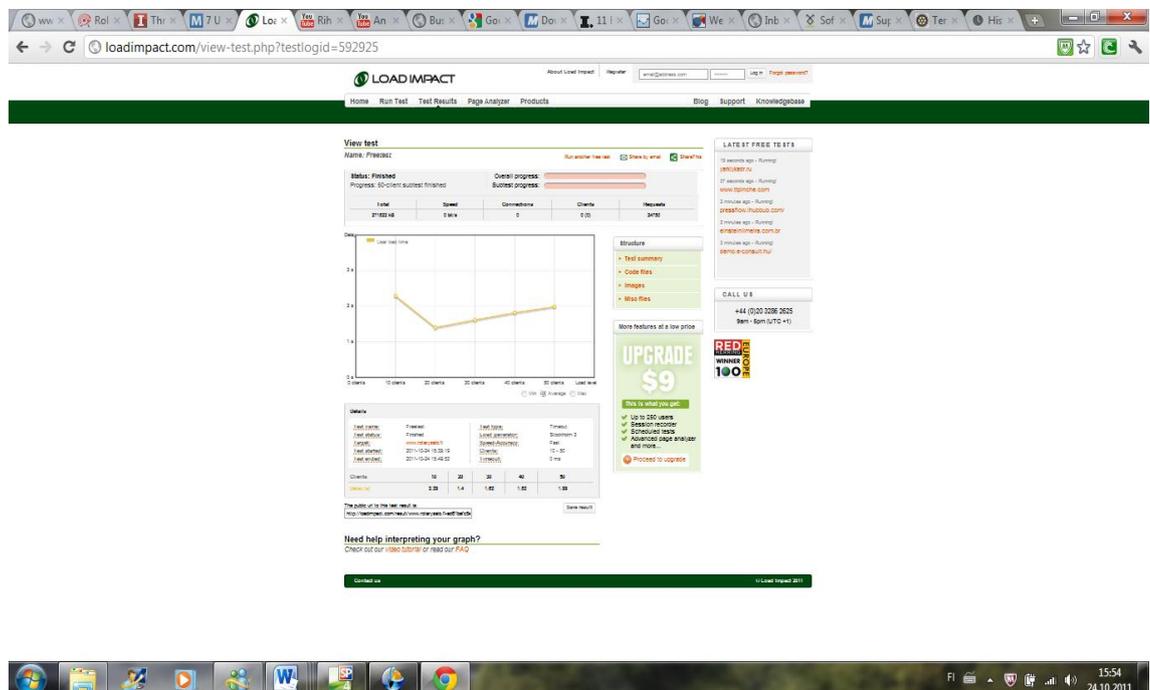
There are many tests that a web developer can do to cross check if his or her website is up to standards. Salo Region Rotary Clubs website was tested

against four fundamental web development tests. These tests were carried out by online web testing tools and the results are as follows.

## 6.1 Load impact

Slow websites means lost customers and revenues. Load Impact is an online load testing service that lets you load test your website if it can withstand stress. load impact generates simulated user traffic to the website for example it might simulate that 100 users are trying to load website pages at the same time. While simulating the traffic from these 100 users, it also records how fast pages are loaded from the server. This gives feedback on how fast a website is when it is being accessed by this 100 users at the same time.

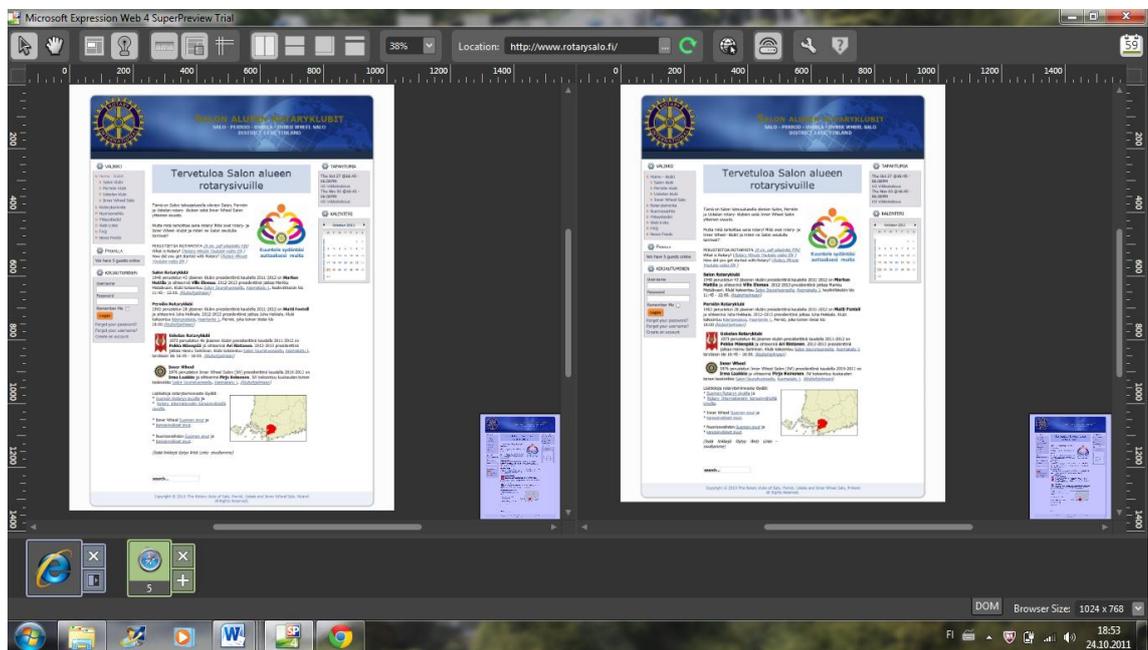
Salo Region Rotary Clubs website was subjected to load impact test of up to 1000 users accessing the site at one time since the website did not show the 404 error page it is an indication that it did pass the load impact test .



Picture 20. Load impact test

## 6.2 Browser test

The website was also subjected to browser test using “Microsoft Expression Web 4 Super Preview” software. A browser test is carried out to ensure that content and website features are in their rightful positions when a user uses any common browsers, for example, IE; Opera; Google Chrome; Opera; Safari. The website passed the entire browser test. Below in Picture 21 is a test sample result.



Picture 21. Browser test

### 6.3 Response time test

The website was tested against response time by Website Pulse Test Tools. This an agency that is located in Seattle United States. The organization has labs of servers that checks the response time of a website from all over the world for free. All a tester has to do is to put the URL of the website to be tested in their online test tool, and then they will run a test and give results. The response time test determines the response time of the website when queries requesting for information are sent to the website. When the website was tested against response time it was confirmed to be okay. Figure 4 below shows summary of response time test result.

<b>URL tested:</b>	http://www.rotarysalo.fi/
<b>Test performed from:</b>	Seattle, WA
<b>Test performed at:</b>	2011-10-24 15:59:26 (GMT +00:00)
<b>Resolved As:</b>	77.240.25.20
<b>Status:</b>	OK
<b>Response Time:</b>	1.639 sec
<b>DNS:</b>	0.224 sec
<b>Connect:</b>	0.192 sec
<b>Redirect:</b>	0.000 sec
<b>First byte:</b>	0.822 sec
<b>Last byte:</b>	0.401 sec
<b>Size:</b>	30797 bytes

Figure 4. Response time test

## 6.4 Broken link test

Broken link test is done to spot broken links in a website. www.2bone.com is a Canadian agency that is located in British Columbia. It provides free online tools that check broken links on a website and publish a report of which specific links are broken. The Salo Region Rotary Clubs website was subjected to the broken link test by this agency to verify that the links are working correctly. 200 links that were checked we confirmed to work correctly.

You asked to check the links on this page: <http://www.rotarysalo.fi/>

✓ A 200 response is good. This means the link is working.

✗ If you see this image, the link is **not** working. Check the server response code (eg. **404** or **500**) for an explanation of the problem. "404" and "500" responses are explained [here](#).

Here are the results:

Checked the links on: <http://www.rotarysalo.fi/>

Found: 82 total links.

Displaying results [ 1 - 10 ]

---

✓ 200 <http://www.rotarysalo.fi/>

---

✓ 200 <http://www.rotarysalo.fi/>

---

✓ 200 [http://www.redcross.fi/ajankohtaista/uutiset/fi\\_FI/japani\\_maanjaristys/](http://www.redcross.fi/ajankohtaista/uutiset/fi_FI/japani_maanjaristys/)

## Picture 22. Broken link test

## 6.5 Result

Table 5 shows a summary of all the test results.

Table 5. Summary of test results

Test	Result	Recommendation
Load test	Pass	-
Browser test	Pass	-
Response time test	OK	-
Broken link test	OK	-

## 7 EVALUATION

The goal of this thesis was to document activities that were carried out during the development process of a website project. The thesis is written through observation of what was implemented and reporting on the results.

### 7.1 System implementation challenges and solutions

The most challenging part of the system was to find an extension that could upload many files at once to the system to save time. The Joomla 1.5 installation suite does not include tools to help upload files. A developer has to find a suitable extension that can be able to do the work and install in the Joomla CMS. There are few of such a kind that can be located in the Joomla extension directory for example, "Docs-Embed Documents ", " Simple File Lister", " ARTIO JoomDOC." However, to find an extension that was compatible with Joomla 1.5 and can upload many files was a hard task. Some extension can only take simple file format and very few could take in PDF. I had to test all the extensions that were available to come up with the best extension that could be appropriate to the system. I finally settled for "JFUploader." This is because it can upload many files at once. The extension also accepts any file format to be uploaded to the website.

Complexity of system was an issue. Joomla has three parts namely public, private and special areas. Public refers to the part visible to the public without the need to register into the system. The private part refers to the part that is visible to the registered members only and special system area, which refers to the part of a system authors, club leader, secretaries can access. I decided to implement the public and the private area and some parts of a special area.

Installing Joomla 1.5 CMS on the web server was a challenge. It had many settings, and it required other technical skills to install it. The club representative contacted the company that provided the server space that installed the CMS. I was only responsible for developing the system on already set up Joomla CMS.

## 7.2 System improvements

The website needs to be migrated to the latest platform of Joomla 1.7. This is because the newer version has more features such as new enhanced security protection (Xhtml junction inc 2011).

Installing the updated extension needs to be done. Even though the current extensions work properly they also need to be checked and upgraded to the newest versions. This is because improvement and testing of bugs are an ongoing process. The later the installed version the better it is.

A special area needs more development. All three clubs have secretaries, each club being unique there is a need to customize this section to suit more their activities.

Finally, it was a great experience working on such a project. I learnt many tools for web development as well as documentation skills.

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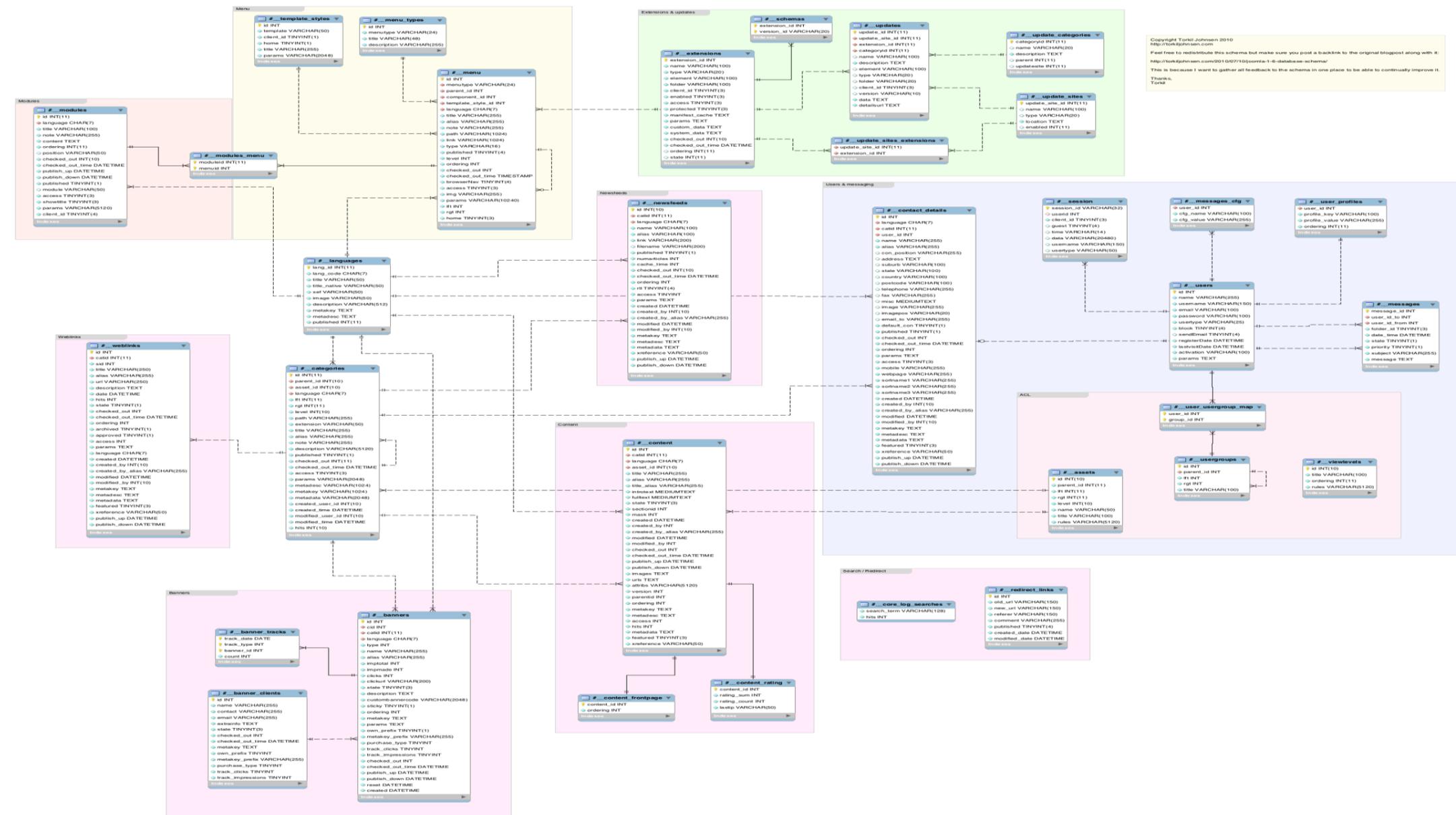
<http://www.torkiljohnsen.com/2006/04/30/joomla-15-database-schema/>.



# APPENDICES

## Appendix 1: Joomla 1.5 database schema

### Joomla 1.5 Database Schema





## Appendix 2: Installing Joomla CMS using Windows JumpBox

Windows JumpBox

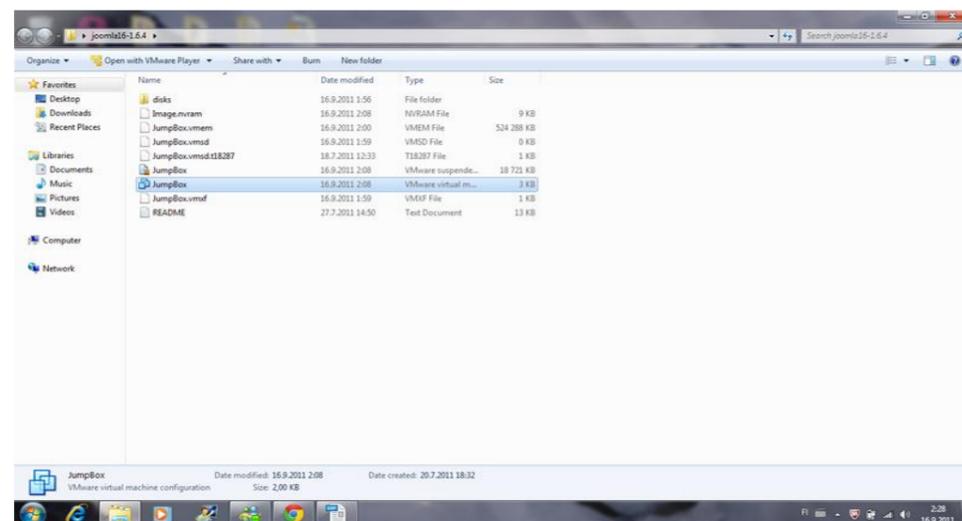
### Step 1

Download and install the appropriate VMware file from [http://downloads.vmware.com/d/info/desktop\\_downloads/vmware\\_player/3\\_0](http://downloads.vmware.com/d/info/desktop_downloads/vmware_player/3_0).

Download and extract to the desktop the appropriate JumpBox for Joomla from [http://downloads.vmware.com/d/info/desktop\\_downloads/vmware\\_player/3\\_0](http://downloads.vmware.com/d/info/desktop_downloads/vmware_player/3_0).

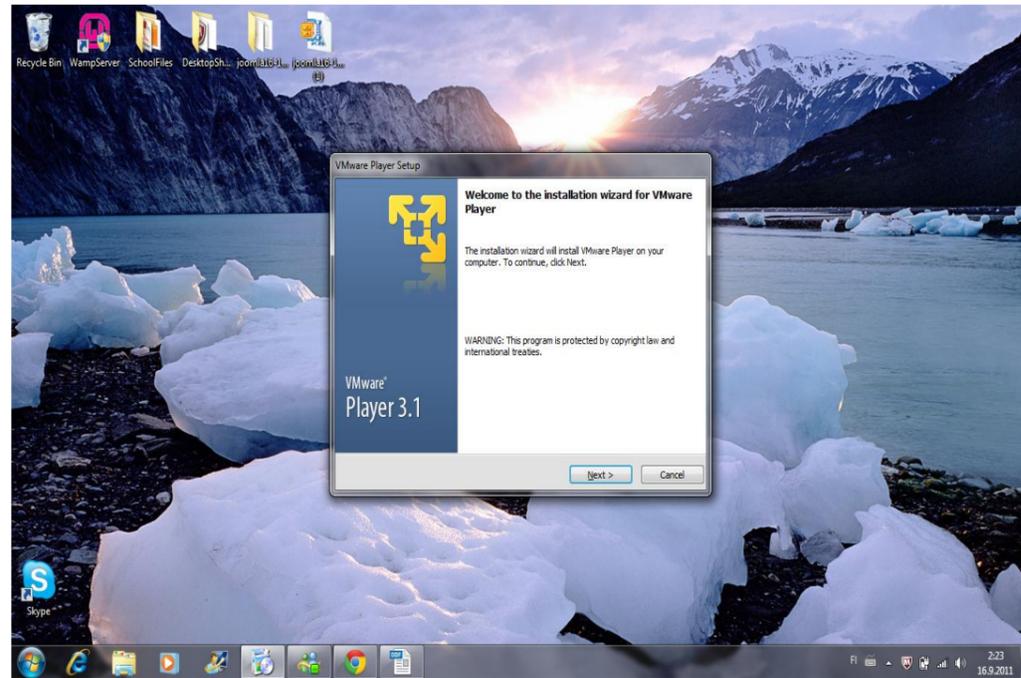
### Step 2

Open the Joomla JumpBox file you extracted to the desktop and click the JumpBox file as indicated in the Print screen Picture below.



Picture 1. Locating JumpBox

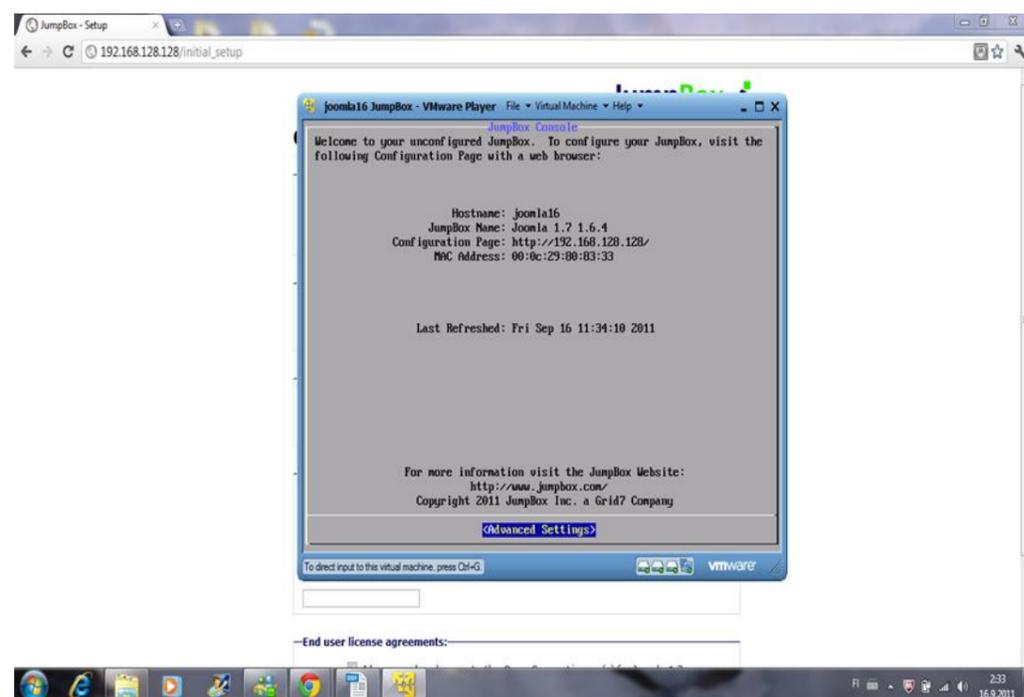
This file will run and open the VMware player setup installer as shown in the picture below.



Picture 2. Installation of VMware

## Step 3

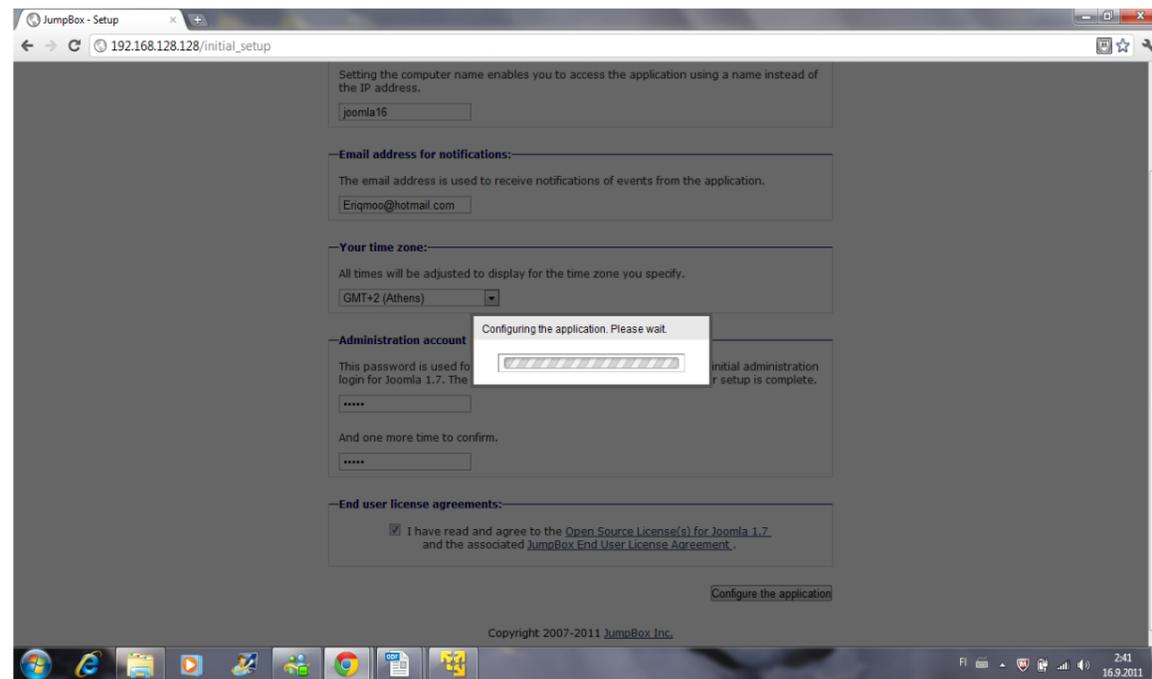
After JumpBox, server has completed running it will generate the JumpBox console screen as shown below. Type the URL shown on the console screen in the browser.



Picture 3. Configuration page

#### Step 4

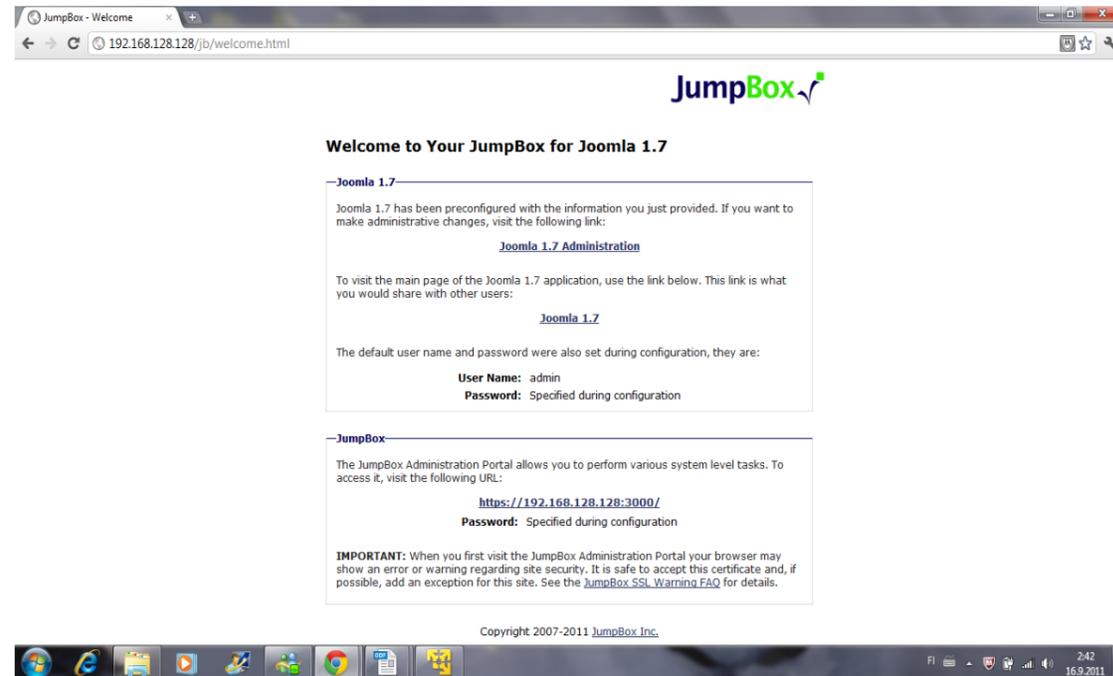
The configuration page shows up if the installation configuration page and the URL were typed correctly. Fill in the requested information. Provide the name of your virtual computer, email address for notification, your time zone, administrator account password and end user license agreements. Then click configure the Application button .Your JumpBox will be configured as shown below.



Picture 4. Configuration process

## Step 5

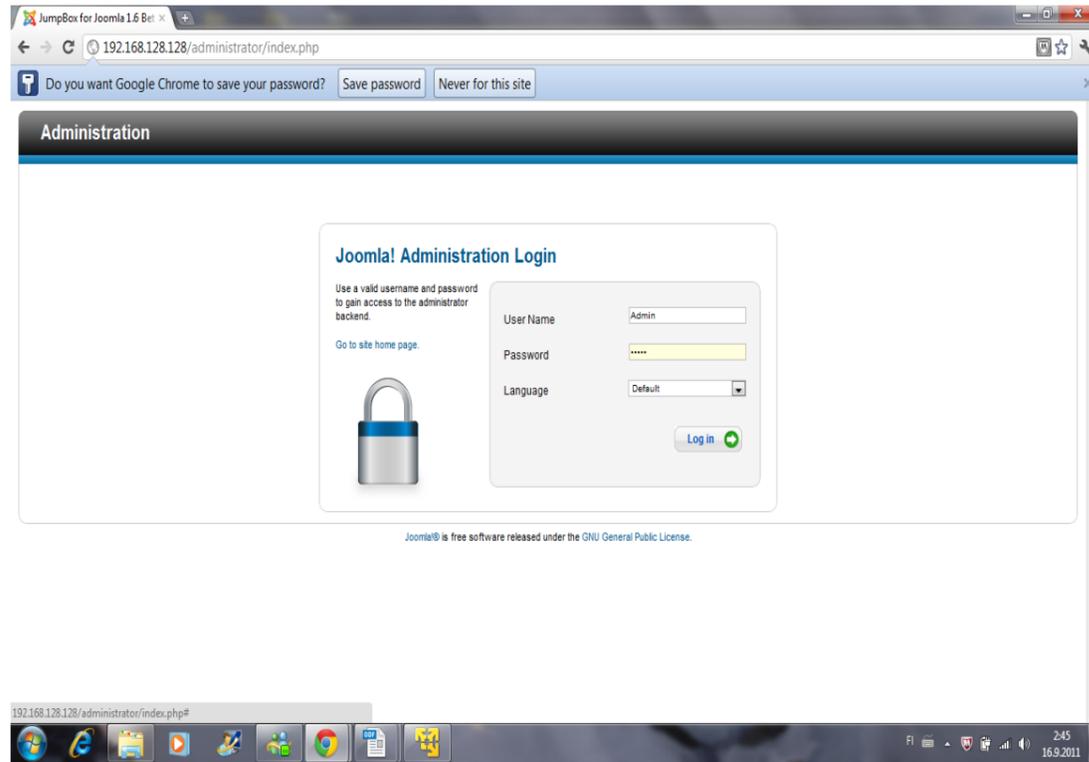
When the page is configured correctly, the Welcome to your JumpBox page is shown. Click the link to the Joomla administration. This should lead you to the administration page as shown below.



Picture 5. Configured page leading you to the Joomla admin page

Step 6

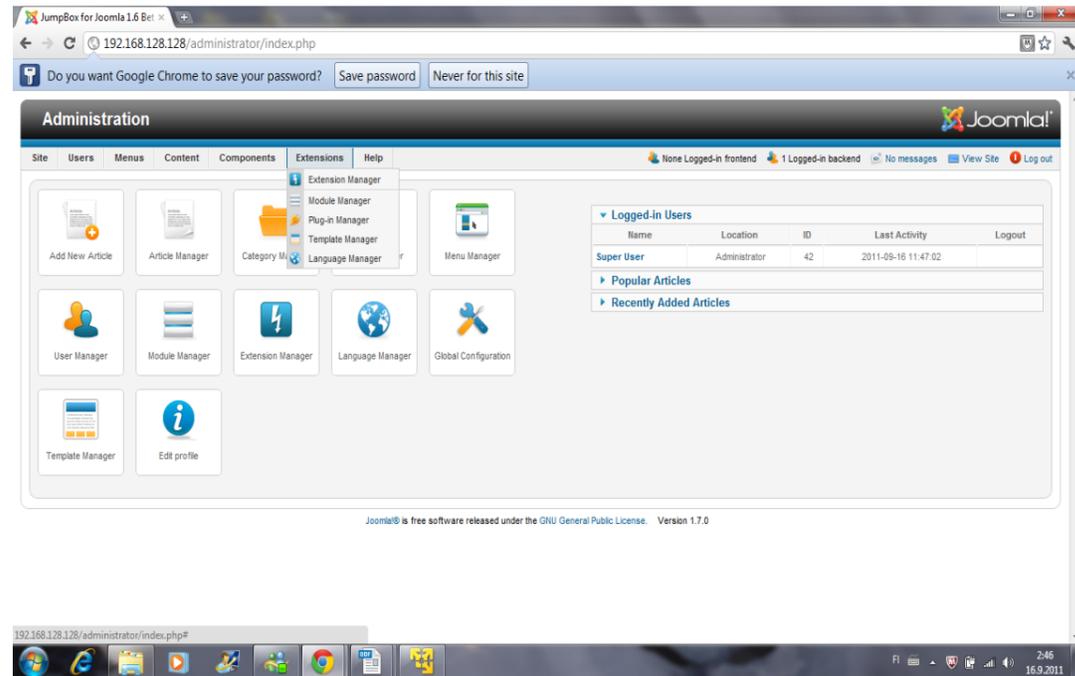
Provide the administration username and password you provided when you were configuring the page as shown on the page below.



Picture 6. Configuration process

## Step 7

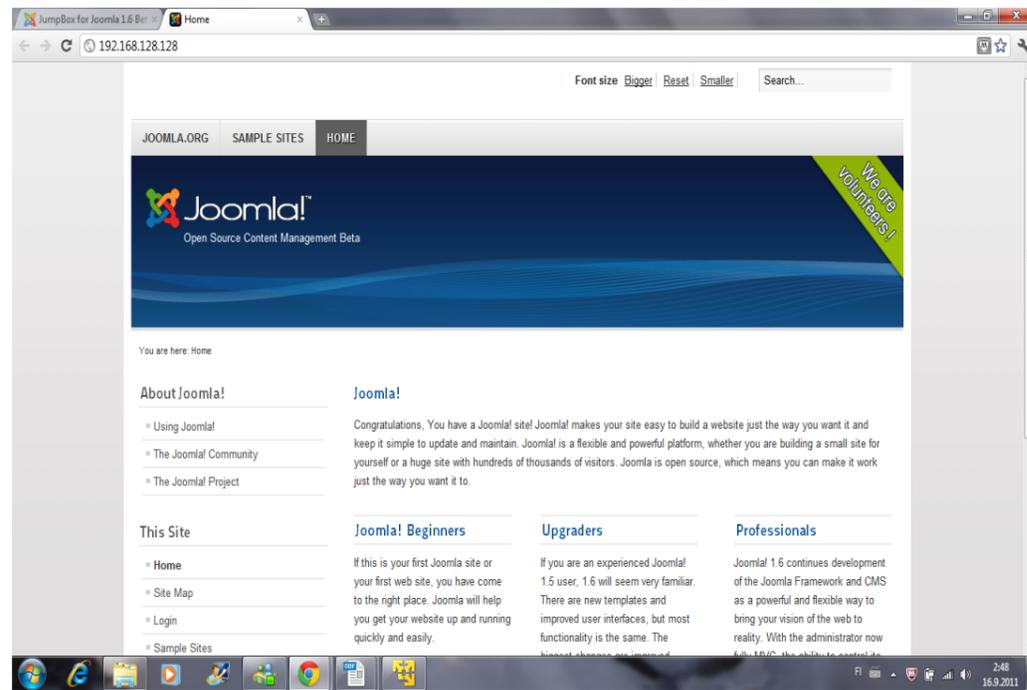
If the administration username and password were correct, the admin page back end will pop up. In the administration page back end is where you will be adding your content and navigating around for administrative tasks.



Picture 7. Joomla admin control panel

## Step 8

Click “View site”, this takes you to the user side of the web page. You can customize the default page or blow it off and replace it with your content. For more information how to work with Joomla, Visit <http://www.joomla.org/>.

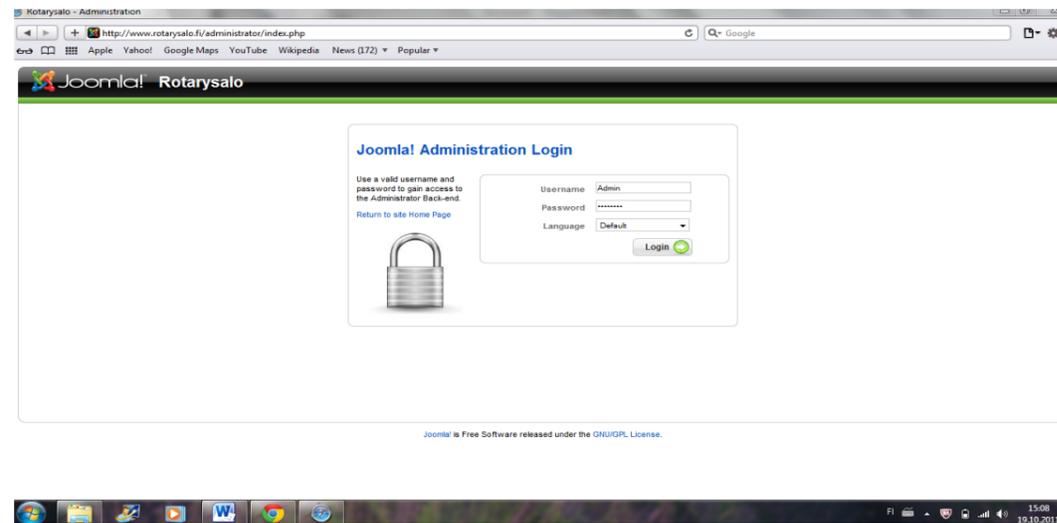


Picture 8. Basic end user admin panel

## Appendix 3: User guide of Uploading file to the system

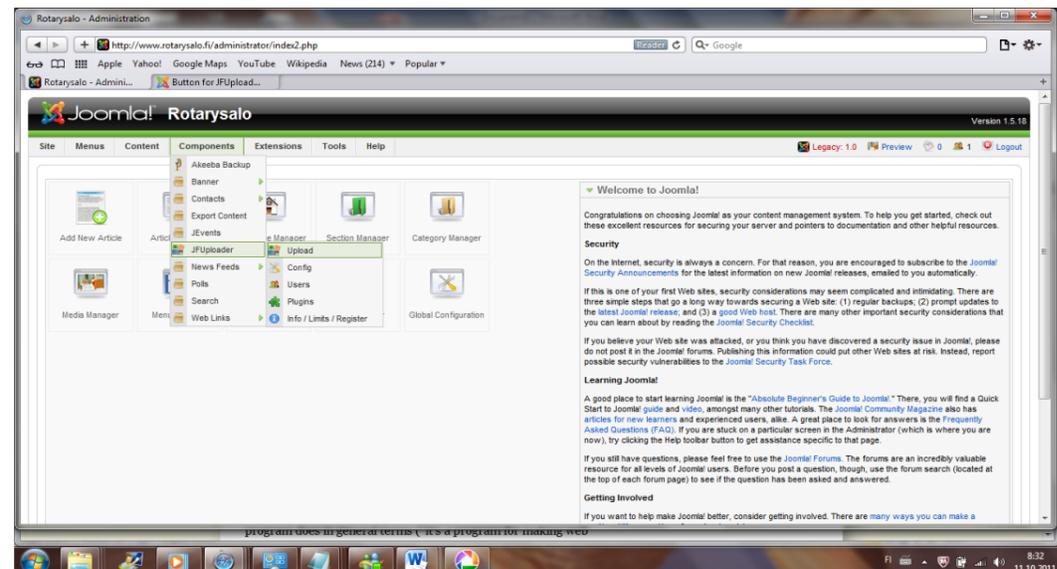
Uploading files to the system

To begin with, login to the system from the administration back end.



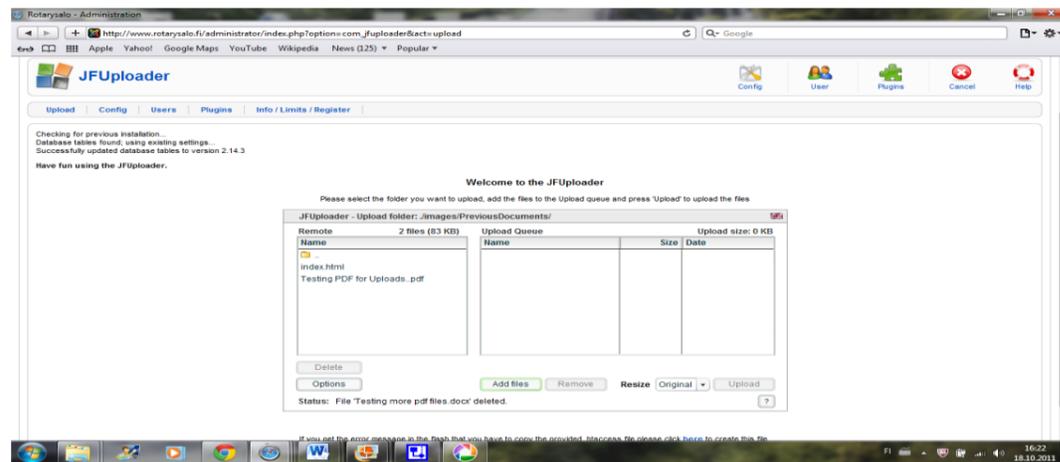
Picture 13. Login admin page

Locate the JFUploader and click on it.



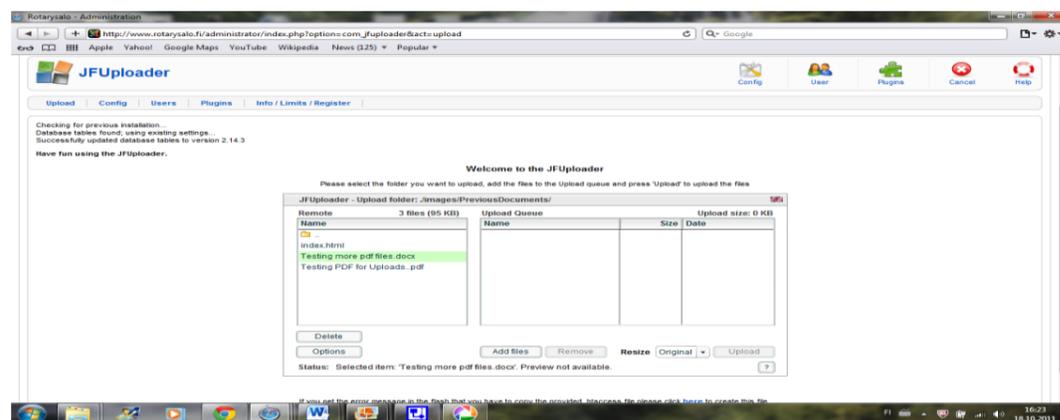
Picture 13. Upload file page

Click the "add file" icon then browses and select the files to be uploaded to the website and click "Upload."



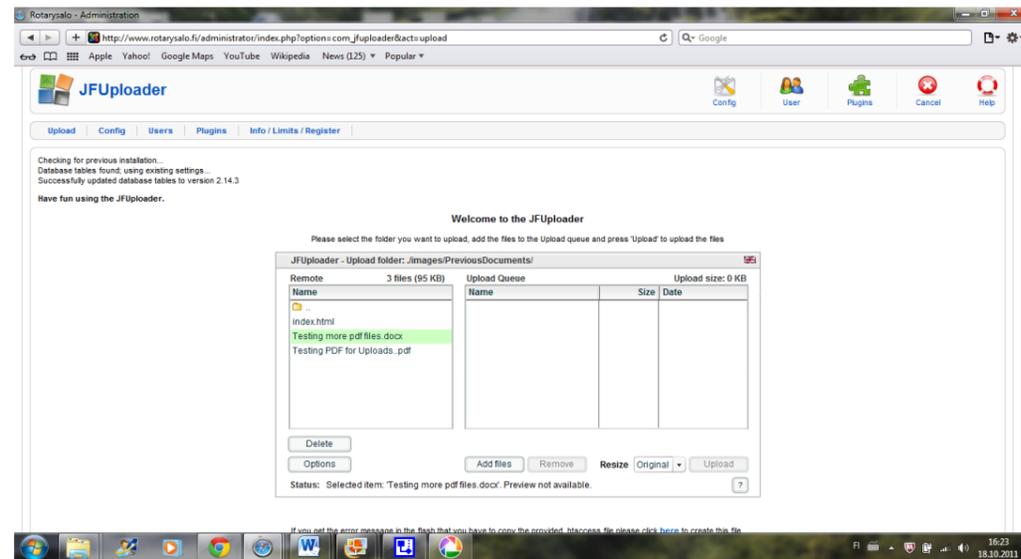
Picture 14. Locate the upload files3

Your files will be uploaded on a website depending on where you chose to upload them. The result will be as Picture 15.



Picture 15. Selecting files to be uploaded

The highlighted green file is the file that was uploaded to the website. The JFUploader can upload many files at one time and of any kind of format and later the uploaded files can be published to the specific location in a system as the publisher desires. The JFUploader can be accessed from the admin back end of the system only.



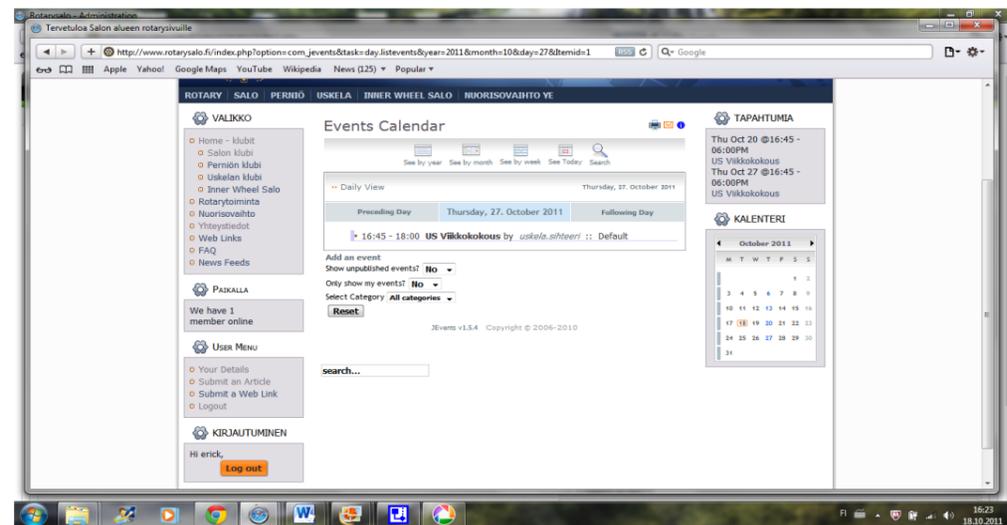
Picture 16. File uploaded



## Appendix 4. Adding an event to the calendar

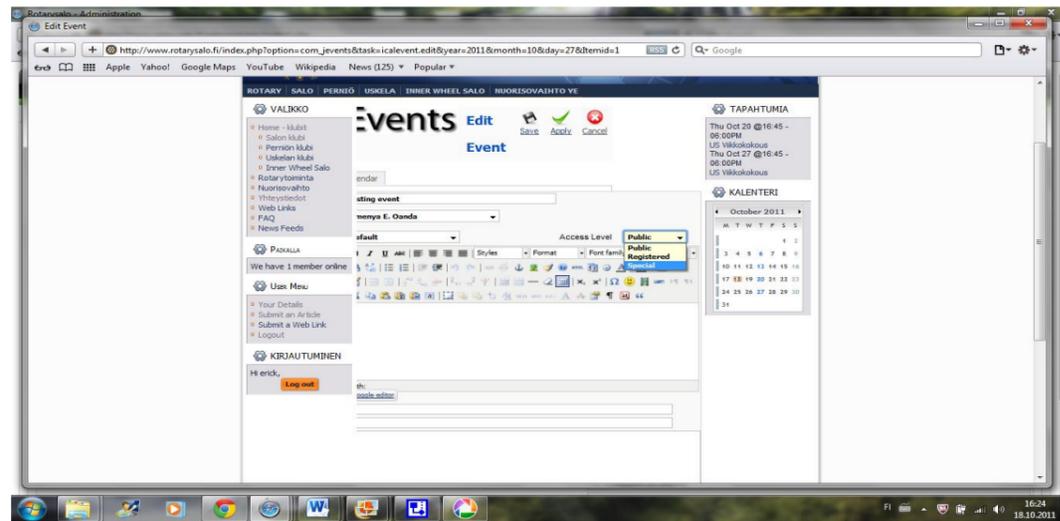
Adding an event to the calendar

Login from the administration back end then locate the calendar which is on the right side of the system and click on the date on the calendar you want to add an event to. For example, I want to inform users that on 27.10, I will be testing the system this how I would add this to the calendar.



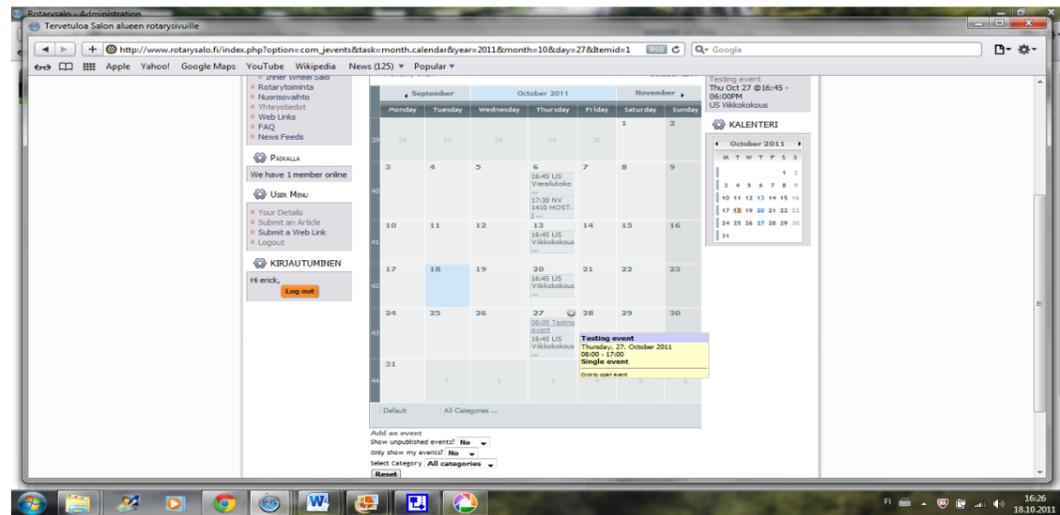
Picture 17. Screen shot of adding an event page

Click on the "add event" icon. It leads you to a place where you can add your event, define when it can be visible, by whom and when .For instance as shown Picture 18 below.



Picture 18. Adding an event to the system

Save the event that you added and then click the apply icon. If you view a later event of that month , what you added will appear when the date arrives as shown in picture 19.



Picture 19. Screen shot of the event added

## Appendix 3: Template source code

### Template source code

```

<?php
defined('_JEXEC') or die('Restricted access'); // no direct access
require_once dirname(__FILE__) . DIRECTORY_SEPARATOR . 'functions.php';
$document = null;
if (isset($this))
    $document = & $this;
$baseUrl = $this->baseUrl;
$templateUrl = $this->baseUrl . '/templates/' . $this->template;
artxComponentWrapper($document);
?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="<?php echo $this->language; ?>" lang="<?php echo $this->language; ?>" >
<head>
<meta http-equiv="X-UA-Compatible" content="IE=EmulateIE7" />
<jdoc:include type="head" />
<link rel="stylesheet" href="<?php echo $this->baseUrl; ?>/templates/system/css/system.css" type="text/css" />
<link rel="stylesheet" href="<?php echo $this->baseUrl; ?>/templates/system/css/general.css" type="text/css" />

<link rel="stylesheet" type="text/css" href="<?php echo $templateUrl; ?>/css/template.css" />
<!--[if IE 6]><link rel="stylesheet" href="<?php echo $templateUrl; ?>/css/template.ie6.css" type="text/css" media="screen" /><![endif]-->
<!--[if IE 7]><link rel="stylesheet" href="<?php echo $templateUrl; ?>/css/template.ie7.css" type="text/css" media="screen" /><![endif]-->
<script type="text/javascript" src="<?php echo $templateUrl; ?>/script.js"></script>
</head>
<body>
<div id="art-page-background-simple-gradient">
</div>
<div id="art-page-background-glare">
<div id="art-page-background-glare-image"></div>
</div>
<div id="art-main">
<div class="art-Sheet">

```

```

<div class="art-Sheet-tl"></div>
<div class="art-Sheet-tr"></div>
<div class="art-Sheet-bl"></div>
<div class="art-Sheet-br"></div>
<div class="art-Sheet-tc"></div>
<div class="art-Sheet-bc"></div>
<div class="art-Sheet-cl"></div>
<div class="art-Sheet-cr"></div>
<div class="art-Sheet-cc"></div>
<div class="art-Sheet-body">
<div class="art-Header">
  <div class="art-Header-png"></div>
  <div class="art-Header-jpeg"></div>
<div class="art-Logo">
  <h1 id="name-text" class="art-Logo-name"><a href="<?php echo $baseUrl; ?>/">Salon alueen rotaryklubit</a></h1>
  <div id="slogan-text" class="art-Logo-text">SALO - PERNIO - USKELA - INNER WHEEL SALO</div>
  <div id="slogan-text" class="art-Logo-text"> District 1410, FINLAND</div></div>

</div>
<jdoc:include type="modules" name="user3" />
<jdoc:include type="modules" name="banner1" style="artstyle" artstyle="art-nostyle" />
<?php echo artxPositions($document, array('top1', 'top2', 'top3'), 'art-block'); ?>
<div class="art-contentLayout">
  <?php if (artxCountModules($document, 'left') : ?>
  <div class="art-sidebar1"><?php echo artxModules($document, 'left', 'art-block'); ?>
  </div>
  <?php endif; ?>
  <div class="art-<?php echo artxGetContentCellStyle($document); ?>">

<?php
  echo artxModules($document, 'banner2', 'art-nostyle');
  if (artxCountModules($document, 'breadcrumb'))
    echo artxPost(null, artxModules($document, 'breadcrumb'));
  echo artxPositions($document, array('user1', 'user2'), 'art-article');
  echo artxModules($document, 'banner3', 'art-nostyle');
?>
<?php if (artxHasMessages()) : ?><div class="art-Post">
  <div class="art-Post-body">

```

```

<div class="art-Post-inner">
<div class="art-PostContent">

<jdoc:include type="message" />

</div>
<div class="cleared"></div>

</div>

                <div class="cleared"></div>
        </div>
</div>
<?php endif; ?>
<jdoc:include type="component" />

<?php echo artxModules($document, 'banner4', 'art-nostyle'); ?>
<?php echo artxPositions($document, array('user4', 'user5'), 'art-article'); ?>
<?php echo artxModules($document, 'banner5', 'art-nostyle'); ?>
</div>
<?php if (artxCountModules($document, 'right')) : ?>
<div class="art-sidebar2"><?php echo artxModules($document, 'right', 'art-block'); ?>
</div>
<?php endif; ?>

</div>
<div class="cleared"></div>

<?php echo artxPositions($document, array('bottom1', 'bottom2', 'bottom3'), 'art-block'); ?>
<jdoc:include type="modules" name="banner6" style="artstyle" artstyle="art-nostyle" />
<div class="art-Footer">
<div class="art-Footer-inner">
<?php echo artxModules($document, 'syndicate'); ?>
<div class="art-Footer-text">
<?php if (artxCountModules($document, 'copyright') == 0): ?>
<p>Copyright &copy; 2010 The Rotary clubs of Salo, Perniö, Uskela and Inner Wheel Salo, Finland<br />
All Rights Reserved.</p>

<?php else: ?>

```

```
<?php echo artxModules($document, 'copyright', 'art-nostyle'); ?>
<?php endif; ?>
</div>
</div>
<div class="art-Footer-background"></div>
</div>

        <div class="cleared"></div>

    </div>
</div>
<div class="cleared"></div>
<p class="art-page-footer">

<!-- BEGIN Snoobi v1.4 -->
<script type="text/javascript" src="http://eu1.snoobi.com/snoop.php?tili=rotarysalo_fi"></script>
<!-- END Snoobi v1.4 -->

</body>
</html>
```