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Synchronicity PBS

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1 Installation

The platform is delivered with a installation script which is to be run from the browser. Before this can be done, please check that your system meets the requirements.

1.1 requirements

Some of these are optional, but fulfilling all of them, you can use all the capabilities of LULOP2.

- Web server, usually Apache is already installed
 - ◆ (mod_trackback 1.0.1)
- MySQL 4.0.x
- PHP 4.3.x (5.0.x)
 - ◆ Fileinfo PECL extension
 - ◆ php.ini
 - fileuploads enabled
 - session.savehandler is set to files
 - ◆ --with-memory-limit might be a good idea, LULOP2 uses about 1200 KB
- Perl 5.8.x
 - ◆ File::Temp 0.16+
 - ◆ PHP::Session 0.22+
 - ◆ Net::MySQL 0.08+
 - ◆ PHP::Include 0.2+
 - ◆ (Net::Trackback 1.01)
 - ◆ (Net::BitTorrent::File 1.01)
- PureFTPd or similar FTP daemon with MySQL authentication backend
- (XBT BitTorrent tracker)
- (XBT BitTorrent client backend)
- Enough free space in the filesystem
- Ffmpeg (latest cvs build).

The perl modules can be installed as shown here:

```
perl -MCPAN -e 'install File::Temp'
```

```
perl -MCPAN -e 'install PHP::Session'
```

```
perl -MCPAN -e 'install Net::MySQL'
```

These are required for PHP::Include :

```
perl -MCPAN -e 'install Filter::Util::Call'
```

```
perl -MCPAN -e 'install ExportTest'
```

```
perl -MCPAN -e 'install Filter::Simple'
```

```
perl -MCPAN -e 'install Parse::RecDescent'
```

```
perl -MCPAN -e 'install PHP::Include'
```

```
perl -MCPAN -e 'install
```

1.2 get the lulop2 package

<http://lulop2.sf.net/> is a good start to get the latest package of the platform. Note that this is the only official place to get it.

1.3 making things ready

Find out your credentials to the MySQL database and what is the address to your www folder in the filesystem.

In case you don't have the access to the directory under the www directory, which is used for mainly everything in the platform, follow the instructions given in the chapter 1.6.

Unpack the package to the correct directory, one level above the www accessible folder. Check that the `I2_config.php` has the correct values in database access and in the platformbase.

1.4 check the configuration file

Check the `I2_config.php` for server configuration, database access and to enable or disable those features which you want to use or not to be used.

Make sure to put your email address on the admin email variable.

There are many features that can be enabled or disabled:

- RSS 2.0 feed
- help buttons
- FTP usage
- FTP publishing
- Torrent usage
- Languages for translation of the site.

1.5 use install.php from the browser

Go with your favorite web browser to your www address and use the installation page to do the rest off the installation.

When this is done, LULOP2 is ready to use for you.

1.6 no access under www folder

In this case you must build your www system with one level difference of the basic.

Use .htaccess to prevent access on those config files and create index.php which will redirect all visitors to lulop2/index.php.

2 Framework mainview

The index page works with certain variables, in the order of powers:

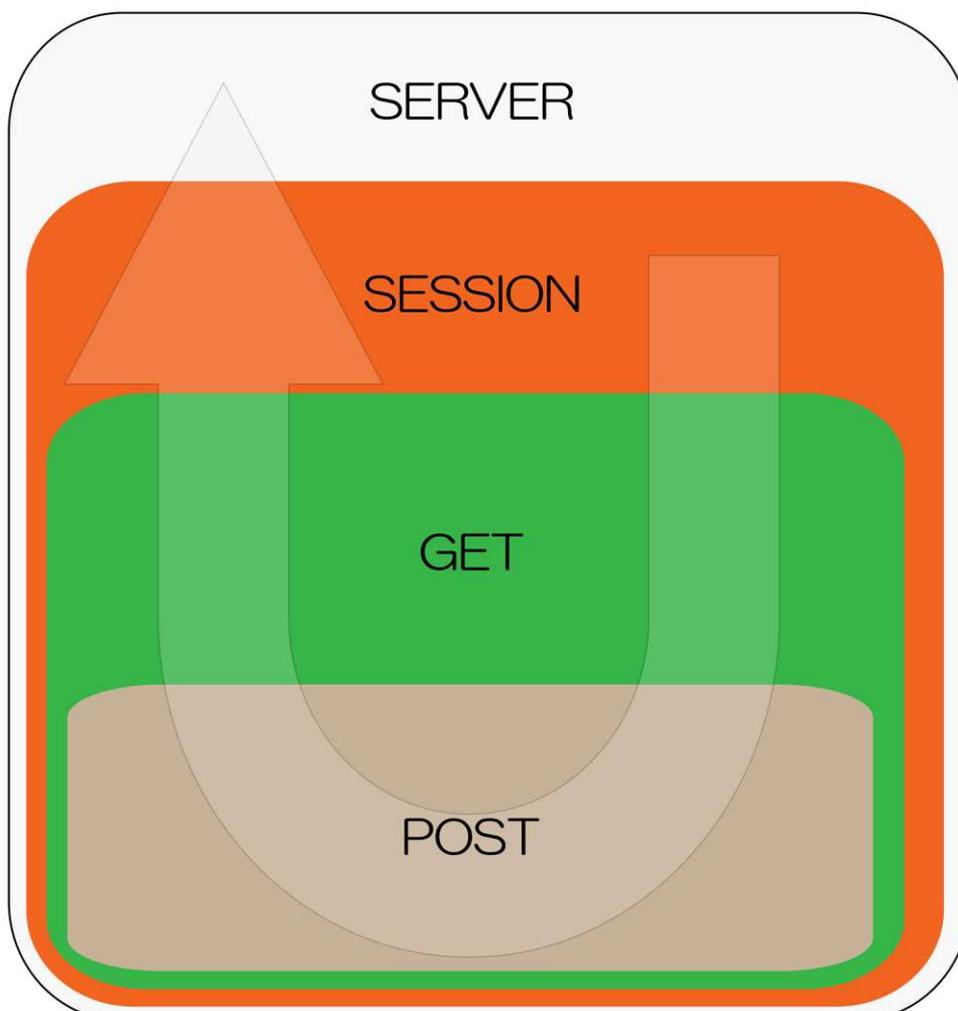
- session
- get
- post.

User can have current session valid, as long as the browser stays the same while in that session. This is checked every time page is opened.

The session should always have the same name so each page within the platform defines it in the first lines of PHP code.

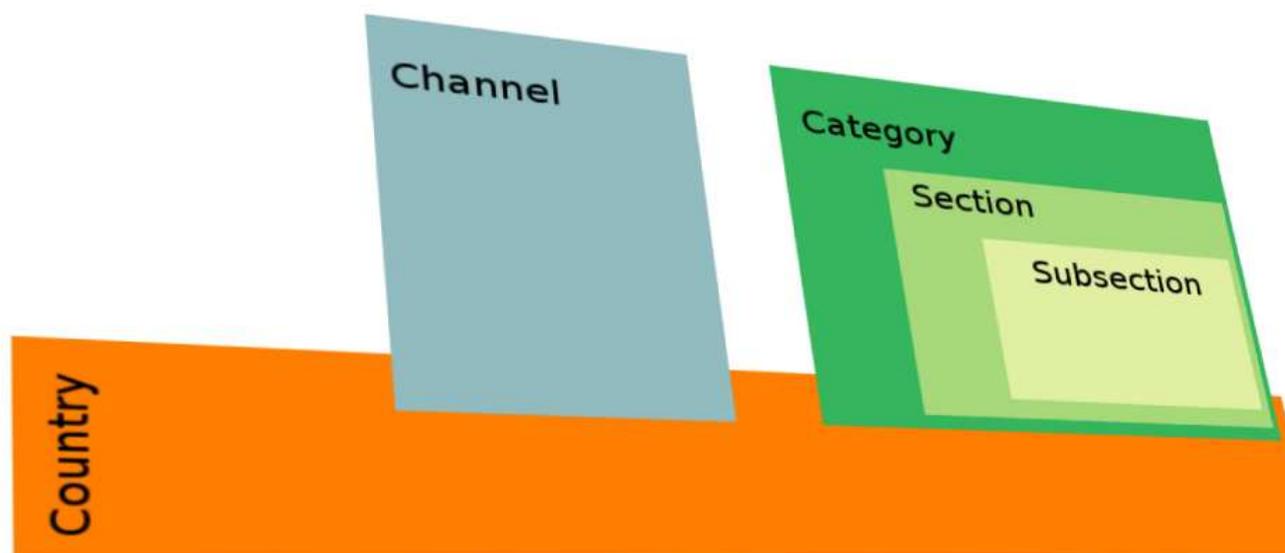
The save_path of session data, in case of files, should be defined either in apache's virtualhost or in each page which has session related actions.

The graphic shows the relationships between these variables. The more outer area the variable is, the more power it has.



\$_SESSION	\$_GET	\$_POST	Story behind these
id			Each session has an unique id. This makes everything to run correctly. Logs are all wrote on based on this variable.
accesslevel			Each user has some level of accessing, privileges to some part of the site. This a numeric value, 0...7
lang	l		Language used to view the site. Get[lang] always replaces the Session[lang]
channel	c		Channel to be viewed. Get[c] replaces Session [channel] if lock is off
chanlock			Channel lock, either on (1) or off (0)
	g	Some variables	Category. Value in in format "nnn-mmm-sss" where nnn is the category and rest are subcategory and its sections
country	y		Content source, material from this country
countrylock			User can only see his/hers/its own country material
	p	Many variables	Page to be viewed. This is mostly used in normal viewing
	e -> h	Many variables	User who is logged in, uses these two to change some values. If [e] exists, then is [h] tested
	u		User whos information is to be viewed. This shows the public information of a user
username			Username after logging in. Used for testing some access for certain content
realname			In format Lastname, Firstname. Is shown in top of the page.
profile			cli or pub with id_by_user from the profile table
profileid			The hash from the activeprofile column in users
browserid			Hash of user agent given by the server variables
qlimit	qlim		Query limit for all the listings

Different types of content presentation



The country selection can either affect to the browsing or not, depending if the user has privileges to change the value of it.

3 File locations and the naming sceme

3.1 folders under platform base

Name	Usage	Files
backups	Daily backup of MySQL tables	Sql.bz2
bittorrent_v4.1.2	BitTorrent scripts	Python
flvtool2_v0.14	Flash Video tool scripts	Ruby
getid3_v1.7.4	GetID3 scripts for video/audio info retrieval	PHP
logs	Httpd, ssl, hack-, etc.. logs related to the domains	log
public_html	Www visible content of the platform	Php, css, perl, jpeg
titles	Title folders, named by the id number of each title.	Mpeg2, Mpeg4, Flash video
torrents	Torrent files created from the title folders	torrent
users	Publisher home folders, access also via ftp	*
session	Php session data	sess_*
tmp	Temporary directory	*

3.2 folders under public_html

Name	Usage	Files
channel	Channel specific stylesheet and banners	Css, jpeg, gif, swf
img	Images for the platform	Jpeg, gif, swf
install	Installation scripts for the platform	Php, sql
lang	Language files	php

3.3 file naming

Type	Example	Explanation
Published mpeg2 AV	23_broadcast01.mpg	23 = title id, 01 = filenumber in the title
Published video only	23_brqvideo02.m2v	These files are to be muxed and encoded before they are truly published
Published audio only	45_brqaudio87.aiff	
Flash preview	709_flash44.flv	Flash video format for quick preview
Still image created from broadcast	37_still04_b.jpg	b = bigger, s = smaller
Mpeg4 preview	332_preview76.mkv	Matroska file for better preview quality

Type	Example	Explanation
Torrent of the title folder	lulop2_867.torrent	

Title number can be 1...9999999, file number can be 01...99.
Only the filename has the zerofill.

4 Left hand side menu area

The menu is divided like the categories of usage.

- Personal
 - Info
 - Password
- Buying
 - Client profile
 - Transactions
- Publishing
 - Publisher profile
 - File maintenance
 - Title maintenance
 - Licenses
- Moderation
 - Title
 - License
 - Channel
 - Section
- Administration
 - User maintenance
 - FTP
 - Torrent
- Debugging
 - Server statistics
 - MySQL statistics
 - DB optimization, table repair

The more specific functions available depends of the users privilege on that particular area.

5 Question mark Help

\$_GET['lang']

Chooses the language which to use from the database.

This is got from the \$_SESSION['lang'] variable in the main page.

Language in the help page can be changed by the flag buttons, as in the main page.

\$_GET['help']

This combined with the language, tells which help text should be displayed.

Always there should always be a link similar to "see also this" when showing something.

Database

Table called "helps" has the amount of columns as there is language in the default installation of this platform. Administrator can add languages from the "language" panel and so is the amount of help columns added.

If the called "whathelp" cannot be found and the accesslevel above four (4), the requested help row is created. But still it needs to be filled with some content.

6 Variables of the framework

Modules uses mainly the session part of this document.

6.1 \$_session

Session variables handles all the authentication related matter. Whether the user is actually logged in or not, which access level user has, etc.

channel

Channel is an area with certain content and a banner in the right upper corner. In the beginning of the php script is tested the virtual host request, for example "monkeyteaser.domain.name", where the "monkeyteaser" is the virtual host. If the value is "www", like it mainly is, no channel value is set.

According to this value, the content of the pages will vary, but only if it is set. Using this, user can choose the preferred channel.

chanlock

Lock the user to see only that channel which is set to him/her/it in the database. Value is either 0 (off) or 1 (on).

lang

Requested language to be used by user. This value is used to include the correct language file from the "lang/" folder.

Also it is used to check the correct sender of any form, in a way that if the language is suddenly changed when the form is sent, the form values are ignored. This should happen only if someone is playing with the site (read: hacking attempts).

Config file sets the array with all possible languages. Value of this variable should be in three (3) letters, like "eng" or "rus".

browserid

Id made of the user agent value plus session id. It is used to see if the session is used by the correct agent to minimize the possible hacking attempts.

username

Username of the person if accesslevel is not zero (0). That means person has logged in. With this is fetched everything user related from the database.

id

This is a unique value for each visitor which is calculated from userip, userhost

and random number by using md5 function. Upload uses this to generate temporary file.

accesslevel

Defines the level where users can access. Correspondance is as follows:

Value	Explanation
0	Normal user, browsing and video previes
1	User with ability to change personal information, pending user
2	Client who can download broadcast quality
3	Publisher with upload and publishing privileges
4	Client and Publisher dual status. Can do everything what the lower levels can
5	Moderator
6	Administrator
7	Grand master, for debugging. Only allowed for persons whom know some coding.

realname

Realname of the logged in user. In format Lastname, Firstname.

debug

Only used if the value id "enabled". User with grand master privileges can use this to find possible holes in the system.

country

Users country, which should be the source where the content comes from. This is set always when user logs in. Countrylock defines if this value is used for restrict some content.

countrylock

Lock user to view only content from that country where user is registered in session(country). Value is either 0 (off) or 1 (on).

profile

This value is the currently active profile name from the id_by_user column.

Format of this value is:

cli:hayabusa

pub:chotto matte

noactive

First part before ":" determens whether the profile is client or publisher.

Second part is the name given by user.

If the value is "noactive", there were no profile set by the user so no actions can

be made before some profile have been activated.

profileid

The hash used for identifying the profile. Should be 32 bits long.

qlimit

MySQL query limit for those queries which usually have more rows.

6.2 \$_get

l

Language selection for user when linking the page. Values are the same as in session(lang).

p

The page what user is viewing.

Value	Explanation
Numeric value 0..n	Opens the corresponding video page
info	Information about the web site and contact info
search	Search page for searching what ever man wants
logout	Sets session off and goes to the frontpage
login	Tries to login
register	Register new user
forgot	Forgotten password emailing, if login fails, user comes here automaticly

c

Channel to be viewed. Values are the same as in session(channel).

If this variable is sent with a value "unset", the channel from the session will be unset, but only if the chanlock is off.

The session variable is replaced with the value of this variable if the lock is off.

u

User information. Only available if logged in and if the other user has allowed to view his/hers information. Even if it's the name of the current user.

e

Edit or do some selection from the menu on the left side.

Value	Explanation
personalinfo	View and edit personal information

Value	Explanation
profcli	Edit or view one of the many profile that client can have
transaction	Client can see the tranactions made
profpub	Edit or view one of the profile that publisher has
files	Manage files
ownlogs	User can view the logs which are created from users titles
content	Manage content
logs	Manage logs
users	Manage users
casts	Edit the main casts which are attached to some user profile
logs	View all the logs that the system offers
dbs	Database checks
master	Area for debugging and securing the system
torrent	Access to torrent area if it is enabled

h

When user is logged in, this variable is tested after the "e". It is used in the menu for the actual link.

g

Category. Value is in format "nnn-mmm-sss-ccc", where "nnn" = category, "mmm" = section, "sss" = subsection, "ccc" = subsub....

y

Country. Can be changed by the user if the countrylock is not 1. The value is saved to the session array.

If this variable is sent with a value "unset", the channel from the session will be unset, but only if the chanlock is off.

qlim

In case this variable is set and it is numerical, it replaces the session variable qlimit.

6.3 \$_post

This gives each time different variables for different purposes, but here is a list of those which are nearly always used.

Always when something is posted, the first check will be based on the "sender", which is the name of the submit button in each form, and from the value that it has. The value should be in the same language as the current session(language)

is.

All post variables are html encoded, trimmed and returned to a array called "enced".

7 Server configuration

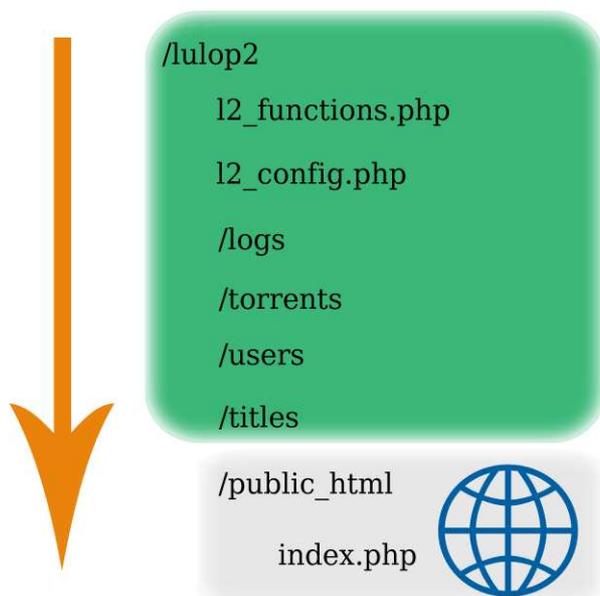
Depending of you own servers setup, this text can or cannot be used straight to it.

This text assumes that your http daemon is runned as user "nobody" and ftp daemon as "nobody" also. Since usually some group is also required, "nobody" is used also for both of them.

This way the file ownership is kept clear and easier to manage.

For the rest, the required user usually depends of the http daemon since everything is runned throught it. For example Perl and PHP are like this.

These diagrams show how the filesystem should be arranged for the default settings.



The green area shows the folders which never should be visible to the outside world.

Only the grey area should be accessed via web browser.

Folders and theirs subfolder under /lulop2 in the picture, should have the following permissions:

- read-write-execute by user
- read--execute by group

"users" and its subfolders should have writing permission also on the group and that group should be "ftplulop2". This folder is accessed via ftp by publishers.

Note that all the text applies only to Linux server systems, no Windows.

There is no need to allow the web server user to access beyond the "lulop" directory.

8 Torrent distribution

LULOP2 platform uses the BitTorrent file distribution protocol. It consists of Tracker and original Client.

As a tracker LULOP2 uses XBTT from sourceforge.net.

As a client LULOP2 uses the original BitTorrent, version 4.0. Also from that same package is the script to create torrent files from.

8.1 tracker

Get the source from CVS on sourceforge.net by using this command:

```
cvs -z6 -d:pserver:anonymous@cvs.sourceforge.net:/cvsroot/xbtt co xbt/misc xbt/XBT\
Tracker
```

```
chmod 755 make.sh
./make.sh
mkdir /usr/local/xbt
cp xbt_tracker /usr/local/xbt
nano /usr/local/xbt/xbt_tracker.conf
    database host user pass
```

Then add to /etc/rc.local
/usr/local/xbt/xbt_tracker &

Create database tables by using xbt_tracker.sql file if not created while LULOP2 was installed.

Settings in table called xbt_config:

Config name	Default by XBT	Default by LULOP2
announce_interval	1800	3000
anonymous_connect	1	1
anonymous_announce	1	1
anonymous_scrape	1	1
auto_register	1	1
clean_up_interval	60	60
daemon	1	1
gzip_announce	1	1
gzip_debug	1	1
gzip_scrape	1	1
listen_check	1	1
listen_ipa	*	*

Config name	Default by XBT	Default by LULOP2
listen_port	2710	6969
log_access	0	1
log_announce	0	1
log_scrape	0	1
read_config_interval	300	300
read_db_interval	60	60
redirect_url		
scrape_interval	0	0
update_files_method	1	1
write_db_interval	60	60

8.2 client

Each time when new torrent is created, it also starts the initial client to download it. This client is in the most significant role, since it starts the cycle of distributing those files which are in the newly created torrent.

After a while when the files have been distributed well, the initial client closes but the files still stay in the torrent network.

In case the server is rebooted, admin needs to start one client with all or selected torrents.

Note that torrent files are only created of those files which are already published.

9 Module definition

User authentication

\$_SESSION ['accesslevel']	0	Normal user who is not logged in
	1	Person who has logged in but is limited only to change own information
	2	So called clients, can download broadcast quality videos
	3	Publisher, can upload files
	4	Dual status: Client and Publisher
	5	Moderator, can't delete, but can deny usage
	6	Administrator
	7	Grand master, used to debug the site

Each higher value has also the privileges from the lower values.
More information can be found from the framework documentation.

All administrating actions should be able to do from the module interface.

User can always go back and forward between the main page and the modules.

That's why all the session variables should be set where ever the user logs in.
Here is the list of the required variables and their corresponding place in the database, table called *users*:

\$_SESSION[]	Column name	Possible values
username	user	"username"
accesslevel	level	0...7
country	country	"Italy"
countrylock	countrylock	0, 1
channel	channel	"channel_name"
chanlock	chanlock	0, 1
realname	last_name, first_name	Doe, John
id		md5(userip + rand())
profile	id_by_user (profile table)	
profileid	profile_id (profile table)	32 bit hash
browserid		32 bit hash made of session id and user agent

Optionally if you wish to use different languages for the users, set the **\$_SESSION['lang']** to be three letter presentation of that language, like "eng", "fre", "ita" and etc...

Php document construction

Document should begin with a short description with

module name, author of the module, email, www address, strating date and the last modification date.

Always should start the output with `session_start()`; and see if the id, which is generated from users ip and of `rand()`, is set.

Declare all the variables in the beginning of the document so they are easier to adjust.

If you can, also open the link to the database server only onse in the beginning of the document, just before the first query and close that link after the last possible query. Avoid using multiple connections to optimize the database connection.

Also when concidering speed, do queries rather in SQL language than in PHP build in mysql functions. For example on `mysql_drop_db`, or `mysql_create_db` use 'DROP TABLE table_name' and 'CREATE TABLE table_name' commands with `mysql_query`.

But still, it is just how you decide to do it.

Files and folders

Try to build the module just by using one php file called as “module.php” where module is the name of your module. All in lowercase.

If needed, use another file for the functions and include that in you main file.

If you need some folders for just this module, name the folder as the module is named.

Database

Write some description of those tables that your module uses and include in the document the commands to create those tables. In addition, add an example how to insert information as SQL phrase.

See examples below.

TABLE_NAME

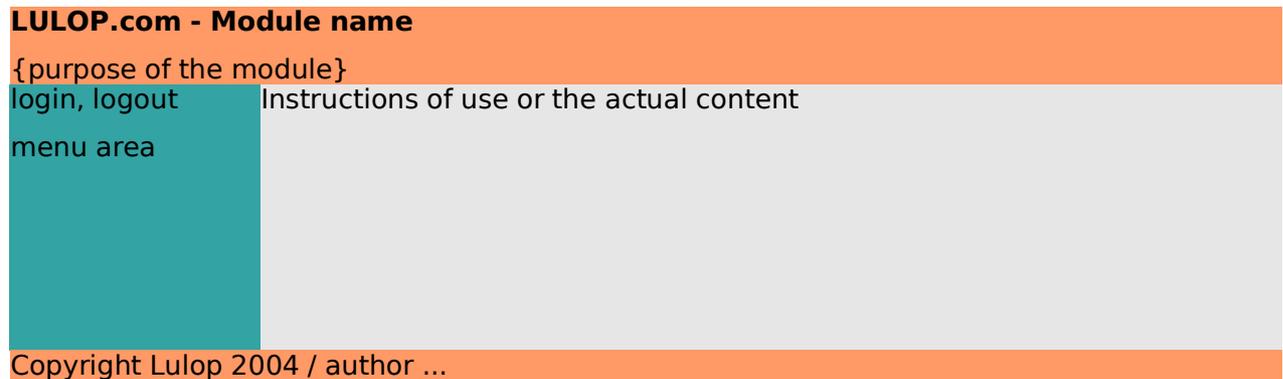
Field	Type	Null	Key	Default	Extra	Explanation
id_number	mediumint(6) unsigned zero fill		pri			Id of the file
visibility	tinyint(1)			0		Level of visibility (-1,0,1,2,3,4)

```
CREATE TABLE table_name (
    id_number mediumint(6) unsigned primary key,
    visibility tinyint(1) not null default 0
);
```

```
INSERT INTO table_name VALUES (
    'id_number',
    '0'
);
```

Layout

When designing layout for your module, try to keep it close to the main site.



Colors and fonts are for you to decide. Atleast there should be a link to the main page ([index.php](#)) with the current language set if it exists ([index.php?l='.\\$_SESSION\['lang'\].'](#)).

If the module is not ment to be used from the browser but it's ment to use with some other techniques, like “publish from email” or “publish from ftp” and so on, make the page to direct the user to the main page if the request comes from the browser.

Debugging

For debugging, the user level number 7 exists (aka Grand master).

When debugging enabled, `$_SESSION['debug'] = 'enabled'`, every database query phrase, commands and other special stuff, should be echoed before they are executed.

Do this by adding these before the execution:

```
if ( isset($_SESSION['debug']) && $_SESSION['debug'] == 'enabled' ) {
    echo $what_to_be_executed;
}
```

Remember to add links in the menu for setting the debugging on and off.

Feedback

Please use the **LULOP - Development forum** for discussion of the modules and of this document.

<http://www.lulop.org/>

10 Video / Audio handling

System is mainly consistet of Mpeg2 videos which should have a good enough quality for broadcasting in television.

As users want to see the videos, the overhead for bandwidth would be huge, so there will also exists two kinds of preview qualitys.

Flash video, which is viewed by the player in the web page.

Mpeg4 video which provides a higher picture quality when compared to Flash video, while it is used for streaming previews.

Every broadcast quality video should have a still image as a snapshot of some interesting frame in the video.

FFmpeg

This command line software is used in the LULOP2 platform in two ways.

The primary one is to use it via PHP by using module called ffmpeg-php.

The second way is to use it straight via command line scripts.

10.1 ffmpeg

The target type of the encoded file is preset to be DVD. This would result AC-3 audio. This is why the audio codec is forced to be mpeg2. It is easier for the recipient since it is not necessary to install additional codecs such as AC-3. This is possible to pass by taking the `-acodec` attribute off the output command line in case AC-3 audio is desired. In any case the output quality is very high; mepg2video 6000 kb/s and mp2 audio 224 kbit/s. This is sufficient for broadcast quality used in television. All the other information, such as in- and outputfiles, is gathered from the variables the DB query returns. Naturally the encoding is double-pass. This is why there is two output command lines; first one is for the first pass and it defines the passlogfile where ffmpeg should write during the first pass. The second one tells ffmpeg where is the passlogfile it should use during the second pass. Ffmpeg detects automatically whether input material is on PAL or NTSC format and leaves it as it is.

Example of execution of ffmpeg:

Input #0, mpeg, from '/domains/lulop.com/titles/13/13_broadcast12.mpg':

Duration: 00:00:16.3, start: 0.377456, bitrate: 4936 kb/s

Stream #0.0: Video: mpeg2video, 720x576, 25.00 fps

Stream #0.1: Audio: mp2, 48000 Hz, stereo, 192 kb/s

Output #0, avi, to '/domains/lulop.com/titles/13/13_preview12.avi':

Stream #0.0: Video: xvid, 720x576, 25.00 fps, q=2-31, pass 1, 400 kb/s

Stream #0.1: Audio: mp3, 48000 Hz, stereo, 96 kb/s

10.2 ffmpeg-php

10.3 sox

Since the support for aiff is not (yet) available in ffmpeg, it must be converted first to wav. This is what SOX (Swiss Audio Tool) is used for. Every input audiofile is being tested; if the filename ends in ".aiff", SOX is being executed. It converts the file into wav the same quality as original. This temporary wav-file is being deleted after encoding. As in ffmpeg command, also SOX command attributes are being gathered from variables the DB query returns. Only preset parameter is the filetype since we want to maintain the original quality.

10.4 video status in the database

Mpeg4		Flash		Still		Statusv
Ok	Fail	Ok	Fail	Ok	Fail	
					x	2
				x		3
			x		x	4
			x	x		5
		x			x	6
		x		x		7
	x		x		x	8
	x		x	x		9
	x	x			x	10
	x	x		x		11
x			x		x	12
x			x	x		13
x		x			x	14
x		x		x		15

* numbers 8...15 are still in consideration, 2...7 implemented.

Other status codes are:

- 1 Start the encoding process as described above
- 0 Hide the file for the moment
- 1 Some part of the file has been sold
- 2 File has been sold completely

10.5 publishing videos

While publishing different files for different usages, the array sending all this must be kept in some sort of hierarchy.

File number	Usage	Informations	Explanation
1	broadcast	fileabs	Realpath of the file
		fileformat	
		mimetype	
		video_codec	
		video_datarate	
		framerate	
		frameheight	
		framewidth	
		audio_codec	
		audio_datarate	
		audio_samplerate	
		lenght	
		filesize	
		statusv	
	createstill		
	preview	fileabs	
		fileformat	
		mimetype	
		video_codec	
		video_datarate	
		framerate	
		frameheight	
		framewidth	
		audio_codec	
		audio_datarate	
		audio_samplerate	
		lenght	
	filesize		
	brqvideo	fileabs	
	brgaudio	fileabs	
	still	fileabs	

11 Uploading

The uploading script is written in perl and it is the only script in the LULOP2 using that language.

Since the file upload is one of the biggest security risks, there is many levels or privilege checks in the uploading script.

It uses Net::MySQL for logging the upload to the database and File::Temp to show the user how much actually is uploaded to the server at given time.

Via ftp is possible to use certain filenames to trigger automatic publishing of those files within that same folder.

Currently this is know to be supported in PureFTPd if it is compiled

`--with-uploadscript`

and the `/usr/local/sbin/pure-uploadscript -r /path/to/l2_ftpublish.php` is running.

12 Database

There is no NULL values in any table, unless explicitly mentioned.
All the tables are InnoDB.

l2_assets

Field	Type	Key	Default	Explanation
mimetype	varchar(60)	pri		Mimetype of the asset
name	varchar(30)	uni		Unique name without whitespace
hname	varchar(40)			human readable name
extensions	varchar(30)			List of file extensions belonging to this mimetype. List should be in preg_match compatible form.
allowuse	tinyint(1)		0	Allow uploading via web page and usage
moreinfo	varchar(200)			Link to the place where users can find more information, without http://

l2_cali_default

Field	Type	Key	Explanation
profileid	char(32)	pri	Profile ID of the client
caliber_tot	float(5,2)		Coefficient for the total title
caliber_sec	float(5,2)		Coefficient for per seconds pricing
caliber_clp	float(5,2)		Coefficient for pricing per clips
edited	int(10) unsigned		Last editing time

l2_cali_group

Field	Type	Key	Explanation
conid	char(32)	pri	Unique id. md5 of the name and the creation time, md5 (name+time())
name	varchar(50)	uni	Human readable name
pubprof	char(32)		Profile ID of the publisher who created this
caliber_tot	float(5,2)		Coefficient for the total title
caliber_sec	float(5,2)		Coefficient for per seconds pricing
caliber_clp	float(5,2)		Coefficient for pricing per clips

Field	Type	Key	Explanation
description	text		Blaa Blaa for the users to know
edited	int(10) unsigned		When was the last editing done

l2_cali_groupconn

Field	Type	Key	Explanation
conid	char(32)	foreign	ID of the group defined in l2_cali_group
cliprof	char(32)	index	Profile ID for the client who is in this group

l2_cali_specific

Field	Type	Key	Explanation
conid	char(32)	pri	Connection ID, md5 hash of pub + cli + time
pubprof	char(32)		Profile ID of the publisher
cliprof	char(32)		Profile ID of the client
caliber_tot	float(5,2)		Coefficient for the total title
caliber_sec	float(5,2)		Coefficient for per seconds pricing
caliber_clp	float(5,2)		Coefficient for pricing per clips
edited	int(10) unsigned		When was the last editing done

l2_category

Field	Type	Key	Explanation
idnum	smallint(5) unsigned	pri	ID number of the category or section, auto increment
name	varchar(20)		Nice short name which is enough supscribing
inuse	tinyint(1)		Is there any content in it yet
belongs	smallint(5) unsigned		What is the ID of the parent category of this one

l2_channel

Field	Type	Key	Explanation
name	varchar(30)	pri	Name of the channel

Field	Type	Key	Explanation
description	text		description of the channel
visibility	tinyint(1)		Can be three different, 0 secret, 1 for owner and those who are locked into it, 2 for public
owner	varchar(40)		Username of the owner

l2_content_groups

Field	Type	Key	Explanation
grid	mediumint(5) unsigned	pri	Numeric id of the group
grname	varchar(60)		Text name of the group
description	text		Description of the group, purpose of it
visibility	tinyint(1)		Can be three different, 0 secret, 1 for owner and those who are locked into it, 2 for public
owner	varchar(40)		Username of the owner

l2_content_info

Field	Type	Key	Default	Extra	Explanation
id_number	mediumint(6) unsigned	pri		auto_increment	Id number for the title. Most important number.
cat1	varchar (16)				If value starts with A, then it is followed by the name of the channel in lowercase. If it starts with C, it will be followed by the numbers for category..
cat2	varchar (16)				
cat3	varchar (16)				
cat4	varchar (16)				
title	varchar(80)				main title
subtitle	varchar(140)				sub title
synopsis	text				short description
description	text				long description
date_content	Int(10) unsigned		0		when video filmed, the actual action time
date_insert	int(10) unsigned		0		when video added to the site
date_modif	int(10) unsigned		0		when modified in the site
date_start	int(10) unsigned		0		When the title becomes active
date_last	int(10) unsigned		0		Date when is the last change to buy it.
language	char(2)				content language, codes in "language" table
publisher	varchar(40)				username from users

Field	Type	Key	Default	Extra	Explanation
pubprof	char(32)				Profile which was active while publishing
region	tinyint(2)				asia, europa, etc..., value from the continent table.
country	char(2)				where filmed, 2 letter code
location	varchar(100)				where filmed, location
basecaliber	float(3,2)		1		Base caliber, 1.00 as 100%
pricetype	smallint(4) unsigned		1		1=All the videos, 2=Per video clip, 10+=minimum amount of seconds
statusc	tinyint(1)		0		draft=0, private for the country=1, private for the channel=2, private for logged in=3, public=4, deleted=-1
accept	tinyint(1)		0		1 = activated, 0 = pending
groupc	varchar(20)				file can belong to a group
torrent	tinyint(1)		0		0 = no bittorrents made yet, -1 = disabled, 1 = made
restrictions	text				
preview_dl	tinyint(1)		1		0 to allow everyone download preview files, 1 to only registered users.

I2_content_video

Field	Type	Default	Explanation
id_number	mediumint(6) unsigned		Id of the title
filenumber	tinyint(2) unsigned zero fill	01	number of the file, 01..99
fileformat	varchar(120)		Quite free text for the format
broadcast	tinyint(1)	1	If 1, the file is broadcast, else it is preview.
mimetype	varchar(60)		mimetype of the content
video_codec	varchar(40)		"mpeg2","divx"
video_datarate	mediumint(5) unsigned		in KBps (= 1024*8 kbps)
framerate	float(3,2)		video fps
frameheight	smallint(4)		576 in pal
framewidth	smallint(4)		720 in pal
aspectr	float(2,3)		Pixel aspect ratio of the video
audio_codec	varchar(40)		"mpeg-layer2"
audio_datarate	smallint(4) unsigned		in KBps
audio_samplerate	mediumint(5) unsigned		in Hz, "44 100"
lenght	float(6,2)	0	In seconds
filesize	mediumint(7) unsigned	0	Filesize in KiloBytes

Field	Type	Default	Explanation
statusv	tinyint(2)	0	2..7 for the creations of still and flash. 0 =for keeping the file hidden. -1 = some part of the file is sold. -2 = file is compelately sold. 1 = start the proses.

l2_continent

Field	Type	Key	Extra	Explanation
cont_id	tinyint(2)	pri	auto_increment	Continent id number
name	varchar(80)			Name of the continent

l2_country

Field	Type	Key	Default	Explanation
code	char(2)	pri		ISO 3166-1 alpha2 character code for country
cnumber	smallint(3) unsigned zerofill			ISO 3166-1 numeric id of the country
cname	varchar(70)			Official name of the country in english
inuse	tinyint(1)		0	If someone is really published in that country, then the value will be 1
continent	tinyint(2)			Continent where this country is in

l2_helps

Field	Type	Key	Explanation
whathelp	varchar(60)	pri	unique id, but should be still a human readable name with no whitespace
modified	int(10) unsigned		What was the last time when this row was affected
lang	char(2)		Language used in this row, in lowercase.
subject	varchar(100)		Headline for the help
content	text		Content of the help

l2_language

Field	Type	Key	Default	Explanation
lang	char(2)	pri		Two letter id of the language
name	varchar(60)			Official name in english

l2_licenses

Field	Type	Key	Default	Explanation
lic_id	char(32)	pri		MD5 of name, time and random
name	varchar(200)			Name of the licence, "php licence"
location	varchar(200)			http:// address without "http://"
description	text			Short description where it usually used to use
version	varchar(10)			Version of the license
creator	varchar(40)			Publisher username
visibility	tinyint(1)			If the license is to be used by everyone or just by the creator
modified	int(10) unsigned			when this license was last time modified in our database. Usually when it was updated.

l2_log_admin

Field	Type	Key	Default	Explanation
whena	int(10) unsigned			When action occurred
user	varchar(40)			Admin or moderator has always a username
actions	text			Action in quite literal format
alevel	tinyint(1)			Accesslevel of the user
referer	varchar(200)			Where the user came to this page

l2_log_download

Field	Type	Key	Default	Explanation
user	varchar(40)		guest	guest, if unknown
sessid	char(32)			Session ID
whens	int(10) unsigned			When started
whene	int(10) unsigned			When ended, if never, if success

Field	Type	Key	Default	Explanation
filesize	float(4,2)			The size of the file in MiB
title_id	mediumint(6) unsigned			Title id where that file belongs
filenumber	tinyint(2)			Which file of the title it was
type	varchar(10)			preview, broadcast, torrent, flash

l2_log_help

Field	Type	Key	Default	Explanation
user	varchar(40)		guest	guest, if unknown
sessid	char(32)			Session ID
whens	int(10) unsigned			When happened
whathelp	varchar(60)			Which help was touched or watched
act	char(1)		v	What did, viewed, failed to view, updated or failed to update(v,t,u,f)
lang	char(2)			Which language was used

l2_log_login

Field	Type	Key	Explanation
user	varchar(40)		With what username
whenl	int(10) unsigned		Time when occurred
success	tinyint(1)		Accesslevel given from the database
sessid	char(32)		Session ID

l2_log_session

Field	Type	Key	Explanation
sessid	char(32)	pri	
initial	int(10) unsigned		Unix timestamp when session initialised
ip_addr	varchar(32)		Ip address of the user
hostname	varchar(80)		hostname of the user if any

Field	Type	Key	Explanation
fromcom	varchar(4)		the domain name ending, like "com", "fr" or ...
platform	varchar(20)		Operating system of the user
browser	varchar(20)		Name of the browser used
bversion	varchar(5)		Version of the browser
bcss	tinyint(1)		CSS version
bcookies	tinyint(1)		Cookies enabled or not
bframes	tinyint(1)		Frames supported or not
biframes	tinyint(1)		Iframes supported or not
bjavascript	tinyint(1)		Javascript supported or not
bjavapplet	tinyint(1)		Java applets supported or not
blang	varchar(5)		Primary language of the browser
referer	tinytext		Where the user came from when the session was created

l2_log_upload

Field	Type	Default	Explanation
user	varchar(40)		Publisher who uploaded
whens	int(10) unsigned		When started
whene	int(10) unsigned		When ended if success
totalsize	float(4,2)		Upload size in MB
sessid	char(32)		Session ID, if any, via www
viaftp	tinyint(1)	0	1 = ftp, 0 = www

l2_log_view

Field	Type	Default	Explanation
user	varchar(40)	guest	guest, if unknown
sessid	char(32)		Session ID
whenv	int(10) unsigned		When viewed
content_id	mediumint(6) unsigned		ID of the title where the view was individual

l2_log_rss20

Field	Type	Key	Default	Explanation
viewtype	varchar(40)			What kind of view occurred, publisher:monky, channel:apina and so on.
viewip	varchar(32)			Viewer ip addr
viewhost	varchar(80)			Viewer host addr
viewagent	varchar(30)			Agent that was used to view the rss
viewcount	mediumint(6)			How many times this combination of ip, host, agent and type of rss have been viewed
lastview	int(10) unsigned			When the latest view was made

l2_log_torrent

Field	Type	Key	Default	Explanation

l2_maincast

Field	Type	Key	Default	Explanation
cast_id	char(32)			MD5 hash
name	varchar(100)			Human readable name of the cast
description	text			Description of the maincast
dest_chan	text			List of channel for final destination
dest_format	text			Destination formats
lic_id	char(32)			Which license will be used
lic_country	varchar(200)			List of countrycodes, preg_match compatible
lic_durat	tinyint(3) unsigned			Can take values 0...125
lic_durtype	varchar(10)			Minutes, second, days, etc..

Field	Type	Key	Default	Explanation
lic_contact	text			Contant info of the person responsible
usage	text			

l2_muxenc

Field	Type	Key	Default	Explanation
itemid	char(32)	pri		Unique id for each item in the list
titlenumber	mediumint(6) unsigned		0	Title number, used if not zero
filenumber	tinyint(2) unsigned zerofill		0	Filenumber of the title, used if not zero
filevideo	varchar(200)			File name with the path if not in default location accordinf to the title id
fileaudio	varchar(200)			
outformat	varchar(40)		mpeg2	“mpeg2”, “xvid”, “real”, “divx” etc..
added	int(10) unsigned			Unix timestamp when the item was added to the list
errorm	tinytext			Error message if had one already a go
deletion	tinyint(1)		0	Delet muxed files if 1

l2_newreg

Field	Type	Key	Default	Explanation
user	varchar(40)	pri		Username
wantlevel	tinyint(1) unsigned		0	Whch accesslevel should be given

l2_profile_cli

Field	Type	Key	Default	Explanation
profile_id	char(32)	pri		Made in md5(user_id+now())
maincast	char(32)			Which main level cast is parent of this profile, cast_id
user	varchar(40)			Id of the user whos profile this is
id_by_user	varchar(30)			Id that user gives to the profile, shown always
comp_name	varchar(80)			Company name
comp_addr	text			Company address
comp_web	varchar(100)			Company website

Field	Type	Key	Default	Explanation
comp_tax	varchar(40)			Company Tax number
comp_email	varchar(100)			Company email address
userealname	tinyint(1)		0	If user which to show [lastname, firstname] rather than [username]
comp_tel1	varchar(20)			office tel 1
comp_tel2	varchar(20)			
comp_fax	varchar(20)			office fax
payment	varchar(30)			Payment terms in days
prostatus	varchar(200)			status of profession
exposure	varchar(200)			
tvchannel	varchar(200)			
medium	varchar(200)			Type of broadcast: Terrestrial, satellite etc.
bandwidth	varchar(50)			"100 mb/s"
channel	varchar(20)			Users default channel, not used if empty
chanlock	tinyint(1)		0	lock the user to use only this channel
country	char(2)			Country if any where this profile is used
countrylock	tinyint(1)		0	If country is defined, profile can be locked in to that one only
public1	text			names of those fields which are public for everybody, separates by comma and whitespace ", ".
public2	text			names of those fields which are public for registered users, separates by comma and whitespace ", ".

l2_profile_pub

Field	Type	Key	Default	Explanation
profile_id	char(32)	pri		Made in md5(user_id+now())
user	varchar(40)			Id of the user whos profile this is
id_by_user	varchar(30)			Id that user gives to the profile
comp_name	varchar(80)			Company name
comp_addr	text			Company address
comp_web	varchar(100)			Company website
comp_tax	varchar(40)			Company Tax number
comp_email	varchar(100)			Company email address
userealname	tinyint(1)		0	If user which to show [lastname, firstname] rather than [username]
comp_tel1	varchar(20)			office tel 1
comp_tel2	varchar(20)			
comp_fax	varchar(20)			office fax

Field	Type	Key	Default	Explanation
exposure	varchar(200)			
publishes	varchar(200)			where publishes
prostatus	varchar(200)			status of profession
equipment	text			Stuff uses to shoot
hardware	text			"Computer, camera"
software	text			"windows, mac, linux, cut edit"
bandwidth	varchar(50)			"100 mb/s"
ftpublish	tinyint(1)		0	FTP uplod and the last file either xml or ini, if this value is one, publishing will occur.
acception	tinyint(1)		0	To allow publish title straight to accepted one
channel	varchar(20)			Users default channel, not used if empty
chanlock	tinyint(1)		0	lock the user to use only this channel
country	char(2)			Country if any where this profile is used
countrylock	tinyint(1)		0	If country is defined, profile can be locked in to that one only
public1	text			names of those fields which are public for everybody, separates by comma and whitespace ", ".
public2	text			names of those fields which are public for registered users, separates by comma and whitespace ", ".

I2_transaction

Field	Type	Key	Default	Explanation
transit	char(32)	pri		MD5 hash to work as an id for the transaction
title_id	mediumint(6) unsigned			ID of the title which is to be sold
cliprof	char(32)			ID of the profile which client used
pubprof	char(32)			ID of the profile which publisher used
money	float(6,2)			The actual shopping payment to be done
amount	varchar(50)			sec_20 = bought by second, 20 of them; total = all of the title bought; clip_4_6 = bought clip number 4 and 6
whent	int(10) unsigned			Time when title was requested with a password
whenp	int(10) unsigned		0	Time when payment done

I2_torrents

Field	Type	Key	Default	Explanation
publisher	varchar(40)			Username of the creator of this torrent
title_id	mediumint(6) unsigned			ID number of the title
created	int(10) unsigned			When was created
downloads	mediumint(6) unsigned			Number of completed downloads

```
CREATE TABLE I2_torrents (
    publisher varchar(40) not null,
    title_id mediumint(6) unsigned not null,
    created int(10) unsigned not null,
    downloads mediumint(6) unsigned not null,
```

```
) ENGINE=InnoDB;
```

I2_tvchannel

Field	Type	Key	Default	Explanation
name	varchar(60)			Official name of the channel
country	varchar(60)			List of countrycodes where distributes

I2_users

Field	Type	Key	Default	Explanation
user	varchar(40)	pri		username, must be unique, [a-zA-Z0-9]
pass	char(32)			password in md5 hash
access	tinyint(1)		0	users activation status (0...7)
firstname	varchar(40)			Firstname
lastname	varchar(40)			Surname
email	varchar(100)			Email address
website	varchar(100)			web site of user
telephone1	varchar(20)			Private tel.
telephone2	varchar(20)			
telephone3	varchar(20)			

Field	Type	Key	Default	Explanation
post_addr	varchar(200)			streer address
post_nro	varchar(8)			zip code
post_area	varchar(40)			city
ucountry	char(2)			country
nativelang	char(2)			Native language of the user
deflang	char(2)		EN	Default language after login
year_birth	mediumint(4) unsigned		0	year of birth
uquota	mediumint(5) unsigned		0	quota size in MB
date_register	int(10) unsigned			Time when user registered
date_modif	int(10) unsigned			Time when user info was edited last time
taxnumber	varchar(40)			Personal tax number
activeprofile	char(32)			ID of the profile which is currently in use so after logout it still remains for the next login.
public1	text			names of those fields which are public for everybody, separates by comma and whitespace ", ".
public2	text			names of those fields which are public for registered users, separates by comma and whitespace ", ".

First fo all, we need to think which part is the most used part in the database.

There will be lots of queries specially in videofiles since those are there real matter in our web site.

Also we want to make the tables as small as possible so that the accessing could be more faster. All data is not always to be printed, so why should all data be in the same table.

For instance, most of the pages are made of lists which have some information of the video material. Those lists have just a small part of all the data what there is for one video file. So to make this platform to be as efficient that it can be, only that information which is in the most of the pages, should be in one table.

These values should be ofcourse considered, what part of all the information is shown in the first view.

13 RSS feed

The RSS 2.0 feed has the following properties and modules used in it:

```
xml
  version 1.0
  encoding UTF-8
rss
  version 2.0
xmlns:tmm
  http://purl.org/net/tmm/2.0
xmlns:dc
  http://purl.org/dc/elements/1.1/
xmlns:creativecommons
  http://backend.userland.com/creativecommonsRssModule
xmlns:rdf
  http://www.w3.org/1999/02/22-rdf-syntax-ns#
xmlns:xs
  http://www.w3.org/2000/10/XMLSchema
xs:noNamespaceSchemaLocation
  http://www.thearchitect.co.uk/schemas/rss-2_0.xsd
xmlns:trackback
  http://madskills.com/public/xml/rss/module/trackback/
```

Authentication is done via hash sent with the url to the rss script.
It is calculated as shown here:

```
hash = md5(md5(username).password);
```

13.1 the market maker

TMM module provides tsap tsap...

Syntax

- `<tmm:rightsAgents>`
A wrapper for multiple `<tmm:rightsAgent>` elements. Mandatory even if there only is one rights agent.
 - `<tmm:rightsAgent>`
A wrapper element for rights agents informations.
 - `<tmm:rightsAgentName>`
It is a text string with the name of the marketplace, exchange or rights clearing actor of the transaction.
 - `<tmm:rightsAgentInfo>`

- The URI of more informations about the rights agent
- `<tm:buyAt>`
Contains a URI where the license for its parent `<item>` can be bought.
- `<tm:priceServer>`
The URI of the XML-RPC server where an RSS aggregator can query for the price of an RSS `<item>`.
- `<tm:caliber>`
The base price of the parent `<item>`. Its value is an integer, which is a token value to allow content producers to sell items at different prices.
- `<tm:restrictions>`
A human-readable list of restrictions to be applied to the broadcasting of the item in terms of countries or specific media.
- `<tm:embargoDate>`
A RFC 822 string, `embargoDate` is the starting date from which the license of an item is available for purchase.
- `<tm:expiryDate>`
A RFC 822 string, `expiryDate` is the ending date in which the license of an item is available for purchase.

13.2 trackback

TrackBack uses a REST model, where requests are made through standard HTTP calls. To send a TrackBack ping, the client makes a standard HTTP request to the server, and receives a response in a simple XML format (see below for more details).

In the TrackBack system, the URL that receives TrackBack pings is the TrackBack Ping URL. A typical TrackBack Ping URL looks like `http://www.example.com/trackback/5`, where 5 is the TrackBack ID. Server implementations can use whatever format makes sense for the TrackBack Ping URL; client implementations should not depend on a particular format.

To send a ping, the client sends an HTTP POST request to the TrackBack Ping URL. The client **MUST** send a *Content-Type* HTTP header, with the content type set to `application/x-www-form-urlencoded`. The client **SHOULD** include the character encoding of the content being sent (title, excerpt, and weblog name) in the *charset* attribute of the *Content-Type* header.

For example, a ping request might look like:

```
POST http://www.example.com/trackback/5
Content-Type: application/x-www-form-urlencoded; charset=utf-8

title=Foo+Bar&url=http://www.bar.com/&excerpt=My+Excerpt&blog_name=Foo
```

The possible parameters in the request content are the following:

- title

The title of the entry.

Optional.

- excerpt

An excerpt of the entry.

Optional.

- url

The permalink for the entry. Like any permalink, this should point as closely as possible to the actual entry on the HTML page, as it will be used when linking to the entry in question.

Required. If a client neglects to send a *url*, the server **MUST** respond with an error message.

- blog_name

The name of the weblog to which the entry was posted.

Optional.

All of the fields provided **MUST** be in the character encoding specified in *charset*.

There are no length restrictions on the above fields inherent in the TrackBack protocol, but server implementations are free to crop or ignore any of the above fields.

In the event of a successful ping, the server **MUST** return a response in the following format:

```
<?xml version="1.0" encoding="utf-8"?>
<response>
<error>0</error>
</response>
```

In the event of an unsuccessful ping, the server **MUST** return an HTTP response in the following format:

```
<?xml version="1.0" encoding="utf-8"?>
<response>
<error>1</error>
<message>The error message</message>
</response>
```

14 Flash player

The source for the flash video player is included in the LULOP2 open source package.

For editing, use Macromedia Flash MX 2004 and to get some functions working, you need to introduce one new function to your Flash itself.



Open file "NetStream.as", usually located in:

C:\Program Files\Macromedia\FIash MX 2004\en\First Run\Classes\

Add the following function to the class introduced in the file:

```
function onMetaData(info:Object):Void;
```

This way you have the ability access the metadata in Flash Video format 1.1. In version 1.0 this does not existed.