FiPS Media Server Beta 0.7 Documentation

- *Although this documentation is only available in English, the FiPS Media Server Distribution can be installed in German or English!*
- *Obwohl diese Dokumentation nur in Englischer Sprache vorliegt, kann der FiPS Media Server auch in Deutscher Sprache installiert werden!*

What is it all about?

License
System
Requirements
Installation
Working with the
System

Release Notes
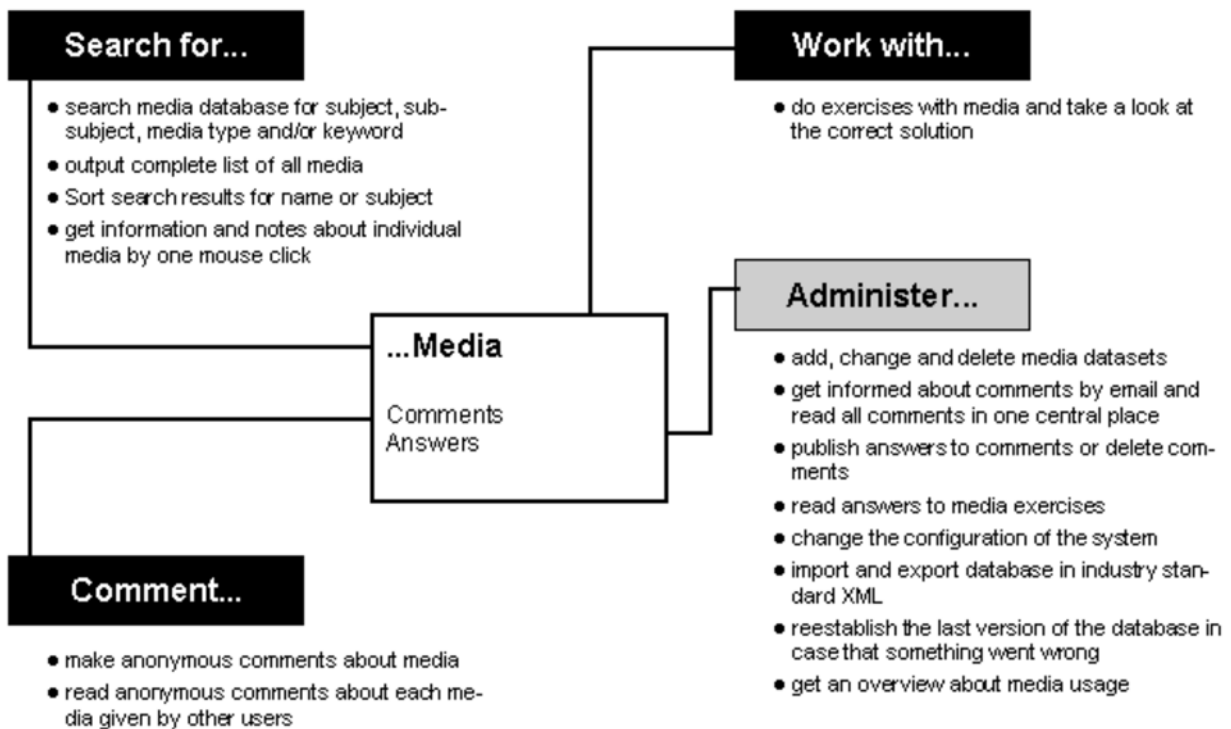Support
Download
Update

What's it all about?

The FiPS Media Server offers an easy way to manage and access hyperlinks to educational media. It's a kind of webbased database, which makes it possible for users to search for media and do exercises with these media.

The user interface is designed in a fast and easy to use way. Search results can be sorted by name or subject, so that media supporting the current lecture can be easily identified. Each search result entry is shown by it's name and a preview picture, together with a short description and the according subject and sub-subject Besides subject and sub-subject search can also be restricted to a certain media type. A search result is presented to the user the

following way:

change sort order by clicking on appropriate tab

Sortierung nach Bezeichnung Sortierung nach Themengebiet

Ergebnis der Suche
1 verschiedene Medien entsprechen Ihres Suchkriterien

Bezeichnung	Medientyp	Beschreibung	Hauptthemengebiet	Unterthemengebiet
Drehimpulserhaltung	Video	Veranschaulichung zur Erhaltung des Drehimpulses. Eine Person versetzt einen Drehstuhl in Rotation indem sie einen Fahrradreisel dreht.	Systeme von Massenpunkten, Stoesse	Erhaltungssaetze

click on preview picture to launch media

click on "download" to download offline version
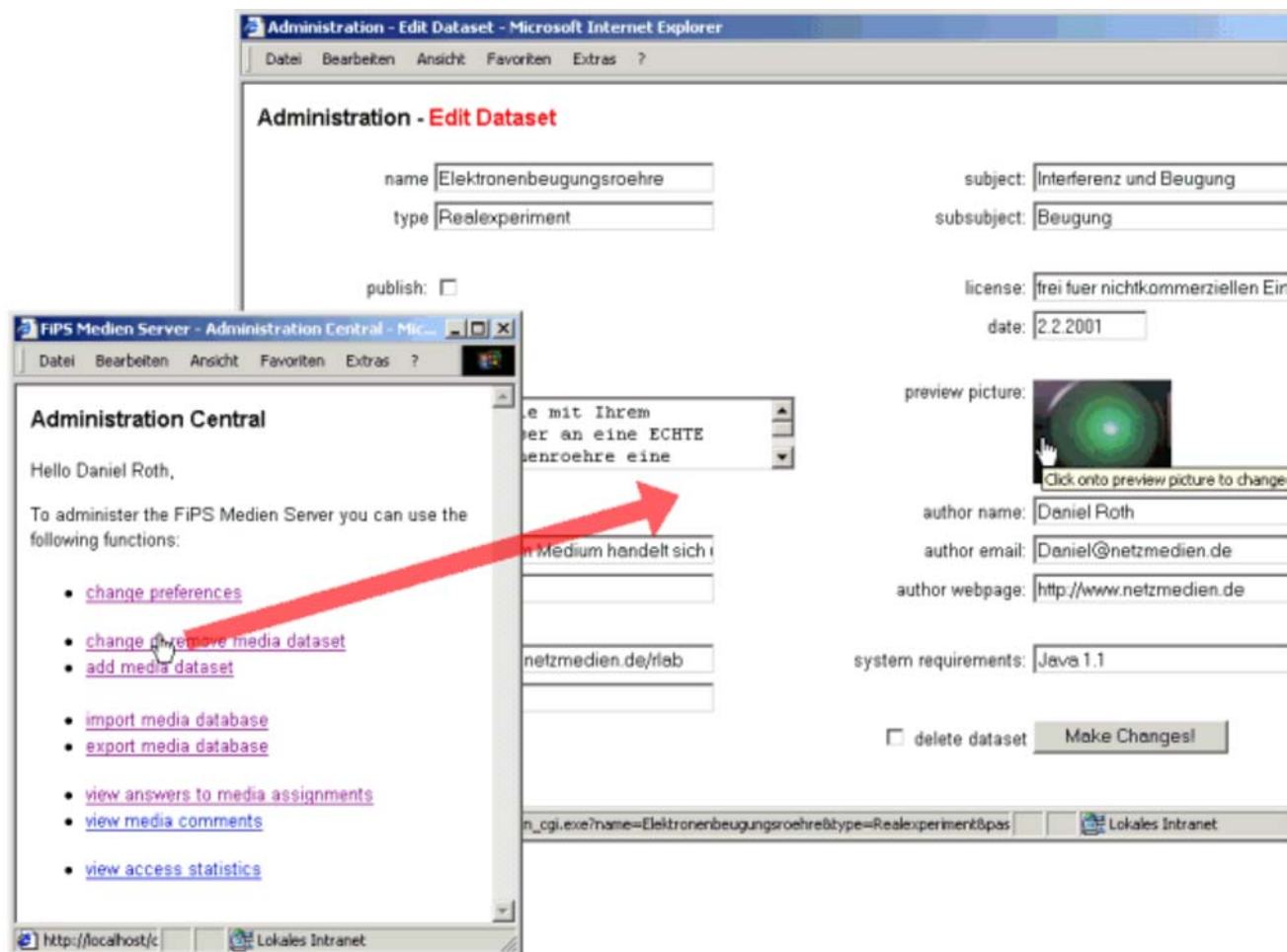
view information about media

view important notes about media

key symbol tells user that access to media is restricted

By clicking onto the preview picture the user can access the individual media. If the media is under authority of the webservers administrator and embedded into a webpage it can feature a navigation bar, which provides access to additional information ("info" tab) about the media and to comments about the media given by users. The user can also make own comments which will be added to the already existent ones and which can be accessed by clicking onto the "comments" tab. The FiPS Media Server also supports media exercises the following way: The user can answer a question included on the webpage and the server automatically presents him the correct solution (which must have been provided by the administrator at one time).

The administrator of the FiPS Media Server only has to include a predefined form field (no changes necessary!) into the webpage the media is embedded into and provide a solution, he does not have to care about how solution presentation and comment generation and viewing is handled. The administrator can access all comments and answers to the media exercises in one place, called "Administration Central". On this protected website (protected whether your webserver does support authentication or not) the administrator can also add new datasets, edit or remove existing datasets, import and export the whole database in XML format, make notes to anonymous comments given by users which will appear on the individual media's comment page and change the configuration (e.g. the language) of the FiPS Media Server.

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To make it short: If you want to administer and publish hyperlinks leading to educational media the FiPS Media Server is maybe the right thing for you to start with. You can take a look at a FiPS Media Server system in action by clicking on the following link: Example implementation running at FiPS, Germany's only online University level physics distance education project.

There you can also access more than 100 different media (mostly Physlets, Applets and Interactive Screen Experiments), covering Mechanics, Heat, Electrodynamics, Magnetism, Electrostatic and Optics for free. Before you can use this media you have to register by filling out the form available by clicking onto "Anmeldung". After having done so you will be provided with a username (called "Benutzername") and a password (called "Passwort") by email. Unfortunately the media is only available in German so far. If you want to translate the media into other languages, you are welcome.

License

> You are allowed to use the FiPS Media Server for free, as long as you do use it for non commercial purposes. If you want to use it for commercial purposes, you have to ask fips@physik.uni-kl.de for permission first. In any case you will use the software completely on your own risk, you will not make us (the author, University of Kaiserslautern) responsible in any way for any damage you might experience by downloading, installing and/or using the software.

System Requirements

In order to use Media Server system you need a computer (further called "server") with the following things installed:

Hardware	Software

PC with..

Webbrowser with JavaScript enabled
Webserver (e.g. Microsoft Personal
Webserver , IIS or Apache)

... Internet or Intranet access

... Microsoft Windows Operating System
(95/98/ME/NT/2000/XP)

... no special CPU (the faster the better)
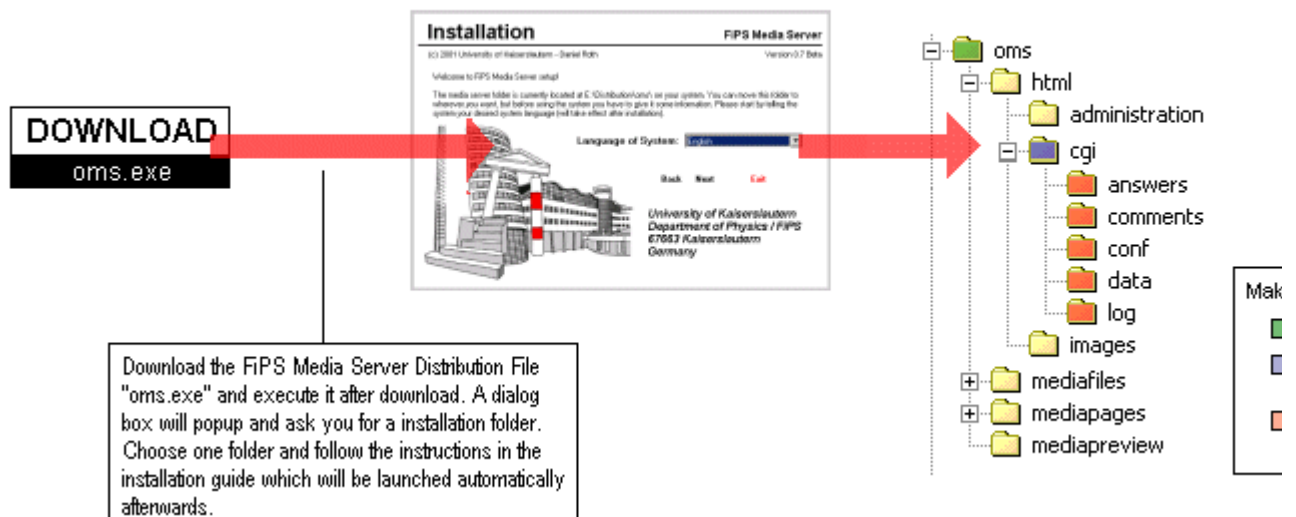
... no special RAM (the more the better)

The system is designed to work with standard PCs. But if a lot of people will use the system simultaneously, it's probably a good idea to use a rather fast system with a lot of RAM (e.g. http://www.fernstudium-physik.de /medienserver uses a Dual Pentium III 500 MHz Server with 512 MB RAM and Windows NT as Operating System). As it is very easy to transfer the system to another server, you probably want to start with a standard system (e.g. something as slow as Pentium II 266 MHz with 128 MB RAM works just fine if there is not a lot of traffic).

Regarding webserver software, all Microsoft Windows Operating system come with Personal Webserver or Internet Information Server (IIS) license, which is restricted to 30 accesses at the same time. As 30 simultaneous access is more than it at first looks like, it's probably a good an cost efficient (because it doesn't cost you anything) way to start with. If traffic increases you can still migrate to the Apache Webserver which is free and unlimited but not that easy to use and configure.

Installation

Download the FiPS Media Server distribution file called "oms.exe", save it somewhere on your harddisk and execute it. As result a windows will popup and ask you for the folder where the FiPS Media Server files should be copied into. As you can later move this folder to wherever you want (and during installation no modifications to the operating system and its configuration files are done) you might just want to use your desktop folder. After you have chosen the folder, a installation guide will be launched. Please follow the instructions in this guide and read the information at the end of the guide carefully! When the installation guide is finished you will find in the following directory structure in the folder you have chosen earlier:

Download the FiPS Media Server Distribution File "oms.exe" and execute it after download. A dialog box will popup and ask you for a installation folder. Choose one folder and follow the instructions in the installation guide which will be launched automatically afterwards.

Now is a good time to move the directory folder to it's final place, because you have to setup your webserver to publish parts of it on the World Wide Web:

The folder called "OMS" and its subfolders (except the subfolders marked red) should be made public by your webserver. As the subfolders marked red contain security sensitive data, they should not be published by the webserver. If you use IIS or Personal Webserver you can easily achieve this by using the administration tools, if you

use Apache just put an appropriate .htaccess file into these folders. You also have to tell your webserver, that .exe files in the folder called "cgi" and marked blue should be considered CGI executables. You can achieve this by using the administration tools (in case of IIS and Personal Webserver) or a .htaccess file together with some configuration changes (if you use Apache). After you have finished configurating your webserver like this, open your webbrowser (please use Microsoft Internet Explorer!) and go (let us asume that the Internet address of your server is "yourHostName") to **http://yourHostName/oms/html/index.html.** You should then be able to see your FiPS Media Server Homepage.

Congratulation, there you may now click onto the links to explore your new media server. It has already a small sample media database of physics applets installed, which you can use to explore the system. The media of this sample database can be found in the "mediapages" (HTML files) and the "mediafiles" (core media files) folder of the FiPS Media Server installation directory (just take a look at the directory tree image some lines above). It is strongly recommended to organize you own media in a similar or the same directory structure. Have fun!

Working with the System

To understand how the FiPS Media Server works, you should take a closer look at its directory structure:

Directory	Contents	Should I care about?	Note
oms	main directory, should be made public by webserver		You can move it to wherever you want, as long as you make your webserver serve it.
oms\html	directory containing client user interface webpages	Yes, you can change the .html files to fit your needs!	You can create your own directories containing additional webpages in this folder.
oms\html\images	directory containing images for user interface	No.	Only edit it, if you experience problems with automatic image upload by the web based administration.
oms\html \administration	directory containing administration user interface	No.	

oms\html\cgi	directory containing system binaries	No. (except subdirectories)	The .exe files in this directory must be executable by the webserver (CGI), .exe files have to be registered as CGI executable in you webserver!
oms\html\conf	directory containing configuration file conf.xml	Maybe.	Although all configuration can be done with the webbased administration tools (they change the conf.xml file), you may want to change it on your own. When doing so, do not change the format of the file in any way!
oms\html\data	directroy containing media database file media.xml	Maybe.	Although all media administration can be done with the webbased administration tools (they change the media.xml file), you may want to change it on your own. When doing so, do not change the format of the file in any way!
oms\html \comments	directory containing comments to media given by users and additional information	No.	Use the webbased administration tool to administer comments.
oms\html\answers	directory containing answers to media exercises given by users	Maybe.	Although you should use the webbased administration tool to read the answers to the media exercises, up to now the only way to delete answers is to go into this directory and delete the appropriate file.
oms\html\log	directory containing debugging messages and user logfiles	Maybe.	The file users.txt contains information about registered users and may be of interest for you.
oms\mediapreview	directory containing preview images of media	No.	Preview images should be created by using the webbased administration tool.

The FiPS Media Server manages a collection of hyperlinks with corresponding information and enables users to search for and access this content. So you have to provide a URL which links to the location of the media. If you used the webbased administration tool to add a new dataset, you have at least to provide the information marked in red:

More detailed a dataset consists of the following datafields:

Datafield	What is it good for?	Note
name	name of media	Must be unique in combination with type!
type	type of media (e.g. Applet, Video, HTML, ...)	Must be unique in combination with name!
publish	Should media be included in appropriate search results?	
protect	Should a key symbol should be shown in the search result to show that access to this media is protected?	A key symbol doesn't mean that access is technically restricted. You have to implement this (e.g. by configuring your webserver the appropriate way) on your own.
Description	short description of the media which will be shown in the search result	
notice	important notice about the media which will be shown by a red exclamation mark	Leave it blank and no exclamation mark is shown.
comment	internal comment about the media which is not shown to users, only the administrator can see it	
show URL	URL link leading to the location of the media	
download URL	URL link leading to a offline version of the media	Leave it blank if there is no offline version of the media available for download.
subject	subject the media is fitting into	Should not be left blank in order to make search easier.
sub-subject	sub-subject the media is fitting into	Should not be left blank in order to make search easier.

license	license conditions under which the media may be used	
date	date the media was created	
creator name	name of the creator of the media	Will be shown in info popup window accompanying search result.
creator email	email address of the creator of the media	Will be shown in info popup window accompanying search result.
creator webpage	homepage of the creator of the media	Will be shown in info popup window accompanying search result.
system requirements	system requirements necessary to open the media	

If you have added a new media dataset to your media database you can use the "edit dataset" function to add a preview picture to the database. If you want to create on media, you can embed it into a webpage. When doing so, please include the following HTML code at the beginning of the page just after the <body> tag (adjust "../../../../html/" to point to the oms\html\ directory!).:

```
<table border="0" cellpadding="0" cellspacing="0" width="100%">
    <tr>
        <td width="974" height="19" valign="bottom" colspan="4">
        <p><img src="../../../../html/images/rule_media.gif"
        width="187" height="14" border="0" usemap="#Map" name="imgRule"></td>
    </tr>
    <tr>
        <td width="142" height="4" bgcolor="silver"><p align="center"> </td>
        <td width="706" height="4" bgcolor="silver"><p align="center"><font face=
            size="3" color="red"><b>Beschleunigte Bewegung</b></font></td>
        <td width="64" height="4" bgcolor="silver"><p align="center"><font face=".
            size="3" color="black"><b><img src="../../../../html/images/rule_fip
            border="0"></b></font></td>
        <td width="62" height="4" bgcolor="silver"><p align="center"><font face=".
            size="2" color="black"><b>Applet</b></font></td>
    </tr>
</table>
```

You also have to include the following HTML code just before the </body> tag:

```
<map name="Map">
<area shape="rect" coords="72, 3, 99, 13" href="../../../../html/cgi/omsshowinfo_
<area shape="rect" coords="106, 3, 181, 13" href="../../../../html/cgi/omsshowcom
</map>
```

To use the commentating feature of the FiPS Media Server you have to include a form field with the a field named "shortanswer" (for the answer), a field named "longanswer" (for the explanation), a field named "firstname" (for the firstname of the user), a field named "lastname" (for the last name of the user), and a POST or GET action "../../../.. /html/cgi/omssolution_cgi.exe" into the webpage. If you are using the exercise feature you also have to provide a webpage with the solution. If the media webpage is having the filename "mymedia.html" (The have to use the extension .html and not .htm!), you solution must have the filename "mymedia_solution.html", resting in the same directory and include the following HTML code:

just after the <body> tag:

```
<table border="0" cellpadding="0" cellspacing="0" width="100%">
    <tr>
        <td width="974" height="19" valign="bottom" colspan="4"><p><img src="../.
            width="127" height="12" border="0" usemap="#ImageMap1"></td>
    </tr>
    <tr>
        <td width="142" height="4" bgcolor="silver"><p align="center"> </td>
        <td width="706" height="4" bgcolor="silver"><p align="center"><font face=
            size="3" color="red"><b>Name of Media</b></font></td>
        <td width="64" height="4" bgcolor="silver"><p align="center"><font face=".
            size="3" color="black"><b><img src="../../../../html/images/rule_fip
            border="0"></b></font></td>
        <td width="62" height="4" bgcolor="silver"><p align="center"><font face=".
            size="2" color="black"><b>Applet</b></font></td>
    </tr>
</table>
```

just before the </body> tag:

```
<map name="ImageMap1">
<area shape="rect" coords="69, 1, 117, 11" href="../../../../html/cgi/omssolution
</map>
```

Well, don't worry too much about these HTML parts. Just use a HTML editor to adapt the templates which you can find in the documentation folder of the FiPS Media Server directory or take a look at the examples in the "mediapages" folder:

- template for media exercise assignment
- template for media exercise solution

Release Notes

This version of the FiPS Media Server is a **BETA version** and therefore **having** some **limitations**:

- You can use "**French**" as language by manually editing the conf.xml file. Because the **translations** are **not** yet completely **finished** (and not yet good enough at all), I didn't include the French language option in the configuration dialog. The client userinterface is available in French but not all of the administrator interface.
- The format of the XML files must be exactly the same like the format created by the administration tools. This will be made more flexible in the final release.
- Answers to the media exercises cannot be deleted by use of the webbased administration. This will be changed in the next release.
- **Special characters** except "-" are **not allowed**. This will be changed in the final release.
- Existent subject, sub-subject and media types have to be included into search form manually by the administrator. This will be changed in the final release, subject, sub-subject and media type lists will be updated automatically then.
- Problems may appear when using Netscape **for administration**. Please **use Internet Explorer** until next release, thank you!
- Password and configuration data is saved unencrypted. This will be changed in the final release (together with other security improvements).

There may also be some undiscovered or unfixed bugs. Therefore it would be nice to inform me if you find one. It would also be nice to give me feedback about the software and about your use of it. Just send an email to fips@physik.uni-kl.de. Thank you!

Support

fips@physik.uni-kl.de is also the place where you can find support.

Download

You can download the latest Media Server Distribution (filesize ~ 5 MB) by using the following form field. As we

would like to know who is using the FiPS Media Server it would be nice to provide us with your name, email address and institution. This information will not be given away to third parties and may help us to know if it is worth to continue development.

Please allow some seconds for the download to start, thank you!

Btw.: We would love to get some feedback!

If you are experiencing download problems, please contact fips@physik.uni-kl.de

firstname:

lastname:

email address:

institution:

Get It!

Download Update(omsadminsave_cgi.exe)