

D5.1: Developers' wiki

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Author(s)	<i>Olga Caprotti</i>
Task responsible	<i>Matti Pauna</i>
Other contributors	

The JEM handbook E-Technologies for Mathematics hosted by <http://results.jem-thematic.net/developers>, is the first deliverable of Work Package 5 devoted to the coordination of mathematical markup technologies. Registration is open to all developers of technology that can be used to enhance eContent in Mathematics, however only accepted authors will be able to contribute pages to the handbook.

This short document recalls the goals of the wiki, describes its structure and includes some guidelines for contributors of the JEM handbooks.

Goals

This handbook is the first deliverable of Work Package 5 devoted to the coordination of mathematical markup technologies. The main motivation for this task is the existence of a broad community of people using semantic markup for mathematics, like MathML, OpenMath, OMDOC and their extensions, in a variety of ways. Several key players in the development of technologies for the delivery of mathematics on the semantic web are already members of the JEM network and intended initial contributors to this handbook.

This handbook aims at collecting synoptic information and reference material to help coordinating the existing and emerging standards for semantic markup of mathematics. It is a building stone in the infrastructure that JEM intends to provide as a support to the task of monitoring new developments in the eLearning community and ensuring compatibility with the current standards for mathematical markup.

Structure

The developers' handbook collects sections devoted to electronic technologies that contribute to enhancing teaching and learning of mathematics.

Home » Handbooks

E-TECHNOLOGIES FOR MATHEMATICS

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This is the JEM developers' wiki that collects the contributions of developers of e-technology suited for online mathematics.

- Applets
- ▶ Mathematical Markup Languages
- Metadata for Mathematical Content
- Publishing Environments
- ▶ Testing and Assessment

[Applets >](#)

[add child page](#) | [printer-friendly version](#) | [add new comment](#)

The top page currently lists a few major categories including, but not limited to:

Applets

Java, Javascript, and Flash applets have been adopted by the mathematics community from the very start as technologies to include interactivity and experimentation in static web pages of mathematical content. Developers of similar technologies, and of libraries to produce mathematical applets are encouraged to describe their work in this section.

Mathematical Markup Languages

Several members of the JEM network are actively developing markup languages for mathematics and science to be included in online documents. This section should collect short description and references directly from the developers.

Metadata for Mathematical Content

Search and retrieval of eContent for learning relies heavily on metadata. JEM partners that have created vocabularies and metadata sets for describing mathematical content will contribute to this section of the wiki.

Publishing Environments

Recent technologies such as blogs, wikis, and content management systems require special handling of mathematics. This section is devoted to collecting information on novel publishing environments best suited to deliver mathematical content.

Testing and Assessment

Automated testing and assessment is a very important technology for the online learning and teaching of mathematics. Initially, those JEM partners working to produce systems that can generate exercises, correct the students' answers and grade assignments will contribute to this section.

Contributing to the handbook

Please refer to the appendix [Contributing to the JEM Handbooks](#) for a short manual on how to contribute pages to the JEM handbooks.

Future Plans

This initial release of the developers' handbook is based on the contribution of JEM members but it should not remain as such. During the network's lifetime, the editorial board will try to constantly enroll and enlist collaborators and maintainers to make the pages sustainable. More immediate work is related to the distribution of editorial tasks and to the overall management of the handbooks.

Contributing to the JEM Handbooks

This is a short user manual on how to create, edit and organize pages of a JEM handbook.

Authors, Editors, and Moderators

At present, the JEM handbooks have different access roles for registered users, for e-authors, for editors and for moderator. Each role allows to monitor a separate aspect of the collaboration.

Authors are allowed to create and edit child pages of handbooks. Authors however may not edit pages they did not create. They may post comments without approval.

Editors may create/edit and reshuffle any page in the handbooks. They are responsible for the creation, structure and organization of the handbooks. They may post comments without approval.

Moderators may create discussion forums and decide to publish comments posted to the web site. They may post comments without approval.

Unregistered users may access the printer-friendly versions of the handbooks and of the JEM deliverables. These versions can be printed out conveniently by using the browser's Print menu. Unregistered users may also vote in the polls issued on these pages.

Registered users may post comments to any entry in the handbooks, however before being published, these comments will be reviewed by the moderators.

Types of Content

The JEM result pages collect both the formal deliverables of JEM and the collaborative space which is meant to offer a wiki area for support infrastructure. Each page is associated a type which is selected at creation but can also be changed afterwards. For the JEM results pages, the types of content that are currently preset are the following:

Handbooks

The type used exclusively for the top page of the handbooks (wikis). Handbooks can be created by editors and are listed by the corresponding menu item in the navigation menu on the left. At present there are three handbooks, each representing a JEM wiki for the community of authors, developers and users of technology in eContent in Mathematics.

Workpackage

The type of content that describe the results of the JEM network in terms of deliverables. It currently points to the cover page of a work package briefly describing the goals, the nodes involved, and the list of deliverables. Leading nodes are encouraged to maintain this cover information. It has a subtype called Deliverable which is used for the cover page of deliverables. Deliverables can be listed by the appropriate menu item in the top menu on the right, above the search box. Deliverables can be created by authors.

At present, pages in Handbooks and in Deliverables do not have a set type, but may be classified

by terms in a vocabulary. These terms form a taxonomy used to index and navigate the pages.

Topics

When submitting a page of an handbook, the system asks for topics that can be used to classify the content of the page. The topics are *short keywords* that will be recorded in a taxonomy. The topics will appear as links in the header, right hand side, of the page. Clicking on the topic link brings up all entries that are characterized by the same topic. Authors may enter new terms if there is no suitable existing term already available. The system will try to autocomplete the term after entering any letter and show the list of available topics. Multiple topics can be separated by comma.

Input Format

New pages can be added as children of existing pages via the input form displayed by the graphical user interface when add child page is clicked. The actual text which is displayed in the page is written in the textarea called Body and by default it is a simplified HTML format. Additional allowed input formats can be selected by opening the menu linked with Input form under the textarea.

Existing pages can be edited by clicking on the title and then selecting the Edit tab that will appear next to the view tab just under the title.

Child pages are ordered lexicographically by their title. This order can be altered by changing the weight of the page. One may add at most 31 (-15..+15) differently weighted child pages to simulate, if necessary, section ordering.

Images needed in the page have to be uploaded using the menu linked by File Attachments. They can be displayed as attachment or, if the image is not listed, it can be inserted using the HTML element with the local link produced by the system after upload. Recall that the input format has to be changed to Full HTML for the image to show.



▼ File attachments

Changes made to the attachments are not permanent until you save this post. The first "listed" file will be included in RSS feeds.

Delete	List	Description	Size
<input type="checkbox"/>	<input type="checkbox"/>	JEMProfile.png http://jem-thematic.net/results/files/JEMProfile_0.png	69.92 KB

Attach new file:

Above you see the unlisted setting used to upload the image called JEMProfile.png on the local disk. The uploaded image can be inserted in the text by the HTML fragment:

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