



Interactive 3D models on Wikipedia

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Wikimania 2012 Unconference
Washington, DC
July 15, 2012

What's this?

- Structures and models that can be rotated in 3D, zoomed into, etc.
- Models feasible for planets, buildings, monuments, sculptures, anatomy, molecules, etc.
- On Wikipedia, 3D models could appear exactly as images do, but also afford interactivity.

Interactivity without plug-ins

- Previous work to enable interactive 3D models on Wikimedia sites has used Java applets. For example, <http://www.mediawiki.org/wiki/Extension:Jmol>.
- Requiring a browser plug-in is a significant drawback.
- Better option: use WebGL, a JavaScript API for making interactive 3D graphics in a web browser.

A media handling extension

- Built as a MediaWiki media handling extension.

http://www.mediawiki.org/wiki/Category:Media_handling_extensions

- Allows 3D models to be added to a Wikipedia page with the same syntax as images – as a wikilink.

`[[File:Interactive_model_of_DNA.pdb]]`

Demo

PDBHandler, a MediaWiki extension to enable interactive 3D models of proteins and DNA.

Developed with eventual deployment to Wikipedia in mind.

<http://pdbhandler.wmflabs.org>

Feedback wanted

In what order should support for interactive 3D models be expanded?

A) Breadth first: enabling interactive 3D models to other file types (e.g. small chemical compounds)

or

B) Depth first: expanding support for interactive 3D models to browsers without WebGL (e.g. IE9, mobile devices) using a non-WebGL canvas fallback.