Rhino

Name:	Rhinoceros 4.0 SR 7
Produced:	McNeel and Associates, USA
Operating system:	Windows, Mac version is in development
Native filetype:	3DM
Description:	Rhino is a parametric NURBS-based 3D modelling software
Next version release:	Sometime 2010
Homepage:	http://www.rhino3d.com/
See also:	Parametric Design
	NURBS
	CAD
Link:	LEARN, The Catalogue
	Official Support Post a question to Media Centre
Introduction:	Rhino is a wide ranging parametric NURBS modelling software. It is best used for organic form finding and modelling, along with complex geometries, component work and prototyping. Rhino is very popular.
Primary functions:	Rhinos is primarily used for: **1. 3D modelling** especially in NURBS and mesh modelling. Rhino allows very organic forms as well as regular geometries to be generated. Where similar forms can be generated in 3DS Max, Rhino offers far greater precision, accuracy and control. **2. Conceptual modelling/form generation** is popular in Rhino owing to the ease with which organic form can be created. **3. 2D construction drawings** Rhino is kind of a combination of AutoCAD with Max. There is not really an equivalent. Although, parts of Rhino's functionality can be handled by 3DS Max, Revit, AutoCAD and SketchUp. **Plug-ins:** Rhino has over a hundred plug-ins [http://en.wikipedia.org/wiki/Plug-in_(computing)] which constantly expand and diversify the program's functionality. Plug-ins include: 1. Grasshopper for generative design (there are also Plug-ins for Grasshopper such as Rabbit, Weaver bird (to prepare files for 3d printing) and also ModeTools for baking colours) 2. PanellingTools for surface patterning 3. Bongo for animation 4. Flamingo for ray-trace rendering 5. Brazil for advanced rendering
Primary outputs:	Rhino has a good range of outputs: **1. Print** **2. Laser-cutting** **3. 3D Printing** Note: If faces are not oriented in the right direction make sure you type ¿flip¿ and choose the face to be reversed before printing. **4. Video**
Usability:	The Rhino interface is similar to other 3D modelling software. It offers a 4-view interface with graphic menus on the left and a command-line at the top. There is therefore no radical changes here, making it quite easy to grasp. The level of usability is very high. The program is straightforward to use and very friendly. Rhino uses both line command and graphic menus to input data. However, most users will find that they can operate the program most efficiently using the command line. Most commands have logical names which can be guessed at least initially, and the command line will prompt the rest. The "commandhelp" function is also very useful. Interoperability in Rhino is a major plus. In fact, it was originally developed as an intermediate file-transfer program. It can import from and export into pretty much all the other programs. Rhino has a particularly good relationship with Illustrator.
Strengths /weaknesses:	Over and above those strengths and weaknesses listed already, Rhino at present is: + + Very good for conceptual work, especially when dealing with organic forms. - Poor in terms of logic with the command line terminology, some of which is difficult to "think up". - Poor when it comes to drafting. Despite drafting functionality Rhino is not architecturally specific: there are no libraries of beams or windows for example as is found in BIM programs.
Learning support:	Media Centre offer a series of PDF tutorials for Rhino here [link to Media Centre tutorial folder]. Also, McNeel and Associate's official site offers good learning support Media Centre suggest also the following tutorials or groups of tutorials: Beginner A Beginner B Beginner C Intermediate A Intermediate B Intermediate C Advanced A Advanced B Advanced C
Additional:	You may also find these interesting: Parametric Formations Morphocode
References:	
External links:	

Published:	First published Mon. 1 Feb. 2010