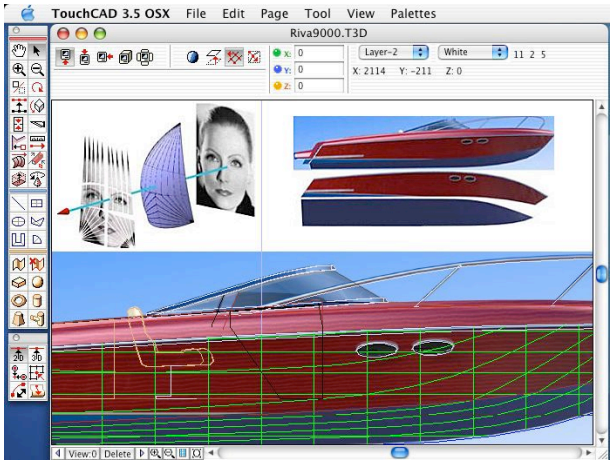
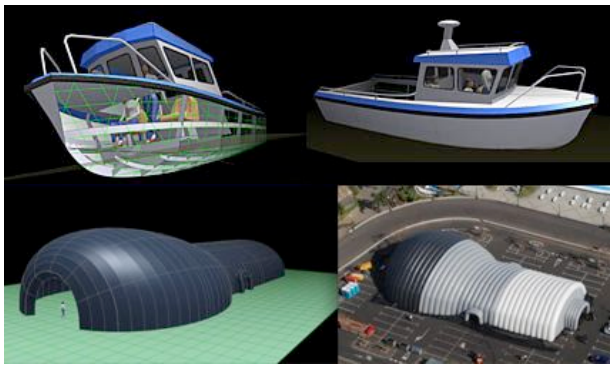
TouchCAD



TouchCAD 3.6.0 released

TouchCAD is a program based upon the concept of highly accurate push-pull free-form 3D modeling, and unfolding into flat production ready surfaces. Such features place TouchCAD in a class of it's own for design and production of flat material based objects, such as fabrics, sheet metal, plywood, cardboard, plastic, and high resolution image unfolding.

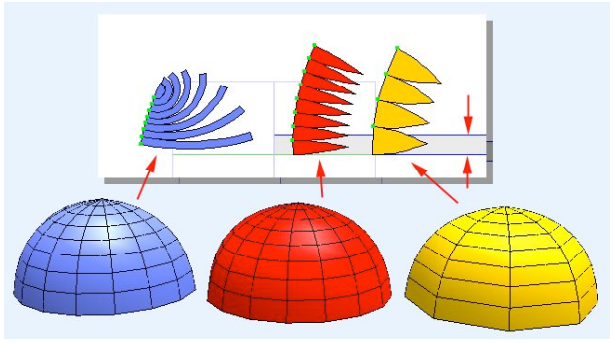
Uses



TouchCAD is used in architecture, industrial design, yacht design, for sails, exhibitions and promotional objects, sheet metal based objects, in theatre and movie sets, for sculptures, various fabrics based objects such as blimps and balloons, tents, awnings, sail roofs, sun covers, and so on. It may not appear that such uses are related but one common factor is the need for the ability to model and unfold parts.

The images show an aluminum boat designed by Claes Lundström, and a 1000 square meter floor area inflatable tent. The tent was designed and unfolded in TouchCAD, by AS Montajes Efimeros, Barcelona Spain.

Dynamic 3D/unfolding links



Unlike other programs, TouchCAD offers a dynamic link between the 3D model and the unfolded parts. It dramatically cuts the time spent converting 3D objects on the screen into something possible to fabricate physically. Unfolded parts produced can be highly optimized to fit the given material dimensions and can be nested/ dragged/rotated individually to maximize the use of material, without loosing the dynamic link to the 3D model.

The illustration shows three identical shapes in 3D, but with different parametric unfolding settings. Note that the red sections fit into the gray nesting area whereas the yellow does not.

Unfolded parts can also include ready to cut/plot features such as seam allowances (overlaps), cut and plot coordinates, automatic panel and point numbers, alignment marks and so on.

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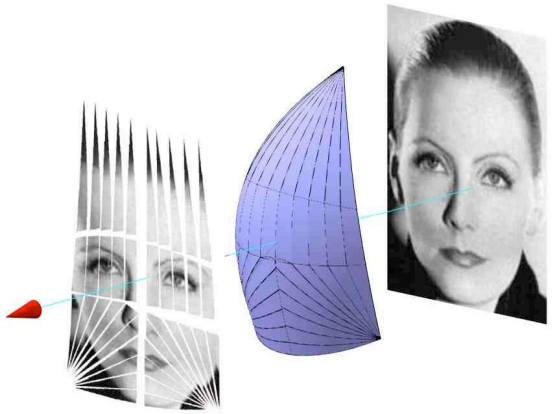
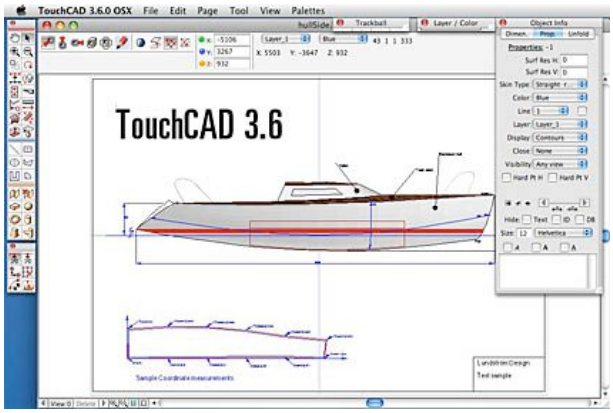
Image unfolding



The ability to apply images on 3D shapes and unfold them in exact scale is another of TouchCADs features. It can be used for production of large 3D objects such as blimps, free-form exhibition stands, sculptures, scale models etc, completely based on pre-painted full color unfolded panels. Individual panels / sub panels up to over 150 million pixels can be processed.

The image shows an 80 square meter sail consisting of 40 individual panels, which took about 2-1/2 minutes to render at 12 DPI.

New features

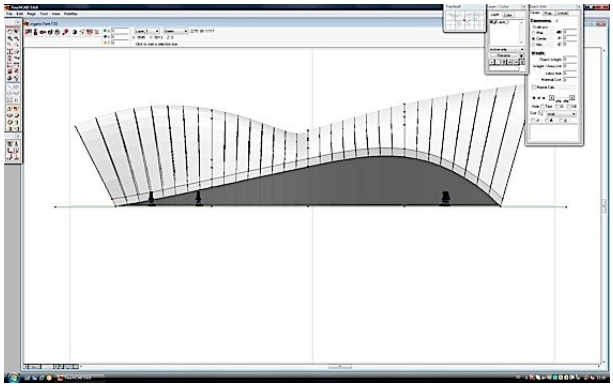


New features in the 3.6 update include: dynamic shading in the 3D editor, support for 3D texts and measurements, improved database and bill of material extraction, improved import and export features, extensively updated contextual menus that dramatically reduces the number tool changes required to perform a given task.

Import / Export

On the import export side, TouchCAD supports export of DXF, DXF-AAMA used by many cutting machines in the fabric industry, HPGL used by many vinyl cutters, STL for 3D milling, VectorWorks -script, VRML, GHS used by a number of marine design programs for hydrostatic calculations, ASCII points, Sails Science Plotmaker, Artlantis, and unfolded images in most commonly used image file formats.

New tutorial movies



TouchCAD now comes with over six hours of tutorial movies in QuickTime format, of which more than three hours are brand new. Many of these movies can also be collected from the TouchCAD web site (www.touchcad.com -> Training), where you will find lots of video tutorials showing both the basics of the program as well as many practical "how-to" examples. Some of these examples are quite complex, but essentially shows the entire process of how to model for example a boat (16 minutes), a car body (21 minutes), a human shape (11 minutes), house and terrain model (9 minutes), sheet metal modeling and unfolding, reverse engineering, a sail roof, awnings and hypar shapes, how to model a shape based on high resolution background images, and so on. The modeling times may appear short, though it is still possible to follow them when running them in small steps.

TouchCAD data

TouchCAD is available in versions for both Mac OSX and Windows (XP/Vista). More info can be found at www.touchcad.com

Stockholm March, 2009
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