

The use of 3D software in presentation and communication on web pages

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World Wide Web inevitably becomes an alter reality of our world. There's already a saying that „if something exists in the Internet - it means - it exists, if not - it means - it doesn't exist”*. All famous designers and companies that want to play a significant role in design world know about it very well since a long time. The web technology improves every month, every week, even every day. From pages with static content, poor graphics and simple structure, web sites have evolved into extended, programming-supported client managing systems that use the best graphic solutions which include flash interactive animations and 3D presentations.



Especially since flash and action script was introduced (Macromedia Flash 1 was released already in November 1996**), the possibilities in graphics – and moreover: motion graphic – became unlimited. The evolution went together with the great development of 3D software, used initially in film's special effects and computer games, but then as well in product presentation – from manuals, through illustrated catalogues, interactive computer based training to structure user feedback. Designers and businessmen know that simple and effective product communication is vital to success and what helps to illustrate it best is 3D software. WWW soon adopted these 3D technology features for it's own use, remembering that what is visual and interactive is easy to understand. Nowadays there are many ways of implementing 3D objects, presentations and animations on a web page, and therefore what is called Web3D is born.

Animations

Although web animation is dominated by flash technology, based on vectors, so two-dimensional – it's easier to make three-dimensional animations in 3D software and then embed them in a flash or html page. An example of software that allows that can be Swift 3D – www.erain.com/products/swift3d/?erain=1049&bid=1

QTVR (Quick Time Virtual Reality)

is a type of image file format supported by Apple's Quick Time*. That solution allows the user to see an object or a panorama of a place at multiple viewing angles by dragging the mouse cursor. Creating a QTVR image is simple – it is an option of rendering in 3D programmes.

VRML (Virtual Reality Modelling Language)

is an engine created intentionally for WWW. It allows vector graphics to be displayed three-dimensionally and to be interactive – the user can click on a specific area or part to go to another VRML object or link. All aspects of virtual reality can be added – animations, sounds, lighting effects, and they can be triggered by external events. Also program code like Java can be added to VRML files. Because of its complexity they are called "worlds" and this solution is used especially to create presentations of places – environments which we can explored like in a computer game. Many 3D programs

Animation



Animated cupboard implemented to flash by Swift 3D
www.erain.com/products/swift3d/examples/

QTVR



The object is rotating but can be also rotated by clicking and dragging. Icon indicates chosen option. Color selection is available.
www.apple.com/iphone/gallery/360/index_white.html

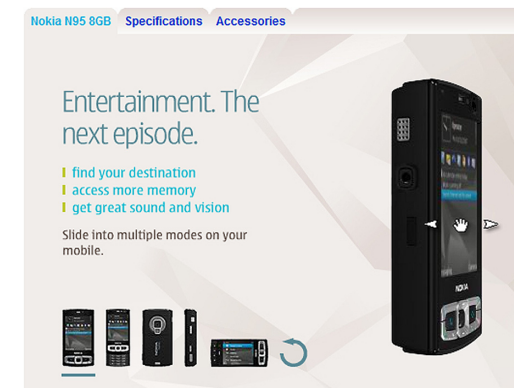


Image-menu allows to explore more features of the product, like sliding tab, camera, horizontal screen.

www.nokiausa.com/link?cid=PLAIN_TEXT_358159

can save object and scenes in VRML format.*
Recently a newer solution is being developed – X3D which derives from VRML.

VRML

Metastream

one of the way of streaming 3D content to page, this plug-in is very similar in performance as VRML, however it focuses on displaying only one single object, but it does it with great quality in details.*

Virtual assistants

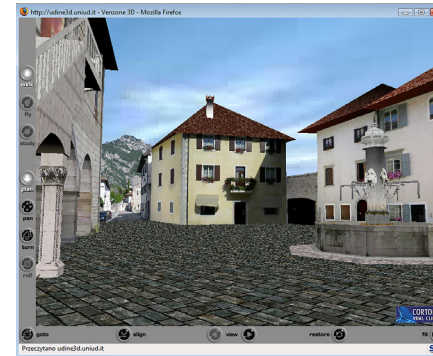
are 3D animated characters that guide us along the site, helping to explore it better, giving tips and hints. The best-known example is Microsoft Agent, used for instance in MS Office software. There are also assistants that are digital interfaces connecting a real assistant person with the client, working as an alternative method of a web conference. They may even have other application technologies implemented, like automatic speech recognition, synthetic speech engine, synchronised lip movements and body language.*

Online games

Flash games already became a common way of increasing the site's popularity, now time has come for them being improved by 3D implements like VRML and PHP language.

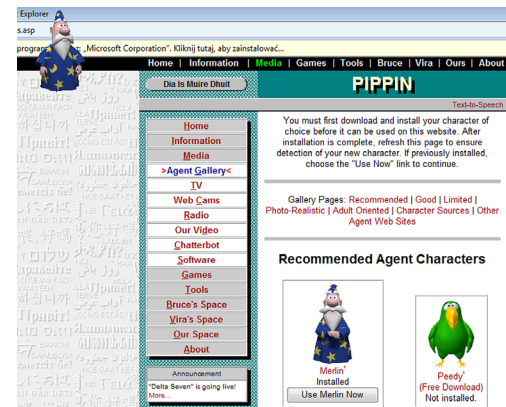
Pros and cons of using 3D solutions in www

Without a doubt the use of 3D technology in www has many advantages. Three-dimensional presentation compared to static "flat" images is much more efficient, impressive and eye-catching - especially the last adjective is crucial in nowadays reality filled up with instant flow of media information. The user can perceive more, see the



VRML presentations of Venzana city in Italy and Expo 2008 campus in Zaragoza, Spain. VRML technology enables the viewer to explore these environments very closely, however the aesthetic impression can be dissappointing because of low quality of image.

MS Agent



www.pippin.us/ site uses MS Agent - the wizard assistant appears in the corner and doesn't disappear when the browser window is minimized.

Baby agent can be downloaded from www.guile3d.com.br/baby_page.asp



product better, the designer can show his object in use, in movement.

There are also ambitious projects based on 3D technologies working online. Active Worlds server (<http://edu.activeworlds.com>) consists of over 100 virtual worlds created by universities, research centres and government institutions. It allows its participants to work together on many projects, from e-learning to language laboratories. OneSpace (www.cocreate.com) supports cooperation in CAD software, enabling user to update data bases.

But on the other hand, Web3D has faults that need to be dealt with. The main problem is the need to install plug-ins to be able to see any of 3D content. Still, none of the web browsers provides these plug-ins. Only to see things described in this text, one must download and install the following: Flash Player, VRML, Quick Time and Viewpoint plug-ins. MS Agent won't be able to work in any other than Windows Explorer browser.

Another issue is the speed of internet connection. Many users still use modem connections, where the transfer is very slow, others have limits for the amount of bytes sent and received. Both groups are almost excluded from participating in Web3D.

The problem that is decreasing, thanks to the development of hardware and software, but which is still present is old equipment. Old versions of web browsers can't deal with 3D implements.

Also, Mac's users can't be satisfied, as the greater part of 3D viewing software is available only for PC computers.

References:

Introduction:

* Maciej Jabłoński „My presence in the Internet, your presence in the Internet”,

http://www.jablonski.wshe.lodz.pl/net_art/moja_obecnosc/index_a.php

** Wikipedia, http://en.wikipedia.org/wiki/Adobe_Flash

QTVR:

* Wikipedia, <http://en.wikipedia.org/wiki/QTVR>

VRML:

* Wikipedia, <http://en.wikipedia.org/wiki/Vrml>

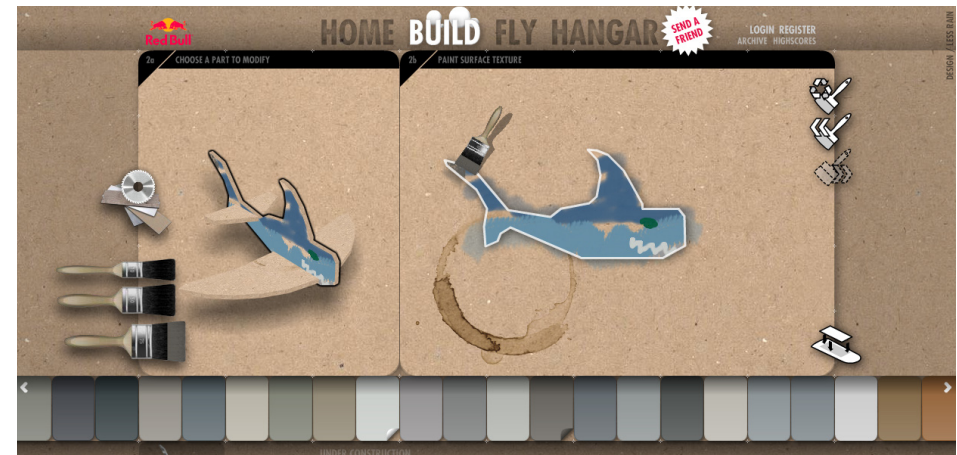
Metastream:

* <http://www.lookoutnow.com/3d/lookmeta.htm>

Virtual assistants:

* http://findarticles.com/p/articles/mi_qa3995/is_200506/ai_n14682866/pg_1?tag=artBody;col1

Online games



Build your own flying object and test how it will fly, www.redbull.com/flightlab

Web3D - case study

www.ora-ito.com

Ora-ito is a French designer, famous as well for his designs as for his original self-promoting strategy (as a beginning designer, he created several non-existing objects for the greatest brands on the market, he received many inquiries for those items from collectors; as a result the companies really commissioned him).

He and his team have done works for the biggest and most famous, like Heineken, Gucci, Renault, Bic, Louis Vuitton, Swatch, Apple, Adidas, Levi's, Toyota, LG and many more – according to his web site. The problem (or the game) is – we don't know which projects are real and which are fake. When we enter the site, a map of squares with logotypes appears. Around a half of squares is empty suggesting the visitors that they should come back later to check for actualisations. Logos are enlarged so that we can only see a big close-up in each square, we need to move mouse over to shrink them and make them legible.

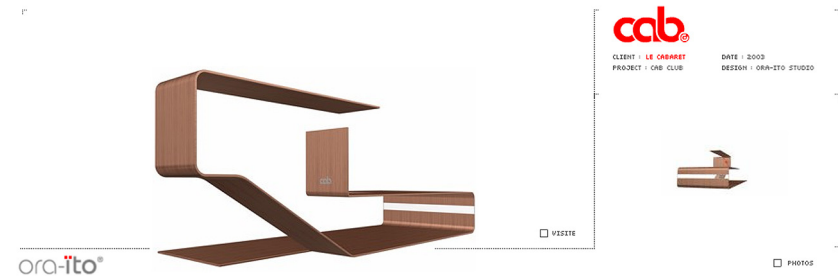
That idea makes the page a little bit of a game in which we become involved by interaction. The structure is simple, straight and strong, it makes an abstract composition we discover to be finally legible. Although the first impression about that can be admiring, every time we enter the menu page, the logotypes are arranged in a different way, so it can be difficult to find one we're interested in. This site menu isn't ergonomic also because it doesn't appear on every page – to get back to it we have to click on Ora-ito's logo on all of the sub-pages. Moreover, the structure of hiperlinks is chain-like – when we get deeper we can get back only one level higher at a time, by clicking the logo; there's no short cut to get to main menu. All that can make the exploration of the site a bit irritating.

The product presentation is complete and interesting thanks to using 3D technology. There are overall and detailed views, the latter are to chose from little image menu under the data table. The use of words is limited to minimum, giving the principle to images and pictograms. Presented objects are animated - they rotate and we can obtain a close-up within one click. It's a pity we can't move the objects ourselves like in QTVR.

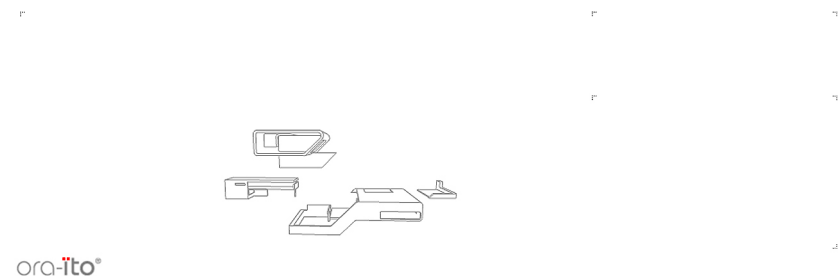
This portfolio is very simple yet elegant in it's visual form which corresponds with Ora-ito's simple but sophisticated style. Even some inconvenients in the navigation may just indicate designer's non-conformist character. Without a doubt it is one of the most original portfolios in the internet. If only there was a button to switch the music off...



Menu page



Product main page. Left side is for presentation, right for data about the project and sub-menu - it can lead to more detailed presentation, to other images, to publicity images or to short animation.



Short animation as an intro to product page.





Gucci villa - one of the virtual, non-existing objects Orai-ito designed. On the left we have a rotating visualisation of the house and we can click to enter the view of the interior.



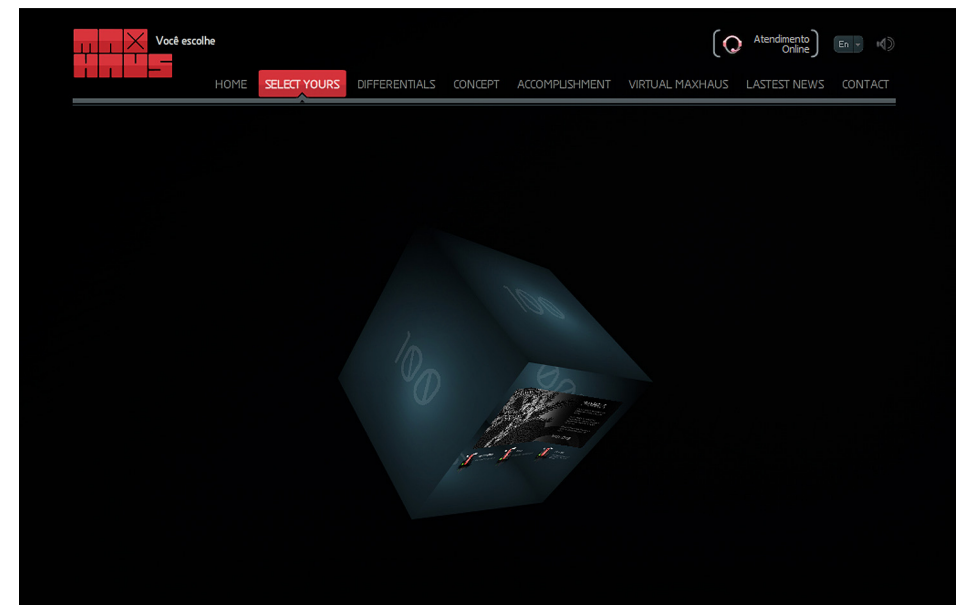
With the mouse we can move a bit the actual view, we can also change it to another one by clicking one of the little squares on the image of the house on the right.

www.maxhaus.com.br

MaxHaus is a design and architecture company which launched a project called Arquitetur Aberta. It gives a possibility to design your own appartement in your own way, with your own hands - or rather mouse. The company provides the space - a building with empty appartaments - and easy tools, available on their site, to create the interior design. As MaxHaus designs also furniture, doors and whole sets like kitchens and bathrooms, it is possible to insert them into our appartement.

While the website's main menu is conventional - horizontal, animated in flash - the content of the pages are organised in an interesting way. Each sub-page is on a different side of a transparent rotating box. Although it looks very attractive, the animation of the box is slow and pixelized. A serious fault was to unable the text areas to be selected - we can't select the text and then for example copy it into language translator - which would be very handy since (despite having so-called English version) only half of the page is translated into English.

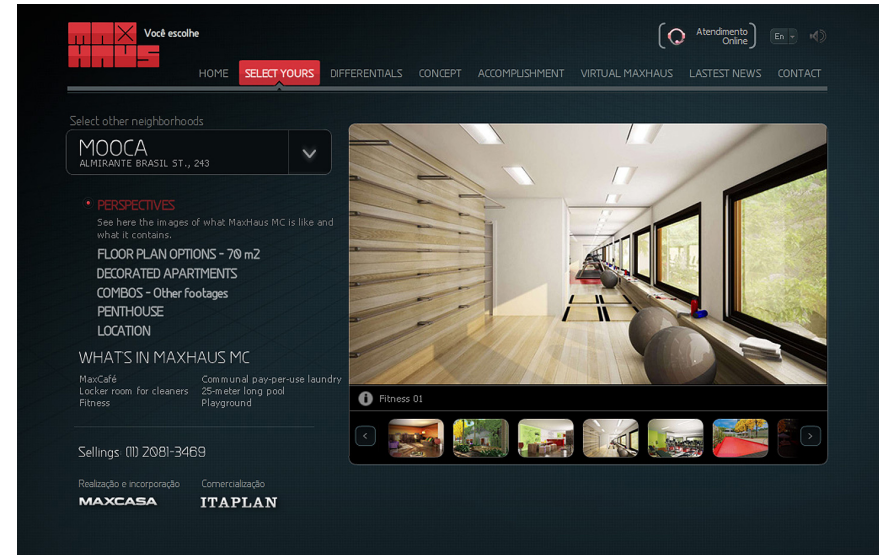
"Select Yours" is a section in main menu that provides us with deatiled information about every building that already exists - we can see the sourrounding area, plans, already existing appartaments. Every section contains a lot of illustration materials,



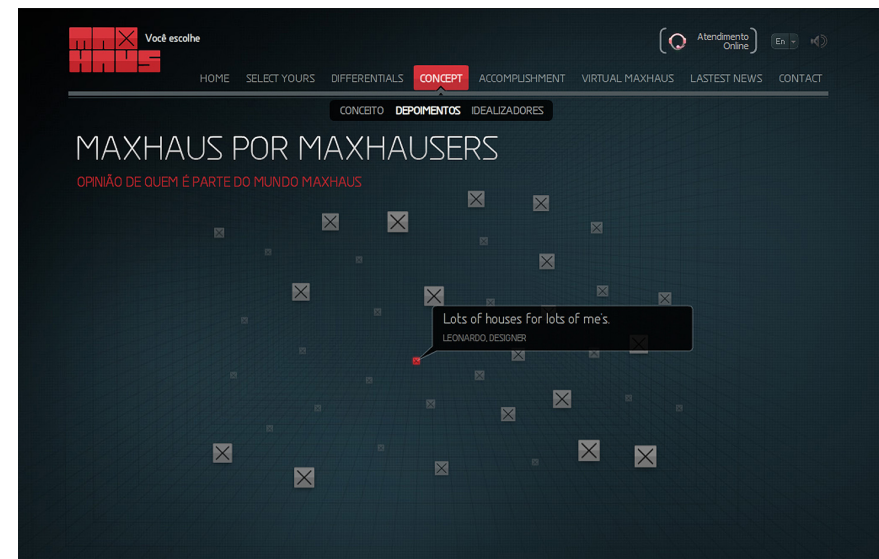
Animation of the rotating cube

mainly renderings of high design quality.

The interactive designing part of the site is under Virtual MaxHaus link in the main menu. In a new browser window we see a visualization of the building and by clicking on the floors we can enter appartaments other users have already created. Starting our own project needs only one click on the banner. The perspective view of the flat refferes to 3D programs' view point, and with the front walls turned off we can easily see the whole space. From menus on the right and on the bottom we can select furnitures to be put inside (all items can be easily moved), the floor tile's pattern and wall colours. We can as well extend the bathroom. A nice feature is the zoom, although when active it disables all other tools. When finished, we can save our work to show it to others, but we need to register. Designing our own interior with this site is easy and fun, however, we can arrange our space using only those products that MaxHause produces - and that narrows our imagination and makes all the interiors quite similar. Nevertheless, the design style of MaxHouse is modern, esthetic, fashionable and interesting - just like their site.



Sub-page with information about buildings, illustrated mainly with realistic, high quality 3D renderings



Floating elements become active on mouse over - a speech bubble appears.



LINKS

www.qba.4x.com.pl/home/portfolio.swf	Jakub Balicki portfolio, site with 3D animated menu
www.casa.ucl.ac.uk/virtualworlds.htm	virtual visualization of London city
www.air-atlantis.com	creative studio
http://www.dhp-architecten.be/eng/index.html	architecture studio, site with 3D animated menu
http://www.dixiechicks.com/underground	blog of a music band with very interesting 3D map
http://www.dvdomain.com.au	creative studio, site with 3D animated menu
http://www.dreamstudiodesign.com	creative studio
http://www.harakiri-style.com	
http://www.mcbd.co.uk	
http://www.pinkfloyd.co.uk/obtw	
http://www.tokyoplastic.com	

VRML

www.vrml-art.org	collection of art and projects in VRML format
www.udine3d.uniud.it/venzone/en	virtual visit in Venzone city, Italy
www.mimentx.com/demo-expo-2008	virtual Expo Zaragoza 2008

Virtual assistants

www.guile3d.com.br
www.pippin.us



