THE 3D REAL TIME ON LINE; AN ASTONISHING TOOL OF COMMUNICATION

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Abstract/Résumé

The broadband spreads becoming an inalienable quality of the service proposed by access suppliers. This increase in data flows rates allows e-commerce today, to use 3D in Real Time (3DRT) in their communication strategy, something impossible a few years ago. After creating a catalogue in 3DTR for a company and with the follow-up of users impressions, we can wonder on the effectiveness of this tool in the transmission of knowledge and thus imagine the possible evolution of Internet interface.

Le haut débit se généralise devenant une qualité inaliénable du service qui est proposé par les fournisseurs d'accès. Cette augmentation dans la vitesse des flux de données permettent qu'aujourd'hui la 3D en Temps Réel (3DTR) puisse être utilisée par le e-commerce dans leur stratégie de communication, quelque chose d'impossible quelques années au par avant. Suite à la l'expérience de créer un catalogue en 3DTR pour une entreprise et au suivi des impressions des usagers, on peut se demander sur l'efficacité de cet outil dans la transmission de la connaissance et imaginer ainsi la possible évolution de l'interface d'Internet.

The world telecommunications network underwent very important evolutions since its beginnings in the 80's until our days. Always related to the exponential growth of computer calculating power (1), the digital network is an inexhaustible source of data which allows us today to communicate enormous amounts of information between much more people than before in almost the entire planet. This easy access and instantaneity in the transmission of data pushes the network to be centered on the quality of contents and their richness (2) because in this vast universe of information, only relevance and the manner of presenting information (a friendly interface to access data) can make a difference in user's choice. Internet not only became an essential tool of communication but it is profiled as the media which could gather all media, all communication means and modify in a radical way social exchanges in society(3).

The disproportionate information growth on the network and the increasing speed in the transfer of data has made evolve the way to reach content and the bonds created between them. Internet today is not just a stock of data like a

paper text, it is offered to us like an extension of our thoughts, of our imagination, a zone of debate where knowledge changes at the speed of broadband (4).

Thanks to this evolution in computer equipment and in digital networks infrastructure, Internet can allow itself to use old technologies considered formerly as delirious and nonviable for streaming. As Tony Parisi, co-creator of the VRML (Virtual Reality Markup Language) illustrates it rather well in an interview granted to www.3dtest.com (5) when asked about SGI 1998's decision of stopping VRML support "...3D was just a circus sideshow during that time and couldn't be taken seriously. Nobody had the (pardon the pun) bandwidth to deal with it. Now, things are different. 3D is going to take center stage, because it's the only party in town."

A new stage starts in the evolution of simulated 3 dimensional universes: they are now on line. Not only for entertainment or to meet people, but as tool of marketing and many other possibilities unimaginable today. We are beginning to see websites with applications in 3DRT (3 Dimensions Real Time) used as a communication object, like the virtual fitting mannequin from La Redoute(6) and La Halle(7) or Home(8) the site for PS3 users of SONY, without forgetting the metaverses(9) like Second Life or Red Light Center. Catalogs which help you to better detail a product, fantastic universes where you play a part in a scenario, others where you can just walk around or where you can be carried out your phantasms. With such a success in the world of ludic activities, one can ask himself to study the effectiveness of this tool in the field of transmitting knowledge. Use this immersion and interactive means to transmit knowledge can undoubtedly change the way we have to learn and to teach. It is essential to study these new tools and how users are using them in their daily day, so we can achieve an evolution on cognitive processes, so we get to increase their effectiveness and richness.

During a training course in a company, the creation of a 3DRT catalogue(10) makes it possible to explore the possibilities of this technology like a tool of communication. What can be interesting to observe it is how a simulation can give a better idea of an object and if Internet users can follow this evolution. The company's activity makes it possible to directly touch computer equipment retailers, a well defined and specialized public. Nevertheless it is not the only public observed because the website is a reference for average buyers too.

In first place we will explain why it's important to study 3DRT used for e-commerce to understand 3DRT cognitive mechanisms. Then we have to interest ourselves on the different devices set up to measure users preferences and reactions. Finally we will try to analyze collected data to answer some of the questions that relate knowledge transmission to 3DRT universes and we will speak about the working as researcher in e-commerce world.

A practice

As an image type which calls in question typologies defined for the image until today(11), the 3DRT raises up questions as medium and support which made its study and observation a vast field very difficult to define as an ensemble. To be interested in 3DRT related questions is undoubtedly essential to understand where media culture is going but in the vastness that such questionings represent, it seems wise to make a choice regarding a research theme.

First as a general use, it's important to say that 3D context is constrained by a photorealistic aesthetics standard. In 3D models examples different devices and techniques are used to achieve this realistic effect. From the use of a greater number of polygons to increase detail volume, to size up image resolution for a better detail textures or even friction effects in the handling to accentuate realism effect of movement. Designers have a large number of possibilities and each one proposes different approaches to create a realistic experience.

In users interface, generally one finds the same elements like an explaining banner to learn 3D universe navigation, buttons that can be placed according to a desired page-setting and so on. These elements must be clear enough for the public and must function between them in a logical way without creating confusions because of a missed interpretation. The choice to include interface inside model's field answers to the complexity of suggested animations and its differences. It is difficult to find categories when each product has its specificity, but in general similarities in buttons choice and animation type are connected to the family of the product, like in the family of PC cases, you can find a button which opens the access door to access computer components and another button if the case has an articulated cover to hide access to hard disks. Buttons are represented by labels of the model which change between the initial and final position. This iconography seems more adapted to explain an animation very quickly and adapts itself to all public because it makes a return on the object creating a direct bond between button, action and object. 3DRT as tool of communication intended for e-commerce is a subject matter which can seem rather superficial and which could easy fall into comparison with marketing theories and handbooks. But what the virtual universe in 3 dimensions proposes as a virtual catalogue must be seen from a different point of view.

E-commerce company's communication strategies are very interesting to analyze because of the highly competitive needs that pushes users interface to be simple and highly efficient. Customer must quickly find what he's looking for and stay tuned enough time to interest himself and purchase. What's important is to decipher cognitive mechanisms used so they can be improved and this way propose users a better virtual experience. Without

wanting to make a comparison which can seem disturbing, Art in the form of an art piece must achieve the same tasks that an object of communication. It must be attracting, and captivate art amateur's attention enough time so that ideas can be created, thoughts, sens.

To start we can ask ourselves very simple things which return to the relevance and the utility of such devices. Could one use this technology to improve quality of learning and communication? Is the evolution of interfaces the same as 3DRT?

A question related to aesthetic codes must be formulated if we see that 3DRT seeks to represent reality and the image of reality and by this means a knowledge transfer is produced.

One could wonder how representation of reality using a mathematical model can help us understand a system or a device, and how much it facilitates the acquisition of a knowledge.

To better see the project's evolution various modes of follow-up were set up, going from the 3D models viewing statistics to telephone questionnaires. It should be specified that the models were never a central point of the company website and didn't profited from any communication at all nor publicity to make them known.

The first follow-up device is visitor counting for the 3DRT models on line. Sorting is done by product and by click number since its publication.

The website also proposes command lines allowing model redirection to other websites outside the company. These websites are measured in the same way as the company website.

The first model was set on line towards the end of September 2006 (19/09/06) and by the same date one year later a total of 7347 consultations for the models on the company's website and 5827 visits made by the means of an external website giving a total of 13174 visits, witch gives us 36 visits per day for one year only.

The most visited product, on sale, on the website is the Asus's VENTO. The most visited model among all is NZXT's ZERO which it's sale was stopped by the company a few months ago.

It is hard to determine the reasons why one simulation model was more used than the other one, but regarding the 3DRT simulations it selves, the second one had a more possibilities in the animation buttons proposing one more button than the other one.

As one can note, the figures provided by the statistical data give a detailed idea of the models visit rate and allow us to conclude that in spite of the lack of promotion, 3DRT visualizations cause enormous interest on website users. Even tough the number of visits can be really precise, statistics can't give a precise idea on user opinion nor why one simulation model has more success than another, this difficulty makes necessary to use another device so we can

be enlighten on this subject.

The idea of taking a sounding on people's impressions guided by a questionnaire seems more adapted for a better inquire. Considering the great number of customers of the company, the public target selected corresponds to users who decided to annex models on their site using the proposed code. In this population, we can find two types of user. On the one hand the tradesmen who visit the website to buy his product stock and on the other hand, the private individuals who seek information on products and latests innovations. Salesmen of computer equipment from Spain, England, Portugal and France, with activities of trade which in all of the cases depend on Internet to carry out almost the totality of their sales.

As a whole we can find rather similar answers. Webmasters are all interested by this kind of communication tool but although 3DRT models are an advantage towards the concourse and they even had increase a little bit sales, written information still makes it possible to better analyze the purchase of a product. Without written information, the specialists in data processing cannot carry out a purchase, especially if it is a question of reselling this material. They must know the design features which make a product better than another to buy what will be sold best.

What seems interesting compared to their opinion on the models, it's to note that they bring qualitative values to the image of the product, such as for example, the reflections and textures of materials or being able to appreciate the totality of the product pieces and their assembly. This makes them conclude that the models 3DRT represent a true advantage against company rivals.

Regarding the models of the company's website, the whole of the interviewed people agrees to say that interface is very simple to understand. The explanatory banner placed on the lower part of the model window is rapidly understood. Using this kind of banner isn't a standard in 3DRT applications, but in a way it makes it possible for more people to understand the virtual universe navigation. It's use can be recommended for e-commerce to increase a successful virtual experience and to ensure a correct and longer application use.

The choice of using buttons that change their appearance with the overflight of the mouse is made while following the ergonomic tendency already existing in numerical interfaces. It's a question of creating a bond between a web page, interface and the 3D model. Other solutions of navigation are possible but their use requires a preliminary knowledge of 3D universes. This can restrict considerably the easy comprehension degree of the virtual model. Regarding their knowledge of other virtual catalogs the answers are mitigated, because for one half it is the first time that they see this kind of device. Compared to other 3DRT Internet tools that seem to interest marketing and e-

commerce, such as for example Second Life, interviewed people agreed to say that these universes aren't interesting for e-commerce. Various reasons were evoked to justify this answer, such as for example the long time search and enormous psychological investment to understand interface use. Of course we are talking about the point of view of tradesmen who need solutions which are applicable in the nearest future to improve their tools of communication, but their opinion is important because it gives us a real idea of e-salesmen opinion against the speculation telling that metaverses are the only future of e-commerce. Maybe in a near future, we will be able to redraw Internet interface by proposing new logic systems to handle content. To have an idea of how Internet could soon look like, we can go to -www. papervision3d.org -, a project which is addressed to the graphic designers particularly considering that it was developed to be used with Flash.

Internet evolves constantly in a random and unforeseeable way, but even though its changes are set by nobody and that no one can say how it would look like in a few years, we can consider that moving images will undoubtedly be one of the pillars for change.

Regarding the totality of knowledge on line, it's not a matter to call in question its massive amount of data nor its reason to exist like good or bad information, but to determine that data perceived like difficult to handle because of its size and download speed, are not any more media objects avoided by Net surfers. Today's paradigm is to have absolute access to all information, all media and this in an instantaneous way.

Nowadays the easiness of connection and the power of computers call in question interfaces designed in a beginning to access data. The world network can't be conceived any more as a bunch of Hyperlinks piled up one after another and proposing only textual information on what one consults. Even the still image seems to have difficulty to follow the requirements of Net surfers eager of possibilities to handle information.
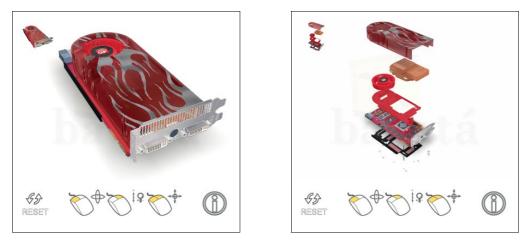
Conclusion

To conclude we can partially answer the question we ask related to transmitting knowledge thanks to virtual universes. Knowledge itself is difficult to define and this fact increases the complexity to answer any question related with it, but this allows us to better justify an answer. On one hand 3DRT makes it possible to visualize qualities that the simple text and the still images don't, as the product materials reflections or its articulated part movements. Compared to video, 3DRT has the advantage of allowing a nonlinear visualization and to establish a direct contact with the object thanks to its handling. These advantages make the virtual model simulation more captivating and encourages it's use. It creates an interaction with the simulation of the object, something that videos, photographies or text can't; it makes it possible to better understand mechanical characteristics of an object

by experience. The possibility of reproducing ad infinitum and under unlimited angles of sight the same movement, allows a fuller comprehension of a simple mechanical process as seen on the opening of a door or the unfolding of an articulated object (12).

On the other hand, 3DRT model can't transmit knowledge of quantitative kind, only text can lighten us with precision on this type of data.

Like seen on answers from interviewed webmasters, the e-salesmen need this information to carry out a purchase. It is here question of data which will allow them to make a comparison and justify the choice of a product instead of another. For them, these data is essential, not only to do their sales but also to make the promotion of a product.

Models in 3DRT have the possibility to integrate information in the form of text to enrich proposed contents but in the world of commercial data-processing on line this possibility doesn't seem to be of any interest. Various reasons explain this position, such as for example the recent use of this tool in e-commerce or the fear which such a radical change could cause in the opinion of the customers. It should be understood that the trade of data-processing parts is a field very competed and difficult. The margins of sale in general are not very important and the price of electronic material changes very quickly so the focus isn't placed in unnecessary investments. On another side this technology isn't used at all in the field by any other salesman what increases the mistrust and uncertainty to use this tool. To remain competitive e-tradesmen are obliged to follow changes that Internet undergoes. For example RSS flow integration became a common practice to ensure customers fidelity. The thorough use of 3DRT on a website means to change all the interface that give access to contents as we can see in the aquarium of Papervision3D.

It's maybe too soon to a e-tradesman to decide a complete change on his website, but the examples start to be more and more frequent and like Alain Laidet co-founder of "convention E-trade"(13) in it's 4th edition this year, says "...the tendency in the E-trade is to give the impression to the customer that he visits a true store, thanks in particular to page-settings in 3D" quote to what manufacturers of 2D websites criticize the over expensive cost. As a personal experience it's a privilege to propose such tools and see how in time they take more and more importance to communication strategies of the company. But it should be said that all new proposed features and concepts are a hard negotiation done according to competitors and that can take enormous amounts of time to be accepted. It is with a lot of patience that one can convince a company to accepts proposals. Although these constrains is with enormous satisfaction that the return of customers proves them that being a pioneer in a field often pays back.

Courtesy of A2S

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