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Flashbang

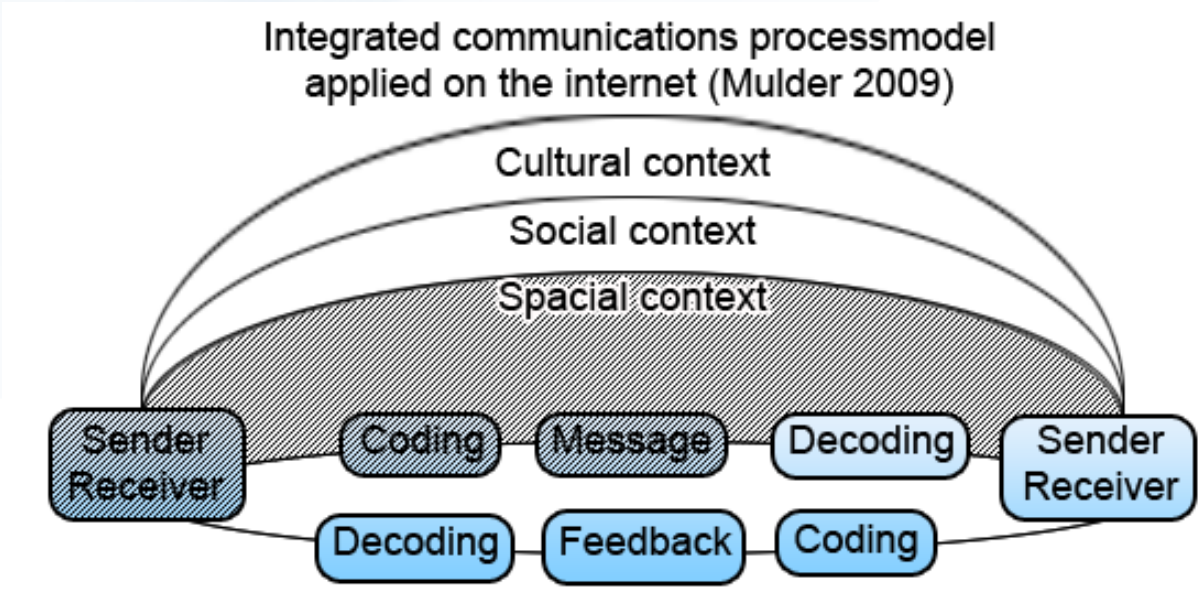
A short essay concerning Flash in a Web 3.0 future

Ever since Tim Berners-Lee invented the web, the medium has developed even faster than its counterparts fitted in your desktop. You may still remember the times when you had to dial up on your 28k connection, just so you could wait half a minute for a webpage to load. Back then, it was safe to say the web itself was the bottleneck when surfing. However, technology's come a long way since then, boasting transfer speeds up to Gigabytes per second, working up its way from bottleneck in the equation, to the superior part, overtaking desktop hardware and user input in the process, with the last coming out as the new loser. No longer was computer the weaker counterpart of man when it came to web technology. Being a prelude to web 2.0, man finally broke the chains restricting him to do as he pleased on the internet. By strengthening the other links, man finally became the weakest link in the chain, just as he wished.

It's about 20 years ago when the web got introduced, five years since it evolved to web 2.0, and we're on the brink of a next evolution to web 3.0. Where or how this change is going to take place is still a mystery. Web 3.0 in itself is still a mystery, as technology no longer poses the biggest boundary, but man's imagination. The sky really *is* the limit.

A vision on web 3.0

As internet started out as means of communication initially, it would be fitting to analyze it as such. Below, you see the integrated process model of communications, to analyze and discuss to current state of internet and the frontiers it has yet to conquer.



I found this model the most fitting, because it emphasizes the fact that the receiver plays just as big a role in the process as the distributor, whereas most other models display communication as a one way medium, an Allocution pattern if you will. The web however, used to be a Consultation medium, to subsequently become a medium of Conversation. This model turned out to be the perfect means to display that fact, and exactly show how far web technology and the internet as a medium have advanced.

The model contains my interpretation of how far the web really is. The grayed-out parts show the sub-processes which internet has already perfected in my opinion, which we'll discuss in a moment. The parts with a normal color are the stages which need some work, where my emphasis will be on the subsequent sub-process, as that will naturally be the next step in evolution and thus, the direction of web 3.0.

The first problem the internet faced was how to code a message. Sure, data could be transferred, but not everyone was able to read it. A solution surfaced in the form of HTML. This became the new standard of internet coding, ensuring that everyone was able to read information on the internet. When this problem was solved, the new problem faced was the dynamic in messages. People were only able to transmit quite static pages, with nothing more than text, images, and a few gimmicks to communicate. Then, in 1996, the message boards surfaced. Although not too popular at first, the public finally found out about them around the millennium, causing a major shift on the internet. For the first time regular John was able to spill his beans to a bigger audience, to whoever wanted to listen or even a simple 'by-surfer'. As technology improved, the public gained the ability to contribute more than just text to the internet, but also images, audio, and even homemade movies for everyone to see. Finally the shift was complete, and internet became a medium where everyone had the ability to input, even without a lot of knowledge about web technology. This concluded the improvement of 'the message', as anything is now possible to use as a message, from video-communiqués to complete 3D representations of the person himself.

This brings us to the next phase of internet, the decoding of the messages, and the context of how these messages need to be interpreted. When this is complete, the entire communication model will be perfected, basically creating the perfect 'face-to-mass' medium.

Decoding of the internet has two phases; finding the required messages, and interpret them right. Finding currently is a process which is still mainly analog. Though the user has certain appliances at his disposal, such as Google and the likes, the actual input remains human. Were the internet to perfect this, a technology needs to be developed which automatically displays required information. This is explained by the concept of Semantic Web. It encompasses the vision that the process of searching could be replaced by artificial intelligence, to remove any need for human input in the process. The Semantic Web is also an initiative by Tim Berners-Lee, explained by him as following:

"People keep asking what Web 3.0 is. I think maybe when you've got an overlay of scalable vector graphics - everything rippling and folding and looking misty — on Web 2.0 and access to a semantic Web integrated across a huge space of data, you'll have access to an unbelievable data resource."

Where Berners-Lee does not give a concrete solution to this problem, I think a solution could be found in 3D environments. When seen how well social 3D communities like Second Life and World of Warcraft thrive in a virtual environment, I believe the future of the web will be a giant virtual world, where all data will be concentrated and can be requested at any time, with only one way to decode it as the user is always operating in the same virtual environment, never leaving that context, as opposed to the current internet where every site, blog and message board has its own rules and laws to abide. That is the ultimate direction the web is heading, the direction where web-communication will be no different than real-life communication.

Practical short-term solutions

The above is of course nothing more than dreams, expectations of a distant future. What we can do however is take the end result, and work back to a practical, realizable solution, possible with current technology.
I believe this can and will be achieved by extensive and professional use of Flash applications in websites. Although this is only a temporary solution, I believe that it will suffice as a way to improve the decoding of web information, and provide a firm step towards the ultimate future. Below I will give two examples of the countless plug-ins for Flash, explaining what they do and how they will impact web-technology.

Flare (http://flare.prefuse.org/)

Flare is a data visualizer, meant to display raw data like numbers or words in a way the user finds fitting. It displays connections and other information of data in numerous ways which the user can pick in the application itself. By doing so it creates a synoptic view of all information, ultimately being a pioneer for a web where all data will be sorted in a synoptic matter, a web where all data is linked in such a way finding the right information will never be a problem anymore. Below is an example of how Flare networks data, giving a basic idea of how this could eventually be applied in the general web.

Prefuse.org (2009)

Papervision (http://www.papervision3d.org/)

Papervision is just one the endless possibilities for the creation of 3D environments in a web-based environment, but because it is probably the most used one, I will give a brief summary of its possibilities.
Papervision allows for the export of 3D data from modelers such as Blender and Cinema4D to be imported in Flash, and utilizing it in such a way that it can be the stage of an immersive 3D website, bordering the definition of educational game. Where previously web designers manipulated their 2D scene in such a way merely a 3D illusion was created, Papervision actually renders the scene in-browser, so that we can actually speak of a 3D environment opposed to the faux-3D of earlier days. This allows creating a multiplayer environment where users can share information, thoughts and ideas through numerous media, not unlike social virtual environments such as Second Life, but in a web-based environment.

Discussion and recommendations

Taken together just these two examples provide for interesting thoughts, let alone the endless possibilities when taking the numerous other available applications into account. If Papervision for example were to become a standard in web design, where every site would be an interactive social 3D environment with a stage not unlike Second Life or World of Warcraft, where users would be able to share any data they like in any manner they please, Flare could be useful for interlinking those sub-worlds, for a synoptic view of the whole. When sites will integrate more because of Flare, eventually a giant web-world could be created, the *real* World Wide Web. This would be a giant Massive Multiplayer Online experience replacing every website, a platform where people can do anything they would normally do on their desktop, in fact replacing every software-related need they would have on their computer. It could become the software, a giant virtual environment that delivers everything in a way the user pleases, integrating everything in one giant, synoptic, easy-to-use digital world. So my recommendations for future web technology would be to invest in such technologies. I'm not saying Flare or Papervision provide the perfect solution for this, but they could be a good way to get started and to warm up the mass for the idea in general. Companies need to do a lot of research into the subject, as the person with the golden idea may well be the next richest person in the world, as we all know what happened to Microsoft back in the 80's.

Needless to say, the subject would be an interesting thing to perform research on. While the final result will most likely not be Flash-powered, the first steps towards an integrated web-environment will most likely be made with Flash-based applications. Who will eventually become the next Microsoft, Yahoo or Google still remains a mystery but given the speed of web-developments, I say it won't be long until a new big player comes into the game to take it all.

Flash, bang, and clear!