Why visualize RL data in SL?

(*or the **co-presence** power of a 3-D virtual world*)

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- When I first saw Google Maps/Earth in Second Life, I was really excited. I was even able to have a GeoRSS news feed of mine rendered on Daden's version in SL.
- This felt like the first realization of the futuristic vision described by Wade Roush in:

  Roush W. **Second Earth: The World Wide Web will soon be absorbed into the World Wide Sim: an environment <u>combining elements of Second Life and Google Earth</u>**. *MIT Technology Review*. 2007 Jul/Aug

- However, Google Earth (the 3-D mirror world application) remains, to this date, far more powerful than its “port” in Second Life, like many other specialist data visualization tools, a fact echoed in a recent discussion of the topic by Paul Bourke:

  Bourke PD. **Evaluating Second Life as a tool for collaborative scientific visualisation**. Computer Games and Allied Technology, Singapore, 28-30 April 2008 - http://local.wasp.uwa.edu.au/~pbourke/papers/cgat08/

  * For example, Google Earth has Collada support: http://www.collada.org/mediawiki/index.php/Google_Earth

- But despite this, there continues to be something very special or “magical” about the current **avatar-inhabited** Google Earth SL version by Daden (even with the current medium’s limitations)!
- Miklos Sarvary, Director of the Centre for Learning Innovation at Insead, has drawn parallels between the life cycle of broadcasting and the Internet:* just as radio gave way to the more immersive experience of TV, today’s flat Web sites will morph into more interactive, immersive multi-user experiences in which users can see and interact with each other in more natural ways.

*Sarvary M. **Breakthough ideas for 2008: The metaverse - TV of the future?** *Harvard Business Review*. 2008 Feb

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- It is predicted that, within 5 to 7 years, the dominant Internet interface is likely to be the 3-D ‘Metaverse’, a new 3-D Web that will gradually absorb, and seamlessly integrate with (not fully replace), today’s World Wide Web and its applications like Google Earth.
- Today’s flat Web allows us to call up “flat” information; a 3-D virtual environment allows us to more naturally experience and visualize this information in real-time **with others and also appreciate their presence around us**.
- Virtual worlds are such an appealing concept to users primarily because of the social ‘**co-presence**’ of others in these worlds in a very realistic manner.

- When people are browsing the flat Web shop of Amazon.com, for example, they cannot see, chat with, and benefit from the experiences/opinions of, other people looking for the same items in real time, as they would do in a supermarket's aisle in the physical world. But with 3-D virtual worlds this is very possible.

- Although there are some very early flat Web co-browsing solutions under development like Weblin (http://www.weblin.com/ – flat) and YOOWALK (http://www.yoowalk.com/ – 2.5-D) that have attempted to bridge this gap, they are not without their limitations, and it is expected that they will *only* achieve their *full* potential within 3-D online social worlds or the Metaverse over the coming few years *(but only after the **full HTML-on-a-prim roadmap/ vision** and many other currently missing key features/ qualities (e.g., **usability**, **scalability** and **interoperability**) properly developed and fully realized in these worlds).*

- Humans are spatial beings by nature, inhabiting feature-rich 3-D analogue spaces, so a 3-D synthetic space should not be more cognitively demanding from a human-computer interface viewpoint (compared to conventional flat interfaces), **if properly designed (usability!)**.
- In fact, it could even make some presentations that are overly complex in 2-D version much less complicated to understand when ported to a more native 3-D environment.
- Recommended: please read the paragraph entitled '**Why 3D for Collaboration**' at http://research.sun.com/projects/mc/mpk20.html and watch http://www.youtube.com/watch?v=BJS8DGjeGvM

- **Why 3D for Collaboration? (Sun Microsystems)** *"One question we are frequently asked is why use 3-D for a collaboration environment? While it might be possible to build a 2-D tool with functionality similar to MPK-20, the spatial layout of the 3-D world coupled with the immersive audio provides* ***strong cognitive cues that enhance collaboration****. For example, the juxtaposition of avatars in the world coupled with the volume and location of the voices allows people to intuit who they can talk to at any given time. The 3-D space provides a natural way to organize multiple, simultaneous conversations. Likewise, the arrangement of the objects within the space provides conversational context. If other avatars are gathering near the entrance to a virtual conference room, it is a good guess that they are about to attend a meeting in that space. It is then natural to talk to those people about the content or timing of the meeting, just as you would if attending a physical meeting.* ***In terms of data sharing, looking at objects together is a natural activity. With the 3-D spatial cues, each person can get an immediate sense of what the other collaborators can and cannot see****."*

ftp://ftp.cordis.europa.eu/pub/fp7/ict/docs/netmedia/UCM-Position-paper.pdf

Missing in original figure: One can add YouTube videos and other types of user-generated content

- David (Corro) and I also discussed this topic in more detail in a recent paper: http://www.ij-healthgeographics.com/content/pdf/1476-072X-6-51.pdf
- We have a second joint paper in the pipe* touching on the same issues (will also be soon available at http://www.ij-healthgeographics.com/)

*Provisional title: Web GIS in practice VI: a demo "playlist" of geo-mashups for public health neogeographers