By Ann Cudworth

"Here be Dragons"—the words found in the corners of old maps, warning of dangerous and unexplored regions of our Earth, are a relevant artifact in our quest to study and formulate an understanding of cyberspace. This seems plausible because the internet and the cyberspace it creates and inhabits, is large and deep and often touching the unknown.

Cyberspace creates new perceptions of time and space, unlike any environment that's ever preceded it, almost defying attempts to map it. It is so much more than people can see with their own eyes!

About those maps…we need them to explore this new dimension of time-space, just as we have in our exploration of previous environments throughout human history. We need them because we've been compelled to make them for millennia: they orient us to our environments and they have some interesting things to reveal to us.

In fact, our first maps were not images of the earth, but of the heavens. Map-like cave paintings in Lascaux and Cuevas de El Castillo show us that ancient people observed and documented the stars, especially significant celestial clusters such as the Summer Triangle, and the Pleiades. These were the observational nodes for the group: common references and markers that all understood and could orient to, and they became a timeless contribution.

Find and share your common visual nodes and everyone gets home.

Or perhaps we should think of how the ocean floor is mapped—a devilishly complex problem in a demanding environment. Interestingly, we use echo sounding to find the location of the sea floor and we "ping" a computer host to find the location and reach-ability of a host on a computer network. Perhaps mapping the ocean is more like mapping cyberspace than any other environment?

Find the distance between 2 locations and everyone packs enough food and fuel for the trip.

And, we can create a "mind map" to illustrate the relationship between concepts as we learn a new topic. Such imagery graphic creates a "map" of our memory space, graphically expanding up from nodes to illustrate the interconnectivity of the ideas in a topic. It also demonstrates the complex interactions of multiple objects to produce an emergent behavior. Our SENDS colleagues with the Krasnow Institute at George Mason University are creating such maps.

Find the relationship between 2 ideas and everyone makes new connections and learns…new behaviors and ideas emerge! The need to orient is great!

Cyberspace needs a map.

This one is interesting…and complex: it shows the nodes, but lacks the indication of time both globally/spatially and point to point:
http://upload.wikimedia.org/wikipedia/commons/d/d2/Internet_map_1024.jpg
.

This one shows a Real Time map of the blogosphere. It connects time to information, but lacks the capacity to demonstrate the interconnection of their ideas:
http://www.youtube.com/watch?v=zgIT-hfgOXY&feature=player_embedded

And this one shows the interconnectivity of ideas but with a limited amount of nodes and not connected to a global picture
http://commons.wikimedia.org/wiki/File:622WebPlanCarreEurobas620English.GIF
.

All good efforts, but not giving us the concept of connecting, real time, in a location- and time-related structural picture of the internet. So how to do this? Perhaps the Romans were onto something with their "method of loci", a mnemonic technique. They remembered the order and collection of concepts by linking them to a landscape or environment and then mentally walking through it to recall the desired information.

Is it possible by utilizing the visualization of spaces, that we can understand and remember the interconnecting, interdependent structures of cyberspace?

A big question indeed, as cyberspace may have as many rooms and plazas and balconies as the universe has stars. In fact, one could speculate that it develops complexity at a similar rate to the expansion of the Universe, moving away from the initial point of the Big Bang.

Internet World Stats tells us 28.7% of the Earth's population surfs the internet, almost 2 billion people. Yet with this technological marvel, few people can access information that would tell them of the interconnectivity they ***could*** have. Like the people who drew stars on cave walls, they know only about the paths they frequent, and the large nearby constellations they only see with their own eyes.

Isn't it time that changed?

There maybe some monsters out there, but there are also galaxies of enlightening information.

Editor's Note Ann Cudworth, also known as Annabelle Fanshaw in Second Life*, is the founder of* Alchemy Sims www.alchemysims.com *, a full service virtual space building, sim-designing, and 3D visualization company. Ann is a 2 time Emmy award winning production designer for network television. Her sets are seen on CBS, and CBS.com, as well as a host of other networks and media outlets. Ann is an advisor to SENDS for the exploration of virtual world environments for the virtual component of the SENDS Center of Cyberspace Research.*