

Copernicus Abstract

Copernicus is a concept for network visualization. Copernicus will allow multiple users to add their data and network to a worldwide map, which is represented in 3D space. Unlike previous network visualization projects, such as Vizster, Copernicus will incorporate data from thousands of users, so that each user can not only see his/her own network, but also the network of those he/she is networked to. Copernicus would eventually contain millions of users, with the ability for individual users to view any individual network. The concept is for a Google Earth of networking. One can see the entire world of networks, yet one can zoom in on one single node of the network. Also, like the roads in Google Maps, one can see how the nodes are connected to other networks and how networks are connected to other networks. The project is named after the astronomer Nicolaus Copernicus (1473-1543) who proposed the fact that the Earth and other planets revolve around the sun, rather than the other way around. We feel this has name has significance to our project, as the visualization will resemble constellations, and will hopefully reveal to its users that the world does not, in fact, revolve around them.

Modes

Copernicus would have several visualization modes. The first mode would be Geographic Mode, with users represented by last known physical location on a 3D graphic of the earth. The second mode would be Strength of Tie Mode, with nodes represented by the strength of the relationship to the individual node selected. By observing these two modes, social trends would be revealed. For instance, are ties formed in Interdependent societies, such as Asian countries, different from ties formed in Independent societies, such as the United States? In addition, Copernicus would also include the fourth dimension of time, as one could also see how ties formed and disappeared over time. Any part of the network can be zoomed in and out on, much like Google Earth. Ties and nodes would be color-coded, as in family, professional, friends, etc. In addition the strength of the ties would be graphically represented by line width and/or line type.

Privacy

Obviously, having individuals listed with their locations to strangers presents privacy issues. Copernicus would represent individuals not known to the user as generic, nameless nodes to protect their privacy.

Feasibility

As we realize that a real, working version of Copernicus would take a team of many individuals many years to complete, we are focusing on the concept and interface design for this class project. Sample screens and animations will illustrate the concept.