

Navigating is more than finding a convenient place to park or identifying the shortest line in the supermarket. Likewise in cyberspace, navigating is more than a convenient place to login and read your favorite newsgroup. Where information space is concerned, "navigating" may be considered a search for meaningful relations among information and the states of actively evolving systems.

Audio plays an important role in many kinds of navigation. When we take a walk in our analog world, we see and hear our surroundings. We may not realize that we are actively listening until an unusual sound grabs our attention or someone calls our name, or we hear a sound that reminds us of that old car Uncle Milt used to drive. Memorable sounds make our world meaningful and help us to find our way between the external world, our memories, and our perception of the

present. New sounds can help us describe and understand new things.

For SIGGRAPH 95, NCSA's Audio Development Group provides sound synthesis software and expertise to create auditory signatures that identify sites on the Interactive Communities network. An auditory signature is a symbolic, interactive mini-scenario in sound, descriptive of the content and activity on a network node.

For cyberspace travel, the project provides a large-screen interactive graphic representation accompanied by 3D sound. SIGGRAPH attendees can "walk around" a visualization of Interactive Communities and hear sonic representations of activities at nodes and neighborhoods.

Participating projects send data on their content and activities over the local

network to the navigation site. Sound-synthesis algorithms use the data to create auditory signals. Sounds are created in software and rendered in real time using the NCSA Sound Server, a unique sound-synthesis software environment. The behavior of the sounds tells the story of what is going on at one or more exhibits as visitors "walk" past them in cyberspace. The audio ambiance changes as visitors move from neighborhood to neighborhood, reflecting the characteristic differences of the exhibits in each area.

This project is designed to:

- Bring the cyberspace and computer graphics communities a few steps closer to using interactive sound.
- Encourage visual artists and designers to include sound composition early in the design process, while basic functionalities are still under construction.

- Expedite development of mainstream desktop computers that include audio as well as graphical rendering engines.

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