

The Tele Garden

Ken Goldberg



TeleGarden, industrial robot arm controlled via the Internet

The *TeleGarden* is an art installation that allows WWW users to view and interact with a remote garden filled with living plants. Members can plant, water, and monitor the progress of seedlings via the tender movements of an industrial robot arm.

"In linking their garden to the World Wide Web and creating an intuitive interface for the control of the arm and camera, the artists transformed what most would consider a fit of over-engineering into a subtle rumination on the nature of the commons."

[Peter Lunenfeld, *Flash Art*, XXIX, 187, March 1996]

The Internet is a means of exchanging images and text. However, one can go further and share material resources. This garden is an example; there's a bit of water, a bit of earth, and people can work together. From anywhere in the world, one can access it to plant seeds and water them. Eventually the garden will come to reflect this community. It's connected across the Web, one side in cyberspace, the other in a very physical environment. There are problems with the material reality: things break, there are insects in the garden, certain plants die from lack of water.

"... For the experienced gardener, the TeleGarden offers a search for the soul of gardening. Sowing a single, unseen and untouched seed thousands of miles away might seem mechanical, but it engenders a Zen-like appreciation for the fundamental act of growing. Though drained of sensory cues, planting that distant seed still stirs anticipation, protectiveness, and nurturing. The unmistakable vibration of the garden pulses and pulls, even through a modem."

[Warren Schultz, *Garden Design*, Dec/January 1996]

The *TeleGarden* went online in June of 1995 and continues to evolve. New seasons were initiated in January and April. Anyone can view the garden as a guest; the rights to plant and water are granted to those who agree to share their email addresses with other members of the co-operative. Activity is recorded in logs so that the co-operative can be self-governing.

"The TeleGarden is part of the artists' ongoing exploration of the stages of humankind using the metaphor of cyberspace."

[Andrew Leonard, *Wired*, October 1995]

A previous project by some members of this team and others used an industrial robot to permit remote excavation of a sand-filled archaeological site. Such hunting and gathering characterizes existing Internet protocols. The *TeleGarden* was designed to consider "post-nomadic" behavior, where survival favors those who collaborate.

"The words community and communicate both derive from common."
[Scott Russell Sanders, Georgia Review, Spring 1994]

"The Neolithic Revolution began sometime around 8000 B.C. when humans made their first successful attempts to domesticate animals and food grains ... Having learned how to assure their food supply by their own efforts, they settled down in permanent village communities."
[H. W. Janson, The History of Art]

In early civilizations, there were hunters and those that gathered. They moved around from place to place. Eventually, there was an agrarian revolution and the domestication of animals. This led to a great change in society: people co-operated differently, they were forced to defend their territory. The term culture comes from this; to cultivate: to work together.

As of mid April 1996, the *TeleGarden* home page was accessed by over 100,000 unique hosts. Over 2 million hits have been registered, including an average of 5,000 move requests to the robot per day. There are currently over 7500 registered members, including a small community of loyal members who visit the site daily to interact in the village square.

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