disperse

Increasingly, technology has come to mean
connectivity. It is no longer enough to know how to use
individual pieces in isolation. We must start to take a holistic
view of how technology impacts the spaces we inhabit, the way
we live and work in those spaces, and how our behaviours are
being transformed by the technology that surrounds us. An
awareness of the grey spaces that enable us and our
technologies to converge will facilitate a empathetic relationship
and encourage symbiosis.

A key element that will enhance this developing relationship is
data sharing, or dispersal. Dispersal is critical for any species,
not only for maintenance within its existing community, but
to ensure the successful evolution of that
community in its wider
environment.

growth, dispersal, cultivation, adoption, usage

The concept is to look at the glue, the in-between stuff that brings
individuals together to form a community and allows that community to
share and retrieve data. This proposal describes an interactive digital
artwork, a investigation into locality, connectivity, accessibility and data flow.

The work provides a window for watching the usually invisible process of participants
joining a digital community. It focuses on the importance and contribution of th e
individual to the network. It aims to highlight an effective data dispersal mechanism (a
peer-to-peer[1] network).

By understanding that there is a need to disperse, as well as gather, information via the
digital community, we can start to place emphasis on data sharing as well as gathering
- a naturally bi-directional system.

In its present form the world wide web is an excellent data repository from which
we can harvest. However, adding data to that repository is not a facile task for
the average person using the current (dominant) client/server[2] network. The
emergence of peer-to-peer networking (as utilised by gnutella[3],
napster[4] et al) is a step in the right direction.

As with dispersal in organic systems the better the conditions
for dispersal, the more effective the spread.

The proposed work visibly represents an
individual joining a peer-to-peer network
community. Its intention is to question the perception of
private or closed communications and expose the potential
for dispersal within the network (community).

By placing the user physically within the visual representation of the
network they see themselves in relation to the community and its
members.

The animation will depict which users are sharing (dispersing) in
addition to harvesting data. It should be clear to see where, if
there is one, any bias lies.

On an aesthetic level the work will reveal an ever-
changing pattern or anti-pattern - a representation
of the essential ethereal infrastructure that the
activity in a networked community produces.
The in-between stuff.

1. Starting points: http://www.peer-to-peerwg.org/ or
   http://linux.oreillynet.com/pub/a/linux/2000/09/22/p2psummit.html
2. http://www.webopedia.com/TERM/C/client_server_architecture.html
3. http://www.gnutella.com
4. http://www.napster.com

The installation consists of a reinforced touch-
screen style floor, approximately 5m x 5m, mounted flush with the
remaining floor area in the space. Interaction is as simple as walking
across the floor and standing still or moving around.

The work is a physical experience - the user (or the part of the user that is
touching the live floor) becomes a node joining a live peer-to-peer network as
they enter the space - the equivalent to a user connecting to the network via their
computer. The user is tracked by a sensor system (touch screen technology) that
converts the users locality into data which represents a new person (or peer) joining the
network.

As the user(s) move over the screen area lines depicting their connections to the rest of the
community stick with them, the user is the central node. As they move around connections are formed
and lost in real-time as new nodes join or leave the network either remotely via the Internet or by
stepping on or touching the floor.

The nodes displayed that are not users in the space are from real-time [5] generated data of a live peer-to-peer
network. This may be a custom developed network or part of an existing one.

The animation will be a code-generated abstract representation of the connectivity and the data being shared and
received at the nodes. The moving elements of the animation will be a digital interpretation of biological
diagrams circa.1970 depicting spore liberation in fungi[6] . These cellular level diagrams are simplistic and
organic but retain a scientific feel. Differentiation between dispersal and retrieval of data on the network
will be indicated via colour and/or form.

The work also has an on-line version that comprises the same animation of the network connectivity.
Connecting to the specific network (the works own website) and sending or receiving data is the
only interaction required to generate activity and locate oneself within the community
representation that is displayed. The users node will be highlighted so they can see where
they fit into the network and how connected they are within the community.

Interaction with the work is fundamental whether in the live space or on-line. The
work cannot be viewed unless the viewer is actively participating in it, this is in
keeping with a peer-to-peer network in which you have to be part of it to
see it.

The web version is a real-time version of the work that is continuous
and constant, a monitor rather than an experiential element, and
allows the work to have a greater audience.

5. The nature of Peer-to-peer networks means that a real-time snap shot of the
users connected is almost impossible. A caching system will have be used to
ensure a realistic representation.
6. Spore Liberation in Cryptogams; C.T. Ingold, Oxford University Press, 1974

The work features a large-scale,
responsive, dynamic animation that represents a
live peer-to-peer network and data storage and
exchange within it. It is constantly in flux with nodes joining
and leaving (the users within the space and on-line).

The piece explores the relationship between individuals and
communities and their use of the network. It suggests that, beyond the
convergence of users, peer-to-peer networks empower members of their
communities to disperse information and contribute to the wider community. By
questioning this dually public/private role, users' perceptions of virtual communities
and their social impact are expanded to reflect the true complexity of their
interactions. The actual embodiment of this exercise within an installation and not just
an online community, reconnects the user to real space, reinforcing the importance of
their individual influence on social and communal change.

Users should be encouraged to question what they can contribute to an ever
evolving body of data with the knowledge that they as individuals are
equally as important to the network and its content, regardless of their
technological prowess. Is there a chance that information is being
censored by the varying level of users ability to disperse,
censorship by the technology itself?

grow, disperse, cultivate, adopt, use