Proxemic Interaction

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```c
#include <stdio.h>
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
#define PORT 12997   /* The port number of the server */

main()
{
    int main_sock, new_sock, count;
    struct sockaddr_in server;

    /* Create a socket */
    if ((main_sock = socket(AF_INET, SOCK_STREAM, 0)) < 0)
        problem("Socket problem");

    /* Name the socket using wildcards */
    bzero(&server, sizeof(server));
    server.sin_family = AF_INET;
    server.sin_addr.s_addr = INADDR_ANY;
    server.sin_port = htons(PORT);

    /* Set the options of the socket */
    count = 1;
    if ((setsockopt(main_sock, SOL_SOCKET)
        SO_REUSEADDR, 1)
        problem("Bind problem.") )
    |

    /* Bind the socket to the address */
    if (bind(main_sock, &server, sizeof(server)) < 0)
        problem("Bind problem.");
}
```
Imagine: A Proxemic Ecology
people, surfaces, objects, devices, fixed features

Sketch conception: Nicolai Marquardt
Proxemics – Edward Hall

Cultural perspectives of how people perceive/manage interpersonal distances
Intimate

Intimate

Far phase

1.5'}

Jorr81:
http://www.flickr.com/photos/jorr81/2652993950
Personal

http://www.indiancricketfans.com/showthread.php?t=188494
Physical but Digital Surrogates
Kuzuoka / Greenberg, ACM CHI Videos, 1999
Proximity Toolkit
rapidly programming proxemic interactions

Capture
- location
- orientation
- identity
- touch

Derive
- relationships
- ray casting
- zone collisions
- movement
The Proximity Toolkit and ViconFace: The Video

Rob Diaz-Marino
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ACM CHI Videos, 2010
A Proxemic Ecology
people, surfaces, objects, devices, fixed features

Sketch conception: Nicolai Marquardt
Surface reacts to proximity of a person

Photo: Till Ballendat, Nic Marquardt
Proxemic Interactions
The Video
Designing for a Proximity and Orientation-Aware Environment

Till Ballendat, Nicolai Marquardt, Saul Greenberg
Interactions Lab
University of Calgary
Surface reacts to people/object relations
Surface reacts to orientation of objects
Surface reacts to multiple people’s proximity
Mediating interaction between multiple people
Surface reacts to digital device proximity
Sharing digital media content between devices
# The Proxemics Literature

<table>
<thead>
<tr>
<th>Category</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Theory</td>
<td>Hall, Sommer, Altman, Watson...</td>
</tr>
<tr>
<td>People to Large Surfaces</td>
<td>Ju, Vogel, Brignull, Inkpen, Shoemaker, Walther-Franks...</td>
</tr>
<tr>
<td>People to Mobiles/Desktops</td>
<td>Butler, Harrison, Dey, Kratz, Smith, Swindells, Inkpen ...</td>
</tr>
<tr>
<td>Attentive User Interfaces</td>
<td>Vertegaal, Horvitz, Huberman...</td>
</tr>
<tr>
<td>Device to Device</td>
<td>Gellersen, Hinckley, Ramos, Holmquist, Merrillm Want ...</td>
</tr>
<tr>
<td>Multi-Display Environments</td>
<td>Rekimoto, Wilson, Streitz, Hinckley ...</td>
</tr>
</tbody>
</table>

*and more!*
Selected Challenges

High vs. low fidelity vs. limited sensing

Rules of behaviour

HCI of proxemics
Imagine: A Proxemic Ecology
people, surfaces, objects, devices, fixed features

Sketch conception: Nicolai Marquardt
A proximity-based power manager for screens

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