

# Star Cursors in Content Space: Abstractions of People and Places

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Virtual multi-user worlds modeled on a literal representation of users and physical environments are currently the vogue in computer graphics.<sup>1</sup> Our assumption is that abstract representations are more expressive for visualising many domains,<sup>2</sup> offering new types of "super-natural" social navigation.<sup>3</sup> This sketch presents design concepts for an information environment, "ContentSpace," inhabited by abstract representations of users in the form of "StarCursors."

## Exterior: The Outer Space and User Presence

ContentSpace is constructed from "content walls," which not only focus the topic domains of local zones, but also set their social properties such as seclusion, genuineness, or access for communication, shopping, work, or edutainment. Content walls respond to the gaze or proximity of users. The interactions between people and place are always two-way, zones mediating and contextualizing the interpersonal exchanges they enfold. Users are represented by a personalised avatar, a StarCursor. Its heart, body, eye, gaze beam, and aura act as multimedia channels, connected to the user profile for personal disclosures, communication or action (c.f.4).

## The Inner Space

A novel graphical metaphor for their inner world enables users to verify their personal profile and control its context-dependent disclosure. StarCursors can be assigned classified interests, demographics, roles, tastes, etc. The interest profile filters the perception of other users and the environment. Default disclosures to others employ stereotype "masks" over facets of this data, according to pre-defined contexts such as job seeking, working, shopping, or romancing. In a specific zone, the user can therefore trust what will and will not be revealed. Body space between two cursors automatically moderates disclosures between two cursors and can be expanded or contracted to suit friends or predators. A body

language is proposed, communicating aspects of identity via emission of multimedia objects, triggered by the gaze and user profile of the beholder. Data gathering on activities and locales further augment a user's profile, thus highlighting issues of trust.

## Observations and Future Work

A first prototype of the interaction between two StarCursors and with a video wall was coded in Java and VRML, interfaced via the External Authoring Interface. VRML's Level of Detail construct proved convenient, although weaknesses in current browser support for subtle audio soundscapes, overlapping translucency, and light beams were exposed.

Unifying the interface designs to support both inner and outer worlds in one abstract metaphor proves richly productive and provocative. Connections among many research fields appear and a host of new interface design challenges emerge. Anticipated future work is in further development of secure and adequate representation of the inner world, identity disclosure processes, and human studies of aspects of trust and usability.

## References

- 1 Damer, B. Avatars! Peachpit Press, Berkeley, 1998.
- 2 Donath, J. S. Inhabiting the virtual city. PhD thesis, Massachusetts Institute of Technology, February 1997.
- 3 Dieberger, A. Supporting social navigation on the World Wide Web. Int. J. Human-Computer Studies, 46, 805-825, 1997.
- 4 Greenhalgh, C. and Benford, S. MASSIVE: A collaborative virtual environment for tele-conferencing. Trans. ACM Computer-Human Interfaces, 2(3), 239-261, September 1995.
- 5 Platform for Privacy Preferences Project, WC3, see [www.w3.org/Privacy/](http://www.w3.org/Privacy/)

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