Chapter 13
Mediaspace – Meaningspace – Meetingspace

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*Thoughts exchanged by one and another are not the same in one room as in another.*

Louis I. Kahn

**Abstract** As technology becomes ever more pervasive in our lives, one of the fundamental questions confronting us is how to resolve the increasing complexity that too often accompanies it – complexity which threatens to prevent us from reaping the potential benefits that it offers. In addressing this question, much of the literature has focused on improving the design and usability of the interface to the technologies. In this chapter we investigate another approach, one in which some of the complexity in using the devices is eliminated by exploiting some of the key properties of architectural and social space. Our work is based on the observation that there is meaning in space and in distance. Hence, we can relieve users of the complexity of having to explicitly specify such meaning, as – through appropriate design – it can be implicit, given its spatial context.

**Introduction**

When you walk into a lecture hall at a university, even one that you have never been in before, and where you know nobody, you still know who is the professor and who are the students. If you see a photo of a dinner party, with everyone sitting around the dining table, you know who are the hosts and who are the guests. Walking in the park, you can tell if two people are in love, even if you see them only from a distance.

In each of these examples, we know what we know because of our literacy in the meaning of space. In the lecture hall, the professor is at the front, and the students in the chairs. We gain our understanding from the position of the people relative to the architectural space. With the dinner party, we can infer who are the hosts because...
they typically sit at the head of the table. In this case, it is position relative to a fixed object in the architectural space that provides the cues for interpreting the social relationship of the party. And finally, with the lovers in the park, it is their physical proximity relative to each other – regardless of if they are in the park, on a bus, or on a boat – which leads to our conclusion about their emotional closeness.

What all these examples illustrate is that from a lifetime of living in the everyday world, we have all built up a phenomenal depth of knowledge about the conventions of space and its meaning – both absolute and relative, and physical and social. This is knowledge that we exploit every day, in almost everything that we do, in order to make sense of, and function in, the world.

It is also something that can be exploited to reduce the complexity and intrusiveness of the technologies that we introduce into our world. This is something that the examples discussed in this chapter are intended to illustrate.

The examples discussed have been implemented and used in practice. The approach was opportunistic: to do smart things with stupid technologies. Rather than make engineering breakthroughs, our objective was to create an opportunity to gain experience living with these technologies before they were commercially viable. Our hope was that the human insights gained might help inform future design practice and development. Our mantra while doing this work was as follows:

*The only way to engineer the future tomorrow is to have lived in it yesterday.*

**Background**

In the 1980s I was involved in two projects at Xerox PARC. One was the *Ubiquitous Computing* project led by Mark Weiser, which was to have a major impact on our thinking about the future of computation (Weiser, 1991). The other was the *Mediaspace Project*, initiated by Bob Stults, Steve Harrison, and Sara Bly (Stults, 1986; Bly et al., 1993).

The former had to do with digital computers, and as manifest at PARC at the time, primarily pen-based computing on three scales: palm-sized “tabs,” slate-sized tablets, and whiteboard-sized panels. All were networked using (then) uncommon wireless technologies (infrared and packet radio), and had high levels of interoperability.

On the other hand, the Mediaspace work had to do with audio/video technologies that let designers, in particular, to better collaborate from a distance. The idea was to use the technology to establish a persistent sense of presence among a community that was geographically distributed. The technologies used were decidedly “old school” in that conventional analogue video gear (albeit controlled by a novel computer interface) formed the foundation of the system.

Despite both existing at PARC, these two projects were very far apart, physically and intellectually. Yet, in my mind, the two were actually two sides of the same coin. Both dealt with technologies that were destined to become pervasive. At the meta-level, the only difference was that the slant of one was computation and the other remote collaboration.