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Comments for Week 3

Context-Aware Computing Applications link

In some sense, this paper seems to dwell excessively on the hardware, which may have been more of an issue before the time of WiFi? PDA's and GPRS-enabled cell phones, and in a sense many of the more pressing problems that exist to this day are not addressed. However, the deeper concept of having a context-sensitive environment and the fact that context could mean so much more than the then-harvestable locational data, is given the short end of the stick, so to speak. Many of the problems that the paper "avoids discussing" still remain problems today, and indicate their complexity. For example, indoor positioning remains a thorn on the sides of ubiquitous computing research. I personally think that some of the applications are somewhat more interesting, though issues such as context transparency and detecting appropriateness of context switches is, as again, left to future work. On the other hand, I feel that the location browser is a very interesting idea that hasn't been greatly explored (mostly due to my point about indoor location sensing... a chicken and egg problem). The concepts are perhaps limited by the simplistic definition of context, which essentially bounds cases to static location-based context, as opposed to dynamic situational context, which is of course a much more involved problem. This is reflected in the predicate language, which does not attempt to generate soft-fail states, and deals only with non-fuzzy (what's the antonym for fuzzy?) state predicates.

On a completely different note, I would like to note that this paper shows the (usually) deeply thought out but badly implemented vision of Mark Weiser, whom Hiroshi describes as a misunderstood visionary for what Ambient Intelligence considers to be ubiquitous computing. It is perhaps this overindulgence of hardware and lack of discussion of the actual visionary issues that stood in his way (or it seems to have from all that I have read). It is always interesting to nudge out the visionary aspects, consider the things that he might have envisioned, and sometimes try to bring those ideas back to the current realm of discussion.

A Survey of Context-Aware Mobile Computing Research link

I just realized as I read this paper (or perhaps I was just being slow about this...) that the entire "Context Aware" community has designed and stuffed itself into a box that is bounded by the same issues that I mentioned about. In particular, a very hardware oriented view presides, and the word is stripped of the holistic sense that it normally conveys. While Chen et al. do give a perfunctory nod to "User context," personal (or interpersonal) context is treated rather lightly. On the other hand, the solutions they propose are computationally very tractable, and make for good demos because they do not set expectations very high. Additionally, the systems are very transparent and easy to explain, thus gaining a high level of user trust. I think the latter portions of the paper provide some good architectural background to anyone designing context-sensitive system, regardless of the definition of "context" used.

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