

Chi2000 Context-aware position paper

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In order to create compelling context-aware applications we must begin to exploit new context types other than location and we must understand, classify, and structure context in a user centered way.

Most context-aware applications, or proposed applications, exploit the user's location. Tour guide applications are the most prevalent type of context-aware application. While this may be a good first step to understanding context and defining application behavior to context it is not even beginning to scratch the surface of exploitable context types. Compelling context-aware applications will need to go beyond location to include other context such as activity, mood, and the context of nearby people and devices.

So how do we decide what types of context to exploit? One approach is user-based techniques to study target populations and the relationship between context and users' expectations, needs, values, and behaviors. Only after we have addressed these issues can we decide how and what context types are important to people. User studies should also give us insights to the application of context. Once we understand how people perceive context then we can begin to understand how to create applications that exploit context in a useful way.

Once important context types have been identified, a method is needed define, classify, and structure context in a way that makes sense to people. It is important that applications 'see' context in the same way that people do in order for applications to react in a way that makes sense to people. It is important that context is defined in such a way that subtle details are emphasized instead of washed over.

Finally a standard method for sharing or discovering context is needed. A context discovery protocol will enable truly context-aware applications to sense the context of nearby devices and people. The context discovery protocol will utilize the context classification described above. A context discovery protocol will enable applications to discover and share context.