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A SOFTWARE ARCHITECTURE FOR THE CONTEXT BUCKET: A DISTRIBUTED QUERY-BASED MULTI-AGENT CONTEXT SERVICE

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Abstract

The contribution of this work is the implementation in Java of a request/gathering service of contextual information made available by data providers. The latter are spread in a distributed environment, providing physical values (e.g. a temperature, the level of illumination etc.) and logical values (e.g. the number of clients etc.). Mobile agents being able to locate and reach adequate data providers collect contextual information, which can be used by context sensitive applications for functional adaptation depending on the usage's context.

Data providers are realized as Jini services, which offers a variety of functionality simplifying the search, discovery and requesting of the former.

The multi-agent platform too is realized with the Jini technology. Its security facilities ensure the integrity and confidentiality of the collected contextual information.