A Framework for Context-aware Applications for Smart Spaces

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Abstract. This paper presents an approach for developing context-aware intelligent applications for Smart Space-based infrastructure. The goal is to model and process context information using our development tool and Nokia's Smart-M3 architecture. We propose an adaptable and scalable context ontology, an ambient computing framework based on Smart Spaces and a rule based reasoning to infer high level context. Our approach deals with key issues in context aware ubiquitous computing such as adaptive and proactive changes in the environment, incorporation of novel sources of context information and automatic code generation from the context ontology to provide seamless interoperability.