Model-based Approaches for the Development of Event-based Systems Using Embedded Services

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Smart homes are a simple example of environment containing different devices (with embedded services) that can be freely controlled by others, in the sense of service invocations. With this, new applications can be developed by defining a set of service interactions either using event-based or request/reply interaction styles or both.

This paper presents our use case of developing an event-based system from (embedded) services specified using UpnP specifications. We use a model-driven approach for the development of the event-based system. Although in this case study we use only UPnP, we believed that the use case is also applicable for other (XML-based) service description technologies.