

An architectural Pattern to Extend the Interaction Model between Web-services: The Location-based Service Context

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Abstract. Internet has succeeded as a global information system mainly because of its availability and openness, and the simplicity of its standards and protocols. However, the current use of Internet as universal middleware has clearly shown the lack of maturity of Web technology to support distributed applications, which involve communication, cooperation, and coordination. This paper proposes an architectural solution to solve these interaction restrictions. It is based on an extension of the service-oriented architectures, adding a new coordinator role that allows more flexible relationships between service providers and requestors than the provided by the client/server model. This role is inspired by the Blackboard architectural pattern and it is the conceptual basis of a Web-Coordination service able to coordinate distributed and heterogeneous applications through Internet. To prove the effectiveness of this proposal, the Web-Coordination service has been used in an highly dynamic and collaborative application context, the Location-Based Services.

Keywords: Web-service architectures, Web-service coordination, Location-based services