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ADAPTIVE SERVICE ORIENTATION IN PERVASIVE COMPUTING ENVIRONMENTS

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ABSTRACT: Pervasive computing requires that the operating platform allow applications to be adaptive and react to changes in the operating context either at the client or server. The principle of dynamic binding underlies the notion of service orientation and hence service oriented architectures are ideally suited to pervasive computing middleware infrastructure. However for this to work, the issue of semantics in service discovery, binding and usage needs to be handled. In this talk, I will outline our notion of adaptive service orientation and look into semantic matchmaking algorithms that enable run time adaptation in service oriented environments.

SPEAKER BIO: Umesh Bellur is currently Associate Professor in the Dept. of Computer Science and Engg. at IIT Bombay. After finishing his Ph.D. from Syracuse University, Umesh went to work in the industry where he has helped establish distributed object standards such as CORBA with OMG and J2EE with JCP. He worked for over 10 years at Oracle Corporation, Teknekron Communication Systems and Covad communications after which he helped found a startup in Silicon Valley called Collation Inc. in 2001 that was subsequently acquired by the IBM Tivoli group in 2005. He moved back to India and joined IIT Bombay as an Associate Professor in the Department of Computer Science and Engineering. He is the recipient of the 2006 IBM Faculty Award in Autonomic Computing - one of the 5 faculty awards given worldwide. His areas of research include: adaptability in service oriented environments and autonomic computing techniques for distributed component based applications and model driven development techniques in software engineering. These research areas include middleware design for different kinds of distributed systems including wireless sensor networks as well as QoS models for such environment.