Context-awareness, dynamism, and heterogeneity are some of the properties that differentiate pervasive computing from traditional distributed systems. Most traditional distributed systems are unaware of context, are static, and are composed of homogeneous devices. As a result, the assumptions underlying traditional middleware infrastructures differ from the ones for pervasive computing. In a pervasive computing environment, issues such as mobility, disconnection, and dynamic introduction and removal of devices and merging of the physical environment with the computational infrastructure are common and affect the underlying middleware infrastructure. Furthermore, different devices might be connected to different networks, with different latency and bandwidth. As a result, the middleware must provide mechanisms for handling disconnection, addressing fault tolerance, and adapting to a number of issues related to diversity including heterogeneous device resources. The scale of pervasive computing in terms of the number of devices and services, combined with the lack of a single system administrator, the associated dynamism, and frequent failures requires middleware services capable of evolving and re-organizing themselves.

The PerWare workshop’s goal is to address the issues related to the design and implementation of middleware services for pervasive computing. The workshop focuses on the challenges associated with pervasive computing and identifies common paradigms and design decisions that affect most middleware designers. Since its first installment in 2004, PerWare has successfully gathered the principal practitioners and their experiences under one roof to discuss their findings and move the state of the art forward. In PerWare 2008, we look forward to continue this tradition by selecting a high-quality program that features slots for discussions and break-out sessions dedicated to hot topics of current research. The plan is to make the workshop interactive and stimulate fruitful discussions among the PerCom Middleware community. This year we have an exciting program that will cover a variety of middleware platforms dealing with diverse areas including energy-awareness, safety, service continuity and trust and security.

We are looking forward to another workshop of high-quality paper presentations and stimulating discussions!

The workshop co-organizers:

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