

A New Protocol Ensuring Users' Privacy in Pervasive Environment

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Abstract : Transparency of the system and its integration into the natural environment of the user are some of the important features of pervasive computing. But these characteristics that are considered as the strongest points of pervasive systems are also their weak points in terms of the user's privacy. The privacy in pervasive systems involves more than the confidentiality of communications and concealing the identity of virtual users. The physical presence and behavior of the user in the pervasive space cannot be completely hidden and can reveal the secret of his/her identity and affect his/her privacy. This paper shows that the application of major techniques for protecting the user's privacy still insufficient. A new solution named Shadow Protocol is proposed, which allows the users to authenticate and interact with the surrounding devices within an ubiquitous computing environment while preserving their privacy.

Keywords : pervasive systems, identification, authentication, privacy

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