

The research of the user authentication in the mobile computing environment

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As a result of technology progress of networks and portable terminals, the mobile computing environment(MCE) where a computer environment moves with a movement of personal has become possible in addition to the conventional fixed computer environment(FCE) where a computer and network were fixed to the location. In spite of fixing a computer network itself with the location of a computer in FCE, it becomes in MCE the environment by using the radio wave that does not specify a user and a place where he uses the computer. So it must confirm a justifiable user in MCE as a new problem before entering a network. This paper proposed MCE model, the user authentication protocol and the protocol simulator about this problem called the user authentication on MCE and studied them.

This paper consists from all 6 chapters. In the 1st chapter the background and purpose of this research were mentioned. In the 2nd chapter the conventional research trend about this research was mentioned. In the 3rd chapter a model of MCE was proposed from a viewpoint of user authentication on MCE as extrapolation of the conventional FCE. In this method the mobile user who carries the mobile terminal makes connection to the nearest server by the radio, and entrusts a connection to the concerned host. The method was proposed by which the server can easily distinct the host computer only from the mobile user's identification. In the chapter 4 the user authentication protocol that used electronic passport on the basis of Kerberos method was proposed newly for MCE model. In this method the information for the user authentication is restricted as shortly as possible with the consideration of an attack from the third party to an authentication protocol. In the 5th chapter it made a protocol simulator in order to confirm the safety of user authentication protocol against the attack by the third party, and the robustness of the user authentication protocol was summarized. The last chapter descvibed the development to application field and the future works.