

Internet Access through Consumer Electronics Equipment

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The Innovative IP Architecture Center, the R&D division of NTT Communications Corp., is working on an Internet appliance management system (IAMS) as part of its market creation efforts (IP: Internet protocol). For the consumer electronics (CE) equipment market in Japan, large-screen digital HDTV (high-definition television) units of the flat panel display type and hard-disk recorders and other devices compatible with digital HDTV are now being developed and marketed aggressively to meet the nationwide spread of terrestrial digital broadcasting and the end of analog broadcasting scheduled to occur in 2011. CE equipment has an Ethernet port to receive various services through Internet connections. Recent product trends include the installation of Internet browsers in digital HDTV units. In the next one or two years, the installation of video-on-demand functions is expected to advance. In addition, IP connection is spreading among other CE equipment, such as telephones and dedicated communication terminals for ISDN (integrated services digital network).

Unlike personal computers, such CE equipment does not have a keyboard, which makes it difficult for a user to enter an ID and a password to use Internet services. For easy service access from CE equipment, the operations and required input should be reduced but the security level should not be sacrificed. We must find a way to meet these conflicting requirements.

Based on UOPF*, a standard of the Ubiquitous Open Platform Forum (UOPF), IAMS is intended to solve the above problems and achieve easy setup and operation of CE equipment by using standard technologies such as http (hypertext transfer protocol), SSL (secure socket layer), PKI (public key infrastructure), and XML (extensible markup language). If IAMS mediates between a CE device and an Internet or application service provider (ISP or ASP), then

users can receive services simply by inputting an ID and password.

IAMS was developed with priority on scalability together with standardization and interconnectability. Scalability will ensure smooth operation despite accesses from an enormous number of terminals. Standardization and interconnectability are important for the market environment in Japan where there are many CE equipment manufacturers and service providers. The current system can control up to 10 million terminals. UOPF has successfully tested connections to two ISPs and three CE equipment manufacturers to verify the interconnectability.

From now, we will consider how to reduce costs in order to begin a commercial service and disseminate this technology through UOPF to promote the spread of such services.

* <http://uopf.org/en/>

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