Classification of N-Screen Services, Scenarios and its Standardization

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***Abstract*— By the advent of IPTV and smart TV, the broadcasting is transmitted using Internet. Bi-directional programs are appeared on broadcasting services. The convergence service combining with communication, information and web service are appeared too.**
N-Screen service is a killer service of smart TV. It uses several terminals, either fixed or mobile, to provide bi-directional, convergence and personal services with broadcasting service.
N-Screen service can be classified into three categories: first, OSMU (One Source Multi Use) case, providing same contents to terminals having different capabilities such as screen size, CPU speed, memory, codec, network speed, etc. Second case is a vertical handover, continuous watching of content using different terminal. Third case is a collaborative service among multiple terminals. For example, a customer is watching soap opera using TV, while watching a specific scene related information or advertisement using his PAD or smart phone.
In ITU-T SG13, the Y.sof (Service Scenario over FMC) was standardized. It defined detailed overall service scenarios using feature extraction of seamless mobile convergence service on several networks such as WiFi, 3G, WiMAX/WiBro. This standard extracts key features of five key elements: person, terminal, network, content, and service. Then, it analyzes relationships among key elements and suggests overall service scenario model.
The service scenario model can be easily adopted on describing N-Screen service scenario because Y.sof handles scenario cases among several fixed or mobile terminals.
In this paper, I will introduce Y.sof and classification of N-Screen service scenarios described using the standard. Also I will refer the standardization issues of N-Screen and its technologies.

***Keywords*— IPTV, Smart TV, N-Screen, OSMU, FMC**

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