

Implementing Web Services in IMS

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Abstract

Information Technology and Telecommunications are two very important industries that come from different backgrounds, but what is clear is that technology and standards are making them change for good to become possibly only one industry in the future. IT in one side provides very strong technologies: the Internet, Internet protocols and now Web Services technologies. On the other hand, the telecom industry brings new ideas and creates a standard called IP Multimedia Subsystem (IMS) based on the IT-based SIP protocol. It is very important for these two industries to understand that a convergence between them is taking place and IMS architectures need to collaborate with Web Services to enable the creation of a whole new world of applications and services to satisfy today's demands and future needs. It is then when new standards are playing a very important role to facilitate the communication between SIP (existing in IMS) and XML technologies found in Web Services. These standards (called APIs or Application Programming Interfaces) provide the elements to facilitate this integration with the objective to combine telephony and IT systems to enable collaboration between IMS resources with the Internet.

This work covered different APIs that enable this integration between SIP and Web Services. Among these interfaces, I covered CGI, Java (Servlets, JAIN SIP, SIP for J2ME, JSLEE) and Parlay/OSA interfaces. The result of this evaluation recommends two technologies to be implemented at the core of IMS: JSLEE and Parlay/OSA, each one of them offering different benefits and covering different aspects in the manipulation of the information, but enabling the creation of applications and services that involve SIP and other technologies including Web Services. These two APIs will be part of the NGN including IMS to support web services technologies because they are based on standards that cover the requirements suggested by very important telecommunication companies.

What is clear about the new technology is that we see a trend towards standard technologies, IMS in one side providing the architecture to support the new wave of applications and services; JSLEE and Parlay/OSA APIs that provide a standard interface to enable communication between the network and the application layer; and Web Services technologies that are key in today's internet. All these standard technologies combined will provide a very strong platform to support the next generation of applications and services that include: voice, video, data, collaboration and personalization.