Pipeline

Knowledge Is Power

The New Promise: The Path to IMS from a Service Fulfillment Perspective

By Chun-Ling Woon and Bill Otto

The Promise of IMS

Since its inception in 1999 by the wireless standards body 3rd Generation Partnership Project (3GPP), IP multimedia subsystem (IMS) has evolved beyond the wireless world to embrace wireline as well. The convergence of voice, multimedia and mobile network technology over an IP-based infrastructure closes the gap between wireless and Internet technologies to provide end-users ubiquitous access of any IP service on any type of device. Ultimately, multiple networks will deliver multimedia applications in a standardized way.

Flash back to three years ago when IMS became a major movement. Engineers wanted to reinvent the network in order to facilitate network management. A wide range of vendors were jumping on the bandwagon and things became complicated due to the lack of synchronization and alignment, which resulted in longer roll-outs. Service providers tried to configure their products but it was difficult to activate and provision at the network level due to the diversity of hardware, software, and systems.

The new promise of IMS is to get everyone to join the movement and to build systems to communicate in the same way. Once that happens, network operators can quickly and cost-effectively launch a wide range of new services to their customers, providing additional revenue streams.

Understandably, there has been a lot of excitement and enthusiasm about IMS enabling carriers and other service providers to expand their offering across both packet-switched and circuit-switched networks. Because it is standards-based and uses an open interface, flexibility is inherently built in to support all interactive applications, and allow third party participation, as well. The days of proprietary, closed network architectures will be left behind, and standardized IP-based systems will be in place.

Current Situation

It sounds ideal, but it is imperative for network operators to overcome the following challenges that exist when integrating an IMS infrastructure:

·Disruption of existing services
·Lack of alignment with fulfillment and assurance systems
·Lack of proven economics for the investment
·Lack of interoperability between BSS and OSS subsystems

The disconnect with the IMS promise is that it simply did not go far enough to reach the end-user (i.e., consumers, businesses, etc.). Simply put, IMS is better received in context of service and network management but less so in the context of improving the customer experience.

From an end-user's point of view, how do I place an order from an IMS-enabled network? And why is this so great? The answer is that if we truly believe in the promise of IMS, a number of scenarios will happen. When you expand your product offering, the network will automatically recognize it. The ordering system will reconfigure itself. When a service is ordered it will be provided by/over the network in a fashion that meets the needs of the user with the quality of service that they

are expecting. At the end of the day, end users will ultimately have the freedom to communicate and interact with the rest of the world and utilize enhanced service offerings, regardless of the type of device that they are using or the networks that they are subscribed to. The IMS infrastructure simplifies the usability and accessibility of these enhanced services, but it is not living up to this promise today.

The Path to the Promise of IMS – How Are We Going to Get There?

It is now possible to deliver IMS-like capabilities while waiting for IMS to mature and become truly available.

Currently, the carrier world looks to product and service catalogs for information about product offerings. The product catalog provides the commercial product offerings available to the consumer and links to the specific services defined in the service catalog that form the product offering. This information is then passed on to a variety of OSS (inventory, activation, etc.) for implementation. Generally, these catalogs are not well integrated and synchronized and are lacking any information regarding the network.

A network catalog is required to optimize the delivery of the products and services to the customer. The network catalog identifies specific network capabilities, understands the specific network requirements to provide a service, validates the network resource availability, and, ultimately, implements any required configuration to deliver the service as desired. The network catalog must be dynamic, incorporating additional network resources, topology, configuration, and capacity changes as they are made in the network.

To illustrate this concept, imagine an end-user would like to find a recording of a past sporting event and download it. First, the user enters a request for what they are looking for. This is provided to an "agent." The agent will go to the network or other sources, locate the recording, and provide the end user with options on the quality, timeliness, and location of the recording they would like to receive. Examples of such options include high-definition (HD) or "normal" definition, streaming it to a mobile device, or downloading it to their laptop or home PVR for

viewing later in one hour or even six hours. The customer specifies the options, the content is delivered as required over the network, and the customer is billed. To deliver the content as requested, the network must be provisioned to provide the necessary bandwidth to handle the data transfer to meet the required service level.

In order for this agent to work, there has to be a product catalog, service catalog, and network catalog, within an IMS or IMS-like system. At best, today we have the product catalog and it is not seamlessly aligned with the service catalog. There also needs to be a logical layer on top of the network that identifies what resources are available at any point in time and is the network interface, the network catalog.

An IMS-like architecture requires rapid service introduction and provisioning, and connectivity from the point of origin to any user device. This means the ability to dynamically create service components that can be combined to create product/service offerings regardless of the network. Most operators have a service catalog that identifies the services that are available. Others may also have a product catalog that automates the process of distributing product changes across catalogs lying in multiple operations systems. Together, these components have the ability to create a unified dynamic catalog management architecture that integrates product definitions with the order capture and workflow processes responsible for service delivery.

A full catalog management solution works with published capabilities to minimize service provisioning errors. This means that service offerings are designed and delivery tasks are created for service fulfillment activities. Business rules can also be designed to automatically amend these service offerings based on customer capabilities and desires. However, to create IMS-like opportunities for service providers and end-users alike, there is still a critical component that is missing – the network catalog.

A systems integrator that specializes in network catalogs needs to be part of the solution implementation. They understand what the network is comprised of, what resources are available, the topology and the notion of policy at the enterprise level. Policy is required to support the service level agreements for various services. This is important when the consumer wants to access programming in HD, potentially streaming it in real-time, or downloading within an hour or within six hours. Policy dictates how the download will occur in terms of use-of-network resources. Policy may also dictate restrictions or capabilities based on a specific consumer's authorization details. Taking all of these factors into account, the network catalog will set-up and tear-down the capacity allocation and delivery mechanisms to enable the download.

The Solution

According to the Yankee Group, carrier operators need to maintain a customer centric-view of products and services to enable a centralized catalog strategy that links both OSS and BSS, and requires enabling a closed-loop provisioning process from order generation to order fulfillment.

It takes mechanisms connected to the network to allow the network catalog to be

constructed, mapped to the next catalog, and to implement end user demand. Begin by identifying what needs to be available in the service provider environment so that the mechanisms will populate these catalogs, then allow catalogs to be utilized and provide the required information, such as how to retrieve content and set up the bandwidth requirement to download it in the specified timeframe.

Trusted and knowledgeable solution providers combine their capabilities in product, service, and network catalogs in order to build an integrated system incrementally without disturbing the network.

There is no need to wait for IMS as the components required for IMS-like behavior already exist and are in place. The system will behave in the context of IMS not only from the value it obtains from the network, but also for the consumer of content and services.

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