PacketCable™ 2.0 & IMS

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About CableLabs
Founded in 1988 by members of the cable television industry, Cable Television Laboratories is a non-profit research and development consortium that is dedicated to pursuing new cable telecommunications technologies and to helping its cable operator members integrate those advancements into their business objectives. There are currently 48 member cable companies representing almost 71 million cable subscribers in North America, South America, and Europe.

About PacketCable 2.0
PacketCable 2.0 is a CableLabs specification effort designed to extend cable's real-time IP communication service architecture and to accelerate the convergence of voice, video, data, and mobility technologies. PacketCable 2.0 defines an architecture and a set of open interfaces that leverage emerging communications technologies, such as the IETF Session Initiation Protocol (SIP), to support the rapid introduction of new IP-based services onto the cable network.

PacketCable 2.0 is designed to support a broad range of services. As a set of specifications and technical reports, PacketCable 2.0 defines a base architecture, and the necessary components and generic requirements to meet a large number of applications and services. Specific applications and services will rely on this base architecture, but will be specified in separate releases. The base specifications should be able to accommodate all of these different applications and services with no or very few changes.

PacketCable 2.0 & IMS
Within the overall PacketCable 2.0 goal to leverage existing industry standards whenever possible, a specific objective is to align with the IMS architecture and specifications being developed by 3GPP. Specifically, PacketCable 2.0 will reuse many of the basic IMS components and interfaces. The primary motivation behind this design objective is to align with a set of standards that are widely supported by vendor products, and therefore, minimize the product development effort required to deploy PacketCable 2.0 networks.

While many of the components and interfaces defined in the IMS have broad applicability to the cable industry, it does not meet all of the needs of the cable industry. PacketCable 2.0 enhances IMS to support the unique technology requirements of the cable industry, and also addresses cable operator business and operating requirements.

Some of the major PacketCable 2.0 enhancements to the IMS include:

- Support for Quality Of Service for IMS-based applications on Cable access networks, leveraging the PacketCable Multimedia architecture;
- Support for signaling and media traversal of Network Address Translation (NAT) and Firewall (FW) devices, based on IETF mechanisms;
- Support for the ability to uniquely identify and communicate with an individual when multiple UEs are registered under the same Public Identity;
- Support for additional access signaling security and UE authentication mechanisms for PacketCable 2.0 UEs;
- Support for provisioning, activation, configuration, and management of PacketCable 2.0 UEs.

CableLabs is dedicated to working with 3GPP to contribute these enhancements back into the IMS. PacketCable 2.0 will align with newer versions of the IMS specifications as these enhancements are integrated into the IMS.