IMS LTE Developer Suite

Advanced building blocks for developing IMS LTE-compliant products

Softil is proud to offer a complete suite of IMS LTE developer solutions to meet the needs of IMS LTE client and server developers.

IMS-based services enable multi-mode communications, including voice, text, location, pictures and video, or any combination of these, in a highly personalized and secure manner. As a result, IMS is perceived as the cornerstone of the industry's fixed/mobile convergence path.

With the rise of the all-IP LTE network revolution as the foundation for 4G networks, IMS is the industry's choice for next- generation network deployments. The IMS network is defined by a set of standards established by the 3GPP, the IETF and TISPAN.

Softil's IMS LTE Developer Suite includes toolkits and products that provide all the necessary signaling and media protocols to easily and cost-effectively meet the IMS LTE challenge for all IMS LTE specifications, including GSMA VoLTE, ViLTE and RCS.

Protocol Toolkits

IMS SIP Developer Suite

The award-winning IMS SIP Developer Suite is a powerful and highly versatile set of tools, designed to dramatically accelerate development of SIP applications. It is comprised of a suite of toolkits, add-ons and testing tools that enable developers to combine the necessary components for building an ideal development environment for an application's specific needs.

The IMS SIP Developer Suite:

- Delivers high performance and provides multiple API layers for full user control and flexibility.
- Is comprised of building blocks that simplify and dramatically reduce development time of all IMS SIP applications.
- Has a dedicated development package for LTE-compliant devices, in accordance with all GSMA VoLTE specifications.
- Complies with the GSMA RCS, an industry effort focused on using IMS for providing mobile phone communication services.

IMS Megaco/H.248 Toolkit

Designed for decomposed gateway architectures, Softil's highly scalable Megaco/H.248 Toolkit is a set of software modules for developing Media Gateways or Media Gateway Controller applications. The IMS Megaco/H.248 Toolkit is fully compliant with both 3GPP and ETSI/TISPAN IMS architectures, enabling development of the 3GPP IMS architecture elements MGCF/IMMGW and MRFC/MRFP, and the ETSI/TISPAN architecture elements AGW/RGW and SPDF/BGF.

IMS Diameter Toolkit

The Diameter Toolkit enables development of IMS Diameter-compliant network elements. Implementing all major IMS interfaces, it allows seamless integration with IMS-based IP networks. Standards-based, the IMS Diameter Toolkit is highly reliable and delivers superior performance.

XDM Toolkit

The XDM, XML Document Management Toolkit provides a standard method that makes user-specific, service-related information accessible to the service enablers that require it - for example, Push-to-talk over Cellular (PoC), Mission Critical Communication over LTE, and Instant Messaging.

The XDM Stack is designed in compliance with OMA XML Document Management V2.0 specifications for developing XDM clients.
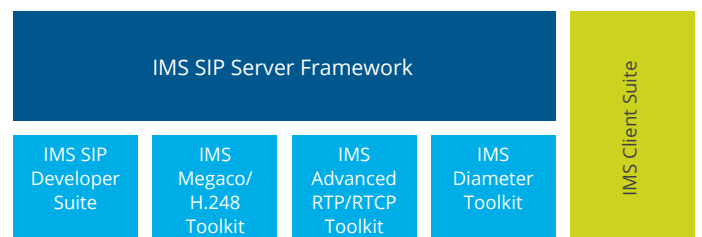
MSRP Toolkit

The MSRP Toolkit is a software development tool designed for building MSRP-enabled devices. The Message Session Relay Protocol enables point-to-point messaging and file transfer, and handles messages as media. It is part of the OMA SIMPLE standard.

The MSRP Stack enables development of OMA and RCS complaint Instant Messaging applications.

IMS Advanced RTP/RTCP Toolkit

When IMS requires audio and video, Softil's Advanced RTP Toolkit is an essential part of the solution. With its support for PoC-specific signaling and extended reports, the Advanced RTP Toolkit is capable of handling IMS-related services. The Advanced RTP Toolkit comes with a large set of supported codec payloads, including AMR, AMR-WB, G.7xx, MPEG1 and 2, H.263, MPEG4, H.264, and the option to add additional codecs.

IMS SIP Server Framework				IMS Client Suite
IMS SIP Developer Suite	IMS Megaco/ H.248 Toolkit	IMS Advanced RTP/RTCP Toolkit	IMS Diameter Toolkit	

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Protocol Toolkits

- IMS SIP Developer Suite
  - MS SIP Toolkit
  - XDM Toolkit
  - MSRP Toolkit

- ICE/STUN/TURN NAT Traversal Toolkits
- IMS Megaco/H.248 Toolkit
- IMS Diameter Toolkit
- IMS Advanced-RTP/RTCP Toolkit

IMS SIP Server Platform

IMS Client Suite

IMS SIP Server Framework

The IMS SIP Server Framework is a software framework that implements all the necessary building blocks for SIP servers and supports rapid and effective development of IMS applications. Based on Softil's market-leading IMS SIP Protocol Toolkit, the IMS SIP Server Platform implements a proxy server engine, B2BUA engine, IMS presence engine, redirect server component, registrar server and general events server engine. IMS SIP server application developers can use the IMS SIP Server Platform to develop AS, (x)CSCFs, BGCF, SEG and other IMS entities.

IMS/NGN Network Architecture

The IMS network separates between the access plane and the user plane. The access plane can be a radio access network (RAN) or any other access layer. In IMS, the user plane is in fact a Packet Switching ne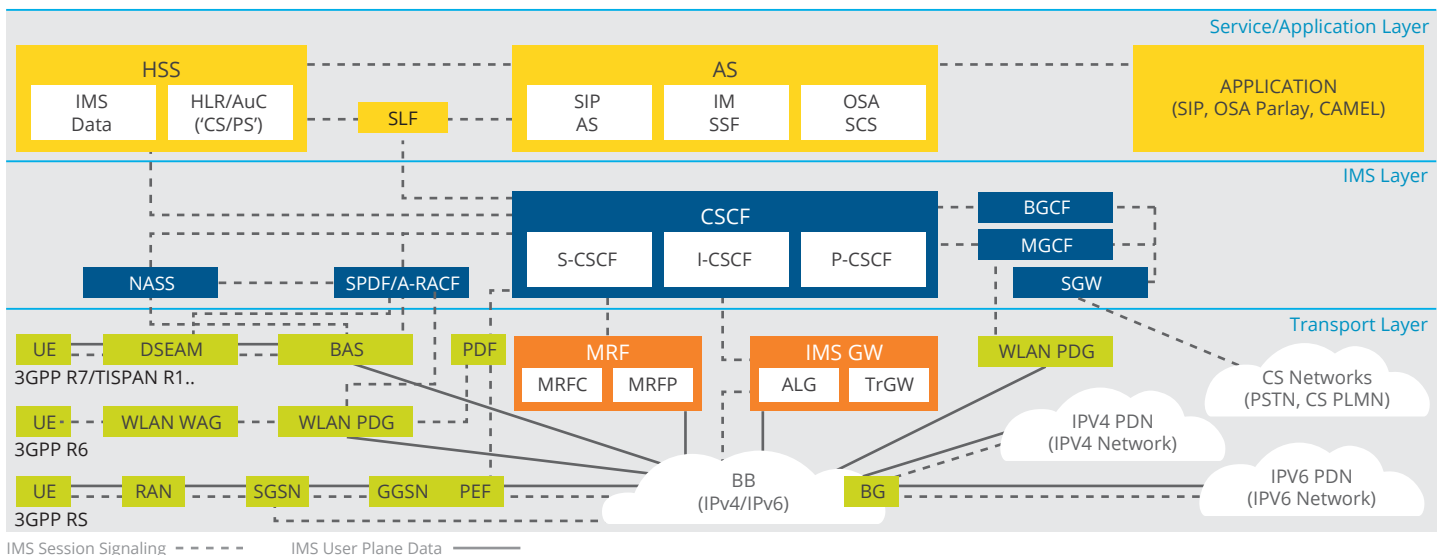twork. This level is the transportation plane for all media and signaling within and outside the IMS network, such as LTE, Fixed Line, Cable, or Wireless. Above the user plane is the control plane. Entities in this layer control the media streams and signaling links between other entities – for example, call control and media control. The application level, above the user level, handles delivery of advanced services that require service logic beyond session setup/teardown.

IMS separates between entities that provide different network services, as opposed to earlier architectures that lacked this separation. IMS defines unique network entities for call control, service control, resource control, media control and packet switch control.

IMS Client Suite

Part of Softil's IMS Developer Suite, the IMS Client Suite is a complete package of IMS client-side building blocks designed to simplify and dramatically reduce development time of IMS client applications. This complete set of versatile development tools is OS independent, allowing seamless porting between platforms. The small footprint and modular and extendable platform allows developers to mix and match components and reuse common building blocks, thus reducing development time significantly. In addition, the high-level APIs hide the inherent complexity of IMS and SIP, reducing development time even further.

IMS Architecture - Layered Approach

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