

# ***References & Acronyms***

**Niklas Blum**  
**Fraunhofer FOKUS**  
**blum@fokus.fraunhofer.de**

# IMS References

TS	23.228	Architecture	IP Multimedia Subsystem (IMS); Stage 2	S2
TS	33.203	Security	Access Security (& integrity protection) for IP-based Services”, Stage 2	S3
TS	33.210	Security	Netw. domain sec.; IP network layer security (sec of SIP signalling between network nodes)	S3
TS	23.218	Call Control	IP Multimedia (IM) session handling; IM call model; Stage 2	N1
TS	24.228	Call Control	Signalling flows for the IMS Call Control based on SIP and SDP; Stage 3	N1
TS	24.229	Call Control	IP Multimedia Call Control Protocol based on SIP and SDP; Stage 3	N1
TS	26.235	User plane	Packet Switched Conversational Multimedia Applications; Default codecs	S4
TS	26.236	User plane	Packet Switched Conversational Multimedia Applications; Transport protocols	S4
TS	29.162	Interworking	Interworking between the IM CN subsystem and IP networks	N3
TS	29.163	Interworking	Interworking between the IM CN subsystem and CS networks	N3
TS	23.278	Service Logic	CAMEL - IP Multimedia System (IMS) interworking; Stage 2	N2
TS	29.278	Service Logic	CAMEL Application Part (CAP) specification for IP Multimedia Subsystems (IMS)	N2
TS	29.228	User data & interfaces	IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents	N4
TS	29.229	User data & interfaces	Cx and Dx interfaces (based on Diameter) Protocol details	N4
TS	29.328	User data & interfaces	IP Multimedia Subsystem (IMS) Sh interface signalling flows and message contents	N4
TS	29.329	User data & interfaces	Sh interface based on the Diameter protocol	N4
TS	22.115	Charging	Charging & Billing, Stage 1	S5
TS	23.815	Charging	Charging implications of IMS architecture	S2/S5
TS	32.225	Charging	Charging data description for the IMS - Rel 5	S5
TS	32.260	Charging	IMS Charging - Rel 6	

# Acronyms

## Interfaces and Reference Points:

- **Cx** Reference Point between a CSCF and an HSS.
- **Dx** Reference Point between an I-CSCF and an SLF.
- **Gi** Reference point between GPRS and an external packet data network
- **Gm** Reference Point between a UE and a P-CSCF.
- **ISC** Reference Point between a CSCF and an Application Server.
- **Iu** Interface between the RNS and the core network. It is also considered as a reference point.
- **Ix** Reference Point between IMS ALG and NA(P)T-PT
- **Le** Reference Point between an AS and a GMLC
- **Mb** Reference Point to IPv6 network services.
- **Mg** Reference Point between an MGCF and a CSCF.
- **Mi** Reference Point between a CSCF and a BGCF.
- **Mj** Reference Point between a BGCF and an MGCF.
- **Mk** Reference Point between a BGCF and another BGCF.
- **Mm** Reference Point between a CSCF and an IP multimedia network.
- **Mr** Reference Point between a CSCF and an MRFC.
- **Mw** Reference Point between a CSCF and another CSCF.
- **Mx** Reference Point between a CSCF and IMS ALG
- **Sh** Reference Point between an AS (SIP-AS or OSA-CSCF) and an HSS.
- **Si** Reference Point between an IM-SSF and an HSS.
- **Ut** Reference Point between UE and an Application Server.

## Abbreviations:

- **AMR** Adaptive Multi-rate
- **API** Application Program Interface
- **AS** Application Server
- **BCSM** Basic Call State Model
- **BG** Border Gateway
- **BGCF** Breakout Gateway Control Function
- **BS** Bearer Service
- **CAMEL** Customised Application Mobile Enhanced Logic
- **CAP** Camel Application Part
- **CDR** Charging Data Record
- **CN** Core Network
- **CPL** Call Processing Language
- **CS** Circuit Switched
- **CSCF** Call Session Control Function
- **CSE** CAMEL Service Environment
- **DHCP** Dynamic Host Configuration Protocol
- **DNS** Domain Name System
- **ENUM** E.164 Number
- **GGSN** Gateway GPRS Support Node
- **GMLC** Gateway Mobile Location Centre
- **GUP** Generic User Profile
- **HSS** Home Subscriber Server
- **I-CSCF** Interrogating-CSCF
- **IETF** Internet Engineering Task Force
- **IM** IP Multimedia
- **IM CN SS** IP Multimedia Core Network Subsystem
- **IMS** IP Multimedia Core Network Subsystem
- **IMS ALG** IMS Application Level Gateway
- **IMSI** International Mobile Subscriber Identifier
- **IP** Internet Protocol
- **IPv4** Internet Protocol version 4

# Acronyms

## Abbreviations:

- **IPv6** Internet Protocol version 6
- **IP-CAN** IP-Connectivity Access Network
- **ISDN** Integrated Services Digital Network
- **ISIM** IMS SIM
- **ISP** Internet Service Provider
- **ISUP** ISDN User Part
- **MAP** Mobile Application Part
- **MGCF** Media Gateway Control Function
- **MGF** Media Gateway Function
- **MMD** Multimedia Domain
- **MRF** Media Resource Function
- **NAI** Network Access Identifier
- **NA(P)T-PT Translation** Network Address (Port-Multiplexing) Translation-Protocol Translation
- **OSA** Open Services Architecture
- **P-CSCF** Proxy-CSCF
- **PDF** Policy Decision Function
- **PDN** Packet Data Network
- **PDP** Packet Data Protocol e.g., IP
- **PEF** Policy Enforcement Function
- **PLMN** Public Land Mobile Network
- **PSI** Public Service Identity
- **PSTN** Public Switched Telephone Network
- **QoS** Quality of Service
- **RAB** Radio Access Bearer
- **RFC** Request for Comments
- **SCS** Service Capability Server
- **S-CSCF** Serving-CSCF
- **SGSN** Serving GPRS Support Node
- **SLF** Subscription Locator Function
- **SSF** Service Switching Function

## Abbreviations:

- **SS7** Signalling System 7
- **SIM** Subscriber Identity Module
- **SIP** Session Initiation Protocol
- **SGW** Signalling Gateway
- **SGF** Signalling Gateway Funktion
- **THIG** Topology Hiding Inter-network Gateway
- **TrGW** Translation Gateway
- **UE** User Equipment
- **UMTS** Universal Mobile Telecommunications System
- **URL** Universal Resource Locator
- **USIM** UMTS SIM

## FOKUS Specials:

- **OCS** Open Communication Server based on Parlay
- **OCX** Open Communication Server based on Parlay X
- **SCE** Service Creation Environment
- **SER** SIP Express Router
- **SEMS** SIP Express Media Server
- **DISC** Diameter Server Client
- **SM** Simple Messenger
- **MDDA** Mobile Directory Dial Assistance
- **PCM** Personal Call Manager
- **DocA** Doc Avatar
- **MSNS** Multimedia Streaming Notification Service
- **EHS** Enhanced Hotline Service
- **P2M** Push To Multimedia
  
- **FOKUS** Fraunhofer Institut für Offene Kommunikations Systeme