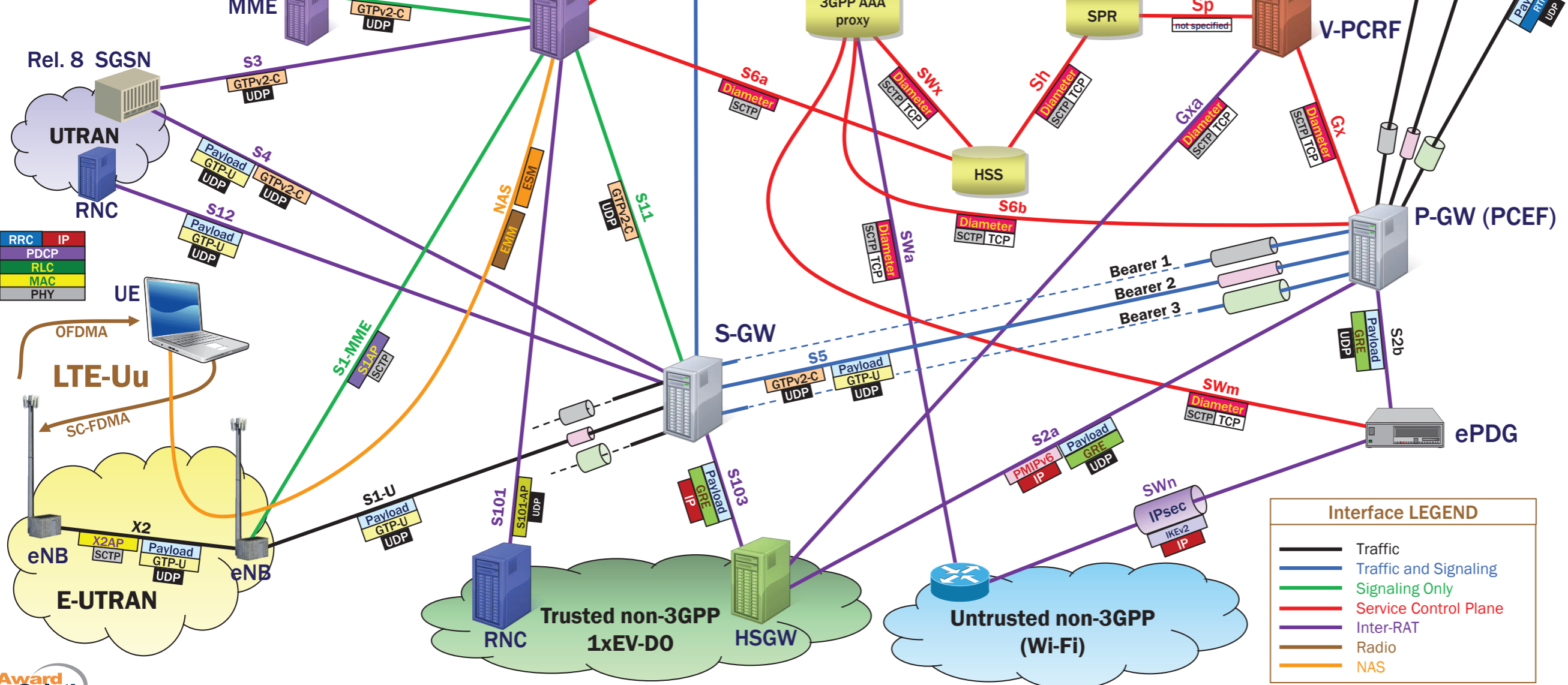


LTE NETWORK REFERENCE

PROTOCOLS and their SPECIFICATIONS		
Diameter	Diameter	RFC 3588, RFC 3589, RFC 4006, RFC 4740
EMM	EMM	EPS Mobility Management, 24.301, Section 5
ESM	ESM	EPS Session Management, 24.301, Section 6
GRE	GRE	Generic Routing Encapsulation, RFC 2784, RFC 2890
GTPv2-C	GTPv2-C	GPRS Tunneling Protocol ver. 2 Control Plane, 29.274
GTP-U	GTP-U	GPRS Tunneling Protocol User Plane, 29.281
IKEv2	IKEv2	Internet Key Exchange ver. 2, RFC 4306
IP	IP	Internet Protocol, RFC 791
MAC	MAC	Medium Access Control, 36.321
PDCP	PDCP	Packet Data Convergence Protocol, 36.323
PHY	PHY	Physical Layer for the Radio Link, 36.302
PMIPv6	PMIPv6	Proxy Mobile IP version 6, 23.402, 29.275
RLC	RLC	Radio Link Control, 36.322
RRC	RRC	Radio Resource Control, 36.331
RTP	RTP	Real-Time Protocol Transport Protocol, RFC 3550
S1AP	S1AP	S1 Application Part, 36.413
S101-AP	S101-AP	S101 Application Part, 29.276, 29.274
SCTP	SCTP	Streaming Control Transmission Protocol, RFC 3708
SIP	SIP	Session Initiation Protocol, RFC 3261
TCP	TCP	Transmission Control Protocol, RFC 793
UDP	UDP	User Datagram Protocol, RFC 768
X2AP	X2AP	X2 Application Part, 36.423
not specified	Not Specified	(proprietary)

H-PLMN

V-PLMN



3GPP ACRONYMS and NODES	
3GPP	Third Generation Partnership Project
AAA	Authentication, Authorization and Accounting
CPE	Customer Premise Equipment
eHRPD	Evolved High Rate Packet Data
eNB	Evolved Node B
eNodeB	Evolved Node B
ePDG	Evolved Packet Data Gateway
EV-DO RNC	Evolved Data Optimized RNC (eHRPD Access)
E-UTRAN	Evolved UTRAN
GERAN	GSM-EDGE Radio Access Network
H-PLMN	Home PLMN
HSGW	HRPD Serving Gateway
HSS	Home Subscriber Server
IMS	IP Multimedia Subsystem
LTE	Long Term Evolution
MME	Mobility Management Entity
NAS	Non-Access Stratum
PCC	Policy and Charging Control
PCEF	Policy and Charging Enforcement Function
PCRF	Policy and Charging Rules Function
P-CSCF	Proxy Call Session Control Function
PDN	Packet Data Network
P-GW	PDN Gateway
PLMN	Public Land Mobile Network
PSTN	Public Switched Telephone Network
RAT	Radio Access Technology
RNC	Radio Network Controller
SGSN	Serving GPRS Support Node
S-GW	Serving Gateway
SPR	Subscription Profile Repository
UE	User Equipment
UTRAN	Universal Terrestrial Radio Access Network
V-PLMN	Visited PLMN

3GPP INTERFACES and TECHNICAL SPECIFICATIONS		
Interface	Nodes	Technical Specification
S1-MME	eNB ↔ MME	36.413
S1-U	eNB ↔ S-GW	36.414
S2a	HSGW ↔ P-GW	23.402, 29.275
S2b	P-GW ↔ ePDG	23.402, 29.275
S3	MME ↔ Rel. 8 SGSN	29.274
S4	S-GW ↔ Rel. 8 SGSN	29.274
S5/S8	S-GW ↔ P-GW	29.274 (control plane) 29.281 (user plane)
S6a	HSS ↔ MME	29.272
S6b	3GPP AAA ↔ P-GW	29.273
S9	PCRF ↔ PCRF	29.215
S10	MME ↔ MME	29.274
S11	MME ↔ S-GW	29.274
S12	RNC ↔ S-GW	29.281
S16	SGSN ↔ SGSN	29.274
S101	MME ↔ EV-DO RNC	29.276, 29.274
S103	S-GW ↔ HSGW	29.276
X2	eNB ↔ eNB	36.423 (control plane) 36.424 (user plane)
LTE-Uu	UE ↔ eNB	36.331 et. al.
Gx	PCRF ↔ PCEF (P-GW)	29.212
Rx	AF ↔ PCRF	29.214
SGi	P-GW ↔ Internet	29.061
Sh	HSS ↔ PCRF	29.328
Sp	PCRF ↔ SPR	29.203
SWa	AAA ↔ Untrusted Access	29.234
SWd	AAA ↔ 3GPP AAA	29.234
SWm	3GPP AAA ↔ ePDG	29.234
SWn	ePDG ↔ Untrusted Access	29.234
SWx	HSS ↔ 3GPP AAA	29.273

Interface LEGEND	
	Traffic
	Traffic and Signaling
	Signaling Only
	Service Control Plane
	Inter-RAT
	Radio
	NAS