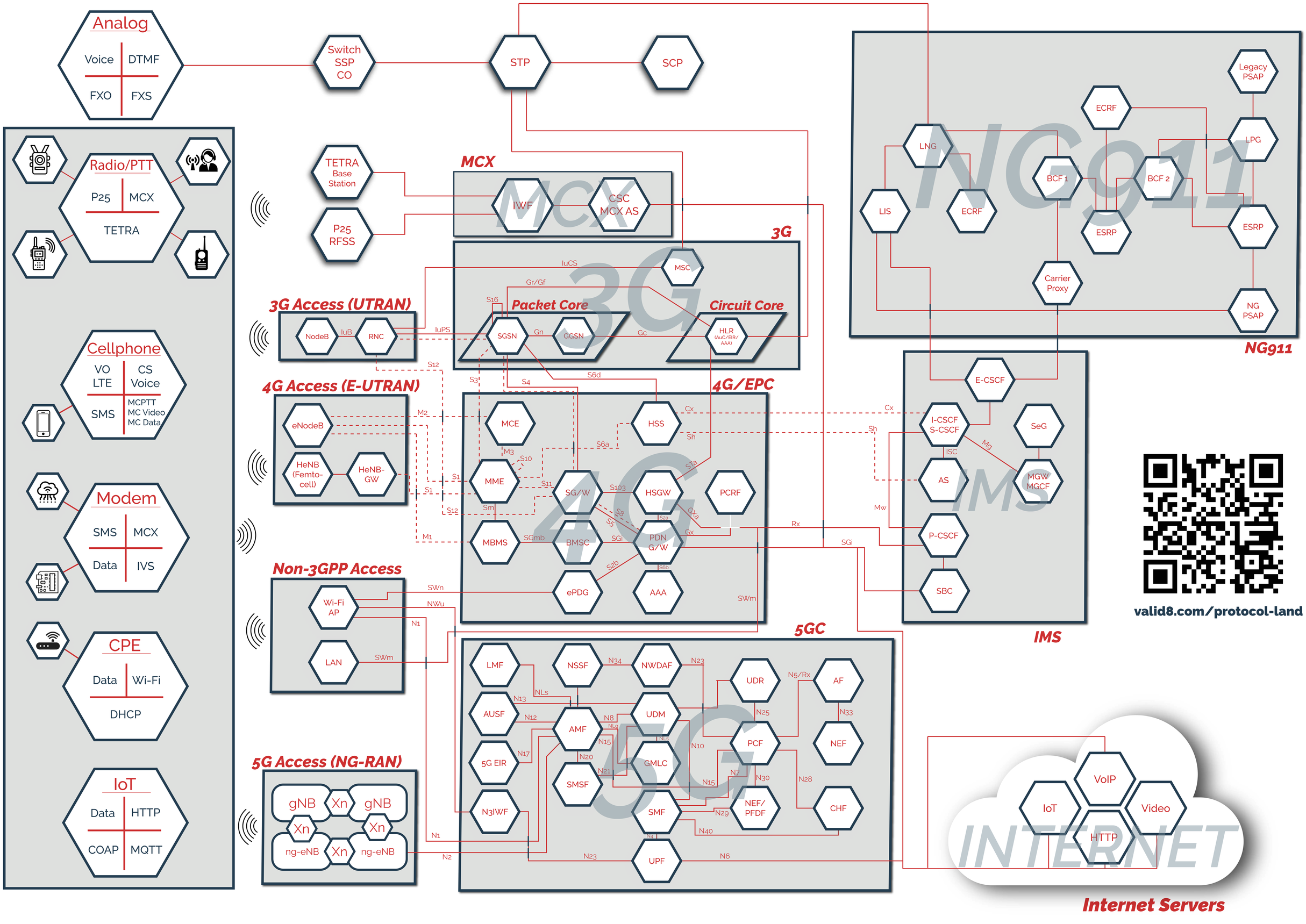
Analog
Voice
DTMF
FXO
FXS
Switch SSP CO
STP
SCP
Radio/PTT
P25
MCX
TETRA
Cellphone
VO LTE
CS Voice
SMS
MCPTT
MC Video
MC Data
Modem
SMS
MCX
Data
IVS
CPE
Data
Wi-Fi
DHCP
IoT
Data
HTTP
COAP
MQTT
TETRA Base Station
P25 RFSS
MCX
IWF
CSC MCX AS
3G
MSC
IuCS
Gr/Gf
3G Access (UTRAN)
NodeB
IuB
RNC
IuPS
Packet Core
SGSN
Gn
GGSN
Gc
Circuit Core
HLR (AuC/EIR/AAA)
S16
S12
S6d
4G Access (E-UTRAN)
eNodeB
HeNB (Femto-cell)
HeNB-GW
M2
S1
S12
4G/EPC
MCE
M3
S10
MME
Sm
S11
SG/W
S103
HSS
Cx
Sh
S6a
HSGW
S2a
PCRF
S5
S8
S5
S2b
S6b
MBMS
SGmb
BMSC
SGi
PDN G/W
ePDG
AAA
M1
Rx
SGi
SWm
Non-3GPP Access
Wi-Fi AP
LAN
SWn
NWu
N1
SWm
5G Access (NG-RAN)
gNB
Xn
gNB
Xn
Xn
ng-eNB
Xn
ng-eNB
N1
N2
5GC
LMF
NSSF
N34
NWDAF
N23
UDR
N5/Rx
AF
AUSF
N13
NLs
N12
AMF
N8
UDM
N25
N33
5G EIR
N17
N15
N20
GMLC
N10
PCF
NEF
SMSF
N21
N7
N30
N28
N3IWF
SMF
N29
NEF/ PFDF
CHF
N40
N4
UPF
N23
N6
NG911
Legacy PSAP
ECRF
LPG
LNG
BCF 1
BCF 2
LIS
ECRF
ESRP
ESRP
Carrier Proxy
NG PSAP
IMS
E-CSCF
I-CSCF S-CSCF
SeG
Cx
Sh
Mg
ISC
AS
MGW MGCF
Mw
P-CSCF
SBC
valid8.com/protocol-land
INTERNET
VoIP
IoT
Video
HTTP
Internet Servers