

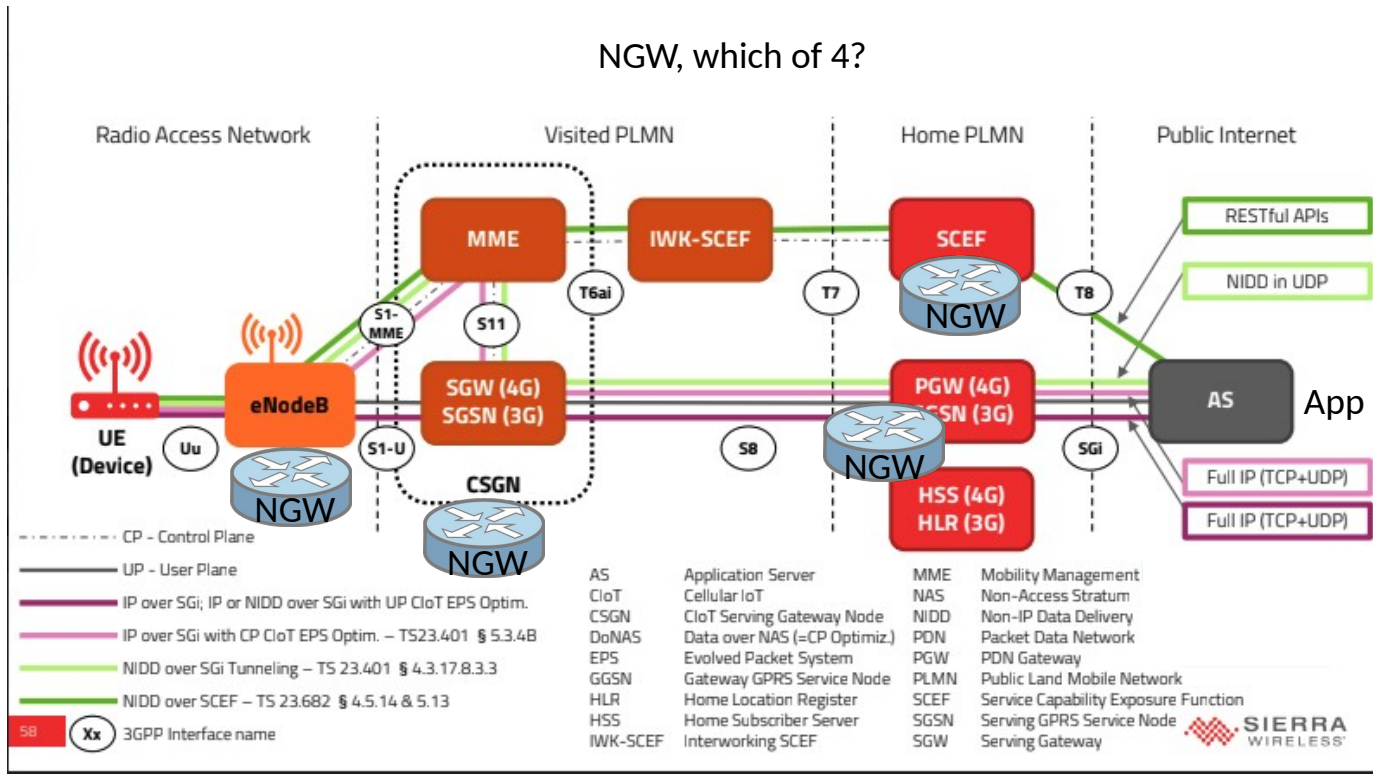
draft-ietf-lpwan-schc-over-nbiot-03

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NB-IoT Network



UseCase1: IP based Data Transmission

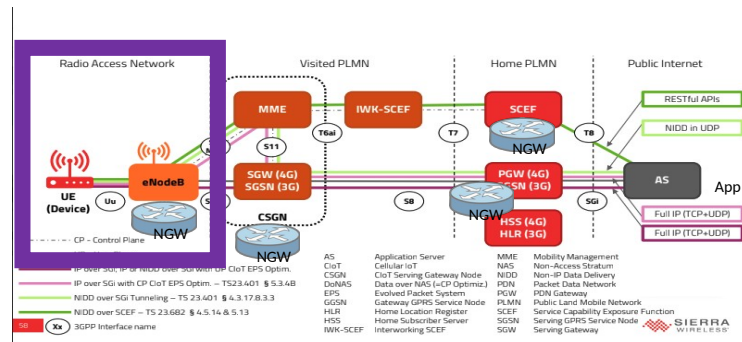
- SCHC over User Plane
 - Data transport
 - SCHC Compression/Decompression as RoHC
 - No SCHC Fragmentation
 - No major changes in the 3GPP specification

IP
PDCP (SCHC)
RLC
MAC
PHY

UE
Device

PDCP (SCHC)	GTP-U
RLC	UDP/IP
MAC	L2
PHY	PHY

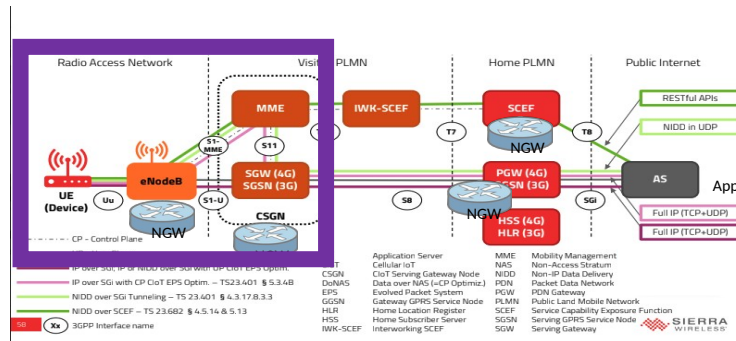
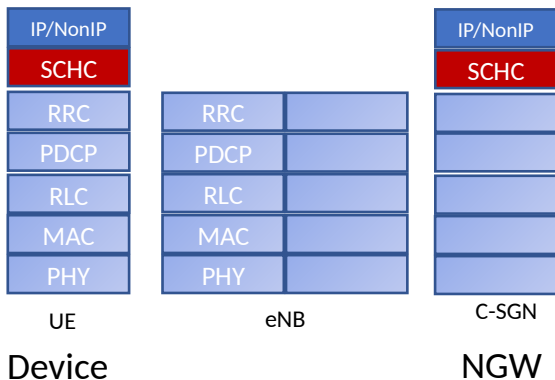
eNB
NGW



- Rule ID dynamically set
- Rule ID up to 9 bits
- No Fragmentation
- MAX_PKT_SIZE = 1 byte

UseCase2: IP based Data Transmission

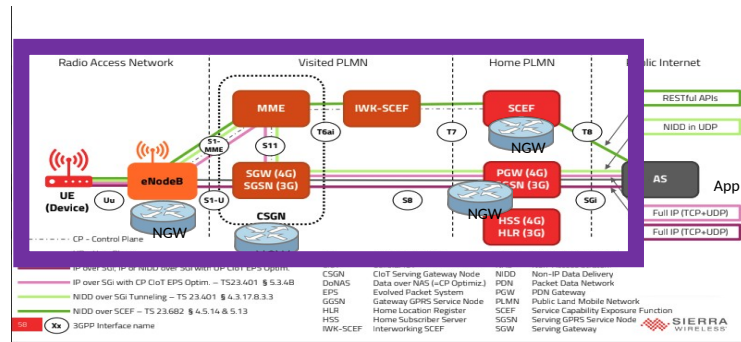
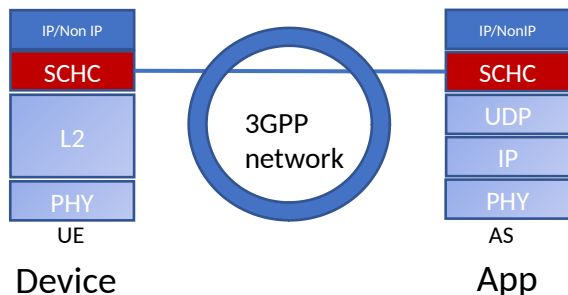
- SCHC over Control Plane (DoNAS)
 - Data transport over signaling network
 - SCHC Compression/Decompression
 - Small quantities of data



- Rule ID dynamically set
- Rule ID up to 9 bits
- Fragmentation may be used
- MAX_PCKT_SIZE = 1 byte

Non-IP based Data Transmission

- E2E transmission
 - SCHC in Application layer
 - Context is handled by the application layer



- Rule ID dynamically set
- Rule ID up to 9 bits
- Max_Pckt_Size = 1358 bytes
- Fragmentation may be used

Fragmentation Configuration

- Use of ACK_on_Error mode
- The Transfer Block
 - From 16 bits to 1000 bits varying of 16 bits
 - Header needs to be multiple of 4 bits
 - When Fragmenting Tiles may keep a fixed size of 4 or 8 bits (avoid pad)
 - 2 Configuration
 - 8-bits header size (<300 bits):
 - RuleID 3 bits
 - Dtag 1 bit
 - FCN 3 bits
 - W 1 bit
 - 16-bits header size (>300bits):
 - RuleID 8-10 bits
 - Dtag 1 or 2 bits
 - FCN 3 bits
 - W 2 or 3 bits

Cont. Parameters

- Timers
 - Following the TS24.008 for power consumption
 - The range goes from 1 hour to 10 hours
 - Inactivity timer at the range
 - Retransmission timer below the range

Thank you

- Questions?
- Reviewers?

- L-C?