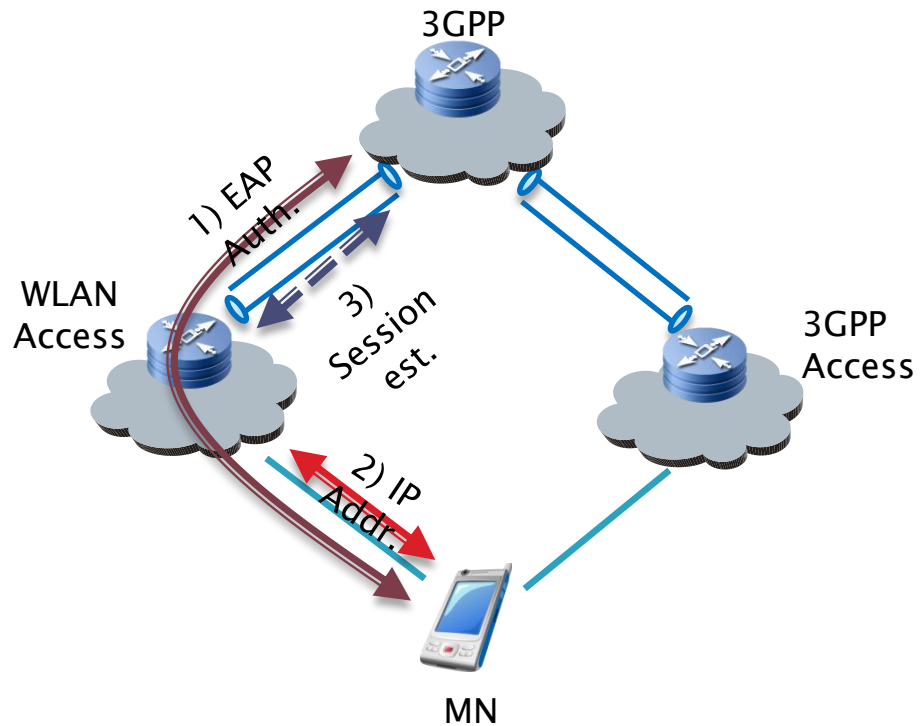


# DHCP Options for 3GPP Service

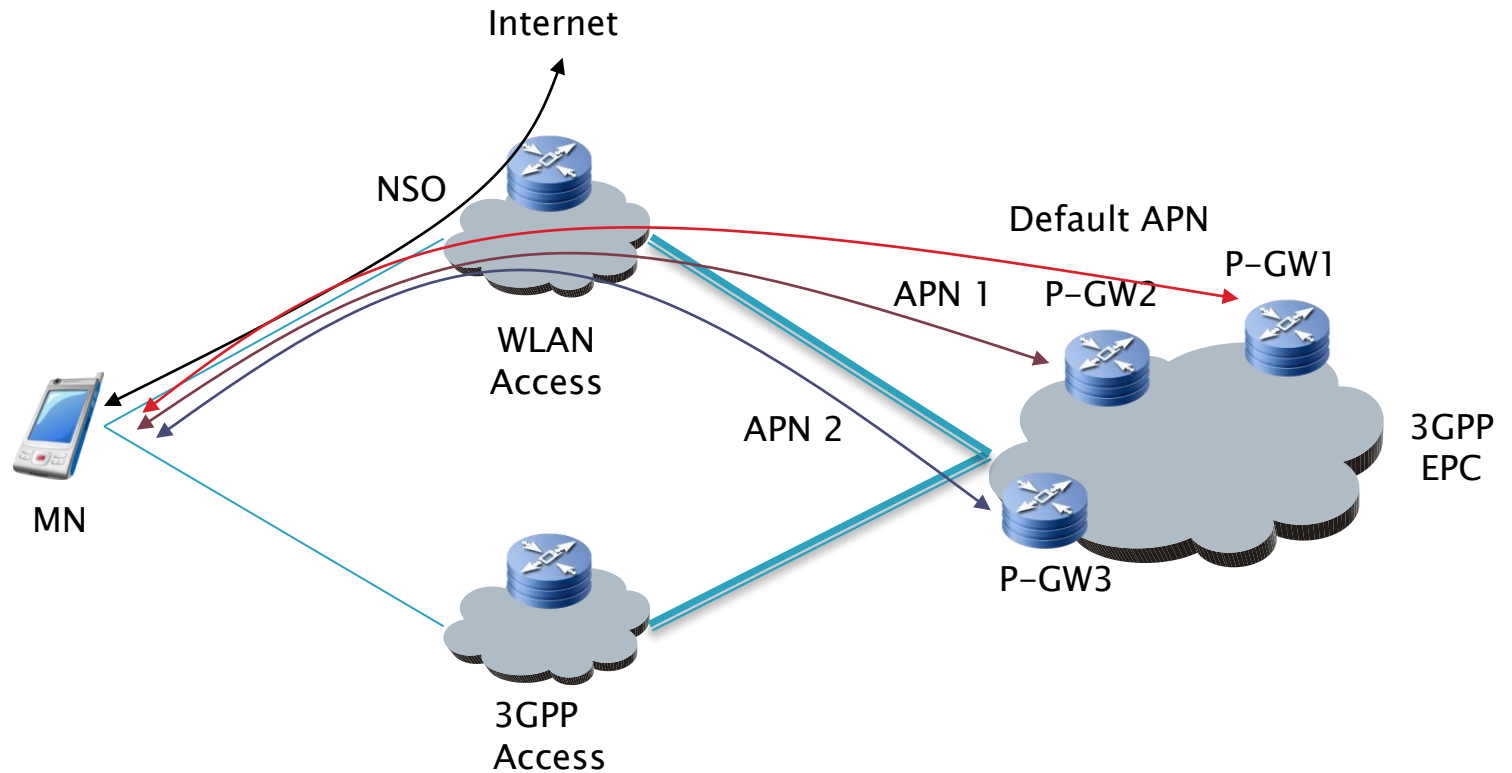
Yangwei Tu, 2012



# Background



# Motivation



Note: 3GPP TR23.852 SaMOG currently works on this scenario.

# Identified Problem (1 / 2)

## Problem Statement#1:

During MN access 3GPP EPC through non-3GPP, specific APN (Access Point Name) is needed to be identified for setting up the type of connectivity based on following consideration:

- ▶ Identify the target PDN GW based on APN and other information ;
- ▶ Indication of IP addressing type (e.g. IPv4, IPv6, IPv4/IPv6) requested by MN from the PDN GW, and other information.

Conclusion1: MN sends requested APN to trusted non-3GPP Access in the appropriate DHCPv4 and/or DHCPv6 request

# Identified Problem (2/2)

## Problem Statement#2:

Two types of connectivity for the MN over trusted non-3GPP access network:

- ▶ Offloading traffic over non-3GPP access network
- ▶ Routing traffic to EPC over non-3GPP access network

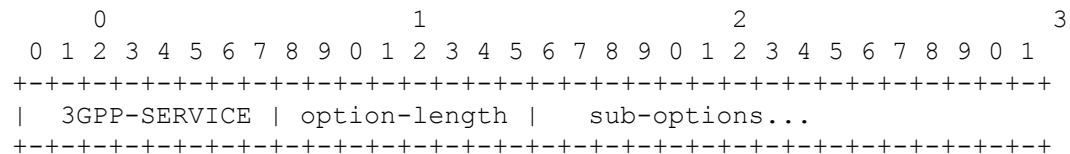
## Conclusion:

- MN needs to indicate Non Seamless Offload or EPC routed traffic when accessing to trusted non-3GPP access network in DHCP message

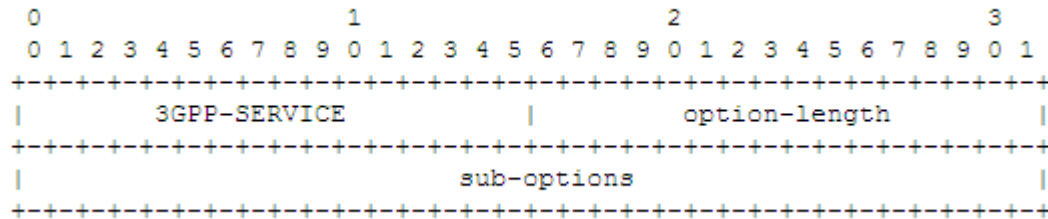
# Initial idea for addressing issue

- ▶ 3GPP-Service option : A new option is defined in DHCPv4 and DHCPv6 messages which are exchanged between MN and trusted non-3GPP access.

- DHCPv4:



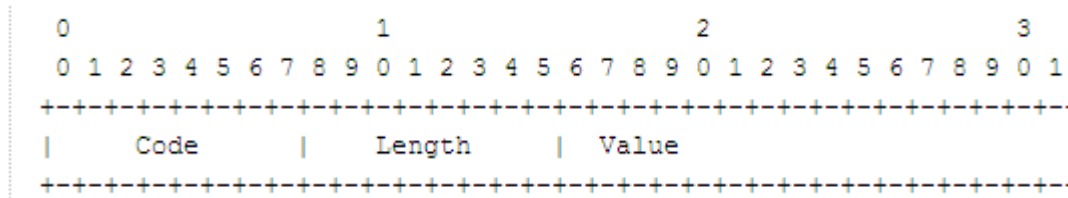
- DHCPv6:



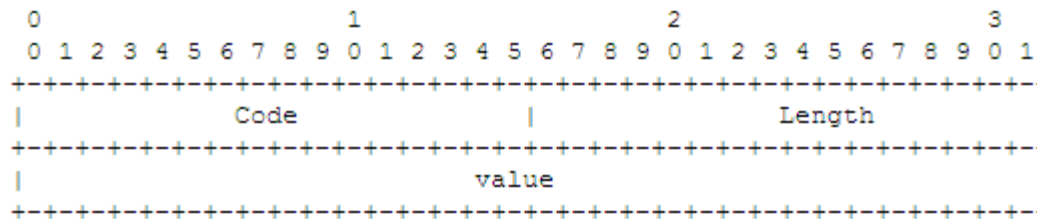
option-code	3GPP-Service (TBD)
option-length	The number of octets in the option, minimum 1.
Sub-options	The “3GPP-Service” Option may contain one or more Sub-options further defined in this document

## 3GPP-APN Sub-option: APN is defined in 3GPP-Service option .

- DHCPv4:



- DHCPv6:



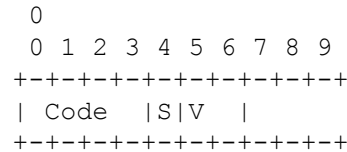
Code            3GPP-APN(TBD).

Length         The number of octets in the option, minimum 1.

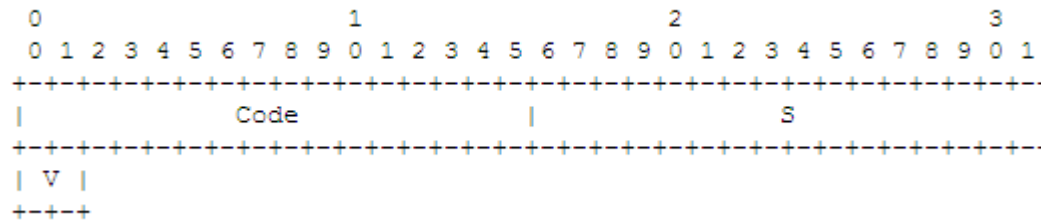
Value          The APN value, as defined in 3GPP TS 24.008 [TS24008] section 10.5.6.1

Non Seamless WLAN Offload (3GPP-NSO) Sub-option : 3GPP-NSO is defined in 3GPP-Service option.

- DHCPv4:



- DHCPv6



Code 3GPP-Service-Type (TBD).

S Bit 4 of octet 1 is spare and shall be coded as zero.

V The 3GPP-Service-Type value, the definition is as follows,

Bits 0 1

0 1 NSO

0 0 EPC

All other values are reserved.



# Next steps

- ▶ Working group agrees on the problem statements and extend DHCP support for these two scenarios.