

# Mapping PMIP QoS to WiFi Networks

(draft-kaippallimalil-netext-pmip-qos-wifi-01)

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# Updates from version-00 to 01

Revision to address comments, questions on version-00:

- QoS Mechanism description (chapter 2)
  - no changes
- Policy Provisioning Architecture (chapter 3)
  - revision to be more inline with PMIP QoS
- Connections and QoS Mapping (chapter 4)
  - new content to address questions from last meeting.
- PMIP – 802.11e mapping
  - no changes
- Next Steps section

# Why do we need per user QoS in AP?

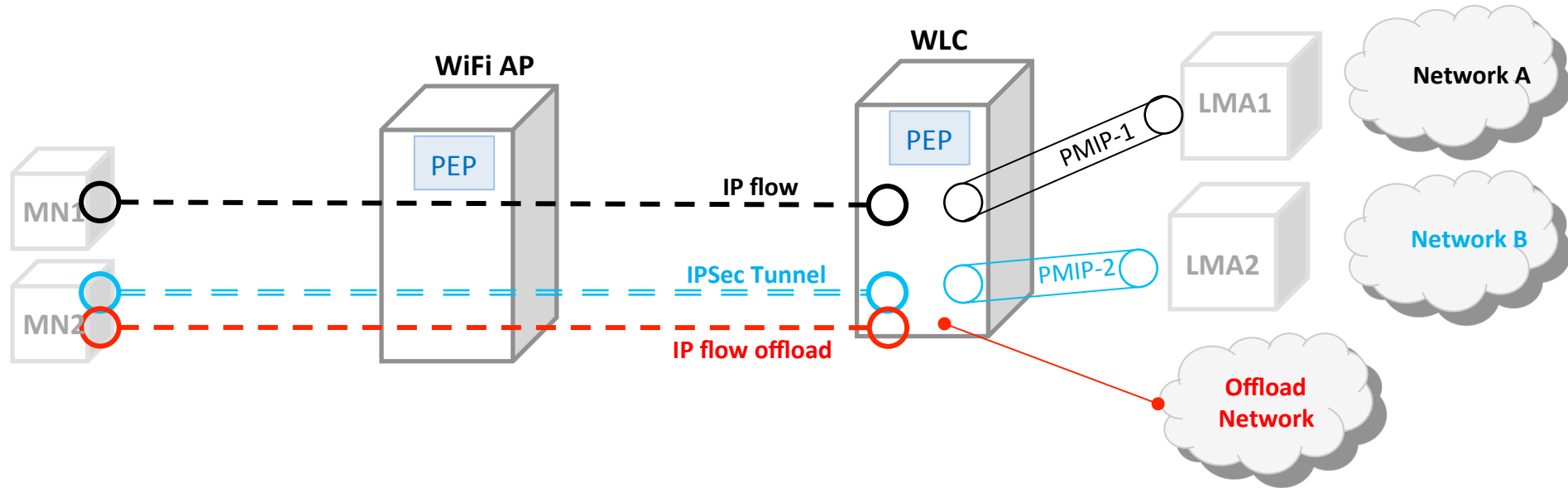
- WiFi radio is a limited resource and has to be managed to achieve better and fair utilization.  
For example, during WiFi radio congestion or for services like VoIP, per user/flow scheduling and policing can utilize the scarce resources better.
- QoS Policies may be statically configured in WiFi AP on per service basis. However, it cannot differentiate per user.
- Per user QoS policies for PMIP mobile sessions between MAG – LMA are available. DSCP of these flows can be used to prioritize flows at WiFi AP. However, other per user information (ARP, AMBR, GBR) is lost.
- Mapping from parameters in PMIP QoS to 802.11e AC + other QoS parameters needs to be consistent when different providers and equipment are configured.

Gap: per user QoS policies at WiFi AP.



# Connection Model

(new in 01 version - Figure 2)



## a) QoS flows at the AP

- IP flows, tunneled flows from end users.

## b) Traffic filters for applying QoS

{MAC address, IP address, port}

# PMIP – 802.11e Mapping

(same as revision 00)

QCI	DSCP	802.11e AC	Example 3GPP service
1	EF	3 AC_VO	conversational voice
2	EF	3 AC_VO	conversational video
3	EF	3 AC_VO	real-time gaming
4	AF41	2 AC_VI	buffered streaming
5	AF31	2 AC_VI	IMS signaling
6	AF31	2 AC_VI	buffered streaming
7	AF21	0 AC_BE	interactive gaming
8	AF11	0 AC_BE	web access
9	BE	1 AC_BK	e-mail

Table: QoS Mapping between QCI, WMM, 802.11e AC

- Mapping of QCI/ DSCP → 802.11e AC (in table above)
- Need further work on general recommendation for how AP handles ARP, MBR, GBR.

# IETF next steps

Continue refining open questions (in next steps).

Consider adoption as working group draft?