Quality of Service Option for Proxy Mobile IPv6

draft-liebsch-netext-pmip6-qos-00.txt

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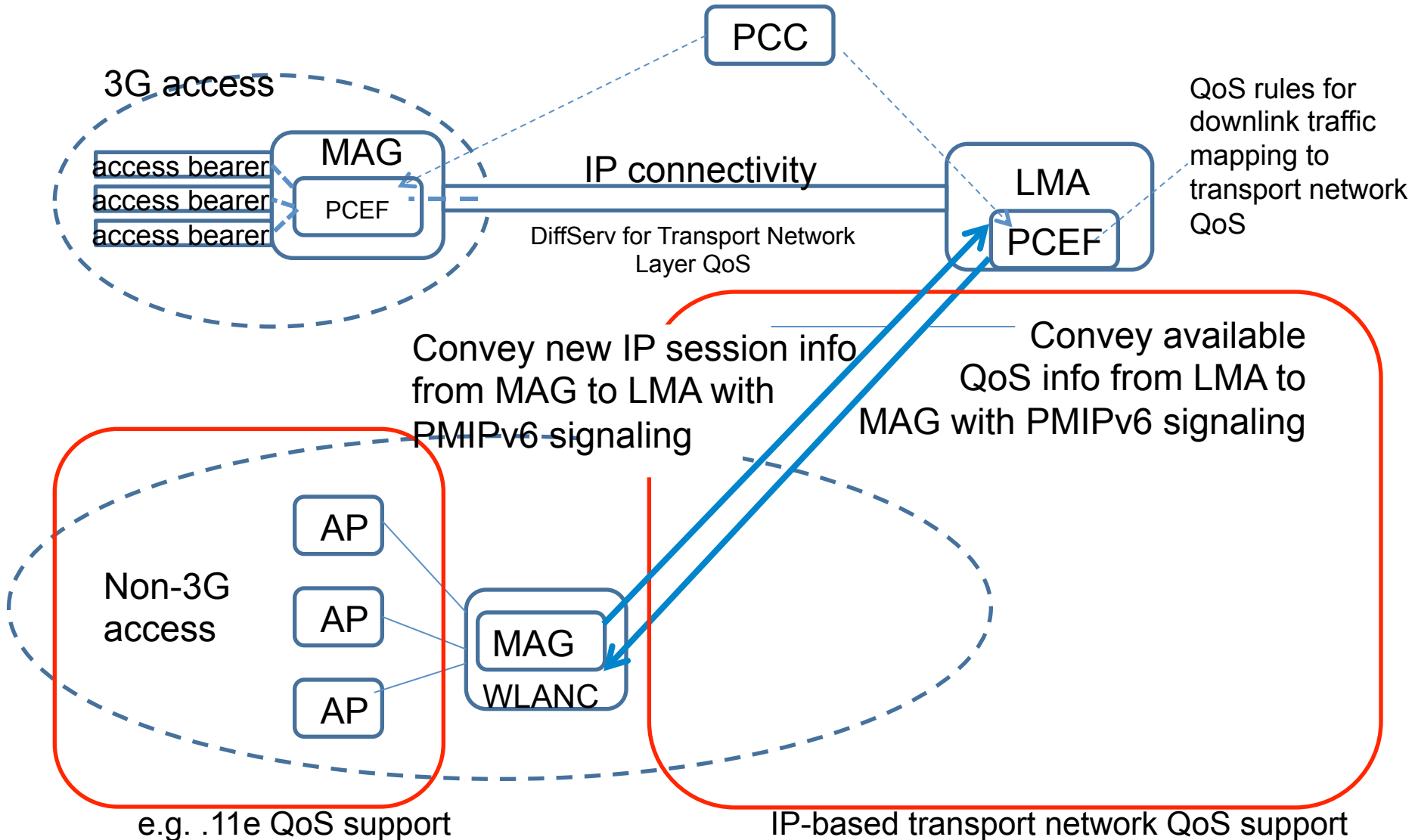
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Motivation and Scope

- Mobile operator systems establish QoS to serve access through 3G radio access
  - Specific access, utilizes radio bearers with different QoS
- QoS policy control for 3G radio access from Policy and Charging Control (PCC) system
- Connectivity through non-3G acccess supported for handover (WiFi, WiMax)
- IP network QoS accomplished by DiffServ mechanisms
- No QoS support so far for non-3G radio access
  - 3GPP started interfacing PCC to MAG for non-3G radio access
- Demand for a PCC-independent solution
  - For networks, which do not deploy a PCC system
  - For all networks until PCC support available for non-3G access

Exemplary architecture

PCC

3G access

access bearer
access bearer
access bearer

MAG

PCEF

IP connectivity

DiffServ for Transport Network
Layer QoS

LMA

PCEF

QoS rules for
downlink traffic
mapping to
transport network
QoS

Convey new IP session info
from MAG to LMA with
PMIPv6 signaling

Convey available
QoS info from LMA to
MAG with PMIPv6 signaling

AP

AP

Non-3G
access

AP

MAG

WLANC

e.g. .11e QoS support

IP-based transport network QoS support

Scope of this work

- Support enabling QoS differentiation of traffic between MAG and LMA for any non-3G access
  - Mainly enforcement and validation of uplink QoS at the MAG
- Support mapping of QoS policies between radio-specific QoS classes and IP network
  - Transport of Flow Information and QoS Class indexes
  - Interpretation of QoS Class indexes is deployment specific, hence out of scope
- Focus on the signaling between MAG and LMA
- Handover of available and enforced QoS policy rules
  - Established while MN accesses through 3G radio access
- Establish QoS for sessions which start at non-3G radio access

Is this of interest to the NetExt WG?