

Quality of Service

What is QoS? - user satisfaction in using a service

MOS (mean opinion score) used for voice calls, 1 to 5

SLA: service level agreement
(typically between operators)

Why QoS?

- to meet the requirements of a service.

(why QoS mechanisms are deployed)

- voice
- web browsing
- video streaming
- audio "

Where QoS is required?

- do not have enough resources to meet the requests of (demands of) the service.

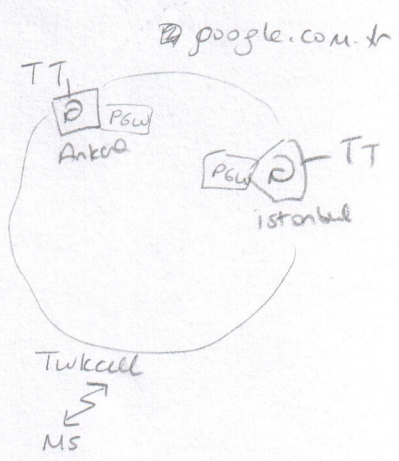
(LTE perspective)

How QoS is deployed?

for LTE

the congestion points?

PoP: point of presence.



SB - CDMA cellular network (aski for deployment use)
2 ethernet switches => for availability!

Access Network is ki
ayni ofst! Core Network + servers

1) highest congestion: UE => eNB radio interface

2) medium congestion links: - access network (backhaul link eNB => core network)

- intercity links (interoffice)

3) least " " : local office

Overprovisioning LAN network
you need 1mbits dep by 10mbits
throwing BW at the problem

Policy & Charging Control PCC

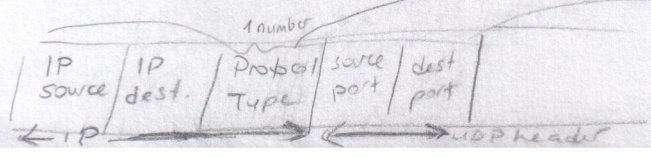
- \$

- provide QoS for IP flows

video stream - 1 IP flow
audio stream - other " "

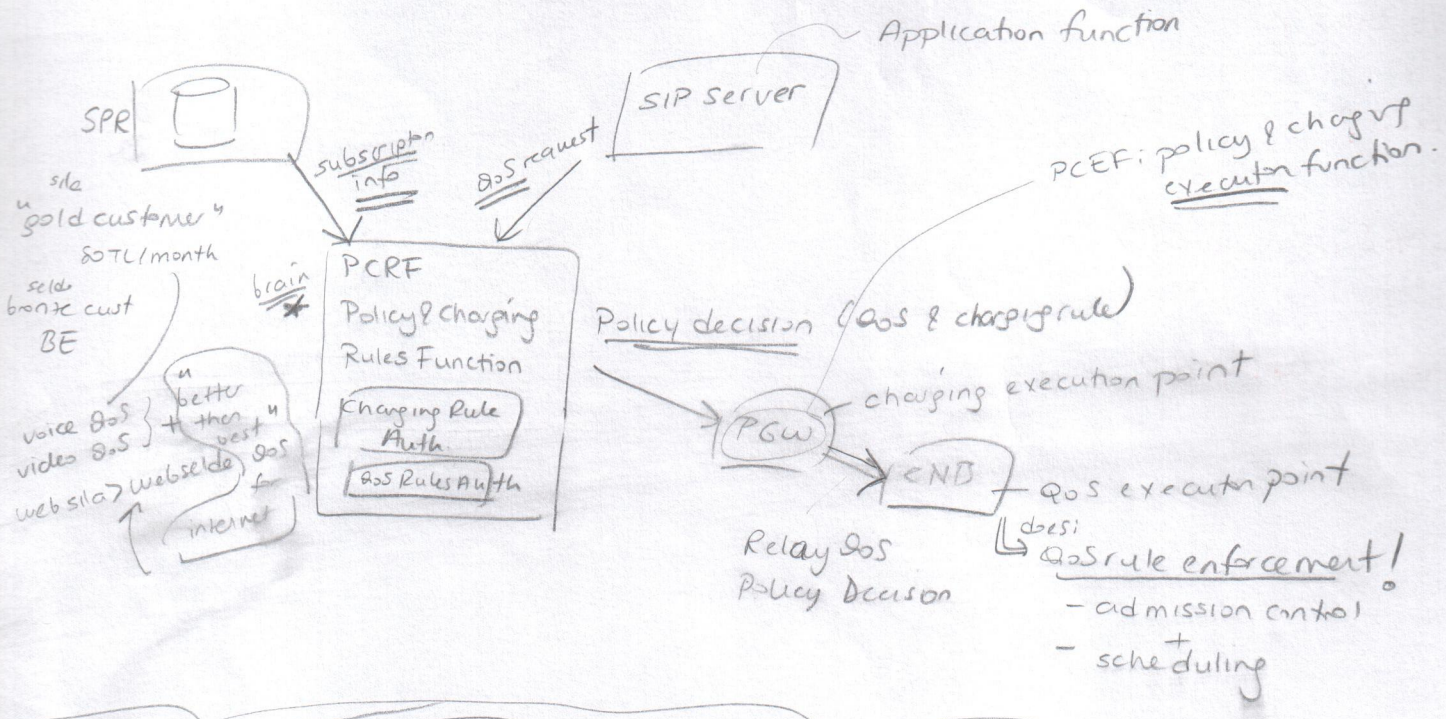
TCP / UDP / SETP / ...

5 tuple Based on this 5 tuple,
you can define a flow



IP flow is defined by IP tuple

a.k.a. Service Data Flow (SDF)



~~Worst case scenario~~