

# **GPRS Charging Schemes**

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# Introduction

- Purpose of charging is to collect data on the network resource usage and services to enable the billing of the subscriber
- Charging scheme means the model charging is based on
- Different ways to define charging schemes
  - Evaluation of the existing and future charging schemes for voice and data
  - The linkage between network level charging schemes and service level charging schemes

# Existing and Future Charging Schemes

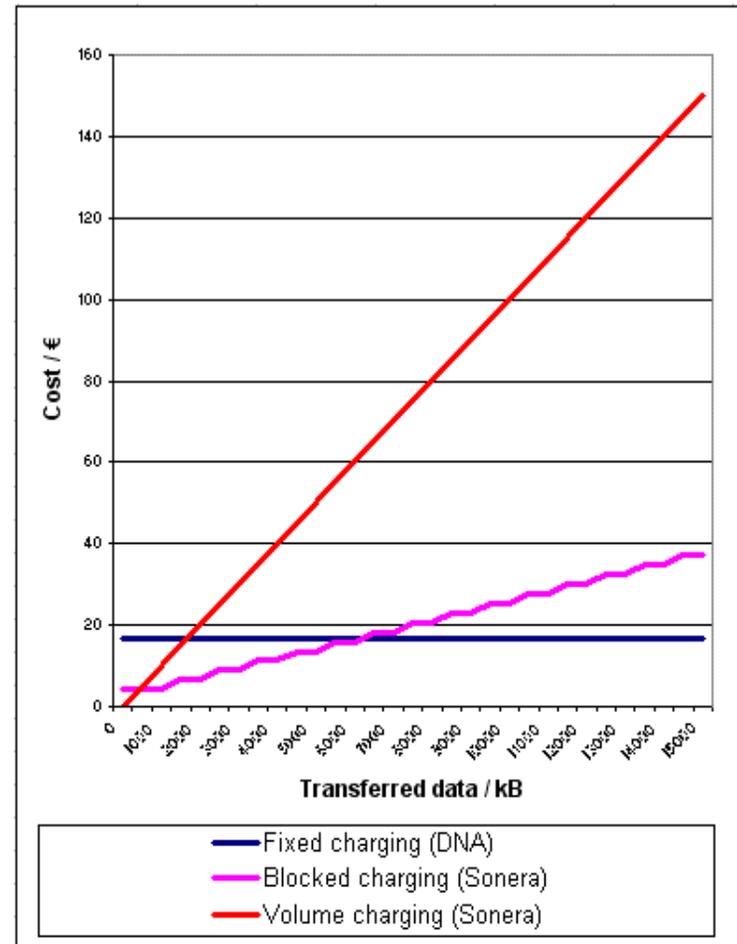
- Metered charging
  - Charging based on units of time
  - Charging based on number of packets
  - Single fee charging
- Fixed price charging
- Expected capacity charging
- Edge charging
- Paris Metro charging
- Market based reservation charging

# Requirements for Charging

- Collects all information concerning chargeable events
- Accommodates various charging models
- Produces appropriate processing
- One-stop billing
- Charging architecture
  - Charging uniformly for one service
  - Charging separately for network and service layers

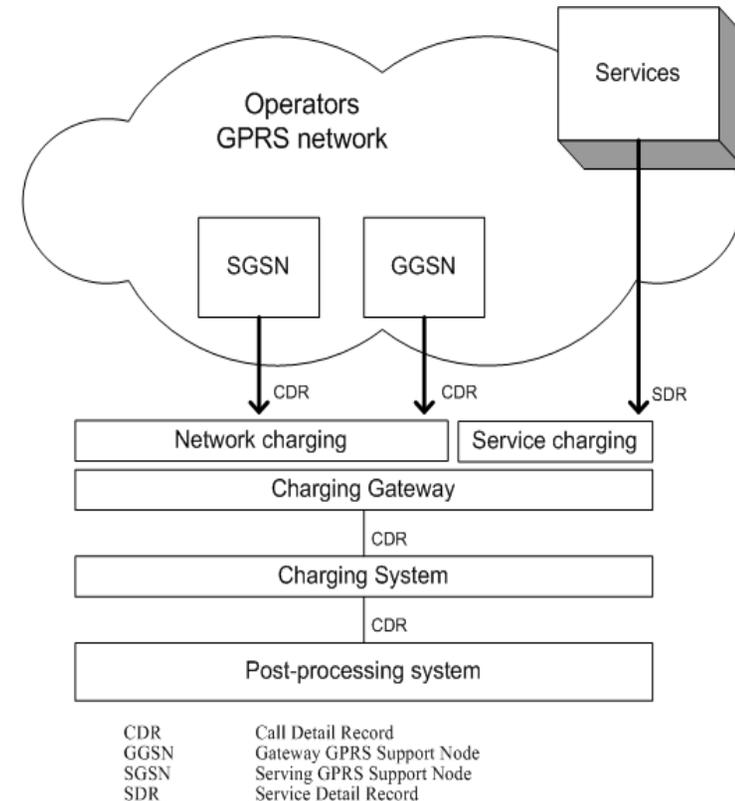
# Feasibility of the Charging Models

- Comparison of three different GPRS charging models
  - DNA Fixed charging
  - Sonera Block based charging
  - Sonera Volume based charging
- Volume based the most expensive
- Fixed price most cost-effective if traffic exceeds 6,5 MB in a month
- Block price charging most inexpensive if data transferred in a month less than 6,5 MB



# Linkage to Service Level Charging (1)

- Important to see the charging in a wider context
- How network level charging and service (application) level charging are linked to each other?



# Linkage to Service Level Charging (2)

- Schemes
  - Customer is charged only based on network usage
  - Customer is charged at different rates for different services
  - Customer is charged only for the service
  - Customer is charged both data transmission and service

# Linkage to Service Level Charging (3)

- Can be linked by adding GPRS charging ID (C-ID), to the service level charging information
  - all the charging information related to one session could be combined and the traffic related to one service event could be handled as an entirety
- SDR creation
  - By identifying the traffic targeted to a certain service at the specific gateways of the GPRS network
  - By passing all the requests for the services to be charged through a specific server in operator's network