

Erstellung von Bottom-up Kosten- rechnungsmodellen zur Ermittlung der Kosten der Zusammenschaltung in Festnetzen und Mobilnetzen

Mobilfunknetz

Fragen zur Kommentierung
des Referenzdokuments

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Beantwortet durch:

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Chapter 1: Network architecture, services and scenario generation

Question 1

Do you agree with the above characterization of the 2G/3G hybrid networks?
Do you agree with the above characterization of the cost of 2G technology?
How long do you intend to use 2G technology in your mobile network?
When it comes to the installation of new sites, do you still install 2G technology in new sites?

Chapter 1.1: Hybrid GSM/UMTS network architecture and corresponding services

Question 2

Do have comments regarding the appropriateness of the hybrid 2G/3G network architectures as presented here?

Chapter 1.2: Main input data for the 2G/3G network model

Question 3

What is your view on excluding coverage (from a network planning perspective) above a certain altitude?

Question 4

What is your view on the relevant parameters as referred to in Tables 1-3 and 1-4?

Question 5

Do you agree to our argument regarding spectrum sharing among technologies within the same frequency band or do you see other relevant considerations?

Chapter 1.3: Scenario generator

Question 6

What is your view on the relevant parameter values in Table 1-6 for Austria?

Chapter 1.4: Service description

Question 7

Which service categorisation do you use for network planning purposes?

Question 8

Does the above service categorization cover your service portfolio?
 If not, what services are missing here? Please provide the relevant information.
 Mobile broadband access is defined as an stand alone category in order to cover the fixed-like and nomadic broadband access.
 Do you agree with this?

Chapter 1.4.2.1: Service description

Question 9

Do you agree with the physical parameters (in terms of Binary Rate Eb/No, propagation profile/Voice codecs) described in the above table for the service categories included there?

If not, please provide a detailed list of the physical services, with the corresponding parameters, used for your network deployment.

Question 10

Services like videotelephony and circuit switched fax/modem are included in the Other Real Time category. Do you agree with this?

Question 11

Are you planning to deploy HSPA/HSPA+ in all Nodes B (UMTS)?

Is this currently the case?

If not, please specify the conditions for the joint deployment (population density, area, traffic per user).

Please specify the ratio of 3G data services which runs over native UMTS and over HSPA (or HSPA+).

Question 12

Can you confirm the parameter values in Table 1-17?

Chapter 1.4.2.2: Considerations on BTS service mapping

Question 13

In the model, we consider EDGE as the top 2G technology because new deployments will be based on 3G. However, have you planned to deploy Evolved EDGE? If yes, in which areas (urban/suburban/rural)? Please describe as deeply as possible the determinants for this deployment (data traffic per user, population density).

Question 14

Can you confirm the parameter values in Table 1-18?

Chapter 1.4.2.3: Considerations on Mobile Broadband Access

Question 15

What is your view on the modelling approach towards HSPA/Mobile Broadband Access?

Chapter 2: Network design and dimensioning

Chapter 2.2: Aggregation network

Question 16

The model considers, that all cell sites of a district are connected to a central point referred to as cell hub, where an aggregator equipment is installed (e.g. an Ethernet switch) and that the cell hub connects to the controller node location. Have you implemented other options? If yes please indicate the type of technology applied.

Question 17

What type of transmission systems are you mainly using in the aggregation network (for 2G, 3G and hybrid 2G/3G sites)?

Question 18

What are your typical network topologies in the aggregation network?

Chapter 2.2.3.1: Dimensioning and system assignment for the connections between cell sites and cell hub location*Question 19*

The model considers that the connection from the cell site with only BTS to the cell hub is provided by a 2 Mbps connection with the same technology for all connections. This can be chosen from leased line, microwave mini links, leased four wire copper or own four wire copper.

Do you apply other technologies? Please indicate.

Do you apply different technologies depending on the area of a district (rural, suburban, urban) ? Please indicate for each area.

Question 20

The model considers that the connection from the cell site with UMTS equipment to the cell hub is provided by layer 2 connections. Currently we estimate 100 Mbps Ethernet with the same layer-1 technology for all connections. This can be chosen from leased lines, microwave mini links, leased (dark) fibre or own fibre wire. In case of hybrid cells with GSM and UMTS and additional HSPA the required bandwidth is integrated into one physical connection.

Do you apply different technologies? Please indicate.

Do you apply different technologies depending on the area of a district (rural, suburban, urban)? Please indicate for each area.

Chapter 2.3.2: Topology

Question 21

What type of topology do you have implemented in the backhaul part of your mobile network?

Chapter 2.3.3: Dimensioning of the backhaul network

Question 22

The model considers that the traffic resulting from HSPA is routed also over the complete hierarchy up to the core (SwRo) node location and is switched in the intermediate location (cell hub and controller node locations) by the corresponding aggregation equipment.

Do you implement other options? If yes, please indicate the type of technology you apply.

Chapter 2.4.1: Design of the core systems for the GSM and UMTS circuit switched traffic

Question 23

The model considers that the Media Gateway provides the interconnection to PSTN/ISDN.

Do you provide additionally interconnection at a Media Gateway to an IP network for supporting voice termination for VoIP?

Chapter 2.4.2: Design of the core systems for the GPRS/UMTS data traffic

Question 24

In which locations of your network do you usually place application servers?

Question 25

How many POIs do you operate in your mobile network and where are they located?

Chapter 2.4.4: Design of additional core network units

Question 26

The model considers that the number of users is the main driver for dimensioning the HLR. As a consequence in a pure LRIC model the HLR cost does not influence the (marginal) cost for voice call termination.

What is the driver you apply for dimensioning the HLR ?

Question 27

The model considers that the VLR is an integrated part of the MSC call server and hence the driver for dimensioning it is, like for the MSC server, the number of BH call attempts. As a consequence the cost of the VLR influence to the pure LRIC cost calculation for the cost of voice call termination.

What driver do you apply for dimensioning the MSC call server and for the integrated VLR?