

Agenda Item: 8

Source:

Title:

1

To meet the milestone of a complete specification ready in 3GPP RAN, i.e. Release 99, we need to prioritise the work and define what functionality needs to be included in Release 99. This paper describes what is meant with being a part of Release 99 and not being a part of Release 99. Note that Release 99 is the first release of the standard. It is expected that this release will be updated on a yearly basis resulting in new releases every year. In this paper a proposal is done of what functions/concepts should be included in Release 99. The proposal is mainly focused on transport channels, logical channels and RABs. However, functionalities not identified in this contribution may also be taken out from Release 99. The functions and concepts not included in Release 99 are proposed to be included in a separate document, "Study Items for Future Releases", by means of which these concepts are not forgotten.

2 RELEASE 99 WORK

Being part of Release 99 should mean that the complete function/concept is standardised without any missing parts, i.e. all WGs need to standardise their part of the concept. However, some parts of a function that is not included in Release 99 but felt crucial for future inclusions should be included in Release 99 (e.g. radio interface issues affecting terminals).

3 ABSOLUTELY NECESSARY CONCEPTS/CHANNELS

3.1 Transport Channels

Currently in TSG RAN there exist 10 different transport channels (BCH, PCH, SCH, RACH, FACH, DSCH, FAUSCH, DCH, ORACH, and ODCH). For each of these channels the working groups need to make comprehensive specifications.

WG1 needs to develop transport formats, multiplexing of the transport channels and the physical channel mapping. WG2 needs to specify the procedures necessary to operate these channels as well as how to switch between the different channel types, whereas WG3 need to specify the Iur and Iub interfaces for all these channel types.

Given the tight time plan (specifications ready ultimo 1999), it seems difficult that all the transport channels can be successfully included in the standard respecting the time plan. Therefore, it seems most appropriate to concentrate on those channels that are vital for the system to work. The channels necessary for the system to work are:

- BCH, to be used by BCCH;
- PCH, to be used by PCCH;
- SCH, to be used by SCCH (in TDD mode, here a question exist whether this channel is

necessary in TDD mode at all);

- FACH, to be used by CCCH, DCCH and DTCH;
- RACH, to be used by CCCH, DCCH and DTCH;
- DCH, to be used by DCCH and DTCH.

3.2 Logical channels and RABs

The corresponding logical channels as listed above are of course necessary for the system to work properly (BCCH, PCCH, CCCH, DCCH, DTCH and SCCH). However, there is a requirement on supporting the cell broadcast multicast services. Therefore it seems appropriate to include a logical channel handling this kind of traffic. It is proposed here to call the channel CTCH (Common Traffic Channel). CTCH would be mapped either to BCH or to FACH.

For radio access bearers we propose that point to point RABs should be supported and not point to multi-point (except for cell broadcast).

4 ADDITIONAL CONCEPTS/CHANNELS (NOT ABSOLUTELY NECESSARY)

4.1 Transport Channels

The following transport channel types are not absolutely necessary for the first release:

- DSCH;
- USCH;
- FAUSCH,

The above listed channels may improve the system performance. However, it remains unclear how large these improvements are. Furthermore, there are currently several solutions on how to realise these transport channels. To determine which are the best solutions needs thorough investigation and is thus very time consuming. In addition, it should be noted that the same functionality of the system could be provided with the set of transport channels listed in Section 0. The solutions for this set of channels are less complex on all interfaces (Iur, Iub and Uu), thus leading to faster development of the system. E.g. the nice property of the shared channel can be obtained by means of using FACH in parallel with DCH. Therefore, the above listed additional transport channels are not seen as absolutely necessary for the system to operate properly. We thus propose to list these channels in the document "Study Items for Future Releases".

4.2 RABs and logical channels

Currently, the specifications are very generic with a wide range of RABs parameters. To support all RABs, it is mandatory to be able to set a large number of parameters in all nodes. Since QoS issues are not solved yet, it is reasonable to impose a number of limitations on the RABs. In this way at least a number of services can be secured in the Release 99. The number of possible RABs is limited by choosing a limited number of parameters to be supported in all nodes. Which parameters to choose for the Release 99 should be studied and decided upon. This work should be connected to which services are specified in Release 99.

4.3 Common Channels over Iur or SRNS relocation

Again with the main goal to finalise the specifications in time it is proposed that either the

functionality of having common channels over Iur or the SRNS relocation will be chosen for the Release 99. To have both functionalities may be desirable for future releases and thus one or the other should be listed in the document “Study Items for Future Releases”.

5 PROPOSAL

Given the tight time schedule, it is proposed that each WG shall create a document containing “Study items for future releases”. Having this document, each WG can, during this year, decide to move study items of the existing specification documents into this document. As a starting point we propose to move the functionality related to the discussed items in Chapter 4 into this document. The concepts/channels listed as absolutely necessary should be specified in Release 99 by all WGs. The table below reflects our proposal.

Transport/Logical Channels	Include in R99	Study item for future releases
BCH	x	
PCH	x	
SCH	x	
FACH	x	
RACH	x	
DCH	x	
DSCH		x
FAUSCH		x
USCH		x
ODMA	X	
BCCH	X	
PCCH	X	
CCCH	X	
DCCH	X	
DTCH	X	
SCCH	X	
CTCH	X	
ODMA	X	

Functionality	Include in R99	Study item for future releases
Common Channels over Iur/ SRNS relocation	X	x
Group Calls		x