

Agenda Item: AH14
Source: Samsung, GBT , Philips, Lucent, InterDigital , ETRI
Subject: Proposed Liaison statement from WG1 to WG2 on the issue of Channel Assignment, UE Channel Selection and CPCH Status Indicator Channel (CSICH).
Document for: Approval

AH14 and WG1 have considered the merits of Versatile Channel Assignment Method (VCAM) [1,2] in CPCH. After considerable discussions, we have concluded that incorporation of CA message provides some benefits and does not introduce significant L1 complexity and processing

VCAM can be used with any number of channels and is the preferred method for high number of CPCH channels. VCAM requires a Channel Assignment message and transmission of the maximum available bit rate by means of a CPCH Status Indicator Channel (CSICH).

With a low number of CPCH channels, the UE Channel Selection method has some advantages in some deployment scenarios. In the UE Channel Selection method, the availability of each CPCH channel is transmitted over the CSICH and there is no need to transmit the Channel Assignment message to allocate the resource from UTRAN. Furthermore, in the case of UE Channel Selection each channel should have a different bit rate.

Therefore to allow flexibility of deployment WG1 concludes that CPCH should support both modes of operation. To this end it is proposed that UTRAN should indicate the following parameters to the UE by higher layer signaling:

1. Whether CA message is active within a cell or not.
2. The format of the information present on the CSICH (since it may be different for the two modes)
3. The subchannel/AP-signature-to-Data Rate-CPCH physical resource mapping for UE channel selection method and subchannel/AP-signature-to-Data Rate: CA-signature-to-CPCH physical resource mapping for the Versatile Channel Assignment method.

Depending on the detailed solution adopted, items 1 and 2 above may not need to be sent as explicit parameters. For example, it may be possible to infer this information from the mapping(s) in item 3.

On the UTRAN side the content of the information to be relayed over the CSICH should be provided to Layer 1 by higher layers.

The number of channels (N) should be determined by UTRAN, but shall not be transmitted over the air. The following should also be noted regarding the possible values of N for each method:

1. For Versatile Channel Assignment Method, N could range from 1 to the resource limit [up to 16 or possibly higher]. However, Channel Assignment message is not required at N=1. It might not be necessary to include the case of N=1 here since it is covered by UE channel selection method.
2. For UE channel Selection method, N should be restricted to a low number of CPCH channels. Thus N could be from 1 to some maximum value (less than 16). [Limit preferably to be determined by WG2]

WG1 would like to inform WG2 of the above conclusions in WG1 regarding the Channel Assignment method, the UE channel Selection method and CSICH. WG1 hopes that the above-mentioned framework is aligned with WG2's UE and UTRAN channel selection model.

WG1 welcomes any feedback from WG2 on this topic.

Reference

[1] R1-00-0106 CPCH access methods comparison, Samsung Electronics Co. Ltd

[2] R1-00-0107 CPCH channel allocation example, Samsung Electronics Co. Ltd