

Agenda Item:

Source: CWTS
To: TSG RAN WG1
Title: Mapping of RACH onto physical channels
Document for: Approval

Introduction

This file describes mapping of RACH onto physical channels for low chip rate TDD option.

Common transport channels

The following figure shows the transport channels mapping in low chip rate option:

	Td1	Td0	DwPTS	UpPTS	Tu0
Code ch 0		BCH/PCH			RACH
Code ch 1		(BCH/PCH)			RACH
Code ch 2					RACH
Code ch 3					RACH
Code ch 4					
Code ch 5					
Code ch 6					
Code ch 7					
Code ch 8					
Code ch 9					
Code ch A					
Code ch B					
Code ch C	FACH	(FACH)			
Code ch D	FACH	(FACH)			
Code ch E	FACH	(FACH)			
Code ch F	FACH	(FACH)			

Figure 1 Transport channels mapping

The Random Access Channels (RACH)

The RACH is mapped onto PRACH. In high chip rate option ,more than one slot per frame may be administered for the PRACH. The location of slots allocated to PRACH is broadcast on the BCH.. While in our low chip rate option , (as figure 1 shows) the RACH channel is mapped onto more than one (up to 8) RU in the first uplink time slot (Tu0) per subframe. The same time slot may be used

for RACH by more than one cell. Multiple transmissions using different codes could be received in parallel. The location allocated to RACH in the time slots is indicated on the BCH. The RACH uses both power control and uplink synchronisation control.

Conclusion

The low chip rate TDD option of 1.28Mcps has already included in the specification. Based on the descriptions above and to enable the low chip rate with it's specific properties, it's proposed to include this new feature for low chip rate TDD option in new clause 5.3.2.4 of TR 25.928.

----- changes to 25.928 begin -----

5.3.2 Common Transport channels

5.3.2.4 **The Random Access Channels (RACH)**

The RACH channel is designed for uplink random access by UE ,it is mapped onto more than one (up to 8) RU in the first uplink time slot (Tu0) per subframe. The same time slot may be used for RACH by more than one cell. Multiple transmissions using different codes could be received in parallel. The location allocated to RACH in the time slots is indicated on the BCH. The RACH uses both power control and uplink synchronisation control.

----- changes to 25.928 end -----