

**TSG-RAN Meeting #11
Palm Springs, CA, USA, 13 - 16 March 2001**

RP-010032

Title: Agreed CRs (Release '99) to TS 25.331 (4)

Source: TSG-RAN WG2

Agenda item: 5.2.3

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Version	Versio
R2-010724	agreed	25.331	668	4	R99	Introduction of default pre-defined configurations	F	3.5.0	3.6.0
R2-010771	agreed	25.331	675	2	R99	Downlink power offsets	F	3.5.0	3.6.0

CHANGE REQUEST

⌘ **25.331 CR 668** ⌘ rev **r4** ⌘ Current version: **3.5.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Introduction of default pre-defined configurations
Source:	⌘ TSG-RAN WG2
Work item code:	⌘ Date: ⌘ 2001-03-06
Category:	⌘ F Release: ⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change: ⌘ At the R2#17 meeting it was agreed to introduce default configurations. However, the required changes to the standard are still missing. This CR intends to correct that.

The RRC message used upon handover from another RAT eg. GSM to UMTS is large and requires several segments when being transferred across the GSM air interface. As a result, it may not be possible to get the message transferred in case of a poor UL. To overcome this, downloadable configurations have been defined. However, these configurations are not always available in the UE; they can only be read them from system information in UMTS. To overcome using large handover messages for UE's that don't have downloadable configurations stored, the proposal is to specify a number of default configurations in the standard. This way, short handover messages are possible even if the downloadble configurations are not available

Summary of change:	<p>⌘ This CR introduces the following items</p> <ul style="list-style-type: none"> - the basic mechanism for using default configurations, - the parameter values for four default configurations <p>Furthermore, the CR proposes the following changes</p> <ul style="list-style-type: none"> - to move parameters dpcch-PowerOffset from preconfiguration to the handover message and to use a smaller value range for this parameters. These changes are recommended by R1 (R2-010200) - to move parameters power control step size and power control algorithm from the handover message to the preconfiguration information, as recommended by R1 - to move PC-Preamble from preconfiguration to the handover message, since this parameter is considered to be cell specific. The parameter may need updating depending on the outcome of the discussion on the general use of this parameter <p>NOTE For those parameters for which one or more alternative values are specified in TS 34.108, the primary value is used</p> <p><u>Changes in R1 of this CR (as compared to the previous version):</u></p> <ul style="list-style-type: none"> - the default configuration identity values used in 13.y are changed to values within range 0..3 - a note about the use of values from TS 34.108 in 13.7 is moved to the cover sheet <p><u>Changes in R2 of this CR (as compared to the previous version):</u></p> <ul style="list-style-type: none"> - introduction of default parameters values for TDD including the handling
Consequences if not approved:	<p>⌘ There will be more cases in which the complete configuration needs to be specified in the handover to UTRAN command message. This will require segmented messages at the air interface. Since each segment will have to be acknowledged, the success of the handover largely depends on the quality of the uplink</p>

Clauses affected:	⌘ 8.3.6.2, 8.3.6.3, 10.2.12, 10.3.4.x (new), 10.3.6.92, 10.3.6.93, 11.2, 11.3, 13, 13.x (new)															
Other specs affected:	<table border="0"> <tr> <td style="vertical-align: top;">⌘</td> <td style="border: 1px solid black; width: 20px; height: 15px;"></td> <td style="padding-left: 5px;">Other core specifications</td> <td style="vertical-align: top;">⌘</td> <td style="border: 1px solid black; width: 200px; height: 15px;"></td> </tr> <tr> <td style="vertical-align: top;">⌘</td> <td style="border: 1px solid black; width: 20px; height: 15px;"></td> <td style="padding-left: 5px;">Test specifications</td> <td style="vertical-align: top;">⌘</td> <td style="border: 1px solid black; width: 200px; height: 15px;"></td> </tr> <tr> <td style="vertical-align: top;">⌘</td> <td style="border: 1px solid black; width: 20px; height: 15px;"></td> <td style="padding-left: 5px;">O&M Specifications</td> <td style="vertical-align: top;">⌘</td> <td style="border: 1px solid black; width: 200px; height: 15px;"></td> </tr> </table>	⌘		Other core specifications	⌘		⌘		Test specifications	⌘		⌘		O&M Specifications	⌘	
⌘		Other core specifications	⌘													
⌘		Test specifications	⌘													
⌘		O&M Specifications	⌘													
Other comments:	⌘															

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.6 Inter-RAT handover to UTRAN

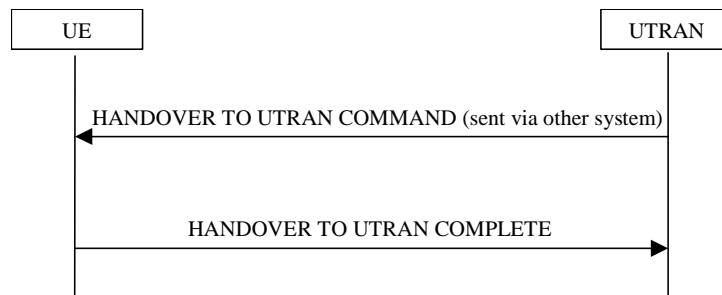


Figure 52: Inter-RAT handover to UTRAN, successful case

8.3.6.1 General

The purpose of the inter-RAT handover procedure is to, under the control of the network, transfer a connection between the UE and another radio access technology (e.g. GSM) to UTRAN.

8.3.6.2 Initiation

The procedure is initiated when a radio access technology other than UTRAN, e.g. GSM, using system specific procedures, orders the UE to make a handover to UTRAN.

A HANDOVER TO UTRAN COMMAND message is sent to the UE via the radio access technology from which inter-system handover is performed.

In case UTRAN decides to use a predefined or default radio configuration that is stored in the UE, it should include the following information in the HANDOVER TO UTRAN COMMAND message.

- the IE "U-RNTI" to be assigned;
- the IE "Predefined radio-configuration identity", to indicate which pre-defined configuration of RB, ~~traffic~~transport channel and physical channel parameters shall be used; OR
- the IE "Default configuration mode" and IE "Default configuration identity", to indicate which default configuration of RB, transport channel and physical channel parameters shall be used;
- PhyCH information elements.

NOTE: When using a predefined or default configuration during handover to UTRAN, UTRAN can only assign values of IEs "U-RNTI" and "scrambling code" that are within the special subranges defined exclusively for this procedure. UTRAN may re-assign other values after completion of the handover procedure.

In case UTRAN does not use a predefined or default radio configuration that is stored in the UE, it should include the following information in the HANDOVER TO UTRAN COMMAND message.

- the IE "U-RNTI" to be assigned;
- the complete set of RB, TrCH and PhyCH information elements to be used.

8.3.6.3 Reception of HANDOVER TO UTRAN COMMAND message by the UE

The UE shall be able to receive a HANDOVER TO UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target UTRAN cell and/or frequency.

The UE shall act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following. The UE shall:

- store a U-RNTI value (32 bits), which is derived by the IEs "SRNC identity" (12 bits) and "S-RNTI 2" (10 bits) included in IE "U-RNTI-short". In order to produce a full size U-RNTI value, a full size "S-RNTI" (20 bits) shall be derived by padding the IE "S-RNTI 2" with 10 zero bits in the most significant positions; and
- if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Predefined configuration":
 - initiate the signalling link, the RB(s) and ~~traffic~~transport channel(s) in accordance with the predefined parameters identified by the IE "Predefined radio-configuration identity";
 - initiate the physical channels in accordance with the predefined parameters identified by the IE "Predefined radio configuration identity" and the received physical channel information elements;
- if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Default configuration":
 - initiate the signalling link, the RB(s) and transport channel(s) in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity";
 - initiate the physical channels in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity" and the received physical channel information elements;

NOTE IE "Default configuration mode" specifies whether the FDD or TDD version of the default configuration shall be used

if IE "Specification mode" is set to "Complete specification":

- initiate the RB(s) and ~~traffic~~transport channels in accordance with the received radio bearer, transport channel and physical channel information elements;
- perform an open loop estimation to determine the UL transmission power, taking into account the received IE "Maximum allowed UL TX power" and move to CELL_DCH state;
- apply the same ciphering (ciphered/unciphered, algorithm) as prior to inter-RAT handover, unless a change of algorithm is requested by means of the "Ciphering algorithm".

If the UE succeeds in establishing the connection to UTRAN, it shall:

- transmit a HANDOVER TO UTRAN COMPLETE message on the uplink DCCH;
- when of the HANDOVER TO UTRAN COMPLETE message has been submitted to lower layers for transmission, the procedure ends.

8.3.6.4 Invalid Handover to UTRAN command message

If the UE receives a HANDOVER TO UTRAN COMMAND message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows:

- Resume the connection with the source radio access technology used before the handover ;
- Indicate a failure to the source radio access technology, using "protocol error" as cause for the failure;
- If allowed by the source RAT, transmit an RRC STATUS message to the source radio access technology, and include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- Other details may be provided in the specifications related to the source radio access technology.

8.3.6.5 UE fails to perform handover

If the UE does not succeed in establishing the connection to UTRAN, it shall terminate the procedure including release of the associated resources, resume the connection used before the handover and indicate the failure to the other radio access technology.

Upon receiving an indication about the failure from the other radio access technology, UTRAN should release the associated resources and the context information concerning this UE.

8.3.6.6 Reception of message HANDOVER TO UTRAN COMPLETE by the UTRAN

Upon receiving a HANDOVER TO UTRAN COMPLETE message, UTRAN should consider the inter-RAT handover procedure as having been completed successfully and indicate this to the Core Network.

10.2.12 HANDOVER TO UTRAN COMMAND

This message is sent to the UE via other system to make a handover to UTRAN.

RLC-SAP: N/A (Sent through a different RAT)

Logical channel: N/A (Sent through a different RAT)

Direction: UTRAN → UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description
New U-RNTI	MP		U-RNTI Short 10.3.3.48	
Activation time	MD		Activation time 10.3.3.1	Default value is "now"
Ciphering algorithm	OP		Ciphering algorithm 10.3.3.4	
CHOICE specification mode	MP			
>Complete specification				
UE information elements				
RB information elements				
>>Signalling RB information to setup list	MP	1 to <maxSRBs etup>		For each signalling radio bearer established
>>>Signalling RB information to setup	MP		Signalling RB information to setup 10.3.4.24	
>>RAB information to setup list	OP	1 to <maxRABs etup>		For each RAB established
>>>RAB information for setup	MP		RAB information for setup 10.3.4.10	
Uplink transport channels				
>>UL Transport channel information common for all transport channels	MP		UL Transport channel information common for all transport channels 10.3.5.24	
>>Added or Reconfigured TrCH information	MP	1 to <maxTrCH >		
>>>Added or Reconfigured UL TrCH information	MP		Added or Reconfigured UL TrCH information 10.3.5.2	
Downlink transport channels				
>>DL Transport channel information common for all transport channels	MP		DL Transport channel information common for all transport channels 10.3.5.6	
>>Added or Reconfigured TrCH information	MP	1 to <maxTrCH >		
>>>Added or Reconfigured DL TrCH information	MP		Added or Reconfigured DL TrCH information 10.3.5.1	
Uplink radio resources				
>>Uplink DPCH info	MP		Uplink DPCH info 10.3.6.88	
>>CHOICE mode	MP			
>>>FDD				

>>>>CPCH SET Info	OP		CPCH SET Info 10.3.6.13	
Downlink radio resources				
>>>>Downlink PDSCH information	OP		Downlink PDSCH information 10.3.6.30	
>>>TDD				(no data)
>>Downlink information common for all radio links	MP		Downlink information common for all radio links 10.3.6.24	
>>Downlink information per radio link	MP	1 to <maxRL>		
>>>Downlink information for each radio link	MP		Downlink information for each radio link 10.3.6.27	
>Preconfiguration				
>>CHOICE Preconfiguration mode	MP			
>>>Predefined configuration identity	MP		Predefined configuration identity 10.3.4.5	
>>>Default configuration				
>>>>Default configuration mode	MP		Enumerated (FDD, TDD)	Indicates whether the FDD or TDD version of the default configuration shall be used
>>>>Default configuration identity	MP		Default configuration identity 10.3.4.x	
>>RAB info	OP		RAB info Post 10.3.4.9	One RAB is established
>>Uplink DPCH info	MP		Uplink DPCH info Post 10.3.6.89	
Downlink radio resources				
>>CHOICE mode				
>>>FDD				
>>>>Downlink information common for all radio links			Downlink information common for all radio links Post 10.3.6.25	
>>>TDD				(no data)
>>Downlink information per radio link	MP	1 to <maxRL>		Send downlink information for each radio link to be set-up. In TDD MaxRL is 1.
>>>Downlink information for each radio link	MP		Downlink information for each radio link Post 10.3.6.28	
Frequency info	MP		Frequency info 10.3.6.36	

Maximum allowed UL TX power	MP		Maximum allowed UL TX power 10.3.6.39	
CHOICE mode	MP			
>FDD				(no data)
>TDD				
>>Primary CCPCH Tx Power	MP		Primary CCPCH Tx Power 10.3.6.59	

10.3.4.x Default configuration identity

This information element identifies a default radio parameter configuration.

<u>Information Element/Group name</u>	<u>Need</u>	<u>Multi</u>	<u>Type and reference</u>	<u>Semantics description</u>
<u>Default configuration identity</u>	<u>MP</u>		<u>Integer (0..639)</u>	<u>The corresponding default configurations are specified in 13.x</u>

10.3.6.91 Uplink DPCH power control info

Parameters used by UE to set DPCH initial output power and to use for closed-loop power control in FDD and parameters for uplink open loop power control in TDD.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE <i>mode</i>	MP			
>FDD				
>>DPCCH Power offset	MP		Integer(-164,..-6 by step of 2)	In dB
>>PC Preamble	MP		Integer (0, 15)	
>>Power Control Algorithm	MP		Enumerated (algorithm 1, algorithm 2)	Specifies algorithm to be used by UE to interpret TPC commands
>>TPC step size	CV algo		Integer (1, 2)	In dB
>TDD				
>>UL target SIR	MP		Real (-11 .. 20 by step of 0.5dB)	In dB
>>CHOICE UL OL PC info	MP			
>>>Broadcast UL OL PC info			Null	No data
>>>Individually Signalled	OP			
>>>>Individual timeslot interference info	MP	1 to <maxTS>		
>>>> Individual timeslot interference	MP		Individual timeslot interference 10.3.6.38	
>>>>DPCH Constant Value	OP		Constant Value 10.3.6.11	Quality Margin
>>>>Primary CCPCH Tx Power	OP		Primary CCPCH Tx Power 10.3.6.59	For Pathloss Calculation

Condition	Explanation
<i>algo</i>	The IE is mandatory if "Power Control Algorithm" is set to "algorithm 1", otherwise the IE is not needed

10.3.6.92 Uplink DPCH power control info Post

Parameters used by UE to set DPCH initial output power and to use for closed-loop power control.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE <i>mode</i>	MP			
>FDD				
>>DPCCH Power offset	MP		Integer(-110..-50 by step of 4)	In dB
>>PC Preamble	MP		Integer (0, 15)	
>>Power Control Algorithm	MP		Enumerated (algorithm 1, algorithm 2)	Specifies algorithm to be used by UE to interpret TPC commands
>>TPC step size	CV algo		Integer (1, 2)	In dB
>TDD				
>>UL target SIR	MP		Real (-11 .. 20 by step of 0.5dB)	In dB
>>UL Timeslot Interference	MP		UL Interference 10.3.6.87	

Condition	Explanation
<i>algo</i>	The IE is mandatory if "Power Control Algorithm" is set to "algorithm 1", otherwise the IE is not needed

10.3.6.93 Uplink DPCH power control info Pre

Parameters used by UE to set DPCH initial output power and to use for closed-loop power control in FDD and parameters for uplink open loop power control in TDD.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE <i>mode</i>	MP			
>FDD				
>>DPCCH Power offset	MP		Integer(-164..-6 by step of 2)	In dB
>>PC Preamble	MP		Integer (0, 15)	
>>Power Control Algorithm	MP		Enumerated (algorithm 1, algorithm 2)	Specifies algorithm to be used by UE to interpret TPC commands
>>TPC step size	CV algo		Integer (1, 2)	In dB
>TDD				(No data)
>>DPCH Constant Value	MP		Constant Value 10.3.6.11	Quality Margin

Condition	Explanation
<i>Algo</i>	The IE is mandatory if "Power Control Algorithm" is set to "algorithm 1", otherwise the IE is not needed

PDU definitions

<Cut until next change>

```

-- *****
--
-- HANOVER TO UTRAN COMMAND
--
-- *****

HandoverToUTRANCommand-r3 ::= CHOICE {
  r3                               SEQUENCE {
    handoverToUTRANCommand-r3      HandoverToUTRANCommand-r3-IEs,
    nonCriticalExtensions            SEQUENCE {} OPTIONAL
  },
  criticalExtensions                SEQUENCE {}
}

HandoverToUTRANCommand-r3-IEs ::= SEQUENCE {
  -- User equipment IEs
  new-U-RNTI                        U-RNTI-Short,
  activationTime                     ActivationTime                OPTIONAL,
  cipheringAlgorithm                 CipheringAlgorithm        OPTIONAL,
  -- Radio bearer IEs
  rab-Info                           RAB-Info-Post,
  -- Specification mode information
  specificationMode                  CHOICE {
    complete                          SEQUENCE {
      srb-InformationSetupList        SRB-InformationSetupList,
      rab-InformationSetupList        RAB-InformationSetupList    OPTIONAL,
      ul-CommonTransChInfo            UL-CommonTransChInfo,
      ul-AddReconfTransChInfoList     UL-AddReconfTransChInfoList,
      dl-CommonTransChInfo            DL-CommonTransChInfo,
      dl-AddReconfTransChInfoList     DL-AddReconfTransChInfoList,
      ul-DPCH-Info                    UL-DPCH-Info,
      modeSpecificInfo                CHOICE {
        fdd                           SEQUENCE {
          dl-PDSCH-Information         DL-PDSCH-Information    OPTIONAL,
          cpch-SetInfo                 CPCH-SetInfo            OPTIONAL
        },
        tdd                            NULL
      },
      dl-CommonInformation             DL-CommonInformation,
      dl-InformationPerRL-List         DL-InformationPerRL-List,
      frequencyInfo                   FrequencyInfo
    },
    preconfiguration                  SEQUENCE {
      predefinedConfigIdentity         PredefinedConfigIdentity,
      defaultConfig                    SEQUENCE {
        DefaultConfigMode              DefaultConfigMode,
        defaultConfigIdentity          DefaultConfigIdentity
      },
      rab-Info                         RAB-Info-Post            OPTIONAL,
      modeSpecificInfo                 CHOICE {
        fdd                            SEQUENCE {
          ul-DPCH-Info                 UL-DPCH-InfoPostFDD,
          dl-CommonInformationPost      DL-CommonInformationPost,
          dl-InformationPerRL-List      DL-InformationPerRL-ListPostFDD,
          frequencyInfo                 FrequencyInfoFDD
        },
        tdd                            SEQUENCE {
          ul-DPCH-Info                 UL-DPCH-InfoPostTDD,
          dl-InformationPerRL           DL-InformationPerRL-PostTDD,
          frequencyInfo                 FrequencyInfoTDD,
          primaryCCPCH-TX-Power         PrimaryCCPCH-TX-Power
        }
      }
    }
  },
  -- Physical channel IEs
  maxAllowedUL-TX-Power               MaxAllowedUL-TX-Power
}

```

<Cut until next change>

```

-- *****
--
-- RADIO BEARER INFORMATION ELEMENTS (10.3.4)
--
-- *****

AlgorithmSpecificInfo ::= CHOICE {
    rfc2507-Info          RFC2507-Info
}

-- Upper limit is 2^32 - 1
COUNT-C ::= INTEGER (0..4294967295)

-- Upper limit is 2^25 - 1
COUNT-C-MSB ::= INTEGER (0..33554431)

DefaultConfigIdentity ::= INTEGER (0..639)

DefaultConfigMode ::= ENUMERATED {
    fdd,
    tdd }

DL-AM-RLC-Mode ::= SEQUENCE {
    inSequenceDelivery    BOOLEAN,
    receivingWindowSize,
    dl-RLC-StatusInfo    DL-RLC-StatusInfo
}

```

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```
-- *****
--
-- PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
--
-- *****
```

<Cut until next change>

```
DPC-Mode ::= ENUMERATED {
    singleTPC,
    tpcTripletInSoft }

-- The actual value of DPCCH power offset is the value of this IE * 2.
DPCCH-PowerOffset ::= INTEGER (-82..-3)

-- The actual value of DPCCH power offset is the value of this (2 + IE * 4).
DPCCH-PowerOffset2 ::= INTEGER (-28..-13)
```

```
DPCH-CompressedModeInfo ::= SEQUENCE {
    tgp-SequenceList TGP-SequenceList
}

DPCH-CompressedModeStatusInfo ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    TGP-SequenceShort
```

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```
UL-DPCH-PowerControlInfo ::= CHOICE {
    fdd SEQUENCE {
        dpcch-PowerOffset DPCCH-PowerOffset,
        pc-Preamble PC-Preamble,
        powerControlAlgorithm PowerControlAlgorithm
        -- TABULAR: TPC step size nested inside PowerControlAlgorithm
    },
    tdd SEQUENCE {
        ul-TargetSIR UL-TargetSIR,
        ul-OL-PC-Signalling CHOICE {
            broadcast-UL-OL-PC-info NULL,
            handoverGroup SEQUENCE {
                individualTS-InterferenceList IndividualTS-InterferenceList,
                dpch-ConstantValue ConstantValue,
                primaryCCPCH-TX-Power PrimaryCCPCH-TX-Power
            }
        }
    }
} OPTIONAL

UL-DPCH-PowerControlInfoPostFDD ::= SEQUENCE {
    dpcch-PowerOffset DPCCH-PowerOffset2, -- smaller range to save bits
    pc-Preamble PC-Preamble,
    powerControlAlgorithm PowerControlAlgorithm
    TABULAR: TPC step size nested inside PowerControlAlgorithm
}

UL-DPCH-PowerControlInfoPostTDD ::= SEQUENCE {
    ul-TargetSIR UL-TargetSIR,
    ul-TimeslotInterference UL-Interference
}

UL-DPCH-PowerControlInfoPredef ::= CHOICE {
    fdd SEQUENCE {
        dpcch-PowerOffset DPCCH-PowerOffset,
        pc-Preamble PC-Preamble
        powerControlAlgorithm PowerControlAlgorithm
        -- TABULAR: TPC step size nested inside PowerControlAlgorithm
    },
    tdd SEQUENCE {
        dpch-ConstantValue ConstantValue
    }
}

UL-Interference ::= INTEGER (-110..-70)

UL-ScramblingCode ::= INTEGER (0..16777215)
```


13 Protocol timers, counters, and other parameters and default configurations

The information provided in subclauses 13.1 and 13.2 shall be treated as informative. The normative text is specified in the relevant subclauses in clause 8 and clause 8 shall prevail.

13.x Parameter values for default radio configurations

The UE shall support the use of the default radio configurations that are specified in the following.

NOTE 1: These configurations are based on TS 34.108 cover a number of RAB and signalling connection configurations

In the table that is used to specify the parameter values for these default configurations, the following principles are used:

- optional IEs that are not used are omitted

- In case no parameter value is specified in a column, this means the value given the previous (left side) column applies

NOTE 2: If needed, SRB4 is established after the completion of handover

NOTE 3: For each default configuration, the value of both FDD and TDD parameters are specified. All parameters apply to both FDD and TDD modes, unless explicitly stated otherwise. It should be noted that in this respect default configurations differ from pre-defined configurations, which only include parameter values for one mode.

NOTE 4: The transport format sizes, indicated in the following table, concern the RLC PDU size, since all configurations concern dedicated channels. The transport block sizes indicated in TS 34.108 are different since these include the size of the MAC header.

FDD and TDD preconfigurations are specified in the same table. Except if explicitly stated the parameter values are the same for FDD and TDD.

It depends on the received message, which mode's parameters are valid. A message that contains parameters for a FDD mode configuration indicates that the FDD preconfiguration parameters is relevant. A message that contains parameters for a TDD mode configuration indicates that the TDD preconfiguration parameters are relevant.

<u>Configuraton</u>	<u>3.4 kpbs signalling</u>	<u>13.6 kpbs signalling</u>	<u>7.95 kbps speech + 3.4 kpbs signalling</u>	<u>12.2 kbps speech + 3.4 kpbs signalling</u>
<u>Ref 34.108</u>	<u>2</u>	<u>3</u>	<u>6</u>	<u>4</u>
<u>Default configuration identity</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>
<u>RB INFORMATION</u>				
<u>rb-Identity</u>	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3, RB5: 5, RB6: 6</u>	<u>RB1: 1, RB2: 2, RB3: 3, RB5: 5, RB6: 6, RB7: 7</u>
<u>rlc-InfoChoice</u>	<u>Rlc-info</u>	<u>Rlc-info</u>	<u>Rlc-info</u>	<u>Rlc-info</u>
<u>>ul-RLC-Mode</u>	<u>RB1: UM RB2- RB3: AM</u>	<u>RB1: UM RB2- RB3: AM</u>	<u>RB1: UM RB2- RB3: AM RB5-RB6: TM</u>	<u>RB1: UM RB2- RB3: AM RB5-RB7: TM</u>
<u>>>transmissionRLC-DiscardMode</u>	<u>RB1: N/A RB2- RB3: NoDiscard</u>	<u>RB1: N/A RB2- RB3: NoDiscard</u>	<u>RB1: N/A RB2- RB3: NoDiscard RB5- RB6: N/A</u>	<u>RB1: N/A RB2- RB3: NoDiscard RB5- RB7: N/A</u>
<u>>>>maxDat</u>	<u>RB1: N/A RB2- RB3: 15</u>	<u>RB1: N/A RB2- RB3: 15</u>	<u>RB1: N/A RB2- RB3: 15 RB5- RB6: N/A</u>	<u>RB1: N/A RB2- RB3: 15 RB5- RB7: N/A</u>
<u>>>transmissionWindowSize</u>	<u>RB1: N/A RB2- RB3: 128</u>	<u>RB1: N/A RB2- RB3: 128</u>	<u>RB1: N/A RB2- RB3: 128 RB5- RB6: N/A</u>	<u>RB1: N/A RB2- RB3: 128 RB5- RB7: N/A</u>
<u>>>timerRST</u>	<u>RB1: N/A RB2- RB3: 300</u>	<u>RB1: N/A RB2- RB3: 300</u>	<u>RB1: N/A RB2- RB3: 300 RB5- RB6: N/A</u>	<u>RB1: N/A RB2- RB3: 300 RB5- RB7: N/A</u>
<u>>>max-RST</u>	<u>RB1: N/A RB2- RB3: 1</u>	<u>RB1: N/A RB2- RB3: 1</u>	<u>RB1: N/A RB2- RB3: 1 RB5- RB6: N/A</u>	<u>RB1: N/A RB2- RB3: 1 RB5- RB7: N/A</u>
<u>>>pollingInfo</u>	<u>RB1: N/A RB2- RB3: as below</u>	<u>RB1: N/A RB2- RB3: as below</u>	<u>RB1: N/A RB2- RB3: as below RB5- RB6: N/A</u>	<u>RB1: N/A RB2- RB3: as below RB5- RB7: N/A</u>
<u>>>>lastTransmissionPU-Poll</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>
<u>>>>lastRetransmissionPU-Poll</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>
<u>>>>timerPollPeriodic</u>	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>
<u>>>segmentationIndication</u>	<u>RB1- RB3: N/A</u>	<u>RB1- RB3: N/A</u>	<u>RB1- RB3: N/A RB5- RB6: FALSE</u>	<u>RB1- RB3: N/A RB5- RB7: FALSE</u>
<u>>dl-RLC-Mode</u>	<u>RB1: UM RB2- RB3: AM</u>	<u>RB1: UM RB2- RB3: AM</u>	<u>RB1: UM RB2- RB3: AM RB5- RB6: TM</u>	<u>RB1: UM RB2- RB3: AM RB5- RB7: TM</u>

>>>inSequenceDelivery	<u>RB1: N/A</u> <u>RB2- RB3: TRUE</u>	<u>RB1: N/A</u> <u>RB2- RB3: TRUE</u>	<u>RB1: N/A</u> <u>RB2- RB3: TRUE</u> <u>RB5- RB6: N/A</u>	<u>RB1: N/A</u> <u>RB2- RB3: TRUE</u> <u>RB5- RB7: N/A</u>
>>>receivingWindowSize	<u>RB1: N/A</u> <u>RB2- RB3: 128</u>	<u>RB1: N/A</u> <u>RB2- RB3: 128</u>	<u>RB1: N/A</u> <u>RB2- RB3: 128</u> <u>RB5- RB6: N/A</u>	<u>RB1: N/A</u> <u>RB2- RB3: 128</u> <u>RB5- RB7: N/A</u>
>>>dl-RLC-StatusInfo	<u>RB1: N/A</u> <u>RB2- RB3: as below</u>	<u>RB1: N/A</u> <u>RB2- RB3: as below</u>	<u>RB1: N/A</u> <u>RB2- RB3: as below</u> <u>RB5- RB6: N/A</u>	<u>RB1: N/A</u> <u>RB2- RB3: as below</u> <u>RB5- RB7: N/A</u>
>>>>timerStatusProhibit	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>
>>>>missingPU-Indicator	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>	<u>RB2- RB3: FALSE</u>
>>>>timerStatusPeriodic	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>	<u>RB2- RB3: 100</u>
>>>segmentationIndication	<u>RB1- RB3: N/A</u>	<u>RB1- RB3: N/A</u>	<u>RB1- RB3: N/A</u> <u>RB5- RB6: FALSE</u>	<u>RB1- RB3: N/A</u> <u>RB5- RB7: FALSE</u>
rb-MappingInfo				
>UL-LogicalChannelMappings	<u>OneLogicalChannel</u>	<u>OneLogicalChannel</u>	<u>OneLogicalChannel</u>	<u>OneLogicalChannel</u>
>>>ul-TransportChannelType	<u>Dch</u>	<u>Dch</u>	<u>Dch</u>	<u>Dch</u>
>>>>transportChannelIdentity	<u>RB1- RB3: 1</u>	<u>RB1- RB3: 1</u>	<u>RB1- RB3: 3</u> <u>RB5: 1, RB6: 2</u>	<u>RB1- RB3: 4</u> <u>RB5: 1, RB6: 2, RB7: 3</u>
>>>logicalChannelIdentity	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3</u> <u>RB5- RB6: N/A</u>	<u>RB1: 1, RB2: 2, RB3: 3</u> <u>RB5- RB7: N/A</u>
>>>rlc-SizeList	<u>RB1- RB3: all</u>	<u>RB1- RB3: all</u>	<u>RB1- RB3: all</u> <u>RB5- RB6: N/A</u>	<u>RB1- RB3: all</u> <u>RB5- RB7: N/A</u>
>>>mac-LogicalChannelPriority	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3</u> <u>RB5- RB6: 5</u>	<u>RB1: 1, RB2: 2, RB3: 3</u> <u>RB5- RB7: 5</u>
>DL-logicalChannelMappingList				
>>>Mapping option 1	<u>One mapping option</u>	<u>One mapping option</u>	<u>One mapping option</u>	<u>One mapping option</u>
>>>>dl-TransportChannelType	<u>Dch</u>	<u>Dch</u>	<u>Dch</u>	<u>Dch</u>
>>>>>transportChannelIdentity	<u>RB1- RB3: 1</u>	<u>RB1- RB3: 1</u>	<u>RB1- RB3: 3</u> <u>RB5: 1, RB6: 2</u>	<u>RB1- RB3: 4</u> <u>RB5: 1, RB6: 2, RB7: 3</u>
>>>>logicalChannelIdentity	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3</u>	<u>RB1: 1, RB2: 2, RB3: 3</u> <u>RB5- RB6: N/A</u>	<u>RB1: 1, RB2: 2, RB3: 3</u> <u>RB5- RB7: N/A</u>
TrCH INFORMATION PER TrCH				
UL-AddReconfTransChInfoList				
>transportChannelIdentity	<u>TrCH1: 1</u>	<u>TrCH1: 1</u>	<u>TrCH1: 1, TrCH2: 2,</u> <u>TrCH3: 3</u>	<u>TrCH1: 1, TrCH2: 2,</u> <u>TrCH3: 3, TrCH4: 4</u>
>transportFormatSet	<u>DedicatedTransChTFS</u>	<u>DedicatedTransChTFS</u>	<u>DedicatedTransChTFS</u>	<u>DedicatedTransChTFS</u>
>>>dynamicTF-information				

>>>tf0/ tf0,1	TrCH1: (0x144, 1x144)	TrCH1: (0x144, 1x144)	TrCH1: (0x75) TrCH2: (0x 84 1x84) TrCH3: (0x144, 1x144)	TrCH1: (0x81) TrCH2: (0x 103, 1x103) TrCH3: (0x 60, 1x60) TrCH4: (0x144, 1x144)
>>>>rlcSize	BitMode	BitMode	BitMode	BitMode
>>>>>sizeType	TrCH1: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 2, part2= 0 (144)	TrCH1: type 1: 75 TrCH2: type 1: 84 TrCH3: 2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 1: 81 TrCH2: type 1: 103 TrCH3: type 1: 60 TrCH4: 2: type 2, part1= 2, part2= 0 (144)
>>>>numberOfTbSizeList	TrCH1: Zero, one	TrCH1: Zero, one	TrCH1: Zero TrCH2-3: Zero, one	TrCH1: Zero TrCH2-4: Zero, one
>>>>logicalChannelList	All	All	All	All
>>>>tf 1	N/A	N/A	TrCH1: (1x39) TrCH2- TrCH4: N/A	TrCH1: (1x39) TrCH2- TrCH4: N/A
>>>>>numberOfTransportBlocks			TrCH1: One	TrCH1: One
>>>>>rlc-Size			TrCH1: BitMode	TrCH1: BitMode
>>>>>>sizeType			TrCH1: 1: 39	TrCH1: 1: 39
>>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>>logicalChannelList			TrCH1: all	TrCH1: all
>>>>tf 2	N/A	N/A	TrCH1: (1x75) TrCH2- TrCH3: N/A	TrCH1: (1x81) TrCH2- TrCH4: N/A
>>>>>numberOfTransportBlocks			TrCH1: Zero	TrCH1: Zero
>>>>>rlc-Size			TrCH1: BitMode	TrCH1: BitMode
>>>>>>sizeType			TrCH1: type 1: 75	TrCH1: type 1: 81
>>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>>logicalChannelList			TrCH1: all	TrCH1: all
>>>>tqi	TrCH1: 40	TrCH1: 10	TrCH1- TrCH2: 20 TrCH3: 40	TrCH1- TrCH3: 20 TrCH4: 40
>>>>channelCodingType	Convolutional	Convolutional	Convolutional	Convolutional
>>>>>codingRate	TrCH1: Third	TrCH1: Third	TrCH1- TrCH2: Third TrCH3: Third	TrCH1- TrCH2: Third TrCH3: Half TrCH4: Third
>>>>rateMatchingAttribute	TrCH1: 160	TrCH1: 160	TrCH1: 200 TrCH2: 190 TrCH3: 160	TrCH1: 200 TrCH2: 190 TrCH3: 235 TrCH4: 160

>>>crc-Size	TrCH1: 16	TrCH1: 16	TrCH1: 12 TrCH2: 0 TrCH3: 16	TrCH1: 12 TrCH2- TrCH3: 0 TrCH4: 16
DL-AddReconfTransChInfoList				
>dl-TransportChannelIdentity (should be as fo UL)	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>tfs-SignallingMode	SameAsUL	SameAsUL	Independent <Only tf0 on TrCH1 is different and shown below>	Independent <Only tf0 on TrCH1 is different and shown below>
>>transportFormatSet			DedicatedTransChTFS	DedicatedTransChTFS
>>>dynamicTF-information				
>>>>tf0/ tf0,1			TrCH1: (1x0)	TrCH1: (1x0)
>>>>rlcSize			BitMode	bitMode
>>>>>sizeType			TrCH1: type 1: 0	TrCH1: type 1: 0
>>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>>logicalChannelList			All	All
>>ULTrCH-Id	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>dch-QualityTarget				
>>bler-QualityValue	TrCH1: 5×10^{-2}	TrCH1: 5×10^{-2}	TrCH1: 7×10^{-3} TrCH2- TrCH3: Absent	TrCH1: 7×10^{-3} TrCH2- TrCH4: Absent
TrCH INFORMATION, COMMON				
ul-CommonTransChInfo				
>tfs-ID (TDD only)	1	1	1	1
>sharedChannelIndicator (TDD only)	FALSE	FALSE	FALSE	FALSE
> tfc-Subset	Absent, not required	Absent, not required	Absent, not required	Absent, not required
>ul-TFCS	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete	Complete	Complete	Complete
>>>ctfcSize	Ctfc2Bit	Ctfc2Bit	Ctfc4Bit	Ctfc6Bit
>>>>TFCS representation	Addition	Addition	Addition	Addition
>>>>>TFCS list				
>>>>>>TFCS 1	(TF0)	(TF0)	(TF0, TF0, TF0)	(TF0, TF0, TF0, TF0)
>>>>>>>ctfc	0	0	0	0
>>>>>>>>gainFactorInformation	[Computed]	[Computed]	[Computed]	[Computed]
>>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>>>>>TFCS 2	(TF1)	(TF1)	(TF1, TF0, TF0)	(TF1, TF0, TF0, TF0)

>>>>>>>ctfc	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
>>>>>>>gainFactorInformation	[Signalled]	[Signalled]	[Computed]	[Computed]
>>>>>>> β c (FDD only)	<u>11</u>	<u>11</u>	N/A	N/A
>>>>>>> β d	<u>15</u>	<u>15</u>	N/A	N/A
>>>>>>>referenceTFCId	N/A	N/A	<u>0</u>	<u>0</u>
>>>>>>>TFCS 3			(TF2, TF1, TF0)	(TF2, TF1, TF1, TF0)
>>>>>>>ctfc			<u>5</u>	<u>11</u>
>>>>>>>gainFactorInformation			[Computed]	[Computed]
>>>>>>>referenceTFCId			<u>0</u>	<u>0</u>
>>>>>>>TFCS 4			(TF0, TF0, TF1)	(TF0, TF0, TF0, TF1)
>>>>>>>ctfc			<u>6</u>	<u>12</u>
>>>>>>>gainFactorInformation			[Computed]	[Computed]
>>>>>>> β c (FDD only)			N/A	N/A
>>>>>>> β d			N/A	N/A
>>>>>>>referenceTFCId			<u>0</u>	<u>0</u>
>>>>>>>TFCS 5			(TF1, TF0, TF1)	(TF1, TF0, TF0, TF1)
>>>>>>>ctfc			<u>7</u>	<u>13</u>
>>>>>>>gainFactorInformation			[Computed]	[Computed]
>>>>>>>referenceTFCId			<u>0</u>	<u>0</u>
>>>>>>>TFCS 6			(TF2, TF1, TF1)	(TF2, TF1, TF1, TF1)
>>>>>>>ctfc			<u>11</u>	<u>23</u>
>>>>>>>gainFactorInformation			[Signalled]	[Signalled]
>>>>>>> β c (FDD only)			<u>11</u>	<u>11</u>
>>>>>>> β d			<u>15</u>	<u>15</u>
>>>>>>>referenceTFCId			<u>0</u>	<u>0</u>
dl-CommonTransChInfo				
>tfc-SignallingMode	Same as UL	Same as UL	Same as UL	Same as UL
PhyCH INFORMATION FDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>powerControlAlgorithm	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm 1
>>>tpcStepSize	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
>tfc-Existence	TRUE	TRUE	TRUE	TRUE
>puncturingLimit	<u>1</u>	<u>1</u>	<u>1</u>	0.88
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				

>>spreadingFactor	<u>256</u>	<u>128</u>	<u>128</u>	<u>128</u>
>>pilotBits	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
>>positionFixed	<u>N/A</u>	<u>N/A</u>	<u>Fixed</u>	<u>Fixed</u>
PhyCH INFORMATION TDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>dpch-ConstantValue	<u>-20</u>	<u>-20</u>	<u>-20</u>	<u>-20</u>
>commonTimeslotInfo				
>>secondInterleavingMode	<u>frameRelated</u>	<u>frameRelated</u>	<u>frameRelated</u>	<u>frameRelated</u>
>>tfc-Coding	<u>4</u>	<u>4</u>	<u>16</u>	<u>16</u>
>>puncturingLimit	<u>0.80</u>	<u>0.80</u>	<u>0.80</u>	<u>0.80</u>
>>repetitionPeriodAndLength	<u>repetitionPeriod1</u>	<u>repetitionPeriod1</u>	<u>repetitionPeriod1</u>	<u>repetitionPeriod1</u>
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>commonTimeslotInfo				
>>>secondInterleavingMode	<u>frameRelated</u>	<u>frameRelated</u>	<u>frameRelated</u>	<u>frameRelated</u>
>>>tfc-Coding	<u>4</u>	<u>4</u>	<u>16</u>	<u>16</u>
>>>puncturingLimit	<u>0.74</u>	<u>0.74</u>	<u>0.80</u>	<u>0.80</u>
>>>repetitionPeriodAndLength	<u>repetitionPeriod1</u>	<u>repetitionPeriod1</u>	<u>repetitionPeriod1</u>	<u>repetitionPeriod1</u>

Configuraton	<u>28.8 kbps conv. CS- data ± 3.4 kbps signalling</u>	<u>32 kbps conv. CS- data ± 3.4 kbps signalling</u>	<u>64kbps conv. CS- data ± 3.4 kbps signalling</u>	<u>14.4 kbps streaming CS- data + 3.4 kbps signalling</u>	<u>28.8 kbps streaming CS- data + 3.4 kbps signalling</u>	<u>57.6 kbps s data + 3.4 kbps si</u>
Ref 34.108	<u>12</u>	<u>14</u>	<u>13</u>	<u>15</u>	<u>16</u>	<u>17</u>
Default configuration identity	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
RB INFORMATION						
rb-Identity	<u>RB1: 1, RB2: 2, RB3: 3, RB-5: 5</u>	<u>RB1: 1, RB2: 2, RB3: 3, RB-5: 5</u>	<u>RB1: 1, RB2: 2, RB3: 3, RB-5: 5</u>	<u>RB1: 1, RB2: 2, RB3: 3, RB-5: 5</u>	<u>RB1: 1, RB2: 2, RB3: 3, RB-5: 5</u>	<u>RB1: 1, RB RB-5: 5</u>
rlc-InfoChoice	<u>Rlc-info</u>	<u>Rlc-info</u>	<u>Rlc-info</u>	<u>Rlc-info</u>	<u>Rlc-info</u>	<u>Rlc-info</u>
>ul-RLC-Mode	<u>RB1: UM RB2- RB3: AM RB5: TM</u>	<u>RB1: UM RB2- RB3: AM RB5: TM</u>	<u>RB1: UM RB2- RB3: AM RB5: TM</u>	<u>RB1: UM RB2- RB3: AM RB5: TM</u>	<u>RB1: UM RB2- RB3: AM RB5: TM</u>	<u>RB1: UM RB2- RB3: RB5: TM</u>
>>transmissionRLC-DiscardMode	<u>RB1: N/A RB2- RB3: NoDiscard RB5: N/A</u>	<u>RB1: N/A RB2- RB3: NoDiscard RB5: N/A</u>	<u>RB1: N/A RB2- RB3: NoDiscard RB5: N/A</u>	<u>RB1: N/A RB2- RB3: NoDiscard RB5: N/A</u>	<u>RB1: N/A RB2- RB3: NoDiscard RB5: N/A</u>	<u>RB1: N/A RB2- RB3: RB5: N/A</u>

>>>maxDat	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A
>>transmissionWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>timerRST	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A
>>max-RST	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A
>>pollingInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>lastTransmissionPU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>lastRetransmissionPU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerPollPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
>dl-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>inSequenceDelivery	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A
>>receivingWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>dl-RLC-StatusInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>timerStatusProhibit	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>>missingPU-Indicator	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerStatusPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
rb-MappingInfo						
>UL-LogicalChannelMappings	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel

>>ul-TransportChannelType	Dch	Dch	Dch	Dch	Dch	Dch
>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: RB5: 1
>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB RB5: N/A
>>rlc-SizeList	RB1- RB3: all RB5: N/A	RB1- RB3: all RB5: N/A	RB1- RB3: all RB5: N/A	RB1- RB3: all RB5: N/A	RB1- RB3: all RB5: N/A	RB1- RB3: RB5: N/A
>>mac-LogicalChannelPriority	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB RB5: 5
>DL-logicalChannelMappingList						
>>Mapping option 1	One mapping option	One mapping option	One mapping option	One mapping option	One mapping option	One mappi
>>>dl-TransportChannelType	Dch	Dch	Dch	Dch	Dch	Dch
>>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: RB5: 1
>>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB RB5: N/A
TrCH INFORMATION PER TrCH						
UL-AddReconfTransChInfoList						
>transportChannelIdentity	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1,
>transportFormatSet	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedT
>>dynamicTF-information						
>>>tf0/ tf0,1	TrCH1: (0x576, 1x576, 2x576) TrCH2: (0x144, 1x144)	TrCH1: (0x640, 1x640) TrCH2: (0x144, 1x144)	TrCH1: (0x640, 2x640) TrCH2: (0x144, 1x144)	TrCH1: (0x576, 1x576) TrCH2: (0x144, 1x144)	TrCH1: (0x576, 1x576, 2x576) TrCH2: (0x144, 1x144)	TrCH1: (0x 2x576, 3x5 TrCH2: (0x
>>>>rlcSize	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: Oc TrCH2:Bit
>>>>>sizeType	TrCH1: type 2, part1= 11, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 11, part2= 2 (640) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 11, part2= 2 (640) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: typ part2= 2 (5 TrCH2: typ part2= 0 (1
>>>>>numberOfTbSizeList	TrCH1: Zero,1, 2 (4) TrCH2: Zero, one	TrCH1: Zero, one TrCH2: Zero, one	TrCH1: Zero, 2 (4) TrCH2: Zero, one	TrCH1: Zero, one, TrCH2: Zero, one	TrCH1: Zero, one, 2 TrCH2: Zero, one	TrCH1: Ze TrCH2: Ze
>>>>logicalChannelList	All	All	All	All	All	All
>>semiStaticTF-Information						
>>>tti	TrCH1: 40 TrCH2: 40	TrCH1: 20 TrCH2: 40	TrCH1: 20 TrCH2: 40	TrCH1: 40 TrCH2: 40	TrCH1: 40 TrCH2: 40	TrCH1: 40 TrCH2: 40

>>>channelCodingType	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional
>>>>codingRate	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third
>>>rateMatchingAttribute	TrCH1: 180 TrCH2: 160	TrCH1: 185 TrCH2: 160	TrCH1: 170 TrCH2: 160	TrCH1: 165 TrCH2: 160	TrCH1: 155 TrCH2: 160	TrCH1: 14 TrCH2: 16
>>>crc-Size	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16
DL-AddReconfTransChInfoList						
>dl-TransportChannelIdentity (should be as fo UL)	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1,
>tfs-SignallingMode	SameAsUL	SameAsUL	SameAsUL	SameAsUL	SameAsUL	SameAsUL
>>transportFormatSet						
>>>dynamicTF-information						
>>>>tf0/ tf0,1						
>>>>rlcSize						
>>>>>sizeType						
>>>>>numberOfTbSizeList						
>>>>>logicalChannelList						
>>ULTrCH-Id	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1,
>dch-QualityTarget						
>>bler-QualityValue	TrCH1: 2×10^{-3} TrCH2: Absent	TrCH1: 2×10^{-3} TrCH2: Absent	TrCH1: $[2 \times 10^{-3}]$ TrCH2: Absent	TrCH1: 1×10^{-2} TrCH2: Absent	TrCH1: 1×10^{-2} TrCH2: Absent	TrCH1: $[1 \times 10^{-2}]$ TrCH2: Absent
TrCH INFORMATION, COMMON						
ul-CommonTransChInfo						
>tfs-ID (TDD only)	[1]	[1]	1	[1]	[1]	1
>sharedChannelIndicator (TDD only)	[FALSE]	[FALSE]	FALSE	[FALSE]	[FALSE]	FALSE
> tfc-Subset	[Absent, not required]	[Absent, not required]	Absent, not required	[Absent, not required]	[Absent, not required]	Absent, not required
>ul-TFCS	[Normal TFCI signalling]	[Normal TFCI signalling]	Normal TFCI signalling	[Normal TFCI signalling]	[Normal TFCI signalling]	Normal TFCS
>>explicitTFCS-ConfigurationMode	[Complete]	[Complete]	Complete	[Complete]	[Complete]	Complete
>>>ctfcSize	[Ctfc2Bit]	[Ctfc2Bit]	Ctfc2Bit	[Ctfc4Bit]	[Ctfc4Bit]	Ctfc4Bit
>>>>TFCS representation	[Addition]	[Addition]	Addition	[Addition]	[Addition]	Addition
>>>>>TFCS list						
>>>>>>TFCS 1	[(TF0, TF0)]	[(TF0, TF0)]	(TF0, TF0)	[(TF0, TF0)]	[(TF0, TF0)]	(TF0, TF0)
>>>>>>>ctfc	[0]	[0]	0	[0]	[0]	0
>>>>>>>>gainFactorInformation	[[Computed]]	[[Computed]]	[Computed]	[[Computed]]	[[Computed]]	[Computed]

>>>>>>referenceTFCId	[0]	[0]	0	[0]	[0]	0
>>>>>TFCS 2	[(TF1, TF0)]	[(TF1, TF0)]	(TF1, TF0)	[(TF1, TF0)]	[(TF1, TF0)]	(TF1, TF0)
>>>>>ctfc	[1]	[1]	1	[1]	[1]	1
>>>>>gainFactorInformation	[Computed]	[[Computed]]	[Computed]	[[Computed]]	[[Computed]]	[Computed]
>>>>>>βc (FDD only)	[N/A]	[N/A]	N/A	[N/A]	[N/A]	N/A
>>>>>>βd	[N/A]	[N/A]	N/A	[N/A]	[N/A]	N/A
>>>>>>referenceTFCId	[0]	[0]	0	[0]	[0]	0
>>>>>TFCS 3	[(TF2, TF0)]	[(TF0, TF1)]	(TF0, TF1)	[(TF0, TF1)]	[(TF2, TF0)]	(TF2, TF0)
>>>>>ctfc	[2]	[2]	2	[2]	[2]	2
>>>>>gainFactorInformation	[[Computed]]	[[Computed]]	[Computed]	[Computed]	[Computed]	[Computed]
>>>>>>referenceTFCId	[0]	[0]	0	[0]	[0]	0
>>>>>TFCS 4	[(TF0, TF1)]	[(TF1, TF1)]	(TF1, TF1)	[(TF1, TF1)]	[(TF0, TF1)]	(TF3, TF0)
>>>>>ctfc	[3]	[3]	3	[3]	[3]	3
>>>>>gainFactorInformation	[[Computed]]	[[Signalled]]	[Signalled]	[Signalled]	[[Computed]]	[Computed]
>>>>>>βc (FDD only)	[N/A]	8	8	11	[N/A]	N/A
>>>>>>βd	[N/A]	15	15	15	[N/A]	N/A
>>>>>>referenceTFCId	[N/A]	[N/A]	N/A	[N/A]	[0]	0
>>>>>TFCS 5	[(TF1, TF1)]	[N/A]	N/A		[(TF1, TF1)]	(TF4, TF0)
>>>>>ctfc	[4]				[4]	4
>>>>>gainFactorInformation	[[Computed]]				[[Computed]]	[Computed]
>>>>>>referenceTFCId	[8]				[0]	0
>>>>>TFCS 6	[(TF2, TF1)]	[N/A]	N/A		[(TF2, TF1)]	(TF0, TF1)
>>>>>ctfc	[5]				[5]	5
>>>>>gainFactorInformation	[Signalled]				[[Signalled]]	[Computed]
>>>>>>βc (FDD only)	8				8	N/A
>>>>>>βd	15				15	N/A
>>>>>>referenceTFCId	[N/A]				[N/A]	0
>>>>>TFCS 7						(TF1, TF1)
>>>>>ctfc						6
>>>>>gainFactorInformation						[Computed]
>>>>>>referenceTFCId						0
>>>>>TFCS 8						(TF2, TF1)
>>>>>ctfc						7
>>>>>gainFactorInformation						[Computed]
>>>>>>referenceTFCId						0
>>>>>TFCS 9						(TF3, TF1)
>>>>>ctfc						8

>>>>>>gainFactorInformation						[Computed]
>>>>>>referenceTFCId						0
>>>>>>TFCS 10						(TF4, TF1)
>>>>>>ctfc						9
>>>>>>gainFactorInformation						[Signalled]
>>>>>>βc (FDD only)						8
>>>>>>βd						15
>>>>>>referenceTFCId						0
dl-CommonTransChInfo						
>tfc-SignallingMode	[Same as UL]	[Same as UL]	Same as UL	Same as UL	[Same as UL]	Same as UL
PhyCH INFORMATION FDD						
UL-DPCH-InfoPredef						
>ul-DPCH-PowerControlInfo						
>>powerControlAlgorithm	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm
>>>tpcStepSize	1	1	1	1	1	1
>tfc-Existence	[TRUE]	[TRUE]	TRUE	TRUE	[TRUE]	TRUE
>puncturingLimit	[0.92]	[0.8]	0.92	1	[1]	1
DL-CommonInformationPredef						
>dl-DPCH-InfoCommon						
>>spreadingFactor	[64]	[64]	32	128	[64]	32
>>pilotBits	[8]	[8]	8	8	[8]	8
>>positionFixed	[Flexible]	[Flexible]	Flexible	Flexible	[Flexible]	Flexible
PhyCH INFORMATION TDD						
UL-DPCH-InfoPredef						
>ul-DPCH-PowerControlInfo						
>>dpch-ConstantValue	[-20]	[-20]	-20	-20	[-20]	-20
>commonTimeslotInfo						
>>secondInterleavingMode	[frameRelated]	[frameRelated]	frameRelated	frameRelated	[frameRelated]	frameRelat
>>tfc-Coding	[8]	[8]	8	16	[16]	16
>>puncturingLimit	[0.56]	[0.8]	0.56	1	[0.50]	0.50
>>repetitionPeriodAndLength	[repetitionPeriod1]	[repetitionPeriod1]	repetitionPeriod1	repetitionPeriod1	[repetitionPeriod1]	repetitionP
DL-CommonInformationPredef						
>dl-DPCH-InfoCommon						
>>commonTimeslotInfo						
>>>secondInterleavingMode	[frameRelated]	[frameRelated]	frameRelated	frameRelated	[frameRelated]	frameRelat
>>>tfc-Coding	[8]	[8]	8	16	[16]	16

<u>>>>puncturingLimit</u>	<u>[0.52]</u>	<u>[0.52]</u>	<u>0.52</u>	<u>0.46</u>	<u>[0.46]</u>	<u>0.46</u>
<u>>>>repetitionPeriodAndLength</u>	<u>[repetitionPeriod1]</u>	<u>[repetitionPeriod1]</u>	<u>repetitionPeriod1</u>	<u>repetitionPeriod1</u>	<u>[repetitionPeriod1]</u>	<u>repetitionP</u>

CHANGE REQUEST

⌘ **25.331 CR 675** ⌘ rev **r2** ⌘ Current version: **3.5.0** ⌘


For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Downlink power offsets		
Source:	⌘ TSG-RAN WG2		
Work item code:			Date: ⌘ 8 March 2001
Category:	⌘ F		Release: ⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ It is stated in 25.214 v. 3.5.0, section 5.2.1.1: <p>"The relative transmit power offset between DPCCH fields and DPDCHs is determined by the network. The TFCI, TPC and pilot fields of the DPCCH are offset relative to the DPDCHs power by PO1, PO2 and PO3 dB respectively. The power offsets may vary in time."</p> <p>Currently, the offsets PO1, PO2 and PO3 are not signalled in RRC messages.</p> <p>Based on the downlink transport channel BLER target signalled by the UTRAN, the UE is able to deduce a SIR_{target} value for the data part, but not for the pilot part. In order to calculate the SIR_{target} for the pilot, the UE should add up the power offset between pilots and data. In order to do this, the UE needs signalled information on the power offset. It is proposed to add this offset PO3 to the signalling. In addition, it is proposed to add the offsets PO1, PO2 RRC messages in order to further simplify decoding operations in the UE.</p>
Summary of change:	⌘ The downlink power offsets are added the IE " Downlink DPCH info for each RL" and the IE "Downlink Power Offset" is specified. <u>In Revision 1 only PO3 is added to the IE " Downlink DPCH info for each RL".</u> <u>In Revision 2, PO3 is added to the IE "Downlink DPCH info common for all RL" instead</u>
Consequences if not approved:	⌘ If the downlink power offsets are not signalled to the UE, RAN WG1 has concluded that the performance of the downlink power control is considerably degraded.

Clauses affected:	⌘ <u>10.3.6.18, 10.3.6.24, 11.3</u>
Other specs	⌘ <input type="checkbox"/> Other core specifications ⌘

Affected:	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
Other comments:	⌘	This CR is a consequence of RAN WG1 LS R2-002182.	
			
		R2-002182.doc	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at:
http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

10.3.6.18 Downlink DPCH info common for all RL

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Timing Indication	MP		Enumerated(Initialise, Maintain)	
CFN-targetSFN frame offset	CV TimInd		Integer(0..255)	In frame
<i>CHOICE mode</i>				
<i>>FDD</i>				
>>Downlink DPCH power control information	OP		Downlink DPCH power control information 10.3.6.23	
>>>Power offset P _{Pilot} -DPDCH	MP		Integer(0..24)	Power offset equals P _{Pilot} - P _{DPDCH} , range -60..6 dB, in steps of 0.25 dB
>>>Downlink rate matching restriction information	OP		Downlink rate matching restriction information 10.3.6.31	If this IE is set to "absent", no Transport CH is restricted in TFI.
>>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256, 512)	
>>>Fixed or Flexible Position	MP		Enumerated (Fixed, Flexible)	
>>>TFCI existence	MP		Boolean	TRUE indicates that TFCI exists
>>>CHOICE SF	MP			
>>>> SF = 256				
>>>>> Number of bits for Pilot bits	MP		Integer (2,4,8)	In bits
>>>>> SF = 128				
>>>>>Number of bits for Pilot bits	MP		Integer(4,8)	In bits
>>>> Otherwise				(no data)
<i>>TDD</i>				
>>>Common timeslot info	MD		Common Timeslot Info 10.3.6.10	Default is the current Common timeslot info

CHOICE SF	Condition under which the given SF is chosen
SF=128	"Spreading factor" is set to 128
SF=256	"Spreading factor" is set to 256
Otherwise	"Spreading factor" is set to a value distinct from 128 and 256

Condition	Explanation
<i>TimInd</i>	This IE is OPTIONAL if the IE "Timing Indication" is set to "Initialise". Otherwise it is absent.

11.3 Information element definitions

```

-- *****
--
--     PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
--
-- *****

DL-DPCH-InfoCommon ::=
    cfnHandling          SEQUENCE {
        maintain         CHOICE {
            initialise    NULL,
            cfntargetsfncframeoffset SEQUENCE {
                cfntargetsfncframeoffset OPTIONAL
            }
        },
        modeSpecificInfo CHOICE {
            fdd           SEQUENCE {
                dl-DPCH-PowerControlInfo          DL-DPCH-PowerControlInfo          OPTIONAL,
                powerOffsetPilot-pdpdch          PowerOffsetPilot-pdpdch,
                dl-rate-matching-restriction     Dl-rate-matching-restriction     OPTIONAL,
                spreadingFactorAndPilot         SF512-AndPilot,
                -- TABULAR: The number of pilot bits is nested inside the spreading factor.
                positionFixedOrFlexible        PositionFixedOrFlexible,
                tfci-Existence                 BOOLEAN
            },
            tdd           SEQUENCE {
                commonTimeslotInfo              CommonTimeslotInfo              OPTIONAL
            }
        }
    }

| PowerOffsetPilot-pdpdch ::= INTEGER (0..24)

```