TSG-RAN Meeting #7
Madrid, Spain, 13 – 15 March 2000

RP-000059

Title: **Agreed CR to TS 25.201**

Source: **TSG-RAN WG1**

Agenda item: **6.1.3**

No.	Doc #	Spec	CR	Rev	Subject	Cat	Versio	Versio
1	R1-000210	25.201	001	-	Editorial revision	D	3.0.1	3.0.2

3GPP TSG RAN Meeting #7
Madrid, Spain, 13-15 March 2000

Document R1-00-0210
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.201	**CR**	**001**	Current Version:	3.0.1

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: (U)SIM ☐ ME ☐ UTRAN / Radio ☐ Core Network ☐
(at least one should be marked with an X)

Source: TSG RAN WG1 **Date:** 21 Feb 2000

Subject: Editorial revision

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification	X		Release 99	X
				Release 00	

Reason for change: Official numbers are allocated to Technical reports R1.03 and R1.04. TR R1.02 is removed, because this TR is now taken care of by RAN WG2 as TR 25.926. Some editorial corrections are done.

Clauses affected: 2, 3, 4.1.2, 4.2.2, 5.1, 5.13, 5.14, 5.15

Other specs affected:

Other 3G core specifications	☐	→ List of CRs:
Other GSM core specifications	☐	→ List of CRs:
MS test specifications	☐	→ List of CRs:
BSS test specifications	☐	→ List of CRs:
O&M specifications	☐	→ List of CRs:

Other comments:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] 3G TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)"

[2] 3G TS 25.212: "Multiplexing and channel coding (FDD)"

[3] 3G TS 25.213: "Spreading and modulation (FDD)"

[4] 3G TS 25.214: "Physical layer procedures (FDD)"

[5] 3G TS 25.215: "Physical layer – Measurements (FDD)"

[6] 3G TS 25.221: "Physical channels and mapping of transport channels onto physical channels (TDD)"

[7] 3G TS 25.222: "Multiplexing and channel coding (TDD)"

[8] 3G TS 25.223: "Spreading and modulation (TDD)"

[9] 3G TS 25.224: "Physical layer procedures (TDD)"

[10] 3G TS 25.225: "Physical layer – Measurements (TDD)"

[11] 3G TR 25.833: "Physical layer items not for inclusion in Release '99"~~3G TR R1.02: "User Equipment physical layer capabilities"~~

[12] 3G TR ~~R1.04~~25.944: "~~[~~Channel coding and multiplexing examples~~]~~"

~~[13] 3G TR R1.03: "Physical layer items not included in Release '99"~~

[1~~4~~3] 3G TS 25.301: "Radio Interface Protocol Architecture"

[1~~5~~4] 3G TS 25.302: "Services provided by the physical layer"

[1~~6~~5] 3G~~PP~~ TS 25.101: "UE Radio transmission and reception (FDD)"

[1~~7~~6] 3G~~PP~~ TS 25.102: "UE Radio transmission and reception (TDD)"

[1~~8~~7] 3G~~PP~~ TS 25.104: "BTS Radio transmission and reception (FDD)"

[1~~9~~8] 3G~~PP~~ TS 25.105: "BTS Radio transmission and reception (TDD)"

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ARQ	Automatic Repeat Request
BER	Bit Error Rate
CCTrCH	Coded Composite Transport Channel
DCA	Dynamic channel allocation
DCH	Dedicated Channel
DS-CDMA	Direct-Sequence Code Division Multiple Access

DSCH	Downlink Shared Channel
FAUSCH	Fast Upink Signalling Channel
FDD	Frequency Division Duplex
FEC	Forward Error Correction
FER	Frame Error Rate
GSM	Global System for Mobile Communication
L1	Layer 1 (physical layer)
L2	Layer 2 (data link layer)
L3	Layer 3 (network layer)
LAC	Link Access Control
MAC	Medium Access Control
Mcps	Mega Chip Per Second
ODMA	Opportunity Driven Multiple Access
~~PSCH~~	~~Physical Shared Channel~~
PCS	Personal Communications System
PHS	Persona Handyphone System
QPSK	Quaternary Phase Shift Keying
RACH	Random Access Channel
RF	Radio Frequency
RLC	Radio Link Control
RRC	Radio Resource Control
SAP	Service Access Point
SCCC	Serial Concatenated Convolutional Code
SCH	Synchronisation Channel
SIR	Signal-to-Interference Ratio
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
TFCI	Transport-Format Combination Indicator
UE	User Equipment
UMTS	Universal Mobile Telecommunications System
UTRA	UMTS Terrestrial Radio Access
UTRAN	UMTS Terrestrial Radio Access Network
WCDMA	Wide-band Code Division Multiple Access

4.1.2 Service provided to ~~upper~~higher layers

The physical layer offers data transport services to higher layers. The access to these services is through the use of transport channels via the MAC sub-layer. The physical layer is expected to perform the following functions in order to provide the data transport service. See also TS 25.302.

- Macrodiversity distribution/combining and soft handover execution
- Error detection on transport channels and indication to higher layers
- FEC encoding/decoding of transport channels
- Multiplexing of transport channels and demultiplexing of coded composite transport channels (CCTrCHs)
- Rate matching ~~(data multiplexed on DCH)~~of coded transport channels to physical channels
- Mapping of coded composite transport channels on physical channels
- Power weighting and combining of physical channels
- Modulation and spreading/demodulation and despreading of physical channels
- Frequency and time (chip, bit, slot, frame) synchronisation
- Radio characteristics measurements including FER, SIR, Interference Power, etc., and indication to higher layers
- Inner -loop power control
- RF processing <Note: RF processing is defined in TS 25.100 series>

When network elements (UEs and network) provide compatible service bearers (for example support a speech bearer) they should be assured of successful interworking. Moreover, different implementation options of the same (optional) feature would lead to incompatibility between UE and network. Therefore, this shall be avoided.

4.2.2 Channel coding and interleaving

For the channel coding in UTRA three options are supported:

- Convolutional coding,
- Turbo coding
- No channel coding.

Channel coding selection is indicated by ~~upper~~higher layers. In order to randomise transmission errors, bit interleaving is performed further.

5.1 Overview

The physical layer specification consists of a general documents (TS 25.201), five FDD mode documents (TS 25.211 through 25.215), five TDD mode documents (TS 25.221 through 25.225). In addition, there are ~~three~~two technical reports (TR ~~R1.02, R1.04,~~25.833 and ~~R1.03~~25.944).

~~5.13 TR R1.02: User Equipment physical layer capabilities~~

~~The scope is to describe the physical layer capabilities of UEs.~~

5.13 TR 25.833: Physical layer items not for inclusion in Release '99

The scope is to collect materials on UTRA physical layer items not included in the Release '99 specification documents, such as DSCH control channel, FAUSCH, Hybrid ARQ, 4-state SCCC turbo coding.

5.14 TR ~~R1.04~~25.944: ~~[~~Channel coding and multiplexing examples~~]~~

<Editor's Note: The document has not been finalised yet>

The scope is to describe examples of channel coding and multiplexing for ~~DCH~~transport channels of various types and cases.

~~5.15 TR R1.03: Physical layer items not included in Release '99~~

~~The scope is to collect materials on UTRA physical layer items not included in the Release '99 specification documents, such as DSCH control channel, FAUSCH, Hybrid ARQ, 4-state SCCC turbo coding.~~