3GPP TSG-T (Terminals) Meeting #23 ***TP-040018***
Phoenix, USA
10 - 12 March, 2004

3GPP TSG T WG3 Meeting #30 ***T3-040156***
Sophia Antipolis, France, 10th – 13th February 2004

Title: LS on Video call bearer capabilities
Response to:

Source: 3GPP TSG T WG3
To: CN1, 3GPP TSG T

Contact Person:
Name: **Alison Hinsley**
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Attachments: **T3-040078 LS** on Addition of Video call capability to CAT, **SCP-040081** Proposed CR to TS 102223 for addition of Video Call from CAT & **SCP-040096** Discussion document on the ability to setup Video telephony calls from SIM TOOLKIT in 3GPP

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1. Overall Description:

3GPP TSG T WG3 have received a LS from EP SCP (T3-040078) requesting a comments on proposed CR (SCP-040081), 3GPP TSG T WG3 feel they do not have the technical expertise to comment on the video call functionality and therefore request CN1 to confirm that the definition of video call functionality is as specified in SCP-040096.

3GPP TSG T WG3 asks CN1 to respond directly to EP SCP and 3GPP TSG T that video calls are defined and in what manner.

2. Actions:

ACTION: 3GPP TSG T WG3 asks CN1 group to review the documents attached and comment accordingly to EP SCP and 3GPP TSG T.

3. Date of Next Meetings:

T#23	10th – 12th March 2004 Phoenix, USA
T3#31	27th April – 30th April 2004 Berlin, Germany
SCP WG3#11	29 March - 1 April 2004 Sophia Antipolis, France
SCP #17	5 - 7 May 2004 Sophia Antipolis, France

ETSI SCP Meeting #16
Barcelona, Spain, 4 – 6 February 2003

Tdoc SCP-040081

EP SCP CR-Form-v1.5.0

CHANGE REQUEST

⌘ **TS 102223 CR** ⌘ rev **-** ⌘ Current version: 6.3.0 ⌘

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

Proposed change affects: ⌘	smart card	X	terminal	X	server / network entity	

Title: ⌘	Addition of ability to set up Video calls using the SET UP CALL command	
Source: ⌘	SCP	
Work item name: ⌘		***Date:*** ⌘ 05/02/04
Category: ⌘	**B**	***Release:*** ⌘ Rel 6

Use one of the following categories:
- ***F*** *(essential correction)*
- ***A*** *(corresponds to a correction in an earlier release)*
- ***B*** *(Addition of feature),*
- ***C*** *(Functional modification of feature)*
- ***D*** *(Editorial modification)*

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*
REL-6	*(Release 6)*
REL-7	*(Release 7)*

Reason for change: ⌘	This change will add the ability to setup Video calls from CAT applications.
Summary of change: ⌘	1) Section 5.2 - addition of bit8 to Byte 18 in TERMINAL PROFILE to indicate support of Video calls in SETUP CALL command. 2) Section 6.4.13 – addition of setence 3) Appendix A – addition of class g
Consequences if not approved: ⌘	If a SETUP CALL is issued with the bearer capabilities indicating that the call is a Video call, the handset will be unable to process the command as a specified action is not defined.

New tag value defined within the CR?	**N**	If ticked, add document number of related CR to TS 101 220:	

Clauses affected: ⌘	5.2, 6.4.13, Appendix A			
Other specs affected: ⌘		Other core specifications Test specifications	⌘	
Other comments: ⌘	This CR is linked to T3 CR in T3-030984			

[...]

5.2 Structure and coding of TERMINAL PROFILE

Direction: terminal to UICC.

The command header is specified in TS 102 221 [**Error! Reference source not found.**] for a 3G platform and in TS 151 011 [**Error! Reference source not found.**] for a 2G platform.

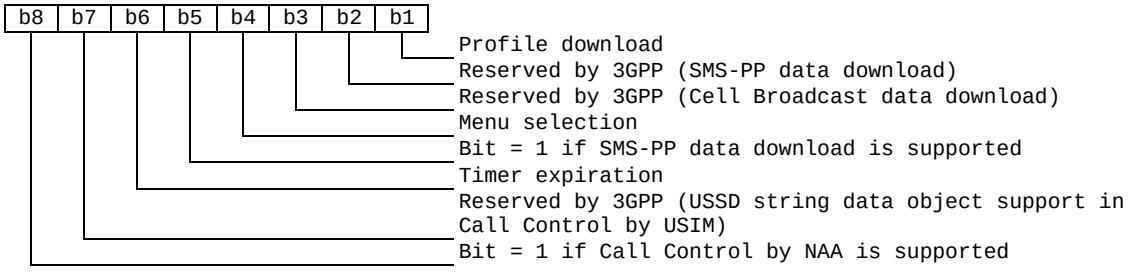
Command parameters/data:

Description	Clause	M/O/C	Length
Profile	-	M	lgth

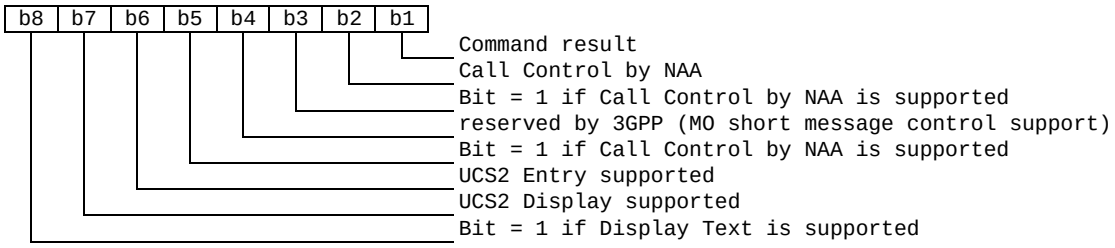
Profile:

- Contents:
  - The list of CAT facilities that are supported by the terminal.
- Coding:
  - 1 bit is used to code each facility:
    - bit = 1: facility supported by terminal;
    - bit = 0: facility not supported by terminal.

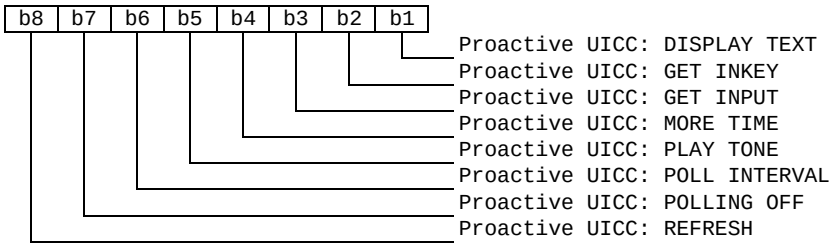
First byte (Download):



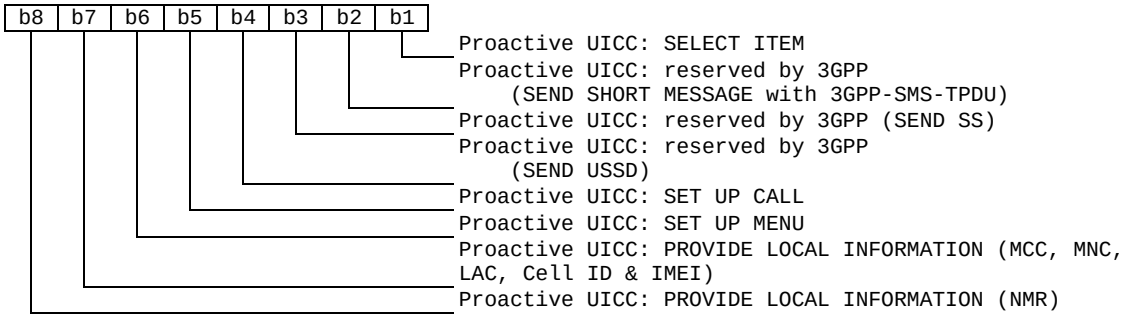
Second byte (Other):



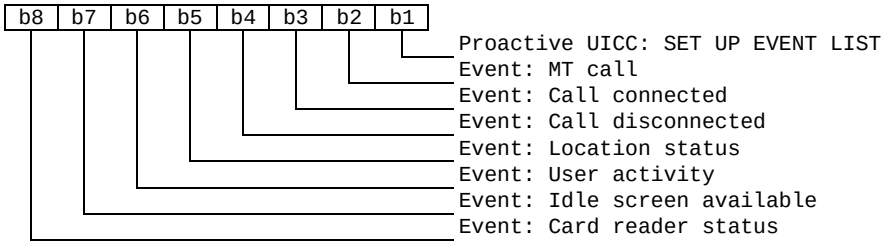
Third byte (Proactive UICC):



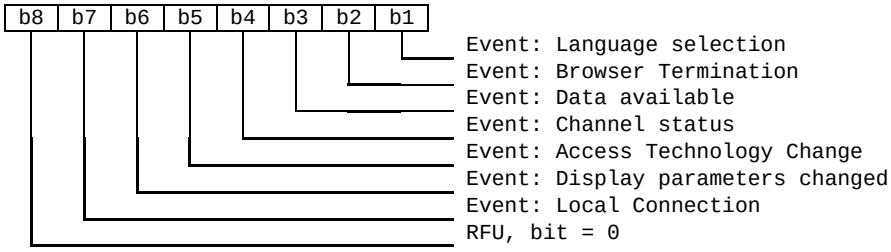
Fourth byte (Proactive UICC):



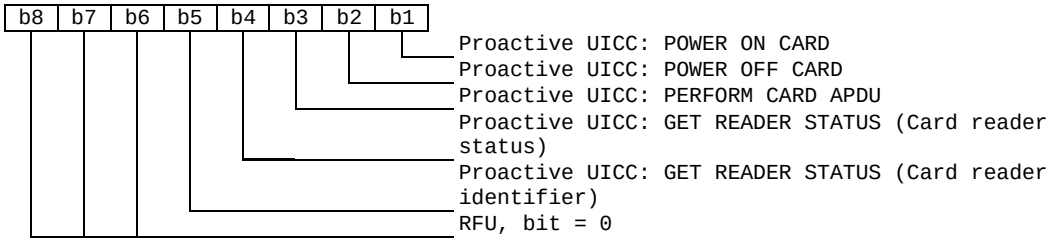
Fifth byte (Event driven information):



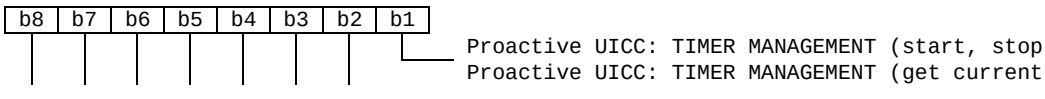
Sixth byte (Event driven information extensions):

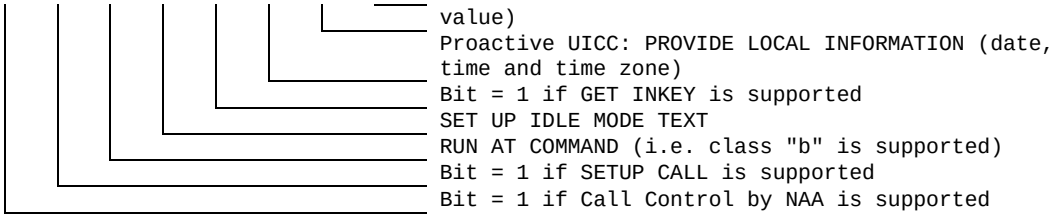


Seventh byte (Multiple card proactive commands) for class "a":

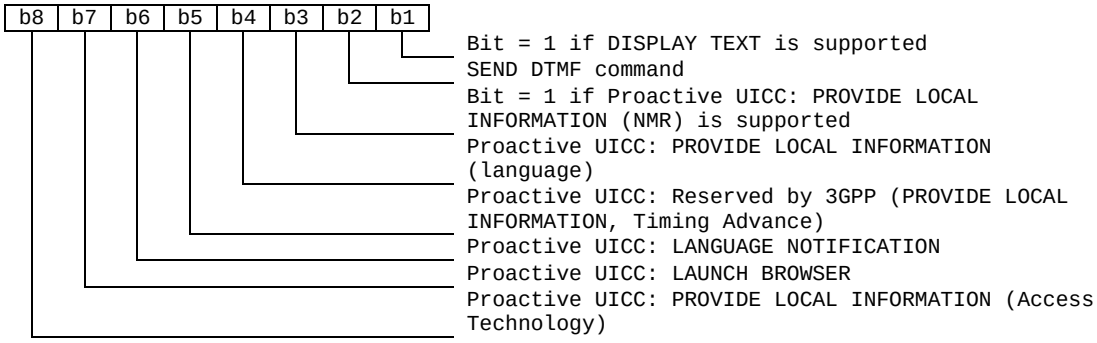


Eighth byte (Proactive UICC):

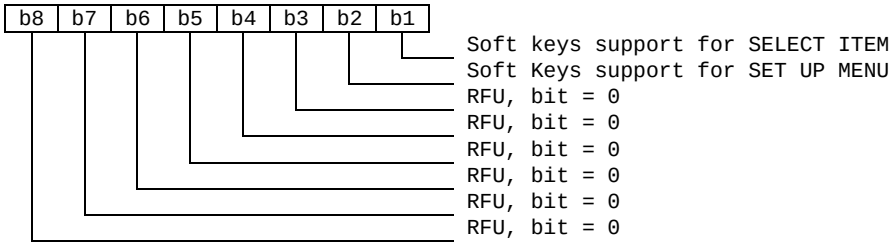




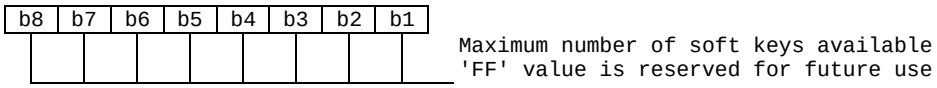
Ninth byte:



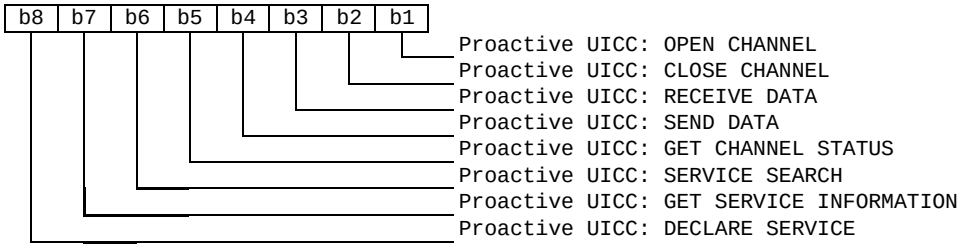
Tenth byte (Soft keys support) for class "d":



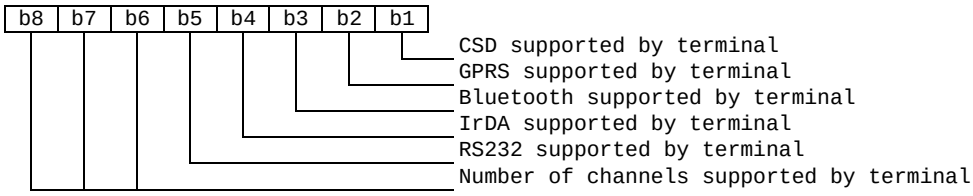
Eleventh byte: (Soft keys information)



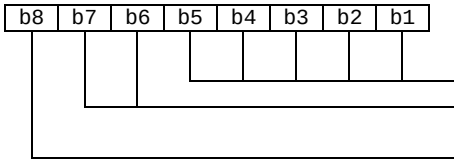
Twelfth byte:



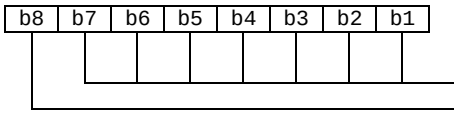
Thirteenth byte:



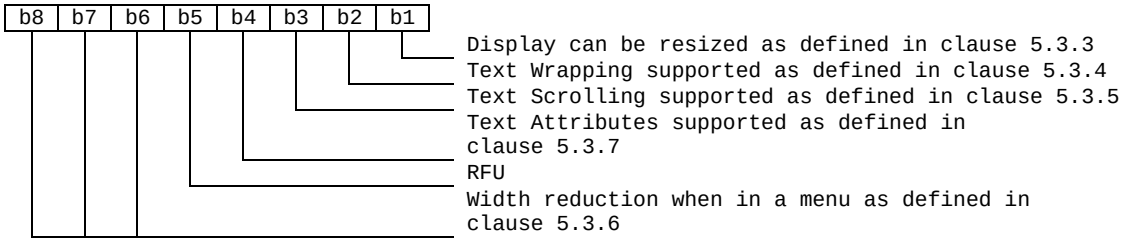
Fourteenth byte: (Screen height)



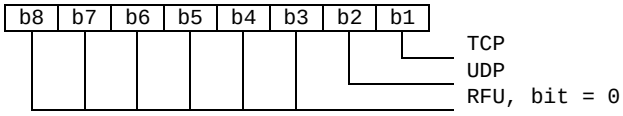
Fifteenth byte: (Screen width)



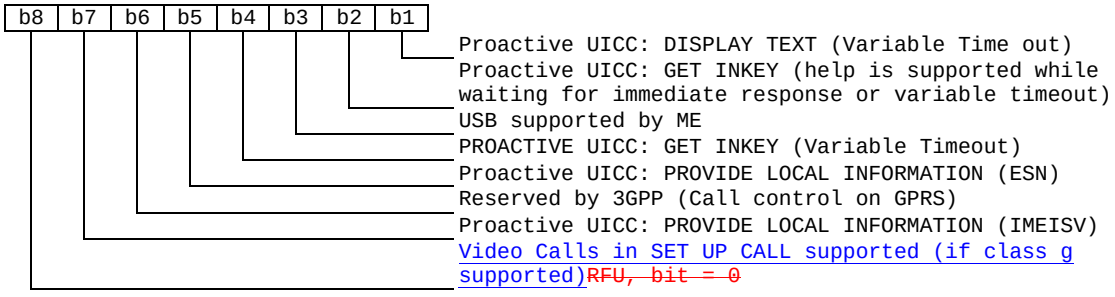
Sixteenth byte: (Screen effects)



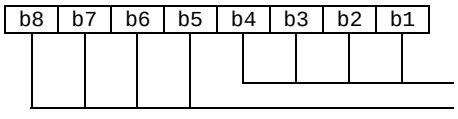
Seventeenth byte:



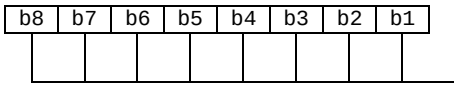
Eighteenth byte:



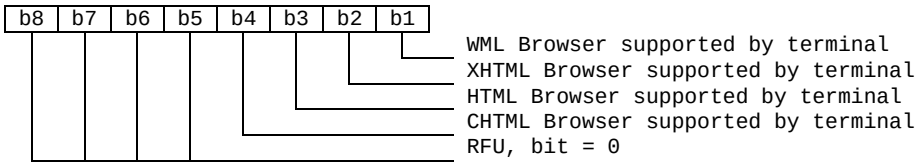
Nineteenth byte: (reserved for TIA/EIA-136 facilities [25]):



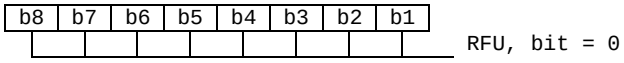
Twentieth byte: (reserved for TIA/EIA/IS-820 facilities [**Error! Reference source not found.**]):



Twenty-first byte (Extended Launch Browser Capability) for class "c":



Subsequent bytes:



- RFU bits, and all bits of subsequent bytes, are reserved to indicate future facilities. A UICC supporting only the features of Card Application Toolkit defined here shall not check the value of RFU bits.
- Response parameters/data: None.

[.....]

6.4.13 SET UP CALL

This command is issued by the UICC to request a call set up.

Three types are defined:

- set up a call, but only if not currently busy on another call;
- set up a call, putting all other calls (if any) on hold;
- set up a call, disconnecting all other calls (if any) first.

For each of these types, the UICC may request the use of an automatic redial mechanism The UICC may also request an optional maximum duration for the redial mechanism. The terminal shall attempt at least one call set-up.

In addition to the called party number, the command may contain capability configuration parameters (giving the bearer capability to request for the call) and the called party subaddress. The terminal shall use these in its call set-up request to the network. If the Bearer Capabilities element indicates that a video call is to be setup then the ME shall launch and use the relevant client to make the call. The command may also include DTMF digits, which the terminal shall send to the network after the call has connected. The terminal shall not locally generate audible DTMF tones and play them to the user.

NOTE: On the downlink audio, DTMF tones reflected by the network may be heard.

It is possible for the UICC to request the terminal to set up an emergency call by supplying the number "112" as called party number. The terminal may translate this number in the appropriate technology specific number or procedure.

The number included in the SET UP CALL proactive command shall not be checked against those of the FDN list, even if the Fixed Dialling Number service is enabled.

Upon receiving this command, the terminal shall decide if it is able to execute the command. Examples are given below, but the list is not exhaustive:

- if the command is rejected because the terminal is busy on another call, the terminal informs the UICC using TERMINAL RESPONSE (terminal unable to process command - currently busy on call).

If the terminal is able to set up the call on the serving network, the terminal shall:

- alert the user (as for an incoming call). This is the confirmation phase;

- optionally, the UICC may include in this command one or two alpha-identifiers. The use of these alpha-identifiers by the terminal is described below:

  - if the first alpha identifier is provided by the UICC and is not a null data object, the terminal shall use it during the user confirmation phase. This is also an indication that the terminal should not give any other information to the user during the user confirmation phase. If an icon is provided by the UICC, the icon indicated in the command may be used by the terminal to inform the user, in addition to, or instead of the alpha identifier, as indicated with the icon qualifier (see clause 6.5.4);

  - if the first alpha identifier is not provided by the UICC or is a null data object (i.e. length = '00' and no value part), the terminal may give information to the user;

  - if the second alpha identifier (i.e. the one after the mandatory address object) is provided by the UICC and is not a null data object, the terminal shall use it during the call set-up phase and during the call. If an icon is provided by the UICC, the icon indicated in the command may be used by the terminal to inform the user, in addition to, or instead of the alpha identifier, as indicated with the icon qualifier (see clause 6.5.4);

  - if the second alpha identifier is not provided by the UICC or is a null data object (i.e. length = '00' and no value part), the terminal may give information to the user;

- if the user accepts the call, the terminal shall then set up a call to the destination address given in the response data, with the relevant capability configuration parameters and called party subaddress (if provided by the UICC);

- if the user does not accept the call, or rejects the call, then the terminal informs the UICC using TERMINAL RESPONSE (user did not accept the proactive command). The operation is aborted;

- if the user has indicated the need to end the proactive UICC session, the terminal shall send a TERMINAL RESPONSE with "Proactive UICC session terminated by the user" result value;

- optionally, during call set-up, the terminal can give some audible or display indication concerning what is happening;

- once a CONNECT message has been received from the network (defined in TS 124 008 [**Error! Reference source not found.**]), the terminal shall inform the UICC that the command has been successfully executed, using TERMINAL RESPONSE. Operation of the call then proceeds as normal.

If the first call set-up attempt is unsuccessful:

- if the UICC did not request redial then the terminal shall inform the UICC using TERMINAL RESPONSE (network currently unable to process command), and not redial to set-up the call;

- if the UICC requested redial, then the terminal may automatically redial the call (depending on its capability/configuration). In this case, the terminal shall not send a command result to the UICC concerning the first or any subsequent failed set-up attempts. If the call set-up has not been successful, and the terminal is not going to perform any more redials, or the time elapsed since the first call set-up attempt has exceeded the duration requested by the UICC, then the terminal shall inform the UICC using TERMINAL RESPONSE (network currently unable to process command), and the redial mechanism shall be terminated;

- if the user stops the call set-up attempt or the redial mechanism before a result is received from the network, the terminal informs the UICC using TERMINAL RESPONSE (user cleared down call before connection or network release).

If the terminal supports the Last Number Dialled service, the terminal shall not store in EF_{LND} the call set-up details (called party number and associated parameters) sent by the UICC in this command.

[.....]

Annex A (normative): Support of CAT by terminal equipment

Support of CAT is optional for terminal Equipment. However, if a terminal states conformance with a specific CAT release, it is mandatory for the terminal to support all functions of that release.

The support of letter classes, which specify mainly terminal hardware dependent features, is optional for the terminal and may supplement the CAT functionality described in the present document. If a terminal states conformance to a letter class, it is mandatory to support all functions within the respective letter class.

Table A.1 indicates the commands and functions of the optional letter classes.

Table A.1: Description of letter classes

Letter classes	Command/function description
a	Proactive command: GET READER STATUS Proactive command: PERFORM CARD APDU Proactive command: POWER ON CARD Proactive command: POWER OFF CARD Event download: Card reader status
b	Proactive command: RUN AT COMMAND
c	Proactive command: LAUNCH BROWSER Event download: Browser termination event
d	Soft key support
e	Proactive command: OPEN CHANNEL Proactive command: CLOSE CHANNEL Proactive command: RECEIVE DATA Proactive command: SEND DATA Proactive command: GET CHANNEL STATUS Event download: Data available Event download: Channel status
f	Proactive command: SERVICE SEARCH Proactive command: GET SERVICE INFORMATION Proactive command: DECLARE SERVICE Event download: Local connection event
g	Video Call support

EP SCP meeting #16
4-6 January 2004, Barcelona, Spain

Tdoc SCP-040096

Title: Discussion document on the ability to setup Video telephony calls from SIM TOOLKIT in 3GPP

Source: Vodafone

Contact Person:
Name: Tim Evans
Tel. Number: +44 7899 077654
E-mail Address: tim.evans@vf.vodafone.co.uk

Attachments: None

Overview on Multimedia Calls

This section provides an overview of how multimedia calls are implemented in 3GPP.

The following call handling scenarios need to be considered:

- 3G-324M to 3G-324M (ME to ME)
- 3G-324M to H.324/I (ME to Fixed)

To establish an end-to-end multimedia call it is essential to communicate the bearer service requirements from one terminal to the other via the network. The key parameters that are used to achieve this are contained in the Bearer Capability information and are as follows:

- Information Transfer Capability (ITC)
- The ITC can be ‘speech’, ‘UDI’ or ‘3.1kHZ’. Unrestricted Digital Information (UDI) is used for digital calls over the ISDN. 3.1kHZ is used for modem calls
- Other Rate Adaptation (ORA)
- This parameter is defined in 3GPP 24.008 [21] and is used to indicate ‘H.223/H.245’ compatibility
- Fixed Network User Rate (FNUR)
- It defines the user rate between the MSC and the fixed network. That is, the rate that applies for the connection between the MSC and the terminal in the ISDN/PSTN or the Access Server that is connected to the Internet
- User Information Layer 1 Protocol
- This parameter is used to indicate ‘H.223/H.245’ compatibility in Q.931.

General

To setup a multimedia call, the terminals perform end-to-end signalling indicating that it is a multimedia call and also the kind of bearer that is required for the call (for example UDI or 3.1kHZ). In the UTRAN, the ‘conversational’ Quality of Service (QoS) class is used that is defined by the Radio Access Bearer (RAB) parameter. Once the bearer is established, negotiations take place ‘inband’ using H.245 to decide which video and audio codecs should be used during the call. The principle of this procedure is illustrated below.

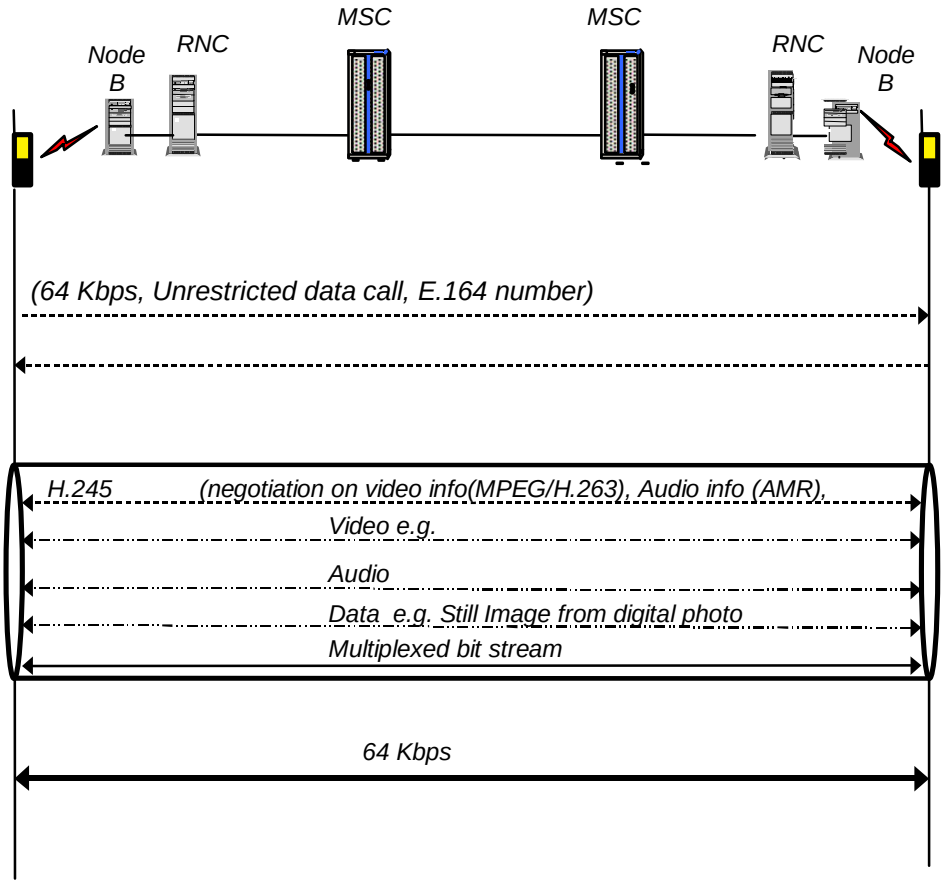


Figure 4-5 Principle of multimedia call setup.

3G-324M to 3G-324M

In a 3G-324M to 3G-324M call the ORA value of 3GPP 24.008 SETUP message is set to 'H.223/H.245' to indicate that it is a multimedia call. The ITC value is set to 'UDI' and FNUR=64K to indicate that it is a digital VT call.

3G-324M to H.324/I

For calls originating from 3G-324M and terminating in the ISDN, the value of ORA in the UE supplied PLMN BC is set to H.223/H.245 in the 24.008 SETUP message to indicate that it is a multimedia call. The ITC value is set to 'UDI' to indicate that it is a digital call. In the ISDN domain the H.223/H.245 indication is mapped onto 'H.223/H.245' as User Information Layer 1 Protocol (UIL1P) in the ISDN BC of the Q.931 SETUP message. The ITC value in the BC of Q.931 SETUP message is set to 'UDI'. Thus providing an end to signalling for request of a multimedia digital call.

3GPP TSG T WG3 Meeting #30 ***T3-040078***
Sophia Antipolis, France 9th - 13th February 2004

EP SCP meeting #16 ***Tdoc SCP-040102***
4-6 January 2004, Barcelona, Spain

Title: LS on Addition of Video call capability to CAT
Response to: LS (T3-030985) on Addition of feature to 31.111

Source: ETSI SCP
To: 3GPP TSG T WG3
Cc:

Contact Person:
Name: **Tim Evans**
Tel. Number: +44 7899 077654
E-mail Address: tim.evans@vf.vodafone.co.uk

Attachments: SCP-040081 Proposed CR to TS 102223 for addition of Video Call from CAT.

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1. Overall Description:

ETSI SCP thanks 3GPP TSG T WG3 for its liaison introducing the ability for CAT to initiate Video calls. ETSI SCP felt that this functionality is of use generally for CAT and would like to add this functionality at the next plenary meeting. This is the outcome of a discussion on this topic, taking also into account the previous work by SCP WG3 and its LS to TSG T3 (SCP3-040049).

ETSI SCP asks T3 if they have any comments relating to the video call functionality being added to TS 102223.

2. Actions:

To 3GPP TSG T WG3 group.

ACTION: ETSI SCP asks 3GPP TSG T WG3 group to review the change attached and comment accordingly.

3. Date of Next SCP Meetings:

SCP WG3#11	**29 March - 1 April 2004**	**Sophia Antipolis, France**
SCP #17	**5 - 7 May 2004**	**Sophia Antipolis, France**