

**Telecommunications and Information Exchange Between Systems**

**ISO/IEC JTC 1/SC 6**

<b>Document Number:</b>	N13975
<b>Date:</b>	2009-05-27
<b>Replaces:</b>	
<b>Document Type:</b>	Meeting Report
<b>Document Title:</b>	Report on Question 15/11 including joint meeting with JTC 1/SC 6/WG 7
<b>Document Source:</b>	SC 6/WG 7 Convenor
<b>Project Number:</b>	
<b>Document Status:</b>	For your information.
<b>Action ID:</b>	FYI
<b>Due Date:</b>	
<b>No. of Pages:</b>	9
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TELECOMMUNICATION  
STANDARDIZATION SECTOR

## TD 125 Rev.1 (GEN/11)

STUDY PERIOD 2009-2012

English only

Original: English

Question(s): 15/11

Geneva, 19-23 January 2009

## TEMPORARY DOCUMENT

Source: Rapporteur

Title: Report on Question 15/11 including joint meeting with JTC 1/SC 6/WG 7

**1 Question 1/15: End to End Multicast**  
**JTC 1/SC 6/WG 7: Network and Transport****2 Rapporteur/Convenor**

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SG11 Doc. No.	SC6 Doc. No.	Title
C 70		Proposal of Amendment 2 of Recommendation ITU-T X.603.1 (2007)
C 69		Proposal of technical corrigendum 1 to Recommendation ITU-T X.603.1 (2007)
C 68		Proposal of new Clause 9. Parameters in X.mmc-3
C 67		Proposed Modification of MMC-3 control messages in clause 8 of X.mmc-3
C 65		Proposed Modification of MMC-3 control data in clause 8.4 of X.mmc-3
C 64		Proposed Modification of X.rmcp-3(X.603.2   ISO/IEC 16512-3) for second FCD

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C 02		WTSA-08 decision concerning the proposal to move Q.14/13 (QK/13) to Study Group 11 (WTSA-08 Doc 91, and 171)
C 01		Questions assigned to Study Group 11 (Signalling requirements, protocols and test specifications)
'TD 131 (GEN/11)		Work programme updates for Q.15/11
'TD 126 (GEN/11)		Communications to IETF: Cooperation in End-to-End Multicast in Q.15/11
'TD 96 (GEN/11)		Revised text of Draft Recommendation ITU-T X.mmc-3   ISO/IEC 24793-3: MMC-3
'TD 95 (GEN/11)		Revised text of Draft Recommendation ITU-T X.603.2   ISO/IEC 16512-3 RMCP-3
'TD 94 (GEN/11)		Draft technical corrigendum 1 to ITU-T Recommendation X.603.1 (2007)   ISO/IEC 16512-2
'TD 93 (GEN/11)		Draft Amendment 2 of ITU-T Recommendation X.603.1 (2007)   ISO/IEC 16512-2
'TD 83 (GEN/11)		Report of ITU-T Question 1/17 Rapporteur Meeting (November 2008)
'TD 82 (GEN/11)	SC6 N 1378	Output document of RMCP-3 (ISO/IEC 16512-3)
'TD 81 (GEN/11)	SC6 N 13780	FCD text of ISO/IEC FCD 24792, Multicast Session Management Protocol (MSMP)
'TD 80 (GEN/11)	SC6 N 13796	Disposition of CD ballot Comments on SC6 N13592, ISO/IEC CD 24792 Multicast Session Management Protocol (MSMP)
'TD 79 (GEN/11)	SC6 N 13833	WD of ISO/IEC 24793-3, Mobile Multicast Communications: Protocol over Overlay Multicast Networks
'TD 78 (GEN/11)	SC6 N 13834	Meeting Notice and Draft Agenda of the JTC1/SC6/WG7 Interim meeting with ITU-T Q.15/11(19~23 January 2009), and WG7 Interim meeting with ITU-T Q.6/17 (12~13 February 2009).
'TD 77 (GEN/11)		Draft Agenda for ITU-T Q.15/11 including joint meeting with JTC1/SC6/WG7
'TD 76 (GEN/11)	SC6 N 13785	Text for DCOR ballot, Draft Technical Corrigendum 1 to ISO/IEC 16512-2:2008 (X.603.1)
'TD 75 (GEN/11)	SC6 N 13782	Working Draft of Amendment 2 to ISO/IEC 16512-2:2008 (X.603.1)
'TD 74 (GEN/11)	SC6 N 13829	Proposed DoC on 16512-2/PDAM.1
'TD 73 (GEN/11)	SC6 N 13781	Revised Text for FPDAM ballot on ISO/IEC 16512-2/AMD.1, RMCP-2: Security extensions
'TD 72 (GEN/11)	SC6 N 13784	Output Document for the Resolution for ISO/IEC 16512-2( RMCP-2) Defect Reports
'TD 68 (GEN/11)		Draft Agenda for WP2/11
TD 56 (GEN/11)		Policy and procedures for security analysis of Study Group 11 publications
TD 44 (GEN/11)		LS: LS from ETSI TISPAN WG3, Information on IPTV Protocol

TD 36 (GEN/11)		LS: Revised version of draft Recommendation Y.iptv-req, "IPTV services requirements" (IPTV-GSI event, Geneva, 30 April ? 7 May 2008)
TD 35 (GEN/11)		LS: LS on Collaboration on IPTV services requirements
TD 34 (GEN/11)		LS: Proposed new draft Recommendations on IPTV
TD 32 (GEN/11)		LS: LS on NGCN issues and proposed workshop
TD 20 (GEN/11)		LS: Proposed new draft Recommendations on IPTV
TD 03 (GEN/11)		LS: Revised Recommendation Y.2091 Terms, definitions and high level terminological framework for Next Generation Networks
TD 02 (GEN/11)		LS: Liaison on IPTV deliverables
TD 01 (GEN/11)		List of contributions, temporary documents PLEN/11, GEN/11 series (update of 12 January 2009)

## 4 Meeting Generals

This is the first Q.15/11 meeting since it has been moved from SG 17 to SG 11.

During this SG11 meeting, Q.15/11 had a joint meeting with ISO/IEC JTC 1/SC 6/WG 7 (Network and Transport) on multicast issues. Q.15/11 has a long collaboration history with JTC1/SC6/WG7 to develop common text recommendations/standards. Most of the meetings of both groups have been conducted as a joint meeting.

The meeting was chaired by Mr. Shin-Gak Kang, as a Rapporteur of Q.15/11 as well as a Convenor of SC 6/WG 7. The previous meeting reports and relevant activities of Q.15/11(formally Q.1/17) were reviewed and accepted by the meeting.

## 5 Meeting results

### 5.1 Agreements reached

#### 5.1.1 ECTP (Enhanced Communications Transport Protocol)

##### a) ECTP-4 and ECTP-6

During the meeting, the status of ECTP-4 and ECTP-6 had been reviewed. The ECTP-4 and ECTP-6 had been consented at SG17 meeting in September 2008 and it was noted that these Recommendations had been approved as ITU-T Recommendations. According to the agreements at the SG17 meeting in September 2008 and at the JTC1/SC6 November 2008 meeting, these ITU-T Recommendations had been requested to JTC 1 to go forward for fast track approval process for adopting as ISO/IEC standard. It is expected that these Recommendations will be approved and published in the ISO/IEC JTC 1.

- ITU-T X.607.1: ECTP – QoS Management for Duplex multicast transport
- ITU-T X.608.1: ECTP – QoS Management for N-plex multicast transport

#### 5.1.2 Relayed Multicast Protocol (RMCP)

##### a) Amendment 1 to ITU-T X.603.1 | ISO/IEC 16512-2: RMCP Specification for simplex group applications – Security extensions

Related documents:

It was noted that Amendment 1 to ITU-T X.603.1 | ISO/IEC 16512-2(RMCP-2) is in FPDAM ballot processing according to the resolution of SC6 meeting in November 2008. The FPDAM ballot will be closed in March and it is expected to be consented at the next SG11 meeting. The meeting agreed to request to hold WP3/11 meeting during ITU-T NGN-GSI meeting in May 2009 to Consent this draft amendment.

**b) Amendment 2 to ITU-T X.603.1 | ISO/IEC 16512-2: RMCP Specification for simplex group applications – Revision of sub-control data and code-value**

Related documents: C70

It was noted that initial text of draft amendment 2 to X.603.1 | ISO/IEC 16512-2 had been developed at the November 2008 meeting. It was pre-authorized to go forward for FPDAM ballot procession with the output document from this joint meeting between ITU-T Q.15/11 and SC6/WG7.

During this joint meeting, contribution C70 had been reviewed and accepted to revise draft amendment. It provides solutions of the defect report that states “No coding for Auth\_subtype is provided. The content and structure of the Auth-DATA field is not defined.” During the discussion, more missing sub-controls were found and it were proposed to update draft amendment. Based on discussions, output document of Amendment 2 to X.603.1 has been developed as TD 93.

The meeting decided to send this document to the ISO/IEC JTC 1/SC 6 Secretariat for the FPDAM ballot processing according to relevant resolution of ISO/IEC JTC 1/SC 6 meeting (Montreux, November 2008).

**c) Technical Corrigendum 1 to ITU-T X.603.1 | ISO/IEC 16512-2: RMCP Specification for simplex group applications**

Related documents: C69

This Corrigendum 1 defines the coded value for the node types and the control data types that were inadvertently omitted from the Recommendation X.603.1 (2007) | ISO/IEC 16512-2:2008. Contribution C69 was reviewed and accepted to revise the text of draft corrigendum 1. C69 adds two tables and its description to clause 8.3.1 after table 2 of the Recommendation X.603.1 (2007) | ISO/IEC 16512-2 which were inadvertently omitted from the published standard. The revised text of corrigendum 1 is contained in TD 94.

However, it was noted that DCOR ballot is on the processing within JTC 1/SC 6. Therefore, it is proposed to submit the revised document to the next joint meeting with JTC1/SC6/WG7 in June 2009, for further processing of this technical corrigendum document.

**d) ITU-T X.603.2 | ISO/IEC CD 16512-3: RMCP Specification for N-plex group applications**

Related documents: C64

This contribution proposes to revise the X.rmcp-3 document based on the comments of the last meeting which can be summarized as follows:

- Aligned definition with the X.603.1(2007)/Amd.1 document and revised definition to its current meaning.
- Removed “service administrator” as much as possible, since the protocol should be operated automatically without “service administer” intervention, but some part has been left out for cases as in initial configuration of RMCP-3 network.
- Changed the style of clause 8(Message) and clause 9(Parameter) to the style to align with the X.603.1(2007)/Amd.1.

- Modified AUTH control data to resolve the same problem defined in defect report 9 of X.603.1(2007)
- Modified Data profile control data to resolve the same problem defined in defect report 13 of X.603.1(2007)

The revised text of draft Recommendations for second FCD processing of Draft ITU-T X.603.2 | ISO/IEC 16512-3 is TD 95.

It is planned for Consent at SG11 meeting in September 2009.

**e) Revision work of ITU-T X.603.1 | ISO/IEC 16512-2: RMCP Specification for simplex group applications**

Even though Recommendation X.603 | ISO/IEC 16512-2 had been published, some defect were reported. The result of resolution of defect report is in TD 72. It requires further revision work to published specification. During this meeting, there was no progress on this work because there was no contribution to this meeting. It is requested members to submit their contributions to the next meeting.

**5.1.3 Mobile Multicast Communications (MMC)**

**a) ITU-T X.604 | ISO/IEC FCD 24793-1, MMC - Framework**

It is noted that X.604 | ISO/IEC 24793-1 is in FCD ballot processing within JTC 1/SC 6. After successful completion of FCD ballot, it will be consented at ITU-T SG11 meeting.

**b) ITU-T X.604.1 | ISO/IEC FCD 24793-2, MMC - Protocol over Native IP Multicast Network**

It is noted that X.604.1 | ISO/IEC 24793-21 is in FCD ballot processing within JTC 1/SC 6. After successful completion of FCD ballot, it will be consented at ITU-T SG11 meeting.

**c) ITU-T X.604.2 | ISO/IEC CD 24793-3, MMC - Protocol over Overlay Multicast Network**

Related documents: C65, C67, C68

Contribution C65 defines MMC-3 control data used in the MMC-3 protocol in clause 8.4. The proposed modification is summarized as follows.

- New control data defined:: SYSINFO control data, DATAPROFILE control data, AUTH control data, RESULT control data, NEIGHBORLIST control data, ROOTPATH control data, TIMESTAMP control data, REASON control data, COMMAND control data, TREEEXPLOR control data, DATACH control data
- Control data modified to align with the definition of the MMC-3 protocol: GROUPINFO control data, LIFETIME control data, OMAINFO control data, IDENTIFICATION control data, CTRLCH control data, URGENTJOIN control data, MNLEAVE control data

All the contents of this contribution are accepted by the meeting.

Contribution C67 proposes modification to clause 8 Messages and small editorial modification to clause 6. The proposed modification is summarized as follows.

- Define Common format of MMC-3 messages
- Define Control data format

- New messages defined: SUBSREQ, SUBANS, PPROBREQ, PPROBANS, HSOLICIT, HANNOUNCE, HLEAVE, RELREQ, RELANS, STREQ, STANS, LEAVREQ, LEAVANS, TERMREQ, TERMANS
- Messages modified to align with the definition of the MMC-3 protocol: mADVERTISE, mSOLICIT, mREGISTREQ, mREGISTANS.

All the contents of this contribution are accepted by the meeting.

Contribution C68 proposes new clause to define MMC-3 Parameters used in the MMC-3 protocol. The contents in the clause 9 can be summarized as follows:

- Definition of MMC-3 Identifiers
- Definition of Parameters used in MMC-3
- Definition of Encoding rules
- Definition of Timers

This contribution also proposes to remove Clause 10 stating that the security should be defined in the next version or extension. All the contents of this contribution are accepted by the meeting.

Based on contributions and discussion results, output document of ITU-T X.604.2 | ISO/IEC 24793-3 has been developed as TD 96.

#### **5.1.4 MSMP (Multicast Session Management Protocol) of JTC 1/SC 6**

This is ISO/IEC JTC 1/SC 6 project. It was noted that MSMP is in FCD ballot processing within JTC 1/SC 6. After successful completion of FCD ballot, it will be go forward for FDIS ballot processing at the next JTC 1/SC 6 meeting in June 2009.

#### **5.1.5 Work Program of Q.15/11**

Q.15/11 has reviewed the current work program. The work program has been updated based on the status of relevant work items of Q.15/11 as shown in TD 131. It is requested members to propose new work item proposals on protocol issues to support NGN multicast capabilities to NGN applications and services.

#### **5.1.6 Liaison matters**

The scope and tasks of Q.15/11 has been reviewed and meeting discussed about the collaboration with relevant issues of IETF. The meeting agreed to send Liaison statement to IESG/IAB to inform of Q.15/11 activities for future possible collaboration.

### **5.2 Recommendations for consent at this SG 11 meeting**

None

### **5.3 Candidate Recommendations for consent at the May 2009 WP3/11 meeting**

Recommendation		WP	Q.	Editor	Location of text	Equivalent e.g., ISO/IEC
No.	Title					
X.603.1/ Amd.1	Information technology – Relayed Multicast Protocol: Specification for simplex group applications / Amd.1: Security Extensions	3	15	M.Y. Youn	TD 73	ISO/IEC 16512-2/FPDAM.1

X.603.1/ Cor.1	Information technology – Relayed Multicast Protocol: Specification for simplex group applications /TC.1	3	15	S.H. Kim	TD 94	ISO/IEC 16512-2/DTC.1
X.604	Information technology – Mobile Multicast Communication: Framework	3	15	M. Roshanaei, S.G. Kang, S.J. Koh	COM 17- TD 1321	ISO/IEC FCD 24793-1
X.604.1	Information technology – Mobile Multicast Communication: Protocol over Native IP Multicast Network	3	15	S.J. Koh Y.J. Kim	COM17- TD 1445	ISO/IEC FCD 24793-2

#### 5.4 Candidate Recommendations for consent at the September 2009 SG 11 meeting

Recommendation		WP	Q.	Editor	Location of text	Equivalent e.g., ISO/IEC
No.	Title					
X.603.1/ Amd.2	Information technology – Relayed Multicast Protocol: Specification for simplex group applications / Amd.2: Revision of sub-control data and code-value	3	15	S.H. Kim S.G. Kang	TD 93	ISO/IEC 16512-2/FPDAM.2
X.603.2	Information technology – Relayed Multicast Protocol: Specification for n-plex group applications	3	15	S.G. Kang S.H. Kim	TD 95	ISO/IEC CD 16512-3

#### 5.5 Candidate Recommendations for consent after September 2009 SG 11 meeting

Recommendation		WP	Q.	Editor	Location of text	Equivalent e.g., ISO/IEC
No.	Title					
X.604.2	Information technology – Mobile Multicast Communication: Protocol over Overlay Multicast Network	3	15	S.H. Kim M. Roshanaei	TD 96	ISO/IEC CD 24793-3
X.603.1 Revision	Information technology – Relayed Multicast Protocol: Specification for simplex group applications	3	15	S.G. Kang	X.603.1 (Published)	ISO/IEC 16512-2

#### 5.6 Liaison statements

The table below shows the liaison activities of Q.15/11.



Incoming Liaisons					Outgoing Liaisons			
Incoming Liaison TD Number	Source	For I or A	Title or Subject	Q.	To	For I or A	Title or subject	Annex No.
				15	IESG/IAB	I	Communications to IETF: Cooperation in End-to-End Multicast in Q.15/11	TD 126

## 6 Future meetings

Q.	Date	Place	Subject	Information
Q.15/11	20~22 May 2009	Geneva	To consent X.603.1/Amd.1, X.603.1/Cor.1, X.604, X.604.1	Q.15/11 will meet during NGN-GSI event
Q.15/11	1~5 June 2009	Tokyo	All topics of Q.15/11 jointly with ISO/IEC JTC 1/SC 6/WG 7	Co-located meeting with JTC1/SC6
Q.15/11	2~10 September 2009	Mar del Plata, Argentina	All topics of Q.15/11 jointly with ISO/IEC JTC 1/SC 6/WG 7	Q.15/11 will meet during NGN-GSI event