ITU Telecommunication Standardization Sector   Document AVC-750
Study Group 15   24 February 1995
Experts Group for Video Coding and Systems
in ATM and Other Network Environments

Source: Rapporteur for Q.2/15 (Sakae OKUBO)
Title: Report of the Study Group 15 meeting held during 6-17
        February 1995

This is to quickly report the outcome of Working Party 1/15
meeting (7-15 February) and Study Group 15 meeting (6, 16, 17
February), highlighting the issues of our concern.

1. H.262|ISO/IEC 13818-2 and H.222.0|ISO/IEC 13818-1
   ^^^

SG15 has decided to apply Resolution No. 1 to these two common
text Recommendations. In about four months, they will be approved
through the balloting procedure defined by Resolution No. 1.

2. H.222.1, H.24X, H.32Y, H.32Z.1
   ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

SG15 agreed that these drafts are stable, subject to further
editorial improvements, and determined to apply Resolution No. 1
at the next meeting in November 1995. (Note that the approval by
Resolution No. 1 is a two stage process; the first is called
"determination", the second is called "decision".) Completed
texts should reach ITU-TSB by July 10, 1995. After this date,
modifications should not be made in principle, though changes at
the November meeting are allowed if they are based on
contributions.

I made some changes in response to the comments obtained during
the WP1/15 meeting. Those parts are attached as Annex 1 to this
report. They are mostly to resolve immediate concerns of the
Working Party; deeper consideration is requested to reach the
final text.

3. H.32Z.2
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SG15 agreed to produce H.32Z.2 and H.22Z for non QoS guaranteed
LANs in 1996.

4. H.32X
   ^^^^^

After difficult consideration, I made a proposal to defer the
determination by one meeting which SG15 approved. My motivation
was partly to better reflect the ITU-T and outside activities
related to the network service and terminal control aspects, but
mostly to make the draft more matured. We will complete our work
by November 1995 when SG15 will determine to apply Resolution No.
1 at its meeting in May-June 1996. Even so, we need hard work to
accomplish the work, let us fully utilize the six months we have
obtained for H.32X. I am aware that this is against our agreement
at the Kamifukuoka meeting, but I am also concerned that
fundamental changes after July 10 would cause procedural
difficulty in November 1995.

Actions to the draft Recommendation which WP1/15 suggested us are
attached as Annex 2 to this report.

5. New Editors

Though this is not a matter of SG15, I was advised in Geneva that Mr. Dale Skran (AT&T) and Mr. Gary Thom (DIS) undertake Editors for H.22Z and H.32Z.2, respectively. I am grateful to the two organizations for their support.

6. Recommendation numbers

The following numbers have been allocated:

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H.24X      H.245
H.32X      H.310
H.32Y      H.321
H.32Z.1    H.322
H.32Z.2    H.323
RTI        H.222.2
H.22Z      not yet allocated
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7. Alignment between H.24X and H.24P

WP1/15 guides us to strive for common specifications and bit-level compatibility, subject to the detailed review of AVC and LBC experts. The LBC meeting in Geneva after the March MPEG meeting in Lausanne will be a good chance to make this happen.

8. Cooperation with MPEG

SG15 agreed to apply the common text for RTI (H.222.2 | ISO/IEC 13818-9). It guides us to further consider DSM-CC, seeking harmonization of the work in SG8. Liaison statements to MPEG and SG8 are attached as Annex 3 and Annex 4 to this report, respectively.

9. Other liaison statements

to SG13 on network performance	as produced at Kamifukuoka
to SG8 on H.24X protocol stack etc.	as produced at Kamifukuoka
to SG11 on Q.2931 signalling	as produced at Kamifukuoka plus Dr. Kenyon's paper on call control
to SG9 on Draft J.82	Annex 5 to this report
to SG1 on non guaranteed QoS systems	to be distributed by Mr. Skran

>>> Annex 1   Changes to Drafts H.222.1, H.24X, H.32Y, H.32Z.1 <<<

H.222.1
^^^^^^^
1) Summary - addition

This Recommendation describes the multiplexing and
synchronization of multimedia information, for audiovisual
communication in ATM environments. This Recommendation
specifies the peer-to-peer protocol, and the interactions with
the AAL.

2) Section 8 title - correction

H.2221 ==> H.222.1

3) Section 9 - addition

The following Editor's note has been added.

{Ed: This section will describe such functions as bit error
correction, jitter removal which are beyond H.222.0 functions.
The outline is contained in Figure 3 of TD-45 (1/15), February
1995.}

Referred Figure 3 corresponds to the one in TD-22 (Kamifukuoka).

4) Section 14 - correction

The second last word in the first paragraph:
        asynchronous ==> synchronous

5) Appendix II - addition

Note 5) to the figure
        - mapping between PS/TS packets and AAL-SDU

H.24X
^^^^^
1) Summary - addition

This Recommendation specifies syntax and semantics of terminal
information messages as well as procedures to use them for the
inband negotiation at the start of or during communication. The
messages cover receiving and transmitting capabilities as well
as mode preference from the receiving end. Acknowledgment is
applied to the procedures for secure exchange of messages.

2) Section 5 - addition 1

"in the lower layer" at the end of the third paragraph.

3) Section 5 - addition 2

Before the last paragraph

This Recommendation defines messages and procedures to
acknowledge the receipt of capability set and mode request
messages for robust communications.

4) Section 7.2 yearOfRecommendation

year of the revision ==> year of the approval or revision

H.32Y
^^^^^
1) Summary - addition

This Recommendation describes technical specifications for adapting narrowband visual telephone terminals, as defined in Recommendation H.320, to broadband ISDN environments. The terminal conforming to this Recommendation interworks with the same type of terminals (i.e., other H.32Y terminals) accommodated in B-ISDN as well as existing H.320 terminals accommodated in N-ISDN.

2) Title - change

Adaptation of narrowband audiovisual terminals over broadband networks

==>

Adaptation of H.320 visual telephone terminals to B-ISDN environments

3) Section 1

Delete "audiovisual" from the first line; now it reads "This Recommendation describes technical specifications for adapting narrowband visual telephone terminals, ..."

H.32Z.1
^^^^^^^
1) Summary - addition

This Recommendation H.32Z.1 covers the technical requirements for narrow-band visual telephone services defined in H.200/AV.120-Series Recommendations, in those situations where the transmission path includes one or more Local Area Networks (LAN), each of which is configured and managed to provide a guaranteed Quality of Service (QoS) equivalent to that of N-ISDN such that no additional protection or recovery mechanisms beyond those mandated by Rec. H.320 need be provided in the terminals. It is noted that projected Recommendation H.32Z.2 addresses the use of some other LANs which are unable to provide the underlying performance assumed by this H.32Z.1 Recommendation.

2) Section 1 - addition

After the third paragraph:

{Editor's note: Reference to IEEE and ANSI standards are to be replaced with corresponding international standards if available.}

3) Section 1 - deletion

Sixth paragraph third last sentence

"and without involving the gateway"

Sixth paragraph last sentence

"The gateway may be omitted if communication with terminals not on the same LAN is not required."

The whole paragraph now reads:

"Systems and terminal equipment complying with Recommendations H.32Z.1 and H.32Z.2 are able to interwork with each other and with those complying with Recommendations H.320 and H.32Y. The concept is shown in Figure 1/H.32Z.1 in which any terminal can be connected to any other. The H.32Z.1 or H.32Z.2 gateway unit provides an interconnection between the LAN and the Wide Area Network (WAN) which may be N-ISDN or B-ISDN or both. An H.32Z.1 terminal communicates with another H.32Z.1 terminal on the same LAN directly. The gateway may be connected via N-ISDN or B-ISDN to other gateways and LANs to provide communication between H.32Z.1 terminals which are not on the same LAN. "

Editor is invited to come up with better wording since the deletion was the simplest way to meet the questions of the WP1/15 participants (S. Okubo).

4) Section 2 - correction

"H.32Z" in the second paragraph and Figure 3 should read "H.32Z.1."

5) Section 2 - deletion

The last sentence in the second paragraph: "Any other N-ISDN terminal may be substituted for the H.320 terminal."

Editor is invited to come up with better wording since the deletion was the simplest way to meet the questions of the WP1/15 participants (S. Okubo).

H.32X
^^^^^
The following summary is provided:

This Draft Recommendation covers the technical requirements for the systems and terminals of broadband audiovisual communication services. The video and audio coding and other technical aspects that are applicable to more than one distinct services are covered in H.200/AV.200-Series Recommendations and this Recommendation specifies what of them are used for the broadband audiovisual communication systems and terminals.

General
^^^^^^^
- Clarify choice of PS/TS and other mandatory/optional specifications
- "Both of AAL1 and AAL5 mandatory at the decoder, AAL1 or AAL5 at the encoder"
- Cover also the unidirectional broadcast case, such as H.331 where H.24X is not involved
- Include multipoint communication; both bi-directional MCU and unidirectional broadcast cases
- Refer to J.82 and mention interworking with systems conforming to J.82.

Section 4.2.3.3 Transfer rate
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
- Consider the case channel aggregation is involved

Section 4.3 Terminal type
^^^^^^^^^^^^^^^^^^^^^^^^^^^
- Define sending only terminal

Section 4.3.1.1.2, 4.3.1.2.2, 4.3.2.1.2, 4.3.2.2.2 ACC
^^^
- Make distinction between low sampling frequency and multi-channel for MPEG-2 audio

Section 7.2 Intercommunication with N-ISDN Terminals
^^
- Guide that B, 2B and H0 be mandatory.
- Modes of interworking with N-ISDN terminals should address high quality, thus CIF should be mandatory.

>>>>>>>>>>>>>>> Annex 3 Liaison to MPEG re DSM-CC <<<<<<<<<<<<<<<<

QUESTION: Q.2/15
DESTINATION: ISO/IEC JTC1/SC29/WG11
ORIGIN: ITU-T STUDY GROUP 15, WP1/15 (Geneva, 6-17 February 1995)
APPROVAL: This liaison has been approved by Study Group 15
NATURE: Request for further cooperation in the areas of common interest
FOR: Information and action
DEADLINE: -

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ATTACHMENT: None

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We are pleased to advise you that at its meeting during 6-17 February 1995 Study Group 15 has decided to apply Resolution No. 1 to the two common text Recommendations H.222.0│ISO/IEC 13818-1 and H.262│ISO/IEC 13818-2 which are expected to receive formal approval through balloting in four months time. We would like to thank you for your support to make this happen.

WP1/15 discussed further cooperation in the area of common interests, particularly the MPEG work of RTI (ISO/IEC 13818-9) and DSM-CC extension (ISO/IEC 13818-6). As to the RTI, we reached the conclusion that this should be the third common text Recommendation as straightforward extension of the current H.222.0│ISO/IEC 13818-1. Experts Group for Video Coding and Systems in ATM and Other Network Environments will continue to collaborate with ISO/IEC JTC1/SC29/WG11 by sending representatives to the meetings.

As to the DSM-CC Extension, we recognize that it constitutes an important element in the information retrieval type of audiovisual communication systems, but at the same time we are aware of that relevant work is also being carried out in ITU-T Study Group 8. We will coordinate inside ITU-T before deciding an appropriate course of action. In the mean time members of the Experts Group for Video Coding and Systems in ATM and Other Network Environments will continue to communicate with ISO/IEC JTC1/SC29/WG11.

END

QUESTION: Q.2/15
DESTINATION: Study Group 8
ORIGIN: ITU-T STUDY GROUP 15, WP1/15 (Geneva, 6-17
February 1995)
APPROVAL: This liaison has been approved by Study Group 15
NATURE: Request for consideration on the control protocol
for audiovisual/multimedia information retrieval
FOR: Action
DEADLINE: SG15 meeting in November 1995

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ATTACHMENT: None

WP1/15 met during 7-15 February 1995 and reviewed the study
results carried out by Experts Group for Video Coding and
Systems in ATM and Other Network Environments which have been
collaborating with ISO/IEC JTC1/SC29/WG11 to produce common text
Recommendations H.222.0|ISO/IEC 13818-1 and H.262|ISO/IEC 13818-
2. We discussed whether DSM-CC Extension currently ongoing in
MPEG should also be a common text Recommendation.

We recognize that the technique addressed by this standard will
constitute an essential element in the information retrieval
type of audiovisual communications systems, but at the same time
we are aware of that relevant work is also ongoing in Study
Group 8 (e.g. Videotex, AVI services related activities etc).
We appreciate to be informed of such SG8 activities and invite
comments on how ITU-T should standardize this area of
technology.

END

>>>>>>>>>>>>>> Annex 5 Liaison to SG9 re J.82 <<<<<<<<<<<<<<

QUESTION: Q.2/15
DESTINATION: ITU-T Study Group 9
ORIGIN: ITU-T STUDY GROUP 15, WP1/15 (Geneva, 6-17
February 1995)
APPROVAL: This liaison has been approved by Study Group 15
NATURE: Question and comment in response to the ITU-T SG9
liaison statement
FOR: Action
DEADLINE: SG15 November 1995 meeting

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ATTACHMENT: pp.18-21 / TD-47 (1/15)

SG15 WP1/15 met during 7-15 February 1995 and appreciated the
information on Draft Recommendation J.82 regarding "Transport of
MPEG-2 Constant Bit Rate (CBR) Television signals" which SG9
produced.

WP1/15 has been studying audiovisual communication systems in
ATM environments and producing a set of Recommendations covering
video coding (H.262|ISO/IEC 13818-2), generic multimedia
multiplexing and synchronization (H.222.0|ISO/IEC 13818-1), its
application to ATM network environments (H.222.1), communication
control (H.24X) and audiovisual communication systems and
terminals (H.32X) in 1995-1996.

The target applications of these Recommendations cover not only
conversational services, but also distribution, information
retrieval, messaging services to achieve service integration on
B-ISDN; the desire is to allow an H.32X terminal to receive
various service signals. We foresee the case that the H.32X
terminal may receive service signals conforming to the proposed
Recommendation J.82.

For our clarification, let us place the following question and
comments:

1)   The target applications of J.82 cover secondary
distribution and the J.82 bitstream reaches the end viewer?

2)   If that is the case, we need close cooperation to make ITU-
T Recommendations well harmonized to avoid complication of the
terminal equipment. We attach the current discussion on the
network adaptation for your consideration.

END