INTERNATIONAL ORGANISATION FOR STANDARDISATION
ORGANISATION INTERNATIONALE DE NORMALISATION
ISO/IEC JTC 1/SC 29/WG 11
CODING OF MOVING PICTURES AND AUDIO

ISO/IEC JTC 1/SC 29/WG 11 N2539

December 1998

Source: **Leonardo Chiariglione – Convenor**
Title: **Resolutions of 46th WG 11 meeting**
Status:

1 WG11 approves the reports from the Requirements, Delivery, Systems, Video, Audio, SNHC, Test, Implementation, Liaison and HoD.

2 Subgroup recommendations

2.1 The Requirements group recommends

2.1.1 to approve the following documents :

Title	No.
Text of ISO/IEC 13818-2 Final Draft Amendment 5	N2547
MPEG-4 Requirements Document	N2562
MPEG-4 Applications Document	N2563
MPEG-4 Overview	N2564
MPEG-4 Profiling Policy	N2565
MPEG-4 Version 2 Profiles under consideration	N2566
MPEG-4 Version 2 Tools Matrix	N2607
List of MPEG-7 pre-registrations	N2567
Guide to submitting to the MPEG-7 CfP	N2568
MPEG-7 Evaluation Guide	N2569
Guide to obtaining the MPEG-7 Content Set	N2570
MPEG-7 XM Development	N2571
MPEG-7 Evaluation Work Plan	N2572

2.1.2 to establish the following AdHoc Groups :

Title	Chair(s)	No.	Mtg
AHG on MPEG-7 Requirements	F. Nack	2596	No
AHG on MPEG-7 Test and Evaluation issues	M. Vetter, P. Salembier, E. Hartley	2597	yes
AHG on XM development	M. Buxton, VV Vinod	2598	no

2.1.3 to make publicly available the following documents :

Title	No.
MPEG-4 Requirements Document	N2562
MPEG-4 Applications Document	N2563
MPEG-4 Overview	N2564
Guide to submitting to the MPEG-7 CfP	N2568
MPEG-7 Evaluation Guide	N2569
Guide to obtaining the MPEG-7 Content Set	N2570
MPEG-7 XM Development	N2571
List of preregistrations	N2567

2.1.4 That requests for new Profiles —especially in the area of Audio and Visual— only be made if there are companies that have concrete plans for deployment of such a Profile. Such requests should be made according to the template found in the document with MPEG-4 V.2 Profiles under consideration (WG11 N2566). These requests should be accompanied by an assessment of why current Profiles are not adequate, together with proof that the new Profile fulfills the requirement. If subjective quality is a reason, it is advised that evidence be given in the form of subjective evaluation results. For the proposed Profiles in WG11 N2566, companies are requested to state support in the form of an input contribution to the Seoul meeting.

2.1.5 That proponents of Chroma Key technology bring requirements to Seoul along with evidence of performance. Proponents are encouraged to bring a demonstration of all functionalities that the tool provides, using IM1. MPEG invites contributions showing how the requirements could also be met using tools already accepted in the MPEG-4 tool set.

2.1.6 Having heard the presentation on the applications and operational environments of fine grain scalability, the Requirements Group concludes that the request in Dublin resolution 3.1.5 has been satisfied, and recommends that the information be made available to MPEG in the form of a contribution to the next meeting.

2.1.7 Allowing 2 weeks for the new versions of the MPEG-4 Overview and Applications Document to be edited and uploaded

2.1.8 Kindly requests attendees of the Lancaster MPEG-7 Evaluation meeting with access to a PC projection system to bring this to the meeting. Please contact the host (Ed Hartley) if you plan on doing so.

2.1.9 That parties submitting proposals in response to the MPEG-7 CfP be asked to make their proposal available as an MPEG contribution for the Seoul meeting.

2.1.10 To include email addresses of people who have pre-registered in the reflector of the Ad Hoc Group on MPEG-7 Evaluation, regardless of whether these people are MPEG delegates.

2.1.11 That members of the Audio, Video and Systems groups join the XM Ad Hoc Group (WG11 N2598), to discuss how one XM framework can be used across different groups

2.1.12 That the following documents remain available on the MPEG home page

- *MPEG-2*
  - **Result of AAC subjective tests**
- *MPEG-4*
  - **Overview of MPEG-4 Profile and Level definitions**
  - **MPEG-4 Audio verification test results: speech codecs**
  - **MPEG-4 Audio verification test results: audio on Internet**
  - **Carriage of MPEG-4 Content on MPEG-2 Systems**
- *MPEG-7*
  - **MPEG-7 Context and Objectives**
  - **MPEG-7 Requirements**
  - **MPEG-7 Applications**
  - **MPEG-7 Call for Proposals**
  - **MPEG-7 Evaluation Procedures**
  - **MPEG-7 Proposal Package Description**
  - **MPEG-7 Evaluation Meeting Announcement**
  - **Description of MPEG-7 Content Set**
  - **Licensing Agreement for MPEG-7 Content Set**
- *Miscellanea*
  - **Bibliography of audio-related WG11 Output Documents N0965 to N2247, July 1995 to March 1998**

2.2 The Delivery group recommends

2.2.1 to approve the following documents:

Title	No.
DMIF V2 WD 5.0	N2606
DoC on ISO/IEC 13818-6/FPDAM 1	N2545
Text of ISO/IEC 13818-6/FDAM 1	N2546
Study on a possible ISO/IEC 13818-6/PDAM 2	N2608

2.2.2 to make publicly available the following documents:

Title	No.
DMIF V2 WD 5.0	N2606

2.2.3 To participate in the AHG for editing the MPEG-4 Conformance CD.

2.2.4 That the Text of the DMIF conformance be added to the MPEG-4 Conformance CD

2.2.5 That interested members contribute to the editing of MPEG-4 code points into H.245 from DMIF V2 WD5.0, at the ITU-T SG16 Q11/14 meeting on Feb 1999 in Monterey.

2.2.6 That the author of UEP (M4294) assures its technical operation over H.223 at the ITU-T SG16 Q11 meeting in Monterey on Feb 1999.

2.2.7 Requirements for DMIF to non-DMIF gateway operation be provided to the Requirements Group in March/99.

2.2.8 That the registration application of a DMIF URL be ready for review in March/99 and subsequent submission to ICANN.

2.3 The Systems group recommends

2.3.1 the approval of the following documents:

Title	No.
Status of the Systems Version 1&2 Software Implementation	N2609
Template for Systems Profiles and Levels Definition	N2590
MPEG-4 Systems Version 2 WD 5.0	N2611
MPEG-4 Systems Version 2 VM 5.0	N2612
Systems Software Implementation Workplan	N2613
IPMP Overview and Application	N2614
Architectural considerations for carriage of MPEG-4 over IP Network	N2615
Tools under consideration for MPEG-4 Version 2	N2607
Request for amendment 7 to MPEG-2 systems	N2616
PDAM 7 to MPEG-2 Systems	N2617

2.3.2 That the comments presented and approved during the Roma meeting are taken into account in the FDIS to be uploaded on the 18th of December, most notably:
- Editorial fixes.
- Moving annex on FlexMux SDM to Systems Version 2.
- Remove annex on MPEG-4 on MPEG-2 and consider this as input to the Version 2 MPEG-4 on MPEG-2 activity.
- Restoring FBA nodes in the Complete Graphics Profile.

2.3.3 The editors of the Systems part of MPEG-4 Version 1 will release the FDIS on the 18th of December and upload the document on the MPEG ftp site. Between the 18th of December and the 15th of January, the editors will polish the document (e.g. cross-references, heading numbering…). This polishing shall be only editorial, it will be flagged by revision marks and will only be made by the editorial committee. The document will be uploaded by the 15th of January to the MPEG ftp site. The SC29 secretariat will retrieve from the ftp site.

2.3.4 To solicit contributions on OD Profiles, Scene Description Profiles, and Graphics profiles and levels. A template for the definition of such profiles is provided in the "Template for Systems Profiles and Levels Definition" (WG11 N2590).

2.3.5 To approve the Systems part of Version 1 CD Conformance (WG11 N2550).

2.3.6 To approve the Systems part of Version 2 WD Conformance (WG11 N2551).

2.3.7 That the document WG11 N2642 "Applications and Requirements for extracting arbitrary shaped visual objects from other visual standards" constructed within the Systems sub-group during the Roma meeting be considered by the Requirement sub-group at the Seoul meeting.

2.3.8 That the Systems sub-group is not satisfied by the response provided by Sun

Microsystems Inc. to resolution 3.3.7 from Atlantic City. MPEG-J will need certain combinations of Java classes and these will be referred normatively by MPEG-4 version 2. MPEG reiterates its request for a position statement from the owner of the IP on Java that these specific configurations of Java classes required by MPEG-J will be possible. As MPEG-J is expected to be part of MPEG-4 Systems version 2 a response is expected by the 22nd of January. The response should be sent to the Convenor of WG 11 and to the Systems Sub-group Chair.

2.3.9 In case Sun Microsystems Inc. does not provide a conclusive answer to the MPEG requirements stated in resolution 2.3.8, that the Convenor establish a call for proposals for programming languages satisfying adaptive audiovisual session requirements and the requirements stated in resolution 2.3.8 (WG11 N2641).

2.3.10 To initiate an amendment on MPEG-2 Systems to address the carriage of MPEG-4 content on MPEG-2 Systems. Members are encouraged to bring their considerations on the PDAM (WG11 N2617).

2.3.11 That the results produced in Roma on the transport on MPEG-4 Content over MPEG-2 Systems and Internet networks are made available to the AIC-Initiative (WG11 N2617 and WG11 N2615).

2.3.12 Given that back channel functionality (like application signaling, stream control etc.), is taking more and more attention in the different MPEG Sub-groups for version 2, that a coordinated activity take place within an Ad Hoc Group on MPEG-4 Back Channel (WG11 N2591).

2.3.13 Given that good contributions on visual normative composition and visual normative composition conformance have been received, to reactivate a normative composition activity in MPEG-4 version 2. Comments on the current conformance WD (WG11 N2551) are solicited.

2.3.14 The Systems sub-group wishes to thank the Audio, Video and SNHC groups for agreeing to convert their bit stream files to mp4 files, thus achieving a better overall integration. The Systems sub-group commits to provide support and interfacing software to make this possible. David Singer (Apple) will be the Systems focal point for this effort.

2.3.15 That the different parts of the MPEG-4 Version 2 WD, VM documents will be released within 7 days after the Roma meeting to accommodate final text editing.

2.3.16 to establish the following AdHoc Groups:

Title	Chair(s)	No.	Mtg
AHG on Systems Conformance	Dufourd & al.	N2618	
AHG on Advanced BIFS	Signes & al.	N2619	
AHG on MPEG-J	Fernando & al.	N2620	
AHG on MPEG-4 File Format	Pawson	N2621	
AHG on Intellectual Property Management & Protection	Rump	N2622	
AHG on IM 1	Lifshitz & al.	N2623	

AHG on MPEG-4 Content on MPEG-2 Systems	**Jan Van Der Meer**	**N2624**	
AHG on MPEG-4 Content on the Internet	**S. Casner & al.**	**N2625**	
AHG on MPEG-4 Version 2 Systems Profiles and Levels	**Rob Glidden & al.**	**N2626**	

2.3.17 to make publicly available the following documents:

Title	No.
IPMP Overview and Application	**N2614**
Architectural considerations for carriage of MPEG-4 over IP Network	**N2615**

2.4 The Video group recommends

2.4.1 approval of the following documents:

Title	No.
ISO/IEC 14496-4 (Conformance) CD	**2550**
FDAM 5 to ISO/IEC 13818-2	**2547**
Text of ISO/IEC 14496-2 Video Verification Model V.12	**2552**
Text of ISO/IEC 14496-2 Visual Working Draft Version 2 Rev 6.0	**2553**
Description of core experiments in MPEG-4 video	**2554**
Report on the study of extensions to ISO/IEC 13818-2 to improve the display of interlaced material on progressive displays.	**2555**
Report Of The Formal Verification Tests On MPEG-4 Video Error Resilience	**2604**
Report Of The Formal Verification Tests On MPEG-4 Temporal Scalability in Simple Scalable Profile	**2605**
Revised test conditions and test plan for video verification test on Temporal Scalability in Core Profile	**2601**
Revised test conditions and test plan for video verification test Content-Based Coding	**2602**
Revised test conditions and test plan for video verification test on Coding Efficiency	**2603**

2.4.2 to establish the following AdHoc Groups :

Title	Chair	No.	Mtg
Ad-hoc group on core experiments in MPEG-4 video	**Ohm**	**2556**	**Y**
Ad-hoc group on software integration and verification in MPEG-4 video	**Tan, Frater**	**2557**	**Y**
Ad-hoc group on editing the documents of the MPEG-4 Visual FDIS, the MPEG-4 video verification model and the MPEG-4 visual working draft	**Ebrahimi, Horne, Jang, Nakaya, Shin**	**2558**	**N**
Ad-hoc group on MPEG-4 video encoder optimization	**Chiang, Sun**	**2559**	**Y**
Ad-hoc group on MPEG-4 Video Verification tests	**Moccagatta**	**2560**	**Y**

Ad-hoc group on display of interlace material on progressive monitors	**McVeigh**	**2561**	**Y**
Adhoc group on MPEG-4 conformance	**Dufourd**	**2618**	**Y**
Adhoc group on backchannel	**Lim**	**2591**	**N**
Adhoc group on normative composition	**Thomas**	**2643**	**N**

2.4.3 the following documents be made publicly available:

Title	No.
Report Of The Formal Verification Tests On MPEG-4 Video Error Resilience	**N2604**
Report Of The Formal Verification Tests On MPEG-4 Temporal Scalability in Simple scalable Profile	**N2605**

2.4.4 WG11 thanks all the companies that have helped with the software integration process, including GI and the University of Hannover for their support in carrying out the final integration of greyscale shape and interlace tools. WG11 notes that the MPEG-4 video software will be frozen on 18th January 1999, with final verification bitstream exchanges completed by 1st February 1999.

2.4.5 WG11 recognises that Version 1 of MPEG-4 Systems does not specify normative composition of video objects. WG11 therefore requests that the video and systems subgroups make every effort to specify normative composition in Version 2 of MPEG-4.

2.4.6 In the resolutions of the October 1998 WG11 meeting at Atlantic City, the list of video tools to be supported by Version 2 of MPEG-4 did not include "Error resilience for scalable still texture coding" by mistake. For clarification, the complete list of video tools for Version 2 of MPEG-4 Visual is:

- **Object based Spatial Scalability**
- **Multiple Auxiliary Components**
- **Shape Adaptive DCT**
- **Boundary Block Merging**
- **Dynamic Resolution Conversion.**
- **Quarter Pel Prediction**
- **Global Motion Compensation**
- **Newpred**
- **Wavelet Tiling**
- **Error Resilience for Scalable Still Texture Coding**
- **Scalable Shape Coding for Scalable Still Texture Coding**

2.4.7 WG11 acknowledges the contribution of the test group, including CSELT, CCETT and FUB, for carrying out and bringing to a successful completion the formal verification tests on error resilience and temporal scalability.

2.5 The Audio group recommends

2.5.1 that the following documents be approved:

Title	No.
Study on DoC on ISO/IEC 13818-4/PDAM3	**2548**

Study on Text of ISO/IEC 13818-4/PDAM3	**2549**
Status of MPEG-4 Audio FDIS 14496-3	**2573**
ISO/IEC 14496-4 CD Conformance Testing of the MPEG-4	**2550**
Workplan for the audio part of ISO/IEC 14496-5 MPEG-4 Reference software	**2574**
Information on MPEG-4 Audio systems issues	**2575**
Report on the technical issues of MPEG-4 Audio, version 2	**2576**
WD of ISO/IEC 14496-3 Amd 1: MPEG-4 Audio, Version 2	**2577**
Information on Extension of Advanced Audio Bifs: A perceptual Paradigm for Environmental Spacialization of Audio	**2578**
Error resilience workplan	**2579**
Status of MPEG-4 Audio Version 2 core experiments	**2580**
WD for ISO/IEC 14496-4 Amd 1: MPEG-4 Audio, Version 2 Conformance	**2581**
Study on ISO/IEC 14496-5 PDAM 1: MPEG-4 Audio, Version 2 Reference Software	**2582**
Fine grain scalable Audio tool implementation ways with MPEG-4 System	**2583**
MPEG-7 XM Development	**2571**
MPEG Audio web page work plan & FAQs	**2584**
Template for systems profiles and levels definition	**2590**

2.5.2 that the following Ad-hoc groups be established:

Title	**Chair**	**No**	**Meeting**
AHG on MPEG-4 Audio Conformance	**Spille, Dietz**	**2585**	**No**
AHG on audio part of MPEG-4 FDIS & Reference Software editing	**Grill, Purnhagen**	**2586**	**weekend before Seoul**
AHG on MPEG-4 Audio V2 editing and software progression	**Grill, Kim, Purnhagen**	**2587**	**weekend before Seoul**
AHG on MPEG-7 audio matters	**Herre/Lindsay**	**2588**	**No**
AHG on MPEG-4 V2 core experiments	**Brandenburg, Dietz**	**2589**	**weekend before Seoul**
AHG on MPEG-4 Conformance (Joint)	**J. Deford**	**2618**	**???**
AHG on MPEG-4 Backchannel (Joint)	**Y. Lim**	**2591**	**No**

2.5.3 the following documents be made publicly available:

Title	**No.**
MPEG-7 XM Development	**2571**
MPEG Audio web page work plan & FAQs	**2584**
Audio contribution to Rome Press statement	**2543**

2.5.4 note that Mr. Sang-Wook Kim of Samsung has volunteered to take on the task of maintaining the official MPEG Audio web pages. The Audio Group wish to express their thanks to Mr. Heiko Purnhagen for having established and maintained the web pages to date, and to Mr Kim for taking on this task.

2.5.5 that note be taken of their sincere thanks to Mr. David Meares for his incredibly hard work during his period as secretary of the audio subgroup.

2.5.6 Audio recommend that WG11 consider carefully at the Seoul meeting the choice of Word Processor for MPEG-7 standards

2.6 The SNHC group recommends

2.6.1 to approve the following documents :

Title	No.
MPEG-4 Version 2 Visual Working Draft Version 6.0	N2553
Conformance CD documents for MPEG-4 Version 1	N2550
Core Experiments on 3D Model Coding	N2631
Core Experiments on Face and Body Animation	N2630

2.6.2 to establish the following AdHoc Groups :

Title	Chair	No.	Meeting
3D Model Coding	Touradj Ebrahimi Pete Doenges	N2628	1) 1999/02/4-5 @ Lausanne, CH 2) 1999/03/14, Seoul, KR
Face and Body Animation	Eric Petajan Tolga Capin	N2627	1999/03/14, Seoul, KR
Integration of Still Textures and 2D/3D Mesh Coding	Euee Jang Julien Signès Eric Petajan Stefano Battista	N2629	

2.6.3 To support the activities of the AHG of back channel definition for MPEG-4 Version 2 (WG11 N2591)

2.6.4 To support the activities of the AHG on VM/WD editing for MPEG-4 visual Version 2 (WG11 N2558)

2.6.5 To participate with Requirements in the development of adequate justification and design of profiles for MPEG-4 Version 2.

2.6.6 To provide for a two-week editing period for finalization of the following documents:

- **Conformance CD Version 1 (WG11 N2550).**
- **Visual Working Draft Version 2 (WG11 N2553).**

2.6.7 SNHC Core Experiments in FBA and 3D Model Coding (WG11 N2630 and 2631).

2.6.8 To work diligently on the completion of the required Conformance testing bitstreams.

2.7 The Test group recommends

2.7.1 to approve the following documents:

Title	No.

Revised test conditions and test plan for video verification test on Temporal Scalability in Core Profile	**2601**
Revised test conditions and test plan for video verification test Content-Based Coding	**2602**
Revised test conditions and test plan for video verification test on Coding Efficiency	**2603**
Report Of The Formal Verification Tests On MPEG-4 Video Error Resilience	**2604**
Report Of The Formal Verification Tests On MPEG-4 Temporal Scalability in Simple scalable Profile	**2605**

2.7.2 to establish the following AdHoc Groups:

Title	Chair	No.	Mtg
Ad-hoc group on MPEG-4 Video Verification tests	**Moccagatta**	**2560**	**Yes**

2.7.3 to acknowledge all the people that contributed to the Error Resilience and Temporal Scalability in Simple Scalable Profile test

2.7.4 to publish the following document

Title	No.
Report Of The Formal Verification Tests On MPEG-4 Video Error Resilience	**2604**
Report Of The Formal Verification Tests On MPEG-4 Temporal Scalability in Simple Scalable Profile	**2605**

2.8 The Implementation Studies group recommends

2.8.1 The approval of the following documents:

Title	No.
Recommendation for the update of complexity prediction syntax for MPEG-4 version 2 video.	**N2592**
ISG Resolutions about the use of VCV and complexity cost function	**N2593**

2.8.2 to establish the following AdHoc Groups:

Title	No.	Meeting
AHG on Computational Graceful Degradation	**N2594**	
AHG on video Decoder Quality of Service	**N2595**	

2.8.3 To specify and build an MPEG-7 XM with the capability of providing complexity measures for comparable and reliable statistical complexity assessments,

2.8.4 To adopt in the normative video part the "Video Complexity Verifier" (VCV) and the "Video Memory Verifier" (VMV) described in Visual FDIS Annex D in order to correctly define what is meant by "MB/sec" and "buffer size" in the video level specifications,

2.8.5 To reconsider, for version 2, the use of a MB-based cost function and to include SPRITES VOP in the VCV, VMV and VBV models,

2.8.6 To continue assessing different implementations of the IPMP interface and of IPMP

non-normative applications, according to document WG11 N2520 "IPMP Implementation Studies".

2.8.7 To include CGD syntax in the SNHC version 2 reference software.

2.9 The Liaison group recommends

2.9.1 the approval of the following liaison documents:

Title	No.
Request to MMA for permission to use some of their text in audio conformance	N2632
Liaison to AIC with attachments: MPEG4-on-MPEG2, MPEG4-on-IP	N2633
Liaison to SMPTE	N2634
Liaison to ITU-T SG16/Questions 11 to 14 Regarding MPEG4 Systems on H.32X	N2635
Liaison to Web3D on VRML NG	N2636
Liaison to DAVIC on Multimedia Navigation Tools	N2637
Liaison to DAVIC on MPEG2 DSM CC amendment	N2638
Liaison to ITU-T SG16/Q12 on Common Text Recommendations	N2639
Liaison to ITU-T SG16/Questions 11 to 14 Regarding MPEG4 Audio on H.32X	N2640

2.10 The HoD group

2.10.1 recommends that sincere thanks be offered to the Israel National Body for their advanced work in preparation for the Eilat meeting and regrets that the international situation required a change of venue very close to the intended meeting date.

2.10.2 thanks the National Bodies of both Italy and France for their rapid consideration of alternative venues for the December 1998 meeting

2.10.3 advises members that those who registered for the Eilat meeting will get a partial refund of the facilities fees as soon as the details can be finalised. For those who have not registered for the Rome meeting, a refund of approximately 130 US$ will be arranged by Carmel. For those who have additionally registered for Rome, Preferred Inc will be arranging a reduction of the fee for Rome, namely, a reduction of 150 US$ less a proportion of the non-recoverable expenses suffered by the Eilat meeting organiser.

2.10.4 thanks the Japanese HoD for his report about the decision that the Emmy Statue will be placed at the Joint ISO/IEC Information Centre in Geneva.

2.10.5 recommends that the MPEG password should no longer be given in advance on the web page and that in future it will be announced no earlier than at the MPEG meeting itself. HoD further recommend that all email requests for the new password should be directed (or redirected) to the relevant HoD and not to the web site manager

2.10.6 recommends approval of the meeting plan including

- **the 47th meeting in Seoul over the period 15th to 19th March 1999 and acceptance of a**

meeting fee of about US$300.

- **the 48th meeting in Vancouver, Canada over the period 12th to 16th July 1999 and acceptance of a meeting fee of approximately US$350.**
- **the 49th meeting in Melbourne, Australia over the period 4th to 8th October 1999 and acceptance of a meeting fee the level of which is yet to be determined.**
- **the 50th meeting in Maui, Hawaii, USA over the period 6th to 10th December 1999 and a meeting fee of about US$200.**
- **the 51st meeting in the Netherlands over the period 13th to 17th March 2000**

3 WG11 approves the initiation and/or progression of the following MPEG-2 related standards/amendments/corrigenda

Standards - Amendments - Corrigenda	WG11 No
ISO/IEC 13818-1/PDAM 7	N2617
ISO/IEC 13818-2/FDAM 5	N2547
DoC to ISO/IEC 13818-6 FPDAM 1	N2545
ISO/IEC 13818-6 FDAM 1	N2546

4 WG11 approves the MPEG-2 workplan:

Part	Title	CfP	WD	CD PDAM PDTR	FCD FPDAM FPDTR	FDIS FDAM DTR DCOR	IS AMD TR COR
MPEG-2							
10	Conformance testing extensions - DSM-CC						99/02
1/Amd 5.2	Systems-related table entries for AAC					99/03	99/05
1/Amd 6	4:2:2 Profile @High level splice parameters and buffer model for ISO/IEC 13818-7 (AAC)					99/03	99/05
1/Amd 7	Transport of ISO/IEC 14496 data over ISO/IEC 13818-1			98/12	99/03	99/10	99/12
2/Amd 5	4:2:2 Profile @High Level						99/02
2/Amd 6	Number of lines per frame				99/03	99/10	99/12
4/Amd 1	AAC Conformance Testing						98/12
4/Amd 2	System Target Decoder Model					99/03	99/05
4/Amd 3	Audio conformance bitstream				99/03	99/10	99/12
6/Amd 1	Additions to support data broadcasting						99/02

5 WG11 acknowledges the updated list of patent statements submitted in compliance to ISO directives for MPEG-4 version 1 (WG11 N2599). Editors of the MPEG-4 ver. 1 standards are requested to use the list in an annex to their standards.

6 WG11 acknowledges the following schedule for uploading the MPEG-4 ver. 1 standards approved at its 45th meeting to the MPEG ftp site and for delivering it to the SC29 Secretariat

	To ftp site	To SC29 secretariat
Part 1	**98/12/18**	**99/01/15**
Part 2	**98/12/18**	**98/12/18**
Part 3	**98/12/18**	**98/12/18**
Part 6	**98/12/11**	**98/12/11**

In the period of time 98/12/18-99/01/15 editors of part 1 will execute final text polishing

7 WG11 nominates the following additional individuals as recipients of the ISO/IEC Certificate of appreciation for outstanding contributions to parts 1 and 2 of the MPEG-4 standard

Part 1 (Systems) Phil Chou
Part 2 (Visual) Michael Wollborn

8 WG11 approves the verification test plan:

Date	Verification test
March 1999 meeting	**Content-based video coding**
July 1999 meeting	**Temporal Scalability in Core Profile** **Coding Efficiency**

This plan will be extended as studies currently under way in the Audio and Video Subgroups mature.

9 WG11 approves MPEG-4 ver. 1 part 4 "Conformance Testing" Committee Draft (WG11 N2550) and thanks Jean-Claude Dufourd and all the people who have worked hard to provide this fundamental document for the successful adoption of MPEG-4.

10 WG11 approves the following MPEG-4 documents

Applications	**WG11 N2563**
Requirements	**WG11 N2562**

11 WG11 thanks Columbia University, Fraunhofer Gesellschaft, Lucent and Samsung for providing patent statements for MPEG-4 version 2 and urges

other companies to make similar statements.

12 WG11 approves the list of technologies candidate for MPEG-4 version 2 with corresponding requirements the technologies satisfy and the status of the software implementing them.

The following technologies await confirmation:

1. **MPEG-J because of the current licensing conditions that are unsuitable**
2. **Chroma-key because of the need to make a final assessment of the benefit of the technology to the standard**

13 WG11 approves:

MPEG-4 Systems ver. 2 VM	**WG11 N2612**
MPEG-4 Video ver. 2 VM	**WG11 N2552**
MPEG-4 Audio ver. 2 VM	**WG11 N2582**

14 WG11 approves:

MPEG-4 Systems ver. 2.0 WD	**WG11 N2611**
MPEG-4 Visual ver. 2.0 WD	**WG11 N2553**
MPEG-4 Audio ver. 2.0 WD	**WG11 N2577**
MPEG-4 DMIF ver. 2.0 WD	**WG11 N2606**

15 WG11 will promote the MPEG-4 ver. 2 WD to PDAM status at the Seoul meeting. This delay in initiating the amendment process will in no way affect the date of final approval of the amendments.

16 WG11 approves MPEG-4 ver. 2 Conformance WD (WG11 N2551)

17 WG11 approves the MPEG-4 workplan:

Part	Title	CfP	WD	CD PDAM PDTR	FCD FPDAM FPDTR	FDIS FDAM DTR DCOR	IS AMD TR COR
MPEG-4							
1	Systems						99/03
2	Visual						99/02
3	Audio						99/02
4	Conformance Testing			98/12	99/07	99/12	00/02
5	Reference Software					99/03	99/05
6	DMIF						99/02

1/Amd 1	Systems Extensions			99/03	99/07	99/12	00/02
2/Amd 1	Visual Extensions			99/03	99/07	99/12	00/02
3/Amd 1	Audio Extensions			99/03	99/07	99/12	00/02
4/Amd1	Conformance Testing Extensions		98/12	99/12	00/07	00/12	01/02
5/Amd 1	Reference Software Extensions			99/03	99/07	99/12	00/02
6/Amd 1	DMIF Extensions			99/03	99/07	99/12	00/02

18 WG11 thanks the following companies, institutions and projects for their pre-registration in response to the MPEG-7 Call for Proposals:

01. ACTS Project MODEST- UCL/TELE;
02. ACTS Project DICEMAN;
03. ACTS Project CUSTOM TV;
04. AT&T;
05. Audio Consortium;
06. Avid Technology;
07. BBC R&D;
08. Canon Information Systems Research, Australia;
09. Canon, Inc.;
10. CCETT-Dept DIH/HDM;
11. Columbia University;
12. CUIDAD Working Group;
13. DiamondBack Systems, Inc.;
14. Digital Accelerator Corporation;
15. Distributed Systems Technology Centre (DSTC);
16. ETRI;
19. Excalibur Technolgies Corp.;
20. GMD-IPSI;
21. Heinrich Hertz Institut;
22. HRL Laboratories, LLC ;
23. Hyundai Electronics Industries Company;
24. IBM;
25. Inesc-Porto;
26. Information Broadcasting Labs, Inc.;
27. Institut National des Télécommunications;
28. IPAL, KRDL;
29. IRISA/INRIA;
30. Iterated Systems, Inc.;
31. Kent Ridge Digital Labs;
32. Korea University;
33. Kwang-Ju Institute of Science and Technology;

35. LG Corporate Institute of Technology;
36. LG Electronics Research Center of America, Inc.;
37. LIGIM;
38. Massachusetts Institute of Technology, Media Lab;
39. Mitsubishi Electric Corporation Information Technolgoy R&D Center;
40. Mitsubishi Electric Information Technology Center America (ITA);
41. Mitsubishi Electric Information Technology Center Europe, Visual Information Laboratory;
42. National Research Council;
43. NEC Corporation;
44. News Digital Systems Ltd.;
45. NHK (Japan Broadcasting Corp) Science and Technical Research Laboratories;
46. Nokia;
47. Philips, LEP;
48. Philips, NatLab;
49. Philips, USA;
50. Ricoh Company, Ltd.;
51. Robert Bosch GmbH, FV/SLM;
52. Samsung Electronics;
53. Sarnoff Corporation;
54. Sharp Laboratories of America;
55. Siemens AG;
56. Sony Corporation;
59. Starlab;
60. TASC, Inc.;
61. Tektronix, Inc.;
62. Texas Instruments Tsukuba Research and Development Center;
63. Toshiba Corporation R&D Center;
64. TU- Munich, Institute for Integrated Circuits;
65. Universidad Politécnica de Madrid, Grupo de Tratamiento de Imagenes;
66. Université Pierre et Marie Curie - Laboratoire d'Informatique de Paris 6;
67. University of Brescia, Signals and Communication Lab, Department of Electronics for Automation;
68. University of British Columbia;
69. University of British Columbia, Department of Electrical and Computer Engineering;
70. University of California, San Diego, Department of Electrical and Computer Engineering;

71. University of California, Santa Barbara;
72. University of Glasgow, Department of Music;
73. University of Illinois at Urbana Champaign;
74. University of Rochester, Department of Electrical and Computer Engineering;
75. University of Southern California;
76. University of Southern California, Department of Electrical Engineering, Integrated Media System Center;
77. University of Southern California, Department of Electrical Engineering;
78. University of Southern California, Signal and Image Processing Institute;
79. University of Washington, Department of Electrical Engineering.

19 WG11 thanks the people who have worked hard for distributing MPEG-7 content, distributing the MPEG-7 Call for Proposals and receiving the pre-registrations:

Miroslaw Bober,
Chris Chorley,
Seungyup Paek,
Mike Vetter,
Judy Garette,
Lois Toomey,
Lorraine Wheeler,
Neil Day,
Philippe Salembier

20 WG11 approves the XM document 0.5 (WG11 N2571)

21 WG11 approves the MPEG-7 workplan:

Part	Title	CfP	WD	CD PDAM PDTR	FCD FPDAM FPDTR	FDIS DAM DTR DCOR	IS AMD TR COR
MPEG-7							
1	Multimedia Content Description Interface		99/12	00/10	01/03	01/07	01/09

22 WG11 approves its integrated workplan:

Part	Title	CfP	WD	CD PDAM PDTR	FCD FPDAM FPDTR	FDIS FDAM DTR DCOR	IS AMD TR COR

MPEG-2							
10	Conformance testing extensions - DSM-CC						99/02
1/Amd 5.2	Systems-related table entries for AAC					99/03	99/05
1/Amd 6	4:2:2 Profile @High level splice parameters and buffer model for ISO/IEC 13818-7 (AAC)					99/03	99/05
1/Amd 7	Transport of ISO/IEC 14496 data over ISO/IEC 13818-1			98/12	99/03	99/10	99/12
2/Amd 5	4:2:2 Profile @High Level						99/02
2/Amd 6	Number of lines per frame				99/03	99/10	99/12
4/Amd 1	AAC Conformance Testing						98/12
4/Amd 2	System Target Decoder Model					99/03	99/05
4/Amd 3	Audio conformance bitstream				99/03	99/10	99/12
6/Amd 1	Additions to support data broadcasting						99/02
Part	**Title**	**CfP**	**WD**	**CD PDAM PDTR**	**FCD FPDAM FPDTR**	**FDIS FDAM DTR DCOR**	**IS AMD TR COR**
MPEG-4							
1	Systems						99/03
2	Visual						99/02
3	Audio						99/02
4	Conformance Testing			98/12	99/07	99/12	00/02
5	Reference Software					99/03	99/05
6	DMIF						99/02
1/Amd 1	Systems Extensions			99/03	99/07	99/12	00/02
2/Amd 1	Visual Extensions			99/03	99/07	99/12	00/02
3/Amd 1	Audio Extensions			99/03	99/07	99/12	00/02
4/Amd1	Conformance Testing Extensions		98/12	99/12	00/07	00/12	01/02
5/Amd 1	Reference Software Extensions			99/03	99/07	99/12	00/02
6/Amd 1	DMIF Extensions			99/03	99/07	99/12	00/02
Part	**Title**	**CfP**	**WD**	**CD PDAM PDTR**	**FCD FPDAM FPDTR**	**FDIS DAM DTR DCOR**	**IS AMD TR COR**
MPEG-7							

1	Multimedia Content Description Interface		99/12	00/10	01/03	01/07	01/09

23 WG11 thanks Ms. Laura Contin for her efforts during her tenure as Chairman of the Test group and regretfully accepts her resignation. Mr. Vittorio Baroncini is appointed as Chairman of the Test group.

24 WG11 approves its revised terms of reference (WG11 N2600)

25 WG11 approves its five-year meeting schedule:

No.	yy	mm	dd	City	Country
46	98	12	07-11	Rome	IT
47	99	03	15-19	Seoul	KR
48	99	07	12-16	Vancouver, BC	CA
49	99	10	04-08	Melbourne, VIC	AU
50	99	12	06-10	Maui, HI	US
51	00	03	13-17	?	NL

26 WG11 approves its Rome press release for publication on the MPEG home page (WG11 N2543).

27 The Convenor would like to express his thanks to Francisco Moran Burgos, Fernando Pereira and Peter Schirling for their support in the preparation of the Friday Plenary.

28 WG11 would like to thank FUB and IBM for offering and BTS-Philips for providing equipment and the following individuals for their support to the meeting

Vittorio Baroncini	FUB
Peter Schirling	IBM
Giuseppe Trombetta	IBM
Valerie Ritacco	Preferred Inc.
Julie Higgins	Preferred Inc.
Nicola Di Fabio	BTS-Philips

WG11 adjourned on 98/12/11 21:15