

**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 **N2769**

JULY 1999

Source: Leonardo Chiariglione – Convenor
 Title: Resolutions of 48th WG 11 meeting
 Status:

- 1 WG11 approves the reports of the Rome and Seoul meetings**
- 2 WG11 approves the reports from the Requirements, Delivery, Systems, MDS, Video, Audio, SNHC, Test, ISG, Liaison and HoD groups.**

3 Subgroup recommendations

3.1 The Requirements group

3.1.1 recommends to approve the following documents:

<i>Name</i>	<i>No.</i>
MPEG-4 - New profiles under consideration - Koenen	2858
MPEG-7 Requirements Document - Koenen	2859
MPEG-7 Applications Document - Koenen	2860
MPEG-7 Context, Objectives and Technical Roadmap- Koenen	2861
MPEG-7 DDL development document v.1.0- Koenen	2862
Overview of MPEG-7 Descriptors and Description Schemes- Koenen	2863

3.1.2 recommends to establish the following AdHoc groups :

<i>Title</i>		<i>No.</i>	<i>Mtg</i>
AHG on MPEG-7 Requirements	F. Pereira	2864	no
AHG on DDL development	F. Nack	2865	yes
AHG on MPEG-7 Intellectual Property Management & Protection	N. Rump, A. Collins	2866	no

3.1.3 recommends to make publicly available the following documents :

<i>Title</i>	<i>No.</i>
MPEG-7 Requirements Document	2859
MPEG-7 Applications Document	2860
MPEG-7 Context, Objectives and Technical Roadmap	2861

3.1.4 The Requirements Group concludes that having too many profiles is detrimental for the success of the MPEG-4 standard. Therefore, National Bodies are urged to be very restrictive in their requests for new profiles, when they cast their ballot on:

- the Systems FCD of MPEG-4 Version 2 (14496-1 FPDAM 1),
- the Visual FCD of MPEG-4 Version 2 (14496-2 FPDAM 1),

- the Audio FCD of MPEG-4 Version 2 (14496-3 FPDAM 1),

The Requirements group asks National Bodies to carefully study the Profiles proposed for Version 2 in N2858 (MPEG-4 Profiles under consideration), when they put forward requests for new profiles whose definition they deem necessary.

The Requirements group further concludes that many of the Profile and Level definitions in this document are very incomplete, and that their inclusion in the standard is highly unlikely without detailed technical input by national bodies

Furthermore, the Requirements Group invites National Bodies to carefully consider the names and come with proposals for better ones if they think the names are unsuitable.

- 3.1.5 The Requirements Group asks companies that have stated support for new profiles during the 48th meeting, to confirm this support in an input contribution to the 49th (Melbourne) MPEG meeting. (Note that this only applies to companies that have not done this in previous input contributions)
- 3.1.6 That companies keep informing MPEG about which Profiles they want to use in implementations of the MPEG-4 Standard.
- 3.1.7 The Requirements group has heard a presentation about watermarking in Video. The group is currently of the opinion that the conclusion of the Stockholm meeting still holds, and that standardising watermarking techniques is not necessary. However, the group would like to be informed by parties that hold a different opinion, and invites input contributions on the matter.
- 3.1.8 The Requirements Group has learnt that IBM has an XML Schema language parser that might be made available to MPEG. MPEG is eager to learn on what terms this can be done.
- 3.1.9 That the following output documents from previous meetings remain on the MPEG home page for public access:

MPEG-4 Requirements Document	N2723
MPEG-4 Applications Document	N2563
MPEG-4 Overview	N2725
Results of AAC Subjective tests	N2006
Overview of MPEG-4 Profile and Level definitions	N2458
MPEG-4 Audio verification test results: speech codecs	N2424
MPEG-4 Audio verification test results: audio on Internet	N2425
MPEG-4 Video verification tests: error resilience	N2604
MPEG-4 Video verification tests: temporal Scalability in Simple Scalable Profile	N2605
MPEG-4 Video verification tests: Content Based Coding	N2711
Carriage of MPEG-4 Content on MPEG-2 Systems	N2526
MPEG-4 Intellectual Property Management & Protection (IPMP) Overview & Applications	N2614
Description of MPEG-7 Content Set	N2467
Licensing Agreement for MPEG-7 Content Set	N2466
Guide to obtaining the MPEG-7 Content Set	N2570

3.2 The Delivery group recommends

3.2.1 to approve the following documents:

Title	No.
Text of ISO/IEC 13818-6/COR 1	N2777
DoC on ISO/IEC 13818-6/PDAM 2	N2778
Text of ISO/IEC 13818-6/FPDAM 2	N2779
DoC on ISO/IEC 14496-6/PDAM 1	N2784
Text of ISO/IEC 14496-6/FPDAM 1 : Extensions for Version 2 - Xavier Zamora	N2806
Text of WD1.0 of Corrigendum to ISO/IEC 14496-6	N2839
Summary of technical problems with ISO/IEC 13818-6/FDAM1	N2840
Study of the DAI syntax specified in DMIF V2	N2841

3.2.2 to establish the following AdHoc groups :

<i>Title</i>		<i>No.</i>	<i>Mtg</i>
AHG on DSM-CC support to data broadcasting	M. Goldman	2842	no
AHG on Support of file transfer inside DMIF	G. Franceschini	2843	no

3.2.3 to make publicly available the following documents:

Title	No.
Text of ISO/IEC 14496-6/FPDAM 1: Extensions for Version 2	N2806

3.2.4 That the text of DMIF conformance FCD be added to the MPEG-4 Conformance FCD (WG11 N2804)

3.2.5 That the text of the DMIF V2 conformance WD 2.0 be added to the MPEG-4 Conformance V2 WD 2.0 (WG11 N2883)

3.2.6 That the responses to UK and France National Bodies on the FDAM1 to ISO/IEC 13818-6 be added to the overall document (WG11 N2894)

3.2.7 That the attention of National Bodies is pointed to document WG11 N2840, on the Summary of technical problems with ISO/IEC 13818-6/FDAM1

3.3 The Systems group recommends

3.3.1 the approval of the following documents:

ISO/IEC 11172-1/COR2	N2775
Disposition of Comments on FPDAM 1 of 14496-1	N2781
FPDAM 1 of 14496-1 (MPEG-4 Systems Version 2) - Swaminathan by 99/07/29	N2801
MPEG-4 Systems Version 2 VM 7.0 -Ron Burns 99/07/29	N2867
Status of the Systems Version 1&2 Software Implementation	N2868
Study on FPDAM 7 of MPEG-2 Systems	N2869
Working Draft 2.0 of corrigendum for 14496-1	N2870
Systems Software Implementation Work plan	N2871
Template for NB Comments	N2872
Record of Agreement with Sun Microsystems Inc. representative	N2873

3.3.2 That the FPDAM-1 to 14496-1 (MPEG-4 Version 2) will be released by the 29th of July to accommodate final text editing (N2801).

- 3.3.3 The discussion with representatives from Sun Microsystems Inc. has been recorded (N2873). This document contains a summary of Sun's conformance testing procedure as well as additional clarifications of these procedures, as understood by MPEG members with the agreement of Sun representatives during the discussions. The Systems sub-group asks for a written confirmation from Sun to be sent to the Convenor of WG11 that the described understanding of Sun's conformance testing procedure is correct. In the meantime, the Systems sub-group recommends promotion of the MPEG-J specification from PDAM to FPDAM. If Sun does not respond to this request by 1st of September 1999, MPEG-J will not be promoted to FDAM in Melbourne.
- 3.3.4 That the simple RTP MPEG-4 Payload format proposal (Draft-ietf-avt-rtp-mpeg4-01.txt) be used initially for the carriage of MPEG-4 content over RTP/IP. If this approach is found to have deficiencies in certain scenarios or under certain conditions, then improvements may be considered.
- 3.3.5 That National Bodies should comment on the inclusion of normative hint tracks for the mp4 file format for UDP, RTP and MPEG-2 TS. This will allow the exchange of streamable mp4 for these transport mechanisms.
- 3.3.6 That National Bodies should comment on the need and specification of Profiles and Levels for MPEG-4 Systems Version 2 specification as applied to the file format, to MPEG-J as well as to Advanced BIFS specification.
- 3.3.7 To approve the Systems part of Version 1 FDIS Part 5 WG11 N2805 (Jean-Claude Dufourd - 15 August 1999).
- 3.3.8 To approve the Systems part of Version 1 FCD Conformance WG11 N2804.
- 3.3.9 To approve the Systems part of Version 2 WD Conformance WG11 N2883.
- 3.3.10 That the MPEG-4 Version 2 VM document be released by 29 July 1999 to accommodate final text editing (N2867) - Ron Burns.
- 3.3.11 to establish the following AdHoc Groups:

Title	Chair(s)	No.
AHG on Systems Conformance	Dufourd & al.	N2874
AHG on Advanced BIFS	Signes & al.	N2875
AHG on MPEG-J	Fernando & al.	N2876
AHG on MPEG-4 File Format	Singer & al	N2877
AHG on Intellectual Property Management & Protection within MPEG-4	Rump & al.	N2878
AHG on IM 1	Lifshitz & al.	N2879
AHG on MPEG-4 Content on MPEG-2 Systems and on the Internet	Carsten Herpel, Jan Van Der Meer, S. Casner	N2880
AHG on Multi-user applications	Olivier Avaro & al.	N2881
AHG on Back Channel and ESM	Young-Kwon Lim & al.	N2882

3.3.12 to make publicly available the following documents:

Title	No.
FPDAM 1 of 14496-1 (MPEG-4 Systems Version 2)	N2801
Working Draft 2.0 of corrigendum for 14496-1	N2870

3.4 The Multimedia Description Scheme group recommends:

3.4.1 The approval of the following output document:

<i>Title</i>	<i>Number</i>
MPEG-7 Description Schemes (V0.5)	N2844

3.4.2 To establish the following Ad Hoc groups :

<i>Title</i>		<i>No.</i>	<i>Mtg</i>
AHG on Generic DS Development	P. Salembier, V. Puig, T. Walker, J. Heuer	2845	yes
AHG on Media and Meta DSs and Harmonization with Other Schemes	J. Martinez, M. Vetter, C. Joergensen	2848	yes
AHG on DS Validation and Core Experiment Planning	A. Benitez, N. Day, S. Devillers	2847	yes
AHG on Generic AV DS Conceptual Model	J. Smith, H. Rising	2846	yes

3.4.3 To work actively with the DDL development group to produce an implementation of the Generic AV DS in the DDL as soon as practical; to list requirements for linking using the DDL within the DS and to data (content).

3.4.4 That certain generic Description Schemes (such as Time, Date, Space, Objects, etc.) and common non-audio/non-video (textual) Descriptors (such as Originator, Title, etc.) are a high priority for specification and implementation to enable Core Experiments within Audio and Video. The DS Group will work with the Systems Group to define these generic DSs.

3.4.5 To work with the Society of Motion Picture and Television Engineers (SMPTE) to harmonize Media, Meta, and other basic DSs and textual Descriptors with the SMPTE Metadata Dictionary.

3.4.6 To work with the Online Computer Library Center (OCLC) to map the proposed Extended Dublin Core (EDC) metadata for resource discovery to the Media and Meta DSs in the Generic DS. Where possible, individual members of the DS Group will attend the next Dublin Core Workshop, report on activities to the DS Group, and factor relevant information into the next version of the Generic AV DS.

3.4.7 To work with other standards bodies and interested organizations with existing metadata structures to use existing best practices in the further development of the Generic AV DS.

3.5 The Video group recommends

3.5.1 that two separate amendments be scheduled for technology currently under consideration for the Simple Studio Profile and for the Fine Granularity Scalability Technology because these two items may progress with different time frames,

3.5.2 that future contributions on watermarking will only be accepted if they state clearly why the proposed technology should be the subject of standardisation,

3.5.3 to approve the following documents :

Title	No.
Text of ISO/IEC 11172-2 /COR2	2776
DoC on ISO/IEC 14496-4 CD ballot	2787
Text of ISO/IEC 14496-4 (Conformance) FCD	2804
DoC on ISO/IEC 14496-2 /PDAM ballot	2782
Text of ISO/IEC 14496-2 /FPDAM1 - Euee 29/07/99	2802
Description of changes from ISO/IEC 14496-2 PDAM to FPDAM	2798
Text of ISO/IEC 14496-5/PDAM1	2807
Description of Core Experiments in FGS	2814
Text of ISO/IEC 14496-2 FGS Amendment WD 1.0	2815
Text of ISO/IEC 14496-2 MPEG-4 Video FGS VM v 1.0	2816
Text of ISO/IEC 14496-2 Studio Profile Amendment WD 1.0	2817
Description of Core Experiments for MPEG-7 Shape/Motion descriptors	2818
Description of Core Experiments for MPEG-7 Colour/Texture descriptors	2819
Report on improving the visual quality of non-progressive content on progressive-scan devices	2820
Working Draft 2.0 of ISO/IEC 14496-2/ DCOR 1	2821
MPEG-7 visual part of XM Version 2	2822
Report Of The Formal Verification Tests On MPEG-4 Temporal Scalability in Core Profile	2823
Report Of The Formal Verification Tests on Advanced Coding Efficiency ACE (former Main Plus) Profile In Version 2	2824
Report of Formal Verification Test on MPEG-4 Advanced Real Time Simple Profile (Error Robustness, Temporal Resolution Stability)	2825
Report Of The Formal Verification Tests On MPEG-4 Coding Efficiency for Low and Medium Bit rates	2826

3.5.4 to establish the following AdHoc Groups :

Title	Chair(s)	No.	Mtg
AHG on the study of extension to MPEG-2 Video to improve the display of video on progressive displays	Gray, McVeigh	2827	Y
AHG on software integration and verification in MPEG-4 video	Benzler, Ito, Morimatsu	2828	Y
AHG on conformance in MPEG-4 video	Tan	2829	Y
AHG on Object-based content creation for MPEG-7	Kim	2830	Y
AHG on Fine Granularity Scalability in MPEG-4 video	Ohm	2831	Y
AHG on the Studio Profile in MPEG-4 video	Yagasaki	2832	Y
AHG on core experiments for Color/Texture descriptors in MPEG-7	Manjunath, Vinod	2833	Y

AHG on core experiments for Shape/Motion descriptors in MPEG-7	Bober, Jeannin	2834	Y
AHG on editing the documents of the MPEG-4 Visual PDAM and the MPEG-4 video verification model	Jang, Nakaya, Son, Nagumo, Shin, Fukunaga	2835	Y
AHG on editing the document of the MPEG-7 Visual part of XM	Jeannin	2836	Y
AHG on organizing the software integration of MPEG-7 Visual part of XM tools	Herrmann	2837	Y
AHG on MPEG-4 video encoder optimization	Chiang, Sun	2838	Y

3.5.5 to make publicly available the following documents :

Title	No.
Text of ISO/IEC 14496-2 FGS Amendment WD 1.0	2815
Text of ISO/IEC 14496-2 MPEG-4 Video FGS VM v 1.0	2816
Text of Visual ver. 2 FPDAM	2802
Report on improving the visual quality of non-progressive content on progressive-scan devices	2820

3.6 The Audio group recommends

3.6.1 that the following documents be approved:

Title	No.
DoC on ISO/IEC 14496-3/AMD1 PDAM	2783
Text of ISO/IEC 14496-3/AMD1 FPDAM	2803
Text of Audio part of ISO/IEC 14496-4 FCD (Conformance)	2804
Study on Outstanding Issues in 14496-3/AMD1 FPDAM	2788
Text of Audio part of ISO/IEC 14496-4/AMD1 WD (Conformance)	2789
Study on Outstanding Issues in Audio part of MPEG-4 Version 1 Conformance	2790
Status and Workplan for MPEG-4 V1 Audio Reference Software	2791
Status and Workplan for MPEG-4 V2 Audio Reference Software	2792
Report on MPEG-4 Audio Version 2 Technical Issues	2793
Proposal for MPEG-4 Version 2 Audio Transport	2794
MPEG-4 Version 2 Audio Verification Test Workplan	2795
MPEG-7 Audio Core Experiment Methodolgy	2796
Workplan for MPEG-7 Audio Core Experiment on Speech Annotation Description and sound effects classification	2797
Workplan for MPEG-7 Audio Core Experiment on Instrument and Melody Description	2799

3.6.2 that the following Ad-hoc groups be established:

Title	Chair	No.	Meeting
AHG on MPEG-4 Audio Version 1 and Version 2 Reference Software Editing	H. Purnhagen B. Teichmann	2808	No
AHG on Audio part of MPEG-4 Version 1 and Version 2 Conformance	T. Moriya T. Mlasko	2809	No
AHG on MPEG-4 Audio Version 2 FPDAM Editing	S-W Kim	2810	No
AhG on MPEG-4 Audio Version 2	B. Grill	2811	Sunday before

Title	Chair	No.	Meeting
Technical Matters	M Iwadare.		meeting
AHG on MPEG-7 Audio Core Experiments	Chair: A. Lindsay Co-chair: P. Garner, P. Herrera	2812	Sunday before meeting
AHG on MPEG-4 Audio Version 2 Verification Test	S. Quackenbush M. Nishiguchi T. Miki	2813	Sunday before meeting

3.6.3 that the following documents be made publicly available:

Title	No.
Text of Audio ver. 2 FPDAM	2803
Audio contribution to Seoul Press statement	2773

3.6.4 that national bodies review and make comments on N2788, Study on Outstanding Issues in 14496-3/AMD1 FPDAM.

3.6.5 that national bodies review and make comments on N2790, Study on Outstanding Issues in Audio part of MPEG-4 Version 1 Conformance.

3.6.6 that national bodies review and make comments on N2794, Proposal for MPEG-4 Version 2 Audio Transport.

3.6.7 that national bodies review and make comments on N2858, Proposed MPEG-4 Version 2 Profiles .

3.7 The SNHC group recommends:

3.7.1 that the following documents be approved:

Title	No.
DoC on ISO/IEC 14496-2/AMD1 PDAM	2782
Text of ISO/IEC 14496-2/AMD1 FPDAM	2802
Text of SNHC part of ISO/IEC 14496-4 FCD (Conformance)	2804
SNHC Software work plan on reference software and IM1 integration	2857

3.7.2 that the following Ad-hoc groups be established:

Title	Chair	No.	Meeting
AHG on FBA	E. Petajan, T. Capin	2855	No
AHG on study of applications for animated 3D model coding	P. Doenges, E. Jang	2856	No

3.7.3 that the following documents be made publicly available:

Title	No.
SNHC contribution to Vancouver Press statement	2773
Text of ISO/IEC 14496-2/AMD1 FPDAM	2802

3.7.4 that national bodies review and make comments on N2858, Proposed MPEG-4 Version 2 Profiles .

3.7.5 that ISG output document “Syntax for the transmission of terminal rendering QoS characteristics through the back-channel for adaptive SNHC content creation” be supported.

3.7.6 that the following facts are recognized in response to the French NB:

1. Hybrid Scheme has equal or better coding efficiency than each of the two competitive methods, namely parallelogram-based method and polygonal-based method.
2. Hybrid Scheme has significantly better coding efficiency on average than the parallelogram-based method when dealing with 3D polygonal meshes (i.e. non-triangular 3D meshes) as demonstrated using the common non-optimized reference encoder.
3. Hybrid Scheme has been implemented in the reference software for the Seoul Meeting.
4. Bitstream exchanges have been reported in m4900 .
5. ISG was not asked by SNHC to evaluate the complexity of the Hybrid scheme (which is a concern) at the Seoul meeting because a decision was made to discontinue consideration of the Hybrid scheme as stated in N2647 output of Seoul
6. No criterion related to progressive or partial transmission was included in the geometry mesh coding CE for the Seoul Meeting.
7. The impact of the Hybrid scheme on the other 3DMC tools has not been addressed as stated in N2647 output from Seoul. The potential loss of functionality of the other tools is a concern.
8. The Hybrid scheme is not integrated in the latest version of the reference software as of the Vancouver meeting.
9. Results have not been verified by the group.

3.8 The Test group recommends

3.8.1 to approve the following documents :

Title	No.
Report Of The Formal Verification Tests On MPEG-4 Temporal Scalability in Core Profile	2823
Report Of The Formal Verification Tests On MPEG-4 Coding Efficiency for Low and Medium Bit rates	2826
Report Of The Formal Verification Tests on Advanced Coding Efficiency ACE (former Main Plus) Profile In Version 2	2824
Report of Formal Verification Test on MPEG-4 Advanced Real Time Simple Profile (Error Robustness, Temporal Resolution Stability)	2825

3.8.2 to make publicly available the following document:

Title	No.
Report Of The Formal Verification Tests On MPEG-4 Temporal Scalability in Core Profile	2823
Report Of The Formal Verification Tests on Advanced Coding Efficiency ACE (former Main Plus) Profile In Version 2	2824
Report of Formal Verification Test on MPEG-4 Advanced Real Time Simple Profile (Error Robustness, Temporal Resolution Stability)	2825
Report Of The Formal Verification Tests On MPEG-4 Coding Efficiency for Low and Medium Bit rates	2826

3.8.3 to acknowledge the below listed persons and companies that contributed to the Formal Verification Tests On MPEG-4:

V. Baroncini (FUB),
S. Bauer (Bosch)
U. Benzler (University of Hannover),
S. Fukunaga (Oki),
G. Heising (HHI),
H. Katata N. Ito T. Aono M. Takahashi (Sharp),
A. Kaup (Siemens),
H. Kimata (NTT),
H. Imaizumi S. Sakaida (NHK),
W. Li (Optivision),
E. Morimatsu (Fujitsu Laboratories),
Y. Nakaya Y. Suzuki (Hitachi),
S. Pefferkorn (CCETT),
M. Quacchia (CSELT).
A. Schertz (IRT),
S. Takamura (NTT);
I. Yoroizawa (NTT-AT),

3.9 The Implementation Study Group recommends:

3.9.1 To approve the following documents:

Syntax for the transmission of terminal rendering QoS characteristics through the backchannel for adaptive SNHC content creation.	N2851
MPEG-7 XM Software Integration examples and instructions: Version 1.0	N2849
Editorial changes for the consistent naming of video and SNHC complexity estimation parameters.	N2852
Study on Outstanding Issues in Audio part of MPEG-4 Version 1 Conformance	N2790

3.9.2 To establish the following ad-hoc groups:

Title	Chair(s)	No.	Mtg
AHG on video Decoder Quality of Service	Gauthier Lafruit Jan Bormans	N2853	N
AHG on MPEG-7 XM Development	Mark J. Buxton, Stephan Herrmann	N2854	N

3.9.3 To specify a back-channel mechanism for the transmission of SNHC rendering terminal QoS.

3.9.4 To further proceed with experiments and verifications resulting from the integration of VCV, VMV and VBV in the video encoder.

3.9.5 To continue assessing different implementations of the IPMP interface and of IPMP non-normative applications, according to document N2520 “IPMP Implementation Studies”.

3.9.6 To provide application-oriented parameter settings for Version 2 Audio BIFS nodes so as to define meaningful levels and profiles.

3.10 The Liaison group recommends

3.10.1 the approval of the following responses to National Bodies

Response to the National Body Contributions	N2894
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3.10.2 the approval of Dr. Jane Hunter (DSTC, member of XML Schema WG) and Dr. Frank Nack (GMD Darmstadt) as Liaison representatives to the World Wide Web Consortium (W3C).

3.10.3 that the results of the Video verification tests (N2823, N2824, N2825, N2826) be sent to ITU-R, ITU-T SG16, EBU, SMPTE.

3.10.4 the approval of the following Liaison output documents:

Liaison to Digital Imaging Group (DIG)	2884
Liaison statement to the Programme Technology Management Committee of the EBU	2885
Liaison to Web3D (VRML) Consortium	2886
Liaison to ITU-T SG16 on MPEG-4 over H.32x Terminals	2887
Liaison to IETF	2888
Liaison to ISO/IEC SC34	2889
List of bodies which are candidate for or already in Liaison with MPEG	2890
Liaison to SC24 on Still Image Metadata	2891
Liaison to W3C	2892
Liaison to MIDI Manufacturers Association (MMA)	2893
Statement to WG 1 (JPEG2000)	2901
Liaison to SMPTE	2895
Liaison to EBU	2896
Liaison to DVB	2897
Liaison to DVD consortium	2898
Liaison to ATSC	2899
Liaison to Pro-MPEG Forum	2900

3.11 The HoD group

3.11.1 Recommends approval of the meeting plan including

- the 49th meeting in Melbourne, Australia over the period 4th to 8th October 1999 and acceptance of a meeting fee of approximately US\$270.
- the 50th meeting in Maui, Hawaii, USA over the period 6th to 10th December 1999 and a meeting fee of about US\$250.
- the 51st meeting in the Netherlands over the period 20th to 24th March 2000 and acceptance of a meeting fee of approximately US\$250.
- The 52nd meeting in China in July 2000

- the 53rd meeting in France over the period 23-27th October 2000.

3.11.2 Requests National Bodies to offer venues for meetings in December 2000 and beyond.

3.11.3 The HoD Group resolves that, in the light of the generous action of KNITQ to offset the higher than expected costs incurred in hosting the 47th Meeting in Seoul Korea, that the resulting surplus be used to offset costs of the 49th Meeting in Melbourne Australia, in anticipation of a lower facilities fee.

3.11.4 The HoD Group resolves that, in the absence of Patent Statements by companies with IP interests in version 2 of MPEG-4, if such Patent statements are not forthcoming by the 50th Meeting of WG11 in Maui, US further progression of the standard to FDAM will be halted.

3.11.5 The HoD Group notes that there have been instances of the registration as trademarks of the familiar terms used within WG11 for WG11 standards such as MP4 and AAC. WG11 urges the ISO secretariat to take urgent action (no later than 99/08/20) to lodge objections to the registration of the MP4 trademark in US courts. WG11 also urges ISO to develop a policy to protect such familiar terms for the benefit of the industrial users of such standards.

3.11.6 In response to the USNB contribution, the HoD group requests National Bodies to undertake the investigation of alternative specification documentation technologies and provide a report and recommendation, if such is deemed appropriate at their earliest availability but not later than the March 2000 meeting in The Netherlands.

3.11.7 The HoD Group notes the concerns of the US National Body about the protection of intellectual property contributed to the MPEG-7 eXperimental Model (XM). WG11 resolves that the existing policy on the contribution of software remain in force but that this policy may be subject to further review in the future.

4 WG11 approves the following MPEG-1 corrigenda

Systems	WG11 N2775
Video	WG11 N2776

5 WG11 approves the progression of the following MPEG-2 amendments and corrigenda

13818-6/COR 1	WG11 N2777
13818-6/PDAM 2 DoC	WG11 N2778
13818-6/FPDAM 2	WG11 N2779

6 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					99/08	99/02

1/Amd 5	Systems-related table entries for AAC					00/02	99/05
1/Amd 6	4:2:2 Profile @High level splice parameters and buffer model for ISO/IEC 13818-7 (AAC)					00/02	99/05
1/Amd 7	Transport of ISO/IEC 14496 data over ISO/IEC 13818-1				99/10	00/02	99/12
2/Amd 6	Number of lines per frame				99/10	00/02	99/12
4/Amd 2	System Target Decoder Model					99/10	99/05
4/Amd 3	Audio conformance bitstream				99/10	00/01	99/12
6/Amd 1	Additions to support data broadcasting					00/07	99/05
6/Amd 2	Addition to support Synchronized Download Services, Opportunistic Data Services and Resource Announcement in Broadcast and Interactive Services				99/12	00/03	00/02
6/Cor 1							99/10

7 WG11 approves the progression of the following MPEG-4 version 1 document. All National Bodies which had voted for disapproval at the FCD ballot have changed their votes into approval

14496-5 FCD DoC	WG11 N2787
14496-5 FDIS	WG11 N2805

8 WG11 nominates the following individuals as recipients of the ISO certificate for outstanding contributions to the development of 14496-5:

Systems	Stefano Battista
	Mike Coleman
	Gianluca Di Cagno
	Jean-Claude Dufourd
	Zvi Lifshitz
	Karl Oygard
Video	T. K. Tan
	Simon Winder
	Michael Wollborn
	Minhua Zhou
Audio	Takehiro Moriya
	Toshiyuki Nomura
	Heiko Purnhagen
	Erich Scheirer
	Bodo Teichmann
SNHC	Igor Pandzic
	Peter van Beek

9 WG11 thanks Deutsche Telekom and HHI for their donation of an MPEG-4 Video software in object code form for use in IM1.

10 WG11 approves the progression of the following MPEG-4 version 1 document. All National Bodies which had voted for disapproval at the FCD ballot have changed their votes into approval

14496-4 CD DoC	WG11 N2780
14496-4 FCD	WG11 N2804

11 WG11 welcomes the communication that parts 6 of MPEG-4 version 1 has been approved as an IS but expresses concern at the longer than expected time that ITTF requires for FDIS Ballots.

12 WG11 would like to thank Vittorio Baroncini and the individuals who have contributed to the successful execution of the MPEG-4 Video version 1 Verification Tests, and the laboratories that have carried out the tests.

13 WG11 would like to thank the companies that have provided patent statements for MPEG-4 version 2

1	AT&T (submitted with version 1)
2	Bosch
3	DemoGraFX
4	Dolby
5	Fraunhofer
6	Hyundai
7	IBM
8	Matsushita
9	Microsoft
10	NEC
11	NHK
12	Samsung
13	Siemens
14	Thomson

WG11 will not promote MPEG-4 version 2 to FDAM in December 1999 if evidence that IPR needed to implement MPEG-4 version 2 can be licensed according to ISO policy will not be obtained.

14 WG11 approves the following Verification Models

MPEG-4 Systems ver. 2 VM	WG11 N2867
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15 WG11 would like to thank Vittorio Baroncini and the individuals who have contributed to the successful execution of the MPEG-4 Video version 2 Verification Tests, and the laboratories that have carried out the tests.

16 WG11 approves the following MPEG-4 amendments

MPEG-4 Systems FPDAM (ver. 2)	WG11 N2801
MPEG-4 Visual FPDAM (ver. 2)	WG11 N2802
MPEG-4 Audio FPDAM (ver. 2)	WG11 N2803
MPEG-4 DMIF FPDAM (ver. 2)	WG11 N2806

These documents will be posted on the MPEG web site.

17 WG11 approves the following MPEG-4 amendments

MPEG-4 Reference Software PDAM (ver. 2)	WG11 N2807
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18 WG11 approves MPEG-4 version 2 Conformance WD (WG11 N2883)

19 WG11 approves the MPEG-4 version 2 verification test plan:

Date	Verification test
December 1999 meeting	MPEG-4 Audio version 2

Verification test activity will continue with the progress of MPEG-4 standard development

20 WG11 approves the list of MPEG-4 version 2 editors (underlining indicates the main editor):

Part 1	Riita Väänänen, Gerard Fernando, Niels Rump, William Belknap, <u>Viswanathan Swaminathan</u>
Part 2	Touradj Ebrahimi, Caspar Horne, <u>Euee Seon Jang</u>, Yuichiro Nakaya, Jörn Ostermann, Atul Puri
Part 3	<u>Bernhard Grill</u>, Sang Wook Kim
Part 5	<u>Jean-Claude Dufourd</u>
Part 6	Bo Burman, <u>Javier Zamora</u>

21 WG11 would like to express its most sincere thanks for Mike Coleman for his dedication to the MPEG-4 Reference Software since the beginning of this activity at the Maceio meeting.

22 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						99/05
2	Visual						99/05
3	Audio						99/05
4	Conformance Testing				99/07	99/12	00/02
5	Reference Software					99/07	99/09
6	DMIF						99/02

1/Amd 1	Systems Extensions				99/07	99/12	00/02
2/Amd 1	Visual Extensions				99/07	99/12	00/02
3/Amd 1	Audio Extensions				99/07	99/12	00/02
4/Amd1	Conformance Testing Extensions			99/12	00/07	00/12	01/02
5/Amd 1	Reference Software Extensions			99/07	99/12	00/03	00/05
6/Amd 1	DMIF Extensions				99/07	99/12	00/02

23 WG11 is pleased with the news that the establishment of an "MPEG-4 Industry Forum" is well advanced and wishes the best for the success of this initiative to promote understanding and adoption of MPEG-4 by the industry.

24 WG11 approves the MPEG-7 Core Experiments documents (WG11 N2818, 2819, 2796)

25 WG11 approves the DDL document (WG11 N2862). The document will be posted on the MPEG web site.

26 WG11 approves the visual portion XM document (WG11 N2822)

27 WG11 approves the MPEG-7 workplan:

Part	Title	CfP	WD	CD PDAM PDTR	FC 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

WG11 recognises that the complexity of the MPEG-7 standard would make its development and use difficult if it were produced as a single part standard. A decision will be made in Melbourne on the structure of MPEG-7 as a multi-part standard starting from the proposal made in resolution 3.1.13 of the Seoul meeting

- 1. MPEG-7 Descriptors**
- 2. MPEG-7 Description Schemes**
- 3. MPEG-7 Description Definition Language**
- 4. MPEG-7 Systems**
- 5. MPEG-7 Reference SW**
- 6. MPEG-7 Conformance.**

28 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	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				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 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						99/05
6/Amd 2	Addition to support Synchronized Download Services, Opportunistic Data Services and Resource Announcement in Broadcast and Interactive Services			99/03	99/07	99/12	00/02
6/Cor 2						99/03	99/07
MPEG-4							
1	Systems						99/05
2	Visual						99/05
3	Audio						99/05
4	Conformance Testing				99/07	99/12	00/02
5	Reference Software					99/07	99/09
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			99/12	00/07	00/12	01/02
5/Amd 1	Reference Software Extensions			99/07	99/12	00/03	00/05
6/Amd 1	DMIF Extensions			99/03	99/07	99/12	00/02
MPEG-7							
1	Multimedia Content Description Interface		99/12	00/10	01/03	01/07	01/09

29 WG11 approves its revised terms of reference (WG11 N2800)

30 WG11 thanks Takuyo Kogure for his vision in proposing the establishment

of the DSM group and his efforts in chairing the group.

31 WG11 thanks Guido Franceschini for his efforts chairing the Delivery group.

32 WG11 would like to thank Mike Vetter for his efforts in leading the Description Scheme activity until the establishment of the Multimedia Description Scheme group.

33 WG11 approves the rules of operation of MPEG ad-hoc groups and guidance notes to Chairs (WG11 N2850)

34 WG11 approves its meeting schedule:

No.	yy	mm	Dd	City	Country
49	99	10	04-08	Melbourne, VIC	AU
50	99	12	06-10	Maui, HI	US
51	00	03	20-24	Noordwijkerhout	NL
52	00	07		Beijing	CN
53	00	10	23-27		FR
54	00	12			

35 WG11 approves its Vancouver press release for publication on the MPEG home page (WG11 N2773).

36 The Convenor would like to express his thanks to Anna Cognell, Gauthier Lafruit and Peter Schirling for their support in the preparation of the Friday Plenary.

37 WG11 would like to thank National Body of Canada for their invitation, the University of British Columbia and Image Power for hosting the meeting, IBM and BC ASI for their financial support and Preferred Inc. for its excellent organization of the meeting. In particular

- **From the Canadian National Body: Mr. Andy Kwan and Mr. Doug Langlotz**
- **From UBC: Dr. Alen Docef, Mr. George Liu, Mr. Thomas Pun, Mr. David Tompkins, Mrs. Berna Erol, Mr. Shahram Shirani and Mrs. Adriana Dumitras**
- **From Image Power: Ms. Astrid Levelt and Mr. Stephen Swift**

- **From IBM: Mr. Peter Schirling and Patrick Sullivan for setting-up the computer room**
- **From Preferred: Ms. Julie Higgins and Ms. Valerie Ritacco**