

**INTERNATIONAL ORGANISATION FOR STANDARDISATION  
ORGANISATION INTERNATIONALE DE NORMALISATION  
ISO/IEC JTC1/SC29/WG11  
CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC1/SC29/WG11** **N1716**

**July 1997**

**Source:** Leonardo Chiariglione - Convenor  
**Title:** Resolutions of 40th WG11 meeting  
**Status:**

**1. WG11 approves the reports from the Requirements, DSM, 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**

<b>MPEG-4 Requirements Document v.4</b>	<b>N1727</b>
<b>MPEG-4 Profiles Document v.4</b>	<b>N1728</b>
<b>MPEG-4 Applications Document</b>	<b>N1729</b>
<b>MPEG-4 Overview</b>	<b>N1730</b>
<b>MPEG-4 functionalities to be supported after MPEG-4 version 1</b>	<b>N1731</b>
<b>Management of identification and protection of content in MPEG-4</b>	<b>N1732</b>
<b>MPEG-7: Context and Objectives - v. 4</b>	<b>N1733</b>
<b>Second draft of the MPEG-7 Requirements Document</b>	<b>N1734</b>
<b>MPEG-7 Applications Document</b>	<b>N1735</b>
<b>Evaluation of responses to IPR Call for Proposals</b>	<b>N1767</b>
<b>MPEG Terms of Reference</b>	<b>N1800</b>
<b>Translation from Profile Requirements to Profile Specifications</b>	<b>N1768</b>

**2.1.2. the definition of a 12 bit luminance Object Profile at the Fribourg meeting, if a request is received in Fribourg showing support from multiple parties wishing to utilize the profile.**

**2.1.3. to make publicly available the following documents:**

<b>MPEG-4 Requirements Document - v.4</b>	<b>N1727</b>
<b>MPEG-4 Applications Document - v.4</b>	<b>N1729</b>
<b>MPEG-4 Overview</b>	<b>N1730</b>
<b>Management of identification and protection of content in MPEG-4 - v.2</b>	<b>N1732</b>
<b>MPEG-7 Context and Objectives - v.4</b>	<b>N1733</b>
<b>Second Draft of MPEG-7 Requirements</b>	<b>N1734</b>
<b>MPEG-7 Applications Document</b>	<b>N1735</b>

**2.1.4. to establish the following AdHoc groups:**

<b>on MPEG-4 Low Delay Evaluations</b>	<b>N1736</b>
<b>on MPEG-4 Requirements</b>	<b>N1737</b>
<b>on MPEG-7 Requirements</b>	<b>N1738</b>
<b>on Content Related IPR Issues in MPEG-4</b>	<b>N1739</b>
<b>on Object Content Information in MPEG-4</b>	<b>N1794</b>

## **2.2. The DSM group recommends**

- 2.2.1. Approval that DMIF is strictly responsible for defining the MPEG-4 delivery control primitives at the DMIF-Application interface for the establishment of the FlexMux and TransMux channels.**
- 2.2.2. Approval of DMIF WD 1.0 (WG11 N1763). This will be uploaded to the MPEG FTP site after completion of editorial modifications by 97/08/05**
- 2.2.3. Approval of DSM-CC Conformance WD 2.0 (WG11 N1764)**
- 2.2.4. Approval of the document Work on DMIF beyond Oct/97 CD (WG11 N1765)**
- 2.2.5. to establish the following AdHoc groups :**

<b>DMIF Reference Source Code</b>	<b>N1819</b>
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- 2.2.6. to make publicly available the following documents :**

<b>DMIF WD 1.0</b>	<b>N1763</b>
<b>DSM-CC Conformance WD 2.0</b>	<b>N1764</b>

## **2.3. The Systems group recommends**

- 2.3.1. the approval of the Disposition of Comments of 13818-1/PDAM 5 (WG11 N1724) and the text of 13818-1/FPDAM 5 (WG11 N1723) and requests the Convenor to forward the documents to the SC29 Secretariat for further processing.**
- 2.3.2. the approval of the text of 13818-1/AMD 4 (WG11 N1725) and requests the Convenor to forward the documents to the SC29 Secretariat for further processing.**
- 2.3.3. the approval of the text of 13818-4/DCOR 1 (WG11 N1726) and requests the Convenor to forward the documents to the SC29 Secretariat for further processing.**
- 2.3.4. the approval of Systems WD 5.0. (WG11 N1825).**
- 2.3.5. the approval of Systems Methodology and Workplan for Scene Description (WG11 N1786). The Systems sub-group further recommends to forward this document to SC24 and to the VRML consortium.**
- 2.3.6. the approval of the following modifications of the Systems WD :**

- only the syntax and semantic of the BIFS nodes (as opposed to the ASCII description) will remain in the Systems WD,
- the text that regrettably found its way into the Systems WD 4.0 from VRML will be completely removed, in order to comply with VRML and SC24 requests. A path of technical cooperation with the VRML community is described in document N1786.

2.3.7. the approval of the procedure to update the Systems WD, as described in document N1827.

2.3.8. the approval of Systems Experiments (WG11 N1773).

2.3.9. the approval of the Systems Software Implementation Workplan (WG11 N1801).

2.3.10. the approval of the MPEG-2 and MPEG-4 Systems Frequently Asked Questions (WG11 N1802).

2.3.11. to establish the following AdHoc groups:

on Systems Working Draft Editing	N1803
on Systems Decoder Model and Multiplex Specification	N1804
on BIFS Scene Description	N1805
on AAVS Scene Description	N1806
on Systems Implementation	N1807

2.3.12. to make publicly available the following documents :

Systems Working Draft	N1825
Systems Frequently Asked Question	N1802
Systems Methodology and Workplan for Scene Description	N1786

## 2.4. The Video group recommends

2.4.1. the approval of the following documents :

Text of ISO/IEC 14496-2 video verification model V.8.0	N1796
Text of ISO/IEC 14496-2 visual working draft V.4.0	N1797
Description of core experiments on shape coding in MPEG-4 video	N1798
Description of core experiments on region-oriented texture coding in MPEG-4 video	N1799
Description of core experiments on error resilience in MPEG-4 video	N1808
Description of core experiments on multifunctional coding aspects in MPEG-4 video	N1809
Description of core experiments on coding efficiency in MPEG-4 video	N1810
Report of the July '97 subjective tests	N1766
List of video and audiovisual sequences for use by MPEG in audio-visual coding standard development	N1740
Plan for March 1998 error resilience verification tests	N1829

2.4.2. to establish the following ad-hoc groups :

<b>Ad-hoc group on core experiments on coding of arbitrarily shaped objects in MPEG-4 video</b>	<b>Ostermann</b>	<b>N1811</b>
<b>Ad-hoc group on core experiments on error resilience in MPEG-4 video</b>	<b>Brailean</b>	<b>N1812</b>
<b>Ad-hoc group on core experiments on multifunctional coding in MPEG-4 video</b>	<b>Puri</b>	<b>N1813</b>
<b>Ad-hoc group on core experiments on coding efficiency in MPEG-4 video</b>	<b>Muller</b>	<b>N1814</b>
<b>Ad-hoc group on editing the documents of the MPEG-4 video verification model and the MPEG-4 visual working draft</b>	<b>Ebrahimi &amp; Puri</b>	<b>N1815</b>
<b>Ad-hoc group on MPEG-4 Video Verification Model Complexity</b>	<b>S. Winder</b>	<b>N1816</b>
<b>Ad-hoc group on advanced layered coding for high resolution video</b>	<b>Huang</b>	<b>N1817</b>
<b>Ad-hoc group on MPEG-4 video encoder optimization</b>	<b>Chiang &amp; Sun</b>	<b>N1818</b>

**2.4.3. that the following documents are made publicly available :**

<b>Text of ISO/IEC 14496-2 video verification model V.8.0</b>	<b>N1796</b>
<b>Text of ISO/IEC 14496-2 visual working draft V.4.0</b>	<b>N1797</b>
<b>Description of core experiments on shape coding in MPEG-4 video</b>	<b>N1798</b>
<b>Description of core experiments on region-oriented texture coding in MPEG-4 video</b>	<b>N1799</b>
<b>Description of core experiments on error resilience in MPEG-4 video</b>	<b>N1808</b>
<b>Description of core experiments on multifunctional coding aspects in MPEG-4 video</b>	<b>N1809</b>
<b>Description of core experiments on coding efficiency in MPEG-4 video</b>	<b>N1810</b>

**2.4.4. to adopt the report of the formal subjective tests held in July 1997 (WG11 N1766). The results of these subjective assessments show that the proposed algorithms have an overall quality that is, from a statistical point of view, not significantly different to the MPEG-4 video standard under development. Therefore, the video group will not integrate the proposed complete algorithms in the video verification model. The video group would like to thank the proposers for providing their algorithms for comparison and is looking forward to continuing collaboration.**

**2.4.5. The video group acknowledges the highly professional support for the preparation and the conduction of the July '97 subjective tests by the following members: Weiping Li for distributing the subsampled source sequences, Ulrich Benzler, Gunn Klungsoyr and Robert Danielsen, Jae-Seob Shin, John Muller and Ghassan Farah for having provided anchor conditions, Vittorio Baroncini for having coordinated the set up of the test and for having run the test itself, Thierry Alpert for having provided the test plan and given support for the statistical analysis and Massimo Gunetti for having made the statistical analysis.**

## 2.5. The Audio group recommends

### 2.5.1. to approve the following documents :

<b>study on 13818-4/FPDAM 1(covering 13818-7 AAC)</b>	<b>N1741</b>
<b>study of Technical Report 13818-5/FPDAM 1 (covering both 13818-3 Second Edition and 13818-7 AAC)</b>	<b>N1742</b>
<b>schedule of activities for the final stages of the Technical Report 13818-5 PDAM/1</b>	<b>N1743</b>
<b>workplan for AAC conformance</b>	<b>N1770</b>
<b>test plan for MPEG-2 AAC stereo verification tests</b>	<b>N1744</b>
<b>MPEG-4 Audio Working Draft, version 4.0</b>	<b>N1745</b>
<b>MPEG-4 Audio software decoder VM 4.0</b>	<b>N1746</b>
<b>report of status of MPEG-4 Audio core experiments</b>	<b>N1747</b>
<b>MPEG-4 Audio core experiments test methodology</b>	<b>N1748</b>
<b>description of the integration of the MPEG-4 narrowband and wideband CELP- core</b>	<b>N1771</b>
<b>proposal for MPEG-4 verification tests</b>	<b>N1749</b>
<b>information on MPEG-4 Audio systems issues</b>	<b>N1772</b>
<b>status of the MPEG-4 Player</b>	<b>N1750</b>
<b>MPEG Audio FAQs version 4</b>	<b>N1751</b>
<b>proposals for the MPEG Audio web site</b>	<b>N1752</b>

2.5.2. that great care should be taken in the adoption of any MPEG-4 watermarking relating to Audio because it may have a significant impact on the quality and/or bitrate. MPEG-4 Audio currently gives extremely high quality at relatively low bitrate and any watermarking technology must be able to exist within this regime.

### 2.5.3. to establish the following AdHoc groups :

<b>Ad-hoc Group on MPEG-2 AAC Conformance and Technical Report (Coleman/Thom/Lueck)</b>	<b>N1753</b>
<b>Ad-Hoc Group on MPEG-2 AAC stereo verification tests (Contin/S.W.Kim)</b>	<b>N1754</b>
<b>Ad-Hoc Group on MPEG-4 Audio WD and Reference Software preparation (Grill/Purnhagen)</b>	<b>N1755</b>
<b>Ad-Hoc Group on MPEG-4 Structured Audio WD and VM (Scheirer)</b>	<b>N1756</b>
<b>Ad-Hoc Group on MPEG-4 Audio Core Experiments (including bitstream exchange tests) (Brandenburg/Moriya)</b>	<b>N1757</b>
<b>Ad-Hoc Group on MPEG-4 verification test preparations (Edler/Contin)</b>	<b>N1758</b>
<b>Ad-Hoc group on MPEG Audio web site (Thom/Purnhagen)</b>	<b>N1759</b>
<b>Ad-hoc group on Audio/Systems transport issues (Teichmann/Herpel)</b>	<b>N1760</b>
<b>Ad-hoc group on MPEG-4 Audio error resilience (Dietz/Miki)</b>	<b>N1761</b>
<b>Ad-hoc group on MPEG-4 Conformance (Oomen/Edler)</b>	<b>N1762</b>

### 2.5.4. to make publicly available the following documents :

<b>MPEG-4 Overview</b>	<b>N1730</b>
<b>MPEG Audio FAQs version 4</b>	<b>N1751</b>

## 2.6. The SNHC group recommends

2.6.1. to SNHC recommends approval of the Audio, Visual, and Systems Working Drafts with public release following a period of 2 weeks for editorial work.

- All WD promotions are subject to verification by bitstream exchange before the next MPEG meeting
- Verification of the adequacy of FAT technique

2.6.2. acceptance of the following core experiments:

- N1775 Core Experiments on New FAP Coding
- N1776 BAP Core Experiments

2.6.3. to establish the following AdHoc groups :

on bitstream exchange for visual texture/mesh coding	N1820
on face and body animation	N1774
on SNHC VM editing	N1828

2.6.4. to make publicly available the following documents :

SNHC VM 5.0	N1821
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## 2.7. The Test group recommends

2.7.1. that that the document WG11/N1740, including the list of video and audiovisual sequences available in MPEG, be approved

2.7.2. that the report on MPEG-4 July '97 tests given in document WG11/N1766 be approved

2.7.3. to acknowledge the highly professional support for the preparation and the conduction of the July '97 subjective test by the following members: Weiping Li for distributing the subsampled source sequences, Ulrich Benzler, Gunn Klungsoyr and Robert Danielsen, Jae-Seob Shin, John Muller and Ghassan Farah for having provided anchor conditions, Vittorio Baroncini for having coordinated the set up of the test and for having run the test itself, Thierry Alpert for having provided the test plan and given support for the statistical analysis and Massimo Gunetti for having made the statistical analysis

2.7.4. that the test plan for video error robustness verification tests (document WG11/N1829) be approved

2.7.5. that the test plan for AAC verification tests (document WG11/N1744) be approved

2.7.6. that the test conditions for MPEG4 audio verification tests specified in document WG11/ N1749 be approved

2.7.7. to establish the following AdHoc groups :

On AAC verification test	N1754
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<b>On MPEG-4 audio verification tests</b>	<b>N1758</b>
<b>On video error robustness</b>	<b>N1812</b>

**2.8. The Implementation Studies group recommends**

- 2.8.1. Preliminary investigations have indicated that the complexity of wavelet based scaleable still picture coding is comparable to the DCT based approach. Considering that there may be significant impact on complexity in non-scaleable moving picture coding, ISG therefore recommends that the wavelet only be used for still picture scalability.**
- 2.8.2. Following an analysis, it is clear that quarter-pel motion estimation and compensation has a significant impact on complexity. ISG therefore recommends that quarter-pel motion estimation and motion compensation only be supported if video group feels the improvement in picture quality justifies the additional complexity.**
- 2.8.3. Following a preliminary analysis of computational complexity of BBM (Boundary Block Merging) technique, ISG recommends that BBM only be included, if it offers advantages over the existing techniques that justify the additional complexity**
- 2.8.4. Following an analysis of the data partitioning technique and the use of reversible VLC tables for error resilience video coding mode, ISG could not identify significant increase in complexity introduced by these techniques. ISG therefore recommends that implementation complexity not be used as determining factor for the inclusion of these techniques.**
- 2.8.5. Following a preliminary analysis of tools supporting interlaced video coding modes, ISG identified an increase in implementation complexity introduced by these techniques.**

**2.8.6. to establish the following AdHoc groups :**

<b>Adequacy of decoder QoS</b>	<b>N1822</b>
<b>Computational graceful degradation (CGD)</b>	<b>N1823</b>

**2.8.7. the approval of the following document:**

<b>ISG recommendations for supporting CGD functionalities within the MPEG-4 video and system WD</b>	<b>N1824</b>
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**2.9. The Liaison group recommends**

**2.9.1. the approval of the following liaison documents:**

<b>Liaison statement to ITU-T SG16 explaining details of MPEG-4 DMIF</b>	<b>N1777</b>
<b>Liaison statement to AESSC accepting Karlheinz Brandenburg as Liaison</b>	<b>N1778</b>
<b>Liaison statement to ITU-T SG9 indicating our acceptance of their request for information on error resilience of MPEG AAC and MPEG-4 audio, when available</b>	<b>N1779</b>
<b>Liaison statement to IEC TC 100 describing our activities, including</b>	<b>N1780</b>

<b>multimedia systems, IPR protection and compression. Attached copy of MPEG-4 Overview</b>	
<b>Liaison statement to Technical Module of DVB to correct their impression of MPEG-4 Broadcast quality at 1 Mbs. Attached copy of MPEG-4 Overview</b>	<b>N1781</b>
<b>Liaison statement to SMPTE on activities of MPEG-4 and MPEG-7 on the standardization of multimedia content description, also known as Metadata</b>	<b>N1782</b>
<b>Liaison statement to ITU-R WPs 10 &amp; 11A on activities of MPEG-4 and MPEG-7 on the standardization of multimedia content description, also known as Metadata</b>	<b>N1783</b>
<b>Liaison statement to ITU-T SG12 on our willingness, assuming copyright owners agree, to make available audiovisual material and test results</b>	<b>N1784</b>
<b>Liaison statement to SC24 and VRML on our mutual collaboration and cooperation. Also, announcement and invitation to the Systems ad hoc meeting in September and the next MPEG meeting in October</b>	<b>N1785</b>
<b>MPEG-4 Systems Methodology and Work Plan for Scene Description</b>	<b>N1786</b>
<b>Liaison statement to MIDI on our audio activities in MPEG-4</b>	<b>N1787</b>
<b>Liaison statement to MUSE on our activities in MPEG-4 for IPR protection</b>	<b>N1788</b>
<b>Liaison statement to DVD Consortium on our activities in MPEG-4 for IPR protection</b>	<b>N1789</b>
<b>Liaison statement to IETF explaining details of MPEG-4 DMIF</b>	<b>N1790</b>
<b>Liaison statement to ITU-T SG 16/SG 12 (Audio tests)</b>	<b>N1769</b>
<b>Liaison statement to FS1017 (Audio tests)</b>	<b>N1826</b>
<b>Liaison statement to ETSI (Audio tests)</b>	<b>N1830</b>
<b>Liaison statement to ITU-T SG 16/SG 12 (Video tests)</b>	<b>N1831</b>

**2.9.2. the approval of the following response to the National Bodies**

<b>Response to the Japanese National Body</b>	<b>N1791</b>
<b>Response to the Norwegian National Body</b>	<b>N1792</b>
<b>Response to the United States National Body</b>	<b>N1793</b>

**2.9.3. the acceptance of the following liaisons**

<b>Audio Engineering Society Standards Committee (AESSC) SC-06-04 representative Karlheinz Brandenburg.</b>
<b>ISO / TC 46 / SC 9 representatives Alan T. Scarboro and Albert Simmonds. See N2096 for addresses.</b>
<b>Association for the International Collective Management of Audiovisual Works (AGICOA) representative Alan T. Scarboro. See above for address.</b>

**2.10. The HoD group**

**2.10.1. recommends acceptance of WG11 N1719 - guidelines for electronic distribution of MPEG and WG11 documents**

**2.10.2. recommends acceptance of WG11 N1722 - guidelines to WG11 meeting hosts**



- 2.10.3. recommends approval of the meeting plan including the 42nd meeting in San Jose in February 1998
  - 2.10.4. expresses its gratitude to the US National Body for its invitation to host the November 1999 meeting on US territory (location to be decided)
  - 2.10.5. encourages all members, new and old, to abide strictly to the document formats prescribed in output document WG11 N1719 when submitting papers to WG11. Submission in other formats causes loss of time and some frustration to the recipients, and is not acceptable.
  - 2.10.6. recommends that members take extreme precautions when preparing documents to avoid introducing viruses of any sort into their submissions. Routine virus checking, with an appropriate up-to-date software package, is strongly recommended.
  - 2.10.7. recommends the use of versioning of MPEG-4 to capture most of the good technology for the preparation of the current CD while sending the message to industry that further features will be supported.
3. **WG11 approves WD 13818-10 (WG11 N1764).**
  4. **WG11 approves the text of 13818-1 AMD 4 (WG11 N1725) and requests the Convenor to forward the documents to the SC29 Secretariat for further processing.**
  5. **WG11 approves the Disposition of Comments of 13818-1 PDAM 5 (WG11 N1724) and the text of 13818-1 FPAMD 5 (WG11 N1723) and requests the Convenor to forward the documents to the SC29 Secretariat for further processing.**
  6. **WG11 approves the text of 13818-4/DCOR 1 (WG11 N1726) and requests the Convenor to forward the documents to the SC29 Secretariat for further processing**
  7. **WG11 approves the MPEG-2 workplan**

Part	Title	WD	CD PDAM PDTR	FGD FPDAM FPDTR	DIS DAM DTR DCOR	IS AMD TR COR
10	Conformance testing extensions - DSM-CC		97/10	98/03	98/12	99/02
4/Cor 1						98/02
1/Amd 5	Systems-related table entries for AAC				98/02	98/04
4/Amd 1	AAC Conformance Testing			97/10	98/03	98/05

5/Amd 1	Revised MPEG-2 Simulation Software			97/10	98/03	98/05
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8. **WG11 approves the MPEG-4 Applications Document (WG11 N1729).**
9. **WG11 approves ver. 4 of the MPEG-4 Requirements document (WG11 N1727).**
10. **WG11 approves ver. 4 of the MPEG-4 profiles document (WG11 N1728).**
11. **Management of identification and protection of content in MPEG-4 (WG11 N1732).**
12. **WG11 acknowledges the request made by the Norwegian National Body and some MPEG members to support ITU-T Recommendation H.263 as a valid MPEG-4 bitstream. WG11 acknowledges, on the advice of proposing members, that picture layer information, GOB header and EOS code, step size for intra-DC inverse quantisation and fixed-length code for intra DC are the only elements that inhibit an MPEG-4 video decoder from correctly decoding an H.263 bitstream. Although WG11 recognises that the changes to the current MPEG-4 specifications are minimal, WG11 is not prepared to introduce those changes now because they would seriously jeopardise the tight plan of work for the October 97 CD. However, in view of the importance of ensuring decodability of H.263 bitstreams by an MPEG-4 Video decoder, WG11 agrees to foresee a plan of work after October 97 in which the said changes will be made to the specifications and the two reference software implementations, bitstream exchanges will be made and quality verification tests carried out. Upon successful completion of said plan of work and support from National Bodies, WG11 may consider introducing said small changes into the Final CD specifications.**

13. **WG11 approves**

<b>MPEG-4 Systems WD</b>	<b>ver 5.0</b>	<b>WG11 N1825</b>
<b>MPEG-4 Visual WD</b>	<b>ver 4.0</b>	<b>WG11 N1797</b>
<b>MPEG-4 Audio WD</b>	<b>ver 4.0</b>	<b>WG11 N1745</b>
<b>MPEG-4 Reference Software</b>	<b>ver 1.0</b>	<b>WG11 N1795</b>
<b>DMIF</b>	<b>ver 1.0</b>	<b>WG11 N1763</b>

14. **WG11 approves**

<b>MPEG-4 Video VM</b>	<b>ver 8.0</b>	<b>WG11 N1796</b>
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<b>MPEG-4 Audio VM</b>	<b>ver 4.0</b>	<b>WG11 N1746</b>
<b>MPEG-4 SNHC VM</b>	<b>ver 5.0</b>	<b>WG11 N1821</b>

**15. WG11 thanks Vittorio Baroncini, John Muller and the members of the ad-hoc group on logistics for MPEG-4 July 1997 tests for their efforts, and Fondazione Ugo Bordoni for offering their facilities to carry out the tests.**

**16. WG11 thanks the companies and projects that have responded to the Call for Proposals for the Identification and Protection of Content in MPEG-4: AT&T, CRL, EPFL, Intertrust, Talisman, the Telecommunications Institute of the University of Erlangen-Nuremberg, and Telstra.**

**17. WG11 approves the detailed MPEG-4 workplan**

<b>Mtg</b>	<b>Date</b>	<b>Result</b>
40 <sup>th</sup>	07/97	<ol style="list-style-type: none"> <li>1. 1.MPEG-4 WD containing <ul style="list-style-type: none"> <li>• Part 1 - Systems</li> <li>• Part 2 - Visual</li> <li>• Part 3 - Audio</li> <li>• Part 5 - Reference software</li> <li>• Part 6 - DMIF</li> </ul> </li> <li>2. Validation of new video proposals and existing VMs by complete formal tests.</li> <li>3. A first instance of the MPEG-4 player integrated</li> </ol>
41 <sup>st</sup>	10/97	<ol style="list-style-type: none"> <li>1. MPEG-4 ver. 1 CD containing <ul style="list-style-type: none"> <li>• Part 1 - Systems</li> <li>• Part 2 - Visual</li> <li>• Part 3 - Audio</li> <li>• Part 5 - Reference software</li> <li>• Part 6 - DMIF</li> </ul> </li> <li>2. MPEG-4 ver. 2 WD 1.0</li> <li>3. A first instance of MPEG-4 browser integrated</li> </ol>
42 <sup>nd</sup>	02/98	<ol style="list-style-type: none"> <li>1. Clarification of MPEG-4 ver. 1 CD</li> <li>2. MPEG-4 ver. 2 WD 2.0</li> </ol>
43 <sup>rd</sup>	03/98	<ol style="list-style-type: none"> <li>1. Clarification of MPEG-4 CD</li> <li>2. MPEG-4 ver. 2 WD 2.0</li> </ol>
44 <sup>th</sup>	07/98	<ol style="list-style-type: none"> <li>1. MPEG-4 Final CD</li> <li>2. MPEG-4 ver. 2 WD 2.0</li> </ol>
45 <sup>th</sup>	12/98	<ol style="list-style-type: none"> <li>1. MPEG-4 DIS</li> <li>2. MPEG-4 ver. 2 CD</li> </ol>
	02/99	MPEG-4 IS
46 <sup>th</sup>	03/99	Clarification of MPEG-4 ver. 2 CD
47 <sup>th</sup>	07/99	MPEG-4 ver. 2 FCD
48 <sup>th</sup>	11/99	MPEG-4 ver. 2 DIS
49 <sup>th</sup>	01/00	MPEG-4 ver. 2 IS

18. **WG11 adopts the following process of developing MPEG-4 in versions.**
  1. **Version 1 will provide a first multimedia standard on schedule while sending the message to industry that further features will be supported.**
  2. **Version 1 of MPEG-4 captures the technology in the current VM that is mature and for which an encoder-decoder software implementation exists and is ready to be used for bitstream exchange.**
  3. **Version 2 will add those features in the current VMs and Core Experiments that cannot be incorporated and proven within CD version 1, e.g. adding body animation to facial animation.**
  4. **Version 2 decoders shall be backwards compatible to version 1 and changes shall not be made for minor benefit, e.g. a small improvement in compression efficiency.**
  5. **At this meeting VM's cease to be a tool to develop MPEG-4 ver. 1 and will be used for the purpose of developing MPEG-4 ver. 2.**
  
19. **WG11 solicits NB comments on and additions to the following guidelines related to further versions**
  1. **Version 2 will reach CD level in December 1998.**
  2. **If a non backwards compatible change will be needed this shall lead to the definition of new profiles, bearing in mind the costs of such definition.**
  3. **The policy to be followed in MPEG-4 ver. 3, if any, will be defined in due time.**
  4. **In adopting this versioning policy it is appreciated that great care will need to be exercised in the handling of Change Control.**
  
20. **WG11 has learnt with pleasure that the establishment of an MPEG-4 Patent Pool is well under way. WG11 wishes well to this initiative complementary to its technical activities.**
  
21. **WG11 approves the MPEG-7 Applications document (WG11 N1735).**
  
22. **WG11 approves the MPEG-7 Requirements document (WG11 N1734).**
  
23. **WG11 approves its integrated workplan**

Part	Title	CfP	WD	CD PDAM PDTR	FCD FPDAM FPDTR	DIS DAM DTR DCOR	IS AMD TR COR
MPEG-2							

10	Conformance extensions - DSM-CC			97/10	98/03	98/12	99/02
1/Amd 5					97/10	98/03	98/05
4/Amd 1	AAC Conformance Testing				97/10	98/03	98/05
5/Amd 1	AAC Technical Report				97/10	98/03	98/05
MPEG-4							
1	Systems			97/10	98/07	98/11	99/01
2	Visual			97/10	98/07	98/11	99/01
3	Audio			97/10	98/07	98/11	99/01
4	Conformance Testing		97/10	98/10	99/07	99/11	00/01
5	Reference Software			97/10	98/07	98/11	99/01
6	DSM-CC Multimedia Integration Framework (DMIF)		97/07	97/10	98/07	98/11	99/01
MPEG-7							
1	MPEG-7	98/11	99/07	00/03	00/07	00/11	01/01

**24. WG11 establishes the Delivery subgroup and appoints Vahe Balabanian as its Chair.**

**25. WG11 approves its Terms of Reference (WG11 N1800)**

**26. WG11 approves its five-year meeting schedule**

Legend:

R: Req. S: Sys V: Vid A: Aud H: SNHC T: Test I: Impl D: DSM

No	yy	mm	dd	City	Country	R	D	V	A	H	T	I	D
40	97	07	21-25	Stockholm	SE	X	X	X	X	X	X	X	X
41	97	10	27-31	Fribourg	CH	X	X	X	X	X	X	X	X
42	98	02	02-06	San Jose	US	X	X	X	X	X	X	X	X
43	98	03	16-20	Tokyo	JP	X	X	X	X	X	X	X	X
44	98	07	06-10	Dublin	IE	X	X	X	X	X	X	X	X
45	98	12	07-11		(IL)	X	X	X	X	X	X	X	X
46	99	03	?	?	(KR)	X	X	X	X	X	X	X	X
47	99	07	?	?	?	X	X	X	X	X	X	X	X
48	99	11			US	X	X	X	X	X	X	X	X

27. **WG11 approves its Stockholm press release for publication on the MPEG home page (WG11 N1720).**
28. **The Convenor would like to express his thanks to Jan Bormans, Peter Schirling and Paulo Villegas for their support in the preparation of the Friday Plenary.**
29. **WG11 thanks ITS, the Swedish National Body, and the sponsoring companies Ericsson, Telia and Teracom for resetting long-forgotten standards of hospitality and meeting support, in particular the following individuals:**

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<b>Hans Södergren</b>	<b>Scandic Crown Hotel</b>

**and Swedish Television for providing viewing equipment**

WG11 adjourned on 97/07/25 21:00