

## Minutes ATSC Technology and Standards Group (TSG)

8 February 2006, 10:00 a.m. until 4:00 p.m. EST  
Wiley Rein & Fielding, 1750 K Street N.W., Washington, D.C.

### 1. WELCOME, INTRODUCTIONS, AND DETERMINATION OF QUORUM

Chairman William Miller (SMPTE) called the meeting to order at 10:00 a.m. at the headquarters of Wiley Rein & Fielding in Washington, D.C. He thanked WRF for hosting today's meeting.

Chairman Miller welcomed those in attendance and asked each person to identify him or herself. He reminded all participants of the confidentiality requirements of this meeting and the ATSC Patent Policy. The attendance list is given in **Attachment 1**. Secretary Jerry Whitaker (ATSC) reported that a quorum was present.

### 2. APPROVAL OF PROPOSED AGENDA

Chairman Miller asked for consideration of the draft agenda, distributed to the TSG reflector on January 23, with the last update posted on February 3 (**Attachment 2**). No changes were requested and the draft agenda was approved as submitted.

### 3. APPROVAL OF THE DRAFT MINUTES OF THE LAST MEETING

Chairman Miller called members' attention to the draft Minutes of the December 14 TSG meeting, distributed to the TSG reflector on February 3 (**Attachment 3**). Mr. Whitaker reported that one editorial correction (a spelling issue) had been identified. No further changes were requested and the document was approved as amended.

### 4. OPENING REMARKS

Chairman Miller noted that TSG has a very full agenda today, and encouraged members to move the discussions along expeditiously.

### 5. COMMENTS BY THE PRESIDENT (MARK RICHER)

Mark Richer (ATSC) reported on current activities within the ATSC.

#### 5.1 Status of Ballots

##### Open TSG Ballots

- **TSG-677**, "Working Draft Recommended Practice: E-VSB Implementation Guidelines." This ballot was issued on 24 January 2006 and closes on 21 February 2006.
- **TSG-680**, "Amendment to ATSC Digital Television Standard, Doc. A/53D, to Revise Annex C and Define E-VSB Transport." This ballot was issued on 24 January 2006 and closes on 21 February 2006.

##### Closed Membership Ballots

- **PS-641**, revision of A/65B, "Program and System Information Protocol for Terrestrial Broadcast and Cable." This ballot was issued on 5 December 2005 and closed on 2 January 2006. It was approved: 25 yes, 0 no, 0 abstain; editorial privilege 24 yes, 0 no, 1 abstain.

- **PS-642**, “Full Revision of A/53D with Amendment No. 1.” This ballot was issued on 29 November 2005 and closed on 27 December 2005. It was approved: 29 yes, 0 no, 2 abstain; editorial privilege 28 yes, 0 no, 3 abstain.

## 5.2 Other

Other items included in Mr. Richer’s report included the following:

- Mr. Richer introduced Lindsay Shelton-Gross, the new ATSC Communications Director. She will be leading work on Web development, events, and related communications activities. He also announced that Meredith Friday, the new office manager, has joined the organization.
- PC Chair Sterling Davis has stepped down after three years at this post. Mr. Richer thanked Mr. Davis for his service to the organization. Graham Jones (NAB) has been named by the Board to succeed Mr. Davis.
- The logo program is moving forward, with the ATSC attorney giving guidance on the path ahead.
- The Board is considering potential changes to the ATSC patent policy.
- ATSC and NAB will again this year sponsor the DTV Hot Spot at NAB 2006. Mr. Richer urged organizations interested in participating to contact him.
- The ATSC Annual Meeting is set for May 9 near Dulles Airport. Mr. Richer recommended that members planning on attending make their hotel reservations soon.
- The ATSC Board has begun a strategic planning program that will look at the future of digital television over the next five to ten years.

## 6. BRIEF REPORTS ON ACTIONS FROM THE PREVIOUS MEETING

The following action items were developed at the last meeting of the Technology and Standards Group:

- 1) Mike Dolan and TSG/S13 to bring back a draft Work Plan on System Renewability Messages (SRM) for consideration at the February 8 meeting.  
*On agenda.*
- 2) Specialist groups to review the proposed A/53 architecture changes, in particular Part 1, and to report back with any concerns at the February 8 meeting.  
*On agenda.*
- 3) Jerry Whitaker to include the item “Feedback from Specialist Groups on Proposed Restructuring of A/53” on the February 8 agenda.  
*Completed.*
- 4) John Henderson and the Architecture Team to develop a proposed timeline for integrating the proposed A/53 architecture changes and to offer guidance on how to move forward.  
*On agenda.*
- 5) Pat Waddell to forward to ATSC staff TSGS6-356r8 for publication as a Candidate Standard for a period of time ending 15 May 2006.  
*Completed.*
- 6) ATSC staff to issue a letter ballot on CS/TSG-661r2 as a Proposed Standard.  
*Completed.*

- 7) Mark Eyer and TSG/S8 to consider the Parameterized Service Type approach and bring back a recommendation at the next meeting.  
*On agenda.*
- 8) Mark Eyer and TSG/S8 to update PS-606 to conform with the current state of references, and bring the document back to TSG for consideration at the at the February 8 meeting.  
*Carried forward.*
- 9) Mark Eyer and TSG/S8 to consider revising A/70A to point users to the DVB registry for CA\_system\_id values.  
*Carried forward.*
- 10) Mark Eyer to work with Mark Richer to develop a liaison statement to DVB relating to the A/70A CA\_system\_id registry issue.  
*Carried forward.*
- 11) Jim Williams to explore whether ISO-639 is sufficient to fully describe language options for feature films and report back to TSG with a recommendation.  
*On agenda.*
- 12) Dane Ericksen to report to TSG/S3 that TSG accepted the revised Work Plan milestones as presented.  
*Completed.*
- 13) Charles Einolf to report to TSG/S9 that, should the ATSC Board approve the pending NWIP on the Samsung/Rhode & Schwarz “A-VSB” system, the specialist group should begin preliminary work.  
*Completed.*
- 14) ATSC staff to issue a letter ballot on TSGS9-014, “Working Draft E-VSB Implementation Guidelines” as a proposed Recommended Practice.  
*Completed.*
- 15) ATSC staff to publish S13-278, “Working Draft ACAP Service Signaling and Announcement” as a Candidate Standard for a period of time ending 15 May 2006.  
*Completed.*
- 16) Chairman Miller to report to the ATSC Board the recommendation of TSG that TSG-666 be published as a Technology Group Report.  
*Completed.*
- 17) Art Allison, as the ATSC liaison to SCTE to convey to DVS the need for a unified approach to captioning and provide CS/TSG-659r1 and TSG-666 as input documents to their current work.  
*Completed.* The liaison to SCTE DVS was accomplished on 15 December 2005 by Mr. Allison.

## **7. NEW WORK ITEMS FOR DISCUSSION**

### **7.1 Assigned by Board of Directors**

Mr. Richer reported that beyond the NWIP on Rhode & Schwarz/Samsung “A-VSB,” there are no new work items from the Board.

## 8. ARCHITECTURAL TEAM

### 8.1 Feedback from Specialist Groups on Proposed Restructuring of A/53

John Henderson (Hitachi) reported progress on the A/53 restructuring work. He said the effort is proceeding, with particular emphasis within the Architecture Team on the planned Part 1. Pat Waddell (Harmonic) has done a first-cut partitioning, which will be shared with other specialist group chairs.

## 9. REPORT OF THE SPECIALIST GROUP ON PSIP METADATA COMMUNICATION, TSG/S1 (ART ALLISON)

Art Allison (NAB), chair of TSG/S1, reviewed current work of the specialist group (**Attachment 4**).

### 9.1 Status Report

Mr. Allison reported that TSG/S1 has finalized major schema changes to A/76 to add the following elements:

- ACAP support capability
- Modular XML design

Mr. Allison reported the consensus recommendation of the specialist group to publish TSGS1-280 (**Attachment 5**) as a Candidate Standard for a period of time ending 12 May 2006. He said the CS phase is appropriate because additional testing is planned. He also called attention to TSGS1-281 (**Attachment 6**), which details what changes are being proposed in the document.

Mr. Allison **moved** on behalf of TSG/S1 to elevate TSGS1-280 to Candidate Standard for a period of time ending 12 May 2006. The motion was **approved** without objection.

### 9.2 Summary of Future Activities

Mr. Allison outlined the planned future work of TSG/S1, specifically:

- Restructured PMCP with ACAP support: on track for Proposed Standard by May 2006.
- Guide to PMCP: no volunteers have expressed interest as of this date.
- Plug-fest: plans are on hold pending volunteers to work on the project.
- Logo program: designs are being developed/researched by ATSC.

## 10. REPORT OF THE SPECIALIST GROUP ON DIGITAL ENG, TSG/S3 (DANE ERICKSEN)

Dane Ericksen (Hammett & Edison, representing SBE), Chair of TSG/S3, briefed the committee on current work within the specialist group (**Attachment 7**).

### 10.1 DRL Working Draft

Mr. Ericksen reported that S3-010r21, the Working Draft DRL Standard, was posted to the TSG reflector on January 26 (**Attachment 8**). He said the latest version of the Working Draft will be posted to the ATSC Member reflector after the TSG meeting.

Mr. Ericksen estimated that the DRL Working Draft will be ready for TSG consideration as a Candidate Standard at the May 9 meeting. He said the goal is to have the Candidate Standard draft version posted to the TSG reflector prior to the NAB convention, and that he still expects to be ready to request elevation (by letter ballot) to Proposed Standard at the September 27 TSG meeting.

Mr. Ericksen requested acceptance by TSG of the new CS target date for the TSG/S3 Work Plan. Chairman Miller observed the consensus of the committee to accept the new target date.

#### 10.2 Request for TSG/S13 to Evaluate Potential Role of A/9x in ENG Communications Work

Mr. Ericksen reported that progress on the remote ENG communications portion of the TSG/S3 work is moving slowly, citing initial difficulties in finding volunteers to work on the project. He said a strawman draft has been prepared (TSGS3-061) and is currently being further developed within the specialist group. Mr. Ericksen said the current goal is to have a Working Draft ready for informative distribution to TSG by May 9. He added that TSG/S3 believes at least a portion of the ENG communications requirements described in TSGS3-061 might be addressed by the A/90 suite of data broadcast standards.

Mr. Ericksen, on behalf of TSG/S3, requested that TSG direct TSG/S13 look at the requirements described in TSGS3-061 (once they are fully developed in TSG/S3), and report back with an opinion on whether A/9x can meet the needs identified in the document.

Chairman Miller asked Mike Dolan, TSG/S13 chair, whether TSG/S13 was in a position to take a look at these requirements and provide input. Mr. Dolan agreed that this would be acceptable. Chairman Miller observed the consensus of TSG to proceed in this manner.

### **11. REPORT OF THE SPECIALIST GROUP ON VIDEO AND AUDIO CODING, TSG/S6 (PAT WADDELL)**

Pat Waddell (Harmonic), Chair of TSG/S6, provided a status report on the work of the specialist group (**Attachment 9**).

#### 11.1 Status of CS-TSG-674

Mr. Waddell noted that CS/TSG-674 is currently published on the ATSC Candidate Standards Web page with following informative note:

“Readers should be aware that there is ongoing coordinated standardization efforts between the ATSC, CEA, and SMPTE in two areas that affect this document: 1) closed captions, and 2) image formatting (AFD and bar data). While neither of these efforts will change the syntax of the ATSC bitstream, they will affect the semantics. As a result, this Candidate Standard will be revised from time to time to reflect decisions reached on these topics by either SMPTE or CEA, since the ATSC bitstream supplies a delivery mechanism for content originating under SMPTE Standards and consumed under CEA Standards.”

Mr. Waddell said it was important that implementers be aware that some semantics in the document will likely change.

#### 11.2 A/53 Document Re-Structure

Mr. Waddell reported that TSG/S6-related work on the planned A/53 document restructuring is moving along, and that he has volunteered to produce drafts of all Parts once the final A/53E text is available.

### 11.3 Revised Work Statement

Mr. Waddell called attention to the revised TSG/S6 Scope and Work Statement developed by the specialist group (**Attachment 10**). He reported the consensus recommendation of TSG/S6 that TSG accept TSGS6-201r2.

Mr. Waddell **moved** on behalf of TSG/S6 that the revised Work Statement be approved by TSG. Discussion followed on the 5-year review of standards, in particular A/63. Questions were raised as to whether A/63 is used in the marketplace. It was suggested that if the standard is not needed, it should be withdrawn. Craig Tanner (Sharp), as a board member of the ATSC Forum, took an action item to investigate whether A/63 is used and to report back to the committee at the next meeting.

Bob Rast (Micronas) identified an apparent inconsistency in the wording of the Work Statement; specifically, “as directed by TSG and the ATSC Board of Directors.” Mr. Rast pointed out that TSG/S6 receives direction from TSG and not from the Board. He suggested deleting the phrase “and the ATSC Board of Directors.” Mr. Rast **moved** to amend the document as proposed. **Second** by Mr. Allison. The motion was **approved** on a voice vote.

Chairman Miller called the question to approve the amended work statement. It was **approved** on a voice vote.

## 12. REPORT OF SPECIALIST GROUP ON DATA MULTIPLEX/TRANSPORT, TSG/S8 (MARK EYER)

Mark Eyer (Sony), Chair of TSG/S8, reported on activities in the specialist group (**Attachment 11**).

### 12.1 Update on Parameterized Services Approach

Mr. Eyer reported progress on the Parameterized Services `service_type` concept—in particular development of a Component List Descriptor, which details the set of codecs that must be supported in a receiving device for access to programming on an associated virtual channel. He encouraged interested parties to monitor and contribute to the ongoing work.

### 12.2 Other Business

Other items covered in Mr. Eyer’s report included the following:

- Motorola has submitted an informative document on the use of `low_delay` modes in MPEG-2 video, which TSG/S8 may craft as a Technology Group Report.
- PS-606 needs to be updated to reflect reference changes and related works-in-process.
- A/65C has an inconsistency in the `ETT_table_id_extension` field. Table 6.13 indicates 0x0000 for `ETT_table_id_extension`, yet semantics say the field shall be unique. Legacy receivers in Korea are involved.

Chairman Miller suggested a posting to the ATSC “admin” reflector calling attention to the A/65C inconsistency and asking for feedback from contributors. Mr. Eyer took an action item to work with Mr. Whitaker to develop and distribute an appropriate note.

### 12.3 ISO-639 Language Issues

Jim Williams (MPAA) reported on his investigation relating to Action Item #11, specifically:

- 1) In general, the ISO-639 three-byte codes allowed for in ATSC A/53 are not sufficient to fully describe all language options for feature films.

- 2) TSG could reasonably debate whether or not this is a problem, given the system architectures and application of ATSC A/53. It is unclear that A/53 should have such a requirement.

Mr. Williams went on to provide extensive background on the ISO-639 language issue. Discussion followed on the current system whether extended capabilities beyond the current three-byte language code are necessary. Chairman Miller observed the consensus of the committee that additional information and time is needed for TSG to make an informed decision. He asked TSG/S8 to draft a summary report on the ISO-639 language issue in time for further consideration at the next TSG meeting.

### **13. REPORT OF THE SPECIALIST GROUP ON RF TRANSMISSION, TSG/S9 (CHARLES EINOLF)**

Charles Einolf (UPN/MSTV), Chair of TSG/S9, reported on current work within the specialist group (**Attachment 12**).

#### **13.1 Status Report**

Mr. Einolf reported that TSG/S9 met on January 24 and discussed the Advanced-VSB System NWIP, approved by ATSC Board of Directors on December 15 and assigned to TSG/S9 by TSG. He said TSG/S9 has agreed on the following Work Plan:

- 1) Disclosure document: 13 March 2006
- 2) TSG/S9 assessment of disclosure document: 31 May 2006
- 3) Verification plan development: 15 July 2006
- 4) Verification testing: 30 September 2006
- 5) Standards documentation (draft): 20 November 2006

Chairman Miller observed the consensus of the committee to accept these dates.

### **14. REPORT OF THE SPECIALIST GROUP ON DATA BROADCAST, TSG/S13 (MIKE DOLAN)**

Mike Dolan (TBT), Chair of TSG/S13, updated the committee on work within the specialist group (**Attachment 13**).

#### **14.1 System Renewability Messages (SRM)**

Mr. Dolan reported that TSG/S13 has discussed the approved SRM NWIP and has developed a draft Work Plan, specifically to have a document ready for consideration as a Candidate Standard at the September TSG meeting. Chairman Miller observed the consensus of the committee to accept this Work Plan.

Regarding the SRM project, Mr. Dolan reported that requirements are close to completion and the committee will likely begin evaluating design alternatives soon. A rough draft is expected to be available in May.

Mr. Dolan noted that the question of a bit rate cap has come up in the TSG/S13 discussion of SRM requirements, and he asked for guidance from TSG. Chairman Miller opened the floor for discussion. Among the points made were the need to understand what the constraints of the SRM bit rate requirements might be, and what the buffer model might look like before formal work on the standard can begin. Mr. Dolan said the key issue is whether the standard needs to contain a maximum aggregate bit rate for SRM carriage. A discussion followed on technical issues

surrounding this question. Chairman Miller observed the consensus of TSG that some form of bit rate cap is needed in the SRM specification.

## **15. REPORT OF THE ADHOC GROUP ON BITSTREAM VERIFICATION, TSG-1 (RICH CHERNOCK)**

Rich Chernock, Chair of the TSG AHG on Bit Stream Compliance (TSG-1) updated the committee on current efforts. (**Attachment 14**)

### **15.1 Status**

Mr. Chernock reported good progress on developing the bit stream compliance working draft. He said the committee is on-track for delivery of a document by the May TSG meeting. He went on to outline the five “levels of severity” as developed by TSG-1:

- TS Off Air (TSOA)
- Program Off Air (POA)
- Component Missing (CM)
- Quality Of Service (QOS)
- Technically Non-Compliant (TNC)

Mr. Chernock provided an example application of the error severity concept. He encouraged interested persons to participate in the work.

## **16. OTHER BUSINESS**

### **16.1 PC Liaison Report**

Graham Jones, the new PC Chair, reported on current activity within the Planning Committee. He reported that an ACAP demonstration project is being developed, which could expand into a field trial of A/101 implementation. He said the PC is also working on several New Work Item Proposals (NWIP) that will be distributed to the ATSC “admin” reflector shortly.

Mr. Jones called attention to work within the PC relating to low bit rate audio and video. He provided background on the issues involved and called attention to a document summarizing the situation, PC-055. Mr. Jones reported the consensus of the Planning Committee that TSG should produce a Recommended Practice on proper delivery of low bit rate audio and video within the existing framework of A/53, using the guidance developed by ATSC subgroups and document PC-055. Mr. Jones urged TSG to take action in this area.

Chairman Miller observed the consensus of TSG that TSG/S6 take on this work.

#### **16.1.1 Status of PC-1 Work**

Mr. Henderson outlined the current status of work in the PC-1 AHG. He said there was a meeting on January 20 and that the discussions have been productive. He said the committee has been working to find common ground, recognizing that developing a transition plan is a difficult task. Mr. Henderson reported that current work is focused on establishing timelines for a draft transition plan, which he hoped would be developed sometime in March.

### **16.2 MPEG**

Sam Narasimhan (Motorola) reported that MPEG has completed an amendment on the transport of streaming text, details of which will be distributed to the TSG reflector when available. He said the document, “Transport of MPEG-4 streaming text and MPEG-4 lossless audio over



MPEG-2 systems,” would be Amendment 1 to the 3rd edition of MPEG-2 Systems (when approved).

#### 16.3 SMPTE

Chairman Miller noted there are several cooperative efforts currently underway, including the SMPTE S.22 work led by Chris Lennon of Harris (the roots of which began in ATSC.), closed captioning, and image formatting.

#### 16.4 HANA

Glenn Reitmeier (NBC) provided an update on work in progress within HANA. He said early demonstration projects have been done using various user interface specifications. Mr. Reitmeier added that HANA is interested in cooperating with ATSC where appropriate.

### **17. SCHEDULE OF NEXT TSG MEETINGS**

The next meeting of the ATSC Technology and Standards Group will be held on May 9. Chairman Miller noted that the meeting will begin at 11:00 a.m. EST.

### **18. ADJOURNMENT**

There being no further business before the committee, the meeting adjourned at 1:20 p.m. EST.

## Action Items

The following action items were developed at today's TSG meeting. Items carried forward from a previous meeting are so noted.

- 1) Mark Eyer and TSG/S8 to update PS-606 to conform with the current state of references, and bring the document back to TSG for consideration. [2005-12-14]
- 2) Mark Eyer and TSG/S8 to consider revising A/70A to point users to the DVB registry for CA\_system\_id values. [2005-12-08]
- 3) Mark Eyer to work with Mark Richer to develop a liaison statement to DVB relating to the A/70A CA\_system\_id registry issue. [2005-12-08]
- 4) Jerry Whitaker to post TSGS1-280 as a Candidate Standard for a period of time ending 12 May 2006.
- 5) Dane Ericksen to report to TSG/S3 the acceptance by TSG of a new target date for the DRL Candidate Standard draft by 9 May 2006.
- 6) Dane Ericksen to distribute TSGS3-061 to TSG/S13, once it is fully developed in TSG/S3.
- 7) Upon submission from TSG/S3, Mike Dolan and TSG/S13 to examine the requirements described in TSGS3-061 and report back with an opinion on whether A/9x can meet the needs identified in the document.
- 8) Craig Tanner to investigate whether A/63 is being used and report back to at the next meeting.
- 9) Pat Waddell to report to TSG/S6 approval by TSG of the draft Work Statement, with changes agreed to in today's meeting.
- 10) Mark Eyer to work with Jerry Whitaker to post a note to the ATSC "admin" reflector calling attention to the A/65C Table 6.13 inconsistency and asking for feedback from contributors.
- 11) Mark Eyer and TSG/S8 to draft a summary report on the ISO-639 language issue in time for consideration at the next TSG meeting.
- 12) Charles Einolf to report to TSG/S9 the acceptance by TSG of the A-VSB Work Plan as presented.
- 13) Mike Dolan to report to TSG/S13 the acceptance by TSG of the SRM Work Plan as presented.
- 14) Mike Dolan to report to TSG/S13 the consensus of TSG that some form of bit rate cap is appropriate for the SRM specification.
- 15) Pat Waddell to report to TSG/S6 a new work item to develop a Recommended Practice on proper delivery of low bit rate audio and video within the existing framework of A/53, using the guidance developed by ATSC subgroups and document PC-055.

## ATTACHMENTS

### ATTACHMENT 1. Attendance List

Mark Richer	ATSC
Lindsay Shelton-Gross	ATSC
Jerry Whitaker	ATSC
Tom Hankinson	ABC
William Miller	ABC/SMPTG
Guy Bouchard	CBC
Brian Markwalter	CEA
Sterling Davis	Cox Broadcasting
Mark P. Henry	Eastman Kodak
Pat Waddell	Harmonic
Joe Seccia	Harris Corp
John Henderson	Hitachi
John Meehan	JVC
S. Merrill Weiss	Merrill Weiss Group / Tribune
Bob Rast	Micronas
James Fang	Mitsubishi Elec.
Sam Narasimhan	Motorola
Victor Tawil	MSTV
Charles Einolf	MSTV/CW/CBS
Graham Jones	NAB
Lynn Claudy	NAB
Glenn Reitmeier	NBC
Janie Maniar	NBC
Andy Scott	NCTA
Jeff Krauss	NCTA/Consultant
Brian Smith	Philips
Rich Annibaldi	Pioneer Research Center
C. B. Patel (Consultant)	Samsung
Arturo Rodriguez	Scientific Atlanta
Bill Wall	Scientific Atlanta
Adam Goldberg	Sharp
Craig Tanner	Sharp
Peter Dare	Sony Corp.
Mark Eyer	Sony Electronics
Paul Snopko	Techwell
Don Sambel	Time Warner Cable
Rich Chernock	Triveni Digital

Rich Kaye	Triveni Digital
Garry Paxinos	USDTV
Wayne Luplow	Zenith
Wayne Bretl	Zenith
<b>Phone Attendees</b>	
P. J. Harr	Fox
Yiyan Wu	CRC
Jim Williamson	MPAA
Bill Warga	Comcast Cable
Hans Baumgartner	Sarnoff
Shlomo Boxerman	Conexant
Michael Dolan	Nielson
Joe Rodolico	Nielson
Walt Husak	Dolby
Jordan Cookman	Auvitek
Brett Jenkins	Thales Broadcast & Multimedia
Michael Christian	TTE Technology
Dane Ericksen	SBE
Ren McMann	CBS
Dick Streeter	CBS

## ATTACHMENT Links

**ATTACHMENT 2.** TSG-670r5, Draft Agenda

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-2-TSG-670r5-Agenda-2006-02-08.doc](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-2-TSG-670r5-Agenda-2006-02-08.doc)

**ATTACHMENT 3.** TSG-665r1, Draft Minutes of December 14 Meeting

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-3-TSG-665r1-Minutes-2005-12-14.doc](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-3-TSG-665r1-Minutes-2005-12-14.doc)

**ATTACHMENT 4.** TSG/S1 Status Report

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-4-TSG-S1\\_Status\\_Report\\_Feb2006.ppt](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-4-TSG-S1_Status_Report_Feb2006.ppt)

**ATTACHMENT 5.** TSGS1-280 Working Draft

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-5-TSGS1-280r2\(A\\_76ra006-changeshown\).doc](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-5-TSGS1-280r2(A_76ra006-changeshown).doc)

**ATTACHMENT 6.** TSGS1-281, Change Details for TSGS1-280

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-6-TSGS1-281r1-Change%20Summary%20for%20TSGS1-280.doc](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-6-TSGS1-281r1-Change%20Summary%20for%20TSGS1-280.doc)

**ATTACHMENT 7.** TSG/S3 Status Report

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-7-S3-066r0-S3-Status.ppt](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-7-S3-066r0-S3-Status.ppt)

**ATTACHMENT 8.** S3-010r21, Working Draft DRL Standard

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-8-S3-010r21-DRL-Working-Draft.pdf](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-8-S3-010r21-DRL-Working-Draft.pdf)

**ATTACHMENT 9.** TSG/S6 Status Report

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-9-TSGS6-404\\_S6\\_Report.ppt](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-9-TSGS6-404_S6_Report.ppt)

**ATTACHMENT 10.** TSGS6-201r2, Draft Work Statement Revision

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-10-TSGS6-201r2\\_Work\\_Statement.doc](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-10-TSGS6-201r2_Work_Statement.doc)

**ATTACHMENT 11.** TSG/S8 Status Report

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-11-S8-614-S8-Status-Report.ppt](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-11-S8-614-S8-Status-Report.ppt)

**ATTACHMENT 12.** TSG/S9 Status Report

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-12-S9-Status-February-2006.ppt](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-12-S9-Status-February-2006.ppt)

**ATTACHMENT 13.** TSG/S13 Status Report

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-13-S13-323R0-Status-2006-02-08.ppt](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-13-S13-323R0-Status-2006-02-08.ppt)

**ATTACHMENT 14.** TSG-1 AHG Status Report

[http://www.atscmembers.org/sg/T3/2006\\_02\\_08/documents/Attachment-14-TSG1-018r1\\_FebTSGStatus.ppt](http://www.atscmembers.org/sg/T3/2006_02_08/documents/Attachment-14-TSG1-018r1_FebTSGStatus.ppt)