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Approved by General Counsel

TR-8.8 Meeting Report

Date: 01/25/12

Location: Mesa, AZ

Approved: 02/8/12

TR-8.8 Meeting Report

Mesa, AZ

January 25, 2012

1. Call to order

Alan Wilson, TR-8 vice chair, convened the Mesa, AZ meeting to order at 1:00 PM on January 25, 2012. Alan Wilson presided over the meeting in the absence of the both the chair and vice chair of TR-8.8. Alan Wilson took the notes of the meeting.

2. Record of attendance

The convener referred to the roll-call attendance called early in the day by John Oblak to confirm a quorum with the result of 12 of 14 qualified voting members present with reference to the membership of the last TR-8.8 meeting on October 19, 2011.

The convener noted the TIA web-based electronic sign-in process and provided the sign-in code. The record of attendance is appended to the end of the notes.

3. Important notice of participation

The convener noted John Oblak, TR-8 chair, previously read the TIA Notice of Participation for the benefit of the TR-8.8 meeting attendees.

Participation in, or attendance at, any activity of a TIA Formulating Group or any sub-element thereof, constitutes acceptance of and agreement to be bound by all provisions of the TIA Engineering Manual and permission that all communications and statements, oral or written, or other information disclosed or presented, and any translation or derivative thereof, may without compensation, and to the extent such participant or attendee may legally and freely grant such copyright rights, be distributed, published, and posted on TIA's web site, in whole or in part, on a non-exclusive basis by TIA or TIA's licensees or assignees, or as TIA directs. Exceptions to the foregoing may be granted or permitted in writing to the Chair of the Formulating Group by TIA's Senior Vice President, Standards and Special Projects on a case-by-case basis.

4. Review and approval of agenda

The convener noted the agenda had been distributed by the TIA and made available on the local meeting network. John Oblak motioned to approve the agenda and John Lambrou seconded the motion. The agenda was approved unanimously.

5. Review and approve previous meeting reports – October 2011

The chair noted the previous meeting report was distributed by the TIA and made available on the local meeting server.

John Oblak motioned to approve the October meeting report and John Lambrou seconded the motion. The October 2011 meeting report was approved unanimously.

6. Identify intellectual property rights

TIA's patent policy can be found in the Engineering Manual. Participants in the work of TR-8.8 are urged to review this policy. Participants are encouraged to notify TIA of any

patents of which they are aware that are related to the practice of a TIA publication early in the development of the TIA document to reduce the possibility for delays in the development process and increase the likelihood that the draft TIA publication will be approved for publication. Patent searches are not required to comply with the TIA IPR policy. Moreover, the Engineering Manual describes the need for members' disclosure of patents that are essential to practice TIA publications and for members to provide an indication of their willingness to license any known patents.

The convener noted John Oblak, TR-8 chair, previously read the TIA Patent Policy for the benefit of the TR-8.8 meeting attendees.

The convener asked if there was knowledge of patents, the use of which might be essential to any documents being considered by TR-8.8.

None were identified.

7. Review status of old business

The committee did not receive any new contributions to comment on 8.8_11_0001 or 8.8_11_0002. The committee did not review any status of old business.

8. New Business

8a. Additional contributions

The convener recognized new contributions by Harris, Cassidian, and PSCR.

Contribution 8.8_12_0001 PS/LMR Broadband Data Standards Proposed Framework

Bill Janky introduced the slides in contribution 8.8_12_0001. At the TR-8.8 meeting in October the committee discussed possible broadband application protocol standardization within TR-8. The slides presented a high-level work plan including some initial contributions made in Mesa. From initial contributions that appeared in January, a new TIA project was needed that provided a framework for all of the planned interoperable broadband data standardization efforts in TIA.

Examples of needed standards included the following:

- Metadata dictionary
- File exchange protocol
- Mission critical voice protocol ("P25 over LTE")
- Other application protocols
- ...and an Overview document

The standards would be a bit different from previous standards since many (formerly fundamental) decisions had already been made. The Physical (PHY) and Data Link (MAC) layer air interface specifications were not required. These layers would reference existing broadband data standards: LTE, WiFi, WiMAX (3GPP, IEEE). The Network Layer was also already chosen: IP (IETF). So what was needed was a standard to enable interoperable applications and interchangeable devices.

- Services and Application protocols
- System and Supporting data/definitions
- Protocol test specifications

The overview proposed a document structure. Seven unique Public Safety Services were highlighted as potential candidates for standardization. The slides reminded the committee that contribution 8.8_11_0002 from October proposed three simultaneous tracks.

- One: Draft a standard for Metadata.
- Two: Draft profile for File Transfer: File Transfer as a “test case” for metadata specification.
- Three: Analyze P25 CSSI as a baseline for LMR voice over BB, use as second test case for metadata specification.

Bill Janky recommended a next step to proceed to create a new project to draft an Overview / Definition document. A first draft was contributed in 8.8_12_0003.

DJ Atkinson asked about respect for GSMA and other standard bodies in the LTE space. Gerard Marque-Pucheu said that TIA should not be shy about doing standards related to P25 technology that also used LTE networks. DJ Atkinson acknowledged that TIA should do standards related to P25 voice service. Andy Thiessen mentioned that detailed user requirements seemed to lacking for public safety over LTE networks. Tom Hengeveld said that TIA could proceed with standards that were understood now and future requirements could be addressed when or if they appeared. Dereck Orr suggested that someone could brief public safety through NPSTC on how TIA was proceeding.

Bill Janky motioned for TR-8.8 to initiate a project for broadband data protocol standards. Stan Causey seconded the motion. The motion passed unanimously.

Contribution 8.8_12_0002 FXP and Related Standards

Tom Hengeveld presented slides to propose a file exchange protocol for broadband data. The slides suggested five elements.

- Transport Security Negotiation:
 - TLS roles
 - Clear vs encrypted operation
 - TLS handshake.
- Application Security:
 - Authentication of source and destination
 - Again multiple techniques.
- Notification:
 - Source informs destination that it has some files
- Exchange:
 - Actual file transfer. Still debating, probably centered around “directory” and “pull”.
- Session T&M:
 - Typical termination stuff

Andy Thiessen and Gerard Marque-Pucheu suggested a look at RFC 3926, FLUTE (File Delivery over Unidirectional Transport). Tom agreed to look into it. The convener asked for comments on the proposal to be sent to TR-8.8 for consideration.

Contribution 8.8_12_0003 Broadband Data Protocol Standards Overview

This contribution by Harris was introduced by Bill Janky in the slides from 8.8_12_0001. Comments were requested to be sent to the convener and TR-8.8 for consideration by February 24.

Contribution 8.8_12_0004 Further elements of P25oLTE architecture

Gerard Marque-Pucheu reviewed these slides to propose an architecture for P25 over LTE networks. The slides presented information on: server discovery and modes of service; security of the client-server link; management of mobility; an architecture overview; and a way forward. The proposal for server discovery should satisfy two cases, one for a home P25 network, and one for a geographically defined local jurisdiction. The proposed security procedures were quite detailed. The mobility management proposal defined two modes of operation for the home P25 network and for the local jurisdiction.

Cassidian proposed that an architecture overview of the P25 client used the currently defined ISSI protocol with some adaptations and additions. The upper part of the client architecture contained a mobility management part (dealing with registration, associated security set-up procedures, affiliation, ..), and services associated parts (voice, data supplementary services, packet data). The lower part (I) of the client architecture managed the set-up, security and maintenance of the bearers (unicast and broadcast) required for provision of the signaling services. This part managed the interface with the LTE UE, so that the upper parts could behave as their wire-line connected counterparts. The lower part (II) dealt with media transport and hid the specific properties of unicast / broadcast transport to the upper parts of the protocol.

Cassidian proposed a way forward to create a companion document that provided a tentative list of the services that the Radio Abstraction Layer provided to the upper entities; based on classical concepts of Services Access Points (SAPs) with primitives of different types (_request, _indication, _confirm); with a second section to the document to contain the description of the protocol implementing the corresponding services. Cassidian invited comments to the proposal.

The convener invited members to forward comments to TR-8.8 for consideration.

Contribution 8.8_12_0005 P25/VoLTE Interconnection

DJ Atkinson reviewed these slides for measurements of audio quality for vocoders used in P25 and LTE networks. The motivating situation was that Project 25 used the IMBE vocoder, VoLTE specified the AMR vocoder. What would happen if audio was interconnected in the two systems?

The method was to start with a simple study using objective measures (Perceptual Speech Quality Measure defined by ITU P.862); compare single coding with AMR/IMBE transcodings; see if directionality matters (i.e., which family of codec is first); and see if transcoding causes significant reduction in quality. The observed results were:

- IMBE Full Rate was not significantly degraded by transcoding with AMR FR, but was by AMR HR.
- IMBE Half Rate was not significantly degraded by transcoding with AMR FR, but was by AMR HR.
- Even though analysis of variance indicated significance, the overall scores were still pretty close. (<0.2 MOSLQO).

Notes:

IMBE = Improved Multi-Band Excitation defined in TIA 102.BABA

AMR = Adaptive Multi-Rate defined by the Global System for Mobile Alliance (GSMA)

VoLTE = Voice over Long Term Evolution defined by the GSMA

The convener invited comments on the slides to be sent to TR-8.8 for consideration.

8b. Identify points of contact to ATIS, 3GPP, NPSTC Voice Task Group

The convener asked if anyone could volunteer as a Point of Contact for ATIS, 3GPP, or the NPSTC Voice Task Group.

Andy Thiessen said that Peter Musgrove would be the POC for ATIS.

Andy Thiessen volunteered himself to be an acting POC for 3GPP.

DJ Atkinson volunteered to be the POC for the NPSTC VTG.

8c. Nominations for chair or vice chair

The previous chair and vice chair could no longer serve TR-8.8. The convener noted that no nominations for chair or vice chair of TR-8.8 had been received. The convener said that nominations would be open to the next meeting. Elections to select a chair and vice chair could then occur.

9. Review new assignments

The convener is to initiate a new project for broadband data. All participants are to review the contributions and send comments to the convener for any further conference calls prior to the next meeting.

10. Schedule next meeting

The next face-to-face meeting of TR-8.8 will be held in coordination with other TR-8 meetings. The convener requested 1.5 hours for the meeting, and it should be held at the end of day so that any schedule overrun does not affect subsequent meetings.

11. Adjourn

John Oblak motioned to adjourn with a second from John Lambrou. The motion was approved unanimously. The meeting was adjourned at 3:30 PM.

This meeting was conducted in accordance with the TIA Legal Guide and TIA Engineering Manual.

Alan Wilson

TR-8 vice chair, presiding in the absence of TR-8.8 chair and vice chair

Quorum

Organization	Mar 2006	Jun 2006	Jan 2008	Oct 2011	Jan 2012	Quorum
Alcatel-Lucent	X	X		X		yes
Cassidian	X	X	X	X	X	yes
Cisco	X	X	X	X		yes
CML	X			X		
Datron					X	
EF Johnson	X	X	X	X	X	yes
FBI	X	X			X	yes
Harris	X	X	X	X	X	yes
Icom America	X	X	X	X	X	yes
Kenwood	X	X		X	X	yes
Motorola Solutions	X	X	X	X	X	yes
NIST-OLES	X	X	X	X	X	yes
Tait	X	X		X	X	yes
Thales	X	X	X	X	X	yes
TX-RX		X	X	X	X	yes
US DHS	X	X	X	X	X	yes

Attendance as recorded by the TIA Electronic Sign-In Tool:

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Documents contributed at or prior to the meeting include:

tr8.08 report oct11-101111083246. 8_2011_meeting_report_2011_10_19_charleston_sc.pdf

8.8_12_0001 PS Broadband Data Standardization Framework.pptx

8.8_12_0002 FXP and Related Standards Proposals Rev A.pptx

8.8_12_0003 TSBpn-000 BB Protocol Overview Rev 1pt0.docx

8.8_12_0003 TSBpn-000 BB Protocol Overview Rev 1pt0.pdf

8.8_12_0004-Cassidian-P25oLTE-Next steps.ppt

8.8_12_0005 - P25-VoLTE.pptx

tr8.08 agenda jan12-211211053014.pdf