Minutes of the AES Technical Committee on Coding of Audio Signals

The 23rd Meeting was called to order at the 127th AES Convention, New York, at 4:00PM Saturday October 10, 2009 by Schuyler Quackenbush, co-chair.

Agenda: The draft agenda, previously posted on the TC email reflector, was approved and is listed in the annex. In order to join the TC, an email should be sent to the chair after the convention. The minutes of the last TC meeting at Munich, previously posted on the TC email reflector, was approved and uploaded to the TC web site.

Schuyler Quackenbush introduced himself as the new TC co-chair and welcomed the attendees.

Recent Activities: The ongoing activities of the committee and other coding-related events were reviewed. It was noted that there are three workshops at this convention sponsored by the TC on Audio Coding. They are:

- Friday, October 9, 2:30 pm — 4:30 pm
  W3 - Lies, Damn Lies, and Statistics
  (A repeat of the workshop given in Munich, which was very well received)

- Friday, October 9, 5:00 pm — 6:30 pm
  W5 - What Will Perceptual Audio Coding Stand for 20 Years from Now?

- Monday, October 12, 9:00 am — 11:00 am
  W17 - Scalable Audio Coding—Pleasing All of the People All of the Time?

Proposals for upcoming conventions:

1) Juergen Herre reported that the workshop on “Unified Speech and Audio Coding” (USAC) proposed for the London convention and to be organized by Ralf Geiger, was on track. It was noted that “application-centric” presentations would be better received by the AES attendees that a “technology-centric” presentations.

2) It was suggested to have a workshop on “Wireless Streaming to Portable Devices” that might cover the difficulties associated with typical cellular or WiFi channels and what systems can do to cope with these difficulties, e.g. dynamic negotiated coding rate change between encoder and decoder in response to channel SNR and concealment of dropped packets. Perhaps current technology or service providers could present. Deepen Sinha and Gary Spittle volunteered to follow-up on this idea as a possible workshop for San Francisco.

3) Bernhard Grill suggested that a workshop on coding for two-way communication would be interesting, with one focus being whether to use a speech coder or an audio coder. Perhaps representatives from major manufacturers or service providers could present (e.g. Polycom, Ericsson, Nokia, France Telecom/Orange).

Proposals for Standardization: This is a new topic for the agenda, and it elicited considerable discussion. Schuyler Quackenbush noted that the flagship standard in AES is AES3 and Juergen
Herre noted that the TC has already done considerable work to specify how to carry coded representation, e.g. MPEG Surround, over AES3 and its consumer counterpart in TC100.

Schuyler Quackenbush noted that when there is a possibility of a program’s audio signal being encoded using multiple codecs, each having a different latency, maintaining lip sync might be an issue. Standards that clearly specify how to achieve this might be of interest to the audio community.

Deepen Sinha suggested that standards on audio forensics, e.g. fingerprints for audio songs, might be appropriate. After some discussion it was agreed that there is existing standardized technology for fingerprinting audio and that this might not be the best area for the AES to pursue.

**Other business:** There was none.

The next meeting will be held in conjunction with the upcoming AES 128th Convention in London, May 20-23, 2010.

The meeting was adjourned at 5:00pm.
Annex I: Agenda

1) Approval of Agenda
2) Review of recent activities for current convention / conference
   - Richard C. Heyser Memorial Lecture Series
   - Other activities
3) Review of / proposals for activities at upcoming conventions, conferences, workshops etc.
   - 128th AES London
   - 129th AES San Francisco
4) Proposals for AES standardization
5) Any Other Business
6) Next Meeting
7) Closing of the Meeting

Annex II: Attendees:

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<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Schuyler Quackenbush</td>
<td>Audio Research Labs</td>
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<tr>
<td>Juergen Herre</td>
<td>Fraunhofer IIS</td>
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<td>Gary Spittle</td>
<td>CSR</td>
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<td>Josh Lando</td>
<td>Dolby</td>
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<td>Oliver Hellmuth</td>
<td>Fraunhofer IIS</td>
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<td>Bernhard Grill</td>
<td>Fraunhofer IIS</td>
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<td>Deepen Sinha</td>
<td>ATC Labs</td>
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<td>Gerald Schuller</td>
<td>Ilmenau University of Technology</td>
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<td>Anibal Ferreira</td>
<td>University of Porto – Portugal</td>
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<td>Karlheinz Brandenburg</td>
<td>TU Ilmenau &amp; Fraunhofer IDMT</td>
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