

Summary: "Creative Sound Solutions" – Meeting #05

Agenda:

1. Review of SoundDay 2021 and year-to-date
2. Webinars:
 - a. Follow-up on proposals and ideas from meeting # 04 including additional comments and proposals.
 - b. Proposals for possible speakers
3. Physical events during 2022
 - a. Meetings? Workshops? Others?
4. Collaborative projects, update of proposals, indication of possible project consortia
5. Other ideas for Danish Sound Cluster activities
6. A.O.B.

Summary

Ad 1 Review of SoundDay 2021 and year-to-date

Two new members are joining the working group:

- Nick Dunkerley, Hindenburg Systems A/S
- Stina Marie Hasse Jørgensen, ITU

On behalf of the board of Danish Sound Cluster, the Chairman expressed great thanks to everyone that had contributed to making SoundDay 2021, a highly successful event.

In relation to the working group “Creative Sound Solutions”, special thanks were given to the group for activating the following external people in SoundDay 2021:

- Bjørn Jacobsen – game audio
- Yann Coppier – Sound Installation
- Mikkel E. G. Nielsen & Nicolas Becker (keynote)
- Live jazz on Keybird (the lightweight piano):
musicians from RMC
- Team of student helpers (arranged through Stefania Serafin):

The ‘Danish Sound Award 2021’ was presented to Professor Stefania Serafin, AAU-CPH (and group member of Creative Sound Solutions”) as well as to Professor Dorte Hammershøj, AAU, Aalborg. Two persons were selected for the award this year, because no ‘Danish Sound Award’ was awarded in 2020, due to cancellation of SoundDay (Covid 19 closure)

Year-to-Date assessment:

The working group had been active in proposing and assisting on 3 webinars since June 2021, a highly satisfactory achievement. The webinars had been really good with high participation. A fourth webinar initiated/created by the group is planned for January 11, 2022:” Multichannel Sound for Headphones”.

The Chairman expressed a sincere thank to the working group on “Creative Sound Solutions” for its enthusiasm, integrity in work and creativity in proposing themes and candidate speakers during the year.

Ad2 Proposals for Webinars

#	Subject	Background
1	'Sound in virtual/augmented reality' (VR/AR) Follow-up workshop	<p>A practical workshop to follow-up on the Webinar completed September 30th, 2021, is now in planning.</p> <p>The event is planned as a physical event at the labs of AAU-CPH and is primarily intended as a workshop for students taking an interest in the virtual/augmented reality (VR/AR)</p> <p>The ambition is to run the event with a duration 3 hours.</p> <p>Time schedule: February-March 2022</p> <p>Professor Stefania Serafin will take the lead in planning, aiming at:</p> <ul style="list-style-type: none"> • A practical workshop, where participants will be introduced to how to implement sounds in VR environments using the Unity engine. Several sound engines will be introduced (Steam Audio, Juce, Unity sound engine, Dear VR, Wwise...) with their advantages and disadvantages, and a practical case study will be implemented from scratch. <p>Participants are encouraged to bring a laptop with Unity installed.</p>
2	Dubbing challenges	<p>As discussed in previous meetings, the topic appears of importance to many. During discussions at the meeting, the following outline of the event is proposed:</p> <p>Speakers:</p> <ul style="list-style-type: none"> • Henry John Michaelsen, GiLyd ApS ? henry@gilyd.dk, 31412160 • Morten Green, LydtiFilm ? morten@lydtifilm.dk • Eddy Bøgh Brixen ? <p>Panelists:</p> <ul style="list-style-type: none"> • Morten Brandstrup, TV2 • Lars Nørretranders, DR • Eddy Bøgh Brixen • Allan Holmberg (movie production) • The speakers <p>For background, see Summary of the meeting #04 in the working group, 5 October 2021.</p>
3	5G microphones and new recording techniques	Completed. When new results/information of significance in this domain appears, we may consider an update.
4	AI-based solutions	Postponed. We covered the topic in the VR event

#	Subject	Background
5	Across boundary solutions, i.e. involve artistic perspectives in audio technical solutions.	<p>Under development.</p> <p>The aim is to run a webinar, where the artistic view on sound is obtaining good focus to ensure the balance between technical and artistic values and considerations in producing sound.</p> <p>The topic focus, and not least who should be invited to talk, still needs some massaging.</p> <p>Potential contributors:</p> <ul style="list-style-type: none"> • Jenny Gräf Sheppard, Kunstakademiet, Leader of the Ambisonics Research Lab at the Laboratory for Sound, • Stephen Mcevoy, Kunstakademiet, Teaching Assistant, • Yann Coppier. • Stine Lyngedall (contact Finn Agerkvist, DTU) • Nicolas Becker, Academy Award for Best Sound ("Sound of Metal") • Bjørn Jacobsen, sound designer & composer, Cujo Sound <p>For example the Royal Danish Academy of Fine Arts have recently opened a new ambisonic room, so it is believed that Jenny Gräf Sheppard and Stephen Mcevoy have genuine results to talk about.</p> <p>Shelley will carry on the work with setting up the webinar,</p>
6	Intelligent microphones	<p>The theme 'Intelligent microphones' focus on signal processing, establishing metadata, ensuring such data in the stream, etc.</p> <p>Proposed Speakers:</p> <ul style="list-style-type: none"> • Eddy Bøgh Brixen (introduction) • Renato Pellegrini (or colleague), Sennheiser • J Keith McElveen, Wave Sciences ? Charleston, South Carolina, United States (Eddy will contact) <p>Panelist:</p> <ul style="list-style-type: none"> • Stefan Heise, Jabra • Brian Johansen, GRAS • The speakers <p>Dilemma: Cameras for video recording, even in smart phones, have a lot of support, making video recording easy and relatively 'professional' for even a novice user. However, with microphones no similar support environment exists. E.g., in using two adjacent wireless microphones there is no support for interaction, and what about auto leveling? How can we change this dilemma?</p> <p>Time schedule: Early 2022.</p>

#	Subject	Background
7	Multichannel headphones	<p>'Multichannel headphones' is an area of high interest for several companies and focus on a broad range of solutions (create good 3D sound perception, binaural recording, achieve "center" impression in sound, etc.)</p> <p>Potential speakers:</p> <ul style="list-style-type: none"> • Pauli Minaar, Idun Audio. • Tom Ammermann, New Audio technology (https://newaudiotechnology.com/) • Hannes Gamper, Microsoft Research Lab. <p>Time schedule: 11 January, 2022</p>
8	Optimal sound environments for "large room offices"	<p>For background, see Summary of the Meeting #04 of the working group, 5 October 2021.</p> <p>Practical experiments are still early in implementations and results not yet ready. The topic is postponed until late in H1 of 2022 or may even be delayed to H2, the autumn semester of 2022.</p>
9	Use of sound in museums	<p>Focus: Use of sound in 'story telling' at museums.</p> <p>Possibly the theme may comprise both a webinar and a theme-day, however, starting off with the webinar (also to serve as a teaser for the subsequent theme-day).</p> <p>Which tools are available for audio-guides working with ambisonic sound, immersive sound in story telling at museums, etc.?</p> <p>Hugh variation in how museums try to use sound in their supporting 'story telling'. Some use headsets for a personal direct impression, however that is often a challenge for families visiting a museum. Others use loudspeakers as part of staging an event.</p> <p>The webinar should be garnered with case stories, e.g.:</p> <ul style="list-style-type: none"> • Varde Museum, Varde • H.C. Andersen Museum, Odense <p>In addition, include a sound designer working with one of the museums to talk about the efforts in making the sound elements in 'story telling'.</p> <p>This should in the webinar be followed up with a presentation from Stouenborg as well as a researcher from Sonic College, Birgitte Folman (working with the museum in Viborg, researching how to use music and sound in the storytelling). Birgitte is anthropologist and Ph.D. from Aarhus University.</p> <p>Sonic College proposes to bring in the Maersk Foundation, since this foundation funds a lot of the ongoing works at museums (essential to hear the views of Maersk Foundation, possibly also obtain some funding for the event).</p> <p>The subsequent physical event, the theme day, could take place in either Haderslev, Kolding or Odense.</p> <p>Time schedule: Webinar in first half of 2022, and theme day in H2 of 2022. Lars and Birgitte Folmann will work with DSC in setting up the events.</p> <p>Potential speakers:</p> <ul style="list-style-type: none"> • Anders Jørgensen, Stouenborg Mobil: 6172 8098, Email: anders@stouenborg.dk • Birgitte Folmann, Researcher at Sonic College • Person from e.g. H.C: Andersen Museum, Odense. <p>Other candidates as per above.</p>

#	Subject	Background
10	ADM Technology	<p>The Audio Definition Model (ADM) is standardized metadata model for describing the technical properties of audio.</p> <p>It is proposed to run two webinar events close to each other, e.g. one week in between. The first webinar, 10A, see below, is a more technical event, i.e. focusing on the engineering part of ADM, while the second webinar on ADM focuses on the creative part of ADM, i.e. using ADM in real work. Both events include hands-on elements, i.e. which tools are available for ADM, and how could they be used.</p>
10a	NGA ADM Immersive delivery	<p>Technical oriented event, including the history of ADM development (BBC). In principle open tool environments, although Dolby and to some degree also Fraunhofer try to force users into environments controlled by the licensing partners and somewhat 'closed environments'.</p> <p>Speakers:</p> <ul style="list-style-type: none"> • Matt Firth, BBC (matt.firth@bbc.co.uk) • Adrian Murtaza, Fraunhofer (adrian.murtaza@iss.fraunhofer.de) • Jonas Roden, Dolby (jroden@dolby.com) or Jan Mueller, Dolby (jan.mueller@dolby.com)
10b	ADM webinar Mixing/Mastering for streaming services	<p>Hands-on event focusing on the creative use of the ADM tools and approaches.</p> <ul style="list-style-type: none"> • Frank Grønabæk (popmusik), frank@nordicproaudio.com • Morten Lindberg (klassisk musik) morten@lindberg.no • Possibly a person from broadcasting (Rune and/or Lars N. to provide candidates) <p>More context is required to allow for inviting candidates from broadcast. Rune will supply.</p>
11	"Beats by girlz"	<p>Possibly a workshop for younger girls. Started in Boston, now also with a Danish Chapter. Normally expect to get paid for their efforts, but DSC could offer a channel to announce their work. Not strait forward for DSC to fund the speakers.</p> <p>Focus to music production, in this case primarily for girls. Basically focus on students or young teenagers, especially females. It may prove a bit marginal, or even difficult in relation to the DSC funding from our funding bodies, where the aim is on industrial enterprises.</p> <p>DSC must check, if such a broader perspective in sound can fit into the objectives of DSC, i.e. is in line with the funding criteria.</p> <p>We need to be clear in our strategy</p>

#	Subject	Background
12	Game audio	<p>Focus: A webinar or a workshop on game audio, including the involvement of game audio companies.</p> <p>However, the working group has some concerns of the viability of including game audio companies, given that the highly competitive marketplace of game audio makes it less realistic to involve the companies of game audio in such an event.</p> <p>We need to be clear on the objectives. Are we focusing on the technical side of game audio or are we aiming at the creative side of game audio?</p> <p>One challenge is that a number of players are small independent companies using their own tools. They seem reluctant or even unable to show their tool approaches due to nature of their products and the marketplace constraints.</p> <p>We possibly need again to run two consecutive webinars, one on the technical objectives, the other on more creative issues.</p> <p>Potential speakers</p> <ul style="list-style-type: none"> • Rob Bridgett, Senior Audio Director, Canada, author of books like "Leading with sound", "Sound is not a service", etc. (framing how the entire game audio works). An iterative approach to the creative process in gaming audio • Bjørn Jacobsen <p>Two former students at Sonic College were brought into focus. The two are now employed at 'I/O interactive', the company responsible for the sound implementation of 'Hitman'. They seem willing to share the "Whats & Whys" of game audio:</p> <ul style="list-style-type: none"> • Kristian Rømer @ IO Interactive mail@kristianromer.dk • Simon Stevnhoved Rasmussen - Massive Malmö/London - https://www.linkedin.com/in/simonstevnhoved/ <p>The topic needs to be further nurtured in discussions at subsequent working group meetings.</p>
13	Dubbing challenges II	<p>Making a deeper dive into dubbing, e.g. focusing on the huge segment of videographers and editors using non-Pro tools in their audio works involving non-linear programs like Adobe Premier, Avid Media Composer and even Black Magic editing program. How do people see the use of such tools in their creative work, when you do not have access to professional tools or involvement of a professional audio engineer?</p> <p>The topic should be discussed in more depth as a follow-up on the 'Dubbing challenge' webinar listed under item 2 in this Meeting Summary once that event has been fully programmed/executed.</p>

Ad 3 Physical events during 2022

The recommendations at the working group meeting were that we postpone physical event until further. Covid 19 and especially the severe increase in incidents lately has already take a toll on international events in the audio domain. Either events are cancelled or have experienced a significant drop in participation, e.g. an event like at the recent “Tonemeister” conference.

If DSC is aiming at physical events now, we may most likely face similar challenges. So the recommendation is that physical events under DSC are postponed until the situation on Covid 19 improves significantly again.

Ad 4.1 Collaborative projects, update of proposals, indication of possible project consortia

DSC is planning to institute a new call for collaborative projects around February/March of 2022. Now is a good time to start building consortia for upcoming collaborative projects. Experience show that it takes time to form consortia. Often the knowledge instructions must take the initiative, since they are the ones obtaining funding and thus have the greater incentive. However, a consortium should focus on projects that will be essential for the participating private enterprises.

If seed funding from DSC is seen as important, time is now to get started. And please note that it is a good idea to contact the DSC secretariat early on to ensure that a consortium meets the formal criteria of funding.

Ad 4.2 Early list of ideas for proposals for collaborative projects

#	Subject	Background
A	Intelligent microphones	Development of intelligent microphones, 5G, Metadata, *fingerprint' identification, etc. See also Morten Brandstrup's webinar comments in webinar theme #3
B	Training courses	<p>Training courses focusing on optimal recording 'in the field', at an advanced level but also at a more general level to reduce subsequent editing significantly.</p> <p>Needs to be focused, e.g. for broadcast, including how the production works in broadcast.</p>
C	Headsets emulating multichannel sound. Alternatively better editing options in headsets (e.g. for TV sound)	<p>Headset with true "room" impression. Today's headsets allow for use of 7.1 sound. However, most solutions appear poor in emulating e.g. "front" sound. "Rear" sound appears OK, but most headsets basically still only offer "mono" in the ear.</p> <p>Necessary to obtain better headset technology, if multichannel sound in headset should have a future. Essential to obtain an impression of "Dolby ATMOS in a big room".</p> <p>Multichannel sound has been around for 30 years, but users are still only exposed to stereo in headsets.</p> <p>A huge potential could exist, if "true room" perception emerges, hence avoiding the need for huge rooms with ATMOS conditions.</p> <p>In TV broadcast, the need is more towards a stable "center-sound picture". Currently the challenges are that basically all TV sounds are edited in huge rooms, where may be 40 people are sitting side-by-side editing, and hence are forced to using headsets during editing. However, during the editing, they need to arrive at a good sound as experienced by a viewer on a traditional TV set.</p> <p>The next generation of young people will only see TV on an iPad or an iPhone and obtain sound through earpieces or simple headsets. Believes that the need for true "room sound" thus may diminish significantly.</p> <p>The real challenge is that you no longer obtain the sound from huge "B&O speakers" pointing towards the viewer/listener, when watching TV. Instead sound comes from small loudspeakers at the back of the TV set pointing away from the viewer/listener. Hence, there is a need for a calibration unit that could simulate and adapt the sound in a room, that is far from ideal in a sound context and where the TV set is placed incorrectly from a sound perspective.</p>
D	Optimal sound environments for "large room offices"	<p>Current sound designs of "big offices" aims at a workspace with good acoustical damping, low background noise, low reverberation time, no ventilation noise, etc. As a result, basically an in-humane environment is obtained, where no one dares just to drop a clip on the table (too noisy ☺).</p> <p>Possible pre-project based on the challenges outlined under webinar theme #8</p>

The above list is just a set of early ideas expressed in the working group. Collaborative project can focus on a variety of other themes.

Next meeting

Wednesday January 19, 14:00 to 15:00

Appendix 1: Participants in the meeting

Stefania Serafin	AAU-CPH	Professor
Cheol-Ho Jeong	DTU Electro, Electrotechnology	Associate Professor
Rune Palving	Den Danske Filmskole	Head of "tone meister" education
Lars Tirsbæk	Sonic College, UCSYD	Underviser
Eddy Bøgh Brixen	ebb-consult	Consultant, owner
Lars Nørretranders	DR	Area Manager
Brian Slott Kristiansen	Dammon Group Systems	CEO
Birger Schneider	CHAMAJ Consult ApS	Director/owner
Torben Vilsgaard	Danish Sound Cluster	CEO
Shelley Uprichard	Danish Sound Cluster	Project Manager

Appendix 2: Slides from the meeting

Great support through "Creative Sound Solutions"

- Bjørn Jacobsen – game audio
- Yann Coppier – Sound Installation
- Mikkel E. G. Nielsen & Nicolas Becker
- Live jazz on Keybird (the lightweight piano): musicians from RMC
- Team of student helpers (through Stefania)



WG 04: Creative sound solutions



Brian Slott Kristiansen	Danmon Group Systems A/S	Admin. Direktor
Cheol-Ho Jeong, lektor	DTU Elektro, Elektroteknologi	Lektor
Eddy Bøgh Brixen	ebb-consult	Konsulent, ejer
Lars Møllegaard Nørretranders	DR	Områdeleder
Lars Tirsbæk	Sonic College - UCSYD	Underviser
Morten Brandstrup	TV2 Danmark A/S	Head of Newstechnology
Nick Dunkerley	Hindenburg Systems ApS	Creative Director
Rune Palving	Den Danske Filmskole	Leder af tonemesteruddannelsen
Birger Schneider	CHAMAJ Consult	Direktor, ejer

Torben Vilsgaard, CEO & Shelley Livingstone, Project manager, DSC



Audio AI - State of the art and perspectives in spoken document understanding
16. juni, 2021



5G Technology in Proaudio applications
22. september, 2021



Creating Sound for VR applications
30. september, 2021

Planned webinars – All Working Groups

- 2nd December 2021 *Traffic Noise and its Effect on Society*
- 7th December 2021 *Multisensory Processing*
- 15th December 2021 *Getting started with sustainability*
- 11th January 2022 *Multichannel Sound for Headphones*
- 18th January 2022 *Online Services for Hearing Rehabilitation*



2. Webinar themes		
#	Proposal for webinars	Background
1	'Sound in virtual/augmented reality' (VR/AR)	Workshop at AAU-CPH, Multisensory Experience Lab in the "pipe" for February 2022
2	Dubbing challenges	Proposed structure: <ul style="list-style-type: none"> • Two speakers & panel debate Speakers: <ul style="list-style-type: none"> • Henry John Michaelsen, GiLyd ApS ? • Sean Olive ? Panelists: <ul style="list-style-type: none"> • Morten Brandstrup, TV2 • Lars Nørretranders, DR • Eddy Bøgh Brixen • Allan Holmberg (movie production) • The two speakers
3	5G microphones and new recording techniques	Completed September 22 nd , 2021
4	AI-based solutions	Postponed. We just had the topic in VR event



2. Webinar themes		
#	Proposal for webinars	Background
5	Across boundary solutions, i.e. involve artistic perspectives in audio technical solutions.	<p>Focus on technical issues, less on artistic ones:</p> <ul style="list-style-type: none"> Jenny Gräf Sheppard, Kunstakademiet ? Stephen Mcevoy, Kunstakademiet ? <p>Proposed</p> <ul style="list-style-type: none"> Yann Coppier ? Stine Lyngedall (Finn Agerkvist, DTU)? Nicolas Becker ? Bjørn Jacobsen, Cujo Sound ?
6	Intelligent microphones	<p>Currently a challenge, possible speakers:</p> <ul style="list-style-type: none"> Eddy Bøgh Brixen, introduction: current technologies, practical implementations, roads to improvements (speech intelligibility, loudness, timbre, metadata). Brian Johansen, GRAS Renato Pellegrini, Sennheiser ? Keith Mackelweave, Wave Science Tech. ? <p>Panelists</p> <ul style="list-style-type: none"> Stefan Heise, Jabra (research scientist) Speakers

2. Webinar themes		
#	Proposal for webinars	Background
7	Multichannel headphones ()good 3D sound perception	<p>Planned for 11th January, 2022</p> <p>Speakers:</p> <ul style="list-style-type: none"> Pauli Minaar, Idun Audio. Tom Ammermann, New Audio technology Hannes Gamper, Microsoft
8	Optimal sound environments for "large-room offices"	<p>Current sound design focus of "big office workspace" results in an "in-humane" silent work environment. New trend is to bring noise back in the office to mask inconveniences.</p> <p>Postponed until late in 2022, H1 (any news?)</p>
9	Use of sound in museums	<ul style="list-style-type: none"> Anders Jørgensen, Stouenborg ? Researcher at Sonic Colleague ? H.C. Andersen Museum ?

2. Webinar themes

#	Proposal for webinars	Background
10a	NGAADM Immersive delivery	<ul style="list-style-type: none"> • Matt Firth, BBC • Adrian Murtaza, Frauenhofer • Jonas Roden, Dolby or Jan Mueller, Dolby
10b	ADM seminar Mixing/Mastering for streaming services	<ul style="list-style-type: none"> • Frank Grønbaek (popmusik), • Morten Lindberg (klassisk musik)



3. Physical events during 2022

- Meetings?
- Workshops?
- Others?



4. Collaborative Projects

- *Now is the time to start thinking of projects for 2022, H1*
 - *Creating consortium*
- *Ideas from 2021:*
 - *Are they still relevant?*

#	Proposal for project themes	Background
A	Intelligent microphones	Development of intelligent microphones, 5G solutions, Metadata, "fingerprint" identification, etc.
B	Training Courses	Training courses for optimal recording "in the field". Advance level but also practical level.
C	Headsets emulating multichannel sound. Alternatively better editing options in headsets (e.g. for TV sound)	<ul style="list-style-type: none"> • Headsets with "true room" impression. Today's headsets allow for use of 7.1 sounds, but appear poor in emulating e.g. "front sound". • In TV production there is a need for a stable "center sound picture". • Challenge: Next generation of viewers do not see TV on a monitor, but uses iPhone/iPad and simple "in the-ear" headsets.



5. Other ideas

- *Events?*
 - *Set-up of "Erfa groups"*
 - *Presenting new technology*
 - *Show case for start up companies*
 - *Networking in general*
- *Joint events with others?*

