

## Summary: "Creative Sound Solutions" – Meeting #07

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### Agenda:

1. Webinars:
  - a. Follow-up on proposals and ideas from meeting # 06 including additional comments and proposals.
  - b. Proposals for possible speakers
2. Physical events during 2022
  - a. Meetings? Workshops? Others?
3. Collaborative projects, update of proposals, indication of possible project consortia
4. Other ideas for Danish Sound Cluster activities
5. A.O.B.

### Summary

#### Completed events – initiated by "Creative Sound Solutions"

Great thanks to the working group for its strong tradition and ability to initiate events in Danish Sound Cluster:

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| 1. AI in Audio – Lars Kai Hansen           | 2021, June      |
| 2. Audio for VR                            | 2021, Sept 30th |
| 3. 5G microphones                          | 2021, Sept 22nd |
| 4. Multisensory Processing                 | 2021, Dec 7th   |
| 5. Multichannel Sound for Headphones       | 2022, Jan 11th  |
| 6. ADM & Next Generation Audio             | 2022, Feb 8th   |
| 7. Music Production for Streaming Services | 2022, Feb 15th  |
| 8. Intelligent Microphones                 | 2022, Feb 23rd  |
| 9. VR Workshop                             | 2022, Feb 24th  |

#### Creative Sound Solutions – New events in calendar

1. Challenges in Audio Post Production 2022, March 29th
2. Bringing creativity into engineering processes  
(not on website yet) 2022, April 26th  
Sound Artists/Engineers
  - a. Yuri Suzuki
  - b. George Koutsouris

#### Other events in the calendar

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|--|------------------|
| 1. Product Test & Certification                                      | 2022, March 24th |
| 2. Edge Impulse for Consumer Audio<br>Applications Workshop          | 2022, April 5th  |
| 3. Sustainability Network, (network meeting)                         | 2022, April 6th  |
| 4. Noise and its effect on our health                                | 2022, April 7th  |
| 5. Robot Audition  | 2022, April 19th |
| 6. ½ day conference (Aarhus):<br>The Danish Audio Hardware Symposium | 2022, April 28th |
| 7. ½ day conference (Copenhagen):<br>Future Sound Forum              | 2022, May 4th    |

## Ad 1 Proposals for Webinars

#	Subject	Background
1	'Sound in virtual/augmented reality' (VR/AR)	<b>Workshop – completed (February 24th)</b> Approx. 40 participants, students, researchers, companies
2	Dubbing challenges	Planned for March 29 <sup>th</sup> 2022 <b>Speakers:</b> <ul style="list-style-type: none"> <li>• Henry John Michaelsen, GiLyd ApS</li> <li>• Morten Green, LydtiLFilm</li> <li>• Eddy Bøgh Brixen</li> </ul> <b>Panelists:</b> <ul style="list-style-type: none"> <li>• Morten Brandstrup, TV2</li> <li>• Lars Nørretranders, DR</li> <li>• Eddy Bøgh Brixen</li> <li>• Allan Holmberg (movie production)</li> <li>• The three speakers</li> </ul>
4	AI-based solutions	Postponed.
5a	Across boundary solutions, i.e. involve artistic perspectives in audio technical solutions. (the border region of sound of art and technical facilitation)	“Sound art” requires artists and skilled audio technicians, the latter to create the sound environment needed by the artists. How can we bring the two disciplines together and ensure that sound artists are not lost in using technical solution that are already outdated?  The aim is to run a webinar, where the artistic view on sound is obtaining focus, but at the same time the techniques behind are becoming likewise clear, to ensure the balance between technical and artistic values and considerations in producing sound.  <b>Potential contributors:</b> <ul style="list-style-type: none"> <li>• <b>Jenny Gräf Sheppard</b>, Kunstakademiet, Leader of the Ambisonics Research Lab.</li> <li>• <b>Stephen Mcevoy</b>, Kunstakademiet, Teaching Assistant,</li> <li>• <b>Yann Coppier</b>.</li> <li>• <b>Stine Lyngedall</b> (contact Finn Agerkvist, DTU)</li> <li>• <b>Nicolas Becker</b>, Academy Award for Best Sound (“Sound of Metal”)</li> </ul> <p>Due to heavy workload on the secretariat and an almost full schedule for 2022 H1, it was decided to postpone this event to late in 2022 H2.</p>
5b	Bringing creativity into your engineering work	Planned for April 26 <sup>th</sup> , 2022  An additional event on artistic/technical issues is in planning (by DSC secretariat), and where Sound Artist/Engineers are in focus.  <b>Planned speakers:</b> <ul style="list-style-type: none"> <li>• Yuri Suzuki</li> </ul> <p>Georges Koutsouris</p>

#	Subject	Background
5c	Mapping of current Danish status of multidimensional sound in education, research, movie generation, theater production, etc.	<p>A mapping activity of the 'landscape' of 'current Danish multidimensional sound in education, research, movie generation, theater production, etc.' was agreed in the previous meeting #06. However, only few had responded with inputs. All WG members to provide inputs. Birger will then produce a first draft of the landscape paper and circulate it for comments.</p> <p>Later on, we may consider running an event, where active groups across the landscape of Danish multidimensional sound will be given the opportunity to present themselves in short video presentations.</p>
6	Intelligent microphones	<p><b>Webinar completed February 23<sup>rd</sup>, 2022</b></p> <p>Feedback from participants that the presentation of J Keith McElveen, Wave Sciences, was not only for surveillance applications, but certainly also for use in the hearing aid industry. We failed to include the hearing aid audience in marketing activities prior to the event.</p> <p>Agreement that we should make a follow up activity vis-à-vis the hearing aid industry, e.g. in a newsletter or direct mailing.</p> <p>DSC secretariat will follow up to ensure a broader dissemination including invitation to people with link to see the recorded webinar on intelligent microphones.</p>
7	Multichannel headphones	<p><b>Webinar completed January 11<sup>th</sup> 2022</b></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><b>Delayed to H2 2022 or H1 2023.</b></p> <p>One of the possible use cases is the new atrium at Sonic College in Kolding. A.P. Møller Foundation has funded 4 mio. DKK to Sonic College to a project, the "sound-embracing atrium". Part of this includes installation of 180 loudspeakers in the 5 storage height atrium that will serve as a huge sound lab including how sound influences people in their daily functions.</p> <p>Sonic College moves to the new premises in September 2022, and about that time R&amp;D related to the sound embracing atrium will also start. Results are not expected until 2023, but Sonic College invites DSC to run events at their new premises whenever convenient.</p>
9	Use of sound in museums	<p><b>Focus:</b> Use of sound in 'story telling' at museums.</p> <p><b>Time schedule:</b> Webinar in H2 of 2022, and "theme day" later, possibly 2023.</p> <p>For details see meeting summary of meeting #05, 2021-11-24.</p> <p>Lars Tirsbæk and Birgitte Folmann will work with DSC in setting up the events. Due to current busy activities in relation to moving Sonic College, Lars cannot start efforts on this theme until after September 2022.</p> <p><b>Potential speakers:</b></p> <ul style="list-style-type: none"> <li>• Anders Jørgensen, Stouenborg</li> <li>• Birgitte Folmann, Researcher, Sonic College</li> <li>• Person from e.g. H.C: Andersen Museum, Odense.</li> <li>• Stina Marie Hasse Jørgensen ("Helsingør Museum")</li> </ul> <p>Other candidates as per above.</p>
10a	NGA ADM Immersive delivery	<p>"The Audio Definition Model and Delivery of Next Generation Audio"</p> <p><b>Completed on February 8<sup>th</sup> 2022</b></p>

#	Subject	Background
10b	ADM Technology	<p>"Multichannel Mixing for Streaming Services"</p> <p>Completed on February 15<sup>th</sup>, 2022</p> <p>The two events should be followed up sometimes during 2023 focusing on <b>ADM in broadcast</b>.</p> <p>Frauenhofer and Dolby are both interested in assisting in future events on the subject.</p>
11a	<p>"Women for sound engineering"</p> <p>Electronic sound &amp; music, focus on females</p>	<p>Time schedule: 2023</p> <p>General challenge that we have a poor gender balance in audio areas, i.e. too few females.</p> <p>Events will be inclusive/open to everyone but have an all-female focus/i.e. those who identify as female program. Include female students.</p> <p>Possible themes: music and sound production, spatial audio concert performances/formats</p> <p>Could possibly be hosted at <b>AAU</b> (for spatial concert event), one of the music schools for production. Or AirLab at <b>ITU</b>.</p> <p>Strong interest from <b>Sonic College</b> to be included. Have the same challenge (contact Lars Tirsbæk)</p> <p>"<b>Scenekunstsolen</b>" is also a possible contributor. Currently 3 very active females (contact Eddy for names).</p> <p>Other possible contributors/interested parties:</p> <ul style="list-style-type: none"> <li>• "Det jyske Musikkonservatorium", DJM in Aalborg, <a href="http://www.musikkons.dk">www.musikkons.dk</a></li> <li>• Syddansk Musikkonservatorium Esbjerg, <a href="http://www.sdmk.dk">www.sdmk.dk</a>,</li> </ul>
11b	Podcast tools, approaches, and support with special emphasis on females	<p>Given that a significant part of podcast production today is delivered by females, and where a deeper lack of sound production sometimes lack, it seems an obvious strategy to bring focus on improved production methodology and tools, to some degree also sound engineering support and not least point to bottlenecks, where tools lack, or emerging tools may fill the gap.</p> <p>Sonic College recently had two former female student that were awarded</p> <ul style="list-style-type: none"> <li>• The '2022 Sound Designer Prize'</li> <li>• The '2022 talent prize in Podcast'</li> </ul> <p>They could be useful to include in the activities. Lars Tirsbæk to provide names</p>
12a	Game audio (for game applications)	<p><b>Focus:</b></p> <p>A webinar or a workshop on game audio, including the involvement of game audio companies.</p> <p><b>Time schedule:</b></p> <p>2022 H2 (when the DSC secretariat overcomes current workload)</p> <p>Be clear on the objectives. Focus on the technical side of game audio or the creative side of game audio?</p> <p>Proposed speakers:</p> <ul style="list-style-type: none"> <li>• Rob Bridgett, Senior Audio Director, Canada,</li> <li>• Bjørn Jacobsen</li> <li>• Kristian Rømer @ IO Interactive</li> </ul> <p>Simon Stevnhoved Rasmussen - Massive</p>

#	Subject	Background
12b	Using game audio engine in other applications than gaming	<p><b>Time schedule:</b> H2 of 2022 or H1 of 2023</p> <p>Gaming engines are extremely powerful and e.g. in broadcast activities, game engines are taking over activities (today primarily in video, e.g. nVidia) that was previously handled by traditional processors.</p> <p><b>Use applications:</b> e.g. in audio walk, creating virtual exhibitions (e.g. Yann Copier), etc. DTU has activities in the area based on machine learning (Nikolas Borrel-Jensen, <a href="mailto:nibor@elektro.dtu.dk">nibor@elektro.dtu.dk</a>) 'Den Danske Filmskole' (Rune) has launched activities this semester, but use is still in its infancy. May be the Microsoft soundscape 3D audio experience (Soundscape App for iPhone) that enriches a blind person's perception of surroundings when walking in a city) fits the theme, <a href="https://blogs.microsoft.com/accessibility/soundscape/">https://blogs.microsoft.com/accessibility/soundscape/</a></p>
13	Dubbing challenges II	<p>Dubbing is undergoing radical changes in current years. For example, in broadcast DR is now focusing heavily on podcast production, i.e. simple and fast production of content. Many people producing podcasts have no strong sound engineering backgrounds, they just want to be able to produce podcast easily and with a minimum of technical skills in the sound technology.</p> <p>Efficient tools are available and the market for such tools develops fast in current years, supporting improvement of even poor-quality audio raw material.</p> <p>However, the entire scene of production is changing rapidly, and a webinar could focus on:</p> <ol style="list-style-type: none"> <li>1. The entire work process using new tools such as Adobe Premier, Avid Media Composer, Black Magic editing, etc.</li> <li>2. Trends in support tools: Getting inputs from major suppliers of tools on what the trends are in tool technology and what can we expect for the coming years from the suppliers.</li> </ol> <p>The first area could possibly be presented by people from e.g. DR or TV2 or podcast companies, since they are already in a process of change, have experience and can enlighten others on, what the changes in working processes mean.</p> <p>The second area is also for people in broadcasting and other audio generating industries, i.e. podcast producers, trying to understand trends, i.e. what the tool developers are likely to bring to market in the next few years (enlighten us on their 'crystal ball' visions).</p> <p>Future trends may also be aired by people from university, e.g. DTU (Nikolas Borrel-Jensen, <a href="mailto:nibor@elektro.dtu.dk">nibor@elektro.dtu.dk</a>) or others.</p> <p>The industry of traditional audio content suppliers faces significant changes in working processes, markets, and uses of tools. That is what the Webinar should try to address.</p> <p>Lars Nørretranders will provide names for area 2.</p>

#	Subject	Background
14	Ethics in audio production	<p>The industry in audio production is, as other sectors, now facing severe issues on ethics in producing content as a result of technological progress. Modern tools, and tools likely to emerge in coming years, will support generation of audio content far beyond what we are used to, even can imagine today, and significant elements of "Fake content" are likely to emerge, actually already sticks is dirty head up.</p> <p>In dramatizing events, clips of historic audio are merged into a different context to support the dramatizing event. AI supported speech allows generation of speech of persons that are non-original. It is now possible to generate the voice of e.g. deceased people, etc. Technology improvements support issues that were never before realistic. Where do we draw the red line?</p> <p>The audio industry at large, knowledge institutions and others should start discussions on how to face such dramatic changes in content production. We need to start the dialogue on ethics. A theme that we need to nurture further.</p> <p>The DSC project calls allow for, that we e.g. can sponsor studies of the challenges of technology.</p> <p>Further, the topic may lend itself better for panel discussions rather than traditional webinars, etc.</p> <p>Block-chain technology has been employed in some instances to handle "fake new", e.g. reported by New York Times.</p> <p>In education, the issues are also aired in dialogue with students, e.g. at Sonic College. In podcast the problem is often surfacing.</p> <p>Difficult to draw up an event strategy at this point in time, but the WG members are encouraged to think of the issue and possibly also research the topic in their own organizations.</p> <p>At the next meetings, we will take the issue up again and try to find a good formula for getting optimal focus and event strategy on the issue of ethics in audio.</p>

## Ad 2.: Physical Events (H1 of 2022)

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| 1. "Demant Discovery". 4 start-ups to talk, (Lydens Hus) | March 17th 2022 |
| 2. "Green Footprint", Sustainability networking Group    | April 6th 2022  |
| 3. "Danish Audio Hardware Symposium", (Aarhus)           | April 28th 2022 |
| 4. "Future Sound Forum", (Copenhagen)                    | May 4th 2022    |

## Ad 3 Collaborative projects, update of proposals, indication of possible project consortia

A new call for collaborative projects under DSC has been announced on March 10<sup>th</sup>, 2022, with deadline for application on April 6<sup>th</sup>, 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 institutions are initiators since they in contrast to companies can obtain funding from DSC 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.

It is recommended to contact the DSC secretariat early on, partly to obtain counselling on what is possible and what needs to be included in an application, partly to obtain assistance in finding partners for a consortium, if that is an issue for establishing a project application.

## Next meeting

**Tuesday May 24th, 2022, 14:00 to 15:00**

## Appendix 1: Participants in the meeting

Birger Schneider	CHAMAJ Consult ApS	Director/owner
Eddy Bøgh Brixen	ebb-consult	Consultant, owner
Lars Nørretranders	DR	Area Manager
Lars Tirsbæk	Sonic College	Lecturer
Morten Brandstrup	TV2 Danmark A/S	Head of News Technology
Nick Dunkerley	Hindenburg Systems A/S	Creative Director
Rune Palving	Den Danske Filmskole	Head of "tone meister" education
Torben Vilsgaard	Danish Sound Cluster	CEO
Shelley Uprichard	Danish Sound Cluster	Project Manager