Danish
Sound
Cluster

Summary: "Creative Sound Solutions" – Meeting #15

The working Group meeting #15 took place Monday, June 13, 2023, 13:30 – 14:30

Agenda:

1. Webinars & Physical events during 2023:
   a. Follow-up on proposals and ideas from meeting # 12 including additional comments and proposals.
   b. Proposals for possible speakers
   c. New themes?
2. Collaborative projects, update of proposals, indication of possible project consortia.
3. "LIFE" contact for assistance in creative sound
4. Information from Danish Sound Cluster
5. A.O.B.

Ad 1 Proposals for Webinars & In-Person Events

#	Subject	Background
5a	**"Use of Immersive rooms"**	**Timing:** June 13, 2023 **Focus:** Use of Immersive rooms **Background:** Several R&D environments in music are currently building ambisonic sound facilities (full-sphere surround sound laboratory rooms). Approaches taken vary. The first event will be based upon early experiments and use. After ½-1 year we can follow up on progress made, and possibly include more players. **Speakers** (have been confirmed) • Bjørn Jacobsen – Cujo Sound, Rev Rooms, etc. • Lars Tirsbæk – Sonic College, UC Syd • Jesper Andersen – The Royal Danish Academy of Music • Hans Peter Stubbe Teglbjærg – The Royal Danish Academy of Music **Event will be transmitted later today.**
9	Use of sound in museums	**Focus:** Use of sound in 'story telling' at museums. **Timing:** Preferred timing for webinar is end of August of 2023. Then it can in addition serve as a teaser for 'Sonic Days' in September and for a possible full day "theme day" later, an international conference, possibly early 2024 (with Alcina Cortez, Portugal). **Situation today:** Sound in museums is used in many 'flavors' and with quite different approaches. Often the background and understanding for adopting a sound strategy is not well founded, sometimes just based on a concept "someone offers for sale". The program is almost ready, but still lacks some involvement of "museum-people". Anders Stouenborg is active trying to include such participation. **Potential Program:** 1. **Use of sound at the Viborg Museum**, v. **Birgitte Folmann** 2. **"Escape" ("Flugt" in Danish).** 3. A technical review by an experienced advisor, **Anders Jørgensen, Stouenborg ApS.**. Inspiration may also be found in the conference: "Sound, Language & the Making of Urban Space" (August 24 &25 , 2023), https://lydenafhovedstaden.ku.dk/nyt-fra-projektet/2023/sound-language--the-making-of-urban-space-programme/ . Pedro will coordinate the efforts.

#	Subject	Background
11b	Podcast tools, approaches, and support with emphasis also on 'gender'	**Event type** (under consideration): • Physical event, if we feel, we can bring enough people together. **Venue** (in case of a physical event): • 'Lydens Hus', Gl. Kongevej, København **Timing:** • After summer holiday of 2023 (H2, 2023) **Focus:** '*Innovation in podcast production'& innovation in getting people into podcast production – how can technology lower the barrier for people to go into podcast production.* **Audience** • **People with little background** in sound engineering but aims at podcast production. • **Solution providers** for podcast generation • **Experienced people** in podcast production and knowledge of the difficulty in supporting a user segment that has ambitions for podcast production but limited background in the area. **Aims**: • "Democratize" podcast production in general. • Address the "Storytelling" market. • Obtain symbiosis between podcasters and audio people. Remarks: Moving away from the original idea slightly, and towards the topic of "Which audio technologies and tools exist to help create better sounding podcasts?" **Program:** • *Nomono* - sound recording kit and AI-driven DSP • *Nick Dunkerley-* about audio editing and how Hindenburg has created this community where everyone can learn more about how to create good content. • *Center for Podcasting* - to speak about podcast hosts, platforms, tools, networks, facilities etc. (They work with Lydens Hus, Lake Radio, Podcast Pusher etc). What about the Podimo platform? Possible people for discussion part: Stacey Goers, Acast **Status:** No progress since our meeting in April. The secretariat must coordinate the date with Nick.

#	Subject	Background
11c	Story telling in Podcasts (balanced on gender) **New Theme, follow-up to 11b**	**Focus:** Follow -up event on Podcast tools (see 11b) **Audience:** **People with little background** in sound engineering but aims at podcast production, and where the story telling is the prime focus. The audience for this theme is not our traditional audience of technically oriented people. Instead, here we need to address an audience of more novices in terms of technical background. To reach out to such an audience, it is mandatory that we identify organizations that can assist us in connecting to such audience, e.g. through linking up with such other organizations through their newsletters, web-info, etc. in relation to the specific topic. **Contributors:** - Center for Podcasts (www.centerforpodcasting.dk) - SDU, Podcasts - Others? Not discussed in the meeting due to absence of key people on the topic. To be discussed in future meetings
12b	Using game audio engine in other applications than gaming	Discussion in the working group has revealed the opinion that there is a general trend in industry on use of 'game engines', but in no way unique in relation to a "sound" agenda. Consensus that using game engines dedicated to sound applications, including 'sound-scaping', may prove a potential for events in a sound-related context. For an event we can focus on two separate directions: - Creative outcome: What are people creating in audio using e.g. Game engines? - Technical focus: What can various technical platforms offer? Past experience shows that if we are to attract many people to an event, we need to have focus on the technical opportunities, e.g. what can tools like 'Unity', Microsoft 'Project acoustics', Frauenhofer, etc. offer. A strategy for an event may be to focus on the technical tools, e.g. Unity, and then garner the technical focus with examples of creative solutions obtained by some people, i.e. a hybrid approach building on technical performance and illustrated through some convincing examples. . **Possible contributors:** - Shelley has been In contact with potential speakers: Daniel Hofmann ? People at Microsoft and Frauenhofer, - Nikolas Borrel-Jensen, DTU currently involved in machine learning. - Yann Coppier: Is at the bottom of using it. Could be a source of identifying more players in the area and if it develops further. The secretariat will continue to search for contributions.

#	Subject	Background
18	Use of sound by artists	Eddy has worked on creating an event, where artists are talking about how they use sound, what tools they use for creation of sound, and what challenges they face in doing so. **Potential speakers:** • Jonas Olesen, author of the book "Pionerer og outsiders" (on Danish electronic music) • Eliza Bozek, Independent artist, e.g. using voice cloning in her sound scapes. • Nanna-Karina Schleimann, uses her own voice in acoustic set designs/sound set designs. She also uses binaural technology for her performances. **Timing:** 2023, H2, possibly October **Challenge:** In working with artists, often freelancers, we face a challenge. We are up against a pecuniary challenge. DSC policy is normally that we do not pay a fee for contributing in events. But freelancers make a living from their work in relation to passing on experience and are therefore challenged. Professional organizations in the field recommend fees for their members. The matter is generally political. Therefore, it will be taken up at the next strategy meeting of the DSC board with the aim of finding workable solutions, incl. seeking outside sponsorships to cover costs in cases where freelancers are involved. **A reference:** https://dmf.dk/tariffer
19	Audio description ("synstolkning" in Danish) **New Theme**	**Background:** Audio description is a means to inform individuals who are blind or who have low vision about visual content essential for comprehension. A narrator (audio descriptor, AD) handles key visual elements of live theatre, television, movies, museums, and other media to enhance the enjoyment primarily by blind and visually impaired consumers. AD describes body language, expressions, and movements, making a program clear through sound. Previously the topic area has been a niche topic but is becoming mainstream in recent years (possibly supported by emerging US and EU legislation? - although not yet enforced). A parallel domain of use has for some years been available to assist blind people in use of websites, e.g. solutions by Danish company 'SiteImprove'. (WCAG 2.1). Many modern types of equipment, e.g. coffee machines employ soft touch buttons rather than classic mechanical switches. This has made life for blind people more difficult. Audio Descriptors could be used to overcome challenges in such applications. **Proposed speakers:** Stein Erik Skotkjerra, personally blind, has years of experience in how use of websites can be improved for blind people. He can provide insight on audio support. Has his own consultancy company in Aalborg and Copenhagen. Not discussed in the meeting due to absence of key people on the topic.

#	Subject	Background
20	Inclusivity, a way to bridge diverse abilities **New Theme**	A webinar aiming at using sound for inclusion of people with different handicaps. Possible speaker: • Doga Cavdir, Ph.D at AAU-CPH, Shelley plans to speak to Doga Cavdir again after her PhD defense (on this topic). Doga Cavdir is keen to lead the event and provide ideas for other speakers. However, as of now, Shelley has not had the opportunity to speak to Doga Cavdir. Postponed until next meeting.
21	Immersive Audio **New Theme**	**Background**: At present, a lot of words appear on immersive audio, but what are people actually doing in relation to immersive audio? What happens in Cinema sound: Rune Palving? People claim they are using ATMOS, but what are they really doing in relation to ATMOS apart from employing an ATMOS encoder? What is the future of immersive sound? Now we seem to have no rules, only ATMOS, and that could be seen as a lack of rules. If sound passes through the ATMOS encoder, it is ATMOS? In past use of surround sound, 5.1 we at least had rules on how to organize, evaluate sound scapes, etc. Status on current expectations on the future of immersive audio, which direction are we moving in terms of content? Many papers on immersive audio appear from Academia, and in many academia set-ups they often have very fine environments for immersive audio. However, what actually happens in productions, what facilities do people have once they leave universities and production schools? A detailed discussion on the theme awaits until after the the event on Immersive rooms, June 13, aiming at avoiding overlapping. Will be on the agenda for our next meeting.

#	Subject	Background
22	AI created music and the threat to artistic generated music. **New Theme**	New music tracks can be artificially created using AI based tools like Boomy-AI. Simply use a number of keywords that describe the direction in which the result should go. The new music tracks can be created almost instantly and can then be put online and streamed. Apart from creating a major challenge to traditional artistically generated music, it also distorts the business model for music streaming. When AI generated music is put onto a streaming service, the people that used AI to generate the music, are entitled payments, although they basically have not been artistically creative in the generation. Spotify, the world's largest music streaming service has recently removed more than 7% of all music tracks that were generated by Boomy. More than 14 million tracks are believed to have been created by Boomy, so it is a substantial problem. How concerned should we be about AI generated music, and what needs to be done? The discussion revealed that the topic is of high interest. Developments in the area are so fast at present that it is difficult to keep track of the current status. Sonic College also plans discussion themes on the topic during 'Sonic Days' in September, so we may be able to piggy-back on some of their findings. The use of AI in sound generation certainly has its pros and cons. Many artists are looking intensively to using AI as inspiration for new music generation. Others see a threat. AI is already used as compositional method and material. AI has since some time been in use for noise cancellation, and AI is increasingly used to support novice users employing camcorders in the field (their poor-quality recordings can be greatly improved using AI tools). Many tools already exist for AI support. For example, 'ChatGPT can be used for text-to-sound generation, Adope has a tool for significantly improving poor audio quality – even to a level of studio quality, however, often at the cost of losing parts of the original voice characteristics. AI generated sound/music offers opportunities but also challenges. Ethics is one major issue. *Deep fake' sound, voice scams, stealing people identity raises legal issues. Ethics could be a webinar in its own right, but even for a more general webinar on AI generated sound/music, we ought to have at least one presentation on the theme of ethics. Potential contributors: • VEGA concerts (Eddy) • Eliza Bosek (artistic approach) • Christoffer Ørum (artistic approach) • Tool provider (e.g. ChatGPT, Adobe, etc. Theme and focus to be discussed further at the next meeting. Working Group members are encouraged to table names of people that can participate in a webinar.

Ad 3: "LIFE" contact for assistance in creative sound

We have been approached by "LIFE Foundation" https://life.dk/om-undervisningsinitiativet-life/life-campus , a Danish business foundation with a non-profit purpose. The LIFE Foundation has two purposes; to increase science education, training and research, and to strengthen motivation and interest in science among children and young people.

The LIFE Foundation supports education and research initiatives in natural, technical and health sciences as well as subject didactics. The LIFE Foundation can also provide support for other non-profit educational and scientific purposes.

The LIFE Foundation is supported by the Novo Nordisk Foundation. The organization runs on a a 10-year budget and currently has about 125 employees.

LIFE has taken an interest in 'audio/sound' and plans to use 'audio/sound' in high school education to create more interest for natural science, i.e. STEM disciplines (Science, Technology, Engineering & Mathematics). The ambition is to create interests among young people so that many will change from 'Level C' to level B or even 'Level A' in high School education ("Gymnasium".

Birger has had meetings with the organization and introduced them to the work of Danish Sound Cluster. They have expressed interest in what they define as "creative sound" and asked for recommendations of people that can talk to/use in their development of a strategy and material. In their minds they would like to engage with companies, and we have added that also educational institutions like universities and profession schools could be of much assistance to them. Can we help them?

The discussion revealed consensus on the idea of supporting LIFE. It was stressed that it could also serve well in a gender strategy to get more females involved in the STEM disciplines. It was stated that possibly we should refocus to a STEAM strategy, where the "A" stands for "Artists". Institution to propose for a collaboration could be Sonic College, IT University, AAU- CPH. Of companies e.g. DPA microphones could be an interesting partner, helping young people to understand the 'power of microphones'.

Other names and links that popped up during the discussion:

- Malle Kaas
- https://www.shecanplay.dk ,
- https://jazzdanmark.dk/artikler/interessen-jazzcamp-piger-er-storre-nogensinde
- https://www.vega.dk/

Next meeting

Wednesday October 04th, 2023, 10:00 to 11:00

Appendix 1: Participants in the meeting

Birger Schneider	CHAMAJ Consult ApS	Director/owner
Eddy Bøgh Brixen	ebb-consult	Consultant, owner
Lars Tirsbæk	Sonic College - UCSYD	Lecturer
Joakim Moe Jensen	DR	Area managerr, DR equipment & Studio OB Production
Stina Marie Hasse Jørgensen	ITU	PostDoc
Pedro Costa	Danish Sound Cluster	Project manager
Shelley Livingstone	Danish Sound Cluster	Project manager
Torben Vilsgaard	Danish Sound Cluster	CEO

Appendix 2: List of potential Themes

Addressed or proposed in previous meetings. For the time being placed on the list of potential topics until topics have matured - or been better identified.

#	Subject	Background
11a	"Women in sound engineering" Electronic sound & music	**Background for theme:** General challenge that we have a poor gender balance in audio areas, i.e. too few females. Events will be inclusive/open to everyone but aim at a better balance in gender.
13	Dubbing challenges II	Efficient tools are available and the market for such tools develops fast in current years, supporting improvement of even poor-quality audio raw material. However, the entire scene of production is changing rapidly, and a webinar could focus on: • **The professional market of tools.** (entire work process is supported using new tools such as Adobe Premier, Avid Media Composer, Black Magic editing, etc.) • **A more general tool market** for less skilled users lacking deep audio engineering background. • **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.
14	Ethics in audio production	Ethics is becoming more and more important – also in relation to audio generation (risk of "deep fake" exists). Several cases of restricted sound exist. In general, if sound in relation to documentation is compromised through reconstruction, "hell breaks loose". Involve documentarists in radio/TV production. In a metaverse world, we might imagine a fully immersive, hyper-realistic virtual world that caters to all our senses. General agreement that challenges related to ethics in sound will become a more and more vital issue. Various types of AI support will allow creation of virtual sound, for example creation of voices of deceased people or other types of virtual sound creating. Ethical challenges follow naturally in the wake of many technological developments, and the use of AI in sound is no exception in this regard. It is crucial to start the debate early in this development, so that the area does not develop into a Wild West area. For example, the Danish association for Speakers and Readers, www.Danishvoices.dk are concerned with the situation on voice cloning. **Possible contributors:** • Anders Kjærulff, Danish journalist, radio host, debater and lecturer • Brit Ross Winthereik, DTU, professor in the Division for Responsible Innovation & Design, • Danish Voices • ETHOS lab, ITU • Morten Holm, tonemeister. mobile: 4019 2627 • Kyogu Lee, Professor, Principal Investigator,

Appendix 3: Working Group Achievements:
Events, proposed and developed by the working group

#	Title	Comments	Event type	Date
1	Creating sound for VR applications		Webinar	September 30, 2021
1	'Sound in virtual/augmented reality' (VR/AR)	Workshop at AAU-CPH	Workshop	February 24 2022
2	Dubbing challenges		Webinar	March 29, 2021
3	5G technology in Proaudio		Webinar	September 2, 2021
4	Audio AI – State of the art and perspectives in spoken document understanding		Webinar	June 16, 2021
5b	Bringing creativity into your engineering work		Webinar	April 26, 2022
6	Intelligent microphones		Webinar	February 23, 2022
7	Multichannel headphones		Webinar	January 11, 2022
10a	NGA ADM Immersive delivery		Webinar	February 8, 2022
10b	ADM Technology		Webinar	February 15, 2022
12.a	Audio in Games		Webinar	October 27, 2022
8	Acoustics in Open Plan Offices		In-person Event	March 23, 2023
17	Haptics and Bone Conduction		Webinar	April 13, 2023
5a	Creative Use of Immersive Rooms		Webinar	June 13, 2023