Danish
Sound
Cluster

Summary: "Creative Sound Solutions" – Meeting #17

The working Group meeting #17 took place Tuesday, December 4, 2023, 14:00 – 15:00

Agenda:

1. Presentation of Jeppe Lindegaard, new Program Manager at Danish Sound Cluster
2. Webinars & Physical events during 2023:
    a. Follow-up on proposals and ideas from meeting # 16 including additional comments and proposals.
    b. Proposals for possible speakers
    c. New themes?
3. Collaborative projects, update of proposals, indication of possible project consortia.
4. Information from Danish Sound Cluster
5. A.O.B.

Ad 1   Proposals for Webinars & In-Person Events

#	Subject	Background
9	Use of sound in museums	**Completed on November 22, 2023** **Speakers**: 1. Johan Ahrenfeldt, Manager of Exhibition Technology Moesgaard Museum 2. Jesper Harding, CEO at YOKE, Exhibition and Experience Design 3. Alexander Rye Sound Designer and Multimedia Artist 4. Kamilla Hjortkjær, Curator Greve Museum, PhD at RUC Good participation from museums, probably 40-50 participants from this focus group. Agreement that we should aim at a follow up event, see new topic proposal
12b	Using game audio engine in other applications than gaming	General trend in industry on use of 'game engines' is focused on "virtual video applications", only moderately used in sound applications. Planning meetings with the speakers have taken place. **Event date:** April 20224 (sometime during first 2 weeks) **Timing:** 19:00 – 20:00 hrs (challenge, one of the . speakers live on West Coast USA) Timing is a challenge, but we will try this out. **Speakers:** • ***Simon Ashby, Audio Kinectic*** Will address 3D sound, and where we are heading in the future. • ***Alexander Adami, Frauenhofer*** (MPEG 4) • Nikunj Raghuvanshi, Microsoft also a more technical presentation. **Jeppe proceeds with the efforts of organizing the webinar event.** In earlier discussion on the topic, we concluded that solutions do not yet meet expectations. May be that is changing now?

#	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:** 2024, H1. **Challenge:** Clarification on whether DSC can pay for speakers in artistic focused events is still an open issue? A reference to artist fees**:** https://dmf.dk/tariffer Discussion on the topic was postponed to next meeting, since Eddy and Joakim could not be present in the meeting.
19	'Audio description', also referred to as 'visual description' or 'video description' ("synstolkning" in Danish) **New Theme**	**Background:** Audio description is a means to inform individuals who are blind or who have poor 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. The topic area is shifting from 'niche topic' to 'mainstream' (supported by emerging US and EU legislation? - although not yet enforced). Many modern types of equipment, e.g. coffee machines employ soft touch buttons rather than classic mechanical switches. Difficult in use for blind peoplet. Audio Descriptors could be used to overcome challenges in such applications. EU Directive imposes requirements related to audio descriptions (Directive (EU) 2019/882, European accessibility act ?). It applies broadly to public service channels, video network municipalities, etc., but is not yet fully implemented in national laws (to be enforced by 2025?) **Potential 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. - Gavin Kearney. York University, R&D in visual descriptions (Rune) - Brian reports the audio descriptions is an emerging challenge to many in the broadcasting communities (Brian will look for possible candidates). - Jenny Lay-Flurrie - Microsoft Chief Accessibility Officer ? No progress from previous meeting. Jeppe will contact Nick Dunkerly before next meeting, and we will then address the issue again.

#	Subject	Background
20	Inclusivity, a way to bridge diverse abilities.	A webinar aiming at using sound for inclusion of people with different handicaps. Possible speaker: • Doga Cavdir, Ph.D at AAU-CPH, Email: doga.cavdir@gmail.com, https://www.dogacavdir.com We need to identify an event where this can fit in. May be related to pos. 19 or "Women in sound engineering". Postponed.
21	"Immersive Audio" **New Theme (general)**	**Background**: At present, many buzz words appear related to immersive audio – and many misunderstandings exist. Request for ATMOS content, but many studies only support "old 5.1 techniques", etc. Two important dilemmas in relation to immersive audio: • How can we get creators of music and film to think "immersive" in their planning and development of sound strategies? • How are ATMOS and similar immersive audio solutions received at the end-user? More formats support immersive audio. Dolby's ATMOS dominates, but other formats like SPACE MAPS, MPEG 4 (Frauenhofer) and others are also in use. Transfers between formats can be obtained using ADM. **Potential sources:** • Sonic College. At recent "Sonic Days", immersive audio was addressed. Sonic College is deeply involved n the area and arranges 8 concerts per year related to this. Sonic College is willing to participate (Lars Tirsbæk) • VEGA offers ATMOS support. Sonic College cooperates with Vega on the topic and one of the Sonic concerts is given at VEGA. (Jeppe & Lars). • RADAR in Aarhus is another live event theater supporting 3D immersive audio. Cooperates with SONIC College. • SONIC College cooperates with "Jazz i Trekanten", http://jazzitrekanten.dk/forside/ also on 3D immersive sound. • DR has equipped its studios 2, 3 and 4 with ATMOS. Currently most focus on classical music, also in relation to DR Concert Hall (Joakim will identify potential speakers at DR). • BBC R&D efforts in relation to ATMOS (Morten to provide contact details) • Sharin Foo, Rytmisk Musikkonservatorium & "Raveonettes" lead singer (Stine) VEGA has experience in the use of 3D in live events. Contact Kevin at Vega (he has been involved in production and pre-production of 3D immersive sound events during 2023). He has worked with artists like Peder Albrechtsen, Troels Abrams, and others in the focus area. See https://www.vega.dk/om-vega/immersiv-lyd-i-ideal-bar/ It is proposed to focus on two events, one on *live music using Immersive sound* the other on e.g. **Broadcast: Classical music recording in 3D immersive sound**.

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#	Subject	Background
21	"Immersive Audio" Cont'd from previous page	See proposals: 21a "Immersive sound in Live events" and 21b "Immersive audio in Broadcast". **Comments from previous discussion** What are people doing in relation to immersive audio? • People claim they use ATMOS, but what are they really doing in relation to ATMOS apart from employing an ATMOS encoder? • What is the future of immersive sound? • Lack of rules, only ATMOS. If sound passes through the ATMOS encoder, it is ATMOS? In past use of surround sound, e.g. 5.1 we at least had rules on how to organize, evaluate sound scapes, etc. **Where are we now?** Many papers on immersive audio appear from Academia: • Many academia set-ups often have very fine environments for immersive audio. • What is the situation in production? • What facilities do people have once they leave universities and production schools?
21.a	**"Immersive sound in Live events"** **New Theme**	Here we could get contributions from: 1. VEGA: Practical experience in live events using 3D immersive audio in concert (Kevin: production challenges, artist and their willingness and ability to contribute) 2. "Jazz i Trekanten". This orgnaization cooperates with Sonic College and performs four of its annual 'live' concerts in Sonic College's 3D immersive room. Here, collaboration is achieved between amateurs, students from Sonic College and professional musicians, and there is a lot of experimentation with form and content. Contact: Jens Munch Contact with the target group can be supported with help from Sonic College, VEGA (Kevin), Music conservatories, Aarhus Sound Association, RADAR, etc. General themes of focus: • How Is 3D Immersive sound useful in live events? • What er the technical challenges? • What are the limitations? **Sonic College is willing to support in this event, Lars.**
21.b	**"Immersive sound in Broadcast"** **New Theme**	How is 3D immersive sound utilized in broadcast today? • DR is currently active in recording classical concerts in its concert hall in ATMOS. • TV2 seems to be running similar experiments.

#	Subject	Background
22	AI created music and the threat to artistic generated music.	**Completed 26 October, 2023** • **AI in Music & Sound**
23	Sound and Learning **New Theme**	Give children with reading difficulties better access to learning, so that they can submit their assignments in an audio format instead of a text format. Can "Folkeskolen" be strengthened in relation to sound and learning? First meeting of the initiative group in Struer on Friday 6 October, 2023.10.11 Is it a topic we should address in the context of a webinar? *Was postponed until next meeting, where Nick is present, and where he can report back on the discussions that took place in the Struer meeting.*
24	Follow up event on Sound in museums (follow up to event to "Use of sound in museums" transmitted on November 22, 2023)	Given the success of the first event we aim for a follow-up event. Some of the elements in a follow-up event could be: 1. **Danish Use-cases,** e.g. as originally proposed by Birgitte Folmann and Lars Tirsbæk, Sonic College. 2. **New content** from the international project collaboration on the theme between Sonic College and other international Universities (UK and others) Birgitte Folman. Sonic College also plans a conference on the topic in late 2024. 3. **Industry Challenge:** Why are no Danish Design bureaus involved in sound design related to audio guides, etc. Basically all work of this nature in Danish museums tends to be handled by Tinker Imagineers in the Netherlands. Tinker does an excellent job, but why do Danish design bureaus shy away? Possibly an issue for a panel debate. *Actions: Jeppe and Lars try to propose an event, possibly also call a meeting with Birgitte Folmann.*

#	Subject	Background
25	Sustainable "Live event" Industry	**Sustainable "Live event" Industry** How can we create sustainable concerts? Today, artists tour around the world with a large faith of musicians, speakers, processing equipment and the like. It's basically not sustainable. Can we do things in a different way? 'Taylor Swift' has e.g. chose to play her concerts in cinemas where good sound equipment is already available. Can it replace the big concert tours, and how will the audience experience the lack of atmosphere and excitement in "Live Events"? At the recent SONIC Days conference, Ralf Zuleeg, Director of Soundscape, D&B Audiotechnik, pointed out that we are doing things wrong by shipping large amounts of equipment and many people around the world for "Live-Events". It is not sustainable. Should we declare the "Live Event" with touring musicians dead? Jochen Sommers, Abrahamsen, stated that you don't need to transport the speakers around. You can use the local sound systems, but the processors must be brought around for "Live events", he thought. When you can do AI based concerts with ABBA, Elvis and others, can't today's artists also perform at AI concerts without everything having to be moved around? Topic for further discussion. Perhaps a "Debate event"?
26	**AI in Music revisited**	Follow-up to the webinar **on "AI created music and the threat to artistically generated music"** could revolve around two elements: **Workshop - physical event** Here the participants can have the opportunity to try out new methods, talk to others about challenges and be inspired. Contact is important. Could possibly be carried out as a "Teams" event, but a physical event is preferable. Stefania Serafin would like to make premises available for a physical event. Cumhur Erkut, , has recently held such an event at the music conservatory. Reported to have been successful. We could involve Cumhuhr Erkut in such a physical event. **Follow-up with a focus on new AI tools** Some in the design industry have already started to become redundant due to the use of AI. Lars reported on a couple of his former students who have been replaced by AI solutions. Adobe has recently come up with a new "drag & drop" tool that makes using AI simple, even for novice users. Possible to achieve "studio quality" sound, even if the sound is recorded on-site with poor quality. Can meet some of the challenges we have previously talked about in connection with dubbing. The release of the John Lennon's new song number on a Beatles release is another example. In Hollywood, Peter Jackson and Disney have been working for some time on being able to extract sound from mono recordings and from there create many new "mono channels". Still a bit of a secret. And what about descriptive AI tools such as Chat-GBT etc. similar tools for describing desired music and from this input into music generation tools. Yet another issue is "Virtual Concerts" with deceased and living artists are another area. To be discussed more at the next meeting

Next meeting

Tuesday February 27th, 2024,   14:00 to 15:00

Appendix 1: Participants in the meeting

Birger Schneider	CHAMAJ Consult ApS	Director/owner
Lars Tirsbæk	SONIC College	Lecturer
Stefania Serafin	AAU-CPH	Professor
Jeppe Lindegaard	Danish Sound Cluster	Project manager

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	Proposers
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.	Stefania Serafin, Shelley Livingstone Stine Marie Hasse J Sofia Dahl (AAU) Lars Tirsbæk Eddy Bøgh Brixen
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.	Lars Nørretranders Nick Dunkerley, Morten Brandstrup
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. • Kyogu Lee, Professor, Principal Investigator, see also http://marg.snu.ac.kr/marg_people/	Lars Nørretranders Lars Tirsbæk Nick Dunkerley Morten Brandstrup Rune Palving

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
11b	"Podcasting – Technology and Potential		Webinar	September 06, 2023
22	AI in Music & Sound		Webinar	October 26, 2023
9	"Use of sound in museums"		Webinar	November 22, 2023