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ITU/WHO WORKSHOP ON SAFE LISTENING IN VIDEO GAMING AND ESPORTS

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July 4, 2024.

(Captioner standing by).

July 4, 2024.

>> Hi, Sarah. Just testing the captioning. Hopefully it's going to work. I see that you have. Yes. Perfect. It's showing up. Thank you very much.

(Captioner standing by).

>> Hi,,.

Can I just ask you to go further down the line to test the captions we have integrated here in the ITU. Just a second. I'm going to hide this. Yes. This is great. Two lines here showing. Thank you very much. We're ready.

(Captioner standing by).

>> CHAIR: Good morning. We would like to open this new edition of the series of workshops that ITU and WHO are organizing in progressing this new standard for safe listening in video gaming and esports. We had the last edition of this during the Study Group 16 meeting in April, where we made I think pretty good progress in terms of collecting inputting and improving the existing draft.

In the meantime, WHO Team has worked further on the text with those comments with addressing and also identifying a few other issues. The purpose of the workshop today is to be, you know, open to members and non-members to collect views on how we can further improve the draft that we plan to put forward starting for approval process in January in the next Study

Group 16 meeting.

All right, so Shelly is whispering here that we could try to do that in the August meeting as well, so yes. Let's see how it goes today with the inputs and preparing the document. All right.

So we're going to run the agenda on the website. It's a very simple agenda. We're going to review the baseline text. I'll let Peter and Shelly run the show for this to drive us through the process. I don't know, Shelly, if you would like to say a few words before we start. I understand that we're going to start with a presentation that Peter has. Shelly, if you want to say hello to all.

>> SHELLY CHADHA: Good morning. Good afternoon. Good evening to those who have joined remotely. A very happy Independence Day to those who have traveled all the way here from the U.S. and also those who are connecting remotely despite it being a holiday in that country.

Very welcome to this, what we hope will be nearly the final version on our workshop on it's Global Standard for Safe Listening in Video Gaming and Esports.

Today we are here to really go through the document and its recommendations and tweak any issues that are still outstanding and come to some decision or agreement on points that are still not settled. We hope to move towards closing this standard, which we have been discussing now for over a year, and to move towards its approval, hopefully within this but at the very latest at the beginning of 2025.

I'd like to give you some brief updates from WHO, just a few points to share with you before we go into the business end of this meeting, which is of reviewing the document, going through it, and receiving feedback and inputting from everybody who is present here.

So, firstly to talk about a survey, actually. Next slide, Peter. A survey that was undertaken by a partner organization, which is American Speech and Hearing Association. So American Speech and Hearing Association, earlier this year, launched a survey with the help of a professional survey-conducting agency. It was done in U.S., Brazil, and Japan which have some of the largest populations of video game players. So a polling survey was done in the three countries with 500 participants in each of these 3 countries to get further insights into the game play attitude. That was one part. But also what we wanted to discuss is the features we have been proposing and discusses. We want to really see the responses from players with respect to these features.

These findings, it was a very, very interesting survey

and you will see that some of those findings are also reflected in our current draft, or rather the impact of them is felt in our current draft, as you will see. They're still under embargo because American Speech and Hearing Association who has collaborated with us to do the survey will be doing a public release with a press release and so on in the middle of July, so stay tuned for that and more to come there. Next slide, Peter.

The other thing that we wanted to share, for those of you who missed that information, we had an online meeting with which was an open public-facing meeting, really just to get people's comments and their feedback, and to also inform them that WHO and ITU are working on the standard, but very much more importantly to get feedback from them on the various features that have been included in this standard.

So, this was on 26 of June. In case you were not there and you would like to know more about it, we are happy to share links to this meeting with you. Brian was there as well as Masahito and Simao. Next slide, please.

The other thing that I would like to share with you is probably an update from the ITU side that there will be a World Telecommunication Standardization Assembly in New Dheli of October this year. 15 to 24 of October, where a large number of delegates are expected there. New Delhi.

It will be accompanied by also the Indian mobile Congress where we expect over 10,000 people, delegates from the communication sector to be present. And during this Indian Mobile Congress, we plan to host WHO along with ITU, we plan to host a panel discussion on changing the narrative, applying mobile technologies for hearing conservation. This is planned for 17th of October. If some of you are going to be there in this meeting, this is a promo for you to join and also potentially to let us know if you are going to be there and be part of the panel. If you're not planning to be there, we invite you to join. Can everybody come to the session? It's an open event, so you're very welcome to join us. For this event, it will be held in one of -- in New Delhi and in one of the new really conference venues, so it should be an exciting event. Next slide, Peter.

Lastly, to say that we have been planning to meet, to convene a meeting, a WHO/ITU stakeholder consultation, similar to what we had in 2023 that many of you came to, July 2023 at WHO. And as of now, the plan is to host it early next year, potentially in January if we can find good dates in January when everybody is available, ITU, WHO, and our rooms and so on. If not, then that would be in March of 2025. That is just an

update from our side to you. I pass it back to you, Simao and see if there is anybody else who would like to give any kind of update.

>> SIMAO CAMPOS: Thank you, Shelly, for this overview and update. Yes, I don't know if there are any questions for clarification for Shelly? In the room or remote? For remote, if you want the floor, just raise your hand and I'll try to monitor that for those requests.

Seems not. In that case, I don't know, if Masahito, you want to say something? No? Okay. Then we can move to the important part, Shelly, how do you want to do that? Shelly, you display the document? Yeah. Maybe before that just to show the agenda for today. Let me just display myself the screen.

So, here we have the website page, the main. In the bottom part you can find a link to the program, which was uploaded yesterday. So, we have basically concluded a little bit in advance the Session 1, the opening and we're going straight to Session 2.

You go up to 10:45 where we make a short coffee break, resume at 11:15 and then continue with the review of the draft. We stop for lunch for two hours, and in principle we can agree to do that slightly different since we don't have any dependencies, we can adjust that if need be, in principle from 12:30 to 2:30. And then -- actually, no, 2:30 -- we have to respect 2:30 because of the captioner, so we should come back at 2:30 for captioning part. And then 2:30 to 3:45. A break at 3:45 to 4:15, and then we close the day at 5:30 and resume tomorrow at 9:30 again can. We run the workshop up to with a coffee break with the same times but run until 12:30. Then in the afternoon, we're going to have Question 28 online meeting, but I suppose that those that are physically present here, we can gather together in the same room and continue discussions there.

Okay. This is for these two days. I don't know if you have any questions on that? This is the program that is on the website. All right. Not seeing any requests for the floor. Let me just doublecheck remote.

Shelly is suggesting a short round of introductions. Maybe we would like to do that. For those in the room, maybe starting with Masahito who didn't speak yet. Mass.

>> Masahito: Good morning, good afternoon. I'm mass heat oa, Study Group 16, International Telecommunication Union and I've been working with Shelly and WHO for close to 10 years already, I think, on safe listening (masahito Kawamori).

We start on the floor, Peter and go around. Pete,

please. I'm sorry, Karl. I must apologize, in my 60--year-old brain I have Peter for Sony. It's hard-wired. I don't know. I'm sorry.

>> Karl Brooks: Karl Brooks from Sony. Based in UK. Been with this group a number of years now. Nice to be here. Thank you.

>> SIMAO CAMPOS: Just one note, for those in the room, so can you hear better make sure that you wear the ear piece and you can control the volume with the controls in front of you in case you're not familiar with the system. Okay. I'm sorry.

>> Melita Mo: Global Vice President.

>> Brian Schmidt, global video game consultant from see altses Washington.

>> TatianaS, lead spokes person for the global video game coalition. Thank you for having us.

>> Hello. Head of esports, video games Europe, based in breakthroughs Brussels.

>> Michael S, chief from Meta Platforms in United States.

>> Hello, my name is -- good in my name is Cari Chow, accessibility, I worked with Masahito before on Project for World without barriers. Please to meet you. Thank you for having me.

>> Good morning, everyone. Carolina, Technical Officer at WHO and part of Shelly's team.

>> Hello, everyone. My name is Karmina from ITU-T SB. Thank you.

>> SIMAO CAMPOS: Thank you. Now the remote participant, maybe start with Peter.

>> PETER MULAS: Just glad you didn't call me Karl. I'm Peter working with Shelly with WHO and been with the team for about 18 months.

>> SIMAO CAMPOS: Thank you. And then, let me see, Mark, please.

>> MARK LAUREYNS: Hello. Thank you for the invitation. This is Mark LaureyNS from Make Listening Safe and world hearing professionals from Brussels. Wish you a good meeting.

>> SIMAO CAMPOS: Thank you.

>> DORTE HAMMERSHOI: Professor at ail bored University and serve for technical committee for hearing loss and hearing loss prevention.

>> SIMAO CAMPOS: Thank you. Richard.

>> RICHARD GLOVER: Richard Glover from LimitEar been in the group for some time, and also one of the TC108X groups WG03 which is dealing with the same subject. Thank you.

>> SIMAO CAMPOS: Thank you. Let me see. I have -- we

have someone from Myanmar Electronics, sir, please or madam, yes, sir? You're muted.

>> KYAW HTET LIN: Hi. From Myanmar electronic sports federation in Myanmar. I'm attending this online meeting on behalf of our Vice President Dr. Lin. My name is Lin Htet, general secretary for esports in Myanmar. Thank you.

>> SIMAO CAMPOS: Thank you. Mr.-- I cannot see the full name, unfortunately. From Sony, please.

>> SHOHEI YAMAZAKI: Hi, everyone. I'm Shoehi from Sony. Based in Japan. Thank you.

>> SIMAO CAMPOS: Thank you. I think we had everyone presented. Yes. Thank you. So, that was our introductions so we can see who is contributing their voices to this meeting. So maybe I would let then to sharing rights, I don't know to you, Shelly? So I stop the sharing?

>> SHELLY CHADHA: Thank you, Simao. I will share my screen and the document that is the main point of discussion today.

So, we start with the changes that we have made. So last time we came to a fair agreement on many of the issues, and we worked then on the output document from that meeting in order to revise it. So, starting here and we will leave the issue of the name for the end of the day as it is listed in the agenda, but starting from the top. There are a few changes that have been made just in the introduction and background to align it more with WHO's current documents and our communication products so as to have it in line with those. A few editorial edits were there.

I think the main thing for us to look at again is the scope. So, we did not make significant changes be from the scope except to remove from it. That is to say that this document provides safe-listening guidelines for device, video titles and audio game peripherals for the purpose of video game play either in home entertainment or esports context. Devices include video game consoles, handheld, or mobile devices and personal computers, headphones and headsets, and since audio peripherals was already mentioned in the earlier sentence, we removed it from there just to make it better.

These guidelines are designed to ensure auditory health and prevent hearing damage for game players across a wide spectrum of scenarios and equipment. That is the scope as it stands currently. We want to hear now if there is any further comment or concern about the scope, we would like to hear it now.

>> Serge from Europe. We don't have any concerns about the scope. We have a couple of about the summary and

introduction that we is send later or discuss now.

>> SHELLY CHADHA: We can discuss now.

>> Okay, so in the summary, the second part of the first sentence is very confusing. It says the standard is aimed also to people involved in esports and video game play, which would be very broad and actually incorrect. There is people involved in esports such as production staff or online referees or programmers, which of course, this standard is not in that, so we suggest that the first line reads, this standard is aimed at reducing the risk of hearing loss among video game players.

(no audio).

>> SHELLY CHADHA: Amongst video game players and what was the next comment you made?

>> (Speaking off mic).

>> Apologies. The second part of the sentence is too broad and would be incorrect. Marketing people and programmers are involved in game play but the standard is not aimed at them. Esports players does not make any sense. It's video game players. If you want, you could use esports participants, but there are no esports players. People do not play esports. People play video games. There are esports participants.

>> SHELLY CHADHA: But esports participants would be very broad and doesn't include only those who are playing the esports.

>> We don't considered audience participants. We consider audience, esports audience.

>> SHELLY CHADHA: Okay. Anybody else with a comment on this?

>> DORTE HAMMERSHOI: Perhaps a solution is esports participants being exposed to the sound of the game.

>> SHELLY CHADHA: Thanks, Dorte. We could perhaps put that -- that is the basic premise, that is why we're preventing the risk of hearing loss. I don't think that helps. If everybody is okay with esports participants, that's fine with me. Yeah. Okay. Karl, Melita and Serge.

>> KARL: I'm happy at the moment. I think it would be simpler for video game players because they're included in esports, so I'm happy with esports participants as well.

>> SHELLY CHADHA: Karl, you're happy with participants but you would prefer to say players? Is that correct?

>> KARL: I would prefer video game players, full stop.

>> SHELLY CHADHA: Melit remark.

>> MELITA: I agree with video game players, because esports people are people involved in esports. We're taking that out. Just hearing loss among video game players. I'm all right with that.

>> SHELLY CHADHA: Okay. Serge?

>> SERGE: Yes, of course. I mean we've been saying that, but esports participants are video game players since day one, so it makes sense.

>> SHELLY CHADHA: Okay. Is everybody okay with this? The standard is aimed at reducing the risk of hearing loss amongst video game players. It is aligned with the principles of sound levels, exposure measurement and communication outlined in ITU-T H.870. Dorte, you have a comment?

>> DORTE HAMMERSHOI: Yes. Thank you for allowing me also to participate and comment on this because I haven't been part of the work so far. I'm just considering, what about the participants that are being knocked out and then will participate still as spectators to the game. Sometimes in environments with relatively high levels. So that's why I thought the definition of just defining it as individuals who are being exposed one way or another to the sound from the game.

>> SHELLY CHADHA: Okay. Tatiana.

>> TATIANA: We also support the current wording that we stop after video game players. Because that's also a question to you. We understand that spectator, of course, are covered by another standard on venues and events so that would already be covered.

>> SHELLY CHADHA: I think Dorte is referring to players that are then inactive, not so much spectators, but if they're out of a game and inactive. Is that the right understanding, Dorte?

>> DORTE HAMMERSHOI: Yes, exactly.

>> SHELLY CHADHA: Yeah. But there are features. So let's go through the document and you will see that there are feature, and that we have certain provisions. They are still considered, even if they have been knocked out, they are still players. They were playing the game, so they are still part of this standard, and there are certain features proposed to limit exposure. Brian?

>> BRIAN SCHMIDT: I would just like a clarification. I understand that you talk about like a game player who is then quote/unquote spectating but part of the game experience. Is she talking about, for example, somebody watching an online tournament at home purely as a spectator, or is that not what was being considered here?

>> SHELLY CHADHA: Dorte, do you want to respond this.

>> DORTE HAMMERSHOI: No, not the ones sitting at home. The ones that were participants on a team and then still listening into the game wearing the headphones they were using

while they were active in the games. It's more that concern.

>> BRIAN SCHMIDT: Thank you for the clarification.

>> SHELLY CHADHA: Yes, please in the back. I'm sorry, I didn't catch your name.

>> That's okay. This is Cari Chow. I think in this case helpful to put a clause somewhere, after we mention players, comma, active or inactive, something like that. There is a status. I get it from Dorte's appointment adds well. It's quite key. Here they were players but they are inactive like you mention before.

>> SHELLY CHADHA: When we say players, we are really -- it's a comprehensive definition and you will see that in the feature, it's not that we are ignoring those who are inactive. So, I don't think it needs to be specifically mentioned, then we can mention ages and so on and so forth, so there could be a lot. Okay. Dorte, your point is well received, and if there are other things where you feel that we are missing people who are inactive, we can please feel free to comment.

>> BRIAN SCHMIDT: I concur that it's implicit in video game player that includes somebody because of the nature of the game, isn't actively making things happen in the game.

>> SHELLY CHADHA: Thank you. All right. Introduction. You said you have some comments on the introduction as well.

>> SERGE: Yes, a couple of comments. They are very minimal, I think, on the second paragraph. Fourth line. It says, including those used in electronic sports, esports. I would suggest to delete electronic sports and change be to or competitive video game player and then esports in brackets. The fact is that Internet sports, cyber sports, digital sports is through that in the origin in the 90s it was connected to competitive video game a play. But not anymore currently. They're heavily discussed categories that are going close to training hardware and software. I don't think that is the case for this video games. The phrase, including those used in video game play, brackets, esports, are not covered, blah, blah, blah. Video game play.

>> SHELLY CHADHA: Any objections to that? Melita?

>> MELITA: Do we just have electronic sports as the definition for what esports is for that's tho may not know what esports is? Is that the purpose of having electronic sports in this since the very beginning? Is that what this is for?

>> SHELLY CHADHA: No. It was to put electronic sports, which is competitive video game play. So the point is could we substitute electronic sports with competitive video game play, still retaining the sense or not?

>> MELITA: I would like to leave it and see where we go

throughout the rest of the paper and maybe come back to. It maybe I just need to read through the rest first.

>> SHELLY CHADHA: Sure. Dorte?

>> DORTE HAMMERSHOI: So just for clarification, what about games that don't have a video game component? Are they being excluded, and if then why? I'm thinking about audio only and virtual reality and other types of games. I know that these are very small groups, but we do have blind gamers as well.

>> SHELLY CHADHA: Comments from the floor? Brian?

>> BRIAN SCHMIDT: I have to doublecheck, but I think it's likely that the phrase, video games for the blind or blind video gamer are commonly used. I actually wrote a game, a video game for blind people, so I don't think that's going to be a problem. It's a little unfortunate use of terminology to talk about a video game at that has no video, but I believe that's terminology that we use, but I will look that up.

>> SHELLY CHADHA: Thank you, Dorte, for raising that. We will cross check it and make a point to follow up on that. Cari.

>> CARI: I'm sorry, I have a question. Is there a term for multimedia game play? I'm sorry for jumping in late with this? Just ignore if it's irrelevant, thank you.

>> SHELLY CHADHA: Comments from anybody on the floor about multimedia games as opposed to video games or video game play.

>> SERGE: The scope would be much, much broader, you would include things like I don't know, Simon, it could be a multimedia game. So I think that we are, yes, that the scope, it's a specific of video game devices and software, so multimedia.

>> SHELLY CHADHA: So we will leave this as such for now. We are making notes of the comments. Brian will get back to us.

Thank you. Any other comments on the introduction part?

>> SERGE: It's a final one. I promise.

>> SHELLY CHADHA: That's what we're here for.

>> SERGE: Last paragraph. For these reasons WHO and ITU have developed a universal standard for safe listening in esports and video game play. Of course, this would -- this is related to the title of the standard, but we would suggest deleting "esports and" because none of the features apply to the competitions themselves, which is how esports are defined in the standard itself. We would suggest deleting that.

>> SHELLY CHADHA: Can we put a pin in that for now, and welcome back to it. If anybody else has any comment on this,

please feel free to take the floor. Tatiana.

>> TATIANA: In the introduction, third paragraph, we would suggest adding one word. At the moment it reads from a public health perspective, video game play and esports expose game players. We would suggest adding the word "may" expose game players. I believe during the last round we added the word "may" in other paragraphs as well, so that will be consistent with the previous additions.

>> SHELLY CHADHA: Peter, I see you're making edits as well. Please make sure they're tracked when they're made. Thank you.

Any other comment on this? All right. Good. Any comments on the scope? All right, the next section, Section 2 is about references. This is really references to other standards and other guidelines from WHO -- I'm sorry, from ITU as well as other IEC and ISO and so on. You've gone through it and saw certain recommendations from IEC and any other in addition standardation agency being missed, please let us know, otherwise we added two about sound level meters and personal sound exposure meters. I don't see any. Dorte, your hand is raised.

>> DORTE HAMMERSHOI: Just my apologies because I only got access to the document this morning, so I'm just commenting as we walk along and I won't take all the time.

>> SHELLY CHADHA: No worries. Take your time.

>> DORTE HAMMERSHOI: 11904.1 in the year, there is also a counterpart from 11904-2 which is for manikins so strikes me as odd that part one is relevant but not part two.

>> SHELLY CHADHA: Could you pop that in the chat, and we will look at that particular recommendation. If it is indeed relevant, we will include it. Thank you for raising that, but please if you could just put it -- it is ISO 11904-2. Is that right?

>> DORTE HAMMERSHOI: Exactly.

>> SHELLY CHADHA: Okay. We will look it up and add it if that is, indeed, relevant. Is that okay with everybody?

>> SIMAO CAMPOS: Yeah, if you added that in this part of the document, it must be a normative reference that is used in the main text. If not, this is being to be removed. If it is used in the main text just as information, then should be in the bibliography. This is just formality, but just so that you proceed accordingly. Thank you.

>> SHELLY CHADHA: Definitions, firstly terms which are defined elsewhere. Most of these, as you know, also have been picked up from H.870, and of course they are defined, and even there they are cross referenced to other documents. Any

question or comment about these references? Do you want me to include all of them. Acoustic reflex -- damage risk criteria, DBA, DBFS, DBHL, diffuse field frequency response, diffuse sound field, sound dose, dosimetry, eardrum reference point, equal energy principle, equivalent continuous A-weighted sound pressure level, equivalent continuous average sound level normalized, access risk, exchange rate, pre-sound field, pre-field frequency response of HATS, frequency response, head and simulator, hearing level listener, listening device, loudness gateway full scale, loudness unit, loudness unit full scale, material hearing impairment, microphone, exposure level, ordinary person, personal music or media player, personal audio device, personal audio system, skilled person, as opposed to an ordinary person earlier, sound allowance, sound induced, sound induced permanent threshold shift, sound induced temporary threshold shift, sound induced tenitus, sound pressure level -- muscle reflex, transducer, hearing loss. Yes?

>> I have a question on three definitions. There are three definitions included in there that actually don't appear in the main document in the standard, that's casual game player, regular game player, and esports game player. My question to you is if those terms do not appear in the standard, whether for simplicity purposes, it might be easier to delete them?

>> SHELLY CHADHA: So, these are terms defined in this recommendation. We are still on the terms defined elsewhere. Welcome to that in a bit, Tatiana. Thank you.

>> SIMAO CAMPOS: Tatiana has a point, after this is approved, there will be a checking in editorial department. If there are terms defined but not used. They will say that there is this defined or referred to as definition but not used and they're going to be removed. There will be a quality control after the process because this -- I think we used this in previous versions of the document, and maybe it has and and it is leftover. There will be a cleanup afterwards. If we identify to remove now, it's better. But in any case, don't worry too much about that because that is something that is done normally. Okay. Thank you.

>> SHELLY CHADHA: Yeah. I was only trying to make the comment that we are still looking for comments on terms defined elsewhere. So if there is anything. Richard, you had your hand up.

>> RICHARD GLOVER: Yes. I think the point has been answered already. There were quite a few definitions here that I do not think appear in the document. But they're going to be cleaned up, which is fine.

>> SHELLY CHADHA: Thanks, Richard. And we can even do that today after the meeting, let's say, and bring you the revised version tomorrow if we have the possibility to look at that. Thank you for raising that. Okay. Let's move on to terms defined in this recommendation. I see a comment. Dorte, please.

>> DORTE HAMMERSHOI: So, this is a definition of dynamic range compression, which you had, 3.2.1, you just scrolled away from it. 3.2.1. You have the loudest peak of the audio signal while increasing the lowest sound altering the dynamics of the sound signal, the difference between the loudest and softest sounds. I think that should be softest sounds. And then you should probably generally consider whether you want to use the terminology of perceptual to main, because it's irrelevant whether people perceive it to be loud or weak. We need terms from the physical to remain high or intense or strong rather than from the perceptual domain.

>> SHELLY CHADHA: Could you elaborate that point because it's not absolutely clear to me.

>> DORTE HAMMERSHOI: The loudest peak means something that someone perceived to be the loudest. Where if you say it's the strongest peak in the signal or the most intense periods of the signal or something like that, then you're referring to the physical or technical domain.

When talking about loud and soft, it's a perceptual domain, so it has to be assessed by someone listening to the sound, which is not normally what we do when we measure and quantify, for instance, exposures.

>> SHELLY CHADHA: Brian, do you want to comment on this?

>> BRIAN SCHMIDT: I agree that Dorte is technically precise. If we're talking about dynamic range compression, usually it's the loudest and softest intensities as opposed to, I'm sorry, the largest and smallest intensities as opposed to the loudest and softest, which are perceptual terms. I think that's a good catch. Also catching software sounds.

>> SHELLY CHADHA: Yeah, when you've been through a document like 100 times and you stop seeing some things, that's what happens. That will reduce the -- how would you like it worded? That will reduce the highest and lowest intensity sounds?

I'm sorry, reduce the highest intensity or strongest intensity? Amplitude peaks?

>> (Speaking off mic).

>> SHELLY CHADHA: Highest peaks? Of an audio signal while increasing the --

>> RICHARD GLOVER: Reducing ratio between the highest peaks and lowest -- highest and lowest levels. It's the ratio that's being reused.

>> SHELLY CHADHA: Ratio between the highest and lowest peaks of an audio signal.

>> RICHARD GLOVER: I'm not sure that peaks is right. Levels.

(chime).

>> SHELLY CHADHA: Dorte, are you happy with that?

>> DORTE HAMMERSHOI: I think amplitude is a little bit more correct than levels, because levels is typically an average over time.

>> RICHARD GLOVER: Agreed.

>> SHELLY CHADHA: Amplitudes of an audio signal. Is everybody happy with that? In brackets we can have the difference between the loudest and softest sound just to make it a little more understandable, if it's okay.

>> RICHARD GLOVER: --

>> SHELLY CHADHA: Richard.

>> RICHARD GLOVER: That's going back to the perception again.

>> SHELLY CHADHA: So delete it?

>> RICHARD GLOVER: You could say this relates to the loudest and softest perhaps.

>> SHELLY CHADHA: Okay.

>> RICHARD GLOVER: But I stand to be corrected.

>> SHELLY CHADHA: All right. Anybody who is not happy with this? Dynamic range compression refers to a signal processing technique that will reduce the ratio between the highest and lowest amplitudes of an audio signal, thus altering the dynamic of a sound signal. This relates to the difference between the loudest and softest sounds in a given audio range. Potentially this bracket is not needed, but if it is felt that it is, we can keep it. Any objection to deleting it? No. Okay. No objection; therefore, it is deleted. This particular signal length strategy -- this signal-processing strategy can result in increased audibility of an entire dynamic range of sound track at lower level, and it also being known as night mode as it can allow for consumption of video games late at night at lower volumes. Okay.

Moving on to esports live event.

>> SERGE: I have some comments on esports live events, mostly for clarity. There are several of them. We can comment now or shall I send them?

>> SHELLY CHADHA: Please, do it now.

>> SERGE: Right now? Okay. First sentence, an esports

live event, can be defined as an event around competitive video game play esports. Designed for life and entertainment centered, it's very, very unclear. So.

>> SHELLY CHADHA: If you're on the zoom, you could pop your proposed definition into the chat there?

>> SERGE: I can if you give me a minute.

>> SHELLY CHADHA: Yeah, okay. Sure. We have a minute. Then we can read it and see what needs to change. We still have one definition which is not complete, Pete, which is headphone safety mode. If anybody has any suggestion for that text, please feel free to propose now for the headphone safety mode.

>> KARL: Just a general question. If we already have a definition later in the text, do we need to repeat it here?

>> SIMAO CAMPOS: Here in this section should stick to have definitions, even if they're elaborated later, but should not be repeated. For example, the previous example, the thing that bothers me, the dynamic range compression. It has two parts there. One part is the definition itself, and then there is explanation of advantages or consequences of using it which are not part of the definition. I would have prefer that had this part that this starts with the signal processing until the end of the sentence, to be somewhere else in the document where you talk about the dynamic range compression. It could be a better way of handling the definitions approach or style. So this is something to be considered maybe for all the definitions. So where you have something here in the section is only explain the term itself, and then pros and cons and features and elaborating about the user of that particular technique or aspect, that should be elsewhere in the text. So that's the normal approach for definitions for consistency. Thank you.

>> SHELLY CHADHA: Karl.

>> KARL: Suffice to say a definition should be just one sentence?

>> SIMAO CAMPOS: No, it might have more. Ideally, yes, as concise as possible. But sometimes you need to explain it with a little bit more words, so it's difficult to give you a rule for that, so anything that, for example -- for this one the dynamic range for any is clear. The first one is simple because it is the range, so that's what it is. And then something that's the feature, so usually in the strategy can result in. It's not part of the definition. It's what happens if you use. It's not really the definition. So in that case that's clear that should not be here in principle. Unless there isn't really a good place to put it in the text later on,

but if there is a place where we talk about dynamic range compression, maybe it is one place to have that kind of language. We have to judge there, but there isn't a clear-cut rule in terms of the definitions. Should be something that talks about you understanding the concept, you know, what you mean by it. Then further elaboration, the consequences of using or not using and so on, that's something that belongs somewhere else. Yeah.

>> SHELLY CHADHA: So what we're proposing is delete it from here and move to 9.3.3, and when we reach 9.3.3 we can relook at it there. Is that okay? Okay.

All right. 3.2.3, esports live event. What Serge has proposed is an esports live event can be defined as an event -- as an event around competitive video game play. So removing this. Around competitive video game play, and in brackets, esports. Involving video game tournaments and related content. These events are conducted in a live format of sometimes, not often but sometimes in designated venues where esports enthusiasts gather to witness the game play competition and associated entertainment. The primary focus of it is the hosting of video game tournaments where players -- so removing the word professionals. Where players or teams compete against each other during game play -- against each other during game play. I'm sorry? Against each other and during game play. I'm sorry? Somebody else?

>> SERGE: I think the comma is person. Because during game play the ELEs may feature, blah, blah.

>> SHELLY CHADHA: And during game play, the ELEs may feature sound -- may feature sound reinforcement audio systems, multimedia display, showcase to game play commentary and highlight to the audience. All right.

So now this is the new proposal for this definition. Esports live event can be defined as an event around competitive video game play, involving video game tournaments and related content. These events are conducted in a live format, sometimes in designated venues where esports enthusiasts gather to witness the game play competition and associated entertainment. The primary focus of ELEs is the hosting of video game tournaments where professional -- I'm sorry?

>> SERGE: ELEs professional.

>> SHELLY CHADHA: Where competitors compete against each other and during game play ELEs may feature sound reinforcement audio system multimedia displays and stages, et cetera.

So, any concern about the new definition? Any counter

proposals to this? I don't see anything. Again, here I ask as we did in the first one. Do we need to put the second sentence? Is that useful to say what the primary focus of ELEs is as opposed to just saying what it is? Dorte?

>> DORTE HAMMERSHOI: Then we're a little bit back to my earlier comment in the discussion of whether these event participants are included in the objective and scope of this standard or whether we expect them to be protected through the make-listening safe standard on live events. And this, in my opinion, would depend on whether some of the active players then swop to become live event participants, because then they would have some burden of exposure from the period they were participants which carries to what was supposed to be restitution but then becomes live event exposure.

>> SHELLY CHADHA: This is the video game and software titles, but not include the venue. What we have is a soft recommendation to say that the venues should be aligned to the WHO Global Standard on safe listening venues and event, and that has been summarized in the form of an appendix. The recommendations of that standard are included, not in the body but in an appendix of this standard.

>> DORTE HAMMERSHOI: Okay. Thank you.

>> SHELLY CHADHA: Yeah. Good. Thank you. Okay. If we see no objection to the second sentence being here, we will leave it as such. Thank you.

All right. We are at 10:47. Do we want to break for coffee?

>> SIMAO CAMPOS: Okay.

>> SHELLY CHADHA: Yes. There is a strong yes in the floor. We need to do that.

>> SIMAO CAMPOS: For the remote participation, we have a break until 11:15, or do you want to resume before? 11:15. 27-minute break. See you in a few minutes. 27 minutes, yes. Thank you.

(break).

>> SHELLY CHADHA: Welcome back. I hope those online also managed to get some coffee or water or exercise maybe if you're more, how do I say, more inclined towards physical activity, that would also be good.

So let's resume where we were. We were at 3.2.3, esports live events. Moving on for 3.2.4, game player. Any concern there? Sergi?

>> SERGI MESONERO: Relates to the potential deletion of the category, then maybe 3.2.4 can just be the first sentence. Because the second sentence for the purpose of this standard, blah, blah, blah, I think that probably doesn't apply, it

doesn't apply.

Yeah. That game player, the second sentence, for the purpose of the standard, the most important consideration is the expected blah, blah, blah, game players categorize the, sub-groups, if we delete the category which, in my opinion, makes sense, then that second sentence should be deleted, too.

>> SHELLY CHADHA: Any feedback from anybody else about that? What Sergi suggested is a person that plays video games on video game play devices is the definition of a game player. We delete the second sentence.

What I would suggest is just for clarity, is to say a person that place video games on video game play devices, including those who play -- including those who play games casually and esports game players.

>> SERGI MESONERO: But it's a false dichotomy. I mean --

>> SHELLY CHADHA: It's a clarification. It's not a dichotomy. It's not that we're classifying them. We're only saying that it includes the entire range of people enjoying video games in whatever way. That would be our proposal.

Okay. Headphone safety mode, we have a proposal for the definition of the headphone safety mode, and to pensione this would come -- Peter, I see the number is 3.2.4 A.but probably this numbering needs to change. Is that right, Peter? Can you confirm?

>> PETER MULAS: That's correct. It's just a placeholder definition for review, and we would move it elsewhere within the definitions, probably beneath 3.2.1 A.for the timebeing.

>> SHELLY CHADHA: All right. There is a comment from -- in the chat saying can you share the document on the screen so that it's easier to follow? But I am sharing the document on the screen. Is everybody able to view it? Is everybody online able to view it? I see it on the Zoom screen here. Yes. Okay. Maybe what you mean, that's you. She says she sees me but not the document. Let me stop sharing and reshare. Maybe that will address the problem. Let me try.

Do you see it now? Okay. Great. Thank you for confirming.

Headphone safety, the numbering will change. A safe listening feature used within a video gameplay device or software. Should a game player switch audio playback from free-field loudspeaker to headphone or headset audio peripheral and the device or software can detect the switch an attenuation of the video game audio output in automatically applied to the device software by predetermined amount. I think we need to

simplify this. Perhaps to say this is attenuation of the video game audio output. If the device or software detects a headphone or headset, audio peripheral. Could you try and reword it, Peter?

>> PETER MULAS: Okay.

>> BRIAN SCHMIDT: I wonder if we can make it even simpler. Since it's the definition. A safe listening feature used within a video game device or software that occurs when a game player switches from free-field speakers to headphone, or headset audio peripheral and just leave it at that. Because it's conceivable that a headphone safety mode might do -- we might decide that it does something different, like it changes an EQ or does --

>> SHELLY CHADHA: Can you put that down, Peter?

>> PETER MULAS: I'm put it just below. It might take a few minutes to come all the way from Australia.

>> SHELLY CHADHA: No worries. We can see it on the screen. Thank you. A safe listening feature used within a video gameplay device or software that occurs when a game player switches from free-field loudspeaker to headphone or headset audio peripheral. Is that okay for everybody?

>> Occurs is probably the wrong verb.

>> SHELLY CHADHA: Yeah. That is activated. Yeah. That activates. That's good. All right. Then we stay with that. If there is any comment on that, please feel free to ask for the floor.

Simao?

>> SIMAO CAMPOS: Do we define safe listening? Because maybe what we want to say is a hearing protection feature rather than safe listening. Because safe listening is a kind of concept. Hearing protection is more generic language, I suppose. I don't know. Thank you.

3.2.5, video game audience. Videogame audience can include but not limited to spectators, video game event, being streamed by online streaming service, pre-recorded online spectator, viewing live events at venues. Any concerns about this? Please.

>> If we can go back up to (b). In case it does say, the second line, this type of game players. I think it should be player. This type of game player. Just delete the S.

>> SERGI MESONERO: Yeah. Just reminding this category probably should be removed, but there is another reason also, if we are not going to remove them, if we weren't, we need to redefine because they're wrong. Some of them are wrong. Regular game player is not actually something that the industry recognize. Casual game player, the definition is wrong. So I

would really suggest that we delete those.

>> SHELLY CHADHA: As mentioned, we will check if they are included in the text, and we're happy to revise them, just so they are accurate, more accurate. It's not about an industry definition here, really. It's definition in the context of this particular standard and document and this whole concept, so it is not important to us that this is on industry definition. It's not really like something that needs to be -- like if there is a definition, we should be consistent as far as possible. But if it is not, we are -- if we reflect in this document we should be clear what we're talking about. Sara?

>> SARA: I want to comment. I think regular game player is not at all a definition. It's to do with the frequency, the use that do play. So I think it's -- to me it's communication perspective, it's very clear and just remembers to the time that they play. So casual versus random versus regular.

>> SHELLY CHADHA: What we can do is just today look at the rest of the document to see if these are here, and if they are, we can come back and discuss these tomorrow so that we are not spending our time unnecessarily, if it's to be deleted. And if they are to be kept, then we discuss them and make sure that we are happy with them. Is that okay with everybody? Then we will move forward and no objection noted. Video game audio participant, I read that out. No concern. 3.2.6 is a media that is audio or audio visual consent for the purposes of entertainment.

All of the subcategories under this were -- have been moved to video gameplay device, so they're in another part where we will discuss them there.

>> BRIAN SCHMIDT: Apologize, back to 3.2.5. Since today the subject of the meaning of spectate has come up. I notice the word spectate occurs three times. We might want to replace in 3.2.5 just replace spectators with people so that there is no ambiguity when we're talking about spectating mode which is when a person playing a game goes into spectate mode.

I think if we just replace spectators with people.

>> SHELLY CHADHA: All right. Is this fine for everybody? I replaced spectators with people. You can see it on the screen. Okay. No objection noted. We move to 3.2.8 which is passive gameplay. Passive gameplay refers to a section of a video game where the game player is not actively participating but still observing game play. This goes back to the point that Dorte was making earlier. This type of game play is most commonly found in multiblare games where a game player is eliminated from a game temporarily.

The second particulate -- the second sentence is

obviously an explanation. Are there any concerns about this definition? None noted.

We move to 3.2.9, passive gameplay audio, refers to video game soundtrack that is produced during passive gameplay moments of a gameplay session. Passive gameplay audio includes sound effects, music, voice chat, or dialogue that occur during moments of a video game where the game player is not actively involved or participating in the game play. The most common intended application of this definition will be towards sections of gameplay in between rounds of a multiplayer game where a game player has been excluded from participating in the game until a new round begins.

Again, the second part of this is kind of an explanation. Maybe it's not needed, but Brian?

>> BRIAN SCHMIDT: I'm wondering if as this is worded, it might be too broad. It seems like it would include things like menu screen, which would probably be the very most common gameplay experience that seems to match the phrasing here. Maybe we want that to be included, or maybe we want that to be excluded. I'm not sure if we've thought about that in detail yet.

I understand this the scenario of first-person shooter going into spectate mode, that makes total sense. But I think there is potentially broader passive gameplay elements that we might want to think are different.

>> SHELLY CHADHA: Peter?

>> PETER MULAS: I just wanted to answer Brian's point. The definitions was developed slightly when this was mandatory feature to be included in game software. We are relaxed that to a recommended and non-mandatory, so I wonder do we really need to be so prescriptive about this definition, because I think it works for what we're intending it. Perhaps the game developer will want to include game menu audio. Maybe they won't. Does it have to be so specific now the passive gameplay audio reduction is not a mandatory feature?

>> SHELLY CHADHA: Brian, to keep it as such?

>> BRIAN SCHMIDT: I think I agree with Peter.

>> SHELLY CHADHA: And this last sentence, does it need to be kept or removed? Melita?

>> MELITA: Just again to comment that this is not necessarily an esports and gaming industry specific, this is is a global health perspective. Think with esports medicine and this being a very novel subspecialty, a lot of people won't even understand this language, so I think that although this is not technically a definition, I think having this further explanation is going to be helpful as we are kind of

approaching and embracing a new area of hearing in this esports and gaming place.

>> SHELLY CHADHA: Thank you, Melita. Peter? All right. I see that you took your hand down, Peter.

So no further comments? We leave it as such. Moving ahead to speaker -- oh, Peter, take the floor, please.

>> PETER MULAS: I'm sorry. I would suggest moving the second half of the definition to 9.3.5.

>> SHELLY CHADHA: 9.3.5. The part of the definition. The second half of the passive gameplay audio definition, putting it in the area of the document where we discuss the recommended feature.

>> SHELLY CHADHA: Okay. All right. Can you make a note of that. When we come to -9D.3.5, we'll review it there.

Okay. 3.2.10, safe listening gameplay device video gameplay device to include features and functionalities that prioritize the well-being of the user's auditory health during gameplay. This is also the definition of what a safe-listening gameplay device is, speaks to what Simao was saying earlier. The primary objective of a safe-listening gameplay device is to promote safe listening and gameplay practices by safeguarding users from excessive sound levels that could lead to hearing impairment, tinnitus and or discomfort. Any objections or comments? None noted. Let's move on. 3.2.11, speaker, a device for converting electrical energy into acoustical energy that is radiated into the room or open air. It includes transducers that are in-built into the video gameplay device or are external to these, for example, loudspeakers, sound bars, sound reinforcement speakers, or in-ear monitors.

I see no comments, no requests for the floor. Moving on to video game.

An electronic game that involves -- yes, Brian?

>> BRIAN SCHMIDT: I'm sorry, on 3.2.12. Per Dorte's previous comment, to generate audio or video feedback for a player, I think would satisfy the concern.

>> SHELLY CHADHA: Let me read that. Video game is an electronic game that involves interaction with the user interface or input device, such as joystick, controller, keyboard or motion sensing device to generate visual feedback from a player. Video games encompass a wide variety of genre and formats, ranging from simple arcade games to complex, immersive simulations. They can be played on various platforms, including personal computers, video game consoles, handheld device, and mobile phones. Could you repeat your proposal.

>> BRIAN SCHMIDT: Substitute visual around/or audio

feedback for what just says visual feedback right now.

>> SHELLY CHADHA: Is that right?

>> BRIAN SCHMIDT: Yes.

>> SHELLY CHADHA: Thank you. I don't see any other requests. Moving on to video game play device. 3.2.13. A device designed for executing the software instructions that constitute a video game. It comprises a combination of hardware, firmware, and an operating system that are specifically designed and manufactured to facilitate the playing, processing, rendering, and production of immersive video and audio gameplay content. A video gameplay device can be designed to be stationary, such as a video game console or arcade game device or portable. In this context of safe listening standard, examples of VGDs include video game console, handheld or mobile devices and personal computers. Yes, Brian and then Karl.

>> BRIAN SCHMIDT: Do we need the phrase of are specifically designed and manufactured to? Because that seems to push people towards a notion of like a Switch or X-box as opposed to a more general-purpose computing device that can facilitate the playing of video games like a PC.

>> SHELLY CHADHA: Thanks. Thanks, Brian. Karl?

>> KARL: Actually, I withdraw my hand. Thank you.

>> SHELLY CHADHA: Thanks, Karl. Any other requests for the floor on this? Okay. Moving ahead to 3.2.14. These are the types of video game play devices, video game console, a purposed game playing system designed to connect to televisions or monitors, providing a platform to run video games.

(b), handheld or portable console, a portable gaming system designed for on-the-go video gameplay. A home game console, a game console designed to be stationary.

Personal computers, general-purpose computers equipped with specialized components such as graph requestic cards, processers or memory to deliver high-quality video gameplay experiences. Mobile devices, smartphones and tablets with capabilities to run and play video games, often available through app stores. Game playing PC, personal computers, optimized for game playing, featuring powerful processers, graphics cards, and advanced cooling systems. Virtual reality and augmented reality, hardware systems that enable players to experience games in immersive, virtual, or augmented environments? Karl?

>> KARL: Yes, thank you. Here we specify personal computers as computers as specialized components as graphic cards -- so you can use personal computers for video gameplay without such specialized components. I mean they all have

graphics cards and processors. I suggest we change the definition to the following, so remove general purpose, and then capital C on computers. And then after "including laptops" use the sentence from the mobile devices below. So with the capability to run and play video games.

And then delete the rest.

>> SHELLY CHADHA: Basically the purpose of adding that was simply to, yeah, make it quite specific. But I'm happy with this if others are. Dorte?

>> DORTE HAMMERSHOI: Just wondering if it shouldn't be mentioned again that it should be able to produce a sound output. Because all the computers that don't make any sound and have excellent video, it shouldn't really be included in this.

>> SHELLY CHADHA: Any comments to that? Do we need to add computers, including laptops with capability to produce audio and run and play video games? Do we have computers that don't produce audio? I see Brian saying, yes. I don't know. A lot of gesturing, but I'm not sure what it means, (Laughing). Dorte, are you aware of devices that do that? In the meantime, Richard, you have your hand up. Please take the floor.

>> RICHARD GLOVER: It's just a point that if it is not capable of putting out sound, it passes this particular standard.

>> SHELLY CHADHA: Sergi.

>> SERGI MESONERO: I would say that all types of personal computers have capabilities to -- there are all computers, of course, I mean the computer inside of a washing machine, some of them probably not. But we say personal computer, that includes the ability to.

>> SHELLY CHADHA: Instead of saying computers, we say personal computers.

>> SERGI MESONERO: Yeah.

>> DORTE HAMMERSHOI: So my point was just to add with capabilities to run and play video games with sound.

>> SHELLY CHADHA: So that is the proposal. Computers including laptops with capabilities to run and play video games with sound. Any concerns with that? Okay. Let's move on.

I don't see any hands for the remaining 3.2.14, so remove to 3.2 -- Karl?

>> KARL: Two points. If we're going to add with sound here, then we should add with sound under the mobile devices as well.

>> DORTE HAMMERSHOI: I agree. Can we delete F, since we changed D, it's no longer applicable.

>> SHELLY CHADHA: What we do is we check if we have

specifically mentioned these separately. This is just -- just these are computers as opposed to gaming computers, or what we are calling game-playing PCs. Let's look at how they're reflected in the document. Richard?

>> RICHARD GLOVER: Why do we need to include the phrase of with sound?

>> DORTE HAMMERSHOI: I can maybe explain. I think we have a definition of some devices and they are defined by the fact that they can run and play video games. But for safe listening, the main point is that they produce sound, so that seems to be sort of a common denominator that might be more relevant to mention rather than whether they have graphic cards and processors and all of this stuff.

>> RICHARD GLOVER: But this standard wouldn't apply to anything that doesn't produce sound inherently.

>> DORTE HAMMERSHOI: Okay.

>> SHELLY CHADHA: Mark.

>> MARK LAUREYNS: I wouldn't add, that can play sound. Why.

if off personal computer that can't play sound, by definition it's a safe-listening device. In this case a computer that couldn't play sound, couldn't be -- couldn't state that it's a safe-listening device for this purpose. So, I don't think you need to add it. I understand the logic part, but I think let's make it easier to show that equipment is safe-listening equipment. If it can't produce sound, well by definition, it's safe-listening equipment.

>> SHELLY CHADHA: By definition, it's not listening equipment.

>> RICHARD GLOVER: But Alt least it's safe.

>> SHELLY CHADHA: If we don't eat anything, we won't get too much sugar or too much salt. Anyway, all right, so for now I removed the sound. I put a note here for 3.2.14f to check. Pete, will you check it later on, and we can come back to it if needed. Karl?

>> KARL: Yeah, we can go back to it. Might be better to do it now because I don't agree with the definition if we are going to include it.

>> SHELLY CHADHA: We can discuss it now.

>> PETER MULAS: We can remove f.

>> SHELLY CHADHA: Peter agrees with that. Any concerns about removing the game playing PCs from here? All right. Peter, we still should check this isn't reflected in the document as such, and if it is, it should be removed.

>> PETER MULAS: Okay.

>> SHELLY CHADHA: Anything else on 3.2.14? Everybody

happy? Let's move to 15. Video game play peripheral, in addition video game hardware connected to video game device that provides some sort of additional functionality relevant to a particular video game being executed. Whilst peripherals can provide a range of functions, those most relevant to this standard are devices capable of producing or capturing audio, such as ear level audio device, free in field audio devices, input accessories, and again audio peripherals. Firstly we'll look at the system and then A, B, C, dch. Any comment on 3.2.15, additional gameplay hardware connected to video gameplay device that provides some sort of additional functionality relevant to a particular video game being executed. Whilst peripherals can provide a range of functions, those most relevant to this standard are devices capable -- are peripheral devices capable of reproducing or capturing audio.

I'll move on while I see that people are still sort of reflecting on this. Dorte?

>> DORTE HAMMERSHOI: I'm not sure if it's ear-level audio device that I'm not -- I don't fully understand. If I read the other ones, it seems to -- it seems to be something that is put on the ear or close to the ear and not being far away from the participant. But level is maybe not a very fortunate term to use in this context. So maybe at ear audio device or in-ear or over ear or close to ear or something like that.

>> SHELLY CHADHA: 3.2.15, ear phones, headphone, ear bud, in-ear monitors, wired or non-wired which often feature both sound-producing components, for example, drivers, speakers, et cetera, as well as sound-capturing component, for example, microphones.

Dorte's suggestion is to somehow change this from ear-level to something else. Yeah, Brian.

>> BRIAN SCHMIDT: Perhaps ear proximate device. I understand your issue with the word level because it can have multiple meanings. Or maybe close to ear is simpler than proximate.

>> SHELLY CHADHA: I think we have to be cautious of just playing too much with words as opposed to losing -- because it is defined as to what this is. That is the purpose of definitions, so it's clear what we mean by it. I don't know if ear proximate or somehow makes it better.

>> DORTE HAMMERSHOI: But level has so much confusion when talking about sound. Because we have sound level, RMS levels. You wouldn't -- if you talk about an ear level, you would think about the ear equivalent sound of level which is defined in many of the standards that we refer to. So ear

level would give that confusion. Comments from the floor? Anybody else? Richard and then Karl.

>> RICHARD GLOVER: I'm not sure what the point of this particular definition is. One phrase that is being used in the -- well, is likely to be used in the IEC standards is close-fitting listening device. Not proximate, but close-fitting. But I'm not sure what 3.2.15 A.is all about anyway.

>> SHELLY CHADHA: I'm going to read 3.2.15d, and maybe we should think if we need both of them separately or these can be combined. Mark, I see your raised hand, but allow me to read this first to say audio peripheral, an external device that captures or outputs sound and connects to a computer system for the purpose of enabling and contributing to video game audio. In the context of video gameplay, audio peripherals typically include but are not limited to earphone, headphone, and headsets. My question is can we combine the two and maintain audio peripheral, given this concern? Mark?

>> MARK LAUREYNS: I would like to echo Richard's proposal. Since we are using close-fitting devices anyway in IEC, why don't we change it to close-fitting audio device, and then if we see it in the text, refer to that. I think I'm all in alignment to the standards as much as possible. It's already used today, so why not keep the same wording. And then we avoid the word level because I understand Dorte's remark that level can be very confusing. If you say close audio devices and then you get a definition, there is no misunderstanding this is of course close fitting to the ear because that's exactly what mentioning in the definition. Close-fitting audio devices. Then we have the same logic in the IEC standard. I think it's a lot easier to combine and read both standards at that moment.

>> SHELLY CHADHA: Right. Peter?

>> PETER MULAS: A couple of points. Would you mind letting us know what the reference is for that IEC standard? Maybe a better approach is to put this in a term defined elsewhere, which is the above section of definitions.

Secondly, I mean the purpose of this section was to talk about peripherals because some of the earlier iterations of this draft standard included some concepted taking advantage of video gameplaying peripherals such as, I just happen for have one here for scientific research, a joystick or gamepad like this with embedded microphone. The original purpose of this section was to say as peripherals, they might be for gameplaying purposes, they might be for audio purposes, they might be for input purposes, or they might be a free-field

speaker. I think it might have had more relevance in the earlier versions of the standard to go into this sort of detail. I guess the question is do we need to have a standard of what peripherals are so the reader of this document knows that okay a headset is a type of peripheral which sits within this ecosystem.

>> SHELLY CHADHA: Thank you. Peter. Richard.

>> RICHARD GLOVER: I don't think it answers the question of 15A can be dropped. I suggest dropping it. As to close fitting, Mark, you may correct me, but I don't think it actually reached the standard at this moment. This is a phrase that's going into the next IEC 62368-1 all being well.

>> MARK LAUREYNS: It's clearly mentioned in the scope change we had, so I think it's likely to appear. Exactly, it would be very elegant if it's in this standard then it's useful for us to refer to the WHO/ITU standard when we're talking about a topic. It will avoid confusion and it will align those standards for the future, so I think it needs to stay in the definitions and not in something that we can find in other standards for the time being. I think it doesn't hurt to have it here.

>> SHELLY CHADHA: Okay. All right. Mark, do you have another comment, and Richard.

>> MARK LAUREYNS: No, I'm fine. Thank you.

>> SHELLY CHADHA: All right. So, yeah, Karl?

>> KARL: Yeah. Thank you. Any time we use or used ear-level audio devices was in a note. And under 8.1. Where we talk about VGA may be able to calculate sound data for both ear-level audio devices, headphones, earphones, and monitors. So we could just replace that with audio peripheral -- yes. That would be my suggestion.

A question about in-ear monitors in game play. My association with that is to do with professional side, so I'm not clear why we have in-ear monitors mentioned anyway. Thank you.

>> SHELLY CHADHA: So I come back to the original question, which was can we merge 3.2.15 (d) and 3.2.15 A. into one. What would we lose by doing so? Peter?

>> PETER MULAS: I just wanted to mention that in-ear monitors is a current trend especially for esports participants and those who want to be like their favorite esports player. So you can hop on pretty much any sort of commonly consumed gaming type of product and there will be some sort of category for in-ear monitoring, so it's just a star I guess -- similar with regards to the professional ones used by musicians in performance, but the style has found its way into competitive

gameplay, and I think if Patrick was here he would say yeah, because he used in-ear monitoring as well when he was a professional player and others have said they use that had device as well.

>> KARL: In that case I think we should have a definition for it. Thank you.

>> SHELLY CHADHA: So we keep, A, B, C, D, and the current terminology is okay. Mark?

>> MARK LAUREYNS: Just wanted to say it would make me very happy if you keep close-fitting in, that makes me life easier when we try to align standards in the future. And yes, I suggest to keep A, B, C, D.

>> SHELLY CHADHA: Great. Thank you, Mark, for the clear response. Anybody else with anything to say about these? Mark?

>> MARK LAUREYNS: Then we also need to look at Karl's appropriate ool and then also change the note where we talk about ear-level audio devices and change it to close-fitting audio, and make a note that we don't forget to change it there so it's matching the title.

>> SHELLY CHADHA: So noted. Peter?

>> PETER MULAS: 8.1 before my comment.

>> SHELLY CHADHA: I'm sorry?

>> PETER MULAS: Karl noticed that ear-level was also mentioned in 8.1, so I've just made a note to correct that.

>> SHELLY CHADHA: Thank you. Yeah, Karl?

>> KARL: Can we just make a note to have a definition for in-ear monitor as well. Thank you.

>> SHELLY CHADHA: Thank you. Can you make that note, Peter, to have separate definition for in-ear monitoring. Richard?

>> RICHARD GLOVER: I question whether we need to define in-ear monitor. We don't define headphone or earbud.

>> SHELLY CHADHA: (Laughing). Okay.

>> DORTE HAMMERSHOI: I have to tend to agree. I think in-ear monitor is probably defined somewhere where we would have a stronger reference than making our own.

>> SHELLY CHADHA: We can put it in the terms defined elsewhere if we can find a definition. But I understand it's also that in-ear monitors are probably not as understood as headphones or earphones which is more standard-used language rather than a term which is being used here. Karl, do you want to say anything to that?

>> KARL: Yes, I just want to distinguish from the professional in-ear monitors. Yeah. Let's see what the text says. I think we should have a go and if we think it's not

needed, then fine.

>> SHELLY CHADHA: We'll look for it as terms defined elsewhere, and added to that section. Your point is taken. I think I don't see any problem really in doing that. Peter, I see you added closed-ear device. Or closed-fitting ear devices?

>> MARK LAUREYNS: We just want the standalone definition for in-ear monitoring and anything else? Nothing else -- I'm sorry.

>> SHELLY CHADHA: Yes. 3.2.16, video gameplay software. Video gameplay software in the context of digital entertainment refers to computer programs and applications specifically crafted to facilitate interactive engagement video gameplay content. Okay. No comments noted. No requests for the floor. Moving to 3.2.17. Video gameplay software title, name or title given to a specific video game software program or application used to distinguish one video game from the other. No comment noted.

Sound category volume control. This is a new definition that we have added in this particular iteration of the standard. Sound category volume controls refer to settings within the sound menu of a video game that allows the player to adjust the volume levels of various key audio components of the game -- to the game players preferences, such as background music, sound effects, dialogue, voice chat, and other in-game audio categories.

>> BRIAN SCHMIDT: I think perhaps we could strike the within a sound menu of a video game. I could imagine a button or something that increases the level of the voice chat or something.

>> SHELLY CHADHA: Settings of a video game or in a video game? Settings in a video game, I would assume is better. In a video game that allow the player to adjust the volume levels of various key audio components to the game players preference, background music, sound effects, dialogue, voice chat, and other in-game audio categories. No requests for the floor. Nothing noted. We will move on. Yes, Karl.

>> KARL: I'm sorry. I thought this was trying to sort of encapsulate all of the audio control, sound audio controls in one place. Is that by the term of category? I think we've lost that now when we said within the sound menu. It depends what the original intent was. Just want to check we haven't lost that.

>> SHELLY CHADHA: Peter? Would you comment on that?

>> PETER MULAS: I think Brian's point is that it doesn't necessarily have to live in a sound menu. So, you

could be playing your game and then it's just always a part of the game, some sort of window that's always open within the game you can control theoretically. Have I interpreted the comment, Brian? If we say sound menu we mean it always exists as opposed to somewhere else in the game the developer may think of or want to develop in some way.

>> BRIAN SCHMIDT: You're interpreting correctly, yes. Karl may have a better point that we may be specifically talking about volumes in a menu since we're talking about, I believe this is in fact as a shall feature. It may make sense to leave it worded as it was originally.

>> SHELLY CHADHA: Can I propose we review this definition when we reach that particular feature? Peter, would you make a note to remind us to come back to this when we discuss that relevant feature. Thank you. Okay.

All right. We are at the end of Section 3. I'm happy that we got through that. Not the most exciting section.

Section 4 is abbreviations and acronyms. If there are any comments about that? Please let us know. Convention, and then becomes the background.

All right, so the background is Section 6, is an introduction to safe listening, so it is -- we have made some changes, firstly, to give some citations that we felt should be included given that we're citing some specific studies. We have added those citations and they are available, I think, in the bibliography now.

So just a little bit of restructuring and removing a particular paragraph and adding some text to align more with the WHO current communication products. It has not really changed, the content of it, in any way, other than the intent of the section anyway. Any comments on this? Any concerns?

A line carried over from H.870 and lying there unnoticed, is deleted, use cases for consideration when applying this recommendation, et cetera. It has been removed.

All right. 6.2 which is a video gameplay device. The definition we have already reviewed. Here we have the figure which has been contributed by WHO with the support of Brian to talk about the general architecture of a video gameplay device. Brian, would you like to explain that?

>> BRIAN SCHMIDT: Okay, so the video game listening ecosystem surprises a video game system, which we usually think, again, as a play station or X-box or PC, and within that we've got game software, the dedicated software we've talked about. Within the software, one of the interesting things to note about the diagram also highlighted in the 870 diagram is where the volume controls are, because that's how we control

the sound exposure to the listener. Within the game itself there is often categorized volume controls, in fact it's a requirement of this specification that categorize volume controls be present in game software. Interesting to note though is that on most devices that play video games, there is also the possibility of having additional audio come from other sources that is not related to the video game software at all such as voice chat that might occur among players during gameplay. Additional music players, as well as things like system sounds and notification beeps that might pop up. Each of those tend to have their own volume controls. Again, if you think of like a Windows system, can you set the of your voice chat separately from the music, separately from the game overall. Then at some point all of that audio is combined, and there is typically a master volume on the device itself, whether that's before or after the DAC, may depend on the implementation. At that point we send audio out of the system to a listening device, whether it's close-fitting listening device or a free-field listening device, which in that device itself may in fact have its own volume control. And there is also a possibility that the listening device can send some telemetry data back to the game system, whether it's stats about what kind of device it is or apparently some headphones can actually report dosimetry back, although that is in parentheses there, and mostly for future proofing. So that's kind of the overall of the video game ecosystem. Hopefully this is broad enough to encompass various different architectures.

>> SHELLY CHADHA: Thanks, Brian, for that explanation. Can I borrow your charger? Any concerns about the video gameplay ecosystem? The video game ecosystem? Okay. Richard?

>> RICHARD GLOVER: This is a helpful diagram. Just to be clear, the listening device, which is -- can be virtually anything, I suppose, it's not only -- some listening devices are able to not just change volume, but able to compress or change the frequency of the signal as well, just worth noting. If you're going to do the job properly, then your headphone status would include information of not only the volume but as of any compression or frequency profile changes, which is quite a big ask. I'm not sure about the brackets on the headphone dosimetry, if we could give you a model of one that does do it, wouldn't that be enough?

>> Thank you very much. I appreciate the comments. I think the reason I put those as well as the status in parentheses is that may or may not be available, in fact, on most devices it's not available. On most listening scenarios,

it's a one-way ticket from the game system to the listening device. I think that may be accounted for in the notes. Perhaps it would make more sense rather than parentheses to put a couple of asterisks, and then have the asterisk reference in the notes of headphone status and dosimetry may or may not be available. Do people have thoughts if an asterisk is more appropriate than existing parentheses?

>> SHELLY CHADHA: Richard?

>> RICHARD GLOVER: Clarity is helpful., so asterisk would be good if it refers elsewhere to an explanation.

>> BRIAN SCHMIDT: There is a note at the bottom of the diagram. I don't know if it's legible on the Zoom.

>> SHELLY CHADHA: I tried to zoom in a bit. I think it can be read. Yeah.

>> RICHARD GLOVER: It can be, but there is no relationship between the parentheses and the note. An asterisk is a good point that somewhere or another there is going to be a note.

>> BRIAN SCHMIDT: I will change the parentheses to an asterisk.

>> SHELLY CHADHA: Great. Thank you, Richard and Brian. Any other comments about the ecosystem? All right. No further requests for the floor or comments. We will move on.

All right. Moving into this, we have video game play device is intended for use by a individual or individuals, and it is designed to enable the use efn gauge with video dpaimplay content and utilizing a display screen for visual pren taigs and incorporates video gameplay peripherals such as controllers, keyboards, motion-sensitive devices for interactive input and features an audio component for delivering sound effects and immersive audio experiences, and can be carried or placed in close proximity to the user during operation, for example, played within proximity to television or computer screen, held in hands, placed on surface, and provides adjustable settings for visual and auditory input. I think we have too many "ands" which can be deleted, of course, but beyond that, please your comments on this? Any concerns with this text?

I don't see any, so moving on. Examples of VGDs including video game console, personal computers, handheld gameplay devices and mobile devices with gameplay capabilities, variable gaming accessories with integrated displays and interaction mechanisms, devices equipped with virtual reality or augmented reality functionality. Summarizing all of the definitions that we had put in earlier.

The provisions outlined do not apply, so the exclusions

are important as well, so do not apply to hearing aid equipment and other specialized devices for assistive listening they rals do not apply to analogue VGDs such as location-based entertainment or arcade games. This is allowed due to evolving technologies and listed patterns. The listed exceptions are subject to reassessment as technologies progresses.

Current scope emphasizes gameplay and visual don't, considerations for virtual reality and immersive experiences are for future study.

>> BRIAN SCHMIDT: I'm not sure analogue VGD makes a lot of sense. Our current arcade games currently being made are all digital as well, so maybe physical video games. I'm not sure what a great word is.

>> SHELLY CHADHA: Dorte?

>> DORTE HAMMERSHOI: There is just the hearing aid equipment that is probably well-established terminology. I'm not sure whether other specialized devices for assistive listening is well defined. Uncertain what we might be ruling out with this terminology because you could say that intelligent -- for instance the earports have their own calibration, so a specialized device for assistive listening or not? I'm not so familiar with the terminology for assistive listening devices.

>> SHELLY CHADHA: I think we have the same also in H.870, and it is also devices for example amplifies for example with use with cochlear implants or T loops and so on that we would like to keep out of the scope of this particular standard. Dorte, that is why this terminology -- that is why this has been included. Thank you. These others, please feel free to make comments. Peter?

>> PETER MULAS: The end part of the sentence there was specifically added for that point about an earport that could be used for assistive purposes. This was raised a few meetings or workshops ago from representatives from Meta. It becomes a little bit difficult if you are going to design an earport as assistive listening device because it could also be a consumer electronic. For the purposes of the standard, if the device is a hearing aid mode or earport can activate as hearing aid, which is in progress I believe, it should be separate to this standard.

>> SHELLY CHADHA: Thank you Peter for clarifying. Pete, do you have any comment to Brian's suggestion about the analogue VGDs such as location-based entertainment?

>> PETER MULAS: I think the analogue was added -- it wasn't there previously in previous iterations. I think it was also to counter things like first-generation home video systems

like that era of device. I think that was the discussion. Just ruling out a certain era of device from decades ago.

>> SHELLY CHADHA: Which may not exist in many place, but they may still be in some.

>> BRIAN SCHMIDT: They also continue to be maffed. There are new location-based entertainment, new arcade games are being made, so.

>> PETER MULAS: This is your area of expertise. Leave it as.

>> BRIAN SCHMIDT: , leave it as location-based entertainment.

>> SHELLY CHADHA: Remove analogue VGD but leave location-based entertainment.

>> BRIAN SCHMIDT: I have to think about this a little bit. Sometimes location-based entertainment might be a room you go to and everybody puts on a virtual reality headsed, then we would want to include. Whereas a big arcade game that you sit in and has a steering wheel and big wrap-around screen is not something that we would look at. So I think this needs a little bit of tweaking.

>> SHELLY CHADHA: I highlighted it here so you can reflect on it and if possible we can review it tomorrow. Thank you, Brian.

All right. We are at the end of 6.2 and almost at 12:30. Karl?

>> KARL: Yeah, just a point on the note., so just what Brian has just said about the location-based entertainment. That would fit with the note, but the hearing aid equipment and other specialized devices, assistive listen, I don't think that would be relevant, so maybe we should attach the note just to the second bullet point.

>> SHELLY CHADHA: Thank you, Karl. Fair point. We can do that. Any further comment on this section? Or can we close now -- or should we close now for lunch before we start 6.3 and come back to 6.3 after lunch? Yes?

>> KARL: I'm sorry, editorial on the last stage. In the second sentence, it is the listed exceptions, but you've only got one, so it would be this exemption.

>> SHELLY CHADHA: So it refers only now to the location-based arcade games.

>> KARL: The second sentence in the note. Should be just this exemption.

>> SHELLY CHADHA: All right. Okay. So let's break for lunch now, and we come back at 2:30.

>> SIMAO CAMPOS: We need captioning, so we schedule for 2:30. We can stay half an hour later after, but we should not

start before.

>> SHELLY CHADHA: And we need to leave now, so let's then come back at 2:30 and thank you to everybody for your contributions. Let's hope we can, at least, progress through until the end of, yeah, Section 7 at the least today. Thank you, everybody. See you at 2:30. Enjoy your lunch.

(session completed at 5:30 a.m. CST).

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