FINISHED RAW TRANSCRIPT

ITU/WHO SAFE LISTENING
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>> Hello. Hello?

Okay, so let's start the question 28 of study group 16. So we will continue the discussion on the result of the workshop today and before we start, maybe it's a good idea to see who are still participating. So let's have some introduction. So my name is Masojito, question 28 study group 16I2T for digital health and so thank you.

And maybe Shelly, introduce yourself.

>> Good afternoon. Shelly Chatta from the WHO. Technical lead for hearing.

>> Brian?

>> Hi, I'm Brian Smith. I'm a game composure sound designer and audio technical consultant for the game industry.

>> Malita.

>> Hi, Dr. Malita Moore, Vice President of global esports federation.

>> And Carl.

>> Good afternoon, Carl Brooks from Sony.

>> Serge.

>> Hi, Serge video games Europe.

>> Mike.

>> Michael Smitgard, chief audio tech meta platforms.

>> Hello, everyone. Catalina from WHO technical officer of the hearing care program.

>> And then we go to online people. Mark first.

>> Mark, G3ICT and make listening safe work stream.

>> Thank you.

Richard.

>> Hi, Richard Glover from hair angel limited.

>> Thank you.

Dorothy.

>> Dorothy from Aaborg university, also vice chair of the technical committee for hearing, loss prevention of the audio engineering society.

>> Thank you. And we have Mr. Yamozaki from Sony.

>> Hi, I'm from Sony based in Japan. Thank you.

>> And Mr. Fuji -- Ms. Fujita. Sorry. I couldn't read.

>> My name is Fujimofo, audio engineer from Sony. Thank you.

>> Thank you.

>> And.

>> Myanmar electronic sports federation.

>> Hello. Electronic sports federation. I'm representing the vice president of the federation. My name is Lintung. Thanks for having me.

>> Thank you.

And we have KRITAC.

yes, go ahead

>> Yeah, my name is Kristof, chairman of CRITAC and also the chair for national intelligence and defense project.

Thank you.

>> Thank you.

And internal resource division Mr.-- I can't read the name because I can't -- it takes up -- the organization name takes you up the place. Mr. Ri something, internal resources division.

[PAUSE]

>> Okay.

>> Electronic telecommunication, who is this?

>> Yeah, so it's me, my name is Janda.

>> Oh, okay.

>> Yeah, nice to meet you and someone is waiting in the queue. Question 28 my meeting room. So I think, yeah, so they may be confusion for this.

>> Thank you. I will ask secretariate.

IRD, internal resource division, who's that?

Okay. So there is someone waiting on the meeting room. I think that's in the question 2816.

Question 2816 not using? Someone waiting in the question 28/16 online room. I don't understand.

>> Yeah, so this is -- so some people is waiting in the online room for the question 28 because yeah. We need to check that. Thank you.

>> I see.

>> Okay. So I have to talk to them.

How I do it?

This way? Hello?

[PAUSE]

>> I'm sorry, there are two links. So people are waiting in either question 28 group meeting rather than this joint meeting link. So they're rejoining. But anyway.

And Sarah.

Hello? Can you hear me?

>> Yes.
>> Can you hear me.
>> Yes.
>> Sarah, it's for introductions.
>> Yes, I can hear -- yes, I can hear you.
>> Are you muted? No. No.
>> Okay. I have two headsets.
Thank you.
>>
>> They just want you to introduce yourself that's the reason they're asking.
>> Okay. But you can hear me now.
>> Yes, I can hear you.
>> Okay. Perfect. So I'm Sarah from university of Lucerne. My field is head communication and I have been working on collecting understand understanding of people behavior in the field of safe listening together with WHO.
>> Okay. Thank you.
>> And Peter?
>> I have been working with WHO while working on this initiative.
>> Thank you. So technically speaking this is a different meeting. So yeah. But anyway.
I would like to start or continue the discussion we had in the morning and Peter, I would like to you kind of wrap up what whatever we were doing in the morning.
>> If it's okay, I will take over.
>> Okay. Sure, Shelly. Yeah, please.
>> And I will share my screen and Peter will compliment. Is that okay, Peter?
>> Of course.
>> So before everybody broke for lunch, there was discussion on the various appendices and some changes have been made based on the discussion including insertion of some references, citations in various places in appendix one. In appendix two, changes have again been made based on the discussion, which is dose estimation, functionality having been added there and aligning it to 17 but also making sure that we delete the repetitions since some of these things were already mentioned earlier in the document.
Peter, do you want to comment on that?
>> Just very quickly. Yeah, I just took into consideration what we discussed. So I compared the text previously in the document and just removed anything that was really duplicated unnecessary ground or stage setting. So it's much more focused on the whole advice for dissymmetry in video game place. Still has its link and still has advice on messaging considering emotion in video gaming as discussed.
>> Good. Thank you, Peter.
I believe the -- this version with the changes has also been uploaded by Masajito on the meeting Web page.
Masajito, can you confirm please? Yeah, okay.
So in case anybody wants to take a look.
If you need us to stop somewhere, please indicate so to Masajito and then we can take your comments because I am not in a position to see

everybody right now.

So appendix three is about examples of safe listening warnings.

And I believe there was a considerable amount of discussion on these examples. I just want to reiterate a few things.

So the examples and warnings, and we are very happy to look at them again but just to say that what has been written here, for example, I believe there was a lot of discussion and contention around the fact should one get a hearing test, should we ask them to check their hearing, so on and so forth but these are aligned with WHO's communication messages. These are not binding. These are simply appendices which are shared here as examples. It's not a normative part, not a mandatory part of this standard. These are examples which manufacturers, some of them, may wish to be -- to take into consideration. Others may complete ignore them and there could be another group of manufacturers who don't have the resources to do their own messaging and who may wish to take them as they are. It's entirely up to the manufacturers to take it, not take it. They are aligned to WHO's messages. We say check your hearing because we know that there are validated apps and that can help to you monitor, to check monitor and even to identify hearing loss. Nothing here says they are hundred percent accurate or whatever. So I think to be really realistic I -- my suggestion would be not to go into each of these in detail. Like I said, it is not mandatory. It is not normative. They are aligned to WHO's messaging in the context and contextualize to video games. So that would be my submission. We are -- if you still prefer, we can go through all of the -- all of these but that would be my contention.

I see is that Mark has his hand raised.

>> Okay, go ahead, Mark.

>> And Malita as well.

>> Yeah, it's also the way it's phrased because if you say has anyone in your whole household mentioned that their volume was too loud, that's already a strange question. I think it should refer to the game player. Told you you were listening at a very loud volume that is a very different story that it seems to make sense because now it's like you -- somebody else will tell you you are listening so that's kind of strange. So I think the take time to check your hearing once in a while seems a little open and low key. So have your hearing checked regularly something very different than check your hearing once in a while. It feels like it's a little free and of course what Dorothy mentioned this, it's not because you had your hearing checked with an audiogram last week that it couldn't mean that you are getting over exposure to sound because we all know that sound exposure doesn't necessarily lead in the first round to a hearing loss in your automatic region. I think that is why if it's the list of things that you observe, I wouldn't put it there. We are not against call to action but please put it separate somewhere because if it's one of the things in the list, it feels like if you had your hearing checked then you don't have to worry about anything and that was the comment that Dorothy made. So we are not against some of the examples just a call to action, very good idea but maybe if it's in the list of observations that's maybe a little week and so that was the remarks we had just to make sure that we don't get too much objections on something which is nice and good information. So that was the argumentation Shelly.

>> And Mark I would like to suggest that we review them again. We

will review all of the text in consultation with Sarah and her group Nicola and anybody else that she delegates it to who are the experts in health communications and with our technical background and make sure the messages as you pointed out are correctly worded and so on. If you think it's worth the time of this group to go through each one of them right now, then sure, we can do that. To me it would seem it's not a good use of our time.

>> I just want to avoid this is going to be a topic that is going to stop the standard for the developing. I don't want this to stall or delay the standard. I think if somebody looks into this and makes it more realistic, I think it's fine because it is just a nonbinding aspect of the standard anyway but yeah so that's the opinion.

>> Malita, any other comments?

Carl?

>> Yeah, just to say as I said this morning we haven't reviewed this in any great detail. We'll be looking over the next few weeks and we'll get back to the participant with our feedback. Some of the questions seem a little strange but I'll come back with our formal feedback in due course.

Thank you.

>> Thank you. Shelly.

>> That would be very welcome.

>> Okay.

>> Any other comments?

[PAUSE]

>> Okay. Yeah. Okay. Then maybe you can proceed.

Microphone, please.

>> Then we are appendix four where we are talking -- sorry.

Appendix four which is examples of textual information provided to the user. So this is through with the video game plate devices. Again we have some suggestions of how it could -- this information could be provided, some suggestions, some also indications of what is not a good type of warning to have or not sufficient as opposed to what is a good warning based on the principles already elaborated in the clauses within this. I think it was clause ten, right? Within this standard. So this is again -- these are different safe listening features. So how can the features be communicated. It is really examples, indicative examples of those textual warnings and messages. If you would like to do a word by word reading then we can start with that, please. Let me know.

>> There's no need because Peter already went through it before the lunch break. So that's fine.

>> Great.

So moving on to appendix five, which is safe listening in live sports events. So this appendix summarizes the features for when used which are already in WHO's global standard for safe listening venues and events and also ITU's technical paper on safe listening in venues and events. This is really a summary of those features. If there are any areas of concern for those who have gone through it or if you would prefer to do it word by word reading, I'm happy to do it.

>> Yes, thank you. Maybe we should change the title to add venues in there.

>> Thanks Carl. The WHO standard is called for venues and events. That is a good point. Thank you.

>> Yes, Brian and Serge.

>> Do we explicitly state here that there is a separate spec and this spec doesn't cover this? I was trying to read through it I think so there's an implication I'm sorry, I didn't see a reference to the actual specification or maybe that's down towards the bottom.

>> Yeah, it's meant to links to the upcoming technical document.

>> It's on -- so that is it on the screen. The HSTP-SLD-venue.

>> Okay. I see it. It feels like we're burying the lead a little bit.

>> Sure.

>> We can put it right at the top. After this appendix does not form an integral part of the recommendation. If it is okay Masajito we can put that the text presented blow is a summary of the WHO with the reference and I2-reference.

>> Yes, if you want you can do that.

>> Sure, if that is -- yeah, that will make it clearer. There it is coming through.

>> Serge.

>> Yeah, I think that the inclusion of -- or the mention of arrangements stream the event online for viewers is a bit unnecessary and it's not really like a -- yeah, it happens but it's not defining -- it does not define an esports life event. What's the difference between an event being broadcast on television or another way and if I'm not mistaken there's nothing similar in the events and venues standard that says hey this concert is streamed or broadcast then. And I don't think that streaming is mentioned anywhere else in the rest of the text and I think it's -- I find it unnecessary.

>> Any comments to that?

>> What do you suggest.

>> I suggest deleting the last point, arrangements to stream the event online for remote viewers. It does not add anything.

>> Okay. So like this. Like that okay.

>> If you delete that you also need to delete the end, Masajito on the line before.

>> Before it.

>> Just to be sure.

>> Yep.

>> Should we go through it?

>> Yes, please.

>> A life sport event is organized for the purpose of hosting competitive matches in front of a live audience. It involves assembly of professionals and/or amateur players and teams to compete in a tournament match. The utilization of video game consoles, PCs or other game play devices is the primary platform for game play. The incorporation of a stage and visual display to present the ongoing game play and related content to the live audience. The implementation of an audio system that delivers in-game sound effects, commentator commentary, crowd reactions and events related announcements. And the provision of standing areas for live audience to spectate the matches in person.

Examples of esports live events encompass international esports tournaments, live local competitive events and exhibition matches that bring together professional and amateur players for high stakes competitions. ELEs showcase a range of esports genre including multi player online battle

arena, first person shooter realtime strategy and more. These provisions do not apply to recreational game play sessions or casual gathering, nonconducted in an unstructured way. Competitive esports events without live in-person component for example streamed online only.

Brian has his hand up.

>> I had one comment. If you could go up a little bit more. The last existing bullet point there standing areas for the live audience to spectate I recommend we replace that with watch since we have been using the term spectate to designate a specific kind of mode of game play.

>> Thanks.

Brian.

>> Serge.

>> Maybe I would also delete the mention to professional amateur players in the second bullet point of these provisions do not apply to noncompetitive video game play events and that's it. Noncompetitive playing events. I would leave it there. Because for example I mean there are recreational noncompetitive events where potentially professional players are present. So I would just leave it there, noncompetitive video play events.

>> Yeah, it's deleted.

Note one, this exemption recognizes the distinct nature of esports events and their focus on competitive game play, noncompetitive video game play events are subject to different considerations.

The future exploration of video game play and virtual reality integration within the esports live setting is anticipated for subsequent study.

Note too the recommendations made in this document apply to video game play hardware and software, game titles during -- used during esports. The external sound in the E sports venue other than that heard through the video game play hardware and software is outside the scope of this document, features a safe listening entertainment when you are cord in E-HSDP-venue.

>> Okay, moving on. Main features of live esports events B-HSD venue presents a systematic and comprehensive approach to achieving safe listening practices within live events and venues. Methodically balances the imperative of ensuring auditory safety with the desire to preserve the entertainment value inherent in live performances. This framework serves as the foundation upon which the subsequent recommendations for volume control in esports live event audiences are built.

Sound level limit, an you were level limit of upper DBLAQ15 minutes shall be imposed for the venue keeping sound safe and enjoyable for the audience.

Sound level monitoring, live monitoring of sound levels should be performed by a designated staff member using calibrated equipment.

Venue acoustics and sound systems. Sound system and venue acoustics shall be optimized ensuring safe listening and improved sound quality. Personal hearing protection, hearing protection such as earplugs, along with appropriate instructions should be available to audience member quiet zones, E sports live events shall include quiet rooms for competitors and audience members, in addition adequate breaks shall be taken between the competitive rounds when sound levels shall be kept below AT d/b/a in order to provide a break from sound exposure.

2.6, appropriate training and information, E sports players, audience

members and venue staff shall be provided information to make them aware of practice steps they can take to ensure safe listening. I'll stop here for any comment.

>> Any comments?

>> Actually this is the end.

>> Carl.

>> Yeah, just one question. If we could go back up to halfway through we talk about noncompetitive events of different requirements.

>> Sorry, Carl, where do you --

>> Further up there's a sentence about noncompetitive events if I'm not mistaken.

>> Yeah, noncompetitive video game play events. Could someone give me an example of what that would be?

>> Trade fair games com for example or a meeting with influencers. There's a lot of them. Like gaming influencer meetup with players to play with the audience. That's also a competitive Meetups, trade fairs.

>> Okay. Thank you.

>> We've reached the end. We are happy to receive any comments otherwise we have bibliography after this and then we finish the document.

>> So we've gone through all the text in the draft and are there any overall comments?

[PAUSE]

>> No comment. So Shelly, so what would be the next step?

>> So we still have time if we want to return to any of the earlier text, we are happy to do it. But also otherwise I think from our side would be important to discuss the next steps, for one. What we would really like we see there is a possible opportunity if we think the draft -- in terms of the main text maybe it is. Maybe the appendices you would still like to review you can come back and we can make those changes but we would like to approve it at the end of August during the study group 16 meeting which will be opportunity the next opportunity will only be in end of January. We would prefer August simply because we would like to use world hearing day third of March to do the launch and the publicity around this standard. If we submit is late in January may still not be approved by that time. For that reason we would like to try to close it. Of course it would depend upon if there are any outstanding objections and so onto it.

That is one point we would like to discuss Masajito.

Second thing we would like to discuss is about the sensitivity register, the characteristics and sensitivity register and how we can move that piece of work forward.

Can you lead the discussion, Shelly? You want to put plan or whatever.

>>

>> Happy to do that, Masajito. What I would like to propose is that we -- if you think there is a need we have another meeting with August or else just before we have a half day or some meeting before the study group 16 meeting.

>> You mean working party meeting.

>> Yes, the working party meeting where it can be proposed for approval but I would like to hear from others what they think and how they think the draft is close to finalization or in terms of its maturity. I'm going to

stop sharing the screen since we have stopped reviewing the document.

>> Serge, you wanted to say something?

Oh, I see. Okay.

No, it's okay. So.

Carl.

>> Yes, so I think Shelly's right. We are getting to a situation of a final draft. We have made quite a few changes to this draft. My concern would be rushing it at this late stage. We'd have to after the study group 16 meeting in August you say; is that right?

>> Simao Campao, perhaps you can tell us the date.

>> Yes, there will be a joint working party one, two, three meeting on the 30 of August where we're going to be meeting to review the meeting reports of the questions and then to start the approval process. So we start the approval process of recommendations that so either consent or determination from all the different working parties, whatever is ready and so in this particular case, if we agree is that we'd soon meet the H.ASLES for consent for at the joint party meeting 30 August.

>> That's 30 of August. And when would the document need to be given to the -- that meeting.

>> Normally should be -- we -- something like 21 days before the meeting. So we still have time to meet contributions if you need be. Okay.

>> Talking about the first week in August.

>> Yeah.

>> It's right in the middle of the holiday season.

>> Tell me about that.

>> So... and we're in first week of July. I just think if people want to make final comments, it's a bit rushed and I think it would be a shame to rush it at this stage.

>> Well, the concept of the approval, right? So the consent we start with the last call and there then ITU members can submit comments for the -- during the last call, right?

>> Yes, I guess but that's ITU members.

>> That's correct.

>> There's quite a lot of nonITU members in this work.

>> That's correct, yeah.

>> Yeah, that's my feeling, is I think it just feels a bit rushed.

>> Yeah, and because of WTSA if it is not this occasion then it would be generally 2025 the next occasion. To start the process.

>> Yeah, no, I understand it shows concern about waiting until then. But having spent all this time on the document I think my preference would be to wait until January. Let's see what others think.

>> Serge and I just conferred. We think the draft is very far advanced. The question is according taking into account the holiday period whether there's a possibility to share the current draft informally. So we can share maybe with members to see if there's any heartburn or major concerns, maybe that would help towards the process. If then we don't hear from members maybe then the August timeline is feasible. I will defer to you on process. I don't know if this is possible to informally share it. Understanding that you will probably need to scrub the draft. This is not the version that will likely be submitted at the beginning of August but just an offer if you're aiming for August.

>> Simoan you want to rely do that.

>> Just a question actually. Are you planning opportunity meeting just before it.

>> Yes.

>> If that's the case that will be the occasion to collect feedback received in the meantime and to prepare the final version. That's also my comment before Carl was in the case that there is no further activity of course but if there is then that would be the occasion to review those comments received in the Meetup, yeah.

>> So after this meeting the document will be available on the Web site from this meeting and we will have another group meeting around the -- I think it's going to be 27th of August. Twenty-seventh of August we'll have a rap tore group meeting question 28. It's not just for safe listening but it's also for other topics but we'll have a session on safe listening. It's online group meeting.

And so at that time, at that session you'll have an opportunity to discuss again. Then on the 30th of August we'll have a working party plenary and if the document is okay deemed okay on the 27th then we can propose for consent. That's the -- unless we have something very outstanding. So you have an opportunity starting around the end of August do you have an opportunity to propose some revisions, modifications, some comments to this document?

Yes, Carl? Emelita first and then Carl.

>> I just looking at that time, that's eight weeks from today to get to August 30th, which I think is a really good time. I agree, I feel like this is very much where we've done a lot of work over these yesterday and today. And I'm thinking just based on what we have now there may be a sentence that might have a question or a word but I think the definition I think we're really close and so I would hate to then wait until January, mismatch if we think -- unfortunately in the US we don't have a holiday season but I know the -- I think over this next eight week period to review this current document is enough time. I think we've had a really great discussion with some major points being addressed today. So I would comfortable and confident that we can get this to August 30th by now.

>> Carl.

>> So at the meeting on the 27th, 28th, depending on the status of the document then if we have -- if anyone has any major concerns we can hold back the document until January; is that correct.

>> So that's why we're here you know. If we have any outstanding issues now then we have to discuss now. And -- mic?

>> Yeah, one thing that I think we need to address before we're based on the hardware variations, wireless versus wider, et cetera, and until that has been addressed, we'll have a very significant uncertainty in the dose estimate that makes the standard less viable I would say. What propose to finish line before having clarity that would then be assuming we get to a point where we have reduced the variations through provisions through work to where it's acceptable and we have an accurate dose estimate. It seems risky to me to propose a into a standard before we have solved this issue.

So firstly in response to Michael's point, I don't think that's an issue that is going to be addressed over a month or even over the next I would say four or five months or even by January. I think that's another piece of work that needs to be done with study group 12 and if we wait for that bees of work to

completed potentially we are setting this back by I would say but Simoan please correct me if I'm out of turn I would say a couple of years would be my feeling because it would take a considerable amount of time and discussion to really get what we want. If you're I guess really efficient potentially could happen in a year but definitely not short of that would be my sense. So we have the H.87TB acknowledge the uncertainties and so on and likewise, they persist in this.

Now, and the question that always comes down at the end is that do we want to do something that is potentially perfect or start with where we are now and we move up towards that where everybody knows and we have very good certainty in the tools estimate. These were some of the discussions H.870 and I would -- for us it could be really disappointing. To hold back the standard we have addressed that issue because we feel that it has the potential to do good influence already in its current format while we go. And of course we have the opportunity to start working on a version two if we felt that we are ready to do.

>> Mark.

>> Yeah, I think I wanted to say something similar because if you follow that logic in 8.70 you would still wait another five years before that standard would be able to be published. I think this was more for start moan manufacturers in that moment. We have seen in the field a lot of manufacturers have done a lot of efforts to make sure that getting a lot of uncertainty down they're looking into making that more accurate better and better for the time being. So I don't think it's a valid argument to stall this standard for another year or something. I wouldn't do that at all but I think it's clear. It's even mentioned in the standard that's a reality. It's not that we are ignoring this. It is mentioned in the standard there is some uncertainty involved and I think that should be fair enough to be able to go forward. This not only accounts for ITU standards. We have the same issue for the IUC standards on safety on electronic equipment. They have the same kind of uncertainty and the standards are still there and they're using them. I think we need to be a little realistic and not use it as an argument to delay the launch of the standard.

>> Mike. Then Carl.

>> I just want to test to see if there's an agreement as to how far the dose estimates can be off because I mean headphones range in sense activities from about 8200DBI familiar watt and impedances range from eight to 600Ohms. If you combine these you actually potentially get to over 45DB uncertainty range of dose estimates. It's not 3DB. It's not 6DB, it's much more than that. As long there is acknowledgment of the ballpark that we're in because of the hardware variations, I'm good with this. I don't want to stall it if we don't need to.

>> Well, I think I'll let Carl first go ahead and then I would -- yeah.

>>

>> Yeah, I think we can just start the work as soon as possible. As I mentioned today we are proposing to create a new work item at this meeting and then we can work in parallel because that will affect not only this recommendation but also H.870 as well as inn 71 and other documents as well. So I think would be good to start initialize that work as soon as possible so that we can make recommendations on the accurate dosimetry. Yeah, that's my understanding.

Carl?

>> Yeah, question. If we have for the August deadlines, when potentially is the earliest it could be published.

>> Simoan.

>> From this meeting? I mean the edits from this meeting you mean?

>> I mean officially published by IT.

>> If we consented in August then when can we have the official publication from ITU.

>> If we consent on 30 August, we could start the AP less call on 15 September, 16 September that would be one month period. Suppose there are no comments. So that would be approved one month after -- four weeks after. So middle October. The text is then sent to the publication department of ITU which usually takes six to eight weeks. So you would see it published like -- something like December. Published the ITU web site in final form. Once it is approved after the AP so that October time frame more or less normally we have the prepublication. Prepublication would be available but it is only for tie success to download and then that goes to the editing department of ITU and so on. So the one that is freely available on the Web site would be some time mid-December.

Sorry, follow-up question then. So in the time period for the month for ITU members in October, if they have comments, what's the mechanism for this group addressing them? Do we set up a meeting expecting there's going to be comments and address them then or how does that work.

>> If there are comments after the clause of the last call, which would be some time mid-October, then we'd have to organize less comment resolution which would be led by the rap tore consulting department that has commented and then find a resolution of the comments and then if they are of substance then we start another call of review which is the additional review that lasts three weeks. So after those three weeks, if there are no further comments of substance, the text is improved. If there are comments of substance, then it's sent for approval at the study group meeting which would be January. So that's the AP process.

>> Thank you very much for that. So editorial comments don't count as substantial.

>> Editorial comments, they don't count, no. If you're saying about the comments, you're talking about minor.

>> Substantial technical comments would mean -- in that case I'm happy to go with the end of August. Thank you.

>> Brian.

>> Just jumping back to Mike's comment. Thanks for doing back of the envelope characterization of the uncertainty numerically. I was wondering maybe we would feel comfortable or you would feel comfortable Mike if we had a population weighted version of that. Obviously, you know, if the vast majority of headphones that most typically gamers use fall within a more narrow range than the eight to 600 dome that might have a significant impact on what the distribution looks like.

>> Richard?

>> Yes, I'm not sure that the range of headphones can really be said to be 45DBs or anything like that. They do fall within relatively narrow bands but we also have this sort of maximum -- the notion of a maximum sensitivity that a head phone is allowed to have which does help a lot. I believe it's

somewhere in the standard.

>> Dorothy?

>> So I actually measured the head phone sensitivity for a range of different types, both inserts and circumstance come oral and super oral. I just took what was available around in the lab and with friends and everything and it didn't give a range of 45 to be but it gave the range of at least ten, 15DB and there was actually one that was 20DB weaker than the most powerful headphones. So I think the uncertainty is really large and if we compare for instance to the equivalent consideration for the music listening, we deal with the spectrum which, of course, vary from one type of music to another, but if we actually have video game play where you can adjust the different channels selectively, you will have some gamers that will maybe mute some of the sound effects and then only focus on communication. You will have others that do the opposite and then they will have the sound effect and no communication. So we cannot assume that there is standard spectrum of excitation for the game players this would short of circuit any considerations we have for them to selectively reduce part of the exposure taces quite an important and technical discussion that needs to be taken.

>> Just a logical question. You mentioned it would be published on the Web site. When approximately were you aiming to publish it.

>> Today. Today.

>> Right after this meeting we will upload it. I think it's pretty much already done. I mean, as far as we -- our discussion is concerned. So I think we can just, you know, share the output document from this meeting as, you know, we have the output from the workshop in the morning and then we also edit it this afternoon. So that's the output from the group meeting, that's the official result of the discussion and so that's the official version. You can take a look at it and you can make comments and we have an opportunity to discuss that in August on 27th again if we don't find anything in the consent and then we have the approval processes during which we can also make comments again as Simoan suggested.

And independent that we create another work item which I would like to share today now on uncertainty accuracy of dosimetry. That's our plan.

>> So I have uploaded very very rudimentary proposer to create a new work item on dosimetry so I just show it.

Yep.

>> So just in terms of the earlier discussion to wind it up, so we will have the output draft. What we will also do from our end is to review the appendices as we mentioned alongside our health communication colleagues and send you the revised version of this draft by early July at the latest. When do we need to submit it so we are in time for the 27th meeting and also the 30th meeting?

>> Okay.

>> That would be 26th I think. Because this is the group meeting so we can --

>> And for the 30th meeting for it to go through to 30th meeting it doesn't need to be submitted three weeks before?

>> Yes.

>> Yes. That would be -- Samoan.

>> The deadline is something that is a limited discretionary but also suggest to be earlier because of this request something last minute people

are not going to be able to see before. So I would suggest at least one week.

>> Yeah, okay, one week.

>> Before the meeting which will last more or less the contributions for the contributions to the working party meeting. So that would be my suggestion, one week before that. And there was another question, yes.

>> By 20th then yes, 20th. I would suggest that so that everyone has a chance to take a look at that and submit a comment, yeah from the meeting if there are drafts then that goes to the working party meeting without -- because it's not a contribution but that you go to there with the proposal for the consent of the text.

Okay?

>> Thank you, Carl. Take care see you.

>> Safe flight.

>> So this is what I just drafted. It's a proposal to create a new work item for safe listening transducers but we can change the title as you know. Based on the discussion we had today about the registry. And so I took the text from that and I just copied it. I wanted to make it more general than just video gaming devices. So I wrote devices. So it's not just video gaming devices but also music players as well as different types of devices.

, and so I'd like to invite Mike and Brian, everybody to make contributions to this document so we can create another document that would be referenced by other recommendations using dosimetry if that makes sense.

What do you think, Mike?

>> Yes, I think that's a good approach. I'll certainly contribute. I've done a lot of work trying to outline the problem and quantify the variations in hardware. Thing's still a lot of work to be done collectively in figuring out how to accurately quantify or measure them or test in each case. We have different technical scenarios for wider and wireless headphones then there is the case where we have signal processing in an active head phone as well, uneven controls on the head phone to change the signal processing and realtime. A bunch of variations we need to capture. We need to see if we can find a way around arriving at an accurate dissymmetry estimate for each of those cases of known hardware combinations I think.

>> Can you actually list those concerns that you just mentioned so I can put those in this new work item.

>> Yes, do we have a shared document or should I just list it in the e-mail you just sent. I don't know if my site account is active yet.

>> You just write down in my mail or whatever.

>> Okay, cool, yeah, I'll do that.

>> I'm sorry.

>> Mila does not have a ties account yet.

>> Must have.

>> Yeah, I also don't -- I think I applied for it at the REN meeting. I don't of it yet.

>> Strange.

>> I think mic.

Let's talk about that.

Just may suggest the document to them.

>> Which one? He.

>> I did I already did.

>> And Malit as well.

>> Yeah.

>> Okay.

>> So is that okay if we -- oh, I'm not sharing.

>> Mark, go ahead.

>> Just a few questions. I think will this document also look into Bluetooth audio connections and how to handle that and will smart headphones doing your own calculation be part of that or do we see that as the basic standard because I think that ITU.H70 already has smart headphones included, right?

>> Yeah, I mean as far as the scope is concerned, yes.

Your question is about.

>> One was Bluetooth you said yes. The other one is smart headphones I think because we also have nonlinear behavior because that's exactly what they can do from time to time. On the other hand, some of those smart headphones can also do their own calculation of sound dose. So that's maybe a little bit out of scope of this document but maybe focus much more on the performance of that head phone how it can be on a database how we can look into this but I see Richard has his hand up and that's the expert on that topic so I'll leave it to him to discuss that.

>> Thank you. Richard.

Oh I wish I was the expert.

>> I think included in this everything that's been mentioned so far, the nonlinear process and compression changes in frequency response just changes in gain inside a head set during the use of it as well, it's not just when you pick it up off the shelf, all of these things do have a bearing on the delivered dose. But there's one other factor I think would be very good to include in this thing and that's the way you measure sensitivity. Because there are different ways and they have different advantages. You can use the 1 kilohertz which has been quite popular. You can use half a kilohertz or you can use the noise, the standard noise signal, which has its own advantages and disadvantages. But all of these do actually have a bearing on what the system thinks is going on in the ears and as mark has just said it really ought to embrace the fact that some headsets can do the calculation the last point within the head set which is not a bad idea. I think it's a great new work item and I'd love to help.

>> Great. Thanks. I would also like to address the issue of registry as well as metadata exchange if that's possible. So some technical issues about uncertainty and accuracy of dosimetry as well as how to make the registry part database as well as metadata. So that would be my idea. And I want contributions. I would like to invite your contributions. So the next meeting in August, maybe we can start working on this already.

Yep. Is that okay? So yes, please.

>> So in terms of the -- I mean, this proposal would be to create a new guideline. Would this be in the format of a guideline technical paper or it doesn't need to be defined right now. So when is that?

>> For the time being I would like to make a recommendation.

>> And secondly we would need also to collaborate you said with study group 12.

>> Yeah, 12 and maybe five as well if -- no, okay?

>> How do we know there was a part -- you will do a liaison statement

or what? So they are part also of this work because I think it's important to get feedback from a lot of people with expertise in this whereas for the standards -- for the standard that we were discussing earlier today, WHO had the capacity to do a lot of that background research and to propose that. We are a bit limited in something which is extremely technical from the acoustics perspective to do we are happy to invite certain experts and engage with them but I think other experts would also have valuable contribution the.

Yes, I think as you can see Samoan doesn't want to include SDG5 so I will delete but still we can have SG12 and IEC and our reference recommendations will be H.870 and 71 and supporting organizations WHO meta.

Samoan.

>> Yeah, to the list of liaisons you might want to add because they do some standards in the area of sense activities, things like that. So might be also useful to recognize that. Thank you.

>> Do you know any group? They have those long numbers. We have to dig into previous interactions safe listening. Remember that we had some feedback from some of the groups so we need to go back and fetch that from the previous study period should be able to see, yeah.

>> Good. Thanks.

>> And so WHO meta G3ICT university and other organizations that would support this work.

Okay. And so for the time being we have the title accurate dosimetry for safe listening transducers but we can change it. We will start working on this, okay?

Any comments? Questions? Yeah, Mike.

>> Yeah, question.

>> Where in the document would you like to see a problem statement or the versus technical suggestions for solving the problems?

>> We can do that in for example in the introduction, we can state just as we did with the current document we listed Samoan, yeah.

>> I mean, you could have something in the A1 form the first block, the summary and scope, yeah. You could say what the problem you are trying to solve. Go one line down please. The empty cell.

>> Yeah, this one.

>> Right.

>> So this, yeah, here we can we will write down the topics we will tackle. And then I just took the summary from the current document. I just copied it. So we can modify it as we want. We can change it. So you can add all the things that you just mentioned, we can just copy in this -- in document and we start -- we can start working on it. And I hope Richard and Mark, Brian and, you know, can help us.

>> Yeah, one comment. Brian or suggestion to think about all the possible variations of hardware and create your beautiful blog diagrams that supports each scenario so that we visually make it a clear what scenarios we're solving for here.

>> Right. Are you volunteering to do some physiodesign work.

>> I hoped you would do that.

>> Sure.

>> Great. Thank you. That's great.

Any other comments? So I will write in my meeting report about the

agreement to create this new work item so that we'll start working on it. And the expected time of completion is somewhere around probably fall next year. So somewhere in like September October I hope. Might take longer so it's okay. It's just a target.

And I think it will be very good. And this will have an impact on other documents as well so depending on the results of this, we will modify the existing H.870 as well as 71 and also this E gaming, E sports document recommendation as well.

>> I have one. Is the focus on audio devices or do we also talk about free field loud speakers because now it says transducers and that seems fairly wide.

>> Okay yeah because I used the word transducers intentionally because it was used in the draft recommendation and yeah you're right it includes a lot of things but I wanted to be a little bit general so that it might include many things. But if you want to specify or more narrowly focused then we can change the title.

>> Honestly I think it's already tough enough to talk about what your device is already there without widening it too wide because at some point it might be unrealistic.

>> So you want to say headsets or. I think that's Richard's favorite term close fitting audio devices because you know it's close to the ear and not level and whatever you avoid those terms. Also use it in other standards what would be good. If that would be created by ITU.

>> You want to say closed fitting.

>> Close fitting audio devices. Not closed. Close.

>> I think it might be closed fitting listening devices.

>> That's also fine with me Richard.

>>

>> Devices could be anything anywhere.

>> Close fitting.

>> Close fitting listening devices.

>> Like this.

>> Cool. Thank you.

>> I think you need safe listening using.

>> I welcome any better suggestion, anything we can just change. For the time being we say for this so it's accurate dosimetry for safe listening using close fitting listening devices.

Maybe we don't have to say safe listening just general dosimetry.

>> I agree there is no need to say safe listening.

>> This is more general and useable.

>> Lower cases please including pose symmetry.

>> Any other comments? For the time being we have this accurate dosimetry for close fitting listening devices draft recommendation and we start working on this starting today and I hope we can have many contributions by the next meeting. Yes, Shelly.

>> Does this still need to be officially submitted before the next reporter meeting or is this taken as submitted already?

>> This has been already submitted.

>> So we don't need to sent it to you formally.

>> No. It has been.

>> Thank you. But the thing is, the actual approval of the work item will

take place in August at that working party plenary.

>> Of course. But what I just meant to ask was if we need to prepare this even justification or to send you what you have very general justly already prepared for us to send it to you.

>> Yeah, we can just keep them for the time being and the official work item will be approved in August, but we can develop the text anyway, but assuming that this will be approved, but I think there will be no problem.

And so this is what we will start. So this is -- as I said, this recommendation will include uncertainty, accuracy, you know, version of dosimetry as well as mechanism registration and metadata change or whatever.

And shall we send a reason statement to SG12? From this meeting? Yeah, okay. So that we can invite them to make comments on our activity. And I hope Mike can give me some text so that I can put more information in this draft. Yeah.

>> Yeah, I'll be sure to give you that text as soon as possible. I think I have 50 percent of it already but just want to work on it a few days more before I submit.

>> Okay. Something very cinch is okay, just topics or your ideas and that's it.

>> Yeah, I'll submit what I have.

>> Thank you. So SG12 people will understand what we want to do SG12 is the quality QOS people so and testing. They do a lot of testing like mannequin things like that. They standardize those things., Samoan, which question was it of study group 12? Question five. I was looking on their Web site. That's working of 12 and question five is for head set terminals. So that seems to be the right one.

>> The rap tore.

>> He's the Danish guy.

>> Yeah, still Lars kneel son.

>> Okay., he's interested in what safe listening group is doing so I think he's going to be very helpful and so we issue a statement from this meeting to SG12 question five to collaborate with us on this dosimetry calculation. Is that okay? Any comments? Is that okay, Mark, Richard, do you have any comments?

>> No, it's fine with me. Great.

>> Great.

Any other groups we have to send liaison to? Maybe we should send it to CIMILAC as well.

>> I think so. The WGO3 group that Mark and I are in and Carl as well, they are looking at some aspects of this question. It would be very good for them to be included.

>> Okay. That was TC108X.

>> Yes, WGO3.

>> All right. So we decided to do this. This will take some time to develop. About a year at least and alongside with that we will develop the original document which is hopefully proposed for consent at the next working party to plenary August 30th.

And Mike, you said you wanted to do another thing related to this.

>> I think the other thing that we discussed in the hallway yesterday might possibly have been covered by the draft standard that we have been

discussing the past couple days. And that was how do we account for dis symmetry estimates appropriately for hearing impaired people. I think there were provisions in the standard that basically excluded the symmetry calculations for assistive listening devices. I think that's covered then if I'm not mistaken but correct me if I'm wrong.

>> That's a very good question for Mark.

>> I hear you. Because I think you need to be different -- careful not to move into medical devices when it comes to this I think that's now written in the hearing aide accessories and then other assistive devices I think it's a good way to make it's clear that's a different story. I don't think a need to work on other public like that.

Dorothy.

>> Maybe I didn't hear the comment. So this might be completely out of the blue but did one of you mention asymmetry in exposure.

>> Dosimetry.

>> Okay, dosimetry. So sorry about that. So what I was have been thinking about is that we're all the time assuming a certain symmetry in exposure and it's quite common for gamers to, you know, take one of the earbuds off of the head phone and this is in fact something that we can see in other contexts that because you don't have final loudness, you actually increase the level so you give a very high asset to the one ear that is composed. I'm sorry that was completely unrelated.

>> Yeah, thank you. Interesting. Is there any issue like that. We don't have to consider that symmetry.

>> I think honestly what the system would do if you don't use one of your ears, it would overestimate exposure because you only would measure the exposure at one but it's doing for two. Since you would increase the level for that one ear the system would more easily see you exceeded your sound doze. So I think it's solving issue as such because I think you will get an earlier signal at that moment. The only thing I could imagine is that smart headphones would be able to calculate the dose on each ear separately.

>> Exactly. Smart headphones that's the thing.

>> Thank you. Richard.

>> Yes, I think measuring each ear separately the risky thing is if you're measuring the dose to each year you'll get quite a different result as if you take the maximum of any, take the worst case. If you take the worst case it will as Mark says be overestimating the overall dose delivered and take down your hearing quickly.

If it's average it will underestimate the dose delivered to the one ear which could really suffer. It's likely to be the same ear every time. It's a tricky area and would be good to include it somewhere in some document, some standard.

>> Okay, Mike.

>> Yeah, I've got another comment related to mild and moderate cases of hearing loss. In the case of mild to moderate hearing loss where people do not use assistive hearing devices or any hearing aides of some sort, do we still estimate the dose as if they were normal hearing or do we take their hearing impairment. For people with hearing loss the fact is cloak letter doesn't care because it will do as much damage as people with perfectly normal hearing. There's no evidence people with mild hearing loss could accept more sound dose than people with normal hearing. That is why there's

no reason to change that and to change the logic.

>> Unfortunately this makes me think of something we maybe hadn't contemplated yet which was potential interactions between accessibility features and safe listening features. In other words, if somebody is hard of hearing and they set the game to do use the hard of hearing features that may necessarily override or interfere some of the safe listening features we've considered. Mark may have another perspective but I wanted to share when we did a quick review how people were responding let's say to the safe features implemented in Apple particularly and also in other devices like Samsung where also some implementation was taken up. Specifically I'm talking about Apple because the responses were very different for Samsung so I won't go there. For Apple not much negative feedback I must say unlike what we say for the hundred decibel limit except that the feedback which game from many people say I have a hearing loss and my phone weeks, it's so annoying, I think that's something which is not adequate reflected in our standard and potentially needs to be considered in the next iteration that people who have severe or profound or moderately severe hearing loss, perhaps there needs to be a way to give them the option. Though this is -- it's not like it's limiting in any way but even to, you know, somewhere it needs to ask them their hearing level or in the case of advocacy even have a hearing test which is built now so they can also do a hearing test to see what their level is or at least ask them that before starting to give them notifications.

>> Mark, you want to add something?

>> Yeah, we differ slightly in opinion because most people with hearing loss won't listen directly to their phone. They will listen through devices at that moment and then of course the phone doesn't know what is happening because the phone is sending its wireless signal to your assistive device cochlear device, hearing aide whatever and then you apply it again. So that's what's happening there. And you may remember the logic we have used for H.871 for personal sound amplifiers is you need to use the same logic as sound dose because I think there is no research stating anywhere that hearing loss means multi ear loss means that you can accept higher doses before you get cochlear damage.

>> Any other comments?

Yeah, okay. So then I think I have to put in some words in this problem statement so that I can finish this justification for the creation of the new work item.

What about bone conducting headphones? Is there any work anywhere on the planet that that says something about how much energy we put into those before they're going to cause damage? Should we be including them in some studies somewhere.

>> Yeah, Mark.

>> Yeah, we know it's from the hearing care field, right. So we have bone conduction hearing aides that moment. We have multiple options in those. The thing is Richard that the current systems on the market have a huge output to reach a decent dynamic range of the cochlear. Honestly the risk level that bone conduction transducers will create hearing loss is fairly unlikely except for the very strong Baja transducers at very high output levels. They are anchored with a titanium screw on the mastery bone and I don't think we intend to do that for gaming or any kind of other listening devices. I shall is bone conduction is a very different animal to handle. Dependent on

the thickness of the skin and between the skin and bone how much energy you get on cochlear level. Very difficult to use that but we have systems to that. We have bone vibrator measurement systems looking at it. I would leave it out of this scope. Very specific domain and risk level is so low that I wouldn't really spend too much time on that.

>> I can sleep tonight thank you.

>> Good that you can sleep tonight.

>> I've spent considerable time investigating both cartilage and bone conduction devices in my career and I think Mark is right here but I also want to point to enormous variation in the order of 22, 25 to 30DB you can take a device off and put it on again and have 23 less sound from your bone conduction device. Even if they were loud enough to warrant that.

>> Yeah, thank you.

>> Good point. Mark you want to add something to that. Mark you said you know someone who has also been published in this area. We have standards on that, right? I could even send you lots of studies looking at the issue because we have some issues that some of the devices brought to market they want to use for children and then we strongly disadvise to some of those children because a child won't get the dynamic range it needs to be able to develop speech in a decent way. So-so yeah there are multiple publication on that but honestly I can send you what we have and I think I can refer to the standard on that.

>> It's good to just mention even if we don't actually include anything in there but maybe we can just mention it so that people, you know, wouldn't have to go back again.

>> Yeah.

>> Thanks.

>> Yeah, so is it okay if we just draft a little bit of problem statements? Is that okay? So you -- yeah, Mike.

>> Yeah, and I've got some suggestions for to you start with so for -- this may be too specific for head phone sense activities typically range from about 80 to 125DBSBL per mill lit watt. That's the sensitivity aspect. That should be captured. And for headphones the impedance aspect also should be mentioned. Typically can range to A domes to 600 domes approximately with a common but not unique value of 32Ohms.

>> Of device headphones.

>> And so this -- so sensitivity range or aspect.

>> Yeah. Sensitivity range.

>> Should be, yeah, taken into account and also.

>> impedance range as well.

>> And these comprise uncertainty.

>> So in order to have accurate calculation of dosimetry we have to have head phone sensitivity range as well as impedance range taken into account.

>> You may look at the design of the head phone because I think it also depends the distance between the transducer and residual volume of air. Can imagine that a very profound deep insert phone has a very different volume push than head phone being farther from the ear drum because some of them use these isolating caps and whatever. So I think that all has an influence on the energy you drive.

>> Wouldn't that be captured in the sensitivity however because in a

basically is perhaps the relationship out the ear drum.

>> You would hope so but sometimes they put the same transducer and that will capture it. Given head phone will have a published sensitivity value which will under a slightly different manufacturer it should have a different sensitivity statement. Any product should.

On sensitivity the impedance only really comes into it if you're measuring sensitivity in terms of so many DB milliwatt. If you measure it in terms of DB per volt impedance is irrelevant for virtually all use cases.

>> So there's the first sentence that we came up with is a calculation of dosimetry depends on the factors such as sensitivity range of headphones impedance range physical shape of headphones, is that correct is that the idea that we are capturing? Is that okay? Mark?

>> For me it's okay and I don't need to repeat headphones because already said that at the beginning.

>> It depends on sensitivity. I'm not sure it depends on sensitivity range.

>> Yeah but you want to put a problem statement and but I think my a fairly wide range of sensitivity?

>> In which case uncertainty of calculation of dosimetry depends on uncertainty that's the problem.

>> Yeah, I agree.

>> These statements assume that we're talking about wider headphones in the case of wireless head phones we also have the amplifier in the head phone plus maybe some signal processing and there the case is more complex.

>> Very much so and you could have wider headphones for the same.

>> Yes, conceivably you're going to have wider headphones with an attenuator, ADC signal processing amplified, et cetera. It can be quite ugly.

>> So we're assuming that we can represent the head phone sensitivity with just one number on average.

>> No, you can't because I think for gaming there are arguments for a target function of the headphones which could be are the flat or tailored for communication or tailored for some other spectral balance like the diffused field target or something like that? And that would be one of the factors to consider if you tried to make just one figure for this sort of sensitivity.

>> So maybe you have to add frequency spectrum to that as well.

>> And any estimate will include some sort of assumption to the frequency spectrum of the signal and some sort of assumption to the frequency response of the head phone if represented only by one number.

>> Yeah, correct.

>> No worries we need to finish the standard. We just need to show what the problems are and there's --

>> Nonlinearity as well.

>> Exactly yeah.

>> nonlinearity is --

>> Characteristics.

>> Yes, characteristics of what?

>> Could be the processing going on inside the head set.

>> I wasn't thinking of transducer. Nonlinear processing.

>> Processing.

>> Are you thinking will link functions in the head phone or

compression? I was thinking of compression.

>> Well, compression.

>> Well, if you already have nonlinear processing that's enough because compression is a consequence.

>> Yeah.

>> Or vice versa.

>> It's fine. It's okay.

>> Don't you have enough problems maintenance to start with.

>> Yes.

>> Yes thank you.

>> In the current draft 7.2 had some text I think about problems.

>> Yeah. 7.12, yeah, uncertainty maybe the text here what do you think the following considerations are taken from H.870 for convenience of the reader in case discrepancy the provision in H.870 prevail. In estimating sound dose there's some uncertainty, some sources of uncertainties are sound source and head phone variation in head phone we have many sources of uncertainties. Maybe we can copy mic, okay.

>> And in many cases I think in fact most none of them sent metadata back to the device they're connected to so that's a real issue estimating accurate doses for those cases.

>> Passive active --

>> Whether they're passive active for instance I mean Sanheis makes a passive boom height for gaming where there is a passive volume control where you can attenuate the input to a head phone passively. It doesn't send any metadata back. Doesn't have a -- you can attenuate the electrical signal and that directly affects.

>> That's the reason why Richard is such a big fan of smart headphones doing it all.

>> So I was just thinking because dosimetry exists already as a code in occupational health and safety and I'm not so familiar with all the details of the various standards but I would assume that there is also some sort of classification of accuracy like class zero, class two or something 123 depending how accurate the time is. Is that perhaps part of the type of solutions we should consider that you can declare your dosimetry to be class zero or class one compliance depending what type of data you base it on because if the metadata is not shared and that is quite clear for the analogue headphones maybe the user can enter some information which can serve as a lookup and then at least you might be one step closer to a better estimate but then of course the responsibility for correct information is on the user and not on whoever is responsible for the platform.

>> I think that's the case for analogue, for example. Yeah. Because there's nothing to be done.

Yeah, Mike.

>> We discussed this informally between the sessions that would be one of the defaults for analogue headphones having a -- like a table of head phone characteristics where the user would input the mega model of the head phone used and while not preferred it's a better approximation than nothing. It still doesn't solve the case of when you have controls on the head phone, a volume control for instance and you dial it down but.

>> Dorothy.

>> One of the --

>> Sorry, I cannot hear what you're saying.

>> did you hear what Mike said.

>> Yeah, that's perfect and I think that the opportunity to say there's insufficient information to make accurate that should also be an option because might be cases where even with the best intentions and all the rigor there's just not information to make an accurate dose and that should be one of the possible outcomes. Exactly what is happening today. Handshake with a head phone for smartphones with own receivers higher robust and know exactly what they are doing. I think the safety margin they take it much smaller than for the moment that accuracy goes down. I think that manufacturers don't want to be liable for because of the use of their devices. That is typically the logic they are using today and somebody else using it is mic from sense phonics they need to do monitoring of sound dose for musicians when they're in ear systems and they already have a list of different in ear headphones, receivers with different specifications measure as close as possible. Logic you're describing they are already using in that use case.

>> Richard.

>> In that situation you've got them actually doing some of the headphones to determine what the sensitivity is. That's really quite good. The problem in the world though is that different manufacturers have used different techniques to measure sensitivity and that means if you measure with say the 1 kilohertz tone which quite a lot, then if you've got any other signal at all you don't really know what the dose is. And then if you got another one that happens to be done in terms of using the standard noise signal, the gain is going to give you a different result. So one of the problems is uncertainty is to what that sensitivity figure against a head phone actually is, how they got it and that I think is quite a big problem with all common headphones. This is one of the things why putting a register together is really a challenge.

>> Yeah, that's right, a single frequency sensitivity figure doesn't really make a lot of sense because these headphones typically are attuned to a target curve and it's not the same in every case so that means that the frequency response varies from one to another. In order to make a correct dose estimate it actually is necessary to know the frequency response and then integrate the signal across that transfer function.

>> Brian, do you want to say.

>> Richard, what do you think?

>> I think I technically agree.

>> Okay.

>> Peter.

>> Just out of curiosity, we're talking about the -- in this document we're talking about different categories of sound, right? In that case what will happen? I mean the dosimetry will accumulate all the channels or categories sound.

>> That's what you mean, right? The categories of sound like we were talking about like conversations speech our music or some background noise, things like that.

Mic?

>> If you know the frequency response of the head phone you can estimate a correct dose given any input signal. I think what you meant was there are different types of signals have different spectra of speech, music,

single frequency tones, et cetera. In that aspect you're right. That can be solved by knowing the frequency response of the head phone the dose estimate. So this kind of outlines the complexity of the task at hand. Underscores we cannot rely on a single frequency measure.

>> Yeah, I definitely concur on this as you recall from the online meeting we had last week, you know, the variation in the sound of different headsets is drastic. Some of the sound designers have to use while they're mixing because everything is so very different. I agree a single register is not going to cut it. And even a frequency shape is stip an approximation for active devices.

>> We may want to invite Ricardo because he did multiple measurements with a spectrum so I think it would be good to have him on board.

>> Yeah, I'll do that. I'll invite him. That's very good.

Okay. So the problem statement, the scope. So we're attacking the tackling the uncertainty, the dosimetry which depends on factors such as sensitivity range, impedance range, frequency spectrum response, frequency response, nonlinear processing, passive versus active, physical shape of the headphones, blah, blah, blah all right.

>> Maybe at controls on the head phone as well.

>> Controls on the headphones.

>> And in the case of wireless head sets, the situation is even more complex so there are many issues to be considered but do we have to tackle them all or maybe we can concentrate on some of them?

Yeah, mic.

>> That depends how accurate we want the dose estimate to be really.

>> Yeah, that's -- I think that's a very good point. Maybe we as Dorothy mentioned, maybe we should have some kind of classification of dosimetry and the range of, you know, how shall I say, you know, acceptable level of accuracy or something like that, kind of like deviation, you know. So that's not a statement of. That's what we may want to describe in this document some kind of range of accuracy of dosimetry.

>> We discussed methods of classifying head phone characteristic ranging from manual input of manufacturer make to detection of possible of some electrical characteristic if that aids all the way to transmission of digital metadata between the head phone and the game console for instance. So those were I think the ideas that we discussed that could potentially solve some of these issues and bring the accuracy up to a divider level but starting off that section with a -- a few words that describes different classes of accuracy what Dorothy said maybe it's a good idea to set a goal how accurate we want to get or how accurate we can get and then have different classes of accuracy of dose estimation.

>> Ray?

>> No, just in my mind agreeing with what Michael's saying.

>> Yeah, okay. Sorry, Dorothy and then Richard.

>> I think I'd like not to add more problems but the head phone wearer state, some headphones automatically detect whether they are being worn or not. So that could be added. And then also as for the classifications and all these many problems I think probably wise to have a document that that mentions all the problems and then for some of them there will be solutions and for us there won't be a solution but at least it will demonstrate that it's a

factor that we have considered.

>> What was the first point you mentioned?

>> No, the head phone wearer state, this was on the problem statement that you don't really know whether they are wearing the headphones or not but some headphones actually have a detection of whether they are being worn or not, this is one parameter that the head phone might feed use data information.

>> Interesting.

>> Is it head phone wear data or something?

>> Wearing state I think.

>> So that's wearing the head phone or not indicated by the head phone itself, right, okay go ahead. Dorothy, yeah, if you want to continue.

>> I'm putting it in the chat.

>> Okay. Good. Thanks.

And Richard?

>> Yeah, earbuds do that sort of thing. They know. I think what she has just said about including all these things at least mentioning them is very good. Head phone sensitivity is measured to this -- the ear drum point in order to know what the -- refer it back to a safe listening level you have to apply a head related transfer function which is a relationship of what's going on with the ear drum to what's going -- what would be going on in the free field. Because the free field is where our safety standards are set.

Now, different types of headphones have, whether it's in in ear monitor eared but or over the ear type thing have a different relationship there to what's going -- to that relationship. The head related transfer function HRTF. It's in the standard H.870 but I think this investigation ought to consider fine research on how that changes with the type of listening device it is much.

>> And there's a comment from Sony on analogue devices. How can I get the chat. Okay, here. So there's a comment. There are analogue headphones on the market that have the ability to change the frequency response under the user. Some models are AB switches while others changed seamlessly and these should be considered, okay.

I have measured a few of these myself and I don't fully understand Richard's point because they are by definition the transfer function from the free field to the ear drum and as such not really part any of transmission with headphones.

>> Yes but it depends on whether you've got the headphones on or not or whether it's a close fitting monitor will it not effect the or am I completely wrong on that.

>> Head related transfer functions are only used because we have to try to estimate what the equivalent free field or diffuse field exposure would be and then convert it into something that can be compared with the free field or diffuse field measure.

>> A correction factor. That's where all our experience for hearing damages are.

>> Thank you very much. That will remove that thought and I think you'll have to remove that sentence.

>> Okay.

>> Dorothy, can you explain a little bit more about that point? I couldn't quite understand well.

>> So part of the EN5332 or the ISO11904.

>> Yeah.

>> What they do is that they lay down principles for measurements either made by a mannequin or in an ear of an individual and then we have to compare that to levels, three field levels because that's, you know, the reference for the hearing damages that people have acquired over time. So there is -- there's tabulated -- there's a waiting function I think in the H.870 or the 53332 which is the equivalent of a diffuse field head related transfer function and there is probably also a free field head related function at least for the ISO11904 you have the opportunity or the possibility to select which one you want to refer to. It gives very little different but that means it's just sort of a calculation trick to get back into the free field domain.

I can lecture for hours about this so I don't know how much time we have.

>> Okay, sorry.

>> But I can also share because I collected the data for the ISO11 904 and also made the tabulated data for the 119042 so this is the head phone standard. I can circulate that document and then you can look into that.

>> Yeah, that would be great. Yes, yes great. These are the topics we will tackle but the first thing will probably the classification different classes of accuracy of dosimetry. We start from there and then behind all this is the uncertainty of the calculation of dosimetry and in order to have safe listening devices we have to have this dosimetry, correct or accurate dosimetry. That's why we want to work on this. I think I can just quickly write liaison statement to SG12. So that we can just publish it.

>> I had mentioned ISO for relationships. ISOTC43.

>> TC43, okay.

>> Liaison statement to SG12 study group 16 like to inform SG12 that we have decided, agreed to initiate work item, a work item on tackling the name of the recommendation.

On accurate dosimetry for close fitting listening devices. This draft recommendation will describe issues or a problem -- issues with the calculation -- describes the uncertainty. So calculating dosimetries -- dosimetry arising from various positions surrounding close fitting listening devices and to propose or describe recommend, recommend requirements conditions or what? What do we recommend in this recommendation in the dosimetry? Are we going to provide some kind of dosimetry mechanism or implementation? Or conditions.

One thing is some classification, right? Classes, metadata, some methods.

>> Maybe some best practice.

>> Oh, okay.

>> Recommend best practice or good practices.

>> I think the classification that would be maybe most personal thing and this be of course also to give some best practice advice. I don't know. It's a recommendation what we formally try to do.

>> Okay.

>> Best practices for classifying. Not just classifying but for accurate dosimetry. Simple.

There's comment. So thank you Dorothy.

Any comment?

And so we would like to invite SG12 to join us in developing this

recommendation. Maybe I would talk a little bit about what the dosimetry is on certain calculating dosimetry arising from various conditions. Dosimetry is an important essential or important part of -- important element and introducing, providing? Safe listening devices systems which is described in H.870.

Okay, so something like this, what do you think? Anything to add? Any idea?

Yeah, right.

>> Sorry, on the sentence right above best practices for accurate dosimetry, I think it would be more accurate to say we are trying to increasing and characterizing dosimetry accuracy.

>> Increasing and characterizing.

>> Yeah.

>> Accuracy and dosimetry.

>> Yeah. Or dosimetry accuracy.

>> Dosimetry accuracy, okay.

>> Sorry, I think my jet lag is starting to kick in.

And maybe follow on accurate dosimetry is an important element in safe listening.

and then for your information we'll have a group meeting

>> Do we think we want to send a draft of this esports video gaming recommendation to SG12 as well? Or we don't have to?

>> I think the liaison with them is in the context of the head phone sensitivity and head phone accuracy which, of course, will wood in future help us to revise H.70 and the video game standard according to what is in this but I don't think that we need to send this particular standard to them.

>> Okay.

>> Would be my but I don't know the points of procedure in ITU if that dictates that decision.

>> Well, it's up to us. If we want to send them get their feedback then we want to do it.

>> I'm always happy to get feedback from people. I'm just concerned. It's very late to ask them for feedback at this stage and yeah.

>> We would like to send out from this meeting and this will probably be sent to ISOTC43 and SG12, is that okay?

Richard, is this okay.

>> I think that's right. CENELEC doesn't get down to WG03 but presumably Mark Carl and I can convey that.

>> Yes, okay. Thank you.

>> What about ISO, TC43, is there anyone who's involved in there or we could just send -- or Dorothy, are you associated with this group as well.

>> I was. The ISO11904 was developed in working group six but the working group was closed in I think 20004 or six or something like that. So it's not -- I don't know which working group it belongs to and I'm not in any of the working groups anymore.

>> I'm still in ISO acoustics and that's I think TC43 and I see some messages come across so I can double-check which work group this would belong and get back to you, is that okay.

>> Okay, great, yes.

>> Anything else to add in this statement it's just rudimentary. Very simple. We started this work and we want them to join our effort, but.

Yeah, Samoan.

>> You are looking for the owner of 11 I know four in ISO, it is TC43.

>> ISO-four-one-two that was developed by TC43.

>> It is that technical committee, no doubt about it but TC43 has two subcommittees and they have different working groups. It was developed in a working group six which doesn't exist anymore.

>> I see. Okay. So TC43 is bigger than working group.

>> Yes. Technical committee has subcommittee one and two and then they have each of these subcommittees have their individual working groups. So working group one for instance is thresholds of hearing and all the reference states of audiometers and there was at some point a working group seven on loudness as well which I don't think exists anymore either but it's all part of TC43.

The TC43. You have to find whoever's responsible for the TC43 and then they will find which working group it's for.

>> But you could just send it to TC43. It's everything about acoustics but of course it's a very wide field, you can imagine.

>> So anyway, so my -- Mark you might be able to find someone.

>> I will double-check which one works best at least. I'm sometimes still part of some meetings so yeah sure.

>> Great, thanks.

>> Oh. So this is the text and we will send out this news and statement to CENELEC, ISO and ICE and SG12 so we can get some feedback from them when we discuss this the first one to tackle is this classification of accuracy of dosimetry.

>>

>> So this is the new work item. We will ship this in -- you know, put it in better shape and I will output from this document and this group meeting.

So this is the work item I hope we can receive many considerations, okay, I hope and. So. So this is a draft of the text. Sorry.

>> So contributions, we want to receive before the -- or we can already start discussing in the August meeting but first this has to be accepted as a work item in August.

>> Yeah, we can start discussing in August.

>> thank you.

So this is the -- so the ITU recommendation has a structure as we did, you know. So we have the title and then we have introduction. This is optional. So we don't have to have any introduction. But we have to have scope. So we have to define the scope. So I, you know, hope someone can contribute, propose the scope of this document, what we will do. So we will define uncertainty and classification, metadata, repository mechanism and so on. And then if you have references. So we identified some, you know, ISO documents already. We put those in here. For example, we already have -- Dorothy has just identified this ISO11904. So we put this like here.

>> And then -- yeah, go ahead.

Who wants to take the floor? No, okay. So then we have definitions as we did, you know, so we have to define some of those terms from ISO. Maybe we can take and also from other, you know, places but for example, dosimetry I think we have to define somewhere or we take it from H.870. And terms defined elsewhere and then terms defined in this document, in this recommendation. And then we have abbreviations, acronyms and

convention. Convention is like it is recommend. It is required. We should say should or shall and things like that. So we define what we mean by those words.

And then clause six, we call it clause, not section, but clause six is the first, the beginning of this document. So we -- for example, we start with background, the information or introduction and four we can just start the main part of the recommendation. Like class of dosimetry or accuracy of dosimetry or uncertainty or, you know, we can list this piece.

And for example, we -- I think we can just copy this. It's just a strawman. I can just put as a strawman.

And also we identified tomorrow issues here, problem statements.

I will put this in the site Web site so that you can take a look at it and you can make any comments, modifications, proposals, it's just initial stage, initial draft so it's -- nothing's fixed yet. It's just for place hold. Any comments questions about this? How we do this recommendation and I hope we can come up with some kind of, you know, requirements or conditions. For example, like classification one, class one, class two, class three for accuracy and dosimetry.

Okay.

All right. So this new work item. That's it. And let's go back to our main concern here this ES.

Yeah.

Go ahead. Who wants to take a floor no, okay. So as I said we have 15 more minutes. So this is wrap-up and so we created this new work item. We will continue to work on it from the next meeting. And this is the output from this meeting and this will be uploaded on the Web site and you can make comments and you know, I mean, we can discuss over mail using e-mails online and if necessary you can -- we can even have some kind of informal Zoom call if that's necessary. That's also possible. But officially we can have -- we'll have Rapporteur group meeting on 27th of August. So until then you can have an opportunity to make comments, propose revisions, modifications, deletion, add decision, anything until then.

And then the deadline will be 12 of August. So if you want to make a written contribution, please submit your contribution by then.

Yeah, Brian.

>> I hate to ask Peter for work while he's not here but I was wondering if there was a plan to make a sanitized version that could be shared by some of the key feature changes that could be made more accessible.

>> Differences.

>> Not a different -- a summary of the doc that is more suitable for a wider distribution that we could revise some for example developers that are not part of ITU.

>> I see. Executive summary or something.

>> We did it earlier and had shared it and we can update it.

>> So as for the next steps and as we discuss as far as ITU is concerned if we successively propose this document or draft recommendation to the working party to plenary on the 30th of August, as Samoan said we would probably be able to publish it officially on ITU around mid-December. And then WHO can take that and hand that to WHO publishing department, yeah.

>> So we will anyway start the work on developing our version of the

standard like we did previously. So a more public health and maybe with some more massages and so on version of the standard. And because our own publication process is quite lengthy we will start it now, we will get our planning clearances and all and it will automatic also to ICU because it will ab cobranded product.

Samoan.

>> About the process of -- editing.

>> Should wait for ITU to edit it and then do your part I think.

>> But we will -- of course it will take time and probably be January or something by the time it comes to you for approval but we will need to start it working on it now because if you do it in December, it will be too late.

>> Well, I would wait until August.

>> Yeah, so --

>> Because might change there and then for you to -- it could be -- so I'd be careful there yeah.

>> I would suggest that you start working when we consent this documenting August. So that after that, you can start working on it and I don't think there will be much, you know, many changes. There are internal processes we will manage those so we are intact.

>> And you are intending to publish it before the world hearing day.

>> We would hope to launch it on our Web site if it's clear then everything on third of March.

>> Or second of March.

>> So that's the general plan.

>> I have a question. When will the safe listening technical paper the guidelines for the venues paper be published?

>> I don't know. It's already in there. I mean, they're working on it, right? We already give it to the department. So has it been published? Or is it on the Web site yet? No.

>> So that's the general procedure and I hope we can finish -- I hope in August.

Any other comments?

And for this safe listening related activities with ITU and WHO, as Shelly mentioned at the beginning of this workshop, there will be expert what consultation ITUWHO of safe listening.

>> WHO ITU stakeholder consultation on safe listening which is for the broader initiative.

>> That will be in January most likely.

>> Most likely.

>> What are the dates for the study group meeting in January Samoan which are dates which are not suitable for ITU so we have an idea.

>> Yeah, it will be two weeks probably South Carolina around 13 January. I need to see which one is marginal.

>> So 27th you mean.

>> Let me.

>> Something like that.

>> January.

>> 13 to 24, yes.

>> To 24. And all of those dates will then not be convenient so for ITU.

>> Correct.

>> Because 29th are executive board meetings starts. So we don't

really have much time in between. Maybe we have to push it then to March. Let's see. We discuss it internal.

>> Can we have a joint meeting during that time SG16 meeting? Samoan? Do you think that's possible?

Sorry, when?

>> During that SG16 meeting. Maybe we can have joint meeting in WHO site? With question 28 going there, something like that.

>> So a meeting to progress this document you mean.

>> Yeah, that's -- as far as we're concerned.

>> If it's --

>> Yeah, it's possible. A bit complicated.

>> Technically possible.

That's that one. In fact, as far as question 28 is concerned we have actually planned another meeting before January which will take place in November. So it's still intact and we can have a Rapporteur group meeting online if that's necessary for the discussion of this new work item.

>> Yes, Brian.

>> Are the dates for that finalized or is it still in discussion.

>> till open. Because we're planning to have this consultation with WHO in November. But since it was moved to January.

>> Question so the August 27th meeting was that for the safe listening standard? Okay.

>> Yeah. It's in the afternoon of 27. Yeah, like starting from 2:30.

>> The date is not fixed yet so we can still discuss.

I think we have five minutes and I think it's a good time to stop, or we have to stop. Anyway, so that's -- has been very productive meeting, workshop, as well as this rapporteur group meeting and I'm very happy that we have come to a tentative agreement to propose is this draft recommendation to consent published version in early next year also glad we have started this new work item on dosimetry so we can have more solid ground.

And yeah. So the work is still going on and I hope everybody can also help us build good standards.

and thank you very much for coming all the way. I think it's very interesting that the largest delegate -- delegation is from the North America. It's very interesting. And one country United States of America is the biggest delegation. So any way I hope to continue to work together and very happy with the results. So as I said, the documents will be available on the Web site. If you don't have any TIES account problem then let's ask Samoan, yeah so he'll take care of it. Yep.

And is there any questions? Any other issue? Any other -- yep, Brian.

>> I think you have to count Carl with Serge and Tatiana so it actually would be a tie between west and UK.

[LAUGHTER]

>> Okay.

Shelly.

>> Thank you, everybody and appreciate.

>> Say a few words.

>> No, just to say thank you. Thank you for all of your feedback and also with -- for your patience with us. Thank you for that.

>> Yeah and also all the people online especially from Asia for staying

up so late.

>> thank you very much. And I hope to see you again in August to discuss the final stage of this draft recommendation.

Thank you. And I have a message from -- what was it?

>> thank you to the captioners.

>> Yeah, okay. Community member so have a good night. Thank you very much and thank you captioners. Thank you very much for helping us for accessibility. And also for providing information about the -- what we have done.

And okay, that's it. Thank you very much. Have a good evening and enjoy your dinner. Thank you.

>> Thank you. Looking forward to seeing new August.

>> Yes, see you in August. See you. Have a good weekend.