ICNIRP
INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION

Public Consultation Template - ICNIRP Draft RF Guidelines, Appendix A, Appendix B

Comments to be uploaded until 9.10.2018

Dear Contributor,

Thank you for participating in the public consultation of the ICNIRP draft guidelines.

Please note that it is important that ICNIRP understands exactly the points that you are making. To facilitate our task and avoid misunderstandings, please:

- be concise
- be precise
- provide supporting evidence (reference to publication, etc.) if available and helpful.

Please provide your details below as per the online form and the provision of the privacy policy

Last name, first name:	Email address:	Affiliation (if relevant): Your affiliation
If you are providing these comments officially **on behalf** of an organization/company, please name this here: organization/company		
☐ I hereby agree that, for the purpose of transparency, **my identity (last and first names, affiliation and organization where relevant) will be displayed** on the ICNIRP website after the consultation phase along with my comments. ☒ I want my comments to be displayed anonymously.		

Please complete the comments table: Please use 1 row per comment. If required, please add extra rows to the table.

ICNIRP
INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION

Public Consultation Template - ICNIRP Draft RF Guidelines, Appendix A, Appendix B

Comments to be uploaded until 9.10.2018

	Document (Guidelines, App A, App B)	Line Number #	Type of comment (General/ Technical/ Editorial)	Comment. Proposed change. Context.
1	Guidelines	64-68	General	ICNIRP states that the reduction factors for its exposure limit values includes an allowance for the *dosimetric uncertainty associated with deriving exposure values*. However, it is not clear whether this dosimetric uncertainty allowance is also intended to cover the uncertainty of RF exposure assessments when evaluating compliance with ICNIRP's limits. ICNIRP should state explicitly whether the reduction factors in its basic restriction and reference level limits cater for the uncertainty of RF exposure assessments when evaluating compliance with its limits. If so, ICNIRP should state explictly (in units of dB) what maximum level has been allowed for in the upper bound of the RF exposure assessment uncertainty. If not, ICNIRP should advise on how RF exposure assessment uncertainty should be considered when evaluating compliance with its limits. There is currently considerable variability between various standards bodies and RF safety assessment agencies on how to deal with RF exposure assessment uncertainties. Some take a very cautious approach and prescribe that the *lower* uncertainty bound of the RF exposure assesment should be used when making comparison to the limits. Most simply specify that the *best estimate* of the RF exposure should be used for making comparison with limits, with the IEC standards permitting up to 6dB of uncertainty in the upper bound of the assessment. These differences in interpretation can lead up to a 10x difference in the assessed permissable RF exposure between different standards and RF safety assessment agencies, thereby causing confusion and eroding confidence in the universality of the ICNIRP limits.
2	Guidelines	396-738	General	ICNIRP's new approach of setting SA, H_{tr} and H_{inc} limits for short (< 6 min) RF exposures is confusing, difficult to implement and not well justified for frequencies below 30 GHz. Restrict the application of the SA, H_{tr} and H_{inc} limits to frequencies above 30 GHz. At frequencies below 30 GHz, continue with the exisiting approach of defining SAR, E, H and S as 6 minute averages. Even as an experienced RF safety practitioner, I had much difficulty in coming to a proper understanding of these limits and therefore consider that they would likely cause substantial ongoing confusion within the RF safety assessment community. As a general rule, safety procedures which are hard to understand and implement are often overlooked and ignored which is a poor outcome for everybody, except perhaps lawyers. As I understand it, ICNIRP's proposed rationale for these limits is to avoid excessive peaks in temperature rises (dT), particulalry at the skin surface. As exposure frequency declines, the skin depth of RF absorption increases, thereby increasing the size of the thermal mass (and hence thermal inertia) of the RF exposed tissues. At frequencies below ~30 GHz the skin depth of RF penetration is sufficiently large to ensure a thermal mass that will effectively smooth out dT peaks to within acceptable levels for the shortest RF pulses that may realistically be expected to occur.
3	Guidelines	83-96	General	The ICNIRP rationales for setting occupational and general public limits do not make sense for RF devices which are intrinsically safe up to the occupational limits.

				Specify that occupational exposure limits are applicable for *all* persons exposed to RF devices which are intrinsically safe up to the occupational limits. There is a large class of RF devices which by their design *cannot* induce whole body or localised RF exposures above the occupational limits, regardless of how they are used. For such devices, ICNIRP's stated rationale of limiting the general public to lower tier limits based on their presumed lack of awareness of their RF exposure from these devices is not plausible since holding such knowledge would have no influence anyway on their zero risk of being exposed above the occupational limits.
4	Document ?	Line number	Type of comment	Insert your comment. Insert your proposed change. Explain the context of your comment.
5	Document ?	Line number	Type of comment	Insert your comment. Insert your proposed change. Explain the context of your comment.
6	Document ?	Line number	Type of comment	Insert your comment. Insert your proposed change. Explain the context of your comment.
Continue numbering	Document ?	Line number	Type of comment	Insert your comment. Insert your proposed change. Explain the context of your comment.

Add further rows if needed. For this copy the above row.

And paste it here.