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.

**How to complete the comments table:**

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

This response document asks you to provide your ‘comment’, your ‘proposed change’, and the ‘context’ to this comment and proposed change. What is meant by these is the following:

**Comment :** A brief statement describing the issue that you have identified (and that you would like ICNIRP to take into account in the final version of the guidelines).

**Proposed Change:** A brief statement describing how you would like the document changed to account for this issue.

**Context:** A brief statement identifying relevant documents in support of your comment and proposed change.

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

|  |  |  |
| --- | --- | --- |
| Last name, first name: Butcher, Matthew | Email address: Your email address. | Affiliation (if relevant): Your affiliation |
| If you are providing these comments officially **on behalf** of an organization/company, please name this here: Sublight Engineering PLLC  |
| [x]  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. |

|  | **Document****(Guidelines, App A,****App B)** | **Line Number****#** | **Type of comment (General/ Technical/ Editorial)** | **Comment. Proposed change. Context.** |
| --- | --- | --- | --- | --- |
| **1** | Guidelines | 117, 138, 142, 146, 156, 373, 380, 394, 420, 521, 522, 533, 535, 537, 540, 545, 827, 831, 854, 859  | Editorial | The term *transmitted* could easily be confused with incident because of the common usage of transmitted to mean energy from the source, i.e. transmitter.Replace transmitted with absorbed. Line 138 indicates transmitted power density is the power absorbed per unit area. Stick with the usage of absorbed.Also replace Htr and Str with an alternate such as Habs and Sabs. Readability |
| **2** | Guidelines | 145, 156, 420, 533, 537, 720, 725, 726, 734, 854, 859 | Editorial | Transmitted energy density (Htr) and incident plane wave energy density (Hinc) are new terms to exposure guideliens and should be rethought and possibly repalced. These terms are time averaged power density and could be easily be represented by that terminology.For a reference level Hinc is challenging as it will only be assessed by measureing and averaging Seq. There is no mechanism to measure Hinc directly. Also it is cofusing to have two important terms represented by the letter H.A simple method could be applied that indicates that the time averaged power density is the restriction unit and the notation of a macron could be used:$ \overbar{S}$.Appropriate modifications to the formulas in table 3 and 6 would have to be made to accommodate this change. As a practitioner of RF exposure assessment it would be good to have terms that are measurable and don’t expand the nomenclature without adding value.  |
| **3** | Appendix A | 98-100 | Editorial | Seq is not well defined. Modifying the follwoing in Appendix A could resolve this...Sinc = EHAs it is typical to measure only the E or H field, the equivalent incident power density is defined as; Seq = E2/Zo = H2Zowhere 𝑍0 is the characteristic impedance of free space, i.e., 377 Ω. Explanation of an under-defined term. |
| **4** | Guidelines | 645-646 | Editorial | Diameter is not the general term, only being appripriate for circular aperture antennas. In most instances this equation uses the term dimension. D and **λ** refer to maximum antenna dimension and wavelength respectively, Common usage and more general application |
| **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.

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