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| Title | **Proposed Contribution to ITU-R WP 1A: *Comment on Working Document towards a PRELIMINARY Draft New Report ITU-R SM.[Visible-Light]*** | |
| Date Submitted | **2017-05-10** | |
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| Re: | ITU-R WP 1A | |
| Abstract | This document proposes a contribution to ITU-R Working Party 1A, as an enhancement of IEEE 802.11-17-0790-02. | |
| Purpose | This contribution requests review by the IEEE 802.18 Technical Advisory Group and submittal of a version, revised to suit the TAG, to the IEEE 802 Executive Committee for approval under OM Subclause 8.2.1 as an intended contribution from IEEE to ITU-R Working Party 1A **for submission by IEEE by the deadline of Tuesday 6 June 2017, 16:00 hours UTC**. | |
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**Proposed Contribution to ITU-R WP 1A: Comment on Working Document towards a PRELIMINARY Draft New Report ITU-R SM.[Visible-Light]**

This document proposes the following draft contribution to ITU-R Working Party 1A, as an enhancement of IEEE 802.11-17-0790-02.

The draft attachment referenced in the “Proposal” section is in document IEEE 802.18-17-0076.

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| **Picture 1** | **Radiocommunication Study Groups** | | Picture 5 |
| **INTERNATIONAL TELECOMMUNICATION UNION** | |  | |
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| Received: XX June 2017  Subject: | | **Document XXX-E** | |
| **XX June 2017** | |
| **English only** | |
| Institute of Electrical and Electronics Engineers, Inc. | | | |
| Comment on Working Document towards a PRELIMINARY Draft New Report ITU-R SM.[Visible-Light] | | | |
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**1****Source information**

This contribution from IEEE was developed by IEEE 802®, the Local and Metropolitan Area Network Standards Committee, an international standards development committee organized under the IEEE and the IEEE Standards Association (“IEEE-SA”), and represents the view of IEEE 802.

**2 Background**

The Working Party 1A Chairman’s Report of December 2016 (Document 1A/144) refers (in 2.3.6) to the “Working document towards a preliminary draft new Report ITU-R SM.[VISIBLE LIGHT],” attached as Annex 17. The report notes that WG 1A-3 proposed to maintain the document in the Chairman’s Report for further work at the next meeting and drafted liaison statements, including one (Annex 19) to provide and request information from external organizations. Annex 19 explains that “At its meeting in June 2016 ITU-R WP 1A started development of a working document towards a preliminary draft new Report ITU-R SM.[VISIBLE-LIGHT] under Question ITU-R 238/1 ‘Characteristics for use of visible light for broadband communications’.”

**3 Standardization within IEEE 802 relevant to Visible Light for Broadband Communications**

The IEEE 802.15 Working Group completed, in 2011, IEEE Std 802.15.7-2011 on “Short-Range Wireless Optical Communication Using Visible Light.” A project to revise IEEE Std 802.15.7-2011 was authorized in December 2014 and is currently active. It intends to develop a standard for optically transparent media using light wavelengths from 10,000 nm to 190 nm.

The IEEE 802.11 Working Group initiated, in late 2016, a Technical Interest Group (TIG) on Light Communication, aiming to determine the technical and economic opportunity presented by using the light medium for wireless communications.

**4 Views on opportunities for Optical Wireless Communications**

Optical Wireless Communications (OWC), also known as Light Communications (LC), has the potential to ease congestion in the lower radio frequency (RF) spectrum bands since light can be used as an additional spectrum resource for broadband communications.

**5 Views on regulatory environment**

Light communications are subject to substantially different propagation characteristics relative to frequencies in the radio frequency spectrum. As a result, the potential for interference is small, and light communications need not be managed by spectrum regulators. IEEE 802 believes that light communications operations should be classified as license-exempt and not subject to exclusive licensing. Adherence to the relevant local health and safety regulations regarding human eye safety and sensitivity is essential. Devices using LC or OWC should adhere to any local regulations regarding spurious RF emissions and should avoid causing interference in other RF spectrum bands.

**6 Proposal**

IEEE 802 proposes the attached revisions to WP 1A Preliminary Draft new Report ITU-R SM.[VISIBLE-LIGHT].

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