# P1914.3v2

**Submitter Email:** rich_tse@yahoo.com
**Type of Project:** New IEEE Standard
**PAR Request Date:** 14-Aug-2018
**PAR Approval Date:**
**PAR Expiration Date:**
**Status:** Unapproved PAR, PAR for a New IEEE Standard

**1.1 Project Number:** P1914.3v2
**1.2 Type of Document:** Standard
**1.3 Life Cycle:** Full Use

**2.1 Title:** Standard for Radio Over Ethernet Encapsulations and Mappings

**3.1 Working Group:** Next Generation Fronthaul Interface (COM/MobiNet-SC/NGFI)
**Contact Information for Working Group Chair**
**Name:** Jinri Huang
**Email Address:** huangjinri@chinamobile.com
**Phone:** 008613910490429
**Contact Information for Working Group Vice-Chair**
None

**3.2 Sponsoring Society and Committee:** IEEE Communications Society/Mobile Communication Networks Standards Committee (COM/MobiNet-SC)
**Contact Information for Sponsor Chair**
**Name:** Oliver Holland
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**Contact Information for Standards Representative**
None

**4.1 Type of Ballot:** Individual
**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 06/2020
**4.3 Projected Completion Date for Submittal to RevCom**
**Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.:** 10/2020

**5.1 Approximate number of people expected to be actively involved in the development of this project:** 20
**5.2 Scope:** This standard specifies:
1. The header and payload for the encapsulation of radio related IQ data, coded or modulated bits, MIMO streams, beamforming information and control data channels/flows into an encapsulating Ethernet frame (or UDP/IP/Ethernet frame)
2. The assignment, control, and algorithms for the compression and decompression of payload information between CU, DU and RU
3. The control, protocols, mechanisms and structures to enable the initial establishment and continued operation, administration and maintenance of RAN equipment

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No
**5.4 Purpose:** This standard enables the transfer of radio information across an Ethernet and/or IP based packet-switched network. The standard fosters interoperability among implementations by defining common framing, information encapsulation, and control mechanisms for these transfers.

**5.5 Need for the Project:** The upcoming generations of cellular systems are projected to be based on centralized data centers with virtualized servers connected to remote radios, possibly through distributed aggregation nodes. Packet-based networks are ideally suited for such systems as they permit traffic to be forwarded to any desired processing unit so the equipment usage can be power-optimized and load-balanced. For cost and performance reasons, it is desirable to have open standardized interfaces in this system so the best-available components can interoperate and be used to perform each necessary function. The expanded breadth of standardization of P1914.3v2 enhances the interoperation of these components, allowing better solutions to be built.

**5.6 Stakeholders for the Standard:** Stakeholders include cellular operators, telecommunication carriers, cellular and telecommunication

system vendors, and component vendors.

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**Intellectual Property**
**6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:** No
**6.1.b. Is the Sponsor aware of possible registration activity related to this project?:** No

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**7.1 Are there other standards or projects with a similar scope?:** Yes
**If Yes please explain:** The eCPRI Interface specification gives a template packet format for transporting radio data. This template is subject to proprietary definitions by the different members of the CPRI organization. While the eCPRI standard offers flexible support for transporting different types of radio data, details are not provided on how each of the functions to be defined in P1914.3v2 could be implemented with the eCPRI standard. eCPRI is not an open standard.

**and answer the following**
**Sponsor Organization:** CPRI
**Project/Standard Number:** eCPRI Specification V1.1
**Project/Standard Date:** 10-Jan-2018
**Project/Standard Title:** Common Public Radio Interface: eCPRI Interface Specification
**7.2 Joint Development**
**Is it the intent to develop this document jointly with another organization?:** No

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**8.1 Additional Explanatory Notes:**