IEEE P802.15  
Wireless Specialty Networks

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| 143th IEEE 802.15 WSN MEETING  **802.15 SG NEXT GEN SUN PHY Minutes September 2023 Hybrid Mtg** | | | | |
| Date: September 12, 2023 | | | | |
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Abstract

# This document contains the SG notes from the September 11-14, 2023 Interim meeting

**Monday, 11th September 2023, 16:00 (Atlanta) SG Next Gen SUN PHY PM#2**

1. The IEEE 802.15 SG meeting was called to order by the Chair.

1. The Chair reviewed the IEEE-SA patent policy, copyright policy, logistics, and reminders, including meeting guidelines and attendance recording procedures.
2. Agenda for Tuesday PM2 meeting was presented by Chair
   * Approved by unanimous consent
3. Reviewed PAR contribution
4. Worked on PAR document
   * + Worked on “Scope of Project” text:
     + Scope of the project: This amendment defines improvement and increase functionality to the SUN PHYs. The SUN PHY has increased data rate by increasing occupied bandwidth and/or adding new MCSs. The SUN-OFDM specification is extended with a focus on long-range communication in congested environments. The sensitivity is improved with at least one mode exceeding -120dBm @ 1% PER 64 bytes (payload) by using lower data rates intended for FCC 15.247 digital modulation system. The SUN-PHY performance is improved for congested environments. MAC modification needed to support the amended PHY are included. Frequency bands are added based on updated regional regulations.
     + Worked on ”Need for Project” text:
     + Need for the Project: The IEEE Std 802.15.4 is widely used in a variety of applications supporting Field Area Networks. Current users and product manufacturers have identified the need for additional data rates, both lower and higher than those currently defined in order to expand the usefulness of the standard for applications such as Smart Metering, Smart cities and other industrial IoT markets. The PHY enhancement better address the needs of emerging applications and as well as meeting the needs of wider set of applications where additional data rates can expand the usefulness of the SUN-PHYs.
5. Meeting was recessed for Tuesday PM2

**Tuesday, 12th July 2023, 16:00 (Atlanta) SG Next Gen SUN PHY PM#2**

1. The IEEE 802.15 SUN PHY SG meeting was called to order by the Chair.

1. The Chair reviewed the IEEE-SA patent policy, copyright policy, logistics, and reminders, including meeting guidelines and attendance recording procedures.
2. Reviewed and worked on CSD text contribution
   * See: 15-23-0494-01-04ad
3. Reviewed and worked on PAR text contribution
   * See : 15-23-0436-03-04ad
4. Call for any other business
   * Joerg proposed to present new data analysis from the local environment in Downtown Atlanta during AM1 Thursday. This was accepted and added to the agenda.
5. Meeting was recessed for AM1 Thursday

**Thursday, 14th July 2023, 8:00 (Atlanta) SG Next Gen SUN PHY AM#1**

1. The IEEE 802.15 SUN PHY SG meeting was called to order by the Chair.

1. The Chair reviewed the IEEE-SA patent policy, copyright policy, logistics, and reminders, including meeting guidelines and attendance recording procedures.
2. Completed draft CSD text
   * See: 15-23-0494-06-04ad
3. Completed draft PAR text
   * See : 15-23-0436-03-04ad
4. Reviewed and approved motion text for WG chair
   * See : 15-23-0478-01-04ad
5. Presentation on “Spectrum use in license-exempt frequency bands”
   * See : 15-23-0515-00-04ad
6. Meeting was Adjourned

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