Single Pair Ethernet PHYs for IoT

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Overview

- There are several existing single-pair PHYs and powering technologies developed or under development in 802.3 for IoT

- A whitepaper to describe those technologies and their potential applications to IoT is proposed

Outline

- **Scope , Normative References, Definitions, acronyms**
- **Existing IEEE 802.3 Ethernet Standard PHY Technologies for Single Pair**
  - *IEEE Std 802.3-2015 Ethernet in the First Mile PHYs*
  - *IEEE Std 802.3 Automotive "BASE-T1" Single-Pair PHYs*
    - 100BASE-T1, IEEE Std 802.3bw-2015
    - 1000BASE-T1, IEEE Std 802.3bp-201x
  - *Span Powering in IEEE 802.3*
    - Power over single-pair Data Lines (PoDL), IEEE P802.3bu-201x
- **Applications for Single-Pair Ethernet PHYs in IoT**
  - *Using Existing Standardized Ethernet PHYs*
  - *Requiring Extensions or Adaptation*
  - *Relevant Cabling Topologies and Environmental Considerations*
  - *Relationship to 'traditional' 4-pair Ethernet Cabling (BASE-T)*
- **Proposed and Potential Extensions for Single-Pair Ethernet PHYs**
  - *Study Group/CFI Possiblities*
- **Conclusion**
- **Bibliography**

Thank You!