SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
COIMBATORE-35
Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

19EEE305 / EMBEDDED SYSTEMS
III YEAR / VI SEMESTER

UNIT-V: EMBEDDED SYSTEM APPLICATION DEVELOPMENT

IEEE STANDARDS - 802.15.4, C12.11.G

IEEE C12.11.G Overview

- Standard used in utility meter communication
- Specifies data formatting and protocol for meter reading
- Supports ANSI C12.18/21/22/19 frameworks
- Often used over power line or RF
- Supports both request/response and unsolicited reporting

Features of IEEE C12.11.G

- Message-oriented protocol
- Efficient for small data payloads
- Support for security and authentication
- Robustness in noisy environments
- Designed for interoperability among vendors

Device Types Using IEEE C12.11.G

- Electric meters
- Gas and water meters
- Utility data concentrators
- Networked sensor interfaces
- Head-end systems (HES)

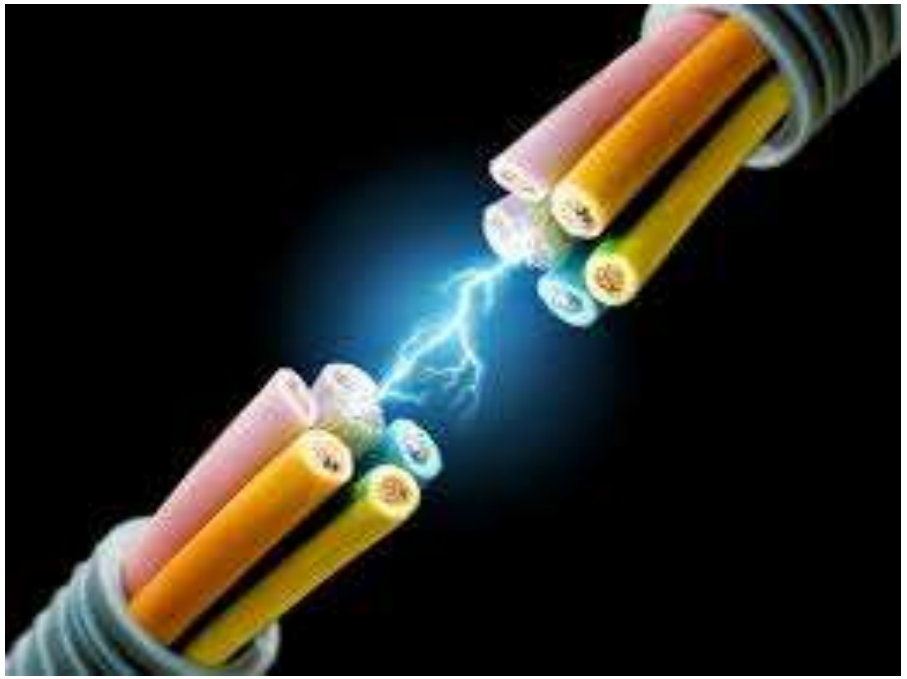
Frame Format of IEEE C12.11.G

- Typical frame: Start, Length, Control, Data, CRC
- Control fields indicate command types
- Efficient binary encoding
- Integrity via CRC field
- Support for custom data structures

Applications of IEEE C12.11.G

- Smart grid deployments
- Automated meter reading (AMR)
- Advanced metering infrastructure (AMI)
- Outage detection and reporting
- Demand response communication

RECAP….



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