Basic requirements of RoE

Liquan Yuan
Chao Du
ZTE Corporation
What is the key requirement for carried Radio

- CPRI interface would be as reference for define the requirements for RoE
- Delay between RRU and BBU need consider delay introduced by RoE equipments
- Synchronization mechanism
- Adaptive to carried variable data rates of radio data.
  - As current CPRI specification, CPRI data block (including Control, Sync and User data) size is different according line rate options, the Max Size is about 16*192 bits (12165.12M/s)
Requirement for Ethernet encapsulation

- Interoperation required unified encapsulation method for different interface types (1G Ethernet, 10G Ethernet, etc...)
  - MAC frame should be agnostic for PHY layer
  - Jumbo frame may be supported for better transmission efficiency optional
  - IQ data and C&M data may need process separately
  - Fragment CPRI’s IQ data to adapt Ethernet Mac frame may be needed
- Processing for RoE frame between RRU and BBU should feed the requirements for carried radio
  - Limited the process delay from ingress to egress of RoE equipment (for example: TDM multiplexing)
- Identification of RRUs for forwarding RoE frame
Some aspects affect the RoE processing

- **Topologies**
  - Tree topology
  - Ring topology
  - Chain topology

- **Services**
  - Hybrid with other services
  - Pure RoE services
Thanks!