BPoE

ietf://dtm/meetings/117

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Motivation

- BP Agents might be directly connected over an Ethernet link
- ... or a link that emulates Ethernet, e.g.:
  - some types of Virtual Private Cloud networks
  - many types of RF links
  - approx. everything
- IP + TCP/UDP/... CLA might not be needed
- MTU might not be a concern
  - “jumbo frames”
  - link-native fragmentation/reassembly might be supported (e.g., GSE)
Proposal

- Just send Bundles in Ethernet frame payloads
  - use a dedicated EtherType
  - first payload byte differentiates BPv6 from BPv7
- `draft-ek-dtn-ethernet` draft -00 says basically this
- w.r.t. EtherTypes:
  - did not find an existing EtherType for anything like this
  - an IETF protocol may request of IEEE an EtherType
    - for procedure see: `draft-ietf-intarea-rfc7042bis`
Considerations

- Single sender agent/single receiver agent
  - src MAC to dst MAC
  - additional src/dst discriminators would require a small header
- MTU might still be a factor for some networks/workloads
  - BP fragmentation at sender works, but repeats Primary Blocks
  - could add RFC 8200 §4.5 Fragment Header -style option
- Extensibility
  - could declare a registry of first byte values, but zero-overhead for BPv[67]
  - extend, somewhat GRE-like, later on
questions for the wg

1. Worth pursuing?
2. If so, how fancy?
thanks