Possible Objectives for Power over Data Lines

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Proposed Objectives (an exact copy)

- These objectives are the same as presented in darshan_1PPoDL_1_0913.pdf
  - The project will amend IEEE Std 802.3-2012 by generating a new clause.
  - Maintain compatibility with 802.3bp.
  - Add appropriate management objects.
  - Specify a power distribution technique for use over a single pair of wires.
  - Specify voltage and current levels to be supplied.

Proposed Objectives (word-smithing)

- These objectives are similar to those presented in darshan_1PPoDL_1_0913.pdf, but differ slightly in wording.
  - Allow for operation of data and power over separate pairs.
  - The project will support power and voltage limits that comply with safety standards used in automotive and industrial applications when applicable.
  - Determine the need for mutual identification protocols (i.e. detection/classification) and specify them if required.
  - Determine the need for protection protocols (i.e. fault/disconnect) and specify them if required.
  - Determine the need for wake-up protocols and specify them if required.
  - Determine startup time requirements.

Objectives We Don’t Need

- These objectives, presented in darshan_1PPoDL_1_0913.pdf, are not necessary.
  - The project shall not preclude the ability to meet EMI standards.
    - Covered by the compatibility to RTPGE objective.
  - The project will limit the output power to TBD at the load.
    - Covered by the “specify the voltage and current levels” objective.
  - Investigate the minimum power requirement at the load (e.g. 100mW minimum).
    - Is there another reason other than disconnect protocols (which is covered in another objective)?

Thoughts/Questions on some of the Proposed Objectives

- Determine the need for mutual identification protocols (i.e. detection/classification) and specify them if required.
  - Do we need detection if this is a static network?
  - Do we need classification for power management purposes?
  - If yes, when do we do detect and/or class? During crank, supply voltage may not be clean. Fast startup time may be needed for certain devices.
- Determine the need for protection protocols (i.e. fault/disconnect) and specify them if required.
  - Fault protocols are obviously needed (shutdown, etc.).
  - Do we need disconnect? If a PD goes to sleep, why does the PSE need to react?
- Determine startup time requirements.
  - Detection/Classification may slow down startup. Crank may cause problems.