



I E T F 83

Energy Management Framework draft-ietf-eman-framework-04

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New in this version

Merge with EMAN-REFERENCE-MODEL

- Merge with “draft-quittek-eman-reference-model-03”, with an entire section copied over (slightly updated):
 2. Energy Management Issues
 - 2.1. Power Supply
 - 2.1.1. Identification of Power Supply and Powered Devices
 - 2.1.2. Multiple Devices Supplied by a Single Power Line
 - 2.1.3. Multiple Power Supply for a Single Powered Device
 - 2.1.4. Relevance of Power Supply Issues
 - 2.1.5. Remote Power Supply Control
 - 2.2. Power and Energy Measurement
 - 2.2.1. Local Estimates
 - 2.2.2. Management System Estimates
 - 2.3. Reporting Sleep and Off States
 - 2.4. Entities

New in this version

- Feedback from Bill Mielke,
<http://www.ietf.org/mail-archive/web/eman/current/msg00983.html>
- Added the terminology section, based on the version 5 of the terminology draft.
 - Integrated the terms Energy Device and Energy Device Component in the text.
- Removed the "Dependency Relationship"
- Removed "virtual grouping of Energy Objects with the keywords"

New in this version

Merge with EMAN-REFERENCE-MODEL

- Introduced the notion of power interface (power inlet/power outlet)

Power Interface:

“A power interface is an Energy Object that serves as a interconnection among Energy Objects, and participates in a Power Source Relationship”

- Similarities to the network interface

Physical Devices

PC w/ one inlet



PC w/ two inlets



PDU w/ one inlet and 10 outlets



PDU w/ one inlet and 10 outlets

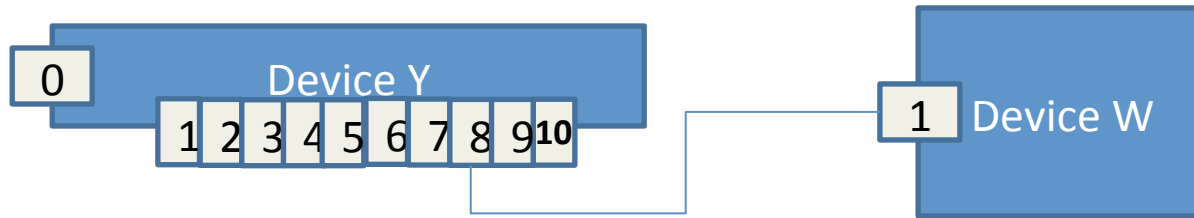


Power Interface Clarification

- In some cases, don't have power interfaces
 - PDU with a single meter for all power outlet
 - A small independent device (power interface = device)
 - Bus-bars which distribute power to a building
 - smart meter measuring current by a connection-less CT

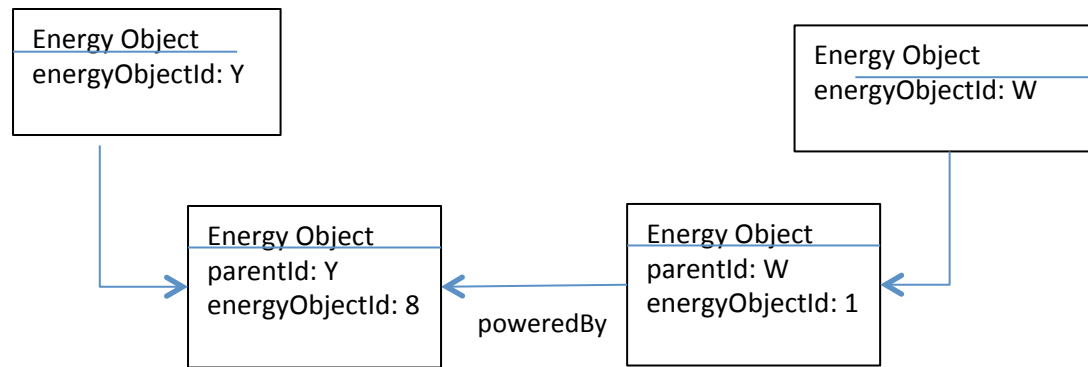
Power Interface Clarification: Example 1

Physical:

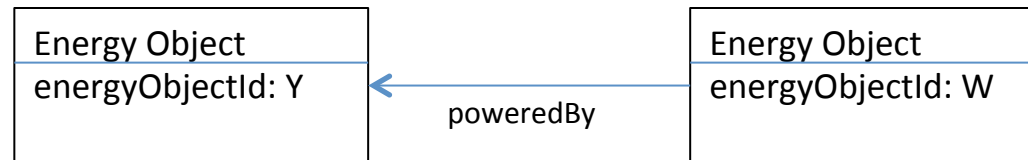


Information Model:

Interfaces:

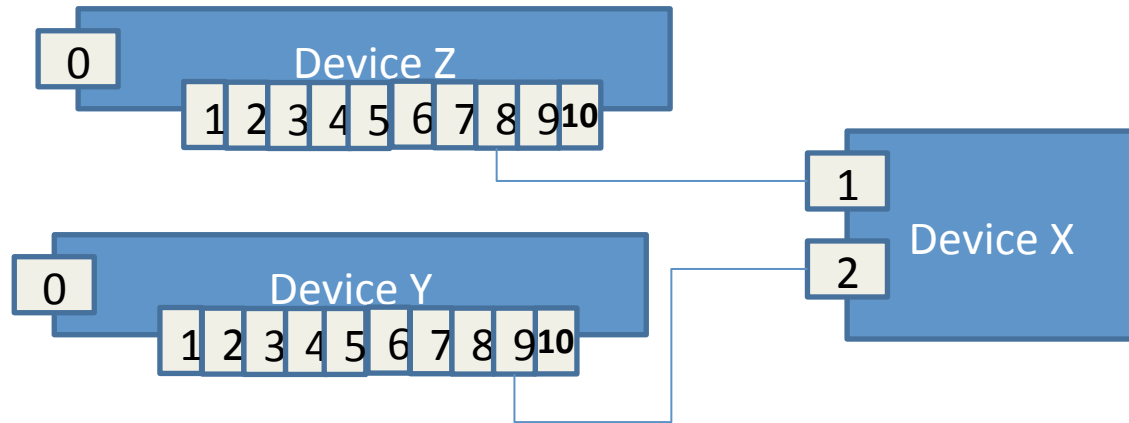


No Interfaces:



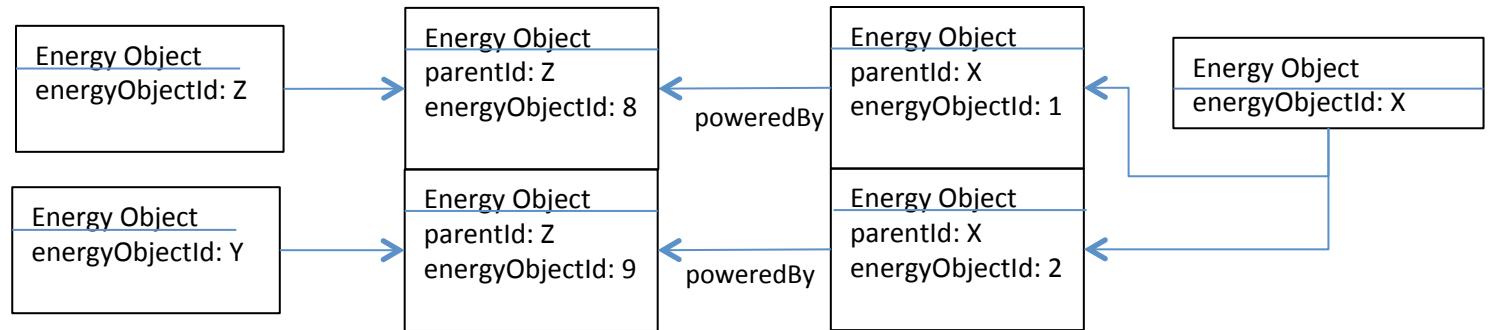
Power Interface Clarification : Example 2

Physical:

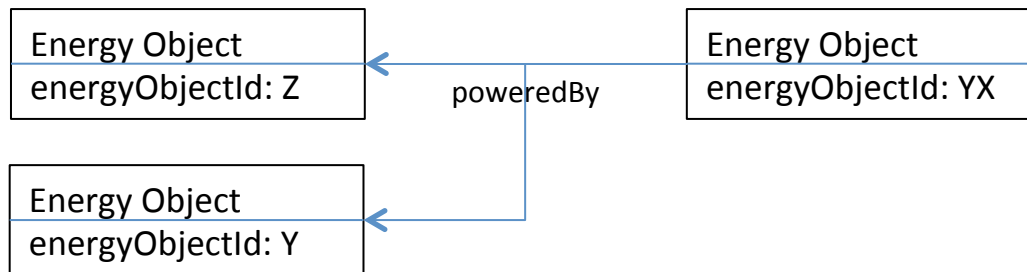


Information Model:

Interfaces:



No Interfaces:



New in this version

- Extending the section 6.4 "Energy Object Relationships"
 - Explain the different types of relationships
- Added a new section 6.4.2 "Energy Object Relationship Conventions and Guidelines"
 - Example: "The Energy Device SHOULD NOT establish Power Source Relationship with Energy Device Component"
- Section 10 with examples has been added.

More Open Issues/TO DOs

- Since we speak about Power Interface now, we need to double the EO Relationships here and in [EMAN-AWARE-MIB]
Example: poweredBy versus providingPower.
- The UML must be aligned with the latest [EMAN-AWARE-MIB] and [EMAN-AWARE-MIB] document versions.
- Complete the section "Energy Object Relationship Guidelines and Conventions"
- Add figures to the section 10 examples
- Aggregation Relationship is different compared to the other Relationships. There are some use cases: a building mediator implementing the MIB, with some subtended devices, a meter for many devices, etc... However, this is also a generic function. We could argue that an aggregation function is something that is not particular to the EMAN context.

Conclusion

- Good progress, specifically thanks to the merge
- Much discussion on the list
- Difficult to keep up with all the open issues
- Hopefully, all listed into the draft
- Feedback (with proposed text ideally) is welcome