I E T F 83

Energy Management Terminology

draft-parello-eman-definitions-05

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REVISED: Energy Domain

- From feedback on list:

- **Energy Management Domain**
  - An Energy Management Domain is a set of Energy Objects where all objects in the domain are considered one unit of management.

Revised Relationships

- Feedback from list that the cardinality and direction of relationships was not specified and clear.

- Redefined all from reference:

- **[CHEN] "The Entity-Relationship Model: Toward a Unified View of Data", Peter Pin-shan Chen, ACM Transactions on Database Systems, 1976**

Revised: Energy Object Relationship

Energy Object Relationship

An Energy Object Relationship is a functional association among Energy Objects

NOTES

1. Relationships can be named and could include Aggregation, Metering, Power Source, and Proxy.
2. The Energy Object is the noun or entity in the relationship with the relationship described as the verb.

Example:

If EO x is a piece of Electrical Equipment and EO y is an electrical meter clamped onto x's power cord, then x and y have a Metering Relationship. It follows that y meters x and that x is metered by y.

Revised all other relationships

- Removed Dependency
- **Aggregation Relationship**
  - An Aggregation Relationship is an Energy Object Relationship where one Energy Object aggregates the Energy Management information of one or more other Energy Objects.
- **Metering Relationship**
  - A Metering Relationship is an Energy Object Relationship where one Energy Object measures the Power or Energy of one or more other Energy Objects.
- **Power Source Relationship**
  - A Power Source Relationship is an Energy Object Relationship where one Energy Object is the source of or distributor of Power to one or more other Energy Objects.

Examples for each are in the draft

NEW: With Consensus

- **Provide Energy**
  - An Energy Object "provides" energy to another Energy Object if there is an energy flow from this Energy Object to the other one. Reference: herein

- **Receive Energy**
  - An Energy Object "receives" energy from another Energy Object if there is an energy flow from the other Energy Object to this one. Reference: herein

NEW: Device and Component

- OPEN in Draft RESOLVED on List
- Device and Component should drop the Energy prefix and are simple terms based on IEEE electrical equipment.

Device - a piece of electrical or non-electrical equipment (Adapted from IEEE100)

Component - a part of an electrical or non electrical piece of equipment (Device). (Adapted from IEEE100)

NEW: Power Interface

- **OPEN ISSUE**
- Solution drafts use a term Power Interface. Given there are congruent to network interfaces perhaps use the same principle from elctrical and non electrical equipment

Proposal:

- **Electrical Interface**

  Then energy and power are attributes like octets and speed are in network interfaces

Term: Power Quality

- **OPEN ISSUE**
- Proposed at IETF-82 to use characteristic but sent issue to list that power quality is well defined in IEC60050 - while characteristics is not and would be a newly defined term
- Long debate on list still no sufficient grounds to change this definition as yet

Summary

- Device and Component seem to have converged
- Relationship has been redefined per comments. Feedback please.
- **OPEN**: Power Interface versus Electrical Interface? Discussion.
- **OPEN**: Point of procedure. When to merge to framework or should it be published alone.
  - Right now it seems helpful to the group to keep it separate

Thanks !