LWIG terminology document
draft-ietf-lwig-terminology-01

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History

– Split out the stable terminology from the guidance document.
– Decided in Atlanta, implemented shortly before Orlando.
– Pretty much done, ship it?
– But then, Peter van der Stok suggested to add power terminology
3: “Classes of Constrained Devices”

• Distinguish 3 rough classes of constrained nodes:

  (0) ≪10 KiB data/≪100 KiB code ("class 0")
  (1) 10 KiB data/100 KiB code ("quite constrained")
  (2) 50 KiB data/250 KiB code ("not so constrained")

• Stable Terminology since Prague Workshop (2011)
2: Base terminology

- Constrained **nodes**
- Constrained **networks**
  - \( \mathcal{D} \) challenged networks
- Constrained **node networks**
  - LLNs (?)
  - LoWPANs, 6LoWPANs
Proposal: Add power terminology

- RFC 6606: “power-affluent” vs. primary battery
  - emergency lights are “battery-operated”, right?
- LLN “Low-power ...”???
- RFC 5673: Scavenging
  - from 4..20 mA: milliwatts
  - from vibration: microwatts
- Scavenging? Harvesting?
  Solar operated parking cash points?
- ???
Systematic approach?

• Quantitative scale
  – sustained average **power** (in W)
  – lifetime **energy** (in J, if defined)

• Boolean attributes
  – **lifetime** energy-limited
    (primary battery, irreplaceable)
    • “Every packet they send today is
      a packet they cannot send tomorrow.”
  – **event** energy-limited (harvesting light switch)
  – **period** energy-limited (daily recharge, solar cycle)
Trying a scale for sustained power

• Kilowatt (data center)
• Hectowatt, Decawatt (desktop, laptop)
• Watt (iPad, smartphone in active state)
• Deciwatt (recharged daily, in-wall, …)
• Centiwatt (recharged weekly)
• Milliwatt, sub-milliwatt, …
• Tens of Microwatt (Decade off AA)
• …
Hmm.

• Are there useful clusters?
• Can’t we just use the SI units?

• Can we agree on some useful clusters?

• We could still define good names for some Booleans.
Way forward?

• Let’s timebox this.

• If we come up with consensus in March: put it in.

• Otherwise, ship terminology to IESG as is.