Powering Smart Devices With Dumb Cables

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What We’ll Explore

- The Problem With Portable Power
- What’s A Power Manager?
- Short-Term Fix: Smart Cables
- Long-Term Solution: Dumb Cables, Smart Devices
- Path Forward
The Problem With Portable Power
The Problem With Portable Power (con’t)
What’s a Power Manager?
The Power Manager’s Dilemma

- Users Don’t Know Power
- User Don’t Want to Know Power
- Power is Non-Standard
- Must be able to self-configure – but how?
Short-Term Fix: Smart Cables

- Show VPM and SPM cables, describe Device ID
What’s In An ID?

- Everything Needed For Power !
  - What the device is.
  - Voltage and amperage ranges.
  - Average and peak power.
  - Environmental limits.
  - Default priority.
  - Data capability.
  - Lots more…

- When is critical: Before applying power!
Long-Term Solution: Dumb Cables, Smart Devices

- Show Device ID migrating from cable into end device
Why Bother?

- Maintains usability by non-power-wizards.
- Standard Multi-Purpose Cables.
- Component most likely to be damaged or lost is now common to everything.
- Does not require standardization of power: a decades-long effort.
Status

- Smart Cables deployed: more than 30,000.
- Several device manufacturers already putting ID into experimental devices being developed for labs – because labs required it.
Path Forward

- All DOD organizations specifying portable devices should begin requiring inclusion of the $0.75 ID chip on the power port.
- As more and more devices are supported, critical mass will be attained, and DOD will no longer need to require it – the market will require it.
  - Good for users: they can use new devices with power sources they already have.
  - Good for manufacturers: they get a robust power source for their device without having to develop it.
  - Good for DOD: they save money and build commonality.