Ekho: Realistic and Repeatable Experimentation for Tiny Energy-Harvesting Sensors

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How to provide realistic comparisons between different configurations for RFID scale devices?

RFID-Scale Devices

...are hard to test.
Devices with large batteries provide comparable outcomes.

RFID-Scale devices do not.

The Common Misconception

Constant power from energy harvester such as a solar panel

The Reality, P=IV

Harvesting current is a function of supply voltage. IV-curves represent instantaneous energy conditions.

Energy Harvesting: An Added Dimension

Energy harvesting can be described by a series of different IV-curves combined into a 3D IV-surface.

Ekho is a tool that lets you record IV-surfaces in the wild, and reproduce them in the lab.

Ekho makes rigorous experimentation with RFID-scale systems possible.

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