Let the system sleep when it gets tired – Completely Avoid Irreversible Wearout [2]

Reversible vs. Irreversible Wearout
- Permanent part of wearout exits even for BTI
- Majority of the trapped electrons are at low energy
- Trap energy is much higher (>2eV)
- Fast traps: Reversible; Slow traps: Irreversible

Natural Recovery vs. Accelerated Recovery
- Natural Recovery: 0V, Room Temperature
- Accelerated Recovery: High Temperature, Negative Voltage, Other energy sources (e.g. UV)
- The irreversible part can be recovered!
- The boundary is “soft” and controllable!

Cross-layer Optimization Infrastructure

A Wearout-aware and Accelerated Self-healing Robust System