

Harvesting Aware Power Management

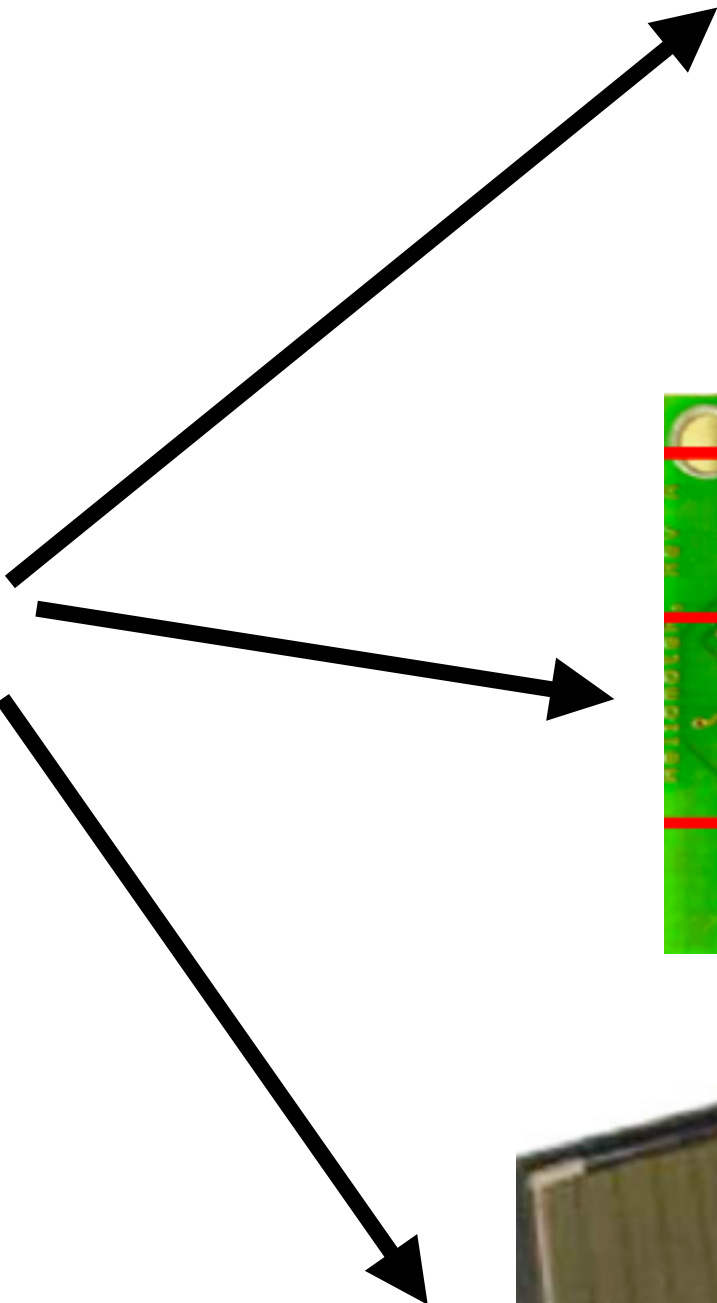
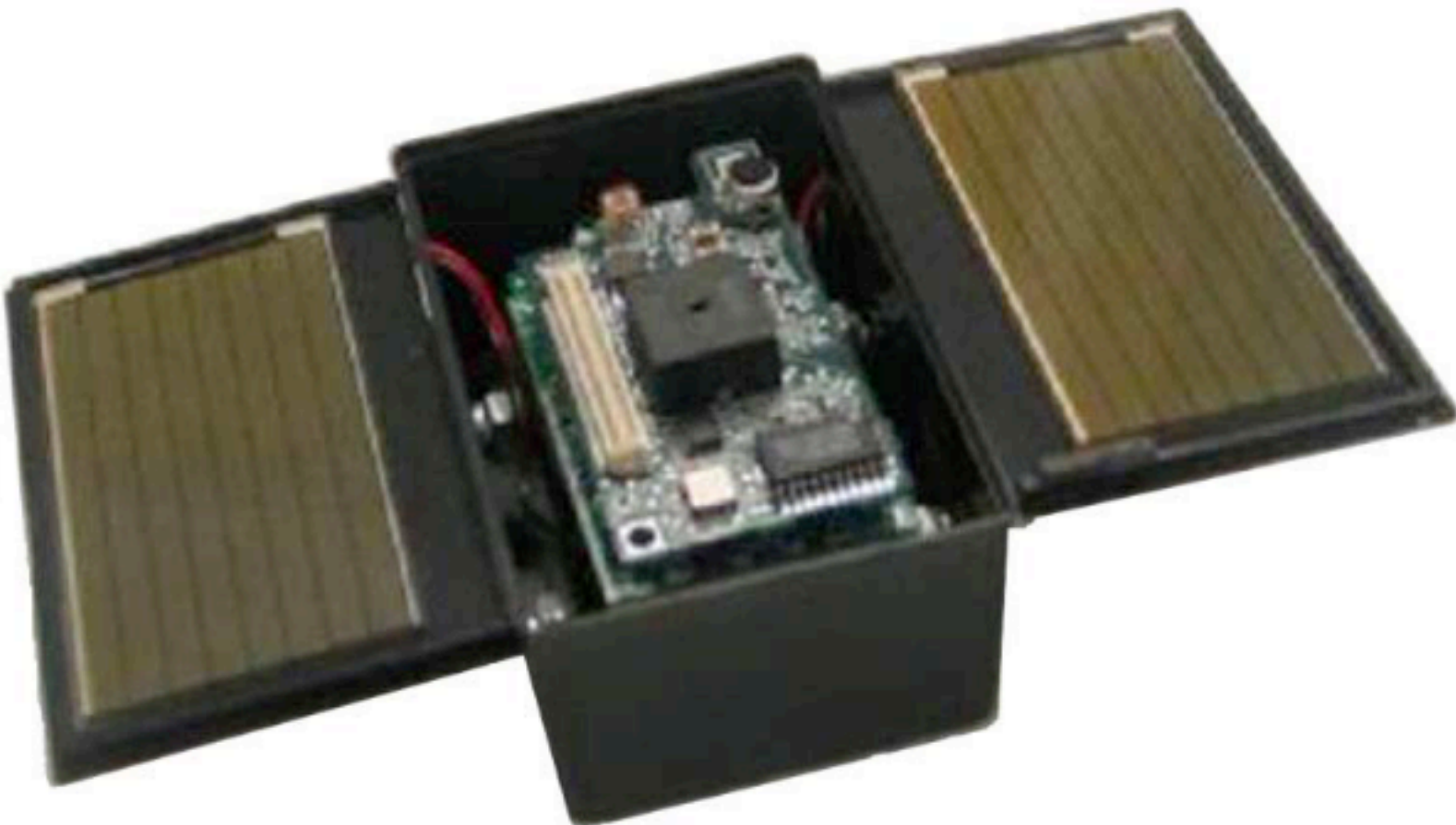
Residual battery based vs. harvesting aware

- what is finally left for both nodes?
- For traditional: $E_b + E_s * \eta - E_r$
- For harvesting aware: $E_b + (E_s - E_r) * \eta$
- $\Delta E = E_b + (E_s - E_r) * \eta - (E_b + E_s * \eta - E_r) = E_r * (1 - \eta)$
- And the energy gain will snowball after several day and night

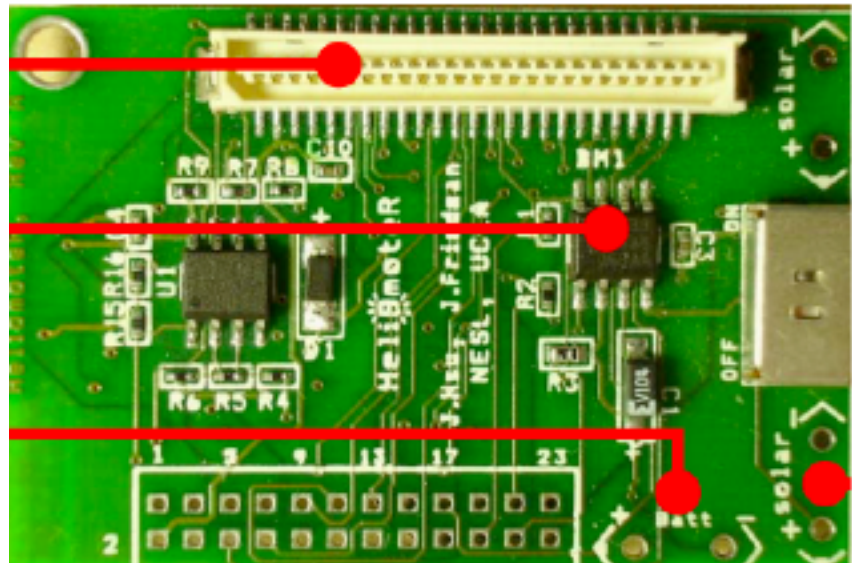
* the energy for routing is supplied from the solar panel first and only the remainder is stored in the battery

HelioMote - a pioneer demo

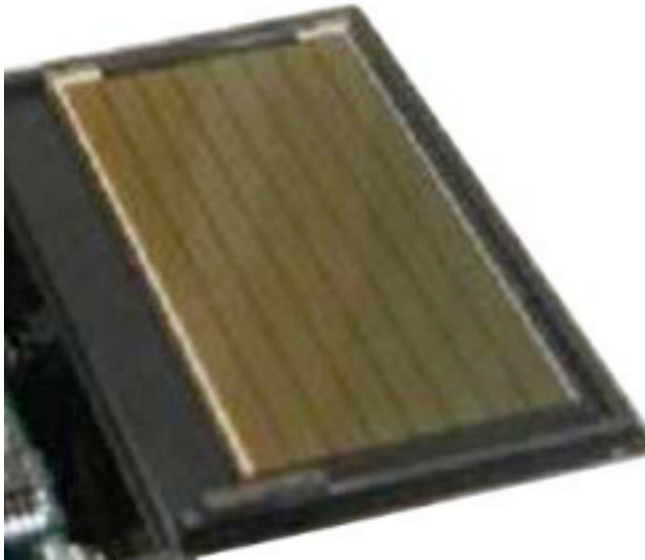
Composition overview



**The Mica2 mote
(Sensor node)**



**The HelioMote
(Harvesting circuit)**



**Solar panel
& battery**