

Energy Harvesting System

Energy Harvesting

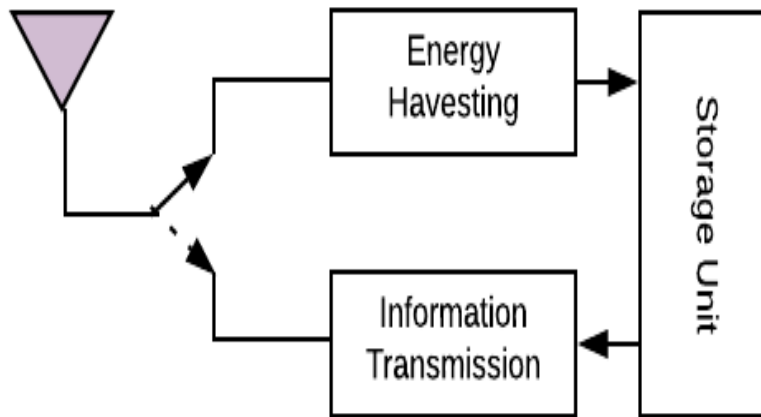


Fig.1. Model for an energy harvesting user device

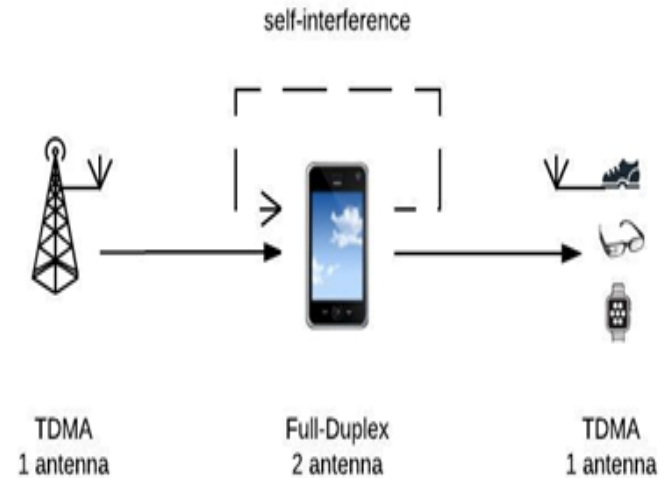


Fig.2. Full-duplex technology model for a relay

System Model & Protocol

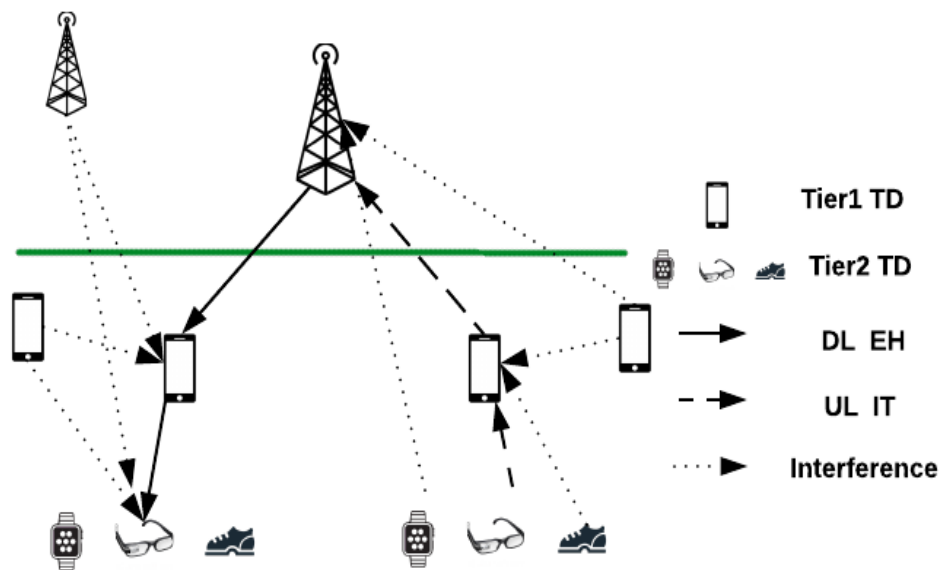


Fig. 3. The system model, the dash arrows means uplink information transfer and solid arrows means downlink energy harvesting.

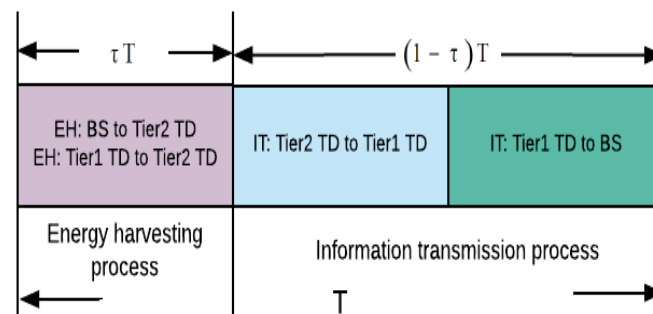
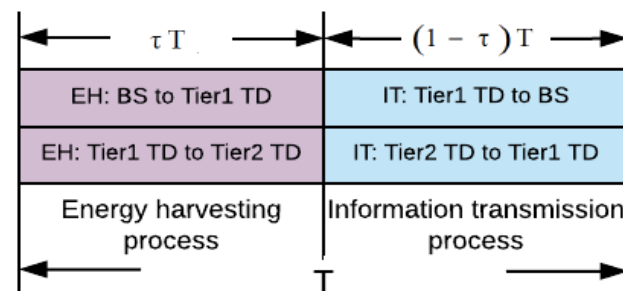


Fig.4. Protocol of Relay.
 T is a whole time slot, τ ($0 < \tau < 1$) is a time factor which used to divide the time slot.

IV - Distributed Power Splitting

- Network model & SWIPT model

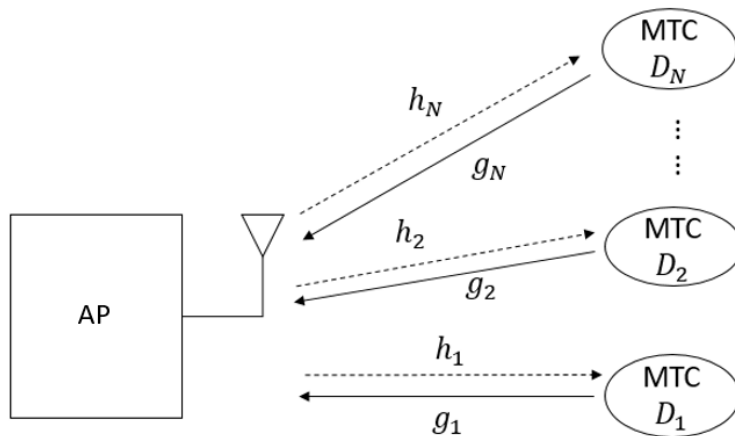


Fig.1

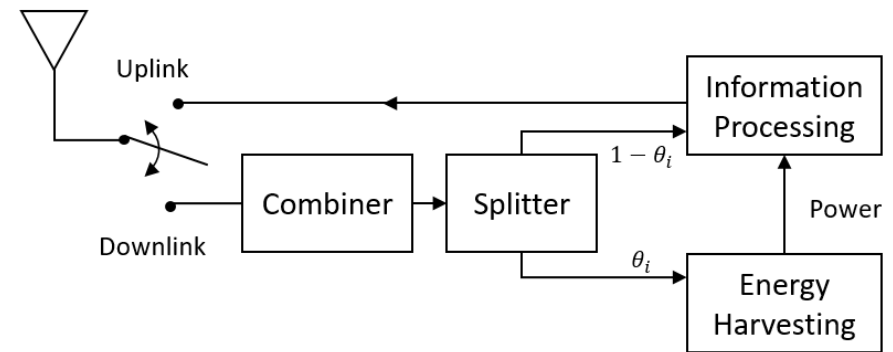


Fig.2

SWIPT: simultaneous wireless information and power transfer;

With SWIPT, the MTC is able to harvest energy from the received signal.