Mobile Internet in China: Opportunities

Stanford University US-Asia Technology Management Center
October 13, 2011

IoT Background

• Premier’s Son Worked in IOT Lab In Wuxi
  • Invited Dad to come to demo Fall 2009
• Premier Attended Demo
• After the Demo, the Premier gave a speech
  • Said that IOT was extremely important and that everybody should focus their efforts on it
• Many efforts are underway, but there is some confusion about what exactly IOT is
IoT Views

- At a Basic Level all IoT Systems Involve Communicating
  - Sensors and/or Actuators
  - Wired vs Wireless
- Different Views
  - Large Scale Centralized
    - Smart Grid, Electronic Parking, …
    - Involves Government
  - Simple Distributed
    - Air Pressure Sensors in Tires
    - Auto Manufacturers as Gate Keeper
- Consumer
  - Current Refrigerator Door Open Monitor
  - Future?

Future Consumer IoT

- Attic Fan
  - Installed in building
  - 50 year life
  - Reduces heat load by ventilating the attic, but must not turbocharge a fire (based on temperature / time of day)
  - Current systems contain micro controller that turns on fan at one temp and off at another temp.
    - Temp’s are average for equator to polls
  - Future micro controller UART becomes WUART
    - Wakes up every night
    - Finds an available wireless network
    - Configures itself to that network
    - Securely accesses a weather forecast
    - Sets
      - Time to start / stop
      - Temperature to start / stop
IoT Business View

- Biggest tide after Internet
- Trillion dollar market
- Connected objects around the globe
- At least 10× bigger than cell phones
- Similar experiences in the past
  - "PC -> Handheld" etc.
  - Each evolution involves unique challenges
  - Essential to catch the trend in a timely fashion
- Modernize traditional industries
- Creates Disruptive Opportunities