U.S. DEPARTMENT OF ENERGY
SOLAR DECATHLON

2011

The Future of the Smart Home Systems and Services

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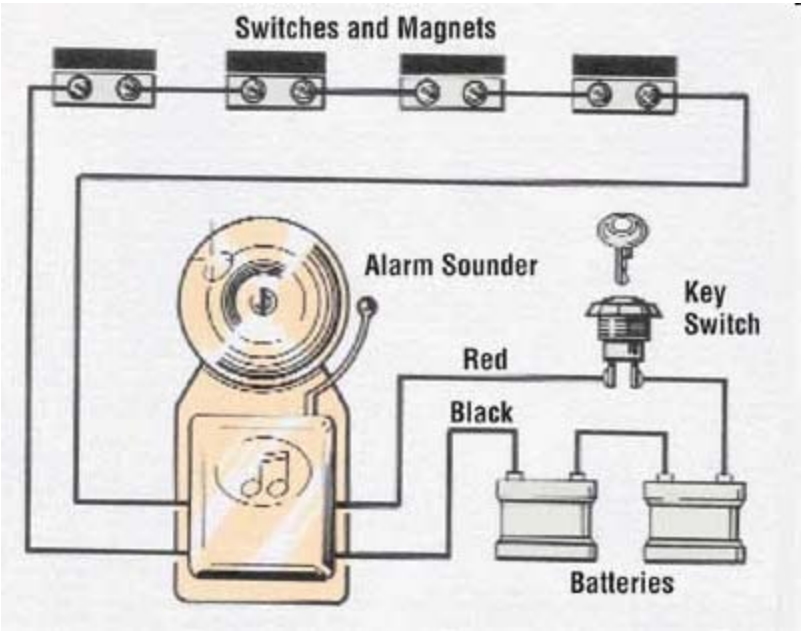
Agenda

- History of connected home systems
- Current state
  - Technology
  - Capability
- Future possibilities
- The Schneider Electric story

A brief history of home systems

- It used to be like this….

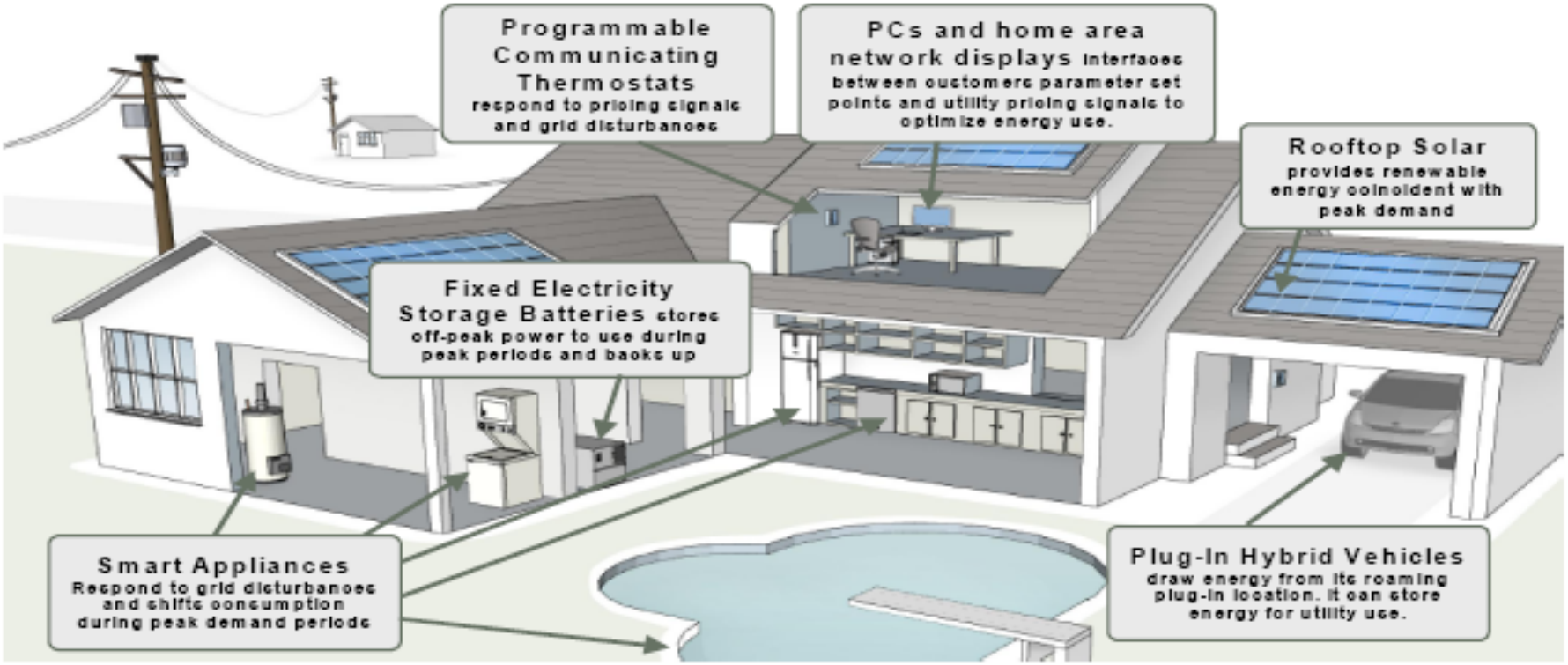


A brief history of home systems

- Then it looked like this…

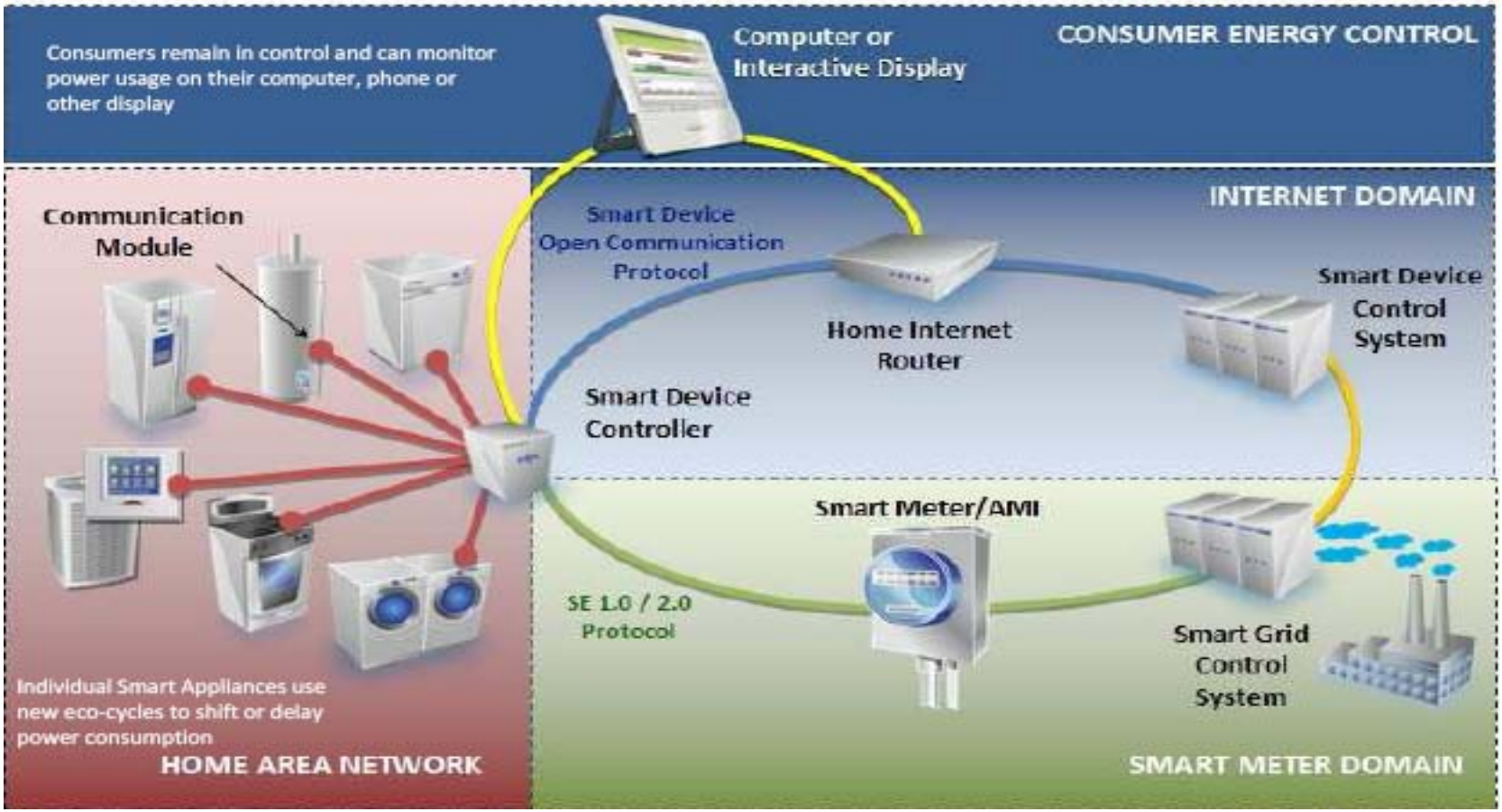
Current State

Systems within the home

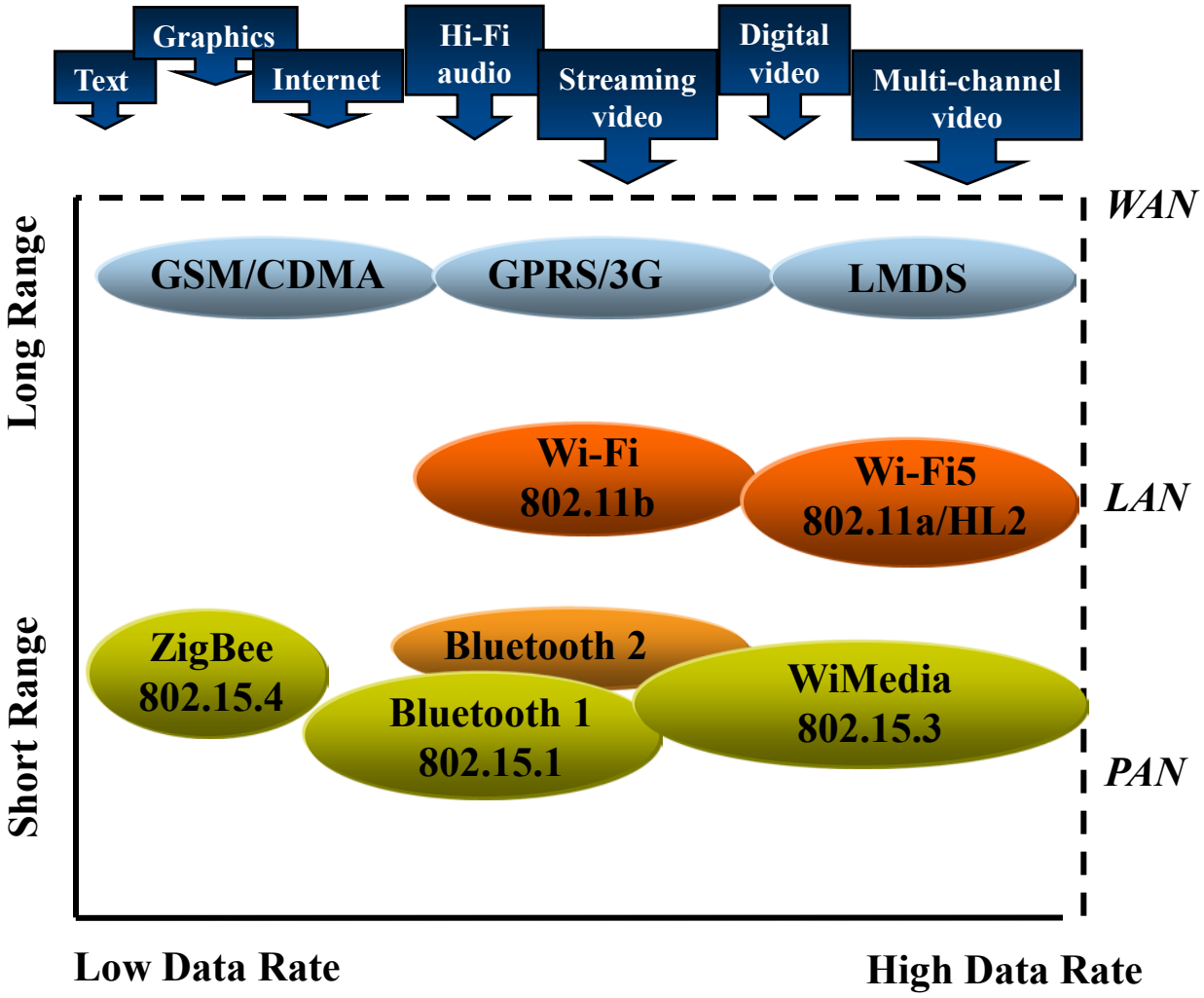


*EIA Annual Energy Outlook 2009 Reference Case Presentation

External Systems



Communication Protocols



Why ZigBee?

- Standard in a fragmented market
  - Many proprietary solutions, interoperability issues
- Low Power consumption
  - Users expect battery to last months to years!
- Low Cost
- High density of nodes per network
- Simple protocol, global implementation

Current state

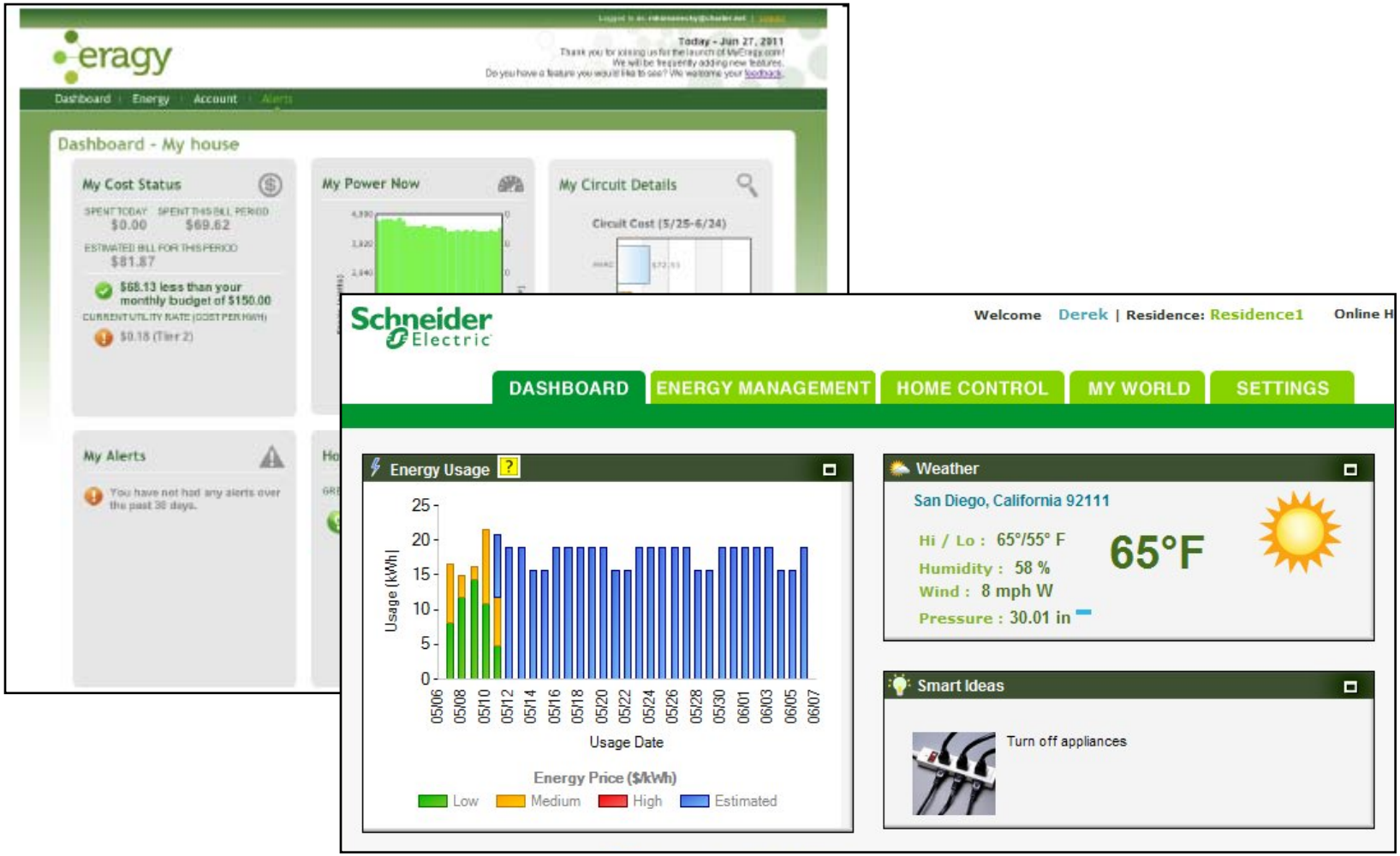
- We've got technology like this…

Input Devices

Wireless Infrastructure

Interface Devices

Web-Dashboards



Current state

Smart Phone Controls

A Case Study- Dockside Green

- A LEED Platinum building
- Biomass Heating/Cooling
- In-room Building Management Technology

A Case Study- Dockside Green

Future State

- What's driving the change?
  - Changing social drivers
    - Expectations for connectivity
    - The Twitter Effect
  - Economic factors
    - The energy dilemma
      - Increased per capita consumption *AND* a need to decrease emissions
    - Water management
  - Latent needs
    - Security
    - Savings

The Future is Now

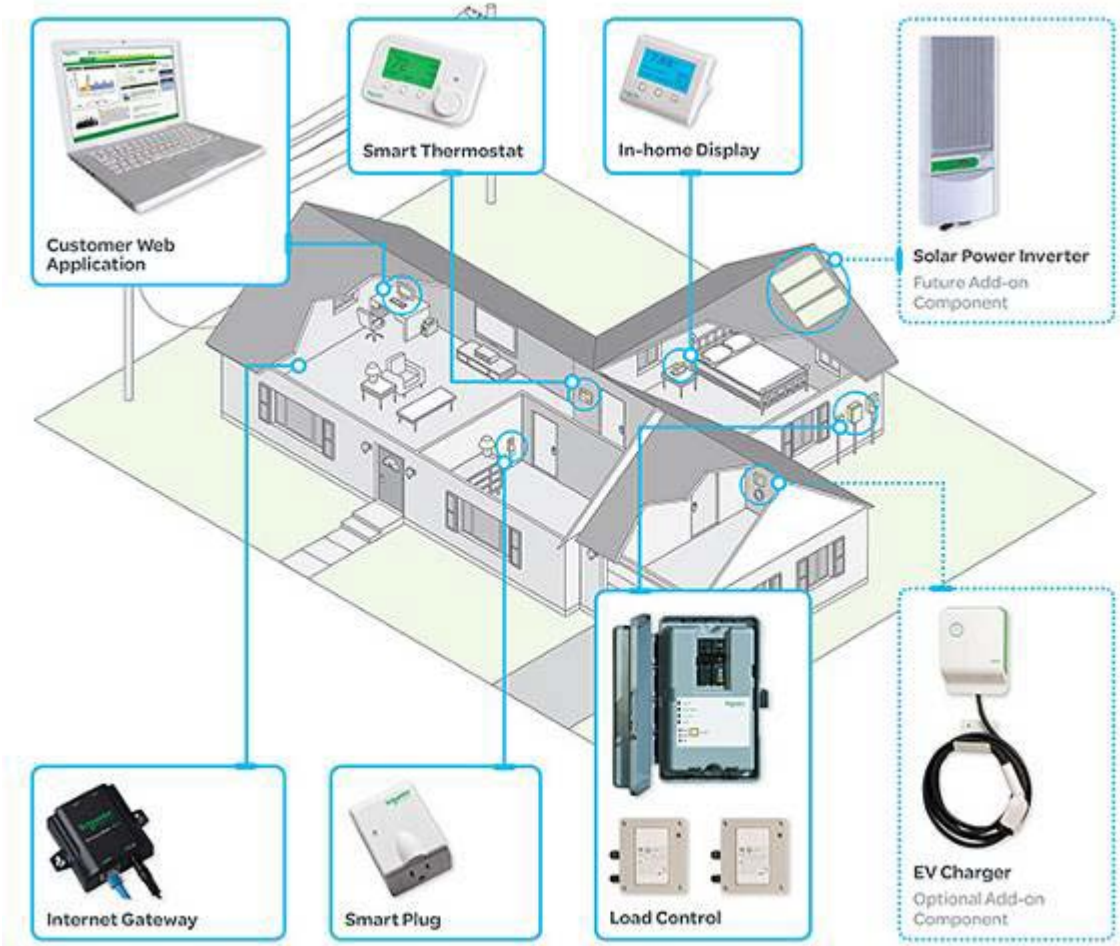
- Cutting-edge technology…
  - Energy signature detection
  - Cloud-based algorithms
- …Enabling customer-focus capabilities
  - Preventative maintenance
    - HVAC
    - Appliances
  - Self-management
    - Sump pumps
    - HVAC

Schneider Electric story

Schneider Electric Story

A simple **integrated solution** to manage the home energy eco-system and an opportunity to turn a functional home into a **smart and exciting** place

- Load Management
- HVAC Management
- Demand Response
- Electricity Monitoring
- Remote Access
- Smart Grid Software



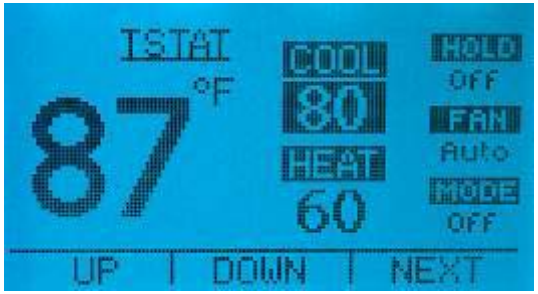
Wiser Core System: Raising Awareness

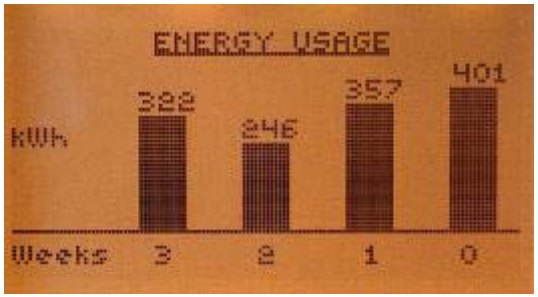
Values

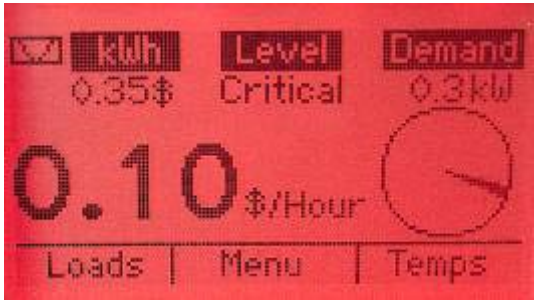
- Increased consumer involvement & awareness
- Set it & forget it
- Innovative color signaling
- Remote manager

Specifications

- ZigBee Smart Energy
- Integrate with utility smartmeter
- 115 VAC (wall adapter)
- Rechargeable battery
- Wall or Table mount







Remote access and management

Wiser in action

“ I installed the Wiser system because I was interested in saving money in my home.

My kids could care less… they like being able to automate the lights around the house! ”

- Gary Kuzkin-

Questions?

Thank You!

Find out more at www.schneider-electric.us/go/resi