



ACLARA™





ACLARA™

**5 million
Endpoints**



**14 million
Endpoints**



**4 million
Endpoints**





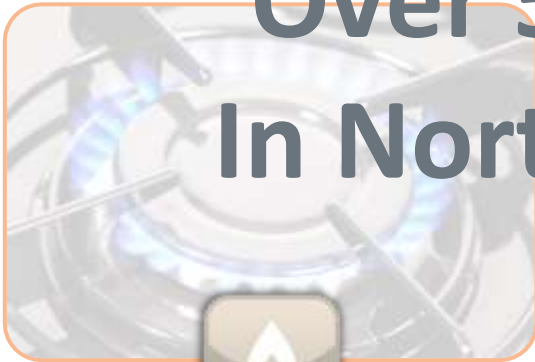
ACLARA™

**Over 500 utility customers
In North and South America**

Mexico

The Caribbean

Asia





**See the
whole board**

What Is The Standard?

Consumer Networks
and Content

Utility Networks
and Content



What We've Heard

“We don't want to be the company that hands out ‘gadgets’.”

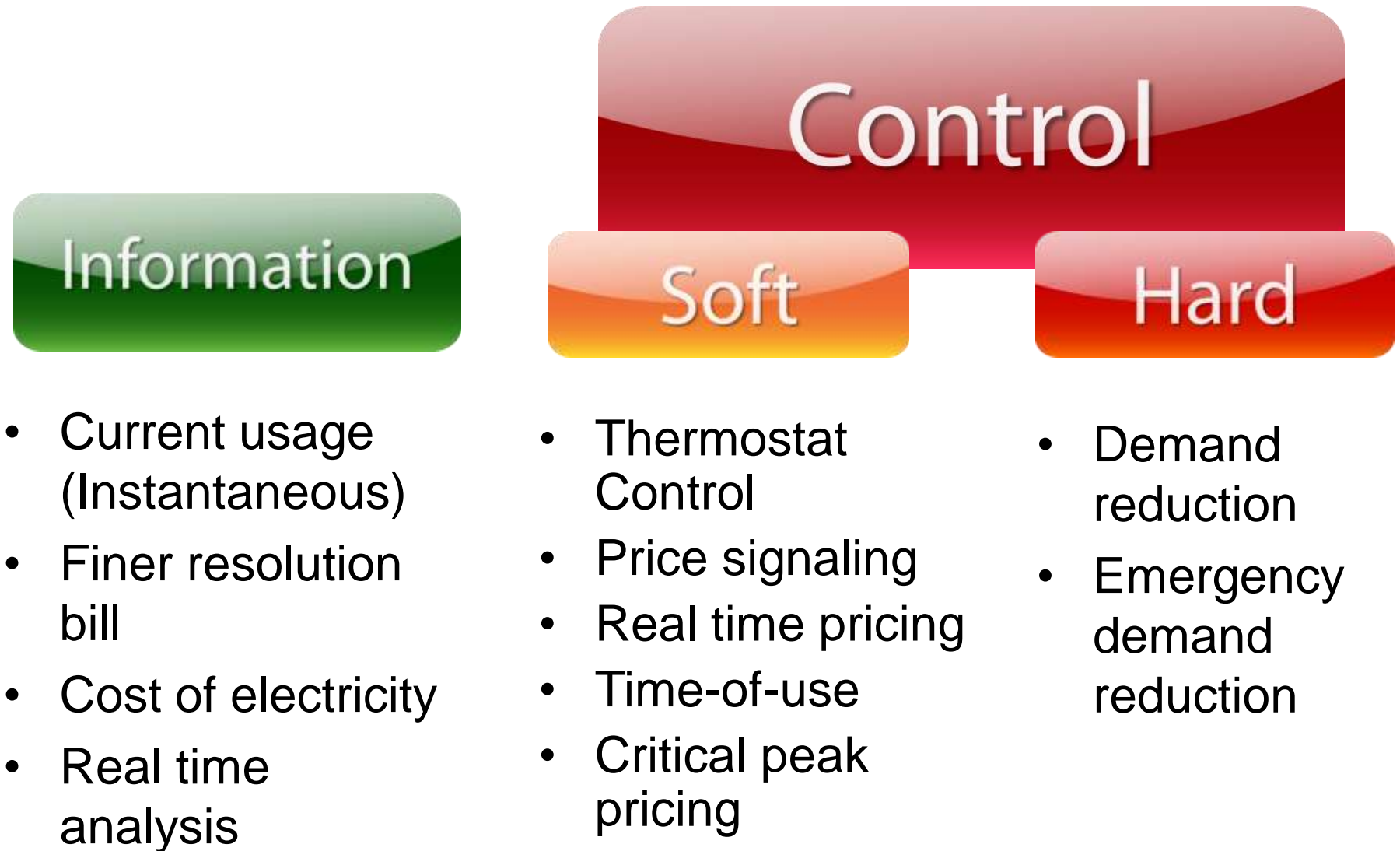
“I don't know what the Smart Grid is, but what I *really* want is smarter consumers.”

“Logging on to the internet is *not* direct access to a customer's data”

“I don't want to install a dead technology that I'll just have to replace when something new comes out.”



The Functionality of Demand Response and HAN

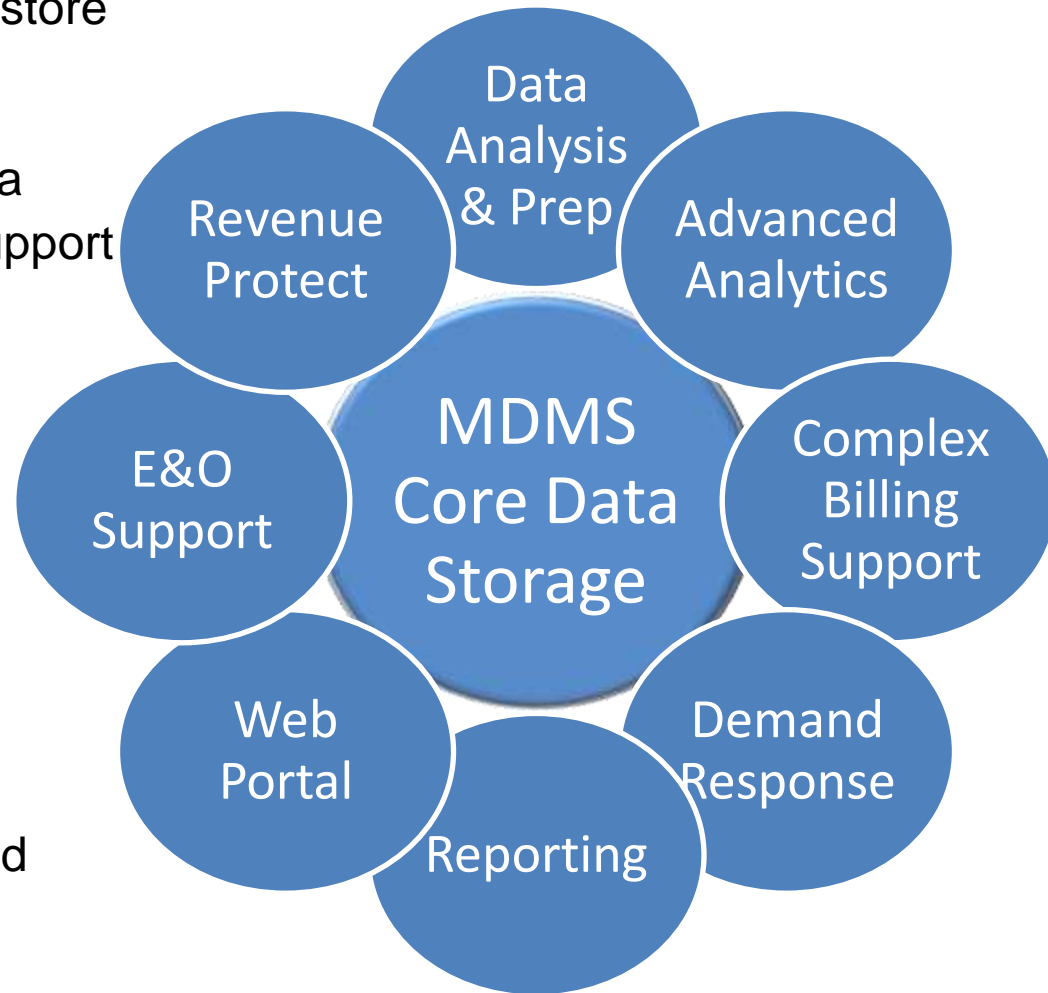


Information



Aclara Software Provides...

- Meter Data Repository - ingest, store and manage AMI data
 - Water, Gas and Electric
- VEE routines to prepare the data
- Standard and complex billing support
- Customer engagement
- Business analytics
 - Revenue Assurance
 - Leakage
 - Theft
 - Demand Response
 - Load Aggregation
 - Distribution Mains
 - Revenue Class
 - Profiling
- Demand Response analytics and control
 - Partner with Calico

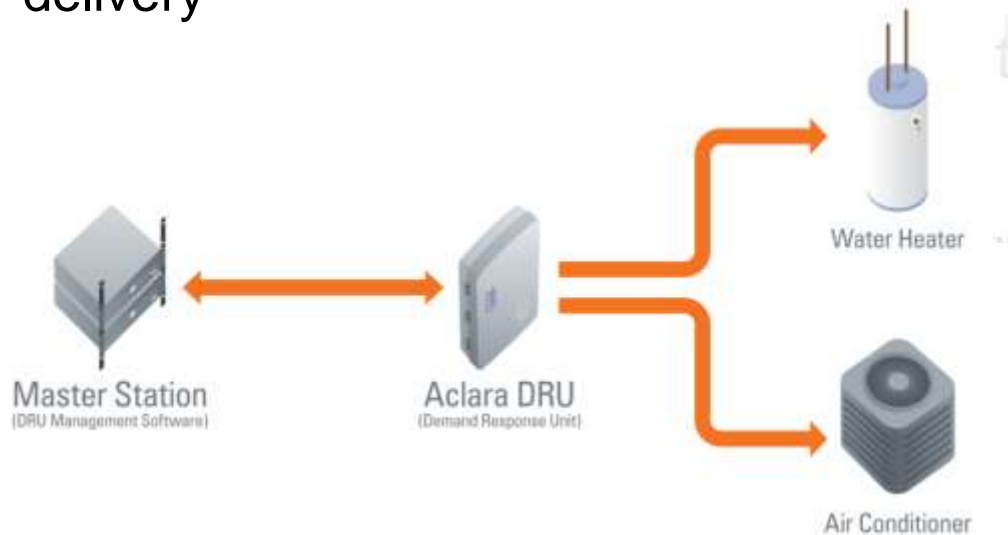


Control



Demand Response Unit

- Supports Direct Load Control Programs
- Can Protect end devices
- Improve Grid Reliability (Smart Grid)
- Minimizes end customer impact
- Two-Way Communication
- Fully released; available for immediate delivery



Demand Response Unit (DRU)

What does it do?

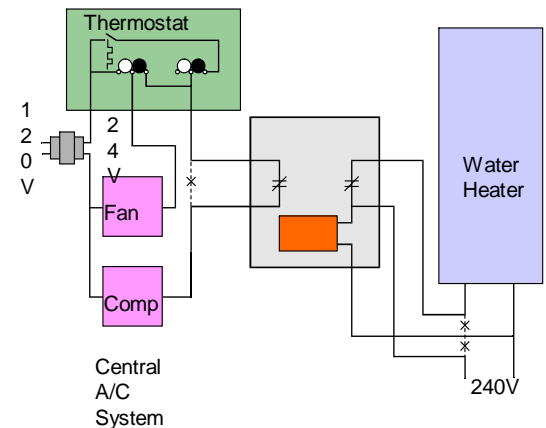
- *Cycle appliances on and off intelligently*
 - *Supports up to two “hard wired” appliances and future Home Automation (HAN)*
- *Maintain load-control strategies during momentary outages*
- *Curb demand and safeguard against under-voltage or under-frequency conditions.*

What benefit does it provide?

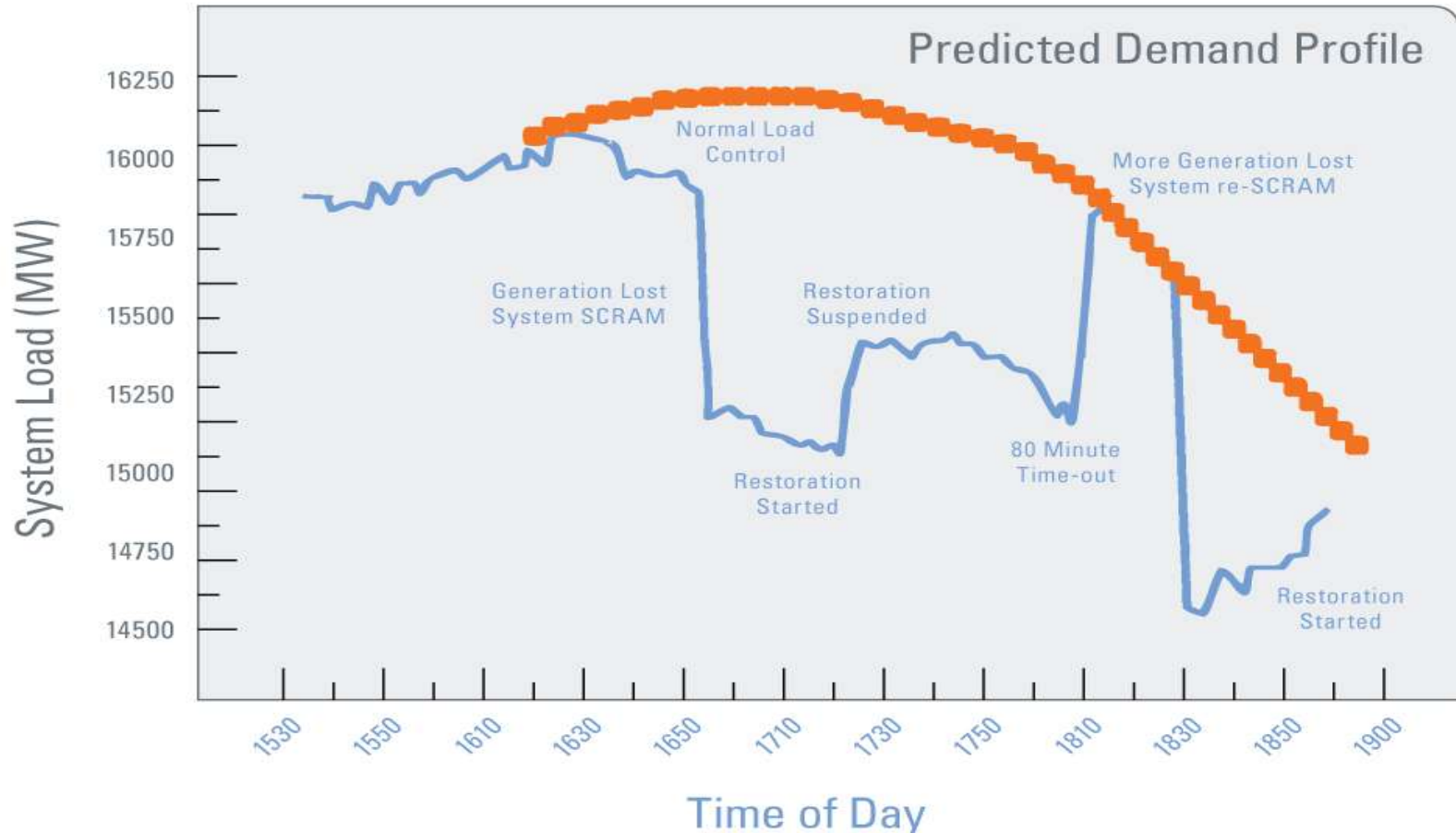
- *Enhances customer satisfaction with Load Control based on historic consumer loading profiles*
- *Ensures fair distribution of load shedding across all consumers*
- *Provides Post Event Information to determine effectiveness of Load Control strategy.*



When energy demand is high, the Aclara DRU reduces peak-power costs without impacting customer service.



Florida Power and Light



- 800,000 in service to date
 - Each device reduces generation approximately 1.25KW



DR/HAN Pilots



Pilot HAN Projects 2009 to 2011

- ZigBee 1.0 HAN Phase 1 Pilot
 - 1000 unit pilot, TWACS to ZigBee to IHD and PCTs
 - Successful but costly with long paybacks
- PPL WiFi Pilot
 - 500 meter, 500 DRU pilot
 - WiFi Module in the Meter with embedded web server
 - Web server on module shows real time usage on a web browser in the home
 - WiFi Module in the DRU with intwine server
 - Only 300 customers signed up

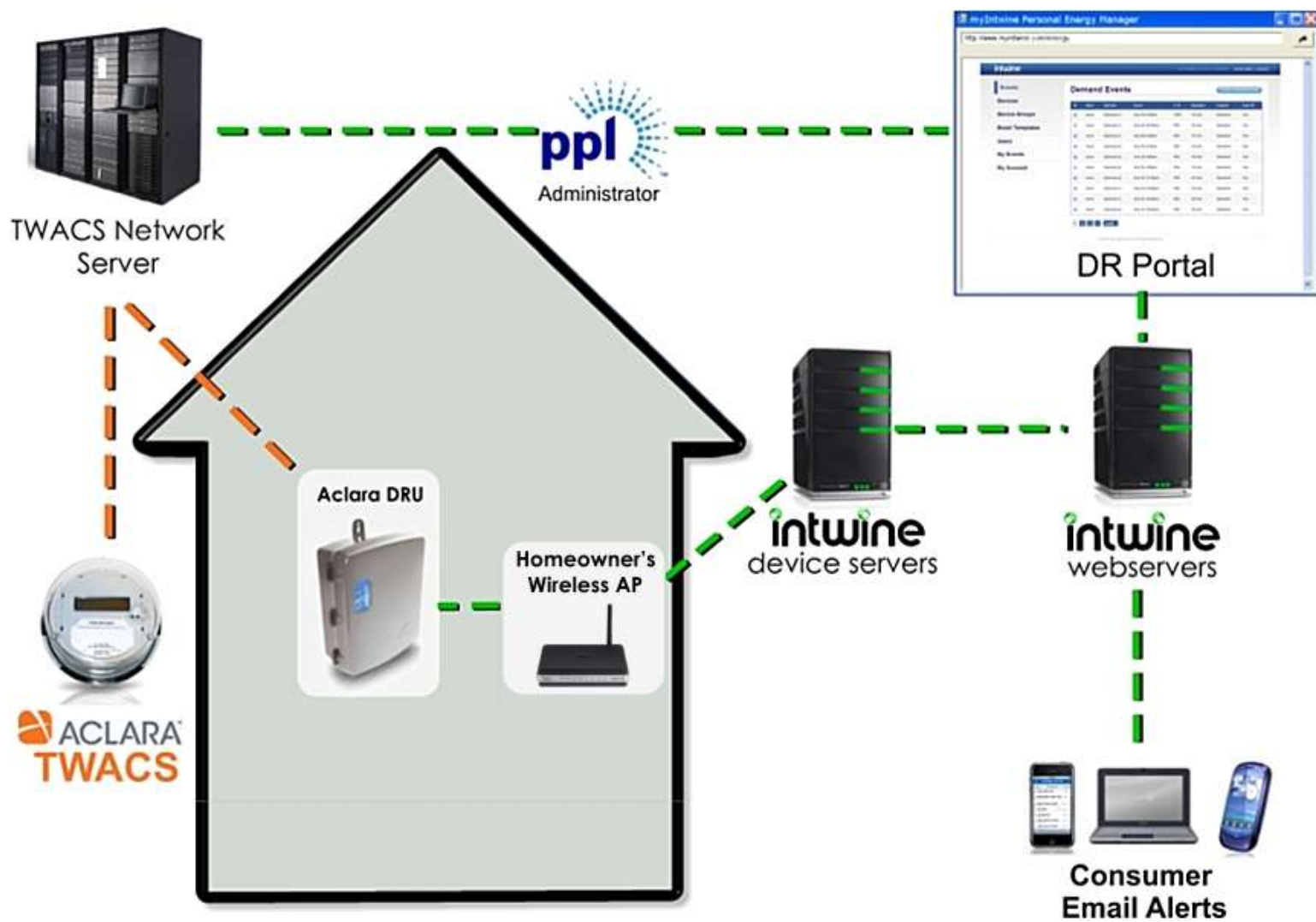


Embedded Web Server

- Use Wi-Fi as the communications link
- Small web-server on meter module shows real-time usage
- Use browser as IHD
 - Mac, PC
 - iPhone, iPod Touch, iPad
 - Blackberry, Android, etc.
 - Gaming consoles (Wii, PS3, PSP)
 - Internet devices (Sony dash, etc.)



TWACS Wi-Fi DRU



DR/HAN Developments



New Developments

- Acendant Wide Area Network
 - 802.11 MIMO technology
 - Mesh, Point to Point, Point to Multi Point
 - Pilot deployments at WPS with delivery to SoCal in 2012
- Productized WiFi Meter Module (Lower the cost)
 - With SEP2.0 and embedded web server
 - Adhock and router configurations
 - Text messaging, real time energy usage, PCT control
- Productized WiFi DRU Module (Lower the cost)
 - With SEP2.0 and embedded web server
 - Adhock and router configurations
 - In home gateway to WiFi network
 - Can be utilized by retailers without an AMI network in place
- Alcara Universal Serial Interface
 - STAR, ZigBee and WiFi radio with SEP 2.0
 - Gateway to Home area networks

