



Driving for Efficiency in Electronics **ENERGY STAR Goals and Plans**

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Topics



- ENERGY STAR program goals for misc/connected devices
- Current Strategy
- Near-Term Strategy
- Complimentary tactic: focusing consumers on energy-wise behaviors

Goals



- Products are energy-wise, intuitive and responsive
 - Use as little energy as possible to deliver their intended function
 - When not delivering their intended function, they drop to a very low power mode
 - When needed to deliver service, they wake quickly

Current Strategy



- Develop meaningful ENERGY STAR requirements for a rich suite of residential CE and IT products:
 - Recognize **system level efficiency: best-in-class product technology**
Recognize **intelligence and smart communications: deliver further savings and improved user experience** (e.g. power management, automatic brightness control, occupancy sensing, Energy Efficient Ethernet)

Example



- Demand: DVR for Every Television



DVR



DVR

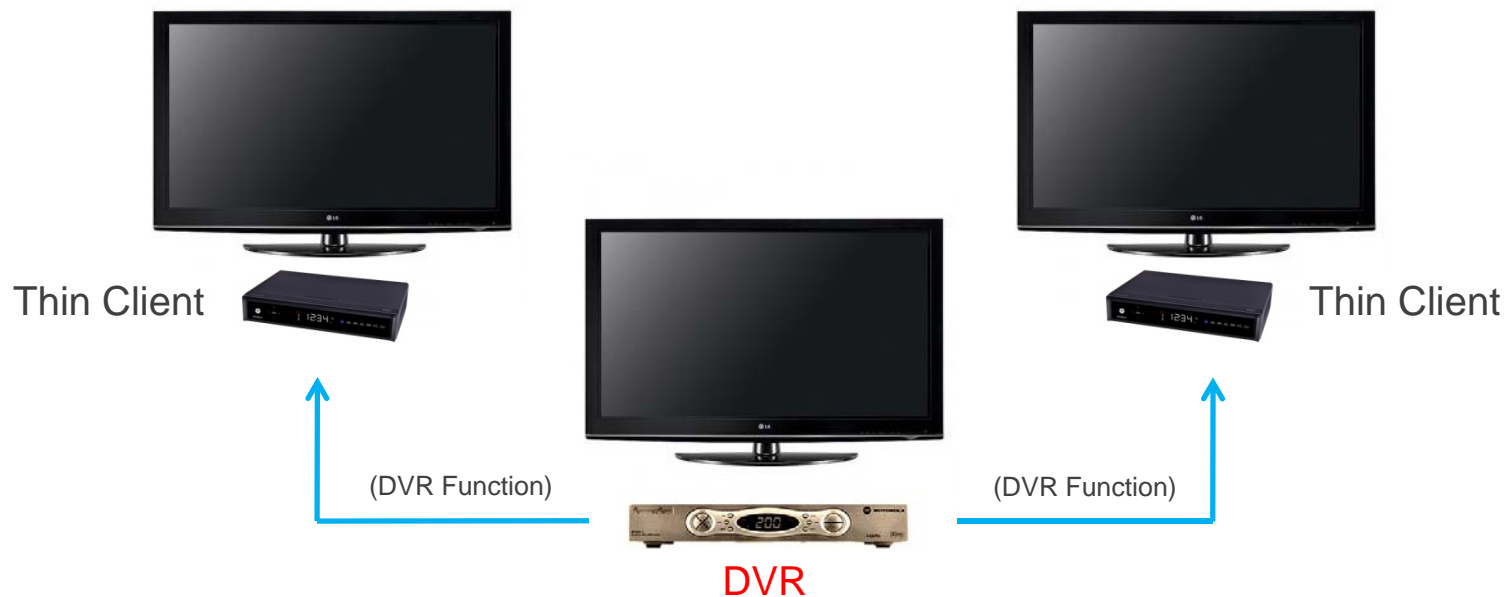


DVR

Example



- Solution: Multi-room STB with Central DVR
 - Higher power DVR hardware limited to one STB
 - Content delivery to remote TVs via Thin-client STBs



Examples



- Promote more effective sleep and better responsiveness
 - Audio/Video Spec: low power sleep state supports the ability to wake from sleep without direct user input. Once audio hits the input, the system resumes automatically
 - Proxying Incentive: encourage computing devices to sleep while maintaining network connection. They appear to the network as always on, but are really sleeping
 - Proposed Deep Sleep Credit for STBs: reward use of advanced energy saving capability – up to 87% reduction in sleep mode power
- Promote better picture and lower power use
 - ABC credit for TVs

Near-Term Strategy

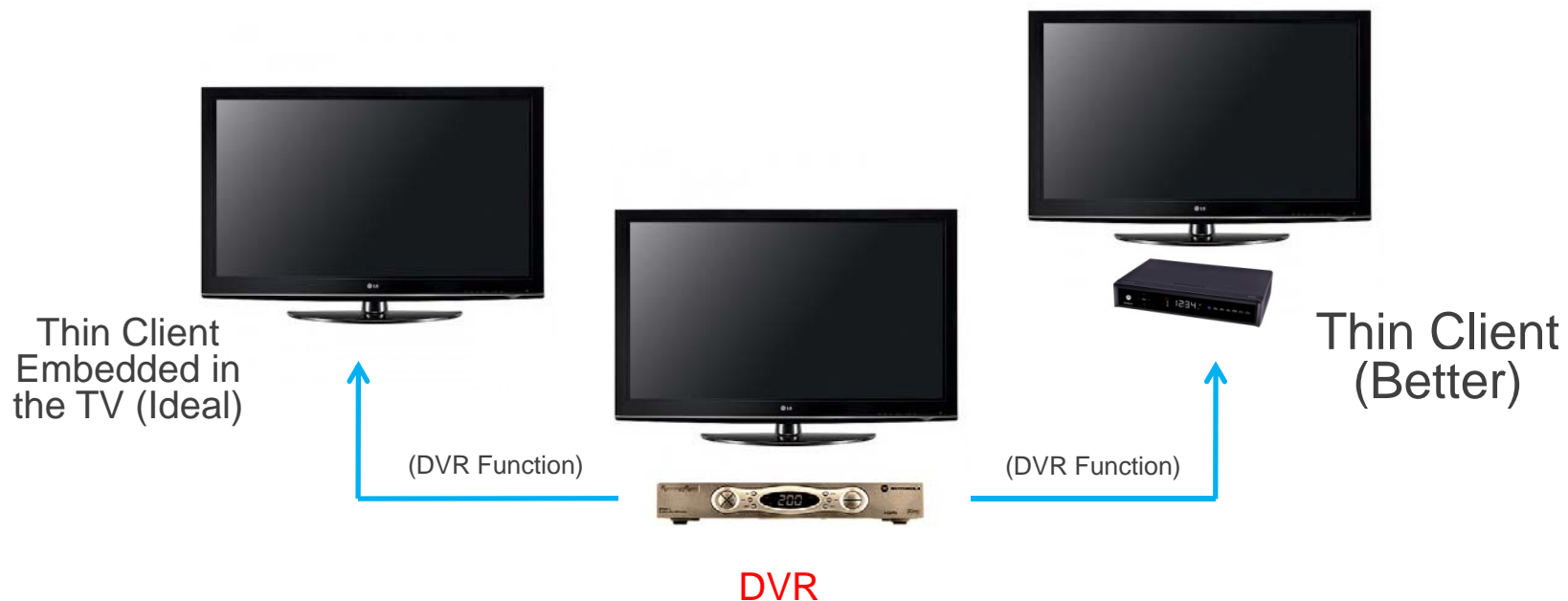


- Take Systems approach further:
 - STB multi-room: function delivered with no client
 - Audio whole home: central device delivers content to low energy clients? Or no clients?
- Invest in development of open communications and interoperability standards to further both intra and inter device intelligence across all product categories
- Reward/require use of these open standards through ENERGY STAR specifications

Example



- Solution: Multi-room STB with Central DVR
 - Higher power DVR hardware limited to one STB
 - Content delivery to remote TVs via Thin-client STBs or now connected Televisions using a common standard



Examples



- Promote true energy intelligence-devices managing energy use wisely while delivering function
 - Devices intelligently know what state to be in

Audio Example: Incoming audio means an amplifier comes on to support the demand. Input stops, amplifier goes into sleep state
 - Appliance Examples:
 - Refrig/Freezer: Light goes on when door opens. Additionally, light goes on only when the room is dark and automatically dims/brightens based on how dark the room is. Plus defrosts only when sensor detects need vs timed defrost
 - Clothes Washer: Apportions only needed water and soap based on sensor's reading



Focusing Users on Energy-wise Behaviors



ENERGY STAR 2011 Plans



- Complete research to better understand how we can motivate consumers to become more energy efficient in their behaviors at home
- Engage in and Create Opportunities for partners to Engage in Youth Partnerships:
 - Educational elements are fun, interactive and engaging
 - Involve social support (groups/family/community), help develop social norms around environmental protection, and involve audience input

Youth Partnerships and Furthering Energy-Wise Behaviors



- Boys & Girls Clubs of America: More than 60 clubs and 4,400 members joined ENERGY STAR community service projects, educating youth and communities about the benefits of energy efficiency
- PTO Today - Go Green Nights: build environmental awareness and understanding among the nation's families through PTAs across the US
- Do Something: This fall, EPA and Do Something launching environmentally focused online game on Facebook called **eMission**



Take Aways



ENERGY STAR rewarding energy-wise performance in products

- Stepwise approach that is aimed at supporting greater availability of intuitive products in the marketplace
- Investing in development of open communications and operability standards that further efficiency and deliver on consumer desires

ENERGY STAR educating users about benefits of energy-wise behaviors at home

- Offers promise of hard to get, meaningful savings
- Aims to build a generation of consumers that will act on opportunities to get savings and expect products to make that easy

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