

# Active/Idle Mode and Enabling Power Management

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# Core Issues

- **Industry believes that enabling power management will yield the most significant energy savings to the user.**
- **Data gathered by manufacturers indicates very few units (significantly less than 25%) comply with proposed limits.**
- **Performance classification of Basic/High performance is flawed.**
  - **Incomplete configuration information provided**
  - **Classification based on frequency of processor**
- **Significant risk for industry to accept proposed Idle limits when it cannot predict the power needs of new technologies and customer requirements.**
- **We require a measurement process which is dynamic and accounts for the highly configurable nature of these products.**
  - **Potentially a process which “normalizes” the products.**
  - **Minimizes the burden of testing numerous configurations.**

# Power Management pilot at Dell call center shows easy implementation and minimal cost

- 10/07/2005 Energy Star EZ-GPO software and system policy successfully deployed to ~600 client systems at call center.
- Computational Inputs
  - 16 work hours per day (operations 2 shifts per day)
  - 7 work days per week
- Power Management Settings
  - Suspend monitor – 10 minutes
  - Suspend system – 15 minutes
- Issues
  - No issues reported to Help Desk.
  - Onsite I/T support staff have received 5 user complaints. They are currently investigating. Issues may be addressed through user education.
  - There have been no production outages as a result of applying power management settings.
- **Conclusion: Minimal cost/risk to implement Power Management.**

# Customers tell us they are enabling PM at a much higher rate than previously reported.

- 300 business and institutions surveyed.
- Mix of small, medium & large customers.
- Users of Dell, HP, IBM systems

## Question:

- Who currently enables Power Management?
  - 33% are 100% enabled
  - 15% additional are between 76% to 99% enabled.
  - 13% additional are between 51% to 75% enabled.
  - 16% additional are between 26% to 50% enabled.
  - 11% additional are between 1% to 25% enabled.
  - Only 13% are not PM enabled.
- Conservative estimate for this survey is that 56% or greater are enabling PM today.

# When Power Management is implemented. Customers see little benefit for more efficient power supplies

**When customers use power management (56% are today), additional energy savings for adding a more efficient power supply is minimal.**

**In the Dell pilot, customers would save only \$1.05 / year more. The cost of adding a new more efficient supply is 10-15 times the annual savings.**

## Enabling Power Management saves 70% more kWh than 80% efficient power supply.

- The bottom line is, in our latest corporate platforms using the Dell pilot usage model, there is a savings of **96KWHr** per day **between the EPA proposal and the Dell pilot** for the same population (of systems), and over 346KWHr from our base line.
- In this pilot, **implementing PM was minimal cost and saves 70% more** than an 80% efficient power supply system. Payback is immediate and only requires conviction to enable it.
- 80% efficient power supplies will cost a customer \$10-15 additional per unit for a mainstream class desktop system in 2007 - 2008. They are not available today in quality or quantity for mass production.

# Energy Efficiency Metric

- ITI supports the development of an energy efficiency metric. Preferably developed and supported by a joint and open effort between industry and other concerned entities.
- In Nov 2005, several members of ITI initiated development of an energy efficiency metric in ECMA International, an international standards body.
- More information on ECMA International:
  - <http://www.ecma-international.org/>

# Status of ECMA Work

- Which committee is developing the metric?
  - ECMA TC38, Product-related Environmental Attributes.
- What are the expected deliverables?
  - To survey national and international standards, specifications and recommendations;
  - To survey energy efficiency drivers (regulatory, NGO, industry, eco label etc);
  - To determine a definition of "energy efficiency";
  - To determine how to measure energy efficiency;
  - To liaise with organizations dealing with energy efficiency.
  - Factors under consideration include; system power rating, system power consumption, user experience

# Status of ECMA Work

- What is the anticipated scope?
  - Desktop and notebook computers
- What is the status?
  - An informal team has developed the work item proposal and key deliverables. A formal Energy Efficiency Task Group is now being formed within ECMA TC38 to execute the work item proposal and develop the metric.
- What is the timeline?
  - Will be determined by the ECMA TC38 Energy Efficiency Task Group.