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Green IT: 5 Ways to Save Money and Shrink Your Company's Eco Footprint

Posted by Linda Barney on April 22, 2008 at 3:59pm in Technology Management

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Green IT: 5 Ways your IT Department Can Save Money and Shrink Your Company's Eco Footprint

By Linda Barney, Barney and Associates

During the Clean Technology track at InnoTech, representatives from Intel, IBM, CH2M Hill, Microsoft, VMware and the Green Electronics Council provided tips on how to use eco-friendly technologies and techniques in the "Green IT: 5 Ways your IT Department Can Save Money and Shrink Your Companies ECO Footprint" session.

EPEAT Green Electronics Product Directory Session moderator Jeff Omelchuck, EPEAT Executive Director, described the local non-profit EPEAT™ initiative and EPEAT "green" electronics products directory which rates products in terms of sustainability and ecologic attributes. There are currently 560 products on the registry with ratings for desktops, integrated systems, laptops, monitors and the ratings will be expanded to include to printers, faxes and TVs. The EPEAT ratings system is used by the U.S. and Canadian governments, various states, the New Zealand Army, cities, universities and a variety of companies. Omelchuck reports that there were a number of environmental benefits of buying EPEAT energy saving equipment including saving electricity, reducing carbon emissions, preventing water pollutant emissions, reducing toxic materials, and avoiding the production and disposal of hazardous waste. For more information on EPEAT-"Greener electronics made easy", see www.EPEAT.net

Convert to more Energy Efficient Equipment

Various panel members recommended buying newer software and more energy-efficient equipment as a way to save energy. Lorie Wigle, General Manager, Eco-Technology Program Office, Intel states, "My top tip on Green IT is to buy smart – the latest generation desktops and notebooks are much more efficient – as much as 17x more than the installed base. Look for the Energy Star logo." Gary Falis, Sr. Director, Sustainability Lead, Microsoft believes that both hardware and software should be reviewed when evaluating excess energy usage. Falis recommends using software products to save energy, reduce cost, manage sustainability and enable telework. "Saving energy is a hardware issue. Ensure that you are and will be using the best equipment sized appropriately. Hardware vendors, from chip makers to system builders, are very focused in this area yielding key advances," said Falis. Taking advantage of the SPECpower ratings is a good way to select and purchase energy efficient servers.

Audience members pointed out that it was not always feasible to buy new software or equipment due to budget constraints. Panel members agreed that IT managers should consider the cost of new software, equipment and energy savings when evaluating the tipping point for disposing of old hardware. IT managers should always make sure that equipment is recycled in a responsible way so that it is refurbished, reused or responsibly broken down so equipment does not end up in a land fill. Omelchuck stated, "All companies and IT staff should buy green equipment in the first place and make old equipment last as long as you can and look at ways to make the equipment more energy efficient."

Power and Equipment Management

Panel members recommend using power management features on PCs to reduce power consumption. Even older PCs have power management software that can be used to control power consumption of the hardware. Wigle recommends "Use power management – even on notebooks when they're plugged in. You can gain 60% in efficiency." Fasil states, "It is important to check usage and utilization of key components such as CPU, memory, video and explore new advances such as central DC power supplies."

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- **"Keeping It Together When Your Team Isn't: Collaboration Tools 2.0"**
May 6, 2008 at 5pm – US Bank Tower
- **Selling IT in Your Company Culture**
May 14, 2008 at 7:30am – Governor Hotel
- **Microsoft Silverlight 2.0: More Than Just a Flash Competitor**
May 15, 2008 at 11:30am – US Bank Tower
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May 20, 2008 at 7:30am – Governor Hotel
- **Oregon Inside - Secret Recipes for Global Success in Embedded Software and Components**
May 22, 2008 at 11:30am – US Bank Tower

Data Center Best Practices

According to an EPA report to Congress in August 2007, "Data centers account for approximately 1.5% of total U.S. electricity usage." Panelists agree that using data center best practices can have a huge impact on energy efficiency. Organizations listed at the end of the article provide recommendations and best practices.

Server Consolidation and Virtualization

Members of the panel believe that using hardware consolidation and server virtualization is one of the best ways to improve efficiency, lower costs and reduce energy usage. Many utilities also provide an incentive from \$150 to \$300 per server removed.

Linda Fravel, Program Manager IBM, sees key IT challenges as providing flexible computing resources, deploying applications that scale up to meet increasing demand, managing thousands of machines with minimal human intervention, and making the most efficient use of all the computing resources in a data center. "IBM's vision for enabling a new enterprise data center includes physical consolidation and optimization of servers, virtualization of individual systems, and the use of network and energy management. The benefits of a new enterprise data center allows for triple the asset utilization, eliminates 80% of system outages, reduces heat generation by up to 60%, reduces floor space required by up to 80% and reduces disaster recovery time by 85%," states Fravel.

According to Winston Bumpus, Director of Standards Architecture at VMware, servers and storage equipment account for up to 50% of power usage in a data center. Bumpus reports that server consolidation and virtualization can result in "\$700 and 7,000 kWh saved per year per workload virtualized, this is the equivalent of 4 tons of CO2 emissions or taking 1.5 cars off the road. In addition, virtualization improves workload agility and provides the ability to consolidate loads to fewer servers during off-peak hours and power down inactive servers."

Kevin Crader, Environmental Management Systems IT Greening Lead, CH2M HILL described how server virtualization was used at CH2M Hill to create 84 virtual servers on 4 physical servers. This change resulted in "CH2M Hill using 24 NICs instead of 160 and less copper wire for networking. We reduced the amount of required equipment, have a smaller equipment footprint and use less energy. It has allowed us to extend our budget and do more with less equipment," states Crader.

Other Green IT and Energy Saving Strategies

All panel members report that their companies are also using a variety of other strategies to improve energy efficiency, reduce waste and improve sustainability. Strategies implemented include reducing paper consumption, establishing environmental procurement criteria on national agreements, increasing recycling, teleworking programs, green travel ratings for hotels, videoconferencing to reduce travel, alternative fuel campus shuttles, commuter subsidies, converting fleets to biofuel vehicles, ride-matching to buildings on large campuses and tax deferred commuting to work alternatives. Several of the companies are building or revising data centers and are paying attention to design, energy usage, installation of solar panels, as well as working to reach a near zero carbon footprint for a new data center.

SAO and Climate Savers Team Up

At InnoTech, it was announced that the Software Association of Oregon (SAO) and the Oregon-based Climate Savers Computing Initiative have formed a collaboration to spur energy-efficient computing in Oregon. "The Software Association of Oregon is committed to reducing the energy consumption of information technology, both through or actions, as well as driving awareness and development of energy-efficient technologies among our more than 450 members in Oregon. By working with Climate Savers Computing Initiative, the SAO is helping lead its membership in the movement toward a more clean and sustainable Oregon," said Bryce Yonker, Director of Marketing and the Clean Tech Forum at the SAO. Lori Wigle, Intel's representative on the Climate Savers Board of Directors states, "With the efforts of the SAO and other like minded organizations, we can reduce the energy consumption of computers by 50 percent by 2010."

Session Moderator & Panel Members:

- Moderator: Jeff Omelchuck, EPEAT Executive Director, Green Electronics Council
- Kevin Crader, Environmental Management Systems IT Greening Lead, CH2M HILL

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Groups



- DevSIG
(28 members)



- TechStart
Education

- Gary Falis, Sr. Director and Sustainability Lead, Microsoft
- Winston Bumpus, Director of Standards Architecture, VMware
- Linda Fravel, Program Manager, IBM
- Lorie Wigle, General Manager, Eco-Technology Program Office, Intel Corp. & President Climate Savers Computing Initiative

Green IT and Sustainability Links

The following groups are dedicated to developing and promoting energy efficiency for sustainability:

Green Grid. Works closely with EPA to develop efficient models and metrics www.thegreengrid.org

Energy Star ratings for servers: http://www.energystar.gov/index.cfm?c=new_specs.enterprise_servers

Climate Savers Computing Initiative: www.climatesaverscomputing.org

EPEAT - "Greener electronics made easy": www.EPEAT.net

Linda Barney is the founder and owner of Barney and Associates, a technical and marketing writing firm. Founded in 1990, Barney and Associates specializes in technical writing, documentation, online help, web content, and training. Barney and Associates also provides a wide range of marketing writing services including creating media articles, white papers, data sheets, solution briefs, scripts, case studies, web content and reviewer's guides. Contact Linda at linda@barneyassoc.com.

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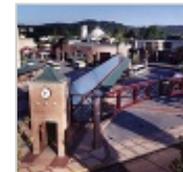
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