Acknowledgements

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To view this report online, visit:
http://www.dell.com/environment

For more information about our sustainability programs, visit:
http://www.dell.com/commitment

You may also contact Dell’s Environmental Affairs department via e-mail at:
www_Environmental_Affairs@Dell.com

Reporting Year

• Financial data are for Dell’s fiscal year 2004 (ending January 30, 2004).
• Environmental data (and associated goals) are for Dell’s fiscal year 2004.
• Other data, except where stated, are for calendar year 2003.

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*Dell has produced this expanded report covering fiscal year 2004 based on a number of external references including, but not limited to, certain elements of the Global Reporting Initiative (GRI) Sustainability Guidelines. This report is Dell’s first sustainability report and we intend to enhance this report over time as appropriate. Our last report was environmental and was published in June 2003. The GRI Index on this Contents page cross-references portions of this report to the GRI Sustainability Guidelines. A “P” suffix in the number listed in the GRI Index indicates that only portions of the referenced section are covered in this report.*
One of Dell’s core strengths is our ability to evolve as we meet changing customer requirements, technological innovations, and global market conditions. This report is an excellent example of that drive to continually improve and deliver increased value to all our stakeholders.

As our last report indicated, we recognize that while environmental stewardship is a key corporate imperative, our accountability extends to other areas in which the readers of this report will have an interest. We have chosen to evolve our reporting from our annual environmental report to an annual sustainability report, indicating our awareness that we have a key role to play in ensuring the impact and long term viability of our corporation. We have also changed the reporting cycle, aligning the release of this report with the release of our Year in Review, which is available online at [http://www.dell.com](http://www.dell.com). We understand that our financial performance and our environmental and societal impact are highly interrelated parts of “triple-bottom-line” reporting. While we do not claim to have achieved our goal for this type of reporting, we believe we are demonstrating real progress towards integration and alignment of these key indicators in our reporting methodology.

Our mission is to fully integrate sustainable development and management practices into our business of providing quality products, best-in-class services, and the best customer experience at the best value. The tone of this report is intentionally direct, factual, and tied to our business results wherever possible.

We would like to highlight several key areas of progress:

- This fiscal year 2004 report is Dell’s second attempt to align our reporting practices with the Global Reporting Initiative (GRI) Sustainability Guidelines, available in their entirety on the Internet at [http://www.globalreporting.org](http://www.globalreporting.org). Our progress in developing more comprehensive and transparent reporting in fiscal year 2004 (when compared to fiscal year 2003) is evidenced in that we have approximately doubled our GRI cross-references as reflected in the GRI Index on page 3.
- Our increased investment in the area of corporate accountability is demonstrated by the addition of internal resources to drive these programs, expansions of our stakeholder relationships, and increased engagement at every level of the company, including our own personal involvement.
- We have increased the number of socially responsible investor groups with which we are working and broadened the scope of our dialogue. We continue to find significant value in the guidance from these groups who strive to integrate environmental and societal impact, as well as financial performance, into their investment decisions.
- Our focus on suppliers’ contributions to Dell’s sustainability efforts expanded to include both design for environment attributes and the human rights impact of our supply base practices. Additional information will be found both in this report and on our web site at [http://www.dell.com/supplierprinciples](http://www.dell.com/supplierprinciples).
- One of the most significant areas of focus in fiscal year 2004 was the rapid evolution of our efforts to address the complex issue of responsible end-of-life retirement of electronics hardware. A series of one-day take-back collection events conducted in the United States in the spring of 2003 was evolved into two-day sessions, the first of which is dedicated to an educational seminar featuring experts addressing many complex product recovery issues such as materials export. Our collection program has also been expanded to include a grant program that you will learn about further in this report. This model, while not a long term national solution, is sustainable and synergistic, allowing communities to attract many other like minds to invest in addressing their local waste issues. Electronics reuse and recycling, in all customer segments, remains a key focus for Dell in fiscal year 2005.

While we have learned much this year, as often is the case, the knowledge has brought with it a realization that there is much more to comprehend. At the conclusion of this year’s report is a summary of the more significant challenges we have identified as well as a broader set of goals for the year. We believe that we have the right team, business model, values, partners, and stakeholders to support Dell on this important journey.

Michael S. Dell
Chairman of the Board
Chief Executive Officer

Kevin B. Rollins
President
Chief Operating Officer
**Company Profile**

*Fiscal year ended January 30, 2004.*

### Dell Americas

**Headquarters:** Round Rock, Texas

**Manufacturing facilities:**
- Austin, Texas
- Nashville, Tennessee
- Eldorado do Sul, Brazil

**Operating subsidiaries in:**
- North York, Ontario, Canada
- Santiago, Chile
- Monterrey and Mexico City, Mexico
- Bogotá, Colombia
- Eldorado do Sul, Brazil
- San Juan, Puerto Rico
- Buenos Aires, Argentina
- Panama City, Panama

### Dell Asia-Pacific/Japan

**Headquarters:** Singapore

**Manufacturing facilities:**
- Penang, Malaysia
- Xiamen, China

**Operating subsidiaries in:**
- Sydney, Australia
- Xiamen, China
- Kawasaki, Japan
- Seoul, Korea
- Hong Kong
- Bangalore, India
- Taipei, Taiwan
- Kuala Lumpur and Penang, Malaysia
- Auckland, New Zealand
- Singapore
- Bangkok, Thailand

### Dell Europe, Middle East, and Africa

**Headquarters:** Bracknell, United Kingdom

**Manufacturing facilities:**
- Limerick, Ireland

**Operating subsidiaries in:**
- Klosterneuburg, Austria
- Asse-Zelik, Belgium
- Prague, Czech Republic
- Copenhagen, Denmark
- Helsinki, Finland
- Montpellier, Paris and Rueil-Malmaison, France
- Langen, Germany
- Athens, Greece
- Bray and Limerick, Ireland
- Milan, Italy
- Amsterdam, The Netherlands
- Lysaker, Norway
- Warsaw, Poland
- Johannesburg, South Africa
- Madrid, Spain
- Uplands Vasby, Sweden
- Geneva, Switzerland
- Bracknell, United Kingdom
- Dubai, United Arab Emirates
ABOUT DELL

Company Facts

Dell—through its direct business model—designs, develops, manufactures, markets, sells, and supports a wide range of computer products and services that are customized to customer requirements. These products include enterprise systems (servers, storage, networking products, and workstations), client systems (portable and desktop computer systems), software and peripherals, and service and support programs. Dell markets and sells its products and services directly to its customers, which include large corporate clients, governments, healthcare, and education accounts, as well as small-to-medium businesses and individual consumers. Dell is headquartered in Round Rock, Texas, and conducts operations worldwide.

Dell was founded in 1984 by Michael Dell on a simple concept: by selling computer systems directly to customers, Dell could best understand customer needs and efficiently provide the most effective computing solutions to meet those needs. This direct business model eliminates retailers that can add unnecessary time and cost or diminish Dell’s understanding of customer expectations. The direct model allows Dell to build every system to order and offer customers powerful, richly configured systems at competitive prices. Dell also introduces the latest relevant technology much more quickly than companies with slow-moving, indirect distribution channels, and turns over inventory every 4 days on average.

Dell’s climb to market leadership is the result of a persistent focus on delivering the best possible customer experience by directly selling standards-based computing products and services. Revenue for fiscal year 2004 totaled $41.4 billion and the company employs approximately 46,000 team members around the globe.

Harnessing the Internet

Dell is enhancing and broadening the fundamental competitive advantages of the direct business model by applying the efficiencies of the Internet to its entire business. Dell led commercial migration to the Internet, launching http://www.dell.com in 1994 and adding e-commerce capability in 1996. The following year, Dell became the first company to record $1 million in online sales. Today, Dell operates one of the highest-volume Internet commerce sites in the world based on the Microsoft® Windows® operating systems. The company’s web site, which runs entirely on Dell™ PowerEdge™ servers, receives more than one billion web site visits per quarter at 86 country sites in 28 languages/dialects and 29 currencies.

The company is increasingly realizing Internet-associated efficiencies throughout its business, including procurement, customer support, and relationship management. At http://www.dell.com, customers may review, configure, and price systems within Dell’s entire product line; order systems online; and track orders from manufacturing through shipping. At http://valuechain.dell.com, Dell shares information with its suppliers on a range of topics, including product quality and inventory. Dell also uses the Internet to deliver industry-leading customer services. For instance, thousands of business and institutional customers worldwide use Dell’s Premier Dell.com web pages to do business with the company online.

For more information about Dell, our business model, leaders, and many areas impacting sustainability, visit our About Dell web site, which is accessible from our home page http://www.dell.com.
Products and Services

Dell provides a variety of products and services to the global market. Dell custom-designs a number of our computer products and partners with our supply base to assemble these designs. Dell manufacturing operations are therefore custom configuration centers, where systems are assembled, software loaded, and a customer’s total hardware and software package is merged. Product categories include:

- **PowerEdge™ servers** offer reliability, performance, and scalability, with standards-based technology that is more affordable and easier to deploy for all business-critical applications, including e-mail, database, and high-performance computing environments.

- **Dell | EMC and PowerVault™ storage systems** offer organizations of all sizes exceptional manageability, availability, interoperability, and performance to protect their vital information today, while offering scalability to expand as their requirements grow.

- **Services** enhances the customer experience through product support, managed services, deployment services, professional services, and customer training and certification. On-site service is provided by independent third-party service providers.

- **PowerConnect™ switches** are standards-based network switches that connect computers and servers in small- to medium-sized businesses, as well as in departments or branch offices of large corporations.

- **OptiPlex™ desktop computers** are developed for corporate and institutional customers who demand highly reliable, stable, manageable, and easily serviced systems within networked environments. Industry-standard technology contributes to the first-rate dependability and low total-cost-of-ownership of OptiPlex systems.

- **Latitude™ portable computers** meet the wide-ranging needs of business and organizations, including powerful performance, portability, and flexibility. Commonality of peripheral modules and docking solutions help lower the total cost of ownership.

- **Dell Precision™ workstations** deliver the performance to run highly complex applications, such as three-dimensional computer-aided design, digital content creation, software development, and financial/economic modeling.

- **Inspiron™ portable computers** are targeted to customers who require high-performance computer systems at aggressive prices, along with industry-leading service and support.

- **Dimension™ desktop computers** are designed for small business and home users requiring fast technology updates and high-performance computing.

- **Dell monitors** offer a range spanning from entry-level to performance, traditional and flat-panel displays. Dell monitors are easy to install, rigorously tested, and backed by Dell service and support.

- **Dell printers** are designed to meet the needs of customers ranging from individual consumers to large workgroups. All Dell printers include the Dell Ink Management System or Dell Toner Management System and other features that make it easier for customers to obtain high-quality, value-priced imaging products and replacement cartridges.

- **Dell Consumer Electronics** offers a natural extension of the company’s existing product portfolio that provides customers with a single resource for consumer technology needs. Consumer Electronics products include the Dell Digital Jukebox, Dell liquid-crystal display televisions (LCD TVs), the Dell 2200MP Projector, Dell Media Experience™, and the Dell Jukebox powered by MusicMatch download service.

- **Axim™ handheld devices** offer sleek, sophisticated designs and are loaded with built-in features, including integrated Wi-Fi and color screens, as well as expansion slots to add memory and peripherals such as Bluetooth™ wireless technology capability, all at an industry-leading price.

- **Software and Peripherals** provides complementary products with the flexibility and convenience of one-stop shopping. We deliver a vast array of Dell and third-party peripherals to meet the wide-ranging needs of all our customers. To enrich the computing experience, cameras, monitors, projectors, software, memory, portable computer accessories, printers, and handheld devices are just a few of the many products and services offered through our web site on the Internet at [http://www.dell.com](http://www.dell.com).
Corporate Accountability
CORPORATE ACCOUNTABILITY

At Dell, we are committed to building value not only for our customers and our business, but also for the communities that our company and our employees call home. We strive to participate responsibly in the global marketplace in which we operate.

Accountability Policy

At the core of this effort is a corporate philosophy, which we call the Soul of Dell, that guides our conduct wherever we do business. Central to that philosophy are our efforts to hold ourselves to the highest possible standards when doing business. Our Code of Conduct details our efforts to hold ourselves to standards of ethical behavior that go well beyond legal minimums. Our Board of Directors has adopted Principles of Corporate Governance, which provide an effective corporate governance framework for Dell.

Dell relies on the diversity of its personnel, suppliers, and customer communities to maximize innovation, growth, competitiveness, and customer satisfaction. Our diversity programs help us build a barrier-free workplace and we apply the same barrier-free philosophy to our supplier relationships through our supplier diversity programs.

Dell and our employees are committed to building technology that helps build communities. Our global citizenship programs and the Dell Foundation define our efforts to contribute positively in our communities.

Finally, Dell is committed to a culture of sustainability and responsibility. We continually reduce Dell’s impact on the environment through product design, manufacturing and operations, product ownership experience, and product end-of-life solutions.

There is a great deal of global dialogue surrounding the importance and definition of responsible business practices, product development, and processes. There has yet to be one globally recognized term to describe this broad responsibility. At Dell, we choose to define our high-level commitment as our corporation’s accountability.

To this end, a statement of Corporate Accountability was developed and adopted in calendar year 2003 as follows:

“Through its direct relationships with customers, employees, and stakeholders, Dell makes technology more affordable and accessible for more people. Dell builds these relationships and sustains our business and social benefits by seeking input from and keeping our commitments to employees, customers, and shareholders; holding ourselves to a higher ethical standard; respecting the individual rights and dignity of others; and increasing our value to customers by improving our performance and productivity and reducing the cost and environmental impact of our products and operations.”

Sustainability

In addition to establishing accountability as the overarching term for our efforts, we also created a Sustainable Business function in 2003.

We choose to define our use of the term sustainability as “creating long-term stakeholder value by integrating economic, social, and environmental responsibility into everything we do.”

The Sustainable Business function is Dell’s process to ensure the integration of social and environmental concerns into our business operations and our interactions with stakeholders, while ensuring that economic goals are met. Key goals include:

- Work with the Environmental Management Council, Public Affairs, Investor Relations, Human Resources, Operations, and Ethics organizations to identify environmental and social impacts of our products, operations, and activities.
- Oversee Dell’s Stakeholder Engagement process to ensure that stakeholder input is sought and incorporated where possible and in alignment with our goals and values.

“In 2003 we established a sustainability function and began the internal education process, exposing a wider audience to the concepts of sustainable development. Our goal in 2004 is to build on that awareness and integrate the concepts into day-to-day business operations and decisions.”

Pat Nathan
Sustainable Business Director
• Ensure that key indicators are identified for each of the impacts and that measurement and monitoring is developed and implemented.

• Work with internal organizations to set ambitious and effective goals to either increase (for beneficial aspects) or reduce (for undesirable aspects) these key indicators.

The key issues and impacts currently identified and being managed are highlighted and discussed in detail throughout this report. In addition, a summary of these may be found in our “Summary of Goals, Targets, and Challenges” on page 60.

The Soul of Dell

The Soul of Dell is our corporate philosophy. It defines who we are and who we aspire to become as a company, and it forms the basis of Dell’s “winning culture.” Central to the Soul of Dell is the company’s commitment to participate responsibly in the global marketplace, which serves as a guide for our actions around the world. The core elements of the Soul of Dell are:

• Customers — We believe in creating loyal customers by providing a superior experience at a great value.

• The Dell Team — We believe our continued success lies in teamwork and the opportunity each team member has to learn, develop, and grow.

• Direct Relationships — We believe in being direct in all we do.

• Global Citizenship — We are committed to understanding and respecting the laws, values, and cultures belonging to the countries in which we do business, as well as contributing positively in every community we call home.

• Winning — We have a passion for winning in everything we do.

For additional information on the Soul of Dell, visit [http://www.dell.com/soulofdell](http://www.dell.com/soulofdell).

Business Ethics

We believe in being direct in everything we do. Our ultimate success is based on maintaining direct relationships that are built on trust and that uphold both personal and professional integrity. In order to sustain this trust with our employees, customers, suppliers, and investors, we must hold ourselves to “higher standards”—performing beyond the requirements of the law in all countries in which we operate. It is our ultimate goal to achieve marketplace success and a winning culture by “winning with integrity.”

We believe that global ethics is everyone’s responsibility at Dell, and we hold all of our employees and suppliers accountable for understanding and complying with our corporate guidelines. Our ethical behavior is enforced through a “zero-tolerance” adherence to our ethics-based policies and “Code of Conduct” that emphasizes trust, integrity, honesty, judgment, respect, managerial courage, and responsibility. This enforcement comes from a top-down commitment jointly from our Board of Directors and executive team to manage and operate Dell’s business with the highest standards of ethics and integrity.

Ethics Policy

Dell’s operations and employees must adhere to our corporate policies and high standards that address ethical issues such as employee treatment, labor practices, financial reporting, law and regulatory compliance, U.S. Equal Employment Opportunity Commission (EEOC) compliance, environmental sustainability, and corporate governance. In addition, we work to develop effective accountability measures to monitor compliance. As an example, the Audit Committee of our Board of Directors oversees our annual financial planning statements, ensuring that ethical behavior and policies are upheld and demonstrating financial responsibility to our stakeholders. The Board’s Corporate Governance Committee also provides compliance oversight, and it is made up entirely of independent directors.
Through these policies, we hold ourselves accountable for following ethics globally, and we have established a number of organizational measures to ensure corporate compliance with these high standards. Our Global Ethics Council defines and advocates our policies throughout our facilities worldwide. We have Regional Ethics Managers in India, Europe, and Asia in addition to our Global Ethics team in the United States. In each region of the world, the Global Ethics Council is supported by Regional Ethics Committees that place these policies into effect locally and monitor compliance.

In 2003, Dell appointed a Chief Ethics Officer who oversees these ethical policies and business policies and appears before the Audit Committee of the Board of Directors twice a year to share plans and results. Michael Dell, chairman of the board, and currently chief executive officer, is the only person who has been both on Dell’s management team as well as Dell’s Board of Directors.

All Dell employees—regardless of grade level, position, or geographic location—have been tasked to base our daily actions and conduct on these higher ethical standards that are the essence of the Soul of Dell, our winning culture, and our ultimate success.

**Code of Conduct**

Just as the Soul of Dell articulates our values and beliefs, Dell’s Code of Conduct provides guidance to ensure that we meet our higher standards of ethical behavior and conduct business the Dell Way—the right way, which is “Winning With Integrity.” Simply put, we want all members of our team, our shareholders, customers, suppliers, and other stakeholders to understand that they can believe what we say and trust what we do.

The seven components of our Code of Conduct are: Trust, Integrity, Honesty, Judgment, Respect, Courage, and Responsibility. The Dell team works to ensure that all employees fully understand our Code of Conduct and are provided with the proper resources to report and resolve ethical dilemmas that may arise. We also share our Code of Conduct with Dell’s business partners and expect them to follow our higher ethical standards. For additional information on Dell’s Code of Conduct, see “Labor Practices” on page 35 and visit [http://www.dell.com/codeofconduct](http://www.dell.com/codeofconduct).

**Diversity**

Diversity is a business imperative at Dell that enables us to provide superior customer service and achieve marketplace success. Our global diversity:

- Fosters a winning culture that enables all employees to perform at his or her best and motivates employees to win with integrity in the global marketplace
- Promotes a barrier-free workplace where individuals take responsibility for addressing any personal and organizational biases that could inhibit successful pursuit of teamwork and business goals
- Partners with multicultural organizations to support access to technology, talent, business, and education in our communities

We characterize diversity by similarities and differences, defining it more broadly than just race, gender, and ethnicity. It’s about diversity of thinking, leadership, skill set, and style. And by harnessing our differences in pursuit of common business goals, our teams can be innovative while achieving business objectives.

Diversity represents a way of doing business that is barrier-free and inclusive. It allows unique ideas, experiences, cultures, and backgrounds of all our people to come together and create the most innovative products and best customer experience. Our diversity is global in its inclusion and its respect for the many different people and cultures encountered every day throughout the many countries in which we do business. We strongly adhere to a zero-tolerance policy against discrimination of any kind.
Management

Our Global Diversity office outlines and oversees the execution of diversity and multicultural communication initiatives throughout every aspect of our business. Dell also manages top-down diversity actions through Diversity Councils: cross-functional teams that establish business unit and corporate priorities, exchange best practices, and promote business unit/corporate accountability for managing workforce and marketplace diversity in pursuit of Dell’s business objectives. More than 1500 employees and leaders participate on Diversity Action Councils and Steering Committees. In addition, our senior executives are asked to complete mandatory diversity management training. In 2002, we established an online training resource for Dell’s managers.

In the Workplace

We are committed to workplace diversity and execute a number of programs and initiatives designed to attract top minority talent. And while we have achieved remarkable workplace results, we continually strive to set and meet higher standards. For example:

• Our workforce is made up of approximately 46,000 employees who live and work in 34 countries and deliver products and services to more than 190 countries.

• At Dell, women and minorities represent:
  – More than half (51 percent) of Dell’s U.S. employment
  – One-third of Dell’s U.S. managers
  – 26 percent of Dell’s vice president-level executives

We work to actively recruit and retain many of the nation’s top women and minorities in order to further diversify our workforce and achieve superior marketplace results. Each year, we sponsor professional conferences, career fairs, and community events with professional minority organizations to promote our job opportunities and workplace benefits. Through our University Relations department, we also cultivate relationships with universities across the country in order to access and recruit top talent among women and minority graduates. We also actively recruit candidates at historically black colleges and universities and other schools with significant minority populations including Florida A&M and Atlanta University Center, which includes Spelman, Morehouse, Morris-Brown, and Clark Atlanta University.

We are committed to providing opportunities for inclusion, recognition, and professional growth to our current employees. For example, we support several diversity networking groups in our U.S. operations that are designed to provide encouragement and an enhanced sense of belonging through informal mentoring. These groups enhance the personal and professional development of our diverse employees. They include:

• aDellante — Hispanic Employee Network
• ANG — Asian Employee Network
• B.R.I.D.G.E. — African American Employee Network
• P.R.I.D.E. — Gay, Lesbian, Bi-sexual, and Transgender Employee Network
• W.I.S.E. — Women In Search of Excellence Employee Network

In the Marketplace

Our commitment to the customer drives everything we do. Diversity in our workforce is a key component of enhancing our customers’ experience and is, therefore, integral to our success in the marketplace. To further meet our customers’ needs, we have partnerships and initiatives in place to do business with the most innovative and diverse suppliers, reach multicultural customer groups, recruit the best and brightest talent, and provide ongoing technology training to our workforce.
Strategic Partnerships

Through strategic relationships with community and professional organizations such as the National Urban League and the National Society of Hispanic MBAs, we expand our outreach to women and minority-owned businesses that want to do business with Dell. We are committed to enhancing our relationships with diverse suppliers and multicultural organizations so that we can provide the best overall customer experience to the global communities we serve.

Dell has established strategic partnerships with diverse community organizations, including:

- National Urban League
- United Negro College Fund
- Congressional Black Caucus Foundation
- Congressional Hispanic Caucus Institute
- U.S. Hispanic, African-American, Native American, Asian, and Women Chambers of Commerce
- National Society of Black and Hispanic MBAs
- National Council of La Raza
- Out and Equal
- Catalyst

Supplier Diversity

We support a top-down commitment to supplier diversity, challenging our executives and procurement managers to continuously seek creative ways to drive supplier diversity into all of their procurement plans. This commitment helps us achieve long-term relationships with quality, diverse suppliers. Our Supplier Diversity Program also provides mentoring opportunities for potential and current Minority and Women Business Enterprises (MWBEs), further enabling them to pursue revenue-building opportunities for their businesses. Our approach to supplier diversity ensures progress in retaining existing relationships, acquiring new supplier partnerships, and rewarding those who support Dell’s supplier diversity goals.

Dell partners with the National Minority Supplier Development Council and other various supplier diversity organizations to help strengthen our commitment to the multicultural business community. We are founding members of the Central and South Texas Minority Business Council (CSTMBC) and, through this unique relationship, help build connections and profits with CSTMBC-certified Minority Business Enterprises (MBEs). And in fiscal year 2004, year-over-year spending with MWBEs grew by 60 percent. We were also awarded nearly $180 million in new contracts to diverse suppliers, and Dell ranked No. 4 on the Div50 listing, the highest ranking among technology companies.

Diverse Community Investments

Dell’s Foundation and Community Programs are focused on expanding access to digital technology and providing opportunities in education. Many of our programs and community partnerships benefit diverse markets and help to promote digital inclusion. Some key examples include:

- The national Dell TechKnow Program is a technology training initiative that provides a student-built computer to keep “at risk” middle school youth in school and focused on their grades. See page 55 for more details on this program.
- Dell has committed $2.3 million in cash and computer equipment over the next several years for its Dell and United Negro College Fund Scholars Program, which launched in 2002. The program offers undergraduate and graduate students hands-on training and financial assistance, providing up to $10,000 in scholarship money, a paid internship, housing, and travel to prepare them for potential careers at Dell.
Since 1998, Dell has contributed more than $1.5 million to the National Urban League and its affiliates. And during fiscal year 2004, Dell provided nearly $300,000 in financial support and computer equipment. Through the Dell Community Technology Center at the Urban League, more than 8000 youth and adults have received support in becoming self-sufficient and self-reliant.

Dell’s Black Economic Empowerment (BEE) focus is on sustainable development and economic transformation in South Africa. Our bias is toward long-term commitments to projects and initiatives that deliver real value and real benefits.

In recognizing BEE as broad-based, our strategies are multipronged in contributing to skills and economic development of historically disadvantaged individuals and businesses. To ensure sustainable value and a team approach to BEE, we have established an empowerment forum within the company to continuously develop our BEE strategies, carefully investigate initiatives, and evaluate and report results. These commitments are consistent with the same clear and consistent focus that has driven Dell’s success: To directly meet and exceed the requirements of our marketplace.

Dell’s BEE management model is focused both internally (workforce) and externally (marketplace) to achieve the following objectives:

- Build superior, direct customer relationships within a growing, diverse marketplace.
- Provide transparent opportunity for our employees, customers, and partners.
- Ensure that all our employees, shareholders, partners, and communities benefit from Dell’s continued success.

Several of the countries in which Dell operates are faced with the pandemic of Acquired Immunodeficiency Syndrome (AIDS). Dell is committed to AIDS education and treating all employees with dignity, fairness, and equality. Dell is committed to creating and maintaining a safe work environment for all employees. Several teams have been working together to devise and implement a global AIDS policy by the close of the second quarter in fiscal year 2005. The policy will include, but not be limited to, the following objectives:

- Promote health awareness and provide information on Human Immunodeficiency Virus (HIV)/AIDS to all levels of employment.
- Protect the legal rights of employees at work who have HIV/AIDS.
- Provide guidelines on managing employees or situations when questions on HIV/AIDS are raised.
- Encourage managers, employees, and employee representatives to convey sensitivity and understanding to employees affected with HIV/AIDS.
- Prevent discrimination against infected persons.
- Comply with and be guided by local laws.

For current information, visit our web site at www.dell.com/diversity.

Recognition and Awards for Diversity

Dell is committed to building a winning culture that encourages every member of the Dell team to be the best at what they do. When our best efforts are recognized by others, it lets us know that we’re moving in the right direction. Dell’s diversity efforts have been recognized by awards from several corporate and community organizations such as INROADS, the National Minority Supplier Diversity Company, DiversityBusiness.com, and the National Society of Black Engineers. These awards and recognitions validate our commitment to diversity and to fostering a winning culture.

Dell has been recognized for its diversity and has received the following awards:

- 2004 Corporation of the Year Award from the Austin Area Urban League
- 2004 Corporation of the Year from the Minority Corporate Council Association
- 2003 Silver Torch Award from the National Society of Black MBAs
- 2003 Brillante Award from the National Society of Hispanic MBAs
- No. 8 on the National Society of Black Engineers Top 50 “Companies to Work For” list

'It is evident that Dell’s worldwide corporate philosophy has successfully embraced South Africa’s transformation process. Integrating an incredibly diverse country with a companionable technology partner.'

Stewart van Graan
Managing Director, Dell South Africa
Governance

Governance is defined as the organizational structures, processes, and tools used to govern. There are many types and levels of governance needed to ensure that our goal of sustainable growth and profitability are met globally. This report looks at the overarching area of corporate governance and then the governance processes utilized to manage our sustainability efforts.

Corporate Governance

The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the company (including stockholders) and establishes the rules and procedures for making decisions on a company’s affairs. It is the responsibility of Dell’s Board of Directors to direct, guide, and oversee the conduct of Dell’s business and to ensure that the interests of the stockholders are being served. The Board considers governance, compliance, and risk management to be among its primary functions, to ensure that Dell is managed with the highest standards of responsibility, ethics, and integrity. The Board has adopted Principles of Corporate Governance that provide an effective corporate governance framework for Dell, intending to reflect a set of core values that provide the foundation for Dell’s governance and management systems and its interactions with others. In 2003, Dell enhanced its governance process, adding a quarterly briefing for the Board on areas of emerging risk.

The Board is diverse from a race and gender perspective, and its members have significant leadership accomplishments in international business, government, education, and not-for-profit activities. Each individual has been associated with institutions noted for excellence and has broad experience and the ability to exercise sound business judgment. For additional information on Dell’s Board of Directors and the full text of the Principles of Corporate Governance, visit http://www.dell.com/corporate.

Sustainable Business Governance

Dell is managed by a Global Executive Management Committee (GEMC) that reports to the Office of the Chief Executive Officer. Members of the GEMC have responsibility for corporate staff and regional operating units around the world. A number of global cross-functional committees operate within Dell to devise strategy, develop policy, set goals, forecast financial needs and impacts, engage with stakeholders, and identify risks and opportunities for their areas of subject matter expertise. The five major committees impacting Dell’s sustainability efforts highlighted herein are the Environmental, Sustainability, Ethics, Audit, and Diversity committees. These committees also prepare updates and summaries of progress and highlight issues for Dell’s Board of Directors. Below these global committees sit teams that Dell calls “core” teams. These core teams drive actions in specific areas to ensure that the overall goals are achieved.

Global Sustainability Steering Committee

This committee is comprised of Dell’s Chairman, Chief Executive Officer (CEO), Chief Procurement Officers, General Counsel, Vice Presidents of Design, and Regional Business units. Led by leaders in Dell’s Environmental and Sustainability functions, the Committee guides the company in addressing the broader area of sustainability, providing input into strategy, resources, and global policies in this important area, while in turn being kept abreast of new developments and emerging topics.
Dell’s Environmental Management Committee

The Environmental Management Committee (EMC) at Dell provides an oversight infrastructure made up of directors, general managers, and vice presidents representing functional areas that may significantly impact the environment and other key decision-makers. The purpose of the EMC is to review, approve, and provide resources for Dell’s environmental initiatives, policies, and strategies, incorporating them into the company’s Environmental Management System (EMS).

In prior years, Dell’s EMS focused on achieving and maintaining International Organization for Standardization (ISO) 14001 certification of its manufacturing facilities. During 2004, we began a process to broaden the scope of our programs, bringing in our fulfillment and logistics operations, product design, supplier management, and selected services under the EMS umbrella. By making all of these functions part of the EMS, we are better able to identify the most important areas for focusing our efforts to continually improve environmental performance. For further information on Dell’s ISO certification, see Dell’s environmental report for fiscal year 2003, *Creating a Model for Sustainability*, at www.dell.com/environmentalreport2003.

Core Teams and Extended Teams

Improvements are driven by focus teams who are charged with delivering the results envisaged by the executive committees. Borrowing from terminology used in our Phase Review Process in design, these teams are called core teams. These focus teams, described in the following sections, are the true engine of Dell’s sustainability efforts and members are found in every region and at every level of the organization.

Reporting Core Team

The Reporting Core Team (with representatives from Legal, Corporate Communications, Operations, Environmental Affairs, Finance, Internal Auditing, Marketing, Investor Relations, and more) is responsible for generating this report as well as the numerous interim reports that are provided during the business year. Activities concentrate on improving reporting quality, consistency, verification, transparency, timeliness, accuracy, and relevance to all stakeholder concerns. Dell continues to participate in numerous forums such as the Global Environmental Management Initiative (GEMI) in order to garner additional insight on governance, stakeholder engagement, transparency, sustainable development tools, and more. The team was responsible this year for:

- Successful realignment of this report to coincide with the publication of Dell’s annual financial report, which may be found on Dell’s Investor Relations web site at http://www.dell.com/investor.
- Publication of an interim environmental report last June, which won the Coalition for Environmentally Responsible Economies (CERES) award for environmental reporting.
- Expansion of the environmental report to this sustainability report.

A primary focus for this team going forward in fiscal year 2005 is to drive the successful implementation of a data solution for environmental reporting. This focus is critical to improve both the timeliness and accuracy of our indicators. The challenge for this project involves envisioning and developing an automated Information Technology data collection system to manage Dell’s environmental operations globally. The data streams that this initiative will initially encompass include manufacturing and operations energy consumption, manufacturing waste, and end-of-life product recovery. The intent is to design this system so that additional environmental metrics can be added in the future, such as product energy consumption, transportation emissions, and our products’ material content.

Asset Recovery Core Team

The Asset Recovery Core Team was created to address policy, regulatory, operational, and sustaining issues concerning the recovery of end-of-life electronics. During 2003 the team developed robust product-recovery offerings and processes for Dell on a global basis. The team is comprised of representatives from Services, Public Affairs, Legal and Government Affairs, Environmental Affairs, and Sustainability. The solution and framework for this activity is based on standardizing formal programs that provide low-cost solutions, comply with governmental regulations, and demonstrate social responsibility by proactively addressing environmental concerns. The span of this program covers external customers, recovery and disposal services, suppliers, internal customers, returns from leasing agents, recycling, repair, donations, redeployment, refurbishment, and resale or brokerage of whole systems and scrap. For details and results on recovery, see “Stage 4: Equipment End-of-Life Strategies” on page 47.
Public Affairs Sustainability Team

This global team serves to facilitate the communications between the Dell team and our internal and external stakeholders. The team is responsible for web site content, bimonthly newsletters, internal employee newsletters, management of Dell’s recycling events and grant processes, agency management, stakeholder identification and the prioritization process, and measurement of public perception on areas key to sustainability. The team, which meets biweekly, is comprised primarily of communications specialists throughout Dell’s global organization and is sponsored by the Sustainability and Public Affairs management team.

Sustainability Policy Team

The following diagram, attributed to Novo Nordisk, depicts the process by which Dell converts strategy into results. The Policy Team is given the key strategy as set forth by the Environmental Management and Sustainability Executive Committees. This team then generates the supporting policies, positions, and strategy statements needed to clarify and measure the process by which the actual results will be delivered. The team meets monthly and is comprised of representatives from Corporate Governance, Government Affairs, Public Affairs, Environmental Affairs, Environmental, Health, and Safety, Procurement, and Sustainability. The team is also responsible for executive approval and posting of these strategies, policies, and indicators on Dell’s internal and external web site as appropriate.

Employee Teams

In 2003, employees began to form environmental teams to identify potential environmental improvements. A group of employees based in Austin, Texas, come from a wide variety of job functions, ranging from product engineers to sales managers to manufacturing employees. The team has focused on improvements such as defaulting printer settings to double-sided printing to conserve paper, improving landscaping to reduce water and energy use, and setting up a web site to improve employee communications on the environment. Dell Panama organized a similar team called the Enviro Club in December of 2003. The Panama team has focused on employee education efforts and a campus area clean-up. These are nascent efforts that Dell will continue to encourage and strive to launch similar teams in our other locations around the globe in the coming year.

Privacy: Protection of Customer Information

Dell respects customer privacy around the world by collecting, storing, and using personal information only for specific purposes such as processing purchases, providing service and support, and sharing product, service, and company news with customers.

Dell does not sell personal information. Dell will share information under the following circumstances: with customer consent; if required by law; as necessary to protect Dell, its customers, or the public; or with companies that help Dell fulfill its obligations and then only with those who share Dell’s commitment to protecting customer privacy and data.

For additional information, visit [http://www.dell.com/policy/privacy.htm](http://www.dell.com/policy/privacy.htm).
Stakeholder Engagement

Dell’s continued growth and introduction of new products, services, and markets makes the value of interaction with key stakeholders more valuable than ever. A global team with representatives from Dell’s Government Relations, Environmental Affairs, Environmental, Health and Safety, Public Affairs, Legal, Manufacturing, Procurement, and Services departments is responsible for our process of establishing and managing Dell’s relationships with interested stakeholders. These groups use a variety of engagement models to listen to, inform, and involve key stakeholders in our business development plans.

Evolution

Stakeholders are identified through a variety of activities, particularly through Dell’s participation in global forums and interface with organizations that contact Dell directly. Our engagement process matured in 2004 and expanded to encompass, in addition to environmental advocates, a broader group of stakeholders whose interests include, but are not limited to, workers’ rights, forestry practices, global warming, recycling, and digital rights.

No less than quarterly, Dell’s senior leadership reviews stakeholder input. Opportunities for engagement are analyzed and prioritized to identify impact, risk, and degree of collaboration potential. With this maturing engagement model, the Dell team has increased its presence at conferences by reviewing the role of sustainability and sharing best practices and key learnings with others in forum discussions.

With input from stakeholders, we have significantly enhanced our web site at http://www.dell.com/commitment. New content includes our Supplier Management Principles, Corporate Accountability Statement, and Global Citizenship Principles. A bimonthly environmental newsletter, created as a means of updating this annual report, has increased in scope and readership and has evolved into a sustainability newsletter to reflect these changes.

“As investors in Dell and as concerned citizens, our broad stake in the company’s performance is rooted in financial, social, and environmental interests. We initiated a dialogue with the company in the fall of 2001 to impel action on the mounting problem of electronics waste. Over the past three years we have seen impressive development of the company’s sustainability policies and programs. The 2004 Sustainability Report demonstrates management’s deepening commitment to openness and transparency. It also shows Dell’s willingness to identify and work publicly toward sustainability goals to enhance the company’s business. There is still a long road ahead. We encourage the company to continue listening to stakeholders, committing to improvements, and reporting on specific goals and results.”

As You Sow Foundation, Calvert Group, Ltd., The Dreyfus Premier Third Century Fund, Green Century Capital Management, ISIS Asset Management, Pax World Funds, and Walden Asset Management
Our Stakeholders

The following table provides an updated overview of some of the many stakeholders that Dell has worked with during 2004 regarding our company’s sustainable business activities and priorities. Our decisions have been significantly influenced and enriched as a result of the engagement with these groups. We thank these organizations for their collaborative engagement and their contributions to our efforts.

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples of Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socially Responsible Investment Advocates</td>
<td>Calvert Group, Dreyfus, Green Century Capital Management, ISIS Asset Management, Pax World Funds, Walden Asset Management</td>
</tr>
<tr>
<td>Socially Responsible Investment Influencers</td>
<td>As You Sow, Dow Jones Sustainability, KLD Research and Analytics, Inc., SAM Research</td>
</tr>
<tr>
<td>Customers</td>
<td>Global: Consumer, Business, Public</td>
</tr>
<tr>
<td>Trade Associations</td>
<td>Asia: JEITA 3R Committee, Canad.; ITAC</td>
</tr>
<tr>
<td>Coalitions</td>
<td>Japan Container and Recycling Association, Canad.: EPS Canada Coalition, Europe: NMC, World Business Council for Sustainable Development</td>
</tr>
<tr>
<td>Governmental Organizations</td>
<td>EPA, U.K. DTI, Legislators, Ministry of Economy, Trade, and Industry</td>
</tr>
<tr>
<td>Authorizing Organizations</td>
<td>Asia: ME, Europe: TCO, UBA, U.S.: EPA, OSHA</td>
</tr>
<tr>
<td>Nongovernmental Organizations</td>
<td>CAFOD, Computer Take Back Campaign, Greenpeace, GreenBlue</td>
</tr>
<tr>
<td>Suppliers</td>
<td>Global Direct Material, Recycling and Other Services</td>
</tr>
</tbody>
</table>

NOTE: See page 61 for a list of acronyms and abbreviations.
Globalization

Global Citizenship

Dell’s global citizenship principles guide the company as it globalizes its operations, enters new markets, and expands its global employment and supplier base. These principles ensure that Dell’s growth is beneficial for current and prospective employees and for our new communities and neighbors.

Our globalization principles are based on our corporate values and policies regarding social and environmental stewardship and draw from the Universal Declaration of Human Rights and the United Nations Global Compact.

A Global Charge

Dell is committed to using its unique direct business model to make technology more affordable and accessible to people and institutions around the world so that they can take advantage of the tremendous economic and social benefits of more pervasive technology. To do this, Dell is:

- Reaching out to customers around the world, using its customer direct model to bring affordable technology to new and emerging markets
- Growing its global employment to tap diverse ideas and skills, increase its understanding of global customer needs, and bring desirable technology jobs to developing economies
- Developing a global supplier network to improve the performance and lower the cost of its systems

Dell’s direct way of working delivers industry-leading value to customers. It is also based on distinct company values, officially known as the Soul of Dell, that acknowledge the company’s responsibilities to its:

- Employees — Dell treats all employees with dignity and respect and provides opportunities for all employees to succeed.
- Communities — Dell strives to be a good neighbor and a responsible community and environmental steward.
- Global suppliers and their employees — Dell acts ethically and requires responsible employment and environmental practices from its suppliers.

Updates to our globalization principles may be found at [http://www.dell.com/globalcitizenship](http://www.dell.com/globalcitizenship), while excerpts from the employment and human rights section are highlighted in the following sections.

Employment

Dell will grow its business by developing the capabilities of our teams around the world and tapping global talent for diverse ideas. Dell will respect the rights of all employees, treating them with dignity and respect, and requiring that our suppliers do the same. Dell will be a competitive employer by providing:

- Meaningful work in a safe, secure, and health-conscious environment
- Quality jobs with competitive benefits
- Opportunities for training and professional development that are open to all
- Rewards based on performance, results, and contribution
In new locations, Dell will work with local governments to provide jobs and create meaningful employment opportunities. Dell will:

- Create new opportunities for qualified individuals who are unemployed or underemployed.
- Provide on-the-job training annually along with other professional growth opportunities.
- Create a “meritocracy” in every location, where the best performers do better.
- Develop a pipeline of knowledgeable workers.
- Address the “digital divide” through community-based education for youth.

To minimize the disruption for Dell employees whose jobs may be changed, relocated, or eliminated as Dell builds a global presence, the company will:

- Provide fair notification regarding employment changes.
- Strive to retain and place displaced employees with good performance into new positions elsewhere in the company.
- Work to ease the transition from Dell to other employment for those employees who want to or need to seek careers and employment outside of Dell.

**Human Rights**

Dell’s respect for individuals begins with respect for human rights. Dell values the diversity of its global workforce. The company’s approach to diversity is defined by a recognition of both similarities and differences, inclusiveness, respect, and a company culture that allows each individual to contribute to his or her fullest potential. Dell adheres to laws regulating wages, hours, and working conditions, and requires by contract that all partners and suppliers also comply with all applicable laws and regulations where they conduct business. In addition, Dell’s partners and suppliers are expected to embrace high standards of ethical behavior and treat their employees fairly and with dignity and respect in accordance with Dell’s Code of Conduct and Supplier Principles Policy available online at http://www.dell.com/supplierprinciples. This site also provides the international standards used as guidance in the development of these policies and processes.
Environmental Responsibility
ENVIRONMENTAL RESPONSIBILITY

A Time of Transition

Dell’s environmental policy, management systems, and programs have continued to expand and improve over the last decade. Managing the stages of the total product life cycle is an ongoing challenge as legislative and stakeholder interests continue to evolve, and our reporting is not only growing in the environmental arena but from the sustainability perspective in general.

The following sections describe new programs, metrics, and goals that will reflect a time of transition in our environmental reporting on our product design, operations, customer relations, and product end-of-life initiatives.

The following diagram depicts the continuum of Dell’s major environmental accomplishments over the last 12 years. Key accomplishments in the continuum show page numbers to indicate where further information about the accomplishment can be found in this report. For additional information, visit http://www.dell.com/environment.

A Continuum of Environmental Improvement
Dell’s Environmental Policy

Achieve an Environmentally Focused Culture
Dell’s vision is to create a company culture where environmental excellence is second nature. Our mission is to fully integrate environmental stewardship into the business of providing quality products, best-in-class services, and the best customer experience at the best value. The following environmental policy objectives have been established to achieve our vision and mission.

Design Products With the Environment in Mind
• Design products with a focus on:
  – Safe operation throughout the entire product life cycle
  – Extending product life span
  – Reducing energy consumption
  – Avoiding environmentally sensitive materials
  – Promoting dematerialization
  – Using parts that are capable of being recycled at the highest level
• Set expectations of environmental excellence throughout Dell’s supply chain.

Prevent Waste and Pollution
• Operate Dell’s facilities to minimize harmful impacts on the environment.
• Place a high priority on waste minimization, recycling and reuse programs, and pollution prevention.

Continually Improve Our Performance
• Use an Environmental Management System approach to establish goals, implement programs, monitor technology and environmental management practices, evaluate progress, and continually improve environmental performance.
• Foster a culture of environmental responsibility among employees and management.

Demonstrate Responsibility to Stakeholders
• Act in an environmentally responsible manner through sustainable practices designed to ensure the health and safety of Dell’s employees, neighbors, and the environment.
• Periodically communicate company progress to stakeholders.
• Engage stakeholders to improve products and processes.

Comply With the Law
• Conduct business with integrity and dedicated observance of environmental laws and regulations, and strive for leadership through programs that surpass compliance.

Michael S. Dell
Chairman of the Board
Chief Executive Officer

Kevin B. Rollins
President
Chief Operating Officer
Managing the Stages of the Total Product Life Cycle

Dell’s environmental policy sustains a company culture that targets improvements at every phase of the product life cycle, from initial concept and design through manufacturing, customer ownership, and end-of-life reuse and recycling solutions. The resulting Dell business practices help ensure that products and processes protect the global environment and maximize conservation and recovery of resources.

STAGE 1
- The Total Product Life Cycle
- Design for Environment (DfE)
  - Product Energy Efficiency
  - Dematerialization
- Restricted Materials Program
- Compliance with RoHS Restrictions
- Integration of EMS in Product Development
- Supplier Management Program
  - Labor Practices
  - Product Integration

STAGE 2
- Environmental Health and Safety
- Climate Change
  - Product Energy Programs
  - Facilities Energy Programs
  - Logistics Programs
- Waste Reduction and Recycling
- Workplace Health and Safety
  - Workplace Safety Ergonomics

STAGE 3
- Customer Relationships
- Environmental Education
- Packaging
- Reducing Paper Usage

STAGE 4
- No Computer Goes to Waste
  - Dell Donations
  - Printer Consumables
  - Product Recovery Events
- Institutional Reuse and Recycling
  - International Programs
  - Looking to the Future
STAGE 1: PRODUCT CONCEPT AND DESIGN

The Total Product Life Cycle

Concerns over resource consumption and sustainability have resulted in societal responses in the form of public policy and consumer actions that are directed at product-related environmental aspects. Within the electronics industry, a number of legislative and market drivers are focused on reducing the environmental impacts of how products are designed, built, used, and managed at end-of-life. The global marketplace is increasingly demanding product improvements beneficial to the environment and environmental information related to product life cycle.

To meet this challenge, Dell has established a Design for Environment (DfE) Program to integrate environmental attributes into each aspect of the product life cycle, from supplier management during component manufacturing to end-of-life solutions. Going forward, Dell will continue to drive improvements with respect to product environmental performance, as well as work to establish measurable and understandable criteria for assessing and demonstrating the environmental performance of electronic products. This “life-cycle thinking” approach is consistent with both the legislative and market-driven integrated-product policy philosophy that is emerging globally to address the fundamental objectives of sustainable development.

Design for Environment (DfE)

Stakeholder expectations for electronic products have expanded beyond basic performance considerations. While the concept of environmental quality has many connotations, most will agree that environmentally sustainable products have attributes that minimize impacts to human health or the environment and/or facilitate reclamation or refurbishment when the product has reached the end of its useful life.

Early environmental legislation was focused primarily on manufacturing processes, emphasizing resource conservation and discharge restrictions, but over the last ten years we have begun to see the emergence of requirements targeting the product itself. Even more recently, the definition of environmental quality has begun to expand to include considerations for sustainable business practices. As part of this expanded set of expectations, Dell adheres to and holds its suppliers accountable to internationally recognized standards for the environment, health, and safety.

Reducing the environmental impact of Dell products begins at the design stage. To achieve this goal, the Dell Environmental Affairs team works closely with product design teams and suppliers to make effective decisions that will have positive environmental results throughout the equipment’s life cycle. Dell recognizes the critical window of opportunity during the early design stages of a product when even small considerations can have a large effect on the environmental impact of a product throughout its life cycle. The Dell DfE Program uses specifications, contracts, and the Phase Review Process as instruments to drive environmentally sound principles into product design. This approach works to achieve higher product quality, improved customer satisfaction, and greater efficiencies in manufacturing, service, logistics, and product asset recovery. Dell’s DfE Programs aim to conserve product energy consumption, avoid the use of environmentally sensitive substances, reduce or eliminate materials for disposal, prolong product life span, and provide effective and convenient equipment recovery solutions.

Integration of Environmental Management Systems in Product Development

In 2003, Dell’s Environmental Management System (EMS) infrastructure was broadened, adding to the over-all expansion of governance mechanisms for the Corporation. We have undertaken the initiative to expand our ISO 14001 EMS methodology (beyond our certified manufacturing facilities) to other functional areas of the business, including the global platform development and product design functions and their related testing laboratories.

In creating an EMS within product development, subject matter experts from Dell’s development departments identified opportunities to control and improve performance on environmental design attributes of our products and control processes. This approach has allowed Dell to formalize the method by which we ensure compliance with legal and voluntary “green product” standards requirements around the world, and it has given us a systematic way of setting goals for continual improvement. (See “Restricted Materials Program Goals” on page 30 for a listing of product design goals planned for fiscal year 2005.)
Product Energy Efficiency

ENERGY STAR® Program

The ENERGY STAR Program is a voluntary, joint effort between the U.S. Environmental Protection Agency (EPA) and manufacturers to reduce power consumption of office equipment. The program allows manufacturers to partner with the EPA to design and certify products that meet or exceed federal government guidelines for low power consumption. Dell has actively participated in this program since 1993.

Dell introduced new desktop computer, workstation, portable computer, monitor, and printer models in 2003 that meet the EPA requirements for ENERGY STAR qualification. These requirements result in Dell products that consume less energy, which effectively reduces the expenditures customers make for electricity. Dell’s decision to design energy-efficient products also reduces the amount of environmentally sensitive materials produced during power generation.

Goal: Default (100 percent) ENERGY STAR-enabling features on OptiPlex™ desktop computers worldwide.

Status: Worldwide implementation of ENERGY STAR standards on all OptiPlex desktop computers launched in 2003, as well as those planned for launch in 2004.

The impact of reducing energy consumption of our products is enormous. The energy savings associated with defaulting to ENERGY STAR enablement globally (just on our OptiPlex GX270 and SX270 systems alone) is estimated to reduce carbon dioxide (CO2) emissions by over 700,000 tons per year. The U.S. EPA states, “In 2002 alone Americans, with the help of ENERGY STAR, saved enough energy to power 15 million homes and reduce air pollution equivalent to eliminating emissions from 15 million cars.”
Also, the EPA estimates that the Million Monitor Drive will save 200 million KWh in 2003 and prevent the release of more than 150,000 tons of CO2 emissions.

Dell has received a certificate of recognition from the EPA for our participation in this program and for helping the EPA get one step closer to attaining their goals.

The OptiPlex GX270 and SX270 desktop computers support standby mode, an industry standard for a "sleep" state designed to enable "instant on" capability in computers that have been idle but not turned off. One sleep state known as suspend mode typically consumes less than 5 watts of power. This energy savings is 67 percent better than the ENERGY STAR standards, which require power consumption of no more than 15 watts. In addition, Dell includes power-factor-correcting power supplies that reduce overall system power consumption. Dell also reduced the amount of time a system sits idle before entering a low-power mode to 15 minutes instead of the 30 minutes currently required by the EPA for ENERGY STAR qualification.

By building computers according to customer specifications, Dell’s unique build-to-order model increases efficiency and eliminates waste, while still maintaining ENERGY STAR qualifications. To ensure that we provide our customers with superior energy-efficient products, Dell works with peripherals and software manufacturers to ensure that their devices (see the following list for examples) support the required low-power modes to qualify for ENERGY STAR certification:

- chassis
- processor
- memory
- operating system
- hard drives
- removable media (CD-ROM, DVD, CD-RW)
- video cards
- audio devices
- modems
- keyboard
- monitors
- mouse
- speakers
- serial port adapters
- floppy drives
- USB memory keys
- storage devices and media
- zip disks
- network adapters
- wireless adapters
Employee/Shareholder Education

Dell is committed to educating employees on the environmentally responsible management of energy. Environmental updates are included in Dell’s internal newsletter, Dell News Network (DNN), on a monthly basis. The Environmental Affairs group at Dell participated in a Dell Finance Employee Education Day by setting up a booth with a focus on ENERGY STAR and recycling responsibly. The team spoke with over 500 finance employees about minimizing energy consumption, displaying several ENERGY STAR promotional materials at the booth. Also, Dell’s Environmental Affairs organization has had a booth at our annual shareholder’s meeting for the last two years where ENERGY STAR information (along with many other product program highlights) was featured.

Dematerialization/Immaterialization

Dell continues to evaluate products and services in light of our dematerialization and immaterialization program. This concept encourages replacing physical products with digital counterparts, thereby eliminating the need for some materials altogether. For example, replacing a system’s user’s guide with a compact disc (CD) is dematerialization. Allowing the customer to download the guide from the Dell web site is immaterialization. We are currently evaluating our customer’s preferences for certain product features to determine which immaterialization initiatives should be supported.

Reducing the volume of materials in a product without diminishing the product’s function is a key environmental initiative for Dell. In many cases, material reduction can actually enhance the product’s functionality.

Reducing the volume of materials that must eventually be sent to landfills not only reduces the impact of Dell’s products on the environment, but also results in a reduction of product size, weight, and cost, all of which enhance customer experience. Including dematerialization and immaterialization as design parameters benefits Dell’s customers as well as the environment.

Displays

Part of Dell’s commitment to conserve natural resources involves the development of environmentally preferable technologies that offer our customers value in product performance and environmental performance.

Recently, Dell launched its first line of liquid-crystal display televisions (LCD TVs). These include 17-, 23-, and 30-inch models. For comparison, a standard 24-inch TV can weigh up to 37 kilograms (kg), while the 23-inch LCD TV weighs only 13.8 kg (depending upon options installed). This differential indicates a large savings in the materials used to manufacture Dell’s LCD TV products. Additionally, these products can either be used as televisions or computer monitors and with picture-in-picture capabilities, you can watch TV while you work on your desktop or portable computer. Dell’s LCD TVs are also equipped with integrated speakers (detachable in the case of the 30-inch model), which eliminate the need for separate audio components.

Another example of Dell’s commitment to conserve resources is the transition from cathode-ray tube (CRT) monitors to the liquid-crystal display (LCD) technology used in flat-panel displays. Increasingly, consumers and businesses are retiring their large, heavy CRTs and replacing them with lightweight, space-saving flat-panel displays. In addition to the significant reduction in lead content, as described in the following section, "Lead Reductions in Displays," flat-panel displays use a smaller volume of total materials, consume less energy, and have a longer life span than comparable CRT monitors, all resulting in lower total-cost-of-ownership for the consumer (see the chart at left).

Lead Reductions in Displays

A typical CRT monitor can contain 2 pounds of lead, whereas flat-panel displays contain only a few grams of lead in the solder. While lead in CRT monitors will be allowed under the European Union’s (E.U.’s) Restrictions on Hazardous Substances (RoHS) directive, Dell encourages customers to purchase flat-panel displays so that they are purchasing the product with the least amount of lead. Note also that CRT monitors consume approximately 2.2 times more energy than flat-panel displays over their life span.

Between 2000–2002 (a time of rapid growth in flat-panel display sales), Dell experienced a significant reduction in the amount of lead shipped in displays worldwide. This reduction was due primarily to an increase in sales of environmentally preferable flat-panel displays. Dell’s goal for 2003–2005, at a minimum, is to maintain a 20 percent
reduction in the amount of lead shipped in displays when compared to 2002 levels. Dell aims to achieve this goal by continuing to offer incentives for customers to purchase flat-panel displays, including reduced costs, improved performance, and lower total-cost-of-ownership.

- Lower energy costs — Flat-panel displays use less energy, and they emit significantly less heat than CRTs with equivalent screen sizes. Actual savings vary but, as a result, flat-panel monitors are associated with lower electricity and cooling costs. Some flat panels can consume as much as 54 percent less energy than CRTs of the equivalent screen size. A comparison of 17-, 19-, and 21-inch flat panels (to the equivalent screen-size CRTs) reflects an average of approximately 40 percent less energy consumed.
- Smaller size and lower weight — A flat-panel display requires less space, incurs lower transportation/shipping demands, and is easier to move.
- Longer life — The average life of a flat-panel display is approximately 6 years, compared to 4 years for a CRT.

Flat-panel displays and portable computer LCDs contain cold cathode fluorescent lamps to efficiently illuminate the display panel. A slight amount of mercury (a few milligrams per bulb) is filled in the glass tube coated with phosphor (fluorescent materials), which are easily removable upon recycling. Although considerable research has been expended towards eliminating mercury from fluorescent lighting products, designs for mercury-free lamps have failed to reach the energy efficiency and performance levels of existing products and a significant technical challenge remains. Dell is working with industry associations and suppliers to evaluate mercury-free backlight technologies such as light-emitting diodes (LEDs), however current LED technologies consume much more energy than fluorescent lamps and do not meet performance requirements.

Chassis

The next generation of desktop computer chassis is being developed to the smallest possible form factors that meet the feature requirements. Smaller sizes allow for use of less metal, plastic, and packaging materials. The next generation of chassis will meet all environmental requirements concerning restricted materials. In addition, products utilizing the next generation of chassis will be lead free (as specified by the E.U.’s RoHS directive). By the end of 2004, desktop computer, portable computer, and server chassis plastic parts will be free of halogenated flame retardants.

Last year, Dell launched its Ultra Small Form Factor (USFF) chassis, which measures approximately 10 x 10 x 3½ inches. This compact desktop computer design has the functionality of a full-sized desktop computer, but it is approximately 80 percent smaller (by volume) than the small mini-tower design. The space, weight, and material savings of the USFF chassis are a prime example of how dematerialization efforts affect product design without sacrificing functionality.

Printers

Dell’s dematerialization/immaterialization initiative also relates to its printer product line. Our line of printers includes “all-in-one” or “multifunction” inkjet printers: A920, A940, and A960. These printers have the ability to copy, print, and scan and therefore reduce the need for separate-function devices, dramatically reducing the volume of materials needed to meet those essential business requirements. Dell’s newest “multifunction” printer, the A960, also faxes.

In 2003, Dell introduced eight printers into its product line: three multifunction printers, one inkjet printer, and four laser printers. Dell designed these products using its Design for Environment (DfE) specifications and in accordance with its Restricted Materials Program. As part of a holistic design and development process, Dell conceptualized and developed a comprehensive recycling plan for printer hardware and consumables (ink and toner cartridges). This program was launched with Dell’s newest recycling offerings and included a redesigned web site with enhanced functionality, as well as a free recycling program with the purchase of a printer. Dell will build on this new program and continue to develop and market premier products that incorporate “best-in-class” end-of-life alternatives.
Restricted Materials Program

Over the past several years, increased attention has been placed on the environmental impact of electronic products, particularly the use of materials that may have an adverse impact on the environment at product end-of-life. Materials such as heavy metals and plastics containing halogenated flame retardants can pose potential environmental hazards if not managed properly during the manufacturing process or on disposal at product end-of-life.

To minimize the use of these environmentally sensitive materials in its products, Dell has integrated a robust Restricted Materials Program into its product design process and across its supply chain. The emphasis of Dell’s Restricted Materials Program is not only compliance with legal requirements such as the E.U.’s Restrictions on Hazardous Substances (RoHS) directive, but also meeting customer requirements to eliminate or minimize the use of certain substances in its products and to design products that are easily recyclable. Currently, more than 50 substances and compounds (see the following list) are restricted for use in the manufacture of Dell products and in the finished products themselves.

Restricted Materials (in Certain Applications)

- Asbestos and its compounds
- Azo dyes/colorants
- Cadmium and its compounds
- Chlorofluorocarbons (CFCs)
- Chloroparaffins, short-chained (10-13 carbon chain)
- Chromium VI and its compounds
- Halogenated flame retardants in plastics, including polybrominated biphenyls (PBBs) and their ethers/oxides (PBDEs and PBBEs)
- Hydrochlorofluorocarbons (HCFCs)
- Lead and its compounds
- Mercury and its compounds
- Nickel and its compounds
- Polychlorinated biphenyls (PCBs) and terphenyls (PCPs)
- Polyvinyl chloride (PVC)

Restricted Materials Program Goals

The following table describes Dell’s program goals for restricted materials.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Status</th>
</tr>
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<tbody>
<tr>
<td>Eliminate lead in external cable insulation by May 2004. Eliminate all other RoHS substances in 2006.</td>
<td>On schedule for eliminating lead in external cable insulation. RoHS-specified restrictions for PBB/PBDE and mercury have been met. Lead, cadmium, and hexavalent chromium restrictions will be met before the required implementation of RoHS in 2006.</td>
</tr>
<tr>
<td>Reduce the amount of lead shipped per display by 20 percent over 3 years. Reduction is based on a rolling average of lead shipped in all displays from 2003–2005 (using the amount of lead shipped per display in 2002 as a baseline).</td>
<td>Exceeded goal by 50 percent in 2003 when compared with 2002 levels of lead shipped per display. In 2003, the use of approximately 15 million pounds of lead was avoided in Dell display shipments due to customer preference for flat-panel displays versus traditional CRT monitors. We significantly reduced lead shipped per display from 2000–2002. The goal for 2004–2005 is to continue to reduce lead shipped per display by 20 percent based on 2002 levels. The new goal for 2003–2005 is a 20 percent reduction over 3 years.</td>
</tr>
<tr>
<td>Eliminate halogenated flame retardants in desktop computer, portable computer, and server chassis plastic parts by year-end 2004.</td>
<td>Restrictions began in 2002. We eliminated halogenated flame retardants in desktop computer, portable computer, and server chassis plastic parts weighing greater than 25 grams. Dell is on schedule to eliminate halogenated flame retardants in all chassis plastic parts (regardless of size) by year-end 2004.</td>
</tr>
</tbody>
</table>
Compliance With RoHS Restrictions by 2006

Global concerns over the human health and environmental risks associated with the use of certain environmentally sensitive materials in electronic products has led the E.U. to enact the Restrictions on Hazardous Substances (RoHS) directive, which is designed to restrict the use of cadmium, hexavalent chromium, lead, mercury, and certain halogenated flame retardants (PBBs and PBDEs) in electronic products. This directive will be implemented in the E.U. in July 2006, and similar legislation is also pending in China and various states in the U.S. Dell understands the environmental risks associated with the substances covered by the RoHS directive and is committed to reducing the use of these as well as other environmentally sensitive substances in our products. Dell’s goal is to comply with the RoHS directive requirements prior to the July 2006 E.U. implementation deadline and to continue to incorporate these changes over our global product lines. Through our integrated Restricted Materials Program, Dell has already prohibited the use of hexavalent chromium, PBBs, PBDEs, and cadmium, and has met public goals to restrict the use of lead, mercury, and other nonregulated halogenated flame retardants in our products, in advance of legal requirements.

Delivering lead-free products as defined by the applicable regulations is a significant challenge for the electronics industry and involves a complex set of technical attributes that have yet to be standardized. Within this environment, Dell is actively working with suppliers and industry associations to develop and offer reliable, cost-efficient lead-free solutions. Dell is currently participating in a number of lead-free process development programs with NEMI, Computer Aided Life Cycle Engineering Electronic Products and System Center (CALCE), and High-Density Packaging User Group (HDPUG). With respect to defining RoHS requirements such as threshold values, exemptions, and compliance verification methodologies, Dell is actively engaged in the European Information and Communications Technology Industry Association (EICTA), the American Electronics Association (AeA), and the United States Information Technology Office (USITO).

Dell will continue to work to eliminate and/or reduce the use of environmentally sensitive materials in our products, as well as continue to evaluate the technical, environmental, health, and safety impacts of lead-free electronic materials.

Supplier and Customer Surveys

An initial survey (now complete) of Dell’s supply-chain partners was conducted by Dell’s Lead-Free Core Team to understand supplier readiness to provide the necessary commodities and process controls that will allow Dell to execute a lead-free solution in a timely manner.

A second, more detailed survey was distributed to all Dell suppliers in February 2004. This survey is intended to help assess the compatibility of different supplier approaches to lead-free solutions and to further formalize Dell’s timeline for lead-free implementation. All suppliers must develop plans, logistics, and controls to ensure that their yield and reliability equals present capabilities well before the deadline on July 1, 2006.

A marketing segment survey was conducted in 2003 to help determine which customer segments are now or soon will be ready to transition to lead-free solutions, and which segments prefer to wait until the new technology has a more proven track record. Dell’s lead-free product roadmap is closely aligned with customer expectations. These surveys assist Dell’s product development extended teams to design systems that will use lead-free components.

Supplier Qualification Update and Roadmap

Through the implementation of engineering specifications, Dell has established a robust lead-free qualification process to ensure that components and assembly-level products meet stringent reliability and quality requirements. Data such as printed-circuit-board cross sections, solder composition and heat resistance, moisture sensitivity, and factory and field quality trend charts are all evaluated to ensure that lead-free solutions meet or exceed previous non-lead-free product requirements. Suppliers also provide Dell with ongoing sub-tier surveys and audits as well as information on how their process management includes RoHS readiness elements such as testing to ensure that incoming materials are RoHS-compliant. Suppliers generate new part numbers for products converting to lead-free, labeling, and marking requirements.
Engagement in Global Standards

Dell is actively engaged in several industry consortia to develop solutions for lead-free products, including NEMI, HDPUG, EICTA, and AeA. Dell chairs a NEMI group that is focused on RoHS transition issues such as component availability, materials marking, supplier materials declarations, and lead-free assembly processes. Dell has also been working with HDPUG to develop a set of universal lead-free guidelines to assist the industry in transitioning to lead-free products. From a legislative standpoint, Dell has been engaged with EICTA and AeA to understand and influence key implementation aspects of RoHS (in Europe, China, and California) including thresholds, definitions, exemptions, and enforcement standards. Through the development of global standards, Dell believes we can more effectively transition to lead-free solutions to meet the needs of our customers.

Elimination of Halogenated Flame Retardants

Position Statement

Flame-retarded plastics are occasionally needed to meet strict fire safety codes. Dell is committed to reducing the use of brominated flame retardants, and other environmentally sensitive materials, in our products.

We have already prohibited the use of brominated flame retardants (PBB and PBDE) listed in the RoHS directive in all our products, worldwide, well in advance of the July 2006 RoHS deadline. In fact, our publicly stated goal is to eliminate (all other) brominated flame retardants in desktop computer, portable computer, and server chassis plastic parts by year-end 2004.

We avoid brominated flame retardants by using plastics that can be flame-rated with phosphorus-based flame retardants and by using design strategies that reduce the need to use flame-rated plastics at all.

Some plastic types cannot be flame-rated with anything other than bromine because reliable alternative technology does not currently exist. As such, we try to avoid these types of plastics when we need flame retardancy. Dell does not permit the use of any flame retardant that is restricted by law.

Dell uses certain flame retardants to help ensure that its products meet stringent global fire-safety standards. Although fires are rare in computer products, flame retardants help prevent the spread or delay the propagation of fire should one occur. Because of this important safety benefit, the electronics industry continues to use flame retardants in its products. A particular class of flame retardants, halogenated flame retardants, has received negative publicity over the past decade, particularly in Japan and Europe, due to concerns over environmental and toxicological risks posed by these compounds on disposal and/or incineration. While no consensus exists within the scientific or regulatory community that all halogenated flame retardants be eliminated from use in electronic products, Dell has taken the initiative to eliminate halogenated flame retardants in portable computer, desktop computer, and server chassis plastic parts weighing more than 25 grams. In addition to this restriction, Dell continues to prohibit the use of polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) in its products. Since 1998, Dell has offered TCO- and Blue Angel-certified systems that do not contain halogenated flame retardants in plastic parts weighing more than 25 grams.
Recycled Plastics

By exploring new environmentally efficient designs such as the use of recycled-content plastics, Dell continues to develop sustainable products for the marketplace. While no single plastic resin has proved to meet all of Dell’s stringent mechanical, safety, and environmental requirements, Dell is actively working with resin suppliers to increase the usage of post-consumer recycled-content plastics. Currently, Dell uses up to 25 percent post-industrial recycled plastics in desktop computer, portable computer, and server chassis plastics.

Also in 2003, Dell participated in a comprehensive technical review of the plastics used in electronics through the Federal Electronics Challenge (FEC) initiative. The activities of the review team (known as the Plastics Task Force) were facilitated by personnel from Tufts University. The FEC, sponsored by several federal organizations, is primarily focused on helping federal agencies procure greener products and manage assets in an environmentally sound manner.

Supplier Management Programs

An inherent part of Dell’s business model is to manufacture most of its components and many of its products through partnerships with global suppliers. An important piece of this relationship is not only ensuring that suppliers meet Dell’s environmental requirements, but also encouraging suppliers to integrate environmental, health, safety, and labor management systems into their own operations. Key initiatives include Dell’s Restricted Materials Program and Dell’s requirement of our suppliers to gain International Organization of Standardization (ISO) 14001 and Occupational Health and Safety Assessment Series (OHSAS) 18001 certification.

In 2003, Dell held a series of web telecasts with suppliers to discuss environmental, health, and safety management, as well as to provide an opportunity for shared knowledge of “best-in-class” performance. Over 230 supplier attendees participated from across 60 strategic Dell suppliers. The primary focus of the summits was on restricted materials requirements, ISO and OHSAS programs, energy-efficient product designs, and product recycling strategies. Dell plans to hold additional environmental summits in Austin and at other Dell campuses in the future.

Supplier Restricted Materials Program

Since 2002, Dell has intensified and formalized our Restricted Materials Program by directing its suppliers to restrict and/or eliminate certain environmentally sensitive materials in the components and products supplied to Dell. This program includes Tier 1 suppliers who contract directly with Dell, and regionally sourced suppliers who provide products and services to Tier 1 suppliers. To date, over 140 suppliers have engaged in this program. Tier 1 and regional suppliers represent approximately 90 percent of Dell’s product procurement expenditures.

Dell requires suppliers to provide restricted materials “declarations” for each new part supplied to Dell, indicating compliance with Dell’s Restricted Materials Program specifications. This declaration process takes place during supplier qualification, and adherence to Dell’s Restricted Materials Program specification is a contractual requirement for doing business with Dell. A major initiative for 2004 will be to automate the supplier declaration process whereby suppliers will enter material content data into a secure, searchable database. This database will help ensure that restricted materials compliance is communicated efficiently to Dell and will facilitate global materials reporting requirements. In instances where restricted materials are found in the components supplied to Dell, Dell takes corrective action to eliminate these substances.
ISO 14001/OHSAS 18001 Program

In January 2003, Dell surveyed its Tier 1 suppliers to identify trends in ISO 14001 and OHSAS 18001 certification across its global supply chain. The ISO 14001 program provides the primary international standard for Environmental Management Systems, and the OHSAS 18001 program provides the standard for occupational health and safety management systems. The results of this survey, which included more than 200 manufacturing sites, are depicted in the following figures.

The results of Dell’s survey indicates that many of our suppliers have already attained ISO 14001 certification; however, a smaller number have attained OHSAS 18001 certification. Since this survey was conducted, Dell has added an ISO 14001/OHSAS 18001 requirement to the supplier scorecard, with the goal that all Tier 1 suppliers become certified for both standards in 2004. Through the third quarter of fiscal year 2004, an increasing number of suppliers have attained both ISO 14001 and OHSAS 18001 certification. All Tier 1 suppliers are either already ISO 14001-certified or have plans to become certified by the end of 2004. Significant progress has been made by Tier 1 suppliers on attaining OHSAS 18001 certification, with approximately 90 percent of suppliers either already OHSAS 18001-certified or planning to become certified by the end of fiscal year 2005. Dell is working with those suppliers who do not currently plan to attain certification to understand their challenges with obtaining certification and to ensure that certification requirements are met in the future.
**Labor Practices**

Dell has a history of leveraging industry standards to ensure a common "language" around business practices. In the mid-1990s, the ISO quality specifications were adopted and were strengthened further with the addition of specific performance indicators for our supply base. In 2002, the environmental and occupational health and safety standards were adopted as a means of communication with our supply base on these broader topics. Late in 2003 work was begun on (a) developing performance indicators to measure the effectiveness of ISO 14001/OHSAS 18001 standards in practice and (b) to understand how best to communicate the importance of high standards of work and behavior.

There is no broadly accepted labor practices standard at this time, though many groups are working diligently to develop these important guidelines. The area of ensuring a high standard of labor practices throughout our supply chain is one of our key focus areas for 2004. To this end, Supplier Principles have been developed that speak to a number of key areas such as child labor, minimum wage, safe working environments, and so on. Visit our web site, [http://www.dell.com/supplierprinciples](http://www.dell.com/supplierprinciples), for updated information on our efforts.

**Product Integration**

Dell’s product integration strategies optimize manufacturing by matching the work performed in any Dell manufacturing site around the world to the computer configuration choices made by customers on Dell’s web site, [http://www.dell.com](http://www.dell.com). Dell is driving toward higher levels of product integration by finding the most efficient path to the customer without adding manufacturing infrastructure as we grow our business.

We determined that we could combine parts that had one-to-one relationships in order to achieve higher levels of integration in the components coming into our factories. One example where one component requires the other is the 1:1 relationship between a system board and a chassis in which only one system board and one chassis is used in the platform and where supply chain alignment exists so that the system board manufacturer and chassis manufacturer are co-located. These co-location and component integration relationships help realize true waste reduction in component manufacturing and in their delivery to Dell manufacturing sites.

Dell expects to realize many benefits from higher levels of product integration, including the following environmental benefits:

- **Reduced waste** — We expect to significantly reduce waste throughout the order fulfillment chain (supplier to customer). Product integration helps us improve inbound logistics: less freight and less packaging reduce air emissions and disposal burdens.

- **Increased factory capacity** — Faster throughput, fewer parts, and less rework lower overall environmental impact from an energy consumption standpoint. The time it takes to assemble a computer has been reduced, process-induced damage has been reduced, and the number of components handled in the assembly process has been reduced.

- **Extended-facility life span** — Reducing build time and material to be received increases the capacity of our existing factories and helps to extend their life span. This extended life span significantly reduces the environmental effects of erecting new manufacturing facilities.

At Dell, product integration is being implemented with great momentum. The year 2002 brought a major increase in this activity, and our goal is to increase integration levels in the desktop-computer line of business during calendar year 2004. We also plan to pursue integration opportunities in the workstation and server lines of business in the coming years. Product integration is yet another means by which Dell will continue to improve our environmental performance and reduce the overall impact of our business on the environment.
STAGE 2: MANUFACTURING AND OPERATIONS

Environmental, Health, and Safety Programs

Dell’s facilities around the globe maintain a strong focus on minimizing our business operations’ impact on the environment while providing a safe workplace for our employees. As in everything we do at Dell, we strive for continuous improvement, utilizing our environmental and health and safety management systems as a tool to drive successes.

Environmental Programs

Dell operates a number of different types of regional facilities in the Americas, Europe, Middle East, Africa, and Asia. Operations in each of these facilities have been evaluated for environmental impacts, and programs have been created or enhanced to manage—and reduce—these impacts.

Manufacturing and Fulfillment Operations

Dell’s manufacturing and fulfillment centers, by their nature, have a fairly low impact on the environment. Computer assembly is mainly a physical process and therefore does not use a significant amount of process water or create significant air polluting emissions. The major opportunities for reducing manufacturing-related environmental impacts are in the areas of:

- Resource use — Electricity used by assembly/conveyance equipment and related systems, product burn-in, and customization
- Waste materials — Packaging, dunnage, and pallets from incoming parts and supplies; small amounts of lubricants and cleaners used mainly in maintenance; processing for disposal of computer systems and components that are no longer usable
- Emissions — Air emissions from carriers’ vehicles arriving or leaving the facility

Laboratories

Dell operates a number of sophisticated product test laboratories, which include equipment for physical testing, environmental testing (temperature extremes and other conditions), product reliability, and packaging testing. Such facilities may generate small amounts of wastes (similar to those generated in manufacturing facilities) and utilize varying amounts of electricity to operate the required test equipment.

Building Operation and Maintenance

Each facility that Dell operates, regardless of the type of operations housed—manufacturing, labs, or offices—requires an environmental investment. The most significant environmental impacts in building operations result from:

- Resource use — Electricity and gas used for air conditioning (heating and cooling), water heating, lighting, office equipment, food services, and similar activities; water used in landscaping irrigation, cafeterias, toilet facilities, and for employee usage
- Emissions — Air emissions from testing and operating emergency generators
- Waste materials — Office use of paper and ink/toner; food and beverage packaging; small amounts of waste oil and cleaners from building cleaning and maintenance

Weighing all of our environmental impacts, Dell’s operational environmental programs focus on two main areas: climate change (which includes energy use) and waste reduction.
Climate Change

Greenhouse gas (GHG) emissions are a cause of concern around the globe, given their impact on our climate. As a technology company, the GHG emissions generated by Dell are primarily from energy consumption and are relatively small when compared to heavy manufacturing industries. Dell is committed to voluntarily reducing GHG emissions and contributing to the protection of our air and environment. Furthermore, we recognize and embrace the role that our product designs play in climate stewardship.

Dell’s GHG emissions come from three primary areas:

• Product energy consumption
• Energy consumption in our manufacturing and support facilities
• Transportation of the following: materials to Dell; products between Dell facilities; products to customers; and employees to and from work

We are focused on achieving reductions in each of these areas through programs that reduce power consumption of our products, conserve energy and use “green” energy in our own operations, and optimize transportation.

In addition, we recognize that both our suppliers and customers have an impact on GHG emissions. We are committed to working with our suppliers to understand the impact that their products or operations may have on the climate and to share best practices for the reduction of GHG across our global supply chain. For customers, we are focused on product features that reduce the energy required to operate our products, as well as educating our customers on the importance of using these features. The result is a lower total-cost-of-ownership while supporting good environmental practices.

Product Energy Programs to Reduce Emissions

Dell’s commitment to reducing greenhouse gas (GHG) emissions associated with energy consumption of our products is clearly demonstrated by our voluntary participation in the ENERGY STAR Program. See “Dell’s Environmental Awards and Recognition” on page 58 to learn more about the recognition that Dell has recently received for its sustainable business practices.

For more information on our product energy programs, see “Design for Environment (DfE)” on page 26.

Facilities Energy Programs to Reduce Emissions

Dell continues to manage the use of electricity in ways that protect the environment. All environmental functions of Dell-owned buildings are monitored, controlled, and optimized by an automated building management system. With this system, Dell monitors energy usage during all seasons and controls temperature and humidity to meet the needs of the business segments, while at the same time reducing energy consumption per unit.

Dell Americas Operations (DAO)

Although electrical consumption in North America increased by approximately 7 percent from fiscal year 2003 to fiscal year 2004, kilowatt hour (KWh) usage per dollar of revenue decreased by approximately 9 percent.

In the Austin (Texas) area, Dell has enrolled in the Green Choice Program offered by Austin Energy, the city-owned electric utility. Green Choice is a program in which large, medium, and small energy users purchase a block of kilowatt hours generated by clean sources of energy, primarily wind-generated power. Dell has agreed to purchase 10 percent of the power consumed in its facilities, within Austin Energy’s service area, from the Green Choice Program. Dell’s decision to make use of clean sources of energy represents an avoidance of 1,547,000 pounds of CO₂ emissions per year.

“As an ENERGY STAR® partner, Dell has significantly advanced the area of computer energy efficiency and heightened awareness of the importance of ENERGY STAR,” said Kathleen Hogan, Director, Climate Protection Partnerships Division. By participating in ENERGY STAR, Dell is showing businesses worldwide that protecting the environment is good for the bottom line.”

Source: Recognition letter from U.S. Environmental Protection Agency

“Dell has a long history of participating in voluntary initiatives aimed at improving our environmental performance of facilities operations. For example, Dell has participated in programs such as the U.S. EPA’s Climate Wise, EPA’s Waste Wise, EPA’s ENERGY STAR Green Building, and Clean Texas Star. Purchasing energy produced from alternative “Green Choice” sources in Austin, Texas, is just another example of how Dell is striving for continual improvement in our business responsibilities to the environment.”

Kip Thompson
Vice President
Global Workplace Environment and Facilities
Dell Europe, Middle East, and Africa (EMEA)

In Limerick, Ireland, the European Manufacturing Facility (EMF) is monitored, controlled, and optimized by an automated building management system (BMS). The BMS tracks production activity to deliver maximum savings from a minimum usage of kilowatt hours. All energy-consuming building functions are turned off when not in use after business hours, such as conference room projectors and auxiliary lighting. The EMF fosters a corporate culture where employees own the environmental responsibility to switch off all computer equipment when not in use. In both buildings, all lighting is high-frequency and energy efficient.

During the winter months, November to February, the EMF implements a demand reduction initiative in conjunction with the electrical utility supplier. A fifth of all our air-handling units are turned off during hours of peak energy use. EMF also participates in the "powersave" program with the electrical utility supplier to reduce energy usage on days when the national power grid is under pressure because of high demand on its ability to provide power.

Asia-Pacific/Japan (APJ)

In Xiamen, People’s Republic of China, Dell facilities undertook a multiphase approach to conserve energy. Air handling units run at a higher chilled-water temperature to reduce dehumidification. The units also draw a minimum of required outside air during hot weather to reduce total cooling load on chillers. The operation of the entire heating, ventilation, and air conditioning (HVAC) system is scheduled with Intelligent Building Management during weekends and nights to reduce operating hours. Additionally, the operation of the entire interior and exterior lighting system is scheduled with Intelligent Building Management at all times to reduce operating hours, especially during low occupancy periods.

In Penang, Malaysia, Dell facilities continue to explore ways to conserve energy. For example, operation of cooling tower fans is now controlled by a return water temperature (rather than by a timed schedule) and heat generated by uninterruptible power supply (UPS) units is now evacuated from the building, thus reducing the air-conditioning load.

We report energy consumption metrics in absolute data and an “Energy Consumption vs. Revenue” ratio. These metrics include energy consumed from a wide variety of uses such as manufacturing, development, sales, and marketing. We believe this ratio is the most meaningful information in regards to Dell’s environmental impact, due to the wide range of product types produced.

This chart format, utilized in previous reports, represents the energy consumption and CO2 emission, in Dell U.S.A., over the last three years. We will now transition to worldwide energy-consumption tracking and reporting, as shown in the adjacent chart.

Source: CO2 conversion factors obtained from World Resource Institute.

Source: CO2 conversion factors obtained from World Resource Institute.
Logistics Programs to Reduce Emissions

Dell is committed to integrating environmental performance into business and operational management. A significant focus is placed on optimizing freight transportation of products from Dell manufacturing facilities to the customer so as to reduce costs and to reduce greenhouse gas (GHG) emissions. Fortunately, the two objectives are mutually beneficial. Dell’s climate change strategy aligns perfectly with its cost saving efforts for freight transportation.

Air Versus Ground Transportation

Air transportation produces roughly eight times more harmful emissions than trucks. One of Dell’s key tenets of transportation management for its outbound distribution is to minimize air transportation. Dell has implemented expedited ground transportation networks, moved manufacturing centers closer to the customer, and implemented factory planning systems to maximize ground transportation opportunities. The chart below labeled “Freight Transportation” shows Dell’s trend for decreasing air transportation as a percentage of its parcel shipments to customers for the past 4 years. During a period of significant volume growth, Dell has reduced its use of air transportation from 25 percent to 14 percent of its parcel tonnage.

This trend in optimizing freight from planes to trucks, while maintaining proper service levels, continues to be Dell’s strategy for fulfillment. Applying standard metric tons of carbon measures for emissions, the chart below labeled “Trend in Transport-Related Emissions” illustrates the positive impact of Dell’s optimization efforts over time, assuming current volumes.

Dell’s freight optimization will continue in the future with the implementation of “geographic manufacturing.” Historically, Dell has aligned its manufacturing centers with product lines rather than for geographic proximity to customers. Dell is currently making adjustments in its supply chain to enable more geographically optimal manufacturing decisions. By shortening the distance from the manufacturing point to the customer, as enabled by Dell’s direct business model, Dell is able to utilize ground transportation instead of air freight in many cases and all freight has less distance to travel; therefore fewer GHGs are produced.

U.S. EPA SmartWay Partner

As part of Dell’s continuing efforts to be an environmentally responsible shipper, Dell is participating in the U.S. Environmental Protection Agency’s (EPA’s) SmartWay Program. Dell already transports a significant portion of its freight with carriers who are SmartWay partners, and Dell is committed to influencing other carriers to join the SmartWay Program, thereby increasing their awareness and efforts to reduce GHG emissions related to their operations. Dell is committed to working with the EPA to reduce GHG emissions.

Dell’s efforts have long been focused on reducing costs and GHG emissions. However, Dell is not satisfied with its past performance and has taken the initiative to partner with the EPA to focus on emissions reduction as it relates to the movement of Dell products to customers as well as Dell’s transportation partners.

Positive Supplier Influence

Dell is also proactively working to reduce GHG emissions through positive supplier influence. We feel that it is important to lead transportation providers toward a greater focus on GHG emissions and overall environmental responsibility. In addition to the efforts Dell has committed to as part of the EPA’s SmartWay Program, Dell has implemented an Environmental Performance Survey. This survey is included with Requests for Proposals in order to better understand the environmental efforts of potential suppliers so that this information may be used in the provider selection process. The transportation carriers provide information relative to their environmental contacts, environmental policies, and emissions and systems efficiencies. More specifically, the respondents are asked to provide information regarding speed restrictions, idle reduction, tire inflation, aerodynamics, lubrication, alternative fuels, weight reduction, and driver training strategies. It is Dell’s goal not only to employ this questionnaire in the provider selection process but to build a knowledge base to share best environmental practices across the transportation industry.

“Our efforts to reduce greenhouse gas emissions have aligned with our efforts to reduce transportation costs. The same initiatives to reduce greenhouse gases often improve costs as well. Being environmentally sensitive is not only good for our communities; it’s good business.”

Fred Montoya
Vice President, Fulfillment
Manufacturing Waste Reduction and Recycling

Through the company’s Reduce, Reuse, and Recycle (R3) initiative, all Dell manufacturing facilities have permanent recycling operations that have resulted in significant waste reductions. These sites collect more than ten different materials, including cardboard, office paper, plastics, foams, metals, batteries, disks, aluminum cans, bottles, and pallets.

Dell’s R3 Program has received recognition for its environmental excellence by local and state organizations including Keep Austin Beautiful, the Austin Corporate Recycling Council, the Recycling Coalition of Texas, and the Texas Natural Resource Conservation Commission. Dell has continued to aggressively and systematically identify new opportunities to reduce waste and achieve related cost savings. Examples include:

- Dell manufacturing buildings in Austin are saving approximately 78 tons of cardboard boxes and packing foam in fiscal year 2004 by reusing boxes for parts and components. The boxes are used to ship replacement parts to customers and service vendors throughout the United States.
- Dell has driven a reuse program for foam components and end caps in Austin manufacturing facilities. This program will reduce landfill waste by approximately 290 tons annually.
- In fiscal year 2004, Dell began a program to recycle plastic and foam in Nashville manufacturing facilities. The program will reduce landfill waste by approximately 800 tons annually.
- By eliminating a battery washing process, the Nashville sites have eliminated a hazardous waste stream.
- In fiscal year 2005, Dell’s Round Rock campus began replacing its existing carpet with recycled carpet. By the second quarter of fiscal year 2005, it is our goal to remove and recycle 1 million square feet of carpet (weighing approximately 423.5 tons), thereby diverting it from Austin area landfills. The new carpet being installed has non-PVC backing and can either be completely reused or recycled. Dell is working with its supplier for this project so that in another 10 years or so, when the carpet again needs replacing, the supplier will take back all of their used-carpet product and recycle the yarns and backing again, thus creating a closed loop.
- Since fiscal year 2003, Dell Austin has participated in a recycling program for light tubes, and over 2000 light tubes are being recycled annually. Dell will drive this program for all lighting refresh projects.
- Approximately 7475 toner cartridges are recycled annually from the Dell Americas facilities. Dell works with its supplier to ensure that cartridges are returned for recycling. The supplier’s return rate on cartridges is 96.02 percent.
- Through a pallet return program, 26,000 pallets have been reused.

Using information gathered from successful R3 programs initiated in the United States, environmental and facilities managers from Austin are working closely with other Dell regions to find similar ways to reduce the company’s solid waste stream worldwide. Examples include:

- At the European Manufacturing Facility (EMF) in Limerick, Ireland, approximately 70 percent of site waste is being recycled. Several new programs have been implemented. Battery collection repositories have been set up around the manufacturing facility.
- The EMF eliminated the use of individual antistatic bags for system boards used in desktop computers.
- In Xiamen, China, a wastewater treatment plant was constructed and put in service, reducing the amount of chemical oxygen demand (COD) material discharged to the waterways by 63.5 percent.
Other Environmental Achievements in Fiscal Year 2004

Ozone Air Emissions Reductions

In Central Texas where Dell is headquartered, local air quality conditions are considered to be one of the biggest environmental challenges. The area is considered to be a near-nonattainment area for ozone, meaning that it is close to failing federal 8-hour ozone air-quality standards. The Nashville (Tennessee) area, where Dell also has major manufacturing and fulfillment operations, has been classified as a nonattainment area for ozone, meaning it already does not currently meet federal ozone air-quality standards. To support regional efforts to reduce ozone emissions, Dell has implemented several programs that contribute positively to air quality. Examples include:

- Reduction in testing frequency of site emergency generators, thereby reducing the emissions of oxides of nitrogen (NO\textsubscript{x}) and volatile organic compounds (VOCs) (two compounds that can form ozone). In fiscal year 2004, Dell fully implemented a reduced frequency schedule for testing at both the Texas- and Tennessee-based facilities.

- Energy conservation programs (see "Climate Change" on page 37) that reduce the demand on local power plants and help to limit emissions from burning fossil fuels. Dell's commitment to purchase from the Green Choice Program a minimum of 10 percent of its energy requirements for its facilities within Austin Energy's service area will also contribute to local emissions reduction programs.

- A carpooling program, to encourage reduced ozone emissions from vehicles used for driving to work, was implemented at the Nashville manufacturing site by an employee-led team.

Hazardous and Electronics Waste Reduction

Dell's facilities generate very little hazardous waste. In the U.S., all of the operations facilities are considered to be conditionally exempt, small quantity generators. Regardless, Dell employees look for and have been successful in identifying important ways to reduce hazardous materials usage and hazardous waste production. Examples include:

- Damaged electronic parts, obsolete office computers, and similar wastes from office, manufacturing, and laboratory facilities are managed so as to maximize recycling and reuse, similar to our product end-of-life strategies. See "Stage 4: Equipment End-of-Life Strategies" on page 47 for more details.

- The Nashville sites eliminated a washing process for forklift batteries, thus eliminating a hazardous waste stream entirely.

Workplace Health and Safety

Dell is committed to providing a safe workplace for its employees, contractors, and visitors. Through our on-site health and safety management programs and our focus on education to our employees, we strive to continually improve. Our ultimate objective is to have a healthy and productive workplace, with no on-the-job injuries.

Health and Wellness Programs

Around the globe, Dell's wellness teams educate employees through newsletters, presentations, safety fairs, and other events customized to the local workforce. For example, during spring/summer 2003, some of our facilities conducted extensive Severe Acute Respiratory Syndrome (SARS) prevention and educational programs.

Several facilities have on-site fitness or wellness centers, where employees can exercise in a group setting or receive information on preventive health topics such as good nutrition and fitness.

Dell also maintains occupational health centers and clinics at each of our main manufacturing campuses and at our larger office complexes. The staff at these facilities provides on-site care and advice regarding medical conditions while maintaining employee medical confidentiality.

In addition, the on-site medical staff and wellness teams collaborate to arrange for convenient employee access to health screenings, tests, and vaccinations.
Below are some examples of the health and wellness programs offered during 2003:

- Health screenings and clinics
- Blood-pressure screening
- Flu vaccinations for employees and family members
- Hearing and vision tests
- Health and wellness educational topics
- Smoking cessation
- Prenatal care and exercise
- Cholesterol reduction
- Stress management
- Healthy heart, healthy lifestyle
- Exercise and fitness
- Cancer awareness
- Alzheimer’s, diabetes, and arthritis information
- HIV/AIDS awareness
- Nutrition and healthy eating
- First aid in the home
- Community support and education events
- Blood drives benefiting community blood banks
- American Heart Association Walk
- National Nutrition Month
- World Health Day
- International Massage Week
- Cholesterol Education Awareness Month
- Great American Smoke-out
- Breast Cancer Awareness Month
- Workplace Health and Safety Training
- Eye protection
- Hearing conservation
- Safe chemical handling
- Back safety and posture
- First responder — fire prevention and spill clean-up
- Emergency Care Attendant and Emergency Medical Technician training

Workplace Safety and Ergonomics

In 2002 and 2003, environmental and health and safety teams around the world implemented a number of aggressive programs to improve Dell’s safety performance. We are very proud of our recent health and safety program achievements.

In 2003, our manufacturing sites in Ireland and Malaysia achieved OHSAS 18001 registration. Certification to this internationally recognized standard shows that these sites have implemented a sustainable and well-supported health and safety management system. With these sites joining our previously registered site in China, Dell now has a total of three sites with OHSAS 18001 certification. Our other non-U.S. manufacturing facility, in Eldorado do Sul, Brazil, plans to be OHSAS 18001-certified by the end of fiscal year 2006.
In the U.S., Dell is partnering with the OSHA in a multiple-year program to evaluate our workplace health and safety programs. The Voluntary Protection Plan (VPP) Program establishes “above the bar” performance criteria and recognizes companies having exemplary employee health and safety programs; those companies meeting OSHA’s high standards can earn one of several levels of recognition from OSHA and industry peers. During 2003, three of Dell’s facilities in Texas were recommended as “Star” sites—VPP’s highest level of recognition. Additional Dell facilities in the Austin and Nashville areas are on track for VPP evaluation and recognition over the next few years.

For the second consecutive year, our China manufacturing facility was recognized as an Advanced Work Safety Enterprise in the Torch High-Tech Zone in Xiamen City. This facility had a near-perfect safety record in 2003, with no serious on-the-job injuries resulting in lost work days.

Worldwide, our safety performance has greatly improved. Significant reductions in workplace injuries were achieved in every operating region: Dell Americas Operations (DAO); Europe, Middle East, and Africa (EMEA); and Asia-Pacific/Japan (APJ). During 2002 and 2003, the total number of workplace injuries in our global operations was reduced by more than 40 percent, and the number of lost-work-day cases was reduced by 20 percent.

These strong improvements are a result of a focus on behavior-based safety programs, further attention to job hazard analysis and ergonomics, and extensive safety awareness and training programs for all employees.

We have set aggressive goals for 2004 to further improve our safety performance. These goals include a continued reduction in the OSHA-recordable rates, as well as continued focus on factory ergonomics improvements.
Customer Relationships—and the Journey to Sustainability

During 2003, the value of Dell's direct business model has become more apparent in all our efforts toward sustainability. Dell's direct customer relationships have for a long time been exceptionally valuable during our development of new products and services from an environmental perspective. Being able to directly communicate with our customers makes it possible for Dell to continually develop and improve our products and processes with both Dell's and our customers' environmental and societal concerns in mind.

Since 1999, Dell has specifically focused on formalizing our customer expertise feedback to identify interested parties and understand their concerns. Environmental and societal requirements are complex by nature and Dell and our customers are today facing a number of challenges in the near future.

Customer Surveys, Expertise Panels, and Audits

In 1999 and 2001, Dell dedicated a resource to track environmental inquires and feedback from our customers. The information was summarized and communicated to our product design teams.

Since 2001, Dell has included environmental inquires in selected surveys such as the European Pulse Panel. During surveys of more than 600 respondents from Germany, France, and the United Kingdom, customers were questioned about product environmental performance standards and certifications. Although rated lower in importance than such nonenvironmental factors as reliability, service and support, and product availability, the key product concerns at that time for the global environment as well as the office environment were identified to be:

• Energy consumption
• Acoustic performance
• TCO '99 eco-label certification

The survey became more technically detailed during 2002 with regard to environmental requirements. Questions concerning energy consumption levels, acoustic performance measurements, and material restriction lists were included. At times, these associated requirements would vary substantially between different countries. In 2002 Dell also included environment aspects during our Customer Advisory Councils. The feedback was then directly communicated to our Product Group team based in Austin, Texas.

Dell's work during 2003 focused on qualitative input and identifying interested parties, understanding their concerns, and recognizing their priorities. These activities are increasing by region, by topic, and by detail:

• Dell conducted surveys and learned much about customer expectations and needs for product end-of-life programs.
• During the Customer Advisory Councils, Dell conducted a survey and reviewed roadmaps and technical expectations of lead-free applications.
• Customer audits were conducted at Dell's manufacturing facilities to review environmental aspects, workers conditions, and supply chain principles.

Our plans for 2004 are to further formalize our customer expertise groups and panels. Dell will conduct Internet surveys, continue our dialogue at customer councils, and communicate progress to our customers. Environmental and societal requirements are inherently complex, and Dell's goal is to continue the journey toward sustainability with our customers.

Environmental Education and Choices With Every Purchase

In Dell's environmental report for fiscal year 2003, Creating a Model for Sustainability, we devoted an entire section to customer education. This section focused on providing helpful information to our customers on the numerous options for reducing a product's environmental impact and creating an awareness of how to manage that asset in an environmentally responsible manner. We developed guidelines to promote environmentally preferable practices for product users, including acquisition, usage optimization, and ways to extend the product's life. For information about these practices and how Dell's participation in voluntary eco-labels helps to achieve these environmentally sound design attributes in our products, see “Environmental Education and Choices” on page 23 of Creating a Model for Sustainability on our web site at http://www.dell.com/environmentalreport2003.
Communications About Energy Efficiency

Dell updated its web site with the new ENERGY STAR® partnership mark to inform customers about Dell’s commitment to the environment and to promote Dell’s dedication to partner with the U.S. EPA in offering products that qualify for the ENERGY STAR Program. Dell also has incorporated the new ENERGY STAR logo in its splash screen for various OptiPlex desktop computers and Dell Precision workstation products. Dell’s commitment to the ENERGY STAR Program extends from training employees to informing customers of the benefits and savings of purchasing ENERGY STAR-qualified products. Dell’s web site includes links to various U.S. EPA sites with information regarding the ENERGY STAR Program. Dell also developed an Energy Management Solutions Center on the Internet to educate customers on power management and the ENERGY STAR Program. For more information on Dell’s participation in the ENERGY STAR Program, visit [http://www.dell.com/energystar](http://www.dell.com/energystar).

Packaging

The primary goal of packaging is to ensure that products are afforded the maximum protection from shock or vibration as well as temperature variations that can occur during shipping and handling. Dell designs packaging so that consumers receive their computer in pristine, undamaged condition.

Because Dell is committed to improving process efficiencies, raw materials conservation, and pollution prevention, Dell’s packaging designers are continually evaluating product packaging requirements against the best environmental packaging practices. Dell packaging designers continue to reduce the amount and content of packaging material without sacrifice to product safety, reliability, or quality. The company’s programs in this area are focused on reducing volume of materials through the use of alternative materials, improving material recyclability, and increasing the use of post-consumer recycled materials. In turn, as packaging volume is reduced, shipping efficiencies are achieved, thereby lowering emissions associated with transportation. Dell uses advanced testing methods to optimize packaging while protecting products throughout the distribution process.

In fiscal year 2004, alternative cushion materials were used in various product lines that allowed for over 5 percent reduction in size of the product packaging. Properties of the alternative material were such that less material could be used without sacrificing the quality of the protection of the product. Less foam and cardboard was needed, the packaging weight was reduced, and a smaller overall packaging footprint resulted in lower freight costs. On an annualized basis, on just one product line, this project resulted in a reduction of 420 tons of foam and 245 tons of cardboard.

Other projects in fiscal year 2004 reduced the keyboard packaging size by approximately 32 percent, reduced the cubic volume of packaging by 7.8 percent for OptiPlex products, and developed an alternative packaging design for server products that reduced the packaging by 10 percent.

Dell’s packaging goals for fiscal year 2005 are:

- **Portable computer packaging** — Redesigns in packaging for Dell portable computers in fiscal year 2005 will save an estimated 230 tons of packaging materials annually. The savings is based on reducing the amount of corrugate material used to ship options by as much as a 27 percent by weight.
- **Desktop computer packaging** — Redesigns in packaging for select Dell desktop computers in 2004 will result in an estimated 7 percent reduction in cube size and an annual 1000-ton decrease in weight of shipped corrugate and foam.
- **Server packaging** — Pallet redesigns for select server products in 2004 will result in an estimated 39 to 64 percent reduction in weight of lumber shipped, resulting in an annual 480-ton decrease of lumber shipped.
- **Other key improvements** — Dell packaging is free of heavy metals, halogenated polymers, and ozone-depleting substances. To facilitate recycling, Dell’s goal is to have all packaging clearly marked with the recycling emblem and all plastics marked according to the standard (German Institute for Standardization) DIN 6120 that graphically promotes recycling.
The company also minimizes paper shipped with some products by offering electronic access to system information and user documentation via the user’s hard drive and the Internet. This ongoing effort substantially reduces the amount of paper stock Dell uses each year. All remaining paper documentation for computers sold in Europe and the Americas is printed on either recycled-content or chlorine-free paper.

The company is reviewing inbound and outbound component packaging to ship more product using less packaging. Changes in this area have enabled Dell U.S. operations to pack approximately 32 percent more product into the same size of box while reducing the volume and types of packaging materials. For information on where to recycle packaging materials, visit http://www.dell.com/recycling_packaging.

Reducing Paper Usage

As part of Dell’s ongoing effort to increase green procurement activities for paper, an environmental matrix was developed. This matrix examined the relationship between recycled content of paper and the chlorine process used in manufacturing the paper. Through this matrix, Dell was able to rank the best combinations of recycled content versus chlorine process. The matrix was then used to develop likely criteria for the next generation of paper that Dell wanted to use. At the end of the process, Dell not only had a much “greener” product but also realized cost savings. The thought process behind the customer documentation “greening” matrix is being applied to other paper products throughout Dell’s lines of business.

During fiscal year 2004, Dell changed the specifications for consumer documentation in the Americas to use paper that is 100 percent recycled, with a minimum of 30 percent post-consumer waste fiber, and produced using chlorine-free manufacturing processes. Substantial reductions in the amount of paper Dell ships with each product were obtained by reducing the basis weight of the paper, resulting in over 1 million pounds less consumption of paper in our operations.

Goal: Dell’s goal in fiscal year 2005 is to implement a similar program to change an additional 35,000 tons of paper to include recycled content and post-consumer waste.
STAGE 4: EQUIPMENT END-OF-LIFE STRATEGIES

No Computer Goes To Waste

As more systems reach retirement age, product end-of-life issues pose a concern for Dell and its customers. Dell focuses on providing solutions that are safe for the environment and maximize the longevity of computers and their parts. While Dell programs vary throughout the world to reflect customer, cultural, and regulatory requirements, Dell’s broad strategies and programs for equipment reuse and recovery are among the industry’s most aggressive and comprehensive in many of its regions. Dell also ensures that during the recycling process we avoid transportation of end-of-life electronics to developing countries. For more information on our disposal guidelines, see page 42 of Dell’s environmental report for fiscal year 2003, Creating a Model for Sustainability, at www.dell.com/environmentalreport2003.

Driving awareness of and participation in recycling is an important element in our stewardship. Working with our stakeholders, we committed to set and have publicly disclosed aggressive recycling goals in March 2004. (Visit www.dell.com/recycling for updates on progress towards these goals.) This effort involves, but is not limited to, establishing common measures, identifying opportunities to stimulate participation, assessing new business opportunities, and leveraging the attributes of the direct business model where possible, to facilitate these processes.

Consumer Reuse and Recycling

Dell recognizes that a functioning computer has more value intact than disassembled and sorted into its component parts. While reuse of systems may not always be an option, Dell’s reuse channels make it possible for many recovered systems that have not outlived their usefulness to arrive at a final destination with customers who may not otherwise have access to technology products. Dell provides several reuse channels for both business and consumer customers.

When a system cannot be reused or refurbished to a useful state, Dell works with its technology partners to recycle as much of the materials and component parts as technically and economically feasible. Dell continues to evaluate new sources for its recycled parts through its technology partners as well as ways to reduce the volume of materials used in its products. These programs—which continue to grow in scope and to evolve to meet demands—provide a full range of alternatives that minimize the burden on landfills and extend the life of Dell products. Visit http://www.dell.com/recycling to find out more about Dell’s consumer recycling program.

Dell’s Consumer Recycling Days — A Tour of Product Recovery Events

In March of 2003, Dell improved our consumer recycling offer to include home pick-up of consumers’ used computer equipment and to lower the price of this offer. The offer was rebranded Dell Recycling and offers consumers donation or recycling options for any brand of used computer. Customer research in late 2002 showed extremely low awareness of any manufacturer recycling offer which made it clear that in addition to lowering the price and making the service easier to use, Dell would have to work to make consumers aware of our offer.

To launch the new service, Dell began holding consumer recycling days in markets around the country. Ultimately Dell organized 18 of these in fiscal year 2004. In each market Dell worked with local government, university, and nonprofit organizations to promote the event and mobilize local consumers. Consumers were offered free drop-off of used equipment for recycling. The equipment that consumers brought to the event was stacked on pallets on-site, loaded onto trucks, and shipped to one of Dell’s recycling partners. The events collected nearly 2 million pounds of used computer equipment, diverting this material from landfills and ensuring proper recycling. More importantly, through media coverage, grassroots outreach, and consumer participation, Dell reached more than 40 million consumers with the message, “No Computer Should Go To Waste.” Events are not a long-term answer to the electronics-waste (e-waste) challenge but are proving an efficient means of raising consumer awareness.

For the two final events of the year, at Stanford University and Reno, Nevada, Dell experimented with two programs to enhance the events. At Stanford, Dell partnered with the National Recycling Coalition (NRC) to offer a free one-day seminar for government and university recycling coordinators interested in organizing their own electronics collection program and/or event. The seminar was held the day prior to the public collection event and seminar attendees became volunteers at the Saturday event, thus mixing theoretical and hands-on training. For the event in Reno, Nevada, Dell provided part of the necessary funds to organize the event and partnered with a local university to raise additional needed funds. More than 20 organizations partnered together to organize and promote the event. This proved that some starter funds and guidance from Dell could empower a community to organize its own event.
A customer survey at the end of 2003 showed that customer awareness of Dell’s recycling offers had risen, showing a large increase over 2002 awareness. A consumer survey conducted in November 2002 showed unaided awareness of any company’s recycling services to be 11 percent. One year later, a similar survey showed 38 percent awareness of the availability of electronics recycling services. Dell will continue to raise that number this coming year. Dell will also continue to organize recycling events in 2004 and plans to host at least five events. In addition, the company will continue its efforts to empower communities to organize their own events. The NRC’s one-day seminar for recycling professionals will be conducted with each of these events, based on the very positive feedback from the Stanford event. In January 2004, Dell launched a recycling grant program that provides grants to communities to organize computer collection and recycling events—the grant concept having been proven by the event in Reno, Nevada.

**Dell Donation**

Through Dell’s partnership with the National Cristina Foundation, customers can donate excess computer equipment to charity and receive a possible tax deduction. The National Cristina Foundation is a nonprofit organization that places used technology with local nonprofit organizations and public agencies that serve disabled and economically disadvantaged children and adults. Computers that may no longer be useful for a current owner may have several years of life left in them for a nonprofit or public agency. Visit [http://www.dell.com/recycling](http://www.dell.com/recycling) and [http://www.cristina.org](http://www.cristina.org) to find out more about Dell’s Donation Program and the National Cristina Foundation.

**Printer Consumables**

In 2003, Dell launched its printer product line, and as part of this launch Dell created an easy-to-use program for returning and recycling printer ink and toner cartridges. Dell’s ink and toner cartridges are produced from materials that are easily recycled, and in some cases our recovered cartridges are remanufactured. This remanufacture program allows customers to return used toner cartridges to Dell to be reused.

**Incentives**

As part of our efforts to increase recycling awareness and better understand consumers and their needs, Dell ran several promotions during fiscal year 2004. These promotions, which included Dell’s standard recycling offer for $0.99, gained much attention throughout the recycling community and significantly increased our recycling efforts.

**Awareness**

One of the biggest challenges in managing end-of-life electronics is educating our customer base about the various options for their systems. One way Dell has accomplished the task of increasing customer awareness of our recycling programs is through our web site, [http://www.dell.com](http://www.dell.com). The Dell Recycling web site provides recycling alternatives for the consumer in addition to links for more information. To determine how well we’re doing, we track the number of visits to our web site. Since April 2003, we have noted approximately 900,000 visits, or about 3500 visits per day. Although it takes time, we understand that these metrics indicate we are helping our customers understand the issues concerning end-of-life electronics disposal.

In a further attempt to educate our customer base, we placed a link to our Dell Recycling web site on our Dell Solution Center—an online tool available on the desktop of all Dimension and Inspiron computers—which was implemented on systems shipping the second half of 2003.

In January 2004, Dell devoted an entire page of a product catalog to asset recovery and recycling to increase consumer awareness and provide an incentive to recycle their end-of-life hardware. A first for Dell, this catalog was distributed to almost 36 million customers.

**Institutional Reuse and Recycling**

For institutional customers, Dell provides asset recovery programs to ensure safe disposition of nonfunctional or obsolete computer technology. Dell provides services that allow organizations to place as much care and emphasis on the proper management of decommissioning technology as they do on the acquisition and ongoing support of those assets. Dell and its financial subsidiary, Dell Financial Services (DFS), have offered various forms of business recycling services since 1991. To support our institutional customers, Dell launched its new institutional program in July 2003 with new options to help facilitate the process even further.
Asset Recovery Services (ARS) is a suite of services that allows business customers to choose whether to recycle or resell their old or outdated computer equipment. Fast and easy to use, ARS provides customers with a safe and environmentally responsible method to recycle or dispose of their used computer equipment. This service includes desktop computers, portable computers, servers, storage, networking, monitors, printers, projectors, batteries, and computer peripherals such as keyboards and mice.

By purchasing Asset Recovery Services, our customers’ old or used equipment is recycled or resold, thereby helping to keep the equipment out of landfills, enabling materials to be recycled or reused, and helping to conserve natural resources.

To make business recycling and value recovery as fast, convenient, and cost-effective as possible, Dell offers two solutions for disposing of a business’ used computer equipment:

- **Value Recovery** — Recover value from used equipment. Value gained from the sale of used equipment is returned to the customer. (The value of the equipment sold is “time bound;” that is, the equipment to be sold in one month must be received at Dell’s Asset Recovery Facilities in that same month.)
- **Recycling** — Recycle used equipment that has no resale value. (In general, used computer equipment over three years old has little or no resale value.)

These services offer several benefits:

- **Data security** — Removes tags and labels from equipment and overwrites hard drives.
- **Decreased costs** — Eliminates cost of storing excess, outdated, or used computer equipment.
- **Increased savings** — The Value Recovery service may provide cash back for computer equipment.
- **Proper disposal** — Customers may not be aware of how to properly dispose of old computer equipment in accordance with EPA guidelines.
- **Logistics** — Logistics and disposition infrastructure to properly manage the recycling or resale of old computer equipment.
- **Accountability** — Provides a single point of contact, end-to-end visibility, and detailed data security and environmental reports.
- **Decreased hassle** — Frees customers to focus on their core business.

Additionally, both of these services include transportation, flexible logistics, equipment disposition, and detailed security and environmental reports. Both offers include Dell’s Logistics Services, which allow customers to choose to audit and package their own hardware for shipment, or they may request that Dell manage this service. Dell offers customers two logistics solutions:

- **Customer Pre-Packed** — For customers who prefer to box or palletize their used equipment themselves and consolidate the equipment on a ground floor location for pickup at a single location.
  - Pre-packed box logistics — For 1 to 9 systems. Dell will provide a kit containing instructions and shipping air bills. After boxing the equipment, the customer schedules a pickup at [http://www.airborne.com](http://www.airborne.com) or by calling 1-800-AIRBORNE.
  - Pre-packed pallet logistics — For 10 or more systems. Dell’s freight vendor contacts the customer 3 to 5 days after order placement to schedule a pickup. The customer is responsible for palletizing the equipment.
- **Program Managed** — This solution is for customers who prefer that Dell handle the logistics. The Program Managed service option is for customers whose needs are more complex than can be addressed with the Pre-Packed service option (for example, customers who need pickup at multiple locations or on multiple floors, program oversight, or customized logistics solutions).

**Reporting Information**

Reporting provides customers with detailed reports after the recycling or disposition service has been completed. The Settlement Report details the list of hardware that was recycled or resold and, if applicable, the value of the resale. The Certificate of Disposal verifies that hard drives were overwritten with a script across the disk (nonoperable drives are shredded or otherwise destroyed) and verifies that any recycling was performed in accordance with EPA guidelines.
No data removal process leaves a hard drive or computer as free from residual data as is a new product. Dell makes no recommendations regarding the customer's security needs or representations regarding the effectiveness of one method of data removal over another. It is the customer's responsibility to protect any confidential or sensitive information contained on its hard drives.

Asset Recovery Metrics

In the past, Dell has collected millions of computers for recycling and reuse through its various programs. In fiscal year 2004 alone, Dell collected approximately 200,000 units in the U.S. from its business customers through Dell Financial Services and its asset recovery business.

However, in an ongoing dialogue with our stakeholders, Dell is transitioning its reporting format to incorporate new requirements. First, Dell will report collection metrics on a worldwide basis. Although still dominated by U.S. collection programs, all Dell's regions have launched recovery programs and will be reporting material collection results quarterly.

Second, Dell manages many recovery streams that include parts, customer returns, and donations to name a few. Our new reporting format will consolidate the results into a single value that will provide consistency across Dell's regions and within the industry. In addition, to quantify the success of the recovery program, the results will be reported as a total weight in kilograms with metric tons included for clarity and comparison. Recent results show that the U.S. and other regions outside the U.S. recovered computers for recycling and reuse weighing approximately 16 million kilograms and 4.7 million kilograms, respectively.

As part of our continuing effort to build awareness, Dell has established a recycling goal for fiscal year 2005. Dell has publicly announced a goal to increase material weight recovered in fiscal year 2005 by 50 percent. We will use material weight recovered in fiscal year 2004 as our baseline. We believe this is a formidable goal that will drive us to enhance our already robust product recovery infrastructure and continue to drive efficiencies throughout the recovery process. This goal is effective for the consumer and corporate asset recovery programs. Contributions from Dell's National Recycling Tour and donation program will also be included in determining goal attainment. We will also continue to increase customer awareness of the need to recycle electronics properly. We will facilitate this through our recycling events and workshops as well as publicize the benefits of recycling end-of-life electronics. We will use our online surveys and direct model to measure changes in customer awareness, and we plan to report our attainment metrics on a quarterly basis.

Significant reporting challenges exist, in particular for those countries whose collection systems do not distinguish by product segment (for example, those that do not segregate electronics at all) or brand. For these countries, charges are passed along to manufacturers based on total weights processed and the companies’ market share. To date, we have not determined an effective means of incorporating these weights into our reporting system.

University Training

In October of 2003, Dell and the National Recycling Coalition hosted an event at Stanford University in Palo Alto, California, to begin to share knowledge about electronics recycling and collection events. Following a free one-day seminar for university, municipal, and county recycling coordinators about the science of electronics waste and recycling as well as how to organize and conduct an electronics recycling event, seminar attendees staffed an electronics collection event for consumers in the area. We are pleased to report that 50 recycling professionals were able to attend the event and the response to both the speakers and the hands-on training was quite positive. Attendees returned to their own communities armed with both theoretical and hands-on knowledge to conduct their own collection events. It is our hope that we can help grow the number of electronics collection events held around the country through this process.

Based on the success of this event, we will be adding a training session to each of the five planned Dell recycling events in 2004. These sessions are free of charge to any recycling coordinator interested in learning how to organize a recycling event for his or her community. Topics covered at the sessions include legislative updates, briefings on
recycling practices and donation programs, and tactical information on organizing an event. The first of these trainings was held on January 30, 2004, at the University of Texas at Austin, in conjunction with an Austin, Texas, recycling event. The session was highlighted by Austin Mayor Will Wynn and our founder, Michael Dell, who shared their environmental journeys with the audience and took questions from the floor about the complex electronics-waste issues that are being faced.

**Dell Recycling Grant Program**

The Dell Recycling Grant Program was created as another way to raise awareness of responsible end-of-life options for unwanted computer equipment, to keep computers and related equipment out of landfills. As part of the program, a dozen winners selected from a competitive group of 200 applicants that included state and local governments, higher education institutions, and nonprofit organizations will receive technical guidance and assistance from the National Recycling Coalition (NRC) and a $10,000 grant from Dell. These grants will be used toward the organization, promotion, staging, and processing involved in effective, no-charge, “No Computer Should Go To Waste” computer collection events in the grantees’ local area.

In addition to the 12 communities receiving grants, Dell plans to hold five recycling events in 2004. Each event will be paired with a one-day training program that features national recycling experts as speakers in a program designed for municipal and university recycling coordinators who wish to learn how to stage their own recycling events. Dell believes that empowering communities through this grant program will help build a sustainable network for responsibly collecting, reusing, and recycling old computers, thus increasing the number of groups that are part of the electronics waste solution.

For additional information on Dell’s grant program, visit [http://www.dell.com/recyclinggrant](http://www.dell.com/recyclinggrant).

See the following table for a list of Dell Recycling Grant Program winners.

<table>
<thead>
<tr>
<th>Lead Organization</th>
<th>Main City</th>
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<tbody>
<tr>
<td>Bridging the Gap</td>
<td>Kansas City, Missouri</td>
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<tr>
<td>Central Contra Costa Solid Waste Authority</td>
<td>San Ramon, California</td>
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<tr>
<td>Centre County Solid Waste Authority</td>
<td>State College, Pennsylvania</td>
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<tr>
<td>City of Atlanta</td>
<td>Atlanta, Georgia</td>
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<tr>
<td>City of Knoxville, Solid Waste Office</td>
<td>Knoxville, Tennessee</td>
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<tr>
<td>DC Department of Public Works, Office of Recycling</td>
<td>Washington, D.C.</td>
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<tr>
<td>Green Star, Inc.</td>
<td>Anchorage, Alaska</td>
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<tr>
<td>Keep Greater Milwaukee Beautiful</td>
<td>Milwaukee, Wisconsin</td>
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<tr>
<td>Mississippi Department of Environmental Quality</td>
<td>Jackson, Mississippi</td>
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<tr>
<td>Recycling Market Development Advisory Council</td>
<td>Columbia, South Carolina</td>
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<tr>
<td>Santa Fe Solid Waste Management Agency</td>
<td>Santa Fe, New Mexico</td>
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<tr>
<td>Town of Bethlehem</td>
<td>Albany, New York</td>
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**International Programs**

**European Asset Recovery Service**

During 2003, Dell launched new European-wide Asset Recovery Services (ARS) that offer the possibility to our customers to recycle or resell their old or outdated computer equipment. Fast, affordable, and easy to use, ARS provides our customers with a safe and environmentally friendly method to recycle or dispose of their used computer equipment. These services include desktop computers, portable computers, servers, storage, networking, monitors, printers, projectors, and computer peripherals such as keyboards and mice. For more information about these services, visit Dell Service Offerings on our web site or contact your local Service brand manager.

**European WEEE Directive**

Dell is also dedicated to meeting the requirements of the WEEE (Waste of Electrical and Electronic Equipment) directive and is engaged in the development of country-specific implementation schemes to comply with these national laws.
Dell Partners With RT Center

Dell takes an active role in promoting the reuse of old personal computers (PCs) and extending their life through donations to various programs within the community. In Ireland, Dell has partnered with RT Center to give disabled and economically disadvantaged children and adults access to technology. The RT Center, a partnership between Central Remedial Clinic and Centre for Independent Living, is supported by Dell, the Institute of Technology Blanchardstown, and the National Cristina Foundation (U.S.). Through the reuse scheme, in the words of the Irish Minister for the Environment Martin Cullen TD, “Dell has taken a leadership position in terms of getting ready for the WEEE directive.”

Responsible Electronics-Waste Management in Asia-Pacific/Japan

The year 2003 has been a very challenging, exciting, and rewarding year for the Asia-Pacific/Japan team as we continued to succeed in our efforts to protect the environment through electronics-waste management programs.

One of the key highlights was the successful roll-out of a voluntary recycling program in the capital cities of Australia and New Zealand on June 24, 2003. Again, the team managed to design a program that does not impose any recycling fees. In addition, Dell Australia and New Zealand (ANZ) was also one of the key sponsors for Planet Ark’s National Recycling Week, a program that has received endorsement from the Australian government.

From the Land of the Rising Sun, on September 11, 2003, Dell Japan successfully launched its Buyback Service Program for corporate customers, which was quickly followed by an equally successful launch of its PC Recycle Service Program for consumers on October 1, 2003.

In Malaysia, the Dell team responded positively to a call for support from Mothers for Mothers, a nongovernmental organization dedicated to protecting the environment. Dell was one of the main sponsors for their conference, “Women and Green Living at Home,” during which we promoted our voluntary recycling program.

In Penang, the team has been instrumental in designing a joint Voluntary PC Recycling Program (launched on February 29, 2004) with the Penang State Government. Besides raising awareness of responsible electronics-waste management across the State, a recycling drive over several weekends at strategic locations was part of the design of this program.

Dell Donation Enhances China’s Village-Elections Project

On behalf of The Carter Center, Dell was recognized by Former U.S. President Jimmy Carter, who thanked Dell for its donation of 240 desktop computers to the China Village Elections Project.

The computers, to be distributed at a rate of 80 per year over three years, will be used to compile election data, help develop election materials, and train electoral workers as part of an overall effort to standardize electoral practices in China.

Since March 1998, The Carter Center has worked with the Chinese Ministry of Civil Affairs to encourage democracy in China’s rural regions through regular village elections. This generous contribution will further enhance the critical work of making democratic elections a reality for the Chinese people.

Looking to the Future

As Dell continues to implement and upgrade its consumer and institutional product end-of-life management solutions, the company is actively engaged in preparing for anticipated directives from many different regions. The most recent is the European WEEE directive, but China is also preparing legislation to address end-of-life electronics as are many other countries throughout the world. In the U.S., Dell is preparing to comply with California’s state legislation (Senate Bill 20), which outlines several milestones for 2004 and continues to engage in discussions to outline a national financing solution. While policies are changing at a rapid pace throughout the world, Dell is confident that its direct business model will allow it to respond to these directives in a timely and effective manner.
Community Engagement
COMMUNITY ENGAGEMENT

We are committed to bringing value to customers and adding value to our company, our neighborhoods, our communities, and our world through diversity and environmental and global citizenship initiatives. Our Dell family is proud to support the communities in which we live and work. Through our employee charitable program, our volunteer programs, and other community involvement events, Dell employees give back to the community in a variety of ways.

Equipping Youth for the Digital World

Dell believes that understanding the Internet and access to information and communication technology is critical for eliminating social and economic barriers to technology proficiency. Internet and technology know-how is becoming more and more important for success in the digital world. Everyone should have the ability to access, use, and understand technology and the skills to make it relevant in their life.

Everyday, Dell is providing opportunities to low-income and underserved children and communities to gain access to digital tools and training—it’s what we call “Digital Inclusion.” Dell is funding numerous Digital Inclusion efforts that inspire children’s minds, reward their inquisitive nature, empower future brilliance, and encourage curiosity.

21st Century Skills/ICT Literacy

Information and communications technology (ICT) has emerged as an essential component of education that, when properly deployed, can have significant impact on:

- Student achievement and engagement
- Communication and collaboration
- Educational institution effectiveness

Dell is focused on promoting programs that help children and their communities develop ICT skills for use at school, home, and work. Dell recognizes that ICT skills help young people to compete and thrive in higher education and the workplace, which are both increasingly enabled by ICT tools. Accelerating technological change, rapidly accumulating knowledge, increasing global competition, and rising workforce capabilities make essential those skills rapidly becoming know as “21st century skills:” thinking and problem-solving skills, information and communication skills, and interpersonal and self-direction skills.

At Dell, we’ve developed our own set of 21st century skills and competencies:

- Set business direction — Foster business acumen, customer focus, strategic agility, financial acumen
- Align and motivate others — Build effective teams, develop direct reports, motivate others
- Deliver results — Encourage command skills, dealing with ambiguity, drive for results, intellectual horsepower, integrity and trust

Dell is a key contributor to the Partnership for 21st Century Skills, which is a unique public/private partnership that is focused on creating a successful model of learning for this millennium to incorporate 21st century skills into the educational system. More information about the Partnership can be found at http://www.21stcenturyskills.org.

Know-the-Net

By helping children, parents, and teachers master the Internet through Know-the-Net, Dell hopes that more and more people begin using the Internet to improve their lives, their communities, and their world.

Dell’s Know-the-Net Challenge for Kids, Parents, and Teachers provides online Internet training and assessment tools to help children, parents or any other interested adult, and kindergarten through grade 12 (K–12) teachers take full advantage of the Internet at home and in the classroom. The online training tool is based on a tool that Dell developed to help its own employees gain Internet proficiency. Know-the-Net is available free of charge at http://www.dell.com/knowthenet.
Dell TechKnow Program

Dell believes that a single computer can change the world, one child at a time. For students in kindergarten through grade 12 (K–12), Dell is focusing its efforts on getting technology into the hands, and homes, of low-income and underserved youth and their communities and helping them become technology empowered. The Dell TechKnow Program is an inclusive technology access and training program that gives middle school students critical 21st-century technology skills, builds self-confidence, encourages children to stay in school, and gives them the opportunity to bring technology into their homes. The Dell TechKnow Program is an after-school, 40-hour, hands-on, self-paced program that provides low-income middle school students with a chance to earn a home computer. This program has been developed and proven successful in the U.S., and the goal is to expand the program into other regions in 2004.

Nearly 3000 middle school students by the spring of 2004 from 21 districts across the United States will have earned a free Dell desktop computer that they refurbished themselves by completing the Dell TechKnow Program. Districts who have participated in the program since July 2001 include:

• Austin, Texas: Austin Independent School District
• Nashville, Tennessee: Metro Nashville Public School
• Chicago, Illinois: Chicago Public Schools
• Alameda, California: Alameda Unified School District
• Atlanta, Georgia: Atlanta Public Schools
• Trenton, New Jersey: Trenton Public Schools
• Detroit, Michigan: Detroit Public Schools
• Kansas City, Missouri: Kansas City Missouri School District
• Laredo, Texas: Laredo Independent School District
• Denver, Colorado: Denver Public Schools
• Norfolk, Virginia: Norfolk Public Schools
• Philadelphia, Pennsylvania: Philadelphia Public Schools

Upon completion of the program, students take home the computer if they can demonstrate competencies in taking apart and reassembling the computer, performing basic hardware upgrades, loading and working through software applications and tutorials provided by Microsoft Corporation, demonstrating a working knowledge of the Internet, and practicing teamwork and collaboration skills. In addition, students sign a contract committing to good school attendance, a demonstrated improvement in grades, and good citizenship.

Dell believes a community-based approach is the most efficient and effective model for Digital Inclusion. Through the Dell TechKnow Program, Dell partners with school districts, businesses, individuals, nonprofit organizations, and other community leaders to equip youth for success in the digital world.

For more information on Dell TechKnow, visit http://www.dell.com/k12/techknow.

Student TECH CORPS

Every day, Dell’s U.S. K–12 customers are making significant investments in computer technologies, and adequate technical support is one key to ensuring that these customers experience the full benefit of this technology. As part of Dell’s Digital Inclusion and Partnership for 21st Century Skills funding, nine middle schools from across the U.S. have been provided with a Student TECH CORPS grant.

Student TECH CORPS is an innovative program that trains middle school students to run a help desk. Students are trained in the latest technologies, giving them excellent real-world skills.

Student TECH CORPS is a program of TECH CORPS, a national nonprofit organization that provides schools across the country with high-quality technology programs and volunteers to help schools with technical support, teacher training,
and student mentoring. In response to a June 2002 National School Boards Association survey that confirmed that students are providing ad-hoc technical support in many school districts, the Student TECH CORPS program was developed by a teacher, tested, and successfully implemented in pilot schools across the country. Student TECH CORPS tackles critical issues head-on by training students to provide essential technical support at the building level, offering valuable technology and general workplace skills for students, as well as an enriching, wholesome opportunity for students to provide value to their school.

A Student TECH CORPS grant provides middle school students from each school with 30 hours of basic technology training from hardware repair to networking to customer relations; testing and certification of the middle school students; and all the procedures, training, and call-tracking software required to establish a student-run help desk to support the school’s technology infrastructure.

At the same time, this program helps schools establish a local technical help desk, saving the school time and money. This type of partnership involving Dell, the school, and the student is a benefit for all. The value of the Student TECH CORPS Program is that it provides students with skills to help them compete in the job market, while schools get trained and certified technical support.

The nine public school districts receiving a Dell Student TECH CORPS grant include Seattle, Washington; Austin, Texas; Chicago, Illinois; New Orleans, Louisiana; Charleston, South Carolina; Greeneville, Tennessee; Manassas, Virginia; Baltimore County, Maryland; and Las Cruces, New Mexico.

**Dell-Winston School Solar Car Challenge**

Hands-on experiences in science and technology are important ways for students to understand the relevancy of technology in their lives. A leading program that pushes students to engage in real-world research, communication, and problem solving is the Dell-Winston School Solar Car Challenge, named “One of America’s 10 Most Innovative Education Programs” by *Technology and Learning* magazine.

According to its founder, Dr. Lehman Marks, “Programs like the Dell-Winston [School] Solar Car Challenge help teach high school students the 21st century skills they need to be successful in the future—whether it’s to become the scientists and engineers of tomorrow or wherever their paths may lead.”

The 2003 Challenge was won by the Houston, Mississippi, “Sundancer” team. The 9-day race began on July 15 at Dell’s headquarters in Round Rock, Texas, and concluded 1500 miles later in Cocoa, Florida, at the Florida Solar Energy Center. The Sundancer solar car was designed and built by high school students from Houston, Mississippi, population 3903. During the 9-day race, the team achieved a top speed of 64 miles per hour (mph) and averaged 23.1 mph. In addition, the Winston School solar car recently participated in the 2003 World Solar Challenge in Australia and was the first high school solar car team to complete the 9-day race.
The Dell Team in the Community

Dell strives to be a good corporate citizen in the communities where its employees live and work, and we maintain several initiatives to help us invest resources in these communities. The One Dell: One Community program mobilizes thousands of Dell employee volunteers worldwide in support of community needs. Dell’s annual Employee Giving Program raises funds for hundreds of local, national, and global nonprofit organizations; diversity programs; environmental programs; corporate sponsorships; and the corporate, charitable Dell Foundation.

The Dell Foundation

Chartered in 1995 as the charitable arm of the company, the Dell Foundation focuses on equipping youth for the digital world by providing grants to nonprofit agencies in the locations where the majority of employees live and work. In addition, the Foundation runs an ongoing volunteer program that mobilizes thousands of Dell employees worldwide in support of community needs and an annual Employee Giving Program that benefits hundreds of local, national, and global nonprofit organizations.

The Dell Foundation seeks to fund collaborative and innovative solutions to community and children’s issues. As such, the Foundation’s innovative programs give youth opportunities for experiencing the digital world. Recognizing that there are fundamental prerequisites to children’s ability to learn and excel in a world driven by the digital economy, the Foundation’s strategy focuses on empowering youth for the digital world based on basic building blocks for success.

Global Community Involvement Week (GCIW)

Launched in 2002 to encourage community engagement and employee unity globally, GCIW is an annual, global employee call-to-action. Dell employees around the globe are encouraged to “get engaged” in their local communities as one Dell team. In 2003, over 7100 employees from 23 countries devoted approximately 70,000 volunteer hours to their community during GCIW. Activities ranged from employees in Denmark cleaning the Copenhagen Canals, the U.S. Legal team helping at the Humane Society, Michael Dell reading to 4-year-old students, the Canadian team sorting food at the food bank, Dell India employees conducting an AIDS telethon, and many other various activities.

Team-Building Match Program

To encourage and recognize team building volunteerism, Dell provides a financial contribution to nonprofit organizations that host Dell volunteer teams. In 2003, the Dell Foundation made over 30 contributions to nonprofit organizations.

Dell VolunteerMatch Site

Dell uses the Internet to connect employees with local nonprofit organizations that need volunteer assistance. By providing and promoting an online database of volunteer opportunities to meet virtually every employee’s interests, Dell significantly increases the likelihood that an employee will volunteer for the first time and on a continual basis. In 2003, approximately 1387 direct connections were made between Dell U.S. employees and the nonprofit organizations of their choice—just through this tool.
Regional Highlights

In each region, Dell employee engagement programs reflect the needs of the local communities and the interests of Dell employees:

• As a partner to the “Mazahuas de Choteje” Area, the Dell Mexico team aims to support community development for this area. Dell team members make contributions to support the essential needs of an individual child.

• In Panama, Dell employees collected different items for charity. For the Leonidas Delgado Vargas School, a school where children live in extreme poverty, employees organized a collection of school supplies for the children. For a local orphanage, Fundación Hogar de Niñas de la Capital, Dell employees collected different dry food items like rice, flour, sugar, canned goods, and beans.

• The Dell China Design Center (CDC) team in Shanghai volunteers and makes donations to a senior citizens home. The ‘Tian Shan Jie Dao’ Retirement Service Center was selected to be the recipient of the Dell CDC Charity donation. Funds were used to purchase appliances for the residents of the home.

• The Dell Canada team volunteers at The Scott Mission, preparing and serving meals. In addition to serving and assisting in the food bank, employees have assisted with sorting, repackaging, and organizing the clothing area.

• Dell Denmark recently launched a matching program whereby if a Dell Denmark employee financially supports a local fundraising program, Dell Denmark will match the amount contributed.

• The Dell Germany team collected clothes and toys for Offenbach, an organization that provides safe houses for women and their children who are victims of domestic violence.

• The Dell Italy team has donated portable computers for a children’s hospital in Milan. The computers will be used by parents who give birth prematurely, so that they can check and monitor their babies remotely when they cannot be in the hospital.

• In Brazil, Dell’s Digital Citizen Program provides technical computing education to youth and teenagers from low-income communities through eight Information Technology Technical Schools (ETIs). Dell employees financially sponsor students to attend the program and volunteer their time to teach Junior Achievement and job-transition courses at the schools.

DELL’S ENVIRONMENTAL AWARDS AND RECOGNITION

Dell believes that our work on sustainable business practices is a journey without end. We are honored to have been recognized by stakeholders in this process along the way:

• Keep Austin Beautiful recognized Dell with an Honorable Mention in the Recycling Category at the 2004 Keep Austin Beautiful Annual Awards Luncheon for Dell’s 2003 recycling event in Austin, Texas. (February 2004) http://www.keepaustinbeautiful.org/

• The Government of Ireland’s Minister for the Environment recognized Dell as an industry leader at a consumer donation program launch. As part of the donation program, Dell Ireland will work through Reusable Technology Centre (RT Centre) in a program modeled on the U.S. relationship with the National Cristina Foundation. (January 2004) http://www.atireland.ie/rtcenter/ OR http://www.dell.ie/donate

• The U.S. Environmental Protection Agency highlighted Dell’s work on the “Plug-In to eCycling” campaign at the 2004 Consumer Electronics Show. (January 2004) http://www.epa.gov/epaoswer/osw/conserve/plugin/

• The Occupational Health and Safety Administration (OSHA) certified three of Dell’s buildings in Round Rock, Texas (buildings 1, 2, and 3), as part of OSHA’s Voluntary Protection Plan (VPP) Program. The VPP Program is one of the most stringent health and safety management programs that U.S. companies can apply for. Dell is currently working on a plan to certify our other facilities in the U.S. under this program. (December 2003) http://www.osha.gov/dcsp/vpp/
- The Recycling Alliance of Texas recognized Dell with the “Outstanding Recycling Special Event” award as part of their Recycling Leadership Awards program. (October 2003) http://www.recycletx.com
- Dell was also ranked as No. 5 on Fortune’s “Most Admired” list of companies in the U.S. and worldwide.
- Dell received the Exemplary Volunteer Efforts (EVE) Award from the Office of Federal Contract Compliance Programs for 2003.

Dell recently received the U.S. Department of Labor’s Exemplary Voluntary Efforts (EVE) award for its recruitment, mentoring, career development, and community outreach initiatives. Pictured are Dell team members that participated in the EVE application process to highlight Dell’s exemplary and innovative efforts in diversity.

**Participation in National/Regional ENERGY STAR® Promotions**

Dell recently received recognition for participation in the ENERGY STAR Million Monitor Drive. With this program, Dell continues to expand our product offerings that feature energy efficient attributes that further contribute to GHG emissions reduction. Worldwide at Dell facilities, beginning in February 2001, Dell has installed or upgraded over 60,000 computers with the default 20-minute sleep state enabled for monitors. It is also Dell’s policy that all future desktop computers for internal use will come with the 20-minute monitor sleep state enabled.

**2003 ACCA-CERES North American Sustainability Reporting Awards**

Dell received “Best Environmental Report” for our last report entitled, *Creating a Model for Sustainability*. This award was presented to Dell on behalf of the Association of Charted Certified Accountants (ACCA) and the Coalition for Environmentally Responsible Economies (CERES). The purpose of the awards program is to reward best practice on transparency by giving recognition to those organizations that report environmental, social, or sustainability information in the most complete and credible way.

**Advanced Work Safety Enterprise in Xiamen Torch High-Tech Zone in 2003**

As one of the top five enterprises in terms of safety performance among those in the zone in which there are about 300 enterprises, the Dell China Customer Center (CCC) was recognized as an Advanced Work Safety Enterprise in the Torch High-Tech Zone in Xiamen City. China’s Work Safety Law is well enforced, and the law-required “Safety First, Prevention Top Priority” policy is well executed. There were no Chinese OSHA-recordable (reportable) occupational injuries or illnesses at CCC in 2003.
## SUMMARY OF GOALS, TARGETS, AND CHALLENGES

<table>
<thead>
<tr>
<th>Area</th>
<th>Goal/Objective</th>
<th>Fiscal Year 2005 Target</th>
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</thead>
<tbody>
<tr>
<td>Product End-of-Life Management</td>
<td>Provide product end-of-life management solutions that reduce environmental impact.</td>
<td>Increase product take-back by 50 percent.</td>
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<td></td>
<td>Refer to page 26 for further information on DfE goals and status.</td>
<td>Eliminate all other RoHS substances in 2006.</td>
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<td>Reduce the amount of lead shipped per display by 20 percent over three years.</td>
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<td>Eliminate halogenated flame retardants in desktop computer, portable computer, and server chassis plastic parts by year-end 2004.</td>
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<td></td>
<td></td>
<td>Set ENERGY STAR® enabling features as the default setting on all OptiPlex™ desktop computers worldwide.</td>
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<tr>
<td>Environmental and Health and Safety (EHS) Programs</td>
<td>Partner with suppliers to improve their EHS programs.</td>
<td>See all Tier 1 suppliers certified to ISO 14001 (Environmental Management Systems) and to OHSAS 18001 or a similar standard (health and safety management systems).</td>
</tr>
<tr>
<td>Sustainable Business</td>
<td>Incorporate sustainable practices into Dell's activities, products, and services.</td>
<td>(1) Maintain global ISO 14001 certification for manufacturing and logistics; (2) Expand Environmental Management System into product development; (3) Others to be determined.</td>
</tr>
<tr>
<td>Workplace Health and Safety</td>
<td>Continue to improve employee health and safety programs.</td>
<td>Continue to reduce recordable-injury and lost-work-day case rates as compared to the previous year.</td>
</tr>
<tr>
<td>Regulatory Compliance</td>
<td>Operate in full compliance with all laws and regulations.</td>
<td>Receive zero fines related to environmental, health, and safety regulations.</td>
</tr>
<tr>
<td>Pollution Prevention</td>
<td>Maintain high waste recycle and reuse rates at Dell manufacturing facilities.</td>
<td>Continue to recycle or reuse greater than 80 percent of all manufacturing wastes.</td>
</tr>
<tr>
<td>Greenhouse Gas (GHG) Emissions</td>
<td>Reduce Dell's contribution to GHG emissions.</td>
<td>Achieve GHG emissions reductions through programs aimed at reducing power consumption of our products, conserving energy and purchasing “Green Energy” in our operations, and optimizing transportation.</td>
</tr>
</tbody>
</table>

### Challenges

It is important to also note areas that we recognize will provide challenges as they are addressed this year.

A summary of these are:

- Driving for a National Financing solution for electronics waste in the U.S.A.
- Implementing balanced controls with our supply base to ensure compliance to our newly created Supplier Principles.
- Ensuring that as restricted chemicals are removed from products, the substitutes are themselves not hazardous and product reliability is equal to or better than their predecessors.
- Developing a more automated environmental data management system to process the vast amount of sustainability metrics associated with Dell's global operations.
- Staying ahead of the global legislation, standards development, and market requirements on all sustainability topics.
# ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACCA</td>
<td>Association of Charted Certified Accountants</td>
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<td>AeA</td>
<td>American Electronics Association</td>
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<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>ANG</td>
<td>Asian Employee Network</td>
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<tr>
<td>ANZ</td>
<td>Dell Australia/New Zealand</td>
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<td>APJ</td>
<td>Dell Asia-Pacific/Japan</td>
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<td>ARB</td>
<td>Asset Recovery Business</td>
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<td>ARS</td>
<td>Asset Recovery Service</td>
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<td>ASL</td>
<td>Dell America Service Logistics</td>
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<td>B.R.I.D.G.E.</td>
<td>African American Employee Network</td>
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<td>BEE</td>
<td>Black Economic Empowerment</td>
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<tr>
<td>BITKom</td>
<td>German Association for Information Technology Telecommunications and New Media E.V.</td>
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<td>BMS</td>
<td>building management system</td>
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<tr>
<td>CAFOD</td>
<td>Catholic Agency for Overseas Development</td>
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<td>CD</td>
<td>compact disc</td>
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<td>CALCE</td>
<td>Computer Aided Life Cycle Engineering Electronic Products and Systems Center</td>
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<td>CCC</td>
<td>Dell China Customer Center</td>
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<tr>
<td>CDC</td>
<td>Dell China Design Center</td>
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<tr>
<td>CD-ROM</td>
<td>compact disc read-only memory</td>
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<tr>
<td>CD-RW</td>
<td>compact disc re-writable format</td>
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<td>CEA</td>
<td>Consumer Electronics Association</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>CERES</td>
<td>Coalition for Environmentally Responsible Economies</td>
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<tr>
<td>CFCs</td>
<td>chlorofluorocarbons</td>
</tr>
<tr>
<td>CO₂</td>
<td>carbon dioxide</td>
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<tr>
<td>COD</td>
<td>chemical oxygen demand</td>
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<tr>
<td>CRT</td>
<td>cathode-ray tube</td>
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<tr>
<td>CSTMBC</td>
<td>Central and South Texas Minority Business Council</td>
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<tr>
<td>DAO</td>
<td>Dell Americas Operations</td>
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<td>DIE</td>
<td>Design for Environment</td>
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<td>DFO</td>
<td>Dell Factory Outlet</td>
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<td>DFS</td>
<td>Dell Financial Services</td>
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<tr>
<td>DIN</td>
<td>German Institute for Standardization</td>
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<tr>
<td>DNN</td>
<td>Dell News Network</td>
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<tr>
<td>DTI</td>
<td>U.K. Department of Trade and Industry</td>
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<td>DVD</td>
<td>digital versatile disc</td>
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<tr>
<td>EEOC</td>
<td>U.S. Equal Employment Opportunity Commission</td>
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<tr>
<td>EHS</td>
<td>Environmental and Health and Safety</td>
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<td>EIA</td>
<td>Electronic Industries Alliance</td>
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<td>EICTA</td>
<td>European Information &amp; Communications Technology Industry Association</td>
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<td>EMCC</td>
<td>Environmental Management Committee</td>
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<tr>
<td>EMEA</td>
<td>Dell Europe, Middle East, and Africa</td>
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<td>EMF</td>
<td>Dell’s European Manufacturing Facility</td>
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<tr>
<td>EMS</td>
<td>Environmental Management System</td>
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<tr>
<td>EPA</td>
<td>U.S. Environmental Protection Agency</td>
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<td>EPS</td>
<td>Expanded Polystyrene Packaging Group</td>
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<td>ETIs</td>
<td>Information Technology Technical Schools</td>
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<td>E.U.</td>
<td>European Union</td>
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<tr>
<td>e-waste</td>
<td>electronics waste</td>
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<tr>
<td>FEC</td>
<td>Federal Electronics Challenge</td>
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<tr>
<td>FY</td>
<td>fiscal year</td>
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<tr>
<td>GCIW</td>
<td>Global Community Involvement Week</td>
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<tr>
<td>GEMC</td>
<td>Global Executive Management Committee</td>
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<tr>
<td>GEMI</td>
<td>Global Environmental Management Initiative</td>
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<tr>
<td>GHG</td>
<td>greenhouse gas</td>
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<tr>
<td>GRI</td>
<td>Global Reporting Initiative</td>
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<tr>
<td>HCFCs</td>
<td>hydrochlorofluorocarbons</td>
</tr>
<tr>
<td>HDPUG</td>
<td>High-Density Packaging User Group</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HVAC</td>
<td>heating, ventilation, air conditioning</td>
</tr>
<tr>
<td>ICT</td>
<td>information and communications technology</td>
</tr>
<tr>
<td>IEC</td>
<td>International Electrotechnical Commission</td>
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<tr>
<td>IEEE</td>
<td>Institute of Electrical and Electronics Engineers</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>ITAC</td>
<td>Information Technology Association of Canada</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
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<tr>
<td>ITI</td>
<td>Information Technology Industry Council</td>
</tr>
<tr>
<td>JEDEC</td>
<td>JEDEC Solid State Technology Association (formerly known as the Joint Electron Device Engineering Council)</td>
</tr>
<tr>
<td>JEITA</td>
<td>Japan Electronics and Information Technology Industries Association</td>
</tr>
<tr>
<td>K–12</td>
<td>kindergarten through grade 12</td>
</tr>
<tr>
<td>kg</td>
<td>kilogram</td>
</tr>
<tr>
<td>KWh</td>
<td>kilowatt hours</td>
</tr>
<tr>
<td>LCD</td>
<td>liquid-crystal display</td>
</tr>
<tr>
<td>LCD TV</td>
<td>liquid-crystal display television</td>
</tr>
<tr>
<td>LED</td>
<td>light-emitting diode</td>
</tr>
<tr>
<td>MBA</td>
<td>Masters of Business Administration</td>
</tr>
<tr>
<td>MBEs</td>
<td>Minority Business Enterprises</td>
</tr>
<tr>
<td>ME</td>
<td>Ministry for the Environment</td>
</tr>
<tr>
<td>mph</td>
<td>miles per hour</td>
</tr>
<tr>
<td>MWBEs</td>
<td>Minority and Women Business Enterprises</td>
</tr>
<tr>
<td>NEMI</td>
<td>National Electronics Manufacturing Initiative</td>
</tr>
<tr>
<td>NMC</td>
<td>Swedish Association of Environmental Managers</td>
</tr>
<tr>
<td>NO&lt;sub&gt;x&lt;/sub&gt;</td>
<td>oxides of nitrogen</td>
</tr>
<tr>
<td>NRC</td>
<td>National Recycling Coalition</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>OHSAS</td>
<td>Occupational Health and Safety Assessment Series</td>
</tr>
<tr>
<td>P.R.I.D.E.</td>
<td>Gay, Lesbian, Bi-sexual, and Transgender Employee Network</td>
</tr>
<tr>
<td>PBDEs</td>
<td>polybrominated diphenyl ethers</td>
</tr>
<tr>
<td>PC</td>
<td>personal computer</td>
</tr>
<tr>
<td>PCBs</td>
<td>polychlorinated biphenyls</td>
</tr>
<tr>
<td>PCTs</td>
<td>polychlorinated terphenyls</td>
</tr>
<tr>
<td>PVC</td>
<td>polyvinyl chloride</td>
</tr>
<tr>
<td>R3</td>
<td>Dell’s Reduce, Reuse, and Recycle initiative</td>
</tr>
<tr>
<td>RoHS</td>
<td>European Union’s Restrictions on Hazardous Substances directive</td>
</tr>
<tr>
<td>RoR</td>
<td>Rest of Regions</td>
</tr>
<tr>
<td>RT Centre</td>
<td>Reusable Technology Centre</td>
</tr>
<tr>
<td>SAM</td>
<td>Sustainable Asset Management</td>
</tr>
<tr>
<td>SARS</td>
<td>Severe Acute Respiratory Syndrome</td>
</tr>
<tr>
<td>SB 20</td>
<td>California’s state legislation, Senate Bill 20</td>
</tr>
<tr>
<td>TCO</td>
<td>The Swedish Confederation of Professional Employees</td>
</tr>
<tr>
<td>TD</td>
<td>Teachta Dála (a member of the Irish government)</td>
</tr>
<tr>
<td>U.K.</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>U.S.</td>
<td>United States</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>United States of America</td>
</tr>
<tr>
<td>UBA</td>
<td>Germany’s Federal Environment Agency</td>
</tr>
<tr>
<td>UPS</td>
<td>uninterruptible power supply</td>
</tr>
<tr>
<td>USB</td>
<td>universal serial bus</td>
</tr>
<tr>
<td>USFF</td>
<td>Ultra Small Form Factor</td>
</tr>
<tr>
<td>USITO</td>
<td>United States Information Technology Office</td>
</tr>
<tr>
<td>VOCs</td>
<td>volatile organic compounds</td>
</tr>
<tr>
<td>VPP</td>
<td>OSHA’s Voluntary Protection Plan Program</td>
</tr>
<tr>
<td>W.I.S.E.</td>
<td>Women in Search of Excellence Employee Network</td>
</tr>
<tr>
<td>WEEE</td>
<td>European Union’s Waste of Electrical and Electronic Equipment directive</td>
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</tbody>
</table>