



## Alzheimer's Rates Rise to More Than Five Million

According to a new Alzheimer's Association report, the greatest risk factor for Alzheimer's Disease (AD) is increasing age. With 78 million baby boomers beginning to turn 60 last year, it is estimated that someone in America develops AD every 72 seconds.

These estimates and other trends are published in "2007 Alzheimer's Disease Facts and Figures" at [www.alz.org](http://www.alz.org).

Additional highlights include:

- Alzheimer's is now the seventh leading cause of death in the US and fifth leading cause of death for those over age 65.
- Prevalence could soar to 7.7 million people by 2030, more than the population of 140 of the 236 United Nations countries.
- States with the largest numbers of deaths due to AD in 2003 were (1) California, (2) Florida, (3) Texas, (4) Pennsylvania, and (5) Ohio.
- Direct and indirect costs amount to more than \$148 billion annually -- more than the annual sales of any retailer in the world excluding Wal-Mart.

Harry Johns, President and CEO of the Alzheimer's Association considers AD "the health care crisis of the 21st century."

But there is hope. With nine drugs currently in Phase III clinical trials and advancements in diagnostic tools, there is significant potential to change the landscape of Alzheimer's Disease prevalence.

## Patent Lawsuit Filed over Bluetooth

In January, the University of Washington Research Foundation (WRF) filed suit against Matsushita Electric Industrial Company of Japan, Samsung Electronics of South Korea, and Nokia of Finland.

WRF, which helps Washington State research institutions capture value from their emerging technologies through intellectual property management and start-up investment activities, claims that the three electronics giants have sold handsets, headsets and laptops in the U.S. using CSR Bluetooth chips that infringe on radio frequency receiver patents owned by the University.

Bluetooth is a communications standard that lets various electronic devices connect when they are relatively close to each other. The technology is distinguished in products by a blinking blue light, and involves the use of a radio frequency for wireless exchanges of data between cell phones, computers, headsets and other devices.

(The name refers to a Scandinavian king of the 10th century who unified tribes in Denmark, Sweden, and Norway.)

The lawsuit seeks unspecified damages and was filed Dec. 21. Reports on it were published Dec. 23 by the Seattle Post-Intelligencer and on Wednesday by Dow Jones and The Seattle Times.

The court filing followed three years of fruitless informal attempts to resolve the issue, said Michael Lisa, WRF's principal lawyer.

According to the lawsuit, Bluetooth-based computers, cell phones and headsets made by the three companies have violated four patents, including one that was issued for research done in the mid-1990s by Edwin Suominen when he was an undergraduate student at Washington. All four patents are now held by the foundation.

Lisa said the three companies could argue that they are not violating the patents, sign a license and begin paying royalties or buy Bluetooth chip sets from Broadcom Corp. of Irvine, Calif., the only chip manufacturer that has licensed the technology.

The three manufacturers named as defendants use chip sets made by CSR PLC of Cambridge, England, which has not licensed the disputed technology. CSR has not actually been sued by WRF as it does not sell the chips directly in the US. The company said it was looking closely at the legal documents, but refused to comment further, according to a report in Forbes.com.:

The case is Washington Research Foundation v. Matsushita Electric Industrial Co., No. C06-1813.

Sources: [Yahoo News](#), [Seattle Times](#), and [Seattle Post-Intelligencer](#).

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## IFI issues rankings of top US patent assignees

*173,772 Patents Issued in 2006 — An Average of 476 Per Day*

IFI Patent Intelligence, a Wolters Kluwer Health business, has compiled the world's top-ranked U.S. patent winners. IFI's preliminary rankings for the 35 leading organizations are posted on the company's website, [www.ificlaims.com](http://www.ificlaims.com).

2006 Rank	2006 Patents	Organization	2005 Rank
1	3,651	IBM	1
2	2,453	Samsung	5
3	2,378	Canon	2
4	2,273	Matsushita Electric	4
5	2,113	Hewlett-Packard	3
6	1,962	Intel	7
7	1,810	Sony	11
8	1,749	Hitachi	8
9	1,717	Toshiba	9
10	1,612	Micron Technology	6

## Weird patents

**US 6,175,625** – 57 years filing to issuance

Issued January 16, 2001, "Control circuits for electric coding machines" was filed on December 15, 1944. The claims for this cryptographic machine are unusual in that all 21 are independent of one another. As it happens, this patent is likely similar to the Enigma machine patent that only recently issued. In both cases, evidently, a secrecy order issued by the precursor to the National Security Agency pulled the sensitive applications and sat on them until no longer considered a threat to National Security, according to Ron Kaminecki of Thomson Scientific.

## MIT puts everything online

In March 2007, MIT announced plans to make its entire 1,800-course curriculum available online by year's end. The university has made the contents of some courses available on the Web since 2002. Some 1.5 million independent learners log on to the MIT OpenCourseWare site each month.

An OpenCourseWare is a free and open digital publication of high quality educational materials, organized as courses. The OpenCourseWare (OCW) Consortium is a collaboration of more than 100 higher education institutions and associated organizations from around the world creating a broad and deep body of open educational content using a shared model.

Who are MIT's independent learners? One MIT calculation found that 17% are educators at other schools, 32% are students elsewhere, and 49% are self-learners. About 40% of MIT alumni use the site,

says Steve Carson, the program's director. "Usually they take courses they didn't have time for while they were students here," he says. Courses are free; no course credit is granted.

Other learners come from outside the United States, from Antarctica to Darfur. The highest domestic traffic comes from leading high-tech states Massachusetts and California, Carson says.

Excerpted from [InformationWeek](#), March 17, 2007 (From the March 19, 2007 issue), by W. David Gardner

See also: [OCW Website](#).

## Supreme Court acts on patents

When the US Supreme Court gets involved in patent decisions, it's big news. In January, the Court ruled 8-1 in the *MedImmune v Genentech* case, which could have broad implications for those who hold or license US patents.

The ruling comes as American businesses, academia, government, and the Supreme Court itself are engaged in heated debate over whether too many bad patents are granted and whether the explosion of patents stifles US innovation.

The justices took a stand in favor of more aggressive policing of the patent system, handing new power to those who challenge patents and potentially undermining the value of intellectual property owned by branded drug makers, universities, and other companies.

The issue was whether companies that license patent rights can sue to challenge the validity of the patent without first breaching their license agreement -- an action that can leave them open to crippling damages. The appeals court for federal patent cases has said licensees must take that risk before they bring suit. The Supreme Court disagreed, saying licensees could sue without breaching the license agreement first. Some legal experts say this could significantly increase patent litigation and lead to the invalidation of more patents.

Still, only large corporations who can afford litigation, will likely challenge patents following this decision, and these cases therefore will remain a minor occurrence, many experts predict. As John Fraser, president of Association of University Technology Managers, told *The Scientist*, "This court case offers up another tactical-level opportunity for the licensee...but from the company's viewpoint it's probably cheaper to pay the royalties instead of paying for the lawsuit."

Excerpted from [The Financial Times](#).

See also: [The Scientist](#), 18 January 2007.

[Patently-O](#) (blog) January 10, 2007.

[Case No. 05-608](#), January 9, 2007.

## Qualcomm races to retool the mobile phone

Qualcomm has single-mindedly focused on its patented Code Division Multiple Access (CDMA) cellular technology, which is only now starting to bring useable wireless data links to mobile enterprise users.



So it may come as a surprise that Qualcomm has just as single-mindedly been on an acquisition binge for the last 18 months for technologies that often have little to do directly with the CDMA, Wideband CDMA (WCDMA) and cellular radio chipsets that have been its extremely profitable bread and butter for 15 years. Qualcomm has been adding a range of wireless, content and media technologies designed to make the mobile phone both more personal and networked than the personal computer.

The acquisitions coincide with Paul Jacobs taking over in mid-2005 as Qualcomm CEO from his father, and Qualcomm founder, Irwin Jacobs. In a statement at the time, Jacobs said that new products and technologies will "enhance the mobile phone's role as the most personal electronic device in a world where wireless, computing, entertainment and consumer electronics are converging."

Acquisitions of companies such as Airgo Networks and the Bluetooth division of RF Micro Devices, combined with Qualcomm's own innovations, are paving the way for a mobile phone that's a powerful computer with extensive voice and data capabilities, one which can tie directly to enterprise data and applications via wireless broadband networks.

Two key moves are intended:

- Beef up connectivity outside the cellular modem. "In a converged world, the 3G WAN needs other pieces," says Michael Concannon, vice president of strategic products with Qualcomm's CDMA Technologies division. Secondly,
- Make the phone itself a powerful computer. Qualcomm's efforts include improved power efficiency, vastly expanded memory, new always-on displays and more intuitive user interfaces.

Qualcomm's next-generation processor platform, its ARM-based Snapdragon battery-powered chipset, handles a wide range of processing chores for the phone. Concannon says the goal is to maximize processing power in MIPS while minimizing electrical power in milliwatts.

The company prides itself on a systems approach: designing the full complement of radio, processor, antenna and power management components, then working hand-in-glove with handset makers, base station suppliers and the carriers that deploy both, to ensure the chipsets work flawlessly.

Other Qualcomm acquisitions have included:

- U.K.-based **Elata**, for its software to organize, control and deliver a wide range of content and applications over various types of cellular nets.
- **Qualphone**, a maker of an application, based on IP Multimedia Subsystem, that can integrate voice, text, image and video on 3G handsets on WCDMA and CDMA2000 networks.
- **nPhase**, a Chicago vendor of machine-to-machine telemetry software that will let enterprise wirelessly monitor over cell networks everything from truck fleets to assembly-line robots.

Excerpted from [PCWorld.com](http://PCWorld.com).

## 12 crackpot ideas ... that just might work

Technologies that push the envelope of the plausible may pique our curiosity—yet the would-be crackpots who concoct them more often become objects of derision than of adulation.

Tinkering along the fringe of possibility, hoping to solve the impossible or apply another's discovery to a real-world problem, these free thinkers navigate a razor-thin edge between crackpot and visionary. They transform our suspicion into admiration when their ideas are authenticated with technical advances that reshape how we view and interact with the world.

IT is no stranger to this spirit of experimentation. An industry in constant flux, IT is pushed forward by innovative ideas that yield advantage when applied to real-world scenarios. Sure, not every revolutionary pose sets the IT world afire. But for every dozen paper-based storage clunkers, there's an ARPAnet to rewrite IT history—itsself a time line of what-were-they-thinkings and who-would-have-thoughts.

It's in that tenor that we take a level-headed look at 12 technologies that have a history of raising eyebrows and suspicions. We assess the potential each has for transforming the future of the enterprise.

1. Superconducting Computing
2. Solid-state Drives
3. Autonomic Computing
4. DC Power
5. Holographic and Phase-Change Storage
6. Artificial Intelligence
7. E-Books
8. Desktop Web Applications
9. Project Blackbox
10. Quantum Computing and Quantum Cryptography
11. Semantic Web
12. Total Information Awareness

Excerpted from [Information World](http://Information World), February 19, 2007.

## Website of the Month

<http://antoine.frostburg.edu/chem/senese/101/index.shtml>

### General Chemistry Online

A well-designed, educational site, by Dr. Frederick A. Senese, Professor, Department of Chemistry, Frostburg State University, Frostburg, Maryland.

Why consult this instead of Wikipedia or a common dictionary, online or otherwise? This site has several unique and easy-to-use features to differentiate it:

- Common compound library – enter the name of a compound and retrieve data about the molecule, including links to PubChem, Webbook, and MSDS info.
- Practice exams – including “ten ways to pass your next exam,” sure to be popular with students of all ages.
- Construction kits – lets you assemble problem solutions, chemical formulas, chemical equations, and other chemical objects piece by piece or step by step; Macromedia’s free Flash Player needed to view.
- Slide Index – lists summary-oriented, PowerPoint-like fact pages.
- Toolbox – offers a “popup” Periodic Table, Gas Law calculator, and GraphPad, which builds a simple graph from your laboratory data and emails a GIF file to you for inclusion in reports or Web pages; simple linear regression is also included.

An online tool since 1997, the site also offers a “Tutorial Index” of tutorials, drills, and quizzes and “Reverse Links” of pages that list the site on their website.

## 'Plutoed' chosen 2006 word of the year

Pluto is finally getting some respect - not from astronomers, but from wordsmiths.

In its 17th annual words of the year vote, the American Dialect Society voted “plutoed” as the word of the year. To “pluto” is to demote or devalue someone or something, as happened to the former planet Pluto when the



General Assembly of the International Astronomical Union

decided Pluto no longer met its definition of a planet.

“Our members believe the great emotional reaction of the public to the demotion of Pluto shows the importance of Pluto as a name,” society President Cleveland Evans said.

“Plutoed” won in a runoff against “climate canary,” defined as “an organism or species whose poor health or declining numbers hint at a larger environmental catastrophe on the horizon.”

The text of the entire press release, previous words of past years, and other interesting trivia are provided at [www.americandialect.org](http://www.americandialect.org).

## 'Looming crisis' from NIH budget

*Four years of flat funding causing major shifts in US biomedical research, university officials and senior scientists warn Congress*

The “stagnated” budget for the National Institutes of Health (NIH), now entering its 4th straight year of flat-funding, is creating a “looming crisis” that is forcing scientists to downsize labs and abandon innovative work, and alienating the next generation of young researchers, a panel of university officials and senior researchers told Congress recently (March 19, 2007).

“Promising research is now being slowed or halted,” said Edward Miller, dean of Johns Hopkins Medicine. “We are seeing veteran scientists spending time not in labs but on the fundraising circuit. We are seeing young researchers quitting academic research in frustration, having concluded that their chances of having innovative research funded by NIH are slim to none,” Miller told a Capitol Hill news conference.

In a report prepared by 20 leading researchers from a consortium of nine academic institutions and universities, benefits of increased NIH funding on biomedical innovations is outlined, as well as a warning of the negative implications should the present budget be left unaddressed. ([CLICK HERE](#))

While Congress and the White House doubled NIH's budget from 1998 to 2003, funding has failed to keep pace with inflation. NIH's budget has hovered at around \$28 billion, but once inflation is factored in, its purchasing power has fallen 13% over the past four years. According to the report, an average of eight out of ten NIH grant applications currently go unfunded, while at the National Cancer Institute, only 11 percent of grants are funded. “This is a recipe for disaster,” Miller said.

The report was released following a hearing of the Senate Appropriations Subcommittee on Labor, Health & Human Services, and Education, during which NIH Director Elias A. Zerhouni acknowledged the budget difficulties.

Stephen M. Strittmatter, a professor of neurology and neurobiology at Yale University's School of Medicine, told legislators that his laboratory's discovery of the NogoReceptor molecule occurred during NIH's budget-doubling period when he and other researchers were more willing to take risks. Today, he said, “researchers shy away from real discoveries. They've become worriers, not explorers.”

Robert Siliciano, an infectious disease expert at Johns Hopkins University School of Medicine, told the Senate panel that “in the past, I would spend about 30 percent of my time applying for grants; now about 60 percent of my time is spent preparing applications,” he said.

Source: [The Scientist](#), 20 March 2007, by Ted Agres ([mail@the-scientist.com](mailto:mail@the-scientist.com)).