

E.I.T. Links

From “self-service” to “room service”:
How Emerging Information Technology is changing the way we live

“The future influences the present just as much as the past.”
 - Friedrich Nietzsche

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Editor's Note:

Please feel free to pass on the newsletter to those interested. *Anyone wishing to receive future editions of the newsletter, please email me at: sknode@gmail.com.*

Note: This newsletter contains links found during May 2010, and all of the links were working at time of publication.

Remember, all links here can be found at www.steveknode.com/news_updates.htm and previous newsletters are available at: <http://www.steveknode.com/newsletters.htm>.

Anyone seeking more frequent updates can follow my ‘tweets’ via my twitter account, <http://www.twitter.com/sknode>

Links for this Issue

AI General

- [UAB's Braintrust Adds Artificial Intelligence to Fraud Fight](#) – At United American Bank, the fight against anti-money laundering and fraud was becoming a tough job to handle through non-technological risk assessments—mostly handled by a single executive—so it's turned to an automated behavior-based approach to locate suspicious transactions.

- [Web 3.0, A Witness Protection Program For Artificial Intelligence](#) – Excellent overview of the coming ‘smart’ semantic web, including an outstanding video interview with the experts!

Brain

- [Scientists Race to Create Cat-Level Artificial Brain](#) – Pentagon-backed scientists aim to create a human-like machine, at some point. But they are starting out with the goal of crafting artificial intelligence on the level of a cat's brain.
- [Mind-Reading Bots by 2020](#) – In Japan, a short cryptic statement in the *Nikkei*, Japan's largest business newspaper, made a startling announcement about a somewhat different vision of the future — a goal to make available commercial mind-reading devices and **personal assistant bots** within the next 10 years.

Educational Technology

- [Telepresence Education for a Smarter World](#) – Ever more immersive online collaboration technologies such as VoIP, IPTV, videoconferencing, online sensor networks (IoT, Internet of Things), 3D Virtual Reality (VR) technologies developed by the gaming industry, and Augmented Reality, are converging to create powerful telepresence platforms.

Information Overload

- [The Digital Universe Decade -- Are you Ready? \(video\)](#) – The yearly update from IDC on how much data is being created still amazes me. Watch this video presentation to see exactly how overwhelming the coming data explosion will be. There is a link to a digital copy of the report. (NOTE: I have long followed each year's update, fascinated by the tremendous exponential growth of data.)
- [The Coming Data Explosion](#) – Another excellent report, outlining how the 'internet of things' will add massive amounts of data to be analyzed.

[Information Visualization](#)

- [Tracking H1N1 through the Internet](#) – Next flu season, mining Internet sites such as Facebook, Twitter, and Google news may provide a faster way to track the spread of H1N1 than reports from official agencies like the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC). That's the idea behind a new generation of disease surveillance tools, including HealthMap, an interactive online system that trawls the Internet for news, both formal and informal, tracking a virus virtually in real-time.
- [Wikitude Drive Beta – Test Drivers Wanted](#) – A heads up display with automated driving may be soon on the horizon. Wikitude Drive, the first mobile Augmented Reality (AR) satellite navigation system with global coverage, launches for test drivers.

[Intelligent Agents](#)

- [Smart agents for smart grids: an application of game theory](#) – Intelligent agents, employing aspects of game theory, are being tested for improving resource usage. With smart meters deployed, the agents can capture information and exchange strategies to optimize cost and usage.

[Knowledge Management](#)

- [Why the Government Needs to Better Understand Emerging Technological Trends](#) – The president has underlined the need to reform the way government does business and brought together private and public sector leaders at a recent forum. The government needs to stay ahead of the times in undertaking reforms.

[Kurzweil](#)

- [An Interview with Ray Kurzweil: Inventor, Bestselling Author, WorldFuture 2010 Speaker](#). – The latest from the main man for the future, Ray Kurzweil. Read about his very insightful predictions for energy, food production, housing, etc.

[Machine Learning](#)

- [Software that Learns by Watching](#) – Overworked and much in demand, IT support staff can't be in two places at once. But software designed to watch and learn as they carry out common tasks could soon help--by automatically performing the same jobs across different computers.

[Manufacturing](#)

- [Top 10 YouTube Videos About Printing 3D Objects](#) – Wonderful videos showing the tremendous progress in the arena of 3D printing. How long until we can 'print' out virtually anything (including body parts?)—not as long as you might think!

[Medical](#)

- [New Discovery Prevents Spread Of Cancer](#) – New discoveries in the medical world occur almost daily. This breakthrough in preventing the spread of cancer cells seems impressive.
- [Regenerative Medicine 1: Stem Cells](#) – Part 1 of an excellent series on the impact of regenerative medicine.
- [Regenerative Medicine 2: Stem Cell Therapies](#) – Part 2 of an excellent series on the impact of regenerative medicine.

MISC

- [Stickybits: Portal to Another Dimension or Graffiti for Nerds?](#) – This software allows you to add content to almost any physical object.
- [The Substance Found in Pencils will Speed Up our Computers One Thousand Fold](#) – Graphene offers the possibility of speeding up computers by several orders of magnitude. We're talking about that smartphone in your pocket having a thousand times the computing power of your desktop PC, but using no more power than it does right now.
- [12 Events That Will Change Everything. Made Interactive](#) (video presentation) – Interesting perspective on 12 events that could change the world. The presentation is extremely insightful.
- [Siggraph Emerging Technologies Trailer](#) (video) – Short video outlining the upcoming Siggraph conference focus on emerging technologies.
- [Why Google's 'Smart TV' Will Succeed](#) – Google is getting into the TV business by developing a smarter interface.
- [Man Infects Himself with \(Computer\) Virus](#) – In a rather bizarre experiment, Dr. Mark Gasson, a cybernetics expert at the University of Reading, deliberately infected himself (by way of an RFID chip implanted in his wrist) with a benign computer virus. This was part of an experiment designed to show how implantable bionic devices are susceptible to computer viruses.
- [MIT's top 10 emerging technologies](#) – MIT has announced their top 10 emerging technologies for the year.

Nanotechnology

- [The Third Assessment Of The National Nanotechnology Initiative](#) – An excellent report, updating progress and challenges in the nanotechnology arena.

- [The Nanotech Gamble](#) – A special report outlining many of the possibilities and potential risks associated with nanotechnology.

Quantum Computing

- [Quantum teleportation achieved over 16 km](#) – Scientists in China have succeeded in teleporting information between photons further than ever before. They transported quantum information over a free space distance of 16 km (10 miles), much further than the few hundred meters previously achieved.

Robots

- [NASA's android astronaut assistant prepares for launch](#) – NASA is preparing to send its first humanoid robot into space. Robonaut first twitched to life in September 1999 and, after a decade of tests, the 140-kilogram R2 model will finally be launched to the International Space Station on the space shuttle Discovery's last mission in September.
- [Robots: 50 Years of Robotics \(Part 1\) - mp3](#) – Interviews with 12 scientists about the most remarkable developments in robotics over the last 50 years and their prediction for the next half-century, part 1.
- [Robots: 50 Years of Robotics \(Part 2\) - mp3](#) – Interviews with 12 scientists about the most remarkable developments in robotics over the last 50 years and their prediction for the next half-century, part 2.
- [Meet QB, Your New Robotic Coworker](#) – QB is a “remote presence robot”—a remote-controllable puppet designed to be the eyes and ears of telecommuters, workers in branch offices, and others who collaborate with people in an office when they aren't in the office.

Sensors

- [Project explores the 'internet of things'](#) – There is now a digital tool that allows users

to 'tag' objects with digital media.

- [10 Internet of Things Blogs To Keep An Eye On](#) – As the Internet of Things continues to progress rapidly, these blogs provide an excellent source of information about developments.
- [Internet of Things Can Make Us Human Again](#) – We've entered an era where the cost of sensors, processors and transmitters are so low that it's fast becoming cost effective to put them inside everything, even the clothes we wear. Even our own toothbrush may soon sense and communicate socially about where it is and how it's being used in space and time.
- [Tim O'Reilly Explains the Internet of Things](#) – Thought leader Tim O'Reilly, the man widely credited with popularizing the term Web 2.0, gave an opening keynote talk about the Internet of Things at his organization's MYSQL conference. (NOTE: There is a short video here with a link to the full keynote presentation.)
- [Smart meters need better user interface](#) – Still more developments in the world of smart sensors. Even though there's been a lot of talk about the smart grid, consumers don't appear familiar with smart **meters** or aren't yet sure of the actual benefit from them.
- [Sensor & RFID Apps of the Future, Part 1](#) – Part 1 of a series outlining the applications of smart sensors, this time to the Food and Supply Chain, the Retail market, and Social Networking.
- [Sensor & RFID Apps of the Future, Part 2](#) – Part 2 of a series outlining the applications of smart sensors, this time to the Buildings and Objects, Environment, and Energy.
- [Giving new meaning to 'smart car'](#) – Researchers have launched a project to investigate how the automotive industry can connect a vehicle's multiple microprocessors, which currently work in isolation, to create a "cognitive car" that can predict vehicle failures before they happen, redirect drivers to less congested routes and

help reduce traffic accidents.

- [Why HP Thinks Sensors Will Lead to The Next Big Wave of Computing](#) – HP is planning a project, named CeNSE (Central Nervous System for the Earth) consisting of a worldwide network of sensors that is connected to the Internet, which in turn creates a feedback loop for objects and people. This sensor data would allow companies to "build awareness" and perhaps even deliver services that people will pay for.

Simulation

- [Europe's Plan to Simulate the Entire Planet](#) – The 'Living Earth Simulator' will mine economic, environmental and health data to create a model of the entire planet in real time.

Virtual Reality

- [The real world of Second Life](#) – [Life 2.0](#), a carefully-produced documentary about the real physical lives of Second Lifers.
- [Code-Free Augmented Reality in Under 5 Minutes \[VIDEO\]](#) – Video that shows a developer building an AR application without any programming language in just shy of five minutes.

Web 2.0

- [Researchers Create Tool for Dealing with Twitter's "Information Overload"](#) – Researchers at the Palo Alto Research Center (PARC) are developing a new Twitter client application that aims to derive meaning from the next-ending influx of tweets. The application, called "Eddi," automatically groups tweets for you into topics mentioned either explicitly or, unlike most Twitter clients that also provide topic browsing, *implicitly*.
- [Wikipedia Goes 3D](#) – Only Wikipedia, the massively collaborative online encyclopedia, would want its users to know what's on the other side of its logo...in three dimensions.