E.I.T. Links

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

> "Not all problems have a technological answer, but when they do,
> that is the more lasting solution."
> **- Andrew Grove**

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Links for this Issue

AI General

- Unthinking Machines – Some of the founders and leading lights in the fields of artificial intelligence and cognitive science gave a harsh assessment last night of the lack of progress in AI over the last few decades.

Decision-making

- When There's No Such Thing as Too Much Information – In a modern economy, information should be the prime asset — the raw material of new products and services, smarter decisions, competitive advantage for companies, and greater growth and productivity. Is there any real evidence of a "data payoff" across the corporate world? It has taken a while, but new research led by Erik Brynjolfsson, an economist at the Sloan School of Management at the Massachusetts Institute of Technology, suggests that the beginnings are now visible.

Educational Technology

- University students fare better with interactive learning, study finds – It's not who's teaching your huge class that matters but how they teach it, a new study from the University of British Columbia says. The researchers who conducted the study say the stand-and-deliver lecture style that dominates many university classrooms should gradually be supplanted by a more interactive and immersive model that has students responding to class material in small groups.

- More on the value of Khan academy approach (video) – Forbes' comments on the value of the Salman Khan Academy videos. The value of the over 2,000 videos appears to be growing and developing.

Future

- 4 Trends Shaping the Emerging "Superfluid" Economy – Humanity and

technology continue to co-evolve at an ever increasing pace, leaving traditional institutions (and mindsets) calcified and out of date. A new paradigm is emerging, where everything is increasingly connected and the nature of collaboration, business and work are all being reshaped. In turn, our ideas about society, culture, geographic boundaries and governance are being forced to adapt to a new reality.

Information Visualization

- [Talking to the Wall](#) – An experimental interface from Microsoft turns any wall into an interactive surface.

Innovation

- ['PaperPhone': Cellphone of the Future?](#) – Developed with help from researchers at Arizona State University, the prototype of what the researchers call a "flexible iPhone" is made of super-thin, ultra-light bendable film, but makes calls, stores books and plays music.

Machine Learning

- [Ford Demos a Car that Learns](#) – Researchers at Ford are testing a hybrid gas-electric car that makes an educated guess at where you're going whenever you turn the key. They installed software that draws on prediction technology developed by Google in a plug-in hybrid Ford Escape SUV.

Medical

- [Sensing Brain Pressure without Surgery](#) One of the most important things to monitor in patients who've sustained a severe blow to the head or a serious hemorrhage is pressure in the brain. A research scientist at the Research Laboratory of Electronics at MIT hopes to change that with a new, noninvasive method for monitoring intracranial pressure.

MISC

- [Marijuana strains identified using artificial intelligence](#) – At StrainBrain.com, medical marijuana patients can upload pictures of their cannabis, and the web application will use a proprietary software system (similar to facial recognition technology) to automatically identify the strain and its medical uses, show locations where the strain can be purchased legally, and provide strain suggestions for similar strains.

- [Emerging Technologies 2011](#) – Technology Review has published its list of the most important emerging technologies for 2011.

- [Moore's Law safe into future as 3D 'Ivy Bridge' arrives](#) – Moore's Law, which says the number of transistors that can be placed on an IC doubles every two years is guaranteed long into the future. For the first time since the invention of silicon transistors more than 50 years ago, transistors using 3D structure will enter high-volume manufacturing.

- [Douglas Rushkoff: Program or Be Programmed](#) – This video of Douglas Rushkoff presents the real question which is, do we direct technology, or do we let ourselves be directed by it and those who have mastered it?

Neural Networks

- [New AI system increases the reliability of opinion polls](#) – Scientists have figured out a way to use an artificial intelligence-based system to make the results of opinion polls more reliable. The system uses a fuzzy neural network that uses a numerical and categorical imputation method to recreate incomplete datasets. This system attains much better results than the imputation methods currently being used in opinion polling.

Quantum Computing

- [Quantum Physics lies at the Core of Life](#) – Life, it turns out, has quite a lot to do with quantum mechanics, the area of physics first developed to understand what Albert Einstein and his contemporaries thought was some pretty strange behavior on the part of elementary particles like electrons. Since then, scientists have shown how quantum physics could, theoretically, lead to faster, more efficient and more secure computers — an area of study called quantum computing.

Robots

- [GeckoSystems Applying Mobile Robot Solutions to Reduce Healthcare Costs](#) – Care for infirm, chronically ill, and frail individuals with various potentially life threatening episodes is a significant problem throughout the world. Tech enabling care givers is a 21st century solution to this century old problem of cost effective family and societal healthcare. GeckoSystems new robotic wheelchair, or ChairBot(TM), which consists of a wheelchair equipped with several artificial intelligence systems.

Search Engines

- [The Human Body, Searchable in 3-D](#) – The first online 3-D interactive search tool of the human body was released today. It allows a user to view and navigate the human anatomy, male or female, down to the finest detail—from the muscles and deep muscles to the nerves, arteries, vessels, and bones.

Sensors

- [Smarter Cities and Smarter Buildings Demonstration](#) – This excellent presentation shows clearly how 'smarter' cities can benefit society.

- [Low-cost sensor can diagnose bacterial infections by odor](#) – Researchers at the University of Illinois have demonstrated a quick, simple method to identify infectious bacteria by smell, using a low-cost array of printed pigments as a chemical sensor.

- [Architecture that senses and responds](#) (TED talk) – With his team at SENSEable City Lab, MIT's Carlo Ratti makes cool things by sensing the data we create. He pulls from passive data sets -- like the calls we make, the garbage we throw away -- to create surprising visualizations of city life. And he and his team create dazzling interactive environments from moving water and flying light, powered by simple gestures caught through sensors.

- [A Nightshirt to Monitor Sleep](#) – A newly developed smart shirt detects the wearer's stage of sleep via respiration patterns.

Simulation

- [Creating the Future website](#) Links to many types of simulations and games used for education and work are here.

Virtual/Augmented Reality

- [Avanade Creates a Virtual Campus in Second Life](#) – Avanade began work with a vendor to build a dedicated virtual campus in Second Life to host virtual training, provide an alternative to expensive in-person training, and provide a global meeting place for Avanade employees spread across 24 countries. Within nine weeks, the campus was designed, developed, and released for pilot testing, and four weeks later achieved a positive ROI. The campus includes: a 50-seater auditorium; a 20-seater training center with five large breakout rooms; a student center for collaboration; interactive displays on the company, what it sells, how to learn, and fun learning

activities.

Web 2.0

- [Twitter Search Done Right by PostPo.st](#) – Trying to search for old tweets can be a pain. Twitter's own search engine brings back limited results. When you sign up for the service PostPost will determine 200 of your most relevant follows and index up to 400 tweets for each user. If some of the people you follow are also PostPost users then nearly all of their tweets will indexed. PostPo.st attempts to be as comprehensive a Twitter search engine that exists today.

- [How Color is Being Used](#) – Color is a smartphone app that enables you to share photos and videos with a group of people at the same location as you. Already, there have been a "wide array of use cases" for Color so far. They range from large gatherings (movie premieres, tech conferences, music concerts) to smaller groups (BBQs, "journalistic events" like the scene of a car fire, cooking groups).

- [How to Teach with Tech Tools](#) – Excellent article on how to incorporate web 2.0 technologies into the classroom.

- [Metrics take the guesswork out of Gov 2.0](#) Call it Gov 2.1. After a rush to get social media sites up and running in the name of openness and collaboration, agencies are now facing a hard reality: how to prove the worth of those efforts under the looming shadow of budget hawks. To do that, they'll need to answer a fundamental question: Does social media truly create value for agency missions or is it just another cool and unusual technology?

- [NASA starts first federal network on SlideShare](#) –The **NASA Universe** network that started May 16 on SlideShare provides links to the agency's videos, slide presentations and other documents shared from SlideShare channels sponsored by NASA headquarters and its 10 field centers.

- [Library of Congress introduces Jukebox](#) – The Library of Congress presents the National Jukebox, which makes historical sound recordings available to the public free of charge. The Jukebox includes recordings from the extraordinary collections of the Library of Congress Packard Campus for Audio Visual Conservation and other contributing libraries and archives.

- [Army Seeks Recruits in Social Media](#) – These days, the Army is getting social — if not quite that sociable — as potential recruits increasingly spend time with social media like Facebook, Flickr, Twitter and YouTube.