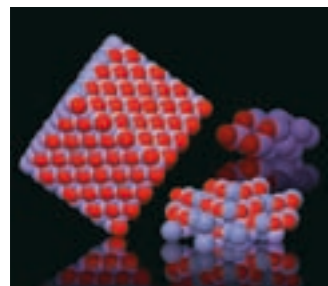


## Quadrocopter to the Rescue



Siemens and MIT have developed the quadrocopter, a miniturized helicopter that can inspect inaccessible installations and create 3-D digital models of complex interiors, Siemens Pictures of the Future reports. It uses lasers to scan its surroundings, video cameras for recording, and AI algorithms for image recognition. Basically a square wire frame, it is driven by a tiny engine block with four helicopter rotors on top. The vehicle is called a quadrocopter. Using lasers, it scans windows, walls, and machines; optical sensors and video cameras register every architectural detail. It maneuvers through the air on pre-planned paths, ready to sense and avoid obstacles that may appear in its path. The data it collects are processed to create precise 3D models of the environment.

## Online Toolkit for Materials Scientists



Thanks to a new online toolkit developed at MIT and the Lawrence Berkeley National Laboratory, any researcher can now find a material with specific desired properties far more easily than ever before. Using a website called the Materials Project, researchers can explore an ever-growing database of more than 18,000 chemical compounds. The site's tools can quickly predict how two compounds will react with one another, what that composite's molecular structure will be, and how stable it would be at different temperatures and pressures. The new tool could revolutionize product development in fields from energy to electronics to biochemistry, its developers say, much as search engines have transformed the ability to search for arcane bits of knowledge. The project is a direct outgrowth of MIT's Materials Genome Project, initiated in 2006 by Gerbrand Ceder, the Richard P. Simmons (1953) Professor of Materials Science and Engineering. The idea, he says, is that the site "would become the Google of material properties," making available data previously scattered in many different places, most of them not even searchable.

## BLOGGING HEADS

- <http://blogmaverick.com/>  
Mark Cuban on entrepreneurship
- <http://www.tompeters.com/>  
Tom Peters on management
- <http://calacanis.com/>  
Jason Calacanis on entrepreneurship
- <http://sethgodin.typepad.com/>  
Seth Godin on marketing
- <http://blog.guykawasaki.com>  
Guy Kawasaki on career
- <http://scobleizer.com/>  
Robert Scoble on technology
- <http://www.briansolis.com/>  
Brian Solis on new media
- <http://globaleconomicanalysis.blogspot.com/>  
Mike Shedlock on global economic trends
- <http://www.presentationzen.com/>  
Garr Reynolds on presentations
- <http://www.farmgateblog.com/>  
Stu Ellis on agriculture
- <http://stuartbruce.biz/>  
Stuart Bruce on PR
- <http://blog.brodzinski.com/>  
Pawel Brodzinski on project management

## How the Wealthy Earn Their Money

- 18 percent are financial professionals.
- 42 percent are executives, managers, or supervisors in nonfinancial businesses. More than half of those are in closely-held (presumably often small) businesses.
- 7 percent are lawyers.
- 6 percent are in medicine.
- 3 percent are in arts, media, or sports.
- Less than 1 percent are professors or scientists.

► <http://econ.williams.edu/>

WWW.



## POWER REDEFINED

IBM has announced the Blue Gene/Q supercomputer, with peak performance of 20 petaflops and 16 multi-processing core technology, marking it as one of the fastest supercomputers in the world and intended to solve the most challenging problems facing engineers and scientists. Nicknamed "Sequoia," Blue Gene/Q will be fully deployed in 2012 at Lawrence Livermore National Laboratory (LLNL), with a scalable peak performance up to 100 petaflops. It is expected to predict the path of hurricanes, analyze the ocean floor to discover oil, simulate nuclear weapons performance, and decode gene sequences.

## THE TRANSATLANTIC ECONOMIC COUNCIL

### MISSION

Created by a joint framework for advancing transatlantic economic cooperation, the Transatlantic Economic Council (TEC) is the primary plenary forum for economic dialogue between the United States and the European Union. The TEC works to facilitate agreement on a wide range of economically important issues managed through its Current Workplan. Meeting at least once per year, the co-chairs of the TEC – White House Deputy National Special Advisor for International Economic Affairs and European Commission Vice President for Trade – promote dialogue and agreement to further integrate the transatlantic economies. Across a spectrum of interrelated issues, the TEC seeks to eliminate trade barriers, implement best practices, harmonize standards, and develop market access.

### HISTORY

Following the 2007 U.S.-EU Summit, a Declaration on Enhancing Transatlantic Economic Integration and Growth laid the foundation for a growth driven agenda of cooperative dialogue. Since then, the TEC has built upon the historical and on-going transatlantic economic integration to identify new areas of cooperation.



## Energy Scenarios

Without a bold change of policy direction, the world will lock itself into an insecure, inefficient and high-carbon energy system, the International Energy Agency warned in the 2011 edition of the World Energy Outlook (WEO).

- The average oil price remains high, approaching \$120/barrel (in year-2010 dollars) in 2035.
- Oil demand rises from 87 million barrels per day (mb/d) in 2010 to 99 mb/d in 2035, with all the net growth coming from the transport sector in emerging economies.
- With oil production declining in all existing fields, an increasing share of liquid fuels will come from natural gas liquids and oil sands, with Russia's role as a supplier of natural gas more pivotal.
- In the WEO's central New Policies Scenario, which assumes that recent government commitments are implemented in a cautious manner, primary energy demand increases by one-third between 2010 and 2035, with 90% of the growth in non-OECD economies.

## Charges to Dream Of

Northwestern University engineers have created an electrode for lithium-ion batteries—rechargeable batteries such as those found in cellphones and iPods—that allows them to hold a charge up to 10 times greater and charge 10 times faster than current batteries; they could also pave the way for more efficient, smaller batteries for electric cars. The technology could be seen in the marketplace in the next three to five years, the researchers said. "We have found a way to extend a new lithium-ion battery's charge life by 10 times," said Harold H. Kung, professor of chemical and biological engineering. "Even after 150 charges, which would be one year or more of operation, the battery is still five times more effective than lithium-ion batteries on the market today."