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Welcome to the February edition of What's Emerging.

We have finally managed to fix our website problems so we have posted the article on oil pricing for this newsletter. Paul has been offering the following bet to three conferences he has presented at over the last six weeks:

"\$10 that the price of oil will fall below US\$40 a barrel sometime in the next three years".

So far he has had only one taker but he is happy to take the bet from any of our newsletter network.

We hope you find the newsletter interesting and useful and please feel free to pass it on to anybody you think would like to read it.

Paul Higgins, Sandy Teagle and Samantha Kyle-Little

Business Tip

37 signals is a software company supplying simple web based applications for business collaboration. Small scale use is free and larger scale use is paid for on a subscription basis. We have been playing around with the tools for a few weeks and they are very useful for small business people that travel a lot because they are hosted by 37 signals and so can be accessed from anywhere in the world on any computer. Check them out:

<http://www.37signals.com/>

Emerging issues from around the world

Click on the titles to read the full stories.

Critical Flaw in Firefox

Because we have been recommending people use the Firefox browser for security reasons we need to inform people that there is a critical flaw in Firefox 1.05 for people on Linux or Mac systems. If you have the automatic update turned on you will have already received the update and if you have upgraded to 1.05.01 then you are fine as well.

Are we finally moving to a cashless society?

Japan has seen a large rise in the number of people using smart cards or mobile phones enabled for purchase transaction. It may be that we are finally moving to the long predicted cashless society.

Hydrogen and Electricity from Biomass

Virent has announced that it is able to create hydrogen and electricity direct from biomass such as agricultural and tree waste using a one step process to produce gas that can be used to drive a generator. The concept still needs to be proved in practical applications but if it is commercially viable it will give a great boost to producing distributed power.

Intel uses advanced nanotechnology for its new chip

Intel has announced that they have built a new chip using 45nm wide transistor technology allowing them to fit one billion transistors on a chip the size of a fingernail. The chip is supposed to be in commercial production towards the end of 2007, and the story provides more evidence toward the continuation of Moore's law well into the future.

A Challenger to the Skype/Google System?

A start up company in Adelaide is challenging Google by having a clickable system that turns an advert or a phone number into an instant phone call between the two parties involved.

New Generation Lead Batteries

Lead batteries have long struggled with weight, cost and life issues. Firefly Energy has developed new lead battery technology which results in significant improvements in these limitations. They believe that with the existing infrastructure for manufacturing these kinds of batteries they can make them at a much lower cost than current options for hybrid motor vehicles.

Could robots build satellites and space station in space?

Japanese scientists are working on experiments to see if spider robots can be deployed in space, perhaps to build solar panel arrays that can beam energy back to earth.

Solar powered nano motor

A collaborative effort between international scientists has designed a nanomotor that runs on solar power. The motor consists of a dumbbell type of arrangement with a ring around the rod part of the dumbbell. When solar energy is introduced the ring moves up and down the dumbbell like a piston. While there is a lot of development to go, this device may power nano machines in the future.

Virtual communities have real economies

Multiplayer online games are growing significantly in popularity and may be pointing the way to future visions of virtual economies as envisioned by William Gibson in his novels. One game called Second Life is estimated to have real turnover of over A\$30 million a year between its players. People buy virtual clothes for their characters, or pay other players to amass points or gold for them.

Nanotechnology and agriculture

For those interested in the food industry and wanting to follow up our special edition on nanotechnology, this link goes to a series of white papers on nanotechnology in agriculture from a series of seminars at Michigan State University.

Using fire for cooling in developing countries

William Crawford has demonstrated a prototype device that he says can be built for US\$18 and can use a fire to produce a cooling effect. The fire heats a liquid coolant that turns into gas then passes through a one way valve. When this process is finished then the device is left to sit until the gas condenses. When placed into a food storage pot the heat energy from the food is used to push the gas through another one way valve back to where it came from, cooling the food. Simple technological advances and systems are sometimes overlooked in the modern world.

Community Based Wireless Access

Google, Skype and Sequoia Capital have invested US\$21 million into Fon which is a company that provides software and routers so individuals can share their wireless network with other Fon users. What these means is that you set up your wireless network so other Fon users can access your broadband connection and then when you travel you can log into other people's Fon networks, giving you free access when you are away from home.

Did warming of the earth cause a 300 yr long winter in Europe?

New computer modeling shows that the breaking of an ice dam may have caused a 300 year long cooling of the earth about 8200 years ago. The theory is that warming of the earth led to massive freshwater lakes from glacial melting and that these lakes finally broke through the ice that held them in and poured into the ocean altering the salinity. Scientists believe that such salinity changes can cause the gulf stream to slow or stop, thus stopping the transport of warm water from the equator towards Europe.

Dogs sniffing out cancer

Researchers are training dogs to smell the breath of lung and breast cancer patients and differentiate them from healthy people to get around some of the problems of standard cancer checks.

Biodegradable packaging moves into mainstream

Use of biodegradable plastics made from a variety of plants, primarily corn, is heading mainstream as a result of growing demand for environmentally-friendly packaging driven by consumers and recycling regulations, reduced cost and improved functionality of bioplastics. Last year price increases for conventional plastics as a result of increased cost of petroleum saw some bioplastics products reach full price competitiveness with the traditional oil-based packaging.

What Are We Writing About

This month's article examines the factors that will affect the future price of oil. There are six key factors that will affect supply and demand for global oil, and keeping an eye on them may be vital for your business. There are some that believe that we have already reached the peak of global annual oil production. If they are right then the mismatch between the demand for oil and its supply will cause havoc across the globe in the next few years. If not, it is still going to happen and you should be on the lookout for the right signals.

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