



Future Horizons Newsletter

November & December 2012

Contents Page

Industry News by Company	Page 03 - 09
Industry News & Trends	Page 10 - 13
East European News & Trends	Page 14 - 16
World Economic Round Up	Page 17
Future Horizons & Industry Events	Page 18

Industry News By Company

[Alcatel to Cut Nearly 5,500 Jobs](#)

PARIS—Telecommunications-equipment maker Alcatel-Lucent ALU.FR +2.57% said Thursday that it plans to cut nearly 5,500 jobs globally as it begins to implement steep cost cuts to help it return to profitability.

At a meeting of Europe-wide union representatives Thursday, Alcatel-Lucent executives outlined new details of a broader restructuring plan the company first announced in July that aims to cut €1.25 billion (\$1.64 billion) in costs by the end of 2013. As part of the plan, the company said it would slash 5,490 jobs world-wide, including 3,300 in Europe, the Middle East and Africa, union officials and an Alcatel-Lucent spokesman said.

The world-wide cuts would amount to 7.2% of Alcatel-Lucent's world-wide work force of 76,002 as of Dec. 31, 2011. But the ax will fall especially hard in France, where union officials said the company plans to eliminate 1,430 jobs, which would represent 15% of the company's French work force at the end of 2011, according to securities filings.

[AMD Launches Dual-Core Tablet Chips](#)

AMD has announced its entry into the lucrative tablet market with Z-Series accelerated processing unit (APU).

AMD's low-powered Z-60 chip will exclusively support Windows 8. AMD Z-60 is a 1GHz dual-core processor that boasts 80 Radeon graphics cores and has a 4.5W TDP.

It also features support for USB 3.0, 1080p playback and HDMI output. The chip will fit into form factors as thin as 10mm.

[Apple Inc. To Collaborate With TSMC For Quad Core Processors For Iphones](#)

Apple Inc. (NASDAQ:AAPL) plans to join hands with the Taiwan Semiconductor Manufacturing Company (TSMC) to source the state of the art quad core processors from the manufacturer. This development will result in making TSMC the only supplier of these types of chips for Apple in the next year or two.

Taiwan Semiconductor Manufacturing Company is globally renowned for its efficiency in 20nm chip technology. The Cupertino based company, Apple Inc, was in continuous efforts to verify the 20nm process of TSMC since August. According to latest press reports, Apple intends to initiate volume production in the fourth quarter of 2013.

[ARM Revives CISC Vs. RISC War With New 64-Bit Designs](#)

Just when you thought everything in the semiconductor sector that could happen had happened, the RISC vs. CISC war is rearing its head again with the introduction of 64-bit processors from ARM.

ARM, which has cleaned up in the mobile market over the past several years with the explosion in demand for low-power smartphone and tablet platforms, on Tuesday announced that it is finally bringing 64-bit to the mobile space after half a decade of development.

ASML to Buy Cymer for \$2.6 Billion to Boost Chip Technology

ASML Holding NV (ASML), Europe's largest semiconductor-equipment supplier, agreed to buy Cymer Inc. (CYMI) for 1.95 billion euros (\$2.6 billion), its biggest deal ever, to satisfy customer demand for more advanced chipmaking technology.

Cymer investors will get 1.15 ASML ordinary shares and \$20 in cash for each stock, the companies said today. That values Cymer at 72 percent more than the stock's close in New York yesterday. The shares jumped 57 percent to \$74.86 at 10:18 a.m. local time. ASML fell as much as 5.6 percent in Amsterdam.

Atmel Enhances Touch Capabilities For In-Car Control Systems

The Atmel® maXTouch® family, known for its superior performance and rich feature set, is now qualified for automotive applications, such as automotive touchscreens and touchpads used in center stack displays, navigation systems, radio human-machine interfaces (HMIs) and rear-seat entertainment systems.

maXTouch devices provide unlimited touch identification, fast response time, exacting precision, robust operation and low power consumption to touch-based designs.

The mXT768E and mXT540E automotive-qualified family members provide dedicated functionalities that meet specific automotive requirements. For example, due to the devices' superior noise immunity, designers can create shieldless sensor designs, thus reducing system complexity, cost and power consumption.

Chip Startup Calxeda Rakes In \$55M In Funding

Semiconductor startup Calxeda on Tuesday announced that it raised \$55 million in its latest funding round, with Austin Ventures and Vulcan Capital joining the ranks of investors in the company's ultra-low power ARM-based chip solutions for servers capable of running on as little as 5 watts of power.

Other investors in the company include ARM Holdings, Advanced Technology Investment Company, Battery Ventures, Flybridge Capital Partners, and Highland Capital Partners. Calxeda, which currently has about 100 employees, was founded in 2008.

Ericsson Cuts Jobs In Sweden

Ericsson has said it would cut almost 10% of its Swedish workforce, as it strives to improve profits and remain competitive in the crowded telecom-equipment market.

The majority of the 1,550 job cuts will be in its main networks division, as well as in research and development, sales and administration, Ericsson said. More than 17,000 of the company's 109,000 employees are based in Sweden.

"We must ensure that we can continue to execute on our strategy to maintain our market leadership, invest in R&D and meet our customers' needs," said Ericsson's human resources chief, Tomas Qvist.

News of the latest job cuts comes a day after Ericsson said it expects the total network-equipment market to grow at a rate of 3% to 5% between 2012 and 2015, while the

company continues to seek cost cuts to boost earnings. The company's net profit in the three months to Sept. 30 fell 43% to 2.18 billion Swedish kronor (\$327 million) as network sales fell 17% to 26.9 billion kronor due to weaker sales in parts of Europe, China, South Korea and Russia.

[Fujitsu : Semiconductor Releases Interface Bridge SoC Incorporating 10 Different Interfaces](#)

Yokohama, Japan, October 16, 2012 - Fujitsu Semiconductor Limited today announced the development of Interface Bridge SoC "MB86E631," which brings together a dual-core ARM® Cortex™-A9 processor and a host of different interfaces, all on a single chip. Sample quantities of the new product will begin shipping in late December 2012.

MB86E631 incorporates a total of 10 different interfaces, including USB, Serial ATA, PCI Express, Ethernet MAC, and TS. As a result, the new product is an LSI featuring performance and functionality that has been optimized for CPUs for transcoder LSI control, as well as for products requiring control of a wide variety of interfaces.

[Imagination Acquires US Chip Designer](#)

Imagination Technologies has bought the operating business of MIPS, the California-based chip designer, as the UK group looks to take on domestic rival Arm in the competitive market for processor chip designs.

Imagination will pay \$60m in cash for the US business, which specialises in home entertainment and networking, as well as the so-called "hardware architecture" for central processing units – the digital brain of electronic devices. As part of the deal, the UK chip designer will also receive 82 patents and a licence for the remainder of MIPS's patents.

[Imec Revolutionises KLA-Tencor's Lithography E-Beam Tool](#)

Imec has designed and fabricated an electrostatic micro-lens (lenslet) array for KLA-Tencor's anticipated Reflective Electron Beam Lithography (REBL) tool.

The REBL technology potentially enables a high throughput e-beam writing process for maskless lithography. The lenslet array is a key component for the parallelisation of the e-beam writing process. Functionality of the lenslet chip was demonstrated in KLA-Tencor's REBL e-beam column.

The lenslet consists of a densely packed array of 4µm deep cylindrical holes with a 1.4µm diameter and top spacing of only 200nm. The electron beam entering the lenslet holes is focused through a set of 4 ring electrodes.

[Increasing PC Security And Data Integrity - Trusted Platform Module Solution From Infineon Supports Windows 8](#)

Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY) today announced that its Trusted Platform Module (TPM) solution supports and secures the recently introduced Microsoft Windows 8 operating system. Infineon provides a complete solution based on Common Criteria certified TPM hardware and the corresponding software suite aiming at use in communication and office applications. In Windows 8, the TPM is used e.g. in the

Microsoft BitLocker Drive Encryption to protect the keys for the encryption of the hard disk. In addition, the TPM provides integrity verification during system boot.

With the release of Windows 8 the importance and role of TPM in the operating system is significantly increased. The TPM technology offers a cost-effective and tamper-proof hardware-based certified security solution, which provides a security level that is not achievable with software-based security solutions. Over the last years many new computing devices have been sold with a built-in trusted platform module chip. The Trusted Computing Group (TCG) estimates that more than 600 million PCs using a TPM were shipped until today.

Intel's Itanium Processor 9500 Breaks Barriers

In an era of unprecedented growth in data usage, businesses require powerful computing solutions that can deliver scalable and resilient performance to run IT's most mission-critical applications.

The new Intel Itanium processor 9500 series is more than twice as powerful as the previous generation. This makes it ideal for today's most demanding workloads, including business analytics, database, and large-scale enterprise resource planning (ERP) applications.

NXP And Murata Collaborate To Deliver Dual Interface RFID Solution

NXP Semiconductors N.V. (NASDAQ: NXPI) and Murata today announced a new addition to the Murata MAGICSTRAP® RFID module family incorporating NXP's UCODE I2C technology. In addition to delivering state-of-the-art RF performance, the bridge mode of the UCODE I2C chip uniquely enables a wireless communication link between the application processor and the UHF reader, enabling bidirectional and unlimited data transfer. The module provides consumer electronics products and white goods with both a consistent ID and the ability to perform zero-power configuration at any point in the value chain.

Based on passive UHF RFID standards, data can be read or written into the memory of the MAGICSTRAP+PC using a standard UHF reader, even while the device or appliance is switched off. Practically, this means that an electronics product can be configured for different languages and markets when already packed in a carton box and ready for shipment. By removing the need to configure products during assembly and when powered on, OEMs can make significant savings in manufacturing and logistics costs by responding precisely to regional and model demand.

Qualcomm Buys Assets Of EPOS

Chipmaker Qualcomm Inc. acquires certain assets of Israel-based EPOS Development Ltd, a developer of ultrasound technologies for input solutions, including pen, stylus and gesture recognition.

EPOS has developed digital positioning technology that enables device manufacturers to integrate advanced user input capabilities into a wide range of consumer devices.

The EPOS technology is based on the digital transmission of ultrasonic waves, enabling precise tracking by a receiver to enable multiple applications, according to Qualcomm.

STMicroelectronics, Audi Co-Operate On Semiconductor Innovation

Premium car maker Audi and STMicroelectronics have announced a strategic partnership to drive the pace of automotive innovation by creating advanced semiconductor solutions.

Audi and ST will co-develop semiconductor solutions in three key areas of automotive design: reduction of CO2 emissions, safety and security, infotainment and comfort. The collaboration of the companies aims to drive innovation actively while also securing product quality, guaranteeing supply and reducing time to market.

STmicroelectronics First To Market With New Generation Of High-Performance Dual-Interface Chip-Card Microcontrollers

STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications and a top-three provider of smart card ICs, is leading the next generation of secure dual-interface chip-card microcontrollers combining advanced computing power with high contactless performance.

ST's new ST31 series is the first chip-card microcontroller to combine the latest ARM® SecurCore™ SC000™ processor that delivers outstanding computing performance and energy efficiency, support for contact or contactless operation, and support for MIFARE™, MIFARE DESFire™ and Calypso transport-card standards enhancing multi-application versatility. The ST31's extremely low-power architecture helps improve communication speed and reliability in contactless applications, in which the card circuitry is powered by RF energy from the reader.

Samsung doubles Q3 smartphone shipments over Apple

Samsung Electronics Co. Ltd shipped more than twice as many smartphones as Apple Inc. in the third quarter, as the South Korean company dramatically expanded its lead over its U.S. rival, according to ABI Research.

Samsung's lead over Apple in smartphone shipments has expanded in the past year thanks to Samsung's range of offerings and the popularity of its newer models such as the GALAXY S III. In the third quarter of last year, Samsung shipped about 35 per cent more handsets than Apple, according to ABI.

Samsung Has Begun Production Of 10 Nm 64 GB Memory Chips For Mobile Devices

Samsung Semiconductor, the part of the company that makes the various bits and bobs that are essential to making your smartphone actually work, has just announced that they've begun producing 10 nanometer 64 GB storage chips. They're insanely fast, capable of hitting 260 megabytes per second read speeds and 50 megabytes per second write speeds. Best of all, since these chips use ultra tiny 10 nanometer transistors, they're 20% smaller than chips from the previous generation.

Now for the important question: When are these chips going to end up in a smartphone sitting on a shelf at your local electronics store? That wasn't specified, but considering these things started rolling off the factory lines "late last month", it's likely going to take at least a quarter or two until they get put into a retail device. Best case scenario, the Samsung Galaxy S IV will use this stuff. Worst case scenario, it'll be in the Galaxy Note III. This is all speculation by the way.

TEL & IMEC Expand STT-MRAM Collaboration

Imec and Tokyo Electron (TEL), a supplier of semiconductor production equipment, have further extended their collaboration. This follows an announcement made regarding imec forming a new collaboration with CANON ANELVA to further develop STT-MRAM.

The new agreement comprises joint R&D on advanced STT-MRAM (spin-transfer torque magnetoresistive random access memory) within imec's research and development program on emerging memory technologies.

The collaboration between imec and TEL on STT-MRAM technology is an excellent opportunity for TEL to accelerate the development of its next-generation etch tools for high-density emerging memory technologies.

Texas Instruments Cutting 500 Jobs In India

First global technology company to establish its presence in India, Texas Instruments, is reportedly cutting over 500 jobs in India as part of its global cuts. In India, the company has close to 1,800 employees.

Last week, the semiconductor firm announced its plans to lay off about 1,700 employees globally in an effort to shift focus away from its struggling mobile chip business.

"We are unsure of the number, but there are nearly 500-700 people working in the mobile chip division here," a source on condition of anonymity told The New Indian Express, adding that all of them could go since they work on mobiles.

TSMC Unveils 20nm And CoWoS Reference Flows For Chip Developers.

Taiwan Semiconductor Manufacturing Co. has announced that the readiness of two foundry-first reference flows, one supporting 20nm and another supporting CoWoS (chip on wafer on substrate) technologies. The new 20nm reference flow will help chip designers to start making 20nm chips with double patterning, whereas CoWoS will enable multi-die integration for complex chips.

"These reference flows give designers access to TSMC's advanced 20nm and CoWoS technologies. Delivering advanced silicon and manufacturing technologies as early and completely as possible to our customers is a chief goal for TSMC and its OIP design ecosystem partners," said Cliff Hou, vice president of R&D at TSMC.

TSMC Acquires Land For 450mm Wafer Fab Project

Taiwan Semiconductor Manufacturing Co. (TSMC) on Oct. 23 bought for over NT\$3.2 billion (US\$106 million) 14.32 hectares of land at the Jhunan Park, an extension of the Hsinchu Science Park in northern Taiwan, for its 450mm wafer fab.

For the first time, world No.1 silicon foundry acquires land outright for manufacturing expansion, instead of leasing, suggesting its resolution to accelerate the development of next-generation chip-making technology.

TSMC executives pointed out that the acquisition is motivated by setting aside land in advance for next-generation technology projects, adding that the Hsinchu Science Park has run out of land for new construction.

Wolfson Micro Rallies On Apple Hopes

Shares in Wolfson Microelectronics rallied by as much as 5 per cent after it emerged that one of its products was being used by Apple – sparking hopes of an improved relationship between the Edinburgh-based chipmaker and the US technology group.

The renewed relationship between Wolfson and Apple came to light after analysts at ABI Research, a technology market research firm, dismantled Apple's new Lightning adapter for the iPhone 5 and found a Wolfson chip.

Wolfson had previously provided audio chips for Apple's early iPods, before Apple scrapped the relationship in 2008, opting not to use the technology in later versions of its MP3 player. At the time, the decision knocked almost a quarter off the Edinburgh-based group's market value, and Wolfson has not made a pre-tax profit since.

Xsens And Stmicroelectronics Demonstrate World's First Wearable Wireless 3D Body Motion Tracking System

Xsens, the leading innovator in 3D motion tracking technology and products, and STMicroelectronics, a global semiconductor leader serving customers across the spectrum of electronics applications and the world's top manufacturer of Micro-Electro-Mechanical Systems (MEMS)[1], are demonstrating the world's first wearable wireless 3D body motion tracking system based on consumer-grade MEMS combo sensors at Electronica 2012 in Munich, Germany.

Xsens built the demonstrator by combining Xsens' patented sensor-fusion algorithms and wireless protocols with STMicroelectronics' iNEMO-M1, the 9-axis "Smart System" combining iNEMO MEMS motion combo sensors and the STM32 microprocessor from ST

Industry News & Trends

Lithium Battery Gains More Power With 'Crushed' Silicon

Rice University researchers develop 'crushed' porous silicon powder that could make rechargeable lithium batteries cheaper and more powerful.

The team led by Rice engineer Sibani Lisa Biswal and research scientist Madhuri Thakur reported that their silicon-based anode achieved 600 charge-discharge cycles at 1,000 milliamp hours per gram (mAh/g)—a significant improvement over the 350mAh/g capacity of current graphite anodes.

In-Car Wi-Fi To Rise Eight Fold By 2019

In-car Wi-Fi is expected to increase eight fold over the next seven years in North America and Western Europe, according to IMS Research.

While the Wi-Fi attach rates in North America and Western Europe are still relatively low with only a small number of manufacturers announcing the inclusion of Wi-Fi as a standard or as an optional extra, it is likely that Wi-Fi will follow a similar trend to Bluetooth, meaning over the next seven years attach rates in new cars will ramp up quickly. Historically, Wi-Fi was not considered for in-car applications, however, several factors have come into play which are creating a significant opportunity for Wi-Fi automotive applications

Breakthrough: "Petrol From Air"

A small UK company has claimed that it can create petrol from fresh air. If the claim is real then this could be a "breakthrough" in true sense.

A company in the north of England, Air Fuel Synthesis (AFS), has developed air capture technology to create synthetic petrol, reported Phys.org.

The company has been running a demonstration plant in Stockton-on-Tees where it has produced five liters of petrol since August, manufacturing gasoline from carbon dioxide and water vapour

Return Of 'Cassette Tapes'!

Are cassette tapes dead? Wait...before reaching any conclusions you should know the importance of this object (generally used in 80s and 90s to play music) in the 21st century.

Researchers at Fuji Film and IBM have created a prototype cassette that works as a storage device, storing up to 35 terabytes of data or about 350 lakh books' worth of information—on a cartridge that measures 10x10x2cm.

The data is stored on a strip of magnetic tape that has been coated in particles of barium ferrite.

Capture Your Entire Life In 30-Second Snaps

Your entire life could be captured in pictures taken every 30 seconds by a camera a little bit larger than a (large) postage stamp clipped to your lapel.

Swedish start-up Memoto on Tuesday launched a Kickstarter project aimed at raising \$50,000 to bring the lapel-camera to market. It has received backing from Passion Capital as well as business angels.

The 1.4-square-inch device, which will be available in orange, gray or white, comprises a 5-megapixel camera, a GPS receiver and a battery the company claims lasts two days on a charge. Every 30 seconds the camera wakes up and takes a picture. Images are uploaded via a micro USB cable connection to your computer and from there to the cloud, where they can be viewed in a timeline via a mobile app for Android or iOS.

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IBM Touts Smaller, Faster Alternative To Silicon

According to scientists at IBM, carbon nanotechnology paves the way for commercial fabrication of dramatically smaller, faster and more powerful computer chips.

For the first time, more than ten thousand working transistors made of nano-sized tubes of carbon were precisely placed and tested in a single chip using standard semiconductor processes.

Transparent Carbon Nanotubes Enable Thin Touchscreens

Rice University researchers developed a method to produce nearly transparent films of electrically conductive carbon nanotubes that may be suitable for flexible electronic displays and touchscreens, according to the paper published this month in the American Chemical Society journal, ACS Nano.

The lab of Rice researcher Matteo Pasquali found that slides dipped into a solution of pure nanotubes in chlorosulfonic acid (CSA) left them with an even coat of nanotubes that, after further processing, had none of the disadvantages seen with other methods.

Robotic Surgeons Obsolete Scalpel

Robotic surgeons are already performing simple procedures using Intuitive Surgical's daVinci platform (shown here), but by 2023 even the most complicated procedures will be performed by robots. The holy grail of robotic surgery will be operating on a living heart while it beats, instead of stopping and restarting it as is necessary today. Robot

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surgeons are also mapping out the circuitry in the nervous system in hopes of producing microchips based on the same blueprint.

For instance, researchers at the Massachusetts Institute of Technology (MIT) and Georgia Institute of Technology (Georgia Tech) are collaborating to use robots to do input-output analysis on living neural networks to create a parts list and electrical wiring diagram of the brain, which can then be used to create cognitive computers.

[New Tech May Double Smartphone Battery Life](#)

A team of engineers is working towards extending the battery life of smartphones – one of the biggest concerns smartphone users have today.

Massachusetts-based Eta Devices, a company co-founded by two MIT electrical engineering professors Joel Dawson and David Perreault, have come up with an alternative amplifier technology that can extend smartphone battery life, reports Phys.org.

[Your Ear Is A Battery...Can Power Tiny Devices!](#)

Deep inside your ear is a battery; and scientists, for the first time, have harnessed this "natural battery" to power implantable electronic devices without impairing hearing, and even used to to deliver medicines and therapies.

The ear converts a mechanical force—the vibration of the eardrum—into an electrochemical signal that can be processed by the brain; the biological battery is the source of that signal's current. Located in the part of the ear called the cochlea, the battery chamber is divided by a membrane, some of whose cells are specialised to pump ions. An imbalance of potassium and sodium ions on opposite sides of the membrane, together with the particular arrangement of the pumps, creates an electrical voltage.

[Ireland's 4G Auction Exceeds Expectations](#)

Ireland has sold its 4G high-speed mobile-phone spectrum to four existing operators for €55m in an auction that netted more cash than expected for its heavily indebted government.

Vodafone, Telefónica, Meteor and Three all won significant slices of spectrum in a competition, which shares many similarities with the UK's 4G auction due to begin early next year.

“The price achieved was well in excess of the minimum prices we set on the spectrum. This is an expression of confidence in the Irish market,” said Alex Chisholm, chairman of Ireland's communications regulator. The four mobile operators will pay licence fees of €481m this year to the Irish exchequer, a boost for a country in the grip of an financial crisis and that needed a bailout from the European Union and International Monetary Fund.

[Researchers Develop Safer, Cheaper Lithium Battery](#)

Finland's Aalto University researchers have developed a method for producing lithium batteries that replaces the harmful methylpyrrolidone (NMP) solvent, which is

traditionally used in the manufacturing of electrodes, with water, providing a cheaper and more environmentally friendly process than previously used methods.

Removing the harmful solvent from the production process makes the production of batteries simpler and safer for employees. Production costs of batteries can be decreased by as much as 5 per cent. Some of this savings comes from the reduced cost of transporting and recycling harmful chemicals and a lower risk of exposure to employees.

Researchers Claim Flexible Circuit Breakthrough

Researchers from the University of Pennsylvania have shown that nanoscale particles, or nanocrystals, of the semiconductor cadmium selenide can be "printed" on flexible plastics.

Electronic circuits are typically integrated in rigid silicon wafers, but flexibility could open up a wide range of applications, say researchers.

The research was led by David Kim, a doctoral student in the Department of Materials Science and Engineering in Penn's School of Engineering and Applied Science; Yuming Lai, a doctoral student in the Engineering School's Department of Electrical and Systems Engineering; and professor Cherie Kagan, who has appointments in both departments as well as in the School of Arts and Sciences' Department of Chemistry.

Triboelectric Effect Can Charge Mobile Phones

Georgia Tech researchers have demonstrated that power can be harnessed by using the triboelectric effect that creates static electricity from friction—like a phone bouncing around in your pocket into enough power to charge a cell phone battery.

Zhong Lin Wang, a professor of materials science at Georgia Tech, has been working on the problem for several years, mostly focusing on piezoelectric materials that generate an electrical voltage under mechanical stress, but this didn't yield enough power to be really useful.

UK Silicon Carbide DC-DC Converters For Cars

A British consortium is working on a flexible converter for electric and hybrid cars using UK-made power transistors.

“The success of a research project to develop a multi-voltage DC-DC converter has led to funding from the UK government’s Technology Strategy Board to develop the technology for manufacture,” says Oxfordshire-based Prodrive, which is leading the project.

In the multiport design, power can flow in or out of any port or any combination of ports.

“The demonstration converter is 97 percent efficient and has 58kW peak flow under acceleration or braking between the traction motor and the batteries, plus a 25kW interface for supercaps, plus a 1kW interface for 12V ancillaries,” adds Peter Tibbles, research manager at Prodrive.

East European News & Trends

[Rusnano's \\$40m Nanotech Center To Open In Stavropol](#)

23 Oct '12 A \$40m nanotech center is scheduled for completion by the end of this year in Stavropol, the center of the North-Caucasus Federal District, Southern Russia, portal Kuban Live from the neighboring Krasnodar region reports.

The Fund for Infrastructure and Educational Programs run by Russia's largest nanotech company, Rusnano (also known as the Rusnano InfraFund), is reportedly kicking in \$24.6m of the total investment.

By the end of this year, the last stage of the project will require \$5.8m, the source says.

[Central And Eastern Europe Emerge As Strong Bases For Electronic Manufacturing Service Providers, Finds Frost & Sullivan](#)

Cost reduction is the most important driver for the outsourcing market. The electronics manufacturing services (EMS) model yields an average of 10% to 15% in savings, which drives outsourcing from OEMs to EMS providers. By outsourcing, OEMs can reduce their capital expenditure and investments on property, plant, equipment, automation systems, infrastructure, and thereby convert fixed costs to variable costs. New analysis from Frost & Sullivan (<http://www.smt.frost.com>), Analysis of the European Electronic Manufacturing Services (EMS) Provider Market, finds that the markets earned revenues of 45.80 billion in 2011 and estimates this to reach 68.19 billion in 2016.

The outsourcing trend in industrial, medical, automotive and other sectors is set to offer more business opportunities for EMS providers in Europe, notes Frost & Sullivan Research Analyst Nupur Sinha. Cost savings is one of the key factors for medical equipment and automotive electronics OEMs favouring outsourcing. OEMs may outsource some or all of their lower-margin activities, ranging from procurement, PCB and box assemblies, testing, and even the repair and warranty of sold products. By doing so, they can focus on the R&D of new products and the refinement of their current products, and can participate more aggressively in sales and marketing, where they can provide differentiation. OEMs can also access the advanced manufacturing, equipment, facilities and logistics capabilities set up by EMS providers without additional capital investments.

[Panasonic To Close Czech LCD Panel Plant](#)

Japanese electronics giant Panasonic (IW 1000/31) will halt production of LCD panels in the Czech town of Zatec in December, laying off up to 615 people as the company focuses on smaller products, the CTK Czech news agency said Wednesday, quoting a company spokeswoman.

Panasonic, which has produced liquid crystal display (LCD) panels in Zatec, northwestern Czech Republic, since 2007, "is winding down its activity in the Triangle industrial park," CTK quoted spokeswoman Helena Sukova as saying.

Gazprom Reduces Price Of Gas To Poland

Gazprom has significantly cut its gas price to Poland, in the latest sign that the Russian gas monopoly's cherished link of gas prices to the price of oil is being eroded.

Poland's PGNiG, the country's leading gas supplier, and Gazprom said they had signed a deal that would reduce contract prices after "taking into account current market prices" of gas.

Mikolaj Budzanowski, Poland's treasury minister, said the price cut amounted to 15 per cent. The price reduction will save the country about \$1bn a year.

Signs Of Hope For Eastern European Tech Sector

VIENNA—If you were to light up a map of Europe based on the buzz generated by its tech sector, the U.K. would burn bright alongside the Baltic rim countries. France might be flickering, the Med countries would be a bit gloomy. A warming glow would come from Turkey and even Russia. But a Stygian blanket would lie across most of central and in particular south eastern Europe.

Perhaps Poland might escape, and pin-pricks of light might break through, but swathes of Mitteleuropa would lie in darkness. But the blanket hides a region of undeniable talent and an area where things are slowly beginning to take form. The recent Pioneer's Festival held in the opulent Hofsburg palace in Vienna provided a spectacular backdrop for many of the region's entrepreneurs and investors to pierce the darkness.

Russia's International Innovation Materials R&D Center Announced

The ApATeK group of Russian companies running the ApATeK-Dubna testing center, a resident of the Dubna special economic zone some 80 miles north of Moscow, is participating in an international project aimed at creating in Skolkovo an R&D center for new materials, the Dubna zone website reports. The project is reportedly being developed under a program pushed by the new Skolkovo Institute of Science and Technology (Skoltech).

The project focuses on helping Russian industry adopt cost-effective innovation lightweight materials and structures. In addition, the effort stipulates a range of educational and research programs to train a cadre of skilled professionals in material science.

Megafon Raises \$1.7bn On London And Moscow Stock Exchanges Amid Mixed Growth Perspectives

This week, Megafon raised \$1.7 billion by trading approximately 15% of its shares on the London and Moscow stock exchanges simultaneously, East West Digital News, the international resource on Russian digital industries, reported earlier today.

Although the order book for the IPO was oversubscribed, the Russian mobile operator priced each share at \$20, at the bottom of the \$20-\$25 range, placing the company's total valuation at \$11.1 billion.

Putting aside current market conditions, which analysts believe are not the most favorable, many investors view companies from Russia and other former Soviet countries with some suspicion.

World Economic Round Up

Unemployment and the economic crisis have drained the energy from crisis-ridden countries who are now running out of steam. More than 40 percent of the global youth is unemployed and this could potentially destabilise world order. The US is the brightest spot in the world economy as another global recession threatens. Economic data and confidence indicators have deteriorated from earlier in the year across the Group of 20 leading developed and emerging economies. The deterioration in hard data and sentiment has forced economic forecasters to lower their estimates of growth this year and next. Global output is projected to expand modestly by 3.3 percent in 2012 and 3.6 percent in 2013.

The latest economic news by country to include USA, Europe, UK, Japan, China, Asia Pacific and India can be found each month in our [Semiconductor Monthly Report](#).

Industry Events 2013

Future Horizons Events

- Industry Forecast Briefing, London – 22nd January 2013
- Silicon Chip Industry Training Seminar – London – 18th March 2013
- Silicon Chip Industry Training Seminar – London – 17th June 2013
- Industry Forecast Briefing, London – 23rd July 2013

To book your place on any of our events please contact us on:

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