

# FutureHorizons



The Global Semiconductor Industry Analysts

## **Future Horizons Monthly News Letter**

### **April 2011**

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## **Industry Overview**

In common with everyone we have spoken to, all of us at Future Horizons were deeply shocked and saddened by the scenes we have seen in Japan. Our hearts and prayers are with all of our friends, colleagues, business associated and the Japanese people at this time of monumental anguish and suffering.

Global economic confidence was fragile enough before either of these events, despite the underlying strength of the economic and industry fundamentals, with most firms still operating on a very short-term horizons, surviving on deals rather than longer-term plans.

Whereas the oil crisis might have been manageable and contained – although traditionally oil has been a disturbingly common factor in derailing the post war world economy, for example the 1973 Arab oil embargo, the 1978-79 revolution in Iran and the 1990 invasion of Kuwait in 1990 – the potential blow to the Japanese, and therefore global economy, could have far more far-reaching effects.

Whilst is far too early to gauge the economic impact of the earthquake – although early reports suggest this could be as high as US\$60 billion – the fact that Japan is a still a global electronics powerhouse means its impact will have far more reach into the global economy as a whole.

**A full market summary and industry capacity round up can be found each month in our [Semiconductor Monthly report](#).**

## **Industry News By Company**

### **Altair Semiconductor**

#### **[Altair Semiconductor and Alcatel-Lucent Jointly Deliver LTE Band Class 12 Solution in North America](#)**

Altair Semiconductor a developer of LTE chipsets, has announced that its Band Class 12 solution, combining Altair's 4G LTE chipsets and Alcatel-Lucent's LTE infrastructure, has successfully completed a three month field trial with a large US wireless carrier and is now commercially available.

### **AMD**

#### **[AMD Snatches Freescale's Mike Wolfe for CIO](#)**

AMD has announced that it has chosen Mike Wolfe to be the company's new chief information officer, possibly indicating the company's desire to join Intel in an assault on ARM.

Wolfe, named as the CIO by interim chief executive Thomas Seifert, comes to AMD from Motorola and Freescale Semiconductor - both companies heavily involved in the mobile and tablet markets, and both heavy users of intellectual property licensed from British low-power chip design giant ARM - although has spent the last five years at HP.

### **Amkor**

#### **[Minor Damages At Japanese Plant](#)**

Amkor, provider of semiconductor assembly and test services to semiconductor companies and electronics OEM's, reports that its operations in Japan are closed and are suffering 'relatively minor' damage from the earthquake. Its Kitakami facility is currently closed due to power supply disruption and other disruptions to infrastructure.

### **Apple**

#### **Apple Delays Japanese launch of iPad 2**

Already available and selling exceptionally well in stores across the US (with many US retailers reportedly running out of stock within hours of them going on sale) Apple had planned to launch the iPad 2 in Japan on the 25 March. Following the recent earthquake and tsunami, Apple has taken the decision to postpone the launch of the iPad 2 tablet in Japan. Apple has insisted they are delaying the launch whilst Japan and their teams focus on recovery, not because of supply shortages. However, it has been identified that Apple use at least five components that are sourced from Japanese companies, and although some of these suppliers facilities were undamaged by the earthquake, suppliers now face the problem of transporting raw materials in and out of the country. This is likely to hinder Apple and restrict their ability to meet the exceptionally high demand they are experiencing for the iPad 2 tablet. To date a new launch date for the iPad 2 in Japan has not been set.

The launch of the new iPad is earlier than expected to keep ahead of its competitors. The new iPad 2 is said to be twice the speed of its predecessor, it has cameras on the front and back and also features improved graphics. The price of the product will be more or less the same as the older version, with more emphasis on selling more features.

## **Brite Semiconductor Corporation**

### **[Chinese Start Up Brite Takes Broad ARM License](#)**

Brite semiconductor Corp, a fables chip company and design house who provide design services to electronics companies, has said it has licensed a broad portfolio of intellectual processor cores from ARM Holdings plc, including Cortex, ARM9, ARM11 and Mali graphics processors on a multi-year deal.

## **Broadcom**

### **[Broadcom Announces \\$360m acquisition of Provigent](#)**

Provigent Ltd, a fabless company that develops system-on-chip solutions for the broadband wireless transmission industry, is being acquired by Broadcom Corporation at a company value of US\$360 million. Broadcom expects to pay about £313 million to acquire all of the outstanding shares of capital and stock and other equity rights of Provigent.

## **CEA Leti**

### **[CEA Leti Working on 3D Integration of Passives on Semiconductor](#)**

CEA-Leti and IPDiA have formed a common lab dedicated to developing new 3D-integration technologies for passive electronics components on the mainstream semiconductor material silicon. Technologies such as these are highly suitable for LED lighting, healthcare and aerospace which require extreme miniaturisation. The partnership will also work on further miniaturisation of passive components such as resistors, capacitors and inductors.

## **Fairchild**

### **[Fairchild Moves Its Headquarters Back To Silicon Valley](#)**

Fairchild Semiconductor International Inc., one of the chip industry's founding companies, has moved its corporate headquarters back to Silicon Valley to draw from a deeper well of technology executives.

The company has switched the registration of its headquarters to San Jose, California, from South Portland, Maine. Its new home base -- a site where it already had an office - is about 8 miles from where the company got its start in Mountain View in 1957.

## **Freescale**

### **[Freescale Semiconductor To Make Next Generation ECU for Chery Automotive](#)**

Freescale Semiconductor announced it is providing advanced microcontroller (MCU) technology to Chery Automobile, one of China's largest automotive manufacturers, for the engine control unit (ECU) in future Chery vehicle models.

## **Fujitsu Semiconductor**

### **[Fujitsu Semiconductor and Verimatrix Officially Announce Partnership for Cardless DVB Set-Top Boxes](#)**

Fujitsu Semiconductor Pacific Asia Ltd. has announced with Verimatrix that Fujitsu's MB86H611 high definition, multi-standard decoder system-on-chip (SoC) has been embedded with Verimatrix's ViewRight® STB for DVB client security. Verimatrix is the specialist in securing and enhancing revenue for multi-screen digital TV services around the globe, and the enhanced SoC provides digital TV operators with a hardened security solution that can be easily integrated into low cost Set-Top Boxes (STBs) for deeper penetration of digital TV services.

## **Fujitsu Semiconductor Europe**

### **[Fujitsu Signs Partnership with ARM](#)**

Fujitsu Semiconductor Europe has signed a licensing deal for ARM's products, with the strategic agreement meaning that the company will be able to offer platforms that implement the latest Cortex A15 processor.

The partnership is not all that shiny and new – the pair have been working together for 'more than a decade' – but the latest agreement will bring all the latest designs to Fujitsu system on a chip (SoC) platforms.

"Fujitsu Semiconductor is working to enhance its product appeal and boost its IP line-up," said corporate senior vice president Haruyoshi Yagi of Fujitsu Semiconductor.

## **Google**

### **[Google Buys Parrot Pictures To Improve YouTube Quality](#)**

Google has bought Irish company Green Parrot Pictures in a bid to improve the quality of video uploaded to YouTube. The Dublin-based firm specialises in image processing to improve, for example, sharpness and camera shake.

Several big Hollywood film studios with movies such as X-Men and Spiderman have already used its technology. Google said that Green Parrot's technology would enhance the look of videos posted on its site while using bandwidth more efficiently.

## **Global Foundries**

### **[Global Foundries to Spend \\$5bn To Expand Semiconductor Business](#)**

Reuters has reported that GlobalFoundries, 86 percent owned by Abu Dhabi's Advanced Technology Investment Co, plans to double its capital expenditure to US\$5 billion in 2011, as it expands its semiconductor business. "This year, Global Foundries will be spending US\$5 billion, which is 120 percent of its revenues. We are investing in our future," Ibrahim Ajami, CEO of Atic said.

## **Imec**

### **[Joint Collaboration In Testing 3D Semiconductor Chips](#)**

Cascade Microtech and imec have entered into a collaborative research partnership for testing and characterisation of 3D semiconductor IC test structures. Both agreed to work closely to develop test methods and methodologies for emerging 3D through-Silicon-Via (TSV) structures, and to lead the way in development of global standards for 3D IC development and production test.

## **NeoPhotonics**

### **[NeoPhotonics Grows for 8<sup>th</sup> Year To Record \\$184.1m Revenue](#)**

For fourth-quarter 2010, NeoPhotonics Corp of San Jose, CA, USA has reported record revenue of US\$51.3 million, up 9 percent on US\$47.2 million in Q3/2010 and up 19 percent on US\$43.1 million a year ago as demand for products to support network upgrades globally more than offset typical seasonality. This boosted full-year revenue to a record US\$184.1 million, up 19 percent on 2009's US\$155.1 million (the firm's 8th consecutive year of growth).

## **Nokia**

### **[Nokia Expects Production Disruption From Earthquake and Tsunami](#)**

Mobile phone company Nokia said it expects "some disruption" to its ability to supply a number of products as a result of the earthquake and tsunami that hit Japan on 11 March.

The company did not quantify or detail this in any way saying that the disruption will result from a "currently anticipated" industry-wide shortage of relevant components and raw materials sourced from Japan.

## **STMicroelectronics**

### **[ST's New Power Semiconductor Package SMBflat Offers High Current in Small Size](#)**

ST Microelectronics has introduced a new semiconductor package with reduced dimensions and meeting safety specifications such as IEC 60370 and IEC 60335.

The three-lead SMT package called SMBflat is developed to house selected products from ST including an AC switch, an SCR (Silicon-Controlled Rectifier) and three types of Triac, which are widely used in circuits such as valve, motor or pump controls, lamp igniters and circuit breakers.

## **Sony**

### **[Sony Gets PS3 Import Ban Lifted](#)**

A court order, banning Sony from importing PlayStation 3's into the Netherlands has been lifted.

The embargo was put in place in late February after the Korean electronics firm LG challenged Sony over alleged patent infringements. It is believed that around 300,000 PS3s were impounded as a result.

The ban could have had wider repercussions, as Sony uses its Dutch facilities to import consoles for most of Europe. Sony confirmed to BBC News that the ban had been lifted on Thursday afternoon. LG is now facing a hefty fine for damages.

## **TSMC**

### **[TSMC Expanding Shanghai Foundry Plant to Rival SMIC](#)**

Taiwan Semiconductor Manufacturing Co. (TSMC) is expanding its Shanghai factory at full speed after the factory lost No.1 title in mainland China's foundry industry last year to Semiconductor Manufacturing International Co. (SMIC), according to suppliers of chip-making equipment.

### **[TSMC Sees Some Impact From Quake](#)**

Silicon foundry giant Taiwan Semiconductor Manufacturing Co. Ltd. (TSMC) will see some impact from the recent earthquake in Japan.

"TSMC expects no immediate impact due to substantial raw material inventory. However, in the long term, TSMC will seek alternative solutions/supplies as the company believes it could take months for the production of some Japanese suppliers to resume to pre-earthquake levels," according to a report from Goldman Sachs.

### **TSMC's Chang Sustains 20% Revenue**

In spite of the 9.0-magnitude earthquake and the ensuing devastating tsunami striking Japan on 11 March, Chairman Morris Chang of Taiwan Semiconductor Manufacturing Co. (TSMC) yesterday said his firm's goal of achieving a 20 percent sales growth, denominated in the U.S. dollar, will remain unchanged.

However, he is worried that the calamity would hamper the company's 2012 expansion plans if Japanese suppliers of chip-making equipment fail to resume production in time.

### **Twitter**

#### **Twitter Celebrates Its Fifth Birthday**

Five short years since it started, Twitter has become part of the fabric of society for tens of millions of users who regularly tweet about their lives and experiences in no more than 140 characters.

And it all started on 21 March, 2006 with the brief and banal tweet sent by co-founder Jack Dorsey simply saying "inviting co workers".

## **Industry News & Trends**

### **The Aftermath of the Japanese Earthquake What Are Implications For The Global Electronics Industry?**

#### **The Importance of Japan**

Japan is a major producer of semiconductor components accounting for around 22 per cent of global semiconductor production. The Flash memory market sector – crucially mobile phones, iPads and their derivatives, digital cameras, and portable storage devices, account for approximately 50 percent of the market, almost all of which are produced by one Japanese firm, Toshiba/Sandisk.

Several of Japan's major semiconductor companies locate their manufacturing spots in the northeast prefectures, for example Toshiba's 8-inch wafer fab in Iwate, Renesas Electronics' factories in Aomori, Hokkaido and Yamagata, Elpedia Memory's backend manufacturing facility in Akita and Fujitsu's plants in Fukushima.

The effects of the devastating earthquake, which hit Japan on Friday 11th March, are already beginning to take hold on the global electronics industry. Damaged buildings and infrastructure and halts to some semiconductor fabs will without doubt have a knock on effect upon the global semiconductor supply chain, with many of the big names i.e. Nokia, General Motors and Apple already experiencing supply shortages.

Many manufacturers, not directly hit by the earthquake, have experienced power failures interrupting production; just a microsecond power supply glitch can result in the scrapping of weeks of in-process production, and with manufacturers no longer holding inventory it will impact IC supply availability in Q2. To what extent, still remains to be seen. The impact will be felt both in the long and short term, affecting not only the semiconductor supply chain but nearly every other industry imaginable, as it is very rare these days to find an industry which is not reliant on chips.

#### **Component Prices**

As in any shortage situation, component price increases are inevitable and this has already happened in memory, although it is not yet clear how much of this is panic profiteering and how much is sustainable. But shortages are inevitable and recovery due to the long production cycle times and already tight capacity – will not happen over night.

#### **Automakers**

The automotive semiconductor market grew 37 per cent in 2010, clearly leaving the problematic 2009 behind. However the recent earthquake in Japan has once again awoken auto manufacturers concerns about the industry. Even before the earthquake purchasing managers had expressed concern about supply levels; inventories were unusually low, resulting in heightened concern from purchasing executives around the world. It is difficult to estimate the extent auto manufacturers will be affected, but following an official announcement from Japan that car production will be down 33 percent from its normal monthly production level of 750k cars per month to 500k it looks as though the 2010 market growth may be short lived.

Toyota Motor Co, the worlds largest auto manufacturer, said all 12 Japanese assembly plants would remain closed until at least 26<sup>th</sup> March and it was not sure when they would re open. Production lost between 14-26 March would be about 140,000 units.

### **Silicon Wafer Supply**

The earthquake has resulted in the suspension of one-quarter of the global production of silicon wafers used to make semiconductors, this has significantly impacted the supply of silicon wafers, the raw materials from which all kinds of chips – from memory to processors are made. Japan accounts for more than 40 per cent of the world's NAND and 15 percent of the world's DRAM production. The suspension of production at Shin-Etsu Chemical Co's Shirakawa facility which accounts for 20 percent of global silicon semiconductor wafer supply has impacted heavily on the Memory market with DRAM and Flash Storage being hit the hardest.

### **Printed Circuit Boards**

The suspended production of copper-clad laminate (the raw material used to make printed circuit boards) by Mitsubishi Gas Chemical and Hitachi Kasei Polymer, who account for 70 percent of production, will heavily hit the supply of the raw materials used to make printed circuit boards in the short term. However, industry experts believe there are enough materials already in the global supply chain for it to withstand this suspension as long as the closure does not run over the planned two-weeks.

### **LCD Panels**

Prices of LCD panels and memory chips may rise as the earthquake leads to potential shortages. Panasonic's factory producing LCD TV panels may have been affected, and that may influence the availability and prices of products. Hitachi has not determined when its LCD display unit can resume operation at its factory in Chiba prefecture. The manufacturer is considering using its alliance Taiwan-based Chimei Innolux Corp to minimise a possible production decline. There has also been some damage at Panasonic's LCD factory in Mobara, Chiba prefecture, Panasonic has not determined when to restart the factory. Osaka –based Panasonic aims to avoid an impact on LCD-panel supply by using an LCD plant in Himeji, western Japan.

Many chip manufacturers have claimed that they are capable of activating alternatives if necessary. In addition, wafer inventory among companies remains at a sufficient level of two to three months. However, if the Shin-Etsu Handotai factory that was responsible for producing approx 22 percent of total silicon wafer demand in the world in 2010 cannot return to normal supply levels in the short term, the semiconductor market will struggle with wafer shortages later in the year. This disaster will bring to light the fact that many multinationals have become too dependent on a single source of production and it is likely we will see in the future global companies spreading their suppliers over more countries in order to reduce reliance on a handful of production powerhouses.

Malcolm Penn Chairman and CEO was interviewed by [Bloomberg TV](#) and the [BBC](#) to give his expert opinion on how the earthquake will affect the industry. Visit our [website to view all video footage](#).

**For more information on market trends purchase [our Semiconductor Monthly report](#), delivered straight to your email box every month. For your Free sample copy contact Jean on [jevans@futurehorizons.com](mailto:jevans@futurehorizons.com) or call 00 44 1732 740440.**

## **World Economic Round Up**

### **The World**

Unrest in Libya is keeping crude oil prices high. The US, Europe and Japan might have to spend almost US\$200 billion more on imports of crude oil this year than they did in 2010, potentially threatening their economic recoveries. The price of oil has climbed to more than US\$100 per barrel.

The World Bank's President warned leaders of the top global economies that the world is reaching a danger point where soaring food prices threaten further political stability. Food prices soared by 15 percent between October 2010 and January 2011, pushing another 44 million people into poverty. These escalating foods, fuel and other basic costs have been one of the key factors driving political unrest across the Middle East and North Africa which has forced the expulsion of long standing autocratic rules in Egypt and Tunisia.

On a positive note, global manufacturing activity grew at a record rate in January with surveys of Purchasing Managers Index (PMI) for all leading economies showing strong manufacturing activity, order books and hiring intentions. A composite global PMI index stood at 57.2 in January the highest reading on this measure since the 1998. (A reading above 50 indicates expanding activity). These positive figures sent stock markets in Europe and the US sharply higher.

Governments across the globe are being forced into raising interest rates in order to fight high inflation levels, which will stretch households even further. Lastly, emerging countries keep proving they are now serious contenders in the global economy. Brazil has overtaken Britain and France to become the fifth largest economy in the world after reporting 7.5 percent economic growth in 2010.

**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**

### **Future Horizons Events**

- [Silicon Chip Industry Training Seminar](#) – London – 13<sup>th</sup> June
- [IC Economics Industry Workshop](#), London – 14<sup>th</sup> June
- [Industry Forecast Briefing](#), London – 19<sup>th</sup> July

### **Industry Events**

- [National Electronics Week](#) – 12<sup>th</sup> & 13<sup>th</sup> April
- [ESC Silicon Valley](#) - 2<sup>nd</sup> – 5<sup>th</sup> May
- [GSA & IET International Semiconductor Forum](#) – 4<sup>th</sup> & 5<sup>th</sup> May