



## Dubai: Emerging Power in Semiconductor Industry

Dubai, once known mostly for its oil, is now the financial center of the Arabian world, a luxury tourism destination, with more than 50 five-star hotels. And today, crude oil contributes less than 5% to Dubai's GDP.

For the future, Dubai's ruling sheikhs have even more ambitious plans in the semiconductor and IT business. "Our vision is to make Dubai Silicon Oasis (DSO) one of the world's leading centers of advanced electronics innovation, design and development." This is the mission pronounced by H H Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, Ruler of Dubai..

The government has already started to build the DSO technology city in the desert, where 125,000 people will be able to work and live. All the utilities - electricity, sewage and water pipes, Internet connections, phone lines, etc - are already installed in the desert sand. The administration building and some residential houses have so far been completed, and more than 65km of roads have been built within the DSO boundaries covering 7.2 sq km.

"DSO's golden target is to establish a fully integrated city with maximum synergy among its core sectors including education, industries based on technology R&D, manufacturing and lifestyle," said Dr Mohammed Al Zarouni, Vice Chairman & CEO of Dubai Silicon Oasis Authority (DSOA) at the International Electronics Forum, organized by Future Horizons.

In the microelectronics segment,

DSO is being promoted for activities in the following sectors: IC design, EDA tools, semiconductor manufacturing, semiconductor assembly & test, and photovoltaic. In terms of general activities, DSOA is looking for companies active in information technology and IT security, telecommunications equipment, computer hardware, nanotechnology, software development and solutions, etc.

### *Dubai Circuit Design*

Currently Synopsys is setting up the Dubai Circuit Design (DCD) Center, the region's first chip design center for the physical implementation of ICs. DCD will focus on delivering physical design services for US, European and Asian customers. It uses Synopsys tools, flows and methodologies to implement the designs.

Currently the DCD design team is very small; however, despite a headcount of only ten design engineers, the team was able to complete a complex design to tapeout in April. This first test chip, dubbed SMC, is currently being manufactured at TSMC in a 65nm process. SMC is an encryption/decryption engine consisting of about 8 million gates with 70 memory macros.

### *Why Dubai?*

But why should companies establish operations in the Dubai desert at a place that is so far definitely not known for chip design at all? "The technology companies willing to invest over here will come to a paradise and they will be treated like kings," claimed DSOA's CTO

Dr Jihad Kiwan. "We have 0% VAT, 0% corporate tax and 0% income tax for 49 years, while the companies keep 100% ownership with a full repatriation of capital and profit. So they will have lower cost of operations.

"Furthermore, Dr Kiwan emphasized Dubai's stringent IP laws, and mentioned that subsidized staff accommodations for R&D engineers are available - a real necessity, as housing has become very expensive in Dubai. Dr Kiwan also pointed out that bureaucracy is low, which means that all the paperwork for establishing a new business can be made and signed in the DSO headquarters without any need to go to other governmental offices.

Source: <http://techon.nikkeibp.co.jp> (July 2008)

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## Market to Hit Bottom by Fourth Quarter of 2008 - Strong Rebound in 2009

According to the World Fab Forecast report, recently released by SEMI, spending on worldwide fabs equipping is expected to show declines of about 17 percent in 2008, as more companies are forced to postpone fab projects due to global economic uncertainties. In 2009, however, the group expects to see a rebound with double-digit growth of over 12 percent.

Regions reflecting this trend most dramatically include Southeast Asia and Taiwan, who will likely experience declines of 40 percent and 33 percent respectively this year, but are expected to recover in 2009 with significant positive growth of over 50 percent and 80 percent respectively.

In the Americas, fab equipment spending is expected to decline over the next two years, while China and the Europe/Mideast are expected to see growth both years. Spending in Japan and South Korea is projected to remain slow, but should improve from negative double digits in 2008, to negative single digits in 2009.

The biggest three spenders in 2008 for equipping fabs are Samsung, Flash Alliance and Intel. Though most companies are investing in non-US fab opportunities, Samsung is making significant investment into its 300mm megafabs in Austin, Texas, and Intel continues to invest in its Arizona and New Mexico fabs. In 2009, Rexchip, TSMC, UMC, Promos and Hynix are expected to join Samsung, Flash Alliance and Intel as key spenders on fab equipping.

In the regional construction of new fabs, only Southeast Asia and South Korea are expected to show positive growth in 2008. Southeast Asia should see greater than 160 percent growth in spending on fab construction projects, due mainly to IM Flash's plan for a new megafab in Singapore.

After a year of very strong capacity growth in 2007 of about 17 percent, global fab capacity is projected to slow slightly, but is expected to post growth in the high single to low double-digits over the next two years. In addition, the overall capacity of volume fabs for 300mm is expected to surpass 200mm capacity by the third quarter of 2008. Looking forward, capacity for 200mm volume fabs will remain at the same level, while capacity for 300mm volume fabs is expected to grow consistently in the double digits with over 2.5 times less fabs.

Source: <http://www.global-electronics.net>

## ComboLED EU Research Project Targets Cost-Effective Production

The development of cost-effective processes for volume production of organic light emitting diodes (OLEDs) is the focus of the research work carried out under the ComboLED project. "The objective of this project, which is being funded by the EU and coordinated by OSRAM, is to create the necessary conditions for introducing the new light sources into lighting applications", said Bernhard Stapp, Head of Solid State Lighting at OSRAM Opto Semiconductors. This includes methods for cost-effective printing of new component architectures for large-format transparent light sources. As an innovation driver on the LED market and a pioneer in the mass production of semiconductor components, OSRAM Opto Semiconductors is bringing valuable know-how to the EU project.

Because OLEDs are ultra-thin, super-light, impressively bright and consume very little energy they are likely to change the lighting market for ever. Experts anticipate that the market will be worth billions from 2015.

These flat panel lights have excellent technical characteristics. They last more than 10,000 hours, offer high luminance (1000 cd/m<sup>2</sup> or candela per sq.m.) and have an efficiency of 40 to 60 lm/W (lumens per Watt). However before they can conquer the mass market, such as general lighting applications, cost-effective production techniques need to be developed.

### *Flat light of the future*

OLED light sources are complementary to the vast majority of existing light sources. Their major strengths are where their special properties as flat light sources with high quality of light are appreciated, such as in lighting canopies, light partitions and windows that become light sources themselves after the sun goes down. With their pleasant diffused light, OLEDs will soon be appearing in the premium design segment. Architecture and effect lighting and the general lighting market will follow as soon as OLEDs can be manufactured in large quantities at reasonable cost and are scalable.

The ComboLED project is part of a broad initiative by the European Union in the Seventh Framework Program (FP7).

Source: <http://www.global-electronics.net>

## Indian Outsourcers Losing Shine?

Indian IT services companies are losing their grip on the global outsourcing ecosystem, a new report has revealed.

Only 10 outsourcers from India made it to this year's 50 best managed global outsourcing vendors for the 2008 *Black Book of Outsourcing*, compared with about half in 2004. Nearly 25,000 outsourcing users participated in the Brown-Wilson Group survey, which ended in May.

The best Indian performers on the list were Wipro, Satyam and GenPact, which were ranked sixth, seventh and eighth, respectively. In 2006, five of the top 10 vendors on the list were Indian outsourcing service providers.

This year's top honors went to Hewlett-Packard, which jumped from eighth spot in 2007. HP also topped the list of top 10 vendors for financial and accounting outsourcing.

Rounding up the rest of the global top five were all U.S.-headquartered companies--Perot Systems, CSC, Unisys and EDS. The report indicated that the Black Book survey closed the day before HP announced its acquisition of EDS.

Indian dominance prevailed in the realm of business process outsourcing (BPO), with Genpact, Satyam BPO, Wipro and HCL BPO making up the top four vendors. Satyam also was placed fourth on the list of top 10 knowledge process outsourcing (KPO) vendors.

In a statement, Satyam BPO's CEO Venkatesh Roddam noted that the results as an affirmation of the company's strategic perspective. "The categories in which we have been ranked this year--BPO and KPO--are the key growth areas that we have been focusing on and basing our 'Specialty BPO' positioning on," he said.

The 2008 *Black Book of Outsourcing* report singled out Infosys' fall from the 50 best vendors list as "surprising". At No. 59, this year marks the first in five years that Infosys has failed to enter the top 50. It was ranked No. 10 last year.

Douglas Brown and Scott Wilson, authors of the re-

port, noted that the company's displacement was accompanied by "rising accounts of client discontentment".

They said: "Over a dozen major customers cited the fact that Infosys has not melded their consulting and service delivery well. U.S. clients cite a lack of American front office support with an imbalance of too much delivered from offshore."

Despite their slide, Indian players remain a major force in the outsourcing industry, and outsourcers in China are still nowhere close to replacing them. According to the report, Chinese outsourcing companies have failed to make the cut for the top 50 for a second consecutive year.

Brown and Wilson pointed out that despite highly skilled labor and solid infrastructure, "China is still risky" particularly in the areas of partnerships, business stability and distribution channels.

They said: "Revenues are increasing for China's technology providers but hardly touch a fraction of the huge global offshoring market share.

"Based on recent client satisfaction outcomes, the majority of those outsourcing decision-makers will not rank China as their first choice for upcoming initiatives anytime soon. They currently agree that too many barriers exist for China to take India's place as offshoring destination of choice."

Source: <http://www.zdnetasia.com> (July 2008)



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## EU to Double its R&D Investment in Robotics

At the occasion of AUTOMATICA 2008 the European Commission has announced a policy to boost European robotics. The European Union will double its investments between 2007 and 2010 with almost € 400 million to support European robotics research. This ambitious programme aims to forge stronger links between academia and industry, and plans to fund a widespread experimentation by academic researchers and industry. The European Commission also calls on the industry to intensify its efforts in producing critical components in Europe, such as gears, in order to face competition from Asia and avoid strategic dependencies on other regions of the world.

"There is a clear window of opportunity for automation industries in Europe – in particular robotics – not just to maintain leadership, but to grow further and to move higher up the value chain", said Viviane Reding, EU Commissioner for Information Society and Media. "To achieve this, the industry has to intensify its efforts in several areas".

The European Union has today a strong position in industrial robots for automation: about one third of all industrial robots are produced in Europe. The robotics market's growth rate will form an important part of the world economy within the next two decades: the International Federation of Robotics (IFR) estimates the current world market for industrial robots at about € 4 billion and forecasts a 4.2% increase per year until 2010.

Service robots that operate outside the manufacturing domain offer opportunities for new applications and market expansion: according to the IFR, growth in this market is expected to reach

between 10% and 15% per year between now and 2010 and the number of professional service robots will grow from 40,000 in 2006 to 75,000 in 2010. Service robots are used in many sectors, e.g. for the distribution of goods, for cleaning vehicles, in agriculture and in medical applications.

Robotics is strategic for Europe's future competitiveness. Manufacturing will only be maintained in higher wage regions such as Europe through automation. Automation also plays a key role in ensuring a sustainable production and minimizing wasteful use of resources. Finally it will contribute to help Europe's ageing society by compensating for a declining labour force.

As part of its € 400 M research programme, the European Commission is taking steps to set up a technology transfer scheme between academia and industry enabling European research labs to use industrial-strength robots for large-scale experimentation. The resulting scientific knowledge will directly be fed back to participating companies.

Beyond research, European industry recognizes the need for reducing dependencies on critical components such as drives, gears and motors. The European Commission also encourages industry to agree on technical standards and develop business models in this field in order to ensure sustained provision of such critical components.

*Source: <http://www.global-electronics.net>*