

FutureHorizons

The Global Semiconductor Industry Analysts



FUTURE HORIZONS Presents

Under The Patronage Of
His Highness Sheikh Ahmed
Bin Saeed Al Maktoum
& The Auspices Of Dubai
Silicon Oasis Authority

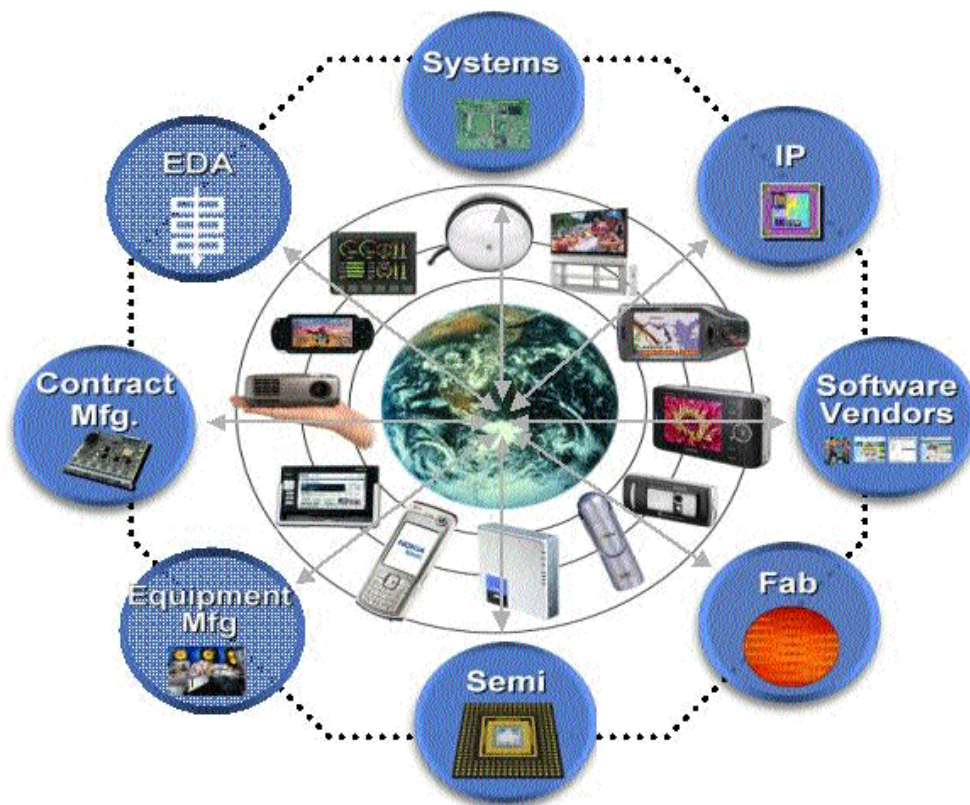
Post Forum Summary

International Electronics 2008

17th Annual International System & SoC Forum

"Where The International Electronics Community meet"

The Global Electronics Ecosystem - revolution Or Evolution



Madinat Jumeirah,
Dubai, UAE
May 7-9, 2008

**"Probably The Best
Global Industry Networking Event Ever"®**

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Delegates feedback and Forum Photographs

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“Incredibly, yet predictably, this Forum set a new global standard of excellence, like the Burj Al Arab, this is the world’s only seven star event.”

“What a brilliant idea to hold your conference in Dubai. It is such a dynamic environment”



“Impeccably well organised, thought provoking presentations, fabulous networking opportunities and a relaxed convivial environment. There is no better meeting ... keep up the great work.”

“As usual, both personally and professionally an excellent event.”



“As a new start-up I was sceptical of the value of attending - this was misplaced. I met so many contacts I would never have been able to meet under normal circumstances. I shall be back again and again.”

“It was a great event with excellent presentations, superb hotel and amazingly efficient organisation.”



Forum Programme

Wednesday May 7, 2007

- 17:00-19:30 **Forum Registration –**
Al Qsar Koubba
- 18:30-19:30 **Welcome Cocktail Reception –**
Al Qsar Koubba & Terrace
- 19:30-22:00 **Welcome Reception Dinner –**
Al Qsar Khaymay al Bahar

Thursday May 8

- From 07:00 **Breakfast –**
Al Muna (Mina A'Salam Guests)
or Arboretum (Al Qsar Guests)
- From 07:30 **Forum Registration (Continued) –**
Joharah Ballroom Pre-Function
Area A
- 08:30-17:00 **Forum Proceedings –**
Joharah Ballroom
- 08:30-08:35 **Introduction & Welcome**
Malcolm Penn, Chairman & Chief
Executive Officer, *Future Horizons*
- 08:35-08:45 **Welcome Addresses**
H.H Sheikh Ahmed Bin Saeed
Al Maktoum, Chairman Of DSOA
H.E Sultan Al Mansoori, UAE
Minister of Economy

Session 1 “Shifting Industry Paradigms”

- 08:45-09:15 **Present & Future Of Digital
Technology**
JJ (Junshi) Yamaguchi, Executive
Vice President, *NEC Electronics*
- 09:15-09:45 **Mobile Device Technical
Challenges**
Petri Liuha, Laboratory Director
Computation Structures
Nokia Research Center
- 09:45-10:15 **The Other Barrier In Electronics:
Applications**
Kees Van Der Klauw, Senior VP
Technology & Development,
Philips Consumer Lifestyle
- Coffee Break Networking/Informal
Discussions – Joharah Ballroom
Pre-Function Area A**

Session 2 “Driving The Changes”

- 11:00-11:30 **Electrification – A Chance For
Automotive Electronics**
Valentine von Tils, Vice President
Platform Development ASICs
Robert Bosch
- 11:30-12:00 **Unified Communications –
The Real Business Behind web2.0**
Thomas Wiemers, Vice President
Strategic Marketing
Siemens Communications
- 12:00-12:30 **Mobile Innovation: Improving
Customer’s Quality Of Life**
Luigi Licciardi, Executive VP,
Technology & Operations
Telecom Italia
- Forum Lunch**
Joharah Water Terrace

Session 3 “Infrastructure Changes”

- 13:45-14:15 **India – The Global Hub For
Semiconductor & Electronics**
Jani Janakiraman, Chairman
*India Semiconductor
Industry Association*
- 14:15-14:45 **Automotive Electronics &
New Technology Trends In Indian
Automotive Industry**
VG (Vasuedo) Gujrathi, Senior
General Manager Electricals &
Electronics, *TATA Motors*
- Coffee Break Networking/Informal
Discussions – Joharah Ballroom
Pre-Function Area A**

Session 4 “Market Forecasts”

- 15:30-16:45 **Outlook & Issues For The Global
Semiconductor Market**
Malcolm Penn, Chairman & Chief
Executive Officer, *Future Horizons*
- 16:45 **Forum Adjourns**
- 18:00-18:15 **Coach Departure – Mina A'Salam
Front Entrance For Bab Al Shams
(On Board Tour Guide &
Commentary On Dubai)**

**19:15-20:00 Welcome Cocktail –
Al Hadheerah Village**
*(Horse & Camel Riding Plus Craft &
Falcon Display)*

**19:30-22:30 Forum Fiesta & Show –
Al Hadheerah Restaurant**

Friday May 9

**From 07:00 Breakfast – Al Muna
(Mina A’Salam Guests) or
Arboretum (Al Qsar Guests)**

**08:40-13:00 Forum Proceedings -
Joharah Ballroom**

08:40-08:45 Opening Remarks
Malcolm Penn, Chairman & Chief
Executive Officer, *Future Horizons*

Session 5 “The Strategic Imperative”

**08:45-09:15 Applying Nanomanufacturing
Technologies Beyond The IC**
Mark Pinto, Senior VP & Chief
Technology Officer
Applied Materials

**09:15-09:45 Recent Developments In
Optoelectronics Are Driving
Innovations In Electronics**
Waguih Ishak, Division Vice
President & Director, *Corning*

**09:45-10:15 Challenges In Introducing 32nm
& 22nm Technology Nodes**
Luc Van den Hove, Chief Operating
Officer, *IMEC*

10:15-10:45 The New Rules Of The Game
Theo Claasen, Executive VP
Business Development & Board
Member, *NXP Semiconductors*
**Coffee Break Networking/Informal
Discussions – Joharah Ballroom
Pre-Function Area A**

Session 6 “Grande Finale Executive Panel”

**11:30-12:45 Strategies For Success In The
Global Electronics Ecosystem**
Susumu Kohyama, President &
Chief Executive Officer
Covalent Materials
Ray Bingham, Managing Partner
General Atlantic
Shankar Pennathur, Vice President
Operations & Manufacturing
Oxford Semiconductor
Loïc Lietar, Corp VP Corporate
Business Development
STMicroelectronics

12:45-12:55 Closing Address
Shahla Abdul Razak, Deputy Chief
Executive Officer, *DSOA*

12:55 Forum Wrap Up

**13:00-14:15 Grande Finale Lunch –
Mina A’Salam Wharf Restaurant**
14:30 Coach Departure Mina A’Salam
Front Entrance For Dubai Silicon
Oasis *(Including driven tour of
Dubai Silicon Oasis complex &
on-board commentary)*

15:30-17:00 Dubai Silicon Oasis Briefing
Guided Tour Of DSO HQ & Dubai
Circuit Design Centre
DSOA Presentation
DCD Presentation
Q&A Session

17:00 Coach Departure DSO For
Mina A’Salam

**18:30 DSOA Hosted Dinner –
Mina A’Salam Majlis Al Mina**

“Future Horizons thrives on doing the impossible at its Forums; this year’s event set a new standard of excellence. Impeccable attention to detail and superbly well executed – a truly great job, well done..”

Keynote Presentation Summaries

(in programme presentation order)

NEC

“Present and Future Digital Technology” -

JJ Yamaguchi, Executive VP, NEC
Electronics Corporation

JJ Yamaguchi kept to his long-term vision of further consolidation of consumer products towards the aim of ubiquitous computing ... the product that can be accessed at any time, in any place and gives access to everyone, in particular, the billions of customers in Asia.

Yamaguchi illustrated this by using the 3G and forthcoming 4G mobile phones that can be used for web browsing, online games, video and music, and for the electronic payment of goods. This brings the fusion of applications into one handheld unit and key to this is a continuous redesign of ICs to reduce size and power consumption. Other illustrations were some consolidation in the TV/STB/Games Console/DVD/Internet applications into one unit.

The PC is now seen as a commodity as prices fell over the past seven years leading soon towards the \$200 PC and then its expansion of use in emerging nations. The automotive market will be good for semiconductors with electric/hybrid/ clean diesel car development driven by emission standards and the growing trends towards low-priced products for the emerging world. NEC sees the car as a ‘cockpit of wireless and computing services’.

Growing wealth and population is also driving the medical and industrial sectors. In all sectors, Yamaguchi concluded our challenge is power and cost. Cost depends heavily on design and development and to reduce this we have to create common platforms, get better design tools and collaborate more.

NOKIA
Connecting People

“Mobile Device Technical Challenges” -

Petri Liuha, Laboratory Director,
Nokia Research Centre

Petri Liuha outlined that over the past twenty-five years the mobile phone industry has done very well in reducing the mobile phone size to the pocket versions today. To do this it has needed a continuous redesign of ICs to reduce power and size. Over this period the phone the phone had changed function - originally it was a voice telephone, then a text platform and now a multi-media computer, with mobile Internet being the key driving force.

Over the same period mobile phones were originally ‘access dominated’, where the radio chipsets were the key items. Now the ‘applications processor’ dominates and in the near future the mobile will be driven by the need to process and display content. The mobile phone is entering a period of gaining intelligence and it will do this by the addition of sensors that will read the environment. It will move from just knowing its position, via GPS, to reading/using character recognition and then to image sensing. This will need a ten-fold increase in computing power using additional specialist microprocessors.

Petri then went on to look at the challenges ahead and his immediate thought was the use of multiple antennae. He was pleased to see 4G would have so many technologies and standards that it would be difficult for one firm to dominate the IP.

PHILIPS

“The Other Barrier In Electronics: Applications” -

Kees van der Klauw, Senior VP
Technology & Development,
Philips Consumer

Kees van der Klauw explained that Moore’s Law stretched over many generations of process, but now this part of the IC business is in the hands of the foundries. Foundries are in control of the assets and raise the asset value by huge investment. Large-scale production encourages high-volume throughput and further commoditisation. The remaining IC companies are now ‘asset light’ and operate in a consumer environment with shortening product life cycles.

The commoditisation of many products holds down the price that can be achieved for the IC. The new IC company needs to look for some form of differentiation and customer leverage. To look for enabling ‘value creation’ Kees used an LCD industry example. In 2005 LCD cell and module assembly was separate and were then both commodities. In 2009 LCD cell production will still

continued

Keynote Presentation Summaries

be separate, but the drivers/backlighting and the TV set assembly will be co-located and this will allow differentiation and value creation.

Similarly with TV chips. These are at present separate commodity chips, which will then become a TV SoC plus a display processor - then eventually a single chip. Differentiation will come in chip architecture and software.

Kees accepted that software complexity also followed a Moore's Law of its own. Software, in itself, is often limited by manpower and validation time. To overcome this companies use outsourcing and re-use IP however to pass this complexity barrier more open architectures are need by industry.



“Electrification: A Chance For Automotive Electronics” -

Valentin von Tils, VP Advanced Development ASICs, Robert Bosch

Valentin von Tils presented some impressive predictions about the global automotive market. Firstly, vehicle sales will reach 70M units in 2008 and will rise to 80M units by 2020. Electronics will play a greater growth and automotive system growth will grow from US\$53B to US\$89B over the same period.

Semiconductors will be 44 percent of the system 2008, and will grow to 67 percent by 2020. This gives us automotive semiconductor sales of US\$23B in 2008 rising too US\$60B in 2020. In terms of semiconductors per car it is US\$332 in 2008 rising to US\$735 in 2020. Over the long term the automotive sector has been a driving force of semiconductor industry with a growth 10.1 percent during 1996-2006 versus 6.5 percent for total semiconductors. In comparison the growth for Europe is bigger because automotive plays a greater force in the market.

The greatest driving force for semiconductors in the sector is legislation, which impacts within five years of an announcement of a standard. Other influences such as safety, fashion and entertainment trends can take up to 15 years for decisions to work down to the average car. This is one of the many reasons that semiconductor product life cycles can be between 10-25 years and it is only via industry long-term stability that the payback is delivered.

Valentin stated that reducing Carbon Dioxide (CO₂) emission has a major impact on future design. CO₂ reduction also reduces fuel consumption as well. Some of the incremental improvements to be introduced will have a payback period in less than one year. An example of a CO₂ reduction improvement is the 'stop-start' system that can save eight percent of fuel in the city.

Looking forward to the technical challenges for automotive Ics, the great gains will be made if silicon could be placed close to actuators. To do this junction temperatures have to be raised from 150oC to 210oC. Other electronics improvements will come if architecture moves to platforms and Valentin would like to see the industry 'zero defect' philosophy also to apply to software.



“Open Communications Solutions” -

Thomas Wiemers, VP Strategic Marketing, Siemens Enterprise Communications

Thomas Wiemers opened by stating that telecommunications had been bringing people together on a global scale since before 1847 when at the time the UK was connected to Calcutta by telephone. The big explosion is that is occurring today is different in that it is driven by social and employee networks and video/IP - enhancing this by 'personalising' data and searches.

Companies that do not harness the power of communications dramatically fall back in company value. Company communications must include fixed wired networks, fixed wireless networks, and mobile networks. To optimise the efficiency of use of the multitude of communications, the employee must have contact on the move, at work, and in the office - all in one device.

Thomas believes that the immediate big challenge is one of security. Identity fraud is a big issue and this fraud sees no geographical or economic boundaries. Already today identities can be purchased on-line for a few dollars so a new way of securing data needs to be found and implemented. Looking further ahead to build future systems, more open standards are required and this will encourage partnerships and cooperation

Keynote Presentation Summaries



“Mobile Innovation: Improving Customer Quality Of Life” -

Luigi Licciardi, Executive VP
Domestic Mobile Services,
Telecom Italia

Luigi Licciardi believes that in the mobile era the customer must be the focus of innovation. Today, a mobile device must recognise a user socialising need via the web, provide time management capability plus entertainment and driving assistance. It must also deliver health assistance, personal sport training, home monitoring and energy saving and be an e-ticket and an electronic credit card banking device. In addition it must still have style and be equally useable by the elderly and young.

To meet these needs it must seamlessly utilise 4G, WiMAX, ZigBee, DVB-H, LTE, connect to femtocells where needed and incorporate ADSL and Wireless LAN. To meet all these market sectors, the phone can possibly utilise a ‘jacket’ to modify a basic handset for specific use. The Apple iPhone is part of this industry learning curve and low-power semiconductors have a key roll in this development.



“India: The Global Hub For Semiconductors & Electronics” -

S Janakiraman, Chairman, India
Semiconductor Association

S Janakiraman’s India will be the most populous country in 2050 and will be the world’s third largest economy with a growing middle class. In the next few years there will be huge growth in mobile subscribers, IT services, automotive purchases, computer and printer hardware. To meet this growth in demand major end-system products are needed, such as mobile handsets, wired and microwave telecom systems, desktop and notebook PCs, low-cost automotives, and TVs and TV set-top boxes.

These products will not necessarily be imported as India has major EMS and OEM plants including Nokia. In the longer term many products will be developed within India, as India is good for SoC design and embedded software. Even with strong inward design investment over 30 percent of this work is being sub-contracted to Indian firms.

Western and Eastern companies will establish themselves in our country as India is democratic and already has good legal/IP protection laws. To fuel this growth the Indian government has set up Special Economic Zones (SEZ) to provide incentives and tax breaks.



“Automotive Electronics & New Technology Trends” -

V G Gujrathi, Senior GM Electronics,
Tata Motors

VG Gujrathi introduced the 130-year old Tata company which had now reached US\$50B in turnover. It is a wide conglomerate whose business covers automotive, chemicals, metals, energy, IT, publishing, consumer products and financial services. Tata has over 3,000 scientists and engineers.

Tata is India’s largest automotive company and the world’s fifth largest commercial vehicle company. The company is most recently famous for the Tata Nano - a car designed to be sold at US\$2,500 to emerging countries - 100 percent Indian designed. As well as controls for low-cost cars, Tata has to design electronics to meet standards in all global markets including those needing in-car networks and telematics/GPS for fleet vehicles.

Cars for emerging markets still need fuel efficiency and there is also a need to run cars on bio diesel and non-conventional energy resources. As well as standard automotive electronics development, Tata is also involved with the government plans to have bus scheduling and fare collection systems and is involved in electronic systems in this market.



APPLIED MATERIA

“Applying Nanomanufacturing Technologies Beyond The IC” -

Mark Pinto, Senior VP & CTO
Applied Materials

Mark Pinto believes that reducing cost per function drives IC market growth and that cost per function has two components; process cost per area and good die per area. Scaling has been primary cost reduction method between process generations where process costs have kept relatively flat.

Mark insisted that his first example was not chosen because of the doldrums the IC industry is in at present. He used an example from LCD industry illustrating that as the cost per area had decreased over the number of years the industry

continued

Keynote Presentation Summaries

had sold a 20 percent bigger TV for the same price every year.

Although at a different scale, similar cost reductions are expected with nanotechnology once it becomes repeatable, robust, reliable and controllable. An early application of nanotechnology is coated windows glass. It saves energy with a payback in three years. Applied Materials is selling equipment into the large-area solar cell market as well as LCDs.

Photovoltaic solar energy is a strong opportunity for rewards from innovation. Cost per watt from conventional carbon power stations and solar-power arrays are coming closer as we move down the learning curve. Parity will be hit before the end of 2010 and GigaWatt fabs will be built by then. Equipment is being delivered for photovoltaic panels of large size and production scale savings will occur through material improvement and better yields.

Other nanotechnology opportunities are in fuel cells, solid-state lighting and energy storage. In semiconductors, nanotubes will be seen in memories first.

CORNING

“Developments In Optoelectronics Driving Innovations In Electronics” -

Waguih Ishak, Divisional VP & Director, Corning

Waguih Ishak forecast that in the near future there would be major changes on our planet in terms of a great demand for health and elder care, growth of demand from emerging nations and, in these nations, a growth of middle class wealth. Other changes will be energy supply issues and a change in the way we work with an increase in working from home or local office/travelling.

He sees three market sectors driven by what people want, namely good health and education, good simple communications and good personalised entertainment, to be met by a convergence of nanotechnology, biotechnology, IT and cognitive sciences.

In solar energy field there are over 100 start-ups in Silicon Valley alone. On the medical horizon there are new product areas such as rapid healthcare and remote health diagnostics, low-cost over the counter diagnostic equipment and ‘on-a-chip’ smart diagnostics (Stanford University). On the communications horizon there are Video On Demand (Via IPTV) STBs, content on-demand (via YouTube), iTunes, Slingbox, mobile TV and improved content service providers (Google etc).

By 2010 we will use 1 terabit/sec optical links, infinite, bi-directional and free. For this era, terabyte storage is required. Nanotechnology will improve ‘bendable’ fibre and optical waveguides will connect chips. Equally importantly, there will be improvements in the machine-human interface, such as; solid-state backlighting, improved displays, improved software for customer satisfaction (iPhone), personal projectors, flexible displays and disposable products brought about by the ink printing of semiconductors



“Challenges In Introducing 32nm & 22nm Technology Nodes” -

Luc van den Hove, Chief Operating Officer, IMEC

Luc van den Hove believes that the workhorse silicon process technology of the next few years will be 32nm, but some early entrants will move to 22nm. There are three lithography options for scaling to 22nm, namely ARF lens immersed, ARF lens immersed with 2x patterning (favoured by early entrants) and EUV light (an option in 2012).

NAND flash memory leads over DRAM and logic by pushing the feature size requirements to doubling the density every year. Logic needs a much more relaxed pitch and is not so demanding in comparison. Current process challenges are high-K Materials, further development of FINFETS, tunnel FETs, use of Ge and III-V materials, nanowires, graphene and the integration of sensors and batteries.

Chip assembly is also being looked enthusiastically with the use of 3-D stacking chips to increase performance, density. This methodology also resolves interconnect issues, allows the building of systems of multi-technologies and

continued

Keynote Presentation Summaries

gives products a sleek form factor particularly if the assembly can include the battery.

IMEC is a university/independent R&D laboratory that is led by industrial partners. Partners include foundries, fabless, fab-lite, the IDM companies and equipment suppliers. IMEC aims to be the R&D laboratory for the industry.



**“The New Rules Of
The Game” -**
Theo Claasen, Executive VP
Business Development,
NXP Semiconductors

Theo Claasen opened by characterising the semiconductor market. He saw it as an industry with a revenue of US\$256B, three companies with sales over US\$10B, more than ten with sales over US\$5B, more than 35 with sales of over US\$1B and 150 with sales below half a billion dollars. Therefore the semiconductor industry has too many suppliers (50 should be just right) in a market with a crazy volatility of +50 to -50 percent growth variations.

Looking at semiconductor costs. a wafer fab for 65nm and 800k wafers/year will cost US\$5B to build and equip. Therefore most suppliers now subcontract to a wafer foundry. Assembly now needs fine-pitch packaging, or multichip modules. Therefore most companies need to subcontract to back-end foundry. R&D for system library and IP Blocks need US\$1B per silicon process node. Therefore companies are beginning to cooperate in R&D partnerships. Theo pointed out other semiconductor trends - the sale of IC Divisions by OEM system companies. The spin out specialist divisions (e.g. memories, analogue) and the integration of large SoC companies with fabless (ST bought Genesis).

Looking forward for a strategy for profitable growth Theo sees a strong correlation between market leader and profit, and recommends that company scale matters with the need to be No.1 or No.2 in each market segment. CMOS process and standard IP no longer differentiates and system knowledge is now the main differentiator.

As an example of changes in NXP Semiconductor operations the company has a blend of businesses - mature, growing and emerging. It has divided R&D 35/55/10 percent as above and then pursued disposal and acquisitions tactics to create leadership positions, as with the recent mobile division merger with ST. The remaining NXP divisions are Home, Automotive, Identification and Multi-market.

Looking slightly further forward at industry needs Theo comes up that a more practical Wi-Fi is needed, which may come from UltraWideBand over a USB connection. Theo uses only 10 percent of a consumer systems technical capability so human interfaces still have to be improved further!

Available Now ... the full Forum binder plus CD-ROM containing copies of all the presentations made at the Forum for immediate delivery priced at only £370 (€590 / US\$790). This price includes delivery by courier, the Forum bag and photo CD. Order by fax or direct from our web site at:

<http://www.futurehorizons.com/page/31/ief-forum-2008%20>

Please note stocks are limited; orders will be shipped on a first-come, first-served basis.

Forum Sponsors

Sponsorship is not just a vote of confidence in the Forum it also allows us to present an even more value-added programme. We would like to formally acknowledge and express our sincere thanks to the following organisations for their invaluable support.



IEF Blues Band

Watch The IEF Blues Band Video Clip @ http://www.youtube.com/watch?v=tPE6A_nSU7Y

Featuring (Left to right) Aart de Geus, Lead Guitar; Jürgen Brüss, Rhythm Guitar & Vocals; Malcolm Penn, Drums; Jeff Baloun (Bass Guitar) and Alexander Kourliandski (Keyboards), with guest appearances from David Risdale (Blues Harp) and Guillaume d'Eyssautier (Vocals). Sax player needed ... please call!!!

“Thank you very much indeed for inviting me to the Forum. I found it very educative and interesting. It was a personal honour to attend. I look forward to more of cooperation between my Company and Future Horizons in the future.”



About DSOA

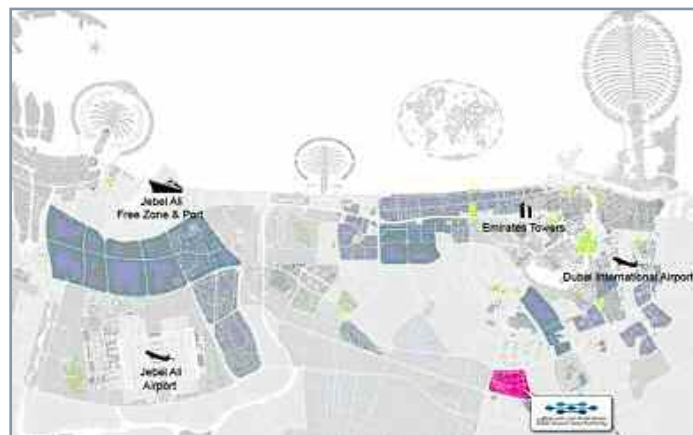


“Our vision is to make DSOA one of the world’s leading centres of advanced electronic innovation design and development.” H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister and Ruler of Dubai

“Dubai Silicon Oasis was officially established by the Government of Dubai, pursuant to Law No. 16, of 2005, with the objective of developing an integrated technology park, highlighting industries built around the production of information and communications technologies using semiconductors. With this roadmap, Dubai Silicon Oasis will definitely contribute to the country’s overall economic development and assist in the development and training of the local talent within the domain of advanced technology manufacturing.” H.H. Sheikh Ahmed Bin Saeed Al Maktoum, Chairman, Dubai Silicon Oasis Authority.

Perfectly located in Dubai, DSO is in the trade crossroads of Europe and Asia. It has easy access to Dubai’s International Airport, seaport (Jebel Ali Port) and central business district.

“Thanks for inviting me and organising a great conference at Dubai. Your staff pulled off what must have been a lot of effort to organise and co-ordinate.”



“This is the only conference I make sure to stay for the full duration ... it is the most productive and thought provoking meeting around.”

For more information visit: <http://www.dso.ae/en>

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Key Market Research Reports

Brochure downloads are available from our website. Reports can be purchased online, by fax, or email and are supplied in A4-ring binder and CD-ROM format. Respect copyright laws, multi-user/site licenses are required for additional users and/or posting on company Intranets.



Global Semiconductor Update Report

<http://www.futurehorizons.com/page/18/global-semi>

A CEO favourite, this report is all a busy executive needs to keep in touch with industry trends. E-mailed monthly, the report provides a useful industry momentum indicator by compiling 12-monthly rolling charts for Units, Average Selling Prices (ASP) and Revenues broken down by total SC, IC, Optoelectronics and Discretes. Also included is a review of the world economy, broken out by region, plus a monthly feature on a key semiconductor market driver. The link between the economy and the semiconductor industry is not perfect but by measuring and understanding the impact of wafer fab capacity on lead-times and prices, and by monitoring the level of system OEM, distribution and semiconductor company inventory, more sense can be made of this fundamentally unstable industry. The report focus is on in-depth analysis and the underlying industry trends.

Annual Semiconductor Report

<http://www.futurehorizons.com/page/15/annual-semi>

This two-volume report provides market analyses and forecasts of the worldwide and European semiconductor market (Volume 1), as well as a detailed analysis of the 27 key semiconductor end-user applications and industry market drivers, collectively accounting for three quarters of the total IC market (Volume 2). This value-added bundle is a must-have for anyone interested in the global semiconductor market and European detail.

Semiconductor Application Markets Report

(Previously called the Key Market Drivers Report)

<http://www.futurehorizons.com/page/16/semi-app-market>

Volume 2 of the Annual Semiconductor report is available separately as the Semiconductor Application Markets Report. Individual chapters describe how each application works, the technology used, the unit sales history and forecast, the semiconductor content and the associated semiconductor market size. This vital research resource volume is a proven industry favourite. Individual applications are also available as separate reports; please call for details.

European Fabless Semiconductor Report

(Previously called the European Chipless & Fabless IC Design House Report)

<http://www.futurehorizons.com/page/17/euro-fabless>

This 300-page report covers the European and Israeli, chipless, fabless and independent IC design house community, and is essential for those planning the resources of subcontracting new product design, both in the semiconductor industry and the final system end product. It will also prove invaluable for authorities and government departments, planning and directing economic growth, as well as companies seeking investments, potential partners or acquisitions. As an added user benefit, the 280 strong chipless and fabless IC design house company database is available in Excel format as an optional CD extra (not available separately), with both pre-organised sorts (by country, design skill and application) and in raw data format allowing customised searches and analyses. This best-selling report has a proven track record as an invaluable research resource.

**Block These Diary Dates Now –
Online @ www.futurehorizons.com**

2009 Diary Dates

Jan 27th	IFS2009, Semiconductor Industry Briefing, London Annual analysis & forecast of the European & WW semiconductor market
Mar 16th	Silicon Chip Industry Training Seminar, London Presented in layman's terms, this seminar provides a complete overview of the integrated circuit industry, its background, technology, manufacture & markets
Mar 17th	IC Economics Industry Training Seminar, London This seminar reviews the economics of the IC manufacturing industry, covering factory costs, yields, die size trends, process defects, and industry cost models
May 6th-8th	International Electronics 2009 Forum IEF2009 - 18th Annual International Electronics Industry Forum. An international forum to update market forecasts, develop new business opportunities, meet new contacts, share experiences, explore ideas, and refine strategic thinking
Jun 8th	Silicon Chip Industry Training Seminar, London Presented in layman's terms, this seminar provides a complete overview of the integrated circuit industry, its background, technology, manufacture & markets
Jun 9th	IC Economics Industry Training Seminar, London This seminar reviews the economics of the IC manufacturing industry, covering factory costs, yields, die size trends, process defects, and industry cost models
Jul 21st	IFS-2009MT Mid-Term Semiconductor Industry Briefing, London Mid-year analysis & forecast of the European & WW semiconductor market
Sep 7th	Silicon Chip Industry Training Seminar, London Presented in layman's term, this seminar provides a complete overview of the integrated circuit industry, its background, technology, manufacture & markets
Sep 8th	IC Economics Industry Training Seminar, London This seminar reviews the economics of the IC manufacturing industry, covering factory costs, yields, die size trends, process defects, and industry cost models
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Nov 23rd	Silicon Chip Industry Training Seminar, London Presented in layman's term, this seminar provides a complete overview of the integrated circuit industry, its background, technology, manufacture & markets
Nov 24th	IC Economics Industry Training Seminar, London This seminar reviews the economics of the IC manufacturing industry, covering factory costs, yields, die size trends, process defects, and industry cost models

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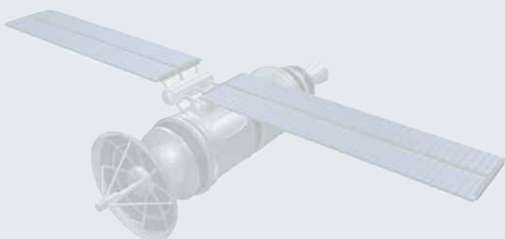
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