



SouthWest dominates industry awards

Companies and semiconductor entrepreneurs from the SouthWest have made a strong showing in the recent NMI awards.

NMI honoured Simon Knowles, co-founder of Icera Semiconductor as Technology Entrepreneur of the year at its annual award ceremony in London alongside Dr Georges Karam. Technology Entrepreneur is one of two new categories introduced in 2011 and joins the Semi360 award, which reflects an imperative for chip companies to provide complete solutions. This category was won by Bristol-based start-up Gnodal.

Plessey Semiconductors in Plymouth won the R&D award for its EPIC sensor, while the UKESF Scholar of the Year award was won by Adam Malpass of Southampton University.

Knowles co-founded Bristol-based Icera Semiconductor in 2002, which grew to over 300 people across seven countries and built a portfolio of more than 550 patents. Nvidia acquired the fabless software modem chip company earlier this year for \$367 million. Simon also

co-founded the ADSL chip firm Element 14, which was sold to Broadcom in 2000 for \$640 million, and established the Element 14 design centre in Bristol.

Dr Georges Karam founded French fabless chip company Sequans Communications in 2003 to address the WiMAX market, expanding in 2009 to exploit the LTE opportunity. Sequans has rapidly grown to become a world-leading 4G communications chip designer and Europe's third largest fabless semiconductor company.

The joint winners were selected from independent nominations by Dr Hossein Yassei, CEO of Imagination Technologies and ARM's founder, Sir Robin Saxby.

"This is the first time a joint winner of any category has been announced," said Dr Derek Boyd, CEO of NMI. "This unprecedented decision celebrates the outstanding entrepreneurial spirit and success that both individuals have displayed in a fiercely competitive global technology marketplace." www.nmi.org

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German DJ equipment maker uses Bristol chip

German music and DJ equipment designer Native Instruments is using a chip developed in Bristol by XMOS Semiconductor for its latest products. The Berlin company is using the XMOS single chip processors as an audio streaming platform in their product range, helping them to deliver systems that use the latest USB Audio Class 2.0 standard. "We are amazed by how rapidly our engineers have learnt to use XMOS devices, and the speed with which they are able to design new products," said Mate Galic, Chief

Technology Officer and President of Native Instruments.

The flexibility of the XMOS chip and software allows engineers to bring a range of equipment with new features to market much quicker than competitive solutions at the same time as adopting emerging standards. Native Instruments has integrated a single XMOS chip with software based on the XMOS USB Audio 2.0 reference design into a variety of new products. The ability to re-use major parts of the software allowed their engineers

to focus on the differentiating features and reduce the time taken to bring the products to market.

Native Instruments has a mission to develop innovative, fully integrated solutions for all professions, styles and genres. It started providing real-time sound synthesis on standard computers in 1996, and today offers a range of products for musicians, producers and DJs. The company currently employs around 270 people in its two offices in Berlin and Los Angeles. www.xmos.com

Crisis, what crisis?

The world economy is stagnating and yet the electronics industry is having some of its best times. Companies like Dialog Semiconductor (p1) and Imagination Technologies (p 2) are going from strength to strength in the face of the worst global recession for seventy years. While the venture capital industry is collapsing, as Laurence Johns of Amadeus pointed out (p8), there is a huge shortage of smaller companies to fill the R&D gaps of the larger ones says Henry Nurser of Blu Wireless (p7).

So what on earth is going on? The Silicon2011 conference in Bristol on November 25th (p3) will get to the bottom of some of these trends with expert market research and leading industry speakers who have been through all of this many times before, looking at the challenges ahead. The day also includes a panel session on the strengths and gaps in the region to make sure we use this relative boom time to make sure the industry is strong for the times ahead with a strong pipeline of innovation across the ecosystems. I look forward to seeing you at Silicon2011

Nick Flaherty

SiliconSouthWest

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On the web:

For comment, analysis and the latest videos on what is happening across the electronics industry go to the new blog by SiliconSouthWest editor Nick Flaherty at www.flaherty.co.uk

Imagination moves into Voice over LTE

Imagination Technologies is launching a series of Voice over LTE (VoLTE) technologies for smartphones, tablets and mobile computing devices.

The chip and software designer, which has key communication technology development in Chipstead, has developed a V.VoIP (voice and video over IP) software development kit (SDK) that supports the full range of two-way real time communications including Voice over LTE (VoLTE), Voice Call Continuity (VCC) Video and Voice over IP (V.VoIP) and SMS over IP.


“VoLTE is the future of cellular voice communications and is beginning deployment now,” said Tony King-Smith, VP of marketing at Imagination. “It’s exciting to see VoLTE open up a wide range of new use cases and capabilities for voice-based communications, evolving voice from basic audio telephony into a highly integrated capability permeating all aspects of smartphone functionality. We are excited by the prospects for Imagination’s technologies being at the forefront of this evolution.”

The HelloSoft V.VOIP products also include field proven Dual Radio Voice Call Continuity (DR-VCC) technology with capability to support Single Radio VCC. Combined with the HelloSoft VoLTE solution, HelloSoft VCC enables seamless handoff of VoIP and circuit switched calls across 4G/3G/2G networks and also between multiple

IP networks such as LTE, WiFi and WiMAX.

The software is fully standards compliant with 3GPP Voice over LTE and IR-92 specifications, and incorporates award winning multiplatform HelloSoft VoIP technology featuring AEC (Acoustic Echo Cancellation) and NC (Noise Cancellation) to produce superior voice quality on 4G mobile devices.

The SDK and VoLTE solutions offer developers, OEMs and carriers high voice quality over 4G LTE networks, and at the same time provide a path to rapid development of innovative next generation voice enabled applications.

“Carrier network interoperability can be very complex and achieving outstanding voice quality is difficult across varied network conditions,” said Allan Johnson, general manager for HelloSoft V.VoIP at Imagination. “Achieving highly reliable performance on a diverse range of mobile device chipset architectures is challenging. To solve this, we created easy to use APIs that are portable across Android, iOS, Linux and Windows operating systems for essentially ‘write once, run anywhere’ code while at the same time providing SDK implementations that are highly optimized across processor and modem architectures. Imagination’s HelloSoft V.VoIP SDKs and VoLTE solution are simply the most comprehensive high performance multiplatform solutions on the market for voice and video over IP on 4G mobile devices.”  www.imgtec.com

“Achieving highly reliable performance on a diverse range of mobile device chipset architectures is challenging. To solve this, we created easy to use APIs that are portable across Android, iOS, Linux and Windows operating systems for essentially ‘write once, run anywhere’ code.”

Silicon2011: The challenges ahead

Thursday, 24 November 2011 - Friday, 25 November 2011, Bristol

7-10pm Thursday 24th November, 2011

Silicon South West Dinner

Glassboat Restaurant, Welsh Back, Bristol, BS1 4SB
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9am-1pm Friday 25th November, 2011

Silicon South West Seminar

Beachcroft LLP, Portwall Place, Portwall Lane, Bristol, BS99 7UD

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Despite global economic uncertainty, the electronics industry is seeing a positive outlook, but what are the challenges for the year ahead? Silicon2011 brings together some of the leading semiconductor companies and executives in the UK to look at the year ahead. It also includes a panel session on the silicon and microelectronics ecosystem in the South West as part of the strategic planning for the region.

Delegate Fees:

Silicon South West Dinner:

£55 (+VAT) per person

Silicon South West Seminar:

£20 (+VAT) per person

Combined Dinner & Seminar:

£70 (+VAT) per person

Speakers:

- **Tony King-Smith**, VP marketing, **Imagination Technology**
- **Christian Malter**, Sales Director for IP, VIP and Design Services, **Cadence Design Systems EMEA**
- **Malcolm Penn**, CEO, **Future Horizons**
- **Steve Allpress**, VP, **NVIDIA**
- **Simon Knowles**, semiconductor entrepreneur

Followed by lunch and a panel session on the South West silicon ecosystem with: **Nick Sturge**, **SETsquared**, **Mike Bartley**, **TVS**, **Simon Knowles** & **Derek Rye** of **Plessey Semiconductor**

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Plessey ships samples of its EPIC sensor...

Plessey Semiconductors is shipping commercial samples of its award winning Electric Potential Integrated Circuit (EPIC) sensors. The first products are optimised for use as an ECG sensor and provide a resolution as good as or better than conventional electrodes.

The EPIC sensors are dry contact so that no gels or similar fluids are required to make contact and can be simply cleaned between uses – unlike conventional ECG sensors that have to be disposed of after every use at

a cost of \$2 a set. Only one pair of sensors is required that are held in each hand which is very quick to do unlike the current approach that requires seven or more. The ease of detection even through clothes or at a distance means that new ways of taking ECG measurements are being investigated by customers. For example, the EPIC sensors could be built into stretchers for immediate monitoring of patients heart rate and respiratory action or built into clothing to monitor stress levels in emergency response personnel such as firemen.

The PS25201 is an ultra-high impedance sensor supplied in a more compact custom package with four exposed balls for surface mount assembly onto the PCB of a customer's equipment design. It measures 10mm square and 3mm high. Because of the large coupling capacitance of the human body of around 250pF, the EPIC sensor can be used to obtain true ECG signals by detecting the potential at surface of the skin that is typically 1mV p-p. These sensors are designed for use in high reliability medical applications and, if required, can be built with an anodised titanium electrode. 

...and launches \$1 version for proximity sensing


Plessey has also developed a low cost version of its EPIC sensor tailored to detect movement for security, switching and gaming applications. By detecting changes in the electric field the EPIC sensor provides an output to a relay to act as a simple non-touch electric switch. The \$1 sensor can be used in both proximity mode or to detect specific kinds of movement as a limited gesture recognition device. As the EPIC sensor does not need line of sight and can even detect movement through walls, it can also be used to replace, or as an adjunct to, a passive infra-red (PIR) sensor in a variety of applications including security motion detectors.

The latest EPIC sensor can be used in any electrical application as a simple switch

including toys, electric appliances, smart lighting, gaming and security. This family of EPIC sensors has been engineered for higher volume applications allowing volume prices for the chip solution of around one-dollar US.

“We have been inundated with demand for samples of the EPIC sensor and have had our first design wins in ECG products for the health monitoring markets,” said Derek Rye, Plessey Marketing Director. “We have also been working with a number of companies on movement sensing and gesture recognition applications. We believe we have an opportunity for some early revenue based on designs for proximity non-touch switches for consumer products.”

“We have optimised the base layout of

the EPIC sensor chip such that discrete movements of the human body can be detected, with a range of up to several metres,” said Dr Keith Strickland, Plessey Technology Director. “For example, the sensor can be configured to detect the proximity of a hand or to detect specific hand motions depending on the chip variant and the appropriate selection of circuit components external to the EPIC sensor. Whilst these first applications for individual sensors are quite simple, they are paving the way for the next generation of sensor array devices that will change the way we address more sophisticated applications like writing on tablets and smart phones, the remote control of televisions and controller-less gaming applications.” 

www.plesseysemi.com

Bath research helps demonstrate reliability of high performance vertical lasers

Researchers at IQE in Cardiff have demonstrated high reliability Vertical Cavity Surface Emitting Laser (VCSEL) devices operating at world record data rates of up to 40Gbit/s, four times faster than the current single channel serial data rate used in commercial systems.


The research is based on work done at IQE company nanoGAN in Bath, which remains one of IQE's sites, and is part of the European Commission funded Vertically Integrated Systems

for Information Transfer (VISIT) programme. This started in 2008 to research, development, test and exploitation of system-enabling optical transmitters with novel designs or largely improved functionality.

The directly modulated VCSEL devices are made on material grown by IQE at its Cardiff facility operate at 850nm for short-reach fibre data communication and storage area networks. The VISIT researchers demonstrated VCSEL devices operating at data rates of up to 30 Gbit/s

at 85°C, and up to 40 Gbit/s at 25°C with bit error ratios of less than 10E-12.

The VISIT team has also produced the first 40 Gbit/s packaged VCSELs that can be easily integrated for system-level optical link testing and development.

The next development stage under the VISIT programme will focus on final directly modulated VCSEL benchmarking and design and processing refinement including device designs for reliability and manufacturability. The VISIT team will also work on further improvements in the packaging and testing of optical transmitter subassemblies. 

www.iqe.com

Tektelic and Picochip collaborate on small cell LTE devices

Picochip in Bath has teamed up with TEKTELIC on the development of a new small cell LTE micro platform. This will use Picochip's LTE development system for small cells, the PC9608, in a real world, carrier-class device ready for deployment that will deliver the highest output power in the smallest form factor available on the market today.

“As one of the pioneers of small cells, Picochip's technology has always been at the forefront of the industry, particularly in LTE,” said Barney Barnowski, Director, Business Development of Tektelic. “Working with Picochip gives us access to proven LTE technology that our customers can rely on and the ability to deliver a fully featured micro eNodeB platform supporting numerous

LTE frequency bands, Tx power levels, and number of users.”

The development will take place in two phases. The first phase will see Picochip's PC9608 system incorporated into a complete, single board, small cell LTE solution ready for immediate deployment. The second phase will see the two companies collaborate to deliver a next generation multi-standard small cell device, encompassing support for 20MHz, dual-mode LTE and HSPA+, as well as 'metro Wi-Fi'.

“This collaboration is testament to the power of our PC9608/09 system that has been helping many of our customers accelerate the development of their own LTE solutions cost effectively. The fact that it will also form the core of a carrier class device in real world deployments shows the power of our technology,” said Rupert Baines, VP Marketing of Picochip. “The relationship with Tektelic has been very productive, as demonstrated by the industry-leading integrated solution, with a direct roadmap to the multi-mode small cell system” www.picochip.com

“As one of the pioneers of small cells, Picochip's technology has always been at the forefront of the industry, particularly in LTE.”

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Scarcity will drive up the value of semiconductor start-ups

There's never been a better time to invest in silicon start-ups, says **Henry Nurser**, chief operating officer of **Blu Wireless Technology** in Bristol. There's a massive imbalance between supply and demand for new companies building up and the market is still growing and vibrant.

The appetite for large companies for acquiring smaller ones is still strong. He points to market consultants Pagemill who see an average return from mergers and acquisitions (M&A) of 4.59x over ten years from over 320 companies. But the acquisitions aren't here at the moment, which means there's a real opportunity for start-ups. You need 35 to 37 deals a year in M&A to supply the big companies, and we're

not seeing those in Europe or the US at the moment, he says.

Semiconductors is still a growing industry. Not at the 20-30% growth rate of the boom years but averaged over the industry cycle it is still 10 to 12%. With a maturing market you get consolidation and from a macro-economic perspective we haven't really started to see this across the industry he

says, also pointing to the fact that there's always new things coming in - WiFi and Bluetooth didn't exist 10 years ago. "I do not think the semiconductor market is mature yet - the growth is not stellar but there is still plenty of disruption possible," he said.

In most markets there are 5 or 6 players selling to any set of customer and that gives a lot of opportunities for small companies to fill the voids in a large company product line. This is more of a defensive move by the large company so that they have a bundle and can stop another bundle supplier coming in to undercut them, but it provides real opportunities for start-ups.

"It's quite easy to get a 5-6x investment with a good team that's managed properly, but I don't agree with the concept of getting a great team and giving them money," he said. "Get a great team to come back with good ideas and customer validation."

Blu Wireless has taken this approach, working with a small team to get a

"It's time for the VCs to wake up and realise that it is now that they should be investing in the right companies."

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baseband chip design developed for the new 60GHz wireless standard and partnering for the radio front end. "We use a multiprocessor approach with accelerator blocks because there's a lot of expertise in the Bristol area and it means we still have the flexibility to add extensions if we want to create new products," he said. "We understood that the market was a potential risk with other players, but you reduce risk technically by architectural analysis and partner for the RF."

"What I'm highlighting is its time for the VCs to wake up and realise that it is now that they should be investing in the right companies," he said. "The right companies that are looking to fill the gaps with good guys with technology that they can show is fit for purpose and a real focus on the application, those are the people that you should be investing in."

"Don't attempt a 10x return on doing everything and raising millions on a few foils, it doesn't work. It's working out where the gap is in someone's product line or the market and coming up with something that can do the job 2 or 3 times better than any of your competitors."  www.bluwirelesstechnology.com

IBM partners comes to Bristol University for a smarter planet


The University of Bristol is to work with IBM on joint research and technology projects in intelligent infrastructure and cloud computing.

"Students and staff at the University will work more closely with IBM teams to develop the skills and technology needed for an ever-changing world," said IBM Executive Partner and Bristol Partnership Executive Jon Bentley "The work that will be carried out by the teams will look at how new intelligent infrastructure can help the world function more efficiently and help create a smarter planet."

The aim of the relationship is to stimulate growth and drive innovation, whilst expanding the scope of resources and experiences offered to students. Smarter infrastructure is vital in all manner of things, including cars, appliances, roadways, power grids, clothes and even natural systems such as agriculture and waterways.

The announcement builds on the success of Bristol University graduates recruited by IBM and the collaboration with IBM to establish the University's £7million BlueCrystal supercomputer facility, which is one of the fastest and largest computers of its kind in the UK.

Cloud Computing is another research priority. This is the delivery of computing as a service rather than a product, whereby shared resources, software and information are provided to computers and other devices as a utility.

Professor Eric Thomas, Vice-Chancellor of the University of Bristol, said: "Jointly we will look at accessing research funding, recruitment activities, staff secondment and possible mentoring opportunities. I look forward to building on our existing links and our shared goal of delivering a truly phenomenal student experience." 

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Viva Entrepreneurs – the rise of the Adventure Capitalists

Leading entrepreneurs from around the country gathered in Bath to celebrate and examine the industry, especially the role of venture capital and new ways to raise money.

Nick Flaherty reports

Leading venture capitalist Laurence Johns from Cambridge-based fund Amadeus led a death-knoll for semiconductor funding. Amadeus made its name investing in silicon start-ups such as Cambridge Silicon Radio (CSR) and XMOS Semiconductor, but is moving away from the silicon investments. That is not to say that technology development is not vitally important.

“If we don’t build some cool technology companies we are going to be left selling tickets to a theme park called Europe and I don’t want that to happen,” said Johns. “What we need is a bit of genius. We have had a lot, but we need a hell of a lot of it.”

That is increasingly vital as the venture capital industry has been going through a fundamental change. “There’s been a massive extinction in my industry,” he said. “VCs are a dying breed because we have given crap returns in Europe and it’s kind of your fault. We are a service industry and if you can’t create enough value in Europe, we can’t. People are retrenching so it has to be re-invented, and this is really hard – some of these funds deserve to die.”

This means there is less appetite for risk and money is only being invested

in well-proven teams rather than new start-ups or spinouts. “All the money is moving to companies with teams that are groomed and likely to win,” he said.

The other trend is towards software rather than silicon and hardware. “My investment intentions are going soft – it’s a huge missed opportunity,” he said. “Hardware and silicon companies think big and global while software companies much less so and that needs to look different.

He points to XMOS as an example where the majority of the value and innovation is in the software running on a standard chip. “This links to things going soft,” he said. “At the moment most of the VCs in the world will not invest in a silicon company so it is quite hard.”

He points to new areas that are emerging on the back of the internet. “There’s massive value in privacy management so that will happen and there will be a whole new industry there,” he said.

Luke Lang, co-founder of Crowdcube in Exeter is highlighting a different way to raise funding. Companies like Kickstarter in the US has allowed lots of people to contribute to funds of a company, often in return for the

product being made, but Crowdcube took a step further and have automated the process of supporting a large number of small investors. The venture launched earlier this year after two years of development and allows small companies to raise money up to around £250,000 from many small investors, including business angels. All the investors get share certificates and can be easily kept up to date with the activities of the company.

“The problem continues to be access to finance,” said Lang. “The gatekeepers with the money [such as venture capitalists] aren’t necessary the best people to decide what will work and what won’t. Our format uses the collective wisdom of the crowd where anyone can ask questions of the entrepreneurs. Effectively they are doing the due diligence and they get to vote with their money.”

So far 500 companies have submitted business plans to Lang and his co-founder, but only 15% have been good enough, and Lang is looking for more companies from the electronics arena. So far four companies have achieved the funding they wanted, with most raising the majority of the money close to the deadline. While angel funding networks tend to be local there has been surprisingly wide scope to the investors so far, he says, with people investing from Scotland and Ireland in small SouthWest ventures. But the company takes business plans from all over the country – one of the latest is for a new entertainment club in London. Crowdcube itself is now looking to use its own approach for the next stage in its development and raise money from a much wider base of investors than has previously been possible. www.crowdcube.com

New MD for Toshiba Labs

Professor Ian Craddock is taking over as Managing Director of the Telecommunications Research Laboratory (TRL) in Bristol.

Professor Joe McGeehan retired from the position of Managing Director on the 31 July 2011 after leading the Telecommunication Research

Laboratory since its inception in 1998. He becomes a Senior General Advisor to the company and continues in his role as Director at the Centre of Communication Research at the University of Bristol.

Professor Craddock is Research Director for the Merchant Venturers

School of Engineering at Bristol University and a member of the Centre for Communications Research. His research interests include wideband microwave imaging, electromagnetic modelling, antenna design and medical applications of communications technology.



Android and The Internet of Things

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As the cost of hardware capable of running the Google Android operating system goes under \$100 there is an opportunity for application developers to create services that run on a dedicated platform. The number of internet connected devices is rocketing and Android devices that are not smartphones or tablets could be a major driver in this growth. Smart cities, intelligent homes, mHealth application, motoring computing devices all communicating to make the world a better place is the vision but how could a \$100 android device provide useful services in the short term?

openMIC 12 will explore this with 4 thought provoking talks in the morning and 2 detailed barcamp sessions in the afternoon for you to build on the ideas and share your own.

Agenda

- 9.15 am** Welcome and Introduction
- 9.30 am** **Graham Fisher**
BathCube
Internet of Things
- 10.15 am** **Tom Melamed**
Calvium
Using App Furnace to create apps
- 11.00 am** Break
- 11.30 am** TBC
- 12.15 pm** **Kieran Gutteridge**
IntoHand
Android SDK - deep dive on developing apps for the home
- 1.00 pm** Lunch at the noodle bar
- 2.00 pm** Barcamp Session 1 - groups of 8 discussing and developing ideas for Android and IoT
- 3.30 pm** Barcamp Session 2 - groups of 8 more discussing and developing ideas for Android and IoT
- 5.00 pm** Drinks, Networking and Celebration

Bath Ventures Innovation Centre has been organising openMIC events covering diverse topics around Mobile Apps and Web services for 3 years now. Come and learn how the internet of things could affect our lives and celebrate christmas too.

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SouthWest companies drive wireless payment revolution

SouthWest companies are at the forefront of driving a new phase of contactless payment systems for transport.

IT specialist Hoeft & Wessel in Swindon is to provide its new Almex e-Ticketing system across the UK for easy contactless payment by credit card without prior registration. The system uses the new generation of NFC (near field communication) chips, some of which are designed by the Cirencester division of chip giant Broadcom, while the core software comes from a Bristol firm.

“This super-fast ticketing system will

practically revolutionise the public transport system,” said Thomas Wolf, member of the Board of Management of the Hoeft & Wessel. “All passengers will soon need is a credit card with NFC functionality to be able to board the means of transport of their choice immediately. What this means in practice is boarding, holding the card in front of the reading device and starting the journey. After holding the card in front of a reader at the end of the journey the best fares will be calculated and charged.”

With the new NFC ticketing system it was possible to minimise

the transaction time required for identification of the credit card or the e-Ticket, which now amounts to less than 500 milliseconds. The software technology to make this happen was developed in Bristol by Creditcall.

The first practical test is now on the cards: Hoeft & Wessel will be equipping FirstGroup, the largest private bus operator in the United Kingdom, with 4,000 systems. They will be integrated into the corporate IT system, and a further 1,500 are at the planning stage. ☒

www.hoeft-wessel.com
www.creditcall.com

Dialog growth beats US emerging companies

Dialog Semiconductor – based in Germany but founded in Swindon with a large design team – has been recognised as the leading emerging semiconductor by the Global Semiconductor Alliance (GSA).

While it can prove to be nearly impossible to predict whether the economy will begin to stabilize or continue to decline, emerging semiconductor companies have

positioned themselves to become the primary drivers of what has recently been deemed a tepid industry, says the GSA.

Dialog Semiconductor led all emerging semiconductor companies with 21.1% and 76.9% Quarter-on-quarter and Year-on-Year growth, beating leading US emerging companies such as Cavium, NetLogic Microsystems and Silicon Labs. Dialog’s record revenues were

driven by the continued ramp of the smartphone and tablet PC markets, as well as continued design wins for companion power management ICs (PMICs) with Dialog’s application processor partners. Dialog forecasts that positive revenue momentum will continue in Q4’11 and expects revenue to be in the range of \$150.0 to \$157.0 million. ☒

www.dialog-semiconductor.com

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Gnodal and Solarflare Complete 10GbE Testing

Bristol-based networking chip and system developer Gnodal has been working with Californian company Solarflare on testing the performance of its 10 Gigabit Ethernet (10GbE) networking hardware and software.

Installing the equipment in a test lab in Cambridge, Solarflare found industry-leading times of 3.4 microsecond (for 64-byte TCP) and 3.2 microseconds (for 64-byte UDP) half round-trip latency in application performance tests. This level of Such ultra-low latency under load is needed for mission-critical, time-sensitive applications ranging from high frequency trading to cloud, big data, and high performance computing workloads.

“We are extremely excited to partner with Solarflare to demonstrate an ultra-low latency solution to the performance community,” said Fred Homewood, founder and CEO at Gnodal. “A number of our customers have asked us to work closely with Solarflare’s 10GbE server adapters and OpenOnload acceleration

middleware to provide the optimal performance solution. This testing shows that with the low latency combination of the Solarflare 10GbE server adapter and the scalable Gnodal GS-Series switch family, we are able to provide an industry leading end-to-end low latency solution capable of spanning many thousands of ports.”

Gnodal’s GS-Series is built around a custom chip that supports 72 ports in a 1RU form factor up to a network of up to 64,000 ports with an initial port-to-port latency as low as 150ns. The products also have typical power consumption under 1.6W per twinax copper port and under 2.5W per optical port. 
www.gnodal.com

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SW Events

NexGen11 – Next Generation Broadband
15th-16th November
Exhibition & Conference Centre, UWE, Bristol
www.nextgenevents.co.uk

Design For Test
16th November
Innovation Centre, Bath
www.NMI.org

TechWorld Exhibition
16th-17th November
Excel Centre, London
www.techworld.uk.com/

Silicon2011: The challenges ahead
24th-25th November
Beechcroft, Port Wall, Bristol
www.siliconsouthwest.co.uk

Making Sense of Sensors
30th November
Exhibition & Conference Centre, UWE, Bristol
www.inets-sw.co.uk/microelectronics


Tapping the opportunities in Japan

UKTI is organising an electronics trade mission to Tokyo and Osaka in January for ten companies.

The mission starts on 29th January 2012 and will focus on the strong cluster of electronics companies in the Osaka region with opportunities for one-to-one

meetings and learning from companies already doing business in the \$970bn Japanese ICT market.

The mission will explore opportunities in smart cloud computing, telecommunication technologies, green technology and smart grid energy management systems as well as sensor devices for M2M networks, surveillance technologies and Open Source software. There will also be opportunities to explore in e-health and robotics for healthcare.

“The Osaka chamber of commerce wants to build links with companies overseas and this is very much led by them,” said Peter Bacon of Electronics Link Asia. “It’s not just the efforts of UKTI in Tokyo but also the Japanese pushing for this as well.” 

The deadline for applications is 25th November with more details from Peter Bacon of Electronics Link Asia at peterbacon1@btinternet.com

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