

A Joint Cambridge Wireless Testing SIG and Digital Communications Knowledge Transfer Network Event

“A Testing Challenge”
25 February 2010

Hosted by



The Testing SIG is championed by Allan MacLean of Amdeo, Steve Edwards of Rohde & Schwarz, Bill Burrows of Aeroflex, and Mike Salmon of IOTAS. This joint Testing SIG and Digital Communications Knowledge Transfer Network (DCKTN) event is kindly hosted by National Physical Laboratory (NPL)

Venue – National Physical Laboratory, Hampton Road, Teddington, Middlesex TW11 0LW

AGENDA

11:00	Registration and Tours of NPL
12:00	Networking over lunch
13:00	Welcome and Intro from SIG Champion – Mike Salmon, IOTAS
13:10	Welcome from DCKTN – Eddie Murphy, Network Development Manager, DCKTN
13:25	“Measuring up to new multi-band/multi-mode radio systems” Prof. Brian Collins, Chief Applications Engineer, Antenova Testing antenna and radio systems for mobile devices is getting more complex because of the increasing number of wireless protocols and the move to lower frequencies and multiple antennas. Conventional anechoic chamber based systems are large and expensive solutions. This talk will outline the problems facing the typical designer, and how measurement systems could evolve to speed up testing and lower cost.
13:50	Q&A
13:55	“Accelerated testing of next generation chips” Dr.Ir. Leo Poll –Business Development Manager, MiPlaza The MiPlaza Electronic Measurement Laboratory enables the development of the increasingly complex and high speed chips which are at the heart of next generation innovations such as wireless communication in the home, providing the infrastructure for ambient intelligence, and ultra low power wireless sensors for use in and around the human body. These wireless innovations will demand massively increased data transfer rates, 100-1000 times higher than currently available. This means increased bandwidth and consequently higher frequencies, multiples of which often have to co-exist in one system. The laboratory supports these requirements, enabling measurements to be performed from remote locations at very high frequency in the RF range.
14:20	Q&A
14:25	Networking over coffee - Meet the Scientists
15:10	“Future challenges of wireless - developing the metrics of the future” Dr. David Humphreys – Principal Research Scientist, NPL A major part of NPL’s role is to support UK industry by developing and applying the most accurate measurement standards to help improve productivity and quality and lay a foundation for innovation. However, the rapid pace of progress in the wireless area means that such industry focussed measurement is not a static target and cannot be developed in isolation. This talk outlines some of the key challenges that NPL currently perceives, where we believe that we can help to meet those challenges, and where working in partnership would be an advantage to ensure that industry’s future needs are met and NPL is able to draw on the latest insights from industry.

15:35 **Q&A**

15:40 **Panel Discussion**

16:40 **Closing Remarks from DCKTN – Stuart Revell, Chair of the Wireless Technology & Spectrum Working Group, DCKTN**

16:50 **Fill in evaluation forms**

17:00 **Event Closes**

With the permission of the speakers, presentations will be loaded to the Cambridge Wireless website on the day following the event

Profile of Organiser

Cambridge Wireless

Cambridge Wireless is a leading and vibrant wireless community with a rapidly expanding network of companies interested in the application of wireless technologies. In addition to VIP networking activities and business development support, we run a number of Special Interest Groups focussed on specific technology and/or market areas, providing opportunities for member organisations to meet, form partnerships and exploit opportunities for new business. Cambridge Wireless has a number of partnerships with like-minded organisations around the world, and we endeavour to keep members fully up to date with the latest developments, and assist in exploring new business opportunities with local and international companies. For more information, please visit: www.cambridgewireless.co.uk

Digital Communications Knowledge Transfer Network (DCKTN)

This new KTN has been formed with the objective of bringing competitive advantage to the UK by facilitating the exchange of knowledge on Digital Communications technologies and capabilities. The DC-KTN plan to do this by acting as a 'Network of Networks', organising a range of events and providing support throughout the UK in association with other communities of interest and centres of excellence, and by working alongside the Devolved Administrations and Regional Development Agencies. A key priority during this start-up phase of the DC-KTN is to establish an as comprehensive as possible network of members spanning the entire industry, together with those University Departments, research organisations and government agencies that are active in the field. For more information please visit: www.dcktn.org.uk

Profile of Host

National Physical Laboratory

The National Physical Laboratory (NPL) is one of the UK's leading science and research facilities. It is a world-leading centre of excellence in developing and applying the most accurate standards, science and technology available.

NPL occupies a unique position as the UK's National Measurement Institute and sits at the intersection between scientific discovery and real world application. Its expertise and original research have underpinned quality of life, innovation and competitiveness for UK citizens and business for more than a century:

- NPL provides companies with access to world-leading support and technical expertise, inspiring the absolute confidence required to realise competitive advantage from new materials, techniques and technologies;
- NPL expertise and services are crucial in a wide range of social applications - helping to save lives, protect the environment and enable citizens to feel safe and secure. Support in areas such as the development of advanced medical treatments and environmental monitoring helps secure a better quality of life for all;
- NPL develops and maintains the nation's primary measurement standards, supporting an infrastructure of traceable measurement throughout the UK and the world, to ensure accuracy and consistency.

NPL has a comprehensive range of test facilities for electromagnetic materials, guided and free-field RF. NPL develops new metrology for waveforms, individual components and subsystems (physical layer) and for the end-to-end performance of a system or sensor network. Please visit: <http://www.npl.co.uk/electromagnetics/>

Profiles of our SIG champions

Allan MacLean, Amdeo

Amdeo specialises in the development and exploitation of high tech innovations. Amdeo principal, Dr Allan MacLean, has worked in research and management roles at the leading edge of Information and Communication Technologies for over 25 years. He was a founder member of Xerox's European Research Centre in the 80's and was a major contributor to building it into one of the world's leading centres of expertise in the user centred design of innovative technologies. In 2002, he co-founded Image Semantics, which he helped lead to become a global provider of innovative mobile applications and services. Allan has frequently advised on funding programmes in the UK, Europe and North America to help improve the fit between technologies and human needs and improve the exploitation of government funded research. For more information please visit www.amdeo.com

Steven Edwards, Rohde & Schwarz

Steve is responsible for National Sales and Marketing Communication at Rohde & Schwarz UK Ltd and has been involved in the groups Test & Measurement business for over 11 years. Rohde & Schwarz is an independent group of companies specialising in a wide range of technologies and industries including wireless, broadcast, aerospace & defence and security markets. Initially Steve specialised in cellular mobile communication standards but his role now includes promoting other R&S business areas such as Microwave, Broadcast, EMC and Aerospace & Defence. Steve's focus is on enhancing the customer relationship, gathering feedback and matching new product development to future customer requirements. For more information please visit www.rohde-schwarz.co.uk

Bill Burrows, Aeroflex

Aeroflex Test Solutions is a global leader in the Test and Measurement Instrumentation marketplace. Our products support a wide range of industries including aerospace, defence and wireless mobile and broadband communications. Bill Burrows is the Business Development Manager for Aeroflex's European instrument business and has held various marketing and product management positions over the last 12 years. Prior to this he was an RF engineer working on spectrum analysis and radio test products. For more information please visit www.aeroflex.com

Mike Salmon, IOTAS

Michael is the Technical Director at IOTAS Ltd. An ISEB qualified test professional with a background in software development. Before joining IOTAS he was the Product Delivery Test Manager for Motorola. IOTAS offers global field trial and approval solutions for 2G, 3G and HSPA terminal devices on live commercial networks and are working with the GSMA to define field trial test cases for LTE. IOTAS is the preferred choice for field trial solutions for Protocol Stack, Handset, and PC Card Suppliers. For more information please visit www.iotas.co.uk

Profiles of Speakers

Prof. Brian Collins, Antenova

Brian Collins has more than 40 years' of hands-on experience of antenna design and manufacture and has been with Antenova for 6 years as Chief Applications Engineer. Brian is a Visiting Professor at Queen Mary, University of London. He has authored more than 70 papers and book chapters, and has 20 patents and 3 current applications.

Dr. Ir. Leo Poll, Miplaza

Leo Poll is a business development manager for Philips research and its open innovation division Miplaza. Miplaza enables high tech organisations to realize their full potential by providing shared use of research infrastructure, cleanrooms, high-tech equipment, service support and consultancy. Services include design, processing, test & measurement, material analysis, hardware and software prototyping. Leo has a keen interest in matching innovative technology to real world problems in a commercially sustainable manner. He has more than 15 years of experience in developing and commercialising customer-insight driven technology solutions. For more information please visit: <http://www.miplaza.com>

Dr David Humphreys, National Physical Laboratory

David A Humphreys was born in Epsom, UK in 1956. He received a BSc in Electronics from Southampton University, UK in 1978 and a PhD in Electronic Engineering from London University, UK in 1990. His thesis concerned the accurate measurement of high-speed optoelectronic devices at telecommunication wavelengths. He joined the National Physical Laboratory, Teddington, UK in 1978 where he developed measurement techniques to characterize optoelectronic devices at up to millimeter-wave frequencies. From 1992 to 2003, he developed accurate wavelength measurement capabilities for optical fiber communications. Recent interests include RF waveform metrology for wireless communications, metrology for nonlinear RF component measurements and formation-flying satellites.

Dr Humphreys is a Chartered Engineer and a Corporate Member of the IET (UK) and a Senior Member of the IEEE (USA). He was awarded the IEE Ambrose Fleming Premium in 1987 and has published over 87 journal and conference papers. He has also been an active member of the Surrey Branch IET committee since 1994.