


Connected Devices SIG
Wearables – the internet of us

9 October 2014

Hosted by **Deloitte** and sponsored by  Cambridge Consultants



This SIG is championed by **Nick Hunn, WiFore Consulting, Paul Green, Arkessa, Antony Rix, TTP** and **Tim Whittaker, Cambridge Consultants**

Venue: **Deloitte, Stonecutter Court, 1 Stonecutter St, London, EC4A 4TR**

AGENDA

10:30 Registration and networking over refreshments

11:15 Introduction to the Connected Devices SIG by **Nick Hunn, WiFore Consulting**

11:25 Session chaired by SIG Champion **Paul Green, Arkessa**

The outlook for wearable computing, **Paul Lee**, Head of Research, Tech, Media and Telecommunications, **Deloitte**

At the beginning of the year, wearables were the talk of the technology sector, and predominated at January's Consumer Electronics Show, and were a major feature at the Mobile World Congress in February. At the start of the year, Deloitte forecast a ten-million unit, £2 billion year for wearables in 2014. Now that we're in the final third of 2014, Deloitte's Paul Lee, head of research for tech, media and telecommunications, provides an update on the likely out-turn for the wearable market this year.

11:45 **Setting the scene for wearables - why now? Ruth Thomson**, Head of Consumer Product Development, **Cambridge Consultants**

From enabling athletes to improve their performance and technique, to increasing efficiency of workers, to helping you to track your wellbeing we are finding wearable technology has a huge number of possible applications. This talk will set the scene for the rest of the day by introducing the topic of wearables, exploring why this is happening now, and what could be next.

12:05 **The market for smart wearables, Nick Hunn, WiFore Consulting**

The consumer electronics industry has convinced itself that wearable technology will be the next big thing, with analysts predicting a market worth over \$30 billion by 2020. That belief is driven by a desperate need for major companies to find something to follow on from laptops, tablets and PCs all of which are being commoditised. The problem is that their model for wearable technology is built around technology push, trying to shape their technology to fit consumers. It is a strategy that is likely to fail, as wearable technology is more, rather than less, personal. This presentation takes the contrary viewpoint, investigating the market opportunity from known consumer behaviour and preferences. It still suggests it will be close to \$20 billion in 2020, but with a different mix of products and service models.

12:25 Panel session

12:50 Lunch and networking

13:50 Session chaired by **Tim Whittaker, Cambridge Consultants**

Anatomy of wearable success: what are the key ingredients for developing a wearable technology market? Ken Blakeslee, Chairman, **WebMobility Ventures**

Contextual Technologies that augment our awareness to personal and environmental situations which are relevant to a precise situation and location will become more and more valuable to individuals. Device technology is only part of the puzzle, however applications software, analysis/correlation engines and ecosystems need to be in place for this to succeed. This talk looks at the ecosystems and business models that will be key to success.

14.10 **The expanding frontier of wearable scent and smell, Jenny Tillotson**, Founder, **eScent**

eScent® technology introduces a totally new dynamic and sensation to the wearables sector. As fashion and technology collide creating new opportunities; one is to engage further with the senses, e.g. wearable scent technologies that enable consumers to sense context and dispense scent accordingly, whilst extracting content experiences via mobile and IoT. This talk is about eScent®, a wearable device embedded discreetly into clothing and jewellery that provides an awareness and contextual sixth sense with wide-ranging applications in fashion, wellbeing, healthcare, multi-sensory retail, AR and entertainment. It delivers a localised 'scent bubble' around the user that is relevant to the situation, condition or location, augmenting how we as humans interact with the physical world around us.

14:25 “Attractive” wearables: bridging the gap between great designs and bespoke electronics, Fabio Pania, CTO, Kovert Designs

While in the past Technology has only been associated with function and usefulness, today's tech products need to be “attractive” to the consumer in a more articulate and complex way. Kovert Designs is currently addressing this need in the space of Wearable Technology by launching a collection of smart jewellery. This talk is about making technology useful and beautiful and the challenges and perks that come with it.

14:40 Wearable to forewarn of impending respiratory failure, Dr Kevin Auton, Managing Director and Founder, Aseptika Limited (Activ8rlives)

WHO predicts that lung disease will be the World's fourth biggest killer by 2030. A third-generation wearable monitor for people that suffer from lung diseases, such as Chronic Obstructive Pulmonary Disease (COPD), Asthma, Cystic Fibrosis (CF) and non-Cystic Fibrosis Bronchiectasis (NCFB), will forewarn of a collapse in respiratory function as part of a self-management plan developed in collaboration with the patient's healthcare team and supported by self-monitoring at home.

14:55 Panel session

15:20 Refreshments and networking

15:50 Session chaired by **Dr Antony Rix, TTP**

The future of wearable technology (in two parts):

- 1) **Technology on its' own isn't enough**
- 2) **What technologies should be used?**

Claire Duke Wooley, Fashion Technology Analyst and **Jon Howes**, Technology Director, **Beecham Research**

How different do wearable products need to be for these markets to really take off? This talk looks at the approaches that are expected from both a fashion and a technology viewpoint to create demand, change perceptions and avoid future disillusionment.

16:10 Wearables: seeing through the hype, Arthur Amarra, Founder, AON2

This talk will cover the brief history of wearables, the current wearable craze (and what's wrong with it) and what (we think) will make wearables successful. We will focus on feelings/experience, completeness and execution

16:25 Wearable technology as a safety standard, Juma El-Awaisi, Product Manager, Braci

For centuries people with disabilities and impairments have been concerned about their safety and well-being both at home and in public. This short talk will focus on revolutionizing wearable technology for the deaf and hard of hearing.

16:40 Wearables and the internet of sound, Carl Thomas, CEO, Audiowings

With wearables blurring the division between human and network, the computer has truly become personal, augmenting and enhancing our sensory perception. Most wearable devices to date have focused on our vision, by putting interfaces in glasses and on wrists. However as we move into the Age of Context, audio has the ability to provide passive access to relevant content without distracting us from our everyday lives. This talk looks to examine the power of audio as the most viable interface to power the wearable age.

16:55 Panel session

17:25 Complete evaluation forms

17:30 Event closes

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

Profile of organisers

Cambridge Wireless (CW)

CW is the leading international community for companies involved in the research, development and application of wireless and mobile, internet, semiconductor and software technologies. With 400 members from major network operators and device manufacturers to innovative start-ups and universities, CW stimulates debate and collaboration, harnesses and shares knowledge, and helps to build connections between academia and industry. CW's 19 Special Interest Groups (SIGs) provide its members with a dynamic forum where they can network with their peers, track the latest technology trends and business developments and position their organisations in key market sectors. CW also organises the annual Future of Wireless International Conference and Discovering Start-ups competition along with other high-quality industry networking events and dinners. With headquarters at the heart of Cambridge, UK, CW partners with other international industry clusters and organisations to extend its reach and remain at the forefront of global developments and business opportunities. For more information, please visit www.cambridgewireless.co.uk

Profile of host

Deloitte, London

Deloitte provides audit, tax, consulting, and corporate finance services to public and private clients spanning multiple industries. The Global Technology, Media & Telecommunications Industry (TMT) group consists of the practices organised in the various member firms of Deloitte Touche Tohmatsu Limited (DTTL) and is dedicated to helping clients evaluate complex issues, develop fresh approaches to problems and implement practical solutions. For more information visit www.deloitte.com/uk

Profile of sponsor

Cambridge Consultants

Cambridge Consultants leads the way in innovative product development. With one of the world's largest independent wireless development teams, we are the partner of choice for leading blue chips, as well as the virtual development team for ambitious start-ups. We develop breakthrough products, create and license intellectual property, and provide business consultancy in technology critical issues for clients worldwide. With a team of over 400 engineers, designers, scientists and consultants, we offer solutions across a wide range of industries including telecommunications, security, defence, healthcare, industrial and consumer goods. Cambridge Consultants is part of the Altran Group, the European leader in Innovation Consulting. For more information visit www.cambridgeconsultants.com

Profile of SIG Champions

Paul Green, Arkessa

Paul originated Arkessa in 2006 – the business that provides remote internet services to multitudes of machines. He is currently creating the services Arkessa will offer in five year's time. His professional life combined engineering and science has taken him through a variety of roles, including design and production engineering, business planning, marketing and corporate sales, mainly in the telecommunications sector. Interestingly, the first product he introduced to manufacture is now in the Science Museum in London. A passionate and committed Christian, Paul is as excited about materials science and quantum physics as he is interested in railways, walking, skiing and the natural world. For more information please visit www.arkessa.com

Nick Hunn, WiFore Consulting

For the past twenty years he has been closely involved with short range wireless and communications, designing technology that helps to bring mobility to products, particularly in the areas of telematics, M2M smart energy and mobile health. He is closely involved with the Bluetooth SIG, the Continua Alliance and other medical and wireless standards bodies. He is the author of "The Essentials of Short Range Wireless" - a book attempting to explain the application of wireless technology to product developers. For more information visit www.wifore.com

Dr Antony Rix, TTP

Dr Antony Rix is a Senior Consultant in the Communications and Wireless group at TTP, Europe's leading independent technology consultancy and product development company. He has led projects in areas including mobile TV, phone apps, network planning, and novel short-range and wide area wireless technologies. Antony is currently engaged in business development and programme management in wireless healthcare and in safety-related radio systems, where he focuses on developing breakthrough products and services for TTP's clients based on applications of technology. Before he joined TTP in 2004, Antony worked at BT's Research Laboratories and then co-founded Psytechnics, a successful start-up company developing quality of service and network monitoring software.

Antony has a Ph.D. from the University of Edinburgh and a Masters in Engineering from the University of Cambridge. He is a member of the American Telemedicine Association, Institute of Engineering and Technology and Audio Engineering Society, and he co-chairs the Cambridge Wireless Special Interest Group on Connected Devices. For more information please visit www.ttp.com

Tim Whittaker, Cambridge Consultants

Cambridge Consultants was started in 1960 to pioneer the delivery of independent design and development services in electronic, mechanical and product engineering: we are one of the founder companies of the high-technology Cambridge phenomenon. Our history of world-class services is augmented by our development of intellectual property in telecommunications, software, silicon and medical devices, and by more than 20 successful spin-out ventures. Today Cambridge Consultants employs 350 engineers, scientists, project managers and technicians with offices in Cambridge, UK and Cambridge, MA in the USA; we provide the full range of services for excellent product design to a worldwide client base in the wireless, consumer, industrial and medical markets. Tim Whittaker is a System Architect in the Wireless business unit, where he has taken the technical lead in projects using radio standards like Bluetooth, ZigBee, DECT, and in the creation of specialist communications schemes for new applications, or to use new spectrum allocations. For more information visit www.cambridgeconsultants.com

Profile of speakers

Arthur Amarra, AON2

Arthur Amarra graduated from the University of Liverpool in 2008 with a Masters' Degree in Aerospace Engineering with a speciality in Computational Fluid Dynamics. Since graduation, he has been working for the past six years in the aerospace sector in Bristol on the analysis of large aircraft wings. Arthur joined Airbus working with the Advanced Numerical Simulation group prior to founding AON2 in 2014 as a startup company to manufacture wearable altimeters for skydiving. For more information visit www.aon2.co.uk

Dr Kevin Auton, Aseptika Limited (Activ8rlives)

Kevin Auton is a biochemist who has invented, developed and manufactured, 12 different life sciences products and marketed them throughout the World. Dr Auton has held several leadership positions in SME technology companies in the East of England region over the last decade and consulted for a number of companies in the life sciences/medical devices area who are seeking to convert promising technologies into real-life products. Dr Auton is a named inventor on 7 patents, including: Biomarkers for Lung Infections on which Aseptika relies. Previously, Dr Auton founded NextGen Sciences and Cellexus Biosystems, having held senior positions in: Genomic Solutions, Pharmagene, Lark Technologies and Millipore. Dr Auton has a Ph.D in microbial biochemistry from Southampton University, studying the protein and co-factor expression patterns of a bacterium. For more information visit <http://activ8rlives.com/>

Ken Blakeslee, WebMobility Ventures

Ken's involvement over the past few years has been specifically in the area of private equity investing in the mobile sector, and his previous experience in developing telecoms, IT and web commerce business strategies spans 25+ years. His focus has been on the emerging new media content, applications and commerce methodologies, and the merging of these with the ubiquitous, personal access of mobile. Recent emphasis has been placed on Wearable Technologies, Fitness/Wellness, mHealth, Augmented Reality, Mobile TV, 3D and personal viewing scenarios for rich media and innovations in technologies enabling multiscreen convergence. Alternate energy and additive manufacturing (3D printing) technologies and applications are also a recent focus. For more information visit www.webmobility.eu

Claire Duke-Wooley, Beecham Research

Claire Duke-Wooley is Beecham Research's Fashion Tech Analyst. Having first trained in textiles at Chelsea College of Art & Design before going on to complete an MA in Womenswear Knitwear at the Royal College of Art and Design in 2006, Claire has over 10 years experience working within the textile and fashion industries. During this time she has had the opportunity to work with some inspirational brands including Missoni, Kenzo, Liberty of London and Orla Kiely. For more information visit www.beechamresearch.com

Juma El- Awaisi

After graduating from the school of pharmacy Juma took a different path and moved towards business and marketing where he was the trade manager at an international pharmaceutical company in Turkey. Juma has also invented a GP kiosk, which diagnosis, measures, prescribes and dispenses medication to the user. For more information please visit <http://braci.co/>

Jon Howes, Beecham Research

Jon Howes is Technology Director at Beecham Research specialising in analysing and researching worldwide IoT and Wearables markets' technology challenges. He was previously CEO at NEuW, building product implementation and advisory teams, and has held senior technical positions with Fujitsu Microelectronics, Ferranti and British Aerospace. For more information visit www.beechamresearch.com

Nick Hunn, WiFore

See profile above. For more information visit www.wifore.com

Paul Lee, Deloitte

Paul Lee is responsible for technology, media and telecommunications research at Deloitte. In this role Paul has authored over 70 TMT reports including Deloitte's annual Predictions for the Technology, Media and Telecommunications series. In 2011 Predictions was launched in over 70 countries. He also founded the Deloitte Global Mobile Consumer Survey, which in its inaugural year included data from 17 countries and over 34,000 individual responses. Prior to Deloitte Research, Paul was Director, Gartner Consulting, leading work in the telecommunications sector. For more information visit www.deloitte.com/uk

Fabio Pania, Kovert Designs

Fabio Pania is the Co-founder and CTO of Kovert Designs, a company that fuses together great design and bespoke electronics and creates products that people want to use and wear every day. He has a wide background in electronics with experience that ranges from Research to Development and that includes ASIC Design, Embedded Systems, Digital Signal Processing, Algorithm Study and Implementation, FPGA, PCB. After receiving a Master Degree in Electronics Engineering from the University of Pisa (Italy) and working for companies such as NXP Semiconductor (The Netherlands) and Imagination Technologies (UK), he's now exploring the world of start-ups and he's thoroughly enjoying it. For more information visit www.kovertdesigns.com

Jenny Tillotson, eScent

Jenny Tillotson is the founder and driving force behind eScent®, a sensory wearable product she has pioneered that unites the ancient art of perfumery with emerging technologies, emotional fashion and wellbeing. She is a Reader in Sensory Fashion at Central Saint Martins, Visiting Scholar in the Institute of Biotechnology, University of Cambridge, a Fellow of the RSA, a Churchill Fellow and an Associate of the British Society of Perfumers. She has worked with numerous smell and wellbeing experts and on projects with The North Face, Philips, Cambridge Consultants, International Flavours & Fragrances and Adeline Andre haute couture. For more information visit <http://www.tfrc.org.uk/author/jenny/>

Carl Thomas, Audiowings

Carl Thomas is founder of Audiowings - an audio aggregation platform powering smart headphones and other smart wearable devices. Leading an experienced team of systems designers and engineers, Carl's background is in the telecommunications industry, where he has been commercially involved in services across the OSI model for both regional and national based Internet Service Providers. For more information visit www.audiowings.co.uk

Ruth Thomson, Cambridge Consultants

Ruth Thomson leads the Consumer business at Cambridge Consultants. She has more than 12 years' experience of working with consumer brands, using technology to deliver innovative consumer experiences across a range of products and services. In the wearables space she is working across sports and fitness technology, wellness and personal care applications bringing Cambridge Consultants' significant skills and experience in the development of novel connected systems to these opportunities for innovation. For more information visit www.cambridgeconsultants.com