Wireless Heritage SIG
Joint event with The National Museum of Computing
'Signals in War and Peace'

27th November 2014

*The Wireless Heritage SIG is championed by **Stirling Essex** of **Espansivo, Steve Haseldine** of **Deaf Alerter, Andy Sutton** of **EE, Geoff Varrall** of **RTT Online** and **Nigel Wall** of **Climate Associates***

Venue: The National Museum of Computing, Block H, Bletchley Park, Milton Keynes, MK3 6EB

AGENDA

18:00	**Optional tour of the museum (about 1 hour)**
18:30	**Registration without the tour** **(Food is not provided at this event)**
19:30	Introduction to the Wireless Heritage SIG by **Stirling Essex, Director of Espansivo**
19:35	Welcome from host, **Kevin Murrell, The National Museum of Computing**
	Chaired by Kevin Murrell of TNMOC
19:40	**'Intercepting Lorenz signals', John Pether, The National Museum of Computing** The first indications that the Germans were using radio teleprinter transmissions was in the latter half of 1940. This early intercept work was carried out by the Metropolitan Police, on behalf of the Foreign Office. It was apparent the standard teleprinter signals were being encrypted by an unknown device. The unknown device was the Lorenz SZ42 cipher attachment. When these messages were decrypted they revealed Hitler's communications to and between the German High Command. The result was the shortening of the war and saving countless lives.
20:05	Q&A
	Chaired by Nigel Wall of Climate Associates
20:10	**'100 Years of Electronic Warfare', Steve Roberts,** VP of Strategy, **Selex ES** In 1914, Marconi engineers based in Chelmsford detected radio signals from German airships. The British Royal Navy recognised the importance of this and set up a chain of Direction-Finding stations on the East Coast of the UK. By 1916, a network had been established that enabled successful defence of the UK from air attacks. In the 2nd World War, the German Air Defence system was very effective, using a mixture of radar, radio and EW systems. The British and American activities to defeat this Air Defence system, and later variants produced by the Warsaw Pact, employed a wide range of equipment that would be familiar to the Electronic Warfare engineers of 2014. This talk commemorates 100 years of British activity in Electronic Warfare in support of Air Operations.
20:35	Q&A
	Chaired by Steve Haseldine of Deaf Alerter
20:40	**'Liberating the laptop: an overview of cellular data communications', Andy Sutton,** Visiting Professor, **University of Salford** The laptop computer offers great flexibility however for many years it relied on a fixed network connection, typically via a dial up modem over the PSTN. The evolution of cellular data started to gather significant momentum as GSM digital mobile phone networks were established, therefore offering an effective wireless alternative to fixed network connectivity. This connectivity was realised through the use of PCMCIA data cards, operating first on circuit switched data networks however this quickly evolved to IP networking based on GPRS, the evolution of which is still on-going today with advanced 2G, 3G and now 4G technologies offering high data mobility and reliability connectivity. This talk will review those early days of mobile data and present a display of PCMCIA data cards and their replacement; the USB dongle, the latter leading to what was commonly known as "dongle mania" as mobile data traffic levels grew at a phenomenal rate.
21:05	Q&A
21:10	**Panel session** chaired by **Geoff Varrall of RTT Online** With all speakers
21:30	**Event closes**

Profile of organisers

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

About Cambridge Wireless (CW)

CW is the leading international community for companies involved in the research, development and application of wireless & 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

About The National Museum of Computing (TNMoC)

The mission statement of The National Museum of Computing is 'To collect and restore computer systems particularly those developed in Britain and to enable people to explore that collection for inspiration, learning and enjoyment.' The museum, located at Bletchley Park, is an independent charity housing the largest collection of functional historic computers in Europe, including a rebuilt Colossus, the world's first electronic computer. TNMOC enables visitors to follow the development of computing from the ultra-secret pioneering efforts of the 1940s through the mainframes of the 1960s and 1970s, and the rise of personal computing in the 1980s. New working exhibits are regularly unveiled and the public can already view a rebuilt and fully operational Colossus, the restored Harwell Dekatron / WITCH computer, an ICL 2966, one of the workhorse mainframes computers of the 1980s, many of the earliest desktops of the 1980s and 1990s, plus the NPL Technology of the Internet Gallery. (Please note that the museum is a separate entity to the Bletchley Park Trust.) For more information, please visit **www.tnmoc.org**