General Interest Lectures on Telecommunications

Professor Nigel Linge, University of Salford, UK

Nigel Linge is Professor of Telecommunications at the University of Salford. He is an electronic engineer by profession, is an experienced academic with over 25 years service and offers a series of popular general interest lectures that showcase the engineering achievements that lie at the heart of our telecommunications revolution and examine how our lives have been transformed. Each lecture is written for a general public audience, is delivered as a multimedia presentation and further illustrated by appropriate exhibits from the University of Salford's collection of telecommunication artefacts. Depending on the audience a more technically orientated version of each lecture can be delivered on request.

Contact details:

If you wish to make a booking for one of these lectures for your group or simply discuss your requirements, please use the following contact options:

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Please note that it is becoming increasingly common for lectures to be booked at least twelve months in advance of delivery.

Venue Requirements:

All that is required at the venue is the provision of a projector screen (or suitable wall for projection onto), easy access to mains electricity, tables on which to place a laptop/projector and the range of physical artefacts that are brought along as visual aids and additional interest for the audience. Car parking close to the venue is also preferred for ease of handling equipment.

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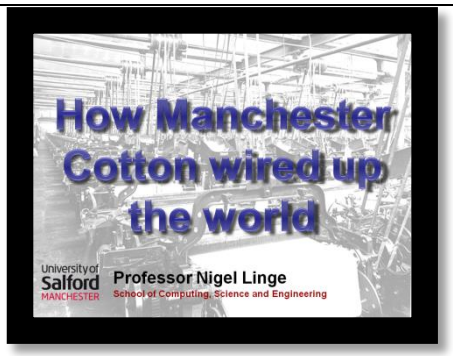
Lecture Titles (March 2015 update)

The following lectures are available from the above date. However, this list is subject to revision. Therefore please consult our website for the most up to date information.

From Man on the Moon to life in cyberspace

In 1969 Apollo 11 touched down on the surface of the Moon, however, a lesser known fact is that in December of that same year the first four computers were connected together to form what we now know as the Internet. This lecture takes as its starting point 1969 and looks at how the early development of the Internet was achieved. From there it goes on to trace the evolution of both the Internet and the World Wide Web to the point where today virtually every aspect of daily life has been impacted and influenced. Mankind may well have made a giant leap on reaching the Moon but cyberspace has potentially had a far greater impact on us all!



How Manchester Cotton wired up the world

In the mid-1800's the Lancashire Cotton industry dominated the world market for finished cotton goods pieces. However, since cotton was not grown in the UK it had to be imported which generated significant trade across the Atlantic. This and other industries therefore drove a business case for improved global communications and from that a desire to link the telegraph networks of the UK and USA with a copper cable under the Atlantic. Nothing on this scale had been attempted before and so this lecture tells the heroic story of the engineers and businessmen who battled numerous setbacks to deliver this pioneering achievement. The lecture goes on to show how the trans-Atlantic telegraph cable then spawned a revolution that delivered the world's first global network that had encircled the planet by 1902.

Our wireless world

We are today more reliant on wireless communications than ever before. Our smartphones use the latest 4G wireless technology, we access the Internet from home using tablets and laptops connected via WiFi, our ability to navigate is increasingly dependent on GPS and our radio listening and television viewing are both dependent on radio broadcasting. This lecture traces the history and key developments in wireless technology from the first theories put forward by James Clerk Maxwell to the practical realisation and exploitation of the technology as a viable means of communication. You will discover that is was a Welshman who was the first to transmit radio signals, how Chelmsford became a world centre for radio, how a military walkie-talkie gave us the mobile phone and the link between a film actress and World War Two torpedo that made both Bluetooth and WiFi possible.

Telstar – 50 years of the telecommunications satellite

In October 1957 the world was amazed by Russia's Sputnik satellite which became the first man-made object to orbit the earth. Whilst Sputnik and those that immediately followed it demonstrated the potential of satellites, it was not until the launch of Telstar in July 1962 that the world would truly be able to exploit the full potential of a telecommunications satellite in space. This lecture tells the story behind Telstar, its capabilities, the importance of Goonhilly Downs in Cornwall, and the world firsts in television and telephone transmission across the Atlantic that it delivered. From there the lecture will show how today's satellites allow you to receive hundreds of television channels, pinpoint your location on the planet, know whether it will rain tomorrow, make telephone calls from the remotest parts of the world and browse the web whilst flying at 30,000 feet!

The call what he made

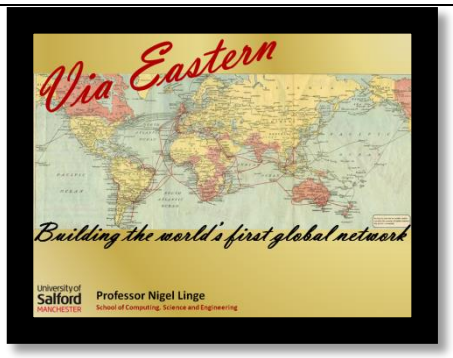
Comedian Ernie Wise was one half of the UK's hugely popular comedy double act, Morecambe and Wise, and was famous for the "plays what he wrote!" However, on 1st January 1985 Ernie Wise made history by inaugurating the UK's first mobile telephone network. This therefore was "the call what he made" that signalled the start of our mobile communications revolution which today has resulted in the situation where there are now more mobile phones than people in the country. Those early mobiles were huge, extremely heavy, very expensive, had limited battery life and could only make telephone calls. This lecture tells the story of how that technology has evolved over a relatively short period of time to deliver today's smart phone that acts as our gateway to the web, ensures that we have a camera with us at all times, can pinpoint our physical location within a few metres on the planet's surface and has transformed our lives and the very language we use to communicate.

The Red Box

It has achieved iconic status; it symbolises Britain; but it is now seldom used! The British Telephone Kiosk has been part of our landscape since 1921when the first K1 model was introduced. However, it was the K2 design by Sir Giles Gilbert Scott and then his much more numerous K6 design that established the now familiar and iconic red box on our streets. Today the mobile phone generation have probably never stepped inside a telephone kiosk let alone used one. Nevertheless there they remain as an essential part of what makes Britain, Britain! This lecture looks at the history and evolution of the humble British Telephone Kiosk through all of its major models, including those that were introduced by organisations other than BT and also the one that is now more famous because it is used by a Time Lord. It will conclude with a consideration of what future lies ahead for our familiar red boxes and also show that they are actually not all painted red!

The Winged Messenger

From the earliest times, our ability to communicate with one another has been essential to our evolution. Even the Gods of Ancient Roman understood this and made Mercury their messenger. With his winged sandals, traveller's hat and serpents to protect him, Mercury could be relied upon to deliver all of the Gods' messages quickly and reliably. This lecture will show how technology of the day has always been exploited to improve our ability to communicate over greater and greater distances and at an ever faster speed. Enjoy a whistle-stop tour through 2,500 years of history that takes you from the early forms of semaphore signalling to today's all powerful smart phones that provide access to a seemingly infinite source of information and keep us connected wherever we happen to be, twenty four hours a day!



Via Eastern – Building the world's first global network

The laying of a trans-Atlantic telegraph cable in 1866 proved that it was practical and possible to communicate using electricity over thousands of miles. This success led to a massive expansion in the laying of oceanic telegraph cables and the emergence of global telecommunications companies such as the Eastern Telegraph Company. This lecture will look at how those cables were laid, how new technology allowed for the automatic transmission and routing of telegrams, why the small village of Porthcurno in Cornwall became a major international communications hub, and how a Glaswegian working in Manchester became one of the most influential figures in global communications. This therefore is the story of how the Victorian's built the world's first global network for communications.

The first and last mile – your route to super-fast broadband

Most homes in the UK are connected by a pair of copper wires to a local exchange. For many years those wires were used solely for making and receiving telephone calls. However, the personal computer, the Internet and World Wide Web changed all of that and now those same wires give you access to a seemingly infinite source of information, allow you to buy things online, bring you television on demand, meet all of your social networking needs and enable you to play interactive games with people in other countries. How has all of this been possible? This lecture examines that pair of copper wires and shows how improvements in the telephone network gave us the 56K modem, how new technology called ADSL delivered broadband to our homes and now how optical fibre is delivering superfast broadband. Those wires have become the critical first and last mile of our connected world.

Do please get in touch to discuss your requirements.

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