Abstract

Although the internet and the new communications technologies are mentioned everywhere the sheer scale of the revolution that is going on is not widely understood. But with both demand and core system capacity nearly doubling each year this “quiet” transformation will change the way we interact with each other both at work and at home. We are an interacting species and most of our activities, from gossiping to merchant banking (and science!) are mainly about trading information; this is why the effect will be so all-pervasive. Just imagine the impact on our lives of a similar growth in almost any other major technology - such as in medicine or transportation - and you will have some idea of what this change will mean for us all.

The lecture will examine the technologies behind this revolution and their implications for the global communications network. In a broad survey of the latest developments - including photonics, wideband mobility - and the factors behind the growth in the global communications network itself - the presentation will take you on a fast-pace journey to our “fully-connected” future.

Professor Will Stewart is currently the Chief Scientist at Marconi, responsible for identifying emerging new technology areas (eg from academia) that hold promise for the company and for building competence in them. Educated at Imperial College (Physics), he started work at Caswell, in 1972, now the focus of the new Marconi Optical Components business and remained at Caswell in successive positions until becoming Marconi Chief Scientist. He is a visiting Professor at UCL and at the ORC at Southampton. He is author on some 64 conference and journal papers, including many invited papers, and of 48 patents. He has recently joined the editorial advisory board for the journal ’Science’.

On 28 June 1978 Admiral of the Fleet Lord Mountbatten was the first of many distinguished speakers to present this series of lectures. Originally set up by the National Electronics Council, the series name for these annual lectures was changed to the ’Mountbatten Memorial Lecture’ after Lord Mountbatten’s death.