

Symposium Speakers



MONDAY OPENING PLENARY SPEAKER



Mind the Gap: Applying SE to Address the Delivery Challenges of London Underground Programmes

Mr. Kuldeep Kumar Gharatya

Engineering Directorate, London Underground Ltd

Kuldeep was born in London, England. His Undergraduate degree is in Mechanical Engineering and he went on to study a Post Graduate Masters degree in Systems Engineering at University College London, which he achieved with distinction. His Masters project was titled 'SE—From Business Case to Organisational Implementation'.

Kuldeep is a Chartered Engineer and a member of the Institution of Mechanical Engineers and a member of the Institution of Engineering and Technology. He is also an active member of the International Council on Systems Engineering, and serves on the UK Chapter's Railway Interest Group. His INCOSE Intelligent Transportation and Transit Systems Working Group (ITTSWG) involvement has led to London Underground entering into an agreement with New York City Transit Authority on sharing knowledge and good practice in Systems Engineering.

Kuldeep joined London Underground in 1997 and has worked in the various departments of the company. This was an experience which led him to subsequently promote a Systems Engineering approach. He is now the professional head for systems engineering and human factors.

London Underground has begun an unparalleled level of upgrade work as part of a 30 year Public Private Partnership (PPP). Systems Engineering (SE) will play a vital role in ensuring these large programmes deliver in the challenging timescales set. For SE professionals the challenge is not 'doing' SE but embedding systems engineering as part of the delivery process.

In the past few years there has been an increasing recognition of the value of Systems Engineering and Kuldeep has overseen the development of a new team within the Engineering Directorate. He continues to work hard at embedding and raising the profile of Systems Engineering in London Underground and its delivery partners.

TUESDAY PLENARY SPEAKER



Singapore: An Example of a Large Scale System

Professor Lui Pao Chuen

Chief Defence Scientist, Ministry of Defence (MINDEF)

Professor Lui Pao Chuen graduated from the University of Singapore in 1965 with a degree in Physics. He joined the Ministry of Defence (MINDEF) in 1966 as the Officer-in-Charge of Tests, Evaluation and Acceptance Section. In 1970 he established the Science and Management Group, reporting directly to the Second Permanent Secretary of Defence for the planning and management of major development projects.

In 1971, he was awarded the first MINDEF fellowship for postgraduate education and elected to pursue his studies at the United States Naval Postgraduate School, Monterey, California. In 1973, after graduating with a Master's degree in Operations Research and Systems Analysis he was appointed acting Director, Logistics Division, MINDEF.

In 1975, he was appointed Special Projects Director and was made responsible for the planning, system engineering and management of the implementation of major weapon systems for the SAF. As he was responsible for both operational and technical matters he could adopt



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a "Conception to Retirement" systems approach which later became standard practice in MINDEF.

In 1984, he held the appointment of acting Director, Joint Operations and Plans Directorate of the Ministry of Defence concurrently with his appointment as Director, Special Projects Organisation. In 1986 he was made Senior Director to set up the Defence Material Organization through the merger of the Material Management Organization and the Special Projects Organization. He was also appointed to the newly created post of Chief Defence Scientist to provide advice to the Ministry and the Singapore Armed Forces.

He has been on the board of directors of various Government-linked-companies, Government agencies and University of Singapore and the recipient of many service awards. Currently, he is holding appointments on the management boards of research institutes and corporations, and in the universities.