

Events

Why 6G?

5G tech is currently being deployed across the country. Some of us may have had the opportunity to experience the true power of this tech. You may not have realized that research has already started on developing the next generation of wireless mobile tech. So, you may ask Why? Well, this was the theme of the one-day conference which was organised Prof. Bal Virdee who is Chair & Executive Member of the Technical Professional Network at the Institution of Engineering Technology (IET). Prof. Bal Virdee is also the Director of the Communications Technology Research Centre at SCDM. The conference which took place on 15th February 2023 at Savoy Place, London and was opened by the IET President Prof. Bob Cryan CBE and chaired by Dr Kafil Ahmed and Dr Mike Short CBE. The conference was streamed worldwide live on IET.tv to online delegates.

The growth of data usage is growing exponentially which is fuelled by massive data-driven applications like TikTok and emerging tech like driverless cars that needs ultra-fast connections and be able to handle millions more connections. To put into perspective the demand on connectivity and data usage one only needs to look at the phenomenal growth of video sharing platforms like TikTok. Since 2018, the number of TikTok downloads has exploded from 100 million to 1600 million. This trend exemplifies the growth of data traffic from just one app. On average the annual data created, captured, copied and consumed per person is about 230 gigabytes and this is predicted to reach 1300 gigabytes by 2030. In a decade's time we'll need wireless mobile tech that will need to cope in a smart and efficient way even a much larger volume of data traffic while striving to meet the Paris Agreement on net-zero by 2050. To do this the 5G tech will need to evolve to the next generation of wireless communications tech that is referred to 6G.

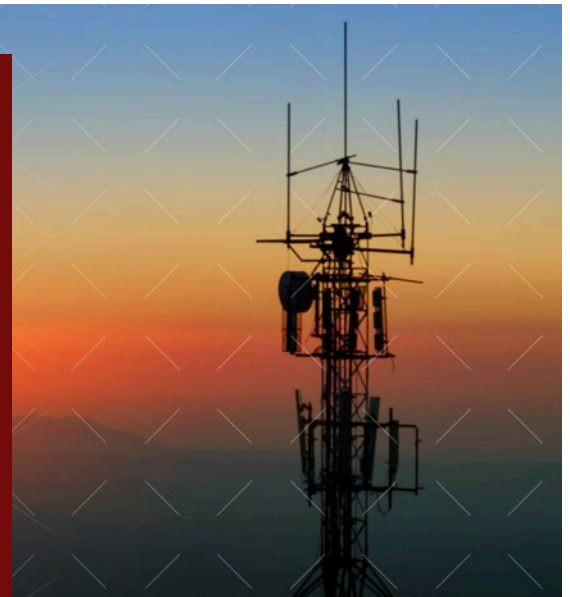
Prof. Bal Virdee said



This is the first 6G conference in the UK. We are embarking on an exciting journey that will converge various technologies such as edge computing, virtual, augmented and mixed realities, integration of cloud, terrestrial & satellite systems. It will use artificial intelligence to provide solutions for very complex problems relevant to network optimization. I'm sure this technology will spur other innovations we haven't thought of yet.



Research has started on investigating new technologies, such as THz, intelligent surfaces, and quantum communications. He also said that "As with any new innovation or technology, it requires collaboration and professionals from across the industry and academia to come together to ensure that 6G is a success."



Dr Kafil Ahmed, said "Many people ask me why we are talking about 6G now. This is a justified question. Development of this technology doesn't happen in isolation, and it takes many years of research and innovation. The purpose of the conference was to bring various stakeholders to map out their trajectories to make 6G a reality".

Prof. Bob Cryan CBE said "We're living in a connected society with many of us having connectivity at our fingertips in a way that just wasn't possible years ago. And the need for fast and reliable connectivity is only rising. We know that there are unique social and environmental demands being placed on future telecoms to accelerate innovation, technical and business growth across the telecoms supply chain. However, this does not happen in a vacuum."

Dr Mike Short CBE said "While 5G will enable society to control more devices remotely in applications where real-time network performance is critical, 6G will bring much richer connectivity to the physical world, using advancements in AI and computing to enhance the machine-human interface."

The first IET 6G conference brought together regulators, policy makers, government representatives, lead industry representatives and researchers worldwide to share their vision and roadmap for the 6G tech.

