

Key drivers and research challenges for 6G

Abstract:

As 5G research is maturing towards a global standard, the research community must focus on the development of beyond-5G solutions and 2030 era, i.e. 6G. It is not clear yet what 6G will entail. It will include relevant technologies considered too immature for 5G or which are outside the defined scope of 5G. More specifically, the way in which data are collected, processed, transmitted and consumed within the wireless network will be a key driver for 6G. It is also envisioned that we need new KPI drivers towards 6G besides the current 5G technical superiority KPIs: societal megatrends, UN sustainability goals, emerging new technical enablers as well as ever increasing productivity demands are emerging critical drivers towards 2030 solutions. To summarize, 6G is not only about moving bits: it will become a framework of services, including communication service where all user specific computation and intelligence may move to edge cloud. Integration of sensing, imaging and highly accurate positioning capabilities with mobility opens a myriad of new applications in 6G era.