IMT2020/ 5G, much more than pure Radio Aspects

Beside further increased demand of (mobile) bandwidth service- development trends also identify further challenging requirements for telecommunication networks related to system latency, mobility and support of big number of connected devices due to the massive increasing number of machine type communications. Future IMT2020 networks, also named 5th generation networks (5G), will be challenged by wide range of requirements that are to some extend conflicting to each other. Current “one-size-fits-all” system architectures based on vertically integrated network elements will be transformed to cloud based programmable platforms, which offer virtual logical isolated network partitions (LINP’s) in form of Network as a Service (NaaS), tailored to the requirements of a specific application or a group of applications. IMT2020 networks are currently gaining huge attention in the telecommunication world. Major public and industry led initiatives have been launched worldwide. ITU and other relevant Standard-Developing Organizations (SDOs) are developing initial standardization work on IMT2020/5G. Beside new radio technologies, there are also many innovative trends on the network side, which include system virtualization, dynamic automation mechanisms for network orchestration (softwarization) and further emerging network technologies as ICN (Information Centric Networking) and CCN (Content Centric Networking).

This presentation introduces the major trends on network side related to IMT2020/5G, by explaining IMT2020 non-radio related network architecture aspects, Softwarization and ICN/CCN. It also considers the already existing recommendations of ITU-T Study Group 13 on content- and data awareness of Future networks, which relate directly to the current IMT2020/5G study topics.

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