

5G India Forum at the ITU meeting submits cutting edge reporting of new 5G radio technologies

The 5G India Forum (5GIF) has been established under the aegis of the Cellular Operators Association of India (COAI), aiming to become the leading force in the development of next generation communications and will enable synergizing national efforts and will play a significant role in shaping the strategic, commercial and regulatory development of the 5G ecosystem in India.

The 5GIF IEG is one of the registered Independent Evaluation Groups (IEG) for evaluation of the new 5G (or also known as IMT-2020) candidate radio technologies. This group was formed by the COAI to evaluate these technologies from the perspective of Indian telecom network deployments for 5G. This is a group of operators, OEM's, universities and individual experts participating in a collaborative manner. This is a contribution driven activity, with decisions made through a consensus seeking approach.

We are now happy to announce that the final report of the 5GIF IEG is now published by the ITU-R WP5D group that is evaluating 5G (IMT-2020) technologies. They evaluated candidate radio interface technology (RIT) submissions under two categories. The first category involved candidate RIT submissions belonging to the class of globally harmonized standards that are based on technologies developed by the 3GPP (specifically 3GPP New Radio). This was primarily to understand from the COAI perspective on how these technologies would impact Indian networks. The cellular networks (4G/3G/2G) currently being run in India are all based on the technologies developed by the 3GPP. It was imperative for us to understand how the 5G NR technology will leverage existing investments made in 4G by our operator members. Also, of great interest to us was to see how this technology will help meet the targets set in the National Digital Communication Policy (NDCP) of India.

The second category of evaluation was on a couple of technologies not belonging to this category of globally harmonized standards. These technologies do not interwork with 3GPP networks (yet) and are of minimal interest. But for many of the members participating in this activity, these technologies posed academic interest. The report was well received by the delegates present at the ITU WP5D meeting#34 held in Geneva last week, specifically the proponents. Prof. Navin Kumar, from Amrita University, Bengaluru was given great appreciation for the high-quality comprehensive deliverables produced by the academia members participating in this activity.

Concerted efforts through multiple workshops were made by 5GIF IEG to prepare this report. A significant outcome of this effort was that an industry grade simulator was built for the evaluation purpose that can now be leveraged for future technology studies in India.

While the primary objective of the 5GIF IEG was to evaluate candidate technologies in the ITU defined framework, COAI tasked the IEG to qualify how the behavior of the 3GPP standards based technologies (that have successfully given more than two decades of "seamless connectivity", and facilitated large scale market adoption) fare now in meeting the targets set by NDCP 2018. In this regard we had provided evaluation results on a couple of additional scenarios that reflect real life Indian network deployments. In one such evaluation scenario, the performance of 3GPP 5G NR in Fixed Wireless Access (FWA) was evaluated. WP 5D (which focuses on wireless) showed keen interest in these results, as the analysis got into evaluating a key performance indicator (KPI) from the wireline world. Another scenario evaluated coverage enhancement aspects already ingrained as part of the 3GPP technology. These additional results by the 5GIF IEG found interest amongst the delegates representing the African, South American and South East Asian countries. COAI firmly believes that the objective of setting up this IEG lived up to the expectation and made a mark at the international stage in the ITU world.

The 5GIF IEG delegation was led by Ms. Vertika Misra from COAI. A member of our delegation, Dr. Sendil Kumar, Ericsson India was given the responsibility of Chairing the drafting group (DG) on evaluation at this meeting. The 5GIF delegation also included Dr. Vinosh James (Qualcomm India), Dr. Punit Rathod (Intel India) and Mr. Ashwani Kumar (Huawei India) who led the discussions on our behalf.

With the receipt of these evaluation reports by the ITU, it has now completed an important milestone in the IMT-2020 process. For the end consumer (operators and general public), the end of this phase gives a list of technologies that meet a minimum technical performance requirement. Their adoption depends on the global interest of the technology, which then maps to cost of network and equipment, its compatibility to existing telecom infrastructure, and support for international roaming and interoperability. COAI firmly believes that the 5GIF IEG report demonstrated Indian technical expertise in evaluating the latest 5G technologies and the report has all this information needed for the global operators to use in their decision making.

Participants of the 5GIF IEG

The evaluation activity was supported by academic members from Amrita University, LNMIIT University, Shiv Nadar University and Amity University. The industry participants include experts from Bharti Airtel Ltd., Vodafone Idea Ltd., Ericsson India, Huawei India, Intel India, Nokia India, Qualcomm India and ZTE India. The report is also posted in the 5GIF section of the COAI website and is available at : https://www.coai.com/themes/bootstrap/images/5GIF_Evaluation_Report_final.pdf.

