# BIF lauds inclusion of India's own GPS Solution 'NavIC' by 3GPP

*NavIC will put India on the global chart alongside the USA, Europe, Russia and China in the Global Navigation Satellite System (GNSS) vertical*

**23rdSeptember 2019, New Delhi**: **Broadband India Forum(BIF),** a think tank for Digital Transformation, lauded the acceptance by the Global standards body 3GPP, of the interface specifications of NavIC, an autonomous regional satellite navigation system developed and operated by the Indian Space Research Organisation (ISRO). This acceptance will boost the mobile telecom industry by utilising advanced regional navigational services from NavIC that has already made India one amongst a handful of countries/regions such as the USA, Europe, Russia and China to possess and operate a Global Navigation Satellite System (GNSS).

During the 3GPP RAN meeting held at Newport Beach California during 16-20th September 2019, 3GPP has approved inclusion of NavIC in Rel-16 LTE and Rel-17 5G NR specification. These 3GPP specifications that support NavIC will be available in a few months' time. TSDSI will soon adopt these specifications as a national standard consequently. Smart phones and cellular-internet-of-things (cellular IoT) devices that use location information will begin to use the NavICsystemin contrast to the current usage of the American GPS system. 3GPP presently has GNSS support from BDS (Chinese), Galileo (European), GLONASS (Russian) & GPS (USA) for cellular positioning systems.

The implications of NavIC's acceptance by 3GPP would be of paramount importance to the country, as:
1. It brings the indigenously developed NavIC technology to mass market for use in 4G, 5G and Internet of Things (IoT).
2. Indian companies and startups have an opportunity to design ICs and products based on NavIC. The potential market for these chipsets and products can be very large as it can be exported to other countries as well.
3. This will result in significant increase in NavIC usage and the uptake of NavIC enabled services and applications throughout the country.
4. With TSDSI preparing to adopt these specifications and develop our own National Standard, the market is likely to be flooded with smart phones and cellular-internet-of-things (cellular IoT) devices that use location information - all of which will begin to use the Indian standard.
5. It alleviates security concerns of the country since now India need not depend on American or European Satellites for commercial operations.

Hailing this as a '*Historic step forward in placing India's indigenous standard development on the Global Map*', BIF President Mr. TV Ramachandran said,*"The applications of NavIC have the potential to bring immense benefits to everyone in the country and the entire region. I would like to extend my warm felicitation to ISRO; TSDSI; the Indian members of 3GPP;Reliance Jio, Professor Kiran Kuchi of IIT Hyderabad;and Mr. Satish Jamadagni, Vice Chairman of TSDSI and VP (Standardisation), Reliance Jio; for playing a pivotal role in getting this proposal accepted in a timely manner for adoption in global 4G and 5G standards. This event is a watershed moment*

*for India since we join the exclusive GNSS club comprising of USA, EU, China and Russia who depend on their own Satellites for navigation applications in their respective regions."*

Being the Market Representative Partner of 3GPP, BIF recognises the immense importance of standardisation and adoption of global benchmarks for technologies with the potential to influence and impact the digital communications technologies landscape in the country. BIF has a dedicated high-level committee on standards development which works in tandem with the relevant authorities and institutions, towards the pursuit of developing world-class standards and implementation thereof, of advanced and futuristic technologies in the country.

The Indian Regional Navigation Satellite System (IRNSS), with an operational name of **NavIC** (acronym for NAVigation with Indian Constellation; also, nāvik 'sailor' or 'navigator'), is an autonomous regional satellite navigation system that uses a constellation of eight satellites developed by ISRO. It covers India and a region extending 1,500 km (930 mi) around it, with plans for further extension.The constellations of IRNSSare in orbit as of 2018, and the NavIC system is presently operational.

Some applications of IRNSS are as follows:
· Terrestrial, Aerial and Marine Navigation
· Disaster Management
· Vehicle tracking and fleet management
· Integration with mobile phones
· Precise Timing
· Mapping and Geodetic data capture
· Terrestrial navigation aid for hikers and travellers
· Visual and voice navigation for drivers

Global Navigation Satellite System (GNSS) refers to a constellation of satellites providing signals from space that transmit positioning and timing data to GNSS receivers. The receivers then use this data to determine location. By definition, GNSS provides global coverage. Examples of GNSS include Europe's Galileo, the USA's NAVSTAR Global Positioning System (GPS), Russia's Global'nayaNavigatsionnayaSputnikovaya Sistema (GLONASS) and China's BeiDou Navigation Satellite System.

providers, MSOs, startups and professional entities, as well as seasoned Industry professionals who are familiar with different technologies, operations, regulations and policies.