

# NAVIC as Allied System of US (Basics of Navic)

April 23, 2020

**Context:** The US Congress has consented to designate India's NAVIC as its "allied" navigational satellite system along with the Galileo of the European Union and QZSS of Japan.

- Approved as part of the conference report of the National Defense Authorization Act (NDAA) 2020
- It designates Russia's GLONASS and Chinese Beidou as a "non-allied system". It means that the US satellite navigation system will not co-operate or exchange data with these two satellite navigation systems.
- The designation of India's NAVIC as an "allied system" is part of the American effort to develop a prototype program for multi-global navigation satellite system receiver development.

## NAVIC/ IRNSS

- IRNSS is an independent regional navigation satellite system being developed by India.
- It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area. An Extended Service Area lies between primary service area and area enclosed by the rectangle from Latitude 30 deg South to 50 deg North, Longitude 30 deg East to 130 deg East.
- The IRNSS System is expected to provide a position accuracy of better than 20 m in the primary service area
- IRNSS will provide two types of services, namely, Standard Positioning Service (SPS) which is provided to all the users and Restricted Service (RS), which is an encrypted service provided only to the authorised users

- The space segment consists of the IRNSS constellation of eight satellites, NavIC. Three satellites are located in suitable orbital slots in the geostationary orbit and the remaining four are located in geosynchronous orbits with the required inclination and equatorial crossings in two different planes. All the satellites of the constellation are configured identically.

### **Some applications of IRNSS are:**

- 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

### **Other**

- Galileo- EU
- QZSS -Japan.
- GLONASS- Russia
- Beidou-China
- GPS- US