NavIC in Mobiles

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Why in News

Qualcomm Technologies has unveiled mobile chipsets supporting the Indian regional satellite navigation system - **NavIC** (**Navigation in Indian Constellation**).

> Users of such mobile chipsets will be able to use NavIC within the Indian region and neighbouring countries.

Key Points

- The release of chipsets will help accelerate the **adoption of NavIC by smartphone Original Equipment Manufacturers (OEMs).** The OEMs can now release any new models for the Indian market which are NavIC enabled, thus eventually making NavIC as a standard feature in the upcoming handsets, applications, processors, etc.
  > OEM traditionally is defined as a company whose goods are used as components in the products of another company, which then sells the finished item to users.
- The availability of NavIC across multiple mobile platforms will help **enhance the geolocation capabilities of smartphones** in the region.
- **An Aid Against Crime:**
  - In April 2019, the government has made NavIC-based vehicle trackers **mandatory for all commercial vehicles** in the country in accordance with the **Nirbhaya case verdict.**
  - NavIC in mobiles will facilitate the implementation of a key mandate from the Nirbhaya case verdict which required the **installation of vehicle tracking systems** and **panic buttons in all commercial vehicles.**
  - NavIC is set to become the backbone of a public vehicle tracking system in India since it offers flexibility to local law enforcement agencies to **monitor vehicles** unlike international systems like the GPS (global positioning system).
- In addition to NavIC, these chipsets will also support the widely used **GNSS** (Global Navigation Satellite System)
  > GNSS includes USA's **GPS**, European Union's **Galileo**, Russia's **GLONASS** and China's **BeiDou** Navigation Satellite System for global coverage.

Navigation in Indian Constellation (NavIC)

- It has been developed by the **Indian Space Research Organization (ISRO).**
- The main objective is to provide reliable position, navigation and timing services over India and its neighbourhood
- Named after Indian fishermen and navigators, NavIC will provide two types of services-
    - **Standard Positioning Service (SPS)** is meant for the general public.
    - **Restricted Service (RS)** is an encrypted service meant for authorised users and agencies.
- Unlike the widely used GPS which includes 24 satellites, NavIC has **7 satellites** and their range is within India and its adjoining regions **extending up to 1,500 km from the country's border.**
- Technically satellite systems with more satellites provide more accurate positioning information. However, compared to GPS which has a position accuracy of 20-30 metres, the NavIC is able to pinpoint location to an estimated **accuracy of under 20 metres.**

Source: Mint