



CURRENT AFFAIRS



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5G rollout



Prelims: Science and Technology

Main: GS.III, industrial policy and its effects on industrial growth and development in Sci & Tech and its Development, applications and day-to-day effects

The background story

- The Indian Aviation Safety Regulator body has written to the telecom department flagging concerns over the probable interference of 5G C-Band Spectrum with radio altimeters because India's telecom operators are preparing for the rollout of 5G service.
- In July 2022, the cabinet gave its consent for the auction of the spectrum that can be used to offer 5G services.
- Total width of 72,097.85 MHz (or 72 Ghz) of the spectrum with a bona fide of 20 years.
- The government of India also gave permission to the big tech firms for setting up captive 5G networks, and the telecoms have opposed any move to set aside spectrum for captive private networks at an administered price.

About 5G technology

- 5 G is the fifth generation mobile network, it will provide faster and more steady communication that too with ultra-low latency.

- According to the government panel report, it is expected that the 5G network will peak the speed in the range of 2-20 Gigabit/seconds (Gbps).
- 5G will provide higher speed internet in India in contrast to 4G link speeds averaging 6-7 megabits per second (Mbps), in comparison to 25 Mbps in the advanced nations.
- 3rd Generation Partnership projects(3GPP) will define the standards for usage of 5G

5G Bands

- There are 3 main bands in which 5G works, they are Low, mid and high-frequency spectrum, these all have their own advantages and limitations.
- Low band spectrum: the maximum speed of it is limited to 100 Mbps(megabits per second), however, it has shown improvement in terms of coverage and data exchange as well as in the speed of the internet
- Mid-band spectrum: it provides a higher speed on comparing to the low band, however, it has limitations in terms of coverage area and penetrations of the signal.
- High band spectrum- it offers the maximum speed in comparison to the former two bands but offers limited coverage and signal penetration strength.

The primary concern of the Directorate General of Civil Aviation (DGCA)

- It is expected that the interference of 5G with the aircraft's radio altimeter could intercept the engine and the braking system from transitioning to landing mode, which could prevent an aircraft from stopping on the runway.
- The DGCA works in close coordination with the Department of Telecommunications (DoT).

Radio altimeter:

- It is a type of altimeter, an instrument used to measure the altitude of an object from a fixed level above the earth's surface, it is a radar aid.
- It measures how far the ground an aircraft is travelling, in aviation.
- It is effective only 20 ft to 2500 ft. and the auctioned frequencies sit too close to this range.

Advantages of 5 G

- According to the report by the Government–Appointed Panel, it has been predicted that 5G will create a cumulative economic impact of \$ 1trillion in India by 2035. also in a separate report of Telecom gear maker Ericsson, it was stated that by 20265G-enabled digitalization revenue potential in India will be above \$27 billion by 2026.
- In addition to this, the Global Telecom Industry GSMA has estimated that India will have around 70 Million 5G customers by 2025.
- It has been expected that the 5G will become the chief support of emerging technologies, like the Internet of Things and machine-to-machine communication. it will also support the application services, including driver-less vehicles, telesurgery and real-time data analysis on a much larger scale

- One of the prime use of 5 G will be, the implementation of a sensor –an embedded network that will permit real-time relay of information across fields, like manufacturing, customers durables and agriculture.
- It can also help make transport infrastructure more systematic by making it smart.
- Well-ordered Governance: This technology will also carry positive changes in the governance of the country, ease of living and ease of doing business.
- It will escalate the convenience and will create many employment opportunities.
- In the National Digital communication Policy, 2018 it was pointed out its potential and TELECOM REGULATORY AUTHORITY OF INDIA (TRAI) advised a reserve price for the auction of 5G spectrum in 3.3-3.4 GHz and 3.4 -3.5 GHz bands.

The Telecom Regulatory Authority of India (TRAI)

- The Telecom Regulatory Authority of India (TRAI) was founded on February 20, 1997, under the Telecom Regulatory Authority of India Act, 1997 act of parliament, to monitor telecom services, including tariff fixation and revision. Earlier to these are vested in the Central Government.
- It is a statutory body of the Indian government.
- Its main objective is to provide a fair and transparent policy environment that promotes a level playing field and facilitates fair competition.
- Its HQ is in New Delhi.

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The growing need for strengthening Internal democracy in Political Parties

CONTEXT

The Election Commission of India (ECI) has rejected the concept of a 'permanent president' for a political party stating it to be inherently anti-democratic. This decision comes in the backdrop of Congress holding elections for the post of Party President and Andhra Pradesh's Chief Minister being declared as President for life by his party.

REASONS FOR LACK OF INNER PARTY DEMOCRACY:

- **No legal backing:** There is no law that mandates political parties to conduct organizational elections at regular intervals. The ECI has time and again used **Section 29A of the Representation of the People Act, 1951** (which provides for registration of political parties with the Election Commission of India) to issue guidelines to remind parties to conduct elections to ensure that there is a renewal of leadership in every five years. But the commission lacks any statutory power to enforce this.

- **Problem of over centralization in functioning of political parties:** There is a problem of over centralization with only one or few people holding vast powers leading to a high command culture. The **170th Law Commission Report** – recommended introducing a regulatory framework to govern the internal structures, accountability and inner democracy of parties. It stated that a political party “*cannot be a dictatorship internally, and democratic in its functioning outside.*”
- **Non Transparent Procedure of determining leadership:** Leadership is decided by consensus and elections even if happen are contested unopposed to declare the de- facto power holder as the Party President
- **Financing structure:** The financing structure is of such nature that it necessitates centralized control by a single person or small group.
- **Fear that election may lead to party fragmentation:** There is a fear that election may trigger disunity and lead to breaking of party into smaller groups
- **Norm of dynastic politics:** power is held in a close knit group of a single family. Hence, rising in ranks depends on relationship with the family instead of merit.

WAYS TO ACHIEVE INNER PARTY DEMOCRACY

- **Conduct election for post of leadership at regular intervals:** The most common way to realize inner party democracy is conducting elections for leadership positions in the party.
- **State funding of political parties:** Former Chief Election Commissioner of India S.Y. Quraishi proposed that parties should receive money as per the number of votes they get.
- **Stringent enforcement by ECI:** The ECI should be firm in insisting on organizational elections, and stop condoning delays for not holding elections. Elections where one is elected unopposed should not be recognized.
- **NCRWC Recommendations:** It recommended that rules and by-laws of the parties seeking registration should include provisions for declaration of adherence to democratic values and norms of the Constitution in their inner party organizations.
- **2nd ARC on Ethics and Governance** stated that over-centralization in the working of political parties leads to corruption and the “*the more remotely power is exercised from the people, the greater is the distance between authority and accountability.*”

Saumya khedwal

Draft Indian Telecommunication Bill, 2022

CONTEXT:

The Department of Telecommunications (DoT) under the Ministry of Communications has released the draft **Indian Telecommunication Bill, 2022** to deal with new regulatory issues with the advent of OTT platforms. The bill seeks to do away with British-era laws governing the telecom sector and bring various changes to the governing of the telecom sector in India.



THE NEED FOR A NEW ACT

India is the world's second-largest telecommunications market with a **subscriber base of 1.20 billion**. In 2021, the Government allowed **100% foreign direct investment (FDI)** via the automatic route in the telecom sector which was previously capped at 49% . The sector is a key river of economic growth and social development.

Hence, it is imperative to secure affordability and accessibility of telecommunication services. It is also necessary to ensure that the communication is safe and secure in line with **Right to Privacy under Article 21 of the Constitution**. Moreover, spectrum benign a public good and hence it is the responsibility of the government to ensure it's proper management

KEY FEATURES OF THE BILL

1. **Consolidation of old, outdated laws:** The bill consolidates Indian Telegraph Act, 1885, the Wireless Telegraphy Act, 1933, and the Telegraph Wires (Unlawful Possession) Act, 1950, which presently govern the telecom sector. These laws have failed to keep pace with the advancement of technology.
2. **Bringing OTT in the ambit of "telecommunication services":** Over-the-top communication services like WhatsApp, and Telegram have been included in the definition of telecommunication services. This would effectively mean that OTT platforms would also require a license to operate the same way that telecom companies do.
3. **Permits interception of information by authorized Government Official:** The bill allows information transmitted and received over telecommunication services to be intercepted by a government official in the interest of sovereignty, integrity or security of India, friendly relations with foreign states, public order, or for preventing incitement to an offence.
4. **Dilution of powers of TRAI:** The bill dilutes certain provisions of Telecom Regulatory Authority of India Act (TRAI Act). For example, presently, the telecom department has to obtain TRAI's views before issuing a new license to a service provider which will not be required with the passage of this bill. TRAI will also no longer be able to request the government to furnish information in order to make recommendations. Further, the Department of Telecommunication had to earlier send matters back for reconsideration of TRAI if it didn't agree with it. The bill does away with this provision.
5. **Reversion of control of Spectrum to Center in case of insolvency:** If a telecom entity in possession of spectrum undergoes bankruptcy or insolvency, the assigned spectrum will go back to Center's control.
6. **Extraordinary powers to Center:** Center can defer, convert into equity, waive off dues or grant relief to any licensee under extraordinary circumstances.

7. **Regulatory Sandbox:** The Central Government may create a Regulatory Sandbox for testing of products and services in a controlled environment under the supervision of the Central Government. This will encourage innovation and development in the field of telecommunication.
8. **Revealing identity of sender to stop Harassment and cyber frauds:** The identity of person sending a message by use of telecom services shall be made available to the user receiving the message

WAY AHEAD

While the reforms were much needed to keep up with the rapidly evolving digital ecosystem affecting the telecom sector, some concerns need to be addressed:

- The bill may affect the role of TRAI as a watchdog, TRAI which has been an independent body so far and has statutory backing. The proposed provisions might dilute its role to oversee the telecom sector and affect its autonomy.
- There are various messaging platforms that provide encrypted services. The bill gives wide power to the government to intercept despite the encryption feature. Encryption is done to protect the privacy of users. The discretionary powers to intercept need to be exercised cautiously while abiding by principles of necessity and proportionality given by the *Puttaswamy judgment*.

There is a need to resolve the bottlenecks of the telecom sector which has led to large unpaid dues adding to the burden on the government's financial liabilities. But this needs to be done while respecting privacy of individuals and establishing strong oversight by independent regulatory bodies to have a win- win scenario.

Saumya khedwal