

## Prelim Bits 18-05-2023 | UPSC Daily Current Affairs

### ASTR and CEIR

*The government developed AI and face recognition tool ASTR claims to detect phone frauds.*

- The 'Artificial Intelligence and Facial Recognition powered Solution for Telecom SIM Subscriber Verification' is an artificial-intelligence-based facial recognition tool shortly known as ASTR.
- ASTR is developed by the Department of Telecommunications (DoT) under Ministry of Communications.
- Mobile connections obtained using fake/ forged documents are then used for cyber-frauds.
- ASTR is designed to identify SIMs issued using fraudulent/forged documents.
- It has the capability of running checks on subscriber databases of telecom operators to deduce multiple connections associated with the same person.
- ASTR used various techniques of facial recognition and data analytics.

*The DoT allows an individual to take 9 legitimate mobile phone connections using a single identity proof.*

- **Facial Recognition** - In 2012, DoT had issued an order to all telecom operators to share their subscriber database including users' pictures with them.
- These images constitute the core database on which authorities are running their facial recognition algorithm using ASTR.
- The subscribers' images are encoded using convolutional neural network (CNN) models.
- A face comparison is carried out for each face against all faces in the database, and similar faces are grouped under one directory.
- **Action Taken** - the DoT prepares a list of numbers obtained through fraudulent means.
- The list of connections is shared with telecom operators to block.
- The same list is also shared with banks, payment wallets, and social media platforms for disengaging these numbers from their respective platforms.

### Centralized Equipment Identity Register (CEIR)

- CEIR was launched by Department of Telecom for blocking stolen/lost mobiles.
- The system is integrated with the Telecom Service Providers and Law enforcement Agencies.

*IMEI is a 15-digit unique numeric identifier of mobile devices assigned before their sale in India.*

- **Working** - The user submits the IMEI number along with the copy of police complaint of lost/stolen phone on the portal.
- The information is verified and then the system blocks the stolen mobile phones from being used in Indian networks.
- The system allows Law Enforcement Agencies to trace the stolen device if still in use.
- On recovery of stole devices, the user can unlock the device on the portal.
- **Benefits** - The system prevents use of stolen/lost mobiles.
- It also prevents mobile devices with inaccurate or forged IMEIs being used in Indian networks.

## References

1. [IE - How government's ASTR will detect phone frauds](#)
2. [PIB - Union MeitY Minister launches Sanchar Saathi portal](#)

## Sikkim Integration

*The 22<sup>nd</sup> Sikkim day was celebrated on May 16 2023, recalling the history of the former kingdom's integration with India in 1975.*

- 'Sikkim day' or 'Sikkim Statehood day' is celebrated annually on May 16.
- It is celebrated to commemorate the day on which Sikkim's kingdom's integrated with India in 1975.
- **Sikkim Kingdom** - The kingdom of Sikkim was established in 1642.
- Phuntsong Namgyal as the first ruler or Chogyal (king) of Sikkim.
- Sikkim's Chogyal dynasty was of Tibetan origin.
- Sikkim often saw conflicts over land with Bhutan and Nepal.
- The Namgyal dynasty came to an end with the statehood of Sikkim and the position of Chogyal was abolished.
- **Sikkim in British era** - The British saw Sikkim as a buffer state against China and against Nepal, with whom they fought in the Anglo-Gorkha war of 1814-16.
- In the Anglo-Gorkha war the British helped Sikkim secure a number of territories that Nepal had previously captured.
- The monarchy of the Namgyal dynasty was maintained for the next 333 years, until its integration with India in 1975.
- The Treaty of Tumlong in 1861 gave the British control over Sikkim but the Chogyals continued to hold onto power.
- **Post-Independence** - After India's independence, princely states had the option to accede to India or Pakistan.
- In 1950, the [Indo-Sikkim Treaty](#) was signed, making Sikkim an Indian protectorate.
- India controlled Sikkim's defence, external affairs and strategic communications.
- In 1974, a new constitution for Sikkim was adopted, which restricted the role of the monarch to a titular post.
- A referendum was held in Sikkim in 1975 where majority people voted in favour of

joining India.

- The 36<sup>th</sup> Constitutional Amendment Act was passed in the Parliament to recognise Sikkim as a state in the Union of India.
- With the assent of then President Fakhruddin Ali Ahmed, Sikkim became the 22<sup>nd</sup> Indian state on May 16, 1975.

## References

1. [IE - Sikkim Day: The story of Sikkim's integration with India](#)
2. [News18 - Sikkim Statehood Day 2023](#)

## CVV-less payments

*RuPay has introduced the CVV (Card Verification Value) free payment experience for its debit, credit and prepaid cardholders who have tokenised their cards on the merchant application or webpage.*

*RuPay is a home-grown card network developed by NPCI.*

*VISA has also launched CVV-free tokenized transactions for domestic payments in India adhering to the guidelines issued by the RBI.*

- **CVV** - Card Verification Value (CVV) is a three or four-digit number located on the back of a physical debit or credit card.
- It is used as an additional security measure to ensure that the person making the transaction is a legitimate cardholder.
- **Tokenisation** is a simple technology to secure card transactions without sharing the clear or real card details with the merchants.
- It refers to the replacement of actual card details with an alternate code called the 'token'.
- **RBI mandate** - The RBI had made it mandatory for all credit and debit card data used in online, point-of-sale, and in-app transactions to be replaced with unique tokens.
- **Process** - A cardholder opts to save their card for a domestic e-commerce transaction.
- The cardholder authenticates the transaction through the card details (Card number, CVV, Card expiry date) as a one-time activity.
- It is followed by entering the OTP (two-factor authentication).
- Now, the details are then Tokenised and saved with the merchant.
- For the subsequent transactions customer can complete the payment by just entering the OTP without the need to enter the CVV or other card details again.
- **Benefits** - In tokenisation, the real card details are not saved with the merchant.
- Safeguards the card details of the customer from cyber frauds.
- Removes the necessity to remember any card details for the customer.
- **Requirement** - The cards has to be saved (tokenised) on the e-commerce merchant which supports for CVV-less payments.
- **Card types** - Debit, credit and prepaid cards.

## References

1. [The Hindu - CVV-less payments for tokenised RuPay cards](#)
2. [Hindustan Times - CVV-less payments for tokenised RuPay cards](#)

## **Sanchar Saathi Portal**

*The Department of Telecom has launched the Sanchar Saathi portal that allows users to block/track their lost/stolen mobile phones across India.*

- Sanchar Saathi portal is an initiative of Department of Telecommunications to empower mobile subscribers and strengthen their security.
- It empowers citizens by allowing them -
  - Check the connections registered on their names
  - Report fraudulent or unrequired connections
  - Block the mobile phones which are stolen/lost
  - Check IMEI genuineness before buying a mobile phone
- **Developed by** - The Sanchar Saathi facilities have been developed by C-DoT.
- **Modules** - Sanchar Saathi contains various modules like CEIR, TAFCOP, etc.
- **CEIR** module facilitates tracing of the lost/stolen mobile devices.
- **TAFCOP** module facilitates a mobile subscriber to check the number of mobile connections taken in his/her name.
- **Know Your Mobile** facilitates the citizens to check the genuineness of IMEI of their mobile device.
- **ASTR** tool to identify SIMs issued using fraudulent/forged documents.

*Centre for Development of Telematics (C-DOT) is the technology development arm under the Department of Telecom established in 1984.*

## **References**

1. [PIB - Union MeitY Minister launches Sanchar Saathi portal](#)
2. [LiveMint - Sanchar Saathi to track, block lost mobile phones](#)
3. [Sanchar Saathi - Portal](#)

## **UNEP report: Turning off the Tap**

*The report, titled Turning off the Tap: How the world can end plastic pollution and create a circular economy, has been launched by UNEP.*

- The report was released ahead of a second round of negotiations in Paris on a global agreement to beat plastic pollution.
- The report is a solutions-focused analysis of concrete practices, market shifts, and policies that can inform government thinking and business action.
- It outlines the magnitude and nature of the changes required to end plastic pollution and create a circular economy.
- **Roadmap laid** - The report urged governments and businesses alike to adopt a circular economy approach for tackling the problem of plastic pollution.
- Global plastic pollution can reduce by 80% by 2040 if countries and companies make

deep policy and market shifts using existing technologies and shift to a circular economy.

- The report calls for three market shifts — reuse, recycle, and reorient and diversify products.
- **Reuse** - Promoting reuse options can reduce 30% of plastic pollution by 2040.
- To realise its potential, governments must help build a stronger business case for reusables.
- **Recycle** - By making recycling a more stable and profitable venture, plastic pollution can be reduced by an additional 20% by 2040.
- **Reorient and diversify** - Careful replacement of products such as plastic wrappers, sachets and takeaway items with products made from alternative materials (such as paper or compostable materials) can deliver an additional 17% decrease in plastic pollution.

### **Intergovernmental Negotiating Committee (INC) on Plastic Pollution including in the marine environment**

- UNEA adopted a resolution to develop an international legally binding instrument on plastic pollution, including in the marine environment.
- The resolution has the ambition to complete the negotiations to frame the instrument by end of 2024.
- Intergovernmental Negotiating Committee (INC) is the committee formed to develop the instrument on plastic pollution.
- **INC-1** - The first session of the INC took place at Punta del Este Convention and Exhibition Centre from 28 November to 2 December 2022.
- **INC-2** - The second session of the INC will take place at the UNESCO Headquarters in Paris, France from 29 May to 2 June 2023.

### **References**

1. [DTE - Go circular to end plastic pollution says UNEP report](#)
2. [Business Insider - UNEP report on plastic pollution and circular economy](#)