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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 22nd 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 36th 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 22nd 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, TAF COP, etc.
- **CEIR** module facilitates tracing of the lost/stolen mobile devices.
- **TAF COP** 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](#)