




04 April 2024

National and International News

<p>White Rabbit Collaboration</p> 	<p>Context:</p> <ul style="list-style-type: none"> • CERN, the European Organization for Nuclear Research, has recently introduced the White Rabbit Collaboration, a technology developed to synchronize devices in accelerators to sub-nanosecond precision. <p>Key points:</p> <ul style="list-style-type: none"> • White Rabbit (WR) is a technology created at CERN in partnership with various institutions and companies to synchronize devices in accelerators to sub-nanosecond precision, addressing the challenge of establishing a common time reference across a network. • This technology, previously requiring specialized hard-wired timing systems, now provides sub-nanosecond synchronization accuracy using White Rabbit Switches within real-time Ethernet networks, offering greater flexibility and modularity. • Initially deployed in 2012, White Rabbit's application has extended beyond particle physics into various fields. • It achieved a significant milestone in 2020 by being incorporated into the Precision Time Protocol (PTP), an international standard governed by the Institute of Electrical and Electronics Engineers (IEEE). • One of White Rabbit's notable features is its open-source nature and adherence to standards, enabling companies and institutions to customize it for their specific needs and integrate it into their products and systems. • White Rabbit is utilized not only in the field of finance but also in various research infrastructures. It is currently being evaluated for potential use in the future quantum internet.
<p>Discovery of Ozone on Jupiter's moon</p>	<p>Context:</p> <ul style="list-style-type: none"> • A study conducted by an international team of scientists, with contributions from researchers in India, has resulted in the detection of ozone on



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	<p>Callisto.</p> <ul style="list-style-type: none"> • This discovery sheds light on the moon's atmospheric composition and potential habitability. <p>Implications</p> <p>Ozone as Indicator of Atmospheric Stability:</p> <ul style="list-style-type: none"> • The presence of ozone on Callisto suggests the existence of stable atmospheric conditions on the moon. • Ozone formation requires specific chemical processes and stable environmental conditions, indicating potential habitable environments. <p>Fundamental Ingredient for Life:</p> <ul style="list-style-type: none"> • Oxygen, a component of ozone, is essential for the formation of complex molecules necessary for life. • The discovery raises questions about the habitability of Callisto and other icy moons in our solar system. <p>Insights into Geological and Atmospheric Processes:</p> <ul style="list-style-type: none"> • The discovery provides valuable insights into the geological and atmospheric processes occurring on Callisto and other icy moons. • It enhances our understanding of the formation and evolution of Jupiter's moons. <p>Comparative Planetary Science:</p> <ul style="list-style-type: none"> • Comparing the chemical compositions and processes on different celestial bodies helps scientists better understand the similarities and differences between these moons and their potential habitability. <p>Callisto:</p> <ul style="list-style-type: none"> • Callisto, the farthest of Jupiter's Galilean moons, stands out as one of the solar system's most heavily cratered objects. • Its surface is dominated by impact craters of varying sizes, indicating a lack of substantial geological activity. • Composed mainly of water ice and rocky material, Callisto is believed to possess a subsurface ocean, though it is suspected to be in contact with a rocky core rather than being heated by tidal forces.
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Digital India Trust Agency

Context:



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	<ul style="list-style-type: none"> • The RBI is planning to establish the Digital India Trust Agency (DIGITA) to combat illegal loan apps. <p>Key points:</p> <ul style="list-style-type: none"> • DIGITA, part of RBI's DIGITA initiative, collaborates with tech giants to enhance digital lending safety. • It verifies apps, removes suspicious ones, and works with the IT Ministry to whitelist legitimate loan apps. • RBI's DIGITA initiative aims to ensure the safety of digital lending by verifying and removing suspicious loan apps. • DIGITA acts as a central hub for vetting digital loan apps, ensuring compliance with regulations and ethical operation. • Only verified apps receive a "DIGITA-approved" seal, making them easily identifiable for borrowers. • Unauthorized apps without DIGITA's verification may face penalties, enhancing the safety of borrowers. • RBI is already working with the government to address the issue. • It has shared a list of 442 legitimate loan apps with the IT Ministry for whitelisting on app stores like Google Play. • This collaboration has led to the removal of over 2,200 suspicious lending apps by Google in the past year. • These efforts aim to create a safer and more transparent digital lending ecosystem for Indian consumers.
<p>Bridge fuel</p>	<p>Context:</p> <ul style="list-style-type: none"> • Natural gas has been termed a 'bridge fuel' for nations seeking to move away from coal and oil dependence towards renewables and electrification. • It is considered cleaner than other fossil fuels, especially coal, as it emits 50% less CO2 into the atmosphere. <p>Key points:</p> <ul style="list-style-type: none"> • The Intergovernmental Panel on Climate Change has stressed the urgency of phasing out coal over reducing gas usage for the 1.5°C pathway, which is challenging for coal-dependent Global South countries. • The aim of using a bridge fuel is to replace current fossil fuel-dependent energy sources as we move



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	<p>towards a cleaner, more renewable energy economy without greenhouse gas emissions.</p> <ul style="list-style-type: none"> • The duration of this transition and the choice of energy source for the bridge are subjects of debate. • Natural gas is a bridge fuel because it produces fewer greenhouse gases during combustion. However, other factors to consider for a bridge fuel include its impact on national energy independence and its ability to reduce pollution-related costs. <p>Read more about the Natural Gas and its properties.</p>
<p>First Tri-service Common Defense Station</p>	<p>Context:</p> <ul style="list-style-type: none"> • The Indian Armed Forces are planning to establish Mumbai as India's first "tri-service common defense station" for the Army, Navy, and Indian Air Force (IAF) to enhance jointness among the services. <p>Key points:</p> <ul style="list-style-type: none"> • This initiative aims to integrate logistics, infrastructure, and administration, which are currently operated separately by the three services in Mumbai. • Currently, India lacks common defense stations, with the Andaman and Nicobar command being the only existing tri-service command since 2001. • Mumbai will be the first common defense station, with Sulur and Guwahati potentially being chosen as locations for the second and third stations, with different lead services for each. • This initiative aligns with the broader goal of integrating the three defense services in India through various measures: <p>Integrated Theatre Commands (ITCs): Establishment of unified commands under a single commander for strategic geographical theatres involving the Army, Indian Air Force, and Navy.</p> <p>Office of the Chief of Defense Staff (CDS): Centralized leadership responsible for fostering coordination and synergy among the three services.</p> <p>Cyber and Space Commands: Integration of capabilities in cyber warfare and space operations across the defense services.</p> <p>Resource Sharing: Pooling and sharing of resources among the services to avoid duplication and enhance efficiency.</p> <p>Joint Training and Exercises: Conducting combined</p>



training programs and exercises to enhance interoperability and cohesion among the forces.

Kerala Regional News

International Day of Mine Awareness



Context:

- The **International Day for Mine Awareness and Assistance in Mine Action** is **observed annually on April 4th.**
- It's a day to raise awareness about the dangers of **landmines and other explosive remnants of war (ERW)** on civilians, particularly in conflict zones.

About:

- On **8 December 2005**, the **General Assembly** declared that **4 April** of each year shall be observed as the **International Day for Mine Awareness and Assistance in Mine Action.**

Theme:

- The theme for **International Day for Mine Awareness & Assistance in Mine Action 2024** is **'Protecting Lives, Building Peace.'**
- It focuses on the needs and rights of people with **disabilities in areas affected by conflict.**
- The **United Nations Mine Action Service (UNMAS)** is highlighting the importance of including people with **disabilities in mine action efforts** and ensuring their safety and access to assistance.

Photo exhibition on Rakesh Sharma's 1984 space flight opens at Russian House



Context:

- A photo exhibition dedicated to **Wing Commander Rakesh Sharma's historic 1984 spaceflight** has opened at the **Russian House, Thiruvananthapuram**
- The exhibition showcases **captivating moments from Sharma's training, the launch, his time aboard the Soyuz T-11 spacecraft and Salyut-7 space station, and the warm reception upon his return to both India and Russia.**
- **Jointly organized by the Russian news agency TASS and the Russian Embassy**, the exhibition is being organised at all five **Russian Houses in India.**

About:

- **Rakesh Sharma, a former Indian Air Force pilot, holds the distinction of being the first Indian citizen to journey into space.**



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	<ul style="list-style-type: none"> In 1984, he soared aboard a Soviet rocket as part of a joint mission <p>Key Points:</p> <ul style="list-style-type: none"> Mission: Soyuz T-11 (1984) Destination: Salyut 7 space station Duration: 8 days
<p>KSRTC forms panel to study, curb road accidents</p>	<p>Context:</p> <ul style="list-style-type: none"> The Kerala State Road Transport Corporation (KSRTC) has taken a step towards improving road safety by forming a committee to study and reduce road accidents. This is the first time KSRTC has constituted an external panel for this purpose, alongside its existing internal investigation mechanisms. The committee will comprise of various KSRTC officials including the station head, mechanical department head, vehicle supervisor, inspector roles, with the aim of getting a comprehensive understanding of accident causes. <p>About:</p> <ul style="list-style-type: none"> The panel will review reports from motor vehicle inspectors and recommend stricter actions for driver-caused accidents, including termination. They will submit regular reports to their superiors for further action. Additionally, a special committee will be formed at the head office to handle these reports. This initiative highlights KSRTC's commitment to improving road safety for passengers and the public.
<p>Water Bodies in forest areas in Kerala rejuvenated</p>	<p>Context:</p> <ul style="list-style-type: none"> Kerala's Forest Department has undertaken a successful initiative to rejuvenate waterbodies within forest areas. This project aims to address two key issues: Mitigate human-wildlife conflict: By ensuring sufficient water availability within the forests, animals are less likely to stray into human settlements in search of water. This reduces the risk of encounters and attacks. Prepare for drought: With the possibility of a severe drought on the horizon, reviving these water sources ensures a reliable source of water for the forest ecosystem. <p>Key facts:</p> <ul style="list-style-type: none"> Around 1,500 ponds and swamps (covering over 75% of all such waterbodies) have been rejuvenated. Activities include cleaning and establishing check dams,



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	<p>desilting operations, and overall restoration.</p> <ul style="list-style-type: none"> This project is crucial for maintaining ecological balance and reducing human-wildlife conflict in Kerala.
<p>Cochin Port attains cargo record of 36.32 million MT</p>	<p>Context:</p> <ul style="list-style-type: none"> Cochin Port achieved a significant milestone in 2023-24 by handling a record-breaking 36.32 million metric tonnes (MT) of cargo. This represents a modest growth of 3.01% compared to the previous financial year. The port's cargo profile was dominated by liquid bulk, accounting for 68% of the total volume. This segment witnessed an impressive 8.57% increase, primarily driven by crude oil, petroleum products, and Liquefied Natural Gas (LNG). Notably, the port handled a record 17.20 million MT of crude oil and 5.86 million MT of petroleum products. Container traffic also played a vital role, contributing 28% of the total cargo handled. Additionally, the port witnessed the import of 15,816 MT of wooden logs, marking a new cargo category.

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