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RBI announces results of second edition of its Global Hackathon – HARBINGER 2023

The Reserve Bank had launched the second edition of its global hackathon - “**HARBINGER 2023** – Innovation for Transformation” with the theme ‘Inclusive Digital Services’ which was communicated vide [Press Release dated February 14, 2023](#).

2. The hackathon received encouraging response with 154 proposals submitted by teams from both within India and 28 participating teams/entities from Australia, Canada, Germany, Singapore, Sweden, UK, USA among others. The Hackathon ran in three phases, with shortlisting of proposals in the first phase, solution development in the second phase, followed by the final evaluation in the third phase. In the first phase of preliminary screening and initial evaluation, 28 proposals were shortlisted by a panel of judges consisting of external experts, across four problem statements. In the second phase of solution development, which lasted for more than six weeks, shortlisted teams worked on building the solutions under the guidance of external mentors.

3. The third phase of final evaluation was held during October 10-11, 2023 in Bengaluru wherein 28 finalist teams presented their solutions for the problem statements to an independent Jury which evaluated and selected the winners and runners-up based on parameters like innovation, technology, demonstration, user experience, security, ease of implementation, etc.

The results of **HARBINGER 2023** are as follows:

| Sl. No. | Problem Statement | Results | | Solution Description |
|---------|---|---------|---|---|
| 1 | Innovative, easy-to-use, digital banking services for differently abled (Divyaang). | Winner | Ezetap Mobile Solutions Pvt Ltd (Now acquired by Razorpay), India | The solution, DrishtiPay, facilitates effortless Card/UPI payments for the visually challenged. With DrishtiPay, a tap of the card or NFC-enabled phone allows blind users to provide OTP securely for transacting instead of struggling to enter PIN. Solution integrates with UPI apps, to facilitate UPI payments for the visually impaired. |

| SI. No. | Problem Statement | Results | | Solution Description |
|---------|---|-------------------|---|---|
| | | Joint Runner-s-up | PoSMirror, India | The solution empowers visually impaired individuals to achieve self-sufficiency in transacting with PoS devices by harnessing the power of AI. The app utilises the phone's camera to analyze randomised keypads on PoS machines and guides the user to enter their PIN on a braille enabled add-on screen. |
| | | | SL Avatar, India | SL Avatar aims at seamlessly translating speech and text into sign language and vice versa, effectively ensuring inclusivity and accessibility across various digital banking touchpoints, including (i) Video KYC, (ii) Customer Support and Chatbots, (iii) Interactive mobile banking, (iv) Video banking, (v) Generation of educational resources, etc. |
| 2 | RegTech solutions to facilitate more efficient compliance for Regulated Entities (REs) | Winner | WeavAir, Singapore | WeavAir solution provides efficient data collection and analytics to facilitate compliance by regulated entities, facilitating financial institutions improve their regulatory reporting and risk management. WeavAir provides scalable AI-powered software for analysing ESG risks and compliance enabled by proprietary high-resolution satellite imaging data and algorithms, which allows for monitoring any site on Earth. |
| | | Runner-up | Munafa, India | MUNAFAs (Mutilated Notes Adjudication For All) is an application which on a click of a photo, identifies the various pieces of a mutilated note along with their respective sizes, and compares the same with the Note Refund Rules to give the user exchangeable value of the note. |
| 3 | Exploring use cases/solutions for CBDC-R transactions, including transactions in offline mode | Winner | Dygnify Ventures Private Limited, India | It is a mobile application on encrypted SMS rails for CBDC-Retail transactions without needing internet. It is an inclusive, affordable solution as it caters to both banked and unbanked users, works on smartphones and feature phones, remote as well as proximity payments and large as well as small-ticket transactions. |

| Sl. No. | Problem Statement | Results | | Solution Description |
|---------|---|-----------|---|---|
| | | Runner-up | Crunchfish Digital Cash AB (Sweden) + IDFC First Bank (India) | Crunchfish along with IDFC First Bank showcased "Digital Cash Telecom" as an easily scalable, resilient and secure offline payment product. Crunchfish Digital Cash augments CBDC online payment rail with a Trusted application supporting multiple offline payment options with both token-based and account-based payment rails. |
| 4 | Increasing Transactions Per Second (TPS)/ throughput and scalability of blockchains.* | Winner | Fortis Net Ltd., UK | Solution is a token-based architecture based on two-phase commit protocol. It also uses the Raft consensus algorithm and Corporate Digital Identity to support linear scalability. It divides the ledger into multiple permissioned segments. |

*No runner-up was selected under this problem statement

4. These innovative products are expected to bring additional benefits to the financial ecosystem viz. inclusion of the differently abled (Divyaang) through innovative, easy-to-use, digital banking services, and facilitation of more efficient compliance through adoption of Regulatory Technology, implementation of new-CBDC Retail use cases as well as improvement in the scalability and throughput of blockchains. These products have the potential for wider adoption in the existing financial system subject to compliance with applicable regulatory requirements. They can contribute to the ease and accessibility of financial services while bringing efficiency and inclusion.