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A MeitY Initiative with Govt. of Karnataka, Haryana, Gujarat & AP

QUARTERLY REPORT

OCTOBER-DECEMBER 2021

Ministry of Electronics & Information Technology
Government of India

MEITY STARTUP HUB

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STARTUP HARYANA
FIRST STEP OF SUCCESS

India's new liberalized drone rules and the road ahead

Friday October 8, 2021: NASSCOM Center of Excellence – IoT & AI organized a round table discussion on India's New Liberalized Drone Rules and the Road Ahead. The session was led by one keynote speaker, four-panel speakers & one moderator.

Speaking on the New Drone Policy, **Shri Rajan Luthra**, Chair of the FICCI Committee on Drones said, India's Drone market could become a multi-billion-dollar industry in the next decade. He also added that the new drone policy will boost the commercial usage of drones across various industries and the coming years will witness widespread usage of drones.

According to global market intelligence and advisory firm BIS Research, the global drone market, which is currently dominated by the US, China and Israel, will touch $28.47 billion this year and India will comprise about 4.25 per cent of that.

Talking about the new policy, the panel agrees that the focus has been on the ease of access for expanding the drone economy to enable the Drone Tech sector to thrive. **Ayushi Mishra**, COO & Co-Founder, DronaMaps, added, the new rules will open up the potential of using drones widely across different sectors and will provide a major boost to private and commercial drone ownership.

Vikram Singh, Founder, Tech Eagle Innovation, said, the new drone rules will bring a big push for the cargo drones and the future of logistics in India. He further said the commercial drone delivery will amplify the usage of drones in the future.

Rishabh Choudhary, Co-Founder, Bharat Rohan Airborne Innovation, added, the Drone industry in India is set to take off. Drones are set to play a key role in the agri-tech domain with applications for crop assessment, digitisation of land records, spraying of insecticides and nutrients.

The new liberalized drone rules is a significant milestone in promoting the drone industry in India. With self-certification and non-intrusive monitoring, start-ups and drone operators will no longer have to go through complex approval processes. The new rules will pave the way for the drone industry to flourish, said, **Rajan Srivastav**, Founder, Heliware.

How to use Edge-AI Technology to build new applications and enhance the current ones

Saturday December 4, 2021: NASSCOM Center of Excellence – IoT & AI organized a webinar on the use of Edge-AI Technology to build new applications and to enhance the current ones. The session was led by **Amit Mate**, Founder & CEO, GMAC Intelligence, where he discussed the role of key technologies such as AI, 5G and Edge compute (IoT) and the need for distributed intelligence enabled by edge AI.

"GMAC is building Connected Intelligence solutions comprising on-device & server-less cloud apps enabling real-time decision making and dashboards. Our mission is to enable Connected Intelligence on consumer electronic devices such as Edge & IoT.", said Amit.

The session also covered different use case applications of the Edge-AI technology. These applications ranged from facial recognition, license-plate recognition, human activity recognition and monocular depth-sensing. These are all real-time applications and are available on a variety of Edge-AI platforms such as smart-cameras, smart-drones, smart-robots and AI-Boxes.

How to utilize - IOT enabled Smart Green Technology to reduce carbon footprints?

Friday December 24, 2021: NASSCOM Center of Excellence – IoT & AI organized a webinar on Utilising IoT enabled smart green technology to reduce carbon footprints. The session was led by **Ankur Jaiswal**, CEO & Co-Founder, 4Mirrortech Innovatives, where he discussed the benefits of using an effective energy management strategy for organizations to achieve substantial savings. He further highlighted the role of IoT & AI-enabled devices in cutting down wasteful energy consumption and cost-saving for organizations.

He added, Using IoT enabled smart green technology is essential to reduce future energy crises. 4MirrorTech Innovatives is therefore committed to reforming facility monitoring by infusing Artificial Intelligence and IoT.

Avrio Energy wins MeitY Swadeshi Microprocessor Challenge

Under **AatmaNirbhar Bharat** Abhiyan, there is a growing need for Swadeshi Compute Hardware, which shall be part of every Smart Device deployed in different domains. To provide impetus to the strong ecosystem of start-ups, innovators & researchers in the country, **MeitY** announced the **Swadeshi Microprocessor Challenge**.

About 6,170 teams including over 500 start-ups participated in the challenge and submitted online quiz, abstract and detailed proposal wherein 100 semi-finalists were provided by MeitY with the Vega & Shakti processors ported on Xilinx FPGA boards and financial as well as technical support to develop Hardware Proof of Concept applications.

30 teams with technically and financially viable solutions were further given financial & technical assistance to improvise further on their hardware prototype and demonstrate to the jury during **Azadi Ka Amrit Mahotsav** celebrated by MeitY from November 29 to December 3, 2021. Out of the 30 teams, 10 most innovative teams were declared as the winners.

CoE Gurugram incubated startup **Avrio Energy** jointly bagged the 4th Prize under the Challenge for demonstrating – **Next-generation AI Energy Meter with Intelligence at Edge and Deep Learning** using **VEGA AS1061** processor **Artix7-100T FPGA** and received Rs 20 Lakhs as prize money.

Shri Ajay Sawhney, Secretary, Ministry of Electronics and Information Technology felicitated the winners and said. "Those that designed the microprocessor actually didn't know the power of what they were designing. It's what you can do with the processor which is even more important than the processor itself. As part of the Azadi ka Amrit Mahotsav celebrations, it is wonderful to celebrate having microprocessors of our own and being able to see where all those can be used".

Dipitr won the National Bio Entrepreneurship Competition (NBEC-2021)

NASSCOM CoE incubated startup, Dipitr Technologies won the C-CAMP National Bio Entrepreneurship Competition under Startup/ Innovator category. NBEC has emerged as a flagship platform for bio-entrepreneurs and innovators in India to showcase their deep science-driven ideas and has created a nationwide impact. Dipitr technologies won the challenge under the Medical Devices category.

Dipitr is building a back/spine care platform for preventing & treating the most common Musculoskeletal (MSK) conditions through behavioural science, biofeedback, & wearable tech. To use the device:

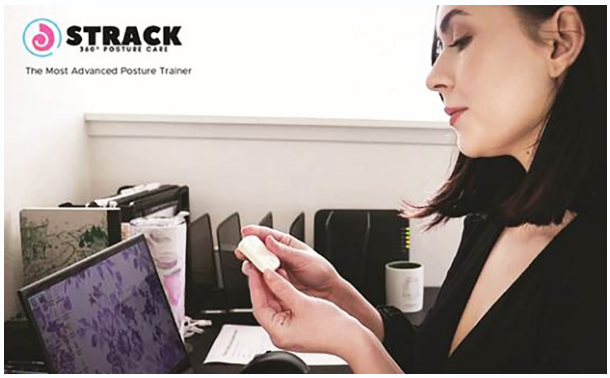
A) Wear Strack on your upper back using the Magnet or the Adhesive

B) Calibrate Strack to your correct posture on the Mobile App.

C) Strack gently vibrates on slouching, reminding the user to correct their posture. Forming a behavioural change through continuous use, which later bemes a habit.

Some unique, standout features of the device include:

- Posture tracking on a free mobile app which is available for Android and iPhone platforms
- Posture training using deep tech AI/ML algorithm
- Posture management functions to improve the strength of core muscles
- Activity/inactivity tracking to keep the body active



"The muscles in the front of the chest (pectorals) have a tendency to become tight, the muscles in the upper back, including the middle trap and rhomboids, are likely to become overstretched. Strack activate the muscles that haven't been worked enough and give them a guide for where they need to be. It takes care of posture correction, training, tracking and posture management functions to make people's back healthy." said, **Amir Valani, CEO & Founder, Dipitr Technologies**.

HFIL Technologies helping power consumers to track and save on energy usage

HFIL Technologies, a NASSCOM CoE Gurugram incubated startup is working on end to end affordable Smart Energy Metering solution. These smart energy meters are electronically controlled and are empowered by AI/ML technology which helps digitally record energy usage data and also offers many advanced features and analytics.

HFIL is currently working on a pilot with Himachal Pradesh State Electricity Board and have deployed their smart meters in government offices, residents and shops in Kangra district of Himachal Pradesh. The H.P state electricity board has received a dashboard to constantly monitor the usage and advanced analytics based on the electricity usage. The users (residents) have access to a mobile app to check their daily usage, analytics and receive communication directly from the board.

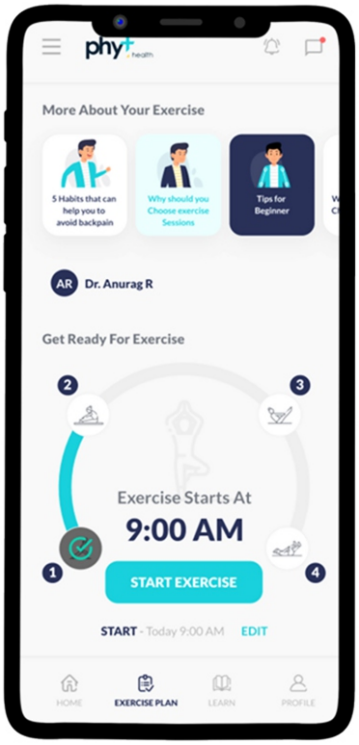
Dinesh Patiyal, Founder, HFIL Technologies, said, "Our vision is to enable organizations and individuals to save energy, smartly. And the first step in saving energy is to measure it effectively because **what gets measured gets managed**." HFIL has received funding support from IIT Mandi Catalyst, Government of Himachal Pradesh, IEEE Smart Village USA, STPI Mohali. They have also received mentoring support from New Energy Nexus and PFAN.

In addition to this, HFIL has received grants & support from IEEE Smart Village to create affordable EV charging points for light vehicles for Himachal Pradesh. **Gaurav Gupta, Co-Founder, HFIL Technologies**, said, "We're developing EV charging points jointly with IIT Mandi, and these are currently being piloted and tested in Mandi. These charging stations will encourage the deployment of eRickshaws & e-bikes in the hills & will help reduce pollution."

AI assisted digital physiotherapy platform Phyt.Health raises $1.5 million seed funding

NASSCOM CoE incubated startup, Phyt.Health has raised a seed fund of $1.5 million from a US-based private investment company Lunsford Capital. Phyt.Health was originally started as a fitness training app named Gryt.Fit but it has now pivoted to the digital physiotherapy model.

Phyt.Health is an AI-Assisted Digital Physiotherapy Platform working on Digital Tele-rehabilitation for a wide range of ailments such as Musculoskeletal (MSK), Neurological, Cardiovascular and Pulmonary ailments. The startup has developed a computer vision and AI-enabled physiotherapy platform that delivers better and more affordable care to patients and increased revenue for providers.



Vikram Patil, Co-Founder, Phyt.Health, said, "The company is planning to use the funds to expand operations in major metro cities and Tier-II cities. He further added, Phyt.Health's technology optimizes physiotherapists' time, encourages patients' adherence to their treatment plan, and provides a continuous PT-Patient engagement model empowering both doctors and patients with regular analytics and feedback.

Robo Bionics: Spreading Hope & Building Confidence

The world has over 20 million people that suffer from hand-related disabilities including limb differences, paralysis and nerve or tendon injury to name a few. Robo Bionics is developing solutions with a Sense of the Human Touch to be pioneers in Hand Rehabilitation across the world.
Robo Bionics has developed Grippy which is an affordable prosthetic hand that reduces the learning time using the sense of touch technology. The sense of touch technology also aids in helping the patient/user of the prosthetic hand identify different types of objects, both hard and soft as well as when the hand is open, closed. This helps the patient/user accept the prosthetic hand.

Llewellyn D'sa, Co-Founder, Robo Bionics, said, "We have developed our own sensors named MMG sensors that work on the pressure displacement rather than nerve activity, because of which the product learning time by the user gets reduced to half as it's as easy as operating a doorbell and it doesn't depend on conditions like sweat, humidity and fatigue like traditional EMG sensors. We have also added a feedback loop like our proprietary sense of touch technology that enables us to reduce the learning time and incorporate a Bio-Feedback onto the product".

Robo Bionics has successfully Tested and fitted two users with congenital (deformations by birth) amputations also, other than the 25 traumatic amputation users (limb loss due to accidents). Such users generally face difficulty adapting to prosthetics as they don't how to use hand muscles due to not having a hand since birth, while also the sensors and the weight of standard prosthetics is designed keeping in mind the user has experienced traumatic amputations i.e., they know how to use the real hand muscles.

A user named Mr Bipin Mishra was a part of the development journey, after fitting him with the device on March 21, he kept pushing the limits and was successfully able to use the device to even light a matchstick, which requires precise motor control of a real hand too.

Another user Mr Russel has the vision to be able to drive his car once again since his amputation over 10 years ago and now with Grippy he has been able to drive very short distances and hopes to soon renew his license after passing necessary tests with RTO, to be able to drive once again.

Mr Russel using Grippy – The prosthetic hand to open and pour water from a bottle.

Robo Bionics has recently been felicitated as the Top 5 Social Impact Start-ups by the Adani Group GreenTalks 2021 and is awarded as the Emerging Social Enterprise 2021 at TiE Sustainability Summit 2021. The most recent achievement includes bagging the National Startup Award 2021 in Medical Devices on the eve of National Startup Day.

StreamMinds gets felicitated at Azadi ka Digital Mahotsav

Streamminds is a CoE Gurugram incubated startup, which is developing a Robotics based solution called Dobot that is designed to serve as a robotics assistant for hospitals, healthcare centers and clinics that can do the following:

- Contact-less delivery to and from the patients
- UV-C based disinfection of the items it is carrying
- Facilitate remote communication between the doctors, the patients, the nurses, and other departments

The company is led by female entrepreneurs, **Jaya Parashar** and **Ankita Parashar**.

StreamMinds was felicitated at the **Azadi ka Digital Mahotsav** in New Delhi by Hon'ble Minister of State for Culture & External Affairs, **Smt. Meenakshi Lekhi**; JS MeitY **Mr. Amitesh Kumar Sinha**; Secretary MeitY **Mr. Ajay Sawhney** and CEO MyGov, **Mr. Abhishek Singh**.

The company had also won Shree Shakti Challenge by Un Women for Dobot.

They also have a product, called Short Circuits, which is a Paper Circuits book that combines electronics with storytelling, to promote STEM Education among students.

Vizara Technologies invited to Dubai Expo to showcase their solution

India is one of the most culturally rich countries of the world. Vizara Technologies, a CoE Gurugram incubated startup led by **Dr Anupama Mallik**, is leveraging AR/VR to enable Digital Heritage preservation & promotion. The company has been closely working with the Department of Science and Technology (DST), Ministry of Culture, Archaeological Survey of India (ASI), and other agencies of the Government of India who share the vision of preserving & presenting India's digital heritage for future generations.

The company has been invited to Dubai Expo at the India Pavilion from 1st October 2021 to 31st March 2022 to showcase their 3D printed true scale replicas of Indian Historical monuments and received extensive appreciation. The 5 monuments which have been exhibited at the Expo are Shri Kashi Vishwanath Temple, Hampi Stone Chariot, Taj Mahal, Rani ki Vav and Konark Sun Temple.

On the 2nd day of the Expo i.e. 2nd October, their Gandhi 360-degree movies, commissioned for Gandhi@150, were also played in the Dome Theater at the Expo.

"We feel happy to have received acute recognition from dignitaries across the world. We are honored to be appreciated by Shri Narendra Modi and Shri Piyush Goyal during the inauguration of the Expo." said Dr Mallik.

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