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DIGITAL SOLUTIONS FOR THE SOCIAL SECTOR

Dr Rishi Bhatnagar, President, Aeris Communications & Chairman, IET IoT Panel says that with a proper IoT application strategy, India can bring back agriculture as a main contributor to the GDP with the help of smart farming

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What kind of IoT solutions is Aeris doing?

At Aeris Communications, we deliver cost-effective and secure end-to-end IoT solutions. Irrespective of the industry, Aeris can help you stay connected. With our range of cellular connectivity options, we make it easy to connect and gather data through remote monitoring devices. We offer flexible plans, the lowest TCO in the industry, and excellent data security for IoT implementations.

We are working across sectors and with multiple enterprises. While we started our journey in the automotive sector, we have now extended our services to telecom, agriculture, healthcare and state projects. Our flagship solution 'Aeris Mobility Platform' is being widely used by the industry leaders such as

Maruti Suzuki, Honda Cars and Mitsubishi to name a few. Infact, insurance and finance is one sector where AMP makes a lot of sense due to shifting risk models, diverse customers and changing business models. Another offering is personnel for workforce security, by tracking and monitoring workforce location, especially in remote locations, factories and hazardous areas.

Some recent use cases from Aeris Mobility Platform can be tracked below:

• Okinawa Scooters Enhances Customer Delight with Aeris Mobility IoT Platform: Aeris partnered with Okinawa Scooters, one of the leading OEMs of electric vehicles in India, to provide safety and security features on the next generation of

DR RISHI BHATNAGAR
President, Aeris Communications &
Chairman, IET IoT Panel

electric two-wheelers. The partnership will bring connected and green transportation to India as the country aims to reach 100 percent electric vehicles by 2030

• Aeris, BSNL to roll out Internet of Things products and services for rural India:Through the partnership, both companies offers packaged IoT solutions and services to enterprises, small and medium businesses and public sector undertakings among other segments in India

• Paragon Footwear Improves Operational Efficiency with Aeris: Paragon aimed to address the issues of unexpected delays due to vehicle breakdown or wrong routes taken, leading to unpleasant incidents. After a thorough research of the information technology (IT) vendor landscape and as a first step towards digitizing their supply chain, Paragon decided to implement the Aeris solution across its nationwide fleet, thus making them a single connected entity.

We are also actively working in the field of agriculture and have IoT based water and soil management solutions. Aeris has brought the concept of uberization of farm equipment with the 'tractor-as-a-service' IoT solutions in partnership with Hello Tractor, addressing the needs for small to medium land holding farmers in Africa, Bangladesh and couple of initial PoCs are now active in India too.

We are also making a difference with IoT

The momentum for IoT-enabled ecosystem is building up in India. There are multiple prospects lying that need to be tapped with innovation. We must look beyond such challenges and consider them as opportunities. Even in the case of 5G, the Indian Government wants the nation to get 5G along with rest of the world and that is a significant step

Technology in the Social Sector. Aeris is working with leading not for profit organisation on river rejuvenation and water conservation projects. We have created TechNirmal, a connected digital solution, leveraging industry-grade mSELL solution for water conservation & social impact for Welthungerhilfe and Tarun Bharat Sangh founded by Dr. Rajendra Singh. Other social organisations include, Jal Jan Jodo Abhiyan, Parmarth Samaj Sevi Sanhthan, Prayog Samaj Sevi Sanstha and indirect partners such as the donor fraternity and government agencies working in the not-for-profit sector. The beneficiary states include Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand, Chhattisgarh, Odisha and Rajasthan. At the Art of Living, Aeris IoT solutions are being used for Impact Assessment of the River Rejuvenation Projects running in multiple locations in India, namely, Karnataka, Maharashtra and Tamil Nadu. We are using our cutting edge, connected vehicle technology to manage the Art of Living fleets across India and also in the 'Project Impact' an initiative by Sarasvati Seva Foundation and Innovant International, supported by IET, Aeris and IIT BHU for sustainable social change through social entrepreneurship using E-rickshaw.

equipment, and time-sensitive manufacturing, where immediate data analysis and response is necessary, will become more viable in 2019 as advancements in edge computing ensue.

Personalised Data Management Solutions will empower Data Insights: IoT applications have reached every industry and are permeating both consumer and business markets. This ubiquity of connected devices is translating into massive amounts of data. There is a great opportunity for businesses to gain valuable insights with this data, although many companies are struggling to keep up with the influx of information.

Electric Vehicles: Today, the four technology-driven trends that dominate the automotive sector are electrification, shared mobility, connectivity and autonomous driving. At Aeris, we are convinced that soon there will be huge necessities for managing the burgeoning Internet of Moving Things as these drifts will shift markets and revenue streams, change mobility behaviour and open new avenues for collaboration, even with competition.

As hackers become sophisticated, so should response and risk mitigation strategies. The first step towards protection is awareness followed by vigilance with diligence. A multi-layered security policy that helps detect and isolate risks across the threat lifecycle will also help. But strategy must address all the complex layers and integrations IoT is built with

What are the major upcoming trends in IoT?

NASSCOM estimates that the Indian IoT market to reach US$15 billion by 2020, and the global market will grow by US$3 trillion. Consumer and industrial applications are expected to drive IoT growth, with sectors like manufacturing, logistics, automotive and transportation anticipated to enable the growth of IoT in India.

Some of the notable trends that can be witnessed in the upcoming time are:

Edge Computing: This is on the verge of revolutionizing the way data has been managed earlier. IoT and related network industries will start to more deeply employ edge computing, bringing the site of IoT data processing closer to the deployed device sensors and their signals. IoT applications, such as self-driving cars, public security, medical

There is still less awareness about IoT in India. What kind of IoT implementations can SMBs, large enterprises and governments go in for?

Enterprises, SMB's and government bodies have established working groups dedicated to achieving this goal. Despite there being several models of standards development, such as the proprietary- and government-led models, collaborative standards development has held a superior position. Creating an application ecosystem,preparing the network infrastructure and establishing strategic partnerships are essential to helping develop sustainable business models for IoT ecosystem.

Will IoTs pose a security hazard on the network? What are the safeguards being taken by the industry?

When it comes to cybersecurity, India is equally vulnerable like the rest of the world. Recently a joint report published by ASSOCHAM and EY claimed that

in a hyper-connected India, IoT has the potential to reach an estimated 2 billion connections, unlocking revenues of US$ 11.1 billion by 2022. IoT is getting featured in almost all the security prediction lists for 2019. Beyond all-too-common corporate attacks, 2018 witnessed increased threats across a diverse range of targets and victims. As IoT matures and scales up, the security issues that distress the wider internet are also present in IoT.

Over time, more 5G IoT devices will connect directly to the 5G network rather than via a Wi-Fi router. This drift will make those devices more vulnerable to direct attack. However, with IoT, the security issues are much larger in magnitude and complexity as any IoT solution or service is not standalone. It is accompanied by numerous devices, hardware, software and application weaknesses that are specific to IoT applications and services.

Security right at the design level is propelled by Aeris as a leading IoT company providing wide range of IoT solutions and services in India. The company believes that it is crucial for securing IoT offerings at the design stage rather than attempting to hold back the tide of attacks by attempting to add security to systems once they have been deployed. Given the way world is getting more and more connected, security can no more be an afterthought for IoT players. Security measures must be designed in from the start and treated as an ongoing process.

Billions of new IoT devices will lead to a flood of even more data. How is AI-ML helping with that?

With IoT getting the momentum, the volume of data generated by the devices will be humongous. It will be important to manage and distribute the content across multiple channels to the IoT applications. AI infuses intelligence around content to gain a deeper understanding of the data being valuable or not. These technologies analyse data at scale with utmost precision, helping enterprises determine what content best resonates the best with their audience,whereas Machine Learning helps understanding the performance of the gamut of data on a more granular level. These insights help the corporates improve the management, creation, and delivery of required content.

How can IoT specifically benefit India, especially in the agricultural and rural market? How can India really leverage IoT in the 2020s?

Industries are witnessing the IoT revolution and it is being deployed across various verticals including

The IoT Action Plan

- Establish a strong IoT ecosystem with stakeholders right from devices to OEM's to regulatory bodies, telcos, technologist and system integrators. This would enhance the quick integration, deployment and implementation for the services required right at the last mile. Platforms such as the IoT India Congress play a significant role in bringing right stakeholders together.

- Reduce duties on imported components like chipsets, network modules etc to encourage IoT hardware assembly in India, which shall also help in bringing the cost of IoT devices down.

- Production of Lithium ion batteries to be domesticated.

agriculture. With the advancement in technology at hand, the opportunities for IoT to revolutionise the agricultural sector is magnanimous. It is predicted that agriculture will contribute about US$1 trillion of India's GDP by 2022, hence, it is important that India shifts its focus to revolutionising this sector. To achieve this growth, India needs to create a blueprint on integrated technology for agriculture and embrace the technologies at our disposal. There is a huge void that needs to be filled to transform the agricultural methodologies applied and processes followed with automation to make operations more effective, leading to better crop yields. With a proper IoT application strategy, we can surely bring back agriculture as a main contributor to the Indian GDP. Digital transformation, implementing smart farming and improving agriculture should be a focus for India today. As mentioned earlier, Aeris is bringing right sized agricultural use cases to the Indian market. □