

EXPO NEWS



27-29
MARCH 2023
PRAGATI MAIDAN,
NEW DELHI

28 MARCH 2023

DAY 2

Quotes of the Hon'ble Prime Minister for the 30th Convergence India & 8th Smart Cities India 2023 Expo



Narendra Modi
Hon'ble Prime Minister of India

- We are transforming governance, making it more transparent, accountable, accessible and participative. We are using technology to impart scale and speed to development.
- Our demographic dividend is our strength. The youth have what it takes to engage with the latest technology and master it.
- When you think of the exponential speed and scale of expansion of social media or a service, you have to believe that it is equally possible to rapidly transform the lives of those who have long stood on the margins of hope.
- We have launched an aggressive expansion of the National Optical Fibre Network that will take broadband to our 600,000 villages. We will connect all schools and colleges with broadband. Building I-ways are as important as highways.
- There was a time when urbanisation was considered as a problem but I think urbanisation must be considered as an opportunity. Soon cities would emerge, not on the basis of water bodies or highways, but on the basis of optical fibre network.
- Our cities are the driving force of our economy. We are making the city a hub of a vibrant economy. Our efforts should be to keep our cities clean as well as healthy.
- Most of the cities in our country are traditional cities and have developed in a traditional way. In this era of modernization, the antiquity of these cities is equally important. We can learn a lot from every street, stone, moment and history of our ancient cities. We can learn how to advance our local art skills and products and make them the hallmark of the city!
- India is celebrating the Amrit Mahotsav of Independence. There should be public participation in the development of the city and we should give emphasis on it.
- 'Brand India' is being built out of 5-Ts - talent, tradition, tourism, trade and technology.

- India has: Taste for technology. Trust in risk takers. Temperament for reform.
- Many tech innovations are among the biggest transformations of our era. Technology has emerged as a force multiplier in battling poverty. Digital solutions can show the way to solve global challenges like climate change. Our emphasis on making digital technology more inclusive is bringing a meaningful change in the lives of the poor. India's tech related efforts have also helped millions of Indians, particularly during the pandemic.
- From long lines to online... the last few years have witnessed effective usage of technology to boost 'Ease of Living.'
- Technology means greater transparency. Technology means enhanced 'Ease of Living.' The numerous strides in technology in the last few years are powering India's growth.
- India has shown how to democratise technology. India has also shown how to give tech a human touch. In India, technology is a force of equality and empowerment.
- Technology brings transformation. Some of you may have heard that India is the world's number 1 in real-time digital payments.
- In India, technology is not an agent of exclusion. It is an agent of inclusion.
- We see urbanisation as an opportunity and we are committed to making our cities world class urban spaces that further 'Ease of Living.'
- Urbanisation is on the rise and we in India are fully prepared to ensure our cities have top quality infrastructure. Increase in the number of cities with metro connectivity over the last few years has been tremendous.
- India is on the move. Our economy is on the move. We are the world's fastest growing major economy. Our cities and towns are on the move. We are building 100 smart cities. Our infrastructure is on the move. We are speedily building roads, airports, rail lines & ports.
- Today, while India is building 100 smart cities across the country, it is also ensuring rapid progress in over 100 aspirational districts. Today, while India has become a net exporter of electricity, it has also ensured that crores of households get electricity.
- हम भारत में आधुनिक डिजिटल इंफ्रास्ट्रक्चर तैयार कर रहे हैं. साथ ही ये भी सुनिश्चित कर रहे हैं कि डिजिटल क्रांति का फायदा समाज के हर वर्ग तक पहुंचे.
- भारत के well planned शहर ही भारत के भाग्य को निर्धारित करेंगे. जब प्लानिंग बेहतर होगी तभी हमारे शहर Climate Resilient और Water Secure बनेंगे.

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INNOCEAN-019/23



From L to R: Dhruv Behl, Director, Exhibitions India Group; Anindya Basu, National Managing Partner KPMG in India; Chandrika Behl, Managing Director, Exhibitions India Group; Shri Nitin Gadkari, Union Minister for Road Transport & Highways, Government of India; H.E. Karel Hirman, Minister of Economy, Slovak Republic; Shri Pradeep Singh Kharola, IAS (Retd.) CMD, ITPO, Ministry of Commerce & Industry

30th Convergence India and 8th Smart Cities India Expo inaugurated by Shri Nitin Gadkari

With the theme of 'Innovation Driving Sustainability', the 30th Convergence India and 8th Smart Cities India expo celebrates India's digital and infrastructure growth and its rising influence as a global digital powerhouse. Jointly organised by the Smart Cities Mission, Ministry of Housing & Urban Affairs (MoHUA), India Trade Promotion Organisation (ITPO), and Exhibitions India Group (EIG), the expo offers a comprehensive platform for domestic and overseas players, innovators, technologists, and start-ups across the segments of IT/ICT, telecom, 5G, wireless technologies, fintech, embedded tech, etc., along with those associated with urban development, mobility, environmental and sustainable technologies, to unleash the power of in-person networking, share best practices and trends, expand business opportunities, and make new alliances.

The event was inaugurated by **Shri Nitin Gadkari, Hon'ble Union Minister for Road Transport & Highways, Government of India**, at Pragati Maidan, New Delhi. Speaking on the occasion, Shri Gadkari said, "Smart Cities is a successful story in India. We have got a huge potential here and I am driving it personally. To achieve Hon'ble Prime Minister's vision of making India a \$5 trillion economy, it is

imperative to develop smart cities and villages for which public-private partnership is key."

Also present during the opening address were H.E. Karel Hirman, Minister of Economy Slovak Republic, Shri Pradeep Singh Kharola, IAS (Retd.) CMD, ITPO, Mr. Anindya Basu, National Managing Partner KPMG in India; Ms. Chandrika Behl, Managing Director, EIG; and Dhruv Behl, Director, EIG.

In his welcome address, **Dhruv Behl, Director, EIG**, said, "This is the 30th year hosting the expo at Pragati Maidan. There aren't too many relationships that make it through the three-decades mark, but this is one of them. This would not have been possible without the support of ITPO." Speaking about KPMG, the expo's



knowledge partner, he said, "KPMG has been our knowledge partner and an extremely valuable support to the expo over the years."

Chandrika Behl, Managing Director, EIG, said, "For 30 years, we have been creating an ecosystem of opportunities for India's fast-growing digital technology industry through the Convergence India series of expos. Meanwhile, the Smart Cities India expo has evolved in tandem with the needs of the Smart Cities Mission. Together, both events have provided a platform for domestic brands to showcase their work in technology, smart cities, and start-up domains. At the same time, they offer a platform for international players to connect and explore business opportunities in India by forging new relationships. I welcome all the participants and wish them a successful event."

Over the years, Convergence India and Smart Cities India series of expos have become the congregating venue for the industries and government bodies/representatives as they focus on creating a modern India. This year, the expo is seeing the participation of over 1,000 companies, including 200+ start-ups, from approx. 30 countries. The conferences, being organised alongside the expo, will have 150 speakers, including those from the Union and State governments, industry, think tanks and academia. The three-day event is expected to see a footfall of 50,000+ visitors.

EXPO NEWS 2023

A major highlight of the expo is the simultaneous conference sessions that will be organised during the three days. The first day was packed with 14 high-powered conference sessions with over 65 speakers. The inaugural conference session was on the topic – Rethinking the role of Telecom and Connectivity. The session set the tone for the next three days and saw addresses from an esteemed panel including V. Raghunandan, Secretary TRAI, Debashish Chakraborty, Sr. Director, Advocacy & Industry Engagement, GSMA, and Satish Jamadagni, Sr. VP Reliance JIO. Mr. Raghunandan, Secretary TRAI said, “With the advent of 5G, we can see that it now has a role in almost all sectors. TRAI has given comprehensive recommendations for early adoption of 5G through the vertical across ministries.”

Some other sessions held during the course of the day included:

- Connecting the unconnected: Expanding Internet access to remote and rural areas
- 5G in India: Lessons for the world
- Beyond streaming: What's next for media and OTT
- Making Indian smart cities a lighthouse for the world
- What does it take to be an environmentally and economically resilient city
- Accelerating future smart cities using data and digitisation.

Other highlights of the expo include an exclusive Startup Hub Pavilion featuring over 200 startups and showcasing innovations across the different verticals of emerging technologies, ICT and smart cities technologies, is another major highlight. The 3-day event will also include mentoring sessions from the pioneers of the ecosystem, a Start Pitch Competition, Investor & Startup meets, and the highly popular Smart City Awards, to be held on Day 3. ■



From L to R: Debashish Chakraborty, Sr Director Advocacy and Industry Engagement, GSMA; V. Raghunandan, Secretary, TRAI; Shobhit Agarwal, Partner, KPMG in India; Lt Gen Dr SP Kochhar, DG, Cellular Operators Association of India; Anku Jain, MD, MediaTek India; Vinayak Godse, CEO, Data Security Council of India



From L to R: Nilachal Mishra, Partner, KPMG in India; Chandrika Behl, MD, EIG; Dr. Sanjay Kolte (IAS), CEO & ED, Pune Smart City Development Corporation Ltd.; Kunal Kumar (IAS), Joint Secretary and Mission Director, Smart Cities Mission, Ministry of Housing and Urban Affairs; Charmie Parekh, CEO, Silvassa Smart City Ltd.; Abhishek Chaudhary, VP-Corporate Affairs, HR & Company Secretary, NICDC Limited; Divyank Singh (IAS), CEO, Indore Smart City Development Ltd.



From L to R: Dhruv Behl, Director, EIG; Umang Jindal, Head of 5G RAN Software and Performance, Ericsson; Rajiv Makhni, Managing Editor, NDTV; Navnit Nakra, India CEO and Head of India Region, OnePlus India; Randeep Sekhon, CTO, Bharti Airtel; Rajen Vagadia, VP, Qualcomm India Pvt Ltd & President, Qualcomm India and SAARC



From L to R: Aastha Grover, Head Startup India; Himanshu Rattan, Partner, KPMG in India; Dr. Omkar Rai, Executive Chairman, Startup Odisha; Gul Panag, Entrepreneur, Actor, Producer

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Durga Shanker Mishra

Chief Secretary, Uttar Pradesh

Over the last few years, government has worked relentlessly to attract industry and investment to make Uttar Pradesh a hub of manufacturing and business. Not only has the law and order situation been addressed, but the infrastructure has been ramped up, and policies with focus on ease of doing business have been implemented. As a result, UP has emerged among the leading few states which have attracted maximum investment in infrastructure in the last five years and will play the key role in achieving India's vision of becoming a \$5 trillion economy.

Today, UP has progressed on India's Ease of Doing Business Ranking with the 2nd rank in the country. The State is a leader in the Start-Up ecosystem, with over 8,000 start ups. The 'One District, One Product Scheme' is being successfully implemented and in the last five years, the exports from UP have doubled. While telecom equipment exports has

increased 63 times, fruits and vegetables have increased 26 times. India has signed three important international Free Trade Agreements, which will open the doors for the breweries and wineries of UP as they will get market access, investments and technologies across the globe.

The State government recently organised the Global Investors Summit and launched Invest UP 2.0 with a vision to bring large investments into Uttar Pradesh and maintain the pace of development. This flagship investment summit has brought together policymakers, industry leaders, academia, think tanks, and leaders from across the world to collectively explore business opportunities, forge partnerships, and secure commitments to the tune of lakhs of crores rupees.

Information and Communication Technology (ICT) has become key to the vision of creating Digital India. Harnessing digital technology to foster innovation for an inclusive, secure and sustainable digital economy will transform how business is done in the country. I congratulate the Smart Cities Mission, Ministry of Housing & Urban Affairs, India Trade Promotion Organisation (ITPO) and Exhibitions India Group for hosting the 30th Convergence India and the 8th Smart Cities India 2023 Expo, from 27-29 March 2023, at Pragati Maidani, New Delhi. This event offers the potential to aid the generational change of India's digital journey to make it a global leader in digital products, platforms, services and goods.

I wish all the very best for successful organization of this event.



B. B. Swain

Secretary, Ministry of MSME

I would like to congratulate Smart Cities Mission, Ministry of Housing & Urban Affairs, India Trade Promotion Organization (ITPO) and Exhibitions India Group' for organizing the 30th Convergence India and the 8th Smart Cities India Expo from 27th - 29th March, 2023 at Pragati Maidan, New Delhi.

The Expo will offer opportunities to industry leaders, professionals, policy makers and entrepreneurs in various sectors for collaboration, business alliance and networking.

I extend my best wishes to the organizers, participants and all persons associated with this event.



S. CHANDRASEKHAR

Secretary, Ministry of Science & Technology
Govt. of India

It gives me immense pleasure to note that India Trade Promotion Organisation (ITPO) and the Exhibitions India Group are organising the 30th Convergence India & 8th Smart Cities India 2023 expo at Pragati Maida, New Delhi during march 27-29, 2023. It is also interesting to learn that start-ups associated with two of the DST's schemes, namely National Science and technology entrepreneurship development board (NSTEDB) will be showcasing their technologies in the event.

The department of science and technology (DST) has been working towards the promotion of new fields of science and technology (S&T) with special emphasis on emerging areas. Various schemes of the department focus on research, development and innovation in areas of cyber-physical systems, clean energy, smart grids, off-grids, alternate fuels, clean energy materials, clean hydrogen, carbon capture utilisation and storage, water technologies, etc.

NM-ICPS is a national mission that focuses on developing, incubating and supporting start-ups as well as commercialisation. Under the mission, 25 technology innovation hubs (TIHS) have been established in reputed academic institutes (host institutes) across the country. Each TIH has been assigned a technology vertical in the areas of advanced technologies like Artificial Intelligence and Machine Learning, technologies for the Internet of Things and Internet of Everything, data banks and the data services, data analysis, robotics and autonomous systems, quantum technologies etc.

NSTEDB has been supporting various programmes to foster the innovation and entrepreneur ecosystem in the country. Under its umbrella programme, National Initiative for Developing and Harnessing Innovations (NIDHI), this initiative of DST supports technology business incubators (TBI) in academic institutions. NIDHI has aligned its activities with initiatives such as Startup India and Startup India to energise the incubator-led innovation value chain by young entrepreneurs in domains such as Agri-tech, Edu-tech, Med-tech, Artificial intelligence, machine learning, robotics, sanitisation, etc.

I extend my best wishes to the organising team for hosting a successful event and welcome all participants. I wish the 30th convergence India and the 8th smart cities India expo a grand success.



27-29 MARCH 2023

PRAGATI MAIDAN, NEW DELHI



Pradeep Singh Kharola

Chairman and Managing Director
India Trade Promotion Organisation
Ministry of Commerce & Industry

The India Trade Promotion Organisation (ITPO) is delighted to co-organise the 30th Convergence India and the 8th Smart Cities India 2022 Expo, from 27-29 March 2023 at Pragati Maidan, New Delhi.

The Convergence India Expo showcases India's digital revolution and is relevant in the context of advancements in Information and Communication Technology (CT) and the vision of Digital India. Digital India is transforming the nation into a knowledge-based economy and a society based on technology that is inclusive, affordable and sustainable. It has helped to create a digital infrastructure with the common thread of digital inclusion.

Meanwhile, the Smart Cities India expo has played a leading role in promoting the vision of the Smart Cities Mission and its success in the country. Urban development is the key to India's growth because livable cities ensure ease of doing business, besides enhancing the efficiency of the cities. Rapidly urbanising India presents exciting investment opportunities for the private sector in cities to address several challenges, including those focused on improving the quality of urban services such as water, sanitation, urban transport and planned development of land resources.

The Convergence India expo is in its 30th edition, which itself is a landmark achievement for the organisers as well as the participants. I urge those participating in this three-day event to make use of every opportunity to harness digital technology and foster innovation to create an inclusive, secure and sustainable digital economy. The Smart Cities India expo is an opportunity for those associated with the various verticals of the sector to showcase their innovative technologies and solutions that will shape the future of our cities.

ITPO remains deeply committed towards the growth of our economy by showcasing India's commercial potential through trade fairs and exhibitions, both domestically and abroad. The exhibition and convention industry in India and globally is upbeat and excited about the remodelled and revamped International Exhibition-cum-Convention Centre (IECC), a state-of-the-art complex to host global conferences and exhibitions.

I extend my best wishes to the Exhibitions India Group, industry leaders, participants as well as supporting bodies for their cooperation in hosting this mega Expo and wish them a successful event.



Alkesh Kumar Sharma

Secretary
Ministry of Electronics & IT

I am glad to know that Smart Cities Mission, Ministry of Housing & Urban Affairs, India Trade Promotion Organisation (ITPO) and Exhibitions India Group are organising the 30th Convergence India and 8th Smart Cities India expo in New Delhi from 27-29 March 2023.

The 'Digital India' programme is transforming India into a digitally empowered society and knowledge-based economy by enabling ease of access, digital inclusion, and participation. The strength of digital infrastructure and services has already given amazing results during the pandemic. India is one of the top countries to have experienced fast digital adoption. This was achieved due to a focused approach of the government and the implementation of innovative initiatives. These initiatives have created a favourable ecosystem for start-ups, industries, and electronics manufacturing to make India an "Atma Nirbhar" nation.

This event will bring together the players of the industry on to a single platform to explore the latest developments, technologies and innovations across IoT, ICT and Smart Cities domains.

I extend my best wishes for the successful conduct of the event.



Apurva Chandra

Secretary
Ministry of Information & Broadcasting

I am pleased to note that India Trade Promotion Organisation (ITPO) and Exhibitions India Group are together organizing the "30th Convergence India Expo and the 8th Smart Cities India Expo, including IoT India, Embedded Tech India, Mobile India, Fintech India, Digital Gaming India, Building India, Clean India, Solar India, Transport India, Smart Health and Water India expos, at Pragati Maidan, New Delhi during 27th- 29th March, 2023. The broadcasting sector is an important part of the economy and such International exhibitions provide a great opportunity for domestic companies to meet on a global platform and exchange ideas, information and technologies with international partners. India is celebrating the Amrit Kaal and also holding G-20 Presidency this year. Organisation of the 30th Convergence India 2023 Expo is a praiseworthy effort in promoting Indian companies. The deliberations at the 30th Convergence India 2023 Expo would be fruitful for the participants from India and overseas. I extend my greetings and best wishes for the success of the 30th Convergence India 2023 expo to be held from 27th- 29th March, 2023.

Aidio: Enhancing Customer Experience using Innovative Technology

IN CONVERSATION



Satish Aski
Co-Founder and CEO
Aidio

Please share something about your company.

We are a Bangalore-based technology startup and an OEM of All-in-one Interactive display (AIO). Started in the year 2016 with a mindset to enhance the customer experience by introducing innovative technology with interactive displays, we are one of the few OEMs offering professional-grade interactive displays with a service network in most of the metro cities in India.

Which innovations have been implemented by Aidio in recent times?

With an in-house R&D team, we keep playing with HW and SW, along with innovative technology trends across the globe. One such innovation we implemented recently is Go SelfServe, which has generated \$2M+ gross merchandise value in the last year.

Did you embrace any new technology or concepts after the pandemic to adapt to the evolving market conditions?

Covid was no doubt a reality check for all of us. During the pandemic, we spent extensively on R&D and came up with innovative technologies such as:

- Covid self-screening kiosk
- AI-enabled Smart Mat for the footwear industry
- Self-service kiosk
- Facial Recognition Terminal
- Virtual Try-on, etc.

What products are you planning to showcase at the expo?

We are showcasing our in-house designed and manufactured android all-in-one interactive displays ranging from 15.6" to 32". We have already delivered 5,000+ units to clientele like Jio, TVS Motors, Ashirvad, Cult, Lenskart and many more.

Are you planning any soft launches of a new product at the expo?

We launched a product - Go SelfServe, last year and now plan to introduce the next-generation technology, which is the future of the retail and F&B sector. With 100+ Go SelfServe kiosks installed, we've clocked over 1 million orders and generated a gross merchandise value of more than \$2 million within a year of the launch.

What kind of challenges is the industry facing?

Some of the challenges faced by the industry are:

- Lack of a mature ecosystem with few very OEMs.
- Domination of Chinese OEMs in the Indian market.
- Lack of after-sales support.
- Poor R&D structure or budget.
- Lack of expertise to meet the client's requirements.

What are your views on the regulatory environment in the country?

I think the government understands the needs of the sector and is making efforts to create a conducive environment to boost the manufacturing sector. Initiatives such as the rising imposition on electronics import, PLI scheme, Make in India, and Vocal for Local, have emerged as the driving force behind the country's economic growth.

Now the government should implement policies to make the sector ecosystem more mature. For example, even today we don't have LCD/touch panel manufacturers in India and are forced to import from countries such as China.

How can your technologies be leveraged for a better tomorrow?

Our innovative and high integration technology can be used in sectors like Retail, F&B, Hospitality, Banking, Healthcare, Government, Entertainment, Automobile, etc., to make the customer experience better at outlets by offering:

- Self-checkout
- Endless Aisle
- Self-serve kiosks
- Information kiosks
- Virtual Business Development kiosks, etc. ■

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Other current topics
and issues of concern

IN CONVERSATION



Mr Anku Jain

Managing Director, MediaTek India

What will be the roadmap for making 5G accessible in India?

With the launch of 5G connectivity in October 2022, the disruptive technology is set to enable new opportunities for India, while transforming core industries with new-age and emerging technologies. Faster speed and lower latency expected through 5G will accelerate data usage among mobile and home broadband customers. Data suggests that 5G broadband will propel India's mobile data usage by 29% and the corresponding revenue by 67% in the 2020 to 2026 period.

In addition to individual use cases, 5G will also trigger the expansion of enterprise use cases around IoT, AI, Edge, and campus networks, while creating new jobs and skilling opportunities for India's youth. There is no denying the potential of 5G; however, the roadmap to making the technology accessible in India is challenging. In this evolving scenario, wherein 5G is already accessible in around 78 cities, infrastructure affordability is becoming integral to developing a sustainable business model. Further, to drive affordability for the common populace, steps must be taken to foster a cost-effective spectrum. This can be facilitated through a reduction in license fees and taxes. In its initial stage, it will be challenging for India to unlock the enormous potential of 5G, as the technology could be considered an upgrade to 4G in terms of speed and coverage. However, this will change when operators begin creating business models from new

applications driven by the availability of affordable and feature-packed 5G devices.

Further, we believe that the roadmap to 5G accessibility in India can be accelerated through the standardisation of protocols and policy reforms. The industry's stakeholders and regulators must consider an integration of network standards to mitigate the cost of deployment, in addition to fostering an industry-friendly regulatory framework capable of enabling emerging applications. A simplification of the tax structure on license fee and spectrum usage charges as well as the development of satellite communication standards can bolster the journey.

Finally, significant investments in fibre for home broadband, across India, and in innovative technologies like MIMO, SDN and NFV, can boost the speed and network performance of 5G, making disruptive connectivity truly accessible and beneficial for people.

The rollout of 5G in India is already unleashing new opportunities. Where do you think India is placed for 6G?

Considering the lessons learnt from the 5G deployment, the first takeaway revolves around the consumer's willingness to adopt new technologies. According to Cybermedia Research, the shipment of 5G smartphones surged 74% in 2022, even as overall mobile phone shipments declined by 8%. This indicates the country's willingness to adapt, even when the technology was yet to be deployed. The second lesson is about 5G monetisation, which is the key for operators to remain resilient in challenging market conditions. For this to be successful, there needs to be a strong investment in fibre and 5G infrastructure. The third takeaway is around regulatory action and spectrum prices – 5G deployment in India was delayed despite chipmakers like MediaTek and OEM companies having launched devices primed for connectivity. Therefore, to enable a smooth rollout of 6G, these takeaways must remain at the forefront.

According to India's telecommunication minister Ashwini Vaishnaw, India plans to take the lead in 6G deployment, with important study groups on 5G and 6G innovation under the International Telecommunications Union being chaired by Indian delegates. We believe that India is well-placed to leverage this position of power.

MediaTek, with its 6G research already underway, is fully poised to support the country on the requirement for semiconductors. We expect the government's initiatives in terms of 6G deployment, such as the focus on encouraging local companies to manufacture materials, components, and equipment, as well as the thrust towards developing an open radio access network compatible with any mobile device and supported by mobile carriers and enterprises, will pave the way for India's 6G dominance on a global stage.

How will satellite communications technology allow brands to integrate two-way satellite communications into smartphones and other devices to usher the country into a new era of connectivity?

With the deployment of 5G connectivity, satellite communications are set to gain greater importance as these can offer seamless and high-speed connectivity across non-terrestrial applications such as aeroplanes and ships. Two-way satellite communication can also enable imperative emergency communications in disaster situations and challenging sectors like mining.

Currently, MediaTek's non-terrestrial network (NTN) tech brings two-way satellite communication to smartphones, and our MediaTek MT6825 chipset, based on the 3GPP NTN open standard, can be integrated into any flagship smartphone. The new era of connectivity will be driven ahead by the implementation of satellite technology in IoT, making IoT-NTN a reality for 2B, and major applications include

OVER THE NEXT FEW YEARS, MEDIATEK'S SATELLITE COMMUNICATIONS PORTFOLIO WILL TARGET BOTH IOT-NTN AND NR-NTN TECHNOLOGY, BASED ON THE 3GPP 5G SPECIFICATION FOR RELEASE 17 (R17).

core sectors like agriculture, forestry, logistics and automotive.

Over the next few years, MediaTek's satellite communications portfolio will target both IoT-NTN and NR-NTN technology, based on the 3GPP 5G specification for Release 17 (R17). IoT-NTN is ideal for messaging since it is designed for low data rate connections, while NR-NTN allows for higher data rates that can support video calls and other applications. The forthcoming NR-NTN chipset from MediaTek will enable devices to support services with higher data rates like navigation and real-time communication. As satellite networks build capacity for NR-NTN in the coming years, it opens up exciting new consumer, enterprise, and industrial use cases, as smartphones, IoT devices, and vehicles can take advantage of reliable connectivity everywhere.


What are the new capabilities that Wi-Fi 7 can bring in all the available spectrums while offering super-fast speeds and low latency transmission?

The Wi-Fi 7 technology is based on the IEEE 802.11be Extremely High Throughput (EHT) standard, which focuses on physical (PHY) and medium access control (MAC). Leveraging these innovative capabilities, Wi-Fi 7 can support a maximum throughput of at least

30 gigabits per second (Gbps), which is significantly higher than the solutions that can be presently accessed. While Wi-Fi 7 utilises the 6 GHz band, it can also support ultra-wide 320 megahertz (MHz), thus facilitating services like multi-link operation (MLO). In such scenarios, Wi-Fi 7 can link multiple Wi-Fi networks to reduce latency, increase reliability, and boost throughput. Accordingly, MediaTek believes that Wi-Fi 7 can potentially mitigate latency and jitter, thus being exceptionally useful for latency-sensitive apps like AR, VR, 4K and 8K video streaming.

In addition, Wi-Fi 7 can also promote significant use cases in mission-critical and industrial applications. At MediaTek, we foresee the rollout of Wi-Fi 7 marking the first time that Wi-Fi can be a true wireline/Ethernet replacement for super high bandwidth applications and expect our Wi-Fi 7 technology to be the backbone of home, office and industrial networks.

In January 2022, we showcased the world's first live demo of Wi-Fi 7 technology, highlighting the capabilities of our forthcoming Wi-Fi 7 Filologic connectivity portfolio while also indicating the super-fast speed and low latency transmission unlocked by Wi-Fi 7. With this technology, we look forward to offering seamless connectivity for everything from multi-player AR/VR applications to cloud gaming and 4K calls to 8K streaming and beyond. ■



Incredible Performance
- 2nd Generation TSMC 4nm-class

Packed with industry firsts, this chip powers a new era of flagship smartphones.

- 1st Arm Cortex-X3 and Cortex-A715
- 1st LPDDR5X-8533, with 13% more bandwidth
- 1st UFS 4.0 + MCQ - fastest-ever smartphone storage
- TSMC N4P + MediaTek-optimized IC design

Cameras & Imaging - MediaTek Imagiq 890

Capture brighter, sharper images with the industry's leading AI-ISP architecture.

- 1st RGBW sensor native support for 30% brighter captures
- Second-Gen AI-Video Engine with APU+ISP fusion
- Capture and stream HDR video from multiple cameras
- Up to 12.5% power savings for 8K30 video with EIS
- Fastest AI-NR photo capture

AI - MediaTek APU 690

Enjoy better AI performance with the new 6th-Gen AI featuring eXtreme Power Saving Technology.

- 35% higher performance (ETHZ 5.0)
- 25% lower power 4K AI-NR video vs 5th Gen APU
- 45% improved video SR efficiency
- Upgraded DLA processor with mixed precision mode
- Upgraded shared memory efficiency

Gaming - MediaTek HyperEngine 6.0

Hardware-based raytracing and exclusive gaming technologies ensure incredible visuals with smooth high frame-rate gameplay.

- 1st Arm Immortalis-G715 GPU with hardware raytracing
- MediaTek Adaptive Game Technology
- Motion Blur Reduction
- Frame Rate Smoother 2.0

Connect Everywhere

Never skip a beat with wireless audio for premium earbuds, the fastest Wi-Fi, and the most reliable 5G connectivity.

Wi-Fi 7

- 1st Wi-Fi 7 ready smartphone chip with up to 6.5Gbps download
- MediaTek Wi-Fi UltraSave provides up to 70% power savings

Bluetooth 5.3

- 1st Studio-grade Bluetooth Audio (24-bit / 192kHz)
- LE Audio Auracast with hearing aid support

5G

- Sub-6GHz + mmWave ready
- 4CC-CA sub-6GHz 5G R16 modem
- MediaTek 5G UltraSave 3.0
- Industry-leading Multimode Dual SIM Dual Active

Display - MediaTek MiraVision 890

We added the most impressive display technologies, including extreme performance gaming displays to ensure movies and videos always show their best.

- MediaTek Intelligent Display Sync 3.0
- Motion Blur Reduction
- EnergySmart Screen 2.0
- MediaTek AI-SR/MEMC video

Anritsu: High Quality Products for Cost-effective Value Proposition

IN CONVERSATION



Madhukar Tripathi

Associate Director
Optical Business
and Marketing
Anritsu India Pvt. Ltd.

Tell us about the Anritsu, its philosophy and its vision?

Anritsu is a leader in telecom tests and measurement instruments. The company serves the telecom eco-system with solutions used by mobile chipset companies, mobile handset manufacturers, mobile network operators and system integrators/network equipment manufacturers. Anritsu Test solutions are also used in broadcast, automotive defence & aerospace communication, mission-critical communication, satellite communication, educational institutes, grid communication, smart city communication, material research, etc. The products are used in R&D, production, network installations and maintenance. Moreover, Anritsu products are known for their cost-effective and high-quality value proposition.

Anritsu's philosophy is to contribute towards developing a safe, secure and prosperous global society by offering an original and high-level product with sincerity, harmony and enthusiasm. We are committed to providing test solution, which enables a safer connected social life.

What are the challenges and roadblocks faced by your industry?

Technology is changing very fast, and the testing and measurement industry needs to keep pace with technological advancements in a cost-effective manner. This has emerged as a key challenge for the T&M industry. Since new technologies are complex and need less test time to deliver products into the market, T&M will play a leading role in the successful adoption of these products and technologies.

Fierce price competition, re-sale of used and outdated instruments, and unskilled manpower to use T&M are some of the other challenges seen regularly.

How do you see the Indian telecom market evolving due to government policies?

The government is already doing a great job to

boost the Indian telecom ecosystem. Initiatives such as Make In India, Design-led manufacturing, and Production-linked Incentive for Telecom are some of the initiatives undertaken in recent years. While the PLI has been extended by one year to 42 beneficiaries, design-led manufacturing is helping to build a strong ecosystem for 5G, with 17 companies having applied under the initiative. Incremental production is expected to be around Rs. 2.45 lakh crore. Skill development is another area where the government is working very closely with the industry.

The industry appreciates the steps taken by TRAI to ensure better 'Quality of Service' (QoS) for consumers. Data centres are also being set up under the infrastructure category. The Telecommunication Engineering Centre (TEC), which is a DoT body, is working for MTCTE. The detailed procedure for Mandatory Testing & Certification of Telecommunication Equipment (MTCTE) has been notified, and many labs are already testing consumer devices to ensure quality products are manufactured and supplied in the market.

The government is also monitoring the 5G deployment and is committed to its successful adaption and use cases in various government departments. More than 1 lakh 5G base stations have been deployed, as per DoT. Invest India, Broadband for All, USO Fund, PM Wani, and 100+ Smart Cities are some of the other significant initiatives by the government for creating a better India. GATI Shakti Sanchar portal, easing Right of Way (RoW), and Single window clearance system

have enabled higher speed deployment.

Please elaborate on the technologies on display at the expo.

We are displaying the 5G Test & Measurement solutions used in R&D, production and field testing. These T&M solutions are used by network operators, system integrators, network equipment manufacturers, and telecom manufacturing companies.

Network Master Pro MT1000A is a state-of-the-art test solution for 5G transport testing, time sync, and PTP application, covering 1.5Mbps to 100Gbps data rates. This is used by mobile network operators and data centres worldwide and for ORAN Testing.

Access Master MT9085x series is used in OFC manufacturing and field-testing during the installation and maintenance (I&M) of the mobile network and data centre.

MS2090A Field Master Pro is used in the 5G base station testing in the field.

MT8870A is a universal wireless test set used in mobile handsets (UE/CPE) and the IoT industry. This is also used in production in addition to R&D of various wireless technologies LoRa, Wi-Fi, GPS, etc.

MG3710E Vector Signal Generator has two RF outputs supporting various wireless technologies such as 5G, LTE, LTE-A, WCDMA, GSM, WLAN AM FM etc. The Vector Signal Generator with the Vector Signal Analyser is the most popular combination used by many test labs for regulatory/compliance testing.

What can we expect from Anritsu in the times to come?

Anritsu is working on emerging technologies such as 6G, V2X, Metaverse, etc. We will make our products cost-effective, energy-efficient, with more built-in intelligence, and automated to reduce test time. We will make our solutions for a connected and safe society by collaborating with industry partners. Anritsu will remain committed to sustainable growth for a connected and safer society. ■



ANRITSU HAS A CLEAR VISION OF SOCIAL RESPONSIBILITY THAT IS BEYOND TESTING, BEYOND LIMITS, FOR A SUSTAINABLE FUTURE TOGETHER.

NATIONAL INDUSTRIAL CORRIDOR DEVELOPMENT PROGRAMME



4 Industrial Smart Cities with Multi-modal Connectivity,
Plug n Play Infrastructure with immediate allotment

DHOLERA (Gujarat), **AURIC** (Maharashtra), **Integrated Industrial Townships** at Greater Noida (UP) & Vikram Udyogpuri (MP)



Fuji Silvertech, AURIC



ReNew Power, Dholera



Airox, AURIC



Hyosung, AURIC



300 MW TATA Sola Park, Dholera



JWorld, IITGN



CP Paints, IITVU



Amul, IITVU

227 PLOTS ALLOTTED | **24** OPERATIONAL | **71** UNDER CONSTRUCTION



Scan QR
to know more

Industries came so far

- FMCG
- Pharmaceuticals
- Automotive
- Lifestyle & Apparel
- Engineering
- Electrical & Electronics and many more



LAND
ALLOTTED (ACRE)

1205



INDUSTRIAL LAND
AVAILABLE (ACRE)

2432



INVESTMENT
MOBILISED (CRORE)

18291

INDUSTRY SPOTLIGHT

Imagine Communications: An Integrated Approach to Playout



At Imagine, we can trace our history back to the very beginnings of playout automation – to the days of VTRs and cart robots – and we have drawn on that heritage to develop today's solutions. The fundamental principle has not changed: Broadcasters want high quality and reliability – keeping the channel on air is a mission-critical goal.

At the same time, broadcasters want operational simplicity and efficiency. Today, they also want to deliver multiple channels to multiple platforms, with advanced options such as UHD, HDR or undiscovered ones still to come. Finally, there is the unstoppable shift in technology platforms – from legacy bespoke devices to SMPTE ST 2110 connectivity or between virtualised software appliances that can run as seamlessly in the cloud as in the machine room.

That represents a series of challenges and tensions. But Imagine has a set of responses.

Versio™ is an integrated playout platform designed to support premium channels with tools like complex dynamic graphics and the ability to switch seamlessly between fully automated operation and live intervention, for example, for sports channels. Versio helps to bridge the SDI and IP worlds, so it is an ideal transition platform. To migrate from SDI to uncompressed video over IP, you swap out the I/O board. Ingest workflows are widely covered with either Nexio+™ AMP for SDI or Versio

Ingest for ST 2110 streams.

For greater interoperability in ST 2110 environments, Versio supports NMOS IS-04 and IS-05. These globally recognised specifications allow for IP devices to be discovered and managed across a network. Because they are open standards, it means, for example, that you can use Imagine's Magellan™ Control System to manage routing control, or you can choose a network management layer from another vendor.

Alongside Versio is Imagine's widely deployed ADC™ playout automation, which runs channels with multiple requirements across five continents. ADC can drive very large numbers of channels, controlling Versio engines or other broadcast devices. It supports multiple topologies and can run on dedicated device controller pairs. But it can also be implemented within Versio software for complete functionality in a single server – ideal for smaller installations.

ADC provides what every broadcaster demands from a playout system: Resiliency. They depend on having all their channels



seamlessly on air no matter what happens. ADC is also feature-rich and scalable, designed for the complex requirements of on-premises master control environments and ideal for highly reactive channels.

A key factor in every automation environment is interoperability. External devices are controlled with frame accuracy. Open APIs allow external systems to exchange scheduled data or content data in real-time. ADC also integrates with all major traffic systems in the market – a prerequisite for generating complex playlists and different variants, example, for regional stations or to quickly reconcile as-run logs for ad revenue recognition.

The entire playout solution benefits from a seamless connection to different content storage options – local servers for immediate delivery, NAS shared storage, and nearline archives on-premises or in the cloud. The quickest turnaround between ingest and playback can be achieved using Imagine's IOX NAS storage, supporting critical workflows such as play-while-record or play-while-transfer. IOX provides elastic bandwidth, on-air scalability and, most importantly, guaranteed high availability. Should there be a hardware failure, there will be no disruption to the channel output or signals recorded.

Any automated playout architecture needs to manage content flows to ensure that the right media is in the right place. In the file-based age, this also means transcoding where necessary. It also needs tools for media preparation such as segmenting for breaks and for ensuring that quality control checks are completed before transmission.

Redundancy and business continuity are essential to keeping a channel on air. With ADC and Versio, you can choose 1+1 full channel redundancy for premium channels, or N+M for less critical services, with a shared pool of backup integrated playout engines primed to step in quickly. The inherent remote-control capabilities also extend to disaster recovery sites, which can be at other managed premises or in the cloud – all capable of automatic setup and failover when required.

Most important, Imagine's playout solutions are ideally suited to hybrid SDI/2110 environments and multiple vendor systems, providing continuity and confidence during any long-term transition. ■

INDUSTRY SPOTLIGHT

Escort Systems: Benchmark Devices

Escort Monitoring Systems is a manufacturing plant located in Kazan, Russia, featuring a full-scale production line of IoT and complex telematics equipment. From idea to concept, research, development and mass production - Escort handles it all since 2005.

Escort creates benchmark-smashing devices by combining high-end electronic hardware with cutting-edge software algorithms. The bestselling tool - fuel level sensor for automotive fleets - helps save up to 30% of fuel expenses.

The IoT environmental equipment is a fully autonomous weather station and industrial gas analyser combined with a modern monitoring software platform, capable of providing insights into the climatic conditions and air quality for various users, including agricultural enterprises,



weather authorities, construction, and development sectors.

With a presence in 120+ countries, Escort partners have already saved and earned thousands of Dollars over these years using the company's telematics and IoT solutions.

A big reason why companies want to unite with Escort is simple – the company always fulfils its obligations. The company prioritises long-lasting, mutually profitable relations over quick profits. Its equipment, being sold to IoT services providers worldwide, has been field-tested for years and earns deserved trust.

Optimisation and ecological usage of resources are only possible through proper counting and factual information. Escort Monitoring Systems provides all the necessary tools for that! ■

INDUSTRY SPOTLIGHT

KINELEC: Solutions that Satisfy Customer Requirements

An end-to-end solution that can cater to the complete backend needs of an ISP be it CRM, NAS, Billing or Logging. These lightweight modules can be installed either on one hardware or based on the ISP's network needs, on separate physical hardware per module.

The system can be used either as a central solution providing AAA services to all customers from the NOC or as a client-server model wherein the NAS component is installed at the edge, thus making it suitable to support virtually unlimited subscribers by segmenting the ISP network into Core, Aggregation and Access layers.

For easier understanding and in keeping with the modular approach, the solution is divided into the following components:

FlashOS

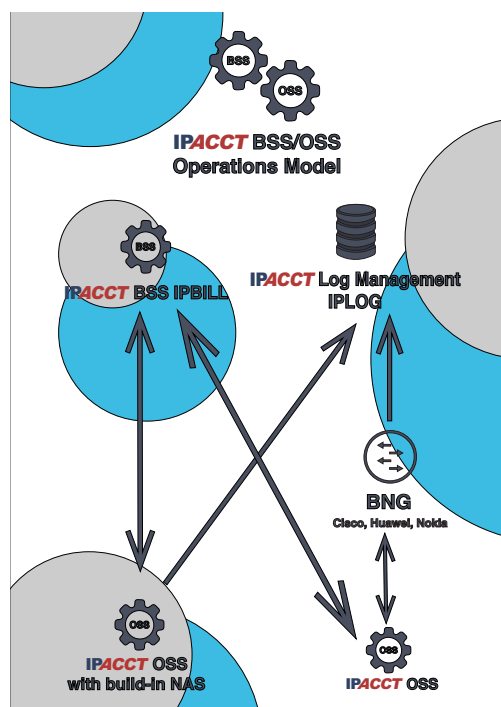
The foundation of the system is a highly optimised Linux-based OS to meet the demands of today's high speed, low latency networks. The size of FlashOS is ~250MB only, making it extremely lean and fast.

IPACCT

A NAS designed as per EU standards and built in line with the requirements of the Indian ISP market.

IPBILL

Designed to cater to the Indian industry and conforms to all required Indian standards, it has an open API architecture allowing integration with existing CRM, Ticketing, Payment/SMS gateway of customer choice. It can control virtually unlimited IPACCT servers.



IPLOG

Specifically designed to adhere to DOT compliance, this module keeps tracks of each connection passing through IPACCT in the format as instructed by DOT (Source IP: Source Port to Destination IP: Destination Port)

BRAS

A broadband remote access server (BRAS) is an access gateway for broadband network applications. It provides a basic access approach to the backbone network and management features for the broadband access network. ■





IN CONVERSATION

Gentari sees India as a Key Market for Integrated Clean Energy Solutions

What will Gentari be showcasing at the expo?

We are participating in a key event in India for the first time and are excited to showcase our commitment towards supporting India's net zero ambition. We will introduce our suite of sustainable energy solutions to businesses that are looking to decarbonise their operations. We also hope to connect with like-minded organisations for opportunities to collaborate. Gentari offers lower carbon options through three core pillars: Renewable Energy, Hydrogen, and Green Mobility. The goal is to become a one-stop solutions provider, cutting across the energy value chain to help create value for customers.

India's Union Budget 2023-24 talks about a holistic, structured view towards achieving zero carbon goals as part of the country's 'Green' growth. How does Gentari aim to participate in this?

Gentari has been part of the Indian energy transition through Amplus Solar, which became a member of the PETRONAS family in 2019. We also recently announced India as a key market for Gentari. We have already made good strides here with 1.4 GW of solar capacity serving around 350 customers, particularly in the commercial and industrial sectors. We are now

intensifying our efforts in the country. We plan to fortify Gentari's presence in C&I and further explore utility-scale renewables, besides forging collaborations to further the company's green hydrogen ambitions and expand the green mobility footprint. Gentari



will also pursue opportunities where we can offer an integrated clean energy offering to local players.

Electric vehicle growth in India is on an upward trajectory. What can we hope to see from Gentari in this area?

We are on a mission to be Asia Pacific's preferred green mobility solutions provider. Our ambition is to capture a 10% market share or about 25,000 charge points across key markets in the Asia Pacific region by 2030, starting with Malaysia and India. Gentari is also establishing a position as a Vehicle-as-a-Service fleet in Malaysia, India, and the Asia Pacific, serving customers such as logistics companies and fleet operators. We will showcase this fleet for some strong strategic partnerships during this exhibition. ■

**GENTARI IS AN INDEPENDENT
CLEAN ENERGY SOLUTIONS
ENTITY FOUNDED BY MALAYSIA'S
NATIONAL ENERGY COMPANY
PETRONAS, WHICH IS ACTIVELY
PURSUING CLEAN ENERGY**

Vedic Sadhana Foundation: Rekindling the Glory of the Vedas

INDUSTRY SPOTLIGHT



Priyanka
CEO, Vedic Sadhana Foundation

The Vedic Sadhana Foundation (VSF) is an 80-G approved not-for-profit technology organisation, taking upon itself the colossal task of reviving the forgotten Vedic way of life. Led by a pursuit to revive, restore, and reclaim the beautiful heritage and spiritual transformation, Sadhana App is its humble offering in the service of humanity, bringing the glorious Vedic practices to the mainstream in the 21st century.

A digital platform for Vedic worship, the Sadhana app is a technological marvel that has been privately funded at a cost exceeding \$1.3 million. The Sadhana App is currently being supported by generous donors who believe in the cause and realise the importance of reviving Vedic traditions to pass on to future generations.

Powered by authentic knowledge from the Vedas, the Sadhana App is an interactive and immersive journey through stunning ancient temples in the mystical land of Siddhashrama, hidden deep in the Himalayas.

While the ancient temples of rich architectural design and glorious deities hook the user, it is the interactive UI that sets this app apart from its contemporaries. An innovative brainchild of a monk and internationally acclaimed author Om Swami, this app is based on more than three decades of his own Sadhana experience, and extensive knowledge of Vedic scriptures and technology.

The handpicked team of the Sadhana App includes some of the best artists and award-winning digital creators from countries such as India, France, Germany, Hungary, Argentina, Brazil, Ireland, Spain, Canada, England, Indonesia, Taiwan, and Australia.

The Sadhana app is based on the concept of Manasic Puja (mental practice) that has been highly spoken about in the scriptures, as practised by our sages and seers. This practice uses the mind's concentrative powers while conducting any rituals. It is not only the most convenient practice, especially while doing

rituals like the yagya where you don't need to collect special ingredients but an equally powerful meditative practice. Plus, it also helps us to be kind to Mother Earth whose resources are fast depleting.

The app allows the user to perform the Nitya Pooja, Abhishekam, Yagya and Japa. There is a fifth ritual that is not as popular but is one of the most powerful of them all - the Mantra Sadhana.

The concept of the Vedic mantra sadhana is a powerful practice from our Vedic scriptures to connect with the divine cosmic energy and achieve spiritual growth and enlightenment. Mantras carry the powerful phonic energy of the seed or syllables that represent the cosmos, and sadhana is a practice that is done over a period of time.

Many studies show the impact of Mantras on the brain and physical well-being. One such study was done by Kumari Gunjan, Effect of Vedic mantra treatment in the reduction of the depressive syndrome and anxiety, published by the International Journal of Medical and Health Research.

At the Vedic Sadhana Foundation, we are leveraging technology to bridge the gap between the ancient knowledge of the Vedas and its recipients.

Last year, for the first time, people around the world were able to perform a virtual sadhana in the same time frame on the sadhana app, along with Om Swami, who was leading the physical sadhana from his ashram in Solan,

India. They offered the ahuties (fire offerings) and do mantra chanting, following his lead. Such a live large-scale global participation has never happened before.

It was a breakthrough in dharma, bringing all Sanatanies across the globe together and practising the auspicious and most powerful Sri Suktam sadhana. It is also a technological wonder to be able to use technology in such a manner. At the Sadhana app, we have gamified the entire event and used artificial intelligence (AI) to create 3D elements giving the users an absolute real-time and place experience.

This year on Shivratri, based on Om Swamiji's pin-prick effect (based on collective consciousness/the law of attraction), we raised over 10,000 prayers from across the globe to create a positive environment that can be the recipient of grace.

At this year's expo, we will be showcasing the Sadhana app and its features and explaining to people how to make the most of it. We are also planning, with the help of our guest Ashish Sahani, Assistant Professor of Biomedical Engineering, IIT Ropar, a technological way to demonstrate to people how mantras positively impact their physical well-being.

Our biggest challenge or roadblock is the stunted mindset of people in whose life Divinity or God has taken a back seat. They either have a transactional relationship with God or they are too bored to care by the concept of spirituality and dharama. ■

A DIGITAL PLATFORM FOR VEDIC WORSHIP, SADHANA APP IS A TECHNOLOGICAL MARVEL



INDUSTRY SPOTLIGHT

Ateme guarantees Next-Generation Primary Distribution

For decades, the primary distribution of media is done via satellite. This has proven to be an economically feasible method of delivering quality videos. However, this has its limits.

The main challenges include significant costs and logistics involved in infrastructure and delivery. Traditionally, primary distribution, using satellites, was done either to set-top boxes or to a dedicated single-channel Professional Integrated Receiver Decoder (PIRD). Each technology comes with its drawbacks. Set-top boxes keep costs down but add extra complexity. Because they are hardware-based, they cannot be easily upgraded to include new features, making it difficult to maintain overall video quality. PIRDs, on the other hand, are only cost-effective if they are dedicated to the use case, limiting their potential for evolution.

Such drawbacks, recent trends in video consumption, and the need to penetrate new markets, expand into the existing ones, and reduce operational costs, have all driven broadcasters to look for new ways of distributing content across regions.

Meanwhile, new protocols, including Zixi, SRT, and RIST, as well as SMPTE ST2110 and 2022-7, enable content providers to increase their reach, reduce costs, and deploy innovative business models.

Gazing into the Future

For years, an Indian content provider had a decent IRD system designed for specific needs. However, once the company started exploring its future, planning for bandwidth optimisation with HEVC, higher image quality with 4K, and better viewer-friendly security measures capable of replacing its obtrusive fingerprinting with invisible watermarking and multi-channel decoding; the system no longer fit the cut. Its IRD was hardware-based and incapable of major upgrades. The company needed a more flexible solution: One that would not only meet its current needs but also evolve seamlessly to fulfil future needs.

The Lucky Star

There is an emergence of new protocols that enable a transition to IP delivery. These IP-based protocols, called the next-generation primary distribution, make it possible to



Mathew Jibu

Country Head - South Asia
Ateme

enjoy the flexibility of having multiple service decoding at the edge for their primary distribution, while monetising content on a regional basis without compromising video quality, quality of service, or content protection. Next-generation primary distribution can be used for:

- *Delivery-over-fibre networks* – supporting both point-to-point and broadcast configurations.
- *Delivery-over-IP networks* – enabling media distribution from any IP-connected source, the studio, set-top box, distribution hub, Internet router, or end-user device.
- *Broadcast services* – next-generation distribution is not restricted to terrestrial cable and satellite distribution,
- *Ad regionalisation* – allowing fine-grained targeting by geographical regions, potentially serving more subscribers.
- *Regionally optimised content* – enabling content to be tailored for local relevance, e.g., localised weather, ads or sports, regionally relevant branding, TV programmes, or archived content.
- *Future-proof and scalable delivery* – delivering content for a rapidly evolving broadcast environment and channel portfolio via either satellite or IP networks.

However, sticking an IP-based protocol on a hardware-based IRD is not sufficient.

To reap the full benefits of next-generation primary distribution in the future, a software-based IRD is needed. This brings the flexibility of adding extra features, or even more CPUs, as required. A software IRD dissociates the appliance from the software, allowing it to evolve. New features can be easily added by adding CPUs as needed. Additionally, operations are simplified with local sourcing and maintenance management.

TITAN Edge

Ateme's TITAN Edge is a powerful, software-based, multi-channel IRD that can run on any commercial, off-the-shelf server and is suitable for operations running on-premises, off-premises, or a combination of both. TITAN Edge is the first professional cloud-native low-latency solution enabling full-IP video operations in the cloud. TITAN Edge is a customised solution for the customer, providing a system for watermarking so that security could be added without disrupting the viewing experience with unseemly fingerprints. A pairing mechanism between the CAM and the IRD was added to avoid piracy related to the appliance.

Ateme also helps the content provider boost monetisation by enabling national advertisements to be replaced on a regional basis for local targeting.

Results

Thanks to Ateme's TITAN Edge, the content provider has a secure and future-proof PIRD solution that enables watermarking, provides monetisation opportunities with regional ad targeting, and can easily upgrade to support 4K and HEVC.

By combining a software-based PIRD with IP-based protocols that enable next-generation primary distribution, the content provider can deliver its content across multiple screens, and on a global scale, monetise it with advertising opportunities, deploy newer ways of distributing its content, and instantly engage with local audiences.

Other Indian broadcasters can also take a versatile, step-by-step approach to successfully embark on a new path in a digital world. And they can do that today: The next generation of primary distribution is already here. ■

SYSTROME

Systrome Networks, established on 1st Sep 2016 is a state-of-the-art technology company to make the people and process work together smoothly. The firm focuses on Next Generation Security with Software Driven Network Solutions that can satisfy the needs of organizations and enterprises today, with a clear path to develop with market demand and technological advances. While most SDWAN solutions focus on centralized controls and path options, as well as delivering Internet as a substitute for MPLS, we realize the security risk of exposing to the internet, which is why we focus on Next Generation Firewall with an assortment of security features and administration in our SDWAN solution.

ISG SERIES



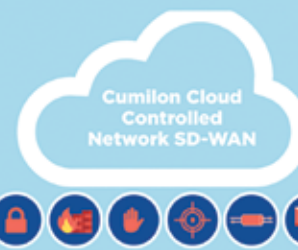
- ◆ Strong network adaptability
- ◆ Professional next-generation firewall
- ◆ Cloud Management Architecture
- ◆ Mobile APP Monitoring

ASG SERIES



- ◆ High Performance
- ◆ Flexible virtualization extension
- ◆ Unified security engine
- ◆ Accurate Internet behavior management and audit.

Cumilon Cloud Service



- ◆ A Multi-Tenant Cloud platform.
- ◆ Monitor devices behind NAT
- ◆ Centralized Firmware Upgrade
- ◆ Historic data for AI/ML

Systrome, a company dedicated to innovative engineering, delivers integrated solutions, hardware, software, and services to leading ISPs and system integrators throughout the world. SOC-based Routers, Switches, Video Encoders, GPS systems, and other network appliances are examples of dependable and high-quality computing and networking platforms.

We have expanded our competencies beyond SOC-based design to Service Delivery appliance, BIOS engineering with multi-vendor knowledge, Mechanical Design, Peripheral Device Design, Design Verification, and in-house testing and debugging. We also provide a powerful cloud solution that allows you to control your network from anywhere. We offers high-performance hardware combined with highly configurable software, ensuring that your network is secure, quick, and, most importantly, yours

Systrome has aggressively invested in R&D capabilities and will continue to do so in order to maintain a competitive advantage for future innovations. We are quite proud of our world-class research and development capabilities. We are equipped to handle the most demanding designs based on the newest technology, with more than 20% of our personnel in R&D and 15% of annual sales income spent in research.

The inventive character of this experienced personnel has helped us to design unique appliances and gadgets that fully meet the needs of our customers and to engage in vendor early access programs in collaboration with leading technology suppliers in order to give cutting-edge technologies to its clients. Moreover, our solutions address special demands in the Power Management, Maritime and Military sectors, as well as the Health & Medical industry.

We learned that customer needs constantly evolve and that service providers must be able to change according to the need of the hour. This is reflected in our solutions, where the products are designed to change according to the market and offer the best from today's technology while also being ready for tomorrow.

In India, Systrome has a variety of manufacturing facilities that enable it to manufacture high volumes. Having a flexible layout and expansion capabilities enables us to easily meet the demand for increased production capacity in order to become the leading supplier of industry-standard products. With its skilled and experienced personnel, Systrome has the ability to respond rapidly to customer requests for standard or customized products by developing an efficient production system.



iWedia: Digital TV Products & Services

IN CONVERSATION



Hans-Juergen Desor
CEO, iWedia

Tell us about the philosophy and vision of the company.

iWedia is a world-class provider of software solutions and services for connected TV devices. We collaborate with operators to support them in integrating complex TV services, so they can deliver the best experience to their customers.

Many of our operator customers are exploring retail channels, and our white-label UI offering can facilitate this. We provide bespoke, and entirely customisable, UI and UX with minimum effort for the customer. This is all done through a framework that supports any video device, whether that is Android TV, Linux, iOS, web browsers, or smart TVs. iWedia's mission is to deliver high-quality digital TV products and engineering services, placing our customers at the forefront of our thinking. We act as part of their team and focus on building relationships with our customers founded on mutual trust.

What are the innovations being developed by the company?

iWedia has a mindset grounded in innovation, so we are always looking to develop new products and solutions that help service providers. For these customers, addressable advertising provides an opportunity and a set of significant technical and commercial challenges. Targeted advertising is a new revenue opportunity for operators, but the deployment of the feature has to be fully integrated into the live service of the end user and maintain quality UX.

Being aware of this, we have developed several tools in our player to guarantee a smooth transition between the Live and OTT streams, as well as some data management solutions on the back end, to make sure operators have flexibility in ads servers.

What are the challenges and roadblocks faced by your industry?

Throughout the pandemic, overall TV content consumption increased significantly, especially with the advent of various new OTT applications. The average user is now continuously bombarded with content offerings and is likely to spend more time searching and browsing through available content, rather than watching something.

It is for the industry to deliver to the end-users a great entertainment experience. We work very closely with our customers to work on retention, content aggregation, recommendation engines, and multiscreen experience. However, we have to be aware of the competitive landscape for the operators. iWedia has designed all the tools to build a cost-efficient and reliable end-user experience. And we are very excited to see our local team deliver state-of-the-art solutions at a reasonable cost.

Please tell us about your focus areas for the future.

iWedia's focus is to build exciting and fluid entertainment solutions for the end user of our customers. We have built a strategic portfolio of market-proven products that we can deploy quickly in a multi-platform environment. To address the needs of the Indian market, iWedia has invested heavily to build a local experienced engineering team of over 100 talented engineers. This team can



CONTENT IS STILL KING. HOWEVER, IT'S DELIVERY IS ALSO IMPORTANT. IT IS CHANGING FROM OPERATOR-DRIVEN TO D2C TO HYBRID/AGGREGATOR-DRIVEN DELIVERY

easily identify the needs of the local market and meet quick deliveries. Alongside this, iWedia will continue to evolve its multi-screen UI/UX solution to fit new customer demands, allowing operators to provide the best possible user experience.

In the near future, we hope to improve our cost efficiency and delivery time to the market.

What technologies do you plan to display at the expo?

iWedia is focused on providing high-quality products and services to existing customers, besides helping new customers to identify how they can improve their business and subscriber base with the right high-quality solutions.

At Convergence India 2023, we will showcase a range of innovative and high-quality products for service operators, telcos and broadcasters such as a solution for ultralow-cost zapper STBs, a simplified and rapidly deployable U/UX for tier-II operators, and a common Live TV experience.

With our market-proven products deployed in over 55 million devices, iWedia is confident that it can help the Indian market perfect its solutions as a key vendor within the digital TV ecosystem. Visitors to Convergence India will be able to discover the benefits of working with iWedia through learning about our products such as the multiscreen UI/UX solution and Media Player, as well as finding out about our work with a Tier-1 Indian operator.

Do you have any message for the potential customers visiting the expo?

With expertise in hybrid turnkey solutions for AndroidTV, AoSP, Linux and others, iWedia has been focusing on an "anything-anytime-anywhere" content delivery and monetisation strategy. Our recent deployments like the Teatro Media Player, multiscreen UI/UX, and targeted ad insertion solution will certainly benefit operators and content providers in vast, complex and low-cost markets such as India and its subcontinent.

iWedia has been the frontrunner in multimedia and entertainment across the globe and will continue to invest in products and turnkey solutions benefiting operators and content providers. ■



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INDUSTRY SPOTLIGHT

JNR: Solutions in PKI & Cybersecurity

JNR Management Resources Pvt. Ltd. (JNR) is an India-based 'Platinum Elite Partner' for the global leader in Digital Trust, DigiCert. The company has been providing services to a wide range of customers for the past 15 years in the fields of PKI and Cybersecurity.

During the 2023 edition of the Internet of Things India expo, we are showcasing the solutions for home IoT and industrial IoT, along with public/private SSL, Smart Seal, VMC, SMIME, Code Signing, etc.

Secure connectivity for Smart Home IoT

With roughly a billion smart home devices shipped each year, there is a clear need for a standard in interoperability and security for home IoT. Until recently, there was no protocol for how IoT devices interact with each other and with networks/hubs like Google Nest, Apple Home, and Amazon Alexa. Thus, securing connections and ensuring

consumer convenience became difficult to deliver. As a result, Matter was created.

Matter is a unifying standard for seamless, smart home connectivity. Manufacturers can simplify device development while providing a more friendly and compatible product to consumers.

Security - Device Attestation Certificates (DACs) issued from trusted PKI roots provide encryption, identity and authentication to devices.

Reliability - Local connection over WiFi enables security and consistent interactivity, even when cloud access is not possible.

Interoperability - Native communication and operation between any Matter-compliant device and hub from any manufacturer.

Simplicity - Easy to buy, easy to set up, easy to use.

Secure Connectivity for Industrial IoT

360-degree protection for machines & robots - PKI provides mutual authentication, data

encryption and system integrity for industrial IoT, thus creating safe interactions between systems, devices, applications and users. No matter how you look, DigiCert IoT Device manager has you covered.

Authentication - Certificates for devices validate identities to ensure only authorised users, messages, or other servers have access to the device.

Encryption - A certificate creates an encrypted link and allows information to be transmitted privately.

Integrity - Certificates ensure there is no alteration in the messages or data transferred between devices.

DigiCert ONE is more than just a platform. It is a new way of thinking about how to secure and manage everything of value in your organisation. From the individual website to the massive enterprise, DigiCert ONE makes security, validation and identity, powerful and easy. No matter the size or use, DigiCert ONE delivers control and simplicity for the highest level of assurance. ■



INDUSTRY SPOTLIGHT

NICDC: Greenfield Industrial Smart Cities

National Industrial Corridor Development Corporation (NICDC) is focused on creating futuristic industrial smart cities in India that can compete with the best manufacturing and investment destinations in the world. These 'Industrial Smart Cities' are being developed around transportation corridors (like dedicated freight corridors, national highways, expressways, state highways, etc.) as the backbone.

These Greenfield Industrial Smart Cities will provide complete "plug and play" infrastructure at the plot level to accelerate growth in the manufacturing sector, leading to systematic and planned urbanisation. It will also create employment opportunities, thereby adding to overall socioeconomic development in the country.

As part of the National Industrial Corridor Development Programme, 11 industrial corridors are being developed

with 32 new Greenfield Industrial Smart Cities across 18 States, planned to be implemented across 4 phases.

During Phase-1 of the programme, the Delhi-Mumbai Industrial Corridor (DMIC) project has made considerable progress wherein the major infrastructure works like roads, utilities, sewerage network, STP, WTP, CETP, power, etc. are completed. Developed land parcels for industrial, commercial and residential use are now available for immediate allotment in the following 4 cities:

- I. Dholera Special Investment Region in Gujarat (22.5 sq. km Phase-1)
- II. Shendra-Bidkin Industrial Area in Maharashtra (18.55 sq. km Phase-1)
- III. Integrated Industrial Township at Greater Noida in Uttar Pradesh (747.5 acres)
- IV. Integrated Industrial Township 'Vikram Udyogpuri' near Ujjain in Madhya Pradesh (1,100 acres)

So far, a total of 227 plots covering an area

of 1,205 acres have been allotted, mobilising an investment of approximately Rs.18,291 crore (\$2,231 million) and generating approximately 30,000 employment opportunities. Up to 24 companies have already started their commercial operations, while construction work is underway for nearly 72 companies. Some of the prominent investors in these developed industrial cities include HYOSUNG, Perkins, NLMK, AMUL, Piramal Pharma and TATA Chemicals. A total of 2,432 acres of developed land is readily available for allotment for industrial use, while 2,502 acres are available for other uses like residential, commercial and institutional.

The National Industrial Corridor Development Programme is getting developed within the overall framework of the PM Gati Shakti National Master Plan launched by the Hon'ble Prime Minister on 13th October 2021 to provide systematic, multi-modal connectivity to various economic zones for seamless movement of people, goods and services, resulting in the efficient conduct of logistics and economic activities. It aims to create quality infrastructure ahead of demand and keep the developed land parcels ready for immediate allotment to attract investments into manufacturing and position India as a strong player in the global value chain. ■



Proscend: High Quality Products for Industrial Networking & Automation

IN CONVERSATION



Sunil Kumar Agrawal
Managing Director
Proscend

What is the mission of Proscend?

Our mission is to provide reliable and high-performance products for data communication, industrial automation and networking. We are looking to establish Proscend as a brand synonymous with reliable, high quality and power-efficient telecom products.

Discuss the new innovations being implemented by the company?

Inspired by the 'Make in India' initiative, the company is consistently working to update its product line to provide a world-class experience to its customers.

- Pace up with the fastest growing 5G technology, ready with 5G indoor & outdoor CPE

- Long Reach PoE Solution for surveillance & security

How has the industry evolved in the aftermath of the pandemic?

After the global pandemic, industrial automation, work from home, online education, intelligent medical facilities, smart warehousing & logistics, AI, Metaverse etc., emerged as the key factors impacting industries. It generated a high demand for safer, faster, and more reliable industrial-grade networking products.

Now, secure and faster communication plays a key role in how business is done and 5G technology has a high potential to match all these requirements in the short-term.

What are the challenges being faced by the industry?

It has not been easy for the industry. Among the challenges faced are costly certifications, limited testing facility, and high taxation. I would like to urge the government to resolve these issues urgently.

Which technologies will Proscend showcase at the expo?

We will showcase a wide range of products including industrial 5G/4G cellular gateways and routers, industrial managed ethernet switches, long reach PoE Extender Solutions, etc., for various industries and Telcos. There will also be a focus on special products/solutions like the Industrial 5G indoor and outdoor CPE. ■

PROSCEND IS THE MOST RELIABLE BRAND FOR HIGH PERFORMANCE AND GOOD QUALITY PRODUCTS FOR INDUSTRIAL NETWORKING AND AUTOMATION

INDUSTRY SPOTLIGHT

PPC Broadband: Active Solutions for FTTH

As an end-to-end solutions provider, PPC offers a range of optical products that enable signal transmission from the central office through the outside plant to the customer premises.

PPC is a committed partner to our worldwide base of customers. Pairing the capabilities of our global manufacturing sites with the knowledgebase of our regional sales and customer support offices, we equip and enable large-scale multiple system operators (MSOs), internet service providers (ISPs) and telco companies, as well as regional operators, local operators, and public and private in-building providers. At this year's show, we will display our active product solutions alongside our passive product portfolio.

Active Products Display

The PPC Broadband exhibit will feature three core active product displays:

Optical Line Terminals (OLT)

PPC's OLT solutions meet industry standards while delivering performance in a compact size. They support network optimisation and reliability, help decrease power consumption and are an excellent option for three-in-one broadcast networks, FTTP architectures, enterprise LANs, and IOT applications.

Optical Network Terminal (ONT)

PPC's ONT solutions are appropriate for residential, commercial, and enterprise applications in FTTx networks. They offer a range of configurations, including single and dual band, and are fully compliant with GPON and EPON technical regulations.

Erbium Doped Fibre Amplifier (EDFA)

PPC's EDFA solutions boost optical signals carried through fibre optic communication systems. Operating at a low-loss fibre band wavelength of 1550, PPC's EDFAs include temperature-controlling technologies in the circuit to ensure performance and longevity, along with laser condition monitoring, digital display, fault warning, network management and various other functions.

Passive Products Display

The PPC Broadband exhibit will feature a range of passive network products on displays:

1) Fibre Optic Cables

PPC offers a range of fibre cabling options, both as bulk cable and pre-connectorised jumpers with multiple termination and connector options. With



the weight of PPC's global innovation team behind it, our fibre cable portfolio is positioned to meet virtually any need of any customer in the region.

2) Fibre Pigtails / Patch Cords

PPC offers high-performance patch cords for use in all types of fibre optic networks, manufactured using a state-of-the-art controlled manufacturing process to operate over the full range of single-mode wavelengths.

The patch cords are terminated with high-quality connectors, which ensure low insertion and high return loss. Each patch cord is individually tested and supplied with test certificates. The unique serial number provides traceability for every single product. They are available in all kinds of single-mode fibre types.

3) Splitters and Couplers

PPC offers a variety of splitter configurations and

module options to support the varying requirements and needs of providers in India. Our innovative product line features PLC splitters, biconical taper splitters, LGX modules, cartridge-type modules, and a range of symmetrical divisions, to meet the demands of the regional marketplace.

4) Fibre Enclosures

PPC enclosures are built to enable modularity, scalability, and simple deployment in low-to-high-density areas. With versatility in mind, our line of enclosures can be configured for patch and splice, patch-only, splice-only, and plug-and-play applications.

5) Patch Panels and Cabinets

PPC's cabinet solutions are designed for customisation and can be tailored to customer requirements to simplify installations and enable fast easy deployment. Integrated cabinet configurations create a turnkey solution that minimises the skill requirements of field technicians and improves reliability and long-term maintenance savings.

Solutions powered by Innovation

The PPC approach to solution development is based on our commitment to innovation. With more patents in connectivity technologies than any company in the world, we leverage our wealth of industry knowledge and operator partnerships to identify industry challenges and develop novel solutions to overcome those challenges.

With our new, state-of-the-art facility in Kochi, India, we have further empowered our culture of innovation through advanced testing laboratories, research and development laboratories, a customer solutions hub, advanced manufacturing, and an advanced workforce focused on delivering our promise of ingenuity, value, and reliability. ■



Keith Electronics: Trusted Name in Industry

INDUSTRY SPOTLIGHT



Ankit Chopra
Director
KEITH ELECTRONICS

K eith Electronics Pvt Ltd is a leading Indian company that specialises in the trade and supply of high-quality electronic components, equipment and instruments. The company has a wide range of products that cater to various industries, including telecommunications, optical fibre, power, and electronics industry. Founded in 1980, Keith Electronics has been in the industry for over four decades, and its experience and expertise has made it one of the most trusted names in the electronics industry due to its unparalleled quality products and services. The company works closely with its customers to understand their needs and provide products to meet their exact requirements. This customer-centric approach has helped build a loyal customer base and established long-term partnerships with many clients such as Airtel, and Jio to name a few. The company offers high-quality, dependable products from Fujikura and Yokogawa in Japan. The Fibre Optic Fusion Splicer from Fujikura and the OTDRs from Yokogawa are the perfect complements for testing fibre networks. Splicing machines, OTDRs, Power metres, Laser Sources, VFL, cable locators, and telecom equipment are among the product offerings. The company is well-established throughout India, and with the opening of a new service facility in the nation's capital at Naraina Vihar, we are now able to service a variety of telecom equipment under one roof. Our timely delivery schedules, quick service, and engineering support have always helped our customers to eliminate obstructions, improve accuracy, and drive yield. India is a rapidly developing country that is making great strides in the deployment and utilisation of optical fibre technology.

The Indian government has recognised the importance of fibre-optic infrastructure in improving the country's digital connectivity and launched several initiatives aimed at expanding fibre-optic networks throughout the country. The National Optical Fibre Network (NOFN) initiative aims to use fibre-optic cables to connect all government institutions, including schools, hospitals, and government offices, to high-speed Internet. A positive impact of the Covid pandemic on individuals and business activity was the extensive use of online learning, e-commerce, virtual meetings, and other similar digital platforms. It created the need for high-speed Internet broadband connection, which is only possible with an optical fibre network of the highest calibre, and a splicing machine is one of the most crucial equipment for setting up and maintaining an optical fibre network.

The industry is expanding rapidly and calling for products to have more precise and sophisticated characteristics. As a result, the Japanese company Fujikura introduced "ACTIVE FUSION CONTROL TECHNOLOGY" in their fibre optic fusion splicers. This novel technology integrates the two optical fibres by melting and fusing them using an electric arc, thus creating a permanent bond between the two fibres and allowing light to pass through them with minimal loss or attenuation.



THE COMPANY WORKS CLOSELY WITH CUSTOMERS TO PROVIDE SPECIALISED PRODUCTS TO BUILD A LOYAL CUSTOMER BASE

Another cutting-edge innovation, Active Blade Management Technology has been incorporated into machines to drastically lower the frequency of subpar cleaves. Fujikura splicing machines use Active Fusion Control Technology to provide optimum fusion even when a poor cleave is detected, reducing the likelihood of excessive splice loss. The splicing machines considerably reduce the requirement for rework and re-splicing by combining these important technologies, which also help to prevent the occurrence of severe splice loss. Our updated lineup of splicing machines now includes the Fujikura 88S+, 66S+, 48S+, 38S+, 28S+, and 88R+. We have expanded our product line to include the new OTDR AQ7280, which has a larger display and a better dynamic range. Optical Time Domain Reflectometer (OTDR) is a device used to test and measure the performance of fibre optic networks by sending a pulse of light into the fibre and measuring the reflections or backscattered light as it travels through the fibre. The AQ7280 is the most adaptable OTDR in our lineup thanks to a modular platform that allows for the creation of a variety of systems, from simple units to units with filtered ports to test real traffic networks for applications like a long haul, metro, core, and FTTH. The introduction of 5G in India has opened new opportunities for the industry. IoT and enterprise use cases, smart homes, factories, and public safety use cases will all contribute to the expansion of LTE, 5G, and data usage in the future. Companies have unveiled IoT platforms that can seamlessly connect billions of devices and integrate data. When supported by a secure, swift internet connection with low latency, these platforms are capable of managing IoT requirements. We will present all of our cutting-edge splicing equipment and optical fibre application-specific OTDRs from the Fujikura 88S+, 66S+, 48S+, 38S+, 28S+, 88R+ AQ1000, and AQ1210Series for demonstration and testing at the exhibition. Keith Electronics Pvt Ltd has established itself as a trustworthy and dependable partner for clients in India thanks to its broad selection of high-quality items and steadfast dedication to services and customer fulfillment. ■

Rise Electronics continues its Growth Trajectory

IN CONVERSATION



Mr. Rajesh Chopra
Managing Director
Technical Expert
Rise Electronics

What is the position of Rise Electronics in the market?

We expect to see the market continue its growth trajectory and we are focussed on positioning ourselves well to capitalise on the future growth. We are strengthening our position in the market by providing our customers with the best innovative products in mobile accessory space.

We specialise in the power segment as a 100% Make In India company, our PCB is designed in-house that matches all the parameters of the quality. We did a lot of surveys on the problems related to the chargers manufactured in India and have tried to overcome that by coming up with the best quality chargers at affordable rates for Indian consumers.

What is your brand's product portfolio?

Our company is manufacturing hands-free, Chargers, Neckbands, Speakers, CCTV Cameras, and a few more products are in the pipeline for which R&D is going on.

Rise Electronics was formed to provide quality-oriented goods. That is why it became a leader in Mobile Accessories and Surveillance in a very short span of time, with over 2,000 channel partners in 22 states of India.

What kind of opportunities are available in the market?

India is just in the initial stages of manufacturing right now. Soon, the market will see massive growth in this segment. We are importing less from other countries as the Indian market is becoming self-sufficient. On popular demand, Rise Electronics is entering in to the OEM Manufacturing segment with a slogan of 'Your Vision, Our Passion' as the brand is using the latest modern Technology.

We are selling good quality products of international standards. Our brand is Make

in India brand and our aim is to provide good quality and durable products to the Indian customers.

What is your aim to capture the market with your products?

We ensure that there is no detrimental effect on quality and functionality of the products. The consumer does not want to compromise on the product quality that won't give them value for money. Quality is one attribute of our mobile charger and cables range that makes our clients choose our product over other products in the market. Our quality control department is headed by a team of quality experts from the domain.

Since we are dealing in mobile accessories, our focus is to offer the best quality to our customers that matches the quality of the product for which they are purchasing the accessory. Our brand gives the same technical specification that a high-

end mobile charger would offer, but at an affordable price.

Hence, they are providing high quality products with the latest design and full quality control on the production process.

Rise Electronics is having SMT and ML facilities at their manufacturing plant.

How do you see future market opportunities?

As per Indian norms, standards are very high right now. We are selling good quality products, which are at par with international standards. Ours is a 'Make In India' brand and we aim to provide quality and durable products to the Indian customers since our customers are ready to pay more in order to get the best quality product.

India is just in the initial stage of manufacturing. In coming future the market will see massive growth in this segment we are importing less from other countries as Indian market is becoming self sufficient. ■

WE ARE STRENGTHENING OUR POSITION IN THE MARKET BY PROVIDING THE BEST PRODUCTS IN THE MOBILE ACCESSORY SPACE



INDUSTRY SPOTLIGHT

Blockchain Council setting Standards for Blockchain & Web3

Blockchain Council is a leading de-facto standard body that offers Blockchain and Web3-related certifications and education. Blockchain council certifications are recognised globally as a reliable proof of knowledge for Web3 skills. Our certification courses are meticulously crafted by industry experts and instructional designers to match the needs of modern-day learners. Blockchain council has trained and certified over 50,000 professionals. Our alumni and members have been significantly contributing to Blockchain and Web3 innovation in more than a hundred countries across the globe. Our worldwide community with over a 100,000 Web3 experts and enthusiasts lead our grand vision of evangelising Blockchain research, development, and knowledge-sharing.

We offer more than 50 different technical certifications in the Web3 domain. We cover Blockchain foundation, development & architecture, Metaverse foundation & development, DeFi, DAOs, Web3 community management, Hyperledger, the tech behind



major cryptocurrencies, and many other certification courses.

Some of our popular certifications are Certified Blockchain Expert™, Certified Metaverse Expert™, Certified Ethereum Developer™, Certified Metaverse Developer™ etc. Our alumni display their pride by suffixing their names with titles like CBE, CME, CMD on their resumes, social media channels etc.

Rooted in the early days of blockchain, our organisation was born out of a sheer passion for learning and developing blockchain technology.

We strongly believe that Blockchain technology has the potential to transform the world for the better. And so we are on a mission to empower professionals with the necessary skills and resources to unlock the full potential of this transformative technology.

Blockchain and other Web3 technologies are evolving by the day, and hence it is challenging for any Tech-ed company to keep their courses updated on the latest tech trends. Blockchain Council has been able to solve this by creating an expert team of in-house subject matter experts, industry professionals, instructional designers and innovators who are passionate to bring the cream of the technology to the people. Blockchain Council courses, news and articles are usually the first to educate people on any new development in the Web3 arena.

Some of our latest additions are certification courses on VR development, 3D Designing, Web3 community management, Smart Contract Auditing etc. You can log on to www.blockchain-council.org to learn more about us and our offerings! ■

IN CONVERSATION

Antriksh: High-end Solutions for the Cable & Broadband Companies

What is the philosophy of AV Group?

Today, the AV Group has two companies: M/s Antriksh Digital Solution LLP and Vyomsai Technology Pvt. Ltd. The Group is focused on providing all the hardware and software technologies capable of converging the cable and broadband requirements.

What are the innovations that the company is working upon?

With the know-how in the broad spectrum of technologies for the control room, transport and home CPE in both cable and broadband, we are at a unique advantage.

We have created a niche for ourselves where we are providing innovative solutions to automate the various systems and processes of the supply as well as the support cycle of the stakeholders.

What, according to you, are the challenges faced by the industry?

The major challenge is the dwindling ARPU, which affects the capex flow towards innovations and upgradation. Another major challenge is delivering maximum services in the constricted data pipe available in the metro networks.

Please tell us about your focus areas for the future.

Our focus is to provide solutions for cable and broadband companies, which increase their competitiveness and provide real-time hands-on data about their network health.

We are looking to bring all the network elements on a simple dashboard to ease the troubleshooting process in the ecosystem. Also, we are working on simple, cost-effective solutions that can deliver more services on the same data pipes.

Any regulatory expectations from the government?

We believe that the Government of India needs to do more to promote an environment conducive to creating manufacturing hubs for semiconductor devices.

Please discuss the technologies you will display at the expo.

On the software front, we will showcase the middleware platform for converged billing solutions of AAA/Radius and SMS, mainly focused towards MSO-ISPs. We have introduced new features on our StrataGem (AAA/Radius) platform focused on CRM and authentication and an LCO portal for various customers. Regarding the hardware, we will display various products with unique features for routing, coherent optics, MPLS and VxLan functions. Additionally, we are updating our solutions on disaggregated BNG. ■



INDUSTRY SPOTLIGHT

Uttar Pradesh creating Modern Cities under the Smart Cities Mission

Urbanisation is inevitable in the modern developing world. Presently, around 31% of India's population lives in urban areas and this is expected to increase to about 38% over the next 10 years, with approx. 13-14 crore people migrating to the cities.

To prepare our cities for this rapid urbanisation, the Smart Cities Mission was launched by the Hon'ble Prime Minister on 25 June 2015. The main objective of the Mission is to promote cities that provide a core infrastructure, clean and sustainable environment, and give a decent quality of life to their citizens through the application of 'Smart Solutions'.

The focus is on sustainable and inclusive development through the creation of replicable models that act as lighthouses to other aspiring cities.

UP identifies 10 cities for Smart Cities project

Uttar Pradesh is the most populous State of the country with 16.5% (200 million) people residing here. Accordingly, 10 cities were selected under the Smart Cities Mission. Already, projects

worth 10,000 crore have been taken up in these cities using Central and State government funds, and another 10,000 crore in convergence and under the PPP model. Most of these projects are on the verge of completion.

Uttar Pradesh has identified 6 'Growth Drivers' for the all-round development of Smart Cities - Ease of Living, New Age Transport and Mobility, Transforming Infrastructure & Utilities, Water Sanitation and Health, E-Governance & Citizen Services, Culture & Lifestyle.



- **Ease of Living** – The Smart Cities Mission has paid special attention to improving the 'Ease of Living' of citizens by implementing projects such as the beautification of parks, development of vending zones, installation of open gyms, landscaping and placemaking.

Senior care centres are being conceptualised to cater to the needs of the retired and elderly people who don't have any means to socialise with people of similar age groups. These centres will also provide them



with preventive health care.

- **New Age Transport and Mobility** – Many projects have been successfully implemented to bring new age transport and mobility for public convenience and to provide a global standard facility to the citizens of the State, such as ITMS, smart roads, junction improvement and public bicycle sharing. These projects have resulted in the reduction of traffic congestion and reduced travel time, fewer accident-prone roads, saving many lives and reduced environmental pollution by less carbon emission.

- **Transforming Infrastructure & Utilities** – UP boasts of a large a chunk of the urban population in the country and increasing day by day. To sustain the infrastructure and utility demand in these cities, many projects have been taken up successfully that provide convenience such as MLCP, bus shelters, charging stations, sports, solar, upgradation of schools, convention centre, etc. for the citizens.

For example, a major transformation has happened in Kanpur for young and budding players in different sports. Kanpur Smart City has successfully transformed the Palika Sports Stadium into a modern and global standard sports facility centre for our youth. Under this project, international standard facilities are being provided, which would help improve the State's performance at national and international sports events. This would also provide a platform for our sportspersons and budding players to prepare for international-level competitions. In addition, Urban Facilitation Centres are being set up, which will be easily accessible for the citizens for all their work related to the municipal corporation.

- **Water, Sanitation and Health** – The other major growth driver is water, sanitation and health. To provide a clean, hygienic and healthier environment to our citizens, many focused initiatives have been taken up on priority, such as a door-to-door collection of household waste, solid waste management, setting up of sewage treatment plants, improving the drainage and sewage networks, providing smart public toilets, health ATMS, etc. The health ATMs set up by smart cities have provided the citizens with a phenomenal service wherein people are getting teleconsultation by specialist doctors, a wide array of pathological tests and access to generic medicines at an affordable price and at a convenient time.

The efforts put in by Smart Cities in monitoring and controlling environmental pollution by installing environmental sensors brought spectacular achievement to three cities of the State - Agra, Gorakhpur and Varanasi. These are now among the least polluted cities



ALREADY, PROJECTS WORTH RS. 20,000 CRORE HAVE BEEN TAKEN UP ACROSS 10 CITIES IN THE STATE

of India with an AQI < 50.

- **E-Governance & Citizen Services** – Projects under the category of 'E-Governance & Citizen Services' such as ICCC, ITMS, CCTV surveillance, digitisation of records, GIS mapping of properties, smart schools, etc. have utilised information technology to serve the citizens. The ICCC has not only played a vital role in pilgrim crowd management at the Kumbh Mela held in 2019 at Prayagraj, it also acted as a strong surveillance system in managing the law and order.

On the other hand, during the Covid-19 pandemic, the ICCCs played a major role in successfully monitoring the hotspots, Covid-19 care hospital management, and Covid-19 command centres. During the pandemic, Agra and Saharanpur Smart Cities successfully used the ICCC in spreading awareness of early Covid-19 symptoms and other health issues through telemedicine facilities to all citizens.

- **Culture & Lifestyle** – Our culture and heritage are our pride and have helped the State in achieving such a position in the country. To preserve and keep alive our heritage, many projects have been taken up by Smart Cities including organising cultural events, cuisine and handicraft festivals. Efforts have also been put into the conservation of manuscripts and documents, restoration and conservation of heritage buildings in Mathura-Vrindavan, Varanasi, Ayodhya, Lucknow, Agra, Jhansi and

Prayagraj. Preservation work of heritage roads in Mathura-Vrindavan and Ayodhya has also started. To preserve the local traditional skill of brass artisans in Moradabad, a dedicated skill development centre has been set up where the local artisans can showcase and brand their products leading to better marketing and commercial benefits.

Extending the reach of the Smart Cities Mission

UP has been at the forefront when it comes to furthering the cause of the Smart Cities Mission and was the first State to extend this initiative to another seven cities - Ghaziabad, Meerut, Gorakhpur, Firozabad, Mathura-Vrindavan, Shahjahanpur and Ayodhya. Projects such as intelligent traffic management system (ITMS), multi-level car parking (MLCP), smart roads, smart classes, smart schools, citizen facilitation centre, senior care centre, health ATMs, green crematorium, etc. are being implemented.

The excellent outcomes of the Smart Cities Mission have encouraged the State government to extend its reach and convert the Mission to a 'Movement' by replicating the innovative and successful projects in all 220 ULBs across the State. In the first phase, the government has initiated action to replicate seven innovative projects such as smart roads, habitat centres, smart health ATM, smart street lighting, place making/city branding, public bicycle sharing and smart solar benches in 102 ULBs. ■

INDUSTRY SPOTLIGHT

Varni: Dedicated to giving Consumers Cutting-edge Products

IN CONVERSATION



Mr. Kishan Mali
Managing Director
Varni

Tell us about the philosophy and vision of the company.

VARNI aims to reach every Indian household with the products that are curated responsibly and resonate with the aspirational needs of the Indian consumers.

This has become a reality now by bringing the highest quality and trendiest products to the Indian audience at affordable rates becoming of the best musical accessories brand in INDIA.

What are the new innovations being developed by the company?

We are preparing several advances for future generations, including the following:

- **Wireless connectivity:** The use of wireless technology has revolutionized the music industry by allowing for seamless connectivity between device. Wireless technology allows us to pair easily to all your devices.
- **NCT and HRA:** Noise Cancellation Technology and High-Resolution Audio.
- Noise cancellations technology enhances the quality of the music by isolating the sound from external distractions, resulting in a more immersive experience.
- Whereas High Resolution Audio Compared to conventional compressed audio formats like MP3, high-resolution audio offers music with more clarity and detail. With the help of this technology, music lovers may hear even the slightest elements of their favorite tunes.
- **Smart Wearable Technology:** In the market for music accessories, smart wearable technology is growing more and more popular, including fitness trackers, smartwatches, and headphones. When listening to music, these gadgets are intended to assist users in keeping an eye on their fitness and health.

What are challenges & roadblocks faced

by your industry?

- Overall, the music accessories industry faces several challenges and roadblocks that can impact its growth and profitability. Companies must stay vigilant and adapt quickly to changing market conditions to succeed.
- **Competition:** The music accessories industry is highly competitive, with many established players and new entrants vying for market share. As a result, companies must work hard to differentiate themselves from their competitors and offer unique features and designs.
- **Counterfeit products:** The music accessories industry is also plagued by counterfeit products, which can be difficult to distinguish from authentic ones. These products can damage the reputation of legitimate brands and can lead to lost sales.
- **Changing consumer preferences:** Consumer preferences can change rapidly, making it difficult for companies to keep up. For example, the rise of wireless headphones has led to a decline in sales of traditional wired headphones.
- **Technological advancements:** The rapid pace of technological advancements can also pose a challenge to the music accessories industry. Companies must stay up-to-date with the latest technologies and incorporate them into their products to remain competitive.
- **Economic conditions:** The music accessories industry is also impacted by economic conditions, with changes in the economy impacting consumer spending patterns. During economic downturns, consumers may be more hesitant to spend money on discretionary items like music accessories.

Please tell us about your focus areas for the future.

The music accessories industry is constantly evolving, and there are several areas that brands are likely to focus on such as,

- **Personalization:** Many music accessories now offer personalized features, such as custom EQ settings, to help users fine-tune the sound quality to their liking. Some products also offer personalized styling options, allowing users to create a unique look for their headphones or earbuds.
- **Sustainability:** Customers who are more aware of their environmental effect are likely to be drawn to brands that can provide environmentally friendly and socially responsible items.
- **Health and Wellness:** As more consumers place

a premium on their physical and mental well-being, music accessory manufacturers may consider including fitness and health-related elements into their products.

- **Artificial intelligence (AI):** Since AI is used more often in consumer goods, manufacturers of music accessories may consider adding AI elements to their products. To offer a more individualized experience, this might incorporate voice assistants, intelligent noise-cancellation, and other features.

Are there any modifications in the regulatory framework that you would advocate for?

The music accessories industry could potentially benefit from regulations that encourage greater sustainability and environmental responsibility. This could include requirements for the use of sustainable materials, the reduction of packaging waste, and compliance with environmental standards. Overall, any modifications to the regulatory framework for the music accessories industry would need to balance the need for consumer protection with the need to support innovation and business growth.

Please elaborate on the technologies on display at the expo.

Varni offers a broad selection of goods, including headphones, speakers, chargers, batteries, and timepieces. India's top brand for mobile and music accessories is Varni. Varni is dedicated to giving its consumers high quality, cutting-edge design, fashionable style, and experience value via each of its goods.

What can we expect from in the times to come?

- **Continued growth:** The music accessories industry is expected to continue to grow in the coming years, with increased demand for products like wireless headphones and earbuds driving market expansion.
- **Greater emphasis on health and wellness:** There is a growing interest in health and wellness among consumers, and the music accessories industry is likely to respond to this trend with products that incorporate fitness tracking, heart rate monitoring, and other health-related features.
- **Adoption of advanced technologies:** The music accessories industry is expected to adopt advanced technologies such as artificial intelligence (AI), augmented reality (AR), and virtual reality (VR) to create new and innovative products.
- **Focus on sustainability:** As consumers become more environmentally conscious, there is likely to be a greater focus on sustainable materials and production methods in the music accessories industry.
- **Greater customization options:** Consumers are increasingly seeking products that are tailored to their individual needs and preferences. The music accessories industry is likely to respond to this trend with greater customization options. ■

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arm-based Chromebooks



Android Tablets



Smart Speakers



Set-top Boxes



Smart TVs & Digital TVs



Connectivity, Broadband & Networking

Source: (2020 market share): Strategy Analytics, Gartner, IDC, IC Insight, IHS and MediaTek company data.
Revenue Share based on Q1-Q3 2021