

## ASTRI E-Newsletter Oct-Dec 2022

# ASTRI



### Establishment of Microelectronics Technology Consortium (METC)



ASTRI announced the establishment of the "Microelectronics Technology Consortium (METC)" on November 9, aiming to build a microelectronics and semiconductor technology ecosystem, and provide a top-notch regional and world-renowned platform for microelectronics technology and product development and industry application in order to better facilitate the reindustrialisation of Hong Kong.

Being part of METC will allow different tiers of members to (1) get working opportunities at over 15 microelectronics and talks (2) explore strategic collaboration with other ecosystem members on microelectronics solutions and knowledge transfer opportunities (3) obtain market intelligence via bimonthly e-newsletter and technical advice via patent analysis and feasibility study, etc.

#### Who should join METC as a member?

SMEs and corporate who need to apply microelectronics in their products such as electronics, electronic vehicles, new energy and storage, lighting, robotics, data centres and smart city related applications;

Academia and research institutes who are involved in the development of microelectronics-related technologies.

#### How to join us as member?

Contact [metc@astri.org](mailto:metc@astri.org) to register as member or visit <https://metc.astri.org> to learn more.

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### 2022 Shenzhen-Hong Kong C-V2X I&T Corridor:

#### A Big Leap Forward in Connectivity of Smart Transportation and Urban C-V2X Platform



ASTRI signed a Memorandum of Understanding (MoU) with Shenzhen SmartCity Development Group on September 27. Under the agreement, ASTRI will conduct research on key technologies of connectivity of smart transportation in the Greater Bay Area, R&D, design, standardisation and testing of C-V2X application in Hong Kong, as well as its research on the big data connectivity standards and security system; meanwhile, Shenzhen SmartCity Development Group will mainly conduct researches on the infrastructure of C-V2X in dominating urban cities scenarios, R&D, design, standardization and testing of C-V2X application in Shenzhen.

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### ASTRI launches 'Artificial Intelligence ESG Report Analysis' engine to help the Greater Bay Area Neutrality Association unveil Hong Kong's first Top 100 Carbon Neutrality List



As climate change tightens its grip, demands for disclosure of listed companies' environmental, social and governance (ESG) information are increasing rapidly around the world. The Hong Kong government is gradually increasing its emphasis on ESG, and the relevant regulators are also continuously strengthening the implementation of ESG policies and regulations and disclosure legislation.

ASTRI has taken the lead in the field of green innovation and technology by introducing AI ESG report analysis solutions to assist enterprises to practice their belief in sustainable development. Moreover, the Greater Bay Area Carbon Neutrality Association unveiled its first list of the top 100 listed companies in Hong Kong, using this solution to automatically extract large amounts of data and enhance operational efficiency.

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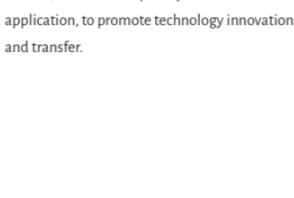
### Cyber Security and Technology Crime Bureau of The Hong Kong Police Force and ASTRI jointly develop a cybersecurity intelligence system 'HoneyNet'



ASTRI and Cyber Security and Technology Crime Bureau of The Hong Kong Police Force jointly develop a cybersecurity intelligence system 'HoneyNet' to enhance the protection of collecting organisations and key infrastructure against cyber attacks. With HoneyNet, the system can collect real-time threat data from organisations and analyse them through artificial intelligence and big data processing.

The Cyber Security and Technology Crime Bureau shares the collected cybersecurity intelligence with key infrastructure in Hong Kong timely, enabling organisations to take proactive precautions against cybersecurity threats and reduce the risk of cyber attacks on computer systems. The Cyber Security and Technology Crime Bureau also detected over 1,000 suspected infected Hong Kong zombie computers and notified relevant users through internet service providers to assist in the removal of botnets.

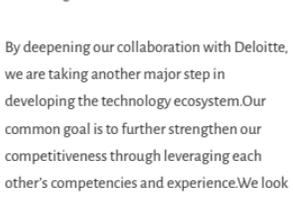
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### Partnership with Hong Kong Baptist University endeavor to explore cutting-edge technologies and propel technology transfer

ASTRI and the Hong Kong Baptist University (HKBU) signed a Memorandum of Understanding (MoU) on "Fostering University Cooperation in Technology Transfer" on 22 September to jointly create a new era of smart living and cross-disciplinary technological development. The extended cooperation covers the smart traditional Chinese medicine (TCM) service system, pharmaceutical R&D, Artech, Fintech, and interdisciplinary research and its application, to promote technology innovation and transfer.

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### Memorandum of Understanding signed by ASTRI and Deloitte to Foster Long-Term Joint Efforts Developing Technology Ecosystem

ASTRI and Deloitte announced new cooperation in the form of The Memorandum of Understanding (MoU). The MoU formalises the existing relationship between ASTRI and Deloitte to foster long-term joint efforts in developing the technology ecosystem via technology research, technology commercialisation, talent development and marketing initiatives.

By deepening our collaboration with Deloitte, we are taking another major step in developing the technology ecosystem. Our common goal is to further strengthen our competitiveness through leveraging each other's competencies and experience. We look forward to creating remarkable impact from this collaboration in the near future.

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### ASTRI showcased Smart City solutions at International ICT Expo 2022

The four-day International ICT Expo 2022 took place at the Hong Kong Convention and Exhibition Centre. ASTRI is honoured to invite Professor Sun Dong, JP, Secretary for Innovation, Technology, and Industry visit ASTRI's pavilion and to learn about our innovative ventures.

ASTRI showcased a series of cutting-edge scientific research achievements, including 5G Cloud Robotics Platform Avatar Technology, IoT Blockchain, 3D Face Anti-Spoofing Technology for Smart Home Applications, edge artificial intelligence Edge AI sensing fusion system, AR/VR Compatible Head-Mounted Display at ICT Expo, enabling the visitors to have an overall understanding of a wide spectrum of advanced application technologies.

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### InnoCarnival 2022

Organised by the Innovation & Technology Commission, InnoCarnival 2022 was held in Science Park in October with the theme of "Innovation & Technology empower our dreams". Professor Sun Dong, JP, Secretary for Innovation, Technology and Industry, and Ms. Rebecca Pun Ting-ting, JP, Commissioner for Innovation and Technology showed great interest in our Student Attentiveness Monitoring System during their visit.

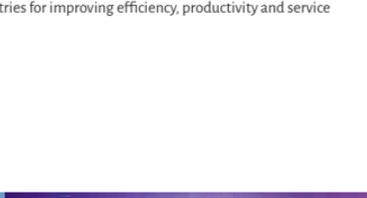
With the theme of Smart City, we showcased a series of cutting-edge scientific research achievements, including smart locks, virtual avatars, DC Power Supply System, Chinese puzzle with OCR Technology, a literacy game based on OCR technology, Student Attentiveness Monitoring System, 5G IoT data transmission based on blockchain technology and portable non-contact smart alcohol multimeter at the InnoCarnival 2022.

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## Tech for impact

### Development of the world-class communication technology

#### "Batched Sparse Code"



n-hop technologies Limited, founded by Professor Raymond Yeung, has currently partnered with Hong Kong's largest government founded R&D centre Hong Kong Applied Science and Technology Research Institute ("ASTRI") to jointly implement and leverage BATS code based solution to enhance the performance of Integrated Access & Backhaul ("IAB") network deployed in the latest 5G. This can help optimise 5G IAB scenarios, greatly increase network transmission rate, and reduce distortion caused by data loss, which in turn will accelerate the advent of smart cities.

This technology commercialisation collaboration among ASTRI, university and local startup is another success case of cooperation among government, industry, academia, and research institutes. It also echoes the 2022 Policy Address to enhance Hong Kong's 5G infrastructure by encouraging the early deployment of 5G technology in various industries for improving efficiency, productivity and service quality.

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### ASTRI wins award for 4K2K AR/VR Compatible Head-Mounted Display (HMD) with Sensing at Hong Kong ICT Awards 2022



ASTRI has won a Smart Business (Emerging Technologies) Silver Award for its 4K2K AR/VR Compatible Head-Mounted Display (HMD) at the Hong Kong Information and Communications Technology Awards (ICT Awards) 2022.

Metaverse is the next generation of the internet, wherein Head Mounted Display performs as the human interface to connect the user between the real world and virtual space. The displayed image quality, security level and human-machine interaction are three key factors for the measurement of the success of HMD. Benefiting from ASTRI's patent-protected display and sensing technology, ASTRI has successfully developed AR/VR Compatible Head-Mounted Display (HMD) with unparalleled image display quality, biometric-based secure data protection, eye gaze tracking and gesture understanding enabled natural user human-machine interface.

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## Nurturing Talents

### Summer Internship Programme 2023



Through an internship with ASTRI, the largest R&D centre in Hong Kong, you will learn from our award-winning scientists and acquire hands-on experience in cutting-edge innovations, including Smart City, Financial Technologies, Intelligent Manufacturing and Re-industrialization, Digital Health, Application Specific Integrated Circuits and Metaverse.

Apart from the R&D projects, a number of tech talks and networking sessions will be arranged, where key industry players and professional scholars from large corporations and organisations will be invited to share their journeys and successful experience. For those who are majoring in non-STEM disciplines, ASTRI also provides opportunities to work in its corporate functions.

[More Information](#)

### FinTech Future Leader Academy



The FinTech Future Leader Academy is the flagship talent programme targeting students who are enthusiastic about financial technologies and innovations. Students will be assigned to the FinTech division and get exposure to ASTRI's FinTech and Metaverse business and innovative projects.

In addition to the series of tech talks and networking sessions, students will undertake two-week field visits to a variety of prestigious financial and technology institutions that support the programme, where they will learn directly from industry professionals and have the opportunity to gain a more comprehensive understanding of the impact of FinTech on society.

[More information](#)

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