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ASX: NVU

EMASS and the Center of Nanoelectronics and Devices Launch Strategic Collaboration

Initiative to Advance EMASS's Application Specific Integrated Circuits Using TSMC's latest 16nm FinFET Process

Highlights

- **Strategic Collaboration**: Embedded AI Systems Pte Ltd (EMASS), a wholly owned subsidiary of Nanoveu, to collaborate with the Center of Nanoelectronics and Devices (CND), which is located in Cairo.
- **Next-Gen Chip Development**: The collaboration aims to co-develop application-specific AI chips using Taiwan Semiconductor Manufacturing Company's (TSMC) 16nm FinFET process and enhance EMASS's ECS-Dot AIoT SoC.
- **Strategic Advisory Appointment:** Dr. Yehia Ismail, Director of the Center of Nanoelectronics and Devices to be appointed Strategic Advisor to EMASS, strengthening technical and strategic leadership.
- Partnership taps into CND's top-tier research and engineering infrastructure supporting nanoscale chip development.
- Initiative supports EMASS's mission to deliver sustainable, export-ready AI technologies for emerging markets.

Nanoveu Limited ("Nanoveu" or the "Company") (ASX: NVU) is proud to announce a strategic research and development collaboration with the Center of Nanoelectronics and Devices (CND) in Cairo, Egypt. This partnership represents a significant milestone towards creating advanced custom integrated circuits (ICs), leveraging EMASS's proprietary ultra-low energy edge AI technology.

Under this initiative, EMASS will develop application-specific ICs utilising TSMC's advanced 16nm FinFET technology. The 16nm FinFET (Fin Field-Effect Transistor) process developed by Taiwan Semiconductor represents a significant leap forward in semiconductor fabrication. Unlike traditional planar transistors, FinFET technology uses a 3D transistor architecture, allowing for more efficient control of electrical current. This results in lower power consumption, higher performance, and greater transistor density which are critical features for building compact, ultra-efficient edge AI systems.

The integration of this process node into EMASS's ECS-Dot AIoT SoC platform is expected to deliver substantial improvements in performance-per-watt, enabling:

- In-situ AI analytics for wearables such as health trackers and smart rings;
- Tiny language models in ultra-low power edge devices (smart specs, etc.)

The Center of Nanoelectronics and Devices, located at the American University in Cairo, contributes deep expertise in nanoscale device design, AI hardware modelling, and SoC prototyping. As a recognized research leader in the Middle East and North Africa (MENA) region, CND will play an instrumental role in translating foundational innovations into commercially deployable systems.

EMASS Founder, Prof. Mohamed Mostafa Sabry Aly, said, *"This collaboration goes beyond technological innovation, it's about building sovereign capability in advanced semiconductor design. Our partnership with CND sets the foundation for next-generation IC development in Egypt, aimed at delivering world-class embedded AI solutions for global markets."*

As part of the deepening partnership, NVU is pleased to welcome Dr. Yehia Massoud Ismail as a Strategic Advisor to the Group. In his role as Strategic Advisor, Dr. Ismail will provide strategic and technical guidance to EMASS's R&D initiatives in edge AI and advanced SoC design. Dr Ismail's appointment is for an initial period of 12 months which may be extended for an additional 12 months upon mutual written consent of Dr Ismail and EMASS.

Dr. Ismail is the director of the Nanoelectronics and Devices Center at The American University in Cairo and Zewail City. He was a tenured professor with Northwestern University, United States from 2000 till 2011. Dr. Ismail was the editor-in-chief of the Institute of Electrical and Electronics Engineers (IEEE) Transaction on Very Large Scale Integration (TVLSI) 2011-2015 and the chair-elect of the IEEE VLSI technical committee. He is on the editorial board of the Journal of Circuits, Systems, and Computers, was on the editorial board of the IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications, and a guest editor for a special issue of the IEEE Transactions on Very Large Scale Integration (VLSI) Systems on "On-Chip Inductance in High Speed Integrated Circuits". He has also chaired many conferences such as GLSVLSI, IWSOC, ISCAS. He was the chief scientist of the Innovation and Entrepreneurship Center of the Ministry of Communications and Information Technology, Egypt.

Dr. Ismail has published more than four hundred papers in top refereed journals and conferences and many patents. He co-authored seven books including On-Chip Inductance in High-Speed Integrated Circuits, Handbook on Algorithms for VLSI Physical Design, Temperature-Aware Computer Architecture, Arbitrary Modeling of TSVs for 3D Integrated Circuits, and Circuit Design Techniques for Microscale Energy Harvesting Systems. He has many patents in the area of high-performance circuits and interconnects design and modeling. His work is some of the most highly cited in the VLSI area and is extensively used by industry. This appointment is vital to ensure the EMASS can deliver on its grand ambitions as it places an emphasis on fabricating next-generation AI SoC's using TSMC's 16nm process technology.

Prof. Yehia Massoud Ismail, commented: "*We are delighted to collaborate with EMASS to accelerate the frontier of energy-efficient computing. This partnership blends local expertise with global innovation and marks a bold step forward in advancing applied nanoelectronics and AI in the region*".

Egypt and CND present an ideal launchpad for this initiative. Located at the crossroads of Africa, the Middle East, and Europe, Egypt is rapidly emerging as a strategic technology hub. The CND ecosystem provides access to top-tier engineering talent, academic infrastructure, and regional visibility—making it an ideal partner for EMASS's expansion into some of the fastest-growing markets for embedded AI and digital transformation.

Initial phases of the collaboration will comprise of:

- Taping out a new IC integrating EMASS's proprietary IP on TSMC's 16nm process;
- Hosting collaborative design sprints, bootcamps, and hands-on workshops for CND students and faculty;
- Prototyping AIoT modules targeting healthcare diagnostics, smart sensing, and continuous health monitoring;
- Developing localized edge AI solutions aligned with regional needs in public health, infrastructure, and security.; and
- Boosting AI performance per unit area and memory density, which is critical for energy-efficient and real-time 2D to 3D conversion developed by Nanoveu (resulting in far exceeding performance compared to today's CPU/GPU-based solutions)

This strategic initiative aligns with NVU's overarching mission, to deliver sustainable, high-performance AI technologies engineered for deployment at the edge.

Commenting on the appointment and collaboration, Dr David Pevcic, Nanoveu's Chairman, said, "*Dr. Ismail's appointment and our partnership with CND represent a strategic inflection point for EMASS. His deep technical expertise and regional leadership will help accelerate our ability to deliver world-class ultra-low-power edge Ai solutions. Together, we are building the foundation for a scalable, sustainable edge AI technology pipeline deployed on the latest TSMC 16nm technology, which will increase the application potential of the EMASS platform substantially.*"

This announcement has been authorised for release by the Board of Directors.

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About Nanoveu Limited

Further details on the Company can be found at https://nanoveu.com/.

EMASS

EMASS is a pioneering technology company specialising in the design and development of advanced systems-on-chip (SoC) solutions. These SoCs enable ultra-low-power, AI-driven processing for smart devices, IoT applications, and 3D content transformation. With its industry-leading technology, EMASS will enhance Nanoveu's portfolio, empowering a wide range of industries with efficient, scalable AI capabilities, further positioning Nanoveu as a key player in the rapidly growing 3D content, AI and edge computing markets.

EyeFly3D™

The EyeFly3D™ platform is a comprehensive solution for delivering glasses-free 3D experiences across a range of devices and industries. At its core, EyeFly3D™ combines advanced screen technology, sophisticated software for content processing, and now, with the integration of EMASS's ultra-low-power SoC, powerful hardware.

Nanoshield™ - is a self-disinfecting film that uses a patented polymer of embedded Cuprous nanoparticles to provide antiviral and antimicrobial protection for a range of applications, from mobile covers to industrial surfaces. Applications include:

Nanoshield™ Marine, which prevents the growth of aquatic organisms on submerged surfaces like ship hulls, and

Nanoshield™ Solar, designed to prevent surface debris on solar panels, thereby maintaining optimal power output.

Forward Looking Statements
This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance, or achievements to be materially different from those expressed or implied by such forward looking information.