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SUPPORTED BY

Ministry of Electronics & IT
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MINISTRY OF DEFENCE
भारत सरकार

रक्षा उत्पादन विभाग
DEPARTMENT OF DEFENCE PRODUCTION
GOVERNMENT OF INDIA

Defence & Aerospace SES 2022

11th Strategic Electronics Summit

7th & 8th July 2022

The Lalit Ashok, Bengaluru

POST SHOW REPORT

PARTNER STATES

उत्तर प्रदेश सरकार

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About ELCINA

Electronic Industries Association of India was established in 1967 as the first industry association supporting electronics hardware, when India's Electronics industry was still in its infancy. Since then, ELCINA has established itself as an interactive forum for electronics and IT manufacturers.

ELCINA had launched the Strategic Electronics Summit (SES) in 2010 and for 10 years we have consistently organized the event in Bengaluru with a focus on all defence and space industry stakeholders. SES has since become a well-recognized and valuable platform for showcasing equipment and technology for the Army, Air Force, Navy and Space sectors and has consistently attracted large presence of all stakeholders. SES highlights the immense scope for industry from public and private sectors to work together to serve the Defence sector.

Background of SES and Its Objectives

Strategic electronics is a fast-growing area in the electronics space and is a key focus of the Government of India through its Make in India program. ELCINA has been at the forefront of bringing together the various stakeholders in strategic electronics through its flagship event, the ***Strategic Electronics Summit*** (SES).

SES encourages Indian Electronics Companies to participate in the defence electronics value chain and strengthen the domestic industry and enable indigenization. Our emphasis remains on Electronics which is at the core of modern defence systems.

Delivering value, SES has grown with time and the 11th Strategic Electronics Summit (SES 2022) - Defence & Aerospace was organised at 7th & 8th July 2022 at The Lalit Ashok, Bengaluru. The theme of the event this year was ***"Strategic Electronics- Moving towards true Atmanirbhar Bharat and Beyond".*** This agenda and the deliberations during the event assisted the industry, and all stakeholders to make a more informed choices while planning their investments in strategic electronics.

To encourage and recognize outstanding companies who have made exemplary contribution in the field of Defence Electronics (R&D, design and Manufacturing) demonstrating an innovative approach and excellence, ELCINA instituted **defennovation Awards** in the year 2018. This year too these awards were presented to deserving companies and start-ups by Dr Girish Deodhare, DG, ADA. Details of the winners are provided later in this Report.

Another initiative which ELCINA took to encourage innovation and start-ups is to bring them under the umbrella of ***ELCINA Tech Zone***. We are happy to inform that 25 start-ups participated in this edition of SES.

With more than USD 100 billion investment expected in the defence sector in India over the next 5-6 years, the overall strategic electronics space needs a greater role by the private sector. The Defence PSUs (DPSUs) of course will continue to be the pillar of the industry. Participation from private companies has to go beyond the scope of domestic corporates and MNC's and involve the Indian MSMEs and Start-ups to usher in a new era of cooperation in the strategic electronics space. The Summit highlighted the capabilities of these MSMEs and Start-ups as well as the willingness of the DPSUs and private corporates to experiment with them to build their future strategies.

SES also enables all stakeholders to appreciate and understand new initiatives in the aerospace and defence sector such as iDEX, Defence corridors and the most updated defence procurement policies that have been released by government. These are all positive signs for Indian industries which can help the industry, academia, and manufacturers in the strategic electronics sector to collaborate in the interest of the nation.

OBJECTIVES OF THE EVENT

- Bring all stakeholders on one platform to enable better communication understanding of requirements of the defence establishment.
- Facilitate creating indigenous capability to manufacture defence equipment and meet these requirements
- Create awareness about opportunities in the Strategic Electronics sector in India
- Involve Small and Medium Enterprises to meet the requirements of Defence Forces.
- Bridging the gap between R&D, Government organizations and businesses.
- Explain and highlight the new Defence Production and Offset Policies.
- Encouraging and enabling investments for developing strategic strengths.

Karnataka has been the home for many defence and aerospace companies, Research Institutes, DPSUs and DRDO labs, and it is well recognised that technology thrives in the State.

We are grateful for the encouragement and support we received from all the stakeholders including State Govts; Karnataka, Tamil Nadu, Uttar Pradesh and Assam, Ministry of Electronics & IT (MeitY), Ministry of Defence, our Sponsors C-DOT, SASMOS, Kaynes, Knowledge Partner Edgerise Global, E&Y, Sugosha all the distinguished Guests, Speakers, Panelists, Exhibitors and Delegates who made this event a success. We are committed to the development of Indian Electronics Industry and look forward to having continued support in future.

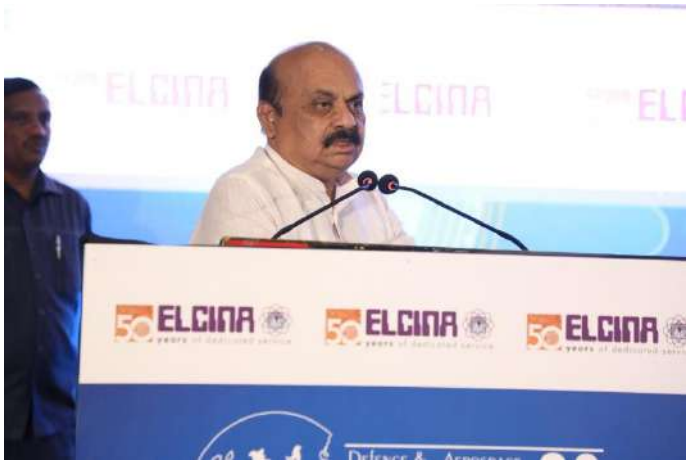
Day 1 - 11th SES Conference

The 11th SES Conference was organised under the theme **"Strategic Electronics – Moving towards true Aatmanirbhar Bharat and Beyond"** has been the focus of our government and thus was considered the appropriate theme. The Conference also delved into how we should look "beyond" self-reliance and lay emphasis on R&D and Innovation as well as technological leadership for making a foothold in global markets.

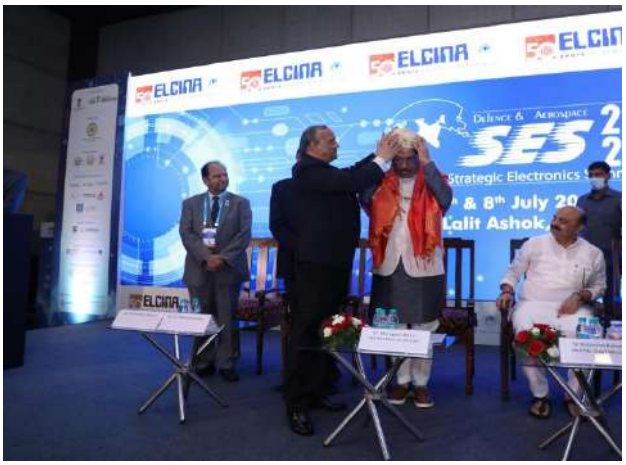
Key Highlights

- 2 day Conference & Exhibition
- 1200 + Delegates/Visitors
- 550+ Organizations
- 55+ Exhibitors
- 35+ Eminent Speakers

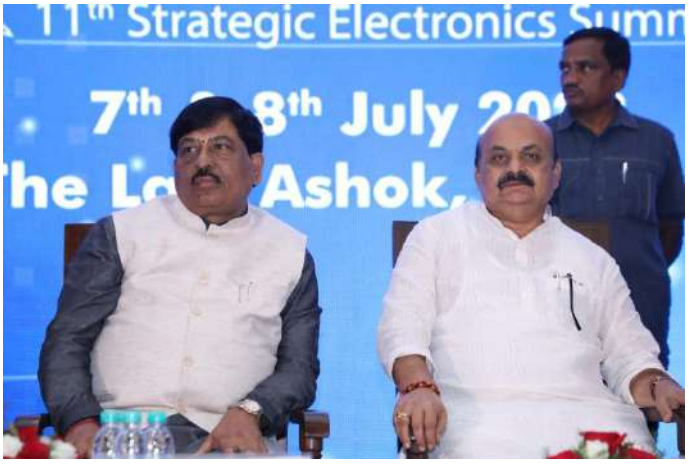
Stalwarts @ 11th Strategic Electronics Summit – Defence & Aerospace



Chief Guest: Sri Basavaraj Bommai
Hon'ble Chief Minister
Govt. of Karnataka



Guest of Honour : Shri Murugesh Nirani
Hon'ble Minister for Large & Medium Industries,
Commerce & Industries Dept., Govt. of Karnataka

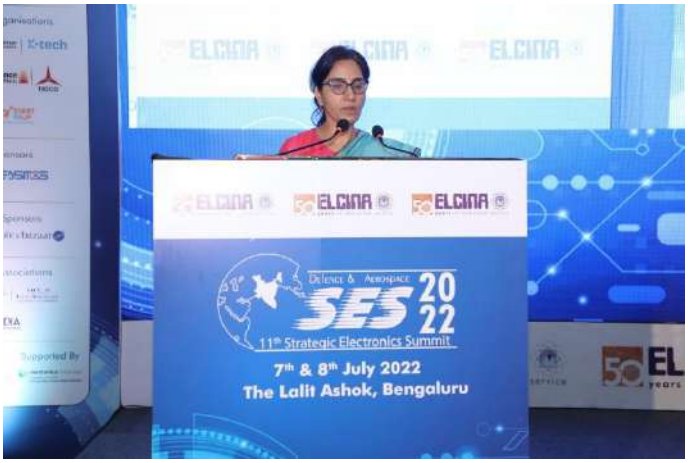


Hon'ble Chief Guest & Guest of Honour

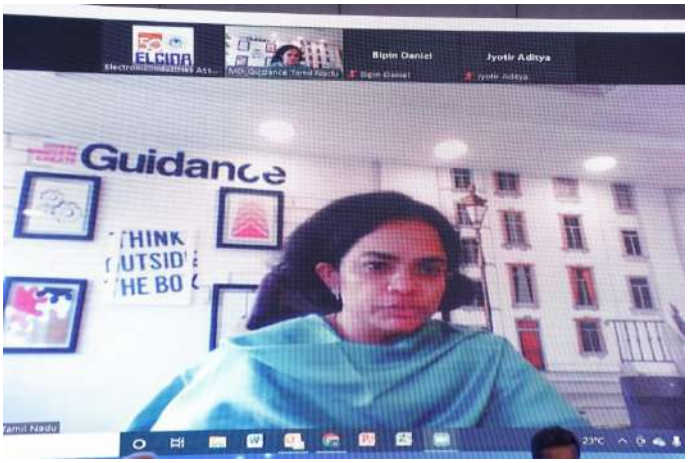
Guest of Honour: Dr. Girish Deodhare, DS,
DG, Aeronautics Development Agency (ADA)

Guest of Honour: Dr. E.V. Ramana Reddy, IAS, ACS to
Government, Dept. of Electronics, IT, Bt and S&T,
Govt. of Karnataka (Lighting the Lamp)

Col HS Shankar (Retd.), CMD, Alpha Design
Technologies Ltd. & Chairman Organising Committee,
SES 2022



Ms. Gunjan Krishna, IAS
Commissioner for Industrial Development, & Director of Industries & Commerce, Government of Karnataka



Ms. Pooja Kulkarni, IAS
MD & CEO, Guidance
Govt. of Tamil Nadu

Mr. Saurabh Gaur, IAS
Principal Secretary, IT, E&C, Skill Dev. & Training, Real Time Governance, Govt. of Andhra Pradesh

Ms. Nivruti Rai
Country Head
Intel India

Mr. N Ramachandran, CMD, Mel Systems & Services & Co-Chairman Organising Committee, SES 2022

Dr. S Christopher
Ex-Chairman, DRDO & Former Director, Centre for Airborne Systems

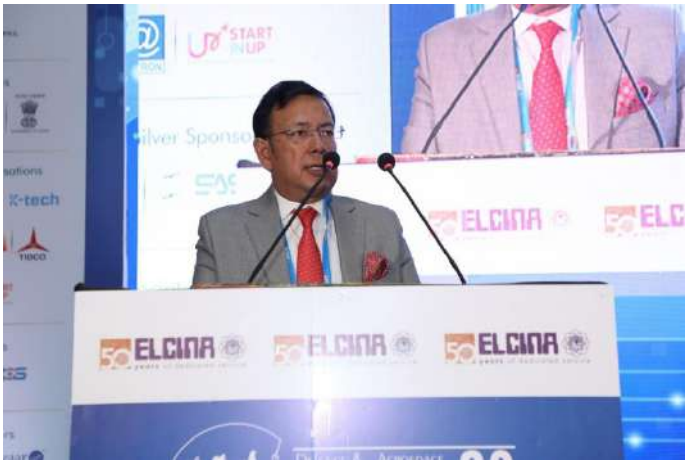
SUMMARY OF PROCEEDINGS

The 11th edition of Strategic Electronic Summit was inaugurated by **Sri Basavaraj Bommai Hon'ble Chief Minister, Govt. of Karnataka** on 7th July, 2022 at Hotel Lalit Ashok, Bengaluru.

Day 1 – 7th July, 2022 – "Inaugural Session"

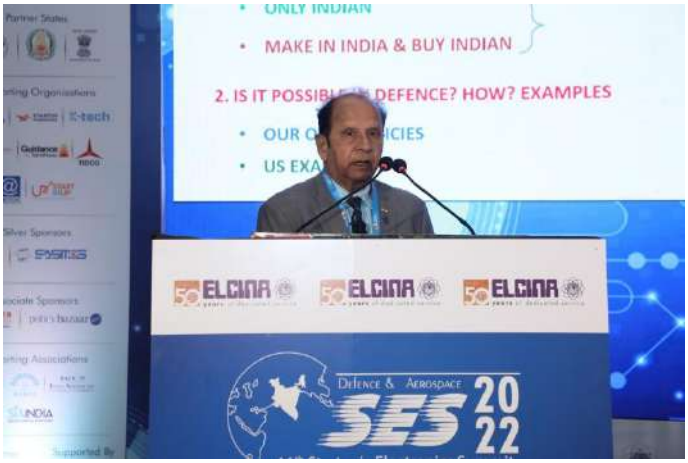
Chief Guest: Sri Basavaraj Bommai, Hon'ble Chief Minister, Govt. of Karnataka Lighting the Lamp

Guest of Honour : Shri Murugesh Nirani Hon'ble Minister for Large & Medium Ind., Commerce & Industries Dept., Govt. of Karnataka Lighting the Lamp



Welcome Address : Mr. Sanjay Agarwal, President, ELCINA & MD, Globe Capacitors Ltd.

Address by Guest of Honour : Dr. Girish Deodhare, DS, Director General, Aeronautics Development Agency



Keynote Address by: Col HS Shankar (Retd.), CMD, Alpha Design Technologies Ltd. & Chairman Organising Committee, SES

Release of ELCINA Report on "Strategic Electronics- Moving towards true Atmanirbhar Bharat and Beyond"

Mr. N Ramachandran, CMD, Mel Systems & Services & Co-Chairman Organising Committee, SES 2022

Hon'ble Chief Guest Inaugurating the Exhibition

Inaugural Session

- **Shri Basavaraj Bommai, Hon'ble Chief Minister, Govt. of Karnataka**
- **Shri Murugesh Nirani, Hon'ble Minister for Large & Medium Industries, Commerce & Industries Dept., Govt. of Karnataka**
- **Dr. Girish Deodhare, DS, Director General, Aeronautics Development Agency (ADA)**
- **Dr. E.V. Ramana Reddy, IAS, ACS to Government, Dept. of Electronics, II, BT & ST, Govt. of Karnataka**
- **Mr. Sanjay Agarwal, President, ELCINA & MD, Globe Capacitors Ltd.**
- **Col. HS Shankar (Retd.), CMD, Alpha Design Technologies Ltd.**
- **Mr. N Ramachandran, CMD, Mel Systems & Services & Co-Chairman Organising Committee, SES**

Mr Sanjay Agarwal, ELCINA President and **MD, Globe Capacitors Ltd** opened the conference with a welcome address. Mr Agarwal welcomed all the participants and the dignitaries, and apprised them about ELCINA and the vision of the association in organising SES as one of its flagship events. He conveyed his thanks to the sponsors and exhibitors for their support.

Hon'ble Chief Minister of Karnataka, Shri Basavaraj Bommai graced the occasion as Chief Guest and was accompanied by **State Industries Minister Shri Murugesh Nirani**. Other dignitaries and Industry Leaders in the inaugural included Dr. Girish Deodhare, DS, Director General, Aeronautics Development Agency (ADA), Dr. E V Ramana Reddy, IAS, ACS to Government Dept. of Electronics, II, BT & ST, Govt. of Karnataka, Col H S Shankar, CMD, Alpha Design Technologies Ltd., Mr. N Ramachandran, CMD, Mel Systems & Services & Co-Chairman Organising Committee, SES and Mr. Sanjay Agarwal, President ELCINA & MD, Globe Capacitors Pvt. Ltd.

The Chief Minister spoke at length about his vision on building an innovative Karnataka and called upon the entrepreneurs in the electronics and R&D sector to use Karnataka as a spring bed to fly high and take the State to a higher orbit. He said that Karnataka is in the forefront of technology with 400 R&D Centres and Bangalore having the largest number compared to any city in the world. Karnataka also was the base for 400 out of 500 Fortune Companies and was the leader in electronics since the early 60s. The Chief Minister also highlighted his dream of a creative society and the emphasis the State gave to the sector by having an exclusive Aerospace

& Defence R&D policy as well as semiconductor and renewal energy policy. He informed that about 2000 acres of land had been reserved in the State for Defence Production and additional 1000 for Aerospace manufacturing units. The State was ready to provide all help and cooperation to Industrialists for setting up their Units in Karnataka. He lauded the role of DRDO in Make in India and Aatmanirbharata in Defence Production. He stated that in last 5 years almost 60% of imports had been converted into Make in India projects.

The dignitaries present along with Delegates deeply appreciated the insightful and progressive views of the Chief Minister who conveyed an in-depth technical understanding of electronics and the need for a modern society to be innovative and scientifically oriented.

After his speech, Hon'ble Chief Minister released an **ELCINA Report on Strategic Electronics moving towards Atmanirbharatha and Beyond.** The Concise Report focused on applications of Strategic Electronics in defence platforms, opportunities for industry as well as transformational initiatives taken by the government to promote a self-reliant defence production industry.

Hon'ble Chief Minister also inaugurated 11th SES Exhibition and spent considerable time meeting with the Exhibitors and specially the start-ups to encourage them to achieve greater heights.

Guest of Honour, **Dr. Girish Deodhare, DS, Director General, ADA**, shared his vast experience as a Scientist in DRDO and his role as Program Director, Combat Aircraft Program, explaining the challenging path which ADA had traversed and finally succeeded in developing Tejas, the first fighter aircraft of India. Tejas had since been commissioned and now boasted of 2 squadrons operational with IAF. This was a landmark for DRDO and the Indian Industry.

The Tejas is the second supersonic fighter developed by HAL after the HAL HF-24 Marut. Tejas achieved initial operational clearance in 2011 and final operational clearance in 2019. The first Tejas squadron became operational in 2016, replacing MiG-21s. The IAF currently placed an order for 40 Tejas Mark 1 and 73 Tejas Mark 1A and 10 trainer aircraft. The IAF plans to procure 324 aircraft in all variants, including the Tejas Mark 2 currently being developed by ADA and HAL. As of 2022, DRDO and HAL have achieved indigenous content in the Tejas Mark 1 of 65% by value and 75.5% by number of line replaceable units.

The **Keynote Address** was delivered by **Col. H S Shankar, CMD, Alpha Design Technologies Ltd.** Col. Shankar is a doyen of the industry who served the Indian Army, Corps of EME during the 1965 & 1971 wars followed by his tenure in BEL as Director R&D. After 7 years in BEL, he launched a new R&D and manufacturing company and has never looked back.

Delivering the keynote address, Col. Shankar gave examples of how Indian Industry had developed several technologies and LRU's for Fighter Aircrafts, Naval Systems as well as Tanks & Radars for the Army. He also highlighted initiatives taken by MoD to encourage industry and specially defence acquisition policy 2020 focus on indigenous R&D and manufacturing, JVs with foreign OEMs and IDDM schemes such as Make-I, Make-II, IDEX and so on.

The Session concluded with closing remarks from **Mr. N Ramachandran, Past President, ELCINA** and Co-Chairman of the 11th SES Organising Committee. Mr. Ramachandran thanked all the dignitaries, delegates, exhibitors, and sponsors and briefly shared his views about the upcoming opportunities in defence electronics and the role of R&D and innovation through start-ups.

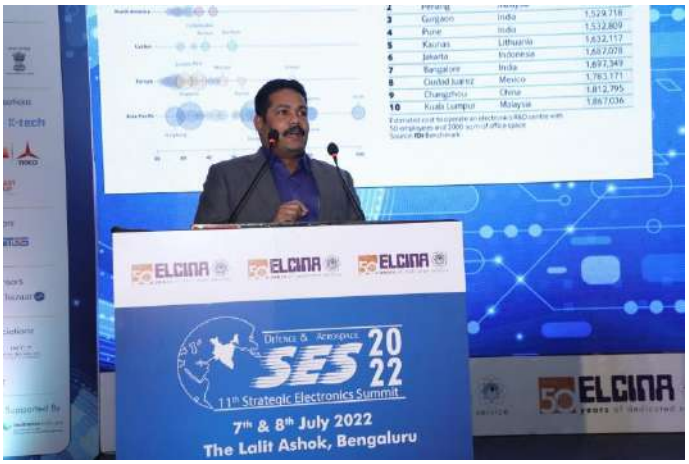
Day 1 – 7th July, 2022 - Session I

"Creating a supportive Eco-System for Strategic Electronics Defence Corridor"

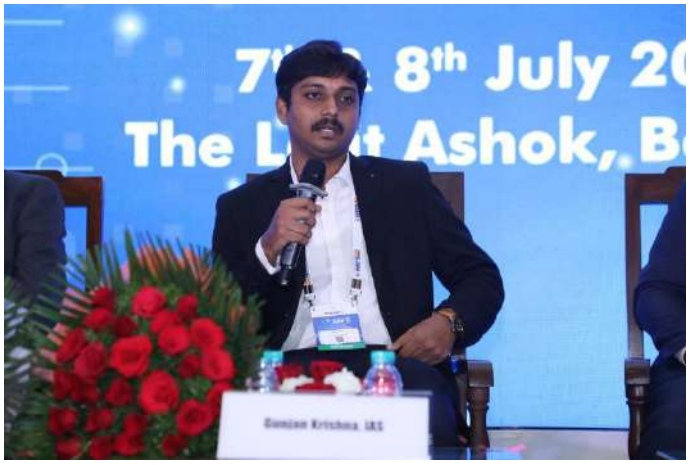
Ms. Gunjan Krishna, IAS, Commissioner for Industrial Development, & Director of Industries & Commerce, Government of Karnataka

Ms. Pooja Kulkarni, IAS, MD & CEO, Guidance, Govt. of Tamil Nadu – (Joined Virtually)

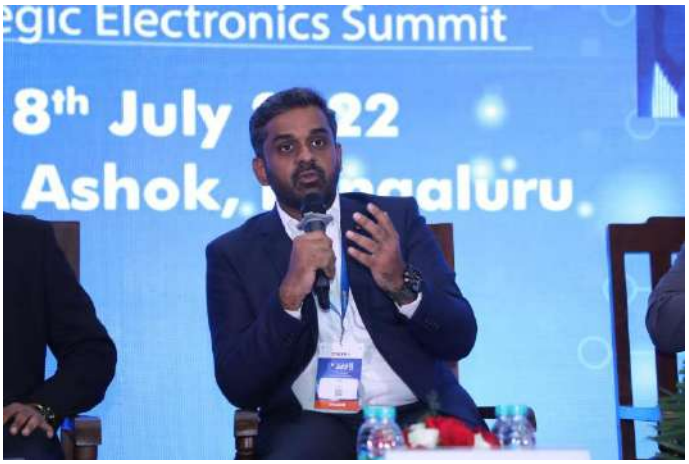
Mr. N Ramachandran, CMD
Mel Systems & Services



Mr. B. Krishnamoorthy, IOFS, Project Director, Tamil Nadu Defence Industrial Corridor



Mr. Vignesh, Taurus Automation



Mr. Vish Sahasranamam, Co-Founder & CEO
FORGE Accelerator

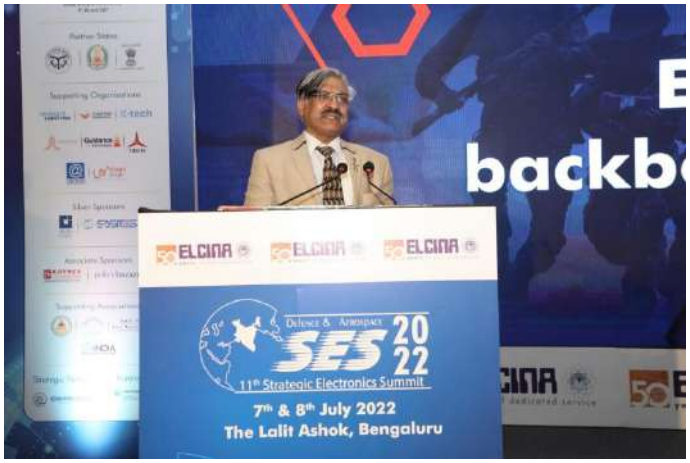
Eminent Speaker/s

Ms. Gunjan Krishna, IAS, Commissioner Industrial Development & Director Industries & Commerce, Govt. of Karnataka delivered the Keynote Address for this Session and apprised the gathering about initiatives that Government of Karnataka is taking to support investments in manufacturing as well as facilitating exports and ease of doing business. Ms. Krishna apprised the gathering about the key features of the industry policy and the Aerospace and Defence policy of the State which is unique. Ms. Krishna also highlighted the focus on innovation and cluster development in the State and the special place of defence industry, R&D and electronics. She also mentioned that while being the 4th largest manufacturer of automobiles, Karnataka leads in the EV space in the country. She apprised about the Government's initiative "Beyond Bengaluru" in which focus was on spreading economic activity and industrial activity in Tier 2 and Tier 3 Towns of the State.

Ms. Pooja Kulkarni, IAS, MD & CEO, Guidance Bureau, Industries Dept, Govt of Tamil Nadu gave a live video message from Chennai about the intensive work and industry support initiatives that were being taken up by Government of Tamil Nadu which was the second most industrialised State in the country, the leader in automotive manufacturing and also among the top 3 in electronics manufacturing. Ms. Kulkarni spoke at length about the support system which was being facilitated by Guidance Bureau, the Nodal Agency in Tamil Nadu for Investment Promotion and support. Guidance had been extremely active and effective in attracting investments and supporting their implementation. Guidance had an effective single window portal which addressed all registrations and approvals and a business friendly app, Biz Buddy an industry help desk to support industry issues and queries. Ms Kulkarni also apprised the delegates about the several Industry promotion policies and infrastructure in the State.

The Session concluded with a panel discussion in which **Mr. Krishnamoorthy, IOFS, Project Director, Tamil Nadu Defence Industrial Corridor, Mr. Vish Sahasranamam, CEO, Forge Incubator and Mr. N Ramachandran** participated. The panel discussed at length about the defence corridor and infrastructure in Tamil Nadu about which Mr. Krishnamurthy shared details with the delegates. Mr. Sahasranaman who had established Forge in Coimbatore, one of the most successful start-up incubators in the country shared details about the start-up eco-system in Tamil Nadu and how the state provides support under the Tamil Nadu Start-up and Innovation mission. This supportive approach had resulted in large number of successful entrepreneurs and youngsters coming into the fray in the state.

Day 1 – 7th July, 2022 - Session II
"Electronic Systems as a backbone of Indian Armed Forces"



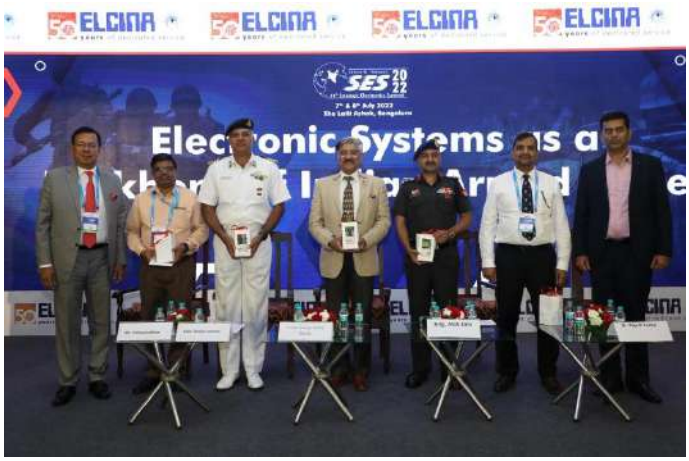
Session Moderator : Lt. Gen. Sanjay Verma, PVSM, AVSM, VSM (Retd), Consultant DRDO

Dr. Rajesh Kumar, Dte of Indigenisation Ministry of Defence

Brig Alok Jain, Commandant, 515 Army Base Workshop

Capt Sanjay Sharma, Addl. Director, Indian Navy

Mr. Vishwanadham, Addl.GM Product Development & Innovation Center, BEL



Group Photo of Eminent Panelists

Eminent Speaker/s

Gen Verma opened the session and introduced the speakers on the panel. He highlighted the importance and need for Indigenous electronics for achieving Aatmanirbharta in Defence which was the need of the hour.

The panellists spoke about the indigenisation efforts and avenues and deliberated on the issue highlighting the opportunities for Private Industry to participate

Brig Jain shared his experience and Challenges peculiar to Services flagged- obsolescence management, MOQs- stringent quality parameters- cost effectiveness- modular design plug and play options with upgrades and product improvements

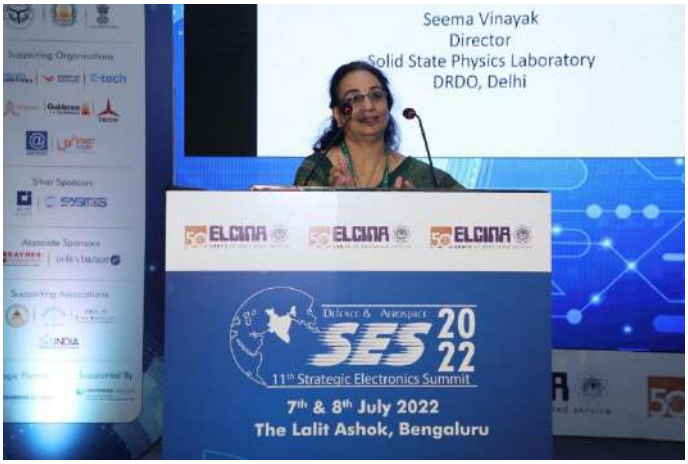
Dr Kumar from Dte of Indiginization spoke about the urgency and focus of government on enhancing domestic value addition and reduce import dependence. He emphasized the need for development of dual application solutions - military as well as civil commercial applications. The industry must expand and pull in the supply chain in the country and exploit export potential.

Capt Sharma representing the **Directorate of Indigenisation, IHQ MoD(Navy) & Headquarters Naval Technical Group**, Bengaluru shared his perspective on indigenization and the Challenges of Strategic Electronics in Naval Systems. Citing the example of A Naval Warship or submarine is a floating and mobile city and a convergence of all possible technologies that have been invented till date.

Mr Vishwanadham from BEL spoke about his experience in BEL and the issues raised by industry with respect to testing and trial facilities to be more easily accessible which hampered product development. He also spoke about the issue and need for collaborative R&D for the country and gain by the synergy thus achieved by combining the benefits of R&D done in different institutes and labs.

Day 1 – 7th July, 2022 - Session III
"Role of Semiconductors in Strategic Electronics"

Mr. Sharad Kumar, Director, Applied Materials India



Dr. (Ms.) Seema Vinayak, Director, Solid State Physics Laboratory (SSPL)

Mr. Anant Naik, CEO, Gallium Arsenide Enabling Technology Center (GAETEC)

Dr. Manish Kumar Hooda, MeitY, GOI & Head Technology Development Division, Semi-Conductor

Mr Sharad Kumar moderated the Session and in his presentation spoke about the urgent need for semiconductors in India for our Strategic sector. The biggest of computing till date was in vogue and after the PC & Internet, Mobility and AI were driving this demand.

Mr Kumar also spoke about the need for an India Chip for our Space program and for securing our communications.

Dr Seema Vinayak presented details of the various programs of SSPL for development of high frequency semiconductor divices and MMIC's for strategic applications and transfer of technologies. She had also led development of AIGaN/GaN HEMT device & MMICs, MESFET based 12-18 GHz GaAs MMIC technologies as well as the current programs for development of Sensors, Laser diodes, IR Arrays and more.

Mr Anant Naik informed delegates about activities of GAETIC- Gallium Arsenide Enabling Technology Centre – which was involved in production of GaAs MMIC technology up to Ka-band applications and development and production of X-band GaN high power RF HEMT and MMIC technology in collaboration with SSPL. He also spoke about GAETEC's close collaboration with ISRO for various space missions.

Mr Manish Hooda, Head Technology Development Division of Semiconductor Laboratory, Mohali apprised the gathering about the focus areas of technology development and manufacturing of wafers at SCL for space and strategic applications.

Under his supervision SCL was establishing state of the art Compound Semiconductor Manufacturing facility for developing devices based on III-V and II-VI semiconductor materials for high power switching and detector applications for India's futuristic space missions.

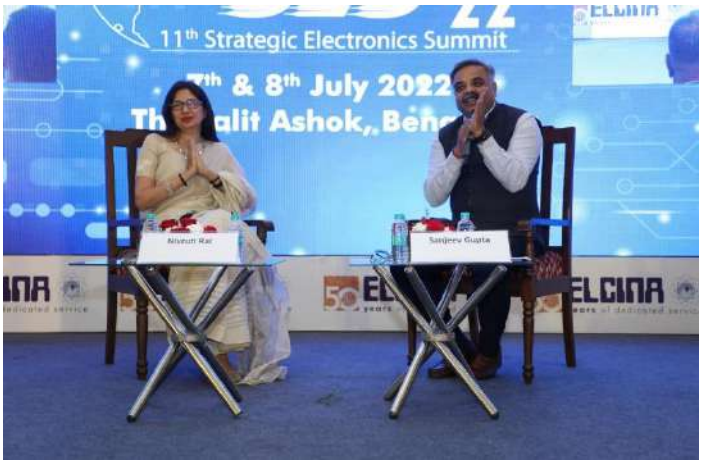
The panel discussed further on thrust areas where should India focus on in the next 5-10 years, how can India leverage its huge skilled workforce in the private and multi-national sector, to enable strategic thrust areas like in defense, communications for greater self-reliance and what can our academic institutions like the IITs and NITs do to enable this future?

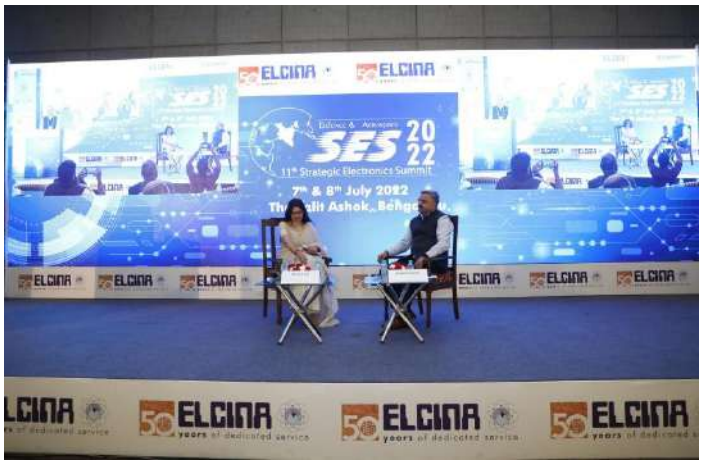
Day 1 – 7th July, 2022 - Session IV

Fireside Chat - on Intel's role in shaping India's Semiconductor & Strategic Electronics Ecosystem

Ms. Nivruti Rai, Country Head- Intel India

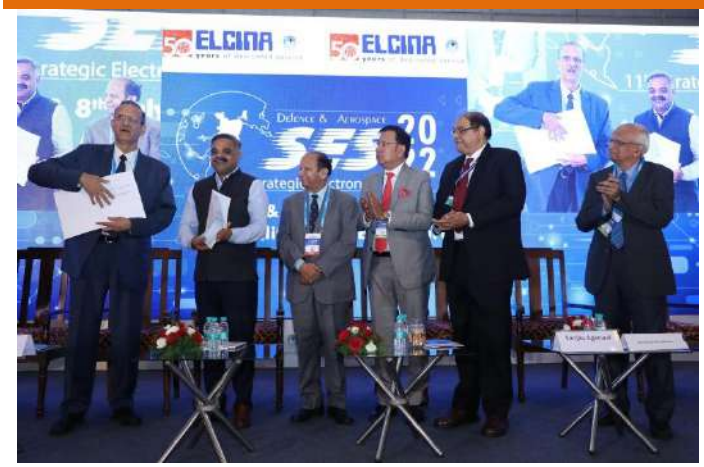
In conversation with :Mr. Sanjeev Gupta, CEO- Karnataka Digital Economy Mission (KDEM)





In this candid discussion with **Mr. Sanjeev Gupta, CEO – Karnataka Digital Economy Mission (KDEM), Ms. Nivruti Rai** shared her views about the role of technology in creating value and impairing the life of people by providing solutions to day-to-day challenges such as road safety, skill development, supporting innovation and spreading use of technology and Artificial Intelligence. Ms. Rai expressed high level of optimism about the view of semiconductor technology in India and how Intel had successfully established design and engineering sectors which were focusing on IoT, AI and automotive segments. Through its smart mobility solutions for costlier vehicles Intel had started working on India's semiconductor eco-system. These were also offering to solve road safety issues in India.

Day 1 – 7th July, 2022
"ELCINA-KDEM MoU Signing Ceremony"



ELCINA signed an MoU with Karnataka Digital Economy Mission (KDEM) which has been established by Government of Karnataka to support the digital economy in the State including IT, ESDM and Innovation and support investments in Karnataka. It also encourages industry to expand operations "Beyond Bengaluru" to spread development in emerging cities and districts. The two Organisations agreed to co-operate with focus on development of ESDM sector and promote Innovation, R&D and start-ups.

defennovation Awards 2022

It has been felt that there is a need for an industry Award to recognize the excellent work Indian companies are doing in the Strategic Electronics sector. ELCINA took the initiative and instituted defennovation Awards in the year 2018. ELCINA defEnnovation Awards aim to recognize outstanding companies who have made exemplary contribution in the field of Defence & Aerospace in Electronics Innovation, R&D, Design and Manufacturing. These awards propel the industry to excel in the field of defence and aerospace Electronics and bring dividends to the entire industry. They encourage the industry to continue efforts and introduce emerging technologies calling for excellence to prove equal to global competition.

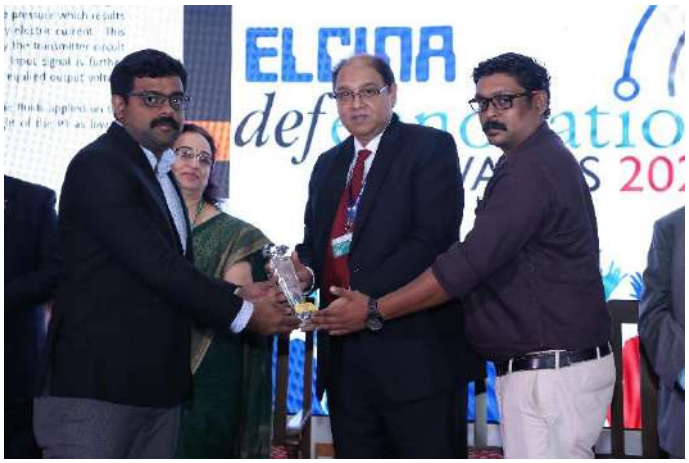
The awards were presented at the conclusion of the Inaugural Session by Dr Girish Deodhare, DG, ADA in the presence of Col HS Shanker, Gen AKS Chandele, Mr Sanjay Agarwal and Mr N Ramachandran.

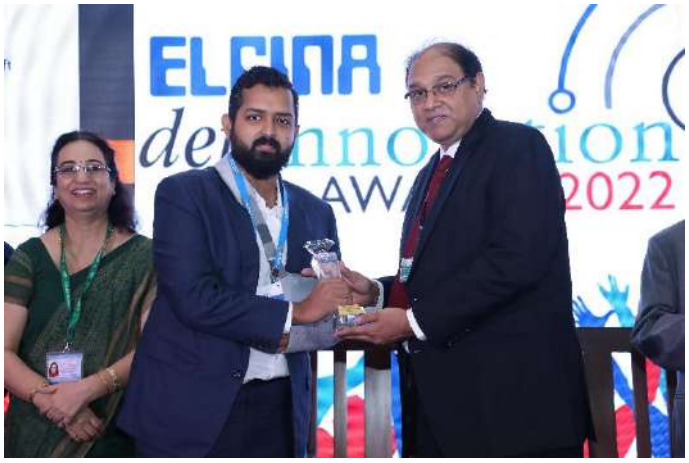
Winners of ELCINA defennovation Awards 2022

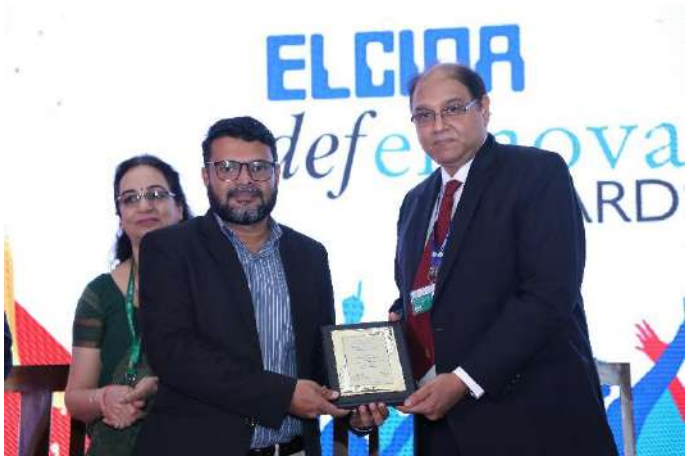
S. No.	Award Categories	Winners
1.	Excellence in Research & Development – Large Scale	M/S Defsys Solutions Private Limited - First Prize
2.	Excellence in Research & Development – Large Scale	Centre For Development Of Telematics (C-DOT) - Certificate
3.	Excellence in Research & Development – MSME	ComAvia System Technologies – First Prize
4.	Excellence in Research & Development – MSME	Electro Circuit Systems - Certificate
5.	Excellence in Indigenization – Large	Centre For Development Of Telematics (C-DOT) – First Prize
6.	Excellence in Indigenization – Large	TE Connectivity - Certificate
7.	Excellence in Indigenization - MSME	Electro Circuit Systems – First Prize
8.	Excellence in Indigenization – Start up	AI Aerial Dynamics – First Prize
9.	Excellence in Indigenization – Startup	Sunlux Technovations Pvt Ltd - Certificate
10.	Excellence in Manufacturing – Product – Large Scale	Kaynes Technology – First Prize
11.	Excellence in Manufacturing – Product – MSME	Matrix Comsec Pvt. Ltd – First Prize
12.	Best Startup	AI Aerial Dynamics - First Prize
13.	Best Startup	Verdatum A.I. Pvt Ltd - First Prize
14.	Best Startup	HW Design Labs Pvt. Ltd - Certificate

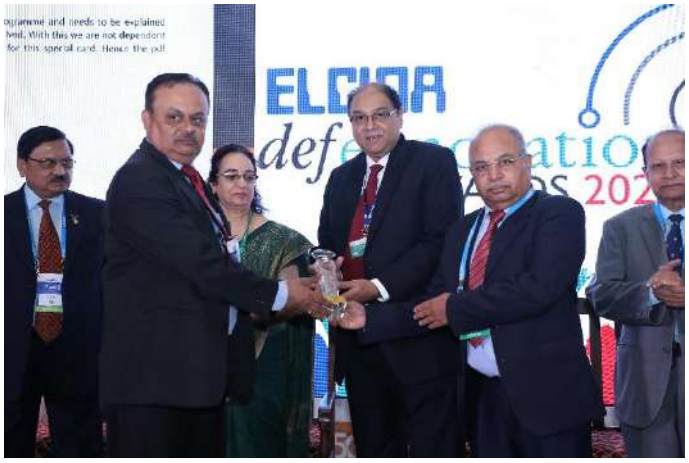
Day 1 – 7th July, 2022

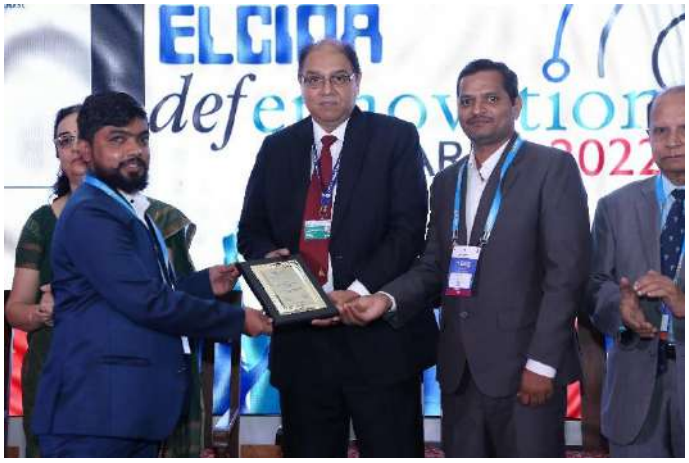
"Presentation Ceremony of defennovation Awards 2022"

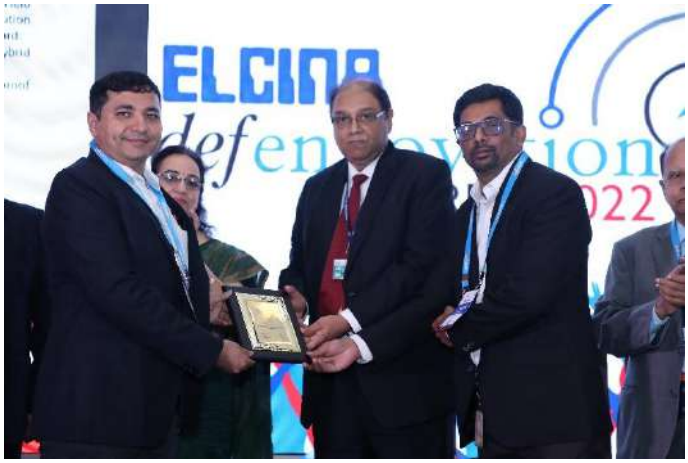












ELCINA
defennovation
AWARDS 2022

Day 2 – 8th July, 2022– Inaugural Speech
"Scenario for Electronics Industry in India"

Guest of Honour : Mr. Saurabh Gaur, IAS, Principal Secretary, IT, E&C, Skill Development & Training, Real time Governance, Govt. of Andhra Pradesh

Inaugural Keynote – Scenario for Electronics Industry in India - **Mr. Saurabh Gaur, IAS, Principal Secretary, IT, E&C, Skill Development & Training, Real time Governance, Govt. of Andhra Pradesh**

Mr Saurabh Gaur shared his views on the scenario for the ESDM sector based on his experiences as a development specialist with over 16 years in implementation of policies and schemes at the State and Central level. He was deeply engaged and instrumental in conceptualizing the Production Linked Incentive Schemes for various product segments. He was also involved in formulation of the Scheme for Development of Semiconductor Eco-System in the country.

In his keynote address, Mr Gaur highlighted Opportunity, Intent and Vision of the Government for future of the Electronics sector. Referring to the opportunity, he highlighted the following domains, Mobile Electronics US$ 120Bn, IT Hardware $50Bn, Hearables and Wearables $20-30 Bn, Consumer Electronics $30-40Bn, Emerging Tech $ 40-50 Bn and Metaverse –Augmented Reality and Virtual Reality $ 20 Bn.

These add up to a US$ 300 Bn + opportunity.

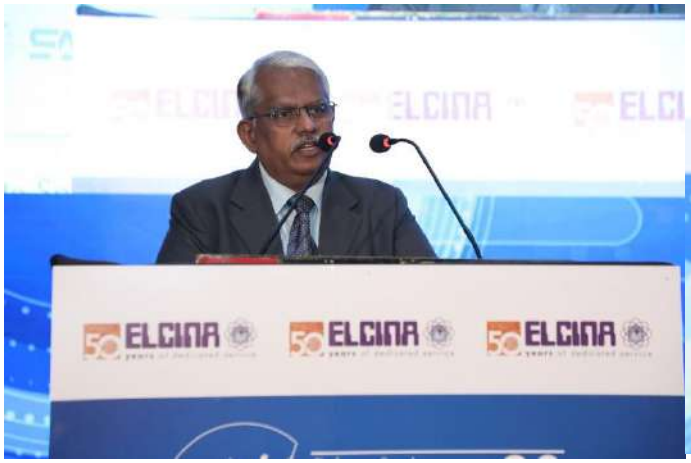
The Metaverse describes an imaginative 3D digital technology wherein actual and virtual worlds are incorporated by the use of technology including virtual reality (VR) and augmented reality (AR). Participation in the metaverse is already developing at an exceptional tempo in the gaming landscape.

Mr Gaur touched upon the intent of the government which is to launch electronics into a higher orbit and make India a global player through formulation and implementation of supportive and aggressive Schemes such as SPECS, EMC and PLI.

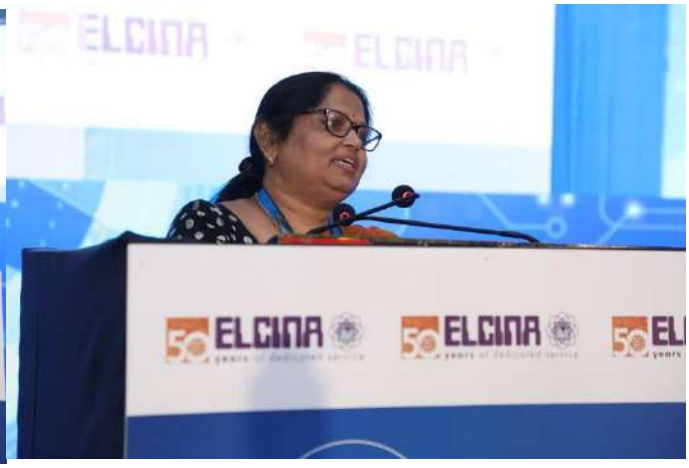
He invited entrepreneurs to Andhra Pradesh which was an aspirational State and the government was going all out to develop the eco-system in the State and ensure that investors had a positive and profitable experience in establishing and growing their business.

Day 2 – 8th July, 2022– Session I

"Technologies available for Development & Commercialisation – Role of MSME's



Dr. S Christopher, Ex-Chairman, DRDO & Former Director, Centre for Airborne Systems



Ms. Suma Varughese, OS, Director General MED, CoS&CS (MCC)

Mr. Bhaskara Rao .S, Group Leader, Center for Development of Telematics (C-DOT)

Mr. HG Chandrashekar, CMD, SASMOS HET

Dr S Christopher, Former Chairman, DRDO and Secretary Dept of Defence R&D, chaired the Session and invited the panelists.

Dr Suma Varughese, OS & DG, MED, CoS & CS (MCC) highlighted the importance of Electronics and Communications cluster amongst the 7 clusters. Being the project director for AWE&C, she focussed on the latest development of AWE&C. It is a complex system consisting of active and passive sensors. 60 LRUs have been developed for the system. It has been 80% indigenized by cost. AWE&C features on the positive list for indigenisation.

Mr Bhaskar Rao, Group Leader, C-DOT, highlighted that C-DOT is working on 6 project lines vis., Software application, Optical technologies, System technologies, Telecom security, Wireless technologies, Telecom technologies and Network management. For 5G development C-DOT, is planning a consortium with MSMEs open for tie up and to work together. It is also creating an infrastructure for testing for 5G.

Mr HG Chandrashekhar, the CMD of SASMOS shared the growth story of SASMOS from its first order in 2001 to its numerous successes today. Citing the examples of economies like the US, Israel and France, where there is an ecosystem where MSMEs, start-ups and OEMs work together, he emphasized that the need of the hour is to create ecosystem and comprehensive capability plan.

Certain challenges highlighted for MSMEs:

- When DRDO asks to make small change in product, it takes time to resolve it for which MSMEs need constant support. There is a need to have plan for lifetime support.
- the certification gap and the lengthy process needs to be relooked at.

Dr Christopher the Session Chairman brought out the following statistics through discussion and deliberations:

- 45% of aircraft cost is from electronics onboard
- MBT consists of 68% of electronics by cost% of electronics in Telecom side

Day 2 – 8th July, 2022– Session II
"Space Sector - Opportunities for Manufacturing & Commercialisation"

Session Moderator : Mr. Anil Prakash
Director General, SatCom Industry Association

Dr. Subba Rao Pavuluri, Managing Director
Ananth Technologies Limited

Mr. Sudheer Kumar, Director, CBPO, ISRO

Mr. Kranthi Chand, Lead – Strategy and Special Projects Dhruva Space

- **Mr. Anil Prakash** stared the session with his opening remarks and introducing the speakers. Also highlighted the importance of this sector which recently has attracted the attention of private sector and start-ups. Though companies like Ananth Technologies have been working for long time, still there are only handful of the private sector doing significant work independently. He believes that the space sector will lead india in next century. What IT has done in the 20th century, the space will do in the 21st century for India.

- **Dr. Subba Rao,** having extensive experience in the space sector, his company ATL involved in Design, Development & Fabrication of Satellite Systems and complete assembly, integration, and testing of Satellites (AIT) for National & International markets; mentioned the vision of our senior scientist like Dr Vikram Sarabhai, Dr. Satish Dhawan etc to kick start the Indian space journey immediately after the independence. That time, there were no resources available, neither it was the priority of new nation, nor its utility was clear to the common man, still those legends could see the future.

- Today when all these components are available and the sector is open for private industry, literally sky is the limit. Government need not to spend for the space program development today. India has the talent and experience available and now Private sector is ready to invest in programs. He emphasised on a level playing field between private industry and govt agencies. ISRO, DRDOs has done great job in past, and their expertise is now available for the people of this country. With the funding available, expertise and experience of institutions, global linkages and enthusiasm of young start-ups, space sector is going to thrive in this country. There is immense market and innumerable opportunities are available for the private sector.

- **Mr. Sudheer Kumar, Director, CBPO, ISRO** touched upon the point that even the industry has the capability and can do the commercialization, whether it will do is a question. The space business is very risky and demand aggregation is needed. The Govt launchers sustained as it was the need of the nation. We were denied many technologies and ISRO with help of industry developed it over a period of 40-50 years. He suggested cluster-based approach for the private sector to sustain in the space business. Shared resources and project will maximise the yield for the companies. This collective approach will help Indian companies to grab the international market as their cost of production will reduce, logistics cost will be less, and multiple talent pools will be available. Also, developing the supply chain for the space projects will help many companies if they work in collaborative mode.

- **Kranthi Chand,** acknowledges the veterans like Dr Subba Rao, Col Shankar for setting up the stage where start-ups like Dhruva can play a role. They have contributed to developing an eco-system where space industry can flourish. ISRO initiated the space era in this country and the first industry collaboration for commercialization has happened as early as in 1971 by ISRO.

- The last two decades have changed many things in space sector. The use of commercial technologies and development in electronics manufacturing has opened new horizons for the satellite manufacturing. The demand is as high as 60000+ satellites to be launched in next 10 years and without participation of industry players it will be impossible to achieve it.

- The industry now has two choices, one to become a build to specs and two, going beyond, understand the requirement, do the R&D and either make that product or give it to someone who can build to specs. In India fortunately both types of industry are available. Infra & R&D both are required as infrastructure without R&D and R&D without infrastructure can not survive. Most of the start-ups do not have money to put up the infrastructure and depends on institutions like ISRO of companies like Ananth Technologies for the infra support. At the same time start-up can build the products which can be manufactured by the electronics industry and there the need of collaborative working comes in.

- The crux of the session was, Space sector has immense potential, institutions like ISRO has led the path of Indian space sector, developed many industries and now the time has come where all these can be integrated in a collaborative, cluster based approach to grab the international market making India the leader in the space tech.

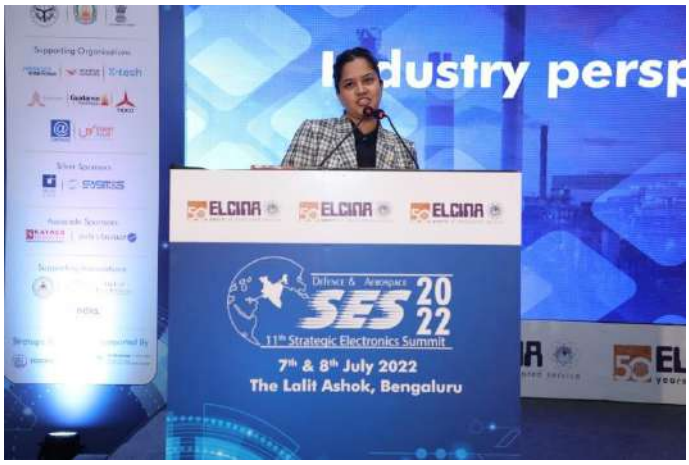
Day 2 – 8th July, 2022

Special Paper Presentation – Aerospace & Defence: An EMS Perspective: by Air Cmde KI Ravi (Retd), VP, Aerospace & Defence, Kaynes Technology

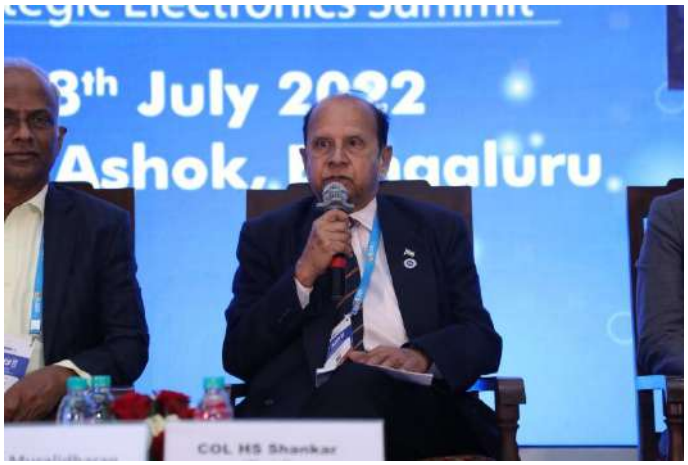
- Air Cmde Ravi provided a 360^0 view of Kaynes products and service offerings, how it started as a mid-size company and is now a public company with 10 manufacturing facilities across the country. He said that Kaynes is one of the top 5 EMS companies in India. Some highlights of his talk are:
- Need of the hour is to specialize in in high/low-medium volume mission and flight critical avionics
- Aim to achieve sustentative self-reliance
- A few growth factors of EMS industry are increasing passenger travel demand, expansion of regions due to improving economy, high military expenditure
- Cybersecurity, drones and satellites have the highest growth potential
- Major challenges in A&D for EMS are lack of access to technology, funding, low availability and high cost of raw material, complex certification process, low volume production related issues, high cost of infrastructure to meet new technology demands
- Kaynes has developed Parylene Coated Board which is superior from conventional boards in terms of electrical insulation, moisture barrier, corrosion, etc.

Day 2 – 8th July, 2022

Industry Perspective on Strategic Electronics: Foreign OEMs and Indian OEMs

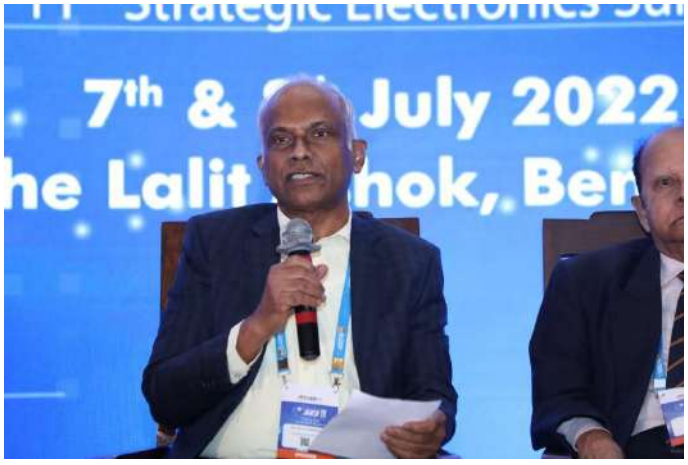


Session Moderator : Ms. Nayan Nag, Manager, Aerospace & Defence, Ernst & Young

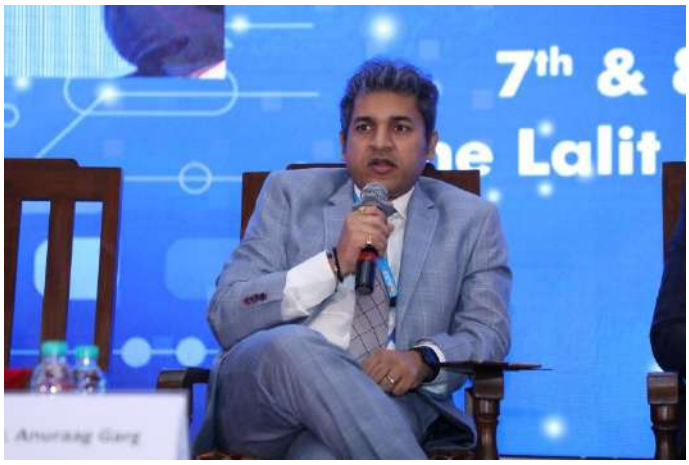


Col. HS Shankar (Retd.), CMD
Alpha Design Technologies Ltd.

Mr. Srinivasa Rao Dangeti, Senior Director (Engineering) - Honeywell Technology Solutions



Mr. R Muralidharan, CTO
Tata Advanced System Ltd.



Mr. Anuraag Garg, Director Strategy & Marketing
Thales India

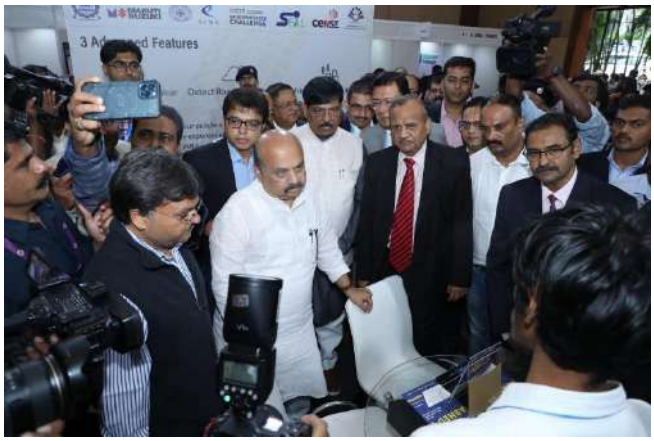
Mr. Ankur Gupta, Director Strategy
Airbus Defence & Space

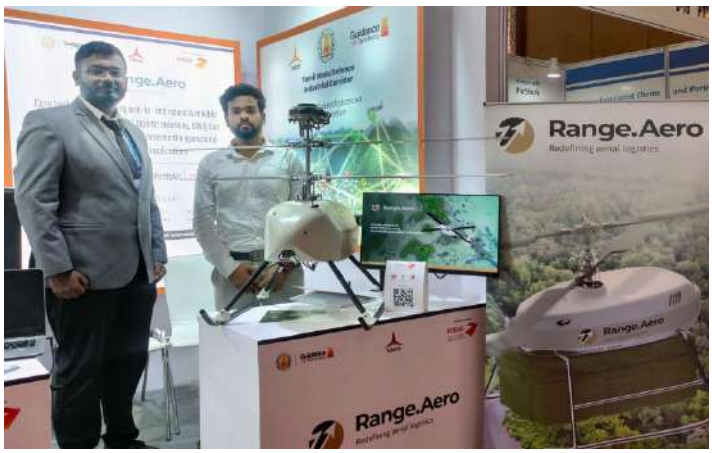
- **Col HS Shankar, CMD Alpha Design, the chair of the session**, gave his views on how to think beyond Atmanirbharta in Strategic Electronics (SE) i.e., exports. He said that 'no one can work in isolation' and reiterated the importance of working together in a collaborative manner. Some of his recommendations to addresses export markets are forging relationships with target countries, tie-ups with international companies to jointly address global demand, bridge the gap for technology. He shared with the gathering that of the INR 430 crore worth of exports that Alpha Design does, INR 370 crore is through offsets. He detailed a case study of BEL initiating a sale of radars to Iran some years ago. Here he mentioned that RBI guidelines say that of the planned cost, 30% can be presented as marketing expenses. These guidelines still prevail. He gave another example of Malaysia where the RFP ask says that minimum 11% of cost/profit is to be given to the local consultant for marketing support.
- Some highlights of the address by **Mr Anurag Garg, Director, Strategy and Marketing, Thales**:
  - Through its presence in India Thales has generated 1800 direct jobs, 1100 indirect jobs
  - Along with JVs, it has more than 70 strategic partners in India
  - The Nagpur facility is the only facility outside India working on radars and electronic warfare systems
  - To reduce imports, it is vital to recognize the gap in SE, move away from build to print
  - Investment in R&D is also crucial. For example, Thales, an Euro 16 bn company invests Euro 1 billion in R&D
- **Mr Ankur Gupta, Director, Strategy, Airbus Defence and Space**, introduced the three segments of Airbus i.e., commercial, helicopters, and defence and space. In response to the moderator's question, he gave his remarks on the FDI limit being enhanced to 74%. He said that the business case is what drives how much FDI shall be ideal to realize the goal. A program guides the JV. Airbus has won the C295 contract under which it has to discharge offset obligations for the next decade. While targeting offsets, Indian companies should look beyond that and develop strategy/business case to sustain themselves after offsets. Airbus has large SE companies in its supply chain. It is advisable for MSMEs to engage with these large companies as tier-2/tier-3 suppliers. Euro 0.5 billion is sourced from India annually by Airbus.
- Some highlights of the address by **TASL CTO, Mr R Muralidharan** on 'Engineering strategic systems and Atmanirbharta':
  - Paradigm of systems and technologies is changing. It is becoming more and more software oriented. AI/ML are here to stay. There are books for 10th standard students for AI/ML – this is how critical these technologies have become
  - GoI has launched a policy on AI
  - While aerospace and defence are booming with AI, automotive and civil sectors are also taking lead
  - Standards get obsolete and should be looked into
- **Mr Srinivasa Rao Dangeti, Senior Director (Engg),** Honeywell technology solutions said that it is the largest R&D institution in India. HTSL is known for its active encouragement to inculcate culture of developing new technologies and filing for patents. 1/3rd of the global patents come from India. He said that Honeywell is actively engaging with the IAF. The takeaway for the audience was that engaging with the end user while developing solutions is helpful. The GoI/ Indian Armed Forces are hand-holding and interacting with Industry.

Exhibitors @ SES 2022

1. AB Circuits and Research Labs
2. Abyom SpaceTech & Defence Pvt ltd.
3. ADDEV Materials Private Limited
4. AI Aerial Dynamics
5. AIIDE, Centre of Excellence
6. Amphenol Interconnect India Pvt Ltd
7. Anritsu India Pvt Ltd
8. Assam Electronics Development Corporation Ltd.
9. Big Bang Boom Solutions Pvt Ltd
10. Big Cat ireless
11. Blunav Technologies Pvt. Ltd.
12. Brady Corporation
13. Carbon Light Pvt. Ltd
14. Centre for Development of Telematics (C-DOT)
15. Centre of Excellence for Products Based on Li-ion Cells (Post-Cell)
16. CEQU Labs
17. CHIPSPRIT Technologies Pvt Ltd
18. ComAvia Systems Technologies Pvt Ltd
19. Continental Device India Pvt Ltd
20. CSIR – Central Electronics Engineering Research Institute (CSIR-CEERI)
21. Datum Advanced Composite Pvt. Ltd
22. Digital University Kerala
23. Directorate of Indigenization (DOI), Army
24. Electronics Corporation of India Limited (ECIL)
25. Envisys Technologies Pvt Ltd
26. EyeROV(IROV Technologies Pvt Ltd)
27. Fabheads Automation Private Limited
28. Government of Uttar Pradesh, Department of IT & Electronics
29. HPRCSE Lab, (IIITDM)
30. HW Design Labs
31. IPC India
32. JV Micronics
33. Kampfer Automation Private Limited
34. Kaynes Technology India Limited
35. LDRA Technology Pvt Ltd
36. Lekha Wireless
37. Meander Spectra Private Limited
38. MEL System & Services
39. Nvent Electrical Products India Pvt Ltd
40. Okulo Aerospace Private Limited
41. Passenger Drone Research Private Limited (PDRL)
42. Policybazaar Insurance Brokers Pvt. Ltd.
43. Qmax Test Equipments Pvt. Ltd
44. Range Aero Pvt. Ltd.
45. Rotary Connectors Private Limited
46. SatCom Industry Association
47. Samriddhi Automations Pvt Ltd "Sparsh"
48. SASMOS HET Technologies Limited
49. Scientific Mes-Technik Pvt Ltd
50. SGS Tekniks Manufacturing Pvt Ltd
51. SGPGI, Medtech Centre of Excellence
52. Tata Advance System
53. Torus Robotics Pvt Ltd
54. Verdatum AI
55. Vyamanik Aerospace
56. XYMA Analytics Private Limited

Glimpses of Exhibition Stalls @ SES 2022





SES 2022 in News

CM inaugurates 11th Strategic Electronic Summit – Defence and Aerospace - 1 min read

Thursday, July 7th, 2022 at 6:31 PM

Team NK

Bengaluru: Chief Minister Basavaraj Bommai inaugurated Electronics Association of India organised 11th Strategic Electronic Summit – Defence and Aerospace in the City on Thursday July 7. Large and Medium Scale Industries Minister Murugesh Nirani, Industries Department Additional Chief Secretary E. V. Ramana Reddy and others were present.

ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಅಸೋಸಿಯೇಷನ್ ಆಫ್ ಇಂಡಿಯಾ ಬೆಂಗಳೂರಿನಲ್ಲಿ ಆಯೋಜಿಸಿದ್ದ 11ನೇ ಶೃಂಗಸಭೆಯನ್ನು ಮುಖ್ಯಮಂತ್ರಿ ಬಸವರಾಜ ಬೊಮ್ಮಾಯಿ ಉದ್ಘಾಟಿಸಿದರು. ಸಚಿವ ಮುರುಗೇಶ್ ನಿರಾಣಿ, ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿ ಡಾ. ಇ.ವಿ.ರಮಣರೆಡ್ಡಿ ಹಾಗೂ ಸಂಘದ ಪದಾಧಿಕಾರಿಗಳು ಪಾಲ್ಗೊಂಡಿದ್ದರು.

20:16 (IST)
07 JUL 2022

CM Bommai urges entrepreneurs in Electronics and R & D to invest in Karnataka

Chief Minister Basavaraj Bommai has called upon the entrepreneurs in the Electronics and R & D sector to use Karnataka as a springboard to fly high and take the state to a higher level.

The Chief Minister was addressing the '11th Strategic Electronics Summit(SES 2022)-Defence & Aerospace' organised by the Electronic Industries Association of India.

Karnataka is in the forefront in R & D with over 400 R & D centers of international fame having their presence in Bengaluru, more than any other city in the world can boast of. About 400 of the 500 Fortune Companies have their base here. If it is about electronics, then it has to be in Bengaluru, nowhere else. Bengaluru is like a springboard to fly high in this sector, Bommai said.

"We are the first state to have an exclusive Aerospace and Defence R & D policy. We have separate Semiconductor and Renewable Energy policy too. The new R & D policy would be approved in the next cabinet meeting. We want to encourage Research and innovation from a Garage level to higher institutions level. We will help them, incentivise them. I want a very creative society in my state. My dream of Karnataka is not just about a livelihood producing state, I want my state to produce a good life for the future through R & D. About 2000 acres of land has been reserved for Defence production and another 1000 acres for Defence and Aerospace manufacturing units. We are ready to extend all the help and cooperation for industrialists to set up their units here," Bommai said.

CM's call for entrepreneurs in Electronics and R & D

07-07-2022

Share

Bengaluru. July 7.
Chief Minister Basavaraj Bommai has called upon the entrepreneurs in the Electronics and R & D sector to use Karnataka as a springboard to fly high and take the state to a higher level.

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