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Soon, onshore doctors for injured Navy sailors on warships, submarines

By Chethan Kumar

Highlights:

- ***The Navy has recently placed an order to initiate the acquisition of a rugged portable tele-medicine system for healthcare management***
- ***The system consists of hardware to acquire vital parameters of patients through the Biomedical Data Acquisition System (BioDAS) and a military grade laptop***

Bengaluru: Soon, Indian sailors getting injured onboard warships or submarines will have access to onshore medical experts, a service the Indian Navy wanted for its warriors for quite a while.

The Navy, which has more than 130 ships and 10 submarines, has recently placed an order to initiate the acquisition of a rugged portable tele-medicine system for healthcare management on its warships and submarines.

While the system was designed and developed by DRDO's Defence Bio-Engineering and Electro Medical Laboratory (DEBEL) in Bengaluru, it will be supplied to the Navy by a Mumbai firm — Maestros Electronics and Telecommunications Systems Limited (METSL).

Work on the product had been going on for nearly a decade during which multiple user trials were also conducted. In 2015, the DRDO finally transferred the technology to METSL, a senior DRDO scientist associated with the project said.

Confirming this, METSL told TOI in an email: "The order is worth Rs 91 crore and the delivery begins in September and first set of units will be operational by December 2019."

The system consists of hardware to acquire vital parameters of patients — such as ECG, blood pressure, respiration rate, heart rate, oxygen saturation, and body temperature — through the Biomedical Data Acquisition System (BioDAS) and a military grade laptop.

"The system works on NAVY satellite network which has extremely limited bandwidth for noncore applications. The devices used are military grade or specially designed for these type of application. Most importantly it transmits data in real-time with bandwidth limitation," METSL said.

"The system can store and transmit annotated data, and can open up a real time live channel for high quality video conferencing. This data can be transmitted over various communication channels, and includes the capability to interface with satellites," the DRDO said in a statement.

DEBEL's system comprises indigenously developed BioDAS, and has been successfully demonstrated in extensive trials carried out in ships and submarines in various operational scenarios. "It is designed to operate in rigours of all naval environments," DRDO added.

At present, the Navy has one doctor onboard its vessels and in cases of all major injuries, the sailors need to be airlifted to one of the command hospitals, or a major military hospital that is closest since the onboard doctor is usually not a specialist.

The Navy itself has three command hospitals — INS Sanjivani in Kerala, INS Kalyani in Visakhapatnam and INS Ashwini in Mumbai — where sailors are taken.

METSL, which holds the DEBEL technology, will implement the project. A source from the company said that this would be a complete solution with multiple medical devices and software to support it. This will be a holistic system with the ability to record various vital parameters and also uses multiple scopes (equipment).

https://timesofindia.indiatimes.com/india/soon-onshore-doctors-for-injured-navy-sailors-on-warships-submarines/articleshow/69860467.cms

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DRDO appoints top UAV brain as CEMILAC Chief Executive

Bengaluru: The Defence Research and Development Organisation (DRDO) has appointed top UAV (unmanned aerial vehicle) scientist A P V S Prasad as the chief executive of the Centre for Military Airworthiness and Certification (CEMILAC).

CEMILAC is a pivotal arm of DRDO that provides airworthiness certification support to desi missions in addition to clearing upgrades and integration of imported and indigenous systems.

Prasad took charge on May 31 following the superannuation of P Jayapal.

Rustom brain

Prasad was earlier the Programme Director of Rustom-II UAV mission at Aeronautical Development Establishment (ADE), a DRDO arm mandated to develop unmanned systems.

Rustom-II is a MALE (medium altitude long endurance) UAV capable of undertaking missions for surveillance and reconnaissance. It is currently under development at ADE.

DRDO sources say that Prasad was earlier given the task to revive the Rustom-II project when it was moving at a slow pace. As PGD Rustom-II, he was responsible for getting the platform ready for its successful maiden flight from DRDO's Aeronautical Test Range in Chitradurga.

Techno-managerial skills

Prasad's techno-managerial skills and ability to convert challenges into solutions had caught the eye of DRDO top brass in Delhi.

He was the recipient of Scientist of the Year Award in 2016 in addition to various other recognitions in his career. He was also the recipient of the Lab Scientist of the Year Award in 1998.

Prior to moving to CEMILAC, Prasad was working in the Defence Avionics and Research Establishment (DARE), a DRDO wing that primarily looked into the needs of airborne electronic warfare and avionics systems for armed forces.

According to ADE insiders, Prasad has close to three decades of experience in design and development of various subsystems for UAVs. His expertise includes design and development of data links, avionics, payloads, software-defined radios, altimeters and airborne radars.

The 51-year-old scientist is among one of the youngest in DRDO to have been appointed to this top post.

Prasad's appointment as CE CEMILAC is a pointer towards the series of reforms being now put in place by the current DRDO regime.

Reforms set in

Many efficient scientists who were denied an opportunity to climb the career ladder earlier have been given a fresh look by the current DRDO top brass. Sources say that all these 'revival missions' are being executed with zero fanfare.

CEMILAC comes under the administrative purview of DRDO's Director-General Aero Cluster Dr Tessy Thomas.

At CEMILAC, Prasad has to oversee the airworthiness certification activities of many indigenous projects including aircraft, helicopters, UAVs, airborne stores, integration of weapons and upgrade programmes for imported fighters.

The first Tejas FOC (final operational clearance) fighter (SP-21) will be among the ongoing projects that would knock at the doors of CEMILAC for certification this year.

https://english.manoramaonline.com/news/nation/2019/06/20/drdo-appoints-top-uav-brain-as-cemilac-chief-executive.html

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Aeronautical experts to help design India's first indigenous aero engine

The workshop is to rekindle the interest in the youth towards designing an indigenous aero engine by seniors in the field, said T Mohana Rao, former Director of GTRE, DRDO

Bangaluru: Aerospace experts including retired members of the Defence Research and Development Organisation (DRDO), design and development manufacturers and aeronautical engineers will come together on one forum to design India's first indigenous aero engine. In the 'Need - Challenges - Preparedness' workshop of the Indian Aero Gas Turbine Engines organised by Society of Advancement of Aerospace Propulsion (SAAP), 60 experts and delegates across the nation will meet on June 22 at the Aeronautical Society of India.

Dr Kota Harinarayana, better known as the 'Father of India's Light Combat Aircraft (LCA)', former programme director, Aeronautical Development Agency (ADA); T Venkata Krishniah, Additional Director, Gas Turbine Research Establishment (GTRE); Dr CG Krishnadas Nair, President, Society of Indian Aerospace Technologies and Industries (SIATI) and former HAL Chairman; and Prof Dipankar Banerjee, former Chief Controller R&D (Aero), DRDO, will be among the speakers.

The workshop is to rekindle the interest in the youth towards designing an indigenous aero engine by seniors in the field, said T Mohana Rao, former Director of GTRE, DRDO. He called out to young engineers to break the existing monopolisation of the aero engine industry that is dominated by five countries. He said India was incurring a huge cost Maintenance Repair and Overhaul (MRO) of these engines which can only be done by the country that produces them.

http://www.newindianexpress.com/states/karnataka/2019/jun/21/aeronautical-experts-to-help-design-indias-first-indigenous-aero-engine-1993108.html