

## CHAPTER V: DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION

### 5.1 Extra avoidable expenditure by ANURAG

**Violation of the prescribed procurement procedure and allowing M/s ITI to execute the job through outsourcing at a higher price resulted in extra expenditure of ₹2.12 crore by Advanced Numerical Research and Analysis Group (ANURAG).**

Defence Research and Development Organisation (DRDO) Procurement Procedure 2006, stipulates that for non-proprietary items single tender system should be adopted with the approval of Competent Financial Authority (CFA) only when single response is available inspite of limited tendering on more than one occasion.

ANURAG designed and developed a 384 node Linux Cluster System under project “Center for High-Performance Computing and Research” (CHITRA) which was connected to all DRDO Labs via DRDO’s Rapid Online Network Access (DRONA) network in 2007. Due to speed limitation of DRONA network, it was proposed by ANURAG (March 2010) to upgrade the system as huge amounts of data could not be transferred. Accordingly, ANURAG proposed (June 2010) to upgrade the supercomputing facility by adding 300 computing nodes to the existing CHITRA facility at an estimated cost of ₹14.50 crore.

The existing system (CHITRA) had been installed by M/s ITI Limited Hyderabad (ITI) in 2007, through an open tender process. As ITI had successfully integrated and maintained the existing system, ANURAG proposed the upgradation on single tender basis through ITI only, in order to have a seamless upgradation.

In response to a tender enquiry, in September 2010, ITI quoted a price of ₹17.50 crore for upgradation of CHITRA computing facility at ANURAG. However, Tender Purchase Committee (TPC) considered the rates as high and negotiated the price to ₹16.38 crore.

Director General (DG) DRDO accorded financial sanction for ₹16.38 crore in December 2010 and ANURAG placed supply order (SO) on ITI at a cost of ₹16.38 crore. Initially, the delivery was to be completed by June 17, 2011 which was extended up to October 17, 2011. However, the firm supplied the system in parts from September 2011 to November 2011.

Our scrutiny in January 2012 revealed, that ITI had outsourced the entire job and placed back to back supply order at a cost of ₹14.26 crore on M/s Real Time Tech Solution Bangalore (RTTS). M/s RTTS was registered with ANURAG for electronics, software development, and supply of computers etc on the terms and conditions stipulated by ANURAG.

On this being pointed in audit in January 2012, ANURAG justified the SO on ITI on the ground that the existing system had been established, integrated and maintained by them successfully. ANURAG further added that above jobs needed multidisciplinary expertise which included configuration of high end servers, design of efficient cooling systems and design of optimal power distribution and that ITI had the requisite expertise for the same. Further, in February 2013, ANURAG stated that they were not aware of the sub-contract on RTTS by ITI and became aware of it only in April 2011. The statement was however, not factually correct as representatives from vendor associates of ITI, included member from RTTS who were to attend Price Negotiation Committee (PNC)/TPC meeting on behalf of ITI, in December 2010.

Our scrutiny further revealed that ITI was responsible only for overall supervision, control and management for the execution of the contract and the entire system including installation and commissioning was outsourced to RTTS. ITI by way of outsourcing of the work for DATA center design, power and cooling system including plumbing and mechanical work had earned 8 *per cent* net profit amounting to ₹1.24 crore on customer purchase order without any value addition.

The matter was referred to Ministry in December 2012 and Ministry in reply (October 2013) stated that ANURAG was not aware of association of RTTS with ITI for the upgradation work and any back to back arrangement with a third party. The reply is not factually correct as representatives from vendor associates of ITI, included member from RTTS who were to attend Price Negotiation Committee/TPC meeting on behalf of ITI, in December 2010.

Thus, the case revealed that ANURAG violated DRDO's Procurement Procedure by resorting to single tender instead of calling open tenders from other vendors registered in its vendor base. ANURAG as a result allowed ITI to execute the entire work at a higher price which resulted in additional cost of ₹2.12 crore.

## 5.2 Unwarranted procurement of CATIA V6 software

**The procurement of ten out of the 12 licences of CATIA V6 CAD/CAM software by ANURAG centrally at a cost of ₹11.05 crore without conducting a proper feasibility study/need analysis proved to be unwarranted as the software continuous to remain unused since its procurement in March 2011. Three beneficiary Laboratories incurred an expenditure of ₹1.38 crore on procuring different software despite the availability of centralised software for managing their activities.**

Laboratories (labs) of Defence Research and Development Organisation (DRDO) have been extensively using CAD<sup>25</sup>/CAM<sup>26</sup> facilities in design of Missiles, Combat vehicles, Aircraft engines, Airframes, Radar systems, Sonar systems, Naval systems, Electronic systems, etc. On the advice of the DRDO Headquarters, Advanced Numerical Research & Analysis Group (ANURAG)

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<sup>25</sup> Computer Aided Design

<sup>26</sup> Computer Aided Manufacturing

organized a workshop, in September 2010, to obtain the opinion of various DRDO labs on the use of CAD/CAM software centrally. Therefore, CATIA V6 software, a multi platform CAD/CAM commercial software suite developed by M/s Dassault Systemes, which enables advanced systems simulation, was identified as the software to be used.

In the workshop, 12 probable user labs were also identified who were to use the software. ANURAG would act as the nodal agency to host the software centrally in 'CHITRA' supercomputing facility for user labs to access this software on DRDO's network 'DRONA'.

Subsequently, the requirement was reassessed by ANURAG, in February 2011, and ten users were identified, which included six users originally identified and four new users. Even though only ten users had been identified, ANURAG, proposed to procure 12 licences of CATIA V6 software with hosting servers from M/s Dassault Systemes on a single tender basis.

After obtaining financial sanction from DRDO Headquarter, on 25 March 2011, ANURAG placed a supply order on M/s Dassault Systemes India Pvt. Ltd., on the same date, for the supply of CATIA V6 software with 12 user licences, at a cost of ₹11.05 crore with three years warranty from the date of installation and acceptance. The software was installed, inspected and accepted on 30 March 2011.

Audit scrutiny (January 2012) revealed that no proper feasibility study/ need analysis based on the existing availability of CAD/CAM software with various user labs and the specific additional functionality, as required by individual labs, likely to be available through acquisition of CATIA V6 software, was carried out before procurement. The Statement of Case for procurement of CATIA software, processed by ANURAG, was based on a general perception of numerous advanced features available in the software rather than on the specific requirement expressed by the individual labs. Further, there was nothing on record to indicate as to what were the other CAD/CAM softwares considered by ANURAG on specific parameters of performance before selecting the CATIA V6 as a CAD/CAM tool suitable for DRDO's requirement.

We also found (January 2012) that though ANURAG had installed the software licences in March 2011 itself, the software had remained unused in six out of the eight labs. In reply, ANURAG stated (July 2012) that the software had been made available on DRONA during April 2011 and eight users, who are expected to use 12 licences, had been informed about the availability of the software on DRONA. The reply is however not factually correct as ANURAG had informed the user labs about the availability of CATIA V6 only in February 2012, after being pointed out by Audit (January 2012).

We further observed that licences were eventually issued to only eight users, out of which only two labs were using the software. The other labs intimated Audit (April 2012 to March 2013) that the software was either not required or required at a later date. We also observed that three labs, viz. R&DE (E), RCI

and ASL had incurred ₹1.38 crore on purchase of different softwares, viz. Auto CAD Mechanised 2011 software, Solid Works 2011 Professional software and CATIA Hybrid Design-2 software between August 2011 and May 2012 i.e. after the availability of CATIA V6 on DRONA.

The matter was referred to Ministry in June 2013; their reply was received in October 2013. MoD stated in their reply that CATIA V6 Software was procured as part of DRDO's initiative to make available commonly used software modules to be accessed by any labs over DRONA and was not intended to be a fixed set.

The reply is however not factually correct as requirement for procurement of licence had been assessed specifically with reference to the needs of particular labs indentified by DRDO and the number of licences was procured accordingly. Thus the procurement of CATIA V6 CAD/ CAM was made without having conducted a feasibility/ need analysis as only two labs were using the same and the user labs had continued to procure different software despite availability of centralized software for managing their activities.

Thus, the procurement of ten out of the 12 licences of CATIA V6 CAD/CAM software by ANURAG centrally on a single tender basis at a cost of ₹11.05 crore without a proper feasibility study/need analysis was unwarranted as even after more than two years, the software continued to remain unused since its procurement in March 2011.

### 5.3 Procurement in violation of norms by DRDO

**In violation of the procurement procedure, DRDO procured (2007) a component required in production of NAG missile at a cost of ₹52.58 crore, in anticipation of an order from the Army, which resulted in blocking of Government money of ₹34.70 crore.**

As per General Principles of Purchase contained in the Defence Research & Development Organisation (DRDO) Purchase Management 2006, all expenditure on purchases will only be need based and Government funds will not be spent on anticipatory requirements, not having immediate use.

In August 2005, Defence Research & Development Laboratory (DRDL) initiated a Statement of Case for the sanction of funds for procurement of 400 Detector Dewar Cooling Assembly (DDCA), a critical component required in production of 'NAG' missile. A production line at Bharat Dynamics Limited (BDL), the production agency in this case, was established and production schedule chalked out. The missiles, on successful completion of user trials scheduled to be held in December 2005 and June 2006, and after completion of General Staff (GS) evaluation, were planned to be inducted in the Army by 2012. An Army project team, in September 2005, suggested negotiations at the earliest for the commercial deal for stock-piling but also indicated that the placement of the final order for procurement could await the successful completion of user trials.

In June 2006, Directorate of Materials Management, DRDO accorded the approval for procurement of 200 DDCA from M/s Sofradir, France at an estimated cost of ₹46.50 crore under Build up<sup>27</sup>. These were not intended to be used in the missiles in the development phase and hence, were not procured under project 'NAG'. A contract was concluded (January 2007) with M/s Sofradir, France for the supply of 200 DDCA at a cost of EURO 77, 80,000. The stores were received between July 2008 and July 2009 at a total cost of ₹52.58 crore. As per the contract condition, the stores had a warranty of 24 months from the date of delivery. The storage/shelf life of DDCA was about 10 years.

Subsequently, DRDL carried out a number of user trials in June- August 2009, June 2010 and July-August 2012. However, since problems were encountered in the performance of 'NAG' missile carrier during the user trials, the product was yet to be successfully tested (June 2013). It was further noticed that 68 out of 200 DDCA had been utilized so far (April 2012), out of which 37 had been used for trial purposes for the project 'NAG' and balance 31 for other projects.

We noticed (March 2009) that DRDO had procured 200 DDCA before successful completion of user trials in anticipation of final order from the Army in violation of the standard procurement practice and despite the recommendation of the Army project team to place the supply order only after successful completion of user trials and GS evaluation. We further observed (June 2013) that the project had been delayed and as against the target of June 2006, the user trials have been re- scheduled to summer of 2014. This resulted in expiry of half of the warranty and shelf life of DDCA already procured.

In reply to the Audit observation on procurement of DDCA(March 2009), Project Director (Project NAG) stated (March 2009) that the procurement had been initiated to avoid delay in initial production as DDCA is a long lead, critical component.

The reply is however, not acceptable since as recommended by the Army project team, the negotiations for commercial deal for stockpiling could commence prior to placing of an order by Army and not the procurement which was to be made only after successful completion of user trials.

Thus, the case reveals that in violation of procurement procedure, DRDO procured 200 DDCA without assessing the immediate requirement, at a cost of ₹52.58 crore in anticipation of an order from the Army for 'NAG' missiles resulting in blocking of Government money ₹34.70 crore for more than four years. Besides, the Army is yet to place the orders as even user trials have not been completed as of June 2013.

The matter was referred to the Ministry in June 2013; their reply was awaited (November 2013).

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<sup>27</sup> Expenditure sanctioned for purchase of scientific equipment and materials for Laboratories/Workshops and maintenance thereof.