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DNRD/05/4003/NRB/270
DRDO HQ
Naval Research Board
Directorate of Naval R&D
3rd Floor
DRDO Bhawan, Rajaji Marg
New Delhi - 110 011

17 Sep 12

The Principal / Director
K.S. School of Engineering & Management
Bangalore - 560062

SANCTION OF PROJECT UNDER NAVAL RESEARCH BOARD (NRB)

1. Under the powers vested in the NRB vide Government of India, Ministry of Defence, letter No.DNRD/0100/NRB/4179/D (R&D) dated 20 Aug 96, amended from time to time and DRDO/DBFA/FA/83226/M/01/2031/D (R&D) dated 30 July 2010 (Para 3.1), I am directed to convey the sanction of the Board for the following project:-

Title : "Design and Implementation of "Novel Sensor for Detection and Direction Finding of Sound Underwater".

Project No. : NRB-270/SSB/12-13

Pi : Prof. Prashil M. Junghare, Assistant Professor
Dept. of Electronics & Communication Engineering
K. S. School of Engineering & Management
Bangalore - 560062

2. Cost and duration of the project : Total budget for the project is ₹.24,89,200/- (Rupees Twenty four lakhs eighty nine thousand two hundred only) for 02 years duration. The breakup of fund for various activities of the project is as given below :-

(Cost in ₹. Lakhs)

<u>Head</u>	<u>1st Year /</u>	<u>2nd Year</u>	<u>Total</u>
Research Staff	2,88,000/-	2,88,000/-	5,76,000/-
Specific Equipment	8,50,000/-	1,50,000/-	10,00,000/-
Consumables	75,000/-	75,000/-	1,50,000/-
Contingencies	70,000/-	70,000/-	1,40,000/-
Travel (TA/DA)	75,000/-	75,000/-	1,50,000/-
Others	0	1,00,000/-	1,00,000/-
Sub Total	13,58,000/-	7,58,000/-	21,16,000/-
Institute Overheads @ 5%	3,73,200/-	0	3,73,200/-
Grand Total	17,31,200/-	7,58,000/-	24,89,200/-

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Principal / Director
K S School of Engineering & Management
Bangalore-560 062

Contd.....2/-

3. **Aim of the Project.** The specific aim of the project is design and implementation of novel sensor for detection and direction finding of sound underwater.

Release of Funds and Accounting

4. **Contingent bill (encl.1)**, duly completed, stamped and signed by the competent/ Executive Authority of the institution will be forwarded to Member Secy. NRB, for countersignature and onward transmission to PCDA (R&D), New Delhi for fund release. Duly filled in ECS proforma (encl.2) for direct crediting of amount through the CDA (R&D) may also be forwarded to NRB, if not already submitted.

5. Six monthly progress will be submitted by the PI as per encl. 3 to NRB. **Audited Statement of Accounts and Utilization Certificate (encl. 4)** duly certified by the executive financial authority of the institute for each financial year are required to be submitted by 30 Jun of the ensuing financial year. Excess expenditure, beyond the yearly sanction, unless authorized by NRB in writing, shall be the responsibility of the grantee institution.

6. **The date of receipt of the first installment** of the grant would be reckoned as the **date of commencement of the project** (unless otherwise specified), which has to be intimated to the Member Secy. NRB, without any ambiguity.

7. A separate account for the grant would be maintained and **interest earned thereon would be accrued** in the project account by the Institute. On completion of the project, the grantee institution should send the **unspent money** to Member Secy. NRB through a Cheque/Draft **in favour of CDA(R&D), New Delhi**. A list of inventory of equipment purchased out of NRB grant shall be intimated year-wise, along with its cost and source of procurement, to Member Secy. NRB. On completion of the project, the grantee institution would forward the consolidated list with request, if any, for retention of any equipment for another project or for in-house R&D.

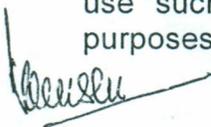
Review of the Project

8. The progress review of the project will be carried out periodically by the Scientific Computing Panel (minimum once in a year) during the panel meetings chaired by the Panel Head and/or as deemed fit by NRB.

9. **Ownership of Intellectual Properties.** As far as intellectual properties generated by this project are concerned, following conditions will apply: -

(a) The ownership of any intellectual properties generated by research performed under this grant, whether or not legally protected, shall vest in the grantee institution. The grantee institution shall promptly report to DRDO its intention to protect legally any such intellectual properties.

(b) DRDO shall be deemed to have an irrevocable and royalty-free license to use such intellectual properties, whether or not legally protected, for such purposes as DRDO may decide, keeping the grantee institution informed.



STATEMENT OF ACCOUNTS

(PERIOD: 1ST January 2013 – 16TH June 2016)

NAME OF THE INSTITUTE: K S SCHOOL OF ENGINEERING AND MANAGEMENT.

NRB Project No.	NRB-270/SSB/12-13	Project Title	Design and Development of Novel Sensor for Detection and Direction Finding of Sound Underwater
Name of Co-ordinator / PI:	Dr. P. KARTHIK	Project Sanction letter no. & date	DNRD/05/4003/NRB/270 & 17-09-2012

AUDITED STATEMENT OF ACCOUNT FOR THE PERIOD FROM JANUARY 2014 TO JANUARY 2015

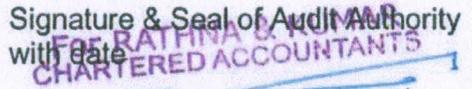
RECEIPT			PAYMENTS					BALANCE
Opening Balance	Receipts	Total	Research Staff /Travel*	Equipment/ Consumables*	Contingency / Others*	Overheads	Total Expenditure	
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
17,31,200	7,58,000	24,89,200	7,26,000	13,63,944	26,000	3,73,200	24,89,745	----
	Bank Charges					601		

- (i) Certified that the accounts in respect of the funds given by the MOD/Govt. of India have been audited by.....
- (ii) Certified that the expenditure from the grant has been audited by this office and it is certified by the that the grant has been utilized for the purpose for which it was sanctioned.


Signature & Seal of Co-ordinator/ PI
With date 30/06/16

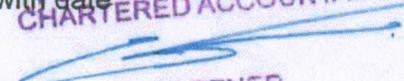

Signature & Seal of Registrar/
Finance/Accounts Officer with date

Signature & Seal of Audit Authority
with date


A. RATHNA & KUMAR
CHARTERED ACCOUNTANTS

To

1. The funding through the Co-ordinator
2. The Co-ordinator
3. File copy


PARTNER
A. RATHNA KUMAR
Membership No. 025576
RATHNA & KUMAR
CHARTERED ACCOUNTANTS
105/139/14, Narasimhaiah Gardens
17th Cross, 18th Main,
J.P. Nagar 5th Phase,
Bangalore - 560 078.

Fwd: SSB panel meeting Schedule

1 message

Kssem Principal <principal@kssem.edu.in>

Tue, Nov 22, 2016 at 12:31 PM

To: Karthik P Dr <karthik.p@kssem.edu.in>

----- Forwarded message -----

From: **Seetharamaiah P** <psrama@gmail.com>

Date: Tue, Nov 22, 2016 at 11:58 AM

Subject: SSB panel meeting Schedule

To: aparna <aparna.akula@csio.res.in>, "Babu A.V" <babu@nitc.ac.in>, "Dr. M. M. Ramya Professor - ANRO" <mmramya@hindustanuniv.ac.in>, Gargeshwari Anand <gargeshwari.anand@gmail.com>, P seetha Ramaiah <psrama@gmail.com>, "p. Karthik" <principal@kssem.edu.in>, "Prof. Debasish Roy" <royd@civil.iisc.ernet.in>, "R.K Misra" <r.k.mishra@ieee.org>, "s.koteswara Rao" <rao.sk9@gmail.com>, Shanthi Prince <Shanthi.p@ktr.srmuniv.ac.in>, Shovan Bhaumik <shovan.bhaumik@gmail.com>, Supriya MH <supriya@cusat.ac.in>

Dear all Pls,

PI find attached schedule of program for the NRB's SSB Pael meeting being held on 01 dec. 2016. PI attend without fail. All are invited to attend for the lunch.

PI email yr PPTs to the undersigned within this week end

Thanks and Regards

Dr.P.S. Ramaiah

Professor of CSE

Dept. of Computer Science and Systems Engg.

Andhra University

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Ongoing Projects Completed and closure report under Submission

S NO	Names of Project, PI and Institution	Time
1	Project no: 229/SSB/10-11 Hidden Markove Based (HMM) Based Target Classifier with Improved Success Rates. Dr. Supriya MH , Dept. of Electronics CUSAT, Kochi	9.45- 10.00
2	Project no: 261/SSB/11-12 Project Title: Acoustic Vector Sensor Array Processing for Detection and Localization of Targets in Shallow Ocean. Prof. G V Anand , Dept. of ECE, PES Institute of Technology, Bangalore	10.01- 10.15
3	Project no: 270/SSB/12-13 Project Title: Design and Implementation of Novel Sensor for Detection and Direction Finding of Sound Underwater. Dr. P. Karthik , Associate Professor, Dept. of ECE, K. S. School of Engineering & Management, Bangalore	10.16-10.30
4	Project no: 283/SSB/12-13 Design and Development of Protocol Stack for Underwater Acoustic Sensor Networks. Dr. A.V. Babu , Dept. of ECE, NITC Campus (Post), Calicut.	10.31-10.45
5	Project no: 285/SSB/12-13 Studying Effects of Cloak Surrounded Antennas on SDR Performance Using Neuro-Space-Mapping. Prof. Rabindra K. Mishra , Dept. of ECE, Berhampur University Bhanja Bihar, Berhampur , Odisha	10.46-11.00
6	Project no: 295/SSB/12-13 Project Title: Intelligent System for Adaptive Enhancement of Underwater Images for Accurate Object Recognition. Dr. M.M. Ramya , Associate Professor, Dept. of Computer Applications, Hindustan University, Chennai	11.01-11.15
7	Project no: 296/SSB/12-13 Project Title: Sparse Grid Quadrature Filter, With Application in Bearings-only Passive Underwater Target Tracking Problem. Dr. Shovan Bhaumik , Assistant Professor, Dept. of Electrical Engineering, Indian Institute of Technology Patna.	11.16-11.30
Tea Break(11.31-11.45)		
<u>Ongoing Projects under Progress</u>		
S NO	Names of Project, PI and Institution	Time
8	Project no: 305/SSB/13-14 New Particle Filtering and Stochastic Search Techniques Applied to the Single-and Multiple –Target Tracking of Slow Moving Objects in the Presence of Clutter. Prof. Debasish Roy , Professor, Dept. of Civil engineering, Indian institute of science, Bangalore	11.46-12.00
9	Project no: 355/SSB/14-15 Design Development of Embedded Computer Based Active Sound and Vibration Control Using Hybrid Control Architecture. Prof. Seetha Ramaiah , Dept. of CS&SE, Andhra University, Visakhapatnam	12.01-12.15
10	Project no: 362/SSB/15-16 Advanced Submarine Target Motion Analysis. Dr.S. Koteswara Rao , professor, KoneruLakshmaiah University Green Fields, Vaddeswaram, Guntur, A.P.	12.16-12.30
11	Project no: 364/SSB/15-16 Radiometric Image Analysis of Marine Platforms Using Infrared Thermograph. MS. Naga Vara Aparana Akula , Scientist, Dept. of CID, CSIR, Chandigarh	12.31-12.45
12	Project no: 378/SSB/16-17 Design, Development and Testing of an Optical Transceiver for Establishing Underwater Optical Wireless Audio-Video Communication. Prof. Shanthi Prince Faculty of Engineering and Technology,SRM University, TamilNadu.	12.46-13.00

Lunch Break= 13.00-14.00

All PIs are invited for LUNCH. The Program may run to AN also based on environmental situations.