KSCST

Karnataka State Council for Science and Technology

Indian Institute of Science Campus, Bengaluru - 560 012

Telephone: 080-2334 1652, 2334 8848, 2334 8849 ♦ Telefax: 080-2334 8840
Email: office@kscst.iisc.ernet.in, office@kscst.org.in ♦ Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. S. G. Sreekanteswara Swamy
Executive Secretary

27th March 2017

Ref: 7.1.03/SPP/1112

The Principal
Alva's Institute of Engineering and Technology
Shobavana Campus,
Mijar, Moodbidri - 574 225.
Mangaluru.

Dear Sir,

Sub : Sanction of Student Project - 40th Series: Year 2016-2017
Your Project Proposal Reference No. : 40S_BE_0851

Ref : Your Project Proposal entitled " **LI-FI BASED INDOOR NAVIGATION SYSTEM FOR PHYSICALLY IMPAIRED PEOPLE**

I am happy to inform that your project proposal referred above, has been approved by the Secretary, KSCST for "Student Project Programme - 40th Series" and has been sanctioned with a budgetary break-up as detailed below:

Student / s	Mr. Praveen Kumar C and others	**Budget**	**Amount (Rs)**
		Materials/Consumables	4,500.00
Guide/s	Mrs. Jyothi Pramal	Labor	-
		Travel	-
Department	Electronics And Communication Engineering	Miscellaneous	-
		Report	500.00
		TOTAL	5,000.00
	Rupees Five Thousand		

The following are the guidelines to carryout the project work :

a) The project should be performed based on the objectives of the proposal sent by you.

b) The project should be completed in all respects and one copy of the hardbound report along with softcopy of the full report in a CD (.pdf format) should be submitted to KSCST.

c) Any change in the project title and objectives, etc., or students is liable to rejection of the project and the amount sanctioned needs to be returned to KSCST.

d) Please quote your **project sanction reference number printed above** in all your future correspondences.

e) **Important:** After completing the project, 2 to 3 page write-up (synopsis) needs to be sent by e-mail [spp@kscst.iisc.ernet.in] and should include following :

1) Title of the project
2) Name of the College & Department
3) Name of the students & Guide(s)
4) Keywords

5) Introduction / background
(with specific reference to the project, work done earlier, etc) - about 20 lines
6) Objectives (about 10 lines)
7) Methodology (about 20 lines)
(materials, methods, details of work carried out, including drawings, diagrams etc)
8) Results and Conclusions
(about 20 lines with specific reference to work carried out)
9) Scope for future work (about 20 lines).
(Note: The write-up (Synopsis) should be sent with the approval of project guide. The softcopy of the write-up, in MS Word format, should be sent by e-mail (spp@kscst.iisc.ernet.in). In your e-mail, please also include project proposal reference number and title of the project.)

e) Projects selected for Seminar / Exhibition will be awarded.

The sanctioned amount will be sent separately by our Accounts Department.

The sponsored projects evaluation will be held in the Nodal Centre and the details of the nodal centre will be intimated shortly.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.iisc.ernet.in

Thanking you and with best regards,

Yours sincerely

(SGS Swamy)

Copy to:
1) The Head of the Department of
Electronics And Communication Engineering
Alva'S Institute Of Engineering And Technology
Shobavana Campus,
Mijar, Moodbidri - 574 225.
Mangaluru.

2) Mrs. Jyothi Pramal
Department of Electronics And Communication Engineering
Alva'S Institute Of Engineering And Technology
Shobavana Campus,
Mijar, Moodbidri - 574 225.
Mangaluru.

3) The Finance Officer, KSCST, Bangalore

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JnanaSangama" Belagavi – 590 010

PROJECT REPORT ON

"LIFI BASED INDOOR NAVIGATION SYSTEM FOR VISUALLY IMPAIRED PEOPLE"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
ATMANAND.A.H	4AL13EC012
NAGAVENI A MULLUR	4AL13EC045
PATTEM JOSHNA RAMESH	4AL13EC051
PRAVEEN KUMAR.C	4AL13EC060

Under the Guidance of
Mrs. JYOTHI PRAMAL
Assistant Professor
Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225

2016-2017

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI- 574 225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled **"LIFI BASED INDOOR NAVIGATION SYSTEM FOR VISUALLY IMPAIRED PEOPLE"** *is a bona fide work carried out by*

ATMANAND.A.H	**4AL13EC012**
NAGAVENI A MULLUR	**4AL13EC045**
PATTEM JOSHNA RAMESH	**4AL13EC051**
PRAVEEN KUMAR.C	**4AL13EC060**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2016–2017. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

15/5/17	D.V. 15/05/17	
Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mrs. Jyothi Pramal	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D.	PRINCIPAL
	Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Li-Fi stands for Light-Fidelity. Li-Fi technology provides transmission of data through illumination by sending data through an Light Emitting Diode(LED) light bulb that varies in intensity faster than the human eye can follow. This project focuses on developing a Li-Fi based system and analyzes its performance with respect to existing technology. Visible Light Communication (VLC) using LEDs is a technology that provides an opportunity for high-speed low-cost wireless communication.

Wireless communication is an essential part of next generation wireless indoor communication system. For an indoor communication number of users and their device are increasing very rapidly so as a result capacity of frequency spectrum to accommodate further users in future is limited. Also it would be difficult for service providers to provide more user reliable and high speed communication so this short come can be solve in future by using Li-Fi based indoor communication system. Li-Fi which is an emerging branch of optical wireless communication can be useful in future as a replacement and backup of Wireless Fidelity (Wi-Fi) for indoor communication because it can provide high data rate of transmission along with high capacity to utilize more users as its spectrum bandwidth is much broader than the radio spectrum.

The aim is to design, implement and test a prototype navigation system to safely guide blind people to travel from one point to another using the shortest path possible, as a result this proposed prototype will help a visually impaired people identifying the location in indoor system along with audio play black system, where a blind person can hear through the ear phones about the location where he is, using Li-Fi technology.