



2021 IEEE R10 EXCOM Virtual Meeting

Date: 10 January 2021

2020 HTA R10 Committee Report

Dr. Jing Dong
2019-2020 R10 HTA Committee Chair

2020 R10 HTA Committee Report

Committee Structure

1.Chair: Jing Dong

2.Members:

1. Huynh Thi Thanh Binh (Vietnam)
2. Zhiqian Bo (China)
3. Hussain Fahh Mehdi (Malaysia)
4. Emi Yano (Japan)
5. Supavadee Aramvith (Thailand)
6. Ramalatha Marimuthu (India)

Objectives

1. To encourage IEEE members, young engineers, students, WIE to work in the HT areas, especially in regional level
- 2.To encourage R10 Sections to contribution in the Humanitarian Technology areas.
- 3.To create the awareness among the IEEE local volunteers regarding the significance of the use of technology for the humanitarian through Webinar by very experienced SIGHT Volunteers/International Humanitarian Organization

Projects / Tasks

1. Organizing TENGUMCH2020 by Assisting the R10 HTC & HT track in R10 Flagship Conferences
2. R10 Initiate Program Supporting Fund
3. Recognizing and rewarding volunteers for their HTA
4. Training and Connecting with Sections Volunteers and helping members to promote Humanitarian efforts
5. Interactive with IEEE HTC and rebuilt R10 HTC website

Outcomes

Project 1:

Received 12 applications and 3 were selected to fund support

Project 2:

Received 7 applications and 2 were selected for funding

Project 3/4/5

HT Tracks on TENSYP2020, SYLW2020,TENCON2020,HTC2020
a SIGHT from NZN has established this year ~ and one project was funded with HAC

Finance

1. Project 1: USD4000
2. Project 2: USD3000
3. No travel expense

Total Finance : USD7000

Details of Project 1

TENHUMCH2020

- Review the criteria and call for proposal: First Week of March, 2020.
- Call for proposal : Last week of March
- Deadline for submission: October ,2020
- Received 12 applications and 3 were selected to fund support
- Upto \$1000 per project

R10 TENHUMCH2020 Project Winners:

	Project Title	Section	Fund Award
No.1	“3D PRINTED KIT FOR THE TECHNOLOGY DEPRIVED UNDERPRIVILEGED TO COMBAT COVID19”	Bangalore Section	US1000
No.2	“Advanced Technology for Humanitarian Demining in Cambodia”	Sendai Section	US1000
No.3	“TRACK & TRACE MANAGEMENT SYSTEM FOR DEMENTIA AND INTELLECTUAL DISABILITIES”	Hyderabad Section	US1000

All funds request will be submitted to R10 Treasurer around 15th, Dec.2020

Details of Project 2

HT Support Fund 2020

- Review the criteria and call for proposal: First Week of March, 2020.
- Call for proposal : Last week of March
- Deadline for submission: October ,2020
- Received 7 applications and 2 were selected to fund support
- Upto \$2000 per project

IEEE Initiate Program Supporting Fund (2020) Application Form

Inviting proposals for this focused volunteer support. The proposal should be a technology proposal.

Email address: msuresh

Project: Dr. Suresh

IEEE Member Number: 9073200

Section: SIGHT-IE

IEEE Initiate Program Supporting Fund (2020) Application Form

Inviting proposals supporting impactful humanitarian activities at the regional and local level. The goals for this supporting fund is to connect with R10 sections and councils to interact with international HT members and pre-design of R10 HTC for maximum activities for IEEE members and volunteers, promote and train volunteers, and networking/meeting of hundreds of members within R10. The proposals must demonstrate consultation with and a clear understanding of the needs of target communities, and demonstrate a needs-driven approach to strengthening local capacity through technology deployment. The R10 HAC committee will review all submissions and support the best proposal up to USD2000 per proposal.

Email address: nasimunnabi@ieee.org

Project Contactor Name: A N M Nasimnabi

IEEE Member Number for the Contactor: 92741897

R10 HTA Initiate Program Support Fund 2020 Winners

	Program Title	Section	Fund Support
No.1	"Intelligent Health Monitoring System for the People during COVID-19 Outbreak"	Vizag Bay Section	US2000
No.2	"Community empowerment: Promoting Safe and Sustainable Food Production"	Malaysia Section (Sarawak subsection)	US2000

All funds request will be submitted to R10 Treasurer around 15th, Dec.2020

Project Reports

R10 TENHUMCH2020 Project 3D PRINTED KIT FOR THE TECHNOLOGY DEPRIVED UNDERPRIVILEGED TO COMBAT COVID19

IMPLEMENTATION
PARTNERS



IEEE SIGHT
Special Interest Group on
Humanitarian Technology
BANGALORE SECTION

IEEE
Region10



Humanitarian Activities
Committee

SOG TARGETS



IEEE SIGHT Bangalore Section
Dr. Abhishek Appaji
SIGHT Chair, IEEE Bangalore Section
B.M.S. College of Engineering, Bengaluru INDIA

IEEE
Region10

R10 TENHUMCH2020 Project 3D PRINTED KIT FOR THE TECHNOLOGY DEPRIVED UNDERPRIVILEGED TO COMBAT COVID19



IMPLEMENTATION PARTNERS



IEEE SIGHT
Special Interest Group on
Humanitarian Technology
BANGALORE SECTION



SOG TARGETS



Outcomes

- Approximately 100 households stand benefitted from this project which in turn helps in breaking the chain of COVID19 pandemic spread especially in the underserved community.



- This project also sensitizes the community about hygiene through the usage training which will be carried by the IEEE Volunteers and partner NGO.
- The NGO will be adapting the technology for scaling in other slums adopted by them.
- A detailed survey is conducted on a suitable sample size from the distributed population in urban slums and further analysis will be carried out for replication and scaling.
- These details along with key performance indicators will be shared with the appropriate government agencies and our partner NGOs.
- We also discussed the analysis of this project with the government for adopting this project through the local authorities.
- The design files are attached. It is simple in design and can be mass distributed after the successful implementation of this project for scaling purposes.
- 100+ kits were distributed out of which almost 100+ have answered the survey after 1 week of distribution of the kit. The survey results are attached.
- The above claim is in line with the results obtained from the analysis of the data collected from the users.



Project Reports

TRACK & TRACE MANAGEMENT SYSTEM FOR DEMENTIA AND INTELLECTUAL DISABILITIES⁴²

ABSTRACT⁴²

The purpose of this project is to design and construct a GPS tracking device that can be tracked from the internet. This project consists of four parts. The first part is a mobile device with an embedded GPS and wireless Internet connection to transmit its current location. The second part is a web server that will receive the data, parse it and store it for access over the internet. The third component is the user interface that will allow others to visually identify the current location of the device. To view its location, one could use any device that can connect to the internet such as a desktop computer, laptop, or cell phone. The data available through a browser includes a scalable map of the surrounding area, latitude, longitude, speed and altitude of the hand held device. The fourth part is the heart beat sensor which senses the heartbeat of the user.⁴²

In the proposed system, Arduino will be the microcontroller and there will be a solar panel for observing the solar energy and to store in the rechargeable battery and give supply to the whole kit. GPS is used for tracking location of the person or to obtain the latitude and longitude of the location so that one can easily find the location. GSM is intended for sending the location to the particular person and heart beat sensor measures the heart beat rate that will be displayed. Also, the project supports charging using solar cell whenever user wants to charge the device.⁴²

⁴²

OBJECTIVES⁴²

The Main Objective of this system is to develop a Track & Trace Management System Integrated with Accurate GPS Location Data Pinpointing using Internet of Things.⁴²

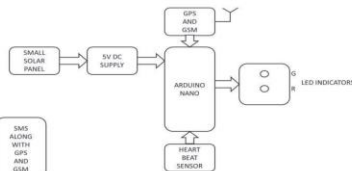
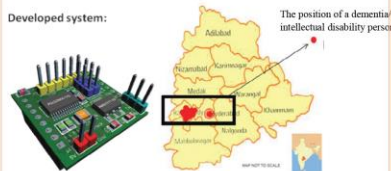
⁴²

To design a GPS tracker this uses to track the position of a dementia or intellectual disability person. It also senses the heartbeat of a person. This is mainly for the dementia people to track their location. This report presents the design of a reliable and accurate GPS tracker. This system utilizes the GPS for finding the location in terms of longitude and latitude. The proposed system is standalone, accurate, durable, reliable, and cost efficient.⁴²

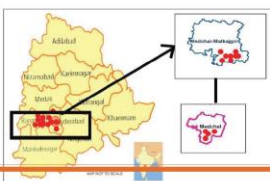
⁴²

GPS gets the location information from satellites in the form of latitude and longitude. The microcontroller processes this information and sends to GSM. The Global system for mobile communication sends information to mobile. It senses the heartbeat of the person.⁴²

Developed system:



BLOCK DIAGRAM



Network standard	GSM / GPRS / ESP
Communication frequency	850 / 900 / 1800 / 1900 Mhz
Wifi	Inbuilt wifi connectivity
Battery standard	5.0 VDC 10000 mah
Working temperature	0 Degree Celsius to +55 Degree Celsius
Operating System	Android, IOS

IEEE Humanitarian Activities Committee (HAC) IEEE HAC Projects Budget Application Form 2020

DATE: 2020/02 [Date you submit form to IEEE
HAC Projects - DD MM YYYY] PROJECT ID # [OFFICE USE ONLY]

PROJECT TITLE: TRACK & TRACE MANAGEMENT SYSTEM FOR DEMENTIA AND INTELLECTUAL DISABILITIES [Insert the same title as the one on your Grant Application.]

Enter details and amount in the appropriate columns. All amounts must be shown in US Dollars.

Funding or Income Received or Expected from other sources		USD Amount	Funding Amount Requested from IEEE HAC Projects		USD Amount
INCOME			EXPENSES		
List the details of other funding, income or resources expected or received:			List and Group ALL Project Expenses		
Source of Funding/Resources	Amount/Value		Expense Amounts to be Paid from IEEE HAC Projects (in US Dollars)	Expense Amounts to be Paid with Other Funds (in US Dollars)	
			ESP CONTROLLERS (1 x 100)	\$ 100.00	
			ATMEGA 328P CONTROLLER (1 x 100)	\$ 120.00	
			GSM 900A (1 x 100)	\$ 120.00	
			1/1 GPS ANTENNA (1 x 100)	\$ 130.00	
			ESP CON W/IR MODULE (1 x 100)	\$ 130.00	
			VERSION 2.1 USB (1 x 20)	\$ 60.00	
			CONNECTORS & WIRELESS (20 x 10)	\$ 200.00	
			PRINTED CIRCUIT BOARD (1 x 100)	\$ 200.00	

IEEE Bangalore Section

R10 TENJANMCH2020 Project

Financial Summary

DATE: 12 Dec 2020

PROJECT TITLE: 3D PRINTED KIT FOR THE TECHNOLOGY DEPRIVED UNDERPRIVILEGED TO COMBAT COVID19

Project Lead: Dr. Abhishek Appaji

Total Funding sanctioned: USD 1,0005

Total Expenditure: USD 1,0005

INR ₹ 74019

USD to INR as per the funds received 74

S No. Date Bill No. Vendor Item Description Amount in INR

1 18.11.2020 487 Saksham - WOL 3D Bangalore White PLA 1.75mm Filament 2000

2 05.12.2020 668 Hi Tech Inc 3D Plan white big 35489

3 07.12.2020 668 Hi Tech Inc 3D Plan White small 36530

3D Plan White big 36530

Total expenses 74019

Dr. Abhishek Appaji, Project Lead

Details of Project 3

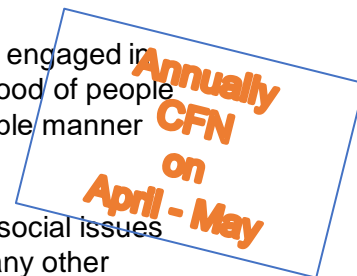
R10 Humanitarian Technology Activities Committee Award

■ R10 Humanitarian Technology Activities **Outstanding Volunteer Award**

to inspire scientists and engineers to become socially responsible and be engaged in developing technological solutions to improve living conditions and livelihood of people thus making a difference in peoples' lives in a cost effective and sustainable manner

■ R10 Humanitarian Technology Activities **Outstanding Section Award**

to recognize the Sections who have done outstanding work in identifying social issues and made efforts to solve those issues through the use of technology or any other means



HTA Outstanding Volunteer Award 2020

NAME	Section
Dr. Bijoy Antony Jose	Kerala Section

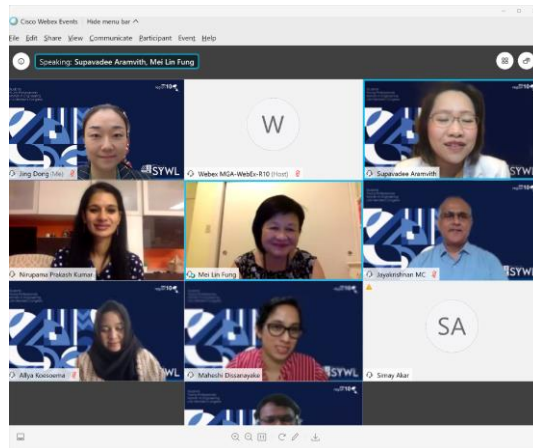
HTA Outstanding Section Award 2020 (N/A)

Details of Project 4/5

2020 HT tracks in R10 Flagship Conferences



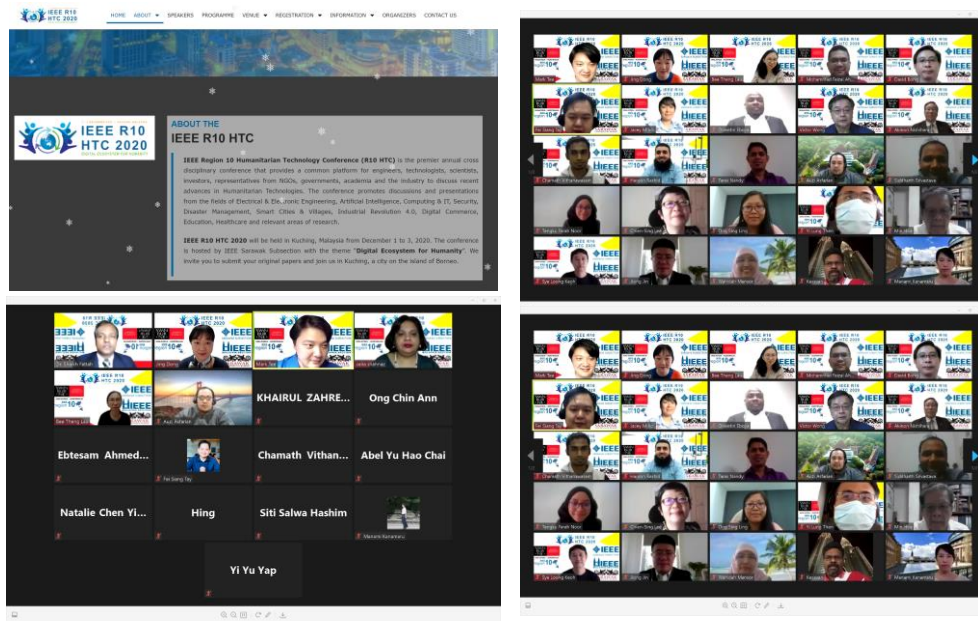
IEEE TENSYP2020 HAC Track
7th June 2020



IEEE R10 SYWL2020 HAC Track
7th June 2020

Details of Project 4/5

2020 HT tracks in R10 Flagship Conferences



IEEE R10 HTC2020 & HAC Track
30 Nov & 1-3 Dec. 2020

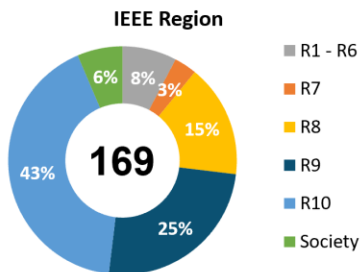
Details of Project 4/5

IEEE SIGHT Group Overview

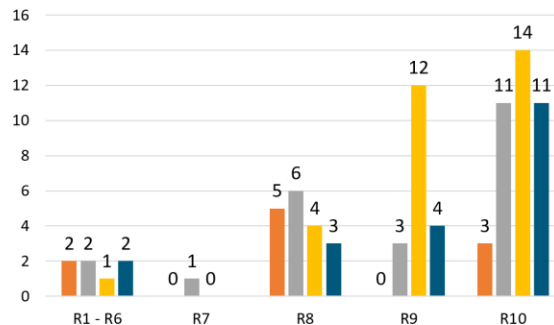
IEEE SIGHT

Special Interest Group on
Humanitarian Technology

Approved SIGHT groups by year

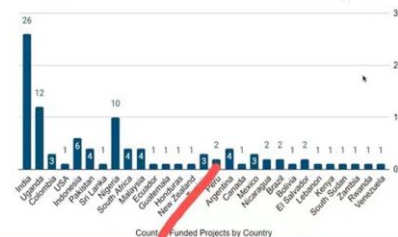


2017 - 2020 New Groups by Region and Year



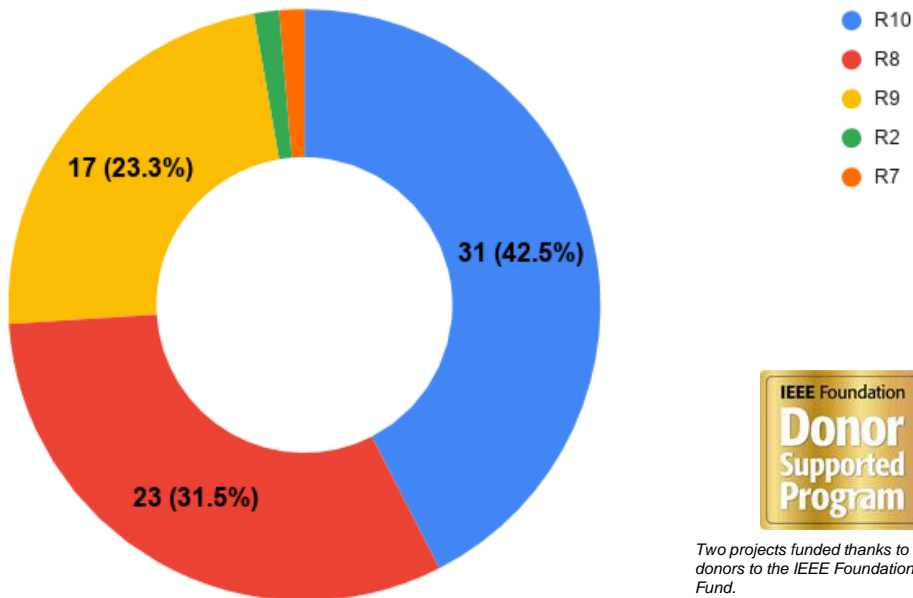
The Results: 101 Approved Projects in 29 Countries

Locations of HAC & SIGHT COVID Funded Projects



IEEE SIGHT Projects R10 Highlights

IEEE Region Affiliation of HAC/SIGHT COVID Projects Funded



IEEE SIGHT Projects R10 Highlights



Rehabilitation for
Sustainable Future for
Delta Farmers, India,
R10



Solar Powered Electric Wheelchair
CARG SIGHT, Bangladesh, R10

- + Empowering Umerkot
PAKISTAN
- + Free Energy from Calories to Electricity
MALAYSIA
- + Intelligent Animal Attack Prevention System for Crop Protection
INDIA
- + Lets Breath Clean Together
ISLAMABAD
- + LoRaWAN Enabled Remote Solar Photo Voltaic Energy Monitoring System
INDIA
- + MOSATE - (Moisture, Salinity & Temperature Kit to Optimize Usage of Water in Hilly Areas)
INDIA
- + Overhead Powerline Safety Awareness Project India
INDIA
- + Rehabilitation for Sustainable Future of Delta Farmers
INDIA
- + Smart Classroom Among the Woods
INDIA
- + Smart Switching Toilet with urine diversion system for Flood Region
INDIA
- + Solar Powered Electric Wheelchair
BANGLADESH
- + TKMCE HTC PROJECT
INDIA

Highlights HT Activities in 2020

