MOVE Volunteer Newsletter

An IEEE-USA Initiative

November 2023

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Newsletter Editor: Luis A. Tatis

The IEEE MOVE truck is deployed to respond to hardest hit disaster areas that frequently have no power or communications. MOVE can quickly set up temporary operations and provide the power and communications required to initiate services to the people affected by the disaster. MOVE is staffed by a network of hundreds of IEEE volunteers who cross train with the Red Cross to provide technology and services at disasters. IEEE volunteers designed, maintain, and operate the truck. When not at disasters, IEEE MOVE provides public outreach and STEM ducation at schools, universities, public events and IEEE events. The large truck draws interest to IEEE from over 50,000 people annually. For additional information, visit move.ieeeusa.org.

MOVE News by Loretta Arellano

The summer months had the MOVE team preparing for the 2023 hurricane season between June and November. On this issue, you will see articles on the efforts to upgrade and to ensure the trucks are ready for any deployments. We supported Hurricane Idalia and Hurricane Lee – see those reports on this issue. We continue to support various conferences and events including IEEE triannual Sections Congress in Ottawa Canada. See Mark Torres' report for details on places we visited and plan to visit soon.

Training continues to be critical to both the existing MOVE volunteers and the new volunteers. See David Sewell's report on recent and upcoming training opportunities. We continue our monthly Tech Talks, and we have exciting speakers lined up. Stay in touch by making sure you are on our distribution for meeting announcements. Sign up at https://bit.ly/MOVE-SIGNUP

MOVE is supported by donations. Thanks to all who voted for MOVE in the Foundation LinkedIn Poll –we were awarded $2500. Giving Tuesday is Nov 28 so we ask that you consider donating to MOVE for us to continue to support those in need. Visit http://bit.ly/DONATION-MOVE.

A special section is included on MOVE Puerto Rico and India as both are doing excellent work

MOVE 2019 ASAE
"Power of A" Gold Award

IEEE Foundation
Donor Supported Program

MOVE NEEDS YOUR SUPPORT

MOVE Deployment – Hurricane Idalia

MOVE-2 Deployed to Hurricane Idalia

Grayson Randall

Grayson Randall and Tim Forrest deployed from Durham NC, on August 30th for Hurricane Idalia. Idalia made landfall in the big bend area of Florida as a category 4 hurricane. MOVE-2 traveled via Atlanta to avoid the winds along the east coast route. While in Atlanta, we went to the Red Cross LFC (Logistics Fulfilment Center) to pick up several cases of equipment for the DR (disaster response). We arrived at the DR-HQ in Tallahassee Florida on the 2nd day.

After 2 days in Tallassee Headquarters doing DST (Disaster Services Technology) work, we were deployed to Horseshoe Beach. A coastal town of about 400 homes and 150 full time residents that was about 20 miles from the nearest highway. A 16-foot storm surge did significant damage and power/communications were out. We supplied power/Internet to FEMA, Red Cross, and the public. This was a great location for MOVE to be deployed. This was the situation that MOVE trucks were designed to operate in. We supplied internet and passed out power banks and coloring books to the kids.

We utilized our generator with 24/7 operations and slept in the truck. We used the satellite dish, mast, Starlink, DMR radios, Meraki networks, MOVE LTE router with Firstnet, and a Red Cross 5G Cradlepoint unit that we tested. All equipment worked well and we focused on Starlink and 5G Cradlepoint for maximum throughput. The mission was supported and tracked by the IMRC (IEEE MOVE Radio Club) with DMR radio and Google chat. The MOVE weather team gave us multiple daily updates on weather status. The truck was fueled by the Emergency Fuel Depot, which delivered fuel to us on-site. The town's Mayor and town representatives as well as local citizens checked on us regularly and made sure we had food and fuel. We met some really nice people who had been impacted by the hurricane.

As the town power was restored and communications were more available, we were released from the operation. MOVE was deployed for 10 days. We returned directly from Horseshoe Beach to Durham, NC, with an overnight stop in Savanna, Ga.

MOVE-2 supporting internet to the Red Cross, FEMA, and the public at Horseshoe Beach Florida

MOVE-2 supporting Red Cross operations under the tent

Hurricane Idalia photos

Tim Forrest and Grayson Randall at Horseshoe Beach Florida after hurricane Idalia

Damage from hurricane Idalia

Damage from hurricane Idalia

Damage from hurricane Idalia

MOVE uses Google Chat

MOVE adds Google Chat to Tool Kit

David Green

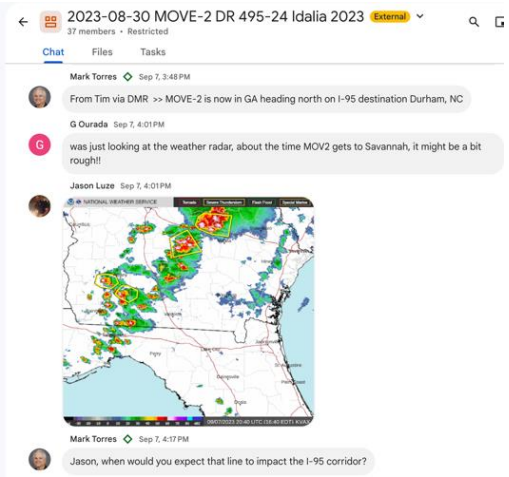
The MOVE team has always used several communication tools including email, WebEx, IEEE Collabratec, Google Drive, SMS (text messaging), and DMR (licensed). During deployments, the support teams have been talking with the deployed team using DMR (radio) and SMS. In a recent deployment, there were no licensed Amateur Radio operators on the deployed team. This pushed more load onto SMS and illuminated some of its limitations. The three biggest being that there were a lot of separate groups, adding someone to an existing group was impossible for Android users, and there were limitations accessing past texts.

The Radio Club gathered requirements and interviewed Net Mons (representing the support teams) and the Drivers team (representing the deployment crew). This effort highlighted the need to continue to use DMR when possible as it was the best fit for the deployment team while the truck was in motion and the need for a group chat tool for richer communications.

After a review of existing products against the requirements, the Radio Club proposed a trial of Google Chat. The trial went well both operationally and with increased engagement. With the success of the trial, operational procedures were developed and communicated to the MOVE teams. The group mode of Google Chat (in Spaces) is used with participants added by “Space Managers”. Two types of spaces are used: team-specific (such as “MOVE Weather” and “MOVE Radio Club”) and deployment-specific (such as “2023-08-30 MOVE-2 DR 495-24 Idalia 2023”).
The team-specific spaces are used for collaboration within the team.

For deployments, the entire MOVE Team is added to the Space and then members can decide how they wish to participate:

- Active (like Net Mon(itor) from Radio Club, deployed members, and Weather Team)
- Monitoring (those who wish to follow and want alerts on posts)
- Mute (those who wish to be able to look up what is going but don’t want alerts)
- Leave (those who don’t wish to do any of the above for this deployment).



A Radio Club Net Mon updates the space based on DMR radio traffic so everyone watching the Chat Space stays current. The Weather Team makes posts providing relevant weather data and responds to requests for detailed information on various scenarios. The deployed crew uses DMR or Google Chat as they choose for the situation they are in.

The system has now been used on two DR (Disaster Response) and two Outreach deployments. A deployment space remains available for some time after the end of deployment for information purposes. Participation and feedback on this new tool have been positive.

MOVE Utilizes Starlink

IEEE MOVE acquires Starlink Terminal

Grayson Randall

MOVE-2 recently acquired a Starlink terminal. Starlink is the world's first and largest satellite constellation using a low Earth orbit to deliver broadband internet, capable of supporting streaming, online gaming, video calls, and more. Leveraging advanced satellites and user hardware, Starlink delivers high-speed, low-latency internet to users all over the world.

This terminal allows MOVE to have a portable satellite link for internet that supports our disaster relief efforts in areas where traditional communications are not available. We tested the terminal during disaster relief operations in Florida at hurricane Idalia with great success. This unit is portable and can be used anywhere in the US. This gives us additional redundancy with our current truck mounted geostationary satellite unit. It is also much faster and cheaper.

MOVE will be acquiring additional terminals in the near future to support MOVE-1 and other modular MOVE configurations.

Starlink in operation in foreground at hurricane Idalia

Tim Forrest with Starlink in backpack case

Meet Ken the Robot

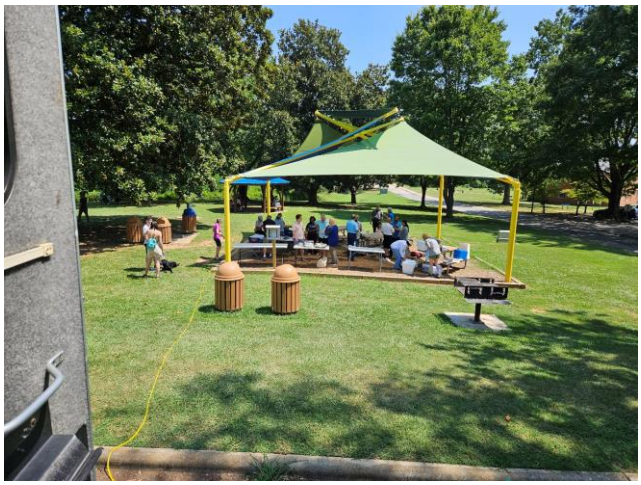
IEEE Eastern North Carolina Section Picnic

Grayson Randall

On August 19th, MOVE-2 attended the Eastern North Carolina Section (ENCS) picnic in Raleigh NC. This was one of the first post-COVID-19 in person events for the section and there was a good turnout. MOVE-2 was there and provided tours to all the members and some other non-members that were in the area and were interested to see the truck. We also provided internet for those in attendance.

KEN, the humanoid robot, was also at the picnic. KEN is the product of a multi-year ENCS Robotics and Automation project to create a robot that could carry on a conversation with people. Initial funding came from the IEEE Foundation for a STEM project where high school students, university students, and mentors of all ages, worked together to create this working robot. KEN was not active during COVID-19, and it was great to see that he has some new improvements and continues to attract the attention of both students and adults.

Daniel McDonald works with KEN and an interested student



Eastern North Carolina Section picnic.

Tim Forrest and David Wright with MOVE-2 provided tours for all ENCS members.

Family Fun

MOVE Volunteer Highlight

Volunteer Highlight
Walt Burns

I have lived in the same house in Parker, CO since moving from the DC area in 1987, where I worked for companies like Tektronix and Intel as a technical instructor. Since then, I have worked for several telecommunications manufacturers and IT consulting firms as a systems architect and as a director of IT consulting services. I am active with the local alumni chapters for the University of Denver, where I completed my Master's degree in Telecommunications, and VA Tech, where I completed a BS in Electrical Engineering Technology. While at VA Tech, I was a founding member of the VT Rescue Squad, and it changed my life, and marked the beginning of many life-long friendships. I became a volunteer paramedic and firefighter and served for over 30 years in three departments in Virginia, Maryland, and Colorado. I also used my IT skills to support public safety with wireless connectivity and video surveillance systems, which I have designed for several cities. I responded to the Gulf region twice to provide IT and communications consulting; first after Hurricane Katrina in 2005, and again in 2010 for the BP oil spill.

I am now semi-retired but continue to teach electrical engineering courses at Metropolitan State University of Denver- and am active with ham radio and the Amateur Radio Emergency Service, as well as the local IEEE Communications Society and the Red Cross. I still maintain a "red card" certification, and for several weeks each summer I deploy as a wildland firefighter-communications specialist. Our mission is to deploy temporary mountaintop radio repeaters to ensure that the hotshots out on the fire line have effective communications for operational safety. Each time I go out is a new adventure, and I am very fortunate that I can continue to serve in this capacity!

I first joined the Red Cross as a CPR instructor many years ago. Then the Emergency Communications Response Vehicle (ECRV) caught my attention, and I joined DST. The ECRV was a smaller version of our MOVE trucks, but with a similar mission, to support communications and power requirements for Red Cross staff during disasters. It was a sad day when the ECRV program was retired. But joining the MOVE team as a driver/operator has allowed me to continue serving, and I have been deployed several times for hurricanes, tornados, and educational presentations. I especially appreciate the new friendships forged with team members Grayson, David, Jay and Mark, and I hope to deploy with many of the rest of the MOVE team in the future!

IEEE MOVE Training and Development

Dave Sewell

IEEE MOVE Training and Development continues to facilitate a different speaker for our monthly Tech Talk Sessions, which occur on the fourth Tuesday of each month at 8:00 PM Eastern.

On October 17th , Grayson Randall provided an overview of the IEEE MOVE Program. The IEEE MOVE volunteers respond to the hardest hit disaster areas to quickly provide the power and communications to the people impacted by a disaster. When not responding to disasters, MOVE provides public outreach and STEM education at schools, universities, IEEE events, and public events.

On October 24th, Greg Hauser from North Carolina Emergency Management presented an overview of the Incident Command System, North Carolina Emergency Management Structure, the role of Emergency Services Function 2 (Communications), how emergency response and deployments work at the state level and talked about MOVE's partnership with NCEM.

On November 28th, we will have a presentation by Judy Farrar-Nicholson and Tara Sweeney Hughes on Disaster Psychological First Aid (PFA). PFA is an initial disaster response intervention with the goal to promote safety, stabilize survivors of disaster, and connect individuals to help and resources. Psychological First Aid is delivered to affected individuals (both, those affected by disaster and disaster responders) by mental health professionals. The purpose of PFA is to assess the immediate concerns and needs of an individual in the aftermath of a disaster and not to provide on-site therapy. Both Judy and Tera have responded extensively in the domestic and international settings. To register for this presentation, please go to https://events.vtools.ieee.org/m/398634

On October 30th, November 6th, and November 13th, we will have the IEEE MOVE three-part MOVE Operations class. This class is required for everyone interested in deploying on MOVE-1 or MOVE-2 truck or has a general interest in the program. It is required for new MOVE members and recommended as a refresher for those that have previously taken it. We discuss what to expect when deploying, what equipment is on the MOVE trucks and several safety procedures when working around the trucks. This is a virtual class that is broken up into 3 required 2-hour sessions. Now that MOVE has two trucks, differences between the trucks will be discussed. If you took this class prior to August 2022, there will be new material due to the 2nd truck's differences.

This is a 3-part virtual class. **Here are the links to register for each class:**

- Part 1: 30 Oct 2023 from 8:00-10:00 PM ET
>> https://events.vtools.ieee.org/m/376696
- Part 2: 06 Nov 2023 from 8:00-10:00 PM ET
>> https://events.vtools.ieee.org/m/376698
- Part 3: 13 Nov 2023 from 8:00-10:00 PM ET
>> https://events.vtools.ieee.org/m/376700

To stay informed of all upcoming courses, sign up for MOVE information at https://bit.ly/MOVE-SIGNUP

MOVE has a new Website

New Updates to the MOVE Website

Grayson Randall

Our website at move.ieee.org has received some updates recently. Thanks to David Green and others, the MOVE International website and the MOVE USA website have tighter integration where everything can be accessed by starting at move.ieee.org. In particular, the MOVE Operations teams now have a "TEAMS" dropdown that gives you access to information about some MOVE support teams, including the Radio Club, USA Weather team, and USA operations.

Under the "USA Weather Team", you can access the live weather information from the weather stations on the MOVE trucks. When the MOVE trucks are powered up, you can see the temperatures, pressures, wind, and rain, at the location of the trucks. Under the "USA Weather Team", you can also access links to some great weather information utilized by the weather team.

If you select "USA Operations" and then "MOVE Operations", you can access "Where are the Trucks", which is a map that shows the current position of each of the MOVE trucks. You can also overlay the weather radar on this map. This allows everyone to see where the trucks are currently located.

We have added the ability to see most of the upcoming MOVE meetings under "USA Operations". Anyone is welcome to join these meetings.

This is a great step forward and we will continue to upgrade the integrated MOVE website as the MOVE program continues to grow. Please enjoy the new functions that allow you to see more information about the MOVE trucks and look for additional features and functions in the future.

Remembering Ted Hissey, IEEE Director Emeritus

We are saddened to report that Theodore J Hissey, Jr (also affectionately referred to as Uncle Ted) passed away on October 14, 2023.

Ted was a great supporter of MOVE, Young Professionals and many other important causes. He served as PES Society President and IEEE Executive Director. Ted served on the MOVE Leadership team and he will be sorely missed.

https://www.cavanaghfuneralhome.com/obituaries/Theodore-W-Hissey-Jr?obId=29737840

Team Work

MOVE's newest Member

Message From MOVE Fundraising Committee Chair

Theresa Brunasso

Hello from your brand-new MOVE Fundraising Committee Chair. For those who don't know me, I'm the current (but soon to be past) Region 3 Director. Most of you know that Region 3, led by then Director Mary Ellen Randall, started the MOVE Truck program, and MOVE Truck 1 has been on the job since 2016. So, it shouldn't be any surprise to you that I have been a supporter of the MOVE Truck program since its inception. So, when I received a text from Mary Ellen last month, asking me to serve as the MOVE fundraising Committee Chair, I did not hesitate to say yes.

There is so much to love about the MOVE Truck program. It uses IEEE skills and technology to help victims of natural disasters. It shows that engineering and technology are used for good. When not responding to disasters, it provides STEM outreach for K-12 students. It is run by IEEE volunteers, and its success is engaging members around the world to set up similar programs.

These are some of the reasons I readily agreed to work on the IEEE-USA MOVE team.

I want to thank those of you who voted for the MOVE Truck in IEEE Foundation's LinkedIn poll this month. We were a close second to IEEE Smart Village, and were awarded a $2,500 grant.

Giving Tuesday is November 28th, when you will be able to donate directly to the MOVE program via the IEEE Foundation. Mark your calendars, and let others know how easy it is to donate through the IEEE Foundation. I'll be making my annual donations that day, and I hope you will join me.

Thanks for all you do for IEEE MOVE.

Call for Volunteers

Loretta Arellano

The MOVE International Community Outreach program is looking for qualified volunteers who not only have a deep passion for humanitarian work but also the expertise, wisdom and time to commit in support of our program. As we are in an expansion phase of this IEEE-wide initiative, we are primarily seeking candidates for leadership positions of our important committees. We are looking to engage people to form and head working groups tasked to pursue the wide variety of the MOVE International global goals.

We'd love to learn about your passions, skills, interests, and volunteer time to explore how we can work together to find a good fit for you in our program.
If interested, please visit MOVE-SIGNUP to complete our MOVE volunteer form.

MOVE-2 Deployed to New England

Grayson Randall

On September 14th, IEEE MOVE-2 was deployed to New England for hurricane Lee at the request of the American Red Cross. The Red Cross was staffing up for the hurricane that was being forecast to potentially impact the coast of Maine. There was also concern about Cape Cod in Massachusetts as it protrudes into the Atlantic.

Grayson Randall and Thomas Kimball arrived in southern Massachusetts the evening of the 15th. They parked at the intersection of I-95/I-495, where they had easy access to both I-495 to Cape Cod and to I-95 north to Maine. They were placed in lockdown because of the tropical storm winds. The next day, they waited for feedback from the Red Cross and around noon they received a call that the weather lockdown had been lifted and they were free to return home.

The hurricane had stayed east and made landfall in Nova Scotia, Canada. Maine had a lot of power outages from the wind but overall, there was little major damage. We always tell the Red Cross that MOVE would rather be on-site and not used than be parked at our home base and be needed, while 2 days away. Both, the Red Cross and IEEE were in place and ready to provide services. The fact they were not needed is good news for everyone.

On the evening of September 17th, MOVE-2 was back in Raleigh and the mission was complete.

MOVE-2 waiting for Hurricane Lee landfall.

Operations Team

MOVE-2 at East Carolina University

Grayson Randall

On October 3rd, MOVE-2 traveled to East Carolina University (ECU) in Greenville North Carolina. Grayson Randall and Daniel Fuccella were invited to speak at a class on Contemporary Issues taught by Dr. Jason Yao. Grayson did a talk on the IEEE MOVE program and showed the class how to utilize technology to assist at disasters. The talk included some background on the MOVE program, how the MOVE trucks are configured, and what a typical disaster response looks like. The class was interactive, and the students asked great questions.

At the conclusion of the talk, the class was invited to tour MOVE-2 and to ask questions. Not only were the students engaged, but also had several people unrelated to the class stop by and ask questions about the vehicle. We were able to pass out flyers that gave them additional information about IEEE and MOVE.

Special thanks to Dr. Yao for inviting us again this year. The Contemporary Issues class is taught to students to provide them a variety of current issues that can be addressed by engineering students. Hopefully the students will see some opportunities that they had not considered.

The previous week, Russell Harrison IEEE-USA, talked to this class on how engineers lobby and educate policy makers in Washington DC. It is rewarding to see how IEEE can contribute to the education of students.

Students tour MOVE-2 truck after a presentation on MOVE.

Dan Fuccella and Grayson Randall at East Carolina University (ECU)

Grayson Randall, Dan Fuccella, and Jason Yao at MOVE-2.

Team Work

MOVE-1 Ready to Deploy

MOVE-1 Work Party Produces Results

Tim Troske

During the week of – September 18th, MOVE volunteers Danny Briggs, Steve Kurtzman, Dennis Peck, Bill Torre, and Tim Troske held a work party in San Diego, CA to make several improvements to MOVE-1. During the party, they installed a new weather station, a new ADS-B receiver set, two new tablets for MOVE drivers to record their hours of service, a tire pressure monitoring system, and reprogrammed the public safety radio scanner.

IEEE member Greg Albrecht built for MOVE an Automatic Dependent Surveillance–Broadcast (ADS-B) set called ATAK. With the new set, MOVE-1 can receive precise aircraft position information from vicinity aircraft and report the data to national aircraft tracking databases. This will be a beneficial capability for aerial firefighting and aircraft safety when MOVE-1 operates in remote areas. Bill Torre installed the new receiver in the MOVE-1 equipment rack and connected it to the MOVE-1 network and video displays. To improve reception, Tim Troske installed an outdoor antenna on the truck roof. The ATAK set (small black box next to the laptop) is pictured below, along with the red rooftop antenna, and the resulting aircraft track display on the coach conference table display in MOVE-1.

To improve the monitoring and reporting of weather conditions during deployments, the team installed a new Davis Vantage Vue Wireless Weather Station on the truck roof, and a Davis WeatherLink Console at the conference table. Pictured below is the rooftop weather station, and the weather console.

Clockwise from top left: Davis Weather Station, conference table display showing ADS-B data with weather console mounted below the display, ATAK ADS-B receiver set, and rooftop ADS-B antenna.

MOVE-1 Work Party Produces Results (con't)

Tim Troske

Dennis Peck installed two new tablet computers with mounts, in the MOVE-1 cab. The tablets will allow drivers to better maintain their hours of service during deployments in accordance with DOT regulations. The tablets run an electronic logging device application that automatically logs driver service and driving hours.

Dennis Peck installs new electronic logging device tablets in MOVE-1

A Tire Pressure Monitoring System (TPMS) was installed to simplify the process of checking tire pressures during deployments. Previously, drivers used a pressure gauge to check tire pressure as part of the daily pre-drive checklist. The new TPMS will continuously monitor tire pressures and temperatures, which will greatly improve safety while driving. The set consists of sensors screwed onto the valve stem of each tire, which communicate wirelessly to a display located in the cab.

Tire pressure monitoring display

Lastly, Steve Kurtzman updated the public safety radio scanner for Southern California emergency radio networks. This was an outstanding item from when the truck was relocated from North Carolina.

What a busy week - altogether, the team spent three days making the improvements described above, plus they completed several maintenance items. MOVE-1 remains ready to deploy!

IEEE MOVE Operations

Grayson Randall

The MOVE operations team has many opportunities available to assist in our global program to help people at disasters. Some of these opportunities require in-person availability but many can be done virtually. Here is a quick overview of some of the opportunities:

- Disaster Response requires training and the ability to respond for 2-week deployments on short notice in harsh conditions. It is a very exciting and rewarding opportunity to be on the ground at the disaster.
- STEM/Outreach responder requires less training and is scheduled well ahead of the event. This is typically a 2 or 3-day trip where you meet with the students or the public and talk about the program. Many of our volunteers enjoy this option.
- Maintenance team members are our hands-on team that normally reside near the trucks. They do all the repairs, new equipment installs, and service for the MOVE equipment. This includes mechanical, automotive, electrical, and system integration skills.
- The weather team is a virtual team that tracks the weather in the tropics for potential events like hurricanes. They also watch for wildfire, flood, and severe weather potential. When the MOVE teams are deployed, the weather team provides real time updates for the deployed teams.
- The network team supports all the digital equipment on the trucks, including the satellite systems, Cisco Meraki networking stack, and LTE routers. Most of this work is virtual.
- The IEEE MOVE Radio Club provides the MOVE team deployment with radio support. This is all virtual. The members of this team mostly have HAM radio licenses but can assist you in getting yours, if you have an interest in radio communications. They support all communications with the deployed teams to ensure their safety in the field.
- Other opportunities in STEM, Training, Finance, Fund Raising, and Program Management are available as well.

The MOVE team continues to grow rapidly, and we need people to support the efforts. If you have an interest in participating as part of our team, join at move.ieeeusa.org or contact Mark Torres at mgtorres@ieee.org for additional information.

Exploring STEM: Unveiling the Mystery, One Challenge at a Time

Melody Richardson

This Fall, dive into the world of science, technology, engineering, art, and math (STEAM) with our STEM on the MOVE backpacks. These backpacks are not just ordinary bags; they are gateways to exploration, filled with fun and educational activities for STEM enthusiasts, students, and anyone curious about the wonders of STEM.

Why STEM on the MOVE?

STEM on the MOVE is all about making STEM accessible and enjoyable. Whether you're well-versed in STEM or just starting to explore, these backpacks are designed for everyone. They're an opportunity to learn, have fun, and discover the magic of STEM without any pressure.

What's Inside?

Inside each backpack, you'll find 45 challenge cards covering various STEM and STEAM disciplines and 7 MOVE Truck Tech Challenges, showcasing the technology used inside the MOVE trucks utilizing IEEE's TryEngineering. The challenges are designed to encourage creative thinking, experimentation, and innovative problem-solving.

How to Get Involved:

Gift a Backpack: Spread the joy of learning by gifting STEM on the MOVE backpacks to someone in your community.

Host a Workshop: Organize a STEM workshop. Pick a few activities, gather your friends or community members, and explore the world of STEM together.

Or be one of the first five people to send me an email at Richardson.Melody@ieee.org and I will send you a fully packed backpack for free!

So, this Fall, let's unravel the mysteries of STEM, one challenge at a time. Join us in this hands-on journey of discovery, where learning is exciting, accessible, and, most importantly, fun!

IEEE MOVE Volunteer & Public Engagement

Mark Torres

As we approach the end of 2023, I look back at our accomplishments this year. The MOVE volunteers supported 21 public visibility & STEM events. This included the 2023 Sections Congress in Ottawa, Canada, the Atlanta Science Festival, the IEEE Board Series in February & June and the Puerto Rico Radio Test just to name a few.

2024 is shaping up to be a very active year with major events already on the schedule. The following events are on the calendar and in the planning stage: 2024 Rising Stars Conference Las Vegas, NV, Region 6 2024 OpCom, 2024 IEEE Board Series, Region 3 2024 SoutheastCon, 2024 Atlanta Science Festival, plus 10 more events in April – June.

The fall 2023 MOVE Operations class series is scheduled for Oct 30, Nov 6 & Nov 13. This is a great opportunity for new MOVE volunteers to learn about the capabilities and operation of the MOVE trucks and equipment. If you are a longtime MOVE volunteer, please plan to attend to get a refresher and to learn about the new technology that has been added to the MOVE trucks. For additional details on MOVE Training activities and events please see David Sewell's article. Please let David Sewell or me know if you need the links to Collabratec.

My goal is to have every volunteer plugged into at least one activity that they can become excited about. We need passionate MOVE volunteers that carry out IEEE's Mission "IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity."

I NEED YOUR HELP, if you are interested in joining the MOVE Volunteer & Public Engagement Committee (VPEC) please contact Mark Torres at MGTorres@ieee.org. The MOVE VPEC coordinates activities to recruit and engage volunteers. In addition to maintaining the Volunteer Roster, the team: 1) Welcomes new MOVE volunteers, 2) Coordinates onboarding and retention of MOVE volunteers, 3) Supports other MOVE teams with volunteer engagement activities, and 4) Supports MOVE activities at event and conferences. With the committee's expanded role this year of public engagement, the committee is focused both inward and outward**.**

Lastly, all volunteers are urged to provide MOVE volunteer roster updates on your current situation, location or email address, by submitting updates on the Volunteer Interest Form >> https://bit.ly/MOVE-SIGNUP

Explore the MOVE truck in virtual reality
https://ewh.ieee.org/ieee/move/vr/

MOVE at Sections Congress 2023

IEEE MOVE at the 2023 Sections Congress

Mark Torres & Loderay Bracero Marrero

The 2023 Sections Congress was an extraordinary event. It was the first time since COVID that we were able to come together to a Sections Congress. Everyone took advantage of the opportunity to gain experience all about what was new and to catch up with old and new friends. As you will see in the pictures, there was a lot of activity and energy around the MOVE booth. The MOVE volunteers working at the booth were able to talk with MOVE volunteers about the program and introduce MOVE to many prospective volunteers and champions.

The visual impact of the booth was remarkable, and the passion of the volunteers working the booth was beyond amazing. The visitors to the booth were able to learn about the mission of MOVE and how MOVE exemplifies the mission of IEEE, which is ***Advancing Technology for Humanity***. The booth volunteers described the two primary goals of emergency relief for disaster victims and STEM Outreach for public visibility. Dozens of section volunteers requested more information on how MOVE could be brought to their country or sections.

Mark Torres represented MOVE at the Ignite booth and delivered an Ignite presentation on the mission and scope of the MOVE Program. The presentation included a complete program overview in only 5 minutes. If you would like a copy of the presentation, it is on Collabratec at the following link >> 2023 SC MOVE Program Ignite Presentation

The success and impact of the MOVE booth would not have been possible without the support and enthusiasm of our MOVE volunteers. It was indeed a Global MOVEment with volunteers from Puerto Rico and the USA assisting at the booth in Canada: Bala Prasanna (Region 1 Director-Elect); Jenifer Castillo (Region 9 Director-Elect), Loderay Bracero Marrero, Abigail C. Terón, Christian Figueroa, Lorena Ramos, Melody Richardson, Hines Richardson, David Green, Butch Shadwell, Don Hill and Mark Torres.

MOVE booth ready for start of Congress

MOVE photos at Sections Congress

Butch Shadwell discussing MOVE

Hines Richardson discussing MOVE operations

Lorena Ramos, Loderay Bracero Marrero, and Dave Green at the MOVE booth

Loderay Bracero Marrero discussing modular MOVE

Melody Richardson highlighting the STEM activity book.

Abigail Terón and Hines Richardson staffing the booth

Thanks to our Supporters

IEEE Life members

cisco Meraki

IEEE Volunteers

IEEE Alabama Section

IEEE USA

BTS IEEE Broadcast Technology Society

IEEE Region 3

IEEE Eastern NC Section

IEEE SMC Systems, Man, and Cybernetics Society

IEEE PES Power & Energy Society®

IEEE Region 6

IEEE Foundation

IEEE Reliability Society

IEEE COMPUTER SOCIETY

IEEE SA STANDARDS ASSOCIATION

Want your IEEE Society to support MOVE?
Possibilities include (depending on level)

- Sponsor a Joint STEM event
- MOVE truck at your conference
- Your Logo on MOVE web page
- Facebook post featuring your society
- Your Logo on the MOVE truck

The MOVE program is funded by donations to the IEEE Foundation "MOVE fund." Help today! Ieeefoundation.org/move
For more information, contact theresa.brunasso@ieee.org

A GLOBAL MOVE

Mary Ellen Randall

As we expand the MOVE Movement, it is exciting to see what is happening in our newest areas: India and the Caribbean.

India provided essential training on disaster awareness and continues to highlight programs like using robotics and AI for disaster relief. Our MOVE staff, **Michael Wilson**, visited the India MOVE team and India Council leadership, **Dr. Debabrata Das**. See article and pictures in the following pages..

Please also see the amazing response to the MOVE-A-THON held by our India team. It is amazing.

The Caribbean team is led by **Dr. Loderay Bracero Marrero** and the Puerto Rico and Caribbean Section. This team used the Modular MOVE kit version 1 with the Red Cross during an actual deployment. The kit has been expanded to include NVIS antenna designs and radios. Next it will be expanded with satellite communication using LEOS (Low earth orbiting satellites.) We hope to expand this capability to other islands in the Caribbean and to other countries. See following article for more details.

To facilitate our global expansion, there is a motion going before the IEEE Board of Directors in November moving the Global MOVE oversight under the Humanity Technology Board (HTB) of IEEE. This is a very positive change for MOVE. The HTB has been incredibly supportive in this transformation and we owe them our thanks, especially HTB Chair **Lwanga Herbert.** The USA, India, and Caribbean teams will still run day-to-day operations. Please watch for additional details in the next newsletter.

Move Puerto Rico Celebrates a Year After the First Modular Kits Deployment

Loderay I.M. Bracero Marrero, Chair MOVE International Puerto Rico

On October 5, 2022, after Hurricane Fiona, MOVE International Puerto Rico had the first modular kits deployment with the Red Cross Puerto Rico Chapter (DR-823). This first deployment took place at Toa Baja, Puerto Rico. The battery inverters provided electricity to the laptops and hotspots of a dozen Red Cross recovery workers. Additionally, the modular kits were available in other locations such as Guayanilla, Puerto Rico.

The Puerto Rico team started organizing the Modular MOVE since 2019. The team conducted the first application of MOVE Modular, which envisioned providing disaster relief with portable equipment.. First, the Red Cross Chapter was contacted and a call for volunteers was issued. On 2020, during the pandemic, the volunteer team became Disaster Service Associates (DST) with the Red Cross. After this process, together with the support of MOVE International and the Puerto Rico team, the work in Puerto Rico has continued growing as an example for future work in the MOVE Program.

The work done in Puerto Rico has served as a prototype to continue expanding the Modular MOVE design in different regions of the IEEE. In a matter of three years, the Puerto Rico volunteer team has been able to continue growing different areas of the MOVE Program. For example, the first team created is dedicated to the Red Cross as DST associates. The maintenance team has been focused on updating equipment inventory and firmware. The communications team has been working on becoming certified radio amateur, to conduct tests using antennas and radio equipment for disaster response. The latter is the latest addition to the Modular MOVE of Puerto Rico.

Move Puerto Rico Celebrates a Year After the First Modular Kits Deployment (con't)

Loderay I.M. Bracero Marrero, Chair MOVE International Puerto Rico

The team has been focusing on the communications component of the modular kits. The radio and antennas have been acquired and tested. The team is now in the process of developing protocols to activate the Modular Move in different disaster scenarios with the radio equipment. In addition, a paper about the experience and results of the NVIS antenna tests conducted in May 2023 will be presented at the International Humanitarian Technologies Conference being held this month.

In summary, Puerto Rico volunteers have been educating themselves, organizing and testing the modular kits elements that will help to provide disaster relief as MOVE International. We are thankful for the continuous support of MOVE International, MOVE-USA, R9 leadership, IEEE Foundation, and the Red Cross Puerto Rico Chapter.

Contact us at: move-puertorico@ieee.org

Website: https://move.ieee.org/puerto-rico/

Modular kits first deployment Toa Baja, Guayanilla (DR-823)

Modular Kits inventory before deployment DR-823-Francisco Carrero

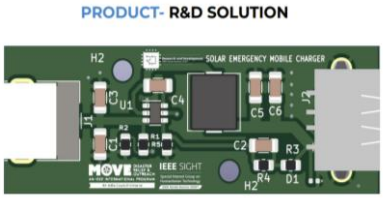
Pilot MOVE Puerto Rico team at a training in the Red Cross Puerto Rico Chapter, 2020: Jenifer Castillo, Magdiel Mojica, Francisco Carreo, Loderay Bracero, Lorena Ramos, Christian Figueroa. Notpictured: Andrea Valenzuela, Héctor Colón y Abigail Terón

Communication team testing new radio equipment with antennas at the Red Cross: Magdiel Mojica, Loderay Bracero, Florencio Sáez -and Héctor Feliciano

Development of Solar based portable mobile Charger for MOVE India Truck

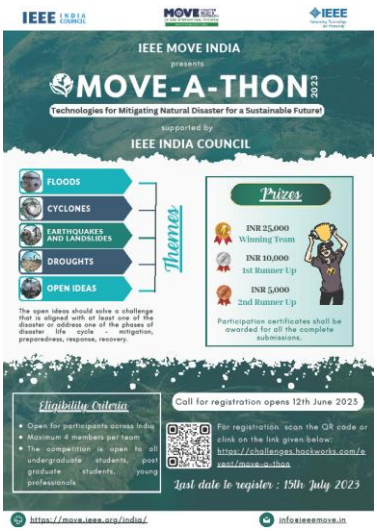
Sadhana Attavar

Design and Development of prototype of solar based mobile charger for use in MOVE India truck in collaboration with IEEE SIGHT Kerala Section and IIT Palaghat.



Call for proposals for MOVE-A-THON and Evaluation

Call for proposals was rolled out in July 2023 for an idea-thon for technologies, for mitigating natural disasters for a sustainable future. The aim and objective of this idea-thon is to invite ideas from students and young professionals for providing immediate relief in the face of natural disasters that India is particularly prone to – floods, cyclones, droughts, earthquakes and landslides.



Grand finale MOVE-A-THON

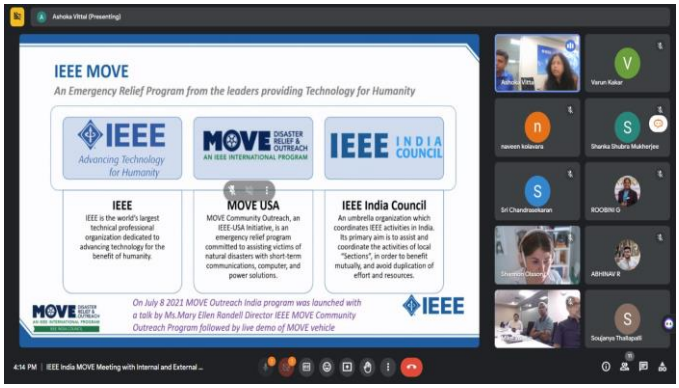
We have had an overwhelming response with over 900 people registering for this event. They have formed over 100 teams and have submitted their ideas. These ideas have been reviewed by experts and we have shortlisted 10 teams as having the most interesting ideas. The grand finale of MOVE-A-THON was held on Saturday, 7th October 2023 at the CNES auditorium in IISc in hybrid mode.

Disaster Awareness Training Programme

A Disaster Awareness Training programme was conducted in collaboration with the Rotary Club Bangalore West on 11th August at MES Kishore Kendra Malleswaram. Mr. Sunand Sampath was the resource person.

Meeting with MOVE International

A meeting with Mr. Mike Wilson, Senior Program Manager MOVE International and MOVE India volunteers and partners was held on August 18, 2023, at the GIEEE Office Bangalore in hybrid mode to discuss the MOVE India program. It was presided by Prof. Debabrata Das, India Council Chair.



As part of the Disaster Management Talk Series of IEEE MOVE India Program, a talk on **Disaster Relief Management using Robotics and AI** by **Dr.Abhimanyu Raja,** founder and Director Janyu Technology Pvt Ltd Mumbai, was organized on **September 12, 2023, at 4 pm** in hybrid mode at the Seminar Hall of Department of CS and IT - Maulana Azad National Urdu University in Hyderabad, in collaboration with IEEE STEM Committee Hyderabad Section. The talk was attended by about 100 participants.