



From the Director's Desk By: Mike Simons

Early in June our Education Director Rob Verbsky and I attended a STEM conference hosted by the US Navy. STEM is an acronym for Science Technology Engineering and Math. According to the National Science Foundation these fields are considered the core technological underpinnings of an advanced society. The strength of the STEM workforce is viewed as an indicator of a nation's ability to sustain itself. In 2005 the National Academies produced a report titled "Rising above the Gathering Storm" which outlined a response to the erosion of American leadership in science and technology. The report called for increases in STEM education, recruitment of top students, scientists and engineers worldwide, a return to a commitment in basic research and a return to the US as the leader in innovation. A revised assessment published this year predicts dire consequences for the country if the prior recommendations are not followed.

According to the Navy's figures, only one in four 18 year olds has the educational background to become a sailor much less to become a Navy engineer or scientist. It not just the Navy that is feeling the pinch, across the board, industry, government, and education are all in need of trained STEM professionals. That is where institutions like the National Electronics Museum come in. Our role is not to replace school curriculums but supplement them with educational programming designed to get kids excited about STEM topics – particularly engineering. Our ultimate goal is to see young people choose engineering or science as a career. At the same time we want the museum to remain relevant increase funding and increase and improve out programming. Focusing on STEM is a way to achieve both goals.

Continued on next page

From the Director's Desk, continued

This summer will see our biggest STEM push to date. We kicked off the summer by posting a video to YouTube produced by the folks at "Smarter Every Day" on our microwave oven display. To date the video has been downloaded over 70,000 times. The Y of Central Maryland contracted with the museum to provide STEM programming to their summer camps. The staff and volunteers prepared a program where the kids interact with the myriad hands on projects developed by our cadre of retired engineers and they get to create a circuit using a pickle!!! We expect to see several hundred kids through the end of June. We are offering our fifth annual Pioneer Camp in August. This is a chance for younger kids to learn about engineering by building telegraphs and telephones. We are holding our annual electronic music festival and for the twelfth year now - our YESS program in the fall.

During a recent board meeting long time volunteer and Board member Joe Meagher suggested the museum publish a yearly NEM Review. This would be a compendium of peer reviewed articles on topics of interest to visitors and members of NEM. We tentatively set winter 2012 as the date for the first issue. If anyone has an interest in helping with this project or submitting material to be published please give me a shout.



NEM Director Mike Simons aboard the Liberty Ship SS John W. Brown during the annual NEM Volunteer Field Trip. Mike and 14 volunteers took a special guided tour of the ship on July 20.

Photo by Joseph Meagher

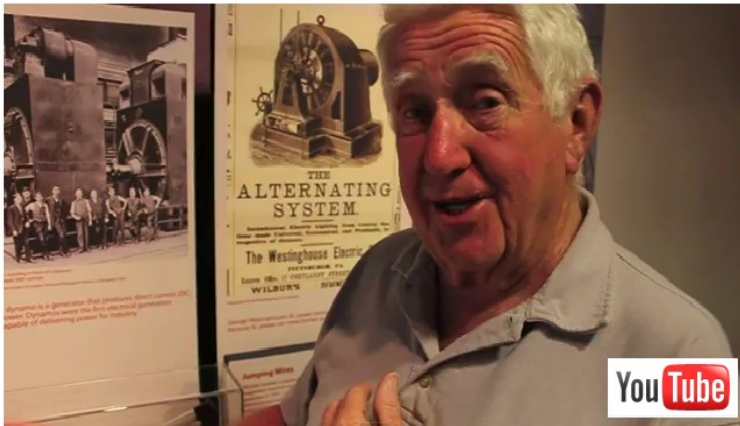
Fulfilling Our Mission By: Alice Donahue

NEM Mission Statement

We promote and encourage the study of science and engineering using our electronic heritage to educate and inspire students and the general public. The Museum collects, preserves, exhibits, and makes available for research various artifacts, documents, and publications related to development of defense and other key electronics systems and the commercial products derived from them. We provide visitors with an appreciation of the evolutionary milestones in electronics that led to the sophisticated products in use today, and honor the achievements of the pioneers who made these advancements possible.

Magnetism Magic - Smarter Every Day 16

SmarterEveryDay 100 videos  



This summer NEM is fulfilling our mission in a new way: the YouTube channel *Smarter Every Day* featured the museum! In a fun three minute long video, channel operator Destin interviewed museum Director Mike Simons about our microwave oven display. They discussed the

“best spot in the microwave” to heat your morning coffee, and explained that microwaves have rotating carousels to move food through the directional waves so it will heat evenly and avoid hot spots.

A second video featuring volunteer John McCarty demonstrates our hands-on exhibit of a magnet making current.

Although NEM already actively uses social media to reach broader audiences, these videos represent a breakthrough for us: as of publication, they have received almost 200,000 views! Additionally, cbsnews.com featured the microwave video on their website. Thank you to *Smarter Every Day* for helping NEM fulfill our mission of educating visitors (even virtual visitors) about electronics.

How the TAM 5 Model Came to NEM By: Gina Truitt

For the past several years, NEM has displayed a model plane in our Space Gallery. Here's the story of the plane, and of how it came to the museum.

On August 11, 2003, Maynard Hill and his team, The Society for Technical Aeromodel Research, flew a model plane made of balsa wood from Nova Scotia all the way to Ireland. It had been their fifth attempt and twenty-fourth model. Prior planes had crashed, or, in one case, simply vanished.



The final flight flew 1881.6 miles, landing only five feet shy of its intended target. Landing on Irish soil at 2:08 pm, *The Spirit of Butts*

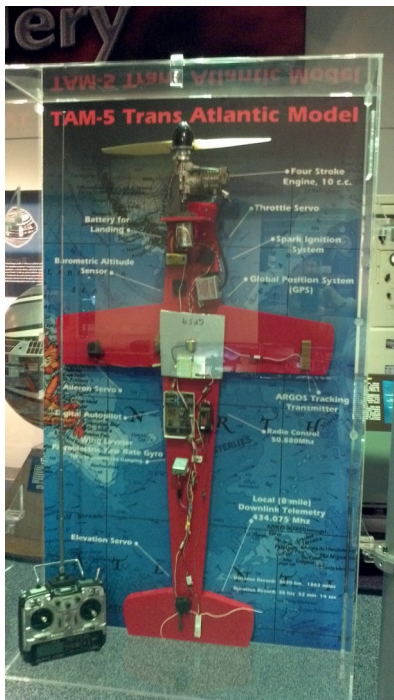
Farm, as the plane had been nicknamed, took 38 hours and 23 minutes to complete the flight. The flight recreated the first transatlantic journey of aviation pioneers John Alcock and Arthur Whitten Brown, who made the crossing in 16 hours and 27 minutes in 1919.

Maynard Hill was the driving force behind the achievement. He had long been a fan of model airplanes reaching back into his childhood. The trip across the Atlantic was also not his first record. Starting in the 60s, Hill set 25 world records flying radio-controlled aircraft as high as 26,990 feet, as long as 38 hours, and as fast as 151mph, and was inducted into the Model Aviation Hall of Fame in 1977.

Hill even managed to turn his hobby into part of his job at the Johns Hopkins University Applied Physics Laboratory. He became

In 1997, Hill was inspired to try a transatlantic flight from New York to Paris, following in the path his hero, Charles Lindbergh. When that became unfeasible, it was decided on a more modest trip across the Atlantic, from Newfoundland to Ireland, which was ultimately successful with the Tam 5.

When NEM founder Bob Dwight heard of this achievement, he wanted to acquire the airplane for the museum's collection. After some initial reluctance, Hill was convinced to visit the museum. He brought along his entire team to see if this was a place he wanted to donate one of his models.



After walking through the museum, The Society for Technical Aeromodel Research team and the museum staff sat down to discuss a possible donation. According to veteran volunteer John McCarty, the meeting began with Hill's announcement that this was not a museum. The staff was understandably taken aback. Hill went on to explain that this was a memorial to the thousands of people who had spent their lives advancing the field of electronics. Although the original *Spirit of Butts Farm* was already com-

mitted to the National Model Aviation Museum in Indiana, Hill agreed to donate a model like the Tam 5.

Maynard Hill passed away on June 7 of this year. He is survived by Gay, his wife of 59 years, and their three children. Mr. Hill's inspired words about our institution now grace a dedication plaque in our lobby: "The National Electronics Museum is dedicated to the thousands who devoted their careers to advancing electronics technology"



Welcome Lena!

By Sara Patenaude



Last month we said goodbye to Anne Mech, our museum administrator for 11 years. It is with pleasure this month that we say Hello to Lena Harding! Lena is now the go-to person for everything administration related, including payroll, scheduling the conference room, and keeping the books for our new museum store.

The next time you are in the museum, please stop by and say hello! Below, Lena answers a few questions about herself.

Where are you from?
Owings Mills, Maryland

What did you do before coming to this job?
I was the administrative coordinator for Pre-Professional Advising at Johns Hopkins University.

Where did you learn your management skills?
It started with corralling my three wonderful children!

What are you most looking forward to at the National Electronics Museum?
I want to make an impact. I hope to bring more cheer to the office, be available for volunteers, and act as an awesome support for the museum staff.

Do you have any big plans to decorate your office?
Definitely! My daughter would say I should put up butterflies and flowers, but I think I will hang posters with several of my favorite inspirational sayings, and bring in some nature.

Electronica Fest is back! By Mike Simons

This September, the National Electronics' Museum festival for electronic music is back. Electronic music has had both a huge impact on music, electronic instruments, synthesizers, and midi boards, and has been a strange part of music history, with instruments like the Theremin, which is an early electronic musical instrument that can be played without being touched.

Last year, we featured several groups for our music festival celebrating electronic music. These included Duc D'Angelos, TANGENT, Bear and Lampshade, and Author Loves Plastic.

The 2011 Electronica Fest will feature 12 of the areas best cutting

edge musicians and musical groups, where attendees can hear everything from spaced out bachelor pad music with a James Bond vibe to bluegrass jug band music played on homemade synthesizers. There will be numerous workshops and demos to round out the program, including sing like a robot, program your own keyboards, or learning to Gaga around the room in your own flashing cape. Want take something home to wake the neighborhood? Adults can build a real working Theremin while the kids fashion light triggered audio oscillators.

Please check our last page for details on this fun event.

NATIONAL ELECTRONICS MUSEUM

ELECTRONICA FEST

2011

date: saturday september 10th 2011
Time: 10:00AM - 9:00PM
Location: The National Electronics Museum
1745 West Nursery Road Linthicum, MD 21090
phone: 410-765-0230
<http://www.nem-electronicafest.com>
Festival Admission Fee: 8 dollars per person

National Electronics Museum

P.O BOX 1693, MS 4015

BALTIMORE, MD 21203

TEL: 410-765-0230

FAX:410-765-0240

EMAIL: nemuseum@gmail.com

WEB SITE:<http://www.nationalelectronicmuseum.org>

ADMISSION:

Adults—\$ 3.00

Students and Seniors—\$ 1.00

Kids 5 and under—Free

LOCATION:

(not mailing address)

1745 W. Nursery Road

Linthicum, MD 21090

(Next to the Marriot)

HOURS:

Monday– Friday 9 a.m. to 4 p.m.

Saturdays 10 a.m. to 2 p.m.

Also, open by appointment

Upcoming Events

Electronica Fest Saturday, September 10th, 10am—9pm; admission \$8

A day of live, experimental electronic music and workshops

<http://nem-electronicafest.com>

NEM Lecture Series Wednesday, September 7, 7-8:30pm

Navy Pilot John Black

Museum Day Saturday, September 24

Smithsonian Magazine's Museum Day offers free admission at participating venues (including NEM).

See www.smithsonian.com/museumday/ for tickets and more information.

Become a Member! Call 410-765-0230 or visit us online.

We are also on Twitter (as Radar Museum) and Facebook!