

# IEEE History Center

ISSUE 118, March 2022



*Nipper and "His Master's Voice" are among the most recognizable trademarks in technological history. Recently, U.S. National Public Radio's This American Life contacted History Center Outreach Historian Dr. Alexander Magoun for help demystifying the origin of the painting and some of the symbolism that may lie within it. (Image courtesy of Wikipedia Commons)*

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The newsletter reports on the activities of the IEEE History Center and on new resources and projects in electrical and computer history. It is published three times each year—once in hard copy (July) and twice electronically (March and November) by the IEEE History Center.

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Dr. Michael Geselowitz, Senior Director, IEEE History Center

Belated happy new year. I hope that you and yours are safe and healthy. Although 2021 was a productive year, I expect that 2022 will be even more exciting as we all hope that the global pandemic continues to subside. I am always thanking you in this column for your philanthropic generosity, and I am grateful still. The IEEE History Center and its staff could not operate without this support. However, your time and expertise are also of value to us. This year, we would like to focus on

the impact that our volunteers can have on our programs and our mission to preserve, research, and promote the history of IEEE, its members, their professions and industries, and the relevant technologies and sciences. Soon it will be National Volunteers Week in the U.S. (beginning 17 April 2022), so this is a good time to raise awareness of volunteer opportunities.

Our activities are overseen by the IEEE History Committee, appointed by and report-

## HOW CAN THE HISTORY CENTER HELP YOU?

### *A Handy Guide to Some of Our Programs and Contacts*

Engineering & Technology History Wiki: [https://ethw.org/Main\\_Page](https://ethw.org/Main_Page)

List of dedicated IEEE Milestones: [https://ethw.org/Milestones/List\\_of\\_Milestones](https://ethw.org/Milestones/List_of_Milestones)

How to Propose an IEEE Milestone: [http://ieemilestones.ethw.org/Milestone\\_Guidelines\\_and\\_How\\_to\\_Propose\\_a\\_Milestone](http://ieemilestones.ethw.org/Milestone_Guidelines_and_How_to_Propose_a_Milestone)

Milestone proposals in process: [http://ieemilestones.ethw.org/Milestones\\_Status\\_Report](http://ieemilestones.ethw.org/Milestones_Status_Report)

Oral History Collection: [https://ethw.org/Oral-History/List\\_of\\_all\\_Oral\\_Histories](https://ethw.org/Oral-History/List_of_all_Oral_Histories)

REACH Program (free online materials for teaching the history of technology): <https://reach.ieee.org/>

History Events Calendar: <https://www.ieee.org/about/history-center/events.html>

Support for scholars:

Fellowship in the History of Electrical and Computing Technologies:  
<https://www.ieee.org/about/history-center/fellowship.html>

Pugh Young Scholar in Residence:  
<https://www.ieee.org/about/history-center/internship.html>

Middleton History Prize (awarded to a book in the history of technology):  
<https://www.ieee.org/about/history-center/middleton-award.html>

## WAYS YOU CAN HELP HISTORY

As you read this newsletter, you will see the many success stories of the IEEE History Center and the ways it nurtures the heritage of the profession. As successful as the Center is, it relies on the support and contributions—financial, intellectual, and time and effort—of many people. We ask you to help further our work by:

**Proposing an IEEE Milestone**—Milestones recognize significant achievements in technology  
[ieemilestones.org](http://ieemilestones.org)

**Contributing a First-Hand History**—Written and oral histories help us chronicle important innovators and innovations  
<http://ethw.org/create>

**Authoring an article for the ETHW**—The Engineering and Technology History Wiki (ETHW) is an authoritative collection of historical information about technology's contributions to society  
[ethw.org/create](http://ethw.org/create)

**Supporting the History Center's mission with a donation.**

*However you can help, it is always deeply appreciated.*

## NEWSLETTER SUBMISSION BOX

The IEEE History Center Newsletter welcomes submissions of letters to the editor, as well as articles for its **Reminiscences** and **Relic Hunting** departments. "Reminiscences" are accounts of history of a technology from the point of view of someone who worked in the technical area or was closely connected to someone who did. They may be narrated either in the first person or third person. "Relic Hunting" are accounts of finding or tracking down tangible pieces of electrical history in interesting or unsuspected places (in situ and still operating is of particular interest). Length: 500-1200 words. Submit to [iee-history@ieee.org](mailto:iee-history@ieee.org). Articles and letters to the editor may be edited for style or length.

ing to the IEEE Board of Directors (see masthead for 2022 Committee members), but you need not be a member of the Committee to become engaged. As readers of the newsletter probably already know, our main repository for historical information is the Engineering & Technology History Wiki, or ETHW (see page 6 for an update on recent activities). Since this is a MediaWiki based site, members can directly write entries themselves, either encyclopedia-style articles or personal first-hand histories. We also encourage members to work with their IEEE Organizational Units (OUs) to help capture the institutional history of IEEE on the site.

You probably also already know about our most public facing activity, the IEEE Milestones Program [http://ieeemilestones.ethw.org/Milestone\\_Guidelines\\_and\\_How\\_to\\_Propose\\_a\\_Milestone](http://ieeemilestones.ethw.org/Milestone_Guidelines_and_How_to_Propose_a_Milestone), where members can propose achievements in IEEE's fields of interest that are older than twenty-five years, and have them endorsed by the appropriate IEEE Organizational Unit for consideration by the History Committee. Successful Milestones are recognized by a bronze plaque and a dedication ceremony, as well as by listing on the ETHW. We encourage all members to consider getting involved in the proposal process, which is administered for the Committee by the History Center. In addition, the History Committee often reach-

*"I am always thanking you in this column for your philanthropic generosity, and I am grateful still...However, your time and expertise are also of value to us. This year, we would like to focus on the impact that our volunteers can have on our programs and our mission to preserve, research, and promote the history of IEEE"*

es out to IEEE members to serve as external experts for evaluating Milestone nominations.

The fastest expanding opportunity for volunteer engagement is in our Oral History Program. With some seed funds from the IEEE New Initiative Committee the past two years, we are expanding our efforts to train volunteers to do

peer-to-peer interviewing (page 8). The current focus is on capturing the memories of IEEE Life Fellows, and we hope you will consider participating in this endeavor.

IEEE REACH is our program that provides free, open educational resources for including the history of engineering and technology in the pre-university classroom (page 7). If you have connections in the pre-university community, please consider helping us to disseminate the program and to find additional partners in the education space.

Finally, I should mention our newest initiative, the effort to produce traveling history of technology exhibits that we have called the IEEE Global Museum (this was described in the last issue). Implementation has been delayed by the pandemic, but we anticipate volunteer opportunities going forward. Look for information in future issues.

So, whether you want to help us with time, talent, or treasure, we thank you again!

## HISTORY COMMITTEE ACTIVITIES

### HISTORY COMMITTEE CHAIR'S COLUMN



By Antonio Savini

As the newly appointed chair of the History Committee I would like to welcome all the readers of this Newsletter that the IEEE History Center publishes since 1982.

First of all, I want to take this opportunity to thank Janina Mazierska, my predecessor, for her dedicated service leading the Committee towards a

successful future. Then I wish to express a warm welcome to continuing and new members of the Committee for their willingness to pursue the goal of the Committee, i.e. to preserve, research, and disseminate historical information in the fields covered by IEEE technical and professional activities.

I would like to address special thanks to the staff of the History Center that supports the activity of the History Committee, and, under the guidance of the latter, carries out specific activities, projects, and campaigns. Particularly appreciated are: the development of the Engineering and Technology History Wiki (ETHW), the documentation site for the history of engineering and technology; the management of the REACH (Raising Engineering Awareness through the Conduit of History) program promoting the history of engineering for the pre-

University classes; the collection of oral histories by means of interviews of technology leaders; the decision about awarding prizes and fellowships; and, last but not least, the management of the Milestones program.

Promoting and reviewing proposals that acknowledge meritorious achievements which have occurred through the history of all fields associated with IEEE (Milestones) is the core business of the History Committee since its origin. The number of Milestones applications spontaneously submitted by IEEE members has recently increased. I would like to remind readers that the History Committee has prepared a list of possible Milestones that any IEEE Organizational Unit or member can review in order to arrange a Milestone application. [http://ieeemilestones.ethw.org/List\\_of\\_Achievements\\_Suitable\\_for\\_Milestones](http://ieeemilestones.ethw.org/List_of_Achievements_Suitable_for_Milestones)

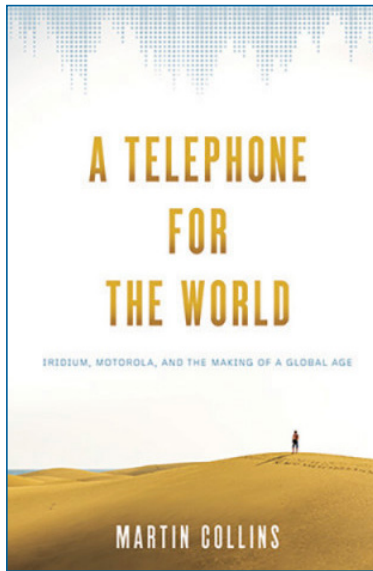
I am happy to remark that over the years the Milestones Program has become more and more popular among IEEE members and Organizational Units, and has proven to be instrumental also in promoting IEEE and helping the general public understand the importance of technology in everyday life.

A new year of intensive and challenging activity is in front of the Committee and the History Center. Despite the ongoing pandemic, I am confident that at the end of the year we can report positive results to our governing body.

## A TELEPHONE FOR THE WORLD WINS 2021 MIDDLETON PRIZE

The first history of Motorola's Iridium global wireless communications system to put the project in the corporate contexts of post-Cold War globalization has received the 2021 IEEE William and Joyce Middleton Electrical Engineering History Award from the IEEE History Committee.

In *A Telephone for the World: Iridium, Motorola, and the Making of a Global Age*, (Johns Hopkins Press, 2018) Martin Collins, a curator at the Smithsonian National Air and Space Museum combines oral history interviews with research in corporate records to reveal the role of the Iridium project's communication satellites in advancing globalization. The seventy-seven satellites in low-earth orbit were launched to provide worldwide commu-



nications, and *A Telephone for the World* has been called "a fascinating look at how people, nations, and corporations across the world grappled in different ways with the meaning of a new historical era." <https://www.press.jhu.edu/books/title/11857/telephone-world>

The Middleton Award, established in 2014 by a gift from the estates of long-time IEEE leader William W. Middleton and his wife Joyce F. Middleton recognizes annually the author of a book (published within the previous three years) in the history of an IEEE-related technology that both exemplifies exceptional scholarship and reaches beyond academic communities toward a broad public audience. It carries a prize of US\$2,000.

## PROFESSOR AMY BIX IS 2021 WINNER OF THE BERNARD FINN IEEE HISTORY PRIZE

Amy Sue Bix, who is also a member of the IEEE History Committee, has won the Finn Prize for her paper "'Remember the Sabbath': a history of technological decisions and innovation in Orthodox Jewish communities," *History and Technology*, 36:2 (2020), 205-239. In her paper, Bix addresses an understudied area, namely the response of religious communities to modern technology. In doing so she highlights the work of members of these communities whose identities as electrical engineers also connects them to the IEEE community.

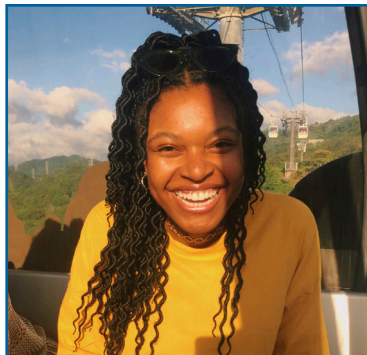
The Bernard S. Finn IEEE History Prize (formerly the IEEE Life Members' Prize in Electrical History) was established by the

IEEE Life Members (who fund the prize) and is administered by the Society for the History of Technology (<https://www.historyoftechnology.org/>). The prize recognizes the best paper in electrical history published during the previous year. Any article published in a learned periodical is eligible if it treats the art or engineering aspects of electrotechnology and its practitioners. The article must be written in English, although the journal or periodical in which it appears may be a foreign language publication. A list of previous winners can be found at: <https://www.historyoftechnology.org/about-us/awards-prizes-and-grants/the-bernard-s-finn-ieee-history-prize/>

## STAFF NOTES

### STARR PHILLIPS JOINS HISTORY CENTER AS REACH DIGITAL MARKETING AND COMMUNICATION SPECIALIST

I'm Starr Phillips and I am so ecstatic to be joining the IEEE History Center team as the temporary Digital Marketing and Communication Specialist for the IEEE REACH Program. I look forward to participating in this role and sharing information about this awesome program with educators and IEEE volunteers. I am a 2019 graduate of Skidmore College in International Relations, with a specialty in Chinese language and culture. While still an



undergraduate, I studied abroad at East China Normal University and taught English as a Second Language to children in Shanghai, China. Since graduating, I have worked on a number of digital marketing and social media projects for small businesses and nonprofit organizations. I am very passionate about this work and I am so thrilled to be joining the team!

## RELIC HUNTING: FRANKLIN IN THE MOUNTAINS

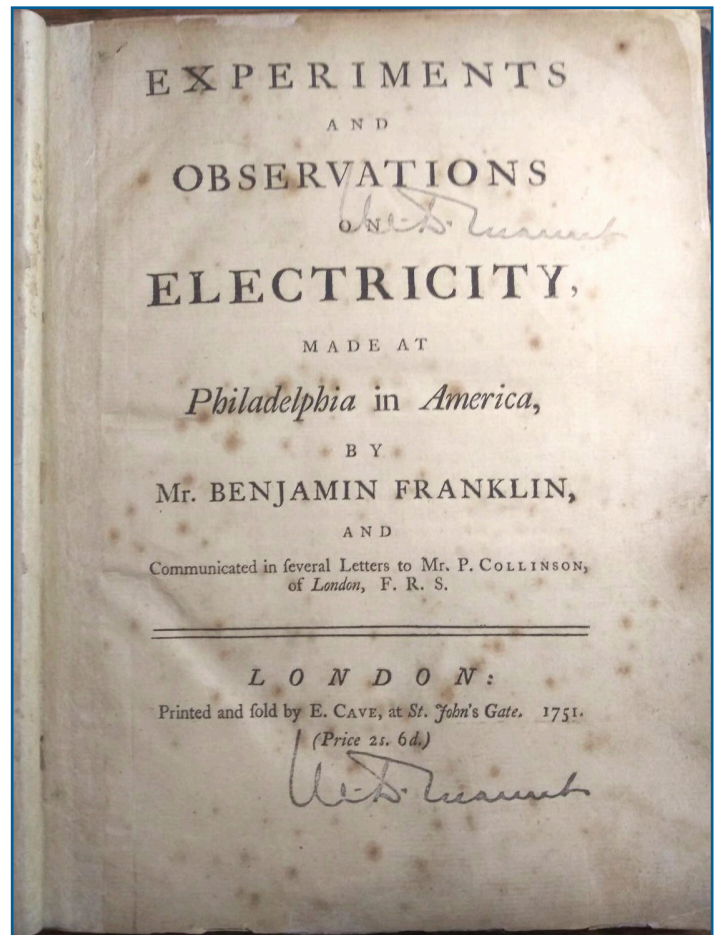
By Robert Colburn, Research Coordinator

While on vacation in the Blue Ridge Mountains of Virginia recently, I was able, via the good offices of a friend, to visit the special collections of Washington & Lee University. Thomas Camden, Head of Special Collections, and Seth McCormick-Goodhart, Assistant Director of Special Collections and Archives, graciously hosted me and showed me treasures from their vaults: Roman coins, Renaissance books and maps, a first edition of Darwin's *Origin of Species*, and—to my surprise and delight—the 1751 (first) printing of *Experiments and Observations on Electricity Made at Philadelphia in America* by Mr. Benjamin Franklin and Communicated in several letters to Mr. P. Collinson, of London. F.R.S [Fellow of the Royal Society]. Printed and sold by E. Cave, at St. John's Gate, 1751. (Price 2s. 6d.)\*

IEEE has dedicated the publication of Franklin's book as an IEEE Milestone [https://ethw.org/Milestones:Book\\_%E2%80%9CExperiments\\_and\\_Observations\\_on\\_Electricity%E2%80%9D\\_by\\_Benjamin\\_Franklin,\\_1751](https://ethw.org/Milestones:Book_%E2%80%9CExperiments_and_Observations_on_Electricity%E2%80%9D_by_Benjamin_Franklin,_1751) indeed, it is as yet the earliest electrical achievement IEEE has dedicated. It was with feelings of no little awe that I gazed at it on the table in front of me in its protective box. In the letters collected within the pages of that book (many would call it a pamphlet really), Franklin reported experiments which determined the existence of positive and negative charges, and the difference between insulators and conductors. Franklin's theory that lightning was a form of electricity was independently proven by French scientists Thomas-Francois Dalibord and a second scientist recorded as Monsieur Delor in 1752. Their proof made Franklin world-famous.

In moments like that, when one is able to make a connection with a tangible artifact, history becomes very vivid. I imagined the excitement that other readers, two hundred and seventy years before me, must have felt staring down at those same pages.

I could not resist taking a photo of the title page with my



mobile phone and emailing it to my colleagues back at the IEEE History Center, imagining their reactions. *Rob, you told us you were going on vacation. You didn't tell us you were going to see the holy grail!*

\*Comparing historical monetary values is always complex, but 2s. 6d would be approximately £28 or \$38 current value, in range with many scholarly or academic publications today.

## CENTER ACTIVITIES

### EXPLAINING THE GHOST IN THE MACHINE

By Alexander B. Magoun, Ph.D., Outreach Historian

Since its establishment in 1980, the IEEE History Center has fulfilled Jim Brittain's vision of serving the "invisible college" of electrical history devotees. As a vital node in the small but vibrant network that supports "the increase and diffusion of knowledge about the contributions of electrical engineers" and their colleagues in computation and related fields, the center aids scholars through fellowships, prizes, conference sessions, publishing platforms, and support of special interest groups. Researchers

in IEEE-related histories also include reporters, public relations staff, halls of fame, working professionals, and documentarians who sometimes have unusual questions to answer.

For example, thanks to a reference from Paul Israel, Director and general editor at the Thomas Edison Papers (and former IEEE History Committee member), producer David Kestenbaum of U.S. National Public Radio's *This American Life* emailed outreach historian Alex Magoun. Kestenbaum wanted to know more about the background to the dog Nipper and the

1899 painting “His Master’s Voice” by English painter Francis Barraud.

Renowned after its conversion into a trademark for two of the world’s largest recorded music corporations, the image of a loyal dog listening attentively to a gramophone or “talking machine” has diffused around the world. But what inspired Barraud to create the painting? Where is his master?

Kestenbaum wanted to know if it was true that Nipper’s owner lay under the wooden surface on which Nipper sits.

The subject is murky and emotionally charged among the Nipper devotees who are invested in the painting behind a global corporate trademark. Magoun had given it glancing attention while writing on the evolution of the phonograph record and concluded that, based on the gently diverging side lines of the wooden surface on which Nipper sits, he was perched on the coffin of his owner. On this narrow substitute for a table, which itself would raise the question of why a dog sits on a table, plays what was originally a battery-powered, Edison cylinder phonograph used for business dictation.

Barraud acquired the dog when Nipper’s owner, his older brother Mark, died at the age of thirty-nine. Nipper died in 1895, four years before Barraud painted him and the phonograph, which manufacturers were just beginning to market as a home entertainment. There is no contemporary documentation of the painter’s motivation; all recollections took place long after the commercial success of The Gramophone Company and Victor Talking Machine Company. By then, amid commissions for another twenty-four copies of the painting, it was not in Barraud’s interest to explain why he chose to paint one dead older brother’s dog listening to an Edison Commercial phonograph that might have belonged to his other older brother, a successful portrait photographer, who died in 1896 at the age of fifty-one. That phonograph was designed to be heard with rubber hearing tubes, not the black horns used in the Edi-

*“Producer David Kestenbaum of U.S. National Public Radio’s This American Life emailed outreach historian Alex Magoun to know more about the background to the dog Nipper and the 1899 painting ‘His Master’s Voice’”*

son company’s early home machines, and a variation of which Barraud used artistic license to depict in his original work. Therefore, Barraud had to change the machine, the horn, and the title from “Dog looking at and listening to a phonograph,” as he initially copyrighted the painting, to “His Master’s Voice.” This he sold along with its copyright to The Gramophone

Company for £100. The diverging lines of the opposite edges of the wooden surface remained in place.

What incentive would Barraud have to paint and then retitle such a mournful study? Sentiment imbues paintings with meaning, thus a painting celebrating the loyalty of his brother’s dog was perhaps a way of Barraud’s memorializing both. The story of Greyfriars Bobby, a Skye terrier who faithfully guarded his master’s grave in Edinburgh, Scotland (d. 1872) for fourteen years was already, by the time of Barraud’s painting, an indelible part of British culture. A statue had been erected to Greyfriars Bobby in 1873. Moreover, “his master’s voice” was a common phrase in late Victorian literature, applied to fictional and observational characterizations of loyal animals and people.

Numerous observers and scholars have described and studied the culture of sentimentality amid rising living standards and tragically persistent disease and infection rates of that period. Life expectancy in 1900 was about fifty years in industrializing countries. As painters of animals and devout children, Barraud’s father and uncle catered to this audience. Francis undoubtedly learned this point before his father died when Francis was eighteen.

Host Ira Glass of *This American Life*, which more than four million people listen to in three countries, drew on this research for episode 757, “The Ghost in the Machine” ([www.thisamericanlife.org/757/the-ghost-in-the-machine](http://www.thisamericanlife.org/757/the-ghost-in-the-machine)). Magoun and Israel are among the persons credited for assistance at its conclusion.

## ETHW UPDATES

### IEEE SECTION OFFICER DATA ON ETHW

One of the missions of the Engineering and Technology History Wiki (ETHW) is to capture the institutional history of various engineering societies, including IEEE. Working with data received from Member and Geographic Activities, the History Center has migrated IEEE Section Officer data from 2000 to the present to the ETHW. Each IEEE Section has its own page on the ETHW, and over the next several months, History Center staff will be working to fill in the data from earlier periods.

Rosters of section officers is one piece of primary documentation the ETHW would like to collect about IEEE Organizational Units. If you have been involved in an IEEE Section, IEEE Region, IEEE Society, or IEEE Student Branch and would like to

contribute to your organizational unit’s history on the ETHW, please email Nathan Brewer [n.w.brewer@ieee.org](mailto:n.w.brewer@ieee.org) for ways you can contribute.

### FIRST-HAND HISTORIES ON THE ETHW

Engineers, scientists, and related professionals have long been the main actors in the drama of technological innovation. Knowing their stories, and the stories of their organizations, is essential to understanding how and why technology has developed as it has for the benefit of humanity. This gives technologists from around the world the opportunity to relate their personal, first-hand experiences as central participants in the process of technical innovation in its broadest context, and the

Engineering and Technology History Wiki (ETHW) acts a repository for these stories.

Do you have a story to tell? No matter how big or small, we would be delighted to add your memoirs to our collection. Areas like the thought processes that led to choosing a particular engineering solution, how one came up with the idea for an invention, or projects that have given the most personal and

professional satisfaction are all great areas of focus for a first-hand history.

New on the ETHW is a history written by Anthony Davies, former Region 8 director, on the history of the IEEE Constitutional Amendment Proposal, and comparisons between IEEE and IET. To view this history, or to submit your own, visit: [https://ethw.org/First-Hand:List\\_of\\_First\\_Hand\\_Histories](https://ethw.org/First-Hand:List_of_First_Hand_Histories)

## OUTREACH OF THE IEEE REACH PROGRAM CONTINUES, BOTH INTERNALLY AND EXTERNALLY

By Kelly McKenna, REACH Program Manager

During the 2021 November IEEE Board Series, the REACH team hosted a general session, *The IEEE REACH Pre-University Education Program*. The session highlighted the History Center's REACH Program ([reach.ieee.org](https://reach.ieee.org)), which provides pre-university teachers with free open education resources (OER) that place engineering and technology in their historical perspectives. The general session provided a wonderful opportunity to share with IEEE volunteers how IEEE REACH encourages students to think critically about technology and enhances technology and engineering literacy skills. IEEE Volunteers were invited to introduce the REACH Program to their local community. A PowerPoint Presentation about the program is available for IEEE members who are interested in sharing the IEEE REACH program with local educators. Please email Kelly McKenna at [k.mckenna@ieee.org](mailto:k.mckenna@ieee.org) for a copy of the PowerPoint. Also in November, the REACH Program hosted a virtual exhibit booth during the IEEE STEM Summit.

The IEEE REACH team will be hosting a webinar about the program during IEEE Education Week held 4-8 April 2022 to celebrate the many ways IEEE impacts education at every level, from pre-university STEM to university activities. Watch this short video <https://ieeetv.ieee.org/video/ieee-education-week-educationatieee> to learn more about this global event. We will soon be posting information about the IEEE REACH webinar on the Education Week website, please keep an eye out for it. We encourage all to attend.

External outreach of the program continues with teachers as well as outside organizations. By the end of 2021, more than 12,000 users accessed the REACH program. These users included secondary school and university teachers. In addition, the site was accessed from all fifty U.S. States, Puerto Rico, Washington DC, and from 160 countries! The REACH team pursued and participated in many external outreach opportunities in 2021 that provided significant exposure of the program and helped increase the number of users. One exciting partnership that continues to gain traction is our continued efforts with UNESCO, under the IEEE/UNESCO Memorandum of Understanding, in association with the IEEE Africa Council and the Uganda Section. As part of this collaboration, in November 2021, the REACH team participated in a teacher mentorship workshop organized by the Uganda National Commission for UNESCO (UNATCOM), with participation by the Uganda Ministry of Education and Sports.



*During a teachers' workshop organized by the Uganda National Commission for UNESCO, educators learned about REACH and participated in a hands-on activity.*

UNESCO has also extended an invitation to the REACH team, along with our stakeholders working on the ground in Uganda, to participate in World Engineering Day 2022 on 4 March, with the theme *Build Back Wiser - Engineering the Future*.

Another external partnership that continues to grow, is with the International Technology and Engineering Educators Association (ITEEA). The REACH team, in collaboration with the ITEEA's STEM Center for Teaching and Learning was invited to present a pre-conference teacher's workshop on 9 March during ITEEA's 2022 Annual Conference. The teacher workshop, *Implement STEL's Social and Humanistic Core Disciplines in the Classroom, with a New Integrative STEM Pathway*.

As part of the NIC grant, REACH also has a new Temporary Digital Marketing and Communication Specialist, Starr Phillips (see page 4). We are grateful for the New Initiative Committee's continued support of the REACH Program and are thrilled to have Starr on board. Starr will help the REACH Program continue its digital marketing efforts and outreach. Be sure to follow IEEE REACH on Facebook (<https://www.facebook.com/ieeereach/>) for Starr's updates regarding all of these activities.

## MAJOR ORAL HISTORY PROJECT WELL UNDERWAY

*“Recently, the History Center launched a new oral history project, ‘IEEE Life Fellows – Capturing Oral History.’ IEEE’s more than 3,200 Life Fellows have contributed to the world’s body of knowledge in IEEE fields of interest, demonstrated a strong commitment to the profession, and achieved extraordinary accomplishments. They and their career experiences are a vital resource.”*



*Past History Committee Chair Janina Mazierska has recorded her oral history*

**“IEEE Life Fellows: Capturing Oral History,”** the IEEE History Center’s major oral history project funded by the IEEE New Initiatives Committee is well underway. During 2021, Mary Ann Hellrigel, Ph.D., Archivist, Institutional Historian and Oral History Program Manager at the IEEE History Center trained 50 IEEE volunteers to serve as peer-to-peer interviewers and 152 subjects have been identified. Thus far, nearly thirty oral histories have been recorded. After processing they are posted on Engineering and Technology History Wiki. Outgoing IEEE History Committee Chair Janina Mazierska recorded her oral history and, along with other committee members, she completed training and will help capture the voices of her IEEE colleagues.

New training sessions will be scheduled in 2022 and the process to match trained interviewers with interviewees continues. In addition, Mary Ann started identifying IEEE Fellows who have previously recorded an oral history, so read the life stories of these esteemed IEEE members posted here: [https://ethw.org/Oral-History:IEEE\\_Life\\_Fellows](https://ethw.org/Oral-History:IEEE_Life_Fellows)

IEEE members continue volunteering to be trained, so new training sessions will be scheduled and the process to match trained interviewers with interviewees continues. For example, Mary Ann is working with Gene Freeman to offer training to R5 members in March 2022.

If you have questions and to volunteer, please contact Dr. Hellrigel, [m.c.hellrigel@ieee.org](mailto:m.c.hellrigel@ieee.org)

## IMPORTANT COLLECTION OF ELECTRIC AND GAS UTILITY DOCUMENTS DONATED TO HISTORY CENTER LIBRARY

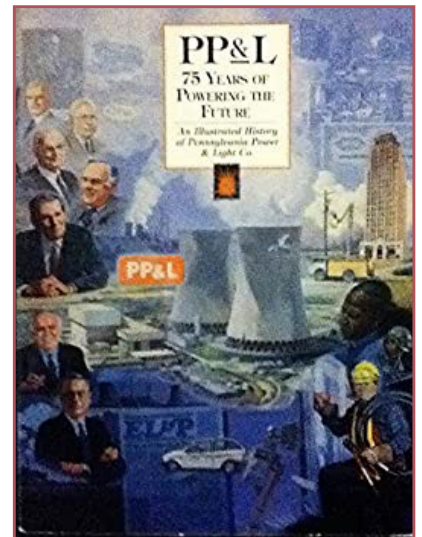
The IEEE History Center is pleased to announce that Bill Beck, President of Lakeside Writers’ Group, has donated books and papers documenting the history of the North American utility industry to the History Center library. Mary Ann Hellrigel, Archivist and Institutional Historian at the History Center met Beck in the early 1990s at the Hagley Library in Wilmington, Delaware, where she was researching her dissertation and he was researching *PP&L: 75 Years of Powering the Future: An Illustrated History of Pennsylvania Power & Light Co.* (1995).

In 2019, Hellrigel jumped at the chance of acquiring Beck’s personal library and research files, visiting Beck and his wife Elizabeth at their home in Indianapolis, Indiana. Although the COVID pandemic delayed the actual transfer of materials to the History Center at the IEEE Operations Center in Piscataway, the donation is now en route and will be a fantastic addition to the History Center’s research library, which was bolstered by the Thomas F. Peterson donation in 2018.

Beck’s collection, which has been assembled over the past four decades, is a documentary treasure which scholars and students of the development of electric and gas utilities will be able to access and use for years to come. The corporate histories written for clients such as Pennsylvania Power & Light,

Houston Lighting & Power, Montana-Dakota Utilities, Minnesota Power, Laclede Gas, Northern States Power, and many others have advanced the study of engineering history in the utility field. The fifty-nine linear feet of books and papers (approximately twenty-eight linear feet in a “clippings file” collection) used to support the writing of those books will be a wonderful addition to the materials already assembled by the History Center.

The donation will be designated “The William O. and Elizabeth A. Beck Collection of Lakeside Writers’ Group Utility Corporate History Research Materials,” and will find a valued place in the study of engineering and its impact on the creation and growth of the modern utility infrastructure.





## SURFING THE WEB FOR MARCH 2022

In December 1921, radio amateurs in the United States and Canada transmitted messages across the Atlantic Ocean to Great Britain and France on the short wave of 200m. Their successors repeated the feat for the centenary of the low-power trans-Atlantic radio transmissions, and the American Radio Relay League, [www.arrl.org/transatlantic](http://www.arrl.org/transatlantic), and the Radio Society of Great Britain, <https://rsgb.org/main/activity/transatlantic-tests/>, have documented the activities then and now with primary and video sources (not including the April 1922 issue of *QST*, <https://worldradiohistory.com/Archive-DX/QST/20s/QST-1922-04.pdf>). Robert McCluskie Alexander, GM0DEQ, developed a website on Paul Godley, ZZE, who established and operated the successful reception of messages from North American amateurs a century ago: [www.transatlantic.org.uk/](http://www.transatlantic.org.uk/).

The highly engaging Twitter account for the Mercurians, the Society for the History of Technology's special interest group in communications technology, is managed by outreach historian and Mercurians chair Alex Magoun. He tweets news of relevant new books, articles, websites, and occasionally historical clip-pings: <https://twitter.com/Mercurians1>.

The British Library has posted more than sixty oral histories from an array of men and women engineers, managers, and workers on "National Life Stories: An Oral History of the Electricity Supply Industry in the UK" from the late 1940s into the 2000s: [www.bl.uk/projects/national-life-stories-an-oral-history-of-the-electricity-supply-industry-in-the-uk#](http://www.bl.uk/projects/national-life-stories-an-oral-history-of-the-electricity-supply-industry-in-the-uk#). Although the recordings are not transcribed, the site provides summaries of each section of the interviews, which can run up to fifteen hours in length. This enables speakers to consider aspects of their lives in more detail and context than American oral histories that typically last one to two hours to make the cost of transcription and editing feasible.

PK Porthcurno is a museum and archive of Cable and Wireless's global communications history based in the Wilshaw station building just outside Penzance, Cornwall, U.K. For the sesqui-centenary of its founding as a telegraph station for the British empire, PK Porthcurno's archives allied with the "2021 Citizen Curators," students at Exeter University and overseas. They created the PK150 Connected Collections of online maps, videos, blogs, and reports on the relationships between telegraphy, gutta percha, imperialism, and shipworm, among other subjects: <https://pkporthcurno.com/pk150-connected-collections/>.

"Edited By" is a terrific and thoughtfully composed survey of 206 women film editors "who invented, developed, fine-tuned and revolutionized the art of film editing":

<http://womenfilmeditors.princeton.edu/>. It draws on memoirs, interviews, histories, photos, and illustrations to show how women in the U.S., the United Kingdom, and elsewhere innovated techniques that movie goers take for granted, even as they fought to keep their jobs when men in film production realized the importance of the editor's job.

*Popkult60*, <https://popkult60.eu/e/en/#p0>, is a European multimedia exhibit of the uses of media technologies—television, radio, record players, film, magazines—across western Europe in the "long" 1960s. Available in English, German, and French, the exhibit follows best museum practices by keeping the well written captions brief.

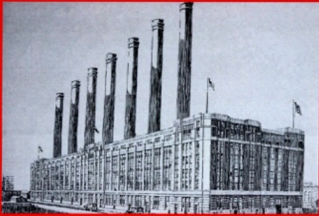
Frank da Cruz, a long-time participant in computing at Columbia University, has updated his "Chronology of Computing at Columbia University" to HTML5, enabling more convenient reading on the array of screens available to readers; providing translations of some pages in various languages; and adding new information on card punches, the IBM Radiotype, movies showing pre-1970s computer systems, and the IBM 405, 610, and 360/91 computers:

[www.columbia.edu/cu/computinghistory/](http://www.columbia.edu/cu/computinghistory/).

For reasons never explained, Google Books' process for digitizing publications leaves incredible numbers of public domain books and serial volumes in "Snippet" or "Unavailable" form. The fact that they originate as United States or other government publications or were published as far back as the 1870s makes one wonder why the optical character recognition program processing them pays so little attention to the publisher or the year of publication, particularly in the federal depository sections of the corporation's U.S. research university library partners. Thanks to a process best accessed at the bottom of Google Books' "classic" webpage, appeals are reasonably easy to file, although required for each volume, and the small staff is very responsive in verifying the volumes' status with Google's library partners. While researching contemporary responses to Nikola Tesla's approach to electromagnetic physics, outreach historian Alex Magoun succeeded in opening the volumes of *Electricity* for 1896-1905, [https://books.google.com/books?id=Ccw0AQAAAJ&source=gbs\\_book\\_other\\_versions](https://books.google.com/books?id=Ccw0AQAAAJ&source=gbs_book_other_versions); and *Electrical World and Engineer*, 1899-1905, [https://books.google.com/books?id=HiQzAQAAAJ&dq=editions%3ALCCN99112079&as\\_brr=4&source=gbs\\_book\\_other\\_versions](https://books.google.com/books?id=HiQzAQAAAJ&dq=editions%3ALCCN99112079&as_brr=4&source=gbs_book_other_versions).

# BOOKS FROM THE IEEE HISTORY CENTER PRESS

## NEW YORK POWER



Joseph J. Cunningham

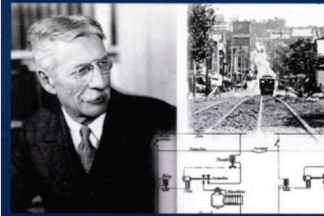
## BELL LABS MEMOIRS:

Voices of Innovation



EDITED BY A. MICHAEL NOLL  
AND MICHAEL GESELOWITZ

## THE BIRTH OF ELECTRIC TRACTION



The extraordinary life of inventor Frank Julian Sprague

Frank Rowsome, Jr.

## SPRAGUE ELECTRIC



An Electronic Giant's Rise, Fall, and Life after Death

John L. Sprague

**NEW YORK POWER** by Joseph J. Cunningham tells the story of the electrification of one of the densest electrical load areas in the world. Electrification began during the 1880s, but many innovations were required to supply urban service at a cost that would make possible large-scale consumption.

[https://www.amazon.com/New-York-Power-Joseph-Cunningham/dp/1484826515/ref=tmm\\_pap\\_switch\\_0?encoding=UTF8&qid=&sr=](https://www.amazon.com/New-York-Power-Joseph-Cunningham/dp/1484826515/ref=tmm_pap_switch_0?encoding=UTF8&qid=&sr=)

### BELL LABS MEMOIRS: VOICES OF INNOVATION:

The innovative spirit and creative energy of Bell Labs during the directorship of William Baker are described by twelve people who worked there. Through their eyes and words, the culture of Bell Labs comes alive.

[https://www.amazon.com/dp/B006L7JRLY/ref=dp\\_kinw\\_strp\\_1](https://www.amazon.com/dp/B006L7JRLY/ref=dp_kinw_strp_1)

### THE BIRTH OF ELECTRIC TRACTION: THE EXTRAORDINARY LIFE OF INVENTOR FRANK J. SPRAGUE:

Sprague made enormous contributions in the areas of electric traction, control and safety, especially automatic signaling and brake control for railroads. He was active in the planning and construction of New York City's subway system, and in the electrification of Grand Central Terminal.

[https://www.amazon.com/Birth-Electric-Traction-extraordinary-inventor/dp/1490955348/ref=sr\\_1\\_1?crid=20XP2PN006USY&keywords=birth+of+electric+traction+sprague&qid=1641497922&s=books&prefix=birth+of+electric+traction+sprague%2Cstripbooks%2C119&sr=1-1](https://www.amazon.com/Birth-Electric-Traction-extraordinary-inventor/dp/1490955348/ref=sr_1_1?crid=20XP2PN006USY&keywords=birth+of+electric+traction+sprague&qid=1641497922&s=books&prefix=birth+of+electric+traction+sprague%2Cstripbooks%2C119&sr=1-1)

**SPRAGUE ELECTRIC:** Sprague Electric Company's rise from a high-tech kitchen-table startup is representative of much of the U.S. electronics industry. Begun in 1926, it became a thriving manufacturer of components. More than 50,000 Sprague components rode aboard every *Apollo* mission, and more than 25,000 aboard every Space Shuttle. *Sprague Electric* provides a valuable business and technological history, a story of corporate success...and a cautionary tale of what to avoid.

[https://www.amazon.com/Sprague-ElectricElectronics-Giants-after/dp/150338781X/ref=sr\\_1\\_1?crid=HRWR6CMKM0D&keywords=sprague+electric&qid=1641498091&s=books&prefix=sprague+electric%2Cstripbooks%2C147&sr=1-1](https://www.amazon.com/Sprague-ElectricElectronics-Giants-after/dp/150338781X/ref=sr_1_1?crid=HRWR6CMKM0D&keywords=sprague+electric&qid=1641498091&s=books&prefix=sprague+electric%2Cstripbooks%2C147&sr=1-1)

## ROBERT A. "BOB" DENT RECOGNIZED AS OUTSTANDING PHILANTHROPIST BY AFP-NEW JERSEY IN 2021



Robert A. "Bob" Dent  
Recognized as  
Outstanding  
Philanthropist  
by AFP-New Jersey

IEEE Foundation

By IEEE Foundation Staff

IEEE Life Senior Member and former IEEE History Committee Chair Robert A. "Bob" Dent received the Association of Fundraising Professionals (AFP) New Jersey's Excellence in Philanthropy Award for Outstanding Philanthropist for his philanthropy to IEEE through the IEEE Foundation.

Since 1981, AFP NJ's Excellence in Philanthropy Awards have recognized the achievements of some of the most notable citizens and organizations in the State who have dedicated their efforts toward making New Jersey a better place.

Bob embodies the philanthropic spirit and emanates a strong desire to personally "give back" to IEEE and his community. Bob is a champion in providing funding opportunities in avenues of monthly giving, matching gifts, leadership giving and planned giving. He is a member of two IEEE donor recognition groups the IEEE Goldsmith Legacy League (Planned Giving) and the IEEE Heritage Circle (Cumulative Giving).

Bob's volunteer work with IEEE began when he joined the IEEE Student Branch in 1965 while he was a senior at Stevens Institute of Technology in Hoboken, NJ, USA. Bob says, "IEEE provided an opportunity to read and hear technical information, to develop professionally, and to network with my peers in the profession and the industry in which I had chosen to work."

After thirty-two years of volunteering for IEEE, he joined the IEEE staff as the Executive Director of the Power Engineering Society, now known as the Power & Energy Society (PES). He has since served in many volunteer roles within IEEE and has been a leading donor to all of the programs he has been associated with, including the IEEE History Center and its REACH program.

Bob says, "I want to pay forward to programs that benefit present and future electrical engineers and society in general."

Your contributions to the **IEEE History Center Fund** preserve the heritage of the profession and its contributions to humanity.

We invite you to find out more about the Center and its programs at <https://www.ieee.org/about/history-center/index.html> and more about the Engineering & Technology History Wiki ([www.ethw.org](http://www.ethw.org))

# Where technology and philanthropy intersect

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- IEEE History Center and REACH
- EPICS in IEEE
- IEEE Smart Village
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## IS IT YOUR WILL – OR SOMEONE ELSE’S?

By IEEE Foundation Staff

All your life you’ve made the decisions about how your money will be used – about how you will provide for yourself, for your family, and for the charitable organizations you believe in. But have you planned in order to retain that same control over your legacy? You can if you have an up-to-date will.

With a will, you can:

- Provide for each of your loved ones as you wish
- Choose caring, responsible guardians for your minor children
- Make special arrangements, such as a trust, for a loved one who might need extra care
- Choose the people who will administer your estate and
- Make gifts to the charitable organizations whose missions align with your values and help to do the good that you want associated with your legacy.

*Without a valid will*, you put every one of these decisions in the hands of others, including administrators appointed by the court. The IEEE Foundation knows this can be a sensitive subject, and planning can seem like a chore but you will gain peace of mind and reassurance when the job is done. Plus your family will breathe easier, knowing that you have worked out a financial plan for their future.

Inclusion and consideration of the IEEE Foundation in this plan would greatly benefit the engineering community and future generations. Every future bequest that we can count on means that IEEE programs will continue to bring the promise of technology and the knowledge to use it to individuals and communities around the world.

It is easy to do – here is the suggested language for a bequest:

“I give the sum of \$\_\_\_\_\_ [or all (or stated percentage) of the rest, residue, and remainder of my estate] to the IEEE Foundation, Incorporated, a corporation organized under the laws of the State of New York, with business address of 445 Hoes Lane, Piscataway, NJ 08854-4141, USA.”

And if you want to designate the IEEE History Center simply insert after USA:

“... to be used for the IEEE History Center. In the event that such use shall, in the reasonable judgment of the IEEE Foundation’s Board of Directors, become impossible, illegal, or impracticable to fulfill, then for such similar purposes as the Board of Directors in their discretion shall determine.”

It is never too early or too late to start! As you create or update your plan, consider the role IEEE has played in your life and the #IEEELegacy you want to leave. The IEEE Foundation team would be honored to assist with finding the right way for you to integrate IEEE into your plans. As always, be sure to consult your legal and financial advisors to ensure that a vehicle is consistent with your philanthropic and planning objectives.

If you have a plan in place that includes the IEEE Foundation, we invite you to share that news with us and join the IEEE Goldsmith Legacy League, our legacy giving group. Members of the League are *Forever Generous*.

Visit the IEEE Foundation website at [ieeefoundation.org/how-to-give](http://ieeefoundation.org/how-to-give) to learn about all your giving option or contact Daniel DeLiberato, Development Officer at +1 732 562-5446 or [d.deliberato@ieee.org](mailto:d.deliberato@ieee.org) to hold a private conversation about what is right for you.

*The information on this article is for educational purposes only and is not intended as legal, tax, or investment advice. If you are considering a planned gift to the IEEE Foundation, we highly recommend you consult with your own tax and legal advisors to determine the best options for you.*



IEEE History Center  
445 Hoes Lane  
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at the "**Designation**" box.