IEEE History Activities Coordinator Report, August 2014 — Tony Davies

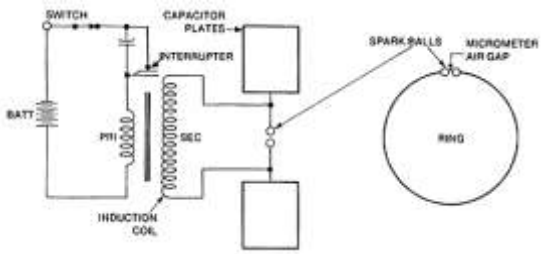
Highlights from the past

- The UK and Ireland LMAG continues to have much of its activity related to the encouragement and preparation of History Milestone Proposals.
  - The Milestone for the 1975 invention of Public-Key Cryptography was dedicated in 2010, but the duplicate Plaque, to be installed in a location accessible to the public, is still in storage, pending the completion of a refurbishment and re-opening of a museum in Cheltenham.
  - I have continued to give some invited talks on Technology History topics, including, recently, a talk about Surface to Air Guided Missiles, at Imperial College for IET and at the University of Newcastle-upon-Tyne. This appears to be a popular topic.
  - The name of the United Kingdom and Republic of Ireland Section (commonly abbreviated to UKRI) is being changed to United Kingdom and Ireland. There are no other implied changes (e.g. it will continue to include Northern Ireland, since that is both part of the United Kingdom and part of Ireland), and will involve one area with pound sterling currency and one area with Euro currency). The Section language is English but there are also three Celtic Language (Welsh, Gaelic and Irish) which have some official support and varying amounts of actual usage. Since it seems that various misunderstandings can still arise about the relationships between the various parts of the Section, I provided an overview and explanation on the History Activities Page of the R8 Webpage, which you are invited to read.
    (see ***http://www.ieeer8.org/category/member-activities/history-activities/***).
    Note that 'Éire' and 'Poblacht na h-Éireann' are the translations into Irish of 'Ireland' (e.g the whole island), and 'Republic of Ireland' (the part excluding Northern Ireland). 'Cymru' is the translation into Welsh of 'Wales', and 'Alba' is the translation into Gaelic of 'Scotland'.


Republic of Ireland and United Kingdom Flags

Future activities

1. Two History Milestones have been approved in the Germany Section - the first ones in that Section.

Heinrich Hertz and his experiment

Rheinfelden (Swiss-German border)

One is to recognise contributions of Heinrich Hertz at Karlsruhe and the other is for the Rheinfelden Hydroelectric Power Plant, 1898 - 2010. It was the decision by Heinrich Hertz to move from Kiel University to Karlsruhe (a Technische Hochschule, with its better facilities for experimental work, responsible for the production of engineers rather than research-doctorates) which led to his electromagnetic-wave discoveries.
The date of the dedication ceremony for Hertz has not yet been decided, for Rheinfelden it is expected to be 25th September 2014, hosted by the power plant operator and owner Energiedienst.

LP record using Blumlein stereo recording method

2. It is hoped that the IEEE History Committee will shortly recommend the approval by the Board of Directors of a History Milestone to recognise the achievements by Alan Blumlein in the areas of Stereo Sound Recording and Reproduction (which include the first pressing of a stereophonic disc with two channels in one groove and invention of the dual 45-degree cutting in a single groove, adopted worldwide for stereo recording on LP discs and many other inventions related to stereo sound - see GHN website for details of the proposal). If possible the dedication ceremony will be in 2014.
3. A Milestone in Poland to recognise the breaking of the Enigma code is due to be dedicated in August 2014, and proposals to recognise a 3D radar system (Zenit) and a sub-millimetre waveguide have been submitted from Ukraine.

Transmit antenna of Zenit L-band 3D pulsed radar (1938-1943)

4. Other Region 8 Proposals in progress include:
   Enrico Fermi's 1926 contribution to Semiconductor statistics at Firenze (Florence) and Luigi Dadda's installation in 1954 of an imported computer CRC102A to Politecnico di Milano, one of the first to be operated in Continental Europe.

Computer CRC102A in laboratory in Milan:

Best practices

- The importance of Technology History in the education and formation of future engineers is often insufficiently recognised. Engineers are supposed to 'invent the future' which they can hardly do without some awareness and understanding of past achievements. It should therefore become a common practice to include a compulsory history of technology module in university undergraduate programs, of a style that is likely to be interesting for the students.
- Evaluation and Challenging of History Milestones: Anyone may contribute to the discussion of a proposed Milestone during the evaluation stage and it is important for the integrity of the process for as many as possible to do so. Once dedicated, a Milestone could be challenged on the basis of a serious belief that it had been approved because of an incorrect or insufficient evaluation, but that would be an unwelcome process, comparable to an accusation of plagiarism. Everyone is therefore encouraged to study the Milestone proposals in process, and to contribute to the discussion if they have expertise or knowledge to offer.

Points of concern / Topics for future discussion

Plans were approved to provide some financial support to the Ukraine Section for a large number of possible History Milestones, some to be proposed from the Kiev area and some from the Kharkiv area. The unfortunate and in some cases tragic events in Ukraine make it likely that there will be little progress with these plans. Only two have been submitted so far (see 'Future Activities, para. 3 above)

There are many opportunities for History Milestone Proposals to be developed in many of the Sections of Region 8; very few seem to be at a significant stage of development. Progress is often very slow because of the difficulties in finding 'champions' with the knowledge and continuing enthusiasm to see

the proposals through to completion. A disproportionate number of the History Milestones are in the USA.

There have been many requests to the Section Chairs of Region 8 to ensure that the history of their Sections is properly recorded - either on their own website or the Global History Network (GHN) website, etc. Some Sections have very limited historical entries or even nothing at all! Assistance and advice is available on request. It is recommended that each Section should appoint or elect a suitable volunteer to promote historical aspects of the Section (this includes both the history of the Section and Technical achievements which took place in the Section territory)

Miscellaneous

- The move of the IEEE History Center to Stevens Institute of Technology, Hoboken, NJ has now taken place. The Center will work closely with Stevens' College of Arts and Letters (CAL), an academic unit dedicated to teaching and research at the intersection of science, technology, the humanities, and the arts. Stevens is a private university founded in 1870.

The IEEE History Center's new home: the campus of Stevens Institute of Technology overlooking the Hudson River. Image by Jeffrey Wack Photography. Creative Commons Attribution Share Alike 3.0

- Plans for cooperation between IEEE and IET in the areas of History of Technology and Archives, etc. have been more or less 'on-hold' because of the upheaval in the IET arising from the £30m refurbishment of their Savoy Place building, scheduled to re-open in late 2015. A number of suggestions for cooperation-experiments have unfortunately not yet led to any action at all. It is my intention to try to get this matter moving again in September 2014. A basic difficulty is that although IET has a large amount of important historical and archive material, the aspects that are described on their website are primarily under the control of IET staff responsible for the website, whereas in IEEE, the GHN website is 'wiki' based and any registered user can submit material.

- Cooperation between some learned societies in USA has been started, with plans for an "Engineering and Technology History Wiki" (ETHW) - to be a website dedicated to the history of all engineering. In March 2014, AIChE, AIME, ASCE, IEEE, SPE and SWE signed an agreement to jointly oversee the design and operation of the new site and to help fund the costs of running the site. It is expected that IEEE will take the lead role in this. Notably IET has not been involved in this initiative in any way, and nor have other non-USA National Engineering Societies.