



IEEE History Committee

*by Janina Mazierska
Chair 2020-2021*

History Committee: Purpose

IEEE Bylaws (I-305.12)

- ▶ The History Committee shall be appointed by and shall report to the Board of Directors.
- ▶ The History Committee shall be responsible for promoting the collection, writing, and dissemination of historical information in the fields covered by IEEE technical and professional activities, as well as historical information about IEEE and its predecessor organizations.
- ▶ It shall provide assistance to all major boards, work with external institutions when helpful information is requested and can be secured, and provide information and recommendations to the Board of Directors when appropriate.



History Committee Contributions to IEEE

- ▶ Increasing public visibility of IEEE through educating general public in history of fields covered by IEEE technical & professional activities together with History Center through Milestones, ETHW, REACH and other programs
- ▶ Increasing connectivity of IEEE with industry and professional entities through celebrating their outstanding achievements.
- ▶ Milestone program recognised by IEEE volunteers as the best nontangible asset of IEEE (based on a survey)

History Committee's History

- ▶ Established as an IRE Committee since 18 August 1953
- ▶ Haraden Pratt (IRE President 1938) Chair 1953-69
- ▶ IEEE Haraden Pratt Award for outstanding volunteer service rendered to IEEE: forty six awarded)

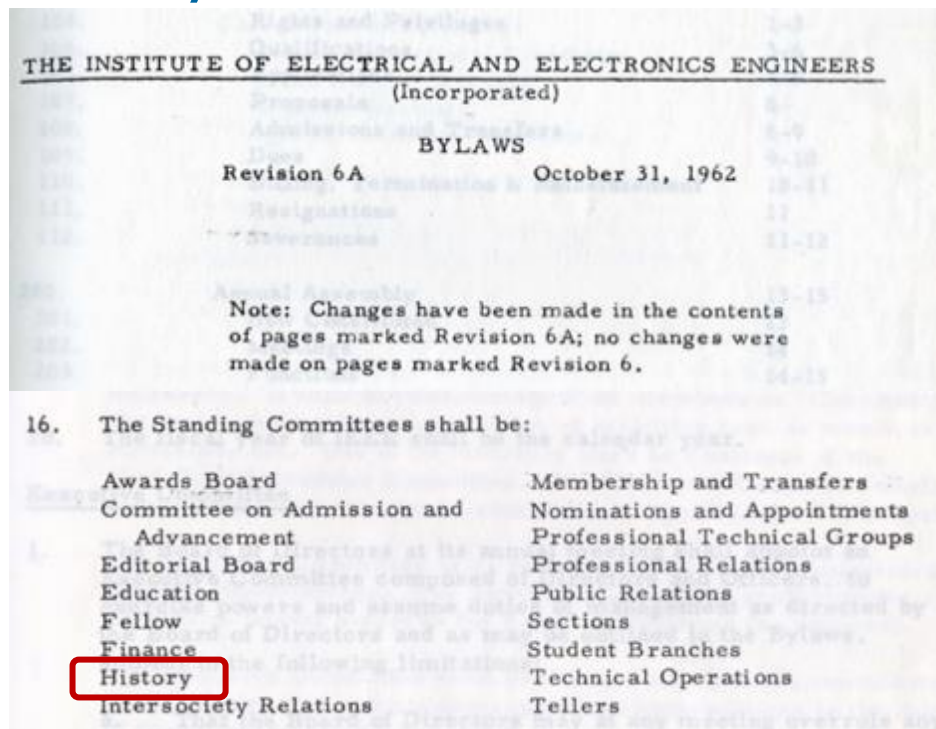


History Committee's History

Established as one of 12 BoD Committees in 1963 when IEEE was founded

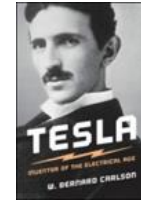
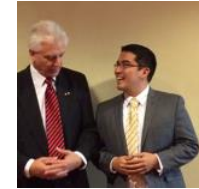


Joint AIEE-IRE panel, 1962



History Committee Programs

- ▶ **IEEE MILESTONES, since 1984:**
213 awarded and dedicated,
21 waiting for dedications
- ▶ IEEE Life Members History Fellowship: since 1978, 43 awarded
- ▶ IEEE Joyce & William Middleton Electrical Engineering History Book Award
- ▶ Guidance to History Center, advice on projects to work on and overseeing its activities



History Center Programs

- ▶ ETHW (Engineering & Technology History Wiki) (www.ethw.org): main outlet of IEEE historical knowledge
- ▶ Management of IEEE Archives
- ▶ IEEE History since 1984 “book”
- ▶ REACH (Raising Engineering Awareness through Conduit of History) had over 1,000 registered pre-university educators to impact 650k students in 2019
- ▶ Collection of oral histories of engineers, largest and most significant in the world (over 800). Recently awarded funding for IEEE Fellows Oral History project by NIC



History Committee Flagship Program: IEEE Milestones



- ▶ The IEEE Milestones program honors significant technical achievements in all areas associated with IEEE. Milestones recognize the technological innovation and excellence for the benefit of humanity found in unique products, services, seminal papers and patent
- ▶ After recommendation by IEEE History Committee and approval by IEEE BoD, a bronze plaque commemorating the achievement is placed at an appropriate site with an accompanying dedication ceremony
- ▶ IEEE established the Milestones Program in 1983 in conjunction with the 1984 Centennial Celebration to recognize the achievements of the Century of Giants who formed the profession and technologies represented by IEEE.
- ▶ Each milestone recognizes a significant technical achievement that occurred at least twenty-five years ago and having at least regional impact.



Examples of Milestones

- ▶ 1751: Book “Experiments and Observations on Electricity” by Benjamin Franklin
- ▶ 1886-1888 : Electric Lighting Of The Kingdom of Hawaii
- ▶ 1987: Chivilingo Hydroelectric Plant
- ▶ 1916: Czochralski Process
- ▶ 1932-39 First Breaking of Enigma Code
- ▶ 1947: Invention of the First Transistor at Bell Telephone Laboratories, Inc.
- ▶ 1948: The Birthplace of the Barcode
- ▶ 1956 Birthplace of Silicon Valley (USA)
- ▶ 1964-89: The High Definition Television System (Japan)
- ▶ 1966: Interactive Video Games (USA)
- ▶ 1968: CERN Electronic Particle Detection (France)
- ▶ 1979: CD Audio Player (The Netherlands)
- ▶ 1969: Parkes Radiotelescope (Australia)
- ▶ 1982: Nobeyama 45-meter Telescope (Japan)

213 IEEE Milestones Awarded and Dedicated
21 Awaiting Dedications



IEEE Milestones Dedications: 1st, 210&211 and 213th

1882 Vulcan Str.
Plant (1977)



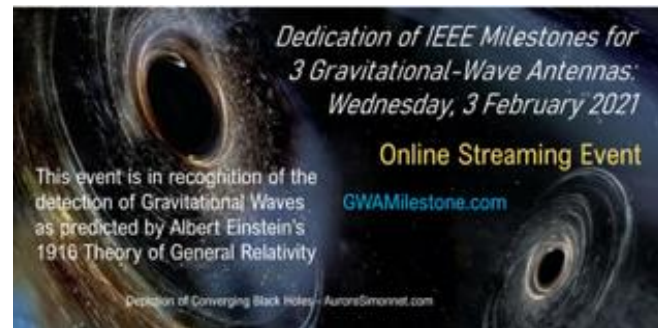
USA Region 4

Fingerprint Identification
System & First Commercial
DSP Chip (2021)



Japan, two milestones

3 Gravitational-Wave Antennas (2021)



Three locations/Regions: two in USA + Italy
Virtual dedication: over 1600 viewers
Four Nobel Prize winners as speakers
(2017 and 2015)
Available on IEEE.Tv



What about Milestones in Region 10?

- ▶ Only 39 Milestones out of 213 (18%)
- ▶ 36 of R10 Milestones (92%) is from Japan, (from 1995)
- ▶ 2 from India (+1) (2012)1
- ▶ 1 from Australia (2019)
- ▶ Region 10 has 34% of IEEE members, incl 27% of HGM
- ▶ Was the only Region that increased HGM membership in 2020
- ▶ As early as 2010 R10 created 40% of IEEE IP (Trans_score card 2010)

Rather Poor Statistics...

What about China? What about South Korea? Thailand, Vietnam, Nepal and all other countries?



How has Region 10 done during the pandemics?

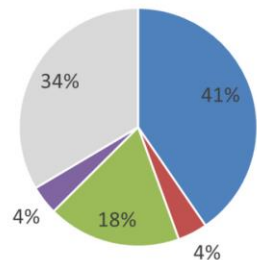
Geographic IEEE Membership Summary - December 2020																
REGION	Higher-Grade w/o GSM				Graduate Students				Undergraduate Students				TOTAL MEMBERS			
	2020		2019		Change		2020		2019		Change		2020		2019	Change
		#	%		%	#	%		%	#	%	#	%	#	%	
1	23,012	24,459	(1,447)	-5.9%	1,625	1,802	(177)	-9.8%	1,402	1,971	(569)	-28.9%	26,039	28,232	(2,193)	-7.8%
2	20,333	21,172	(839)	-4.0%	1,415	1,616	(201)	-12.4%	1,111	1,364	(253)	-18.5%	22,859	24,152	(1,293)	-5.4%
3	21,257	21,871	(614)	-2.8%	2,067	2,322	(255)	-11.0%	1,668	2,429	(761)	-31.3%	24,992	26,622	(1,630)	-6.1%
4	14,658	15,509	(851)	-5.5%	1,566	1,728	(162)	-9.4%	1,344	1,840	(496)	-27.0%	17,568	19,077	(1,509)	-7.9%
5	19,838	20,798	(960)	-4.6%	1,526	1,724	(198)	-11.5%	1,749	2,218	(469)	-21.1%	23,113	24,740	(1,627)	-6.6%
6	40,444	42,565	(2,121)	-5.0%	2,552	2,868	(316)	-11.0%	2,731	3,927	(1,196)	-30.5%	45,727	49,360	(3,633)	-7.4%
R 1-6	139,542	146,374	(6,832)	-4.7%	10,751	12,060	(1,309)	-10.9%	10,005	13,749	(3,744)	-27.2%	160,298	172,183	(11,885)	-6.9%
7	11,968	12,935	(967)	-7.5%	1,953	2,151	(198)	-9.2%	1,185	1,780	(595)	-33.4%	15,106	16,866	(1,760)	-10.4%
8	50,533	52,743	(2,210)	-4.2%	10,116	11,103	(987)	-8.9%	10,154	11,968	(1,814)	-15.2%	70,803	75,814	(5,011)	-6.6%
9	8,955	9,303	(348)	-3.7%	1,477	1,634	(157)	-9.6%	6,143	8,035	(1,892)	-23.5%	16,575	18,972	(2,397)	-12.6%
10	77,391	73,210	4,181	5.7%	21,710	20,875	835	4.0%	34,124	41,087	(6,963)	-16.9%	133,225	135,172	(1,947)	-1.4%
R 7-10	148,847	148,191	656	0.4%	35,256	35,763	(507)	-1.4%	51,606	62,870	(11,264)	-17.9%	235,709	246,824	(11,115)	-4.5%
TOTAL	288,389	294,565	(6,176)	-2.1%	46,007	47,823	(1,816)	-3.8%	61,611	76,619	(15,008)	-19.6%	396,007	419,007	(23,000)	-5.5%

Extremely well: Region 10 the only region that increased HGM and Graduate Student Membership!



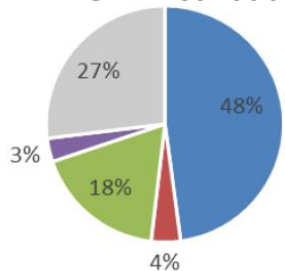
Strategic Goal for Region 10

IEEE Membership Distribution



■ R1-6 ■ R7 ■ R8 ■ R9 ■ R10

HGM Distribution



■ R1-6 ■ R7 ■ R8 ■ R9 ■ R10

- ◆ To encourage establishment of History/Milestones Coordinators in China, South Korea and other Councils as well as Sections
- ◆ To prepare a list of Achievements suitable for Milestones
- ◆ To submit 10 Milestone nominations by the end of 2022



Strategic Goal of IEEE History Committee for 2021-2025

- ◆ To become more a triple strand helix from a double one (History Committee and History Center) through
 - - strengthening collaborations and improved communication with Societies, Regions & Sections
 - - providing information and training
- ◆ Encouragement to all Major OUs:
To appoint History Chairs or Coordinators



Thank you

