

REPORT OF THE SECRETARY

1953

TO THE BOARD OF DIRECTORS,
THE INSTITUTE OF RADIO ENGINEERS

GENTLEMEN:

ANOTHER ANNUAL REPORT, FOR THE YEAR 1953, IS HEREWITH TRANSMITTED. IT EMBODIES THE USUAL STATISTICS AND OTHER INFORMATION CONCERNING THE VARIOUS INSTITUTE OPERATIONS AND ACTIVITIES, NOTABLY MEMBERSHIP, EDITORIAL, TECHNICAL (INCLUDING THE PROFESSIONAL GROUPS), SECTION, STUDENT BRANCHES AND CONFERENCES.

INSTITUTE AFFAIRS ARE STILL ON AN EXPANDING BASIS, AS THIS REPORT CLEARLY SHOWS. THE LARGE SPECIALIZED ISSUES OF THE PROCEEDINGS AND THE AUGMENTED NUMBER, SIZES AND ACTIVITIES OF THE PROFESSIONAL GROUPS, THEIR CHAPTERS AND TRANSACTIONS ARE OF PARTICULAR INTEREST, IN ADDITION TO WHICH MENTION IS MADE OF THE CONVENTION RECORD, WHICH APPEARED FOR THE FIRST TIME. TWICE AS MANY PERSONS ATTENDED THE NATIONAL CONVENTION IN 1953 THAN IN 1950 WHICH IS A TESTIMONIAL OF THE IMPORTANCE OF YOUR INSTITUTE IN THE PROFESSIONAL FIELD.

RESPECTFULLY SUBMITTED,

HARADEN PRATT
SECRETARY

JANUARY 22, 1954

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GRADE	MEMBERSHIP
FELLOW	425
SENIOR MEMBER	4,170
MEMBER	5,307
VOTING ASSOCIATE (\$15)	
ASSOCIATE (\$15)	4,680

MEMBERSHIP

AT THE END OF THE YEAR 1953, THE MEMBERSHIP OF THE INSTITUTE, INCLUDING ALL GRADES, WAS 37,134, AN INCREASE OF 4,260, OR 13% OVER THE PREVIOUS YEAR. THE 4,260 MEMBER INCREASE IN 1953 WAS MORE THAN 3,466 AND 406, THE INCREASES FOR 1952 AND 1951 RESPECTIVELY. THE PERCENTAGE INCREASE WAS 12% IN 1952, AND 1.4% IN 1951. THE MEMBERSHIP TREND FROM 1912 TO DATE IS SHOWN GRAPHICALLY IN FIGURE 2, AND NUMERICALLY IN TABLE XVI.

ACTUAL MEMBERSHIP FIGURES FOR 1951, 1952 AND 1953 ARE SHOWN IN TABLE III. OF THE 21,846 NON-VOTING ASSOCIATES, 4,680 HAVE BEEN IN THAT GRADE FOR MORE THAN FIVE YEARS.

DETAILED ANALYSES CAN BE FOUND ON THE TABLES LISTED ON THE PRECEDING PAGE.

FELLOW	1.2
SENIOR MEMBER	11.2
MEMBER	14.3
VOTING ASSOCIATE (\$15)	2.3
ASSOCIATE (\$15)	12.6
ASSOCIATE (\$10)	11.2
ASSOCIATE (TOTAL)	23.8
STUDENT	12.2

TABLE I - TOTAL MEMBERSHIP DISTRIBUTION BY GRADES AS OF 12/31/53

GRADE	AS OF DEC. 31, 1953 NUMBER	% OF TOTAL	AS OF DEC. 31, 1952 NUMBER	% OF TOTAL	AS OF DEC. 31, 1951 NUMBER	% OF TOTAL
FELLOW	425	1.2	378	1.2	345	1.2
SENIOR MEMBER	4,170	11.2	3,588	10.8	3,070	10.4
MEMBER	5,307	14.3	4,617	14.0	4,043	13.7
ASSOCIATE	22,702	61.1	20,025	61.0	17,523	59.6
STUDENT	4,530	12.3	4,363	13.0	4,427	15.1
TOTALS	37,134	100.0	33,574	100.0	29,408	100.0
ASSOCIATE (TOTAL)			22,702		32,604	
STUDENT					4,530	
GRAND TOTAL					37,134	
U. S. POSSESSIONS						
U. S. OVERSEAS MILITARY						

TABLE II - TOTAL MEMBERSHIP DISTRIBUTION BY GRADE BY PERCENTAGE AS OF 12/31/53

GRADE	1953	1952	1951	PERCENTAGE
FELLOW	425	378	345	1.2
SENIOR MEMBER	4,170	3,588	3,070	11.2
MEMBER	5,307	4,617	4,043	14.3
TOTAL	22,702	20,025	17,523	61.1
VOTING ASSOCIATE (\$15)	856	856	856	2.3
ASSOCIATE (\$15)	4,680	4,680	4,680	12.6
ASSOCIATE (\$10)	17,166	17,166	17,166	46.2
ASSOCIATE (TOTAL)	22,702	22,702	22,702	61.1
STUDENT	4,530	4,363	4,427	12.2

* INCLUDES 974 VOTING ASSOCIATES
 ** INCLUDES 910 VOTING ASSOCIATES
 *** INCLUDES 856 VOTING ASSOCIATES

TABLE III - COMPARISON OF TOTAL MEMBERSHIP DISTRIBUTION BY GRADES, 1951 - 1953

GRADE	AS OF DEC. 31, 1953		AS OF DEC. 31, 1952		AS OF DEC. 31, 1951	
	NUMBER	% OF TOTAL	NUMBER	% OF TOTAL	NUMBER	% OF TOTAL
FELLOW	425	1.2	379	1.2	345	1.2
SENIOR MEMBER	4,170	11.2	3,566	10.8	3,070	10.4
MEMBER	5,307	14.3	4,617	14.0	4,043	13.7
ASSOCIATE	22,702 ***	61.1	20,029 **	61.0	17,523 *	59.6
STUDENT	<u>4,530</u>	12.2	<u>4,283</u>	13.0	<u>4,427</u>	15.1
TOTALS	37,134		32,874		29,408	

TABLE IV - ANALYSIS OF TOTAL MEMBERSHIP DISTRIBUTION BY GRADES

	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S</u>	<u>TOTALS</u>
UNITED STATES	375	3813	4722	797	4278	15,852	4314	34,151
U. S. POSSESSIONS	-	10	23	7	20	85	3	148
U. S. OVERSEAS MILITARY	<u>1</u>	<u>11</u>	<u>37</u>	<u>2</u>	<u>18</u>	<u>131</u>	<u>6</u>	<u>206</u>
	376	3834	4782	806	4316	16,068	4323	34,505
CANADA	19	121	230	20	144	574	174	1,282
FOREIGN	<u>30</u>	<u>215</u>	<u>295</u>	<u>30</u>	<u>220</u>	<u>524</u>	<u>33</u>	<u>1,347</u>
TOTALS	425	4170	5307	856	4680	17,166	4530	37,134

TABLE V - FIVE-YEAR ANALYSIS OF U. S. AND FOREIGN MEMBERSHIP

	<u>1953</u>	<u>1952</u>	<u>1951</u>	<u>1950</u>	<u>1949</u>
TOTAL	37,134	32,874	29,408	29,002	26,769
U.S. & POSSESSIONS	34,505	30,535	27,202	26,708	24,434
FOREIGN (INCLUDING CANADA)	2,629	2,339	2,206	2,294	2,335
PER CENT FOREIGN	7.1	7.1	7.5	7.9	8.72

* INCLUDES 974 VOTING ASSOCIATES

** INCLUDES 919 VOTING ASSOCIATES

*** INCLUDES 856 VOTING ASSOCIATES

TABLE VI - DISTRIBUTION OF U. S. MEMBERS, 1952 AND 1953
(INCLUDING U. S. POSSESSIONS AND U. S. OVERSEAS MILITARY)

<u>1953</u>	<u>1952</u>		<u>GAIN</u>	<u>LOSS</u>
142	125	ALABAMA	17	
177	134	ARIZONA	43	
80	72	ARKANSAS	8	
4,509	3,864	CALIFORNIA	645	
189	169	COLORADO	20	
581	476	CONNECTICUT	105	
43	37	DELAWARE	6	
767	759	DISTRICT OF COLUMBIA	8	
403	370	FLORIDA	33	
214	185	GEORGIA	29	
29	28	IDAHO	1	
1,747	1,474	ILLINOIS	273	
615	519	INDIANA	96	
301	280	IOWA	21	
192	175	KANSAS	17	
167	153	KENTUCKY	14	
138	107	LOUISIANA	31	
59	47	MAINE	12	
1,433	1,189	MARYLAND	244	
2,107	1,787	MASSACHUSETTS	320	
796	729	MICHIGAN	67	
337	309	MINNESOTA	28	
54	49	MISSISSIPPI	5	
428	375	MISSOURI	53	
30	24	MONTANA	6	
75	74	NEBRASKA	1	
6	7	NEVADA		1
58	44	NEW HAMPSHIRE	14	
3,465	3,129	NEW JERSEY	336	
410	365	NEW MEXICO	45	
7,025	6,342	NEW YORK	683	
279	231	NORTH CAROLINA	48	
38	30	NORTH DAKOTA	8	
1,660	1,493	OHIO	167	
285	240	OKLAHOMA	45	
199	172	OREGON	27	
2,106	1,934	PENNSYLVANIA	172	
83	71	RHODE ISLAND	12	
68	82	SOUTH CAROLINA		14
41	40	SOUTH DAKOTA	1	
145	107	TENNESSEE	38	
1,016	891	TEXAS	125	
103	108	UTAH		5
33	18	VERMONT	15	
661	573	VIRGINIA	88	
480	458	WASHINGTON	22	
58	51	WEST VIRGINIA	7	
292	266	WISCONSIN	26	
27	32	WYOMING		5

	<u>1953</u>	<u>1952</u>	<u>NET GAIN</u>
TOTAL	34,151	30,194	3,957

TABLE VI - DISTRIBUTION OF U. S. MEMBERS, 1952 AND 1953 - CONT'D.
 (INCLUDING U. S. POSSESSIONS AND U. S. OVERSEAS MILITARY)

STATE	1953	1952	1953	1952	1953	1952	1953	1952	TOTAL
ALABAMA	-	5	10	-	10	23	31	142	
ARIZONA	-	-	-	-	17	20	20	177	
<u>UNITED STATES POSSESSIONS</u>									
ARKANSAS	<u>1953</u>	<u>1952</u>	8	5	-	-	<u>GAIN</u>	<u>LOSS</u>	50
CALIFORNIA	27	38	ALASKA	20	98	629	2253	426	4500
	7	4	CANAL ZONE	-	-	3	-	11	
COLORADO	1	1	CANTON ISLAND	-	-	10	23	62	180
	1	1	MARIANA ISLANDS	-	-	-	-	-	
CONNECTICUT	20	21	PUERTO RICO	17	63	250	52	1	581
	91	91	TERRITORIES OF HAWAII	-	-	-	-	-	
DELAWARE	<u>1</u>	<u>1</u>	VIRGIN ISLANDS	-	-	7	20	7	43
DISTRICT OF COLUMBIA	148	157				3	308	61	767
NET LOSS: 9									
FLORIDA	3	3				41	159	52	403
<u>U. S. OVERSEAS MILITARY</u>									
GEORGIA	-	-				29	65	71	214
IDAHO	206	184	U. S. OVERSEAS MILITARY			22	15	3	29
ILLINOIS	14	14				289	762	118	1747
INDIANA	3	3				73	282	114	515
IOWA	3	3				35	159	34	301
KANSAS	1	1				16	107	30	182
KENTUCKY	4	4				10	87	30	167
LOUISIANA	1	1				13	65	23	133
MAINE	2	2				6	14	26	58
MARYLAND	9	9				136	711	88	1433
MASSACHUSETTS	30	30				281	895	402	2107
MICHIGAN	1	1				101	375	158	748
MINNESOTA	3	3				46	153	69	337
MISSISSIPPI	-	-				4	20	22	54
MISSOURI	1	1				36	183	102	428
MONTANA	-	-				5	7	13	30
NEBRASKA	-	-				9	24	16	75
NEVADA	-	-				-	3	1	6

TABLE VII - DISTRIBUTION OF U. S. MEMBERS BY GRADE AND STATE
AS OF DECEMBER 31, 1953

<u>STATE</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA(\$15)</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S</u>	<u>TOTALS</u>
ALABAMA	-	5	10	-	13	83	31	142
ARIZONA	-	16	37	1	17	86	20	177
ARKANSAS	2	9	5	-	-	38	26	80
CALIFORNIA	35	448	620	98	629	2253	426	4509
COLORADO	1	16	30	-	18	62	62	189
CONNECTICUT	6	68	67	7	93	258	82	581
DELAWARE	-	3	5	1	7	20	7	43
DISTRICT OF COLUMBIA	22	142	105	33	99	306	60	767
FLORIDA	3	36	67	15	41	159	82	403
GEORGIA	-	13	31	3	29	65	73	214
IDAHO	-	-	5	-	6	15	3	29
ILLINOIS	14	219	270	57	289	782	116	1747
INDIANA	3	62	67	9	78	282	114	615
IOWA	3	29	38	4	35	158	34	301
KANSAS	1	9	28	1	16	107	30	192
KENTUCKY	-	12	23	2	13	87	30	167
LOUISIANA	1	6	16	4	13	65	33	138
MAINE	2	5	3	1	6	14	28	59
MARYLAND	9	163	239	37	186	711	88	1433
MASSACHUSETTS	30	204	279	46	251	895	402	2107
MICHIGAN	1	46	88	27	101	375	158	796
MINNESOTA	3	19	43	4	46	153	69	337
MISSISSIPPI	-	2	6	-	4	20	22	54
MISSOURI	1	37	64	5	36	183	102	428
MONTANA	-	-	4	1	5	7	13	30
NEBRASKA	-	4	19	3	9	24	16	75
NEVADA	-	1	-	1	-	3	1	6

TABLE VII - DISTRIBUTION OF U.S. MEMBERS BY GRADE AND STATE (CONT'D.)
AS OF DECEMBER 31, 1953

<u>STATE</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA(\$15)</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S</u>	<u>TOTALS</u>
NEW HAMPSHIRE	-	7	8	4	7	22	10	58
NEW JERSEY	94	620	500	127	452	1463	209	3465
NEW MEXICO	1	45	72	4	37	212	39	410
NEW YORK	107	804	851	146	890	3388	839	7025
NORTH CAROLINA	2	24	37	6	19	148	43	279
NORTH DAKOTA	-	-	2	1	2	10	23	38
OHIO	7	181	256	29	181	820	186	1660
OKLAHOMA	1	22	48	2	23	156	33	285
OREGON	1	13	27	6	27	74	51	199
PENNSYLVANIA	14	260	281	55	224	1031	241	2106
RHODE ISLAND	-	3	10	1	11	38	20	83
SOUTH CAROLINA	-	3	13	2	7	39	4	68
SOUTH DAKOTA	-	-	6	-	2	17	16	41
TENNESSEE	1	12	16	4	25	75	12	145
TEXAS	4	98	213	17	118	446	120	1016
UTAH	-	5	3	-	6	40	49	103
VERMONT	-	2	1	2	-	6	22	33
VIRGINIA	3	93	106	15	89	279	76	661
WASHINGTON	2	30	54	5	59	239	91	480
WEST VIRGINIA	-	1	4	-	6	28	19	58
WISCONSIN	1	15	42	9	51	106	68	292
WYOMING	-	1	3	2	2	4	15	27
TOTALS	375	3813	4722	797	4278	15,852	4314	34,151

TABLE VIII - DISTRIBUTION OF MEMBERSHIP BY REGION, BY SECTION, BY GRADE
AS OF DECEMBER 31, 1953

<u>REGION</u>	<u>SECTION</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA</u>	<u>A</u>	<u>S</u>	<u>SECTION TOTAL</u>	<u>REGION TOTAL</u>
1	BOSTON	32	211	284	51	1163	468	2209	
	CONNECTICUT VALLEY	6	78	83	10	435	91	703	2912
2	LONG ISLAND	25	245	312	52	1429	208	2271	
	NEW YORK	56	298	235	73	1586	449	2697	
	MID-HUDSON SUB.	1	15	23	1	160	15	215	
	MONMOUTH SUB.	8	71	75	11	250	15	430	
	NORTHERN NEW JERSEY SUB.	55	376	287	87	1161	137	2103	
	SCHENECTADY	8	56	36	7	172	51	330	8046
3	BALTIMORE	4	72	126	13	492	50	757	
	NORTH CAROLINA-VIRGINIA	3	35	61	8	288	98	493	
	PHILADELPHIA	15	259	249	62	1224	151	1960	
	LANCASTER SUB.	1	28	22	4	97	7	159	
	PRINCETON	22	72	53	5	156	32	340	
	WASHINGTON	29	316	300	65	1057	119	1886	5595
4	AKRON	1	9	40	5	135	20	210	
	BINGHAMTON	-	4	29	2	98	3	136	
	BUFFALO-NIAGARA	-	29	39	5	227	18	318	
	ERIE SUB.	-	3	6	2	19	4	34	
	CLEVELAND	1	35	53	8	203	56	356	
	COLUMBUS	-	13	14	4	99	32	162	
	DETROIT	1	44	86	25	455	148	759	
	ELMIRA-CORNING	1	9	14	-	46	2	72	
	EMPORIUM	2	32	40	4	68	23	169	
	PITTSBURGH	4	40	40	7	253	87	431	
	ROCHESTER	2	29	32	5	87	9	164	
	ROME-UTICA	-	19	35	1	137	8	200	

TABLE VIII - DISTRIBUTION OF MEMBERSHIP BY REGION, BY SECTION, BY GRADE (CONT'D.)
AS OF DECEMBER 31, 1953

<u>REGION</u>	<u>SECTION</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA</u>	<u>A</u>	<u>S</u>	<u>SECTION TOTAL</u>	<u>REGION TOTAL</u>
4	SYRACUSE	13	87	76	5	287	45	513	3794
	ITHACA SUB.	2	14	13	1	53	27	110	
	TOLEDO	-	8	15	1	72	16	112	
	WILLIAMSPORT	-	5	15	-	18	10	48	
5	CEDAR RAPIDS	2	25	30	1	160	17	235	5360
	CHICAGO	14	226	274	60	1137	173	1884	
	CINCINNATI	3	21	43	10	176	45	298	
	DAYTON	2	91	85	4	274	20	476	
	USAFIT SUB.	-	4	7	-	57	1	69	
	DENVER	1	17	33	2	85	71	209	
	DES MOINES-AMES	1	5	9	2	30	14	61	
	EVANSVILLE-OWENSBORO	-	10	10	-	62	6	88	
	FORT WAYNE	2	22	23	3	120	9	179	
	INDIANAPOLIS	1	26	30	4	130	42	233	
	KANSAS CITY	2	24	45	4	159	65	299	
	WICHITA SUB.	-	1	11	-	55	3	70	
	LITTLE ROCK	2	9	5	-	39	26	81	
	LOUISVILLE	-	4	14	-	48	22	88	
	MILWAUKEE	1	15	36	9	141	71	273	
	OMAHA-LINCOLN	-	4	20	4	37	18	83	
ST. LOUIS	-	26	43	3	157	66	295		
TWIN CITIES	3	19	58	5	240	114	439		
6	ATLANTA	-	27	49	7	188	105	376	1151
	CHARLESTON SUB.	-	5	11	2	42	4	64	
	BEAUMONT-PORT ARTHUR	-	3	16	1	44	2	66	
	CENTRAL FLORIDA	-	16	26	1	62	19	124	

TABLE VIII - DISTRIBUTION OF MEMBERSHIP BY REGION, BY SECTION, BY GRADE (CONT'D.)
AS OF DECEMBER 31, 1953

<u>REGION</u>	<u>SECTION</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA</u>	<u>A</u>	<u>S</u>	<u>SECTION TOTAL</u>	<u>REGION TOTAL</u>
6	DALLAS-FT. WORTH	1	47	88	10	274	69	489	
	HOUSTON	1	23	60	5	122	23	234	
	HUNTSVILLE	1	5	14	1	139	29	189	
	MIAMI	3	17	38	13	110	61	242	
	NEW ORLEANS	1	6	19	3	70	38	137	
	OKLAHOMA CITY	-	6	36	1	44	12	99	
	SAN ANTONIO	2	18	32	2	100	25	179	
	TULSA	1	16	12	1	134	21	185	2384
7	ALBUQUERQUE-LOS ALAMOS	1	43	56	3	172	27	302	
	EL PASO	-	8	38	1	125	15	187	
	HAWAII	-	7	12	6	64	2	91	
	INYOKERN	-	4	16	-	47	2	69	
	LOS ANGELES	13	235	325	51	1648	230	2502	
	BUENAVENTURA SUB.	2	5	19	1	94	4	125	
	ORANGE BELT SUB.	1	29	40	2	133	3	208	
	PHOENIX	-	16	37	1	103	20	177	
	PORTLAND	1	13	27	6	108	53	208	
	SACRAMENTO	-	3	12	6	48	4	73	
	SALT LAKE	-	5	7	-	64	52	128	
	SAN DIEGO	-	32	56	10	222	21	341	
	SAN FRANCISCO	4	29	68	10	230	44	385	
	EAST BAY SUB.	4	25	26	6	167	71	299	} 1235
	PALO ALTO SUB.	11	86	65	12	300	77	551	
SEATTLE	2	30	60	6	306	101	505	6151	
8	HAMILTON	1	15	20	1	53	12	102	
	LONDON	-	4	18	-	39	14	75	

TABLE VIII - DISTRIBUTION OF MEMBERSHIP BY REGION, BY SECTION, BY GRADE (CONT'D.)

<u>REGION</u>	<u>SECTION</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA</u>	<u>A</u>	<u>S</u>	<u>SECTION TOTAL</u>	<u>REGION TOTAL</u>
8	MONTREAL	7	37	66	6	180	43	339	
	OTTAWA	6	19	29	3	97	6	160	
	TORONTO	5	34	71	7	216	42	375	
	VANCOUVER	-	6	16	3	88	48	161	
	WINNIPEG	-	6	10	-	45	9	70	1282
-	BUENOS AIRES, ARGENTINA	2	15	5	-	67	13	102	102
TOTALS		396	3956	4969	823	20979	4503	35,626	35,626

1953 1952

GRAND TOTAL 2,629 2,330

TABLE IX - DISTRIBUTION OF FOREIGN MEMBERS - 1952 - 1953

<u>1953</u>	<u>1952</u>		<u>1953</u>	<u>1952</u>	
7	6	ARABIA	135	137	INDIA
103	89	ARGENTINA	2	3	INDONESIA
68	69	AUSTRALIA	1		IRAN
1	2	BAHAMAS		1	IRAQ
11	10	BELGIUM	6	6	IRELAND
3	2	BERMUDA	31	24	ISRAEL
1	1	BOLIVIA	31	29	ITALY
59	48	BRAZIL	41	21	JAPAN
2	1	BRITISH GUIANA	1	1	KOREA
3	4	BRITISH WEST INDIES	6	7	LEBANON
4	3	BURMA	8	7	MALAYA
1282	1105	CANADA	2	2	MALTA
3	2	CEYLON	31	32	MEXICO
4	6	CHILE	7	5	MOROCCO
1	2	CHINA	18	14	NETHERLANDS
12	12	COLOMBIA	1	2	NETHERLANDS WEST INDIES
1	1	COSTA RICA	10	11	NEW GUINEA (PAPUA)
20	13	CUBA	15	15	NEW ZEALAND
1	1	CURAGO	10	8	NORWAY
2	2	CYPRUS	19	17	PAKISTAN
3	4	CZECHOSLOVAKIA	2		PANAMA, REPUBLIC OF
23	22	DENMARK	7	6	PERU
2		DOMINICAN REPUBLIC	6	9	PHILIPPINE ISLANDS
1	3	ECUADOR	3	4	PORTUGAL
19	16	EGYPT	14	14	SCOTLAND
1		EL SALVADOR	53	52	SOUTH AFRICA
298	280	ENGLAND	11	8	SPAIN
1		ETHIOPIA	4	3	STRAIT SETTLEMENTS
1	1	FIJI ISLANDS	48	46	SWEDEN
4	3	FORMOSA	49	47	SWITZERLAND
58	50	FRANCE	4	2	SYRIA
11	6	GERMANY	2	2	THAILAND
6	9	GREECE	11	10	TURKEY
3	3	GUATEMALA	4	5	URUGUAY
1	1	HONDURAS	15	13	VENEZUELA
5	5	HONG KONG	2	2	WALES
1	1	HUNGARY	2		YUGOSLAVIA
1	1	ICELAND			

	<u>1953</u>	<u>1952</u>
GRAND TOTAL	2,629	2,339

TABLE X - DISTRIBUTION OF FOREIGN MEMBERS BY GRADE AND COUNTRY
AS OF DECEMBER 31, 1953

<u>COUNTRY</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA(\$15)</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S</u>	<u>TOTAL</u>
ARABIA	-	1	1	-	3	2	-	7
ARGENTINA	2	15	5	-	19	49	13	103
AUSTRALIA	2	19	14	7	15	11	-	68
BAHAMA ISLANDS	-	-	1	-	-	-	-	1
BELGIUM	-	-	3	1	-	7	-	11
BERMUDA	-	1	1	-	1	-	-	3
BOLIVIA	-	-	-	-	-	1	-	1
BRAZIL	-	6	14	1	10	28	-	59
BRITISH GUIANA	-	-	1	-	-	1	-	2
BRITISH WEST INDIES	-	-	1	-	1	1	-	3
BURMA	-	-	-	-	-	4	-	4
CEYLON	-	-	1	-	-	2	-	3
CHILE	-	-	1	-	1	2	-	4
CHINA	-	-	-	-	-	1	-	1
COLUMBIA	-	-	4	-	1	7	-	12
COSTA RICA	-	1	-	-	-	-	-	1
CUBA	-	2	1	2	4	11	-	20
CURACO	-	-	-	-	1	-	-	1
CYPRUS	-	-	2	-	-	-	-	2
CZECHOSLOVAKIA	-	-	-	-	1	2	-	3
DENMARK	1	1	1	1	4	15	-	23
DOMINICAN REPUBLIC	-	1	-	-	-	1	-	2
ECUADOR	-	-	1	-	-	-	-	1
EGYPT	-	3	9	-	1	6	-	19
EL SALVADOR	-	-	-	-	-	-	1	1
ENGLAND	14	74	74	11	61	60	4	298

TABLE X - DISTRIBUTION OF FOREIGN MEMBERS BY GRADE AND COUNTRY (CONT'D.)
AS OF DECEMBER 31, 1953

<u>COUNTRY</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA(\$15)</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S</u>	<u>TOTAL</u>
ETHIOPIA	-	-	-	-	-	1	-	1
FIJI ISLANDS	-	1	-	-	-	-	-	1
FORMOSA	-	-	1	-	1	2	-	4
FRANCE (REPUBLIC OF)	1	20	10	1	9	17	-	58
GERMANY	1	4	3	-	-	3	-	11
GREECE	-	1	1	-	-	4	-	6
GUATEMALA	-	-	-	-	-	3	-	3
HONDURAS	-	-	-	-	-	1	-	1
HONG KONG	-	1	2	-	2	-	-	5
HUNGARY	-	-	-	-	1	-	-	1
ICELAND	-	-	-	-	1	-	-	1
INDIA	1	16	35	-	11	72	-	135
INDONESIA	-	1	-	-	1	-	-	2
IRAQ	-	-	1	-	-	-	-	1
IRELAND	-	1	-	-	2	3	-	6
ISRAEL	-	2	7	-	2	19	1	31
ITALY	-	2	3	-	10	16	-	31
JAPAN	1	5	8	-	1	25	1	41
KOREA	-	-	-	-	-	1	-	1
LEBANON	-	-	1	-	1	4	-	6
MALAYA	-	1	4	-	-	3	-	8
MALTA	-	-	2	-	-	-	-	2
MEXICO	1	1	4	2	4	13	6	31
MOROCCO	-	1	5	-	1	-	-	7
NETHERLANDS	-	5	6	-	2	5	-	18
NETHERLANDS WEST IN- DIES	-	-	-	-	1	-	-	1
NEW GUINEA (PAPUA)	-	-	-	-	-	-	-	-

TABLE X - DISTRIBUTION OF FOREIGN MEMBERS BY GRADE AND COUNTRY (CONT'D.)
AS OF DECEMBER 31, 1953

<u>COUNTRY</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA(\$15)</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S</u>	<u>TOTAL</u>
NEW ZEALAND	-	-	4	1	6	4	-	15
NORWAY	-	1	2	1	-	5	1	10
PAKISTAN	-	5	6	-	1	7	-	19
PANAMA (REPUBLIC OF)	-	-	-	-	1	-	1	2
PERU	-	1	1	-	2	3	-	7
PHILIPPINES	-	-	1	-	1	4	-	6
PORTUGAL	-	1	1	1	-	-	-	3
SCOTLAND	1	1	6	-	2	4	-	14
SOUTH AFRICA	-	5	21	1	9	17	-	53
SPAIN	-	1	3	-	-	4	3	11
STRAIT SWETLEMENTS	-	-	1	-	2	1	-	4
SWEDEN	2	4	8	-	10	24	-	48
SWITZERLAND	3	5	6	-	6	29	-	49
SYRIA	-	1	-	-	-	3	-	4
THAILAND	-	-	-	-	-	1	1	2
TURKEY	-	-	2	-	1	8	-	11
URUGUAY	-	-	2	-	-	2	-	4
VENEZUELA	-	3	2	-	5	5	-	15
WALES	-	1	-	-	1	-	-	2
YUGOSLAVIA	-	-	1	-	-	-	1	2
TOTALS	30	215	295	30	220	524	33	1347

GRAND TOTAL: 1347

TABLE XI - GEOGRAPHICAL AND GRADE BREAKDOWN - CANADA, U.S. POSSESSIONS AND

OVERSEAS MILITARY MEMBERSHIP
AS OF DECEMBER 31, 1953

<u>CANADIAN</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>VA(\$15)</u>	<u>A(\$15)</u>	<u>A(\$10)</u>	<u>S</u>	<u>TOTAL</u>
HAMILTON	1	15	20	1	7	46	12	102
LONDON	-	4	18	-	10	29	14	75
MONTREAL	7	37	66	6	46	134	43	339
OTTAWA	6	19	29	3	16	81	6	160
TORONTO	5	34	71	7	39	177	42	375
VANCOUVER	-	6	16	3	19	69	48	161
WINNIPEG	-	6	10	-	7	38	9	70
	—	—	—	—	—	—	—	—
TOTALS	19	121	230	20	144	574	174	1282

U. S. POSSESSIONS

ALASKA	-	1	5	-	4	17	-	27
CANAL ZONE	-	-	-	1	1	5	-	7
CANTON ISLAND	-	-	-	-	-	1	-	1
MARIANA ISLANDS	-	-	-	-	1	-	-	1
PUERTO RICO	-	2	5	-	2	10	1	20
HAWAII	-	7	12	6	12	52	2	91
VIRGIN ISLANDS	-	-	1	-	-	-	-	1
	—	—	—	—	—	—	—	—
TOTALS	-	10	23	7	20	85	3	148

OVERSEAS MILITARY MEMBERSHIP

P.O. SAN FRANCISCO, CALIFORNIA	-	5	14	-	8	64	5	96
P.O. SEATTLE, WASH.	-	-	3	-	2	5	-	10
P.O. NEW YORK, N.Y.	1	6	20	2	8	62	1	100
P.O. NORFOLK, VA.	-	-	-	-	-	-	-	-
	—	—	—	—	—	—	—	—
TOTALS	1	11	37	2	18	131	6	206

TABLE XII - MEMBERSHIP CHANGES, BY GRADES, IN 1953

<u>GAINS</u>	<u>F</u>	<u>SM</u>	<u>M</u>	<u>A</u>	<u>S</u>	<u>TOTAL</u>
ELECTIONS		252	611	2217	2661	5741
REINSTATEMENTS	2	36	60	571	62	731
TRANSFERS TO	49	416	349	1488		2302
TOTAL GAIN	51	704	1020	4276	2723	8774

LOSSES

NEW ELECTIONS (UNPAID)		4	5	45	2	56
TRANSFERS FROM		45	200	565	1492	2302
VOIDED ELECTIONS			2	22		24
DEATHS	5	11	15	35	3	69
RESIGNATIONS		16	57	416	114	603
DELINQUENTS		24	51	520	865	1460
TOTAL LOSS	5	100	330	1603	2476	4514

NET GAIN 46 604 690 2673 247 4260

THE NET GAIN OF 4,260 SHOWN ABOVE COMPARES WITH 3,466 FOR 1952.

TABLE XIII - ANALYSIS OF TRANSFERS, BY GRADES, 1953

<u>TRANSFERS FROM</u>	<u>SM</u>	<u>M</u>	<u>A</u>	<u>S</u>	<u>TOTAL</u>
TRANSFERS TO F	45	2	2	-	49
TRANSFERS TO SM	-	198	217	1	416
TRANSFERS TO M	-	-	346	3	349
TRANSFERS TO A	-	-	-	1488	1488
TOTAL	45	200	565	1492	2302

TABLE XIV - ANALYSIS OF HIGHER-GRADE APPLICATIONS FOR 1953

	<u>APPROVED</u>		<u>REJECTED</u>		<u>TOTAL</u>
	<u>DOMESTIC</u>	<u>FOREIGN</u>	<u>DOMESTIC</u>	<u>FOREIGN</u>	
ADMISSION APPLICATIONS					
FELLOW	26	2	1		29
SENIOR MEMBER		252		13	265
MEMBER		611		39	650
VOTING ASSOCIATE	10				10
TRANSFER APPLICATIONS					
SENIOR MEMBER		416		11	427
MEMBER	47	349		8	394

	<u>LIFE MEMBERS</u>						<u>Total</u>
	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	
FELLOW	1	9	3	6	7	3	29
SENIOR MEMBER	-	1	3	2	3	2	11
MEMBER	-	-	-	-	-	-	-
VOTING ASSOCIATE	-	4	-	3	1	2	10
ASSOCIATE	-	1	-	-	-	1	2
TOTAL	1	15	6	11	11	8	52

TABLE XV - LIFE MEMBERS, BY GRADES, AS OF DECEMBER 31, 1953

<u>YEAR</u>	<u>HIGHER GRADE</u>	<u>DOMESTIC</u>	<u>CANADIAN</u>	<u>FOREIGN</u>	<u>TOTAL</u>
1912	FELLOW	26	2	1	29
1914	SENIOR MEMBER	10	-	1	11
1915	MEMBER	--	-	-	--
1916	VOTING ASSOCIATE	10	-	-	10
1918	ASSOCIATE	1	-	1	2
1921	TOTAL	47	2	3	52

LIFE MEMBERS

	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>TOTAL</u>
FELLOW	1	9	3	6	7	3	29
SENIOR MEMBER	-	1	3	2	3	2	11
MEMBER	-	-	-	-	-	-	-
VOTING ASSOCIATE	-	4	-	3	1	2	10
ASSOCIATE	-	1	-	-	-	1	2
TOTAL	1	15	6	11	11	8	52

TABLE XVI - YEARLY MEMBERSHIP, 1912 - 1953

<u>YEAR</u>	<u>HIGHER GRADE</u>	<u>STUDENT</u>	<u>YEARLY</u> <u>INCREASE</u> <u>(DECREASE)</u>	<u>%</u> <u>INCREASE</u> <u>(DECREASE)</u>	<u>TOTAL</u>
1912					109
1913			122	112.0	231
1914			402	174.0	633
1915			351	55.4	984
1916			208	21.2	1,193
1917			134	11.2	1,327
1918			(-505)	(-38.1)	822
1919			264	32.2	1,086
1920			199	18.3	1,285
1921			197	15.3	1,382
1922			(-140)	(-10.0)	1,242
1923			176	14.2	1,418
1924			635	31.0	2,053
1925			195	9.5	2,248
1926			482	21.4	2,730
1927			1,480	54.3	4,210
1928			613	14.6	4,823
1929			872	17.6	5,695
1930			840	14.8	6,535
1931			199	2.9	6,734
1932	6,301	102	(-331)	(-4.9)	6,403
1933	5,011	108	(-1,284)	(-20.1)	5,119
1934	4,803	86	(-230)	(-4.5)	4,889
1935	4,388	121	(-380)	(-7.8)	4,509
1936	4,896	299	686	15.2	5,195
1937	5,099	360	264	5.1	5,459
1938	5,089	314	(-56)	(-1.0)	5,403
1939	5,213	399	209	3.9	5,612
1940	5,209	496	93	1.7	5,705
1941	6,112	909	1,316	23.1	7,021
1942	7,261	1,533	1,773	25.3	8,794
1943	8,793	2,286	2,285	26.0	11,079
1944	11,054	2,083	2,058	18.6	13,137
1945	13,881	1,898	2,642	20.1	15,779
1946	15,902	2,252	2,375	15.1	18,154
1947	17,403	3,634	2,883	15.9	21,037
1948	17,498	5,939	2,400	11.4	23,437
1949	18,573	8,196	3,332	14.2	26,769
1950	21,442	7,560	2,233	8.3	29,002
1951	24,981	4,427	406	1.4	29,408
1952	28,591	4,283	3,466	11.8	32,874
1953	32,604	4,530	4,260	12.9	37,134

TABLE XVII - PROFESSIONAL GROUP MEMBERSHIP, BY GROUPS, 1952, 1953
(PAID MEMBERSHIP ONLY)

<u>CODE</u>	<u>GROUP</u>	<u>1952</u>	<u>1953</u>	<u>NET GAIN</u>
G-1	AUDIO	1681	2147	466
G-2	BROADCAST TRANSMISSION SYSTEMS	358	661	303
G-3	ANTENNAS & PROPAGATION	1008	1219	211
G-4	CIRCUIT THEORY	1192	2151	959
G-5	NUCLEAR SCIENCE	--	109	109
G-6	VEHICULAR COMMUNICATIONS	419	584	165
G-7	QUALITY CONTROL	315	476	161
G-8	BROADCAST & TELEVISION RECEIVERS	750	1106	356
G-9	INSTRUMENTATION	1477	1961	484
G-10	RADIO TELEMETRY & REMOTE CONTROL	--	827	827
G-11	AERONAUTICAL & NAVIGATIONAL ELECTRONICS	1048	1400	352
G-12	INFORMATION THEORY	771	1154	383
G-13	INDUSTRIAL ELECTRONICS	530	839	309
G-14	ENGINEERING MANAGEMENT	742	1243	501
G-15	ELECTRON DEVICES	479	1086	607
G-16	ELECTRONIC COMPUTERS	1241	2267	1026
G-17	MICROWAVE THEORY & TECHNIQUES	471	1144	673
G-18	MEDICAL ELECTRONICS	--	695	695
G-19	COMMUNICATIONS SYSTEMS	--	721	721
G-20	ULTRASONICS ENGINEERING	--	7	7
* G-21	COMPONENT PARTS	--	--	--
		<hr/>	<hr/>	<hr/>
		12,482	21,797	9315

* NO ASSESSMENT LEVIED BY GROUP.

TABLE XIX - IRE NATIONAL CONVENTIONS

THE IRE NATIONAL CONVENTION CONTINUES TO INCREASE IN IMPORTANCE EACH YEAR AND IS NOW INTERNATIONALLY RECOGNIZED AS ONE OF THE LARGEST CONVENTIONS OF ITS KIND IN THE WORLD. THE GROWTH IN CONVENTION ACTIVITIES FOR THE YEARS 1946 THROUGH 1953 IS INDICATED IN THE COMPARISON FIGURES ITEMIZED BELOW:

<u>YEAR</u>	<u>ATTENDANCE</u>	<u>EXHIBITS</u>	<u>NO. OF FIRMS REPRESENTED</u>	<u>NET SPACE OCCUPIED</u>	<u>TOTAL NUMBER OF PAPERS PRESENTED</u>
1946	7,200	135	1,571	13,200 ¹ *	88
1947	12,013	177	2,845	20,830 ¹	118
1948	14,459	180	3,059	25,900 ¹	130
1949	15,710	225	3,427	30,700 ¹	144
1950	17,689	253	4,088	33,600 ¹	163
1951	22,919	277	5,082	45,672 ¹	198
1952	28,673	365	6,306	54,246 ¹	211
1953	35,642	412	7,493	63,033 ¹	214

* ESTIMATED

A CONDENSED SUMMARY OF INCOME AND EXPENSES FOR 1953 IS SHOWN IN TABLE XX, AND A BALANCE SHEET FOR 1953 IS SHOWN IN TABLE XXI.

TABLE XX - SUMMARY OF INCOME AND EXPENSES, 1953

<u>INCOME</u>		
ADVERTISING	\$ 693,725.24	
MEMBER DUES AND CONVENTION	696,530.51	
SUBSCRIPTIONS	87,511.74	
SALES ITEMS - BINDERS, EMBLEMS, ETC.	45,844.78	
INVESTMENT INCOME	22,779.63	
MISCELLANEOUS INCOME	<u>647.97</u>	
	TOTAL INCOME	\$ 1,547,039.87

<u>EXPENSE</u>		
PROCEEDINGS EDITORIAL PAGES	244,911.50	
ADVERTISING PAGES	363,770.52	
DIRECTORY	126,466.09	
SECTION AND STUDENT BRANCH REBATES	45,053.34	
PROFESSIONAL GROUP EXPENSE	51,634.52	
SALES ITEMS	30,992.83	
GENERAL OPERATIONS	262,250.88	
CONVENTION COST	<u>197,530.78</u>	
	TOTAL EXPENSE	<u>1,322,610.46</u>

RESERVE FOR FUTURE OPERATIONS - GROSS	\$ 224,429.41
RESERVE FOR DEPRECIATION	<u>11,026.67</u>
RESERVE FOR FUTURE OPERATIONS - NET	<u>\$ 213,402.74</u>

TABLE XXI - BALANCE SHEET - DECEMBER 31, 1953

ASSETS

CASH AND ACCOUNTS RECEIVABLE	\$ 407,572.36	
INVENTORY	<u>16,089.15</u>	
TOTAL CURRENT ASSETS		\$ 423,661.51
INVESTMENTS AT COST	873,765.95	
BUILDINGS AND LAND AT COST	576,943.65	
FURNITURE AND FIXTURES AT COST	120,479.44	
OTHER ASSETS	<u>18,343.88</u>	
TOTAL		<u>1,589,532.92</u>
TOTAL ASSETS		<u>\$ 2,013,194.43</u>

LIABILITIES AND SURPLUS

ACCOUNTS PAYABLE	\$ 31,987.14	
FEDERAL TAXES ON EMBLEMS, ETC.	<u>97.00</u>	
TOTAL CURRENT LIABILITIES		\$ 32,084.14
*DEFERRED LIABILITIES	503,325.10	
PROFESSIONAL GROUP FUNDS ON DEPOSIT	<u>78,956.45</u>	
TOTAL OTHER LIABILITIES		<u>582,281.55</u>
TOTAL LIABILITIES		\$ 614,365.69
RESERVE FOR DEPRECIATION		48,149.97
SURPLUS DONATED	595,286.61	
SURPLUS EARNED	<u>755,392.16</u>	
TOTAL SURPLUS		<u>1,350,678.77</u>
TOTAL LIABILITIES AND SURPLUS		<u>\$ 2,013,194.43</u>

*1954 ITEMS, PROCEEDINGS FOR MEMBERS AND SUBSCRIBERS,
ADVERTISING AND CONVENTION SERVICE.

TABLE XXII - EDITORIAL DEPARTMENT

THE YEAR 1953 WAS MARKED BY A MAJOR EXPANSION IN THE PUBLICATION ACTIVITIES OF THE IRE. DURING THE YEAR 56 PUBLICATIONS TOTALING 8,360 PAGES WERE PUBLISHED, REPRESENTING A 40% INCREASE OVER THE PREVIOUS YEAR.

PERHAPS OF GREATER SIGNIFICANCE THAN THE INCREASED VOLUME OF PUBLISHED MATERIAL WAS THE FACT THAT A FIRM FOUNDATION WAS LAID FOR THE FUTURE GROWTH OF THE PUBLICATION PROGRAM OF THE INSTITUTE. IN THIS CONNECTION, THE MOST NOTABLE DEVELOPMENTS DURING 1953 WERE THE CRYSTALLIZATION AND EXPANSION OF THE PROFESSIONAL GROUP TRANSACTIONS PROGRAM, THE SUCCESSFUL INITIATION OF THE CONVENTION RECORD OF THE I-R-E, AND ADOPTION OF A PLAN OF EDITORIAL COMMITTEE REORGANIZATION WHICH WILL EXPEDITE THE REVIEW AND PUBLICATION OF PROCEEDINGS PAPERS AND BETTER COORDINATE THE CONTENTS OF PROCEEDINGS WITH THOSE OF TRANSACTIONS.

PROCEEDINGS OF THE I-R-E

THE BOARD OF DIRECTORS ADOPTED, AT THE SUGGESTION OF EDITOR ALFRED N. GOLDSMITH, A PLAN OF EDITORIAL COMMITTEE REORGANIZATION WHEREBY THE PRESENT PAPERS REVIEW COMMITTEE, BOARD OF EDITORS, AND ADMINISTRATIVE COMMITTEE OF THE BOARD OF EDITORS WOULD BE SUPERSEDED IN 1954 BY TWO NEW COMMITTEES, NAMELY, THE EDITORIAL REVIEW COMMITTEE AND THE EDITORIAL BOARD. THIS REORGANIZATION IS EXPECTED TO RESULT IN REDUCING THE TIME REQUIRED TO REVIEW PAPERS FOR THE PROCEEDINGS. IN ADDITION, IT IS PLANNED TO DRAW UPON THE PROFESSIONAL GROUPS FOR MEMBERS TO SERVE ON THE EDITORIAL REVIEW COMMITTEE, THEREBY INSURING THAT THE BEST INTERESTS OF BOTH THE PROCEEDINGS AND TRANSACTIONS ARE SERVED.

THE 1953 PUBLICATION SCHEDULE WAS HIGHLIGHTED BY ISSUANCE OF TWO SPECIAL ISSUES OF PROCEEDINGS ON TOPICS OF PARTICULAR TIMELINESS AND IMPORTANCE, THE UHF ISSUE IN JANUARY AND THE COMPUTER ISSUE IN OCTOBER.

THE TOTAL NUMBER OF PAGES PUBLISHED IN THE PROCEEDINGS DURING THE YEAR WAS 4,006, INCLUDING COVERS. AS SHOWN IN TABLE I, THIS WAS A MARKED INCREASE OVER PREVIOUS YEARS. THE NUMBER OF EDITORIAL PAGES PUBLISHED EACH YEAR SINCE 1913 IS SHOWN IN FIGURE I.

TABLE I - VOLUME OF PROCEEDINGS PAGES

	<u>1953</u>	<u>1952</u>	<u>1951</u>	<u>1950</u>
EDITORIAL	1860	1804	1628	1516
ADVERTISING	<u>2146</u>	<u>1800</u>	<u>1424</u>	<u>1016</u>
TOTAL	4006	3604	3052	2532

TECHNICAL PAPERS TOTALING 212 WERE PUBLISHED IN 1953. IN ADDITION, 5 IRE STANDARDS WERE PUBLISHED. AUTHORSHIP OF THESE PAPERS WAS BY 309 INDIVIDUALS OF WHOM 227, OR 73 PER CENT, WERE MEMBERS OF THE INSTITUTE.

SEVERAL IRE COMMITTEES AND PROFESSIONAL GROUPS ASSISTED IN THE PROCUREMENT AND REVIEW OF PROCEEDINGS PAPERS. AS A RESULT, 6 SUCH PAPERS WERE PUBLISHED WITH THE APPROVAL OF THE FOLLOWING: 3 PAPERS APPROVED BY THE PROFESSIONAL GROUPS ON AERONAUTICAL AND NAVIGATIONAL ELECTRONICS, CIRCUIT THEORY AND AUDIO, 2 BY THE WAVE PROPAGATION COMMITTEE, AND 1 BY THE EDUCATION COMMITTEE.

THE YEARLY VOLUME OF PAPERS REVIEWED FOR PUBLICATION CONTINUED TO INCREASE. DURING 1953, 376 PAPERS TOTALING AN ESTIMATED 2,621 PROCEEDINGS PAGES WERE CONSIDERED, OR AN AVERAGE OF 31 PAPERS AND 218 PAGES PER MONTH. DURING 1952, 339 PAPERS OF 2,162 PAGES WERE REVIEWED, OR 28 PAPERS AND 180 PAGES PER MONTH.

THE BACKLOG OF PAPERS ON HAND IN THE EDITORIAL DEPARTMENT WAS NORMAL AT THE END OF 1953, CONSISTING OF 86 PAPERS TOTALING 646 PROCEEDINGS PAGES, OF WHICH 49 PAPERS OR 372 PAGES HAD BEEN ACCEPTED FOR PUBLICATION, THE REMAINDER BEING UNDER REVIEW.

PROFESSIONAL GROUP TRANSACTIONS

THE YEAR 1953 SAW A 50% INCREASE IN THE PUBLICATION ACTIVITIES OF THE PROFESSIONAL GROUPS OF THE IRE AND THE FIRM ESTABLISHMENT OF THE TRANSACTIONS AS A PERMANENT AND IMPORTANT PART OF THE IRE PUBLICATION PROGRAM. THE YEAR ALSO SAW AN IMPROVEMENT IN THE TRANSACTIONS THEMSELVES, WITH ALL GROUPS ADOPTING IDENTIFYING COLORS FOR TRANSACTIONS COVERS, 3 GROUPS UTILIZING VARITYPE OR LETTERPRESS COMPOSITION FOR IMPROVED APPEARANCE, AND 6 GROUPS ISSUING TRANSACTIONS ON A REGULAR SCHEDULE.

AS A RESULT OF THIS INCREASED ACTIVITY, THE EDITORIAL DEPARTMENT PUBLISHED 32 ISSUES OF TRANSACTIONS TOTALING 1798 PAGES FOR 15 GROUPS DURING 1953, AS COMPARED

WITH THE 1952 TOTALS OF 22 ISSUES TOTALING 1474 PAGES FOR 10 GROUPS. A BREAKDOWN OF TRANSACTIONS MATERIAL PUBLISHED IN 1952 AND 1953 IS GIVEN IN TABLE 2.

TABLE 2 - VOLUME OF TRANSACTIONS PAGES

	1953		1952	
	ISSUES	PAGES	ISSUES	PAGES
AERONAUTICAL AND NAVIGATIONAL ELECTRONICS	3	84	4	68
ANTENNAS AND PROPAGATION	2	72	4	636
AUDIO	6	180	6	216
BROADCAST AND TELEVISION RECEIVERS	3	160	1	16
CIRCUIT THEORY	1	112	1	104
COMMUNICATIONS SYSTEMS	1	76	0	0
ELECTRON DEVICES	3	184	1	36
ELECTRONIC COMPUTERS	4	136	1	80
INDUSTRIAL ELECTRONICS	1	44	0	0
INFORMATION THEORY	2	290	0	0
INSTRUMENTATION	1	116	1	68
MEDICAL ELECTRONICS	1	44	0	0
MICROWAVE THEORY AND TECHNIQUES	2	100	0	0
QUALITY CONTROL	1	56	1	62
VEHICULAR COMMUNICATIONS	1	144	2	188
TOTALS	32	1798	22	1474

CONVENTION RECORD OF THE I-R-E

PUBLICATION OF ALL PAPERS PRESENTED AT THE 1953 IRE NATIONAL CONVENTION WAS UNDERTAKEN FOR THE FIRST TIME IN A NEW PUBLICATION, THE CONVENTION RECORD OF THE I-R-E. THE VOLUME, CONTAINING 213 PAPERS TOTALING 1272 PAGES, WAS ISSUED IN TEN PARTS WITH EACH PART DEVOTED TO ONE GENERAL SUBJECT. EVERY PAID MEMBER OF A PROFESSIONAL GROUP RECEIVED FREE OF CHARGE A COPY OF THAT PART PERTAINING TO THE FIELD OF INTEREST OF HIS GROUP.

THE CONVENTION RECORD ACHIEVED, WITH NOTABLE SUCCESS, THE OBJECTIVE OF PROVIDING THE MEMBERSHIP PROMPTLY WITH A PERMANENT RECORD OF THE TECHNICAL PAPERS PRESENTED AT THE CONVENTION.

JOINT CONFERENCE PUBLICATIONS

THE EDITORIAL DEPARTMENT EXPANDED ITS SERVICES BY OFFERING ITS FACILITIES TO CONFERENCES JOINTLY SPONSORED BY THE IRE AND OTHER SOCIETIES. AS A RESULT, THE EDITORIAL DEPARTMENT PUBLISHED THE 236-PAGE PROCEEDINGS OF THE WESTERN COMPUTER CONFERENCE, HELD IN LOS ANGELES, CALIF., ON FEBRUARY 4-6, 1953 BY THE IRE, AIEE, AND THE ASSOCIATION FOR COMPUTING MACHINERY.

THE EDITORIAL DEPARTMENT HAS ALSO UNDERTAKEN PUBLICATION OF THE PROCEEDINGS OF THE EASTERN JOINT COMPUTER CONFERENCE, HELD IN WASHINGTON, D. C., ON DECEMBER 8-10, 1953.

IRE DIRECTORY

THE 1953 IRE DIRECTORY WAS THE LARGEST DIRECTORY PUBLISHED TO DATE, CONTAINING 1,048 PAGES INCLUDING COVERS, OF WHICH 473 WERE MEMBERSHIP LISTINGS AND INFORMATION, 575 WERE ADVERTISEMENTS AND LISTINGS OF MANUFACTURERS AND PRODUCTS. THE 1952 DIRECTORY TOTALED 856 PAGES.

EDITORIAL DEPARTMENT

THE YEAR 1953 WAS PARTICULARLY NOTEWORTHY IN THAT IT MARKED THE 41ST YEAR IN WHICH ALFRED N. GOLDSMITH HAS SERVED AS EDITOR DURING THE 42-YEAR HISTORY OF THE IRE. IN RECOGNITION OF THE INVALUABLE SERVICE HE HAS RENDERED THE INSTITUTE AND HIS MONUMENTAL CONTRIBUTIONS TO THE GROWTH AND HIGH STANDING OF ITS PUBLICATIONS, THE BOARD OF DIRECTORS HAS APPOINTED HIM EDITOR EMERITUS OF THE INSTITUTE AS OF JANUARY 1, 1954.

DURING 1953 THE EDITORIAL DEPARTMENT WAS DIRECTED BY EDITOR ALFRED N. GOLDSMITH IN MATTERS OF EDITORIAL POLICY, CONTENT AND FORMAT, AND BY EXECUTIVE SECRETARY GEORGE W. BAILEY IN MATTERS OF FINANCE AND ADMINISTRATION. BOTH FUNCTIONED THROUGH ADMINISTRATIVE EDITOR E. K. GANNETT AND AN EFFECTIVE STAFF. IT WAS GREATLY ASSISTED BY THE COUNSEL AND COOPERATION UNSTINTINGLY GIVEN BY THE MEMBERS OF THE BOARD OF EDITORS, PAPERS REVIEW COMMITTEE, AND THE ADMINISTRATIVE COMMITTEE OF THE BOARD OF EDITORS.

TABLE XXIII - TECHNICAL ACTIVITIES

TECHNICAL COMMITTEES. THERE WERE 224 TECHNICAL COMMITTEE MEETINGS DURING 1953. THIS FIGURE INCLUDES MEETINGS OF THE 23 TECHNICAL COMMITTEES, AS WELL AS THE SUBCOMMITTEES AND TASK GROUPS. A TOTAL OF 182 WERE HELD AT IRE HEADQUARTERS, THE REMAINING 42 ELSEWHERE.

THE ACTIVITIES OF THE IRE TECHNICAL COMMITTEES ARE REPORTED IN THE PROCEEDINGS.

THE POLICY OF PUBLISHING STANDARDS IN THE PROCEEDINGS, AS INITIATED IN 1949, IS BEING CONTINUED. THE STANDARDS LISTED BELOW WERE PUBLISHED IN 1953:

53 IRE 7. S1 STANDARDS ON ELECTRON DEVICES: METHODS OF MEASURING NOISE

53 IRE 2. S1 STANDARDS ON ANTENNAS AND WAVEGUIDES: DEFINITIONS OF TERMS, 1953

53 IRE 19. S1 STANDARDS ON SOUND RECORDING AND REPRODUCING: METHODS OF MEASUREMENT OF NOISE, 1953

53 IRE 22. S1 STANDARDS ON TELEVISION: DEFINITIONS OF COLOR TERMS, PART I, 1953

53 IRE 11. S1 STANDARDS ON MODULATION SYSTEMS: DEFINITIONS OF TERMS, 1953

SUPPLEMENT TO STANDARD

51 IRE 17. S1 SUPPLEMENT NO. 2 TO STANDARD 51 IRE 17. S1, VHF-UHF ANTENNA CONSTRUCTION

IN ADDITION TO STANDARDIZATION WORK LISTED ABOVE, THE FOLLOWING STANDARDS WERE ADOPTED BY THE STANDARDS COMMITTEE AND SUBMITTED FOR EXECUTIVE COMMITTEE APPROVAL DURING THE LATTER PART OF 1953. THEY WILL APPEAR IN THE PROCEEDINGS AT AN EARLY DATE:

STANDARDS ON AMERICAN RECOMMENDED PRACTICE FOR VOLUME MEASUREMENTS OF ELECTRICAL SPEECH AND PROGRAM WAVES

STANDARDS ON CIRCUITS: DEFINITIONS OF TERMS IN THE FIELD OF LINEAR VARYING PARAMETER AND NON-LINEAR CIRCUITS

STANDARDS ON SOUND RECORDING AND REPRODUCING: METHODS FOR DETERMINING FLUTTER CONTENT

STANDARDS ON GRAPHICAL SYMBOLS FOR ELECTRICAL DIAGRAMS

THE ANNUAL REVIEW COMMITTEE IS COMPLETING ITS SURVEY, "RADIO PROGRESS DURING 1953," WHICH WILL APPEAR IN A SPRING ISSUE OF THE PROCEEDINGS.

THERE HAS BEEN NO CHANGE IN THE NUMBER OF TECHNICAL COMMITTEES. FIFTEEN NEW SUBCOMMITTEES AND TASK GROUPS HAVE BEEN SET UP FOR SPECIFIC PURPOSES DURING 1953. THERE ARE NOW 85 SUBCOMMITTEES AND TASK GROUPS WITHIN THE IRE TECHNICAL COMMITTEE STRUCTURE. SEVERAL CHAIRMEN HAVE APPOINTED AD HOC COMMITTEES TO SURVEY FUTURE WORK AND REORGANIZE AND ACTIVATE SUBCOMMITTEES.

PROFESSIONAL GROUP SYSTEM

GENERAL. ON JUNE 2, 1948 THE ESTABLISHMENT OF THE FIRST IRE PROFESSIONAL GROUP WAS APPROVED BY THE INSTITUTE'S EXECUTIVE COMMITTEE. SINCE THAT TIME TWENTY ADDITIONAL GROUPS HAVE BEEN ESTABLISHED AND ALL TWENTY-ONE GROUPS ARE PRESENTLY ACTIVE. 14,850 INSTITUTE MEMBERS HAVE TAKEN ADVANTAGE OF THE PROFESSIONAL GROUPS SYSTEM, WHICH NOW HAS A TOTAL OF 21,797 PAID MEMBERS.

THE INSTITUTE HAS FOLLOWED THE COURSE OF LIMITING ITSELF IN STIMULATION AND GUIDANCE OF THE PROFESSIONAL GROUPS DEVELOPMENT. IT HAS ESTABLISHED GENERAL POLICY AND PROCEDURE, BUT HAS LEFT THE FORMATION AND ACTIVITIES OF INDIVIDUAL GROUPS TO THE INITIATIVE OF INTERESTED IRE MEMBERS. THE GROUPS HAVE NOT BEEN UNIFORMLY ACTIVE NOR ARE THEIR PROBLEMS IDENTICAL. SUPPLEMENTARY FINANCIAL ASSISTANCE HAS BEEN PROVIDED BY HEADQUARTERS DURING THE YEAR. PROVISION FOR REIMBURSING SECTIONS FOR CHAPTER MEETINGS HAS ALSO BEEN MADE.

DURING THE YEAR, 409 MAILINGS WERE DISTRIBUTED TO THE GROUPS MEMBERSHIP. SYMPOSIA. THE MANAGEMENT OF SYMPOSIA IS NOW IN THE HANDS OF THE PROFESSIONAL GROUPS WITH BUT FEW EXCEPTIONS.

NINETEEN OF THE GROUPS SPONSORED 62 NATIONAL MEETINGS, JOINT SYMPOSIA WITH OTHER PROFESSIONAL SOCIETIES AND TECHNICAL SESSIONS. EIGHTEEN GROUPS SPONSORED TECHNICAL SESSIONS AT THE 1953 NATIONAL CONVENTION; ELEVEN GROUPS SPONSORED THE TECHNICAL SESSIONS PRESENTED AT THE 1953 WEST COAST CONVENTION.

AT THE NATIONAL ELECTRONICS CONFERENCE HELD IN CHICAGO, THE AUDIO, CIRCUIT THEORY, ENGINEERING MANAGEMENT AND ULTRASONICS ENGINEERING GROUPS SPONSORED TECHNICAL SESSIONS.

THE JOINT IRE-AIEE-RETMA CONFERENCE ON QUALITY ELECTRONIC COMPONENTS HELD IN PASADENA, CALIFORNIA, WAS SPONSORED BY THE P.G. ON INSTRUMENTATION.

OVER 1400 PERSONS ATTENDED AND PROCEEDINGS OF THIS CONFERENCE WERE PUBLISHED. THIS GROUP ALSO SPONSORED THE JOINT IRE-AIEE-NBS CONFERENCE ON HIGH FREQUENCY MEASUREMENTS HELD IN WASHINGTON, AND PARTICIPATED IN THE EIGHTH NATIONAL INSTRUMENT CONFERENCE AND EXHIBIT HELD IN CHICAGO.

THE P. G. ON AERONAUTICAL & NAVIGATIONAL ELECTRONICS SPONSORED THE IRE-IAS-RTCA-ION SYMPOSIUM ON ELECTRONICS IN AVIATION HELD IN NEW YORK, THE NATIONAL AIRBORNE ELECTRONICS CONFERENCE HELD IN DAYTON, AND A SYMPOSIUM ON ELECTRONICS IN AIRCRAFT IN LOS ANGELES. THIS GROUP ALSO SPONSORED THE TUESDAY NIGHT SYMPOSIUM ON ELECTRONICS IN AVIATION AT THE 1953 NATIONAL CONVENTION.

THE P. G. ON ELECTRONIC COMPUTERS SPONSORED TWO LARGE AND SUCCESSFUL MEETINGS JOINTLY WITH THE AIEE AND ACM IN LOS ANGELES AND WASHINGTON. PROCEEDINGS OF BOTH THESE MEETINGS HAVE BEEN PUBLISHED.

AT THE IRE-RETMA RADIO FALL MEETING HELD IN TORONTO, CANADA, THE PROGRESSIVE TECHNICAL SESSIONS WERE SPONSORED BY THE PROFESSIONAL GROUPS ON BROADCAST & TELEVISION RECEIVERS, ELECTRON DEVICES AND QUALITY CONTROL.

THE P. G. ON ANTENNAS AND PROPAGATION SPONSORED THE JOINT URSI-IRE SPRING MEETING IN WASHINGTON AND THE URSI MEETING HELD IN OTTAWA, CANADA. THIS GROUP ALSO CO-SPONSORED THE CONFERENCE ON RADIO METEOROLOGY HELD IN AUSTIN, TEXAS.

A SYMPOSIUM ON MICROWAVE RADIO RELAY SYSTEMS WAS HELD IN NEW YORK AND WAS SPONSORED BY THE PROFESSIONAL GROUPS ON COMMUNICATIONS SYSTEMS, MICROWAVE THEORY AND TECHNIQUES AND ELECTRON DEVICES. THE COMMUNICATIONS SYSTEMS P. G. ALSO SPONSORED A SYMPOSIUM ON HIGH FREQUENCY COMMUNICATIONS.

THE FOURTH ANNUAL MEETING OF THE VEHICULAR COMMUNICATIONS P. G. HELD IN BOSTON, CONSISTED OF A THREE DAY MEETING WITH AN INTERESTING TECHNICAL PROGRAM AND DEMONSTRATIONS.

THE THIRD ANNUAL MEETING OF THE BROADCAST TRANSMISSION SYSTEMS P. G. WAS HELD AT THE FRANKLIN INSTITUTE IN PHILADELPHIA.

THE P. G. ON CIRCUIT THEORY CO-SPONSORED A SYMPOSIUM ON NONLINEAR CIRCUIT ANALYSIS WITH THE POLYTECHNIC INSTITUTE OF BROOKLYN.

THE P. G. ON RADIO TELEMTRY AND REMOTE CONTROL CO-SPONSORED THE NATIONAL TELEMETERING CONFERENCE HELD IN CHICAGO, AND THE KANSAS CITY SECTION ANNUAL ELECTRONICS CONFERENCE. PROCEEDINGS OF THE NATIONAL TELEMETERING CONFERENCE HAVE BEEN PUBLISHED.

THE P. G. ON MEDICAL ELECTRONICS SPONSORED THE JOINT IRE-AIEE CONFERENCE ON ELECTRONIC INSTRUMENTATION AND NUCLEONICS IN MEDICINE HELD IN NEW YORK AND A SYMPOSIUM ON ELECTRONIC PLETHYSMOGRAPHY AT THE UNIVERSITY OF BUFFALO.

THE P. G. ON ULTRASONICS ENGINEERING SPONSORED TECHNICAL SESSIONS AT THE ACOUSTICAL SOCIETY OF AMERICA MEETING IN CLEVELAND, AND AT THE NATIONAL ELECTRONICS CONFERENCE IN CHICAGO.

PUBLICATIONS. THE TRANSACTIONS OF MANY OF THE PROFESSIONAL GROUPS ARE PUBLISHED ON A REGULARLY SCHEDULED BASIS. THESE PUBLICATIONS INCLUDE THEORETICAL, TUTORIAL AND PRACTICAL PAPERS, NEWS ITEMS, AND ADVERTISING LIMITED TO THE FIRM NAME AND PRINCIPAL PRODUCT. 308 COLLEGE, COMPANY AND TECHNICAL LIBRARIES HAVE SUBSCRIBED FOR ALL ISSUES OF THE TRANSACTIONS.

ALL GROUPS ARE ASSISTING IN THE PROCUREMENT OF PAPERS FOR PUBLICATION IN THE PROCEEDINGS. SPECIAL MENTION IS MADE OF THE CONTRIBUTION OF THE P. G. ON ELECTRONIC COMPUTERS IN THE PREPARATION OF THE OCTOBER ISSUE OF THE PROCEEDINGS DEVOTED TO COMPUTERS.

FIFTEEN PROFESSIONAL GROUPS PUBLISHED 32 TRANSACTIONS CONTAINING 1798 PAGES.

PROFESSIONAL GROUP CHAPTERS. THE PURPOSE OF A CHAPTER IS TO ENCOURAGE THE INTERESTS OF ITS GROUP MEMBERS WITHIN A SECTION, TO STIMULATE AND CONDUCT ACTIVITIES IN THE FIELD OF INTEREST OF THE GROUP, AND TO COORDINATE THESE WITH THE LOCAL ACTIVITIES OF THE SECTION AND THE NATIONAL ACTIVITIES OF THE GROUP. A PROFESSIONAL GROUP CHAPTER MANUAL AND SUGGESTED BY-LAWS HAVE BEEN APPROVED AND DISTRIBUTED. THIS HAS PROVIDED FORMAL INFORMATION FOR CHAPTER PERSONNEL TO WORK DIRECTLY WITH THE SECTION AND THE GROUP.

PROFESSIONAL GROUP ACTIVITY WITHIN THE SECTIONS IS INCREASING RAPIDLY. 74 OFFICIAL CHAPTERS WERE OPERATING WITHIN THE SECTIONS ON DECEMBER 31, 1953.

CHAPTERS ARE COOPERATING WITH THE SECTIONS IN ARRANGING TECHNICAL PROGRAMS FOR SECTION MEETINGS AND WITH THE GROUPS IN NATIONAL MEETINGS HELD IN THEIR AREAS.

APPOINTED INSTITUTE REPRESENTATIVES ON OTHER BODIES

THE IRE APPOINTED REPRESENTATIVES ON THE FOLLOWING BODIES FOR A ONE-YEAR PERIOD, MAY 1, 1953 TO APRIL 30, 1954:

IRE-AIEE COMMITTEE ON NOISE DEFINITIONS

JOINT IRE-AIEE-NEMA CO-ORDINATION COMMITTEE ON COMMERCIAL INDUCTION AND DIELECTRIC HEATING APPARATUS

INTERNATIONAL SCIENTIFIC RADIO UNION (URSI) EXECUTIVE COMMITTEE

U. S. NATIONAL COMMITTEE, INTERNATIONAL ELECTROTECHNICAL COMMISSION, ADVISERS ON SYMBOLS

U. S. NATIONAL COMMITTEE, INTERNATIONAL ELECTROTECHNICAL COMMISSION, ADVISERS ON ELECTRICAL MEASURING INSTRUMENTS

U. S. NATIONAL COMMITTEE OF THE INTERNATIONAL ELECTROTECHNICAL COMMISSION

JOINT IRE-AIEE COMMITTEE ON HIGH FREQUENCY MEASUREMENTS

INTERNATIONAL RADIO CONSULTATIVE COMMITTEE, EXECUTIVE COMMITTEE OF U. S. DELEGATION

JOINT IRE-RETMA-SMPTE-NARTB COMMITTEE FOR INTER-SOCIETY COORDINATION (TELEVISION) (JCIC)

COUNCIL OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

PRACTICALLY ALL OF THE CURRENT WORK OF THE INTERNATIONAL RADIO CONSULTATIVE COMMITTEE WAS COMPLETED BEFORE MAY 1953, IN PREPARATION FOR THE PLENARY ASSEMBLY HELD IN LONDON SEPTEMBER 3 - OCTOBER 7. A COMPLETE SET OF IRE DEFINITION STANDARDS AND A COPY OF THE TENTATIVE ASA C42 DEFINITIONS OF COMMUNICATIONS TERMS HAVE BEEN FORWARDED TO CCIR HEADQUARTERS IN GENEVA THROUGH THE U. S. COMMITTEE.

THE ANNUAL SPRING AND FALL MEETINGS OF URSI WERE HELD IN WASHINGTON ON APRIL 27-30 AND IN OTTAWA, CANADA, OCTOBER 5-8. THE SPRING MEETING WAS JOINTLY SPONSORED BY THE U. S. A. NATIONAL COMMITTEE OF URSI AND THE IRE P. G. ON ANTENNAS AND PROPAGATION. AT THE FALL MEETING THE CANADIAN NATIONAL COMMITTEE OF URSI WAS THE SPONSORING HOST. THE IRE P. G. ON ANTENNAS AND PROPAGATION PARTICIPATED ACTIVELY IN THIS MEETING WITH THE U. S. AND CANADIAN NATIONAL COMMITTEES OF URSI AND WITH THE NATIONAL RESEARCH COUNCIL AND DEFENSE RESEARCH BOARD OF CANADA.

THREE MEETINGS OF THE U. S. NATIONAL COMMITTEE OF THE INTERNATIONAL ELECTRO-TECHNICAL COMMISSION WERE HELD. AT THE MARCH MEETING THE PRESIDENT WAS AUTHORIZED TO APPOINT A NEW SUBCOMMITTEE TO CONTINUE LIAISON WITH THE INTERNATIONAL COMMISSION ON RULES FOR THE APPROVAL OF ELECTRICAL EQUIPMENT. REPORTS OF THE USNC DELEGATES TO THE 1953 MEETING IN OPATIJA, YUGOSLAVIA WERE REVIEWED. A REQUEST OF THE ILLUMINATING SOCIETY FOR MEMBERSHIP IN THE USNC WAS APPROVED. AT THE JULY MEETING IT WAS VOTED TO HAVE AN OBSERVER OF THE USNC ATTEND THE MEETINGS IN 1954 OF THE INTERNATIONAL COMMISSION ON RULES FOR THE APPROVAL OF ELECTRICAL EQUIPMENT. THE OCTOBER MEETING DEALT PRINCIPALLY WITH PREPARATIONS FOR THE COMING GOLDEN JUBILEE MEETING OF THE IEC TO BE HELD IN PHILADELPHIA IN 1954.

JOINT TECHNICAL ADVISORY COMMITTEE

THE JOINT TECHNICAL ADVISORY COMMITTEE AND ITS SUBCOMMITTEES HELD 18 MEETINGS AT IRE HEADQUARTERS, IN ADDITION TO A LUNCHEON MEETING AT THE TORONTO FALL MEETING IN OCTOBER.

VOLUME X OF THE JTAC PROCEEDINGS WAS PUBLISHED. THIS INCLUDED SECTION I - OFFICIAL CORRESPONDENCE BETWEEN THE FEDERAL COMMUNICATIONS COMMISSION AND THE JOINT TECHNICAL ADVISORY COMMITTEE (IRE-RETMA) WITH OTHER ITEMS OF CORRESPONDENCE PERTINENT TO THE ACTIONS OF THE JTAC AND SECTION II - APPROVED MINUTES OF MEETINGS OF THE JOINT TECHNICAL ADVISORY COMMITTEE FOR THE PERIOD 1 JULY 1952 - 30 JUNE 1953.

THE JTAC SUBCOMMITTEE ON LAND-MOBILE CHANNELING ARRANGEMENTS SUBMITTED ITS FINAL REPORT ON MAY 28, 1953, WHICH WAS TRANSMITTED TO THE FCC CHAIRMAN ON JUNE 15. NINE MEETINGS WERE HELD BY THE SUBCOMMITTEE, INCLUDING FOUR DAYS OF FIELD TESTING IN SYRACUSE, NEW YORK, AND ADDITIONAL FIELD TESTING AND DEMONSTRATIONS IN CAMDEN, NEW JERSEY. THE FCC CHAIRMAN ON JULY 1 STATED THAT THE COMMISSION FEELS CONFIDENT THAT THIS STUDY WILL LAY THE GROUND WORK FOR IMPROVED FREQUENCY UTILIZATION IN THE LAND MOBILE SERVICE.

THE INTERFERENCE STUDY SET UP BY JTAC IN DECEMBER 1952 AT THE REQUEST OF THE FCC CHAIRMAN CONTINUED DURING 1953, WITH A TOTAL OF SIX MEETINGS HELD BY THE SUBCOMMITTEES. AS A RESULT OF THE JTAC'S REQUEST TO DR. W. R. G. BAKER, DIRECTOR OF

THE ENGINEERING DEPARTMENT OF RETMA, A MEETING WAS CALLED BY DR. BAKER IN NEW YORK CITY ON JANUARY 9 TO DISCUSS UNDER THE SPONSORSHIP OF RETMA, THE PROBLEM OF INTERFERENCE. AT THIS MEETING THREE TASK FORCES WERE SET UP BY RETMA TO COOPERATE WITH JTAC IN THE INTERFERENCE STUDY. THESE TASK FORCES HAVE HELD THREE MEETINGS IN 1953.

THE JTAC SUBCOMMITTEE TO REVIEW FCC TECHNICAL REQUIREMENTS, SET UP IN FEBRUARY 1952, SUBMITTED ITS REPORT AT THE OCTOBER MEETING OF JTAC. THE CHAIRMAN WAS AUTHORIZED TO INFORM THE FCC THAT THE STUDY DISCLOSED THAT THE MORE IMPORTANT PROVISIONS IN THE REGULATIONS CAN NOT BE CONSIDERED PRIMARILY FROM A TECHNICAL STANDPOINT AND THE REMAINING PROVISIONS REGARDING WHICH SUGGESTIONS WERE FORMULATED BY THE SUBCOMMITTEE, WHILE OF VALUE, ARE NOT OF SUFFICIENT IMPORTANCE TO WARRANT FORMAL CONSIDERATION BY THE COMMISSION AT THIS TIME. THE JTAC CHAIRMAN WAS AUTHORIZED TO ADVISE THE FCC CHAIRMAN OF THE RESULTS OF THE STUDY AND WITH HIS CONCURRENCE TO GIVE THE SUGGESTED CHANGES TO THE CHIEFS OF THE BUREAUS IN CHARGE OF THE PARTICULAR SUBJECTS AND TO THE CHIEF ENGINEER OF THE COMMISSION FOR CONSIDERATION WHEN THE RULES CONCERNED ARE REVISED.

NTSC

THE NATIONAL TELEVISION SYSTEM COMMITTEE HELD 48 MEETINGS AT IRE HEADQUARTERS. THE IRE TECHNICAL SECRETARY WAS SECRETARY OF THE COORDINATING PANEL 18 OF THE NTSC. THE NTSC PETITION WAS FILED WITH THE FEDERAL COMMUNICATIONS COMMISSION ON JULY 23, 1953 AND WAS SUBSEQUENTLY SUPPLEMENTED WITH THE FINAL REPORT OF THE NTSC.

TECHNICAL MEETINGS, 1953

<u>NAME OF MEETING</u>	<u>PLACE</u>	<u>DATE</u>
IRE/AIEE/NBS CONFERENCE ON HIGH FREQUENCY MEASUREMENTS	WASHINGTON, D.C.	JANUARY 14-16
SEVENTH REGIONAL IRE CONFERENCE	ALBUQUERQUE, NEW MEXICO	JANUARY 26-28
IRE/IAS/RTCA/ION SYMPOSIUM ON ELECTRONICS IN AVIATION	NEW YORK, NEW YORK	JANUARY 28
IRE/AIEE WESTERN COMPUTER CONFERENCE	LOS ANGELES, CALIFORNIA	FEBRUARY 4-6
IRE SOUTHWESTERN CONFERENCE AND ELECTRONICS SHOW	SAN ANTONIO, TEXAS	FEBRUARY 5-7
IRE/AIEE/ASME SOUTHWEST CONFERENCE ON FEEDBACK CIRCUITS	DALLAS, TEXAS	MARCH 12-13
IRE NATIONAL CONVENTION AND RADIO ENGINEERING SHOW	NEW YORK, NEW YORK	MARCH 23-26
IRE NEW ENGLAND RADIO ENGINEERING MEETING	STORRS, CONNECTICUT	APRIL 11
IRE SEVENTH ANNUAL SPRING TECHNICAL CONFERENCE	CINCINNATI, OHIO	APRIL 18
IRE/POLYTECHNIC INSTITUTE OF BROOKLYN SYMPOSIUM ON NON-LINEAR CIRCUIT ANALYSIS	NEW YORK, NEW YORK	APRIL 23-24
URSI/IRE SPRING MEETING	WASHINGTON, D.C.	APRIL 27-30
IRE/AIEE/RETMA/WCEMA ELECTRONIC COMPONENTS SYMPOSIUM	PASADENA, CALIFORNIA	APRIL 29- MAY 1
IRE NATIONAL CONFERENCE ON AIRBORNE ELECTRONICS	DAYTON, OHIO	MAY 11-14
IRE/AIEE/ISA/IAS NATIONAL TELEMETERING CONFERENCE	CHICAGO ILLINOIS	MAY 20-22
IRE-PGCS SYMPOSIUM ON HIGH FREQUENCY COMMUNICATIONS	NEW YORK, NEW YORK	JUNE 11-12
IRE/ONR/UNIVERSITY OF CALIFORNIA SYMPOSIUM ON STATISTICAL METHODS IN COMMUNICATION ENGINEERING	BERKELEY, CALIFORNIA	AUGUST 17-18
IRE-PGANE CLASSIFIED SYMPOSIUM ON ELECTRONICS IN AIRCRAFT	LOS ANGELES, CALIFORNIA	AUGUST 18
IRE/WCEMA WESTERN ELECTRONIC SHOW AND CONVENTION	SAN FRANCISCO, CALIFORNIA	AUGUST 19-21

TECHNICAL MEETINGS, 1953 (CONT'D.)

<u>NAME OF MEETING</u>	<u>PLACE</u>	<u>DATE</u>
NATIONAL ELECTRONICS CONFERENCE	CHICAGO, ILLINOIS	SEPTEMBER 28-30
URSI FALL TECHNICAL MEETING	OTTAWA, CANADA	OCTOBER 5-8
IRE-PGUE/ACOUSTICAL SOCIETY OF AMERICA SYMPOSIUM	CLEVELAND, OHIO	OCTOBER 15-17
IRE/RETMA RADIO FALL MEETING	TORONTO, CANADA	OCTOBER 26-28
JOINT IRE-PGCS, -PGMTT AND -PGED SYMPOSIUM ON MICROWAVE RADIO RELAY SYSTEMS	NEW YORK, NEW YORK	NOVEMBER 2-3
IRE/AMS/RWC/URSI CONFERENCE ON RADIO METEOROLOGY	AUSTIN, TEXAS	NOVEMBER 9-12
FOURTH ANNUAL MEETING OF THE IRE PROFES- SIONAL GROUP ON VEHICULAR COMMUNICATIONS	BOSTON, MASSACHUSETTS	NOVEMBER 12-13
IRE KANSAS CITY SECTION ANNUAL ELECTRONICS CONFERENCE	KANSAS CITY, MISSOURI	NOVEMBER 13-14
THIRD ANNUAL MEETING OF THE IRE PROFES- SIONAL GROUP ON BROADCAST TRANSMISSION SYSTEMS	PHILADELPHIA, PENNSYLVANIA	NOVEMBER 16
IRE/AIEE SIXTH ANNUAL CONFERENCE ON ELECTRONIC INSTRUMENTATION IN MEDICINE AND NUCLEONICS	NEW YORK, NEW YORK	NOVEMBER 19-20
IRE/AIEE/ACM COMPUTER CONFERENCE	WASHINGTON, D.C.	DECEMBER 8-10
IRE-PGME SYMPOSIUM ON ELECTRONIC PLETHYSMOGRAPHY	BUFFALO, NEW YORK	DECEMBER 10-11

TABLE XXIV - SECTION ACTIVITIES

WE WERE GLAD TO WELCOME SIX NEW SECTIONS INTO THE INSTITUTE DURING THE PAST YEAR. THEY ARE AS FOLLOWS:

ELMIRA-CORNING	MAY 1953
HUNTSVILLE	NOVEMBER 1953
LONG ISLAND	MAY 1953
NEW ORLEANS	NOVEMBER 1953
ROME-UTICA	NOVEMBER 1953
WINNIPEG	AUGUST 1953

THE TOTAL NUMBER OF SECTIONS IS NOW 71. REFERENCE TO TABLE XXV WILL SHOW A MEMBERSHIP INCREASE IN 50 OF THE 71 SECTIONS.

THE HUNTSVILLE, LONG ISLAND, ROME AND WINNIPEG SUBSECTIONS BECAME FULL SECTIONS, AND THE SOUTH BEND SUBSECTION WAS DISSOLVED IN THE YEAR 1953. THE SUBSECTIONS OF SECTIONS NOW TOTAL 15, THE FOLLOWING BEING FORMED IN 1953:

BUENAVENTURA (LOS ANGELES SECTION)	AUGUST 1953
EAST BAY (SAN FRANCISCO SECTION)	FEBRUARY 1953
ERIE (BUFFALO-NIAGARA SECTION)	JANUARY 1953
ITHACA (SYRACUSE SECTION)	JANUARY 1953
U.S.A.F.I.T. (DAYTON SECTION)	MAY 1953

TABLE XXV - SECTION MEETINGS AND MEMBERSHIP
(INCLUDING SUBSECTIONS)

<u>SECTIONS</u>	<u>NUMBER OF MEETINGS</u>			<u>MEMBERSHIP OF SECTIONS</u>					
	<u>1953</u>	<u>1952</u>	<u>1951</u>	<u>1953</u>	<u>%¹</u>	<u>1952</u>	<u>%¹</u>	<u>1951</u>	<u>%¹</u>
AKRON	10	11	9	210	+13	186	+21	154	+ 2
ALBUQUERQUE- LOS ALAMOS	9	9	10	302	+ 9	277	- 9	303	+13
ATLANTA	11	9	10	440	-25	587	+ 8	544	-12
BALTIMORE	10	10	10	757	+27	597	+ 2	587	+25
BEAUMONT- PORT ARTHUR	10	10	10	66	+ 7	62	+19	52	+15
BINGHAMTON	7	7	-	136	+ 2	134	-	-	-
BOSTON	6	15	18	2209	+19	1864	+16	1613	+ 6
BUENOS AIRES	-	10	4	102	+15	89	- 5	94	-18
BUFFALO-NIAGARA	9	8	9	352	+20	294	+11	266	+ 7
CEDAR RAPIDS	10	11	10	235	+10	213	+14	187	+ 9
CENTRAL FLORIDA	8	-	-	124	+ 3	121	-	-	-
CHICAGO	5	18	10	1884	+14	1652	+ 8	1531	- 4
CINCINNATI	3	17	10	298	+10	270	+23	220	- 3
CLEVELAND	9	10	9	356	+11	322	+ 8	299	- 6
COLUMBUS	9	11	10	162	+18	137	+12	122	+ 6
CONNECTICUT VALLEY	8	12	10	703	+22	574	+12	512	+ 5
DALLAS-FORT WORTH	10	20	15	489	- 2	499	+ 2	491	-16
DAYTON	11	7	11	545	+11	492	+12	439	+ 7
DENVER	9	11	7	209	+ 4	201	+ 7	187	-15
DES MOINES-AMES	7	10	9	61	- 5	64	+ 7	60	-28
DETROIT	9	9	10	759	+ 7	709	+ 9	652	- 2
* ELMIRA-CORNING	4	-	-	72	-	-	-	-	-
EL PASO	5	6	-	187	+13	166	-	-	-
EMPORIUM	18	19	11	169	- 8	184	+16	158	+ 8
EVANSVILLE- OWENSBORO	10	10	9	88	+27	69	- 1	70	-10

TABLE XXV - SECTION MEETINGS AND MEMBERSHIP (CONT'D.)
(INCLUDING SUBSECTIONS)

<u>SECTIONS</u>	<u>NUMBER OF MEETINGS</u>			<u>MEMBERSHIP OF SECTIONS</u>					
	<u>1953</u>	<u>1952</u>	<u>1951</u>	<u>1953</u>	<u>%¹</u>	<u>1952</u>	<u>%¹</u>	<u>1951</u>	<u>%¹</u>
FORT WAYNE	10	8	9	179	+35	133	+30	102	+13
HAMILTON	9	8	-	102	+26	81	-	-	-
HAWAII	10	12	10	91	-	91	- 6	97	- 9
HOUSTON	10	7	10	234	+14	206	+13	183	-15
* HUNTSVILLE	11	-	-	189	-	-	-	-	-
INDIANAPOLIS	3	6	7	233	+ 2	228	+12	203	-19
INYOKERN	10	10	2	69	+ 5	66	+ 6	62	+26
KANSAS CITY	9	10	8	369	+13	328	+ 6	311	-14
LITTLE ROCK	9	9	-	81	+13	72	-	-	-
LONDON	10	11	6	75	- 6	80	- 9	88	-25
* LONG ISLAND	8	-	-	2271	-	-	-	-	-
LOS ANGELES	15	19	16	2835	+24	2282	+23	1852	+ 7
LOUISVILLE	9	9	10	88	- 9	97	+56	62	-55
MIAMI	9	-	9	242	+16	209	-27	288	+12
MILWAUKEE	8	14	9	273	+ 9	250	- 7	268	-22
MONTREAL	8	5	10	339	+25	271	+ 9	248	- 2
* NEW ORLEANS	-	-	-	137	-	-	-	-	-
NEW YORK	34	41	36	5445	-22	6990	+10	6331	+ 4
NORTH CAROLINA- VIRGINIA	1	6	7	493	+22	405	+13	359	- 7
OKLAHOMA CITY	9	8	2	99	+24	80	+31	61	-
OMAHA-LINCOLN	7	3	5	83	+ 1	82	- 9	90	-23
OTTAWA	7	9	12	160	+14	140	+ 4	135	+ 7
PHILADELPHIA	21	17	13	2119	+17	1804	+18	1530	+ 9
PHOENIX	8	3	6	177	+32	134	+34	100	-
PITTSBURGH	11	9	10	431	+ 2	423	+ 3	410	- 5
PORTLAND	15	13	11	208	+14	182	+ 3	177	-15

TABLE XXV - SECTION MEETINGS AND MEMBERSHIP (CONT'D.)
(INCLUDING SUBSECTIONS)

SECTIONS	NUMBER OF MEETINGS			MEMBERSHIP OF SECTIONS					
	1953	1952	1951	1953	% ¹	1952	% ¹	1951	% ¹
PRINCETON	10	10	10	340	+19	287	+ 6	272	+ 2
ROCHESTER	7	7	4	164	+12	146	+13	129	- 8
* ROME-UTICA	6	-	-	200	-	-	-	-	-
SACRAMENTO	9	5	5	73	- 9	80	+11	72	- 8
ST. LOUIS	9	9	9	295	+11	267	-10	296	-20
SALT LAKE	1	7	9	128	- 3	132	+ 7	123	- 5
SAN ANTONIO	8	9	11	179	+16	155	+ 2	152	- 3
SAN DIEGO	1	12	12	341	+ 3	332	- 4	345	+32
SAN FRANCISCO	15	17	18	1165	+ 8	1076	+ 4	1034	+ 1
SCHENECTADY	7	6	8	330	+12	295	- 3	304	-10
SEATTLE	3	6	9	505	+ 6	476	-10	530	- 2
SYRACUSE	12	15	18	623	-11	697	- 1/2	701	+22
TOLEDO	9	10	9	112	- 1	113	+ 4	109	+ 1
TORONTO	6	14	22	375	- 2	383	- 3	393	- 1
TULSA	10	11	5	185	+16	159	+21	131	-
TWIN CITIES	10	10	9	439	-22	559	+47	381	- 9
VANCOUVER	9	10	10	161	+ 7	150	+13	133	-15
WASHINGTON	10	12	10	1886	+10	1718	+ 9	1570	+ 6
WILLIAMSPORT	7	7	5	48	-16	57	+12	51	+19
* WINNIPEG	8	-	-	70	-	-	-	-	-
	625	674	602	35,626	+13	31,479	+11	28,224	+ 2
TOTAL MEMBERSHIP OF INSTITUTE				37,134	+13	32,874	+12	29,408	+ 1

PERCENTAGE INCREASE OR DECREASE BASED ON PRECEDING YEAR.

SECTIONS FORMED DURING 1953.

TABLE XXVI - SUBSECTION MEETINGS

<u>SUBSECTION</u>	<u>PARENT SECTION</u>	<u>NUMBER OF MEETINGS</u>
AMARILLO-LUBBOCK	DALLAS-FORT WORTH	-
BUENAVENTURA	LOS ANGELES	-
CENTRE COUNTY	EMPORIUM	8
CHARLESTON	ATLANTA	-
EAST BAY	SAN FRANCISCO	1
ERIE	BUFFALO-NIAGARA	-
ITHACA	SYRACUSE	4
LANCASTER	PHILADELPHIA	7
MID-HUDSON	NEW YORK	7
MONMOUTH	NEW YORK	8
NORTHERN NEW JERSEY	NEW YORK	8
ORANGE BELT	LOS ANGELES	5
PALO ALTO	SAN FRANCISCO	6
U.S.A.F.I.T.	DAYTON	3
WICHITA	KANSAS CITY	6
TOTALS		<u>63</u>

GRAND TOTAL: 100

TABLE XXVII - PROFESSIONAL GROUP CHAPTER MEETINGS, 1953

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	TOTAL
BUQUERQUE- S ALAMOS	4										10											14
ANTA (AK RIDGE)					3																	3
STON	6	4														1						11
AGO	3		2	2	2	2	1	4					2	3								21
CINNATI	2																					2
YTON											6											6
USTON	1																					1
S ANGELES			4	2		2		2		1		5		9		6						31
WAUKEE	2																					2
ILADELPHIA	5										4					6						15
I FRAN- SCO															3	5		2				10
SHINGTON						3								7		6						16

TOTALS	23	4	6	4	5	7	1	6		1	10	15	2	19	3	24		2				132

GRAND TOTAL: 132

TABLE XXVIII - STUDENT BRANCHES, 1953

THE NUMBER OF STUDENT BRANCHES FORMED DURING 1953 WAS 4, ALL OF WHICH OPERATE AS JOINT IRE-AIEE BRANCHES. THE TOTAL NUMBER OF STUDENT BRANCHES IS NOW 118, 83 OF WHICH OPERATE AS JOINT IRE-AIEE BRANCHES.

FOLLOWING IS A LIST OF THE STUDENT BRANCHES:

<u>SCHOOL</u>	<u>BRANCH</u>	<u>FORMED 1953</u>
AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS	IRE-AIEE	
AKRON, UNIVERSITY OF	IRE-AIEE	
ALABAMA POLYTECHNIC INSTITUTE	IRE	
ALBERTA, UNIVERSITY OF	IRE-AIEE	
ARIZONA, UNIVERSITY OF	IRE-AIEE	
ARKANSAS, UNIVERSITY OF	IRE	
BRITISH COLUMBIA, UNIVERSITY OF	IRE-AIEE	
BROOKLYN, POLYTECHNIC INSTITUTE OF	IRE-AIEE (EVENING DIVISION)	
BROOKLYN, POLYTECHNIC INSTITUTE OF	IRE (DAY DIVISION)	
BROWN UNIVERSITY	IRE-AIEE	
BUCKNELL, UNIVERSITY OF	IRE-AIEE	
CALIFORNIA INSTITUTE OF TECHNOLOGY	IRE	
CALIFORNIA STATE POLYTECHNIC COLLEGE	IRE	
CALIFORNIA, UNIVERSITY OF	IRE-AIEE	
CARNEGIE INSTITUTE OF TECHNOLOGY	IRE-AIEE	
CASE INSTITUTE OF TECHNOLOGY	IRE	
CINCINNATI, UNIVERSITY OF	IRE-AIEE	4/7/53
CLARKSON COLLEGE OF TECHNOLOGY	IRE	
COLORADO, UNIVERSITY OF	IRE-AIEE	
COLUMBIA, UNIVERSITY OF	IRE-AIEE	
CONNECTICUT, UNIVERSITY OF	IRE-AIEE	
COOPER UNION	IRE-AIEE	
CORNELL UNIVERSITY	IRE-AIEE	

TABLE XXVIII - STUDENT BRANCHES, 1953 (CONT'D.)

<u>SCHOOL</u>	<u>BRANCH</u>	<u>FORMED 1953</u>
DAYTON, UNIVERSITY OF	IRE	
DELAWARE, UNIVERSITY OF	IRE-A IEE	
DENVER, UNIVERSITY OF	IRE-A IEE	
DETROIT, UNIVERSITY OF	IRE-A IEE	
DREXEL INSTITUTE OF TECHNOLOGY	IRE-A IEE	
FENN COLLEGE	IRE	
FLORIDA, UNIVERSITY OF	IRE-A IEE	
GEORGE WASHINGTON UNIVERSITY	IRE	
GEORGIA INSTITUTE OF TECHNOLOGY	IRE	
ILLINOIS INSTITUTE OF TECHNOLOGY	IRE	
ILLINOIS, UNIVERSITY OF	IRE-A IEE	
IOWA, STATE UNIVERSITY OF	IRE	
IOWA STATE COLLEGE	IRE-A IEE	
JOHN CARROLL UNIVERSITY	IRE	
JOHNS HOPKINS UNIVERSITY	IRE-A IEE	
KANSAS STATE COLLEGE	IRE	
KANSAS, UNIVERSITY OF	IRE-A IEE	
KENTUCKY, UNIVERSITY OF	IRE	
LAFAYETTE COLLEGE	IRE-A IEE	
LEHIGH UNIVERSITY	IRE	
LOUISIANA STATE UNIVERSITY	IRE-A IEE	
LOUISVILLE, UNIVERSITY OF	IRE	
MAINE, UNIVERSITY OF	IRE	
MANHATTAN COLLEGE	IRE-A IEE	
MARQUETTE UNIVERSITY	IRE-A IEE	
MARYLAND, UNIVERSITY OF	IRE-A IEE	
MASSACHUSETTS, UNIVERSITY OF	IRE-A IEE	1/6/53

TABLE XXVIII - STUDENT BRANCHES, 1953 (CONT'D.)

<u>SCHOOL</u>	<u>BRANCH</u>	<u>FORMED 1953</u>
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	IRE-AIEE	
MIAMI, UNIVERSITY OF	IRE	
MICHIGAN COLLEGE OF MINING AND TECHNOLOGY	IRE-AIEE	
MICHIGAN STATE COLLEGE	IRE-AIEE	
MICHIGAN, UNIVERSITY OF	IRE-AIEE	
MINNESOTA, UNIVERSITY OF	IRE-AIEE	
MISSISSIPPI STATE COLLEGE	IRE	
MISSOURI SCHOOL OF MINES AND METALLURGY	IRE-AIEE	
MISSOURI, UNIVERSITY OF	IRE-AIEE	
MONTANA STATE COLLEGE	IRE-AIEE	
NEBRASKA, UNIVERSITY OF	IRE-AIEE	
NEWARK COLLEGE OF ENGINEERING	IRE	
NEW HAMPSHIRE, UNIVERSITY OF	IRE-AIEE	
NEW MEXICO COLLEGE OF AGRICULTURE AND MECHANIC ARTS	IRE-AIEE	
NEW MEXICO, UNIVERSITY OF	IRE-AIEE	
NEW YORK, COLLEGE OF THE CITY OF	IRE	
NEW YORK UNIVERSITY (DAY DIVISION)	IRE	
NEW YORK UNIVERSITY (EVENING DIVISION)	IRE-AIEE	
NORTH CAROLINA STATE COLLEGE	IRE	
NORTH DAKOTA, UNIVERSITY OF	IRE-AIEE	
NORTH DAKOTA, AGRICULTURAL COLLEGE	IRE-AIEE	
NORTHEASTERN UNIVERSITY	IRE-AIEE	
NORTHWESTERN UNIVERSITY	IRE-AIEE	
NOTRE DAME, UNIVERSITY OF	IRE-AIEE	
OHIO STATE UNIVERSITY	IRE-AIEE	
OHIO UNIVERSITY	IRE-AIEE	

TABLE XXVIII - STUDENT BRANCHES, 1953 (CONT'D.)

<u>SCHOOL</u>	<u>BRANCH</u>	<u>FORMED 1953</u>
OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE	IRE-AIEE	
OREGON STATE COLLEGE	IRE	
PENNSYLVANIA, UNIVERSITY OF	IRE-AIEE	
PENNSYLVANIA STATE COLLEGE, THE	IRE-AIEE	
PITTSBURGH, UNIVERSITY OF	IRE	
PRATT INSTITUTE	IRE-AIEE	
PRINCETON UNIVERSITY	IRE-AIEE	
PURDUE UNIVERSITY	IRE	
RENSSELAER POLYTECHNIC INSTITUTE	IRE-AIEE	
RHODE ISLAND, UNIVERSITY OF	IRE-AIEE	
RUTGERS UNIVERSITY	IRE-AIEE	
ST. LOUIS UNIVERSITY	IRE	
SAN DIEGO STATE COLLEGE	IRE	
SAN JOSE STATE COLLEGE	IRE	
SEATTLE UNIVERSITY	IRE	
SOUTH CAROLINA, UNIVERSITY OF	IRE-AIEE	
SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY	IRE	
SOUTHERN CALIFORNIA, UNIVERSITY OF	IRE-AIEE	
SOUTHERN METHODIST UNIVERSITY	IRE-AIEE	
STANFORD UNIVERSITY	IRE-AIEE	
STEVENS INSTITUTE OF TECHNOLOGY	IRE-AIEE	
SYRACUSE, UNIVERSITY OF	IRE-AIEE	
TENNESSEE, UNIVERSITY OF	IRE	
TEXAS, UNIVERSITY OF	IRE-AIEE	
TEXAS TECHNOLOGICAL COLLEGE	IRE-AIEE	4/21/53
TOLEDO, UNIVERSITY OF	IRE-AIEE	
TORONTO, UNIVERSITY OF	IRE-AIEE	

TABLE XXVIII - STUDENT BRANCHES, 1953 (CONT'D.)

<u>SCHOOL</u>	<u>BRANCH</u>	<u>FORMED 1953</u>
TUFTS COLLEGE	IRE-A IEE	
TULANE UNIVERSITY	IRE-A IEE	
UTAH STATE AGRICULTURAL COLLEGE	IRE	
UTAH, UNIVERSITY OF	IRE-A IEE	
VERMONT, UNIVERSITY OF	IRE-A IEE	6/2/53
VILLANOVA COLLEGE	IRE-A IEE	
VIRGINIA POLYTECHNIC INSTITUTE	IRE-A IEE	
VIRGINIA, UNIVERSITY OF	IRE-A IEE	
WASHINGTON, UNIVERSITY OF	IRE-A IEE	
WAYNE UNIVERSITY	IRE-A IEE	
WEST VIRGINIA UNIVERSITY	IRE-A IEE	
WISCONSIN, UNIVERSITY OF	IRE-A IEE	
WORCESTER POLYTECHNIC INSTITUTE	IRE-A IEE	
WYOMING, UNIVERSITY OF	IRE-A IEE	
YALE UNIVERSITY	IRE-A IEE	