



345 EAST 47TH STREET, NEW YORK, N.Y. 10017 AREA CODE 212 752-8800



**THE INSTITUTE OF
ELECTRICAL AND
ELECTRONICS
ENGINEERS, INC.**

345 EAST 47TH STREET, NEW YORK, N.Y. 10017

REPORT OF THE SECRETARY - 1969

There was a healthy growth of 8.5% in Group membership, 25% of the members above student grade and 45% of the student members participate in the Group program.

110 major Conferences were sponsored or cosponsored by IEEE in 1969, 34 having exhibits, with paid registrations totaling 114,533, and additional exhibit attendance of 112,980. In addition, the 1969 International Convention attracted 68,747 attendees.

38,760 editorial pages were published in 1969, a slight decrease over the previous year, 184 Group Transactions were published in 1969 with 50,566 editorial pages, as compared with 179 published in 1968 with 19,847 pages.

The technical activities of the Institute were reorganized through amendment of the Bylaws to provide for the clustering of Groups into Technical Divisions, with members in the Divisions to nominate and elect an IEEE Director.

A new Conference Board, established in November, will have full responsibility for the operations of future IEEE International Conventions.

These data indicate a general growth trend and increased effectiveness in the organizational structure to better serve the membership.

Respectfully submitted,

Raymond W. Sears
Secretary, 1969



345 EAST 47TH STREET, NEW YORK, N.Y. 10017 AREA CODE 212 752-6800

To the Board of Directors
The Institute of Electrical
and Electronics Engineers

Gentlemen:

The Report of the Secretary for the year 1969 is presented herewith.

The membership increased 2.5% during the year. The highest increase was in the Member grade, 3.8%. Senior Membership continues to show a gradual decline, 0.8% in 1969 and 5% over the past five years. Membership outside the United States and Canada increased 10% during 1969. New statistics in this Report indicate that 638 members are women.

There was a healthy growth of 8.5% in Group membership. 55% of the members above Student grade and 43% of the Student members participate in the Group program.

110 major Conferences were sponsored or cosponsored by IEEE in 1969, 34 having exhibits, with paid registrations totaling 114,533, and additional exhibit attendances of 115,980. In addition, the 1969 International Convention attracted 60,543 attendees.

38,760 editorial pages were published in 1969, a slight decrease over the previous year. 184 Group Transactions were published in 1969 with 20,266 editorial pages, as compared with 179 published in 1968 with 19,847 pages.

The technical activities of the Institute were reorganized through amendment of the Bylaws to provide for the clustering of Groups into six Technical Divisions, with members in the Divisions to nominate and elect an IEEE Director.

A new Conference Board, established in November, will have full responsibility for the operations of future IEEE International Conventions.

These data indicate a general growth trend and increased effectiveness in the organizational structure to better serve the membership.

Respectfully submitted,

Raymond W. Sears
Secretary, 1969

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Region	December 31, 1985 Number of Total	December 31, 1986 Number of Total	December 31, 1987 Number of Total
Region 1	40,432	39,234	38,234
Region 2	22,967	22,967	22,967
Region 3	14,022	14,022	14,022
Region 4	18,734	18,734	18,734
Region 5	13,888	13,888	13,888
Region 6	30,881	30,881	30,881
Region 7	8,043	7,989	7,989
Region 8	4,810	4,123	4,123
Region 9	1,949	1,779	1,779
Region 10	2,884	2,444	2,444
U.S. Possessions & Military Overseas	888	873	873
Total	188,237	188,237	188,237

SECTION A

Table 1 - IEEE Membership by Region, Grade, Percentage; as of December 31, 1969

	H	F	SM	M	A	Student	Total	Percentage
Region 1	2	943	6,009	25,301	3,790	5,023	41,068	25
Region 2		539	4,719	16,408	1,792	2,895	26,353	16
Region 3		265	2,330	8,705	853	2,329	14,482	9
Region 4		238	2,663	10,674	1,631	3,566	18,772	11
Region 5	1	180	2,034	8,279	834	3,107	14,435	9
Region 6		502	4,704	20,991	2,087	3,386	31,670	19
Region 7		65	817	4,417	1,060	2,019	8,378	5
Region 8		146	851	2,602	478	988	5,065	3
Region 9		13	205	1,247	275	628	2,368	1
Region 10	1	25	422	1,859	354	306	2,967	2
U.S. Possessions & Military Overseas		1	61	575	81	72	790	
	4	2,917	24,815	101,058	13,235	24,319	166,348	100

Table 2 - IEEE Membership by Grade, Percentage; 3-Year Comparison

Grade	December 31, 1969		December 31, 1968		December 31, 1967	
	Number	% of Total	Number	% of Total	Number	% of Total
Honorary (H)	4		4		4	
Fellow (F)	2,917	2	2,885	2	2,817	2
Senior Member (SM)	24,815	15	25,023	15	25,411	16
Member (M)	101,058	61	97,326	60	94,746	60
Associate (A)	13,235	8	13,200	8	12,991	8
Student (S)	24,319	14	23,930	15	22,248	14
	166,348	100	162,368	100	158,217	100

Table 3 - IEEE Membership by Region, Percentage; 3-Year Comparison

Region	December 31, 1969		December 31, 1968		December 31, 1967	
	Number	% of Total	Number	% of Total	Number	% of Total
Region 1	41,068	25	40,492	25	39,534	25
Region 2	26,353	16	25,957	16	25,381	16
Region 3	14,482	9	14,055	9	13,889	9
Region 4	18,772	11	18,794	11	18,442	12
Region 5	14,435	9	13,886	8	13,309	8
Region 6	31,670	19	30,851	19	30,375	19
Region 7	8,378	5	8,043	5	7,568	5
Region 8	5,065	3	4,810	3	4,123	3
Region 9	2,368	1	1,940	1	1,779	1
Region 10	2,967	2	2,684	2	2,444	1
U.S. Possessions & Military Overseas	790		856	1	873	1
	166,348	100	162,368	100	158,217	100

SECTION A

Table 4 - IEEE Life Members by Grade; 3-Year Comparison

	December 31, 1969	December 31, 1968	December 31, 1967
Fellow	1,140	1,742	1,112
Senior Member	2,084	2,050	1,973
Member	1,038	1,046	1,018
Associate	32	29	29
	<u>4,294</u>	<u>4,867</u>	<u>4,132</u>

Table 5 - IEEE Women Members by Grade

	December 31, 1969
Fellow	2
Senior Member	57
Member	95
Associate	316
Student	168
	<u>638</u>

Table 6 - IEEE Membership Changes, by Grade for the Year Ended December 31, 1969

GAINS	H	F	SM	M	A	Subtotal	Student	Total
Elections			279	2,630	732	3,641	12,443	16,084
Reinstatements		134	664	2,205	306	3,309	2,102	5,411
Transfers To		127	592	10,376	2,252	13,347	1,425	14,772
Total		<u>261</u>	<u>1,535</u>	<u>15,211</u>	<u>3,290</u>	<u>20,297</u>	<u>15,970</u>	<u>36,267</u>
LOSSES								
Transfer From Deceased			245	2,033	410	2,688	12,084	14,772
Resignations		187	320	205	30	742	11	753
Dues Arrears		11	324	1,274	343	1,952	140	2,092
Total		<u>31</u>	<u>854</u>	<u>7,965</u>	<u>2,472</u>	<u>11,322</u>	<u>3,346</u>	<u>14,668</u>
		<u>229</u>	<u>1,743</u>	<u>11,477</u>	<u>3,255</u>	<u>16,704</u>	<u>15,581</u>	<u>32,285</u>

Table 7 - IEEE Membership Changes; 3-Year Comparison

GAINS	December 31, 1969	December 31, 1968	December 31, 1967
Elections	16,084	17,497	17,025
Reinstatements	5,411	1,520	1,897
Transfers To	14,772	20,794	12,244
Total Gain	<u>36,267</u>	<u>39,811</u>	<u>31,166</u>
LOSSES			
Transfers from Deceased	14,772	20,794	12,244
Resignations	753	465	518
Dues Arrears	2,092	2,258	5,116
Total Loss	<u>14,668</u>	<u>12,143</u>	<u>15,141</u>
	<u>32,285</u>	<u>35,660</u>	<u>33,019</u>
Net Gain (Loss)	3,982	4,151	(1,853)

SECTION A

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade, December 31, 1969

REGION 1									
Section	H	F	SM	M	A	Student	Subtotal	Section Total	
Berkshire		24	119	228	21	10		402	
Binghamton		1	78	539	64	58		740	
Boston	1	142	871	4,024	408	649	6,095	7,600	
Lynn		7	75	268	25	32	407		
Merrimack Valley		7	106	800	88	97	1,098		
Buffalo		12	193	523	65	125		918	
Connecticut		22	189	873	144	220	1,448	3,083	
Fairfield County		28	231	779	124	88	1,250		
New London		5	34	249	26	71	385		
Elmira-Corning		2	29	90	20	9		150	
Ithaca		6	19	72	6	72		175	
Long Island		83	622	2,677	407	252		4,041	
Maine		9	42	169	22	74		316	
Mid-Hudson		8	81	656	67	31	843	1,125	
Catskill			21	206	42	13	282		
Mohawk Valley		9	56	427	63	48	603	761	
St. Lawrence Int'l.		1	17	57	25	58	158		
New Hampshire		8	92	540	54	109		803	
New Jersey Coast		60	245	1,190	117	68		1,680	
New York	1	88	625	2,754	842	1,150	5,460	6,898	
Westchester		47	242	850	170	129	1,438		
North Jersey		159	885	3,383	518	586		5,531	
Princeton		65	240	878	125	205		1,513	
Providence		13	109	461	52	153		788	
Rochester		7	144	792	99	112		1,154	
Schenectady		73	283	477	45	232	1,110	1,268	
Adirondack		9	37	85	11	16	158		
Springfield		4	36	138	16	115		309	
Syracuse		35	195	713	65	64		1,072	
Vermont		6	30	179	25	77		317	
Worcester County		3	63	224	34	100		424	
	2	943	6,009	25,301	3,790	5,023		41,068	

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade, December 31, 1969

REGION 2	H	F	SM	M	A	Student	Subtotal	Section Total
Akron	8	8	88	270	26	57		449
Allegheny Mountain	3	1	41	57	10	6		115
Baltimore		38	344	1,098	109	79	1,668	2,314
Annapolis		8	98	418	29	29	582	
Eastern Shore		2	14	39	5	4	64	
Canton			42	97	14	42		195
Central Pennsylvania		8	55	178	14	149		404
Cincinnati		12	105	452	54	66		689
Cleveland		43	378	975	103	205		1,704
Columbus		13	141	563	85	236	1,038	1,095
Chillicothe			6	6	2	1	15	
Zanesville		1	11	26	3	1	42	
Dayton		17	200	787	120	181		1,305
Delaware Bay		1	49	214	21	41		326
Erie		4	81	169	20	39		313
Johnstown		1	24	100	19	17		161
Lehigh Valley		26	173	576	79	175		1,029
Lima		3	49	96	3	26		177
North Central Ohio		2	32	75	13	23		145
Ohio Valley			9	39	7	7		62
Philadelphia		115	878	3,515	403	576		5,487
Pittsburgh		84	512	1,262	74	271	2,203	2,295
Upper Monongahela		2	12	51	3	24	92	
Sharon		7	77	136	14	85		319
Southern New Jersey		4	19	102	20	12		157
Susquehanna		6	72	245	43	47		413
Washington		133	1,184	4,731	479	442		6,969
West Virginia			25	131	20	54		230
		539	4,719	16,408	1,792	2,895		26,353

SECTION A

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade,
December 31, 1969

REGION 3									Section Total
Section	H	F	SM	M	A	Student	Subtotal		
Alabama		7	131	397	16	189			740
Atlanta		18	174	588	59	178	1,017		1,101
Macon-Warner Robins			2	23	3	6	34		
Rome			16	27	4	3	50		
Baton Rouge		2	25	105	6	51	189		248
Lafayette			1	31	5	22	59		
Canaveral		8	92	693	61	60			914
*Central North Carolina			30	194	22	24			270
Central Virginia		11	73	264	17	43			408
*Charlotte		8	92	167	47	45			359
Chattanooga		11	65	142	17	7			242
Daytona		7	41	94	9	1			152
*Eastern North Carolina		15	71	353	28	198			665
East Tennessee		4	69	199	4	96	372		441
Upper East Tennessee		1	16	41	4	7	69		
Evansville-Owensboro		1	34	116	13	39	203		230
Paducah			1	21	4	1	27		
Florida West Coast		57	182	570	57	33			899
Fort Walton			11	95	8	7			121
Gainesville		5	22	118	8	143			296
Hampton Roads		3	42	322	24	41			432
Huntsville		3	84	547	40	29	703		749
Muscle Shoals			6	33	2	5	46		
Jacksonville			39	100	15	10			164
Lexington		2	25	119	3	27			176
Louisville		1	38	177	8	59			283
Memphis		2	62	148	18	157	387		436
Jackson		1	8	31	2	7	49		
Miami		33	151	417	99	67			767
Middle Tennessee			21	60	1	4			86
Mississippi			24	130	6	13	173		306
Northeast Mississippi		2	6	47		78	133		
Mobile			20	92	11	13			136
Nashville		5	49	152	12	192			410
New Orleans		8	109	374	39	107			637
Oak Ridge		2	41	86	4	5			138
Orlando		8	98	354	41	8			509
Palm Beach		16	51	171	32	5			275
Panama City			12	61	3	10			86
Pensacola		1	8	39	6	9			63
Richmond		4	49	197	17	12			279
Savannah			15	38	7	3			63
South Carolina									647
Central Savannah River			9	31	5	5	50		
Charleston			21	99	8	49	177		
Columbia		3	38	110	4	27	182		
Piedmont		1	23	122	8	84	238		
Virginia Mountain		5	65	168	19	142			399
*Western North Carolina		8	25	45	4	2			84
*Winston-Salem		2	43	197	23	6			271
		265	2,330	8,705	853	2,329			14,482

* Affiliations of North Carolina

SECTION A

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade,
December 31, 1969

REGION 4

Section	H	F	SM	M	A	Student	Subtotal	Section Total
Arrowhead		1	17	71	11	3		103
Cedar Rapids		9	72	326	29	52		488
Central Illinois		16	98	344	44	215		717
Central Indiana		14	146	585	159	268	1,172	1,250
Bloomington		2	12	49	11	4	78	
Central Iowa		7	50	143	5	82		287
Chicago		60	642	2,164	525	497	3,888	5,196
Calumet		4	53	167	47	49	320	
Fox Valley		10	176	683	81	38	988	
Fort Wayne		9	104	307	26	104		550
Illinois Valley			29	74	6	99		208
Iowa-Illinois		1	43	128	14	7	193	216
Burlington			4	12	4	3	23	
Madison		7	33	160	7	279		486
Milwaukee		28	227	848	53	242	1,398	1,517
Racine-Kenosha		2	9	55	13	40	119	
Nebraska		3	85	261	104	228		681
Northeast Michigan		2	36	161	23	19		241
Northeastern Wisconsin		1	35	152	16	97		301
Rock River Valley			26	164	25	37		252
Siouxland			16	55	18	33		122
South Bend		1	43	205	58	196		503
Southeastern Michigan		41	379	1,582	208	471		2,681
Southern Minnesota			12	180	8	11		211
Toledo		1	82	192	20	69		364
Twin Cities		16	174	1,326	86	238	1,840	2,104
Red River Valley		1	11	101	4	147	264	
West Michigan		2	49	179	26	38		294
		238	2,663	10,674	1,631	3,566		18,772

SECTION A

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade,
December 31, 1969

REGION 5

Section	H	F	SM	M	A	Student	Subtotal	Section Total
Arkansas		5	42	146	18	32		243
Beaumont		4	27	123	15	89	258	292
Lake Charles			4	27	2	1	34	
Central Texas		19	87	402	30	177		715
Corpus Christi		2	31	74	25	87	219	252
Victoria-Port-Lavaca			7	19	3	4	33	
Dallas	1	26	258	1,852	107	139		2,383
Denver		35	280	1,006	61	373	1,755	2,037
Black Hills			4	33	4	67	108	
Pikes Peak		1	31	113	8	21	174	
El Paso		1	37	235	22	130		425
Fort Worth		4	83	385	37	92		601
Houston		9	192	880	111	483	1,675	2,196
Clear Lake			43	383	26	29	481	
Freeport			7	27	1	5	40	
Kansas City		11	183	446	103	200		943
Oklahoma City		10	108	245	15	111		489
Ozark			23	70	1	128		222
Panhandle		1	28	49	15	1		94
Permian Basin			6	39	11	2		58
St. Louis		36	295	1,131	108	589		2,159
Shreveport		2	71	131	35	89	328	369
Monroe			3	27	3	8	41	
South Plains			16	50	6	48		120
Tulsa		8	105	213	54	131		511
West Central Texas		1	13	40	2	3		59
Wichita		5	50	133	11	68		267
	<u>1</u>	<u>180</u>	<u>2,034</u>	<u>8,279</u>	<u>834</u>	<u>3,107</u>		<u>14,435</u>

SECTION A

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade,
December 31, 1969

REGION 6								Section Total
Section	H	F	SM	M	A	Student	Subtotal	
Alamogordo-Holloman		1	10	66	11	3		91
Alaska			13	80	15	35		143
Albuquerque		9	103	374	45	91	622	738
Los Alamos-Santa Fe			29	80	5	2	116	
*Antelope Valley			9	57	4	5		75
Boise			32	26	2	4		64
*Buenaventura		4	41	381	28	9		463
*China Lake			10	95	8	3		116
*Foothill		11	163	711	69	89		1,043
Fort Huachuca		1	21	58	4	8		92
Hawaii		3	38	325	40	47		453
Idaho		1	9	62	3	7		82
Las Vegas			13	107	24	5		149
*Met. Los Angeles		14	198	770	134	170		1,286
Montana				1	1	2	4	312
Billings		1	4	28	1	6	40	
Butte			15	18	2	5	40	
Helena		1	7	55	1	164	228	
*Orange County		22	383	2,207	211	101		2,924
Phoenix		26	224	883	61	167		1,361
Portland		29	212	546	55	59	901	1,173
Eugene		2	23	94	11	142	272	
Richland		3	35	88	9	1	136	164
Walla Walla			2	21	2	3	28	
Sacramento		7	68	338	46	90	549	762
Reno		3	15	44	5	37	104	
San Joaquin		1	9	36	7	17	70	
Shasta		1	7	23	5	3	39	
San Diego		14	202	885	78	105		1,284
*San Fernando Valley		20	390	1,409	190	63		2,072
San Francisco		41	241	856	120	121	1,379	8,336
East Bay		33	206	911	95	254	1,499	
Golden Gate		15	122	373	75	123	708	
Santa Clara		102	579	3,413	253	403	4,750	
*San Gabriel Valley		17	182	606	74	45		924
*Santa Barbara		16	74	292	17	184		583
*Santa Monica Bay		44	299	1,173	102	118		1,736
Seattle		24	289	1,300	89	215		1,917
*South Bay Harbor		14	252	1,382	129	80		1,857
Spokane		7	36	129	14	73		259
Tucson		7	61	189	14	90		361
Utah		7	53	309	15	225		609
*Vandenberg			15	163	11	11		200
Wenatchee		1	10	27	2	1		41
		502	4,704	20,991	2,087	3,386		31,670

* Los Angeles Council

SECTION A

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade,
December 31, 1969

REGION 7

Section	H	F	SM	M	A	Student	Subtotal	Section Total
2) Bay of Quinte		2	43	176	29	98		348
1) Canadian Atlantic		1	22	163	18	115		319
2) Hamilton		2	49	154	52	96		353
2) Kitchner-Waterloo			24	114	34	81		253
2) London			20	104	32	31		187
1) Montreal		12	191	949	130	372		1,654
2) Niagara Int'l.		1	32	92	24	23		172
3) Northern Alberta			4	168	62	169		403
1) Ottawa		15	98	680	113	105		1,011
1) Quebec		1	12	87	10	22		132
3) Regina			5	100	12	66		183
1) St. Maurice				20	3	2		25
3) Southern Alberta			8	99	50	104		261
2) Toronto		20	167	923	286	375		1,771
3) Vancouver		7	105	374	133	222		841
3) Victoria		3	16	52	21	9		101
3) Winnipeg		1	21	162	51	129		364
		65	817	4,417	1,060	2,019		8,378
1) Eastern Canada Council								
2) Central Canada Council								
3) Western Canada Council								

SECTION A

Table 8 - IEEE Membership by Region, by Section and Subsection, by Grade,
December 31, 1969REGION 8

Section	H	F	SM	M	A	Student	Subtotal	Section Total
Benelux		17	66	225	38	218		564
Denmark		1	12	90	20	67		190
Egypt		3	11	36	6	10		66
France		25	111	257	50	103		546
Germany (West)		11	74	126	27	6		244
Israel		3	24	132	20	15		194
Middle & South Italy		1	17	121	33	52		224
North Italy		2	26	159	73	130		390
Norway		4	22	50	3	2		81
Spain		1	10	129	14	66		220
Sweden		5	74	171	29	129		408
Switzerland		11	67	256	27	67		428
U.Kingdon & Republic of Ireland		58	277	630	83	57		1,105
Total Sections		142	791	2,382	423	922		4,660
Not Assigned to Sections (See Table 9)		4	60	220	55	66		405
Total Region		146	851	2,602	478	988		5,065

REGION 9

Argentina		3	30	177	31	135		376
Chile			8	58	8	16		90
Colombia			6	82	25	76		189
Mexico		6	50	218	28	74	376	395
Monterrey			2	10	1	6	19	
Peru			7	51	2	8		68
Puerto Rico & Virgin Islands			21	175	19	50		265
Rio de Janeiro		2	19	68	10	67		166
Sao Paulo			13	87	54	131		285
Venezuelan		1	16	155	61	44		277
Total Sections		12	172	1,081	239	607		2,111
Not Assigned to Sections (See Table 10)		1	33	166	36	21		257
Total Region		13	205	1,247	275	628		2,368

REGION 10

India		3	105	399	59	19		585
New Zealand			5	36	19	15		75
Tokyo	1	18	140	642	107	196		1,104
West Pakistan			24	38	36	16		114
Total Sections	1	21	274	1,115	221	246		1,878
Not Assigned to Sections (See Table 11)		4	148	744	133	60		1,089
Total Region	1	25	422	1,859	354	306		2,967

SECTION A

Table 9 - Membership in Region 8, by Country, by Grade, December 31, 1969;
3-Year Comparison

Country	H	F	SM	M	A	Student	12/31/69 Total	12/31/68 Total	12/31/67 Total
Albania			1	3	2		6	-	-
Algeria					1		1	2	1
Austria			6	9	5		20	21	13
Bulgaria			1				1	1	1
Cyprus			4	14	3		21	19	17
Czechoslovakia			2	5	6	1	14	13	14
Denmark						2	2	-	101
Finland			1	31	6	29	67	64	45
Germany, F.R. (Berlin)			2	5	2	1	10	9	10
Greece		1	5	36	5	1	48	43	45
Hungary			4				4	4	4
Iceland				4	2		6	6	6
Iraq			1	3	2		6	10	10
Jordan			1	2			3	5	6
Lebanon			1	25	2		28	31	30
Libya			4	18	2		24	23	23
Malta			1	4			5	5	5
Morocco							-	-	1
Monaco				1			1	1	-
Poland		1	4	2	2		9	6	7
Portugal			3	10	1		14	14	13
Rumania				2		1	3	3	1
Spain							-	-	204
Syria				4			4	4	3
Tunisia							-	1	-
Turkey			2	35	3	30	70	46	40
U.S.S.R.		2	16	1	7		26	25	26
Yugoslavia			1	6	4	1	12	11	11
Total		4	60	220	55	66	405	367	637
Territory Assigned to IEEE Sections		142	791	2,382	423	922	4,660	4,443	3,486
Total		146	851	2,602	478	988	5,065	4,810	4,123

Table 10 - Membership in Region 9, by Country, by Grade, December 31, 1969
3-Year Comparison

Country	H	F	SM	M	A	Student	12/31/69 Total	12/31/68 Total	12/31/67 Total
Argentina				1			1	-	-
Bolivia				9			9	10	9
Brazil			6	32	4	18	60	31	30
British Guiana			1	3	4		8	9	-
Chile							-	-	1
Costa Rica			2	8	2		12	10	13
Cuba			2	2			4	5	5
Dominican Republic				1			1	-	-
El Salvador		1	1	6	1		9	11	10
Ecuador			2	13	2		17	12	12
Falkland Islands							-	-	1
Guatemala			1	5			6	17	13
Guyana							-	-	9
Honduras				2			2	3	1
Netherlands Antilles			1	6			7	6	5
Nicaragua				8	1	2	11	7	7
Panama			1	12	4	1	18	13	13
Panama Canal Zone				10	2		12	-	-
Paraguay			1				1	1	-
Surinam			1	3			4	5	3
Uruguay					2		2	3	3
Venezuela							-	1	-
West Indies			14	45	14		73	76	65
Total		1	33	166	36	21	257	220	200
Territory Assigned to IEEE Sections		12	172	1,081	239	607	2,111	1,720	1,579
Total		13	205	1,247	275	628	2,368	1,940	1,779

SECTION A

Table 11 - IEEE Membership in Region 10, by Country, by Grade, December 31, 1969;
3-Year Comparison

Country	H	F	SM	M	A	Student	12/31/69 Total	12/31/68 Total	12/31/67 Total
Afghanistan				5	5		10	9	2
Australia		1	45	233	26	50	355	341	288
Bahrein				1			1	2	4
Basutoland							-	1	1
Burma				4			4	6	5
Cambodia				5	1		6	5	2
Cameroon				2	1		3	1	-
Ceylon			7	2	4		13	11	11
China			4	25	1	1	31	28	23
Congo				4			4	2	2
Dahomey			1				1	1	2
Ethiopia							-	6	4
Fiji Islands							-	1	1
Ghana			1	4	1		6	7	9
Hong Kong			6	101	24		131	124	115
India							-	522	565
Indonesia				5	5		10	8	4
Iran			5	50			55	52	33
Ivory Coast			2				2	1	-
Kenya			5	17	3		22	27	20
Kuwait			4	15	3		22	18	16
Liberia			1	1	1		3	4	4
Macao				1			1	1	1
Madagascar				1			1	3	2
Malawi				1			1	2	2
Malaysia			5	54	4	1	64	62	58
Mali				1			1	4	5
Mauritius				1			1	2	2
Mogadishui Somalia							-	1	-
Muscat				1			1	1	1
Nepal				2	1		3	4	4
New Guinea			1	1			2	1	-
New Zealand							-	-	55
Nigeria		1	6	24	5	1	37	38	40
Nukualofa Tonga							-	1	-
Pakistan (East)		1	3	18	1	3	26	18	68
Pakistan (West)					1		1	-	-
Philippines			8	21	9	3	41	40	29
Qatar				3			3	1	-
Rhodesia			2	7	1		10	10	11
Ruanda				1			1	-	-
Sabah				1			1	1	1
Sambia			3	8			11	9	5
Saudi Arabia		1	8	16	3	1	29	29	29
Sierra Leone			2	6			6	3	1
Solomon Islands					2		2	2	2
Somalia			1				1	-	-
South Africa			15	40	12		67	71	68
South Korea			6	25	3		22	29	25
South West Africa							-	-	1
Sudan				4	2		6	-	-
Tanganyika							-	-	5
Tanzania				4	2		6	4	-
Thailand			6	24	7		37	25	30
Togo					1		1	2	-
Tonga			1				1	-	-
Trucial Oman				1			1	2	2
Uganda				3	1		4	3	3
Viet-Nam				6	3		9	7	3
Total		4	148	744	133	60	1,089	1,553	1,564
Territory Assigned to IEEE Sections	1	21	274	1,115	221	246	1,878	1,131	880
Total	1	25	422	1,859	354	306	2,967	2,684	2,444

SECTION B

Table 1 - IEEE Student Branches and Student Branch Membership, 1969

Twenty-three Student Branches were established during 1969. The total number of Student Branches is now 342 operating as follows:

- 278 - IEEE Student Branches
- 61 - IEEE Student Associate Branches*
- 1 - IEEE Student/Student Associate Branch
- 2 - IEEE Section Student Branches

<u>School</u>	<u>Section Location</u>	<u>Region</u>	<u>Membership***</u> 1969
*Academy of Aeronautics	New York	1	59
Air Force Institute of Technology	Dayton	2	36
Akron, University of	Akron	2	80
Alabama, University of	Alabama	3	67
Alaska, University of	Anchorage	6	30
Alberta, University of	North Alberta	7	120
*Algonquin College of Applied Arts & Technology	Ottawa	7	2
Arizona State University	Phoenix	6	140
Arizona, University of	Tucson	6	93
Arkansas, University of	Arkansas	5	137
Auburn University	Alabama	3	108
**Boston University	Boston	1	14
Bradley University	Illinois Valley	4	110
Bridgeport, University of	Connecticut	1	72
Brigham Young University	Utah	6	106
*British Columbia Institute of Technology	Vancouver	7	103
*British Columbia Vocational School	Vancouver	7	4
British Columbia, University of	Vancouver	7	117
*Bronx Community College (Day Division)	New York	1	27
*Bronx Community College (Evening Division)	New York	1	15
Brooklyn, Polytechnic Institute of (Day Division)	New York	1)	291
Brooklyn, Polytechnic Institute of (Evening Division)	New York	1)	
*Broome Technical Community College	Binghamton	1	36
Brown University	Providence	1	38
Bucknell University	Central Pennsylvania	2	21
Buenos Aires, Instituto Tecnológico de	Buenos Aires	9	36
Buenos Aires, University of	Buenos Aires	9	24
Calgary, University of	Southern Alberta	7	38
California State Polytechnic College (San Luis Obispo)	Santa Barbara	6	155
California State Polytechnic College (Kellogg-Voorhis Campus)	Foothill	6	94
California State College at Long Beach	South Bay Harbor	6	55
California State College at Los Angeles	Metropolitan Los Angeles	6	26
California, University of (Berkeley)	San Francisco	6	245
California, University of (Davis)	Sacramento	6	34
California, University of (Irvine)	Orange County	6	31
California, University of (Los Angeles)	Santa Monica Bay	6	112
California, University of (Santa Barbara)	Santa Barbara	6	70
California Western University	Santa Monica Bay	6	7
*Capitol Institute of Technology	Washington	2	33
Carabobo, Universidad de	Venezuelan	9	25
Carleton University	Ottawa	7	21
Carnegie Mellon University	Pittsburgh	2	94
Case Western Reserve University	Cleveland	2	94
Catholic University of America	Washington	2	30
Catholic University of Louvain	Benelux	8	102
*Central Technical Institute	Kansas City	5	20
Chalmers University of Technology	Sweden	8	59

<u>School</u>	<u>Section Location</u>	<u>Region</u>	<u>Membership***</u>
Christian Brothers College	Memphis	3	103
Cincinnati, University of	Cincinnati	2	87
Citadel, The	South Carolina	3	41
Clarkson College of Technology	Mohawk Valley	1	50
Clemson University	South Carolina	3	83
Cleveland State University	Cleveland	2	64
*Cogswell Polytechnical College	San Francisco	6	11
Colorado State University	Denver	5	66
Colorado, University of	Denver	5	178
**Colorado, University of, Denver Center	Denver	5	14
Columbia University	New York	1	102
Concepcion, Universidad de	Chile	9	6
Connecticut, University of	Connecticut	1	82
Cooper Union	New York	1	39
Cornell University	Ithaca	1	91
Dayton, University of	Dayton	2	62
*Dayton, University of, Technical Institute	Dayton	2	33
Delaware, University of	Delaware Bay	2	29
Denver, University of	Denver	5	37
Detroit Institute of Technology	Southeastern Michigan	4	12
Detroit, University of	Southeastern Michigan	4	40
*DeVry Institute of Technology (Illinois)	Chicago	4	186
*DeVry Institute of Technology (Canada)	Toronto	7	42
Drexel Institute of Technology (Day Division)	Philadelphia	2	115
Drexel Institute of Technology (Evening College)	Philadelphia	2	59
Duke University	North Carolina	3	32
Ecole Polytechnique	Montreal	7	179
**Ecole Superieure d'Electricite	France	8	35
**Ecole Superieure d'Ingenieurs d'Electrotechnique et d'Electronique	France	8	9
*Electronic Institute of Technology	Southeastern Michigan	4	19
**Escola Politecnica Universidade de Sao Paulo	Sao Paulo	9	83
Escuela Tecnica Superior de Ingenieros de Telecomunicacion	Spain	8	58
*Escuela de Tecnicos	Venezuelan	9	-
Evansville, University of	Evansville-Owensboro	3	33
Fairleigh Dickinson University (Day Division)	North Jersey	1	56
Fairleigh Dickinson University (Evening Division)	North Jersey	1	7
Florida Institute of Technology	Canaveral	3	52
Florida, University of	Gainesville	3	169
*Franklin Institute of Technology	Boston	1	42
*Franklin University	Columbus	2	-
Fresno State College	San Francisco	6	50
Gannon College	Erie	2	37
*Gaston College	North Carolina	3	3
George Washington University	Washington	2	61
Georgia Institute of Technology	Atlanta	3	165
Gonzaga University	Spokane	6	15
Grove City College	Sharon	2	52
Hartford, University of	Connecticut	1	56
Hawaii, University of	Hawaii	6	43
*Heald Engineering College	San Francisco	6	66
Helsinki, Technical University of		8	30
Hofstra University	Long Island	1	14
Houston, University of (College of Engineering)	Houston	5	85
*Houston, University of (College of Technology)	Houston	5	129
Howard University	Washington	2	33
*Hudson Valley Community College	Schenectady	1	30
Idaho, University of	Spokane	6	20
Illinois Institute of Technology	Chicago	4	96
Illinois, University of (Urbana)	Central Illinois	4	222
Illinois, University of (Chicago Circle)	Chicago	4	91
Indiana Institute of Technology	Fort Wayne	4	68
** * Instituto Radiotecnico A. Beltrami	Middle & South Italy	8	3

<u>School</u>	<u>Section Location</u>	<u>Region</u>	<u>Membership***</u>
Instituto Superior de Electronica	Buenos Aires	9	3
Iowa State University of Science & Technology	Central Iowa	4	80
Iowa, University of	Cedar Rapids	4	52
John Carroll University	Cleveland	2	26
John Hopkins University, The	Baltimore	2	52
Kansas State University of Agriculture & Applied Science	Kansas City	5	70
Kansas, University of	Kansas City	5	36
Kentucky, University of	Lexington	3	127
Lafayette College	Lehigh Valley	2	43
Lamar State College of Technology	Beaumont	5	86
LaPlata, Universidad Nacional de	Buenos Aires	9	20
LaSalle College	Philadelphia	2	64
Laval University	Quebec	7	12
Lawrence Institute of Technology	Southeastern Michigan	4	53
Lehigh University	Lehigh Valley	2	82
*Los Angeles Pierce College	San Fernando Valley	6	7
*Los Angeles Trade-Technical College	Santa Monica	6	54
Louisiana Polytechnic Institute	Shreveport	5	79
Louisiana State University	Baton Rouge	3	37
Louisiana State University at New Orleans	New Orleans	3	30
Louisville, University of	Louisville	3	53
Lowell Technological Institute	Boston	1	96
Loyola University of Los Angeles	Santa Monica Bay	6	18
Lund Institute of Technology - Lund University	Sweden	8	25
McGill University	Montreal	7	140
McMaster University	Hamilton	7	50
Maine, University of	Maine	1	63
Manhattan College	New York	1	123
*Manitoba Institute of Technology	Winnipeg	7	43
Manitoba, University of	Winnipeg	7	92
Marist College	Mid-Hudson	1	3
Marquette University	Milwaukee	4	122
Maryland, University of	Washington	2	190
Massachusetts Institute of Technology	Boston	1	283
Massachusetts, University of	Springfield	1	71
**Memphis State University	Memphis	3	177
Merrimack College	Boston	1	33
**Mexico, National Polytechnic Institute of	Mexico	9	23
**Mexico, Universidad Nacional Autonoma de	Mexico	9	10
Miami, University of	Miami	3	56
Michigan State University	Southeastern Michigan	4	86
Michigan Technological University	Northeast Wisconsin	4	81
Michigan, University of	Southeastern Michigan	4	140
Milwaukee School of Engineering	Milwaukee	4	113
Minnesota, University of	Twin Cities	4	146
Mississippi State University	Mississippi	3	83
Mississippi, The University of	Memphis	3	26
Missouri, University of (Columbia)	St. Louis	5	110
Missouri, University of (Rolla)	St. Louis	5	387
*Mohawk College of Applied Arts & Technology	Hamilton	7	54
*Mohawk Valley Community College	Mohawk Valley	1	27
Monmouth College	New Jersey Coast	1	23
Montana State University	Montana	6	171
**Monterrey, Instituto Tecnologico y de Estudios Superiores de	Mexico	9	23
Nebraska, University of	Nebraska	4	168
*Nebraska, University of (Omaha)	Nebraska	4	8
Nevada, University of	Sacramento	6	38
Newark College of Engineering (Day Division)	North Jersey	1	158
Newark College of Engineering (Evening Division)	North Jersey	1	64
**New Brunswick, University of	Canadian Atlantic	7	40
New Hampshire, University of	New Hampshire	1	85
New Haven College	Connecticut	1	49

School	Section Location	Region	Membership***
New Mexico Highlands University	Albuquerque	6	4
New Mexico State University	El Paso	5	75
New Mexico, University of	Albuquerque	6	77
New York, City College of the City University of	New York	1	129
*New York City Community College	New York	1	23
*New York Institute of Technology	New York	1	122
*New York, State University of (Alfred)	Buffalo	1	37
New York, State University of (Buffalo)	Buffalo	1	94
*New York, State University of, Agricultural & Technical Institute (Canton)	Mohawk Valley	1	30
**New York, State University of (Stony Brook)	Long Island	1	44
New York University (Day Division)	New York	1)	197
New York University (Evening Division)	New York	1)	
North Carolina State University	North Carolina	3	180
North Dakota State University	Twin Cities	4	93
North Dakota, University of	Twin Cities	4	57
Northeastern University	Boston	1	273
*Northern Alberta Institute of Technology	Northern Alberta	7	50
** * Northern College of Applied Arts & Technology	Canadian Atlantic	7	23
Northrop Institute of Technology	Metropolitan Los Angeles	6	35
**Northwestern State College of Louisiana	Shreveport	5	25
Northwestern University	Chicago	4	69
Norwich University	Vermont	1	26
Notre Dame, University of	South Bend	4	60
Nova Scotia Technical College	Canadian Atlantic	7	60
Oakland University	Southeastern Michigan	4	6
Ohio Northern University	Lima	2	20
Ohio State University	Columbus	2	161
*Ohio Technical College	Columbus	2	32
Ohio University	Columbus	2	65
*Oklahoma City University	Oklahoma City	5	1
Oklahoma State University	Tulsa	5	113
Oklahoma, University of	Oklahoma City	5	88
Old Dominion College	Hampton Roads	3	23
Oregon State College	Portland	6	124
*Oregon Technical Institute	Portland	6	36
Ottawa, University of	Ottawa	7	77
*Pacific States University	Metropolitan Los Angeles	6	5
Pacific, University of	Sacramento	6	10
Padova, Universita di	Italy	8	44
Paris, Institut Supérieur d'Electronique de	France	8	36
PMC Colleges	Philadelphia	2	15
Pennsylvania State University	Central Pennsylvania	2	185
Pennsylvania, University of	Philadelphia	2	126
Pittsburgh, University of	Pittsburgh	2	129
**Politecnico di Milano	North Italy	8	40
** * Pontificia Universidad Javeriana	Colombia	9	30
*Port Arthur College	Beaumont	5	7
Portland State College	Portland	6	27
Prairie View A & M College	Houston	5	108
Pratt Institute	New York	1	47
Princeton University	Princeton	1	69
Puerto Rico, University of	Puerto Rico & Virgin Islands	9	46
Purdue University	Central Indiana	4	230
Queen's University	Bay of Quinte	7	66
*Queensborough Community College	New York	1	31
*RCA Institutes, Inc.	New York	1	162
*Radio College of Canada	Toronto	7	31
*Radio Engineering Institute	Nebraska	4	54
Rensselaer Polytechnic Institute	Schenectady	1	156
Rhode Island, University of	Providence	1	50

School	Section Location	Region	Membership***
Rice University	Houston	5	69
**Richmond College of the City University of New York	New York	1	21
Rio de Janeiro, Universidad Federal do	Rio de Janeiro	9	58
Rochester Institute of Technology	Rochester	1	72
Rochester, University of	Rochester	1	42
Rome, University of	Italy	8	39
Rose Polytechnic Institute	Central Indiana	4	37
Royal Institute of Technology	Sweden	8	25
Royal Military College of Canada	Bay of Quinte	7	19
Rutgers University	Princeton	1	51
*Ryerson Polytechnical Institute	Toronto	7	26
Sacramento State College	Sacramento	6	39
*St. Clair College of Applied Arts & Technology	Southeastern Michigan	4	20
St. Joseph's College	Philadelphia	2	3
St. Louis University	St. Louis	5	41
*San Diego College of Engineering	San Diego	6	18
San Diego State College	San Diego	6	47
San Francisco State College	San Francisco	6	40
San Jose State College	San Francisco	6	152
Santa Clara, University of	San Francisco	6	51
Santander, Universidad Industrial de	Colombia	9	12
Saskatchewan, University of	Regina	7	65
Seattle University	Seattle	6	30
Shizuoka University, Graduate School	Tokyo	10	50
*Sinclair College	Dayton	2	12
Sir George Williams University	Montreal	7	46
**South Alabama, University of	Alabama	3	11
South Carolina, University of	South Carolina	3	29
South Dakota School of Mines & Technology	Denver	5	67
South Dakota State University	Twin Cities	4	74
Southeastern Massachusetts Technological Institute	Providence	1	42
*Southern Alberta Institute of Technology, The	Southern Alberta	7	62
Southern California, University of	Metropolitan Los Angeles	6	107
Southern Methodist University	Dallas	5	70
*Southern Technical Institute	Atlanta	3	8
Southern University	Baton Rouge	3	12
South Florida, University of (Section Student Unit)	Florida West Coast	3	25
*Southwest Missouri State College	Kansas City	5	30
Southwestern Louisiana, University of	Baton Rouge	3	19
*Spring Garden Institute	Philadelphia	2	25
Stanford University	San Francisco	6	168
Steubenville, College of	Canton	2	24
Stevens Institute of Technology	North Jersey	1	104
*Stout State University	Twin Cities	4	16
Swarthmore College	Philadelphia	2	13
Switzerland Section Student Branch	Switzerland	8	66
Syracuse University	Syracuse	1	59
**Technische Hogeschool Twente	Benelux	8	19
*Temple University, College of Engineering Technology	Philadelphia	2	53
Tennessee A & I State University	Nashville	3	22
Tennessee Technological University	Nashville	3	99
Tennessee, University of	East Tennessee	3	113
Texas A & I University	Corpus Christi	5	52
Texas A & M University	Houston	5	134
Texas Technological College	South Plains	5	45
Texas, University of, at Arlington	Central Texas	5	120
Texas, University of, at Austin	Central Texas	5	167
Texas, University of, at El Paso	El Paso	5	57
Toledo, University of	Toledo	4	62
Toronto, University of	Toronto	7	202
**Trieste, Universita Degli Studi di	North Italy	8	16

School	Section Location	Region	Membership***
Tri-State College	Fort Wayne	4	35
Tufts University	Boston	1	53
Tulane University	New Orleans	3	43
**Tulsa, University of	Tulsa	5	25
Tuskegee Institute	Alabama	3	21
Union College	Schenectady	1	63
*Union County Technical Institute	North Jersey	1	-
*Union Technical Institute	North Jersey	1	100
United Kingdom & Republic of Ireland Section Student Branch	United Kingdom & Republic of Ireland	8	58
United States Air Force Academy	Denver	5	4
United States Coast Guard Academy	Connecticut	1	13
United States Naval Postgraduate School	San Francisco	6	60
**Universidad de Cauca	Colombia	9	-
Universidad Distrital Francisco Jose de Caldas	Colombia	9	19
**Universidad Nacional de Colombia	Colombia	9	10
Universidad Nacional de Ingenieria	Peru	9	8
**Universidad Nacional del Sur	Argentina	9	14
Uppsala, University of	Sweden	8	10
Utah State University	Utah	6	45
Utah, University of	Salt Lake City	6	72
*Valparaiso Technical Institute	South Bend	4	126
Valparaiso University	South Bend	4	42
Vanderbilt University	Nashville	3	81
Venezuela, Universidad Central de	Venezuelan	9	20
*Vermont Technical College	Vermont	1	15
Vermont, University of	Vermont	1	33
Villanova University	Philadelphia	2	70
Virginia Military Institute	Virginia Mountain	3	23
Virginia Polytechnic Institute	Virginia Mountain	3	143
Virginia, University of	Central Virginia	3	45
*Virginia Western Community College	Virginia Mountain	3	10
*Voorhees Technical Institute	New York	1	28
*Ward Technical Institute	Connecticut	1	31
Washington State University	Spokane	6	43
Washington University	St. Louis	5	72
Washington, University of	Seattle	6	163
Waterloo, The University of	Kitchener-Waterloo	7	123
Wayne State University	Southeastern Michigan	4	72
*Wentworth Institute	Boston	1	10
Western Michigan University	West Michigan	4	27
Western New England College	Springfield	1	30
West Virginia Institute of Technology	West Virginia	2	53
West Virginia University	Pittsburgh	2	31
Wichita State University	Wichita	5	56
Windsor, University of	Southeastern Michigan	4	36
*Wisconsin State University	Madison	4	23
Wisconsin, University of	Madison	4	320
Worcester Polytechnic Institute	Worcester	1	83
Wyoming, University of	Denver	5	64
Yale University	Connecticut	1	30
Youngstown University	Sharon	2	35

*IEEE Student Associate Branches

**Established in 1969

***Membership as of December 31, 1969

SECTION C

Table 1 - IEEE Group Membership, December 31, 1969; 4-Year Comparison

Group No.	Group Name	Students	Members	1969 Total	1968 Total	1967 Total	1966 Total
1	Audio & Electroacoustics	1,001	4,074	5,075	4,572	4,488	4,302
2	Broadcasting	317	1,773	2,090	2,009	1,918	1,755
3	Antennas & Propagation	890	4,313	5,203	4,937	4,882	4,605
4	Circuit Theory	2,967	7,200	10,167	8,868	7,963	7,020
5	Nuclear Science	459	2,051	2,510	2,453	2,364	2,181
6	Vehicular Technology	202	2,157	2,359	2,192	2,088	1,911
7	Reliability	97	2,541	2,638	2,486	2,622	2,602
8	Broadcast & Television Receivers	359	2,071	2,430	2,299	2,238	2,043
9	Instrumentation & Measurements	494	4,354	4,848	4,732	4,848	4,650
10	Aerospace & Electronic Systems	1,114	7,978	9,092	9,150	9,762	10,021
12	Information Theory	909	4,300	5,209	4,558	4,465	4,306
13	Industrial Electronics & Control Instrumentation	391	3,082	3,473	3,293	3,474	3,370
14	Engineering Management	754	5,971	6,725	6,293	6,167	5,791
15	Electron Devices	3,209	6,750	9,959	9,175	8,160	6,674
16	Computer	4,200	12,662	16,862	14,982	13,240	11,136
17	Microwave Theory & Techniques	1,139	5,781	6,920	6,370	6,129	5,830
18	Engineering in Medicine & Biology	1,311	3,895	5,206	4,614	4,267	3,796
19	Communication Technology	1,661	7,970	9,631	8,972	8,377	7,253
20	Sonics & Ultrasonics	106	1,251	1,357	1,246	1,220	1,176
21	Parts, Materials & Packaging	40	2,068	2,108	2,176	2,401	2,526
23	Automatic Control	1,987	5,438	7,425	6,769	6,412	5,874
25	Education	190	1,776	1,966	1,880	1,837	1,630
26	Engineering Writing & Speech	254	1,948	2,202	2,103	2,157	2,067
27	Electromagnetic Compatibility	66	1,811	1,877	1,719	1,679	1,687
28	Man-Machine Systems	222	1,241	1,463	1,225	1,058	936
29	Geoscience Electronics	249	1,458	1,707	1,571	1,543	1,458
31	Power	1,453	12,420	13,873	12,897	12,161	10,820
32	Electrical Insulation	44	1,202	1,246	1,139	1,095	985
33	Magnetics	183	1,951	2,134	2,019	1,953	1,757
34	Industry & General Applications	394	4,893	5,287	4,713	4,151	3,578
35	Systems Science & Cybernetics	1,093	3,669	4,762	3,987	3,486	2,918
		<u>27,755</u>	<u>130,049</u>	<u>157,804</u>	<u>145,399</u>	<u>138,605</u>	<u>126,658</u>
	Student Members With Group Membership			10,431	14,324		
	Grades Other Than Student With Group Membership			78,463	68,101		

SECTION C

TABLE 2 - 1969 IEEE GROUP MEMBERSHIP, BY GROUP, BY REGION, BY SECTION

REGION 2	Total Affiliates	Total Group Members	A&E G-1	B G-2	AP G-3	CT G-4	NS G-5	VT G-6	R G-7	BTR G-8	IM G-9	AES G-10	IT G-12	IECI G-13	EM G-14	ED G-15	C G-16	MTT G-17	EMB G-18	Com Tech G-19	SU G-20	PHP G-21	AC G-23	E G-25	EWS G-26	EMC G-27	MMS G-28	GeoS G-29	P G-31	EI G-32	MAG G-33	IGA G-34	SSC G-35
Akron	1	325	9	7	19	14	3	5		1	7	10	1	13	9	9	33	13	4	11		2	18	2	3	1	1	2	72	3		48	5
Allegheny Mountain	1	65	1	2		4		1	2	5	4	1		2	3	6	2	1	1	1	2	8	1	1	1				5		7	3	1
Baltimore	6	1,480	40	18	57	80	23	12	41	14	38	146	71	15	79	77	102	86	46	94	9	22	46	9	24	23	4	14	150	8	15	89	28
Annapolis	1	483	15	1	18	36	4	5	16	6	9	61	18	2	32	37	38	27	5	23	4	3	22	2	10	38	2	6	16	3	4	10	10
Eastern Shore		34	1	2		1	1	2	1	1	1	1		2	1		3			1				1			1	12				2	
Canton	2	134	2	2	5	10	2	5	3	2	3	3	1	5	5	7	5	3	4	10	1		3			1		1	40	2	1	8	
Central Pennsylvania	2	348	11	5	15	35	8	2	3	5	5	26	21	2	12	35	41	16	8	14	7	3	18	6	2	3	4		18		3	4	16
Cincinnati	2	540	35	14	7	37	12	15	3	3	20	12	7	25	24	24	38	11	29	16	1	6	36	5	3	6	5		80	5	5	43	13
Cleveland	7	1,373	41	30	18	66	34	36	13	15	61	36	13	78	51	63	105	21	74	40	17	15	95	14	18	6	11	4	169	12	15	163	39
Columbus	2	1,073	26	3	79	67	18	21	9	10	34	54	37	35	37	71	107	52	38	73	8	12	70	12	12	3	14	7	76	2	22	26	38
Chillicothe		5												1	1	1	1												1				
Zanesville		16				2														1	1					1			8				2
Dayton	4	1,184	33	7	40	57	13	10	22	10	34	117	37	15	123	91	171	30	40	39	10	15	66	10	19	17	19	10	47	6	10	21	45
Delaware Bay	3	240	10	2	5	11	2		1		7	4	4	7	9	13	26	8	6	4	1	2	14	1	2	3	1	2	36	14	6	27	12
Erie	1	144	6		2	6		3	3		2	9	1	5	7	8	6	2	2	5	2	5	3		4	6		1	15	4	2	34	1
Johnstown	1	86		2	2	6	1		1	1	3	3	2	4	2	3	6	2	2	2	1	2	2					28	1			10	
Lehigh Valley	7	726	22	7	6	46	15	6	8	5	22	18	5	23	27	105	69	31	13	22	10	11	15	13	14	1	1	4	140	3	21	33	10
Lima		89			1	4		2	1	1	4	20		3	6	8	4	1	3	3		1	3	2	1	1		10	1		7	2	
North Central Ohio		121	3	1	3	4	1	2	3	1	3	3	2	3	7	5	7	2	1	20	1	1	4	3	1	2	1		19	2	3	9	4
Ohio Valley		24	1	1	1	1						1		1		2	1						1					5	1		7	1	
Philadelphia	37	5,169	175	87	118	269	50	69	118	93	157	378	163	99	236	225	615	165	216	328	38	133	220	74	76	75	49	36	400	40	99	190	178
Pittsburgh	13	1,806	38	20	12	80	48	25	13	10	56	25	25	67	74	124	167	19	57	41	19	7	98	20	22	9	8	15	371	37	40	182	77
Upper Monongahela	2	67	2	1	2	1	2	1		1	3	4		2	1	4	6	1	4	6	1		5	2				10	3		4	1	
Sharon	1	206	3	3	4	9	2	4	1	1	2	2		11	5	7	12	3	2	4			13	6	2		2	1	58	10	7	28	4
Southern New Jersey		90	5	3	4	4	1	3	3	2	2	12		1	6	4	9	1	4	5			2	1		1		12	1		1	3	
Susquehanna	2	318	14	8	6	18	12	5	8	18	10	12	9	7	19	28	17	20	8	12	6	8	6	3	2	4	2	4	26	3	5	15	3
Washington	64	7,515	243	136	381	346	131	122	132	70	230	775	408	64	469	293	757	343	215	808	66	66	231	60	123	164	78	126	236	23	54	65	300
West Virginia		90	3	5	4	7		2			1	2	3	2	1	4	10	4	1	5			4	3	3	1		16				9	
Total	159	23,751	739	367	809	1221	383	358	405	275	718	1735	828	494	1247	1254	2358	862	784	1588	204	322	996	249	343	365	203	234	2076	184	319	1040	791

SECTION C

TABLE 2 - 1969 IEEE GROUP MEMBERSHIP, BY GROUP, BY REGION, BY SECTION

REGION 4 Section	Total Affil- iates	Total Group Members	A&E G-1	B G-2	AP G-3	CT G-4	NS G-5	VT G-6	R G-7	BTR G-8	IM G-9	AES G-10	IT G-12	IECI G-13	EM G-14	ED G-15	C G-16	MTT G-17	EMB G-18	Com Tech G-19	SU G-20	PMP G-21	AC G-23	E G-25	EWS G-26	EMC G-27	MMS G-28	GeoS G-29	P G-31	EI G-32	MAG G-33	IGA G-34	SSC G-35		
Arrowhead		49		3		1		3		1	1	3		2	4	3	2		1	1			1			1	1				10			10	1
Cedar Rapids	2	345	11	2	11	32	3	2	8	4	10	23	7	2	17	16	60	18	15	25	1	6	18	7	4	2		3	18		6	8	6		
Central Illinois	11	740	25	11	38	57	6	5	5	7	14	27	27	10	17	69	110	36	13	36	7	5	36	17	2	3	10	9	72	2	6	24	34		
Central Indiana	9	1,088	54	16	23	83	9	13	10	50	24	34	56	19	38	97	93	29	28	67	4	9	69	29	13	5	7	6	93	5	24	46	35		
Bloomington	3	62	4	4	1	5	1			7	2	1			4	7	3	1	2	1		1	1			1		13	2		1				
Central Iowa	5	271	5	2	10	25	8	3		2	3	9	7	2	5	14	29	11	11	12	1	2	23	11	2		2	1	43		9	9	10		
Chicago	28	3,962	183	39	84	254	82	111	63	184	105	106	78	113	272	182	327	116	147	240	43	64	134	40	66	56	23	20	432	48	70	194	86		
Calumet	1	216	8	4	7	14	5	4	2	3	7	7	3	9	6	14	19	8	6	8		1	11	1	2	1	4		33	2		20	7		
Fox Valley	3	832	31	9	10	53	27	25	11	31	16	24	12	17	57	29	134	15	14	97	5	9	15	4	10	6	5	5	112	8	6	22	13		
Fort Wayne	1	414	17	6	14	36	3	9	5	27	10	25	13	3	23	21	25	22	7	25	2	7	10	4	3	2	2	2	42	20	9	12	8		
Illinois Valley	1	75	1	1	2	3		1	3		2	3	2	4	8	4	5		2	1	1		3	2	1			12	3		10	1			
Iowa-Illinois		128	3			4	1	1	1		4	5	1	5	2	4	10	2	3	1	1	1	7		5			48	1	1	14	3			
Burlington		7						1			1		1						1	1								2							
Madison	5	569	19	5	19	40	11	1	3	9	18	19	9	13	14	56	81	20	32	23	3	3	44	23	1	1	9	8	48	1	4	7	25		
Milwaukee	6	1,254	29	18	10	76	14	13	17	15	38	45	7	44	68	79	104	25	51	35	7	18	94	11	16	11	7	6	170	18	39	141	28		
Racine-Kenosha		97	1		5		4	3	1	3	6	1	9	6	6	4		4	3	2	1	6	2	1	2		1	10	1	6	9				
Nebraska	1	495	15	9	9	34	8	10	3	8	16	18	3	14	10	34	48	7	25	25	6	3	21	12	11	5	2	5	104	1	3	12	14		
Northeast Michigan		162	3		1	7	5	7	4	1	10	4	1	8	4	10	12	2	3	6	5	4	10	2	2	5	2		20	7	2	14	1		
Northeastern Wisconsin		180	8	4	4	18	3	3		3	1	6	3	4	5	9	21	1	2	6	1		12	8	1		1	40		2	13	1			
Rock River Valley		237	11	2	1	22	3	3	5	2	10	7	1	24	11	15	26	2	5	11	2	3	14	3	4	4	2	1	18	3	2	17	3		
Siouxland		46	3	4	1	2		1		1					2	3	2	5	2	4								13	1		2				
South Bend	2	350	22	4	9	34	9	4	5	4	7	17	16	9	13	21	30	12	7	15	4	2	24	8	4	1	2	4	18	4	5	22	14		
Southeastern Michigan	17	2,508	71	25	104	158	35	88	19	75	98	89	72	65	144	274	99	78	93	13	17	117	53	26	13	33	18	328	10	36	143	95			
Southern Minnesota	1	179	8	3	2	8	2	8	5	4	5	5	4	4	6	9	45	1	15	3	1	5	3	2	3	6	1	6	1	1	4	9			
Toledo	1	246	16		2	16	2	5	2	1	6	2	3	19	7	19	17	6	9	2	6	5	26	3	2	2	4	2	29	4	1	18	10		
Twin Cities	22	1,942	62	18	14	136	17	16	40	8	46	82	57	45	91	107	417	24	79	93	9	23	119	21	36	19	14	7	144	15	80	36	67		
Red River Valley		165	6	5	8	16	1	1	1	3	1	5	10	3	8	5	13	2	7	9			7	4	7	2		4	27	1	1	4	4		
West Michigan	1	198	5	7	3	14	2	5	2	3	4	6	2	8	11	13	22	1	6	10	1	2	13	3	5	2	3	3	17	4	2	13	6		
	120	16,817	621	201	387	1153	257	347	217	398	439	587	413	462	774	990	1933	465	575	853	125	191	838	270	227	150	133	106	1922	162	315	825	481		

SECTION C

TABLE 2 - 1969 IEEE GROUP MEMBERSHIP, BY GROUP, BY REGION, BY SECTION

REGION 5 Section	Total Affil- iates	Total Group Members	A&E G-1	B G-2	AP G-3	CT G-4	NS G-5	VT G-6	R G-7	BTR G-8	IM G-9	AES G-10	IT G-12	IECI G-13	EM G-14	ED G-15	C G-16	MTT G-17	EMB G-18	Com Tech G-19	SU G-20	PMP G-21	AC G-23	E G-25	EWS G-26	EMC G-27	MMS G-28	GeoS G-29	P G-31	EI G-32	MAG G-33	IGA G-34	SSC G-35	
Arkansas	1	149	9	3		6	4	1	1	2	4	3	1	3	4	8	10	1	4	3	2		3	1				1	54	5	3	12	1	
Beaumont		101	2	5	4	1	1	3		1		2	1	13	2	1	7	3	1	4			8	3	4			2	21	1		8	3	
Lake Charles		4														1												1				2		
Central Texas	7	876	43	8	43	53	13	8	6	9	27	33	43	10	25	50	121	28	68	39	9	4	35	19	14	16	9	27	69	2	7	11	27	
Corpus Christi		111	3	2		3		3		2	4	5	1	3	2	8	11	1	1	5			4	1	1	1	2	1	35		1	8	3	
Victoria-Port-Lavaca		11	1								1		2															5				2		
Dallas	5	2,523	77	44	122	188	27	38	40	36	59	170	89	36	129	190	284	184	53	143	13	19	110	17	28	14	13	63	195	5	21	36	80	
Denver	9	1,554	37	19	99	103	30	15	11	15	95	89	27	27	59	100	145	74	70	105	8	9	72	22	18	17	7	25	162	5	21	32	36	
Black Hills		55		2	2	4	1				1	7		1	2	4	8	2		1			6	3			1	1	6		1	2		
Pikes Peak		160	4	3	8	14	4	1	4	1	4	13	6	2	7	11	19	7	5	5		1	14	3	2	1	1	2	8	1	1	3	5	
El Paso		351	9	2	19	31	8	9	3	6	13	27	10	2	16	17	41	11	10	26	4	3	15	6	10	5	4	5	17	1	3	8	10	
Fort Worth	4	449	15	3	25	24	3	7	4	5	10	61	12	4	11	24	51	15	10	19		2	28	5	3	8	1	4	80	1	4	4	6	
Houston	9	1,550	54	11	40	87	23	23	12	8	47	70	65	33	43	80	220	27	62	82	9	13	97	19	14	4	11	113	151	5	15	56	56	
Clear Lake	4	390	4	1	14	17	5	1	8		12	56	13	11	27	10	59	6	13	22	1		34	2	6	9	4	7	23	1		11	13	
Freeport		26	2		1	2					1			1				2	1									1		9	1		4	
Kansas City	3	748	29	8	22	70	12	11	7	7	13	42	13	17	26	62	62	35	36	33	6	7	22	21	13	2	7	7	112	6	6	20	14	
Oklahoma City	1	315	7	4	7	18	2	6		4	6	16	1	4	15	22	54	6	6	18		1	12	2	3	1	3	3	69		5	9	11	
Ozark		91	5	1		4		1		3		3	2	2	4	7	12	2	7				9	5	1				18			4	1	
Penhandle		25				1						1		2				1					1	1	1				15			1	1	
Permian Basin		26				1					2		1			2	5		1		1							2	9			1	1	
St. Louis	9	1,822	30	15	47	135	19	14	24	10	47	149	63	46	59	128	223	69	86	69	5	16	108	26	28	11	7	6	188	17	16	108	53	
Shreveport		230	13	3	2	11	1	6	8	5	6	4	3	2	5	13	22	2	1	15		2	7	6	5	1		2	69	2	1	11	2	
Monroe		23	3	1						1	1		2				2						1					6			5			
South Plains		142	3	2	5	19	4	1	1	1	7	7	6	2	1	18	12	4	5	6		1	12	5	2			2	7		2	2	5	
Tulsa	3	427	13	8	8	28	9	5	4	5	11	14	13	7	4	30	34	4	7	15	8	4	19	6	8	5	3	27	89	3	4	18	14	
West Central Texas		43	1	1	1	1	1	2	1			1	1		4	1	1	2	2	10					2	1		1	7			1	1	
Wichita		183	5	3	5	24		2	1	2	7	10	3	2	7	15	14	5	4	9	1	1	16	1	4	4	2	2	18	2		9	5	
Total	55	12,385	369	149	474	845	167	157	135	123	378	783	373	235	453	801	1420	489	452	629	67	83	633	174	168	101	76	303	1443	58	111	388	348	

SECTION C

TABLE 2 - 1969 IEEE GROUP MEMBERSHIP, BY GROUP, BY REGION, BY SECTION

REGION 9	Total Affiliates	Total Group Members	A&E G-1	B G-2	AP G-3	CT G-4	NS G-5	VT G-6	R G-7	BTR G-8	IM G-9	AES G-10	IT G-12	IECI G-13	EM G-14	ED G-15	C G-16	MTT G-17	EMB G-18	Com Tech G-19	SU G-20	PMP G-21	AC G-23	E G-25	EWS G-26	EMC G-27	MMS G-28	GeoS G-29	P G-31	EI G-32	MAG G-33	IGA G-34	SSC G-35
Argentina	1	525	29	6	20	51	8	4	3	16	14	9	10	22	5	52	61	38	38	27	4	1	28	3	3	1	2	3	29	4	2	9	20
Chile		100	3		3	8		1		4	1		3	4	2	6	11	7	4	8	1		10	3		1			9	1		6	4
Columbia		283	9	5	7	17	1	2		12	10	5	2	8	2	44	26	10	8	19			21	1		1		2	45	1		20	5
Mexico		431	6	3	5	16	9	2	7	13	19	2	3	12	39	12	16	4	7	14	2	6	22	16	8		2	115	17	3	38	13	
Monterrey		18			1	3				1		1	1	1	1	1	1	1		2								5			1		
Peru		102	3		5	5	1	1	2	2		2	1	2	5	2	6	2	4	7	2			6	2	1	2	1	20	1		13	4
Puerto Rico & Virgin Islands		230	8	7	10	19	6	3	1	4	6	8	3	7	9	15	9	6	6	18		1	8		2	3	2	2	48	2	1	11	5
Rio de Janeiro		232	5	3	5	10	5	3	2	2	9	2	2	7	7	6	12	4	6	34	1	1	11	4	3	2	2	1	60	6	3	8	6
Sao Paulo		388	27	7	19	14	3	6	3	16	12	6	6	18	12	23	28	16	6	28	3	3	24	7	5	1	2	2	54	3	1	15	18
Venezuelan		397	9	8	21	13	3	10	2	7	12	4	1	13	17	14	25	23	6	51	1	1	15	4	5	4	4	2	83	3	1	32	4
Total Sections	1	2,704	99	39	96	156	36	32	20	77	83	39	32	93	99	174	195	111	85	208	14	13	145	40	27	13	14	15	468	38	11	153	79
Not assigned to Sections (see Table 10)		240	13	11	4	11	1	6	1	5	9	1	1	7	9	7	11	7	8	17		1	10	2	1	3		62	2	1	27	2	
Total Region	1	2,944	112	50	100	167	37	38	21	82	92	40	33	100	108	181	206	118	93	225	14	14	155	42	28	16	14	15	530	40	12	180	81

REGION 10	Total Affiliates	Total Group Members	A&E G-1	B G-2	AP G-3	CT G-4	NS G-5	VT G-6	R G-7	BTR G-8	IM G-9	AES G-10	IT G-12	IECI G-13	EM G-14	ED G-15	C G-16	MTT G-17	EMB G-18	Com Tech G-19	SU G-20	PMP G-21	AC G-23	E G-25	EWS G-26	EMC G-27	MMS G-28	GeoS G-29	P G-31	EI G-32	MAG G-33	IGA G-34	SSC G-35
India	1	64	2	1		4	1	1		3	1	1	1	3	2	2	8	2	1	7			6	2					13	2			1
New Zealand		85	3	2	6	4		5	1	1	2	1	2	7	3	5	4	4	2	3	3	1	4	1			2		7			8	4
Tokyo	14	3,574	90	67	146	211	69	58	83	96	107	100	163	105	61	331	244	248	87	171	81	115	141	52	48	55	61	46	140	83	113	104	98
West Pakistan		76	1	1	1	1	2				6	1	1	1	2	3	12	1	2	4			2		1		1		26	2	1	2	2
Total Sections	15	3,799	96	71	153	220	72	64	84	100	116	103	167	116	68	341	268	255	92	185	84	116	153	55	49	55	64	46	186	87	114	115	104
Not assigned to Sections (see Table 11)	6	1,791	57	35	63	121	34	28	19	61	48	33	37	59	65	90	97	63	46	106	10	20	112	34	32	11	10	12	315	23	28	77	45
Total Region	21	5,590	153	106	216	341	106	92	103	161	164	136	204	175	133	431	365	318	138	291	94	136	265	89	81	66	74	58	501	110	142	192	149

U. S. Possessions & Military Overseas	1	691	32	16	41	30	8	8	6	4	14	75	23	3	46	25	64	29	14	94	5	-	28	3	16	7	10	15	37	-	1	14	23
---------------------------------------	---	-----	----	----	----	----	---	---	---	---	----	----	----	---	----	----	----	----	----	----	---	---	----	---	----	---	----	----	----	---	---	----	----

GROUP NAME
Audio & Electroacoustics
G-1
Broadcasting
G-2
Antennas & Propagation
G-3
Circuit Theory
G-4
Nuclear Science
G-5
Vehicular Technology
G-6
Reliability
G-7
Broadcast & Television Receivers
G-8
Instrumentation & Measurements
G-9
Aerospace & Electronic Systems
G-10
Information Theory
G-12
Industrial Electronics & Control Instrumentation
G-13
Engineering Management
G-14
Electron Devices
G-15
Computer
G-16
Microwave Theory & Techniques
G-17
Engineering in Medicine & Biology
G-18
Communication Technology
G-19
Sonics & Ultrasonics
G-20
Parts, Materials & Packaging
G-21
Automatic Control
G-23
Education
G-25
Engineering Writing & Speech
G-26
Electromagnetic Compatibility
G-27
Man-Machine Systems
G-28
Geoscience Electronics
G-29
Power
G-31
Electrical Insulation
G-32
Magnetics
G-33
Industry & General Applications
G-34
Systems Science & Cybernetics
G-35

SECTION C

TABLE 3 - GROUP CHAPTER ACTIONS IN 1969

Region and Section	New Group Chapters	Expansion of Existing Chapters	Merger of Existing Chapters	Chapters Dissolved
<u>REGION 1</u>				
Long Island		G-23 to G-23/35		
Maine		G-31 to G-31/34		
North Jersey		G-17 to G-3/17		G-26
Rochester	G-14			
<u>REGION 2</u>				
Canton	G-4/6/19			
Cincinnati/Dayton	G-6			
Cleveland		G-4 and G-16 to G-4/16/23/35	G-13 7 G-18 to G-13/18	
Columbus	G-16			
Dayton	G-15/21			G-5 G-18
<u>REGION 3</u>				
Atlanta	G-3/17			
Canaveral	G-16			
Central N. C. / Eastern N. C. / Winston-Salem	G-12			
Daytona				G-10
Huntsville				G-27
Orlando		G-31 to G-31/34		
<u>REGION 4</u>				
Central Indiana				G-1, G-10
Chicago				G-26
Madison/Milwaukee			G-31	
Twin Cities				G-14
<u>REGION 5</u>				
Central Texas		G-18 to: G-18 (Austin) G-18 (San Antonio)		G-4
Dallas	G-14			
<u>REGION 6</u>				
Fort Huachuca	G-16/19			
Utah	G-18			
<u>REGION 7</u>				
Ottawa	G-14			
Toronto	G-34			
<u>REGION 8</u>				
United Kingdom & Republic of Ireland	G-26 G-25			
<u>REGION 9</u>				
Mexico	G-31 G-35			

SECTION C

TABLE 4 - IEEE GROUP CHAPTERS

as of December 31, 1969

Group Code	Name of Group	No. of Chapters	Section Locations		
G-10	Aerospace & Electronic Systems	38	Baltimore	Lima	Rochester
			Binghamton	Long Island	St. Louis
			Boston	Los Angeles Council	San Diego
			Buffalo	Middle Tenn.	San Francisco
			Canaveral	Mohawk Valley	Seattle
			Chicago	Nebraska	South Carolina
			Cleveland	New Jersey Coast	SE Michigan
			Columbus	NY/No. Jersey	Syracuse
			Dayton	Oklahoma City	Tucson/Fort
			Denver	Orlando	Huachuca
			Fort Worth	Ottawa	Twin Cities
			Houston	Philadelphia	Vancouver
Huntsville	Providence	Washington			
G-3	Antennas & Propagation	34	Atlanta	Huntsville	Phoenix
			Akron	Kansas City	St. Louis
			Baltimore	Long Island	San Diego
			Boston	Los Angeles Council	San Francisco
			Buffalo	Montreal	Seattle
			Chicago	New Hampshire	SE Michigan
			Columbus	New Orleans	Syracuse
			Connecticut	North Carolina	Toronto
			Dallas	Affiliation	Tucson
			Dayton	North Jersey	Vancouver
			Denver	Orange County	Washington
			Foothill	Philadelphia	
G-1	Audio & Electroacoustics	13	Chicago	Kitchener - Waterloo	San Francisco
			Cincinnati	Ottawa	Shreveport
			Cleveland	Philadelphia	Twin Cities
			Connecticut	San Diego	Washington
			Houston		
G-23	Automatic Control	25	Baltimore	Long Island	San Francisco
			Buffalo	Los Angeles Council	Schenectady
			Central Virginia	Milwaukee	Seattle
			Chicago	New York	SE Michigan
			Cleveland	North Jersey	Toledo
			Dallas	Philadelphia	Twin Cities
			Dayton	Phoenix	Vancouver
			Houston	Pittsburgh	
			Huntsville	San Diego	
G-2	Broadcasting	7	Cleveland	Philadelphia	Washington
			Fla. West Coast	Twin Cities	Winston-Salem
			Houston		
G-8	Broadcast & TV Receivers	3	Central Ind.	Chicago	Philadelphia
G-4	Circuit Theory	13	Canton	Los Angeles Council	Syracuse
			Central Ill.	Nebraska	Tucson
			Chicago	Philadelphia	United Kingdom &
			Cleveland	Portland	Republic of Ireland
			Houston	San Francisco	
G-19	Communication Technology	44	Alabama	Dallas	Nebraska
			Atlanta	Denver	New Jersey Coast
			Baltimore	East Tennessee	New Orleans
			Boston	Fla. West Coast	New York
			Canaveral	Fort Huachuca	North Jersey
			Canton	Houston	Orlando
			Charlotte	Jacksonville	Ottawa
			Chattanooga	Long Island	Philadelphia
			Chicago	Los Angeles Council	Pittsburgh
			Columbus	Mohawk Valley	Phoenix
			Connecticut	Montreal	

(Cont'd)

Group Code #	Name of Group	No. of Chapters	Section Locations		
G-19	Communication Technology (Cont'd)	44	Rochester Sacramento San Diego San Francisco	Seattle Shreveport SE Michigan Syracuse	Toronto Twin Cities Vancouver Washington
G-16	Computer	41	Akron Baltimore Binghamton Boston Central Texas Chicago Cleveland Columbus Connecticut Dallas Dayton Daytona Fort Huachuca France Houston	Huntsville Long Island Los Angeles Council Mohawk Valley Nebraska New Jersey Coast New York North Jersey Oklahoma City Orange County Orlando Philadelphia Phoenix Pittsburgh Portland	St. Louis San Diego San Francisco Schenectady SE Michigan Syracuse Tokyo Twin Cities Vancouver Washington United Kingdom & Republic of Ireland
G-25	Education	4	San Francisco Utah	SE Michigan	United Kingdom & Republic of Ireland
G-32	Electrical Insulation	2	Chicago	Montreal/Ottawa	
G-27	Electromagnetic Compatibility	15	Atlanta Boston Canaveral Central Texas Chicago	Houston Los Angeles Council Mohawk Valley New Jersey Coast New Orleans	NY/ LI/No. Jersey Philadelphia San Francisco Seattle Washington
G-15	Electron Devices	20	Albuquerque Boston Dayton Lehigh Valley Los Angeles Council Milwaukee Nebraska	NY/LI/No. Jersey Philadelphia Phoenix Pittsburgh Portland St. Louis San Francisco	Schenectady SE Michigan Syracuse Tucson Twin Cities Washington
G-14	Engineering Management	28	Baltimore Binghamton Boston Buenaventura Canaveral Central Ind. Chicago Cleveland Connecticut Dallas	Dayton Denver Houston Huntsville Los Angeles Council Mohawk Valley New Orleans NY/LI/No. Jersey Orange County Ottawa	Philadelphia Rochester San Francisco Seattle Syracuse Toronto Vandenberg Washington
G-18	Engineering in Medicine & Biology	29	Baltimore Boston Central Texas(2) Chicago Cleveland Connecticut Denver Houston Los Angeles Council Memphis	Miami Milwaukee Mississippi Montral Nebraska New Jersey Coast New Orleans NY/LI/NJ/Prin. Philadelphia Portland	Rochester San Diego San Francisco Seattle Twin Cities Utah Washington Winston-Salem North Carolina Affiliation of Sections
G-26	Engineering Writing & Speech	4	Buffalo Los Angeles	Philadelphia	United Kingdom & Republic of Ireland
G-29	Geoscience Electronics	5	Houston Los Angeles Council	Providence Tulsa	Washington

Group Code #	Name of Group	No. of Chapters	Section Locations		
G-13	Industrial Electronics & Control Instrumentation	7	Beaumont Boston Chicago	Cleveland Connecticut	San Francisco Vancouver
G-34	Industry & General Application	30	Akron Baltimore Boston Buffalo Chicago Cincinnati Cleveland Connecticut Dayton Delaware Bay	Houston Illinois Valley Los Angeles Council Maine Middle Tenn. Milwaukee NY/LI Orlando Philadelphia Pittsburgh	Rochester Sacramento St. Louis San Francisco Schenectady Seattle SE Michigan Syracuse Toronto Vancouver
G-12	Information Theory	15	Baltimore Boston Buffalo Central N. C. / Eastern N. C. / Winston-Salem Dallas Los Angeles Council	Chicago/Central Ill./ Central Ind./South Bend Nebraska NY/LI/No. Jersey Philadelphia Phoenix	San Francisco SE Michigan Syracuse Washington
G-9	Instrumentation & Measurement	11	Boston Chicago Los Angeles Council Montreal	NY/LI/No. Jersey Ottawa Philadelphia Portland	San Francisco Shreveport Washington
G-33	Magnetics	6	Boston Los Angeles Council	Milwaukee Princeton	San Francisco Twin Cities
G-28	Man Machine Systems	1	New Jersey Coast		
G-17	Microwave Theory & Techniques	36	Atlanta Baltimore Boston Buffalo Chicago Columbus Connecticut Dallas Denver Fla. West Coast Foothill Huntsville Kansas City	Long Island Los Angeles Council Milwaukee Montreal New Hampshire New York North Carolina Affiliation North Jersey Orange County Orlando Philadelphia Phoenix	St. Louis San Diego San Francisco Schenectady Seattle SE Michigan Syracuse Tokyo Toronto Tucson Washington
G-5	Nuclear Science	6	Boston Chicago	Connecticut Los Angeles Council	San Francisco Washington
G-21	Parts, Materials & Packaging	12	Baltimore Boston Chicago Dayton	Los Angeles Council Nebraska New Jersey Coast NY/LI/No. Jersey	Philadelphia San Francisco Seattle Washington
G-31	Power	80	Akron Alabama Argentina Arkansas Baltimore Beaumont Berkshire Binghamton Boston Buffalo Canveral Canton Central Ill. Central Ind. Central Texas Charlotte	Chattanooga Chicago Cincinnati Cleveland Columbus Connecticut Corpus Christi Dallas Dayton Delaware Bay Denver East Tenn. Fla. West Coast Foothill Fort Worth Houston	Illinois Valley Kansas City Las Vegas Lehigh Valley Los Angeles Council Maine Memphis Mexico Miami Mid Hudson Middle Tenn. Milwaukee/Madison Montreal Nebraska New Hampshire

(Cont'd)

Group Code #	Name of Group	No. of Chapters	Section Locations		
G-31	Power (Cont'd)	80	NY/LI	Sacramento	Tokyo
			North Jersey	St. Louis	Toledo
			NE Wisconsin	San Diego	Toronto
			Oklahoma City	San Francisco	Tulsa
			Orlando	Schenectady	Twin Cities
			Ottawa	Seattle	Utah
			Philadelphia	Sharon	Vancouver
			Phoenix	Shreveport	Washington
			Pittsburgh	SE Michigan	Worcester County
			Portland	Spokane	
			Rochester	Syracuse	
G-7	Reliability	19	Baltimore	Huntsville	Philadelphia
			Binghamton	Los Angeles Council	San Diego
			Boston	Mohawk Valley	San Francisco
			Canaveral/Daytona	Montreal	Twin Cities
			Chicago	New Jersey Coast	Washington
			Connecticut	NY/LI	
			Fla. West Coast	North Jersey	
G-35	Systems Science & Cybernetics	12	Boston	Los Angeles Council	Pittsburgh
			Cleveland	Montreal	San Francisco
			Dallas	New Jersey Coast	Schenectady
			Long Island	Philadelphia	Washington
G-6	Vehicular Technology	19	Canton	Los Angeles Council	SE Michigan
			Chicago	Montreal	Toronto
			Cincinnati/Dayton	Nebraska	Twin Cities
			Cleveland	NY/LI/No. Jersey	Vancouver
			Columbus	Philadelphia	Washington
			Dallas	Pittsburgh	
			Fla. West Coast	San Francisco	
31		579*		107	
Groups				Sections	

* Of this number, 76 Group Chapters are operated jointly by more than one Section or more than one Group. A total of 503 single or joint Group Chapters have been established as of 12/31/69.

SECTION D

Table 1 - IEEE Group Affiliates, December 31, 1969; 4-Year Comparison

Group No.	Group Name	12/31/69	12/31/68	12/31/67	12/31/66
1	Audio & Electroacoustics	4	5	3	2
2	Broadcasting	-	-	-	-
3	Antennas & Propagation	-	3	3	3
4	Circuit Theory	1	1	1	-
5	Nuclear Science	150	141	138	99
6	Vehicular Technology	8	9	11	4
7	Reliability	18	19	21	20
8	Broadcast & Television Receivers	-	-	-	-
9	Instrumentation & Measurements	1	1	1	1
10	Aerospace & Electronic Systems	9	9	11	8
12	Information Theory	17	17	19	19
13	Industrial Electronics & Control Instrumentation	1	-	-	-
14	Engineering Management	58	49	46	37
15	Electron Devices	107	105	109	114
16	Computer	158	125	115	89
17	Microwave Theory & Techniques	13	14	11	6
18	Engineering in Medicine & Biology	176	141	129	120
19	Communication Technology	-	-	2	3
20	Sonics & Ultrasonics	13	11	8	10
21	Parts, Materials & Packagin	-	1	3	4
23	Automatic Control	7	8	2	2
25	Education	1	2	2	-
26	Engineering Writing & Speech	19	26	30	13
27	Electromagnetic Compatibility	4	2	3	1
28	Man-Mchine Systems	12	12	12	9
29	Geoscience Electronics	-	-	-	1
31	Power	-	-	-	-
32	Electrical Insulation	15	11	11	13
33	Magnetics	103	107	114	114
34	Industry & General Applications	-	-	-	-
35	Systems Science & Cybernetics	43	26	26	27
		<u>938</u>	<u>845</u>	<u>831</u>	<u>719</u>

SECTION E

ORGANIZATIONAL UNITS OF IEEE BY REGION

Region Number	1	2	3	4	5	6	7	8	9	10	Other	Total
<u>1969</u>												
Membership	41,068	26,353	14,482	18,772	14,435	31,670	8,378	5,065	2,368	2,174	1,583	166,348
Sections	23	23	38	22	20	32	17	13	9	4		201
Subsections	8	5	12	6	7	12	-	-	1	-		51
Group Chapters	107	94	55	64	53	95	24	5	3	3		503*
Affiliation & Councils	-	-	1	-	-	1	3	-	-	-		5
Student Branches	70	43	37	40	36	47	29	18	21	1		342
<u>1968</u>												
Membership	40,492	25,957	14,055	18,794	13,886	30,851	8,043	4,443	1,720	1,131	2,996	162,368
Sections	23	23	38	22	20	32	17	13	9	4		201
Subsections	9	5	12	6	7	11	1	-	-	-		51
Group Chapters	107	95	54	68	52	93	22	3	1	3		498*
Student Branches	67	43	35	40	34	47	27	12	13	1		319
<u>1967</u>												
Membership	39,534	25,881	13,889	18,442	13,309	30,375	7,568	3,486	1,579	880	3,274	158,217
Sections	23	23	38	22	20	32	17	11	9	2		197
Subsections	9	5	12	6	6	12	1	-	-	-		51
Group Chapters	108	90	51	65	49	93	19	2	1	3		481*
Student Branches	65	42	33	40	35	43	24	7	10	-		299
<u>1966</u>												
Membership	39,871	26,512	14,436	18,338	13,422	31,411	7,382	3,938	1,416	2,509	835	160,070
Sections	23	23	38	22	20	32	17	11	7	2		195
Subsections	9	6	12	6	7	12	1	-	-	-		53
Group Chapters	105	89	48	64	42	85	15	1	1	2		452*
Student Branches	62	41	32	36	36	45	24	5	5	-		286

*Joint Chapters of two or more Sections or two or more Groups are counted as one Chapter.

SECTION F

Table 1 - IEEE Technical Publications Output - 1969

	Editorial Pages	Advertising Pages & Filler	Total Pages	Number of Papers	Number of Letters
<u>Regular Journals</u>					
IEEE SPECTRUM	1,279	605	1,884	85	94
PROCEEDINGS OF THE IEEE	2,254	162	2,416	171	456
Group TRANSACTIONS & JOURNALS	20,266	---	20,266	2419	878
IEEE STUDENT JOURNAL	276	---	276	53	5
Subtotals	24,075	767	24,842	2728	1,433
<u>Other Publications</u>					
Translated Journals	9,421	---	9,421	1,173	423
Conference Records*	1,804	---	1,804	450	---
Preprints	3,460	---	3,460	302	---
Subtotals	14,685	---	14,685	1,925	423
Totals	38,760	767	39,527	4,653	1,856
*Produced through IEEE Editorial Department					

Table 2 - Group TRANSACTIONS and JOURNALS - 1969

	Number of Issues	Editorial Pages	Number of Papers	Number of Letters
AEROSPACE & ELECTRONIC SYSTEMS	6	1080	107	36
ANTENNAS & PROPAGATION	6	868	86	116
AUDIO & ELECTROACOUSTICS	4	350	37	3
AUTOMATIC CONTROL	6	818*	84	100
BIO-MEDICAL ENGINEERING	4	372	40	15
BROADCAST & TELEVISION RECEIVERS	3	344	36	--
BROADCASTING	4	124	17	--
CIRCUIT THEORY	4	612	51	100
COMMUNICATION TECHNOLOGY	6	786*	104	8
COMPUTERS	12	1288	132	33
EDUCATION	4	332	57	14
ELECTRICAL INSULATION	4	130	14	2
ELECTROMAGNETIC COMPATIBILITY	4	192	21	2
ELECTRON DEVICES	12	1156	141	33
ENGINEERING MANAGEMENT	4	270*	23	2
ENGINEERING WRITING & SPEECH	3	108	23	1
GEOSCIENCE ELECTRONICS	4	296	35	--
INDUSTRIAL ELECTRONICS & CONT. INSTR.	3	208	31	--
INDUSTRY & GENERAL APPLICATIONS	6	818*	98	--
INFORMATION THEORY	6	792	79	63
INSTRUMENTATION & MEASUREMENT	4	392	60	2
MAGNETICS	4	1060*	154	128
MAN-MACHINE SYSTEMS	4	172	17	5
MICROWAVE THEORY & TECHNIQUES	12	1224	117	87
NUCLEAR SCIENCE	6	2152	395	3
PARTS, MATERIALS & PACKAGING	4	210*	20	1
POWER APPARATUS & SYSTEMS	12	1900	200	--
QUANTUM ELECTRONICS	12	704	74	63
RELIABILITY	4	236*	28	14
SOLID-STATE CIRCUITS	6	468	52	32
SONICS & ULTRASONICS	4	248	30	3
SYSTEMS SCIENCE & CYBERNETICS	4	396	43	12
VEHICULAR TECHNOLOGY	3	160	23	--
TOTALS	184	20,266	2419	878
*Estimated. Final issue not published at time of count.				

SECTION F

GROUP NEWSLETTERS PUBLISHED IN 1969

Table 3

	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
A&E		X			X			X			X	
AES	X	X	X	X	X	X	X	X	X	X	X	X
AP		X			X						X	
AC	X			X			X			X		
BTR	Does not publish Newsletter											
B			X			X		X				X
CT		X			X			X				X
COMTECH			X		X				X		X	
COMPUTER	X		X		X		X		X		X	
EDUCATION	Does not publish Newsletter											
EI		X				X		X				X
EMC		X		X		X		X		X		X
ED	X			X			X			X		
EM		X				X		X				X
EMB	X			X			X			X		
EWS										X		
GE		X			X			X			X	
IECI		X		X		X		X		X		X
IGA		X		X		X		X		X		X
IT					X		X					X
IM	X		X		X		X		X		X	
MAG	X		X		X		X		X		X	
MMS		X		X		X		X		X		X
MTT	X			X			X			X		
NS							X			X		
P		X		X		X		X		X		X
PMP		X			X					X		
REL	X			X			X			X		
SU									X			
SSC		X				X	X		X			X
VT			X			X			X			X
CADAR NEWS	X		X		X		X		X		X	
OCEANOGRAPHY							X					

SECTION G

TABLE 1 - IEEE & JOINTLY SPONSORED MAJOR TECHNICAL MEETINGS - 1969

Name of Meeting	Sponsors	Place	Date	Paid Registration	Exhibits	Additional Exhibit Attendance
Reliability Symposium	G-R, ASQC, et al	Chicago, Illinois	Jan. 21-23	645	No	
Hawaii Int'l Conf. on System Sciences	G-AC, G-CT, G-IT, Univ. of Hawaii et al	Honolulu, Hawaii	Jan. 22-24	344	No	
Winter Power Meeting	G-P	New York, N. Y.	Jan. 26-31	2521	No	
Int'l Symp. on Information Theory	G-IT, URSI	Ellenville, N. Y.	Jan. 28-31	318	No	
Transducer Conference	G-IECI	Washington, D. C.	Feb. 10-11	130	No	
Aerospace & Electronic Systems Winter Convention (WINCON)	G-AES, L. A. Council	Los Angeles, Calif.	Feb. 11-13	1217	No	
Int'l Solid State Circuits Conference	SSC Council, Univ. of Penna. Phila. Section	Phila., Penna.	Feb. 19-21	2000	No	
Conf. on "Where is Technology Leading Communications"	G-EWS, Washington Sec.	Washington, D. C.	Feb. 24-25	164	No	
Neuroelectric Conference	G-EMB, Stanford Res. Inst., et al	San Francisco, Cal.	Feb. 26-28	200	Yes	
Particle Accelerator Conference	G-NS, NBS, AEC, NSF, APS	Washington, D. C.	March 5-7	798	No	
Microwave Technique Conference	IEEE W. Ger. Sect., NTG at Cologne, URSI	Cologne, FR Germany	March 12-14	350	No	
Data Transmission	NTG at Mannheim, IEEE W. Ger. Sect.	Mannheim, F. R. Germany	March 19-21	650	No	
IEEE Int'l Convention & Exhibition	IEEE	New York, N. Y.	March 24-27	60544	Yes	
Semiconductor Device Res. Conference	IEEE W. Ger. Sec., et al	Munich, FR Germany	March 24-27	750	No	
Conference on Lasers and Optoelectronics	IEE, IERE, UKRI Section	Southampton, England	March 25-27	370	No	

<u>Name of Meeting</u>	<u>Sponsors</u>	<u>Place</u>	<u>Date</u>	<u>Paid Registration</u>	<u>Exhibits</u>	<u>Additional Exhibit Attendance</u>
Mining Industry Tech. Conference	G-IGA, MEMMA	Greensburg, Penna.	April 1	407	No	
Rubber & Plastics Ind. Technical Conference	G-IGA, Akron Section	Akron, Ohio	April 14-15	294	No	
Jt. Railroad Conference	G-IGA, ASME	Montreal, Canada	April 15-16	279	No	
Int'l Computer Aided Design Conference	IEE, IERE, IEME, IEEE UKRI Sec.	Southampton, England	April 15-18	720	No	
Int'l Magnetics Conf. (INTERMAG)	G-MAG, Phys. Soc., Royal Inst. of Engineers	Amsterdam, The Netherlands	April 15-18	1006	Yes	
Int'l Geoscience Elec. Symposium	G-GE	Washington, D. C.	April 16-18	327	No	
Region VI Conference	Region VI, Phoenix Sec.	Phoenix, Arizona	April 16-18	213	No	
Midwest Symp. on Circuit Theory	G-CT, Univ. of Texas	Austin, Texas	April 21-22	150	No	
Conf. on Switching Tech. for Telecommunication Networks	IEE, IERE, IEEE UKRI Sec.	London, England	April 21-25	750	No	
USNC/URSI IEEE Spring Meeting	USNC/URSI, IEEE	Washington, D. C.	April 21-25	632	No	
National Telemetry Conference	G-AES, G-ComTech	Washington, D. C.	April 22-24	430	Yes	450
Conf. on Electric Process Heating in Industry	G-IGA, Phila. Section	Phila., Penna.	April 23-24	193	No	
Southwestern IEEE Conf. & Exhibition (SWIEEEO)	Region 5, Central Texas Section	San Antonio, Texas	April 23-25	2148	Yes	
Rural Electrification Tech. Conference	G-IGA	New Orleans, Louisiana	April 28-29	189	No	
Appliance Technical Conference	G-IGA, South-eastern Mich. Section	Detroit, Mich.	April 29-30	235	No	
Electronic Components Conference	G-PMP, EIA	Washington, D. C.	April 30 - May 2	694	No	
Middle Atlantic States Textiles Ind. Tech. Conf.	G-IGA	Charlotte, N. Carolina	May 1-2	301	No	
EEMTIC & IM Symp.	G-IM, Ottawa Section	Ottawa, Ontario, Canada	May 5-7	1225	Yes	

<u>Name of Meeting</u>	<u>Sponsors</u>	<u>Place</u>	<u>Date</u>	<u>Paid Registration</u>	<u>Exhibits</u>	<u>Additional Edhibit Attendance</u>
Int'l Microwave Symposium	G-MTT	Dallas, Texas	May 5-7	723	No	
Int'l Congress on Instrumentation in Aerospace Simulation Facilities	G-AES	Farmingdale, N. Y.	May 5-8	90	No	
Conf. on Power Thyristors and their Applications	IEE, IEEE UKRI Section	London, England	May 6-8	475	No	
Congress on Nuclear Electronics	G-NS, ECAE, N. Italy Sec.	Stresa, Italy	May 6-8	250	No	
Pulp & Paper Industry Tech. Conference	G-IGA	Atlanta, Georgia	May 7-9	250	No	
Int'l Jt. Conference on Artificial Intelligence	G-MMS, et al	Washington, D. C.	May 7-9	575	No	
Underground Distribution Conference	G-P	Anaheim, Calif.	May 12-16	2028	Yes	3247
Vehicular Communications Systems Symposium	G-VT	L. A., Calif.	May 13	133	No	
Cement Industry Technical Conference	G-IGA	Toronto, Canada	May 13-15	501	No	
Ind. & Comm. Pwr. Sys. & Elec. Space Htg. & Air Cond. Jt. Tech. Conf.	G-IGA, Baltimore Sec.	Baltimore, Maryland	May 13-15	390	No	
Spring Jt. Computer Conference	G-C, AFIPS	Boston, Mass.	May 14-16	9800	Yes	25725
Power Industry Computer Applications Conf. (PICA)	G-P	Denver, Colorado	May 18-21	493	Yes	
Aerospace Elec. Conference (NAECON)	G-AES, Dayton Sec.	Dayton, Ohio	May 19-21	1021	Yes	
Off-Shore Technology Conference	G-AES, G-Com Tech. G-GE et al	Houston, Texas	May 19-21	4300	Yes	
Electron, Ion, and Laser Beam Technology Symp.	G-ED, Am. Vacuum Soc., et al	Gaithersburg, Md.	May 21-23	154	No	
Workshop on Applied Magnetics	G-MAG	Washington, D. C.	May 22-23	198	No	
Laser Engineering & Applications Conference	G-ED, G-MTT, OSA	Washington, D. C.	May 26-28	1445	Yes	
Conference on Micro-electronics	IEE, IERE, Inst. of Phys. & Phys. Soc., IEEE UKRI Section	Eastbourne, Sussex, England	June 3-5	480	No	

<u>Name of Meeting</u>	<u>Sponsors</u>	<u>Place</u>	<u>Date</u>	<u>Paid Registration</u>	<u>Exhibits</u>	<u>Additional Exhibit Attendance</u>
Product Assurance Conf. & Exhibit	ASQC, G-R L.I. Sec. et al	Hempstead, L.I.	June 6-7	100	Yes	
Design Automation Workshop	G-C, SHARE ACM	Miami Beach, Fla.	June 8-12	199	Yes	
Chicago Spring Conf. on Broadcast & TV Receivers	G-BTR, Chicago Sec.	Des Plaines, Illinois	June 9-10	1450	Yes	460
Int'l Communications Conference	G-ComTech., Denver Sec.	Boulder, Colo.	June 9-11	1124	Yes	
Computer Conference	G-C, G-EMB participating	Minneapolis, Minn.	June 17-19	594	No	
Electromagnetic Compatibility Symposium	G-EMC	Asbury Pk., N.J.	June 17-19	398	Yes	
Summer Power Meeting	G-P	Dallas, Texas	June 22-27	1034	No	
Conf. on Applications of Continuous Sys. Simulation "Languages"	ACM/IEEE/ SHARE, SCI	San Fran- cisco, Cal.	June 30 - July 1	165	No	
Conference on Nuclear & Space Radiation Effects	G-NS, NASA, DASA, AEC, Penn State Univ.	Univ. Pk., Penna.	July 7-11	360	No	
Conference on Measurement Education	IEE, IMA, IMC, Inst. of Phys. & Phys. Soc., IERE IEEE UKRI Sec.	Warwick- shire, Eng.	July 8-10	70		
Int'l Conf. on Medical & Biological Engrg. & Engrg. in Medicine & Biology	G-EMB, JCEMB, IFEMB	Chicago, Illinois	July 20-25	1600	Yes	
Conference on Digital Methods of Measurement	IERE, IEE, UKRI Section	Canterbury, Kent, Eng.	July 23-25	260		
Seminar on Case Studies in System Control	G-AC	Boulder, Colo.	August 4	26	No	
Jt. Automatic Control Conference	G-AC, AACC	Boulder, Colo.	August 5-7	805	No	
Western Electronic Show & Convention (WESCON)	Region 6 & WEMA	San Fran- cisco, Cal.	August 19-22	5527	Yes	40541
Electrical Insulation Conference	G-EI, NEMA, NAVSEC	Boston, Mass.	Sept. 7-11	4180	Yes	600
European Microwave Conference	IEE, IERE, G-MTT	London, England	Sept. 8-12	650	No	

<u>Name of Meeting</u>	<u>Sponsors</u>	<u>Place</u>	<u>Date</u>	<u>Paid Registration</u>	<u>Exhibits</u>	<u>Additional Exhibit Attendance</u>
Int'l Man Machine Systems Symposium	G-MMS, ERS, IEE, IERE, IEEE UKRI Sec.	Cambridge, England	Sept. 8-12	242	Yes	
Symposium on Microe- lectronics	G-MTT, G-CT, G-ED, St. Louis Section	Clayton, Mo.	Sept. 10-12	160	No	
Petroleum & Chemical Ind. Tech. Conference	G-IGA	L. A., Calif.	Sept. 14-17	307	No	
Solid State Devices Conference	Inst. of Phys. & Phys. Soc., IEE, IERE, IEEE UKRI Section	Exeter, Devon, England	Sept. 16-19	100	No	
Broadcasting Symposium	G-B	Washington, D. C.	Sept. 18-20	251	No	
Jt. Power Generation Conference	ASME, G-P, ASCE	Charlotte, N. Carolina	Sept. 21-25	865	No	
Intersociety Energy Conversion Engrg. Conference	AICHE, AIAA, ASME, G-ED, G-AES et al	Washington, D. C.	Sept. 21-26	736	Yes	
Conference on Industrial Ultrasonics	IERE, IEE, Inst. of Phys. & Phys. Soc., BAS, IEEE UKRI Section	Lough- borough, England	Sept. 23-25	100	No	
Ultrasonics Symposium	G-SU	St. Louis, Missouri	Sept. 24-27	340	No	
Hybrid Microelectronics Symposium	G-PMP, Int'l Soc. for Hybrid Microelectronics	Dallas, Tx.	Sept. 29 - Oct. 1	580	No	
Int'l Conf. on the Theory & Applications of Differential Games	G-AC, AACC, AFOSR	Amherst, Mass.	Sept. 29 - Oct. 1	107	No	
Int'l Electronics Conf. & Exposition of Canadian Region	Canadian Reg. of IEEE	Toronto, Canada	Oct. 6-8	13730	Yes	
Allerton Conf. on Circuit & System Theory	G-CT, G-AC, Univ. of Ill.	Monticello, Illinois	Oct. 8-10	150	No	
Jt. Engineering Manage- ment Conference	G-EM, 8 other societies	Montreal, Quebec, Canada	Oct. 9-10	424	No	
IGA Group Annual Meeting	G-IGA, S. E. Mich. Sec.	Detroit, Michigan	Oct. 12-16	733	No	

<u>Name of Meeting</u>	<u>Sponsors</u>	<u>Place</u>	<u>Date</u>	<u>Paid Registration</u>	<u>Exhibits</u>	<u>Additional Exhibit Attendance</u>
Symposium on Switching & Automata Theory	G-C, Univ. of Waterloo	Waterloo, Ontario, Canada	Oct. 15-17	170	No	
Seminar on Distribution of Electrical Energy in Mexico	Mexico Sec.	Mexico City, Mex.	Oct. 15-18	294	Yes	3600
Electrical Insulation & Dielectric Phenomena Conference	G-EI, NAS, NRC, Nat'l Res. Lab et al	Buck Hills Falls, Pa.	Oct. 20-22	141	No	
Thermionic Energy Conversion Specialists Conference	G-ED	Carmel, Calif.	Oct. 21-23	123	No	
Systems Science & Cybernetics Conference	G-SSC, Phila. Section	Phila., Pa.	Oct. 22-24	181	No	
Midwest Power Symposium	G-P, Twin Cities Sec.	Minneapolis, Minn.	Oct. 23	100	No	
Jt. Conf. on Mathematical & Computer Aids to Design	G-C, G-AC, SIAM, CADAR et al	Anaheim, Calif.	Oct. 26-28	413	Yes	
Machine Tools Technical Conference	G-IGA, S.E. Mich. Section	Detroit, Mich.	Oct. 27-29	460	No	
Jt. Materials Handling Engineering Conference	G-IGA, ASME	Portland, Oregon	Oct. 27-29	226	No	
Electronic & Aerospace Systems Convention (EASCON)	G-AES	Washington, D. C.	Oct. 27-29	1096	Yes	599
Nuclear Science Symposium	G-NS, USAEC, NASA	San Francisco, Cal.	Oct. 29-31	350	Yes	
Int'l Electron Devices Meeting	G-ED	Washington, D. C.	Oct. 29-31	1323	No	
Automatic Support Systems for Advanced Maintainability	G-AES, St. Louis Section	St. Louis, Mo.	Nov. 3-5	200	No	
Symposium of Affiliation of N. C. Sections	Affiliations of N. C. Sec.	Greensboro, N. Carolina	Nov. 5-6	433	Yes	218
Northeast Elec. Res. & Engrg. Meeting (NEREM)	New England Sections	Boston, Mass.	Nov. 5-7	5160	Yes	18240
Symposium on Adaptive Processes	G-AC, G-IT, G-SSC part.	Univ. Pk., Penna.	Nov. 17-19	80	No	
Fall Joint Computer Conference	G-C, AFIPS	Las Vegas, Nevada	Nov. 18-20	10600	Yes	14000
Magnetism and Magnetic Materials Conference	G-MAG, AIP	Phila., Pa.	Nov. 18-21	800	Yes	

<u>Name of Meeting</u>	<u>Sponsors</u>	<u>Place</u>	<u>Date</u>	<u>Paid Registration</u>	<u>Exhibits</u>	<u>Additional Exhibit Attendance</u>
Region III Convention	Region 3	Huntsville, Alabama	Nov. 19-21	490	Yes	
Vehicular Technology Conference	G-VT	Columbus, Ohio	Dec. 4-5	350	Yes	
Symposium on Consumer Electronics	G-BTR, G-ED	Chicago, Illinois	Dec. 8-9	480	No	
Conference on Applications of Simulation	G-C, G-SSC, ACM, SHARE, et al	L. A., Calif.	Dec. 8-10	600	No	
Int'l Symposium on Circuit Theory	G-CT	San Francisco, Cal.	Dec. 8-10	255	No	
Nat'l Electronics Conference	Region IV, et al	Chicago, Illinois	Dec. 8-10	8000	Yes	8300
G-AP Int'l Symp. and Fall USNC/URSI Meeting	G-AP, USNC/URSI	Austin, Tx.	Dec. 8-11	385	No	
Application of Magnetism in Bioengineering	G-MAG, G-EMB, ISBE participating	Rehovot, Israel	Dec. 9-11	100	No	
Asilomar Conference on Circuits & Systems	G-CT, G-AC, Naval PG Sch., Santa Clara Univ.	Pacific Grove, Cal.	Dec. 10-12	250	No	
Conference on Reliability in Electronics	IEE, Inst. of Phys. & Phys. Soc., IEEE UKRI Section, IERE	London, England	Dec. 10-12	150		

SECTION G

Table 2 - IEEE INTERNATIONAL CONVENTION STATISTICS

The Convention is internationally recognized as one of the largest Conventions of its kind in the world. An exhibition became part of the Annual Convention activities in 1930. Convention activities, from the first Convention held in 1926 through 1969, are indicated in the comparison figures listed below.

Date	Year	Attendance	Firms Represented	Exhibits	Sq. Ft. Occupied	Papers Presented	Location	
January	18-19	1926	*	0	0	6	New York, N. Y.	
January	10-12	1927	425**	0	0	5	New York, N. Y.	
January	9-11	1928	800	0	0	9	New York, N. Y.	
May	13-15	1929	555	0	0	37	Washington, D. C.	
August	18-21	1930	575	*	20**	23	Toronto, Canada	
June	4-6	1931	400	*	50	19	Chicago, Illinois	
April	7-9	1932	461	*	25**	23	Pittsburgh, Pa.	
June	26-28	1933	487	*	35	24	Chicago, Illinois	
May	28-30	1934	940	*	56	32	Philadelphia, Pa.	
July	1-3	1935	586	*	34	21	Detroit, Michigan	
May	11-13	1936	360	*	40	19	Cleveland, Ohio	
May	10-12	1937	1,189	*	37	30	New York, N. Y.	
May	15-17	1938	1,866	*	29	49	New York, N. Y.	
September	20-23	1939	1,668	*	34	26	New York, N. Y.	
June	27-29	1940	1,071	*	35**	44	Boston, Mass.	
January	9-11	1941	1,310	*	30**	28	New York, N. Y.	
June	23-25	1941	353	0	0	33	Detroit, Michigan	
January	12-14	1942	1,790	*	30**	25	New York, N. Y.	
June	(29-1)	1942	256	0	0	23	Cleveland, Ohio	
January	28	1943	1,750	0	0	11	New York, N. Y.	
January	28-29	1944	1,704	0	0	22	New York, N. Y.	
January	24-27	1945	3,000	*	39	43	New York, N. Y.	
January	23-26	1946	7,200	1,571	135	13,220'***	88	New York, N. Y.
March	3-6	1947	12,013	2,845	177	20,830'	118	New York, N. Y.
March	22-25	1948	14,459	3,059	180	25,900'	130	New York, N. Y.
March	7-10	1949	15,710	3,427	225	30,700'	144	New York, N. Y.
March	6-9	1950	17,689	4,088	253	33,600'	163	New York, N. Y.
March	19-22	1951	22,919	5,082	277	45,672'	198	New York, N. Y.
March	3-6	1952	28,673	6,306	365	54,246'	211	New York, N. Y.
March	23-26	1953	35,642	7,493	412	63,033'	214	New York, N. Y.
March	22-25	1954	39,302	8,799	605	87,192'	242	New York, N. Y.
March	21-24	1955	42,133	9,504	704	95,782'	248	New York, N. Y.
March	19-22	1956	41,017***	8,851	716	98,684'	277	New York, N. Y.
March	18-21	1957	53,811	11,757	840	105,240'	284	New York, N. Y.
March	24-27	1958	55,811	12,555	950	110,828'	285	New York, N. Y.
March	23-26	1959	60,050	13,509	1,200	114,117'	263	New York, N. Y.
March	21-24	1960	69,760	15,889	1,200	113,597'	261	New York, N. Y.
March	20-23	1961	67,451	15,170	1,237	113,711'	274	New York, N. Y.
March	26-29	1962	74,734	16,246	1,307	116,412'	275	New York, N. Y.
March	25-28	1963	71,337	15,507	970	116,192'	251	New York, N. Y.
March	23-26	1964	66,541	14,967	966	122,336'	307	New York, N. Y.
March	22-26	1965	58,462	13,150	884	116,448'	359	New York, N. Y.
March	21-25	1966	63,650	14,270	731	115,410'	305	New York, N. Y.
March	20-23	1967	59,196	12,731	722	121,790	320	New York, N. Y.
March	18-21	1968	63,749	13,710	680	121,777'	230	New York, N. Y.
March	24-27	1969	60,543	13,020	618	115,208'	231	New York, N. Y.

* Figures not available

** Estimated

*** Reduction in attendance due to blizzard

S - Section Meetings

SS - Subsection Meetings

G - Group Chapter Meetings

STC - Section Technical Conferences

Section and Subsection	Meetings				Section and Subsection	Meetings			
	S	SS	G	STC		S	SS	G	STC
REGION 1					Region 2 - cont'd.				
Berkshire	3		4		Ohio Valley	5			
Binghamton	2		17		Philadelphia	8		97	
Boston	3		100		Pittsburgh	4		38	1
Lynn		7			Upper Monongahela		3		
Merrimack Valley		6			Sharon	7		2	
Buffalo	10		19		Southern New Jersey	8			
Connecticut	4		11		Susquehanna	8			
Fairfield County		7			Washington			94	
New London		8			West Virginia	8			
Elmira-Corning	5					181	20	359	3
Ithaca					REGION 3				
Long Island	6		27		Alabama	10		17	
Maine	7		3		Atlanta	9		16	
Mid-Hudson	7				Macon-Warner Robins		7		
Catskill		6			Rome		8		
Mohawk Valley	8		14		Baton Rouge	7			
St. Lawrence Intn'l		3			Lafayette		7		
New Hampshire	15				Canaveral	4		17	
New Jersey Coast	1		19		Central North Carolina	7			
New York	4		84		Central Virginia	9		2	
Westchester		4			Charlotte	6		11	
North Jersey	3		25	1	Chattanooga	4		4	
Princeton	8		4		Dayton	10		5	
Providence	7		2		Eastern North Carolina				1
(1) Southeastern Mass.		0			East Tennessee	8		4	
Rochester			14		Upper East Tennessee				
Schenectady			21		Evansville-Owensboro	5			
Adirondack		3			Paducah		7		
Springfield	2				Florida West Coast	6		17	
Syracuse	3		12		Fort Walton	10			
Vermont	1				Gainesville	6			
Worcester County	7		2		Hampton Roads	9			
	106	44	378	1	Huntsville	5		16	
REGION 2					Muscle Shoals		5		
Akron	9		13		Jacksonville	9		3	
Allegheny Mountain	6				Lexington	9			
Baltimore	4		31		Louisville	10			1
Annapolis		6			Memphis	7		16	
Eastern Shore		6			Jackson		4		
Canton	6		4		Miami	7		4	
Central Pennsylvania	8				Middle Tennessee	8		4	
Cincinnati	16		5		Mississippi	9		2	
Cleveland	4		27		Northeast Mississippi		5		
Columbus	4		9	1	Mobile	10			
Chillicothe					Nashville	9			
Zanesville		5			New Orleans	8		15	
Dayton	5		23		North Carolina Affilia-	6		1	
Delaware Bay	11		6		tion of Sections				
Erie	6				Oak Ridge	5			
Johnstown	13				Orlando	6		15	
Lehigh Valley	19		10	1	Palm Beach	12			
Lima	8				Panama City	5			
North Central Ohio	7				Pensacola	10			

(Cont'd)

Section and Subsection	Meetings			
	S	SS	G	STC
<u>Region 3 - cont'd.</u>				
Richmond				
Savannah	9			
South Carolina	1			1
Central Savannah River		4		
Charleston		8		
Columbia		3		
Piedmont		10		
Virginia Mountain	4			
Western North Carolina	10			
Winston-Salem	8			
	<u>277</u>	<u>68</u>	<u>168</u>	<u>3</u>

REGION 4

Arrowhead	8			
Cedar Rapids	7			
Central Illinois	3		4	
Central Indiana	1		5	
Bloomington		11		
Central Iowa	3			
Chicago	1		42	
Calumet		8		
Fox Valley		8		
Fort Wayne	6			
Illinois Valley	10			
Iowa-Illinois	8			
Burlington		7		
Madison	3			
Milwaukee	3		29	1
Racine-Kenosha		2		
Nebraska	23		12	
Northeast Michigan	10			
Northeastern Wisconsin	10		4	
Rock River Valley	6			
Siouxland	10			
South Bend	6			
Southeastern Michigan	4		31	
Southern Minnesota	7			
Toledo	8		4	
Twin Cities	5		36	
Red River Valley		10		
West Michigan	9			
	<u>151</u>	<u>46</u>	<u>167</u>	<u>1</u>

REGION 5

Arkansas	10		10	
Beaumont	5		3	
Lake Charles				
Central Texas	5		15	
Corpus Christi	4		3	
Victoria-Port Lavaca		6		
Dallas	8		34	
Denver	7		16	
Black Hills		4		
Pikes Peak		6		
El Paso	10			
Fort Worth	8		8	
Houston	5		30	
Clear Lake		9		
Freeport		5		
Kansas City	16			

Section and Subsection	Meetings			
	S	SS	G	STC
<u>Region 5 - cont'd.</u>				
Oklahoma City	7		4	
Ozark	9			
Panhandle	8			
Permian Basin	8			
St. Louis	3		27	
Shreveport	10		2	
Monroe		9		
South Plains	3			
Tulsa	7		6	
West Central Texas	4			
Wichita	7			
	<u>144</u>	<u>39</u>	<u>158</u>	

REGION 6

Alamogordo-Holloman	3			
Alaska	4			
Albuquerque	6		1	1
Los Alamos-Santa Fe				
Antelope Valley	4			
Boise	11			
Buenaventura	9		5	
China Lake				
Foothill	9		10	
Fort Huachuca	8		1	
Hawaii	10			
Idaho	7			
Las Vegas	6		2	
Los Angeles Council	2		139	
Met. Los Angeles	5			
Montana				
Billings				
Butte		8		
Helena		5		
Orange County	7		13	
Phoenix	4		20	
Portland	7		24	1
Eugene		5		
Richland	6			
Walla Walla		7		
Sacramento	5		13	1
Reno		6		
San Joaquin		4		
Shasta		6		
San Diego	10		25	
San Fernando Valley	2			
San Francisco	3		122	
East Bay		6		
(2) Golden Gate		5		
Santa Clara Valley		6		
San Gabriel Valley	7			
Santa Barbara	10			
Santa Monica Bay	8			
Seattle	7		29	
South Bay Harbor	1			
Spokane	6		5	
Tucson	8		3	
Utah	4		5	
Vandenberg	9			
Wenatchee	8			
	<u>196</u>	<u>58</u>	<u>417</u>	<u>3</u>

Section and Subsection	Meetings			
	S	SS	G	STC
<u>REGION 7</u>				
(3) Central Canada Council				
Bay of Quinte	8			
Hamilton	10			
Kitchener-Waterloo	4		1	
(4) Guelph				
London	7			
Niagara International	5			
Toronto	2		9	
(5) Eastern Canada Council				
Canadian Atlantic	5			1
Montreal			21	
Ottawa	4		7	
Quebec	3			
St. Maurice	5			
(6) Western Canada Council				
Northern Alberta	12			
Regina	7			1
Southern Alberta	9			
Vancouver	9		10	
Victoria	6			1
Winnipeg	11			
	<u>107</u>		<u>48</u>	<u>3</u>

REGION 8

Benelux	4			
Denmark	6			
Egypt	6			
France	4			
Germany (West)				
Israel	1			
Middle & South Italy				
North Italy	2			
Norway	7			
Spain				
Sweden	6			
Switzerland	8			
United Kingdom & Republic of Ireland	12		3	
	<u>56</u>		<u>3</u>	

REGION 9

(7) Argentina	7			
Chile	7			
Colombia	2			
Mexico	9			
(8) Monterrey		3		
Peru	4			
Puerto Rico & Virgin Islands	9			
Rio de Janeiro	2			1
Sao Paulo	11			
Venezuelan				
	<u>51</u>	<u>3</u>		<u>1</u>

Section and Subsection	Meetings			
	S	SS	G	STC
<u>REGION 10</u>				
(9) India				
(10) Kanpur				
New Zealand				
Tokyo	11			14
West Pakistan	5			
	<u>16</u>			<u>14</u>

TOTALS

Section	1,285
Subsection	278
Group Chapters	1,713
Section Technical Conference	15
Student Branches	919
GRAND TOTAL	4,210

- (1) Subsection dissolved 8/26/69
- (2) Subsection established 3/22/69
- (3) Council established 12/16/69
- (4) Subsection dissolved 6/26/69
- (5) Council established 8/26/69
- (6) Council established 8/18/68
- (7) Name changed from Buenos Aires 2/13/69
- (8) Subsection established 6/26/69
- (9) Section established 6/26/69
- (10) Section dissolved 6/26/69

*As reported to IEEE through 1/20/70

SECTION G

TABLE 3 - SECTION, SUBSECTION, GROUP CHAPTER MEETINGS AND CONFERENCES

Region Number	1	2	3	4	5	6	7	8	9	10	Total
<u>1969</u>											
Sections	106	181	277	151	144	196	107	56	51	16	1,285*
Subsections	44	20	68	46	39	58	-	-	3	-	278*
Group Chapters	378	359	169	167	158	417	48	3	-	14	1,713*
Section Technical Conference	1	3	3	1	-	3	3	-	1	-	15*
Student Branches	139	111	132	162	127	148	71	15	12	2	919
Total Meetings	668	674	649	527	468	822	229	74	67	32	4,210
<u>1968</u>											
Sections	158	196	313	153	152	205	126	68	53	7	1,431
Subsections	46	35	80	41	35	56	1	-	-	-	294
Group Chapters	765	364	197	183	154	405	57	4	-	-	2,129
Section Technical Conference	1	2	3	2	-	2	3	4	2	-	19
Student Branches	103	85	55	88	58	53	35	6	-	3	486
Total Meetings	1,073	682	648	467	399	721	222	82	55	10	4,359
<u>1967</u>											
Sections	141	179	301	176	160	240	131	58	44	9	1,439
Subsections	61	29	91	47	43	65	6	-	-	-	342
Group Chapters	611	333	154	171	131	384	40	5	-	11	1,840
Section Technical Conference	-	2	6	2	-	3	3	3	-	-	19
Student Branches	346	210	197	210	212	261	85	5	7	-	1,533
Total Meetings	1,159	753	749	606	546	953	265	71	51	20	5,173
<u>1966</u>											
Sections	158	196	313	184	168	234	104	33	26	-	1,416
Subsections	52	34	78	45	53	74	6	-	-	-	342
Group Chapters	355	323	127	134	107	398	38	-	1	-	1,483
Section Technical Conference	1	1	2	-	-	1	1	3	2	-	11
Technical Discussion Group	78	19	4	11	-	10	9	-	-	-	131
Student Branches	235	205	139	230	195	201	97	-	6	-	1,308
Total Meetings	879	778	663	604	523	918	255	36	35	-	4,691

*As reported to Headquarters through January 20, 1970

1. PUBLICATIONS AND INFORMATION SERVICES1. TECHNICAL PUBLICATIONSGENERAL

During 1969 the Editorial Department processed 3,480 papers and 1,433 correspondence items for printing in IEEE publications, excluding the translated journals, giving a total output of 29,339 editorial pages. Of these, 24,075 pages were published in regular journals of the Institute, a slight increase over the previous year's output of 23,759 pages.

The practice of assessing voluntary page charges was adopted by the PROCEEDINGS OF THE IEEE and six Group TRANSACTIONS and JOURNALS, bringing to twelve the total number of Institute periodicals that follow this procedure. The percentage of authors' institutions which honored the voluntary payment, currently \$50 per page, varied from one publication to another but averaged 55% over-all.

The potential usefulness of microfiche as a publications medium was explored by conducting a test program in which the TRANSACTIONS of three Groups were offered to members and subscribers in microfiche form, either instead of, or in addition to, the regular printed editions. A microfiche is a 105-mm by 148-mm film transparency containing the images of up to 60 printed pages reduced in size by a factor of approximately 20. As a result of the test, it was decided to make all IEEE technical periodicals available in microfiche form in 1970.

Two significant improvements were made to the editorial communication channels. In the first of these, an ombudsman procedure was established to assist authors who have difficulty in communicating to, or receiving communications from, IEEE publication editors. Under the procedure, the Director of Editorial Services acts as a centrally located person to whom authors can turn for assistance. The second improvement was the inauguration of a monthly memorandum to all IEEE publication editors through which they are able to advise one another of their plans for future special issues, thus enabling potential conflicts to be avoided.

The Editorial Department was greatly saddened by two untimely deaths: Helene Frischauer, Administrative Editor of the TRANSACTIONS and the PROCEEDINGS OF THE IEEE, and Seymour Tilson, Staff Writer of SPECTRUM.

IEEE SPECTRUM

Under the guidance of Editor J.J.G. McCue of M.I.T. Lincoln Laboratory and with the approval of the IEEE Publications Board, several significant steps were taken to make SPECTRUM a more interesting, useful and widely read publication. These included broadening the editorial coverage to include treatment of relevant social controversies, adopting a new cover and improved typography for some of the departments, and adding two new departments, called "New Product Applications" and "News from Washington." That these measures were at least partially effective was readily evident from the major increase in reader mail received by the Editor and by a 42% increase in the number of Letters to the Editor published.

Because of reader response to the broadened editorial coverage, the Publications Board developed a policy statement on the presentation of controversial social material in IEEE publications and at meetings, for the approval of the Board of Directors. A draft of the policy statement, published for comment by President Willenbrock in the Forum section of the September issue of SPECTRUM, elicited a two-to-one membership response in favor of the policy of permitting the inclusion of relevant social material in IEEE publications and meetings. The final wording of the statement will be published in SPECTRUM following approval by the Board of Directors in January 1970.

A total of 85 articles and 94 letters were published during the year, as compared with 82 articles and 66 letters the prior year. Nine articles were written by editorial staff members. The total pages published in SPECTRUM numbered 1884, of which 1279 were devoted to technical and editorial material and 605 to advertising and related material.

PROCEEDINGS OF THE IEEE

An important event in the PROCEEDINGS year was the appointment of a new Editor, David Slepian of Bell Telephone Laboratories. He took over from M.E. Van Valkenburg who had provided valuable editorial guidance to the PROCEEDINGS for three years. The members of the PROCEEDINGS Editorial Board actively assisted Dr. Slepian throughout the year with the review of papers and with plans for invited papers and special issues.

Four highly successful special issues, each devoted to a single area of major interest, were published in 1969. The subjects covered were remote environmental sensing (April), topside sounding and the ionosphere (June), materials and processes in integrated electronics (September), and technology and health services (November). A major contribution of effort and talent was made by the guest editors who organized these issues.

The program of inviting technical leaders to write tutorial review papers in their areas of special competence was continued. Eleven of these invited papers were published during the year on subjects ranging from glass lasers to the control of electric utilities.

The year saw the appearance of 2416 pages in the PROCEEDINGS, of which 2254 were editorial pages while the remainder contained paid advertising and related material. The total number of papers published was 171, of which 132 appeared in special issues. The technical letter section contained 570 pages devoted to the publication of 456 letters.

GROUP TRANSACTIONS and JOURNALS

The technical publications of the Groups again encompassed a major fraction of the IEEE publication output. During the year 184 issues constituting 20,266 pages were published, a slight increase over the 19,847 pages published the year before.

The number of TRANSACTIONS published remained at 31 and the number of JOURNALS at 2. Of these 33 publications, 5 were issued monthly, 8 bimonthly, 16 quarterly and 4 appeared aperiodically.

The current program of evaluating Group publications, set up by the Publications Board and TAB OpCom in 1968, was concluded during the year by 17 three-man task forces. It is expected that the task force reports and recommendations will be extremely helpful to the Groups in strengthening their publications.

For the second year in a row, one of the Institute's three printers suffered a strike, thus seriously aggravating a continuing problem of meeting production schedules. The services of three additional technical typesetters were acquired during the year, two in England and one in the U.S., and by the year's end significant improvement was beginning to be made in meeting schedules.

The Editorial Department staff was strengthened by the appointment of H. James Carter as Managing Editor of the TRANSACTIONS, to assume responsibility for the production of all Group TRANSACTIONS and JOURNALS.

Professor Frank S. Barnes of the University of Colorado continued to implement the editorial innovations he introduced in 1968, when he was appointed Editor of the STUDENT JOURNAL. Each of the five issues published in 1969 was organized around a specific theme -- graduate education, electronic communication, case histories of achievement, social issues and survival, and instrumentation. Under the leadership of Professor Barnes and an Editorial Board of prominent engineers, SJ continued to take on a new look, with livelier graphics and thematic art. With the appointment of four students to the Editorial Board in the spring of 1969, readers gained a direct representative voice in tailoring the magazine to their tastes.

C.W. Beardsley was named Managing Editor, succeeding A.A. McKenzie, who continued his affiliation with the STUDENT JOURNAL as Editorial Consultant.

As in previous years, an additional 20,000 copies of the September issue were sent to Branch Counselors for distribution to potential student members.

Since 1967 student members have been given the option of receiving either the STUDENT JOURNAL or SPECTRUM as part of their dues. In 1969, 51% of the new students and 45% of the renewing students chose the STUDENT JOURNAL instead of SPECTRUM.

During the year 53 signed articles and five guest editorials as well as other technical and career information appeared in the 276 pages of this publication. A correspondence column, which initially contained 5 letters, was inaugurated in the November issue.

TRANSLATED JOURNALS

The Institute continued sponsorship of the program for translating and publishing papers from two Japanese, one Ukrainian, one Chinese and four Russian technical journals. The journals translated from Russian were published by IEEE's former contractor; the balance were published by IEEE with the aid of grants from National Science Foundation. During 1969, over 9000 English pages were published in this translation program, of which 4853 were from Russian, 3607 from Japanese, 449 from Ukrainian and 512 from Chinese.

Advance tables of contents of issues to be translated were carried each month in SPECTRUM, as were signed critical reviews of selected papers that had been published in English.

A total of more than 1600 articles, brief communications, letters and other items were published in English during 1969, of which 1173 were full technical papers.

ADVERTISING

During the year, Sweatman & Fordham was appointed to represent IEEE publications and the International Convention and Exhibition among advertisers and exhibitors in Great Britain and Europe. Another addition was Hendrik V. Prins as Manager, Marketing Services. Mr. Prins has the overall responsibility for IEEE advertising and marketing research, including a newly created marketing and research program, "Synoptic Marketing." This service, which will be offered by the IEEE Advertising Department early in 1970, will make available in-depth information about the overall membership of the IEEE.

In 1969, industry-wide IEEE Advertising Awards were established to recognize annually the important contribution that advertising makes to the industry and to the profession through dissemination of technical information.

2. INFORMATION SERVICES

Data base use and development have been the central focus of Information Services Department activities during 1969. Production capabilities of the Data Base system established during 1968 were refined this year to allow on-schedule delivery of year-end indexes to IEEE technical journals.

System planning for direct on-line access to the Data Base began this year, as did development of capabilities to produce computer tapes for public distribution and to make selected abstracts available for publication in IEEE Transactions.

The first computer tapes containing abstracts and related bibliographic information were delivered to us by the Institution of Electrical Engineers (London) under a new agreement which continues joint IEEE-IEE publication of Electrical and Electronics Abstracts, Computer and Control Abstracts, and the associated Current Papers journals.

The technical subject-classification scheme developed in 1968 with the IEE was used during 1969 in an expanding program of author-assisted indexing. Also based on this scheme, technical subject interest profiles of over 85,000 IEEE members were collected and stored on the IEEE computer for use and analysis. In addition, this scheme was used by TAB to compile technical profiles of the IEEE Groups.

Author-selected citations were collected, as a first step towards a network of meaningful linkages between technical papers in the data base.

National Science Foundation support received for Information Services developmental work amounted to over \$70,000 for 1969-1970, and a proposal for increased NSF support for a three year development and operating program is being submitted.

External contacts by our staff continue to pay off in knowledge of new methods and approaches and in wider awareness of IEEE activities among individuals and groups concerned with information services. In 1969 we actively participated in the leadership and on the committees of the National Federation of Science Abstracting and Indexing Services, and on the Advisory Panel to the Tripartite Committee for the Battelle Study. Papers and talks were delivered by our staff at Computer Group Workshop (Boston, May), Popov Society Convention (Moscow, June), National Engineering Information Conference (Washington, D. C., June), the American Society for Information Science meeting (San Francisco, October), American Society for Information Science and Special Library Association meetings in connection with the Fall Joint Computer Conference (Las Vegas, November), and Special Libraries Association meeting (New York, December).

3. REGIONAL PUBLICATIONS

Two Regional Publications, inaugurated in 1967, continued publication in 1969. Four issues of IEEE ELECTROLATINA were published and distributed to the approximately 2,000 members in Region 9 (Latin America). This technical publication contains articles and other material in Spanish and Portuguese. Region 8, serving nearly 5,000 members in Europe, published the IEEE REGION 8 NEWSLETTER four times during the year.

4. SECTION PUBLICATIONS

A major activity of many Sections is the publication of a monthly Bulletin for the announcement of local activities. Sixty-nine IEEE Sections are now issuing monthly publications as listed below:

<u>Section</u>	<u>Publication</u>
Akron	Akron Section Bulletin
Allegheny Mountain	IEEE News Letter
Atlanta	The Atlanta Circuit
Baltimore	Newsletter
Binghamton	Pulse
Boston	The Reflector
Canaveral	Impulse
Cedar Rapids	Corona
Central Indiana	The Reporter

SECTION PUBLICATIONS (continued)

Section	Publication
Central Pennsylvania	Newsletter
Central Texas	The Analog
Chicago	IEEE Scanfax
Cincinnati	Cincinnati Section News
Cleveland	Cleveland Section News
Connecticut	The CONNector
Dallas	Direction
Dayton	Conductor
Delaware Bay	Newsletter
Evansville-Owensboro	The Transmitter
Florida West Coast	Suncoast Signal
Fort Walton	The Courier
Fort Wayne	The Announcer
Houston	The Scope
Huntsville	The Live Wire
Las Vegas	Current & Sparks
Lehigh Valley	Newsletter
Long Island	The Pulse
Los Angeles Council:	IEEE Bulletin
Antelope Valley	
Buenaventura	
China Lake	
Foothill	
Met. Los Angeles	
Orange County	
San Fernando Valley	
San Gabriel Valley	
Santa Barbara	
Santa Monica Bay	
South Bay Harbor	
Vandenberg	
Mohawk Valley	Echoes
Montreal	Current PHASE Courante
New Jersey Coast	The Scanner
New Orleans	Section Bits-IE ³
New York	The Monitor
North Carolina Affili-	IEEE Bulletin
ation of Sections:	
Central No. Carolina	
Charlotte	
Eastern No. Carolina	
Western No. Carolina	
Winston-Salem	
North Jersey	The IEEE Newsletter
Orlando	Orlando Section Notes
Ottawa	Ottawa Section Bulletin
Philadelphia	Almanack
Pittsburgh	IEEE Bulletin
Portland	The BEEEP
Princeton	The P. S.
St. Louis	The Mighty MHO
San Diego	San Diego Section Bulletin
San Francisco	IEEE Grid

Schenectady	The Prism
Seattle	Data Link
South Bend	The Nucleus
South Carolina	Southern Corona
Southeastern Michigan	IEEE News
Syracuse	Syracuse Scanner
Tokyo	Denshi Tokyo
Twin Cities	Radiator
Washington	The Washington Bulletin
Worcester County	Newsletter

5. ELECTRICAL ENGINEERING

This IEEE management newsletter of 6 to 8 pages, first issued as such in 1964, notes completed and impending changes in the structure, Bylaws, policies, and operations of the Institute and the evolution of its organization units. Its bimonthly distribution includes about 3,500 officers and members of these units. Under supervision of the Internal Communications Committee, its mission is to encourage an exchange of information among committees, Groups, Sections, and Headquarters staff. "Feedback" from the field units to Headquarters is encouraged. In 1969, to 42 pages of text were added 18 supporting supplements.

Ownership of the title "Electrical Engineering" by the Institute as a registered trademark goes back to 1931.

II. TECHNICAL ACTIVITIES

1. TECHNICAL ACTIVITIES BOARD

Reorganization. The seeds of reform, sown two years earlier, bore fruit by the end of 1969 with the reorganization of the support for IEEE's technical activities. The purposes of the reorganization were to provide better mechanisms for responding promptly to changes in technology and for coping with the complex, highly interdisciplinary problems that characterize the present era. Through more timely and appropriate activities, IEEE will give better service to individual members and, collectively, to the profession they represent.

This is the second significant modification of the Group system since its establishment more than two decades ago, the first being the wide-spread incorporation of Technical Committees within individual Groups in the 1963-4 era. The present reorganization is more fundamental in nature. The Groups have been clustered into six Divisions, each of whose composite memberships will nominate and elect an IEEE Director. The IEEE Vice-President for Technical Activities will continue to be the Chairman of the Technical Activities Board and will speak for their interest at the IEEE Executive Committee. The TAB Vice-Chairman, who will also be a Director, and the six Divisional Directors will join the TAB Chairman on the IEEE Board; they plus the appointed Chairmen of the TAB Standing Committees will constitute the voting members of the TAB Operating Committee.

Suitable amendments have been made in the IEEE Bylaws to accomplish a smooth transition to the new organizational structure. Ad hoc Committees were established in 1969 to initiate studies on the detailed implementation of the reorganization. Topics receiving especial attention were criteria on Group viability, which will serve as guidelines in the review of the total performance of each Group, not less frequently than once each five years; an examination of the names or titles associated with Groups and Group officers and the internal and external significance of such proposed changes as "Group" to "Society" and "Chairman" to "President"; and a review of present member services in the light of present member interests and requirements and against the background of what other societies are doing.

The Group Divisions, adopted at the conclusion of the 1969 reorganization, are listed below. The composition of these Divisions is not static. Every encouragement is offered for the migration of technical interests between Divisions, including the shifting or merger of Groups, whenever such adjustments will lead to beneficial long-term results.

Division 1

- G-1 Audio & Electroacoustics
- G-4 Circuit Theory
- G-12 Information Theory
- G-23 Automatic Control

Division 2

- G-16 Computer

Division 3

- G-2 Broadcasting
- G-8 Broadcast & TV Receivers
- G-10 Aerospace & Electronic Systems
- G-19 Communication Technology
- G-27 Electromagnetic Compatibility

Division 4

- G-3 Antennas & Propagation
- G-15 Electron Devices
- G-17 Microwave Theory & Techniques
- G-20 Sonics & Ultrasonics
- G-21 Parts Materials & Packaging
- G-33 Magnetics

Division 5

- G-5 Nuclear Science
- G-6 Vehicular Technology
- G-9 Instrumentation & Measurement
- G-13 Industrial Electronics & Control
Instrumentation
- G-31 Power
- G-32 Electrical Insulation
- G-34 Industry & General Applications

Division 6

- G-7 Reliability
- G-14 Engineering Management
- G-18 Engineering in Medicine & Biology
- G-25 Education
- G-26 Engineering Writing & Speech
- G-28 Man-Machine Systems
- G-29 Geoscience Electronics
- G-35 Systems Science & Cybernetics

Some details of the reorganization are discussed in the December issue of Spectrum (pp. 122-124) and a further report on the implementation details is planned for a 1970 issue.

Standards. Apart from the major reorganization described above, advances were made in specific areas, such as standards, member interest profiles, publications and finances. An Ad Hoc Committee on IEEE's Standards Activities concluded that existing arrangements could not meet the basic requirements stated in the IEEE Bylaws, much less fulfill the expectations of IEEE members, which were revealed as a by-product in a survey made two years earlier. Recognition of the Groups, and their Technical Committees, as the primary sources for IEEE standards is evidenced by the Ad Hoc Committee recommendations that the Groups share more fully in all the steps in IEEE's standards procedures. Effective immediately, IEEE standards will be published in

the appropriate Transactions or Journals, with reprints available for additional individual sales. Other recommendations concerning such matters as the role and composition of the IEEE Standards Committee, the types or categories of materials that are appropriate for IEEE standards, and the interaction between IEEE standards activities and those of USA and international organizations are expected to receive attention in 1970 from the IEEE Standards Committee, TAB, and the IEEE Executive Committee and Board.

Technical Interest Profiles. The concept of technical interest profiles for individual members was seriously proposed when plans were first made for the IEEE headquarters computer. Great strides were made in 1969 towards the fulfillment of this potential, in part as a consequence of the reorganization described above and through the joint efforts of the Information Services Department and TAB.

The Group membership lists have provided a gross type of technical interest profile for all IEEE members belonging to at least one Group; but this left about half of the IEEE membership undifferentiated. The response cards used for the 1970 IEEE directory were designed to permit each member to identify individual technical interests by means of not more than ten 4-character codes, taken from the subject list used jointly by IEEE and IEE (see details of this joint effort in the Information Services portion of this report) for indexing and similar purposes. Concurrently, the Groups and their Technical Committees had been asked to describe themselves in terms of present activities and those projected to 1975, to review the joint IEEE/IEE subject list, and to suggest improvements for those technical areas deemed to be less than adequate.

The response of the IEEE membership was most gratifying, particularly in view of the lack of a detailed utilization plan and demonstrable value of the requested coded information; in a sense, this response was a vote of confidence in the IEEE leadership to provide better means of serving the membership.

Without giving details here, one may visualize the possibilities of defining the actual technical activities and interests of the individual IEEE members and of the Groups and their Technical Committees by means of the same 4-character codes, thereby making possible a much more precise selectivity than ever before possible. Trial use of these capabilities will be undertaken in the months ahead. It should be noted also that these technical interest data may be combined with employment data also in the IEEE records to produce statistical information of great value for advertising and other promotional efforts.

Publications. Through the joint efforts of the IEEE Publications Board and the TAB Publications Committee, evaluations were completed for those Group Transactions and Journals not covered in 1968. The TAB Publications Committee focussed its attention particularly on the factors that contribute to delays in the

publications and distribution of our periodicals. Perhaps to the surprise of many Group officers, the procedures and practices employed by a considerable number of Group Editors have been responsible for a great deal of the systematic delays, as distinguished from delays caused by external, more random events, including strikes. Once the nature of the problems were understood, remedial action could be initiated through the joint efforts of the Editors, the IEEE staff, and the publishers; there does not appear to be immediate prospects of a speed-up in the U. S. postal system which introduces a variable delay in the final step of the publication and distribution cycle. The microfiche experiment undertaken with three Transactions in 1969, awaits analysis of renewals and similar data. Meanwhile, upon the recommendations of the IEEE Publications Board, TAB OpCom concurred with the offering of microfiche editions of all IEEE technical publications in 1970.

Finances. The TAB Finance Committee has continued its efforts to identify all items of income and expense related to technical activities. The interface between the Groups and TAB budgets and the total IEEE budget has received particular attention. To encourage long range planning by each Group, efforts were made to describe each item of expense or income by means of simple formulas. Parameters derived from IEEE headquarters operations, e. g. printing costs, hopefully will change only slowly from year to year and may be forecast with sufficient accuracy to permit meaningful budgeting and financial planning. Other parameters controlled by activities and efforts of the individual Groups, e. g. membership growth rates, the number of pages published per year, newsletters and other special publications, and conferences, may be similarly forecast by the Groups.

The details for the preparation of 1970 budgets were reduced to a computer program. Although most of this work was done outside, the program had been tested and proven to be compatible with the IEEE headquarters computer. Efforts along these lines will continue, with the understanding that many headquarters operating routines will be transferred to the computer early in 1970, thereby making feasible the preparation by computer of much of the material for financial statements and reports. Statistical studies are planned to show the current membership relations among the various Groups in a Division and between Divisions and, on a continuing basis, to reveal changes in membership patterns.

Technical Planning. One of the purposes of the TAB reorganization was to be better prepared to recognize and respond to changes in electrotechnology. It was recognized that in some cases new technologies would emerge; in others, long-known technologies might come to the fore as elements in the solution of new and complex problems. The TAB Vice-Chairman undertook major responsibility for these areas

and established a Technical Planning Committee to assist with the work.

During 1969, an Ad Hoc Committee study of IEEE's interests in manufacturing technology was drawn to a close. From an analysis of the attendance records at special sessions sponsored at several conferences, it was found that most IEEE members interested in manufacturing technology are not members of any of the present Groups; the minority who belonged to Groups held memberships in about three-quarters, which was an unanticipated diverse spread of interests. Recommendations of the Ad Hoc Committee will be considered and acted upon in 1970.

A TAB Oceanography Coordinating Committee was established to bring together the interests of more than a dozen Groups in the ocean engineering field. The OCC is intended to provide a simple and flexible means for the IEEE Groups to interact with external organizations, such as the intersociety Offshore Technology Conference. The OCC also is responsible for a newsletter, available to any IEEE member on request, to report on present and planned activities of the Groups, acting individually and in concert. In the latter category is the first IEEE conference devoted solely to ocean engineering, which is cosponsored by the IEEE Panama City, Florida, Section and the OCC and will be held in Panama City, September 21-24, 1970.

Late in 1969, an Ad Hoc Committee was formed to explore IEEE's interests in electrography. This is illustrative of a change in emphasis or importance for a technology that has been with us for a number of years. To date, IEEE's treatment of the subject in publications and at conferences has been sporadic.

Convention Technical Program. In 1969, TAB continued its responsibilities for the technical program for the IEEE Convention. Particular attention was given by the Technical Program Committee to the technical content of the sessions planned for March 1970.

Of far greater long-range significance was a TAB initiated effort that evolved into a special Committee report to the IEEE Board, recommending establishment of a new IEEE Convention Board. This recommendation was adopted in the closing days of 1969. It is to be promptly implemented in order that the new Board may have full authority and responsibility for the 1971 Convention. A new IEEE headquarters staff organization is being established to support the Board and implement its decisions. The staff will have major operating responsibility for the IEEE Convention and Exhibition.

General Activities. As has been true in prior years, the accompanying tabulations show a continued growth in IEEE technical activities, as measured in terms of such parameters as published pages, conferences and symposia held, Group Chapters, and Group memberships. All of these depend most heavily on the leadership and efforts of individual IEEE members. The degree of our membership involvement appears to be a unique feature of IEEE's operations.

It is worth noting that the percentage of IEEE members who belong to at least one Group has increased, which continues a trend of more than five years. The number of memberships per individual has declined slowly, but the total number of such memberships increased. The effect of a new fee arrangement for student members of Groups (a fixed \$2.00 fee for each Group membership, without limit as to number, replacing a \$1.00 fee for a single Group membership plus full fees for any additional memberships) appears to have resulted in a significant increase in the total number of Student Group memberships but a decrease in the number of individuals holding these memberships.

Conclusion. The outline of TAB affairs reported above includes some items that will have a profound influence on our technical activities for many years. For as long as we are willing to recognize technological changes and to modify old, established organizations and procedures to accommodate technical advances, and for as long as we enjoy the support and leadership of our members and attract and interest students, who will form the body of the electrical engineering profession in their time, IEEE may be confident of its viability and its future.

2. The JOINT TECHNICAL ADVISORY COUNCIL

(JTAC), sponsored by the IEEE and the EIA (Electronic Industries Association) held six meetings during 1969. The Council has had four Committees active in various areas of the radio art.

JTAC Committee 63.1—Electromagnetic Compatibility: Committee 63.1 held three meetings during 1969. These were mainly devoted to exploring the efforts made by government and private concerns to adopt the recommendations made in the report SPECTRUM ENGINEERING — THE KEY TO PROGRESS. The JTAC's prime recommendation in this report was to establish a modern spectrum engineering and system-design philosophy for technical procedures relating to allocation and assignment of the radio spectrum. Adoption of such a philosophy would be essential in order to establish the "next generation" spectrum engineering system.

To implement this recommendation, JTAC outlined a pilot project which would put the new frequency selection concept into experimental operation in a trial region. Results thus obtained from the project would then provide the basic information required to proceed further with the development of a flexible full-scale system.

Many steps have been taken on the part of numerous private and government entities to ultimately provide the much needed data required to fulfill the JTAC recommendations. Among these include the following:

- The Office of Telecommunications Management and the Electromagnetic Compatibility Analysis Center (ECAC) have been studying the role they could play in data collection and analysis of specific problem areas. Their findings point more and more to the need for a separate facility, space limitations being a major factor. Planning effort is now moving forward for the creation of a Nation-wide Electromagnetic Compatibility Analysis Facility (NECAF). The OTM plans to seek funding for this new facility in the fiscal 1971 budget.
- Some work has also been done on defining and expanding the parameters needed for the data base which will be required for the new spectrum engineering system. Meetings among representatives of the Department of Defense, Electromagnetic Compatibility Analysis Center and Office of Telecommunications Management on the design of the data base are underway.
- Some preliminary work has been done among users in the Los Angeles area as a potential pilot project region. A Southern California Land Mobile Users Committee, representing non-government users, has been organized. This organization has volunteered to do initial work on the pilot project until an adequately funded entity is established by the government. The FCC is considering recognition of this body as an interim agency to handle preliminary pilot project work. Government users would join in later, after funding is available.

In addition, the OTM has initiated a study of spectrum usage in the L band telemetry

services (1435 - 1535 MHz), including government and non-government users, which will provide information for use in developing the new spectrum engineering system.

- The FCC contracted with the Stanford Research Institute to study land mobile channel assignment procedures. This study has led to the development of another method of monitoring spectrum occupancy. The method uses a scanning receiver with the output being computer processed to produce a three-dimensional display on movie film. It is automated and very rapid compared to manual monitoring. Further study is necessary to determine what role this method could play in the monitoring effort needed to support an effective spectrum engineering system.
- The FCC has invited bids for a study contract for the development of spectrum utilization criteria and frequency assignment procedures for the frequency range of 1.85 to 15.25 GHz; they also request consideration of frequencies above this range.
- An interdisciplinary advisory council, advisory to the OTM and called the Electromagnetic Radiation Management Advisory Council (ERMAC), has been established by the OTM. The Chairman of the section of the JTAC report dealing with "side effects," has responsibility for writing a report on the results of work in this field to date. The first volume, "General Considerations," is complete; the second volume, "Technical Considerations," is now being reviewed.
- A public Safety Study, under the direction of IIT Research Institute, has been made for Association of Police Communications Officers (APCO) under the Law Enforcement Assistance Program with regard to the present use and future needs of police frequencies in the Great Lakes area: The study showed that already there was a need for additional channels to meet current load.
- The National Academy of Engineering (NAE) has a Telecommunications Committee which, in turn, has a panel, sponsored by the OTM, looking into the technical, economical, and social considerations involved in a value-based, decision-making process for spectrum allocation.

The JTAC, together with a group from the Committee, met with staff members from the Office of Science and Technology, the White House, and the Bureau of the Budget. At this meeting, it was suggested that the JTAC make similar presentations to appropriate committees of the House and the Senate.

JTAC Committee 65.1—Future Needs and Uses of the Spectrum: An attempt was made to conduct a new survey to update the 1968 report, FUTURE NEEDS AND USES OF THE SPECTRUM. Although additional technical answers are needed for a meaningful evaluation, a complete survey cannot be reported without a full knowledge of the government needs, as well, on the future needs of the spectrum. The Office of Telecommunications Management is proposing to establish a

National Electromagnetic Compatibility Analysis Facility (NECAF). This is in response to the JTAC reports SPECTRUM ENGINEERING — THE KEY TO PROGRESS and FUTURE NEEDS AND USES OF THE SPECTRUM to provide an entity for advance confidential review of prospective new developments to assure spectrum availability for those developments successfully completed. The JTAC is waiting to act further in this area after the establishment of NECAF.

JTAC Committee 66.2—Testing Sharing of TV Channels by LMRS: The JTAC established this Committee to assist the FCC in tests being conducted by the Commission on the feasibility of the Land Mobile Radio Services sharing TV channels. The tests have been completed and final acceptance of the FCC report by the Commissioners is awaited.

JTAC Committee 67.1—Spectrum Utilization Aspects in the Use of Space Techniques: Committee 67.1 was established to study spectrum utilization aspects of space techniques. It is anticipated to release a report by November/December, 1970, prior to the International Telecommunication Union's World Administrative Radio Conference on Space Telecommunications scheduled for early 1971.

Pre-College Guidance

The IEEE Pre-College Guidance Committee of the Educational Activities Board held three meetings under the chairmanship of Dr. I. J. Liden, E. Saline, General Electric Company. Various approaches to IEEE's guidance activities were evaluated, resulting in the establishment of sub-committees to coordinate guidance activities in the following specific areas:

1. Coordination with ECPD and its constituent societies to launch a nation-wide, professional-wide guidance program. Extra emphasis was placed on the activity by a talk given by IEEE President F. Karl Wilbercock at the ECPD Annual Meeting in Washington, D. C. President Wilbercock emphasized the strong need for such a program. The committee is coordinating its coordination with ECPD towards further of this program.
2. New responsive guidance brochures are being developed.
3. Guidelines are being promulgated for coordination of guidance activities at the local level.
4. A brochure is being developed for the production of a guidance film on "Engineering Technology."

The Educational Activities Board, under the chairmanship of the John D. Frankel, held a technical institute of education, held five meetings during 1969 at which it reviewed the activities of its standing committees and initiated actions as indicated. The standing committees are:

- Pre-College Guidance
- Student Activities

In the area of Continuing Education the Board reviewed, evaluated and promulgated a number of new projects. The following summarizes the activities of each of the above areas of responsibility of the Board.

Accreditation

The chairman of the Accreditation Committee is Dr. H. W. Farrow, University of Michigan. Dr. Farrow and the committee work closely to maintain liaison with ECPD and IEEE representatives in evaluating criteria and criteria at Universities in the United States. The committee reviewed the current list of institutions and recommended appropriate changes in IEEE's representation to the EERA Visiting Committee.

Continuing Education

Among the continuing programs of the Board are the offering of short course in career listings published in SPECTRUM, additions to the slide-tape lecture series for use of IEEE societies, updating and extension in a number of services and material available in the continuing education area.

The Board reviewed a number of potential short courses which could be given by the IEEE and established guidelines for the selection and evaluation of such material. Two short courses were presented during the year with favorable and enthusiastic response from the membership. Three tutorial seminars were presented at the 1970 International Convention. Plans are under way to continue the tutorial seminar program at the 1970 Convention. Tutorial seminars will be presented concurrently each morning of the Convention. In addition, two two-day short courses will be given on subjects deemed of current interest to our membership.

Management Games Seminar, the first of a series of home study courses, has been presented twice during the past year with an enrollment of

III. EDUCATIONAL ACTIVITIES

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Among the continuing programs of the Board are the updating of short course university listings published in SPECTRUM, additions to the slide-tape lecture series for use of IEEE entities, updating and reissuance of a manual of services and material available in the continuing education area.

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Management Games Seminar, the first of a series of home study courses, has been presented twice during the past year with an enrollment of

over 3,500 students. The course will be presented again in 1970 to the membership in Regions 1 through 7. Additional courses of this type are under consideration by the Board.

Facilities are being arranged to test a "Dial Access" information system. This will be in the form of 5-8 minute, current status of technology reviews prepared by eminent Group members, which can be played over the telephone upon request from a member. It is anticipated that the program will be in operation early in 1970 on an experimental basis.

IPL '69, an audio tape cassette recording of a workshop on Industrial Processing Languages, inaugurated a new service entitled Cassette Colloquia through which the Educational Activities Board hopes to provide technical information and a record of workshops, seminars and conferences. Additional subjects are being prepared in this format for release early in 1970.

Pre-College Guidance

The IEEE Pre-College Guidance Committee of the Educational Activities Board held three meetings under the chairmanship of Dr. Lindon E. Saline, General Electric Company. Various approaches to IEEE's guidance activities were evaluated, resulting in the establishment of sub-committees to coordinate guidance activities in the following specific areas:

1. Coordination with ECPD and its constituent societies to launch a nation-wide, profession-wide guidance program. Extra emphasis was placed on the activity by a talk given by IEEE President F. Karl Willenbrock at the ECPD Annual Meeting in Washington, D. C. President Willenbrock emphasized the strong need for such a program. The committee is continuing its coordination with ECPD towards fruition of this program.
2. New inexpensive guidance brochures are being developed.
3. Guidelines are being promulgated for coordination of guidance activities at the local level.
4. A prospectus is being developed for the production of a guidance film on "Engineering Technology."

5. A study was initiated under the direction of Dr. Donald Super, Columbia University, to determine which factors have what degree of influence on a youngster's career determination. It is hoped that this study will provide an insight to how high school students get "turned on" or "turned off" in the selection of engineering as a future career. The information will be most helpful in the development of IEEE's guidance activities.

Region	Student Branch	Associate Branch	Total Branches
1	51	19	70
2	36	7	43
3	34	3	37
4	32	8	40
5	31	5	36
6	40	7	47
	<u>224</u>	<u>49</u>	<u>273</u>
7	18	11	29
8	15	1	16
		Section	2
9	19	2	21
10	1	0	1
	<u>277</u>	<u>63</u>	<u>342</u>

Student Activities

The Student Activities Committee, chaired by Dr. Richard B. Russ, Union College, held two meetings in 1969. The annual Vincent Bendix Award program was administered with grants to seven Student Branches totaling \$2,605. The annual Student Branch Counselors meeting was held at the 1969 International Convention with a record attendance.

The committee has reviewed and evaluated in depth the IEEE Prize Paper structure and has made recommendations for consideration by other Boards and Committees of the Institute. IEEE's role in Student Activities was reviewed and the following reasons for Student membership in the IEEE were developed:

1. To establish a base for further Institute membership.
2. To serve and augment school programs.
3. To promote leadership training.
4. To give vocational orientation as a stimulation for further motivation.
5. To identify the electrical engineering profession with the Student and the school by establishing avenues of communications.

In keeping with the above points, the Student Activities Committee appointed an ad hoc committee to review existing procedures and recommend any necessary changes in criteria for IEEE Student/Student Associate Branches and membership.

IEEE Student and Student Associate Branches enjoyed a growth of 23 new Branches, making a total of 342 operating as follows:

IV. BOARD AND STANDING COMMITTEE ACTIVITIES

1. Admission and Advancement Committee. During the year 30,805 membership applications for admission and transfer were processed. This compares with 30,400 processed in 1968. 1,561 required review by the Admission and Advancement Committee during the twelve meetings held in 1969, when actions were taken as follows:

	Senior Member	Member
Admissions approved	307	583
Admissions rejected	49	36
Transfers approved	437	99
Transfers rejected	41	9
	834	727

2. Awards Board. During 1969 the Awards Board conducted an extensive study of the IEEE awards. This was in accordance with the Institute Bylaws and was the first such review since the formation of the IEEE in 1963. Many suggestions and recommendations were made, and the final recommendations will be submitted to the Board of Directors early in 1970. Because of the decennial review of the awards structure, two additional meetings were scheduled in 1969 for a special committee of the Awards Board besides the three regular meetings of the Board. All the meetings were held in New York at IEEE Headquarters.

The Awards Board considered and approved for submission to the Board of Directors for final approval the recommendations of its Committees for candidates for five Major, eight Field, three Prize Paper, and two Scholarship Awards. With regard to the presentation of the awards in 1969, the Medal of Honor and Major Annual Awards were presented at the Annual Banquet and the Prize Paper Awards were given at the Directors Reception during the International Convention. The Field Awards were presented at special functions held during various meetings and conferences throughout the country as follows: the Winter Power Meeting in New York; the International Conference on Communications in Boulder; the Western Electronic Show and Convention in San Francisco; the Electronic and Aerospace Systems Convention and the International Electron Devices Meeting in Washington, D. C.; and the National Electronics Conference in Chicago.

Regarding Intersociety activities, the Awards Board approved recommendations for replacement of several IEEE Representatives whose term of membership expired on three Intersociety Boards of Awards. Also, recommendations for candidates were submitted for the following awards, which are administered by other professional societies: Alfred Noble Prize Award

(ASCE); the John Fritz Medal (UET); the Hoover Medal (ASME); and the Washington Award (WSE). Recommendations were also made for the National Medal of Science.

In addition, the Awards Board approved the establishment of awards that were proposed by four different IEEE Groups during the year.

3. Educational Activities Board. (See Section H-III)
4. Fellow Committee. The Committee held two meetings and conducted much activity by correspondence in 1969.

395 nominations for Fellow grade were reviewed and scored by Committee members. The Committee submitted to the Board of Directors the names of 123 candidates, with accompanying citations, recommended for elevation to Fellow grade as of January 1, 1970.

Following the Committee's recommendation, the Board of Directors approved a Bylaw which prohibits Regional Committees from endorsing or sponsoring Fellow grade nominations.

A new Handbook for Fellow Grade Nominations was prepared and distributed to assist sponsors in the effective preparation of nominations.

5. Finance Committee. The Committee held seven meetings in 1969 and primarily concerned itself with the review of the investments of the Institute, the creation of the Investment Committee, the comparison of actual results this year against the approved budget, the analysis of additional space needs, the determination of what expenses could be reduced and income augmented in this and future years, and the preparation of the 1970 budget.

The annual audit of the Institute by Price Waterhouse & Co. was accepted by the committee who recommended to the Board of Directors that it be published in SPECTRUM.

During the year, in which the overall securities market sustained a substantial loss in value, the committee spent considerable time reviewing the investments with its appointed investment counselor. The need for more frequent reviews of this essential function was the motivating force in the creation of an Investment Committee, composed of representatives from the Board of Directors along with some outside experts. The Investment Committee has met with the investment counselor, and presently has under preparation its charter.

An analysis of the operating functions and the cost of performing various individual services for the members was started during 1969. This indicated several areas where the cost of services being performed should be repriced and/or the work force realigned to balance the work being performed, the income generated, and the funds available to support the particular function. The Finance Committee also recommended changing the financial statements so that the service departments would charge costs directly to the operating departments based on the amount of assistance rendered rather than on an indirect allocated basis.

The Finance Committee coordinated and prepared the budget for 1970, and presented it to the Board of Directors in November along with a detailed explanation of its components.

6. History Committee. A formal meeting of this Committee was held in March at the International Convention, but most of the Committee work was carried on by correspondence. The preparation of a history of the formation of the IEEE from the merger of the American Institute of Electrical Engineers and the Institute of Radio Engineers is an on-going project of Nelson Hibshman, retired IEEE Executive Consultant, under the auspices of the History Committee. A first step was taken in 1969 for assembling a limited collection of archival documents having special relevance to the Institute.

The Committee was saddened by the death in August of Haraden Pratt, its Chairman since the formation of the IEEE in 1963.

7. Internal Communications Committee. The ICC held five meetings during 1969. The Committee has operated as a far-ranging advisory group and has constantly reviewed internal communication problems and recommended ways to improve the interface between the Institute and the member.

Acting on a recommendation of the ICC, ballots for the 1970 IEEE officers included a photograph of each candidate in addition to the background material.

The Committee generated a program for officer recognition by the preparation of special tie pin/clips with the Institute emblem and identifying color borders - rust for Group Chairman, turquoise for Section Chairman and royal blue for the Life Member. It also developed a recognition insignia for Past Presidents and Past Directors of the Institute. In addition, a fresh new family of certificates was developed and put into operation by the Institute in 1969.

At the request of the Sections, a program has been evolved whereby a quick "thank you" could be said by giving a miniature certificate duly inscribed and inserted into a paperweight.

In support of the need of the Membership and Transfers Committee, the ICC has been asked by the Executive Committee to expand membership promotional programs which are needed to further enhance the Institute entity to both recruit members and retain those whose job function or interest might have changed, thereby creating a possible impression that their needs are no longer served.

The ICC is trying to correlate a conference manual for the Institute, taking into consideration the several now in use. The Organization Chart printed in the Organization Roster was revised to more clearly define both functional areas of responsibility and organizational lines of authority.

ELECTRICAL ENGINEERING is the Institute's management newsletter on IEEE operations to encourage communication among committees, Groups, Sections, and staff. It is published under the aegis of the ICC who this year encouraged each organizational entity to have either regular or periodic inserts giving its own news to the readership. Additional information on E. E. could be found in the publication section of this report.

8. Intersociety Relations Committee. During 1969 the ISRC further refined its continuing review of our representation and interaction with outside organizations. In conjunction with designated Boards and Standing Committees, it compiled a comprehensive status report of these activities. The report resulted from the responses obtained from 158 representatives to 32 societies located throughout the world. The responsibility for appointments to outside organizations for which the Professional Relations Committee had been responsible was delegated to the Educational Activities Board. The appointments so delegated were to the NCEE and the Ethics Committee and Young Engineers Committee of ECPD.

The ISRC reviewed the subject of professionalism and decided there was no basis for changing current policy in this regard at this time. It re-emphasized the fact that members of IEEE cover an extremely wide range including para-professionals, individual practitioners, practicing professionals in industry, and top management. The common bond the Institute supplies to all members is the satisfaction of their technical needs.

The ISRC focussed a good part of its time on the ISRC Subcommittee on Scientific and Cultural Exchanges and its effort to enlarge the scope of the scientific and cultural exchange to include other Eastern European nations. Dr. Chestnut, during his trip to Poland to attend an IFAC meeting, approached a number of people from several Eastern European countries and elicited some very positive interest in an exchange program. The subcommittee, acting on the basis of the groundwork prepared by Dr. Chestnut, wrote

letters to the contacts he made with copies to the appropriate embassies in Washington, D. C. requesting suggestions and identification of other key people in their respective countries.

Dr. Willenbrock, who headed the U.S. delegation to the 1969 Popov Congress, gave particular attention to the various aspects of the exchange and he and the delegation made a number of valuable suggestions for facilitating its operation.

The 1969 IEEE/Popov Exchange was the most successful to date from the point of view of numbers of participants and the quality of the installations visited. The 1970 visit should be even more meaningful in that it is anticipated that there will be greater depth of coverage of various technical areas. A new 1970 "Guide" has been prepared for the IEEE delegates to the Popov Congress.

9. Life Member Fund Committee. The annual meeting of the Life Member Fund Committee was held in March 1969 when the criteria for supporting the travel expenses of individuals who represented IEEE at meetings for the determination of international standards were discussed. The funds would be granted to those individuals who could not readily obtain alternate sources since these funds are to supplement rather than replace presently available funds. It was reconfirmed that the participants were to represent IEEE's views in these fields and not that of the U. S. community.

The Life Member Fund Committee, at the request of Haraden Pratt, Chairman of the History Committee, agreed to make available the sum of \$2,500.00 for the purchase of display equipment to house objects and papers of historical significance.

Members who have retired from active employment before they have fulfilled the requirements to become Life Members of IEEE have requested some adjustment in their membership dues. This problem was referred to the Life Member Fund Committee by the Executive Committee. The Life Member Fund Committee felt that there should be no change in the conditions necessary for becoming a Life Member nor modification of the Bylaws to allow preferential dues treatment other than that set by the present Life Member category.

10. Long Range Planning Committee. At the formal meeting of the Long Range Planning Committee, the results of its preliminary work were discussed and certain recommendations prepared.

The Committee believes it is essential that its membership be enlarged and that the members should participate for a longer period of time than the present one year appointment. The tenures should overlap with different members leaving the Committee each year in order to allow for continuity.

Further, its function should be that of a coordinator, and its work done through the cooperation and efforts of subcommittees assigned to study specific tasks and/or by standing subcommittees representing continuing activities of the Institute. The Boards and Committees of the Institute have substantial knowledge of the Institute in their particular areas and the forces which can be applied to improvement of the total IEEE organization.

With the change in social structure in the world, the Institute must become more oriented towards the needs of the individual. We should attempt to bring the human factors into the thinking-oriented engineer's life. IEEE should, in conjunction with other engineering societies, take the initiative to convince its members to contribute their intellectual abilities towards solving society's problems.

The Long Range Planning Committee recommended that a study be performed by representatives of the Regional Activities Board to determine the desirability of reducing dues for those members who reside outside the United States of America and are members of national societies. The dues would be lowered proportionately to compensate for IEEE services not provided to such members, or for rebates not granted to such geographical units.

It was further recommended that the Institute develop an operating reserve, by the end of 1976, of \$7,200,000. A sum of this magnitude is necessary to cover years in which the Institute might operate at a loss and not desire to temporarily cut back services rendered to members; to take care of major market collapses affecting our Investment Portfolio; to cover major casualties to our premises; and, amongst other things, to provide funds for acquiring major capital assets that would make the Institute more efficient and beneficial to its members.

11. Membership and Transfers Committee. This Committee, composed of thirty members, met four times during 1969.

All members of the Committee were designated "Area Representatives" and assigned to particular IEEE Sections with which they maintained regular communication in the matter of membership and transfers activities.

"Operation GIT" (G-Growth, I-Involvement, T-Transfers) is a continuing membership drive throughout the organizational units of the IEEE with the objective of realizing an annual ten per cent increase in membership. One of the functions of the Area Representatives was to stimulate interest of the Sections in organizing local membership activities to fulfill this objective.

A questionnaire was developed and mailed to all members failing to pay current year's dues to determine why they have chosen not to continue membership. The responses are being analyzed and a detailed report will be submitted for Committee review.

One important subject discussed by the Committee was the matter of increasing Student member enrollment. The Committee also recommended that privileges of Student membership be extended to pre-college students. The Executive Committee has requested the Educational Activities Board to study and submit recommendations on this proposal.

The Committee questioned how significantly IEEE is communicating the objectives and goals of the Institute to foster and maintain interest in membership. In contacts with the Sections it was discovered that many of those elected or appointed to serve the Institute were unaware of all of the benefits of membership and services from the IEEE. The Committee developed a "Communications Program," a series of articles for publication in "Electrical Engineering" in 1970, covering the following major subjects: (1) goals of the IEEE, (2) advantages of membership, (3) self-improvement/participation, (4) transfers, (5) Group membership, (6) mechanics of establishing Group Chapters, (7) mechanics of establishing Student Branches.

The Committee was authorized to publish in the April 1969 issue of SPECTRUM an article on "Operation GIT" and a postcard on which members of the Institute could furnish the names and addresses of prospective members. IEEE membership promotional material was furnished to 843 potential members as a result of this promotional effort.

During the year IEEE staff members operated Membership Service Desks at sixteen major IEEE Conferences. This successful undertaking will be continued in 1970.

12. Nominations and Appointments Committee. Three meetings of the Committee were held in 1969 to fulfill its responsibilities, which included:

- (1) Reports to the Board of Directors recommending candidates for (a) election by the annual Assembly and by the voting membership, and (b) appointment to those Committees and Boards reporting to the Board of Directors.
- (2) Report to the Executive Committee recommending candidates to serve on those Committees reporting to the Executive Committee.

The Committee continues to seek ways of encouraging more active participation by the IEEE organizational units in submitting names of recommended nominees who are willing and able to serve the Institute.

13. Publications Board. (See Section F and Section H-I)

14. Regional Activities Board. In March 1969 the Sections Committee was abolished and a new Regional Activities Board (RAB) established to assume the responsibilities of the Sections Committee and to give full attention to the important geographical activities of the Institute. The Board of Directors approved a new Bylaw (308) defining the composition and scope of activities of RAB.

RAB held three meetings in 1969, and activities are reported as follows:

- (1) Region 8 Boundary Change. Upon the recommendation of RAB, the Board of Directors approved a new border for Region 8 to achieve a clear delineation of its southern boundary, together with a minor adjustment to include the Middle East. The country of Greenland was simultaneously assigned to the territory of the Denmark Section in Region 8.

- (2) Abolishment of Constitution for Sections. Upon the recommendation of RAB, the Board of Directors abolished the Constitution for Sections and incorporated Articles of that Constitution into the IEEE Bylaws.

- (3) RAB Committee Structure. A Committee structure for RAB was developed, including the following:

National Activities Committee
Non-National Activities Committee
Finance Committee
Policy and Planning Committee
Member Services Committee
Student Activities Committee
Technical Activities Committee

- (4) Section Student Activities Manual. As proposed by the former Sections Committee, RAB approved a new document, "Section Student Activities Manual," which provides suggested guidelines for the important relations between Students and the Sections.

- (5) National and Non-National Roles of IEEE. RAB discussed at some length the national and non-national roles of the Institute and concluded that IEEE is at least potentially adequately equipped to deal effectively with its appropriate national roles in any nation where such roles might emerge, without weakening its broader non-national roles. The RAB also concluded that a policy statement by the Board of Directors relative to the IEEE's national role was desirable and it recommended, and the Board of Directors subsequently approved, the following statement:

"When the IEEE, or any of its organizational elements, engages in an activity which is specifically national in character, that is to say, an activity which by its nature reflects an intrinsic relationship to a specific national environment, the guiding policy should be that undertaking such an activity should not preclude IEEE action on the corresponding problem in any other national environment. It should be noted that this policy contemplates the possibility that the IEEE might adopt differing positions relative to a particular problem area, in its different national environments."

- (6) Exchange Member Privileges. IEEE has been approached by counterpart societies in Regions 8 - 10 concerning reciprocal membership privileges and cooperation with them in activities of mutual interest.

The following RAB proposal was approved by the Board of Directors and the necessary Bylaw revisions adopted for implementation:

"It is proposed that the Board of Directors authorize the Executive Committee to extend membership privileges, on a reciprocal basis, to members in good standing of those National Societies in our field of interest which wish to enter into such a relationship. In this context, an exchange membership implies collection of the same dues and Group fees as for regular membership; full membership privileges in every respect excepting the right to vote in the election of officers and directors; and automatic acceptance of applications for exchange membership status which carry a certification by an officer of the National Society involved attesting to the applicant's membership status in that Society, without entrance fee. Exchange membership privileges would be limited to a maximum of three years for any individual."

- (7) Proposal to Extend Group Affiliate Program. RAB considered the question, frequently raised, relating to an extension of the Group Affiliate Program to members of certain national societies, making it possible for many more individuals outside Regions 1 - 7 to receive Group publications at reduced rates. RAB has recommended to the Technical Activities Board and to the Executive Committee that the present Group Affiliate structure be reconsidered with the objective of broadening it to include: (a) collateral societies with collateral interests (such societies to be "accredited" by the respective Groups), (b) broad-based national or quasi-national societies, as determined by RAB upon the recommendation of the appropriate Regional Director.

This proposal is now under consideration by those concerned.

- (8) Section Workshop. RAB determined that the former Forum for Section Chairmen will be continued under the auspices of RAB, to be renamed "Section Workshop" and held annually during the IEEE International Convention. Any similar Workshop held elsewhere will be organized and chaired by the respective Regional Directors.
- (9) Section Manual Revisions. RAB approved and authorized distribution of a complete revision of the IEEE Section Manual.
- (10) Group Chapters. Bylaws relating to Group Chapters were revised, as recommended by RAB, to specify that responsibility for these entities rests with the local Section, the Group Chairman, and RAB through the respective Regional Directors.

15. Technical Activities Board. (See Section H-II)

16. Tellers Committee. The Tellers Committee met once in 1969 for the purpose of supervising the count of ballot returns from the voting members in the annual IEEE election. After verifying the count, the election results were reported to the Board of Directors.

SECTION H

V. IEEE GROUP INSURANCE PROGRAM

The Insurance Program approved by the Institute for its members showed another substantial increase in participation during 1969. The following table indicates the number of certificates in force for each of the Plans in the Program for the policy years ending in 1969.

<u>Certificates in Force</u>	
Disability Income	3,341
Major Hospital-Nurse-Surgical	2,696
High-Limit Accidental Death and Dismemberment	4,258
Hospital Dollars	6,097
Life Insurance	18,910
Total	35,302

The increase was to a large degree due to the high enrollment in the new Hospital Dollars Plan, introduced in October 1968. In one year's time this Plan has become the most popular sickness and accident coverage. Enrollment in the Disability Income Plan (previously called the Loss of Time Plan) and the High-Limit Accidental Death and Dismemberment Insurance Plan also continued to increase. The Life Insurance Plan is still the most popular Plan in the Program, accounting for over 54% of all certificates in force.

Members who were insured under the Life Insurance Plan during the policy year ending September 1, 1969 will receive a dividend credit equal to 50% of the amount paid for coverage during that policy year.

This amounted to a gain of approximately 26%.

VI. HEADQUARTERS STAFF ACTIVITIES

As of December 31, 1969 there were 298 permanent employees on the IEEE staff. Staff assignments for the years ending 1968 and 1969 are as follows:

	<u>12/31/68</u>		<u>12/31/69</u>	
	<u>Budget</u>	<u>Actual</u>	<u>Budget</u>	<u>Actual</u>
Administrative Services				
Accounting		19		19
EDP		25		28
Membership Services		26		26
Operations		99		102
Totals	174	169	178	175
Editorial Services				
Spectrum		9		8
Proceedings		7		4
Group Transactions		37		37
Student Journal		3		2
Other Publications		5		6
General Editorial Office		7		0
Art Department		0		4
Totals	66	68	68	61
Educational Services				
Awards		1		1
Student Branches		2		2
Public Relations		2		2
Support of Other Organizations		3		3
Career Guidance		1		1
Continuing Education		1		1
Totals	12	10	13	10
Executive Office	17	17	18	19
Information Services	5	8	10	8
Publication Services	0	3	5	4
Technical Services	20	21	21	21
Totals	294	296	313	298

We report with regret the death during 1969 of Helene Frischauer, who was Administrative Editor of the Group Transactions. This position has now been filled by a new staff member, Mr. H. James Carter. Further personnel changes during the year included the resignation of Michael P. Asselta, Manager, Systems and Procedures, and the addition of Hendrik V. Prins, Manager, Marketing Services.