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Phil Sager, WB4FDT, EXECUTIVE SECRETARY
7634 Carla Rd
Baltimore Md 21208

AMERICAN RADIO RELAY LEAGUE

	RECEIVED AT				TIME		DATE		191
	Prefix	No.	Check	Date and Hour Filed		FROM		Relayed via	
	RADIO								

TO _____ Instructions _____

SIGNATURE _____

ONE OF THE EARLIEST PRINTINGS OF THE ARRL MESSAGE FORM

NEW domestic member $26. ($10 initiation + $16 yearly sustaining fee).
NEW International member, $28 ($20 initiation +$18 yearly sustaining fee).

Note that the Initiation fee is a one-time fee to new members. These fees include receiving the Spark-Gap Times via email or via the OOTC website.

Renewing USA members $16 yearly, $18 Canadian and foreign. These fees include receiving the Spark-Gap Times via email or via the OOTC website.

If you wish to receive the PRINT Spark Gap Times the additional fee is $6.00 yearly for USA members, including Life Members, and $7 yearly for Canadian and foreign members, including Life Members.

Life Membership dues: Under age 70-$250.00. Ages 70-89 $150.00. 90 and above—Free. Note that Life Membership dues do not include the print Spark-Gap Times. The $6 yearly fee must still be paid for the print copy.

ELIGIBILITY REQUIREMENT.   You are eligible if you had two-way wireless communication 40 (or more) years ago (eligible on Jan 1 of the 40th year) OOTC recognizes your first two-way communication by CB, Amateur, commercial or military operation. Provide proof if possible. If never ham licensed but had eligible 2-way communication, you may also join.

OOTC wishes to have extended information about each member, activities and background. This information becomes a permanent and important part of your record as a member of OOTC, making it possible for us to publish you life work and experiences. Information is saved in OOTC archives. We would like a photograph. Send a biography and/or story suitable for publication in the Spark-Gap times on separate sheets of paper, or via email attachment to our Secretary.

OOTC ACTING PRESIDENT: Fritz Tender, WD8E, #4567

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dtabor@wright.com

OOTC PRESIDENT RESIGNS

TIME TO SAY GOODBYE!--W6HV

Greetings to all Old Old Timers! I would like to take this opportunity to wish all of you the very best in this new year. Over the past ten years it has been my pleasure to serve as the OOTC president. Now it is time for me to step aside and welcome a new president. I have enjoyed working with our executive secretary, Phil; our vice president, Fritz; Joe, our treasurer and all of our district directors.

There have been many changes over the last ten years in all of the organizations membership and activities. I anticipate that OOTC will continue to grow and thrive in the future. I look forward to the new ideas and plans under the new leadership. So with that, I wish you all the very best in the coming years. My resignation is effective as of the year end.

73 all, Troy, W6HV

TWO NEW DIRECTORS-- DISTRICTS 5 AND 9

OOTC has two new Directors, Gilbert "Skip Amis, Jr, N5CFM, from Edmond, OK and Gene Santoski, K9UTQ, from Wisconsin Rapids, WI.

Gilbert "Skip" Amis, Jr, N5CFM OOTC #4598, District 5

"Skip" is a retired Social Psychologist and Theologian. His interest in Amateur Radio began in 1955 when his father, an Army Major, brought home a Zenith TransOceanic receiver to keep 8-year olld Skip occupied. He was fascinated with SWLing, and listened to morse code. Skip found radio operators on the army base who taught him the code and a Boy Scout troop which offered a ham radio merit badge. As he grew older, his radio interests were replaced with Hot rods, motocycles and girls.

\   In 1971 he became interested in Citizens Band Radio and became active, but after a few years he became bored with CB and felt that were something really lacking in radio. Then, in 1979, Skip met Buddy Luce, WD5FRB. Skip was working at a commercial two way radio shop in Alvin Texas, and Buddy owned a used car lot there. Buddy had a ham shack in his car lot office. When Skip stopped by Buddy's car lot to buy a car, Skip saw the radio shack and the two immediately became good friends. When Buddy found out Skip knew the code, he gave Skip the Novice Exam and Skip became KA5HDM. He later upgraded to General and received his present call. Presently, Skip is an Extra Class.

Skip's main interests are low band CW and SSB and his goal is to accomplish both CW/SSB 5BWAS. He enjoys QRP construction, key restoration, vintage WWII rigs, stamp collecting, and says real radios glow in the dark! He is the President of the QCWA Central Oklahoma Chapter 63. He is a Life Member of QCWA and ARRL, a VE and W5YI, Geratol #2301, FISTS #12627, NAQCC #0745, SKCC #6119, and 10-10 #73840. US Navy 1965-6, and US Merchant Marine 1973-9.

### Gene Santoski, K9UTQ, OOTC #3838, District 9

Gene is retired after 37 years at Consolidated Papers (paper manufacturing) in 2001. All of his family is licensed, Janet (XYL) WD9IMV, Sara KB9LGF, Scott KB9DVS, and brother Norb,

W0ENB. Gene's radio activities include QRP, mobiling, HF Pack, bicycle mobile, satellite operations, County and grid square hunting, NTS traffic handling, Navy MARS (NNN0IBD-47 years), Dxing, digital modes, CW, SSB, and RTTY.

Gene is active in the annual Boy Scout JOTA (Jamboree on the Air) and has served on the K2BSA staff at 6 National Jamborees at Ft A. P. Hill, in Virginia, and has worked with many scouts on the Radiio and Electronics Merit Badges.

He is a life member of QRRL, QCWA, and QRP International. He is also a member of the Antique Wireless Association, NAQCC, AMSAT, Fists, SKCC, the Collins Collectors Association, and many others. He has held appointments as an ARRL Assistant Division director, Wisconsin ARRL Section Traffic Manager, and Deputy Director of Wisconsin Navy MARS.

Gene is an avid collector of old radio and Scouting magazines and books. He also collects collins (S/line era or later) and other vintage gear. Also interested in Photography, collecting cameras, stamp collecting, woodworking, chess, Corvette activities, and Scouting.
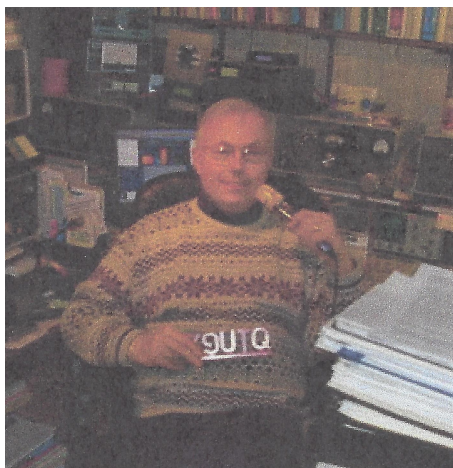
KDKA—1919-1920

William Thomas, W3RV (SK)
(Taken from "Spark Gap Times", October, 1964)

(William Thomas was on the air in Pittsburgh, Pa, beginning in April 1908, using the initials BGM. In the beginning he used a Ford Spark Coil, and later graduated to a rotary gap, and later to a quenched gap. In 1914.he received the call of 8DE. After WWI ended, he received the call 8LF. Returning to Pittsburgh, he was fortunate to be employed at Westinghouse Electric and Mfg., Co,. We now pick up the rest of his story...)

"It was my good fortune to be employed in the development of the first transmitter used by KDKA during the Harding-Cox election returns. The first KDKA transmiter was a simple affair, consisting of a couple of fifty watt bottles fabricated locally as an oscillator and a couple more triodes modulating them. The transmitter assumed the shape of a straight back chair with gear hanging underneath the seat and tubes mounted on top, plus those large Dubilier Capacitors here and there.

This entire project cost a pretty penny as it was fabricated by specialist machinists and not by ordinary workman.

      The first studio of KDKA was merely a large tent erected on the roof a of a nine story building in the heart of the East Pittsburgh plant, accessible only by a freight elevator. This studio was a temporary affair and established mainly to accommodate the early "live" performers who wanted to get on radio. This studio was short lived affair as a heavy wind wiped it out of existence. On this same roof a building 10 ft by 30 ft was erected to house the "transmitter and receiver" with a separate room for operation of CW between Cleveland and East Pittsburgh. The input from the end fed horizontal antenna was quite handy and fed through a normal feed-through insulator.

      This was a modern broadcasting station of 1920. Crude as it was then, it still "got out"..... The original antenna consisted of 6 wires spaced three feet apart and supported at both ends by wooden spreaders. The far end wires were not connected together, but they were later on. The antenna was suspended above the East Pittsburgh plant between a smoke stack and the top of a nine-story building. about 300 feet long. It is now (1964) remotely controlled and located many miles away from the main studios in downtown Pittsburgh."

Those Nasty Kickbacks

Albert Sonn, W2GC (sk)

(Taken from "Sparfk Gap Times", October, 1964)

      In the Good Old wireless days there was a term called "kickbacks" and they didn't refer to today's meaning of getting money back for being crooked in contracts. These "kickbacks" were casused by high voltages getting into the electrical lines and fixtures of older wired homes where they would flash from the line to the grounded side of the fixture causing damage and sometimes fire.

      One sunday morning when I ws pushing a kilowatt out on my aerial, I heard the cllanging of fire engines in my neighborhood. They came closer and pulled up in front of a neighbor's home next next door who was on the same supply line. I saw smoke and....I had a feeling that I was to blame. I had "kickbacks" before in my own house. The firemen went in and started tearing the walls down in the bathroom next door to get at the burning woodwork. The "kickback" was from the sparks jumping to the ground in my neighbors house. It took half an hour to extinguish the blaze which partly ruined the bathroom and contents.

      I don't know if I was to blame or not, but the next day the city Public Service came up and installed a new 5 KW transformer on the pole across the street which put me on th private 110 volt circuit. From the on , all I had to do was to have my father call in an electrician to repair our damaged light fixtures of which there were plenty in those good older wireless times.....

SILENT KEYS

#2385 Edward P Hardt, W0JS, 97, Anoka, MN. Ex-W9RZU and W0RZU. Life member OOTC. First licensed in 1934 as W9RZU. Silent Key October, 2014.

 #2445 Paul Goodwin, KO6D, 96, La Canada, Flintridge, CA . First licensed in 1935 as W6MVI. His

interest in amateur radio let him to a 25-year career with the Jet Propulsion Laboratory. He was part of the planetary tracking and communication team for Apollo Moon missions, and later worked on Mariner and Viking missions to Mercury and Mars. He was an active Mason and member of both the Scottish and York Rites

#2654 Walter Verdick, KA4WFS, 96, Greenville, NC. First two-wy communication in 1946, licensed in 1981 as KA4WFS.

#3424 Melvin Pieper, W9CSV, 90, Elkhart, IN. Licensed in 1953 as WN9CSV and served in the US Army. Worked as a tool and die maker. He leaves 7 children, 22 grandchildren, 37 great grandchildren, and 3 great-great grandchildren(!).

#3445   Bryon Lott, W6VIB, 90, Livermore, CA. Passed General Class exam in late 1941, but wasn't licensed as W6VIB.until 1946 due to WWII. He was a radio officer in the Army Signal Corps from 1945-47 and spent one year in China. He was an early engineer in the design and manufacturer of early Televisions, and after being recalled to active duty in Korea, was again an early engineer in the design and manufacturer of color televisions. Beginning in 1960, he worked for Lockheed as a communications expert in satellite communications..

#3483 Gene Chenette, N5YJ, 88, Allen, TX. Ex-W0LNE, W4TCN. Life member OOTC. First licensed in 1948 as W0LNE.

#4162 Robert Schreiber, K9ZZS, 69, Wrightwood, CA. Ex N6JCJ. First two-way in 1959. Licensed in 1984 as N6JZJ.

#4271 Stanley Hoffman, K3FOB, 69, York, PA. First licensed as KN3FOB in 1963. Worked for GTE for 40 years. He was also a Mason and Scottish Rite member.

#4298 Frank Hayne, W5AHS, 74, Life long resident of New Orleans, LA. First licensed as WN5AHS in 1952. Received a law degree from Tulane University.

#4435 Pier Bargellini, WA3KNN, 101, Oakland, CA. Life member of OOTC. Born in Italy, Pier went on the air illegally in 1934 as I1KS after the Italian government had banned amateur radio in 1927. He worked as a Engineer for the US Army in Italy in 1944-45. He was licensed at the end of WWII and was elected Prfesident of the Italian Amateur Radio Society (ARI) in 1948. In 1950 he emigrated to the United States and was licensed in 1968 as WA3KNN. He taught at the University of PA from 1950-1968 and was a Senior Scientist, COMSAT Labs from 1968-84.

#4995 Wendall Benson, WW2G, 89, Forest Hills, NY. Joined the Navy in 1943 and became a radio operator—or "Sparks". He spent the war aboard many merchant navy ships. In 1946 he received his commercial operator license and continued to operate aboard commercial ships for another ten years. He then worked commercially on land as a coastal telegraph operator of MacKay radio, retiring in 1988. He was active in the Veterans Wireless Operators Association (VWOA)

CHARLES STANTON, W5LBU SK
Charles, "Chuck" Stanton, W5LBU, **OOTC District 5 Director and life member**, passed away on September 1, 2016, at the age of 94. In his early 20's he moved from Iowa to Dallas, Texas to attend

radio operator school, after which he secured a job with Braniff Airlines as a high speed radio telegraph operator in 1942. He received his amateur radio license, W5LBU, in 1947. In 1954 he became Chief Engineer at station KOAT in Albuquerque, and in 1960-1992 worked as an Electrical Engineer with Sandia National Labs.

He was also a long time member and secretary/treasurer of the Roadrunner Chapter of the QCWA in Albuquerque and was a member of ARRL. Until the last few years of his life, Chuck was an active CW operator on the 20 and 40 meter bands.

GEORGE ANGELO LUCCHI, W6NVN SK

OOTC has just received word of George Lucci's, W6NVN, passing in September, 2014 at age 98. George had always been interested in radio and at the age of 8, he built a one tube broadcast receiver. He became friends with some ham operatorsand by the age of 12 had constructed a 3-band amateur radio band receiver, and a self-excited 801 tube transmitter running 40 watts. In 1936 he obtained his amateur radio license with the call of W6NVN, a call he kept for 78 years. He operated CW only, and by 1939 had a 1-kw rig with a 400 foot zepp for an antenna.

At the beginning of WWII, he joined the Coast Guard and became a radioman. Due to his experience building ham rigs, he soon performed all the maintenance of the transmitters and receivers on the station and soon was promoted from Apprentice Seaman, to first class seaman, to Chief. In 1944 he posted to the USS Aquarius as Chief Radioman, where he visited much of the far east, China and Japan. In 1947 he retired from the Coast Guard and served as a CAA radio operator at Wake Island and Honolulu.

He was later hired by RCA working on missles and radar programs, and worked on weather radar designs which were used in the Concord Jet, WACS, and the Blackbird spy plane guidance system. He was awarded numerous patents throughout his career, and is listed in Who's Who.

THE ARRL AND A HISTORY OF TRAFFIC HANDLING—PART 1

Bud Hippisley, W2RU
Phil Sager, WB4FDT

We all know the old story of how the ARRL was founded: Hiram Percy Maxim, unable to send a message from Hartford to Springfield, Connecticut, called an amateur from Windsor Locks, a small town between Hartford and Springfield, to relay the message to Springfield. This gave Maxim the idea of an organization — to be called the "American Amateur Radio League" — that amateur radio clubs would join. The clubs would advise the League which stations in their locality were the best ones to relay messages, and the League would then appoint these stations "Official Relay Stations". Almost immediately, the name of the new organization was changed to "The American Radio Relay League". Thus, the ARRL was originally formed to expedite amateur radio traffic handling.

In the beginning, not everyone could be a ARRL member. A two-page questionnaire was sent to prospective members, asking questions such as "Is your spark rotary, fixed or quenched?" and "What tone does your spark have?" Respondents had to give the names and addresses of the five most distant stations they communicated with. Other questions included "Do you use an audion detector?" and "Do

A 1920'S ARRL MESSAGE FORM

you have a government license?"

A copy of the original application is on page 12 of "Fifty Years of ARRL". [1]
The new League, through radio contacts and correspondence, was building up the relay routes for which it had been formed. But it became apparent that a general bulletin was necessary and within a year the fledgling ARRL published the "December Radio Relay Bulletin" at the end of 1915. Future issues eventually became *QST*. Anyone could join the League for $1.

As 1916 dawned, Maxim decided the time was ripe for the ARRL to have 6 trunk lines for passing traffic — three trunk lines running horizontally across the map and three running vertically. Maxim outlined his plan in the February 1916 issue of *QST*. Within a month, four of the six trunk lines were up and running, and by the end of 1916 more than 150 cities were linked by these trunk lines, with branch lines completing national coverage. In February, 1917 a message relayed from the east coast of the USA to the west coast and the ensuing answer back to the east coast made the entire round trip in one hour and 20 minutes, a record time. However, World War I soon intervened, and amateurs were off 10
the air for two and one-half years.

When amateurs in the USA were allowed back on the air in 1919, the trunk lines resumed operations.ARRL Traffic Manager J. O. Smith, 2ZL, codified rules of traffic handling for ARRL members in theFebruary, 1920, issue of *QST*. All ARRL-sponsored traffic work was limited to — and to be deferredto by other League members during — the hours of 9 p.m. and later, local time. Of course, spark was still "king", and virtually all message handling was conducted in that mode. The official messageformat (long before the ARRL Radiogram came into being) was "dynamic"; that is, the preamble for a given message changed with each relay, since it included the call of the station transmitting the message (rather than the originating station) as well as the call of the station the message had been received from (the latter preceded by the word "VIA"). Otherwise, the specified format was very similar to the subsequent Radiogram except that there was no "check" ("CK") count of words or character groups in the text.

By November, 1920, amateur radio interest in relaying traffic had grown so much the ARRL

decided tohire its fifth full time employee and first paid Traffic Manager: well-known amateur Fred Schnell,1MO. Shortly thereafter, in January, 1921, the first official postwar transcontinental relay tests wereheld. "One message made a record that established amateur radio as the fastest cross-country channel of public communications — six and one-half minutes round-trip elapsed time." [2]

Under Schnell's guidance, the *Operating Department* column in each month's *QST* began to list some of the top traffic totals from two months earlier. Generally, division reports provided a single summaryt otal of messages handled by members reporting each month; occasionally one individual would be singled out, with his call, name, QTH, and total traffic count listed in a highlighted box at the beginning of *The Operating News* column. In the March, 1921 issue of *QST*, Schnell introduced the "honor position" — the holder of the highest traffic total reported in each division. By the end of the year,divisional traffic totals, broken out by CW vs. spark, were being displayed in a box matrix and ARRL members were being exhorted to help improve their respective division's totals through more activity and/or more reporting.

By November of 1922, the message count had climbed to 50,000. As of October, CW accounted for only 17% of the totals, but was rapidly increasing in impact. The merits of CW (as compared to spark) were becoming so evident as 1921 wore on that Schnell asked in his May column for separate CW transcontinental routes to be established. In July he lauded the acceleration of interest in CW but noted that the transition was causing a noticeable dip in total traffic reported as stations went off the air for the equipment changes.

December, of course, brought the famous Transatlantic Tests wherein twenty-six stations (six spark and 22 CW; two stations succeeded on both modes) from North America "got across" the pond and were heard at multiple locations in Europe. While not at first blush directly related to message handling, most of those whose signals were good enough to be heard 2500 or more miles away were prominent traffic handlers. And operators at 1BCG, a station assembled at Greenwich, CT specifically for these tests, managed to have "the first private radiogram" — a message transmitted in full ARRL format, including "CK 12" for its word count! — copied in its entirety by Paul Godley at his temporary receiving station in Scotland.

Without a doubt, these tests were instrumental in sounding the death knell for spark. As the 20s progressed, *QST* collected and displayed more and more detail about the total traffic being handled by its members. Monthly totals for individual stations appeared as part of the divisional

reports — sometimes as the sole text, sometimes following the other information reported. It was only natural that many treated the monthly totals as a form of competition and, in fact, Schnell had essentially encouraged the competition when he pushed traffic handlers to boost their own division's totals. Against that backdrop it was only natural that greater recognition followed. Since virtually all 3rd-party traffic was being handled by CW operators who were familiarly called "brass pounders", it was a short leap from that phrase to the "Brass Pounders' League", or "BPL".

The first *QST* reference to the appellation "Brass Pounders' League" appears to be in *The Operating Department* for January, 1923. By August, only one of the ten BPL recipients was using spark. But the BPL box listings did not survive the year, reappearing in response to popular demand a little over a year later, in February, 1925. In May, 1925, Acting Traffic Manager F. E. Handy, W1BDI, repeated February's announcement of a new award — the "Traffic Department Trophy" — "to be given

to the ARRL member who shows the highest degree of operating ability by handing the most bona fide messages for three consecutive months". Operators handling 100 or more messages in a month were invited to "bundle up their messages" and send them in via their division directors. Just as contest logs are reviewed nowadays, claimed messages submitted in competition for the trophy were reviewed by HQ staff and, in some cases, the number of messages disqualified was publicly disclosed in a subsequent column — along with the entrant's name and call!
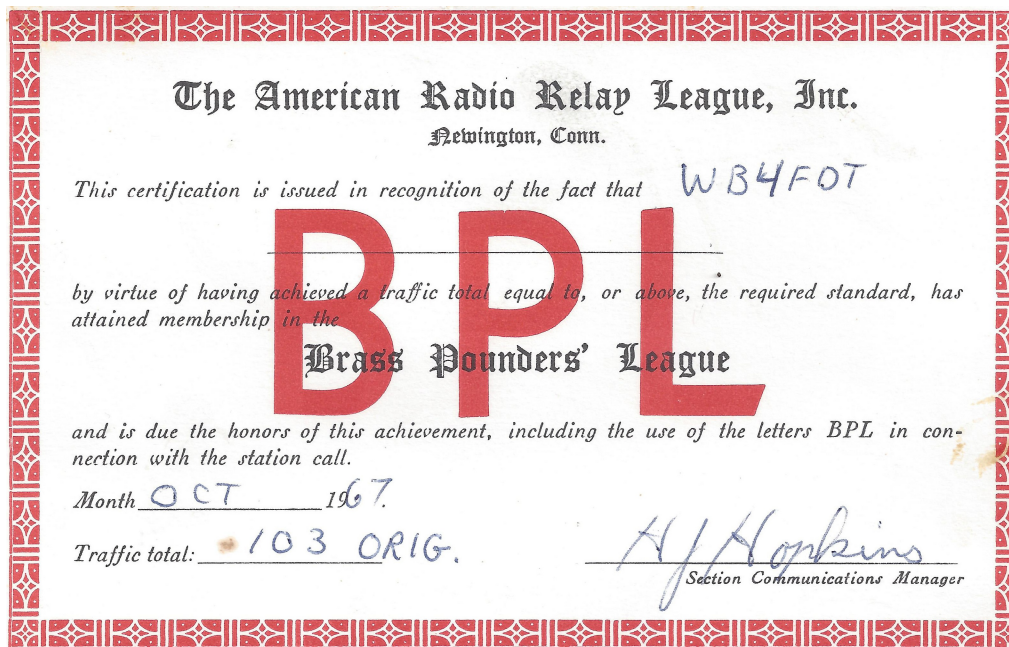

In 1924 changes were made to the original Official Relay Station appointment. In an article in March 1924 *QST*, on page (Roman numeral) "I" that followed page 65, Midwest Division Manager P. H. Quinby, 9DXY, complained that the ORS appointment had become commonplace; too many messages were never delivered, and many appointees were unreliable. So in 1924 the ARRL cancelled all ORS appointees, and started all over again. This time, a set of "iron bound" qualifications and regulations would make the ORS appointment difficult to secure, and it would remain difficult to retain unless a definite code of action was rigidly lived up to by appointees.

These requirements included, among others: ARRL membership; making regular reports; and relaying and delivering traffic in a timely manner. In return, the appointee received a "good-sized" ORS certificate which "gives him a mark of distinction and puts him in a class above the average ham; and his badge of honor some weight with all who visit his station, including the RI [Radio Inspector]". [3]

In *QST*'s *Operating News* column for September, 1934, rules for counting traffic for BPL were clarified to exclude traffic passed to/from government agencies or on non-amateur frequencies. This was necessary because amateurs of the day were allowed to engage in message-handling work with

certain army and navy stations.

The American Radio Relay League, Inc.
Newington, Conn.

This certification is issued in recognition of the fact that WB4FOT

BPL

by virtue of having achieved a traffic total equal to, or above, the required standard, has attained membership in the

Brass Pounders' League

and is due the honors of this achievement, including the use of the letters BPL in connection with the station call.

Month OCT 1967.

Traffic total: 103 ORIG.

H J Hopkins

Section Communications Manager

Beginning in the mid-1920's with the demise of spark and the near universal use of CW, better and better equipment, both homebrew and commercial, became available. As more hams gained access to VFOs and multiple crystals, it was no longer necessary to call CQ and then scan the entire band looking for a reply, as Novices were to do 25 years later. Gradually, the traffic net — with all its participants on or near the net's publicized frequency — came into being. At first, the nets were virtually all CW, initially held on weekend afternoons and one or two days in the early evening. When possible, any outgoing traffic was sent to operators who maintained trunk line schedules, and trunk line ops used the new nets to pass incoming traffic on through to stations close to the message destinations. HF (AM) phone operations weren't far behind. In response, the ARRL introduced the "Official Phone Station" appointment in 1932. For the next 30 years, practically every ham had some experience in traffic handling.

The trunk lines and local (state or ARRL Section nets) operated continuously until 1941, when WWII forced another shutdown of all amateur transmitting activities. Following the war, amateur radio
signals returned to the airwaves, and so did the trunk lines, with ARRL announcing reactivation of the six major trunks it sponsored: three east/west lines and three north/south lines. Independent trunk lines also resumed operations.

But almost immediately the trunk line concept resulted in dissatisfaction for many U.S. hams interested in traffic handling; ARRL's Communications Department became recipients of an increasing level of complaints in the early post-war years. Two categories, in particular, stood out: One was that large sections of the country were neither covered by, nor reliably linked to, the trunk lines. Consequently, amateur radio's ability to pass traffic between different regions of the country was unreliable. Some of the complaints even came from trunk line managers themselves!
The other oft-expressed concern was that much about the trunk line mode of operation led to ove over

over reliance on a relatively small number of "iron-man" operators and station setups, leaving few, if any, opportunities for meaningful participation by those with less time available despite the fact that if one of the trunk line members went off the air for any reason a significant gap or "hole" in the trunk lines' ability to move traffic smoothly quickly became evident. Some correspondents complained about the "elitist" attitude found on some trunk lines and even reported being turned away by trunk line managers when they attempted to volunteer!

As the trunk lines resumed operation in the post-war months, ARRL's Assistant Communications Manager / National Emergency Coordinator, George Hart, W1NJM, was not unaware of the shortcomings of the trunk lines. And when his assigned duties permitted, George was spending what spare time he could muster defining post-war traffic message handling issues and inviting comments and recommendations from active traffic handlers and net managers around the country.

As more and more active amateurs weighted in with their concerns, sometime during 1947 or early 1948 now-Communications Manager Ed Handy, W1BDI, formally tasked George with developing a League response to the limitations of the trunk lines. George's involvement with the Wartime Emergency Radio System (WERS) during WWII arguably made him uniquely qualified among ARRLstaffers to tackle this project.

Hart worked on the assignment throughout much of 1948, drawing on lessons learned from his WERS background and sifting through a potpourri of complaints and proffered remedies from traffic handlers and Section officials from coast to coast. Some of the suggestions received at HQ brought hints of things to come. An unsolicited letter to Ed Handy from Bob Evans, WØAUL, who had been instrumental in forming the Iowa CW traffic net, strongly endorsed the practice of employing a different net control station (NCS) for each night of the week. Handy agreed in his reply to Evans, noting that the "Connecticut Net and a number of others operate just like [the Iowa Net]".

In a parallel exchange with George Hart, Jack Avis, WØHMM, Manager of Trunk Line "L", expressed his own concerns about the limitations of the trunk lines and presented the case for aligning the State or Section Net(s) in each of the 48 states to one of five geographically determined early evening "collection" nets. Jack's plan had these collection nets meeting at 6:30 p.m. local time each evening continuously for the next two to three hours while periodically sending representatives to and from a so-called National Federation of Nets which Avis freely admitted was Trunk Line "L" in new clothing.

The State (or Section) Nets would then meet late each evening to receive and distribute incoming messages. In his reply to Avis, George expressed reservations about certain aspects of Jack's plan — especially what he considered to be the "upside down" sequencing of nets. Nonetheless, the idea of"collection" nets appealed to him.

By the beginning of June 1949 W1NJM, working with other Communications Department staffers, had arrived at a basic framework for the League's proposed response to the shortcomings of the existing trunk line networks. The formal proposal ("Proposed ARRL Traffic Organization") was delivered to Ed Handy by George early that month; with the included example routings and ancillary material such as proposed certification policy for participants, it comprised eleven double-spaced typewritten pages long. Of course, the proposal was no surprise to Handy, whose own writings during the first half of 1949 made it clear that he knew about — and was totally on board with — the proposal.

In fact, both Handy and Hart were providing written "teasers" about "a new ARRL traffic plan" as part of their correspondence with the field during the Spring of 1949.

The two men continued to "flesh out" the League's plans with an article in the July 1949 issue of the Communications Department's quarterly *CD Bulletin* that was automatically mailed to all ARRL officials and appointees. At the same time, they were finalizing copy for the September 1949 issue of *QST*, wherein ARRL formally introduced members and other readers to its so-called "National Traffic Plan".]

In the months leading up the September '49 *QST* announcement, there had been concerns voiced by some of the trunk line leadership that ARRL intended to replace the trunk lines with the new system. Handy and Hart took great pains to defuse these fears, and the official announcements were quite vehement in asserting that the new offering from ARRL was intended to sit alongside the trunk lines. Indeed, since ARRL had no control over the independent lines, it was clear that the League did not have the power to discontinue trunk line operations by *fiat*. Nonetheless, George privately observed that he did not expect the trunk lines to survive in the longer term — after all, it was the shortcomings of the trunk line approach that had led to the creation of the new plan, not the reverse.

The new system concept was fairly simple, and quite analogous to the way today's long distance traveler uses a sequence of car, bus or train, and feeder airline to get to or from a major airport for a long distance flight: Each evening, "local" nets — each typically encompassing an ARRL Section, U.S. state, or Canadian province — passed out-of-state traffic to a predetermined volunteer who collected that outbound traffic and then checked into a subsequent Regional [sic] Net spanning as many as seven Section Nets. Similarly, representatives from Regional Nets met to exchange inter-Regional traffic in an Area Net (called an "Inter-regional" Net in the original proposal to Handy but almost immediately changed to "Area Net"). [Note: Throughout this discussion, capitalization of the first letter of Section, Region, Regional, and Area means the capitalized word refers to specific geographical coverages as defined within the National Traffic Plan (NTP) or System (NTS), in contrast to their more general or generic usage.] Then, as now, the first ten numbered Regional Nets had their basis in FCC call areas but exceptions existed, especially where an FCC call area straddled two time zones.

As originally announced, the NTP called for nets to officially operate at least five evenings a week —Monday through Friday. Each evening's activities began with Section Nets in a given time zone meeting in parallel around 7 p.m. local time. Messages having a destination outside the originating Section were relayed during the Section Net session to a designated representative who then checked into the associated Regional Net at 7:45 p.m., where s/he exchanged messages with similarly tasked representatives from the other Sections in that Region. The representatives were to then bring the traffic so received back to the next session of their own Section Nets (generally, but not always, held later that same evening).

Messages with destinations beyond that Region were to be collected during the 7:45 p.m. Regional Net by another volunteer (rep) whose assignment was to bring it to the Area net at 8:30 p.m. local time. Again, traffic staying within the Area was to be passed between the appropriate Regional Net representatives during the course of the Area Net session. Following the Area Net, "late" Region Net sessions would meet to distribute inbound traffic to representatives of the various Section Nets. Most, but not all, Section Nets then met — generally around 10 p.m. local time — to receive and distribute the incoming traffic to destination stations present in that net. While the NTP in "full-up" mode called for all Sections to hold a "late" Section Net meeting at 10:00 p.m., Hart made it clear in

the formal proposal to Handy that he understood population densities, levels of traffic interest, and other local factors might make that an unattainable ideal. The proposal also indicated flexibility in allowing multiple contiguous Sections to come together in a single Section Net and in determining the exact coverage areas of the Regional Nets, especially wherever a call area straddled two time zones.

As originally announced, the NTP had four Area Nets, corresponding to the four time zones covering the 48 states. (Hawai'i and Alaska were still a decade away from attaining statehood.) Also in the original plan, westbound traffic headed to another Area was relayed by a designated representative from the originating Area Net to the destination Area Net. Thus, by the end of the evening, there could be as many as three direct check-ins from Eastern, Central, and Mountain Area Nets for the Pacific Area Net. If propagation or time constraints made it impossible for the designated inter-area rep to meet the later Area Net, alternative routings — including the use of the trunk lines or out-of-net schedules — were encouraged, to avoid delaying the relaying and ultimate delivery of traffic.

[Part 2 will appear in the next issue of *Spark-Gap Times*.]
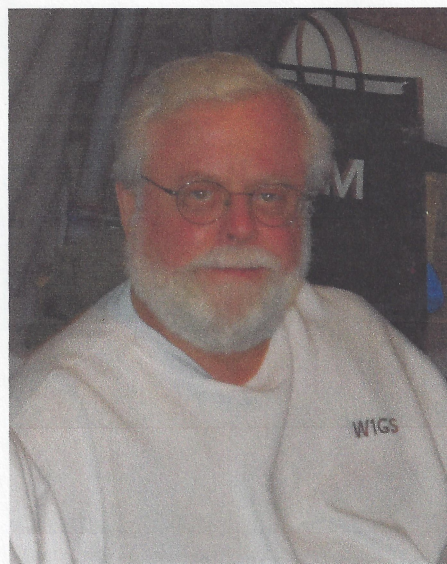
HOW I BECAME A HAM
William J. "John" Good W1GS OOTC 4193

I was born in Greenwich Village, NYC on December 21, 1942 My Dad was an Anglican priest and a curate in Trinity Church on Wall Street. We were avid radio listeners and I remember as a young child my mother listening to Don McNeil's "Breakfast Club", which became the longest running show on radio. The chicago-based variety show would come to NYC every year, and the the late 1940's my mother took me to see the show live. The show had an interview segment wherein I was interviewed as a "fourth generation New Yorker" at the age of 6 or 7. so that was my first time on-the-air—on broadcast raadio WJZ, New York (in 1953 WJZ became WABC-AM).

In 1950 my Dad became rector of his own parish and we moved to Biddeford, Maine. He was also responsible to a small parish in Old Orchard Beach as well. One Sunday he related a curious

incident that occurred during the mass in Old Orchard. As the Choir was beginning the final hymn, the \little Hammond organ burst forth with "CQ, CQ, CQ 75...." instead of the hymn. That incident was my introduction to amateur radio.

In 1953 we moved to Providence RI. I began to listen to short wave radio with a radio given to me by a cousin who listened to it while in the Merchant Marine during WWII. In 1956 while in New York City, I saw on display an early transistor radio. I couldn't get my mind off it and I just had to build a radio using one of these tiny devices. Before I got the radio going, I "cooked" a few 2N107 transsistors, which were relatively expensive devices then, at which point my father asked Charle Kenyon, the Warden of Acolytes at church if he could help me. Charles was W1AEL. He invited me over to his house where once again I heard that "CQ" expression but now on `10 meters. 10 meters was now wide open! It was during Cycle 19, the greatest on record.

Charlie introduced me to DX and sugested I attend a meeting of the Providence Radio Association, (PRA) W1OP. He said that the members would help me obtain an amateur radio license. I did and I was hooked. I was licensed as KN1HZN in 1954.

The PRA was quite an institution and it still is. Among the oldest radio clubs in the world, and the oldest in Rhode Island, the PRA was established in 1919. It became in ARRL Affiliated Club in 1921. Dom Mallozzi, N1DM, has written a fine history of the PRA from its beginnings to the present day. The oller members such as Mel, W1SGA, Bob, W1TQW, and Walt W1KKR were pioneers in the newly-developed modulation mode called "single-sideband". Other members, such as Bob, W1KKE and Howard, W1HIK, were mentors to the younger ops. QST author, Pops, W1YLB, designed and built the first solid-state (almost) SSB transceiver was an inspiration.

I still remember my first Field Day in 1959 when I logged for the CW ops, Bill W1HIJ and Zaven, W1IUX (SK). Sometime during 1959 a young fellow of 11 came into the club. He figured out that if I changed the 6V6 in my Ameco AC-1 transmitter to a 6L6, it would draw twice the current and double my power. The tube bases were the same, he observed. It was obvious that this kid was going to be a star operator. By the 1959 Field Day, this kid had obtained his call-sign, KN1LPL. Early on, he became interested in an activity called "contesting". Now W3LPL, Frank Donavan documented that Field Day in a talk to the Potomac Valley Radio Club in 2000. Frank has built one of the great multioperator contest stations and was elected to the Contest Hall of Fame in 1999.

Meanwhile, I briefly held a Technician Class licnese in 1958 and upgraded to General in 1959, and upgraded to Extra Class in 1970. I received my current call in 1977. In 1965 I went to work for General Dynamics electric Boat in Groton, Connecticut as a technical writer. I joined Raytheon Company and later joined General Dynamics sworking on the Apollo Program tracking ships program. By 1968 I was at the MIT Instrumentation Lab on the Apollo program for the first lunar landing. I rejoined Raytheon in 1971 working on many diverse programs including missile systems, electronic countermeasures and radar. After 41 years, I retired from Raytheon Company in 2012.

Although I now reside in New Hampshire, I still operate Club station W1OP in several contests every year, particularly the 160 meter contess just to ensure there's a Rhode Island station on the air. I chase DX, build, restore or modify equipment on the bench, and collect "boatanchors", mostly Collins gear. I have three children and three grandchildren.

RICHARD "ROD" RODERICK, W5QU #3201 (SK-1999)

At age 18 (1928) I went to New Orleans for Commercial Telegraph License and later shipped out on an ocean going tug boat with a string of barges bound for Jacksonville, FL. Then several trips around the Caribbean and to Cuba. My transmitter was a 10KW quinch gap spark, one of the few left, and the receiver was a three tube regenerative with headphones(!). After 6 months, the tug went back to New Orleaans to dry dock for repairs. I then decided that I was not cut out to be a commercial operator and went back to Texas and enrolled at Texas A&M in Electrical Engineering. I had several jobs and wound up with Humble Oil company in Venezuela.

After three years in the jungles, I came back in 1941, and was called to active duty as a 2nd Lt. In the Signal Corps at Ft. Sam Houston in San Antomio/. After War was declared, I was sent to Point Barrow, Alaska. The thermometer hit 70 degrees below zero there. Boy, was that a change from South America. Then I was moved to the Aleutian Islands, Attu and Shyma, where I was shot at several times by the Japanese. I was later promoted to Captain and ordered to New Jersey to take command of a Signal Company of 10 officers and 197 meen. We were sent overseas to Italy, and later to southern France and up the Rhone River. Saw plenty of action, more than I liked. Two years later the war was over, came back home and set up my ham station.

I ended up in Fort Worth, TX, working for General Dynamics as a test engineer. Had a lot of long flights on the old B-36. After five years I quit and opened my own professional engineering firm and did all right until I got too olld! Quit working except small jobs for friends. Gave away two racks full of equipment and lots of junk, and now have the old Ten Tec Omni and a 80 meter zepp antenna.

I was big in traffic handling in the 1970's, and really enjoyed it, CW of course! Now after I write something down, I can't read it 5 minutes later. I am now 82 and worried about what to do next. 73 Rod.

BILL BRIDGES, W6FA, EX-W6GEB OOTC #3192

When I entered Inglewood (CA) High School in 1948, I signed up for "Electric Shop" class taught by Wilbur Aolson, W6TQU. As an incentive to get a ham license, anyone who received his ticket could operate the school station, W6RBU, instead of doing all the wire-splicing and doorbell-wiring experiments in the classroom. I took the exam at the FCC office in downtown LA and passed. I received W6GEB in April, 1949, and upgraded to Class A a year later and to Extra when it became available in 1952.

In 1952 I entered the University of California, and by 1957 had received my Bachelors's and Master's degrees in EE. I then married and settled down and did research for a Ph.D.. My Thesis was directed at understanding noise in microwave traveling wave tubes (TWT). While doing this research, I discovered a curious "instability" that can occur in electronic beams. (Without going into great detail), by the 1990's this "instability" was used to make multi-megawatt microwave "weapons" grade oscillators known as "Virtual-cathode oscillators, or "VIRCATORS" both ussed by US and Russia.

I began work in 1961 with the Highes Aircraft Company and by 1962 had been reassigned to work on gas lasers. I made some of the early helium-neon gas lasers at Hughes, but the big moment in
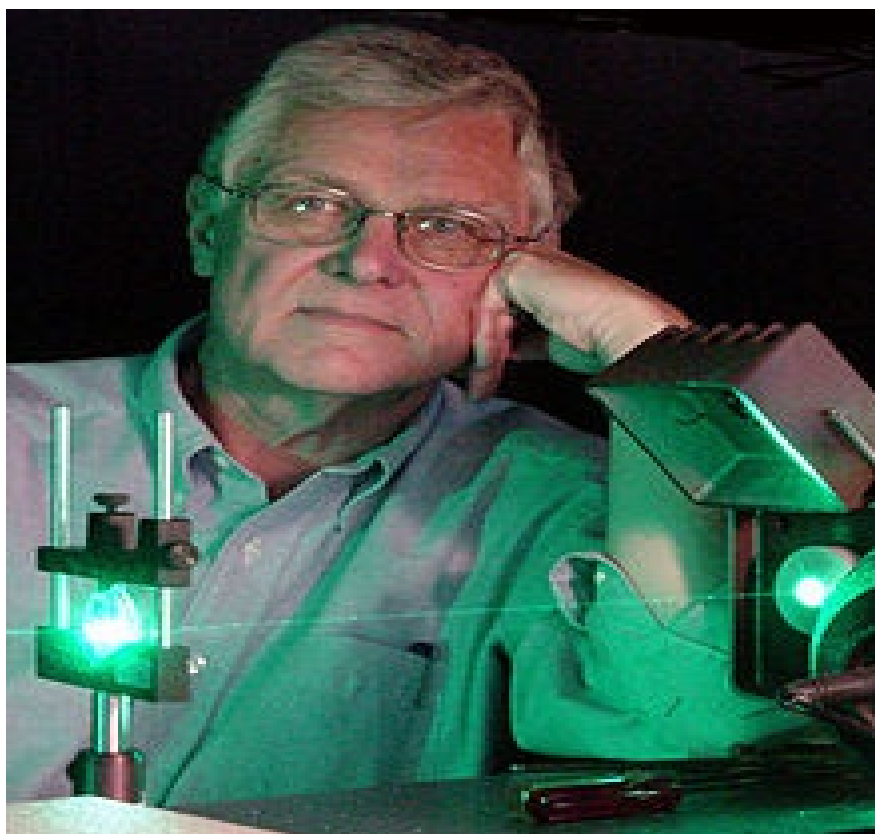
W6FA

my career came on Valentine's day, 1964 when I discovered the argon ion laser (this is the laser used in laser light shows, including the Laserium shows, some laser eye surgery, some printing applications, gene-sequencing machines and many scientific laboratories...still a $100 million a year business in 1993!. It was an unexpected discovery; I was actually trying to understand a different laser, but the blue line of ionized argon just "took off" in my lab as I was fooling around. (Anyone interested in the story can read more in Jeff Hecht's book "Laser Pioneers", Academic Press, 1991). I was made Fellow of the IEEE in 1970, primarily for my work on the argon ion laser.

        I continued to do laser device and applications research at Hughes until 1977...We built laser night reconnaissance systems, laser radar systems, and explored many more applications. In the mid-1970's, after teaching a year at the California Institute of Technology(CalTech) . I returned to Hughes and worked on Hydrogen Maser clocks for the Global Positioning System. In June, 1977 I joined the the EE and Applied Physics Departments at CalTech, teaching courses in guided waves, optoelectronics and basic electronics.   I served as President of the Optical Society of America in 1988, and was elected to the National Academy of Engineering in 1977 and the National Academy of Sciences in 1983.
        Editor note: Bill has retired from CalTech. Despite his many professional activities, he has been very active in ham radio over the years and remains active from his retirement home in Nevada City, CA.