



THE COASTSIDE COMMUNICATOR

VOL. 52, No. 6

OCTOBER 2020

WWW.COASTSIDEARC.ORG

PRESIDENT'S COLUMN

October is here! This usually means the fall season, Halloween, then the return of Thanksgiving and then the Holidays. Incredibly happy times for all! But wait? This is 2020, and the Pandemic is upon us, so what will all this look like? And will this year's presidential election throw the country into turmoil and lawlessness? And to top it all off, the CARC has a presidential (and other officers) election! I propose to have a very smooth nomination process and election and transfer for the club this year, so let's do our best to take part in the process and try to get into and participate in the club Zoom meetings. If you need help, call one of us or contact me for help. All the info you need is in the newsletter, so get involved! I also want to thank all our net control operators for their continued work on Wednesday nights: the contact numbers are low, but they continue to persevere!

73's Dave Lawrence, KF6TWW.

SEPTEMBER MEETING MINUTES

CARC September 09, 2020 Meeting Minutes

Call to Order

The September 9th meeting was called to order at 7:32pm by: President Dave Lawrence-KF6TWW, on Zoom Video Meeting.

Self-introductions

Introductions by members in attendance.

Minutes

Motion made by Paul-AI6BB and seconded by Jon Lancelle-N6SJF to approve the AUGUST minutes as posted in *The Coastside Communicator*. Motion was passed by unanimous vote of the membership present.

TREASURER'S REPORT

Funds: The Treasurer, Frank Erbacher-N6FG reported that we have a Grand Total of \$22,800 in the account.

MEMBERSHIP: No change

Bills needing approval: None

Correspondence: None

COMMITTEE REPORTS

CURRENT REPEATER

1. Update on status of WA6TOW repeater from Casey-N6TZE & Frank-N6FG: Frank got an email from Mike-WB6JKV stating "he has looked into status of the WA6TOW antennas AND they are missing pieces Etc. I have heard many users complain there are many coverage issues as it stands now but were Not before!!! Mike has an approved installation contractor by the Owner of our site and has done good work on many of their sites. Company has all the licenses and insurances needed to do this work!!! Mike shot out the idea that IF we are behind in the new cabinet hardware and software "Could We or Should We" consider getting this done AHEAD of the cabinet?". Casey responded with: "New antenna's and transmission line was a needed follow up to the new repeater. The antennas have been missing pieces for years. I think the 1.2GHz antenna pieces are still in my garage." Frank will check with Mike to see about getting a quote for the work and pricing of parts. Frank is also going to check with the ARRL on insurance liabilities.

2. **APRS** – No Report given

3. **Emergency Services** – No Report given

Replacement Repeater

1. Update on Repeater Replacement Committee progress: Casey stated that the new repeater is in Half Moon Bay. He said the repeater needs to be taken apart to transport. The PL will need to be changed and the filters retuned. Combinations to locks/gates are required and scheduling with Scott Sutor-KM6SCD to move the repeater to his location for setup and testing. President Dave Lawrence-KM6TWW will look into making arrangements to get it done.

FIELD DAY: Report on last meeting

FOG FEST: Cancelled for 2020

NEWSLETTER - Published

WEBSITE: Online and working.

Net Script – Using (temporarily using modified, covid-19) approved script.

UNFINISHED BUSINESS

A. See Current Repeater Status

New Business

A. See New Replacement Repeater Status

B. Ted stated we need to do a demonstration/social activity in order to spark interest in bringing new ham operators into the group.

Adjournment

President Dave Lawrence-KM6TWW adjourned the meeting at: 8:25p.m.

Present at the Meeting

Officers: President: Dave Lawrence-KF6TWW, Vice-President: Paul Atkins-AI6BB, Secretary: Tom Oliver-KJ6OGL, Treasurer: Frank Erbacher-N6FG

Members: Jon Lancelle-K6SJF (Zoom Host), Georgia Grant-KE6KRT, Gary Barnes-KI6HIG, Casey Villyard-N6TZE, Dave Conroy-KM6CPF, Walt Long-KG6EDY, Ted Niemira-K6TET, Ralph Kugler-KM6YDH, Mary Ellen Scherer-AJ6J

Submitted by: Tom Oliver-KJ6OGL, Secretary

NEWS

HF Station Grounding and Microcontroller Projects are Next ARRL Webinar Topics

09/29/2020

Two well-known ham radio authors and speakers will share their expertise with members in October during **ARRL Learning Network** webinars.

- ARRL Contributing Editor Ward Silver, N0AX, will present “Grounding & Bonding for Home HF Stations” on Tuesday, October 6, at 10 AM PDT/1 PM EDT/0500 UTC.
- Popular ARRL author Glen Popiel, KW5GP, will present “Welcome to the World of Arduino” on Thursday, October 15, at 5 PM PDT/8 PM EDT (0000 UTC on Friday, October 16). Members must log in to the ARRL website to register for each webinar.

Silver authored the ARRL book *Grounding and Bonding for the Radio Amateur* in 2017 as a practical guide to building a station that incorporates effective grounding and bonding

techniques for electrical safety, lightning protection, and RF management. Radio amateurs often cite the title for demystifying an often misunderstood or intimidating topic.

During his webinar, Silver will define grounding and bonding, cover the benefits and requirements, and share useful references and guides for hams to apply these techniques in their home HF stations.

In his presentation, Popiel — the author of several ARRL books, including *Arduino for Ham Radio*, *More Arduino Projects for Ham Radio*, and *High Speed Multimedia for Amateur Radio* — will cover the open-source, electronic-prototyping Arduino platform, which is widely popular among electronics hobbyists and radio amateurs. The webinar will include examples of how to put Arduinos to use in building ham radio projects and practical station gear.

Live question-and-answer periods will follow each 30-minute presentation.

The ARRL **Learning Network** webinar series was introduced as a new membership benefit in July. Presentations are by members, for members, as part of ARRL’s Lifelong Learning initiative. Topics cover three primary interest areas among radio amateurs, including electronics and technology, personal communications and operating, and emergency communications and public service.

All webinars are recorded, so members and radio clubs can view previous presentations. **Join** ARRL to take advantage of this new member benefit.

WSJT-X Beta Release Introduces Digital Protocols Designed for LF and MF Bands

09/28/2020

The latest beta release of the WSJT-X digital software suite includes digital protocols particularly designed for communication on LF and MF bands, such as 2200 meters and 630 meters, and its developers say that during its first few months of testing, contacts have spanned intercontinental paths “many times” on those bands. New protocols FST4 and FST4W are included in WSJT-X version 2.3.0-rc1 (release candidate 1). FST4 is for two-way contacts, while FST4W is for “quasi-beacon” style WSPR transmissions. Both modes offer a range of options for T/R-sequence lengths and threshold decoding sensitivities extending well into the –40 dB range, developers said.

“On these bands, their fundamental sensitivities are better than other WSJT-X modes with the same sequence lengths, approaching the theoretical limits for their rates of information throughput,” the WSJT-X development team said in releasing version 2.3.0-rc1. The developers said, “FST4 and FST4W do not require the strict, independent time-synchronization and phase-locking of modes like EbNaut,” a protocol for VLF and LF communication.

The WSJT-X development team said operators familiar with the software suite will find using FST4 and FST4W straightforward. “Most on-screen controls, auto-sequencing,

and other features behave as in other modes,” the developers said. “Operating conventions on the LF and MF bands make it useful to have additional user controls to set the active frequency range used by the decoder.”

The new modes use 4-GFSK modulation and share common software for encoding and decoding messages. FST4 offers T/R sequence lengths of 15, 30, 60, 120, 300, 900, and 1,800 seconds, while FST4W omits the lengths shorter than 120 seconds. Submode names, such as FST4-60 and FST4W-300, indicate sequence length in seconds.

Message payloads contain either 77 bits — as in FT4, FT8, and MSK144 — or 50 bits for the WSPR-like messages of FST4W. Message formats displayed to the user are like those in the other 77-bit and 50-bit modes in WSJT-X. Forward error correction uses a low-density parity check (LDPC) code with 240 information and parity bits. Transmissions consist of 160 symbols: 120 information-carrying symbols of two bits each, interspersed with five groups of eight predefined synchronization symbols.

Threshold sensitivity (SNR in a 2500 Hz bandwidth, yielding a 50% probability of decode) was measured for each submode using simulations over the additive white Gaussian noise (AWGN) channel. As with other recently developed modes in WSJT-X, a feature called a priori (AP) decoding can improve sensitivity by several additional decibels as information is accumulated during a standard minimal contact or FST4W operating session.

“Keep in mind that these are very narrow-band modes; achieving the sensitivities listed in the table requires that oscillator drifts and path-induced Doppler shifts must be less than the tone spacing, over the full sequence length,” the developers said.

WSJT-X version 2.3 offers 12 different protocols: FST4, FT4, FT8, JT4, JT9, JT65, QRA64, ISCAT, MSK144, WSPR, FST4W, and Echo. The first seven are designed for making reliable contacts under weak-signal conditions and use nearly identical message structure and source encoding.

The **WSJT-X 2.3 User Guide** and the **Release Notes** include additional information.

FCC Proposes to Reinstate Amateur Radio Service Fees

08/28/2020

[UPDATED 2020-09-01 @1845 UTC] Amateur radio licensees will pay a \$50 fee for each amateur radio license application if the FCC adopts rules it proposed this week. Included in the FCC’s fee proposal are applications for new licenses, renewal and upgrades to existing licenses, and vanity call sign requests. Excluded are applications for administrative updates, *such as changes of address, and annual regulatory fees.*

The FCC proposal is contained in a Notice of Proposed Rulemaking (*NPRM*) in MD Docket 20-270, which was adopted to implement portions of the “Repack Airwaves Yielding Better Access for Users of Modern Services Act” of 2018 — the so-called “**Ray Baum’s Act**.”

The Act requires that the FCC switch from a Congressionally mandated fee structure to a cost-based system of assessment. In its *NPRM*, the FCC proposed application fees for a broad range of services that use the FCC’s Universal Licensing System (ULS), including the Amateur Radio Service that had been excluded by an earlier statute. The 2018 statute excludes the Amateur Service from annual regulatory fees, but not from application fees.

“[A]pplications for personal licenses are mostly automated and do not have individualized staff costs for data input or review,” the FCC said in its *NPRM*. “For these automated processes — new/major modifications, renewal, and minor modifications — we propose a nominal application fee of \$50 due to automating the processes, routine ULS maintenance, and limited instances where staff input is required.”

The same \$50 fee would apply to all Amateur Service applications, including those for vanity call signs. “Although there is currently no fee for vanity call signs in the Amateur Radio Service, we find that such applications impose similar costs in aggregate on Commission resources as new applications and therefore propose a \$50 fee,” the FCC said.

The FCC is not proposing to charge for administrative updates, such as mailing address changes for amateur applications, and amateur radio will remain exempt from annual regulatory fees. “For administrative updates [and] modifications, which also are highly automated, we find that it is in the public interest to encourage licensees to update their [own] information without a charge,” the FCC said.

The FCC also proposes to assess a \$50 fee for individuals who want a printed copy of their license. “The Commission has proposed to eliminate these services — but to the extent the Commission does not do so, we propose a fee of \$50 to cover the costs of these services,” the FCC said.

The Ray Baum’s Act does not exempt filing fees in the Amateur Radio Service. The FCC dropped assessment of fees for vanity call signs several years ago.

ARRL is reviewing the matter and intends to file comments in opposition.

Deadlines for comments and reply comments will be determined once the *NPRM* appears in the Federal Register. Interested parties may file comments by using the FCC’s Electronic Comment Filing System (**ECFS**), posting to MD Docket No. 20-270. This docket is already open to accept comments, even though deadlines have not yet been set.

Maine Radio Amateur Dies after Fall from Tower

09/04/2020

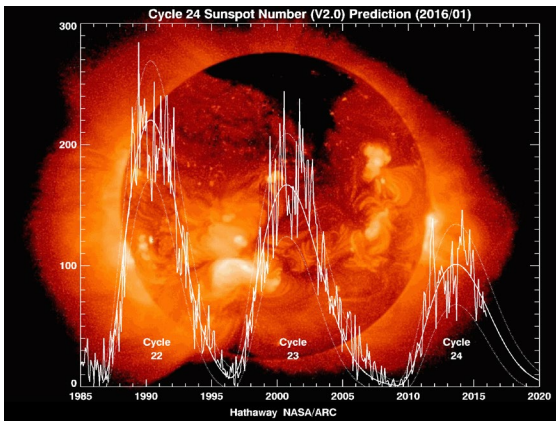
James Lerner, N1ATO, of Bangor, Maine, died on Wednesday, September 2, after apparently falling a reported 80 feet from an amateur radio tower in the rural Knox County town of Union. The incident happened just before 1 PM local time.

Said to have been a tower professional who had done a lot of work for many Maine broadcasters, Larner, an ARRL member, was 74. According to news accounts, Larner was disassembling an antenna on a tower located on Olson Farm Lane.

The Knox County Sheriff's Office and Union Fire and Rescue responded, and the rescue squad pronounced Larner dead at the scene. The deceased was equipped with a harness and carabiner clips and was believed to have been secured to the tower, a close friend on the scene told authorities.

The Occupational Safety and Health Administration was contacted and will conduct a follow-up investigation along with the Maine Medical Examiner's office. — Thanks to the Bangor Daily News and the Rockland Courier-Gazette, and to Norman Blake, W1IT

The K7RA Solar Update



09/25/2020

Tad Cook, K7RA, Seattle, reports: Up until September 23, we saw 32 consecutive days with no sunspots. Then new sunspot group AR2773 appeared, which has a magnetic signature indicating it's part of new Solar Cycle 25. Spaceweather.com noted it was a weak one, and may not persist for long. The daily sunspot number for September 23 was 13, indicating three sunspots visible in that group, but the sunspot was gone the next day.

Average daily solar flux rose from 69.2 to 71.1 over the September 17 – 23 reporting week. Geomagnetic indicators were about the same, with average daily planetary A index declining from 5.3 to 5.1.

As of September 23, the predicted solar flux for the following 45 days was 73 on September 24 – October 1, and 70 on October 2 – November 2.

The next day that forecast was revised to a predicted solar flux of 70 on every day until November 8. But on Thursday, September 24, the solar flux was 73.6, closely matching the previous day's forecast.

Predicted planetary A index is 15, 12, 25, and 15 on September 25 – 28; 8 on September 29 – 30; 5 on October 1

– 10; 10 on October 11; 5 on October 12 – 19; 10, 12, 16, 28, 18, and 10 on October 20 – 25; 5 on October 26 – November 6; 10 on November 7; and back to 5 on November 8.

Here's the geomagnetic activity forecast for September 25 – October 20, from F.K. Janda, OK1HH.

The geomagnetic field will be:

- quiet on October 6 – 7
- quiet to unsettled on October 5, 8 – 9, 13 – 16, 18
- quiet to active on September 30, October 1 – 2, (3 – 4, 10, 12, 17), 19
- unsettled to active September 25 – 26, 28 – 29, (October 11, 20)
- active to disturbed (September 27)
- Solar wind will intensify on September (27 – 28,) 29 – 30, October 1, 13 – 14, (15, 21,) 22

Note: Parentheses mean lower probability of activity enhancement.

The OK1HH forecast sees active to disturbed conditions on September 27, which matches the NOAA and USAF A index prediction of 25 on that date. This disturbance returns about 30 days later with an A index of 28 on October 23.

An interesting article in SciTechDaily discusses, “How NASA & Scientists around the World Track the Solar Cycle.”

Ken, N4SO, on the Alabama Gulf Coast reports that he hears three 15-meter beacons daily on 21.150 MHz — LU4AA in Argentina, OA4B in Peru, and YV5B in Venezuela. These are part of the NCDXF beacon network, and he rarely hears the 1-W transmission. At the other power levels they are S-3 – S-4.

Here's a recent video from Tamitha Skov, WX6SWW, the “Space Weather Woman.”

Sunspot numbers for September 17 – 23 were 0, 0, 0, 0, 0, and 13, with a mean of 1.9. The 10.7-centimeter flux was 69.7, 69.9, 70.6, 70.2, 71.3, 72.4, and 73.3, with a mean of 71.1. Estimated planetary A indices were 4, 5, 3, 4, 3, 6, and 11, with a mean of 5.1. Middle latitude A index was 5, 4, 4, 4, 3, 5, and 10, with a mean of 5.

For more information concerning radio propagation, visit the ARRL Technical Information Service, read “What the Numbers Mean...,” and check out K9LA's Propagation Page.

AMATEUR RADIO HISTORY

Amateur radio's history goes back more than a century

Ham radio can be anything you want it to be. You can communicate over the airwaves much like amateurs did decades ago. You also can take advantage of the latest digital modes and be on the cutting edge of technology all from the comfort of your own home or vehicle. How did we get to where we are with ham radio today?

Marconi was the first “amateur” radio operator. It’s easy to find the stories about how Guglielmo Marconi invented radio and is considered to be the first “amateur” to get on the air — way back in 1901 with transatlantic communications. Before that experiment, Marconi adapted Heinrich Rudolf Hertz’s theory that radio waves existed and constructed a communication system in the 1890s. Amateurs took to the airwaves in the early 1900s and the first “wireless” club was formed at Columbia University in 1908.

Marconi was hailed early on. Just days after the Titanic sank in 1912, a crowd assembled in New York City to cheer the man responsible for creating the technology that ensured there were survivors of that famous shipwreck. While Marconi and his family chose not to sail on the famed ship, two of his Marconi Co. wireless operators sent out telegraph signals for assistance as the vessel sank into the ocean.

OCTOBER PUZZLER

PAUL ATKINS, AI6BB

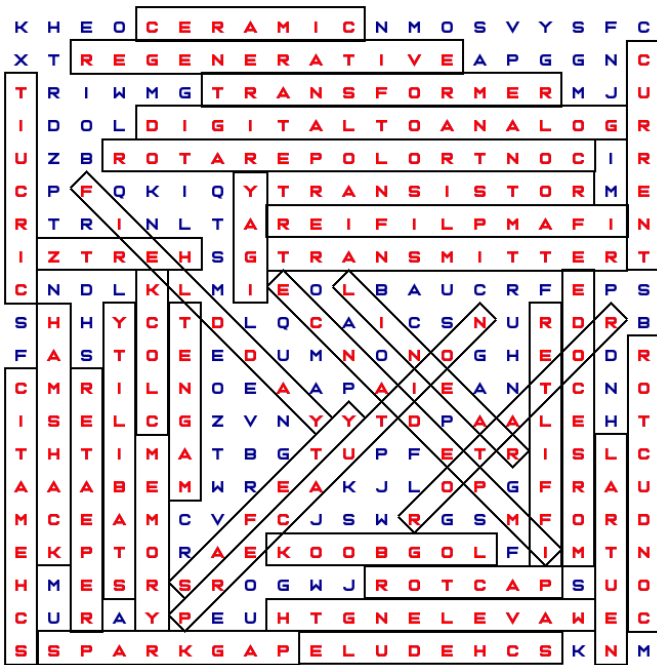
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WORDLIST

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| airlink | equalization | mount |
| balun | gfc | nec |
| beacon | groundwave | pack |
| bias | half | parasitic |
| buffer | integrated | potential |
| cathode | ionizing | rate |
| center | ionospheric | ratio |
| centi | itu | resonant |
| clock | keyed | safety |
| combination | kirchoff | saturation |
| conductor | ladderline | series |
| coronalhole | lower | smeter |
| coulomb | match | ssb |
| current | mega | sunspot |
| dec | microprocessor | synthesis |
| doping | modem | value |

ANSWER TO SEPTEMBER'S PUZZLER



NAME THAT RIG!
YEASU 902DM



Features

- 160-10 meters
- Attenuator
- Memory
- Tunable IF Rejection Filter
- 6146 Finals
- Noise Blanker
- 180 Watts Input (80W AM/FSK)
- Semi Break-in CW
- Calibrator 25 kHz.
- Selectable AGC
- Speech Processor
- VOX



COMING EVENTS

Pacifica CERT (Community Emergency Response Team)

For training and information

<https://pacificacert.samariteam.com/RequestInfo.aspx>

email: <mailto:cert@pacificapolice.org>

QCWA NorCal Chapter 11 - Lunch at Harry's Hofbrau

3rd Wednesday of every month

1909 El Camino Real, Redwood City, CA.

No host. 11:00AM to 1:00PM (approx).

ASVRO Silicon Valley Electronics Flea Market

State and county Shelter in Place orders and restrictions on large sustained gatherings are likely to stay in effect through October 2020. In consideration of government orders and the Silicon Valley Electronics Flea Market dates for 2020,

<https://www.electronicfleamarket.com/>

LICENSE EXAMS

Bay Area Educational Amateur Radio Society

All previously scheduled sessions are on hold until we have clearance from public health agencies, and it's safe for our participants.

Web Page: <http://www.baears.com/> for info and registration.

Questions: Ross Peterson (650) 349-5349 or wb6zbu@arri.net

Silicon Valley Volunteer Examiner Group

Due to the spread of COVID-19 in the Bay Area, and to protective measures mandated by Santa Clara County government, our VE sessions have been temporarily suspended. Please check website for updates

Fee: \$15

Walk-ins only, No pre-registration

Web Page: <http://www.svve.org>

Sunnyvale VEC Exam Sessions

Fee: \$15 Cash

Cut-off-time, 30 min. after starting time.

Exam: changes, directions, call (408) 255-9000 24/hr

Sep. 12, Sunnyvale Exam Session at 10:30 AM Please Bring [Map De Anza park](#)

Fee: \$15

Walk-ins only, No pre-registration

Web Page: <http://www.amateur-radio.org>

CARC MEETING/EVENT SCHEDULE

DATE	EVENT
Jan 8th	2020 Agenda Planning, LM Fire Station
Feb 12th	2020 Agenda Final, LM Fire Station
Mar 8th	Daylight Savings Time Start
Mar 11th	LM Round Table Pizza
Jun 10th	Zoom Meeting
Jul 8th	Zoom Meeting
Aug 12th	Zoom Meeting
Sep 9th	Zoom Meeting
Oct 14th	Zoom Meeting, 2021 Officer Nomination
Nov 1st	Daylight Savings Time Ends
Nov 14th	Zoom Meeting
Dec 9th	Zoom Meeting

? to be determined # updated ---- canceled * tentative dat



www.smcready.org
cert@pacificapolice.org



In Memoriam



Roger G. Spindler-WA6AFT/SK



COASTSIDE AMATEUR RADIO CLUB

The Coastsides Amateur Radio Club (CARC) is affiliated with ARRL and meets the second Wednesday of each month at 19:30 hrs. in the Linda Mar Fire Station Community Room, on Linda Mar Blvd. in Pacifica. Visitors are welcome.

The CARC has been organized since 1959, serving Bay Area amateurs, and providing emergency communications services to the City of Pacifica. Membership dues are \$20.00 per year for the administration of the Club and the publication of the Communicator.

CARC supports two repeaters, WA6TOW/R (VHF and UHF); a Packet Digipeater, WA6TOW-1; and an APRS Digipeater, WA6TOW-2. Users of the machines provide repeater support and maintenance strictly through donations.

VHF: 146.925 MHz –offset 600 KHz PL 114.8

UHF: 441.075 MHz +offset 5 MHz PL 114.8

PL Tone: 114.8 Hz is used on both repeaters, as needed, for noise suppression.

Packet Digipeater: 145.050 MHz, Packet Node: PAC

APRS Digipeater: 144.390 MHz.

CARC/Pacifica OES VHF Simplex: 146.535 MHz

PL Tone: 114.8 Hz is used, as needed, for noise suppression

VHF Net

The club sponsors a VHF net each Wednesday, with the exception of meeting nights, at 20:00 hrs. for membership check-ins, notices, and QST's. Note: The WA6TOW repeater on 441.075 MHz may be used as an alternate if the WA6TOW VHF repeater is down.

HF Net

The club sponsors a HF rag chew net on 3.852 MHz, or the first clear frequency up/dn, on Saturday at 09:00 hrs. with an alternate frequency of 7.228 MHz.



The Coastsides Communicator is a monthly publication of the CARC. All articles contained herein are the opinions of the authors and not necessarily those of the club members or editor.

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CARC, P.O. Box 1106, Pacifica, CA 94044

61 years



of Service

51 years



affiliation

COASTSIDE NETS

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	R. Scott Sutor	KM6SCD		



COASTSIDE COMMUNICATOR

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FIRST CLASS

TO:

MEETING
 NOTICE:

61 years



of Service