



Special Edition – 2024 DXCC Year-end Review – by Joe Reisert, W1JR – January 6, 2025

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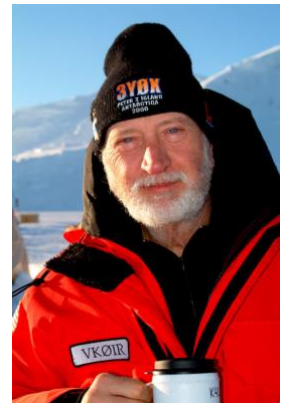
This year was like a roller coaster driven by increased radio propagation from Solar Cycle (SC) 25. January started with a great solar peak and was followed by a peak every month through October and late December. Even 6 meters saw worldwide openings in late October.

As usual, several DXpeditions faced transportation and permit problems, increased costs, local RFI problems, etc. Nevertheless, several of them exceeded 100K QSOs. Two of the top 25 Club Log DXCC Most Wanted Countries were activated. WSJT once again was often the dominant mode of communication.

ARRL was hit by an extensive ransomware attack in May. LOTW (Logbook of the World), DXCC, and many other programs were severely impacted. They are still working hard trying to recover.

Unfortunately, after the death of *CQ Magazine* owner Dick Ross, K2MGA the magazine ceased publication. However, most of their programs have been picked up by individuals, clubs, etc. MFJ owner Martin Jue, K5FLU decided to retire and is ceasing on-site production for MFJ and its sister companies.

Dedication: This Year-end Review is dedicated to the memory of Bob Allphin, K4UEE, who became a Silent Key in February. For many years, Bob participated or led numerous DXpeditions on the Most Wanted DXCC Entities List. He was a great CW op, a member of the DX Hall of Fame, FOC member, A-1 Operator, and more. Bob will surely be missed. May he rest in peace.



K4UEE, Bob Allphin, passed away on February 10, 2024.

2024 in Review: 285 DXCC entities were activated during 2024. Two on the Club Log DXCC Most Wanted List were activated. Single operator FT4GL put Glorioso Island on the air for a month and multi-op N5J activated Jarvis Island. Several DXpeditions made over 100K QSOs, including A8ØK, TX5S (Clipperton Island), N5J, 9L5A, 3D2V, VK9CV, PXØFF, CY9C and T32TTT.

As usual, many DX gatherings and conferences were held, including the International DX Convention in Visalia, CA; HamVention in Xenia, OH; W9DXCC in Chicago and others by many DX clubs. Congratulations to the 2024 CQ Hall of Fame inductees. Contest Hall of Fame: N2IC, PP5JR, and K2MGA, DX Hall of Fame: VE3LYC, W3UR, and K2MGA, and Amateur Radio Hall of Fame: DL8HCZ/(CT1HZE), K3LR, and K2MGA.

Radio Propagation: Needless to say, increased solar flux spiked radio propagation this year. In January the solar flux index hit 195. Even higher peaks followed for the next several months thru October. Later in October many long haul 6 meter contacts took place when the solar flux stayed above 200 for several days. However, the solar flux peaks decreased until the end of December when solar flux finally increased. In October 2023 NOAA predicted that SC 25 may peak between January and October 2024. In October this may have happened. Time will tell.

The weekday propagation column forecasts by Frank Donovan, W3LPL in *The Daily DX* by W3UR are a great source for current radio propagation. Frank always lists several sites such as SWPC/NOAA for further information. KC2G near-term maps are helpful as is [DX.QSL.net/propagation](https://www.dxqsl.net/propagation). Recent articles by Frank, W3LPL in October *QST* and Carl. K9LA in the *ARRL Letter* on May 30 are also of interest.

Here are some useful propagation guidelines. Propagation is best on 10 and 12 meters when the A index is <15, the K index is <4, the solar wind is <400 KMS and solar flux is >160. A solar flux well over 200 for several days in a row is usually required for good 6 meter F2 propagation.



VK2/W7BRS, Jeff, did a one-man operation from Lord Howe Island in July.

Ham Radio and the Internet: There is no doubt that the internet has had a profound influence on DXing. The DX spotting network on the internet consists of multiple DX Cluster nodes worldwide. Many DX Cluster sites such as [DXSummit](https://www.dxsummit.com), DXHeat, VE7CC, RBN (Reverse Beacon Network), PSKReporter, etc. are great resources for timely DX spotting activity and DX information.

When spotting DX on the DX Clusters, **make sure to show the exact frequency and mode of operation such as CW, SSB, FT8, or FT8/FH** especially when the frequency spotted is not in the expected spectrum. Please don't spot stations that you either aren't hearing or

not sure of the call sign. Also, don't ask for skeds or brag about your QSO, etc. Most DXpeditions aren't watching the DX Spotting Network, and many users don't appreciate these interruptions.

Band-by-band Activity in 2024 (Frequencies in MHz):

160 Meters: The rise of SC 25 has adversely affected DX on this band. As a result, there was low to moderate activity, especially on CW, except when DXpeditions are active or during contests when activity fills the band. Increased FT8 activity is between 1.830 and 1.840. Try to avoid using frequencies on 160 meters that are divisible by 5 (e.g., 1.820, 1.825, 1.830 etc.) since broadcast birdies are often present.

75/80 Meters: DX activity has been low to moderate on these bands except during contests and DXpeditions. CW is mostly on the low end and SSB near 3.795. On the other hand, FT8 activity has really increased around 3.573.

60 Meters: Many new entities have received permission to operate on this band, although they may be limited to 15 watts and a dipole antenna. Well over 250 DXCC entities have been active on 60 meters. Most DX activity is now concentrated around channel 3 at 5.357 and almost entirely on FT8. The FCC is still considering non-channelized operation near channel 3 for USA stations. The ARRL Awards programs do not recognize 60 meter contacts. **USA operation on 60 meters is limited to 100 watts output power and a dipole antenna.**

Use of gain antennas requires reducing transmitter output power.

40 Meters: 40 meters is still the workhorse band during local nighttime. CW and SSB DX activity is especially high during contests. Most DX activity has shifted to the FT8 mode around 7.074. **USA stations cannot operate SSB below 7.125, so it is best to stay above 7.128 for safety.**

30 Meters: This band is still very popular for DXing, especially for low-power stations. It is usually open a few hours before sunset until after sunrise, but it can remain open most of the day during local winter. There is lots of FT8 activity between 10.130 and 10.140. **The USA power limit is still 200 watts at the output of the transmitter.**

20 Meters: It is still the go-to DX band especially during local daylight hours, but activity has decreased somewhat as the propagation on the upper bands has improved. Much of the DX activity on CW has decreased except for DXpeditions but SSB activity is still OK. FT8 near 14.073 and FT4 and F/H (Fox/Hound) modes between 14.080 and 14.095 are very active.

17 Meters: This band is often open shortly after 20 meters opens. All modes seem to be doing well. There is lots of FT8 activity around 18.100.

15 meters: With increasing sunspots, 15 meter DX is open during all four seasons and sometimes well into the night. FT8 activity near 21.074 is high, as are the nearby F/H modes.

10 and 12 Meters: Both bands are doing well during the day, Vigilant DXers are sometimes catching DX at least several hours after sunset. Summertime DX propagation is less reliable than during the other months. F2 propagation occurs during most summer days when the solar flux index exceeds 200. Sporadic-E DX propagation frequently occurs during June and July. FT8 activity is high near 24.915 and 28.074.

6 Meters and Above: In recent years, most of the DX activity has gone digital on 50.313 and 50.323 during band openings. There is no doubt that the increased sensitivity of FT8 over CW opens this band more often than expected. Also check the [ON4KST website](#) for other VHF/UHF traffic. Some F2 propagation is returning with the increase of sunspots during SC 25. TEP (Trans-Equatorial Propagation) and other related propagation associated with the equatorial ionization anomaly are also increasing. EME (Earth-Moon-Earth) DX using digital modes such as WSJT Q65 is becoming very popular on 2 and 6 meters, especially during local moonrise and moonset and during DXpeditions. Over 75 stations contacted ZD9GJ on a recent W7GJ 6 meter EME DXpedition and over 1,000 were also worked on other propagation modes. The top DXers on 6 meters have worked 283 entities but so far officially only about six or so North American stations have achieved the 200 level.



The CY9C team from St. Paul Island in August/September.

2024 Monthly DX Activity Sample: Here are just some of the medium-rare to rare DX stations that were active during each month.

January: This past January was very productive as solar flux increased with over 210 entities active. Notably rare to semi-rare stations included FW4AT, 3B9AT, T32TT, ET3AA, TX5S (Clipperton 114K QSOs), J52EC, and FH4VVK.

February: As usual, there was lots of activity especially during DX contests. 5X7O, 7O2WX, KH9/NL7RR, CBØZA/ZW (108K QSOs), H4ØWA, and VK9L/GM4DLG were active.

March: Conditions were still great with 4W/JH2EHV, TY5C, HC8MD, and TO5XG (FO/A) active.

April: A52CI, A52P, 3GØYA (142K QSOs), 3D2CCC (117K QSOs), TX7W (FO/A), and VP6G (16K QSOs).

May: OJØT, C91CCY, T5/IT9HRE, VU7LAL, ZD7SC (1.3K QSOs), SV2RSG/A, PYØFZ, and FT4GL (61K QSOs).

June: C91AHV, 5U5K (40K QSOs), VK9LA (21K QSOs), W8S and K8K (KH8), and S21ZI.

July: K8R (KH8) and FP/KV1J.

August: N5J (107K QSOs), TU/TA7YGT, TO8EP (FP), V73ML, OJØJR, and CY9C (115K QSOs).



In December 15 ops from Bangladesh, including 8 youth ops, were QRV as S21DX from IOTA AS-140.

September: Z81D, ZD9GJ, XT2AW, T2M, KH8T, and FO/NY1P (FO/A).

October: 3D2V, TI9/TI2JJP, C21MM, C91BV, YJØJJ, and PXØFF (129K QSOs) and ZL7IO.

November: VK9CV (108K QSOs), S9Z (52K QSOs), A35GC, 3D2Y (Rotuma), C5T, TL8ES, FJ/W6HGF, AU2K (AS-179 10K QSOs), 9L5A (111K QSOs), 3D2AG/P (Rotuma), and KH7AL/KH9.

December: This is YOTA (Youth on The Air) month with special YOTA call signs everywhere from dozens of entities. Also active were AU2S (AS-153), VU4A (30K QSOs), S21DX, T32TTT (100K QSOs) and of course OF9X (Santa Claus).

Unauthorized Operations: As usual many unlicensed or pirate stations were active during the year. Many expeditions were pirated and spotted before, during, and even after their operation. This explains why many

don't release their call signs before commencing operation. Check your QSO using online logs if available. Foul language was sometimes present and is unacceptable.

Some call signs reported on the clusters were probably incorrectly listed. These spots affect many DXers. When spotting a station on the cluster accuracy is extremely important. **If you are not sure of a call sign, don't spot it** until you are sure it is correct, since it can cause bells to ring worldwide and increase anxiety.

DXpeditions: They are increasing and are the lifeblood to work rare or semi-rare DX entities. They usually face many obstacles since they often go to remote locations. Permission to operate from these locations can sometimes be difficult to obtain and travel can be very costly.



Here is the on-island 3D2Y Rotuma Island DXpedition team. They had many remote youth ops.

This past year was no exception with many delays, interruptions, and cancellations. High winds often damaged antennas. High temperatures above 35 degrees C (95 degrees F), high humidity, as well as critters were sometimes a big problem. Medical issues also occurred. Power outages and local RFI often made it difficult for them in some locations to copy weak signals. Despite these difficulties, at least nine DXpeditions made over 100K QSOs as noted earlier. Several EME expeditions also took place from semi-rare locations.

Support for DXpeditions has never been more important as costs are skyrocketing. While you are operating from the comfort of your shack, they are not always as lucky. Don't complain on the Internet about their operations since you don't know the circumstances. Please support their efforts so they can continue to activate rare entities. NCDXF (Northern California DX Foundation), INDEXA (International DX Association), GDXF (German DX Foundation), and The Yasme Foundation are just a few of the significant supporters of many DXpeditions. These foundations do a great job at vetting and funding upcoming requests.

Operating techniques: Needless to say, the RST report 599 on CW and 59 on SSB are now almost universal! The **DX Code of Conduct** is a great operating guide. **Deliberate QRM is always forbidden.** The adage still applies, always **Listen, Listen, and Listen** before you start to transmit and **do not call on the DX station's frequency!**



In October/November members of the Mediterraneo DX Club operated XT2MD in Burkina Faso.

Don't call stations unless you are copying them or tune up your transmitter on the DX station and the common DX frequencies. Keep tuning time to a minimum and change frequency often. DXpeditions and rare to semi-rare stations **almost always operate split frequency.** Unfortunately, many stations still call right on top of the DX station or tune up on the same which causes panic.

Finally, don't spot rare DX on the DX Cluster unless you are sure it's legit, know the proper call sign, and surely don't spot rare DX call signs **for test purposes.** It causes lots of bells to ring worldwide and unnecessary worry. Also don't post rare call signs to thank someone for a QSO or for receiving a QSL etc. Those watching the cluster do not appreciate this type of boasting.

Digital Operations: Nowadays digital modes such as WSJT-X (FT8, etc.) are often the dominant DX mode. WSJT-X is managed by K1JT, Joe Taylor, and his development team. It can often decode signals that are barely audible. FT8 sensitivity is up to 10 dB better than CW. The developers of WSJT have recently released updated software. Also, they released the new **SuperFox** mode (see below) to some stations which makes it possible to work up to nine stations at a time. More updates are expected soon.

FT8 can be a band opener, especially during times of poor propagation. It also allows smaller stations to participate in DXing. The Q65 mode is highly recommended for EME, ionospheric scatter, and other weak signal work in VHF, UHF, and microwave bands.

DXpeditions usually use the F/H (Fox/Hound) mode which requires stations to call at least 1KHz above the DX frequency. Selected stations are now using SuperFox which has no calling frequency requirements. Make sure to call in the proper time sequence and never call if you are not copying the station because if the station should reply, it just slows down the pile-up.

The F/H mode has a learning curve and requires special operating parameters. First off, always call at least 1 KHz above the DX station. Don't call the DX station if you aren't copying them well since if the DX station copies you and calls you it will tie up the report cycle and slow others from a QSO. Make sure that you are transmitting on the proper time slot. Stations are often observed calling in the wrong time slot and right on top of the DX station.

According to Club Log (outside of contests), 50-75% of all DX activity now takes place using WSJT modes. It's interesting to see many well-known DXers now operating FT8. RTTY activity is low but increasing primarily during contests.

DX Contesting: Contests as usual were everywhere this year and lit up the sometimes quiet bands using CW, SSB, and digital modes. There was a noticeable increase of activity on the upper HF bands. The WA7BNM Contest Calendar is a great source of contest information. Also, the **ARRL Contest Update** is a bi-weekly newsletter which often has interesting tidbits on upcoming contests and operating, etc. CTU (Contest University) is also conducted during the year. Remember that contesters should stay healthy so they can operate long hours of continuous activity. A recent article entitled "Healthy Contesting Habits" by KØMD in November QST should be of interest.



3D2AG, Antoine, was QRV as 3D2AG/P from Rotuma in October/November.



The H40WA team was QRV from Temotu Province in February/March.

ARRL and DXCC Matters: The DXCC program is the largest program at ARRL. As mentioned earlier, ARRL was hit by a huge ransomware attack in May. Many services such as LOTW were literally destroyed. Some have been fixed, but others are still being serviced, causing long processing delays. LOTW has over two billion QSOs on file and is becoming even more popular and widely used instead of paper QSLs.

There are now over 1,845 persons that have qualified for the top of the **ARRL DXCC Honor Roll**. Over 275 have reached the **ARRL DXCC Challenge** 3,000 level. To see the latest DXCC standings on the ARRL website first click the "On The Air" window and then DXCC Standings. ARRL also has many bulletins that are of interest to DXers. Some new books were published in addition to updates on existing books. The ARRL QSL bureau is another service for League members.

The DXCC program and rules are now being closely examined for the first time since 2000 by the ARRL Programs and Services Committee. See “Second Century, The Future of DXCC” by NA2AA, David Minster, in November QST. Changes are possible. Send your recommendations to your ARRL DXAC member.

Finally reports in the news media tell us that Bougainville, an autonomous region in Papua New Guinea (P29). has voted to become an independent nation in 2029. If this happens, it might be added to the active DXCC list.

QSLing: Postage and shipping costs have gone sky-high. Many DXpeditions are now requesting US\$5 for a QSL. Use of OQRS (Online QSL Request Services) are increasing. Paper QSLs are becoming a lost art form.

QRZ.com: This is still a great source for information and is very up to date. Locations, distance, bearings, and email addresses are readily available. Sometimes there are also interesting biographies or stories and photos.

Club Log: This is another important source of information for DX. Many DXers and DXpeditions post their logs on Club Log so it is a good place to verify QSO sometimes in a relatively short time. It is also a source for OQRS. Club Log.ORG.DXreport.htm is available on the Internet. They list solar activity, active expeditions, most active modes, etc. This gives you a good overall view of daily DX activity.

Technology: As usual rig improvements such as filtering, noise elimination, direct signal sampling, signal handling, software. etc. are continuing. Some say that AI (Artificial Intelligence) may soon be used to assist noise elimination. Time will tell. Solid state high power amplifiers are increasing. Likewise, antennas, especially smaller sizes, are being developed for people with limited space. Accessories are a necessary part of operating. Nowadays building is often being replaced by buying. Many commercial sources are available. Likewise electronic flea markets and hamfests are often a great source of inexpensive equipment and accessories.

Remote operation is now becoming common practice especially where antenna structures are limited. Gear for same is becoming available. **RIB** (Radio in a Box) is also being used. Small remote stations can be placed on land, especially where there are environmental concerns or nighttime restrictions. The recent N5J DXpedition used RIBs to make 107K QSOs and operated remotely from a boat and via the internet.



During the CQ WW DX CW, GU4YOX, Bob, was active as VP2EBB from Anguilla.



N5J from Jarvis Island used the RIB technology, hopefully paving the way for other rare islands.

IOTA (Islands on the Air): The IOTA Program celebrated its 60th anniversary during 2024. Improved propagation and a decrease in COVID has increased operations from rare and semi-rare IOTA groups. This year saw two first-time IOTAs activated: 4A5D (NA-144) on Maria Madre Island in late March and AU2K (AS-179) on Kanika Island in late November. Many rare to semi-rare IOTAs were activated, such as AU2S (AS-153), N5J (OC-081), CY9C (NA-094), and TX5C (NA-011). Others had trouble in obtaining entry permits, increased costs, and travel delays, as well as fuel shortages. The IOTA program now has made some accreditation restrictions when the DX station is working remote such as

from a RIB.

YOTA (Youngsters on the Air): Throughout the year and especially in December, there were numerous stations some having easily identifiable call signs. They often operated and were supervised by licensed operators, especially on SSB, but also on FT8 and occasionally on CW. These operations are very important for the future of our hobby. Give these stations a call to incentivize the operators to become radio amateurs. Several groups have introduced CW training such as CWops with CW Academy, the Long Island CW Club, and K1USN that transmit slow-speed CW for practice. Several scholarships are also available yearly to youth under 25 years of age such as WROF, NCDXF and W2PV.

Safety: This can never be stressed enough. During the past year there was at least one fatal accident, VA2VKG. VE6WZ and others were nearly injured during tower and antenna repairs. We can never be safe enough when working with towers and antennas. See the article by Don Daso, K4ZA, in September QST. Even some professional experts have problems but still may be the correct choice. Proper safety harnesses are required.

Podcasts: These are increasing and sometimes available live or later on the Internet from clubs etc. Examples are The DX Mentor, QSO Today, DX world, AJ8I, W3LPL, K9LA, and others.



TX5S started off the year in January from Clipperton Island.

Silent Keys (SK): This was a dreadful year for DXers and those supporting amateur radio, although the number of persons on the QST Silent Key list has decreased slightly during this year.

The following is a partial list of SK DXers and others that contributed to our hobby. They are generally listed in the order as they have departed us during this past year: K5YKD, ZL3NB, K6AW, S57DX, K4UEE (see above), HC5T, W2UDT, IZ1GAR, K9IED, HC8JG, NN7D, DJ6TF, W5LE, WA3LPQ, UT5UT, W9YSX, YV5SF, VK4BLK, K2MGA (see above), W8SU, WX4G, WØPAN, W3HC, KC5LK, KB6LQS, N4XM, NQ7R, N6ZM, K3RR, K6GFJ, K5EWJ, W9GT, S21AD, EP2ES, OH5TS, FM5AN, HC5EG, W1FV, K5QE, K3PP, N3AO, N9NR, WB2YQH, K8UT, EK6TA, NE3F, ZL2AO, G3HTA, K9NR, KK9DX, 4S7VG, UT5SI, K4GK, W7DXX, ZA1H, ON4IZ, W4VQ, K8NA, AD6P, W4FLA, OH2BAD, ON4IZ, AB4IQ, K9ZO, NP2B, W6NYW, K2WR, EA5RM, and N2HX.

And now the Drum Roll: There were approximately 55 DXCC entities that were NOT believed to have been active during 2024*.

Africa (18): 3B6, 3C, 3CØ, 3Y/B, 5T, 9Q, D6, E3, FT/J, FT/T, FT/W, FT/X, FT/Z, T5, TN, VKØH, VQ9, and ZS8.

Antarctica (1): 3YØ/P.

Asia (9): 1S, BS7H, BV9P, E4, EZ, P5, T6, XZ, and YK.

Europe (3): 1A, JX, and R1F.

North America (6): CYØ, KG4, KP1, KP5, XF4, and YVØ.

Oceania (13): FK/C, KH1, KH3, KH4, KH7K, T33, VKØM, VK9M, VK9W, VK9X, ZK3, ZL8, and ZL9.

South America (6): CEØ/X, HKØ/M, PYØ/S, VPØ (G), VPØ (O), and VPØ (S).

*Please note that some rare entities may not be on this list for 2024 because operations were short, set up schedules, or were only on VHF, EME (Earth-Moon-Earth), etc.

DXCC entities that are not believed to have been activated in ten (10) or more years have increased and now include: 3Y/P, BQ9P, BS7H, CEØX, FK/C, FT/J/E, FT/T, FT/Z, HKØM, KH3, KH7K, KP5, P5, VPØ/S, Sand, YK, YVØ, and ZL8. An avid DXer working hard at DXCC who worked every country over the past 13+ years could have made the DXCC Honor Roll. This list also serves as a guide to those planning DXpeditions to rare entities. As for me, the top of my needs list for the DX Challenge has only slightly changed in many years and not surprisingly goes to P5, BS7H, and BQ9P in that order.

Upcoming DXpeditions: The following DX operations have been announced for early January: VK9C, C5RK, 6W1RD, TY5C, T88SM, TX7N (FO/M), 5N, and 9X5AW, followed in the next months by V7, VK9XU, H44MS, VK9C and 3B9DJ. It looks like 2025 will also be an exciting DX year.

Remember to stay tuned and check www.ng3k.com/misc/adxo.html for future operations.

Looking ahead to 2025 and beyond: As stated above, Solar Cycle 25 may still be cranking away in 2025. DX has really changed in the last few years with WSJT. Some DXers chase the ARRL DXCC Honor Roll, the ARRL DXCC Challenge, or the DX Marathon. In 2024 there were some 1,500 logs submitted in the DX



Not exactly a DXpedition, but certainly a great photo of his YE9BJM QTH in Bali.

DXpeditions possible!

Marathon. There is still time to improve or repair, if necessary, your 6, 10, and 15 meter antennas as well as keeping your 80 and 160 meter antennas in operation. Then there are the never-ending DX Contests, DX Marathon, DXCC Challenge, and IOTA chasing. There are lots of things to do. Don't let the airways slow down for lack of activity. HF radio conditions on the higher bands are doing well. Try to stay active and join the fun. Don't forget to support the various DX Foundations around the world that help make

Finally: Once again, I am honored to be asked by Bernie, W3UR to write this 20th DXCC Year-end Review and for his valuable input and help. Thanks especially go to Frank, W3LPL for his many helpful comments and inputs. Also, to my son Jim, AD1C for his computer help and all the others who helped provide information. I have tried to rearrange and add subjects this year. Suggestions are always appreciated. We hope this review has been informative especially for historical purposes. Most prior DXCC Year-end Reviews can be viewed on the [K8CX Ham Gallery](#). They are listed in the Table of Contents

Happy New Year and best wishes for DX during 2025.

73,

Joe Reisert, W1JR

NOTE: Obviously all the opinions etc. expressed are solely mine as are any errors that I have made. This Year-end Review is copyrighted. Therefore, copies or use of this review MUST first be approved by Bernie, W3UR and then a courtesy copy of the reprint must be sent to Joe@Reisert.org.

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