

Volume LVI

January 2015

Number 1



The New Year is here and did you do for the New Year's SEZ: Celebration? We spent it with family and ventured into Philadelphia for the

Mummer's Parade; what great weather and a marvelous, fun event.

Everything is new and we have a fresh opportunity to shine with our VHF / UHF and Microwave efforts. What will you do new this year? I plan to complete my EME station and have it ready for operation so I can supplement my operating activity with the ever present (when the moon is in view) level of activity afforded by this method of communication. And given the last enthusiastic talk by Al, K2UYH, I think I might add 432 and 1296 to my elevation boom between the cross pole 144 antennas.

New Years' resolution time is a good time to plan and dream of your newest chance to make improvements to your band coverage. I have some acquired 47 GHz gear that needs to be made operational. It's a good time to not only add new bands, but think how you can expand or improve bands that you already have working. Maybe a new mode or more use of an old mode like CW. My plans include more six meter CW activity during the contest.

We are still being blessed with acceptable antenna weather, the snow and storms have held off from our area so far. Sure hope they stay away

at the end of the month. If any antenna work we're off to a great start. What remains, its still a good time to get out there and do it

> Contest preparations are ongoing at my station. With only three weeks to go we should be hearing more activity on the bands as everyone gets cobwebs out of the gear and prepares for the big event. Lets get on all of the nets on Monday night and show everyone that you are ready.

This months meeting is all about the **January** Contest, we need you to come and be prepared to share your plans for the Contest. We'll get into logistics and even have some long range input from a guest from Florida. If you can, come ahead at 6 PM for dinner at Giuseppe's.

April brings some events of interest. Normally the Spring VHF Sprints begin in April, we're waiting for the schedule to show up on the Southeastern VHF site. Saturday April 11th will be the **trailer** preparation picnic at my QTH. Mark you calendar and come to Ephrata for food, fellowship and trailer clean out. The following weekend is the annual N.E.W.S. Conference in Hartford, CT. This is always a fun, educational event and as before I plan to travel via Amtrak; what an enjoyable way to travel

May is the time for Dayton and it will be here before vou know. Make plans now to come with many of your fellow members, we're planning a group of flea market spots together.

Pack Rats CHEESE BITS is a monthly publication of the Mt. AIRY VHF RADIO CLUB, INC. - Abington, PA.

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PACKRAT BEACONS - W3CCX/B

FM29jw Philadelphia, PA

50.080 144.284 222.064 432.286 903.072 1296.245 MHz 2304.043 3456.207 5763.196 10,368.062 MHz (as of 1/08)

MONDAY NIGHT NETS

TIME	FREQUE	ICY	NET CONTROL
7:30 PM	50.145	MHz	K3EOD FM29II
			WA3QPX FM29di
8:00 PM	144.150	MHz	N3ITT FN20kl
8:30 PM	222.125	MHz	KB1JEY FN20je
8:30 PM	224.58R	MHz	W3GXB FN20jm
9:00 PM	432.110	MHz	WB2RVX FM29mt
9:30 PM	1296.100	MHz	K3TUF FN10we
10:00 PM	903.100	MHz	WA3SRU FN20le
Visit the M	It Airy VHF	Radio	Club at: www.packratvhf.com or
www.w3co	x.com		

It's not too soon to talk about the major communications event of our club, the ARRL June VHF Contest. Mark your calendar for June 12 - 15 this year and get your time off request in early for Friday through Monday. With all of our equipment in the trailer now it's going to be a simpler process to get to the mountain.

We also plan to use the tower trailer, so there's one less tower to erect. Join us for lunch at the sub shop at the base of the mountain



and then we're off to the top and a great, fun weekend of weak signal activity. Like I did last year, bring along someone new to VHF / UHF / Microwave and we'll gain more stations and more activity on the bands.

So have a great New Year and lets talk on lots of bands,

Phil, K3TUF

DECEMBER MEETING PICTURES







Lots of goodies this month on the Mario raffle table



Loopers At W2BVH

I picked up loopers for 902 and 2304 around 3 or 4 years ago at the annual Packrat White Elephant sale. I did this purely on speculation since I didn't have anything to connect to them. The fact that they were in excellent shape and the price was very very reasonable didn't hurt either! They sat in the shed since then waiting for something to connect them to.

Since that time I picked up a 902 transverter (which I later found out needed some serious TLC).

Over that time I also made slow but excellent progress on getting my ITS MMDS transverter converted over to 2304 MHz. (Gary, WA2OMY has it over at his QTH for the power amplifier tuning. He is also going to do the cooling fan control mod.)

With prospects for a couple of new bands, this summer I fabricated mounting gear for the loopers. (They came without any mounting hardware — but hey, for the price I paid, missing mounts was nothing to be sorry about). I also mounted the loopers on a fiberglass crossbar and left the whole shebang on a couple of sawhorses on the patio.

Warren WB2ONA came over in October and pronounced the setup fit to be hung on my rotator pole. He also went up on the roof and tied on a couple of lengths of 7/8" hardline in preparation for mounting the antennas. He brought one piece of hardline and I had the other one, which Dave W3KM gave me around a year ago. He left the job of actually hanging the antennas for another time.

When he came to inspect, Warren also brought over a 25 element 1296 looper for me. His reasoning is there's room on the crossbar, and going up on the roof to hang antennas is probably more work than going up on a tower. So it's better to get as many antennas as possible up there all at once, even if I don't have a 1296 rig to connect. And having a 1296 up there is good motivation for me to go looking for 1296 equipment!

In November I went over to AI, K2UYH's shop to help out with a small project for one of his customers. While there I took the opportunity to put the 1296 looper on a VNA. Pushing the 1st reflector back about 3/16" moved the VSWR from 1.25 to 1.05. After that it was all set to go.

Warren came back with a helper, **the day after Christmas** and put all 3 antennas on my rotator pole. It was quite a bit of work. The fiberglass crossbar with 2 of the 3 antennas had to go up and around the 6 Meter antenna. As you see, this was done using a pairs of heavy duty pole clamps as steps to climb the pole. Not so clear in the photos is that the climber was tied off in two different places for safety.



From the looks of it, there's a 95% chance I'll be ready with 902 for the January contest. 2304 will almost certainly be ready some time in 2015. 1296 is just a gleam in my eye right now but at least the antenna is there waiting! Shooting through the trees is going to limit me on the microwaves, but even 2 or 3 grids on 2 more new bands will make this work well worth the effort.

MANY THANKS to all the Packrats, especially WB2ONA and his helper Peter Halsey who helped expand my horizons.

73, Lenny W2BVH

Note: Second & 3rd pictures on p.8

A TOWER STORY

Almost four years ago we decided to move. This meant that my tower with antennas for six VHF and UHF bands had to come down. When we got to the new house there were plenty of things to do before a tower was put up so I made short Yagis for 144, 222, and 432 and placed them in the attic of the garage. These antennas worked but their performance was limited especially to the south where the array looked right into the second story wall of our house. So about a year and a half ago I started planning for a new tower. This tower would support antennas for the bottom eight bands (one member of our household does not like the appearance of horn or dish antennas so anything above 3456 was out.)

I figured I would do things by the book, building permit and all, so I began reviewing the engineering information for towers. I had purchased a 40' Rohn 25 tower in anticipation of the new installation but discovered that it needed to be guved for the antenna load that I had planned to put on the new tower. A quick check put one of the guy anchors in our front yard. That got vetoed very quickly so I began looking for a free standing tower. I hit upon a tower from Universal in Michigan. Their recommendation was to use their Heavy Duty series because I live so close to the ocean and am likely to experience hurricane force winds. Perhaps south eastern Pennsylvania is closer to the ocean than Michigan but I did not consider us to be shore front. Regardless I went with their recommendation and ordered a 40' heavy duty tower. It arrived and the FedEx guy and I dragged it up the driveway. In spite of the fact that the shipment was



marked residential delivery he would not pull the truck into the driveway to unload the tower and later billed me for the use of the lift gate on the truck. Apparently I have the rare residence that does not have a semi truck accessible loading dock, but I had my tower.

The next step was to construct a pier on which to mount this tower. The manufacturer specified a concrete pier 5' x 5' x 6'. This seemed beyond my "do it yourself capabilities" so I got a contractor recommended by KB1JEY. They dug the hole by hand and set the mounting for the tower. The building inspector came and uttered, **"That isn't going anywhere"** which was interpreted to mean it was OK to pour the concrete.

After the concrete cured K3GM, KA3WXV, another friend, and I put the next two sections on and pushed the tower up. We were unable to put the last section on because there was a tree limb in the way. Cold weather came and the last remaining tower section spent the winter in our garage. The 24' mast endured the winter lying on the side walk covered with snow. There are a lot of trees on our property and this past winter was not kind to trees. A large limb fell from one tree totaled our SUV and damaged our other car so we had



a tree service come out to trim the trees. During that visit I was able to persuade them to install the last section of the tower and the mast.

About this time my brother arrived on his annual trip east from Arizona and offered an early birthday present: he had access to a 60' bucket truck. So I scrambled to get a ground crew together and KB1JEY and W2PED were kind enough to supply their services.

Saturday morning my brother showed up with a rather decrepit looking but entirely functioning bucket truck. I think that my brother was intrigued with this borrowed toy so he did all of the aerial work himself. He did complain a little about wrestling the H frame with three 12' loopers installed but otherwise he worked quietly and efficiently.

Paul, Michael and I prepared antennas on the ground installing feedlines and weather proofing connectors. Michael supplied self vulcanizing tape and a seemingly endless assortment of hand tools. Paul supplied meticulous workmanship and sage advice. Michael even came equipped to climb but never got the chance. **He appeared to be disappointed that he did not get to climb**.

As a result of the generosity of Chris, Michael and Paul, I now have antennas in the air for 50 MHz to 3456 MHz. Now I have to get busy hooking them up

This was a real demonstration of the generosity of the Pack Rats. This job would not have been possible without the help of Michael, Paul and my brother Chris and I can't thank them enough.





It is really amazing that these people would come out and help me with this project on short notice and ask nothing in return. We have a great club.

Thanks

Tom KA3FQS



January 2015





6 Foot fiberglass crossbar, with 3 loopers just below the top (2 Meter) antenna and above the 6 Meter antenna





- At the beginning of the contest concentrate on 6 and/or 2
- CALL CQ
- Whenever you work a Rover, run the bands right away - they are only on for a short period of time in each grid
- CALL CQ
- Use the Contest Clock especially the first 15 -30 minutes of each time period.
- CALL CQ
- Eat properly
- CALL CQ
- Make sure you are prompt for any skeds
- CALL CQ
- Get the proper amount of sleep
- CALL CQ
- Look for Packrats on 223.5 FM but DO NOT use as a coordinating frequency
- CALL CQ
- Use the "Packrats To Look For" List especially on Sunday to see if there is anyone that you didn't work

WORK AS MANY PACKRATS AS POSSIBLE CALL CQ OFTEN – IF THEY DON'T HEAR YOU THEY CAN'T WORK YOU

73 Bill K3EGE

Six Meter DX Report

14 December 2014

There isn't a whole lot to report from this end. The band for the most part has been dead here. The trans-Pacific path opened from New Zealand and Australia to Central and South America and the West Coast in early December, and there has been some single hop sporadic E. A screenshot from ON4KST for December 13th shows both the trans-Pacific path and sporadic E activity in Europe and the USA. The trans-Pacific path first began with stations in New Zealand; more recently the path extended to VK. One thing of interest is the location of the VK stations getting in on the trans-Pacific activity. One might think the activity would be confined to stations on the East Coast of Australia. i.e., VK2, VK4, but John VK5PO near Adelaide in South Australia (PF95HJ) has made a number of contacts with US and Central American stations; and the path at time seems to extend to VK6 on the Western Coast of Australia. In the next few weeks, if we get real lucky, there could be an Es link to the trans-Pacific path for us in the Eastern US.



N4KST Dec. 13, 2014 6m DX.

The long-awaited **Navassa DXpedition** is a go and there will be **"some"** six meter activity. The station's call will be K1N and it now appears they will begin transport to the Island during the last week of January 2015. Activity is expected to last about two weeks. According to Bob K4UEE, one of the prime organizers, "We are getting a five element six meter beam from DX Engineering and it will be mounted on a 10m. mast. The plan is to have a beacon on most times...and we will ask that if no one answers when there is an opening, then notify us on another band that six meters is open. There will be no EME and we will be barefoot on some bands, including six meters, due to "green footprint" power restrictions. (solar, wind, batteries and small gensets)."

It seems to me that there **might be some sporadic E in late January** but nothing to count on; keep your fingers crossed for a Navassa contact. More information on the operation can be found at: <u>http://www.navassadx.com/</u>.

Merry Christmas, Happy Hanukkah and Happy New Year to everyone.

73, Chris Patterson W3CMP

P.S. 14-15 December 2014 Just got on ON4KST. Apparently I missed ZL1RS about 45 min ago. Still listening....NZ3M worked him about 22:55z.

Just worked ZL1RS at 00:12 529. DXCC 142 on six meters here/.





EA3HMJ EME

EA3HMJ sent some details of the his small EME station as a follow-up to K2UYH's presentation last month. A pic of one of his helical antennas is on the desktop. Thanks Jose!!



1160 Hz you can see a weak ON0EME beacon signal (-25 to -28 db)



ON4KST screen shot for 12/15/14 (UTC). It shows the contacts with ZL1RS that occurred after 7:00pm last night. Bob was in again very weakly (too weak to work here) but was worked in the Midwest and Texas. **73, Chris W3CMP** **W3CCX** wins 2nd place nationally (June VHF - 2014) Multi Multi. That is WITHOUT a linear on 222 and 432!

73, John K3MD

W3AJJ former K3SZY

I regret to inform the membership that Ron has succumbed to pancreatic cancer in Johns Hopkins Hospital.

When I last talked to Ron he was optimistic that he would beat it, but that did not happen. Sorry to lose another member. Ron was enthusiastic that after retiring last year he would now have time to get on the air. He was building a station and most recently was installing an EME station. —Phil K3TUF

41st ANNUAL EASTERN VHF/UHF/MICROWAVE CONFERENCE

Fri./Sat./Sun. April 17-18-19, 2015 BAYMONT INN & SUITES, 20 Taylor St., Manchester, CT 06042 (just a few miles northeast of Hartford, CT off I-84, at Exit 63)

Registration \$30 (includes Super Hospitality Room, & Saturday Lunch) Registration \$25 before April 1 makes the Saturday Lunch Free.

Send presentation proposals to Paul <u>W1GHZ@arrl.net</u>

AGENDA AND DETAILS TO FOLLOW

W2SJ QRV FM28 for January Contest

Due to some family member medical complications, I have not been able to get my new tower installed at home for the January Contest as planned. The tower will now be installed in the Spring.

I have accepted Ray's (N3RG) offer to borrow his RV and go to Cape May Point, NJ in FM28. I will have 50-3456 on board with loop yagis for 903-3456. 6 meters will be a moxon and 144, 222, & 432 will be a special KMA log periodic manufactured just for those 3 bands with 24 elements on a 12 ft boom. Power will be 100 watts on 6 & 2, 200 watts on 222 & 432, 50 watts on 903 & 1296, 35 watts on 2304, and 50 watts on 3456. This is all my equipment and the antennas that will go up at my QTH on my new tower in the spring. The site is Cape May Point (Sunset Beach) right on the Bay and on private property. So, point your beams south to FM28MW. I'm looking forward to working you on all the bands I have. Tnx es 73, Bob, W2SJ

N2MO HISTORIC OPEN HOUSE

The Ocean-Monmouth Amateur Radio Club would like to invite you to an informal open house for radio amateurs at the N2MO Station at InfoAge on 10 Jan starting at 11:00 am to 3:00 pm (local time).

The N2MO Station occupies a site rich in history:

On the morning of 10 Jan, 1946, an experiment was conducted by Lt. Col. John DeWitt (W4ERI), Edwin King Stodola (W2AXO). F. Slacker (W2DMD), Herbert Kaufman (W2OQU) and Jacob Mofensen. A series of radio signals were transmitted, and in each case, the echo was picked up in 2.5 seconds, **the time it takes light to travel to the moon and back**. We know this experiment as **Project Diana**.

In 1959, the US Army Signal Research and Development Laboratory deployed the TLM-18 telemetry antenna. This 18 m dish was used as a ground station supporting the TIROS I and II satellites. The TLM-18 was used by the US Army until the site was decommissioned in the mid 1970's.

InfoAge, OMARC and our academic partner, Princeton University are **restoring the 60' TLM-18 Telemetry antenna system to use for radio astronomy and EME**. The project team has restored power to the TLM-18, rebuilt the drive system and deployed computer controls. Work continues on deployment of upgraded feed lines, new feed horns and SDR/digital receivers - see on the web at <u>http://www.n2mo.org</u>.

Please RSVP to diana@n2mo.org.

[Tnx to K2UYH for this info]

PWA has the new Yaesu Fusion repeater up and running on 448.225 -- PL is 131.8 for FM -no PL for Digital. The full length article is published in the PWA newsletter "X-Mitter". Email me for the PDF... it's free. <u>wa3qvu@arrl.net</u>

The Wayback Machine In CHEESE BITS, 50 Years Ago

(Nibbles from January 1965. Vol. VII # 10) de Bert, K3IUV (*author's comments in italics*)

- "Our Prez Sez". Prez K3GAS, Doc, pointed out that you should be in the last throes of your contest preparation, and that the coming week is "just for checkout". (Another "still true" comment.).
- Possible disaster averted by club member W3ELI, George Van Dyke. December 9 headline in the Philadelphia Inquirer read "Fire destroys Willingboro Hall". George was alerted to the fire by WA2THL, and he knew the Civil Defense Council stored combustibles there. George contacted the police who were able to remove the materials and thus prevent a probable explosion.
- Amateur Radio Week Proclamation ceremony in Philadelphia City Hall. A copy of the full page Proclamation was included in this issue. Present at the ceremony in the Mayor's reception room were 4 members of the Packrats, 3 members of other area clubs, and of course Mother Rat, Helen. (Do we still get such a proclamation?).
- The Inquirer announced "Philadelphia Ham Operators will mark the ARRL's 50th Anniversary during a weeklong celebration at the Franklin Institute". As part of the ceremonies, the Post Office will sell sheets of the new Amateur Radio stamp to Officials of the Packrats. The first sheets were sold by

the Postmaster, to our Prez, K3GAS, Doc, and Mother Rat, Helen. One of the sheets was dated and autographed by the Postmaster (I wonder where it is now? Might be worth some \$. John, your attic?). The photo copy from that issue is shown here. (You saw a picture of my copy of the stamp in my previous article.).



FIRST ISSUE OF A NEW STAMP honoring amateur radio operators is sold by Postmaster Anthony I. Lambert (left) at the 30th st. post office to Mrs. Helm Brick, of the Mt. Airy VHF Radio Club, and Dr. Isadore Cutler, club president.



Caption (above) reads: "FIRST ISSUE OF A NEW STAMP honoring amateur radio operators is sold by Postmaster Anthony I. Lambert (left) at the 30th St. post office to Mrs. Helen Brick of the Mt Airy VHF Radio Club, and Dr. Isidore Cutler, club President.

A QSL card emblazoned "Discover the New Pennsylvania" was created by the "Committee of 100,000 Pennsylvanians for the Promotion of Economic Growth". The reverse side featured promotional material about the state, includinga great new inter-state highway system (<i>Overwhelmed by traffic today</i> !). Supplies of the cards were made available to area Hams. (<i>I just found a few in my desk</i> !) ARRL Bulletin 984. Announced that Solar Flare Activity is expected to increase shortly and alerted us to the probable impact on radio communications. Flares could cause complete loss of	 K.U.I. (keeping you informed) by W3HKZ, Ed reported on the first demonstration of microwave power transmission, conducted by Raytheon. Microwave energy was transmitted from a parabolic antenna on the ground, to a "rectifying antenna" mounted beneath a helicopter. The antenna contained "thousands of tiny diodes" whose output ran the motor which turned the rotor blades. The helicopter flew 50'. (<i>Wow</i>.). However, they have developed a new <i>Amplitron</i> tube which will be able to power a helicopter to 50,000 feet. (<i>Where is the tube today</i>?). Also, Sperry Rand is developing a new 	
 communications for 30 minutes. New Products, by W3NSI, Lynn. 1) Amperex announced a new Varactor diode with a breakdown of 175-volts. The diode can be used as a Tripler from 50-Mc to 150 with 25-watts output, or 13-watts at 432 when used as a Tripler. (Used to be in my 1296 rig.). 2) The Sellistor (?) transient voltage suppressor was announced by Eastern Delta Corp. Priced at between 20 and 80 cents each. (The description sounds like today's Varistor.). 3) GE announced availability of a "Five-inone" tool for the electronic service technician and hobbyists. The tool features a pocket clip, and combines a Phillips and a regular screwdriver, with hex wrenches in ¼", 5/16" and 3/8" sizes. Available through GE distributors, the tool is priced at 98 cents! (Sounds like something KB1JEY needs in his pocket.). 	 machine dubbed Sceptron which is being "taught" to recognize words and speakers, regardless of their individual tonal characteristics. (Paved the way for SIRI?). January meeting announcement. The speakers will be "you", at the annual crying towel session. (Still a Packrat tradition today. I wonder where that first crying towel is now? Next month we'll find out who won it.). As in previous editions, many "folksy" comments about members, their families, and activities were included in this edition of Cheese Bits. If interested, or for more detail on the above items, visit www.W3CCX.COM and read the full issue posted there by our Webmaster, Ron, W3RJW). 	
• Reminder to be sure you are ready for the Jan contest, scheduled for Jan 12 & 13. (<i>Different dates, but still true today. Are you ready? See K3EGE or K1DS for "loaners</i> ".).	thirty, de K3IUV	

The College of New Jersey Hosts TCF[™]@40 TCF[™]@40 The 40th Anniversary of THE ORIGINAL PERSONAL COMPUTER SHOW **Trenton Computer Festival**TM Admission: \$10.00 (advance) onehicrive cre



KEYNOTE SPEAKER Dan Rosenbaum, Technology Journalist and Award-winning Writer. Wearable Tech Insider. speaks on "Approaching Singularity"



Focus on Wearable Technology and Celebration of the 40th TCF!

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Tour the Sarnoff Museum of Tech.

IEEE/ACM IT PROFESSIONAL CONFERENCE

Friday March 20, 2015, 8:30 am — 5:00pm** Continuing as part of TCF's Saturday Talks. For Conference Info and Fees See http://princetonacm.acm.org/tcfpro/

For additional TCF'15 info,

directions and advance tickets: www.tcf-ni.org

\$12.00 at Gate Free Parking www.tcf-nj.org

@ The College of New Jersey, Ewing, NJ Saturday, March 21, 2015

9:00 am — 5:00 pm Registration/Flea Market open at 9 am, Talks start at 10:15 am.

Internet-of-Things

 Android Wear talk by author Barry Burd Project Tango • Android/iPhone Apps



Raspberry Pi Tutorial and Projects

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Ham Cram Session & Exam: Get an Amateur Radio License in one day at TCF! Cram begins at 9 am

Robot Arduino Developer/User Tutorial/ Demos Workshop

DOOR PRIZES

IEEE Integrated STEM Education Conference (ISEC)** Saturday, March 7 – 8:00 am — 5:00 pm at Friend Center, Princeton University, NJ Creating a Culture of Achievement Info: http://ewh.leee.org/conf/stem/

**The IT Pro (Friday) and ISEC Conferences require separate registrations.

The 2015 Trenton Computer Festival[™] is sponsored by The College of New Jersey and its School of Engineering.

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25

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<u>Events</u>

For inclusion, please direct event notices to the editor.

Harrisburg Winterfest - Hamfest - January 24, 2015. 1 HACC Drive, Harrisburg PA 17110. \$3 admission. See www.w3uu.org or email Tin Lehman kb3oza@arrl.net for details.

ARRL January VHF Contest - Contest January 24 - 26, 2015. Get ready for the "Big One" and attend this months meeting on January 15th. Contest details at http:// www.arrl.org/january-vhf. Hints and strategies discussed at the Jan meeting.

Frostfest - Hamfest February 7, 2015. Mid-Atlantic's largest and first hamfest of the year. Includes ARRL Virginia State Convention. See **www.frostfest.com** for details.

Trenton Computer Festival - Conference & Swap March 21, 2015. 40th annual conference. Multiple tracks of presentations all day and an indoor flea market. See www.tcf-nj.org for more details.

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