Monroe County Radio Communications Association

The Hertzian Herald

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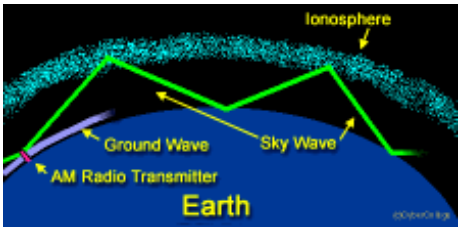
N8DXR's Ground Waves



Spring has arrived and as usual it is the most unpredictable season of the year. Last week we could look out the family room window and watch the deer chasing each other and the ducks in a rather large temporary spring pond. Today things are dry, the sky is clear and it's warm and sunny yet the forecast is for wind, rain and possible thunderstorms for the next few days. With this weather variability I hesitate to put my snow shovel away lest I provoke Mother Nature by being too presumptuous. The average snowfall for the Detroit area in April is 1.7 inches while the biggest snow fall in Detroit history happened on April 6, 1886 during a blizzard that dumped over 24 inches of snow in around 21 hours.

Michigan's varied, and somewhat unpredictable weather underscores the need for us as amateur radio operators to prepare ourselves to be of service to our community should the need arise. The level of preparedness can range from great to minor; both of which are better than not being prepared at all. Whether a person has the most well prepared mobile or base station or just a hand held radio with a rubber duck antenna, the most important tool they need is knowledge. The knowledge of how, when and where to use their skills and equipment in a manner that can be an asset to the emergency management community. In our area we have the Monroe County Amateur Radio Public Service Corps (ARPSC) which is open to all licensed amateurs and is a source of training and knowledge for any amateur who wants to become more prepared to provide service to their community. For ARPSC information visit the ARPSC web site at http://www.monroecountyarpsc.org/ or on the MCRCA website at http://www.mcrca.org.

Important Dates:
May 19 to 21 Dayton Hamvention;
June 18 MCRCA Hamfest;
June 24-25 Field Day.

That's it for this month.
Enjoy the good weather and get on the air.

John- N8DXR

Club Officers

PRESIDENT
John Copeland N8DXR
jcn8dxr@gmail.com

VICE PRESIDENT
Glen Ohlemacher K8GO
goglen@gmail.com

SECRETARY
Fred VanDaele KA8EBI
ka8ebi@yahoo.com

TREASURER
Brenda VanDaele KB8KQC
ka8ebi@yahoo.com

DIRECTOR
Paul Trouten W8PI
w8pi@arrl.net

DIRECTOR
Rodney Haddix
rodhaddix@hotmail.com

DIRECTOR
STATION TRUSTEE
Wes Busdiecker KC8SKP
busdiecw@netscape.net

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MCRCA Minutes:

Meeting called to order at 7:30 pm, by John Copeland N8DXR
Pledge of Allegiance
Introductions: No new members, upgrades or guests.

PROGRAM: Building Baluns and inexpensive Antennas by Tom KG8P

BREAK

DOOR PRIZE DRAWING: John N8DXR, Hank KE8DRP and Bob AC8DZ

50/50: Neil KA8PQH donated $10 to Scholarship

MINUTES: Motion by Dale WA8EFK, supported by John WD8QKJ, to approve as written in the Herald. Approved.

TREASURER REPORT: Motion by Paul W8PI, supported by Glen K8GO, to approve the treasurer's report as passed out to the membership. Approved.

DX REPORT: Tom KG8P reported that we are still in the lower end of the sun spot cycle and although there is quite a bit of sporadic DX out there it can be more challenging. Sterling State Park is scheduled to be operational in the MSPOTA challenge only in 2019.

TESTING: Next session - Sat. April 15, 2017.

ARPSC: Dave AC8SI Skywarn is scheduled for April 4th at the Community College. The MIQSO Party will be April 15th at the Red Cross, contact Paul or Dave if you can help out. Dave is recruiting new members for the ARES and has forms available to fill out. Monday night net on the 146.72 repeater at 8 pm, please join in. ARPSC meetings are held the first Thursday at the EMD office at 7:00 PM.

ARRL: Dale WA8EFK Michigan Legislature is drafting a bill to restrict use of all electronic devices while driving. Ed Mason has talked to the bill's writers to have the bill changed to cell phone service and exempt Amateur Radio.

RRRA: Dale WA8EFK has now moved all the repeaters 2m, 220, 440 and soon the Packet to Ida.

GLHamCon: Glen K8GO - October 7 & 8, 2017 are the dates for the new Great Lakes HamCon at the Michigan International Speedway. We will have a booth (#6112) for advertising at this year's Dayton Hamvention. We are looking for people to help man the booth for an hour or two while you are down there. We are also looking for people with skills in Marketing and Promotion. If you have talent in social media, website design, videography, or graphic design we can use your help.

OLD BUSINESS: none

NEW BUSINESS: Bob AC8DZ asked about ID badges for members of the club.

ANOUNCEMENTS: none

ADJOURNED: 9:00 pm

ATTENDANCE: 17

AC8SI David	K8GO Glen
KA8EBI Fred	KA8PQH Neil
KB8KQC Brenda	KC8SKP Wes
KD8ZUI Robert	KE8DRP Hank
KG8P Tom	N8DXR John
N8RWI John	W8PI Paul
WA8EFK Dale	WD8QKJ John
AC8DZ Bob	KE8CQW Sandra
W8GPR Gary	

Committees

Classes

Club Station
Wes Busdiecker KC8SKP

DX Net

Field Day
Jeff Breitner KA8NCR

Finance
Paul Trouten W8PI (chair)
Fred VanDaele KA8EBI
Dale Williams WA8EFK

HamFest
Fred VanDaele KA8EBI

Hertzian Herald
Fred VanDaele KA8EBI

Historian
Paul W8PI

Public Relations
Jeff Breitner KA8NCR

Scholarship
Fred VanDaele KA8EBI

School Liaison
open

Programs
open

Membership
open

Planning
open

Property Custodian
open

NASA unveils new searchable Video, Audio and Imagery Library for the public

NASA officially has launched a new resource to help the public search and download out-of-this-world images, videos and audio files by keyword and metadata searches from NASA.gov.

The NASA Image and Video Library website consolidates imagery spread across more than 60 collections into one searchable location.

https://images.nasa.gov

NASA Image and Video Library allows users to search, discover and download a treasure trove of more than 140,000 NASA images, videos and audio files from across the agency's many missions in aeronautics, astrophysics, Earth science, human spaceflight, and more. Users now can embed content in their own sites and choose from multiple resolutions to download. The website also displays the metadata associated with images.

Users can browse the agency's most recently uploaded files, as well as discover historic and the most popularly searched images, audio files and videos. Other features include:

- Automatically scales the interface for mobile phones and tablets
- Displays the EXIF/camera data that includes exposure, lens used, and other information, when available from the original image
- Allows for easy public access to high resolution files
- All video includes a downloadable caption file

NASA Image and Video Library's Application Programmers Interface (API) allows automation of imagery uploads for NASA, and gives members of the public the ability to embed content in their own sites and applications. This public site runs on NASA's cloud native "infrastructure-as-a-code" technology enabling on-demand use in the cloud.

The library is not comprehensive, but rather provides the best of what NASA makes publicly available from a single point of presence on the web. Additionally, it is a living website, where new and archival images, video and audio files continually will be added.

For more information about NASA's activities, visit: http://www.nasa.gov

Almost Hamvention Time

NASA is Developing High-speed Space Communication

BY Jennifer DelaOsa

NASA is currently working on a pathfinder relay satellite known as the Laser Communications Relay Demonstration (LCRD), which may be the first steps towards high-speed Internet in space.

The LCRD will help coordinate systems using laser communication (also known as optical communication), which in turn will enable faster data transfer between Earth based technology and spacecraft. If all goes as planned, this system could greatly advance space communications.

"LCRD is the next step in implementing NASA's vision of using optical communications for both near Earth and deep space missions," says Steve Jurczyk, associate administrator of NASA's Space Technology Mission Directorate, which leads the LCRD project.

Laser communication starts by encoding data onto a beam of light. This light beam is then transmitted from spacecraft to Earth based systems. Compared to communications using radio frequencies (RF), laser communications typically display data rates that are 10 to 100 times more efficient.

Laser based systems have another leg up on their RF counterparts—their potential for a reduced overall size. Since this technology can be smaller, spacecraft communication systems can have lower power, weight, and size necessities, which is important for human space travel.

"LCRD is designed to operate for many years and will allow NASA to learn how to optimally use this disruptive new technology," says Don Cornwell, director of the Advanced Communication and Navigation division of the Space Communications and Navigation program office at NASA Headquarters. "We are also designing a laser terminal for the International Space Station that will use LCRD to relay data from the station to the ground at gigabit-per-second data rates. We plan to fly this new terminal in 2021, and once tested, we hope that many other Earth orbiting NASA missions will also fly copies of it to relay their data through LCRD to the ground."

The LCRD is the successor to the Lunar Laser Communications Demonstration (LLCD). This pathfinder mission was the first of its kind to validate laser communications at a high data rate beyond low Earth orbit in 2013.The LCRD will expand upon its predecessor, testing its dependability, operational durability, and performance over varying weather conditions.

The LCRD is planned to function between a two- and five-year time frame. As the LCRD orbits in space, the spacecraft will communicate with Earth based terminals armed with laser modems in California and Hawaii. The relay satellite will include technological additions, such as a space switching unit (similar to a data router), which connects to two identical optical cameras and an RF downlink.

Recently, the LCRD has transitioned into the testing stage, where engineers will examine each component's functionality after launch conditions. The projected launch date is scheduled for summer 2019.

Webmaster or Executive - Monroe County Radio Comm Assn

Earlier this year, I published a series of articles on my web site called the "Arduino Ham Radio Starter Kit". The purpose of this information is to encourage more hams and their clubs to engage with the local maker community as a gateway to amateur radio.

These articles explain Arduino basics in a ham radio context. They contain many suggestions about how amateurs can use Arduinos, as well as how a ham club can engage other makers in hobby activities.

Please take a moment to review the Arduino Ham Radio Starter Kit articles. If you find them to be useful, please consider passing these along to your members or contacts.

The URL is: http://play.fallows.ca/wp/series/arduino-ham-radio-starter-kit/

Thanks for your consideration. If you have any questions or suggestions, please contact me.

73 John Fallows VE6EY Calgary, Alberta

First Moon Bounce using Opera

On Tuesday, March 7, Luis EA5DOM and Jose EA3HMJ made a test using the amateur radio weak-signal data mode Opera for 1296 MHz Moon Bounce (EME)

Luis EA5DOM posted the following:

We are both using an small 180cm offset dish. Jose is 400w, so he was transmitting and I was trying to decode. The trace was visible but too weak for an Op05 decode. So tried Op1 switching band to 70MHz. After some trying we got one decode at -24dB

2017-03-07 23:31:17 EA3HMJ JN11AN EA5DOM IM98WN 381 70.093 -23 Op1__~24dB

Switched to Op2 and tried some times without success. I was getting problems to keep an accurate tracking, so the signal was not optimal and close to the decoding limit

We will keep testing, But at least one decode was worth the effort.

This is my screenshot
https://dl.dropboxusercontent.com/u/7162072/Docs/Opera%20over%20EME%20first%20decode%20in%20Op1.JPG

And EA3HMJ side
https://dl.dropboxusercontent.com/u/7162072/Docs/Opera%20over%20EME%20first%20decode%20in%20Op1%20ea3hmj.jpg

You can download Opera from https://rosmodem.wordpress.com

USA ham radio allocations at 472 and 135.7 kHz

ARRL say: It's been a long time coming, but the Amateur Service in the USA will get two new bands in the near future

The ARRL report:

The FCC on March 28 adopted rules that will allow secondary Amateur Radio access to 472-479 kHz (630 meters) and to 135.7-137.8 kHz (2,200 meters), with minor conditions.

The FCC Report and Order (R&O) spells out the details. It allocates 472-479 kHz to the Amateur Service on a secondary basis and amends Part 97 to provide for Amateur Service use of that band as well as of the previously allocated 135.7-137.8 kHz band.

The R&O also amends Part 80 rules to authorize radio buoy operations in the 1900-2000 kHz band under a ship station license. The new rules become effective 30 days following publication in The Federal Register.

Read the ARRL story at:

http://www.arrl.org/news/new-bands-fcc-issues-amateur-radio-service-rules-for-630-meters-and-2-200-meters

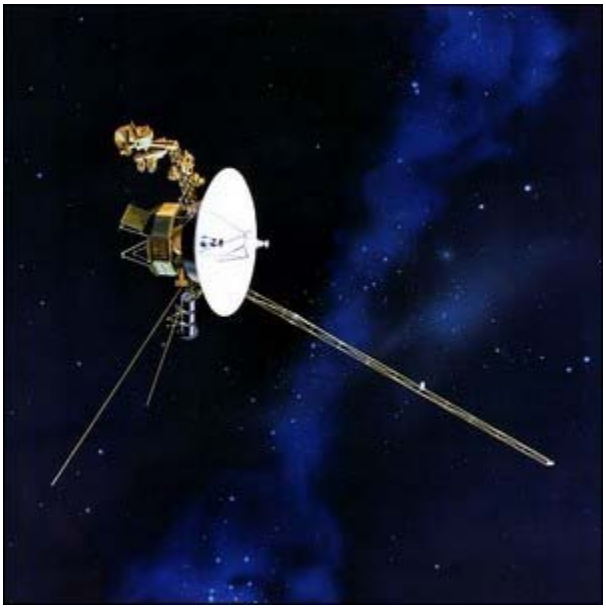
The Federal Register:

https://www.federalregister.gov/
https://twitter.com/FedRegister

FCC Report and Order

https://apps.fcc.gov/edocs_public/attachmatch/FCC-17-33A1.pdf

Voyager I



In September of 1977, NASA launched the *Voyager 1* space probe on mission to study our solar system and interplanetary space. Since then, the small nuclear-powered probe has been rocketing towards the edges of the solar system, sending us reports and stunning photographs all along the way.

Thanks to *Voyager 1* we've see close up photos of Jupiter's spots, volcanic eruptions on Jupiter's moons, and intimate looks at the rings of Saturn, its moons, and more. By 1990 the probe was far enough away to take a photos of our entire solar system, among those photos is the famous "pale blue dot" photo that shows a very tiny Earth lost in the cosmos.

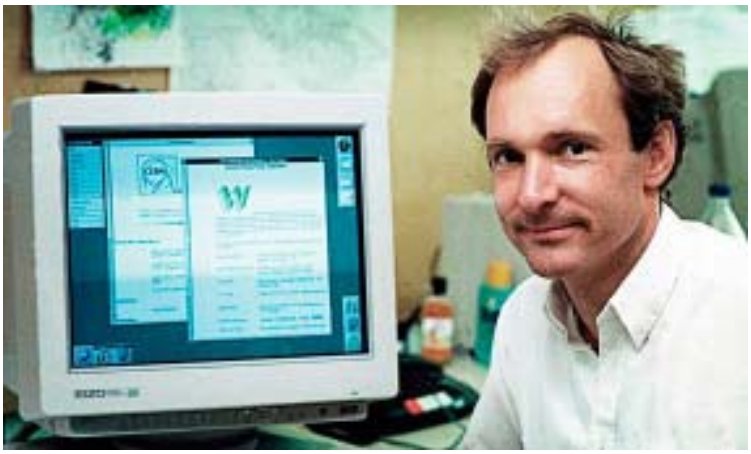
Right now the probe is farther from Earth than any other man made object has ever ventured. At roughly 11 billion miles away, Voyager 1 is in what NASA describes as a sort of cosmic purgatory, a dead zone between intrasteller and interstellar space where the strength of our Sun's influence is waning but not yet entirely absent. In the next few years Voyager 1 will punch through the heliosheath, the last vestige of our solar system, and find itself in true interstellar space.

Tim Berners-Lee and the Birth of the Web

In the summer of 1991, researchers at the European particle physics laboratory CERN released a program called the World Wide Web. It was a set of protocols that ran on top of the Internet protocols, and allowed a very flexible and general-purpose access to material stored on the Internet in a variety of formats. As with the Internet itself, it was this feature of access across formats, machines, operating systems, and standards that allowed the Web to become popular so rapidly.

Today most consumers consider the Web and the Internet to be synonymous; it is more accurate to say that the later was the foundation for the former. The primary author of the Web software was Tim Berners-Lee, who was working at CERN at the time. He recalled that his inspiration for developing the software came from observing physicists from all over the world meeting together for scientific discussions in common areas at the CERN buildings.

In addition to developing the Web, Berners-Lee also developed a program that allowed easy access to the software from a personal computer. This program, called a "browser," was a further key ingredient in making the Internet available to the masses. Berners-Lee's browser saw only limited use; it was soon replaced by a more sophisticated browser called "Mosaic," developed in 1993 at the University of Illinois in the United States. Two years later the principal developers of Mosaic left Illinois and moved to Silicon Valley in California, where they founded a company called Netscape.



Their browser, called "Navigator," was offered free to individuals to download; commercial users had to pay. Netscape's almost instant success led to the beginning of the Internet "bubble" whereby any stock remotely connected to the Web was traded at absurdly high prices.

Excerpt from Paul E. Ceruzzi's essay "The Trajectory of Digital Computing".

The American Radio Relay League's round-up of the forthcoming week's DX activity on the amateur radio bands

This week's bulletin was made possible with information provided by QRZ DX, the OPDX Bulletin, 425 DX News, The Daily DX, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites. Thanks to all.

MAURITANIA, 5T. Jean, 5T0JL will be active with the call 5T3MM between April 12 and 18, including the CQMM DX Contest. QSL via PY4KL.

MOROCCO, CN. Special event station 5C12SIA operates around the 12th International Exhibition of Agriculture in Meknes from April 18 to 23. QSL via CN8WW, direct.

ALGERIA, 7X. Toufik, 7X2DE who is now a member of the CWJF group, plans to participate in the CQMM DX Contest. QSL via PY4KL.

PALESTINE, E4. Janusz, SP9FIH will be active from Bethlehem during the second half of April with the call E44WE. He will be QRV on 17, 10 and 6 meters. QSL via ClubLog OQRS, SP9FIH.

FRANCE, F. Special event station TM17CV from Chatelaillon-Plage will be active from April 15 to 17 to celebrate the Festival de Cerf-Volant et du Vent (Kite and Wind Festival). QSL via F8FZC.

ST LUCIA, J6. Steve, WF2S and Ralph, K1ZZI will be operating with calls J68SL and J6/K1ZZI from Gros Islet (NA-108) from April 17 to 28. QSL via LoTW.

ST. VINCENT, J8. Brian, GW4DVB will be back on the air as J88PI from Palm Island (NA-025, WW Loc. FK92ho) from April 14 to 23. He will be QRV on 40, 20, 17, 15, and 10 meters. QSL via GW4DVB (d/B).

JAPAN, JA. The Japan Ladies Radio Society (JLRS) celebrates its 60th anniversary with the call 8N60JLRS until the end of March 2018. QSL via bureau, JQ6FQI, direct.

UNITED STATES OF AMERICA, K. N7S commemorates the first launch of the Space Shuttle, with operations until April 17. This is one in a series of activities for marking historic milestones in air and spacecraft technology.

BULGARIA, LZ. LZ38GI, LZ38NR, and LZ38SATURN commemorate the first flight of a Bulgarian cosmonaut (Georgi Ivanov) into space 38 years ago. They are QRV until the end of April. An award is also available. QSL via LZ1ZF.

TURKS AND CAICOS ISLANDS, VP5. Jim, K3NK and Joe, W3HNK will be signing VP5/K3NK and VP5/W3HNK from Providenciales Island (NA-002) until April 18 on 80 to 10 meters. QSL to home calls.

GUADELOUPE, FG. Dirk, DM1DZ is QRV as FG/DM1DZ until April 24. Listen for him on the HF bands, using SSB and possibly PSK31. He will be posting his logs to Club Log. QSL via DM1DZ.

ERITREA, E3. Zorro, JH1AJT will be joined by DJ9ZB, E21EIC and RA9USU, from May 19 to 29, on the air with the call signs E31AA and E39DI. Look for them on 160 to 10 meters using CW, SSB and RTTY. QSL via JH1AJT.

VIETNAM, XV. Jesus, WP4JBG/JP7MBO will be QRV as XV9G from April 19 to May 9 on 40, 20 and 15 meters, using mostly CW with SSB occasionally. QSL to WP4JBG.

CORSICA, TK. Alex, TK/F4GHS plans to be on the air from the west coast of the main island, on the HF bands, from May 23 to 28. Look for him on 40 and 20 meter SSB. QSL via the bureau or direct to his home call.

MONTENEGRO, 4O. Giuseppe, IK5WWA will be QRV as 4O7GD from June 18 to 28. Look for him on 80 to 6 meters using SSB, and possibly 2 meters. QSL to his home call, direct or bureau.

CEUTA AND MELILLA, EA9. Ten ops from the Tortugas CW Group will be QRV as EG9TOR from Melilla May 18 to 22, switching to the ED9T call sign for the King of Spain CW 2017 Contest, May 21 and 22. Most of their activity will be on CW though they will do some SSB and digital mode operating as well, on all HF bands. QSL via EA4PN or use OQRS for a direct or bureau card, or LoTW or eQSL.

TOGO, 5V. Operators David, OK6DJ and Petr, OK1FCJ will be active as 5V7P from April 21 to 28. Activity will be on 160 to 10 meters using CW, SSB and digital modes. QSL via OK6DJ, ClubLog's OQRS or LoTW.

GALAPAGOS ISLANDS, HC8. Tim, LW9EOC will be active as HC8/LW9EOC from May 15 to 29. Activity will be on 160 to 6 meters, with a focus on 30, 17 and 12 meters, using CW, SSB and RTTY. QSL via his home call, direct or LoTW.

MARKET REEF, OJ0. Pasi, OH3WS will be active as OJ0W on May 6 and 7. Activity will be on 20 to 6 meters using CW and SSB. Pasi will try 60 meters on both CW and SSB, on 5354 kHz. QSL via his home call.

SAN MARINO, T7. Mike, DF8AN will be active as T7/DF8AN/P from April 14 to 18. Activity will be VHF/UHF only using mainly JT65 and CW/SSB. QSL via his home call sign, direct or by the Bureau. No LoTW.

THIS WEEKEND ON THE RADIO. The Holyland DX Contest, ES Open HF Championship, Worked All Provinces of China, YU DX Contest, CQ Manchester Mineira DX Contest, Michigan QSO Party, EA-QRP CW Contest, Feld Hell Sprint, Ontario QSO Party, North Dakata QSO Party, WAB 3.5/7/14 Data Modes, and the ARRL Rookie Roundup, SSB will keep contesters very busy this weekend. The Run for the Bacon QRP Contest, Low Power Spring Sprint and the 144 MHz Spring Sprint are on April 17. Please see April QST, page 92, and the ARRL and WA7BNM contest web sites for details.

Amateur Radio Examinations Monroe, MI

Monroe County Radio Communications Association Amateur Radio examinations are held the 3rd Saturday of every even numbered month at:

American Red Cross Chapter Bldg.
1645 North Dixie Highway
Monroe, MI 48161

Walk-ins are always welcome.

2017 Schedule:
February 18 April 15
June 17 August 19
October 21 December 16

TESTING BEGINS PROMPTLY AT 9:00 AM

Applicants are expected to have all forms filled out and be ready to take tests at that time. Coffee and doughnuts are available at 8:30 AM. For more information or to make reservations, call Paul Trouten - W8PI at 734-854-2224

Join us at the next meeting

April 20th at 7:30 pm
American Red Cross Chapter Bldg.
1645 North Dixie Highway
Monroe, MI 48162

Local Net

ARPSC Net - Every Monday evening on '72-Monroe (146.72 Mhz) starting at 8:00pm.

ARPSC Meeting first Thursday of every month at the EMD office on Raisinville Rd.. 7:00 PM

Monroe County Radio
Communications Association
P.O. Box 237
Monroe, MI. 48161-0237