

News from



The GLORIOUS SOCIETY OF THE WORMHOLE

April 2019

Hello Worms

Hi Worms,

ITalk-in is on the Wormhole repeater system. For those coming to the meeting who cannot hit the repeater we will also monitor the Honeywell club repeater on 443.050 +141.3. Bring a folding chair for the meeting if you have one.

* GOOGLE'S NEW AMP EMAIL: GOOD OR BAD?*

INFOPACKETS by John Lister on March, 28 2019

Google is to make emails more interactive. It's billed as offering "more engaging and actionable email experiences" but might appeal to marketers more than users. It's all to do with the release of what Google calls "AMP for Email." AMP (Accelerated Mobile Pages) already exists and is a project designed to have web pages open quickly on mobile devices even if they contain media such as photos or videos.

AMP for Email makes it possible to send a document in AMP format, but have it delivered as an email. At its most basic level, that should mean emails will be quicker to load, rather than having noticeable delays while the content formats itself. Emails could contain "live" information.

Google also says it could make email messages more interactive. For example, an email could include a questionnaire or have an RSVP button. Users could interact with the email without needing to open a new web page. (Source: google.com)

The setup could also make it possible to send dynamic emails, meaning the content is generated specifically for the user at the moment they open it. For example, somebody promoting a clearance sale could send an email that included "live" details of whether items were still in stock when the customers opened the message, rather than have to click through to a website and be disappointed.

Although Google developed AMP for Email, it will release it as an open standard meaning other email providers will be able to support it. Several major companies have already started work on the format and will likely start sending out emails using it in the next few weeks. They include travel site Booking.com, jobs site Nexxt and events planning tool Doodle. (Source: techcrunch.com)

In theory anyone can create and send messages in the new format. However, it will require some technical knowledge, similar to creating a web page, so it's much more likely to be used by businesses than consumers.

*** INVENTOR OF INTERNET SPEAKS AT 30TH BIRTHDAY***

World Wide Web Foundation

The creator of the World Wide Web (WWW) says it faces a "downward plunge to a dysfunctional future." Sir Tim Berners-Lee said many of its problems were unintended consequences.

Berners-Lee spoke to mark the 30th anniversary of him submitting a proposal to his managers at European science group CERN for a way to organize data. That technology, based on hyperlinked text, became the World Wide Web. In turn, that helped shape the Internet into something used worldwide by ordinary people.

Writing an open letter, Berners-Lee noted that the web is now "a public square, a library, a doctor's office, a shop, a school, a design studio, an office, a cinema, a bank, and so much more." However, he acknowledged three sources of dysfunction that affect the web today.

The first is deliberate damaging activity, such as criminal actions, harassment, and state-sponsored hacking.

The second is what he describes as system design with perverse incentives that work against the interests of users. He specifically cited the way ad revenue models often reward clickbait or people sharing misinformation. Clickbait is defined as content which links to another site or page, using a headline or image (usually). When users click the link, the destination content is usually misleading - hence the term "clickbait".

The third is unintended consequences of "benevolent design." He gave an example of when attempts to foster "greater and wider discussion" online have instead led to an "outraged and polarized tone," which can be compared to how lynch mobs operate. According to Berners-Lee, everyone needs to play their part in rectifying these problems. He says governments must make sure laws are suitable for the modern era, protecting rights and freedoms online. He also says companies must do more to protect privacy and security, rather than simply over to vote or choose online services, while also doing their own part to communicate and debate online in a constructive manner.

He concluded that "The web is for everyone, and collectively we hold the power to change it. It won't be easy. But if we dream a little and work a lot, we can get the web we want." (Source: webfoundation.org)

Editors Note: For some reason Al Gore was not interviewed for this article ;-)

* DIODES*

Ralph WD0EJA, MARCH 2019

This is a very common term, even among folks that are not in electronics. These devices are used in automotive, generators, solar panels, HVAC and many other applications.

What is it? Mostly a two material solid state device. A "P" and a "N" material. Simply it allows electrical current to flow in one direction only. If reversed it will not conduct. Sort of like a check valve in a plumbing system. Water will flow in one direction, but not the reverse direct.

Why do we need it? One basic reason is to change an alternating current (AC) to a direct current (DC). The latter is what most of our equipment operates on.

There are several ways to use diodes to make the AC to DC change. There are 1/2 wave rectifiers (what the diode does) that will allow 1/2 the wave of an alternating current to flow, but eliminate the 2nd half the AC cycle.

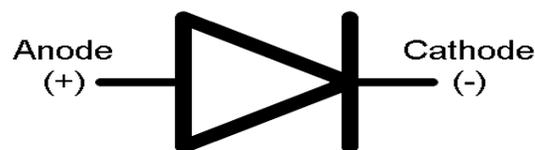
There are full wave rectifiers using two to four diodes. This allows 1/2 of the alternating current to flow down a wire. Then it reverses the polarity of the other 1/2 wave to flow in the same direction. This makes a more stable direct current.

The most common power supply diode is the silicon diode. These can be acquired for very low power to hundreds of amps such is used in welders.

One interesting characteristic is the voltage it take to get the diode to conduct in the forward direction. For silicon diodes it takes .7 volts across the diode to start conducting. Voltages lower than this will not conduct. What is the advantage?

If you look at your Digital Multi Meters (DMM) you will see a resistance mode. When you select this mode (several selections), you will be able to measure the value of resistors, capacitors (for short) or inductors without turning on the diode and giving you an improper reading because the meter uses less than .7 volts to make the measurement.

To check the diode, there is a selection on the meter specifically for this. It may have a symbol of a diode.



The diode symbol tells you the polarity. The pointed end of the triangle with a line is the cathode or negative side. The back of the triangle is the anode or positive end. This is usually marked on the diode. Small diodes have a line around the diode that indicates the cathode side. On the bigger diodes that use a stud and heat sinks, it is best to confirm polarity with your DMM.

There are many applications diodes can be used in. Later articles will describe more on this.

73,
Ralph WD0EJA, **BILAL COMPANY**

*** MORE THAN 50 BUGS FIXES IN LATEST APPLE UPDATE***

The Register By Thomas Claburn in San Francisco 26 Mar 2019

Apple rolls out repairs for 51 iOS flaws, including nasty ones, plus fixes for macOS. In addition to teasing the world with a glimpse of subscriptions services for newspapers and magazines, gaming, and video entertainment, Apple on Monday released iOS 12.2, which patches 51 security vulnerabilities.

The fruit-themed company's fixes cover some serious flaws and should be applied as soon as possible.

Among the most troubling vulnerabilities is a ReplayKit API flaw (CVE-2019-8566) that allows a malicious application to access the microphone on an iPhone, iPad or iPod touch without the authorization or awareness of the user.

"An API issue existed in the handling of microphone data," Apple explains in its security update. "This issue was addressed with improved validation."

Apple watchers may recall in January that the iGiant scrambled to fix a thematically-related FaceTime flaw that enabled a miscreant to force a FaceTime recipient's phone to answer a call, turning the Apple kit into a conduit for potential eavesdropping. That issue was fixed last month.

A related issue affects WebKit (CVE-2019-6222), the heart of mobile Safari, allowing a website to potentially access an iOS device microphone without any indication being shown. A separate Safari bug (CVE-2019-8554) allows a website to access device sensor information without consent.

Reached via Twitter, security researcher Patrick Wardle, chief research officer at Digita Security and founder of Objective-See, said in addition to the Replay Kit flaw,

which could be used to spy on people, there's a noteworthy Geo Services bug (CVE-2019-8553) that permits remote code execution.

According to Apple, the flaw could be used to construct a malicious SMS link that triggers arbitrary remote code.

"These are the types of bugs that advanced (nation-state) adversaries exploit to remotely infect targets," said Wardle, who lamented that Apple's iOS platform rules disallow security tools that could thwart or at least detect this sort of attack.

The 12.2 update also fixes an iOS kernel bug (CVE-2019-8527) that a remote attacker could use to crash the system or corrupt kernel memory.

WebKit meanwhile received multiple bandages to prevent maliciously crafted web content from messing with memory in order to achieve arbitrary code execution: CVE-2019-8536, CVE-2019-8544, CVE-2019-7285, CVE-2019-8556, and CVE-2019-8506.

"To me the takeaway is that, iOS is, and always will be a hackable device," said Wardle. "Yes it's very secure, but as is the case with any computing system it's hackable."

CAN HUMANS SENSE MAGNETIC STORMS?

SpaceWeatherNow Dr. Tony Phillips March 27, 2019

Close your eyes and relax. Daydream about something pleasant. In this state your brain is filled with "alpha waves," a type of electrical brainwave associated with wakeful relaxation.

Now try it during a geomagnetic storm. It may not be so easy. A new study just published in the journal *eNeuro* by researchers at Caltech offers convincing evidence that changes in Earth's magnetic field can suppress alpha waves in the human brain.

Researchers have long known that living creatures can sense magnetic fields. For instance, honeybees, salmon, turtles, birds, whales, and bats use the geomagnetic field to help them navigate, and dogs can be trained to locate buried magnets.

"Many animals can do it, so why not us?" asks Connie Wang, Caltech graduate student and lead author of the *eNeuro* study.

To find out if humans can indeed sense magnetic fields, the researchers built an isolated radiofrequency-shielded chamber where participants sat in utter darkness for an hour. As magnetic fields shifted silently around the chamber, participants' brain waves were measured using electrodes positioned at 64 locations on their heads.

In some of the 34 participants, alpha brainwaves decreased in power by as much as 60 percent in response to the shifting fields. Additional runs of the experiment showed that the effect was reproducible.

Study co-authors Joseph Kirschvink and Shin Shimojo say this is the first concrete evidence of a new human sense: magnetoreception.

Remarkably, participants who experienced the changes reported no awareness of them. It appears to be a completely unconscious effect, never rising to the level of a conscious interruption. This led the researchers to suggest it may be vestigial, some remnant of an ancient ability to navigate using local magnetic cues.

“It is perhaps not surprising that we might retain at least some functioning neural components [of magnetoreception], especially given the nomadic hunter-gatherer lifestyle of our not-too-distant ancestors,” says Kirschvink.

“As a next step, we ought to try bringing this into conscious awareness,” adds Shimojo.

Does this mean people may be able to sense geomagnetic storms? It's unclear.

When coronal mass ejections (CMEs) and streams of solar wind reach Earth, they cause our planet's magnetic field to shake, moving back and forth. During the Carrington Event of Sept. 1859, for instance, compass needles at mid-latitudes swung back and forth by several degrees (ref). The Caltech study didn't look at such small changes, however. Magnetic fields inside their test chamber shifted plus or minus 90 degrees at least. As a result, we do not yet know if human magnetoreception is sensitive enough to detect the more subtle changes typically associated with space weather.

By developing a robust methodology for testing magnetoreception, Kirschvink says he hopes their study can act as a roadmap for other researchers who are interested in replicating and extending this research. “The full extent of [magnetoreception] remains to be discovered,” he says.

CLUB MEETING

The next club meeting is April 6th. We meet on the first Saturday every month at 11:00 Saturday morning at the Minnreg Building located at 6340 126th Ave N, Largo. Members are welcome to come in the rear area through the fence gate on the southeast corner of the property. Talk-in is on the Wormhole repeater system. For those coming to the meeting who cannot hit our repeater we will be monitoring the Honeywell club repeater on 443.050 +141.3. We will keep an eye peeled for you. We will take advantage of the cooking facilities with an after-the-meeting Social and Wormdog picnic.

CLUB NETS

Check in on the club net Thursdays at 1930 and 2000 (or at the end of the 2M net). 2M at 146.850 – with a tone of 146.2. Our 6M net runs after our regular 2M net on 53.150 – 1MHz offset 146.2 tone. We are always looking for volunteers to be the net control operator. Anyone interested, talk to one your club officers.

LOCAL NETS

MONDAY

1730 147.030 + Receiver sites and tone info <http://www.qsl.net/wd4scd/> St Pete Yacht Club ARC

1830 147.060+ no tone St Pete ARC daily net St Petersburg

1900 144.210 USB CARS, vertical polarization
Clearwater

1900 147.135 +146.2 Zephyrhills ARC
Zephyrhills

2000 147.165+ 136.5 Brandon ARS from
Brandon

2000 50.135 Pinellas ARK Pinellas
County

2030 NI4CE system EAGLE Net, NTS traffic net, NI4CE system

2030 145.450 Pinellas ARK Pinellas
County

TUESDAY

1830 147.060 no tone St Pete ARC daily net from St Petersburg

1900 50.200 USB 6M net Brandon
ARS

1900 28.450 Clearwater	WCF section net	
1900 NI4CE system system	WCF Section VHF ARES	NI4CE
1930 145.170 & 442.4 both pl 156.7	Pinellas ACS net	Clearwater
1930 444.900 +141.3	Sheriff's Tactical ARC	Tampa
2000 NI4CE system	WCF Skywarn net	NI4CE system
2000 147.105+ 146.2 Tampa	Tampa ARC net	from
2000 28.365 USB	simplex	Brandon ARS
2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
2100 28.465 USB	10/10 net	from Orlando
1900 146.490 simplex simplex Net	3 RD Tuesday monthly, Hillsborough Co ARES	
WEDNESDAY		
1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
1930 52.020 simplex Petersburg	Suncoast 6'ers	from St
1930 NI4CE system system	WCF Section Digital Info Ne	NI4CE
2000 147.105 146.2 Tampa	Greater Tampa CERT net	from
2000 146.97- 146.2 Clearwater	Clearwater ARS	from

2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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2100 NI4CE system affiliated	Tampa Bay Traders Net	non-
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THURSDAY

1800 146.52 simplex Tampa	Hillsborough ARES/RACES	North
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1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
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1900 444.750 +146.2 Tampa	Fusion net	from
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1915 224.660- no tone Petersburg	St Pete ARC	from St
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1930 146.6385 -127.3 Lakeland	Lakeland ARC	from
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1930 440.100 + 162.2 Tampa	Hillsborough ARES/RACES	from
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1930 146.850- 146.2 Petersburg	Wormhole	from St
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2000 53.150 -1MHz 146.2 Petersburg	Wormhole	from St
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2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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FRIDAY

1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
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2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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SATURDAY

0730 3.940 (7.281 Alt.)+/- QRM WCF	WCF Section HF Net	from
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1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
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2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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SUNDAY

0800 3.933	Florida Traders Net	non-affiliated
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1830 147.060 no tone Petersburg	St Pete ARC daily net	from St
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1930 NI4CE system system	WCF Section Net	NI4CE
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2000 147.550 simplex County	550 Simplex Net	Pinellas
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2030 NI4CE system system	EAGLE Net, NTS traffic net	NI4CE
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2100 144.210 USB orientation	Clearwater ARS	vertical
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FOR SALE / WANTED

Anyone having something for sale or who might be looking for an item let me know. I will not print phone numbers or email addresses unless specifically told to since this newsletter might end up on the web. The exception is when I get the information off

the web. If you are a member of the Wormhole then you have all the information you need on a club roster and if you are not a member .. why not? OK, if you are not a member you can contact me at the email address at the end of this newsletter, I will give you the information to contact the person involved.

FOR SALE, Mosley TA-33M 10-15-20M beam with the 40M add on kit. Antenna is on the ground and in good shape. There are several parts that need replacement. The 40M kit is new in box. Antenna is broken down into six or seven feet sections so easy to handle. Asking \$300, talk to me, Bill AG4QX at arrl dot net or see me at the meeting.

FOR SALE, Cushcraft A4S 10-15-20M beam, on the ground. There are several parts that need replacement. Asking \$250, talk to me, Bill AG4QX at arrl dot net or see me at the meeting.



HAMFESTS

2019

- March 3** Punta Gorda, Charlotte County Hamfest, Punta Gorda Boat Club, 802 West Retta Esplanade, talk-in on 147.255 + 136.5, <https://www.prra.club/hamfest.html>
- March 16** New Port Richey, Millennium Academy, 10005 Ridge Road, nothing on club website
- March 23** Sarasota, Sarasota ERC, American Red Cross, 2001 Cantu Court, \$2 entry, \$5 tailgate, \$15 inside, limited space, For info e-mail SERC@comcast.net
- April 6** Odessa, Suncoast ARC, Gunn Highway Flea Market, 2317 Gunn Highway, talkin 145.350 no tone, for info Don Nystron , KA2KDP 727-868-0176

- April 13** **TARCFest**, TARC Clubhouse, 22nd St at the river, \$ entry plus \$ to tailgate, inside tables \$ in advance, talkin on 147.105 +146.2, more info at <http://hamclub.org/>
- May 11** Dade City, East Pasco ARS, 37745 Church Ave, \$5 entry and tailgate, info at http://eparsonline.org/public_html/eparsonline.org/
- May 25** **WormFest 2019, Pinellas Park, FREE, Freedom Lake Park, 9990 46th St N, southeast corner of US 19 and 49th Street, Park opens at sunrise for vendor setup, hamfest starts at 0800. Talk-in on 146.850 - 146.2. For a map and directions see <http://www.TheWormholeSociety.org> .**
- August 17** **TARCFest**, TARC Clubhouse, 22nd St at the river, \$ entry plus \$ to tailgate, inside tables \$ in advance, talkin on 147.105 +146.2, more info at <http://hamclub.org/>
- November 9** Pinellas Park, **SPARCFest**, admission FREE, tailgate free, Freedom Lake Park, 9990 46th St N, Southeast corner of US 19 and 49th Street, Talk-in on 147.060+ no tone. VE testing at 0900. For more information go to <http://www.sparc-club.org/sparcfest.html>
- December 13 & 14** **Plant City, the 2018 Tampa Bay Hamfest is the West Central Florida Section Convention, Friday and Saturday, at the Expo Building in the Strawberry Festival grounds, advanced admission \$9, at the door \$10, for information contact Bill Williams AG4QX, chairman@fgcarc.org or go to <http://www.tampabayhamfest.org> or you can just ask me, Jim or Dee at a meeting ;-)**
- 2020**
- February 7-9** **Orlando Hamcation and State Convention**, Central Florida Fairgrounds, 4603 West Colonial Drive, Tickets \$15 in advance, \$17 at door. Talkin 146.4760 - no PL or D-Star 146.850 -, all the information at www.hamcation.com or call 407-841-0874

February 21 & 22 Tampa, **5th Annual TECHCON Convention**, for more info
<http://arrlwcf.org/> or contact Darrell Davis at kt4wx@arrl.net.

Mid January	Frogman swim in Tampa Bay. http://www.tampabayfrogman.com/
Last full weekend January	Winter Field Day, https://www.winterfieldday.com/
Late January	Gasparilla celebration
Late February	West Central Florida Tech Conference http://arrlwcf.org/wcf-special-events/wcftechconference/
March/April	MS Walks
March/April	Mass Casualty Exercises
Late April	Southeastern VHF Society Conference, http://www.svhfs.org
Late April	Florida QSO Party
Mid May	March For Babies (was March of Dimes) https://www.marchforbabies.org/Registration/Events
Early to Mid May	MS 150 Citrus Tour bike ride http://www.citrustour.org/register.php
Mid-May	Annual Armed Forces Crossband Test
Mid-May	Florida Hurricane Exercise
May, Memorial Day Weekend	Wormfest
Early June	Museum Ships on the Air
Fourth weekend in June	Field Day http://www.arrl.org/contests/announcements/fd/
July 3/4	Midnight Run in Largo http://www.kiwanismidnightrun.com/
August	International Lighthouse/Lightship Week https://illw.net/
October, 3 rd weekend	JOTA, Scout Jamboree-on-the-AIR (around 14.280MHz)
Early December	ALS bike ride in Walsingham Park

December, Second weekend

Tampa Bay Hamfest <http://www.fgcarc.org/>

YOUR WORMHOLE OFFICERS

Bill AG4QX is President and editor of this newsletter, Treasurer is Jim KD4MZL, Paul KA4IOX is the Secretary, Dee N4GD is the Repeater Trustee and Mike K4ZPE is both our club Vice President and webmaster.

YOUR WORMHOLE REPEATERS

53.150 -1Mz PL 146.2

442.625 +5Mz PL 146.2

146.850 - 600Kz PL 146.2

The Wormhole repeaters are both now dual mode Yaesu DR-1X. FM analog as always and now Yaesu Fusion, a C4FM/FM digital mode.

The Wormhole website is at: <http://www.TheWormholeSociety.org>.

West Central Florida Section website: <http://www.arrlwcf.org/>.

The ARRL website is at: <http://www.arrl.org/>

This newsletter is written for The Glorious Society of the Wormhole, an ARRL affiliated amateur radio club located around the Seminole section of Pinellas County Florida. Anyone wishing to be added or removed from The Glorious Society of the Wormhole mailings please write to me at the address below and thy will be done.

73,

Bill Williams

AG4QX

ag4qx AT arrl DOT net