

THE COMMUNICATOR

Grant County Employee Newsletter

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Editor: Dawn Mergen, Personnel Specialist

You Asked IT

Submitted by Dana Andrews, Information Technology Technician

'You Asked IT' will be a new column coming soon to the County Newsletter. In it we will be answering general questions users have about common software programs, hardware, or 'how-to something'. Rather than us just generating random tips and tricks, the questions we answer will come from submittals to the email address <u>techhelp@co.grant.wi.gov</u>. This email address is not a substitute for the help desk but rather a place to ask those questions we often hear when a tech is out in the field. "Which is better, faster CPU or more RAM?",



"How do I do a Screen Capture?", "What is the latest Windows release?" are some examples of questions that can be answered. Note however that overly complicated questions will be reduced to simpler terms. Questions like "How do I edit a photo" will most likely not include a discussion of the feature set for Photoshop. We would respond with programs that do editing (in this case, Microsoft Paint or IrfanView, or maybe even GIMP). The answers will depend in some cases on column space or complexity of the response. But hopefully each newsletter will bring you useful knowledge and information that will help in this ever increasing digital world we all live in.



Grant County's IT Staff: Deanna Steines, Christine Douglas, Shane Drinkwater, Lucretia Wilson, Jesse Klein, and Dana Andrews

Grant County Continues to Improve Connectivity Using Fiber Optics

Submitted by Grant County Board Chair, Robert Keeney

The recent construction of the Community Services Building (CSB) was the start of new technologies which included improved connectivity provided by the use of fiber optic connection to Orchard Manor. An opportunity soon became available to bring a fiber optic connection to the Administration Building, which allowed us to also bring fiber to the Fairgrounds, Highway Department and the Law Enforcement Center. Over time, we continue to improve the communications system in Grant County. We moved south to Grant Regional Health Care and on to the Conservation, Sanitation, and Zoning (CSZ) department and Unified Community Services. This fiber optic system allows for high speed communications between the connected buildings. The County uses fiber optics for:

- a.) VoIP (Voice over Internet Protocol) phones. The County's VoIP system relies heavily on the fiber optics because of low latency and capacity of the fiber optics.
- b.) Inter Building backups. The County's backup system needs a high bandwidth connection between buildings in order to complete off site backups in a timely manner.
- c.) Grant County Public Wi-Fi and Media wireless networks use the fiber optics to funnel all of the County's public and media traffic to the CSB Building.
- d.) High performance for the County's systems. Fiber optics provide instant and high bandwidth to every area of the network.

The intention is to complete the loop using a south route back to the Community Services Building to provide a reliable redundant loop for flow of information in case a fiber line is damaged.

The improved technologies used at CSB was the start of a new Grant County Public Safety Communications System. Initial planning took place to expand to an 11 Tower communication system that needed "line of sight" to connect the towers. Because of the "line of sight" issue created by the topography of the northern areas of Grant County, fiber optics were investigated. Through this investigation we found that fiber connections could replace the need for additional tower structures and equipment. As American Rescue Plan Act of 2021 (ARPA) was rolled out, available funding provided the opportunity for this fiber optic line to be expanded to create a full loop around Grant County in lieu of the microwave link.

The communications system need for a redundant and reliable communication transport will use this fiber optic loop. The loop will support distribution and relaying of traffic around the loop of the 11 radio shacks. Focusing in on the fiber loop proposal the County has 3 main priorities:

- 1.) Support and operation of the Grant County Public Safety system
- 2.) Help provide communications for municipalities, towns and cities of Grant County
- 3.) Provide reliable and if needed redundant communications for broadband and industry in the County.

As communications become a corner stone for modern society, this fiber optic loop will provide multiple options for growth. The initial fiber optic installation to Platteville will allow Grant County to connect to WisNet for multiple reasons. First is to support County and government entities with reliable high-speed internet. The second reason is to help diversify the County's internet portfolio. By using multiple high-speed internet service providers, the County can now start looking at internet cloud options. Our hope for 2021 is to grow the loop north to a tower site east of Fennimore, on to a site in the Muscoda industrial park, and on to a site in the City of Boscobel. Along the way, there will be opportunities to connect communities, schools, and possibly even broadband companies, and to share our fiber optic investment to help connectivity while helping to support the maintenance and expansion of the system.



Dana's Desktop Dana C. Andrews, Grant County IT Technician



Time to Power UP

One of the big goals in environmentally friendly powergeneration is to get fusion energy to work.



Fusion energy comes from merging two atoms together (what the sun does) where fission is the splitting of an atom (atomic bomb and current nuclear power plants). Fusion energy does not create harmful radiation nor is it prone to run-away processes (no Three Mile Island or Chernobyl incidents).

Fusion powered reactors that have been built so far have been too inefficient because they consume more energy than they produce. This is because you need to contain an electrical plasma that is around 100,000,000° in temperature. Power reactors, called tokamaks, are able to contain this atomic soup by using a magnetic 'bottle'. But this 'field' is generated by using a series of copper-wired electromagnets that required vast amounts of energy. As much as 200 megawatts (200 million watts).

That is until September 5th of this year.

The Massachusetts Institute of Technology (MIT) in collaboration with a private concern, Commonwealth Fusion Systems (CFS), was able to generate a record amount of containing force (20-tesla) using only 30 watts of power (tesla is a measure of magnetic attraction and has nothing to do with a car dealership). The upshot of this being they can now build a Tokamak that produces more energy than it consumes.

The key to their success was by using a superconducting ribbon that worked in a hightemperature environment (most superconductors need very cold conditions). Super-conduction is a state where electrons have virtually no resistance of movement. With the lack of electrical resistance, only a very small amount of energy was needed to create the super strong magnetic field. This is not pie-in-the-sky stuff either. The September 5th experiment was in support of a testbed power generator called SPARC that is being built now. The ultimate hope is for a commercial fusion power plant to be operational by 2030. Nor is this the end of the story. Besides Tokamaks, there are other types of fusion reactors. One of them tries to use a laser to rapidly heat material to the point that the required plasma state is achieved; called ignition. About a month before MIT's success, one of the labs at Lawrence Livermore was able to achieve ignition and produced more power than consumed (even if only for 1 billionth of a second).

No matter the method, clean, inexpensive, and safe power may be no more than a decade away.

Door Dash in Space

Elon Musk's SpaceX recently made a delivery to the space station. The Dragon spacecraft carried more than 4,800 pounds (that's 2-½ tons) of supplies and experiments. Beside things like fresh food, ice cream, and a host of experiments, the cargo also



included a Japanese made robotic arm. This is a high precision device that will attempt to autonomously screw weightless items together and perform other mundane chores normally done by astronauts (no doubt to put together space station IKEA furniture). The hope is a squad of these arms could help build lunar bases and mine the moon for precious resources (and assemble moon IKEA furniture).

Did You Know...

The Falcon rocket used in the previous story landed upright on SpaceX's newest ocean recovery platform, named "A Shortfall of Gravitas". The names given to these platforms come from Elon Musk's continuing tribute to the late science fiction writer Iain Banks and his 'Culture' series of stories.

Back to the Beginning

The successor to the Hubble Telescope is the James Webb Space Telescope (named after James E. Webb, NASA's chief administrator from 1961 to 1968). It has been under development for over two decades and is the combined efforts of NASA, ESA (European Space Administration), and CSA (Canadian Space Administration, which I really thought was just two guys drinking beer in a Canadian forest). The primary mirror system will span 21 feet, compared to Hubble's 7 feet 10 inches (the larger the mirror, the more light that is captured). The on-board sensors are also tuned to a lower frequency to help the platform to see farther (something called red-shift that involves waves of light at very low frequencies). James Webb is expected to be able to see ancient light from just 100 million years after the Big Bang. (Hubble was only able to see back to ½ billion years after the large pop). But it is more than just a bigger version of Hubble. It has the ability to see planets orbiting other stars and collect information on those that have atmospheres (At this time, planets are inferred by measuring the wobble of a star and are not directly observed). The telescope will float in an area called the Sun-Earth Lagrange point, an area where the gravity of the sun and the earth cancel each other out. It is scheduled to launch December 18, 2021.

Can Light Sabers be Far Behind...

If you were part of my generation, then space travel was shiny metal rockets with big flames trailing out the end. This was the stuff of science fiction and later, real life. But if you are a more recent human



being then your expectations are of things that float and move with nothing more than blue light showing from the power end. It has been the stuff of your science fiction but is still wanting in real life. That is, until now.

NASA's newest mission to examine an asteroid is named Psych and while it will use a conventional rocket to launch into space, once separated, it will make the trip using electric thrusters. These are devices that use electricity from solar panels to generate electromagnetic fields that, in turn, will thrust atoms of Xenon (the stuff in those too bright headlights on new cars). Called Hall Thrusters, they glow blue during this process. While not providing a whole

lot of power (the example given is it's the same power as you holding 3 quarters between your finger and thumb), they work well in the no-resistant environment of space, reaching speeds of up to 200,000 miles per hour. For this mission, the spacecraft will carry a little over 2000 lbs. of Xenon, which is 1/5 of what would be needed with traditional propellant. This is not the only planned use of these thrusters either. Maxar Technologies has built and tested 6 kW Hall thrusters to be used for the moon space station (NASA's Gateway project).

Will Self-Driving Trucks Still Honk for You

The car company Hyundai recently announced their "Hydrogen Vision 2040" program. Betting big on nextgen fuel cells, they envision a future of



650 hp sports cars where the 'h' in 'hp' will be hydrogen. However, one of the more intriguing (or scary) concepts using this fuel system was a cargo system dubbed 'Trailer Drones'. The system would consist of smart trailers moved by self-driving hydrogen-powered vehicles called e-Bogies. A trailer can be moved by one e-Bogie but the big plan is for 'trains' of trailers coupled with e-Bogies flying down the highway that would peel off individually at the delivery exit points.

Below is one of Hyundai's test vehicles. Apparently, you cannot photograph this vehicle in detail due to the crazy paint scheme.



Cell Phone Usage

Here are a few statistics about cell phone usage.

- 85% of Americans check their phone when speaking with family members or friends.
- 44% of Americans check their phone while crossing a street.
- 32% of Americans check their device immediately upon waking up.

- 89% of iPhone users unlock their device 80 times per day.
- 68% of adults state they irrationally worry about losing their phone.
- 14% of Fatal vehicle crashes involved cell phone use.
- Less than half of Americans actually answer phone calls made to their devices (48%).
- In 2019, 204 Billion apps were downloaded.
- TikTok was the most downloaded app of 2020 (850 million downloads)
- The average time spent on smartphone apps is 4.2 hours (per day).
- 26 billion text messages are sent a day.
- Text messages have a near 100% read rate. 50% are read within 3 minutes.
- Over 1.3 Billion smartphones were sold worldwide in 2020.
- The average American makes and receives 178 calls per month (93 received and 85 made).

(My apologies if you are reading this on your phone...)

Do You Have a Change?

It is the responsibility of each employee to promptly <u>notify</u> his/her supervisor and the <u>Grant County</u> <u>Personnel Department</u> of any changes in personal data <u>no later than seven business days</u> <u>after the change occurs</u>. Personal mailing addresses, <u>marital status</u>, telephone number, email address, number and names of dependents, individuals to be contacted in event of an emergency, educational accomplishment, and other such status reports should be accurate and current at all times with the employee's personnel file.

Failing to notify the Personnel Department may impact your insurance and receipt of important notices.

Aflac

Grant County's benefit eligible employees may participate in Aflac. This coverage helps you pay for medical related out-of-pocket costs.

Policy changes/enrollments are effective July 1st and January 1st.

Michelle Nodorft (608-778-8057) from Aflac will be in Lancaster to meet with employees that would like to learn about the coverage types, have questions, or want to make changes.

Please see the below schedule and choose the location(s) and time(s) that work best for you.

November 18, 2021

9 a.m. to 10:30 a.m. at the Community Services Building (Lobby Conference Room) *11 a.m. Presentation at the County Board Room; must contact Personnel Office if plan to attend* 11:30 a.m. to 12:30 p.m. at the Administration building (Conference Room 266) 1 p.m. to 3 p.m. at Orchard Manor (Conference Room 104)



"Now that I've invented it, I have this odd compulsion to hold it in my hand wherever I go and glance at it incessantly."



It's Here: The New EBC Mobile

The new EBC Mobile is now available in the <u>App Store</u> and <u>Google Play</u>! Your participants will receive an email that they can download it now and we'd love for you to forward this email or share this information with them to help them know it's available. You can also find more EBC Mobile resources at <u>www.ebcflex.com/mobiletoolkit</u>.

EBC Mobile combines user feedback and the latest development best practices to give participants everything they need to manage their benefit accounts, all in one intuitive app.

Here's what you can tell your participants.

The new EBC Mobile is now available in the <u>App Store</u> and <u>Google Play</u>! Download it now to manage your benefit accounts all in one intuitive app.

Tip: Because the app is brand new, you'll have the most success finding it by entering EBC Mobile in the app store search field or clicking the links in this email.

You'll see all of your EBC accounts in the new app, including your flexible spending account (FSA), health savings account (HSA), health reimbursement arrangement (HRA), and commuter accounts.

In the app, you can:

- Log in with your existing online account information or register your new account if you're logging in for the first time.
- Use the latest security technology, including a biometric login and two-step verification.
- Track all of your EBC accounts on the Home screen, use quick navigation at the bottom of the screen, and tap a benefit account to see account-specific details.
- Submit a claim to be reimbursed for eligible expenses and verify a Benefits Card transaction is an
 eligible expense by using your phone's camera within the app to take pictures of receipts/expense
 documentation.
- View transactions to track all money going in or out of your account, drill down to details, and find exactly what you're looking for by filtering based on account, account status, type, or date range.
- View your messages from EBC in a centralized location and receive timely notifications about your benefits account.
- Send us your questions through a secure channel and we'll respond to the email address in your account profile.
- Provide app feedback to help us make the app even better by sending us feedback, fixes, and ideas.







eam Grant Coun

Welcome to our Team!

New Employees - August 1, 2021 through September 25, 2021

Owen Riley ~ August 9 ~ Sheriff Allison Simmons ~ August 9 ~ Orchard Manor Victoria Bonilla ~ August 10 ~ Sheriff Megan Miles ~ August 12 ~ Orchard Manor Nathan Allen ~ August 16 ~ Emergency Mgmt Darin Hampton ~ August 16 ~ Highway Ryan Heberlein ~ August 16 ~ Highway Allison Dreckman ~ August 17 ~ Fair Logan Hipps ~ August 23 ~ Sheriff Mary Fishnick ~ August 24 ~ Orchard Manor Madison Schneider ~ August 24 ~ Orchard Manor Alaina Stader ~ August 24 ~ Orchard Manor Dakota White ~ August 24 ~ Orchard Manor Rose White ~ August 29 ~ Orchard Manor Daniel Kliebenstein, Jr. ~ September 1 ~ Sheriff Brianna Klaas ~ September 3 ~ Health Charissa Fecht ~ September 7 ~ Orchard Manor Paige Slater ~ September 8 ~ Sheriff Ashley Abing ~ September 12 ~ Emergency Mgmt John Bohlman ~ September 12 ~ Emergency Mgmt Joanne Govier ~ September 12 ~ Emergency Mgmt Sherry Govier ~ September 12 ~ Emergency Mgmt Natalie Yager ~ September 13 ~ Social Services Jean Verger ~ September 14 ~ Health Julie Atkinson ~ September 15 ~ Health Tanner Reuter ~ September 15 ~ Health Ashley Heinz ~ September 21 ~ ADRC

Anyone wishing to have a specific subject discussed in a future newsletter may contact Joyce Roling at 723-2045 or <u>jroling@co.grant.wi.gov</u>.









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Pumpkin Pies Apple Crisp Baking Soda Butter Cinnamon Cloves Eggs Vanilla Extract Flour Ginger

Heavy Whipping Cream Ice Creams Lemon Juice Evaporated Milk Nutmeg Oats Salt Pie Shell

Brown Sugar Warm Water Whipped Topping