Issue # 11

November, 2014

"News & Views"

Your Taylorsville HAMnet newsletter

Submit ideas/articles to tville.hamnet@gmail.org

S h o c k i n g !

(see page 3 for more)

Happy Thanksgiving

The Utah VHF Society

The Utah VHF Society is a non-profit organization founded in 1968 to promote and coordinate the installation and use of VHF/UHF amateur repeaters throughout Utah at a time when operation on 2 meters was fairly rare and repeaters were even rarer! In the interest of spurring on what was viewed to be a growing facet of the hobby, the Utah VHF Society was conceived to facilitate the installation and coordination of the new repeaters as they came online.

Mel Parkes, President

Utah VHF Society

Frequency Coordination:

From the beginning it was realized that there had to be a central coordination body so that the chaos of repeaters going on the air on the same frequencies could be avoided as well as to make the best use of the spectrum: Even though there were still plenty of "empty spaces" in the repeater sub-bands, it was still important to take due care to prevent issues of interference well before they could happen! In addition to just record keeping, coordination also had the advantage of making sure that systems that were put on the air were done in a technically-sound manner, this providing a means of keeping other repeater operators informed of what was going on as well as to help provide a bit of feedback between the would-be repeater owner, the frequency coordinator and other repeater operators so that advice could be given, mistakes could be avoided, and if something did go wrong, provide a knowledge base to help solve the problems.

As repeater operation became more prevalent, it was recognized by the amateur community and the FCC that, when disputes arose, a means of aiding in the "self-policing" of the amateur service was needed and in light of that, the Utah VHF Society has long been aligned various national groups and its coordination actions are considered when issues relevant to FCC §97.201 of the Amateur Service rules arise.

"Bootstrapping" Repeaters in rural areas:

It should not escape the attention of anyone who has looked at a map to note that there are very few people in most of the rural areas of Utah, and it is these areas of sparse population that cover, by far, most of the state. It should be no surprise that when the few hams in these rural areas wanted to put up their own repeaters, finding the funding and expertise to do so often posed a bit of a challenge. From the beginning, the Utah VHF Society has leveraged its membership resources so that the installation and maintenance of repeaters and linked systems in these areas was possible, often providing financial and material support as well as expertise and manpower when requested.

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What is Electricity, and where does it go after it leave's the Toaster?

Attributed to Dave Barry

Here is a dissertation on electricity for your enlightenment.
I found it on the Internet, so it must be true!

Today's scientific question is: What in the world is electricity and where does it go after it leaves the toaster?

Here is a simple experiment that will teach you an important electrical lesson: On a cool dry day, scuff your feet along a carpet, then reach your hand into a friend's mouth and touch one of his dental fillings. Did you notice how your friend twitched violently and cried out in pain? This teaches one that electricity can be a very powerful force, but we must never use it to hurt others unless we need to learn an important lesson about electricity.

It also illustrates how an electrical circuit works. When you scuffed your feet, you picked up batches of "electrons", which are very small objects that carpet manufacturers weave into carpet so that they will attract dirt. The electrons travel through your bloodstream and collect in your finger, where they form a spark that leaps to your friend's filling, then travel down to his feet and back into the carpet, thus completing the circuit.

AMAZING ELECTRONIC FACT: If you scuffed your feet long enough without touching anything, you would build up so many electrons that your finger would explode! But this is nothing to worry about unless you have carpeting.

Continued on next page

Rulon Swensen

K7BTU

I hate putting myself in the spotlight but someone suggested that "What was good for the goose was good for the gander"

I hold a General license and was the main culprit in starting this group.

I really enjoy working with each of you and hope that as we work together we will be successful
Thank you for your efforts.

What is Electricity, and where does it go after it leave's the toaster? (continued)

Although we modern persons tend to take our electric lights, radios, mixers, etc. for granted, hundreds of years ago people did not have any of these things, which is just as well because there was no place to plug them in. Then along came the first Electrical Pioneer, Benjamin Franklin, who flew a kite in a lightning storm and received a serious electrical shock. This proved that lightning was powered by the same force as carpets, but it also damaged Franklin's brain so severely that he started speaking only in incomprehensible maxims, such as, "A penny saved is a penny earned." Eventually he had to be given a job running the post office.

After Franklin came a herd of Electrical Pioneers whose names have become part of our electrical terminology: Myron Volt, Mary Louise Amp, James Watt, Bob Transformer, etc. These pioneers conducted many important electrical experiments. Among them, Galvani discovered (this is the truth) that when he attached two different kinds of metal to the leg of a frog, an electrical current developed and the frog's leg kicked, even though it was no longer attached to the frog, which was dead anyway. Galvani's discovery led to enormous advances in the field of amphibian medicine. Today, skilled veterinary surgeons can take a frog that has been seriously injured or killed, implant pieces of metal in its muscles, and watch it hop back into the pond where it sinks like a stone.

But the greatest Electrical Pioneer of them all was Thomas Edison, who was a brilliant inventor despite the fact that he had little formal education and lived in New Jersey. Edison's first major invention in 1877 was the phonograph, which could soon be found in thousands of American homes, where it basically sat until 1923, when the record was invented. But Edison's greatest achievement came in 1879 when he invented the electric company. Edison's design was a brilliant adaptation of the simple electrical circuit: the electric company sends electricity through a wire to a customer, then immediately gets the electricity back through another wire, then (this is the brilliant part) sends it right back to the customer again.

This means that an electric company can sell a customer the same batch of electricity thousands of times a day and never get caught, since very few customers take the time to examine their electricity closely. In fact, the last year any new electricity was generated was 1937.

Today, thanks to men like Edison and Franklin, and frogs like Galvani's, we receive almost unlimited benefits from electricity. For example, in the past decade scientists have developed the laser, an electronic appliance so powerful that it can vaporize a bulldozer 2000 yards away, yet so precise that doctors can use it to perform delicate operations to the human eyeball, provided they remember to change the power setting from "Bulldozer" to "Eyeball."

It was because of these local groups and the occasional support of the Utah VHF Society that many of these systems first came into existence.

The Utah VHF Society today:

A lot has changed since 1968 in that the number of repeaters in Utah is far higher than it was. One positive result was that there are few portions of the state that where repeater coverage is not possible and that many of the repeaters in these rural locations are linked together to increase their coverage and utility when it comes to facilitating communications across large portions of the state. These days, many of the clubs in the more rural portions of the state are both strong and active and are well able to both install and maintain their own repeaters, but there are still some many repeater projects where the financial help and possibly the technical resources of the members of these other clubs and the Utah VHF Society may be brought to bear!

One ongoing need for all repeater systems is that of maintenance: Utah mountaintop winters can take a heavy toll on equipment such as antennas while the occasional lightning strike may require that much of the repeater's equipment be replaced. In these instances, the Utah VHF Society has been called on to help in defraying some of these costs and/or providing technical assistance to get the affected system(s) back on the air as soon as possible! As you can imagine, some of these repairs/replacements can be very costly and may be too much for some of the smaller clubs or groups to bear while at the same time leaving a "hole" in the coverage of some portion of the state!

In the future, emerging technology will require - more than ever - that close attention be paid to the management of our precious amateur spectrum resources and because of this, there must be organizations like the Utah VHF Society to make sure that these new systems are thoughtfully accommodated and integrated into our amateur bands.

We encourage you to view the Utah VHF Society website **utahvhfs.org** and see what this great organization does for you. We also encourage you to join and support the group to help them keep the repeaters up and running.

The Utah VHF Society holds an annual “Swap meet” in the month of February. It has been held at the Davis County Fair Grounds for the past couple of years.

Heinrich Rudolf Hertz 22 February 1857

A tidbit from Wikipedia, the free encyclopedia

Heinrich Rudolf Hertz was a German physicist who first conclusively proved the existence of electromagnetic waves theorized by James Clerk Maxwell's electromagnetic theory of light. Hertz proved the theory by engineering instruments to transmit and receive radio pulses using experimental procedures that ruled out all other known wireless phenomena. The scientific unit of frequency – cycles per second – was named the "hertz" in his honor.

Between 1886 and 1889 Hertz would conduct a series of experiments that would prove the effects he was observing were results of Maxwell's predicted electromagnetic waves. In the apparatus Hertz used, the electric and magnetic fields would radiate away from the wires as transverse waves. Hertz had positioned the oscillator about 12 meters from a zinc reflecting plate to produce standing waves.. Each wave was about 4 meters long. Using the ring detector, he recorded how the wave's magnitude and component direction varied. Hertz measured Maxwell's waves and demonstrated that the velocity of these waves was equal to the velocity of light. The electric field intensity, polarity and reflection of the waves were also measured by Hertz. These experiments established that light and these waves were both a form of electromagnetic radiation obeying the Maxwell equations.

Hertz did not realize the practical importance of his experiments. He stated that,

> "*It's of no use whatsoever... this is just an experiment that proves Maestro Maxwell was right—we just have these mysterious electromagnetic waves that we cannot see with the naked eye. But they are there.*"

Asked about the ramifications of his discoveries, Hertz replied,

> "*Nothing, I guess*."

Hertz's proof of the existence of airborne electromagnetic waves (referred to as "Hertzian Waves" early on) would lead to experimentation in this new form of electromagnetic radiation and the eventual development of commercial Hertzian wave based wireless telegraphy (radio), audio radio, and later television.

Calendar Events – Nov, 2014

Nov 3 - Weekly Net, 8:30 p.m. 146.94 repeater

Nov 10 - Weekly Net 8:30 p.m. 146.94 repeater

Nov 17 - Weekly Net 8:30 p.m. 146.94 repeater

Nov 24 - Weekly Net 8:30 p.m. 146.94 repeater

Nov 29 - **In person meeting – Antenna basics**

Taylorsville-Bennion Heritage Center

Calendar Events – Dec, 2014

Dec 1 - Weekly Net, 8:30 p.m. 146.94 repeater

Dec 8 - Weekly Net, 8:30 p.m. 146.94 repeater

Dec 15 - Weekly Net, 8:30 p.m. 146.94 repeater

Dec 22 - Weekly Net, 8:30 p.m. 146.94 repeater

Dec 27 – **IN PERSON MEETING – 2015 PLANNING**

Dec 29 – Weekly Net, 8:30 p.m. 146.94 repeater

Calendar Events – Jan. 2015

Jan 5th - Weekly Net, 8:30 p.m. 146.94 repeater

Jan 12th - Weekly Net, 8:30 p.m. 146.94 repeater

Jan 19th - Weekly Net, 8:30 p.m. 146.94 repeater

Jan 26th - Weekly Net 8:30 p.m. 146.94 repeater

Jan 31st - In Person meeting - Taylorsville-Bennion Heritage Center

Who's calling the net?

November 3rd	Bruce	KG7CRG
November 10th	Open	Please volunteer
November 17th	Rulon	K7BTU
November 24th	Open	Please volunteer
December 1st	Open	Please volunteer
December 8th	Rulon	K7BTU
December 15th	Open	Please Volunteer
December 22nd	Rulon	K7BTU
December 29th	Open	Please Volunteer

We need you to volunteer to take your turn in calling the net. Each member should call the net as part of their readiness training. **We need your help!**

Thanks to those who have volunteered to help.

To get your name on the list, send an email to tville.hamnet@gmail.com and indicate the day or days you can be net control. You can call the net from your home or if you want to call it from the pantry radio room, let us know and we will make sure you can get in.