Sinewaves

STONEWALL JACKSON AMATEUR RADIO ASSOCIATION
Meetings: 3rd Thursday of each month, 1930 hrs at Saint Marks Lutheran Church RT19/98 Clarksburg
SJARA Tuesday Night Net
This net meets each Tuesday evening at 2100 hours utilizing the N8FMD Repeater on 147.210 Mhz with PL Tone of 103.5
15 March 2012

	Net Control	Date
1.	KD8FDD	February 21, 2012
2.	K8WWW	February, 28 2012
3.	K8TPH	March 6, 2012
4.	WD8NSC	March 13, 2012

Meeting
February 16, 2012
Minutes

The SJARA meeting was called to order at 1930 by the President KD8FDD at the St Marks Lutheran Church. Minutes, for the last meeting which were for November 2011, were accepted as read. The Treasurer's report was read by K8TPH with a balance of $1280.84

New Business: No new business

Discussion: Mike N8FWD is exploring on coordinated testing with Morgantown and Elkins so that testing could take place every month. Mike also discussed the growing issue of lack of tower space tower space for repeaters.

Net Controls were assigned for next month and the meeting was adjourned by the President KD8FDD.

After tge meeting Cecelia Reid KD8IZC gave a presentation on the Medical Reserve Corps (MRC) and the need for Amateur Radio cooperation in providing communications.

Batteries
Not Included

Researchers at the University of Bedfordshire have developed a new technique for powering electronic devices.

The system, developed by Prof Ben Allen at the Centre for Wireless Research, uses radio waves as power.

Believed to be a world first, the team claims it could eventually eliminate the need for conventional batteries.

The university has now filed a patent application to secure exclusive rights to the technique.

Prof Allen and his team, including David Jazani and Tahima Ajmal, have created a system to use medium wave frequencies to replace batteries in small everyday gadgets like clocks or remote controls.

The new technique uses the "waste" energy of radio waves and has been developed as part of the university's research into "power harvesting". Prof Allen said that as radio waves have energy - like light waves, sound waves or wind waves - then in theory these waves could be used to create power. The emerging area of power harvesting technology promises to reduce our reliance on conventional batteries.

WRC-12

600 Meters

Amateur Radio Gets Secondary MF Allocation at WRC-12

It's official -- delegates attending the 2012 World Radio communication Conference (WRC-12) have approved a new 7-kilohertz-wide secondary allocation between 472-479 kHz for the Amateur Radio Service.

Agenda Item 1.23 had both its first and second readings in Plenary Session on Tuesday, February 14; to become part of the ITU's Radio Regulations, each Agenda Item must be read twice in Plenary Session. While the Final Acts will be signed on Friday, February 17 at the close of the Conference, the new allocation will not take effect until it is entered into the Radio Regulations on January 1, 2013. In any case, no amateur can use the band until his or her national regulations are revised to implement the allocation. The new allocation to the amateur service is accompanied by several footnotes including, i) a number of countries will identify their intent to elevate the status of their Aeronautical Radio navigation Service to Primary as a step in ensuring protection from secondary users, and ii) the power which radio amateurs may use in 472 to 479 kHz will be limited to 5 watts (e.i.r.p.) except for amateur stations within 800 km of the borders of a number of countries - principally Russia, many of the former Soviet bloc and the Arab states. For those affected amateurs the limit will be 1 watt.

It is, of course, up to individual administrations to authorize use of the band by their amateurs. It appears that in the US and Canada will authorize the use of these frequencies for all amateurs under their two authorities for control of frequency use.

Authors Note:

600 meters is a great band. In 1957 I worked Japanese fishing boats on CW. They would call on the international distress frequency of 500KHz and when contact was made we would move them to either 468KHz or 478KHz and then take their weather related traffic. We worked them everyday, day and night and these fishing boats were in the northern Pacific from 500 to 1000miles away with very good signals. We ran 15KW but the ships mostly used transmitters of 25 to 50 watts.

Payroll Tax Bill

Middle Class Tax Relief and Job Creation Act of 2012

The *ARRL* reports on a bill that could result in recommendations to remove unnecessary restrictions on amateur radio residential antenna installations.

A bill that has passed both the House and the Senate includes a provision for a study of the uses and capabilities of Amateur Radio Service communications in emergencies and disaster relief.

If passed into law, Section 6414 of the Middle Class Tax Relief and Job Creation Act of 2012 mandates the completion of the study, with a report of the findings to the House Committee on Energy and Commerce and the Senate Committee on Commerce, Science, and Transportation.

This study would "use the expertise of stakeholder entities and organizations" to recommend how to best use radio amateurs in emergency communications and disaster relief efforts, and how to best utilize the Amateur Radio Service in coordination with the federal government in these efforts. In addition, the study would also discuss the effects of unreasonable or unnecessary private land use restrictions on residential antenna installations and recommend ways to remove such impediments.

Read the full ARRL story
Middle Class Tax Relief and Job Creation Act of 2012.

HR 3630

Digital Communications

Digital Communications has been around as long as radio has been around. The first was CW or Morse Code as most hams call it, and then there were several other Digital Communications around but the more known Digital didn't come into being as a major communications system until FSK (Frequency Shift Keying) came along. FSK used to difference frequencies, one for the Mark (1) and one for the Space (0). Later, after SSB came along some started using shifting tones at a very narrow variation, thus more than a single digital stream could be sent at the same time utilizing less spectrum. As this caught on it would be possible to stack tones up to 32 in the Upper Side Band and 32 in the Lower Side Band giving the possibility of having 64 individual digital streams being sent simultaneously.
Later introduced was multiplexing and interlacing giving the ability of sending up to 4 channel digital streams. These 4 channel MUX signals could be placed on the Double Side 64 tone system giving the ability of sending 256 individual links. Not really practical. This had all the drawbacks of AM signals.

The first time I can remember hearing a shifting tone sending digital information was an incident involving Radio Moscow in the

late 50s and early 60s. Radio Moscow was a normal AM signal better described as DSB (double sideband) with 25 to 50 % of the power being used in the carrier wave that carried the two audio sidebands. As we know when listening to an AM signal you do not hear the carrier wave since it is filtered out. The USSR KGB was using the shifting of the carrier wave for spy traffic. Of course all you had to do to hear or copy the shifting carrier was use a receiver with the VFO on and then run the signal through filters to attenuate the sidebands.

The first time I every heard a digital signal which was generated by a computer as we do with nearly all of the digital signals on the air today, was a circuit between the University of Colorado and their research center in Panama Canal Zone. It was part of the Geophysical Survey Centers located on an island in Lake Gatun of the Panama Canal. This was in 1967 and 1968.

We first heard them setup the communications link in SSB voice. After establishing a comm circuit they referred to data and then went to a digital signal. We knew right away that the signal was based on the octal system such as the 8 bits used by computers. All we could obtain from the signal of course, was just a series of numbers between 0 and 255. After recordings were made and sent to NSA it was decoded as being plain language similar to the coding we now use with PSK31 or other digital signals.

Learn More

ACSII Coding

LightSquared

The FCC appears to be on the hot seat with congress over the way its been handling the entire matter of the licensing of LightSquared"s proposal to create its high speed Internet service in spectrum adjacent to that used by the Global Positioning System or GPS. Iowa Senator Charles Grassley who has been investigating the FCC"s interactions with LightSquared, said that the agency put this project on a fast track for approval with what appears to have been completely inadequate technical research.

The base stations of the LightSquared network will transmit signals in a radio band immediately adjacent to the GPS frequencies. The GPS community is concerned because testing has shown that LightSquared's ground-based transmissions overpower the relatively weak GPS signal from space. Although LightSquared will operate in its own radio band, that band is so close to the GPS signals that most GPS devices pick up the stronger LightSquared signal and become overloaded or jammed.

All we need is another big dish on our roof.

Update

LightSquared Inc. the wireless company whose controversial plan to operate in spectrum adjacent to that used by the space-based G-P-S navigation system says that it plans to lay off nearly half of its employees to save money. In a press release, the company said it will cut 45 percent of its 330 employee workforce and called the move a necessary cost savings measure to ensure the long-term success of the company.

Joke of the Day

On the way home from a party, a wife said to her middle aged husband: "Have I ever told you how sexy and irresistible to women you are?"

"I don't believe you have dear," he replied flattered.

"Then what the hell gave you that idea at the party?"

Dayton Bus Trip

The Fairmont Club is sponsoring a bus trip to Dayton Hamfest. The bus will leave for Dayton on May 19, 2012 at 2AM from Fairmont and 2:30AM from Clarksburg. The bus will leave Dayton at 5PM for the return trip. The cost is $60.00. Reservations with payment is due prior to April 1, 2012. More information is available from KD8PCZ, Tom Turner Rt 1 Box 218K Lost Creek, WV 26385 or by phone at 304 745 3216. You can't drive you own car at this cost.

SJARA TUESDAY NIGHT NET

February 2012

Sessions.....4

Total Time.....60 mins

Signin Total.....44

Formal Traffic.....0