



The Spirit of '76 and '88



Newsletter of the Lake Erie Amateur Radio Association

Editor: Joe Prokop KC8RAN

Publisher: Jeannie St. Marie, KC8MNW

This Month's Meeting — November 28, 2006

'Tis the Season for Celebration!



November brings the Annual LEARA Holiday Party. Come enjoy an evening of fun, food and fellowship!

The meeting is held, as usual, at Dimitri's Restaurant, 1830 Snow Rd., Parma, Ohio (in the Mid-Town Shopping Center, just west of Broadview Road). Dinner will be served at 6:30 PM. The menu is traditionally expanded, and this year is no exception. Your choices are:

- | | | |
|--------------------|----------------------------|--------------------|
| Beef Kabob | Roast Prime of Beef au jus | Chicken Parmigiana |
| Chicken Alfredo | Fisherman's Platter | Orange Roughy |
| Breaded Pork Chops | | Veal Marsala |



Entrees served with Minestrone Soup, Salad, Baked Potato, Rolls, and Butter and Desert. Baklava may be reserved for the first 25 people requesting it (first come, first served). All other diners may request either Ice Cream, Sherbet, or Rice Pudding. RESERVATIONS ARE REQUIRED BY 11:00 AM Monday November 27. Please call in your reservation, baklava, and your menu choice to Marv Grossman, W8AZO, at 440-248-0031. You can also visit leara.org and make your reservation through the club's website.

Door Prize Drawings :

Top Prize: \$150 AES Gift Certificate.
2nd Prize: \$100 AES Gift Certificate

The Program: BINGO BOB!

\$16 gets you dinner, door prize tickets, and Bingo card. What a deal!!!!



November 2006

In This Issue

Officers/Trustees	2
de N8AUC	2
LEARA Info	2
Association News.....	3
October -D-STAR.....	4
Trustees Mtg/Officers.....	5
Suitsat-2	5
ARRL News.....	6
ARISS News.....	8
Hamfest & VE Exam Listing.....	9
Web Subscribers Extras:	
China's Plans for Lunar Probe,	
GPS.....	10

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Editor: Joe Prokop, KC8RAN	

de N8AUC



This is it, folks. Another year is now "in the books", well it is as far as LEARA is concerned. The meetings have been met, the programs have been done, and the public service events have been serviced, and now it's time to party.

That's right, I said party. The last LEARA meeting of the year is our annual Holiday Party, and this year's event will be held at Dimitri's on Tuesday night, November 28, 2006, at the usual and customary time. What holidays? Well, pick one that suits you best, we don't care. Ramahanakwanzamas, Festivis, whatever. Tis the season for Holiday cheer, ya know? You are planning on attending, right? Dinner is a little fancier than usual, the prizes are a little fancier than usual, and W2THU gets to live his personal fantasy of abandoning the legal profession and becoming a professional bingo caller. And if we are REAL lucky, no one will try to sing. Yes, there is a reason why the FCC prohibits transmitting music in the Part 97 rules. And WE are that reason. Or at least I think we are. Anyways, just like any big family holiday get together, if you aren't there people WILL be talking about you. So make it a point to come join us for LEARA's annual Holiday Party.

Speaking of meetings, we've had some good ones in 2006. Most of that is due to the efforts of this year's program chairperson (in this case chairman IS correct) Tom Bishop, W8TAB. Folks, this guy could probably sell ice cubes to Eskimos and make them think they got a good deal. Tom has done an absolutely stellar job lining up programs and speakers for us over this past year. I hope he'll continue to serve in this position for 2007! Make sure to thank Tom the next time you see him for all the effort he put in on our behalf.

I can't think of very many people who could have pulled off the October program like he did. For those of you who missed it (for whatever lame-o reason you had), you missed a real gem of a program. Tom managed to do a little corporate-style arm twisting and got Pat from Icom America to show up and give a presentation on Icom's D-STAR digital radio system. She was accompanied (much to her dismay I'm sure) by our old friend Alex K8EUR from AES. So we ended up with TWO guests!

(Continued on page 3)

LEARA is a not-for-profit organization dedicated to Amateur Radio and to Public Service. Club information packets and applications for membership are available from **Marv Grossman, W8AZO, 440-248-0031**, or may be downloaded from our web site at www.leara.org. Annual membership is \$18.00. LEARA's address is: LEARA, PO Box 22823, Beachwood, OH 44122-0823.

LEARA is an ARRL-affiliated club. When you join or renew the ARRL, LEARA benefits monetarily if you so through the club. Send ARRL Applications/renewals to Club Treasurer Dave Foran WB8APD, 5439 Nan Linn Dr. Willoughby, OH 44094-4365. Make the check payable to LEARA, not the ARRL.

Membership Meetings are held the last Tuesday of each month except December at Dimitri's Restaurant, 1830 Snow Rd., Parma, OH (in the Mid-Town Shopping Center, just west of Broadview Road). Dinner is served at 6:30 p.m. The regular meeting begins at 7:30 p.m. Meetings are open to all interested persons. You may attend without eating, but **reservations are required** if you do wish to eat. Call **Marv Grossman, W8AZO at 440-248-0031** to leave a message.

Trustees' Meetings are held on the second Saturday of odd numbered months at 9:00 a.m. at the Parma-Snow Branch of the Cuyahoga County Public Library, 2121 Snow Rd., Parma, OH (opposite the Mid-Town Shopping Center). Meetings are open to all current members of LEARA.

DE N8AUC*(Continued from page 2)*

And Pat even brought a boat load of Icom goodies to give away! And they were heavy - I helped carry them in from Alex's car. Now D-STAR isn't cheap - not by any means. But it has some really cool features and capabilities. We may indeed have seen the future of ham radio, at least for the VHF/UHF bands. And it's a future where repeater bozo's just might be an endangered species. "How's that?", you say. Well you shoulda been there.

Another guy who deserves way more credit and kudos than I can possibly write in a whole year's worth of these columns is our very own Minister of Propaganda, Joe Prokop, KC8RAN. Joe is our newsletter editor, and every month he cranks out another edition of "The Spirit of 76 and 88" for us. He puts in a LOT of work behind the scenes, and the end result is always of the highest quality. Thanks, Joe! *(Don't forget Jeannie KC8NMW and the fold, bend and spindle crew who do the hard work! Ed.)*

Now let's look forward into 2007. By the time you read this, the newly re-elected trustees will have been seated, and new officers will have been elected. So who knows? There may be someone else may be writing this column next year. You'll know who they all are by the time we gather for the Holiday Party. There will be the usual gaggle of public service events (Westlake Soccer is Memorial Day Weekend), then there will be Dayton and Field Day. And next year at this time we'll all be looking back again wondering how another year went by so fast.

See YOU at the party!

73 de N8AUC (da prez)

Congrats!

Congrats go to **Sara, KC8KSU** and **Bryan, N8OOF**, who recently "tied the knot". Many years of happiness and prosperity to the newlyweds!

Congrats to **Tom Long, N8QXA**, who was recently appointed to the Rocky River City Council, filling the position of Councilman At Large replacing Pamela E. Bobst, who moved on to become the City's Mayor.

Ken KG8DN, operating the Gilmour Academy club station ND8GA scored 2,368 points in the October School Club Roundup. Ken worked 44 stations in 12 states, 2 provinces and 8 countries, working 14 on SSB and 30 on PSK-31.

Association News**Upcoming Meetings:**

Nov 28: Holiday Party Meeting

***** No December Club Meeting *****

Jan 13: Trustees Meeting

Jan 30: TBD-Dimitri's

Note: Have any ideas for club meeting topics? Contact Tom W8TAB (w8tab@leara.org).

Club meetings, with the exception of the June Field Day and picnic meetings, are held at Dimitri's in the Mid-Town Shopping Center. Trustees Meetings are open to all members in good standing and are held at the Snow Rd. Library across from Dimitri's.

**LEARA "On The Air"
Club Net Information****Club Net:**

The Lake Erie Amateur Radio Association's weekly net is held every Thursday evening at 8:00 PM on the 146.760 (- offset, 110.9 PL) repeater. This is an open and informal net intended to provide the opportunity to test radio equipment, promote fellowship among local amateur radio operators, and develop radio traffic handling skills.

SSTV Net:

LEARA is sponsoring an informal SSTV net on Saturdays on the "88" machine. This net is open to anyone and everyone. Refer to the January 06 newsletter for hints on how to get started, or check in and we'll get you on the way to exchanging pictures. Check ins are open to anyone, whether sending pictures, receiving pictures only, or just listening in, let us know you are out there!

Net Control Operators Needed... Any member of the Lake Erie Amateur Radio Association interested in trying their hand at directing the weekly net or the SSSTV net are encouraged to contact Joe KC8RAN (kc8ran@leara.org) or as listed on page 2. It's a good opportunity to be prepared for emergencies or just to upgrade your operating skills.

See you Thursdays on "76" and Saturday Nights on "88"!



Association News

October Club Meeting—D-STAR Pat Marcy, W7PZ

The October meeting was a very enlightening one as Pat Marcy, W7PZ presented a “mountain top View” of the D-STAR system. In addition to Pat’s presentation, we also had a users’ perspective as we had a contingent from the NERT ARC, located in the Akron area.

D-STAR was developed by the JARL with the goals of advancing amateur radio as a contributor in new technology, a way to improve spectrum efficiency and as an experiment to combine data and voice. For those of us (like me) who were unaware, the JARL is equivalent to combining both the FCC and ARRL here in the states. All repeaters in Japan are owned by the JARL and not held by clubs or individuals as they are in the U.S. Because of the density of population in a smaller geographic area, the need for spectrum efficiency is important, so the JARL developed the D-STAR standard so that voice and data can fit in about a 6 khz. Bandwidth, as opposed to the 15 khz. required for conventional FM transmissions. The result was 3 repeaters can fit in the space 2 repeaters currently occupy.

D-STAR technology is not proprietary to ICOM. Rather, they were the early adapters of the JARL-driven technology. While the ability to manufacture is open to all, only ICOM has introduced products so far in the U.S. Kenwood is currently marketing products in Japan and expected to introduce products here in the future. Yaesu has yet to be heard from, but are expected to enter the market as well.

The system transmits digital data at a 4800 baud rate. Within that data stream, 2400 baud is the digitized voice stream, 1200 baud for forward error correction on voice, and 1200 for data transmission. If one would listen to the transmission on a standard FM radio, it would sound like white noise. If you are traveling in the Akron area, the NERT’s KD8DRG repeaters (146.955/442.575) are the nearest D-STAR repeaters in operation.

Besides spectrum efficiency, D-STAR proves to be a valuable emergency communication tool. Imagine having a disaster hitting our area on the level of Katrina where streets and landmarks no longer provide reliable position information. You are trying to contact net control to report a significant piece of information. With a D-STAR HT linked to GPS, you call net control and immediately your call and position are sent digitally. You can pass your traffic quickly and move on. In fact, D-STAR was

implemented in a field trial in the recent SET activity in Alabama. It worked very effectively and 2 portable, field set ups are now ready for the next emergency.

Another feature available is to link D-STAR repeaters via the internet. Applications are currently being developed at relatively fast pace. The protocol is fixed in proprietary technology, but the engine for change is in the software independent of the hardware. Because the technology is fixed, there is little risk of obsolescence in the future.

As with IRLP, you can call up a specific repeater in a distant location (if you know the address) and make a call. In some respects, D-STAR allows roaming in that once you link to a D-STAR repeater and someone wants to call you, the system will be able to locate which repeater you are connected to and link the transmission to that repeater.

For more information, you can visit the ICOM website (www.icomamerica.com), the NERT website (www.nert-arc.org) chronicles their implementation, www.dstarusers.org shows activity on connected systems, and the K5TIT (Texas Interconnect Team) www.k5tit.org website has a forum that will keep you informed about happenings and topics on D-STAR.

Results of the Trustee Elections:

The October Club Meeting is also the annual club election. Counting of ballots was conducted while the program was in progress. The results of the elections, announced at the meeting is as follows:

Elected to a 3 year term as trustees:

Dave Foran WB8APD
Marv Grossman W8AZO
Jacob Kinosh KC8GHZ
Bryan Torok N8OOF
Bob Winston W2THU



Door Prize Winners are found
on page 9

November Trustees Meeting

de Steve, KB8UTA

In attendance

Steve KB8UTA
 Dave WA8APD
 Jim N8XDO
 Mike K8EHP
 Bryan N8OOF
 Tom Bishop W8TAB
 Raye N8NAP
 Bob W2THU
 Joe KC8RAN
 Jacob KC8GHX
 Eric N8AUC
 Jeff N8YNR

Not attending

Tom Long N8QXA
 John KC8FOC

Elected trustees were installed.

Election of officers.

President: Eric N8AUC

Vice President (2 positions): Jim N8XDO, Bryan N8OOF

Treasurer: Dave WB8APD

Secretary: Jeff N8YNR

Radio officers: Mike K8EHP, Bryan N8OOF.

License Trustee: Eric N8AUC

Holiday party and menu are set. 8 menu items will be available to cover all tastes. Price will be 16.00 per person, with LEARA picking up the difference.

Main door prizes with are a 150.00 and 100.00 AES gift certificate. Bingo will be called by our own "Bingo Bob", W2THU

Approved the purchase of a computer projector for club meeting. This will alleviate the problem of trying to locate one to borrow for the meetings.

“Thank You”s

Thanks go to outgoing officers:

Radio Officer: Raye, N8NAP for doing a fantastic job in keeping the machines on the air...

And

Secretary: Steve, KB8UTA for doing one of the hardest jobs in the club with humor and diligence!

SUITSAT-2 TO HAVE AMATEUR RADIO TRANSPONDERS

Plans to launch a second "SuitSat" spacesuit-turned-satellite were the subject of discussions and presentations at the recent AMSAT Space Symposium and Amateur Radio on the International Space Station (ARISS) International Delegates' meeting near San Francisco. Despite a weaker-than-anticipated 2-meter signal, SuitSat-1 -- a surplus Russian Orlan spacesuit fitted with an Amateur Radio transmitter -- sparked the imagination of students and the general public and turned into a public relations bonanza for Amateur Radio. ARISS now hopes to capitalize on the concept by building an even better SuitSat that will include ham radio transponders.

"The whole science fiction aspect" of SuitSat-1 made it attractive, ARISS International Chairman Frank Bauer, KA3HDO, told the AMSAT Space Symposium in October. "From our perspective it was a tremendous success." Bauer said the experience gained through SuitSat-1 "will provide the stepping stone to get to the next level." The next-generation SuitSat also will re-use another surplus Orlan spacesuit.

Lou McFadin, W5DID, who headed the SuitSat-1 hardware team, told the AMSAT Space Symposium that SuitSat-2 will incorporate some features his team didn't have the chance to accomplish the first time around. For starters, the second SuitSat will have an onboard Amateur Radio transponder using digital signal processing (DSP) techniques. McFadin says the team is looking at SuitSat-2 as a test bed for the hardware that AMSAT plans to launch on its Phase 3E "Eagle Project" satellite, which will employ software defined radio (SDR) technology.

"With DSP, we can do more than one thing at once," he said. Among them are an SSB Mode U/V transponder, an FM crossband transponder, a CW ID that offers a contest for listeners to copy as many of the call signs as possible, a digipeater and four slow-scan TV (SSTV) cameras. Other experiments are yet to be determined. Solar panels -- something SuitSat-1 did not have -- will energize the hardware and recharge SuitSat-2's batteries.

An ISS crew could launch SuitSat-2 during a spacewalk as early as next fall. It could have an operational lifetime of six months or longer.

"We're going to have so much fun with this," McFadin predicted, adding that one goal of SuitSat-2 will be to attract newcomers to Amateur Radio.

ARRL News

LEAGUE SEEKS FCC'S WRC-07 SUPPORT FOR 150-KHZ 60-METER AMATEUR ALLOCATION

The ARRL wants the FCC to throw its support behind a Draft Proposal seeking to have World Radiocommunication Conference 2007 (WRC-07) delegates consider a worldwide, secondary Amateur Radio allocation from 5260 kHz to 5410 kHz. The ARRL included the request in comments <<http://www.arrl.org/announce/regulatory/WRC07/WRC-07-Comments-10-27-06.pdf>> it filed October 27 in IB Docket 04-286, "Recommendations approved by the Advisory Committee for the 2007 World Radiocommunication Conference." WRC-07 Agenda Item 1.13 will review allocations to all services between 4 and 10 MHz. The League told the FCC that a contiguous band of frequencies in the range of 5 MHz is an important goal of the amateur community -- domestically and internationally.

"There are times when the propagation at 5 MHz bridges a significant gap between the Maximum Usable Frequency (MUF) when the MUF is below 7 MHz, but the Lowest Usable Frequency (LUF) is above the next lower Amateur Radio allocation at around 3.8 MHz," the League said, citing the Draft Proposal. "For reliable communications, an Amateur allocation in the vicinity of 5 MHz is the solution."

Originating with ARRL, the Draft Proposal from Informal Working Group 4 (IWG-4) follows up on disaster relief-related changes to Article 25 of the international Radio Regulations made at WRC-03. "The amateur services provide emergency communications on a local, national and international basis as an adjunct to normal communications, and in many cases provide the first information about disasters and serve as the only communications link when communications infrastructures are destroyed," the IWG-4 Draft Proposal background information notes.

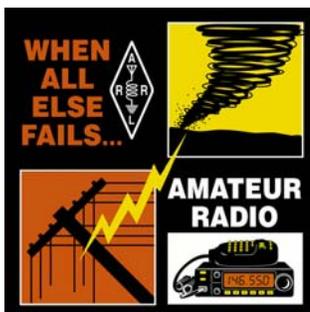
Several countries -- including the US, Canada, Finland, Iceland, Norway and the UK -- already have permitted Amateur Radio operation on spectrum between 5250 and 5450 kHz, the ARRL said, citing the Draft Proposal. "It notes that there is a successful history of amateur secondary use of bands in which incumbent primary users are present," the ARRL said, mentioning 30 meters as one example. The ARRL said the five 60-meter channels have been in regular use by US radio amateurs since 2003 "without any instances of interference reported by primary users."

The League took issue with remarks contained in the ITU Conference Preparatory Meeting (CPM) draft report with respect to Agenda Item 1.13 that suggest otherwise. Among "disadvantages," the Draft CPM Report asserts, an allocation such as the League suggests "would increase congestion and potential interference to fixed and mobile services at 5 MHz." It argues that compatibility between amateur and fixed service systems in the vicinity of 5 MHz "has not been shown" and a decision to create an Amateur Service allocation there "could seriously affect reliable 24 hours [sic] communication capabilities of the fixed and mobile services." The Draft CPM Report also takes note of the advantages to the Amateur Service of such an allocation.

The proposed allocation is "well within the scope of existing resolutions from WRC-03," the League said. It reiterated that amateur use of the five current 60-meter channels "has not resulted in any apparent compromise in the use of the band" on the part of primary Fixed and Mobile services. "To the contrary, that use has demonstrated compatibility with primary users over a reasonable period of time," the ARRL said.

The ARRL's request in its IB Docket 04-286 comments is unrelated to the League's October 10 Petition for Rule Making (PRM) <<http://www.arrl.org/announce/regulatory/5MHz/5-MHz-Improvement-Petition-09-2006.pdf>>, in which the ARRL asked the FCC to expand operating privileges on 60 meters and to swap one existing channel for a new one.

While the National Telecommunications and Information Administration (NTIA) has indicated it's okay with the ARRL's October 10 petition request, it also said it could not support a request for a 50 kHz-wide domestic secondary



(Continued on page 7)

(Continued from page 6)

allocation. The NTIA oversees spectrum allocated to federal government users, which includes the present 60 meter allocation.

Both the FCC and the NTIA provide input toward positions the US delegation ultimately will take on various WRC-07 issues. Should WRC-07 delegates eventually consider and agree to the international allocation at 5 MHz that ARRL proposes, it still would be up to the FCC -- in conjunction with the NTIA -- whether to authorize such a band for US radio amateurs.



Reminder -- FCC "omnibus" rule changes not yet in effect:

The new Amateur Radio rules detailed in the recent "omnibus" FCC Report and Order (R&O), WT Docket 04-140, adopted October 4 and released October 10, are NOT yet in effect. The changes will become effective 30 days after they appear in the Federal Register, the official daily publication for rules, proposed rules and notices of federal agencies and organizations. Since publication has not yet occurred, the effective date of the Part 97 rule changes cannot be determined. The ARRL will announce the effective date of these new rules as soon as it's known. The "omnibus" R&O does not include action on the Commission's proposal to eliminate the Morse code requirement for all license classes. A Report and Order in that proceeding, WT Docket 05-235, is still pending, and the ARRL will announce when the Commission releases it.

From Jim Weaver, K8JE, Great Lakes Division Director:

GREAT LAKES DIVISION CONVENTION

Don't forget about the Great Lakes Division Convention on September 22, 2007. It is in Cleveland the day before the Cleveland Hamfest which is on September 23. ARRL President Joel Harrison, W5ZN is banquet speaker. Joel is a real go-getter and a very interesting speaker. You'll have ample opportunity to speak with him in person throughout the weekend. The details of the program will be released later; however, the program committee is working on a real winner. They have polled numerous amateurs throughout the area to learn the programs that are in greatest demand.

NO RACES FREQUENCIES = NO RACES?

A few people have asked if FCC's abolishing special RACES frequencies means it plans to abolish RACES. It may come as a shock to some of you, but I don't know just what is in the minds of the folks at FCC. I discovered my crystal ball was broken when they issued the recent omnibus Report & Order. Nonetheless, I strongly doubt they plan to abolish RACES. Instead of looking behind the abolishment of RACES frequencies for an ulterior motive, why not look at it at face value. The change that will take effect 30 days after the new rules are published will open amateur frequencies to use by RACES. RACES is being freed to operate anywhere in the ham bands the local RACES brass want it to operate. My money is on RACES being around for quite some time.

Speaking of CW...

ARRL also has also not asked FCC to abolish all Morse testing for Amateur Radio licensing exams. We petitioned to have the exam dropped for General licensees. This tactic was based upon the knowledge CW would be dropped totally if we did not develop a counter strategy to FCC internal thinking to drop all Morse testing. The strategy acknowledges that Morse testing will be lost for Generals regardless of what we do. At the same time, we're trying to keep it for Extras. The idea is to keep Morse as one means of making the Extra Class license something extra. Will even this strategy work. I'm hopeful, but not holding my breath. When will the FCC release its decision on Morse testing? My crystal ball is still broken, but I'm guessing it will not take nearly so long as it took them to release the omnibus Report & Order. One final word on Morse testing: Even if the Commission abolishes all Morse testing, CW will remain the primary mode of operation for a great many current hams. I'm included among this number. It will even become the primary mode of operation for a great many new hams. A still greater number of hams -- new and old -- will use it to some extent. Abolishing Morse code testing as a licensing requirement will not of itself doom Morse to extinction.

ARISS Announcements

ARISS "CONTINGENCY NETWORK" IMPRESSES NASA

When Russian flight controllers encountered difficulties during a recent International Space Station cargo rocket docking, NASA called on a special -- although little-known -- Amateur Radio team to stand by if needed. Amateur Radio on the International Space Station (ARISS) Ops Team "ISS Ham Contingency Network" volunteers around the world immediately swung into action. Within 15 minutes of receiving the call from Johnson Space Center, Kenneth Ransom, N5VHO, reported the ISS Ham Contingency Network was ready to provide any necessary communication support.

"The ARISS teamwork was very effective," ARISS Secretary-Treasurer Rosalie White, K1STO said. "Its members learned a great deal, and they impressed NASA with how quickly the system was brought up."

During the October 26 Progress docking, NASA says, Russian flight controllers were unable to confirm whether an automated antenna on the rocket had retracted as commanded. If still extended, the antenna could have interfered with the final latching of the supply ship to the ISS. To avoid disturbing the softly docked cargo ship and to aid the crew with docking maneuvers, the ISS orientation was allowed to drift freely.

During free-drift mode, however, the Tracking and Data Relay Satellite System (TDRSS) -- which handles communication between the crew and Mission Control in Houston -- can be lost. That's because the station's solar arrays may not directly face the sun, causing a drop in onboard power.

Awakened at 2 AM, ARISS Australian team member Tony Hutchison, VK5ZAI, put out a blind call on VHF to the ISS crew, although no answer was needed at that point. Others available to cover later passes included Gerald Klatzko, ZS6BTD, in South Africa; Gaston Bertels, ON4WF, at ON4ISS in Belgium; Dick Flagg, AH6NM, and Nancy Rocheleau, WH6PN, at Sacred Hearts Academy in Honolulu; and Frank Bauer, KA3HDO, and Mark Steiner, K3MS, at the Goddard Space Flight Center's WA3NAN. Each of these Earth stations has a track record of being able to sustain reliable communication with the ISS.

The call-up marked the first time that NASA had asked for such Amateur Radio assistance since the initial crew came aboard the ISS in November 2000. Ransom says that by remaining available to ensure solid communication while Mission Control staff dealt with the docking issue, the ISS Ham Contingency Network provided Mission Control with an additional layer of security. Once the antenna retraction problem was resolved, the contingency network stood down, but NASA's request and the ensuing ham radio activity did serve as a valuable drill, ARISS said.

HF, Digital TV Operation from Space on the ARISS Horizon

Plans to deploy an HF transceiver and a digital TV system in space were among the highlights of the Amateur Radio on the International Space Station (ARISS) 2006 International Delegates Meeting October 9-10 near San Francisco. The session also marked ARISS's 10th anniversary. In November 1996, delegates from eight countries met in Houston, Texas, to lay the foundation for the joint educational outreach program and map plans to establish a permanent ham radio presence in space.

At this year's gathering, ARISS delegates discussed expanding the complement of ham radio hardware and the operational capability of the two Amateur Radio stations on the ISS. On the near horizon are plans to launch and install a Yaesu FT-817ND transceiver on the ISS to permit operation on some HF bands from the ARISS Phase 2 station. That setup now features a modified Kenwood TM-D700E for VHF and UHF work, including school contacts, digipeating and slow-scan television (SSTV). An HF antenna already is in place on the space station. ARISS had intended to go with a Yaesu FT-100D transceiver, but there was no reliable way to ensure that the unit could be adapted to a reduced-output configuration. A multiband, multimode transceiver, the FT-817ND runs a maximum of 5 W output. It also includes VHF and UHF capability.

ARISS also wants an ISS crew to install an Ericsson 70 cm FM transceiver, already aboard the station. It would go in

(Continued from page 8)

HF, Digital TV Operation from Space on the ARISS Horizon the ISS Zvezda Service Module -- the crew's living quarters and site of the ARISS Phase 2 station. An Ericsson 2 meter FM transceiver has been in use since 2000 at the ARISS Phase 1 station in the Zarya Functional Cargo Block or FGB. A headset is lacking for the second Ericsson radio, however.

A bit farther down the road, ARISS envisions installation of a digital Amateur Radio TV (DATV) system aboard the ISS Columbus module. A contribution of the European Space Agency, the Columbus module is awaiting launch at Kennedy Space Center. At this point, no Amateur Radio antennas have been installed on the unit. Delegate Graham Shirville, G3VZV, speaking on behalf of ARISS-Europe, outlined plans for a mode L/S transponder aboard Columbus as well as a DATV downlink on S1 band (2.4 GHz). "So, future ARISS contacts could have pictures as well as sound," Shirville told the delegates. He said ARISS-Europe is looking at a 100 W transmitter and a signal bandwidth of from 4 to 8 MHz.

The SSTV system already aboard the ISS also came in for some discussion following a presentation by its development coordinator, Miles Mann, WF1F. After some successful initial testing, the SSTV has been off the air, ARISS-Russia delegate Sergei Samburov, RV3DR, explained. "We had had some challenging issues with the SSTV," he said. "We will be working to resolve these soon." Samburov said he would meet with Expedition 13 crew member Pavel Vinogradov, RV3BS, to debrief the cosmonaut on his experience with the SSTV system and come up with a troubleshooting plan to get the system back on the air.

Need help with getting your license or upgrading to the next level. Contact LEARA by email to elmer@leara.org or visit the club website at www.leara.org.

"It's Easier Than You Think!"

Notice to Subscribers:

If you receive the newsletter by mail, you are missing the "web subscribers bonus" article in the area occupied by the mailing label.

By subscribing electronically, you not only save the club some postage, you get a little more content.

Volunteer Exam Dates and Locations

(from the ARRL website)

02-Dec-2006

Sponsor: LAKE COUNTY ARA

Time: 12 NOON (Walk-ins allowed)

Contact: SCOTT FARNHAM (440)256-0320

Email: SCOTTFARNHAM@ADELPHIA.COM

Location: KIRTLAND LIBRARY 9267 CHILLICOTHE ROAD ROUTE 306 1.7 MI S OF I-90 KIRTLAND, OH 44094

05-Dec-2006

Sponsor: CUYAHOGA FALLS ARC

Time: 7:00 PM (Walk-ins allowed)

Contact: BRUCE M FERRY (330)929-2766

Location: STOW-MUNROE FALLS PUBLIC LIBRARY 3512 DARROW RD
HTTP://WWW.AK8B.US/VE STOW, OH 44224

17-Dec-2006

Sponsor: LORAIN COUNTY ARA RED CROSS

Time: 1:00 PM (Walk-ins allowed)

Contact: CHARLES S HALL (216)433-3036

Email: VE@W8HF.COM

Location: AMERICAN RED CROSS 2929 W RIVER RD N ELYRIA, OH 44035
WWW.W8HF.COM (HOME PAGE)

October Door Prizes

N8PLV-LEARA Buck

KB8RKF 50/50

N8OOF-Heat shrink/Wire wrap assortment

N8DJG-Mini-screwdrivers

N8YNR-Pliers set

N8AUC-DMM

KC8NMX-DMM

KB8RKF-LED Light

N8UPZ-LED Light

Many received ICOM hats, maps and other goodies brought by Pat W7PZ. Everyone received an information packet and other goodies courtesy of **Alex, K8EUR** from AES Cleveland.

Web Subscriber's Bonus Content

Thirty Songs To Be Broadcast From Lunar-Probing Satellite

AMSAT News Service Bulletin 288.05
From AMSAT HQ SILVER SPRING, MD.

China announced a list of 30 songs to be broadcast to Earth next year from its first lunar-probing satellite. The Commission of Science, Technology and Industry for National Defense, in charge of the lunar project, announced Friday a list of 30 tunes to be played from the lunar-probing satellite.

The lunar satellite is designed to obtain 3D images of the lunar surface, analyze the content of useful elements and materials, and probe the depth of the lunar soil and the space environment between the earth and the moon.

The satellite will be 2,350 kg in weight with 130 kg of payload, and will orbit the moon for one year. A Chinese Long March III A carrier rocket will be used to launch the satellite.

The satellite launch at the Xichang Satellite Launch Center in southwest China's Sichuan Province next year will be followed by the landing of an unmanned vehicle on the moon in 2010 and collecting samples of lunar soil with an unmanned vehicle in 2020.

From physorg.com website...

China announced Thursday plans to build a satellite navigation system that will include up to 35 satellites and be working in the Asian region by 2008, state press said. The system, called "Beidou", will include five geostationary earth orbit satellites and 30 medium earth orbit satellites, Xinhua news agency said.

Navigation services open to commercial customers will provide users with positioning accuracy within 10 meters (33 feet), velocity accuracy within 0.2 meters per second and timing accuracy within 50 nanoseconds, the report said.

It was also not clear how the Chinese system would rival the American global positioning satellite system or the EU's Galileo satellite navigational system which is expected to be built with Chinese participation.

China would launch two "Compass" navigation satellites next year as part of the Beidou project, Xinhua said.

The system is expected to cover China and parts of neighbouring countries by 2008, before being expanded into a global network of satellites, it said.

LEARA — The Lake Erie Amateur Radio Association

VOICE REPEATERS:

53.230/R-
146.76/R-
146.88/R-
224.90/R-
444.40/R+
444.70/R+

- Highland Hills (136.5 Hz tone)
 - Highland Hills (Use 110.9 Hz tone for remote inputs in Lakewood, Newbury & Willoughby)
 - Lakewood (Requires 110.9 Hz tone)
 - Lakewood (141.3 Hz tone)
 - Highland Hills (131.8 Hz tone)
 - Lakewood (131.8 Hz tone)
- (.76, .88, .90 and .70 offer emergency and member-only autopatch lines.)

PACKET NODES: CLE1 145.01 MHz: CLE5 145.05 MHz: CLEV220 223.70 MHz

These nodes are part of the Cleveland Net Cluster in K8EIW's backbone system.

GENERAL: NBRY
NBRYX
LEARA

- 145.07 MHz & 223.70 MHz (KA-NODE)
- 145.07 MHz ↔ 223.70 MHz Gateway
- 145.07 MHz & 223.70 MHz PBBS

INTERNET:

- www.leara.org
- To subscribe via e-mail, send a message to: spirit76-request@leara.org

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