Feedline

The Voice of The Cary Amateur Radio Club N4NC

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November 2001

Pheedline Phun Phacts

By Kaz, W4KAZ

Let me start by knocking one of the devices ubiquitous to all modern desktop computers and well known by most computer users: the mouse. That's right, not the furry little rodent sort, but the type perched in some inconvenient space on the edge of your desk. I have never been fond of the mouse as a user interface. Having been educated on mainframe systems, which lack any user-friendly interface, the mouse seems to me superfluous. No, I am not pining for the days of punch cards(yes, I AM old enough!) I know, you will argue the mice are necessary to deal with modern point-and-click applications. All true. I will also stipulate that modern computer applications have come a long way in just the last fifteen years. But many applications do not supply keyboard shortcuts for routine functions. Unacceptable!

Back to mice. My biggest problem with the little devils is more basic. Mouse cleaning. Their fuzzy balls. Fuzzy balls in the mechanism. (ARGH!) The mouse pad. (SHEESH!) Loss of traction. (*&###!) With two children in my home as regular computer users, the mouse sees its share of use, miss-use, ab-use, and ref-use. None of which enhance its performance as an input device.

No more. For those who may not pay attention to this sort of thing, I bear good news. There are new, improved mice lurking on store shelves near you. I recently purchased a Logitech "optical mouse" For the sum of $19.00 US. This gizmo does not use mechanical tracking. It instead uses LED's and electronics to determine the movements. No more mouse pad required. Good-bye to gummy mechanisms. Adios, fuzzy balls! For a more princely sum, there is also a "cordless" optical mouse available, perfect for the RFI geek. These new mice also have a "web wheel", which allows scrolling pages and panels up or down. I chose the corded variety, because the cord helps keep the little devil tethered to the computer. I hesitate to guess where it might turn up otherwise….

October was elections month for Cary ARC. The new club officers are Ed, AB4S, President. Clare,N2RJB as Vice President. Susan, WA4AKB, returning as Treasurer. In the only contested race, Lee, N4AJF, after both nominating and voting for his opponent Keith, W4KAZ(yours truly), was re-elected as Secretary. Better luck next year, Lee.

Cary Band Day, 2001

Herb, W3HL

The Cary ARC again provided needed communications in support of the Cary Senior High School marching band's 43rd Annual Band Day. We generally provide support communications for the parade in the morning. The real meat of the event is the Band Competition that goes on from noon time until after midnight. Glad we don't have a part in that!

We were short a few hands this year for all good reasons. Unfortunately, the law of randomness brought them together in one year. We were able to enlist some from the State ARS and at least one independent. David, KG4JXF; Thomas Babb, KF4JKQ, an independent (who did our program for October; Greg, KG4AWG; Larry, KD4HSL; Mike, WA4KE; Al, KQ4FP; Suzi, WA4AKB; Bill, WA4ONO; Ashby, W5PGX; and probably some others - to whom I apologize for not mentioning.

There were minimal needs for emergency communications that I'm aware of, so the event had the apperance of a being smoothly run. We'll buy that. Hopefully, next year we will be able to drum up a few more troops. Thanks to all who made it this year.

November-December Dinner Meeting.

Herb, W3HL

The combined Nov.-Dec., meetings into an informal family meeting has been a CARC tradition. Over the years, we have met in a number of places under a number of formats. This year, we are meeting at the Golden Corral on Dillard Drive, Thursday, November 29 (one week after Thanksgiving) 6:00-6:15 p.m. Bring the whole family and dress informally. Go right through the line. You will be paying for your selections - either buffet or from the menu. In any event, we will be meeting in the room to the right rear. They will assign a person to serve the menu items, provide additional plates for buffets, top off beverages, etc. The agreement is that we each will leave approximately a 15% tip for those services. Please keep that in mind as we leave the Golden Corral.

THERE WILL NOT BE ANY CARC BUSINESS TRANSACTED AT THE DINNER. We will have some introductions and some prizes to distribute - that is it!!!!!! Y'all come!!! November 29, 6:00-6:15 p.m., Golden Corral, Dillard Drive (behind Lowe's), informal attire.

Neckties will be confiscated at the door!!!

CARC Minutes - 25 Oct 2001

By Lee H. Swanson, N4AJF

The October meeting of the Cary Amateur Radio Club was held on 25 October, 2001. The meeting was opened at 7:28 P.M. by the vice-president, Ed, AB4S, in the absence of the president. Introductions by the attendees were done, there were 21 in attendance, 13 members and 8 guests. Many of the guests were there to present the Skywarn program.

The Treasurer's Report, given by Susan, WA4AKB, was as follows: Savings - $1257.49 Checking - $3487.46 Cash on hand - $40.xx

The Secretary's Report, given by Lee, N4AJF, was to refer to the last issue of the "Feedline".

Old Business:

Ham class: Alf, KQ4FP, reported that the Gordon West tape was only 1/2 hour long. After discussion, it was moved and seconded that Alf, KQ4FP, order the Gordon West video tape, the audio tape, and also a set of the CQ general Ham video tapes, for the club.

Herb, W3HL, reported that we have a room for the class at the White Plains United Methodist Church (our meeting place) on Jan. 5th, 12th, and 19th, from 9:00 A.M. to 1:00 P.M. However, there may be a noise problem on the 12th, due to Cub Scout Pinewood Derby racing.

Christmas Party: Herb, W3HL, reported that the K&S Cafeteria was unable to schedule us for the Christmas party. Therefore, it will be at the Golden Corral, at Dillard drive, on 29 Nov 2001, at 6:15 p.m. We will get our own food, they have a place for us to sit together. This party replaces our November and December meetings.

Flyers for CARC Swapfest: Will, K4IWW, reported that there will be flyers ready for the Benson Hamfest, to be held on Nov. 18.

New Business:

Band Day: Herb, W3HL, will coordinate the signup for our yearly participation in communication for Band Day, Nov. 3. He passed a signup sheet, and stated that any help would be welcome. KF4JKQ, Tom Babb, announced the availability of the 440 mHz, in Cary, if it could be utilized. He also volunteered to be the control station.

Sympathy to K4PB:

Lee, N4AJF, announced that a sympathy card has been seen to K4PB, Alan, upon the death of his wife. He was a very active member of this club for many years, before his retirement to Florida. A donation has been also made to the requested charity by the club, in her name.

Election of 2002 Officers:
Ed, AB4S, noted that a nominating committee had not been appointed at the last meeting, therefore, nominations would be from the floor only. The results were were as follows:

Treasurer - WA4AKB, Susan (re-elected by acclamation).

Secretary - N4AJF, Lee, and W4KAZ, Keith, were nominated. Voting resulted in N4AJF, Lee, being re-elected.

President - AB4S, Ed, (elected by acclamation). Ed was formerly the vice-president.

Vice-president - N2RJB, Clare (elected by acclamation).

State EOC admittance:
Herb, W3HL, announced that there has been a tightening of the security at the state EOC. A badge will now be required. Herb will have details, see him if you anticipate requiring admittance, he will fill you in on the details.

The meeting was adjourned at 8:05. There was a short break before the program.

Program: The program, on Central North Carolina Skywarn, was presented by KF4JKQ, Thomas Babb, and assisted by WX4MMM, Bob Woodson, KG4AWG, Greg Johnson, and KF4EAG, Josh Tate. They did a good job on reviewing our interaction with Skywarn, and some of the changes in process. WX4MMM runs the Skywarn net on the 146.88 repeater, on Tues. P.M. at 9:15. We are invited to participate. KG4AWG maintains the Skywarn Web page: http://www.centralcarolinaskywarn.net/ We were very happy to have them visit and present the program.

Lee H. Swanson, N4AJF
Secretary, CARC

Cary ARC Foxhunt - Sept. 27, 2001

By Lee H. Swanson, N4AJF

The annual foxhunt was the program for the CARC meeting on Sept. 27, 2001. The foxes (radio transmitters) were set up by KA4ATK, Dennis Herman, and his wife, Jeanne, with the help of NZ0I, Charles Scharlau, in programming the foxes. The hunt was expected to start at 7:30, and the transmitters were set up with this start time in mind. Fox "A" started transmitting at 7:30, and fox "B" started at about 7:50, both on the same frequency. They were set up so that the signals did not overlap, and each had a different I.D. The idea was, the first fox found would be "A", and by then the second, "B", would be on the air. However, with the actual starting time of about 8:00, both foxes were on for the entire hunt.

There were six teams of fox hunters, as follows:

Herb, W3HL
Charles, NZ0I
Will, K4IWW, & Lee, N4AJF
Darrell, KF4URC, & Tom, K4ZAD
Brett, KG4NUK, & Bob, KG4NUL
Ed, AB4S, Susan, WA4AKB, & David, KG4JXF

The rules stated that the fox hunting was to be over by 9:30. At this time the only one to find both foxes was Charles, NZ0I. About 10 minutes after the official ending time, Will, K4IWW & Lee, N4AJF, reported finding both foxes. Soon, with some help, Ed, AB4S and his group located both foxes, and later, Darrell, KF4URC & Tom, K4ZAD, also with some help, found the second fox. I believe that Herb, W3HL, only found one fox, and that KG4NUK, Brett, & KG4NUL, Bob, were unsuccessful in locating either fox.

It appeared that everyone had a good time, and several said they were looking forward to next year's hunt. Thanks to Dennis, KA4ATK, and his wife, Jeanne, for a good hunt, and thanks to Charles, NZ0I, for helping to program the foxes, and for providing (loaning) much of the equipment used by the fox hunters.

Last Foxhunt Of The Year For The Backwoods Orienteering Club, But The First For This Ham

From Brett Guenther, KG4NUK

Temperature 80 degrees, skies clear, leaves near peak color: what other excuse did I need for a chance to get outside and take a nice leisurely walk through the woods? The answer is a radio orienteering event organized by the Backwoods Orienteering "Klub" (http://www.treklite.com/bok/) and Charles Scharlau, NZ0I of the Piedmont Transmitter Trackers (http://www.qsl.net/nz0i/). This was my first on-foot ARDF (amateur radio direction finding) international style "fox hunt", but will certainly not be my last.

The fox (transmitter) hunt was held Sunday October 21 at Camp Whispering Pines in Umstead State Park. It started around noon and lasted until about 3 o'clock. Charles, NZ0I set up the course that consisted of 5 transmitters located within about a mile radius of the start point. There were four transmitters working at 300 mW and one transmitting 5W. Upon arrival I checked in and paid a 4 dollar fee which entitled me to a topographical map of the area, score card, and registration number for the official time keepers. Armed with a directional antenna, a variable attenuator, a compass, and my trusty HT, I took my initial bearings for all five transmitters. Each transmitter was on for one minute with a total cycle time between transmitters of five minutes. After a couple of cycles I was convinced of my bearings and headed out to find transmitter number one. I made my way in the general direction of the first transmitter for about four and a half minutes and set up for the next bearing measurement. After I took my second bearing I headed out for the intersection of my two bearing lines. Sure enough there was the transmitter. "Hey, this is not going to be so bad," I thought! (Little did I know). The transmitter was marked with an orange and blue flag and had a unique punch that I used to punch my score card and thereby indicate that I did indeed find transmitter number one. After punching my score card, I quickly set about positioning myself for the next bearing. This is where things became a little more complicated.

Those of you familiar with Umstead State Park know of the many hills, valleys, and water features that make this park beautiful to the eyes. This beauty becomes the beast, however, when you try to find a hidden transmitter. While Charles did admit that this course was a little shorter and a little easier than a regulation ARDF event, he did throw a couple of curves to keep everyone on their toes. Transmitter two, for example, was located low in a valley directly next to a lake. The reflections off of the hill on the opposite side of the valley created echoes. After chasing a few of these echoes I stopped to think. I found that stopping to think is one of the most important things to do in a foxhunt. My gut told me to listen to each transmission and move as quickly as possible to find the transmitter. This strategy, however, only caused me to run in circles trying to find the sneaky fox. By stopping for a moment to think, I was able to realize my errors, interpret some of the measurements I had been taking, and ultimately find transmitter number two.

One of the most important rules of fox hunting is that high ground measurements are typically more accurate than low ground ones. This point sounds obvious, but it was one that I forgot. After finding transmitter number two, I noticed that transmitter number four's signal was quite strong. I decided to go after this fox next. In retrospect, since I was already in the low ground with transmitter number two, I should have hiked all the way up the hill to take some measurements on number four. It was a large hill and I was feeling pretty skilled after finding number two so I decided to go after it directly. I won't describe the following events since I would like to forget that part of the hunt, but suffice it to say they involved crossing a small river and bushwhacking through some pretty rugged country. I chased number four for the rest of the hunt and ultimately found it after spending what seemed like an eternity looking. Luckily transmitter number three was just next to the check in table so I was able to pick that one up just before check in. I finished the race after finding 4 out of 5 transmitters.

The team of Darrell Gammon, KF4URC and Tom McKee, K4ZAD bagged all five foxes and came in first place. I teamed up with John Swartz, AF4ZE and we came in second. This sounds great until I mention that there were only two teams! The third "team" was Robert Pierpoint, KG4BDX who was trying on-foot hunting for the first time and wasn't competing in it as a race, but rather as a practice/learning experience. Everyone had a great time and was smiling at the end.

I encourage everyone to come to these events and participate. If you have an HT you can typically borrow a directional antenna or an atenuator (or both) from one of the participants or organizers. If you don't have any equipment you can still participate by teaming up with those that do. A good team has one or two people direction finding and another who maps the bearings and navigates the team. Personally, I am a convert to this sport. It only took two hunts (one in a car and one on foot) to win me over. I hope to see others come out and share in the fun and excitement that is ARDF. If you do and you see a guy way off course looking a little lost – don't worry - its just me.

The USA ARDF Championships For 2002 Are Coming To Georgia.

From Charles E. Scharlau, NZ0I

This is the same event in which I participated this year in Albuquerque, NM. Next year, this event will be less than one day's drive from central North Carolina! This is a rare opportunity. It may be some time before the USA Championships return to the southeast.

The USA ARDF Championships are a great way to meet fellow T-hunters and radio orienteers from across the USA, and (often) from around the world. They are also a whole lot of fun. So don't miss your chance to experience this so close to home.

If you think you might have any interest in on-foot transmitter hunting, please consider participating in Atlanta next spring. There are divisions for both men and women, and every age group. You don't have to be an athlete, or have any prior experience with the sport. So let's have the Tar Heel State well represented in next year's Championships.

If you'd like a taste of on-foot transmitter hunting in Georgia prior to the Championships, then consider attending the practice event scheduled for the weekend of December 1, 2001. I'm planning to go, and will have room for passengers in my vehicle, and hunting equipment to loan.

There will also be opportunities to try ARDF right here in the Triangle area prior to the 2002 championships. Contact me if you'd like to be notified of local transmitter hunting events, or if you're interested in car pooling to the December practice event near Atlanta.

Additional details from - Joe Moell K0OV, USA ARDF Coordinator, www.homingin.com
Georgia Orienteering Club (GAOC) has been selected to host the Second USA ARDF/Radio-Orienteering Championships, to take place April 19-21, 2002 at F. D. Roosevelt State Park near Pine Mountain, Georgia. The competition will get under way on Friday afternoon with a practice event, followed on Saturday by the main two-meter hunt and on Sunday by the 80-meter hunt. In addition to the hunts, there will be a cookout on Friday evening, a spaghetti dinner on Saturday night, and an award ceremony following the 80-meter hunt, all included in the registration fee.

The USA ARDF/Radio-Orienteering Championships are open to anyone, from beginner to expert. Competitors will be placed in age/gender categories, with awards for first/second/third place in each category. Foreign visitors are welcome. Awards will be presented in two divisions, Overall and USA-Only. Pine Mountain is approximately 90 minutes southwest of Atlanta. Lodging options include cabins in the park and campgrounds with RV hookups. There are also many local motels and bed-and-breakfast inns.

Laurie Searle KG4FDM of GAOC is the Meet Director. Sam Smith N4MAP will set the ARDF courses. Robin Shannonhouse is Registrar. For more details, go to the Georgia Orienteering Web site <www.mindspring.com/~sam.smith/gaoc> and click on "Special Events - Radio-O Champs." There you will find the event flyer, rules, and registration forms. Registrations are now being accepted.

Slovakia will host the next ARDF World Championships in fall 2002. Positions on Team USA for these championships will be determined by individual performances in the Pine Mountain events, as well as in last summer's USA Championships in Albuquerque.

Upcoming Contests

NOVEMBER

LZ DX Contest, CW	1200Z, Nov 17	-	1200Z, Nov 18
IARU Region 1 160m Contest, CW	1400Z, Nov 17	-	0800Z, Nov 18
ARRL Sweepstakes Contest, SSB	2100Z, Nov 17	-	0300Z, Nov 19
RSGB 1.8 MHz Contest, CW	2100Z, Nov 17	-	0100Z, Nov 18
CQ Worldwide DX Contest, CW	0000Z, Nov 24	-	2400Z, Nov 25

DECEMBER

TARA RTTY Sprint	1800Z, Dec 1	-	0200Z, Dec 2
QRP ARCI Holiday Spirits Sprint	2000Z	-	2400Z, Dec 2
ARRL 160-Meter Contest	2200Z, Dec 7	-	1600Z, Dec 9
ARRL 10-Meter Contest	0000Z, Dec 15	-	2400Z, Dec 16
OK DX RTTY Contest	0000Z	-	2400Z, Dec 15
28 MHz SWL Contest	0000Z, Dec 15	-	2400Z, Dec 16
DARC Christmas Contest	0830Z	-	1059Z, Dec 26
RAC Winter Contest	0000Z	-	2400Z, Dec 29
Stew Perry Topband Challenge	1500Z, Dec 29	-	1500Z, Dec 30

Local Field Day 2001 Results

A recompilation of results gathered for RARS by Gary, KN4AQ(Thanks Gary!)

The 2001 Field Day results are now on the ARRL Members Only web page. Here's how clubs in the area did.

The Cary ARC, N4NC, placed #32 in 2A, a very respectable showing. Thanks to Nate for such a strong CW operation.

W4DW placed 2nd in 8A, with 10,828 points. First place was taken by N6ME, the Western ARA, with (better sit down...) 17,326 points, blowing our previous 8A wins off the map. They placed 6th overall in the "top 10" box. And third place went to the Mississauga (Ontario) ARC, VE3MIS, with 5,692 points. Meanwhile, downtown, W4RNC shows up at #124 in the very competitive 2A class. That's out of about 448 total entries (I counted quickly - might have missed a couple). Not bad at all!

The Orange County Radio Amateurs (OCRA), W4EZ, WON the 6A Battery class (again!). Congrats to you guys, too.
The Cape Fear ARS (Fayetteville), N4NG, came in 12th in 2A - the highest NC showing in that class.
The Knightlights, WQ4RP, took 14th in a very busy 3A Battery class.

A group called the Frogmore Stew and Brew Crew, with the familiar call WW4M (that's Jim Price, who made the IRLP presentation at the October RARS meeting), almost had the distinct honor of bottoming out the 2A class. Only three other groups managed to slink below their 506 points. And there's a story there that's I've only heard part of. Ask Jim or Danny KD4RAA.

Our neighbors in Franklin County, using KQ4MS, placed in the middle of 4A.
DFMA brought up the rear of 6A Battery with a 6th place finish.

ANSWERS: Brain Teaser - or - "Why Physics is Phun"

Last month I posed the question, "Why does the shower curtain move toward the water?"
ANSWER: The shower spray drives a vortex. The center of this vortex—much like the center of a cyclone—is a low-pressure region. This low-pressure region is what pulls the shower curtain in.

The complete answer is available in the October issue of S.A., or online at http://www.sciam.com/askexpert (click on the "Physics" category).

Contesting and Antenna Experiments

By Kaz, W4KAZ

I worked my first contest in almost 20 years(outside of Field Day), over the weekend of October 27th and 28th , the CQ World Wide SSB. My goal was not to be a serious competitor, but to haul in a bit of DX, wet my feet in contesting, and try out the wire beam in the November issue of QST. Since I had been planning to re-hang my 10/15 meter dipole, which was used on SSB for 2001 Field Day, I was already halfway there. All I needed were the two support poles, and the reflectors. Having the wire and some 1x2's handy made it a certainty. The "quicky" wire beam came together easily with the addition of a bit of olive drab camo cord. The elements for 20 meters were not added, nor was the hairpin match described in the article. With the length of coax used, there was a 1.5:1 match across the desired parts of both bands and the transceiver was happy. The hard part turned out to be pulling it up into the tree canopy in gusty winds. I had hoped to be able to secure the high end and be able to swing the other end 90 degrees, but this did not work out as I had hoped.

So. I got to work CQWW, with a bit of gain, pointing slightly east of due north. I got good reception from Italy across to asiatic Russia and Japan. The Canadians boomed. The Romanians boomed. The Germans boomed. The Japanese stations were workable. Bagged South Africa on the 20 meter dipole. Much fun.

Unfortunately, the longing for a real antenna system has set in once again.

Benson Hamfest Reminder

The Jarsfest is November 18th, 2001 from 8:00am to 4:00pm in Benson, NC. See http://www.jars.net/jarsfest.htm

Hey, if you get out there "real early", you might catch a good spot for the meteor shower! (see "Leonid" item)….W4KAZ

The last man on the Moon

From: http://www.spacetoday.org/History/SpaceFactoids/SpaceFactoids3.html

Apollo 17 astronaut Gene Cernan was the LAST man on the Moon. He left a plaque which read, "Here Man completed his first exploration of the Moon December 1972 A.D. May the spirit of peace in which we came be reflected in the lives of all mankind." *Lets hope it's not the "last" trip …..W4KAZ*

Leonid Meteor Shower Could Be One Of Best In History

Press release: Astronomical Society of the Pacific (Oct. 30, 2001)

San Francisco, Calif. - In the wee morning hours of Sunday, November 18, the Leonid meteor shower might intensify into a dazzling meteor storm, with "shooting stars" continuously blazing trails across the night sky. Viewers across the United States are perfectly positioned to take advantage of the storm, which could be among the most spectacular sky events of the 21st century according to the latest scientific predictions.

The peak in shower activity will occur between 4:00 and 6:00 a.m. EST, or 1:00 and 3:00 a.m. PST on Sunday morning, November 18. "During the peak, people viewing under clear and dark skies could see meteors shooting across the sky at a rate of 1,000 to 2,000 per hour, with flurries of one meteor per second at the peak of the storm," says Robert Naeye, Editor of Mercury magazine, which is published in San Francisco by the Astronomical Society of the Pacific (ASP). More information.

Earth will encounter another dense ribbon of Comet Tempel-Tuttle debris in 2002, but under a full Moon. After that, it's over for nearly a century. "It's now or never," stresses Naeye. "People should take advantage of this year's Leonid storm, because astronomers don't think we'll see another storm like this one until the year 2099. We will probably never see a better meteor shower in our lifetimes."

For the whole story see: http://www.astrosociety.org/news/astronews/currentastro.html

Satellite Danger

W4KAZ subtitle: "Cosmic Turkey shoot?"

From < http://www-space.arc.nasa.gov/~leonid/index.html >

The 2001 Leonid meteor shower presents a potential hazard for GEO satellites stationed between longitudes (approximately) 35 and 160 degrees west, between 17:00 and 20:00 hrs UT on 18 November 2001. "While overall risk of major damage is still relatively low, this period undoubtedly represents the greatest impact risk to GEO spacecraft since the beginning of the space-age.", says Dr Neil McBride of the Space Sciences Research Group of the Planetary and Space Sciences Research Institute at The Open University in Milton Keynes, UK. He reports on the satellite impact danger from the Leonid meteoroids during the upcoming storms, from the specific viewpoint of operations of spacecraft at particular GEO longitudes. Precise geometries and times with respect to the equatorial plane etc. were calculated. The results are presented in this Technical memorandum <see http://www-space.arc.nasa.gov/~leonid/Leoniddanger.pdf >

Project Starshine Issues Call For Telemetry Reports

The ARRL Letter,Vol. 20, No. 42,October 19, 2001

Project Starshine is seeking volunteer Amateur Radio operators and students worldwide to monitor and report telemetry from the recently launch Starshine 3 satellite. Data supporting a solar cell experiment on the satellite is being downlinked so students and radio amateurs can participate in collecting the data. The satellite transmits 9600 bps AX.25 packet telemetry at 145.825 MHz every two minutes. An attractive QSL card is available to all who forward telemetry reports to Project Starshine.

Launched September 30 as one of three ham radio payloads from Alaska' new Kodiak Launch Complex, Starshine 3 is in a 500-km, 67-degree circular orbit. Nearly one meter in diameter, Starshine 3 weighs some 200 pounds and carries 1500 aluminum mirrors polished by some 40,000 student volunteers in the US and 25 other countries.

Starshine 3's primary mission is to involve and educate students in space and radio sciences. The "mirror-ball" surface permits youngsters to visually track the satellite during morning and evening passes. Students record the mirror flashes and report their observations to Project Starshine, and visual data gathered will be used to determine the effects of the atmospheric drag on the spacecraft.

To report Starshine 3 telemetry, visit the Starshine 3 Telemetry Web site, <http://epulation.com/starshine/starshine3/>. For additional information about Project Starshine, visit the Project Starshine Web site, <http://www.azinet.com/starshine/>.

ARRL to FCC: No Commercial Users at 2390-2400 MHz.

ARRL Bulletin, 10/24/2001

The ARRL has urged the FCC "in the strongest possible terms" to make no commercial allocations in the Amateur Service 2390 to 2400 MHz primary allocation. The League tentatively suggested, however, that hams might be willing to share the band with compatible government services that are displaced to make room for advanced wireless systems. The ARRL told the FCC that advanced wireless systems "are fundamentally incompatible with continued amateur access to the band."

The ARRL said the federal government "has historically been a compatible sharing partner" and that government uses would offer "the least disruptive opportunities for sharing" in the band. Such sharing, the League made clear, should happen only "if it is absolutely necessary to reaccommodate some displaced users" and would be "subject to compatibility studies."

The ARRL commented this week in four separate proceedings dealing with allocations for advanced and third-generation wireless systems, the mobile satellite service and the Unlicensed Personal Communications Service (U-PCS).

The ARRL further asked the FCC to retain the non-government primary Amateur Service allocation at 2390-2400 MHz. The ARRL's comments noted that amateur allocations in the vicinity of 2 GHz "have been steadily eroded" through encroachment by other services.

Dayton Hamvention Picks Emergency Communications Theme

The ARRL Letter, Vol. 20, No. 43, October 26, 2001

The theme of the 2002 Dayton Hamvention will be emergency communications and preparedness, the Hamvention Committee announced this week in a letter to vendors and exhibitors. Hamvention said it's expecting "record attendance for 2002" at its 51st show, May 17-19, 2002. The annual event draws upwards of 30,000. "Hamvention expresses deep concern for the tragic events that occurred September 11, 2001, and the world events since," the letter said. "In order to show our support for Amateur Radio, we are going to emphasize emergency communications and preparedness as our theme for Hamvention 2002." The committee said it anticipates new Amateur Radio-related exhibitors as a result and would "limit the number of computer exhibitors at the show to only those who are related to Amateur Radio."

FCC Clarifies Details Of Cores Amateur Implementation

The ARRL Letter, Vol. 20, No. 43, October 26, 2001

The FCC's Wireless Telecommunications Bureau has clarified several issues regarding Amateur Service implementation of the Commission Registration System--or CORES. Starting December 3, everyone doing business with the FCC--including amateur licensees--must obtain and use a 10-digit FCC Registration Number (FRN) when filing. Many amateurs will not need to take any action to comply with the new requirement, which further expands the number of FCC abbreviations, numbers and systems hams need to be aware of.

Amateur licensees now registered in the Universal Licensing System (ULS) already have been cross-registered in CORES and issued an FRN by mail. The FCC said it planned another cross-registration by November 28. Amateurs can check to see if they have an FRN via a ULS license search. Many Internet call sign servers, including ARRL's, also provide this information.

Once CORES becomes mandatory, the FCC will "auto-register" all amateurs who seek to register in ULS and will issue them an FRN. Amateurs then should use the FRN in place of a Taxpayer Identification Number (TIN--typically an individual's Social Security Number) when filing applications with the FCC. New or upgrade license applicants not previously registered in ULS will be registered automatically in both CORES and ULS when they provide a TIN on a license application filed through a Volunteer Examiner Coordinator.

Both ULS and CORES will contain a licensee's FRN, but updating information in one system will not update the other. For amateurs, CORES registration will replace ULS "TIN/Call Sign" registration. Once CORES becomes mandatory, those registering in ULS will be redirected to CORES registration. The ULS will remain the Amateur Service licensing database within WTB, however, and only ULS will associate an individual with a particular call sign and FRN.

Going away December 3 will be the so-called Assigned Taxpayer Identification Number, or ATIN, which the FCC has been issuing to applicants ineligible to obtain a Social Security Number, such as foreign applicants and club station licensees. CORES will offer exemptions to amateur clubs and to foreign entities not holding a TIN/SSN. The FCC is encouraging club station applicants to first register in CORES and then use their FRN when filing via a Club Station Call Sign Administrator. Club station applicants also may use a trustee's TIN/SSN or a tax-exempt club's IRS-assigned EIN.

The WTB says that starting December 3, "all passwords will be maintained in the CORES database." Amateurs using paper FCC Form 160 to register in CORES will be mailed a CORES password for on-line access.
The FCC continues to work out the details of how amateurs, CORES and ULS will coexist. Amateur Service testing with CORES is planned for November. For more information about CORES, visit the FCC Web site <http://www.fcc.gov/> and click on the "Commission Registration System" link.

W1AW Installing New 40-Meter Bulletin Transmitter, Amp:

ARRL In Brief, 10/31/2001

The installation of a new 40-meter exciter and amplifier for code practice and bulletin transmission service is proceeding on schedule at ARRL Maxim Memorial Station W1AW. A Ten-Tec OMNI VI Plus will serve as the exciter for a Command Technologies HF 2500C amplifier. A similar arrangement has been providing reliable bulletin transmitter service on 20 meters for a few years now. Eimac donated the 3CX800A7 tubes used in both units. W1AW Station Manager Joe Carcia, NJ1Q, says the new 40-meter gear will be on the air very soon

Sharing Spectrum With Other Services A Ham Radio Reality

The ARRL Letter, Vol. 20, No. 44, November 2, 2001

Amateur Radio operators can get mighty territorial when they perceive that some other radio service is intruding upon "their" turf. What many hams often don't understand, however, is that Amateur Radio is a secondary service in the US on several popular bands or subbands. As such, it's subject to interference from primary radio service occupants and, by law, must avoid interfering with them. And, of course, ham bands are not all the same everywhere in the world.

Hams share most of their spectrum--especially the UHF and microwave allocations--with other users, typically the US Government and Fixed and Mobile services. The popular 70-cm band, 420-450 MHz, is a good case in point, says ARRL Field and Regulatory Correspondent Brennan Price, N4QX.

"Amateur use of the 70-cm band is secondary to government radiolocation services in the US, so hams must tolerate interference from the primary service and may not QRM it," Price explained. No operation in the 420-430 MHz band is permitted in some parts of the US (in the vicinity of the Great Lakes), while 50-W output power limits apply to operations centered near certain US military installations.

Price notes, however, that military use of the band is not confined to these areas, and the band is utilized aboard aircraft. "We occasionally receive inquiries from amateurs who complain of 70-cm disruptions when military planes fly overhead," said Price, who also serves as the ARRL Monitoring System coordinator. "We have every reason to believe that the current spate of widely heard disruptions is due to high-altitude airborne operations by the band's legal, primary occupant--the US Government." The 420-430 MHz segment is allocated on a primary basis worldwide to the Fixed and Mobile (except Aeronautical Mobile) services.

Two meters--144 to 148 MHz--is an exclusive allocation in ITU Region 2, which includes North and South America. US hams who have taken along an H-T while vacationing in Europe or elsewhere in Region 1, however, know that the 2-meter band in that part of the world is 144-146 MHz. In Region 3, hams have exclusive access to 144-146 MHz and share 146-148 MHz on a co-primary basis with Fixed and Mobile Service stations.

Six meters--50 to 54 MHz--is an exclusive ham allocation in Regions 2 and 3, but the band is allocated exclusively for broadcasting in Region 1--although certain countries do allow limited 6-meter operation.

The sharing news is much better on the higher HF bands. The 20, 17, 15, 12 and 10-meter bands are allocated to the Amateur Service on an exclusive basis worldwide--with a few minor exceptions for the high end of 20. On other HF bands, some sharing occurs.