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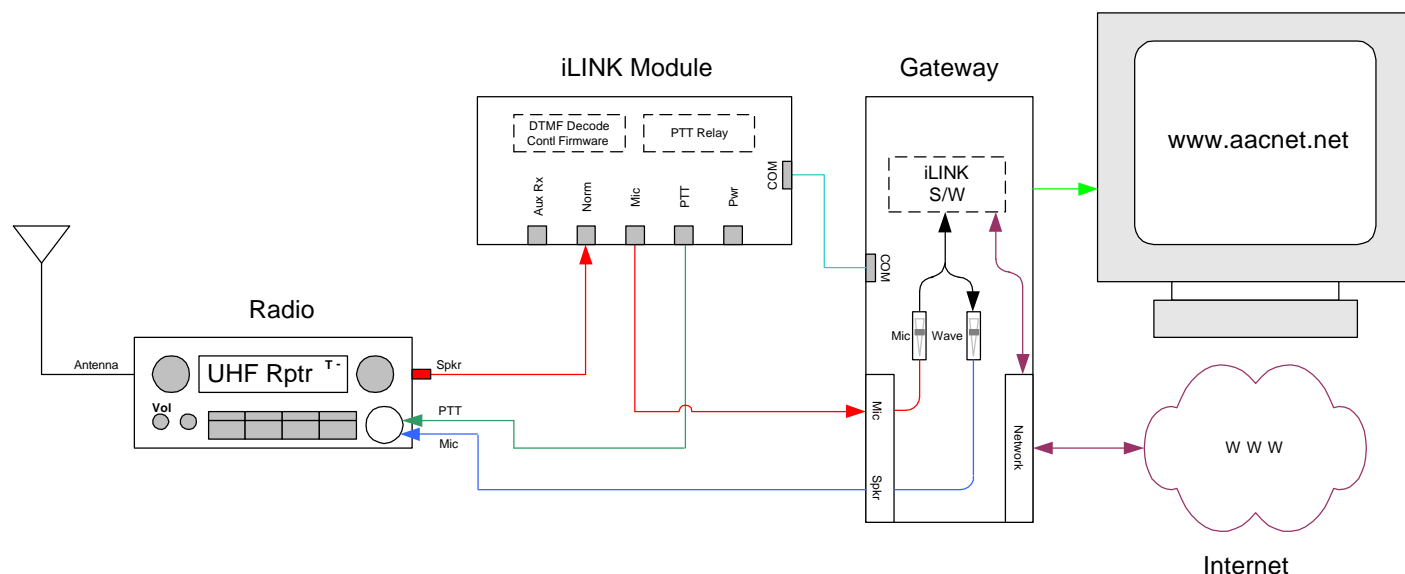
No. 4

New Horizons for Amateur Radio

By Frank McNally/KFØWF

Most of you have read the QST article in the March 2002 issue by James Milner, WB2REM, titled 'I-Link the .WAV of the Future'. According to the author, iLINK is a software program designed specifically for amateur radio operators by Graeme Barnes MØCSH. This program allows stations around the world to communicate by voice to others either directly through a computer, through repeaters or in conference rooms. According to the software author, the software provides basic services that include the use of a personal computer to access the system, an easy Internet interface, software that shows which stations are active and where they are located. The software also provides control over the link from mobile stations with the ability to switch links quickly, and security features to enable logout, call-sign verification and blacklist registration.

The Colorado Springs Amateur Radio Association (CSARA) decided to try this new communication technology using voice over Internet Protocol (vo/IP) to communicate with hams around the world over the Internet. The concept is simple: each station downloads the iLINK software module (www.aacnet.net/download.html) and installs the gateway software on a Windows operating system (95/98/NT/ME/2000) platform. During the installation process, the user is asked for a call sign and verifies the call sign before allowing the software package to interface with the iLINK server. Upon receipt of the call sign verification, the iLINK server assigns the gateway software module either a four or five digit number to identify the gateway computer to the iLINK system. When a user wishes to talk to another gateway, the user looks up the location and ID number assigned to other gateways (www.aacnet.net) and enters a gateway ID into the iLINK network. The iLINK server then connects the local gateway computer (source) to the distant gateway computer (destination) and passes IP packets between the two computers. The iLINK software accepts audio input from [Goto Pg 3]



**Meeting Location Back to Mt Calvary Lutheran Church
April Program is on PSK-31 by Shel Radin KFØUR**

Meetings Our monthly meetings are normally held on the 2nd Wednesday of each month at 7 pm at Mount Calvary Lutheran Church, 1318 N. Circle Drive, about 1/2 way between Platte Ave and Constitution Ave on N. Circle. Our Annual meeting is in October. Check the web site for any changes.

Regular License Exam Sessions

Our ARRL VEC test sessions are on the 2nd Saturday of even numbered months at 0900 at the Denver Technical College, 3245 International Cr, across from Memorial Park. Contact Erik KGØXE for details. Examinees need to bring (1) \$10, preferably a check or money order payable to ARRL/VE; (2) picture ID; (3) the signed original and a copy of your current amateur radio license and CSCEs you have (we keep the copies); and (4) a pen, pencil, and calculator if needed. Memory calculators will be checked.

PPRAA Web Page See it at <http://www.qsl.net/ppraa/>. Thanks to Lee Inman KØQED, our new webmaster.

Get on the PPRAA E-mail Reflector Stay on top of new or short-fused developments. Send e-mail to majordomo@qth.net; within the body type "subscribe ppraanet". Thanks to John Wishart KCØJFH for maintaining this list.

PPRAA Simplex Net All amateurs are invited to join us on Thursday evenings at 1900 on 146.58 MHz simplex for our club net. Get the latest club and regional happenings!

Officers and Directors

President	Rick Brown	KØSU	531-9423	k0su@arrl.net
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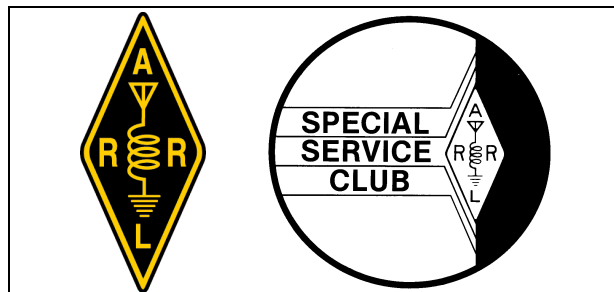
* Indicates this Director is completing the second year of a two-year term

Committee Chairs & Other Contacts

Activity	Sean Mullally	NØCT		
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Asset	Mike Stansberry	KØTER		
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ARES Liaison	Mike Stansberry	KØTER		
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CCARC Liaison	Moe Pierce	WBØRTF		
RACES Officer	Tony Dal Lago	KC4VMB	575-8400	kc4vmb@qsl.net

Upcoming Club Programs

Apr	PSK-31 by Shel Radin KFØUR
May	Amateur Operating in Antarctica by Nick Powell NH6ON



Articles for the Ø-Beat Deadline for articles or ads for the May issue is Apr 22. Submit articles by e-mail, US Mail, telephone or in person to the editor. Editor reserves right to correct for readability, grammar, spelling, punctuation and length.

Nonprofit Organization The PPRAA is a federal 501(c)(3) nonprofit organization and welcomes all contributions. Your contributions/donations may be tax-deductible.

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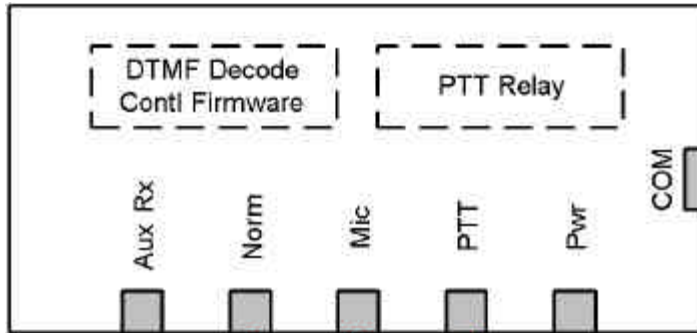
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Club and Local News

[Continued from Page 1]

the microphone (mic) jack on the computer sound card, converts the audio into data packets, and routes the packets over the Internet to the distant end. At the distant end, the iLINK software converts the packets into voice and outputs the audio to the sound card speaker jack on the computer.

Enlarged View of iLink Module



So the user does not have to have a radio link. It may be a computer on someone's desk top, allowing antenna challenged hams to pursue their hobby from the comforts of their easy chair. Actually, there are four types of users found on the iLINK system. The first one has already been discussed. The second type of user is an amateur that has connected his computer mic and speaker ports to a radio link and accesses the iLINK system using a simplex frequency. This requires the use of an interface board that converts DTMF control codes into software commands to allow the remote user to access the Internet features and gateway nodes. The interface board also controls the radio push-to-talk (PTT) circuit to activate the radio transmitter when incoming packets arrive. The third type of user is an iLINK gateway that is connected to a repeater using an interface module. The last type of user is a conference server that allows multiple gateway computers (with or without radio links) to connect to a single gateway conference loop.

The CSARA chose to connect the iLINK system to the CSARA linked VHF/UHF repeaters operating on 146.625 [-] {123.0} and 447.025 [-] {123.0}. A basic block diagram (on page 1) shows the interface.

In this diagram the radio speaker output jack is connected to the iLINK module. The CSARA uses the WB2REM (www.ilinkboards.com/index.html) interface module to interface the radio to the gateway computer. This board is available in a variety of forms. It may be purchased as a kit, assembled, or in piece parts. The radio receiver audio is routed to the iLINK module to allow the module to decode and convert DTMF codes to commands, to control the gateway. Commands are sent to and from the gateway computer via the communications (COM) port

Up, Up and Away de KØRM Jeff Ryan

Fifty-four launches, fifty-four recoveries. That's a perfect record for a group of Denver based ham radio operators who use high altitude weather balloons to lift scientific payloads to the edge of space. Appropriately named Edge of Space Sciences (EOSS) was formed in 1991 and incorporated in 1992 as a non-profit scientific and educational organization. Over the past decade it has come to be recognized as one of the premier groups in its field. EOSS works primarily with schools— elementary, high school, colleges and universities— to define and launch scientific payloads that will advance the study of the upper atmosphere. Payloads have been sent aloft for Longmont Middle School, the University of Southern Colorado, CU-Boulder, Cherry Creek High School, Air Academy High School, UCCS and the US Air Force Academy to name a few. EOSS also works with other groups such as the National Oceanic & Atmospheric Administration (NOAA) and Jet Propulsion Labs (JPL). All operations are accomplished using amateur radio. On-board telemetry, beacons, television, a cross-band repeater, and GPS data are sent back to earth using ham radio. On-site coordination, remote coordination, fox-hunt and recovery, and talk-in also use 2M simplex, 2M & 70cm repeaters and HF. As you can imagine, it takes a tremendous amount of coordination and planning to launch payloads into the upper atmosphere and just standing around watching the set-up and operation of the ground station and launch crew while listening to the recovery teams is in itself fascinating.



Preparing to launch EOSS-54, volunteers hold each of the payload modules on the flight string. Photo by NØLNE

My first experience with EOSS was in May of 1995 when a payload was launched from the Air Force Academy. On board were APRS, ATV, a cross-band repeater and other telemetry payloads. Sitting in my shack at home, I listened

[iLink continued]

located on both the iLINK module and the gateway computer. Actually, command interpretation and execution is accomplished on the iLINK module using a Programmable Integrated Circuit (PIC). The PIC may be purchased with the firmware pre-installed or the user may prefer to program the firmware (HEX code) into the PIC. The receive audio is then routed to the Gateway sound card mic input jack for conversion to data packets. The gateway iLINK software module converts the analog audio to data packets and routes the packets to the Internet via the network interface card.

Packets received from the Internet enter the network interface and are sent to the iLINK software module where they are converted to analog audio that is output from the gateway speaker jack. The audio is directly connected to the radio audio input. In addition, the gateway iLINK software activates the radio PTT circuit to allow the radio to transmit the audio over the airwaves. The audio gain to and from the Internet is controlled by the Windows operating system Volume Control panel.

The CSARA members have enjoyed using the new functionality of the iLINK system to talk to hams worldwide. The audio quality is excellent and each link is repeatable. That is, hams no longer have to rely on propagation profiles or line-of-sight limitations to make a contact with a specific location or station. The system has opened up new horizons for all the members and we are enjoying the experimentation that has made this hobby great. Not only does it provide a new form of entertainment, it also provides amateur service organizations (RACES, ARES) a new avenue to use when supporting community events. Imagine using the iLINK system conference loop to pass severe weather information directly to the weather service or providing coverage for a 100 mile race from start to finish, no matter what the distance is between radio stations. How about using the system to assist fire fighters located on either side of mountainous terrains. The possibilities are endless and since some stations may be connected to the conference loop using a computer interface, they will be able to access normal email and software applications to support the emergency service needs.

Everyone is invited to listen to the CSARA repeater and try answering a DX CQ call. The system announces each iLINK connection with "Connected, please call CQ". When you hear the announcement, answer the call. Use standard repeater protocol remembering to give your call sign every 10 minutes and be aware of third party agreements when talking to stations outside of the United States. Don't be surprised when you find yourself rag chewing for hours, bringing new life to this exciting hobby. 73!

[EOSS Continued]

to the ground station and launch crew on 2 meters, the HF net on 40 meters, the cross-band repeater (2M/70cm) on the balloon, and the recovery net on the 448.45 repeater. I watched the balloon's track on my computer screen by receiving APRS via 2M packet, and I watched the television picture of the earth as seen by the balloon as it ascended to an altitude of 102,000 feet MSL. These payloads are not expendable, and the recovery teams-- some of the finest fox-hunters anywhere-- have an enviable record of tracking and recovering the expensive hardware. GPS has certainly made their task much easier, but they still track using plain old DF'ing techniques just in case there's an on-board GPS failure.



*The Earth as seen from EOSS-54 at an altitude of 99,000 Ft.
Photo by KCØJHQ on board camera*

My next EOSS experience was in March of the following year when I attended a launch. Using a model airplane field about 15 miles northeast of the Springs as a launch site, EOSS launched an experiment for the US Air Force Academy. Payload modules are spaced out and tied together, then this 'flight string' is attached to the balloon, which has been carefully inflated with exactly enough gas to lift the string's weight at the calculated rate of ascent. Coordination with the FAA prior to and during the flight ensures the balloon and its payload do not become a hazard to aircraft. The flight and recovery were flawless and the Academy's experiment was a success.

I marveled at the level of activity at the ground control station after the launch. ATV pictures, constant telemetry updates, listening to the tracking and recovery net-- the feeling of excitement was constant. EOSS is scheduled to launch again in our area on Saturday, May 4th (inclement WX date is May 5th). Launch time is scheduled to be 8:00 AM, from the 'old Hangar Restaurant' located on the west side of Meadow Lake Airport, about 1 mile north of the intersection of Woodmen Rd and Highway 24 near Falcon. If you want to see one of the most interesting aspects of our great hobby, come on out. I'll see you there. For more info on EOSS see their web site at **www.eoss.org**.

Other Local "Goings-On"

de N7LV Rob Roller

Field Day! *Mike KØTER* reports that we now have approval to use the Agilent recreation area north of Woodland Park for this year's Field Day. More in next month's *Ø-Beat*, or visit our web site!



Spring is barely here, but Field Day is getting closer! Start thinking about coming up in the fourth weekend in June. Here Jaclyn KCØJTP (seated) logs as Jeremiah WB9EIU (right) get going in last year's Field Day event north of Woodland Park.

Tech/General/Morse Code: *Mike WV7T* is offering limited size classes. If you're interested, contact him at wv7t@aol.com, or 634-7168.

Club Web Page Gets Face Lift: *Lee KØQED* has been pretty busy lately giving the club's web page a face lift. Lee recently took over as webmaster from Rick Brown (so Rick could get some of his life back!). Some notable improvements include nearly daily updates of local current events and news, links to the newest ARRL bulletins, and a new menu. Check it out if you haven't already!

<http://www.qsl.net/ppraa/>

Rocky Mountain Division Convention: This month's convention committee meeting is postponed for an additional week due to schedule conflicts. It will meet on April 20 instead of April 13. Contact *Jerry ADØA* if you have any questions.

Ten-Ten International, Local Chapter: Thanks to *Dave Sloan NØEOP* for getting things going again. Dave is working on getting a new Pikes Peak chapter

of 10-10 set up, and is having a meeting on 2 pm April 7, Village Inn, 4675 N Academy Blvd (at Austin Bluffs Pkwy). Please RSVP with Dave at 391-0590, and bring a copy of your current 10-X membership card!

CRA 145.16 repeater to get toned: That actually applies to ALL CRA repeaters. 107.2 Hz will be the new tone, and will probably be in effect by the time you read this. For more info on the CRA, write to cra@qsl.net, or call 303-840-4CRA (303-840-4272).

CCARC Meeting: The Spring 2002 CCARC meeting will be held in Silverthorne, Colorado at the Silverthorne Library on April 27th, 2002 at 1:00 PM. Our CCARC rep is *Moe WBØRTF*.

Digital Communications Conference: It's still a little ways out yet, but mark your calendar anyway. The next ARRL/TAPR conference will be in **Denver, 13-15 Sept 2002**, at the Denver Marriott Southeast Hotel, 6363 E Hampden. This an international conference with attendees coming from all around. Topics include digital voice, digital SATCOM, GPS, APRS, DSP, HF modes, internet interoperability, TCP/IP, AX.25, spread spectrum, emergency comm, and more. An ARRL/TAPR conference was held in COS at the USAFA in 1989 and was very interesting, as those were the early days of packet!

QRPTTF: That is, **QRP To The Field!** Saturday, April 27, from 1500 to 2400 UTC (pick any 6 hours) on 40-20-15-10 meters, in the vicinity of the QRP calling frequencies. Cw only. 5 watts or less. This year's theme is to get as close as possible to a water location! The bigger the body of water, the more points you score! If you can't get away to be near the water, set up in your backyard! More on QRP operating at <http://www.fix.net/norcal.html>

Morse Code Practice: From time to time, I've heard the NDØQ Morse code practice transmissions on **146.4 MHz**, FM. Some of you may remember the transmissions from Pueblo were on nearly continuously in the past decade, but then disappeared a couple of years back. I've heard it as recently as mid to late Mar 02. (Anyone else doing code practice that we should know about?)

Public Service & Emergency Communications

The PPRAA is an ARRL Special Services Club, but it is not an emergency services club itself. The PPRAA supports all amateur radio involvement in public service and emergency communications in any way it can, including reporting activities happening in the region. These columns are based on available knowledge of the editor, and the opinions expressed are not necessarily the opinions of RACES, ARES, Skywarn or any other organization, or their leadership. Logos used with permission.

RACES



<http://www.qsl.net/epcraces/>

VHF Net Tuesdays at 1930 on 146.76 MHz

CMRG repeater

Tony Dal Lago KC4VMB, RACES Officer

Last training was weather spotting training, and all trainees should have been certified as NWS Skywarn spotters. An application for a club call has been submitted, so RACES should have its own callsign fairly soon, which can be used at the station and on the packet systems. Apr training will be on basic operator preparedness, and basic antennas, compliments of Doc WØMCT. Subsequent training has been planned and can be viewed on the web page.

ARES



<http://www.qsl.net/ppares/>

VHF Net Tuesdays at 1900 on 146.97 MHz

PPFMA repeater

Wes Wilson KØHBZ, EC

Two events this month: Apr 13-Skywarn spotter training; Apr 27-March of Dimes Walk America. Early May is a COS Emergency Preparedness Fair; PPARES will be putting on a demo there, from 1000 to 1600 at the new city complex at 375 Printers Parkway. KØHBZ attended an EC meeting on 9 Mar in Golden. Among other things, this summer there will be numerous exercises relating to weapons of mass destruction, and talk continues on developing a rapid response team for Colorado ARES. On-the-air training – first Tuesday monthly!

Time for Weather Training!

Like to stare up at the clouds? Looking for bunnies? Well, get trained to do it right! There are two weather spotter training sessions this year. One, sponsored by El Paso County RACES, was held at the RACES training session on Mar 21, open to all amateur operators. The second one is yet to come, scheduled for Apr 13, from 0815 – 1500. Both sessions qualify you as a Skywarn spotter for the NWS. Pre-registration is REQUIRED for the Apr session! Contact Sid K4ARM (k4arm@arrl.net, 495-4147) if you're interested. Tom Maguson of the NWS has also provided a video tape showing clouds rotating in real-time, which should be very helpful for spotters that have never seen rotation. Too many times, less experienced spotters have called in rotation for clouds moving in a straight line. Copies of the tape will be available for a buck (look out, 10-10-220!) to cover the cost of the tape. Let Sid know if you want one. (Attendance is not required to get the tape, although Sid will have the tapes ready on Apr 13.)

Weather – Related Resources Available:

There are a number of local weather related resources available on the web, or through RACES and/or ARES. Here are some of them:

- ✓ Basic Weather Spotters Manual:<http://www.skywarn.org/nwsbasicspottersfieldguide.pdf>
- ✓ Advanced Spotters Manual (text only):<http://www.crh.noaa.gov/lmk/sguide.htm>
- ✓ Handbook and map of local staff gauges (13 MB):.....<http://rollerr.home.mindspring.com/r/staffgauge.pdf>
- ✓ Map: COS fire stations (possible shelters in storms): <http://www.qsl.net/ppares/Reference/cosfire.pdf>
- ✓ Winter wind chill chart:<http://205.156.54.206/er/gyx/wndchil.htm>
- ✓ Pueblo NWS web site:<http://www.crh.noaa.gov/pub/>
- ✓ RACES Handbook[Not on web site - Contact Tony kc4vmb@qsl.net](#)
- ✓ ARES Operations Manualhttp://www.qsl.net/ppares/Ops_Manual/aresops.htm

Articles

Computer Performance Fundamentals de KIØPE Seth Bardash

[Ed: Part III of a multipart article. Seth's e-mail address is seth@integratedsolutions.org if you want to contact him.]

Now that we have an overview of the items that most effect system performance, lets take a look at a dual processor system.

Typical Dual Processor System Architecture:

The graphic in Fig 1 shows a dual processor AMD based motherboard. The AMD-762 is the North Bridge chip. As you can see, the 762 provides all the connections between the processors, the memory (right), the AGP graphics port (left) and the slower parts of the system (AMD-768 South Bridge chip).

Between the 762 and the South Bridge chip (AMD-768) is a high performance 64 bit 66MHz PCI bus. This bus is also used to interconnect to fast PCI peripherals (shown on far left). An example of a fast PCI peripheral would be Adaptec's 29160 UltraSCSI-160 controller or Intel's Pro/1000T Gigabit Ethernet card.

Both of these controllers have 64 bit interfaces and can fully utilize this faster, wider PCI bus. Performance considerations to take into account for a motherboard like the one shown above are:

- 1) Processor(s) speed
- 2) Memory Size and Speed (CLx)
- 3) Type of I/O controllers (on-board versus 64 bit PCI)

So far we have only looked at processors and memory. We still need to store our programs and connect to the internet. To do this we will need disk storage and either a Local Area Network connection or a modem/DSL connection.

Disk Performance:

Disks store data on magnetic media known as a platter. The platter is a circle of magnetic media that can be written to through the use of a coil that flies very close to the platter. This coil is known as a head. The platter turns underneath the head. As the platter turns the head can read or write data on the media that is directly underneath it. To write more data than can fit in a single track the arm holding the head must move it to the next track. The things that effect disk performance are:

- 1) Platter rotation speed (effects average rotational latency)
- 2) Track to Track head speed
- 3) Track Data Density
- 4) Disk Cache Size

Platter rotation speed effects average latency. This is the average time it takes for the platter to spin around until it get to the piece of data you are looking for on that track. The faster the disk spins the sooner you can get (on average) to the data you want. Most disks today have a rotation

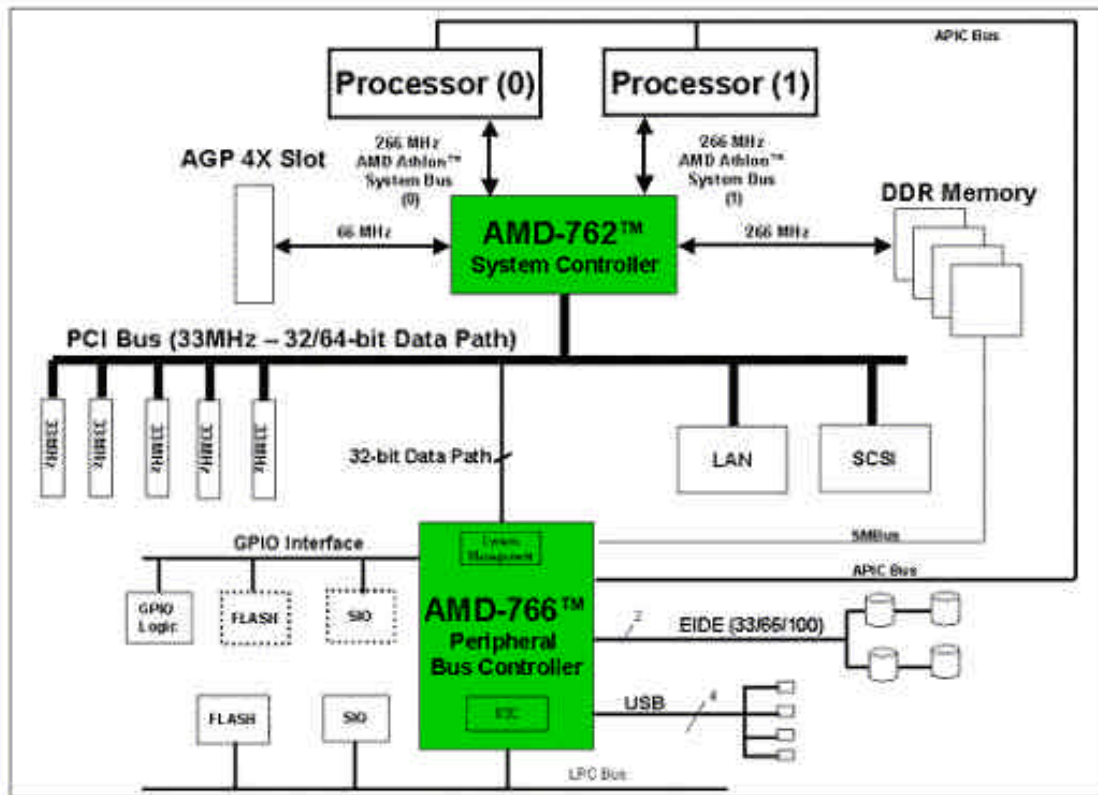


Figure 1

speed from 5400 rotations per minute (RPM) to as high as 15,000 RPM.

Track to Track Access Time. If the data requested is not on the present track, the track to track access time becomes important. The faster the disk can move the head to the track where the requested data resides the sooner the system can get access to the needed data. Most disks today have a track to track access time from

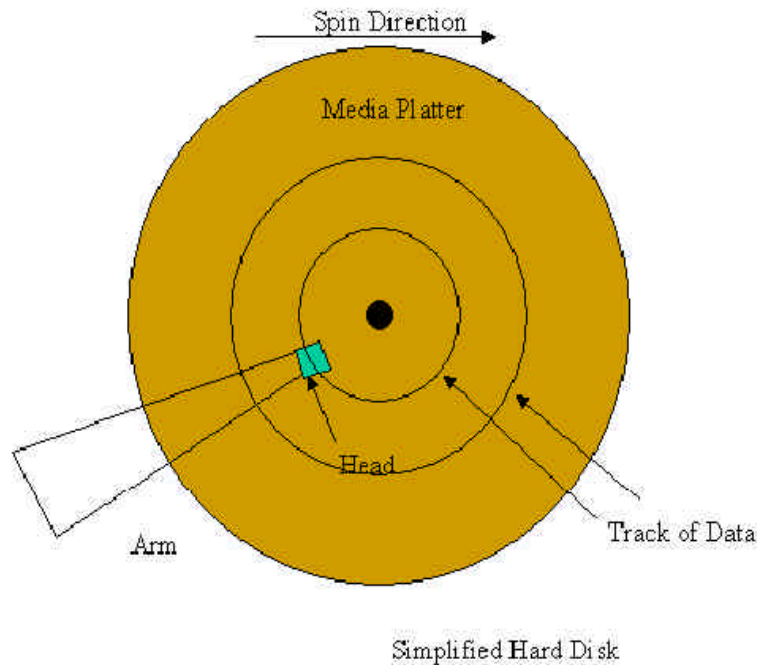


Figure 2

10 milliseconds (ms) to as low as < 3 ms. This parameter is also sometimes listed by the drive manufacturers as head seek time.

Track Data Density defines how much information can be stored on a given track. The higher the track data density, the more information the disk can store on one track. If a disk can store more data on one track it does not have to move the head to the next track as often. This means that the higher the recording density the lower the chances are that the head will have to be moved to the next track to get the required data.

Disk Cache Size. Disks contain intelligent controllers, read cache and write cache. When you ask for a given piece of data, the disk locates the data and sends it back to the motherboard. It also reads the rest of the track and caches this data on the assumption that you will want the next piece of data on the disk. This data is stored locally in its read cache. If, some time later you request the next piece of data and it is in the read cache the disk can deliver it with almost no delay.

When the motherboard writes to the disk the data is initially stored in its write cache. This allows the motherboard to finish the write and go onto other things while the disk is writing the data to the media.

Usually a disk with a larger cache will perform better for small to medium transfer sizes than a disk with a smaller cache. Most disks today have cache sizes from 512 K bytes to 8 Megabytes. Maximizing disk cache size, all other parameters being equal, will usually provide higher overall disk performance. *[To be continued]*

Vanity Fee Hike Proposed *de N7LV Rob Roller*

[From the ARRL]

The FCC has proposed raising the regulatory fee it charges vanity call sign applicants from \$12 to \$14.50 for the 10-year license term. The FCC included the proposed new fee in a Notice of Proposed Rulemaking (MD Docket No. 02-64) released March 27 to set Fiscal Year 2002 fees.

The effective date will be announced in the Report and Order that terminates the proceeding. If it's approved, the new fee likely will become

effective sometime in September.

The FCC has estimated that 8000 applicants would apply for vanity call signs in FY2001. Applicants for Amateur Vanity Call-Signs will continue to pay the \$12 regulatory fee per call sign (per 10-year license term) until the FY2002 fee schedule becomes effective. The vanity fee is paid at the time of application for a new, renewal or reinstated vanity license.

Comments are due April 23; reply comments are due May 3.

[Still a deal, considering I paid \$30 for mine several years ago, and some paid up to \$50 for theirs!]

Club Business

Board Meeting Minutes de NØMIK Mike Allen, Secretary



The March 18, 2002 PPRAA Board of Directors (BOD) meeting was called to order at 7:00 PM by President Rick Brown KØSU at the home of Ron Deutsch NKØP. Present were Mike WV7T, Rhoda KB2BZY, Tom NØNTX, Rob N7LV, Mike NØMIK, Sid K4ARM, Kate KCØEGJ, Aaron KD6FLM, Roger KE6ZOT, Moe WBØRTF, and Bill KDØJU. The Board welcomed the club's new publicity chairman, Roger KE6ZOT. The April BOD meeting will be held at the home of Bob KBØB. Rick announced he would stay on as the club representative to the planning committee for the 2003 ARRL Division convention, with Bill KDØJU assisting him in gathering door prizes. Programs in the next couple of months will be a presentation on PSK-31 in April, and maybe a talk on "boat anchors" by Bob KIØGF in May. The business portion of the meeting began with a discussion of donated equipment. Sid will begin to put together a list of donated equipment noting the type, donor, recipient (if any), and the approximate value. Mike NØMIK will work with Sid to draft a letter to the estate of Fay Herron KBØQI (SK) itemizing the equipment received from her station. The antenna and tower, which had been donated providing the club removed them, has been refused since the tower is in too bad of shape to climb safely. A motion was made to purchase an MFJ CW machine (*Model # MFJ-414*) for approximately \$200, which could be used for teaching as well as the CW portions of the club's VE sessions. The motion passed unanimously. Mike WV7T asked the board for money to purchase items for his ham radio programs. Discussion centered on what types of items to fund, and the board decided that items that a potential student would probably not have access to would be considered. Items such as practice CW oscillators would not be funded. Mike will bring an estimate of the costs to the next board meeting. Items left over from the programs would become PPRAA property. The offer of the Cheyenne Mountain Repeater Group (CMRG) to donate prizes to the swapfest was discussed, with the board approving the acceptance of the CMRG offer with some stipulations. Chief among those stipulations are that that all proceeds from the Swapfest are the property of the PPRAA. It was also noted that the CMRG donations could not be used for the raffle since only items listed on the tickets can be used. Rob N7LV is updating the club manual.

Items from individual board members were discussed next. Aaron KD6FLM suggested the regular meeting site be

switched to the Leon Young Service Center. He sited the easy access for the handicapped and the overall comfort of the room. Mike NØMIK will draft a letter to the city thanking them for the use of the center the last two months. Tom NØNTX noted that a suit has been brought before the FCC citing Cirrus radio for using too much power in the 2.4 gigahertz band. Kate KCØEGJ has a suggestion box that was once used by the club, as well as a small drawing ticket hopper. Rhoda KB2BZY informed us she had purchased a new coffee pot out of the coffee fund and would now be offering regular as well as decaf coffee at club meetings. Roger KE6ZOT noted that he had picked up the publicity information package from Ron. Ron had a new check for \$25 made out to CCARC for Bill KDØJU to take to the next CCARC meeting in April. The club had paid its dues previously, but the CCARC has yet to cash the check. He also noted that the club had \$1,082 in expenses last month and an income of \$244, leaving a balance of \$3,919 in club accounts. The meeting adjourned at 8:28 PM.. *Submitted by Mike Allen NØMIK, Secretary*

Membership Report de KCØNC Les Borst, Membership Chairman

Please welcome these New Members

NICK FOWLER	KCOMIT
FRANCIS CLARK MAYO	KCOLNM
VIRGENE NOLAN	
CHARLES NOLAN	
ROBERT SAYERS	WOOFA
CHARLES G. UHLIR Jr.	KCOMIS

Goodbye to the following Members

DAVID HAMULA	WBØFHO
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Total Number of Members

172

General Meeting Minutes de NØMIK Mike Allen, Secretary

President Rick Brown KØSU called the meeting to order at the Leon Young Service Center at 7:02 PM. 48 members and guests were in attendance. After introductions, a motion to accept the minutes of the last meeting was made and passed unanimously. Rick gave the Treasurer's report in Ron Deutsch NKØP's absence, noting that we did have money in our accounts, although he did not say how much. Membership Chairman, Les KCØNC, reported that membership has picked up a bit with some late renewals. Rick, who is also our Programs Chairman, announced the evening's program, Tom Magnuson KBØZWX from the

National Weather Service in Pueblo, and the April program, a presentation on PSK-31. A Publicity Chairperson is desperately needed. The Swapfest honcho Bob K1ØGF announced he had a sign-up roster for anyone who would be willing to solicit donations for door prizes. Swapfest planning meetings are held the last Saturday of the month at 9:00 AM in the CSPD Falcon substation on Goddard St. Rob N7LV, the *Ø-Beat* editor, announced that he had raffle tickets for anyone who wanted to buy, or volunteer to sell them. He also welcomed contributed articles for the *Ø-Beat*. AMSAT Coordinator, Tom NØNTX announced that the Malaysian Tonsat (sp?) had been designated AO-46. ARES Chairman, Wes KØHBZ, briefed us on his meeting with state emergency coordinators the previous weekend. Due to the dry winter, fire is a major concern among the EC's this year. Moe WBØRTF, the CCARC chair, said the next meeting of the council would be April 27 in Silverthorne. Speaking for RACES, Rob N7LV said that SKYWARN training would be held at the RACES meeting next Monday, the 18th. Jerry, ADØA, the Chairman for planning the 2003 ARRL division convention said that this year's convention host, Utah, is offering us a table at their convention. Next, Rick announced that the club's new Webmaster is Lee KØQED. The website has current news and looks great! And, John KCØJFH has taken over the duties of maintaining the reflector. Thanks to both new these volunteers.

Announcements began with Rick stating the next Board meeting would be held at Ron NKØP's house next Monday, the 18th. Moe WBØRTF mentioned the Lunch Bunch would meet at the Country Buffet in Citadel Crossing this coming Friday at 11:00 AM. And Mike WV7T informed us that Russ, KBØFNM was in the hospital for the last two weeks and that he and Rosie, WAØMNL, were moving into a new condo soon. The first presentation of his ham radio program is scheduled for May 4th, and he is starting a CW class for anyone who is interested and is willing to see it through to completion. There was no old business. New business consisted of Dick K2LCT announcing he had pictures of the last Edge of Space Sciences (EOSS) balloon launch for people to view at the break. John NØQJS presented the hammy to Wes for his support of numerous amateur radio events. In a late announcement, Kate, KCØEGJ told us about the next EOSS launch on May 4th from Meadowlake airport. After the break, two more announcements were made. First, Mike KØTER told us that the HP campground in Woodland Park had been secured for this year's Field Day, and Rick let everyone know that next month, the club meeting would be held at the regular location. The door prize drawings were held, after which, Tom Magnuson KBØZWX, presented an entertaining talk on the National Weather Service, touching on SKYWARN activities. The

meeting adjourned at 9:00 PM. *de Mike Allen NØMIK, Secretary*

ARRL Asks FCC to Eliminate, "Reform" Novice CW Bands

de the ARRL Letter, March 22, 2002

The ARRL has asked the FCC to eliminate the 80, 40 and 15-meter Novice/Technician Plus CW subbands as such and reuse that spectrum in part to expand the phone allocations on 80 and 40 meters. In a Petition for Rule Making filed March 22, the League requests that the FCC revise its Amateur Service rules in accordance with the modified Novice band "refarming" scheme the ARRL Board of Directors okayed in January. The Petition has not yet been put on public notice for comment. "The opportunity to eliminate the Novice and Technician-Plus telegraphy subbands and the reapportionment of those inefficiently deployed segments will allow alleviation of significant, sometimes critical, overcrowding in the popular Amateur HF allocations," the ARRL said in its Petition. The ARRL also cited "substantial advancements in the use of digital techniques" in the HF bands--such as PSK31--to bolster its assertion that a refarming plan for the underutilized Novice HF subbands "cannot wait longer and must proceed now." The refarming plan adopted was based on the recommendations of the ARRL Novice Spectrum Study Committee following a survey of the amateur community last year. Under the proposal, no operator class would lose privileges, and most would gain. If the FCC approves the plan, current Novice and Technician Plus (ie, Technician with Element 1 credit) licensees would be permitted to operate on the 80, 40, 15 and 10-meter General-class CW allocations at up to 200-W output. For General and higher class operators, the ARRL wants the FCC to implement changes in the 80, 40 and 15-meter "phone" bands. On 80 meters (3500-4000 kHz), phone privileges would begin at 3725 kHz for Extra, at 3750 kHz for Advanced and at 3800 kHz for General--another 25 kHz for Extra and Advanced operators and another 50 kHz for Generals. On 40 meters (7000-7300 kHz), phone privileges would begin at 7125 kHz for Advanced and Extra and at 7175 kHz for General--25 kHz more for Extra and Advanced operators and another 50 kHz for Generals. On 15 meters (21,000-21,450 kHz), phone privileges would begin at 21,200 kHz for Extra, at 21,225 kHz for Advanced and at 21,275 kHz for General--no change for Extra and Advanced but 25 kHz more for General. On 10 meters, the ARRL has recommended no changes other than to accommodate CW, RTTY and data by Novice and Tech Plus licensees at 28.0 to 28.3 MHz. The ARRL suggested that its proposed configurations strike the right balance between the need for additional phone spectrum and the important goal of encouraging further development of narrowband data modes in the CW segments. The ARRL's "omnibus" petition also asks the FCC to permit amateurs to use spread spectrum on the 222-225 MHz band; expand the pool of special event call signs beyond the 1x1 format to include identifiers for US territories and possessions that do not provide for mailing addresses; clarify its rules to indicate that modulated CW (MCW) is permitted for repeater station identification; and to incorporate into its rules a 1990 FCC waiver authorizing amateurs in certain areas of Colorado and Wyoming to operate on certain segments of the 33-cm band. The League invited the FCC to consolidate its omnibus petition with other pending Amateur Radio-related petitions now before the FCC. A copy of the ARRL's complete Petition for Rulemaking is available on the ARRL Web site <<http://www.arrl.org/announce/regulatory/refarm/>>.

April / May 2002 -- Please see Page 2 for Points of Contact						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6 Longmont ARC hamfest
7	8	9	10 PPRAA Mtg	11	12 Lunch Bunch	13 Skywarn Trng PPRAA VE Test
14	15 Board Mtg Taxes Due!	16	17 MARC Mtg	18 RACES Training	19	20 RMD Conv Mtg
21	22	23	24	25	26	27 Swapfest Mtg PSE MOD Walk America CCARC Mtg
28	29 ZB Deadline	30	1	2	3	4 MARC VE Testing RMD Conv Mtg EOSS Launch
5	6	7	8 PPRAA Mtg	9	10 Lunch Bunch	11
12	13 Board Mtg	14	15 MARC Mtg	16 RACES Training	17	18
19	20	21	22	23	24	25 Swapfest Mtg
26	27 ZB Deadline	28	29	30	31	

Questions about any event on this calendar? Something missing? Try our web page, or contact a Board Member!

<h2 style="text-align: center;">Membership Application for the Pikes Peak Radio Amateur Association, Inc.</h2> <p style="text-align: center;">P.O. Box 16521, Colorado Springs, CO 80935-6521</p>	
Date: _____ <input type="checkbox"/> New Member <input type="checkbox"/> Renewal Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Call: _____ Class: N T + G A E Phone: _____ Mbr of ARRL? <input type="checkbox"/> Yes <input type="checkbox"/> No E-mail: _____ Additional Family Members to Join/Renew: Name: _____ Call: _____ Class: _____ ARRL? _____ Name: _____ Call: _____ Class: _____ ARRL? _____ Name: _____ Call: _____ Class: _____ ARRL? _____	In which activities would you like to participate? Field Day <input type="checkbox"/> Demonstrations <input type="checkbox"/> Nets or round tables <input type="checkbox"/> Organize activities <input type="checkbox"/> Teach ham classes <input type="checkbox"/> Full Member \$15: <input type="checkbox"/> Family Membership \$18: <input type="checkbox"/> Over 65 \$10: <input type="checkbox"/> Over 65 Family \$12: <input type="checkbox"/> Associate \$12: <input type="checkbox"/> Ø-Beat Only \$12: <input type="checkbox"/> Donation to Club: \$ _____ Total Enclosed: _____ <u>MAKE ALL CHECKS PAYABLE TO "PPRAA"</u>
<p>Please indicate how you'd like your - delivered: <input type="checkbox"/></p> <p>ard hard copy in the <input type="checkbox"/></p> <p>event that NO check boxes are checked) <input type="checkbox"/> I'll save the club a few bucks and download it from the Web!</p>	
Circle your interests ⇨ HF / V/UHF / FM / SSB / Digital / DX / Contests / Technical / Hardware / Other _____	
New and renewing members must submit a completed application form along with your check to the Treasurer. <p style="text-align: center;">Please Type or Print Clearly!</p>	

ALL NEW MEMBERSHIPS AND RENEWALS WILL BE PRORATED TO EXPIRE IN DECEMBER!!

RadioActivities!

Lunch Bunch



organizer!!

The next **Lunch Bunch** is Mar 12 at Country Buffet in the Citadel Crossing Shopping Center, Academy & Galley, 1130-1300. (Always the **Friday** following the club meeting.) Moe WBØRTF is our Lunch Bunch

Hamfest Horizon

- **Apr 6:** Longmont ARC LARCFest, Boulder County Fairgrounds, Longmont. www.qsl.net/larc
- **May 17-19:** Dayton Hamvention, Dayton, OH. 937-276-6930. P.O. Box 964, Dayton OH 45401-0964. www.hamvention.org
- **Jun 1:** PPRAA Megafest 2002! Lewis-Palmer High School. Raffle prize: FT-100D, Yaesu VX-1R. Bob Ryals KIØGF, rryals@pcisys.net, 265-9950. www.qsl.net/ppraa

Dits & Bits

- **For Sale:** Uniden Bearcat 300-channel Trunk Tracker scanner. Two battery packs, charger. Full documentation. \$150. Ron NKØP, nk0p@arrl.net, 593-8352.

Jess Miley KØTAA

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