SEITS

SouthEast Iowa Technical Society

http://www.seits.org

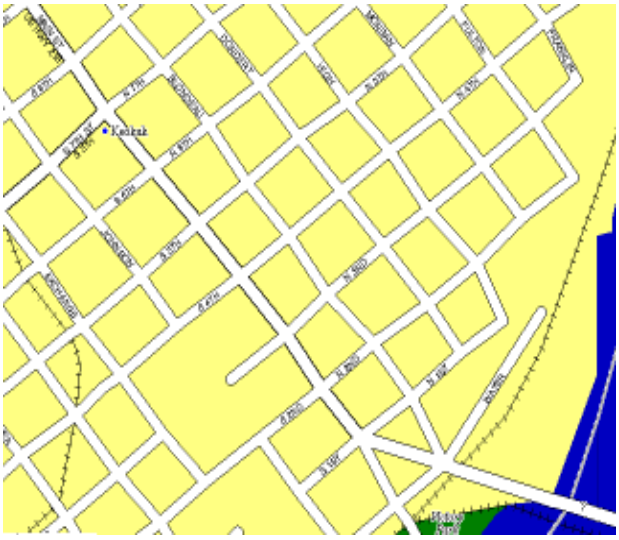
The Techical Journal

Volume 12, Number 3

March 1999

March Meeting

The next meeting is March 14, 1999, in Keokuk, Iowa. We will be meeting at Diamond Dave's Restaurant at 12:00 noon for lunch with a 1:00 pm business meeting. Diamond Dave's is located at 300 Main St. in the Keosippi Mall, just one block from the Mississippi River bridge.



This is our first trip to the Keokuk area for a meeting. Keokuk is the next area to be added to our LINK system. The equipment for their link is all in place, there is just a minor antenna problem to solve before we hear them on the system. So we figured now was a good time to introduce ourselves to the area.

Vice President Dennis Hoffman, KA0UKA, has been spreading the word in Keokuk , so let's see if we can make a good showing and let the area know that SEITS is there not to replace their local club, but to support and enhance their ham radio experience.

Hope to see you there on Sunday!!!
de KE0BX

1999 Membership Dues

Membership dues are now being collected for 1999. Dues are at the same level as previous years: $20 for an individual membership, $5 for additional members in the same household, and kids under 18 are free (but have no vote!).

You can mail your dues to:

Mary Beth Penne, N0IJP
SEITS Sec/ Treas.
1204 North Elm Street
Ottumwa, Iowa 52501-2840

Newsletter will be sent to 1998 members through the April issue. If dues are not received by the May mailing date, membership will be dropped.

SUNSAT HAM RADIO SATELLITE "ALIVE"

After more than a month of delays and aborted launch attempts, the Delta II rocket carrying the South African SUNSAT Amateur Radio satellite and other payloads lifted off February 23 from Vandenberg AFB in California. The SUNSAT team in South Africa reports it has communicated with the new satellite and monitored telemetry. SUNSAT should be fully operational in about a month.

SUNSAT, which stands for Stellenbosch University Satellite, takes its name from the South African university whose students constructed the payload.

The SUNSAT package includes digital store-and-forward capability and a voice ''parrot'' repeater that will be used primarily for educational demonstrations. The latest Keplerian elements are in the Satellite Elements section in this issue.

In this issue:

The NOS Box

by Mark Atherton, N0RXD

There are several NOS packages availiable for downloading from the internet. The most popular ones are JNOS and TNOS, and they are derived from a program developed by Phil Karn, KA9Q. TNOS has more features and has the advantage of running under the Linux platform, while JNOS is a bit simpler to set up and runs well under DOS. There is a TNOS/DOS package and I think JNOS can be compiled for Linux, but these approaches take more time and trouble. As far as I know, there is no NOS package for Windows, although the Flexnet group from Europe has developed a module that attaches to the Win95 tcp/ip stack. The disadvantage to Flexnet is that it won't run with standard tncs. They require that firmware (called sixpack) be installed, and unless you burn your own eproms you are out of luck. They do have a driver for a Baycom modem, but I haven't been able to make it work.

SET UP FILES

To set up NOS, of course the package needs to be downloaded and installed in its own directory. With TNOS/Linux, there are a few other things like setting up a slip link to the Linux kernel. Once installed, there are 5 main files that need editing to configure NOS to your environment: autoexec.nos, rewrite, forward.bbs, alias, and ftpusers (now called security in TNOS).

Autoexec.nos, as the name implies, is the file that NOS uses to set your callsign, IP address, connect the tncs, configure the routes, and start various services that may be desired. It also sets many parameters to give your NOS system the look and feel you want.

Rewrite is the file that tells NOS how to handle mail addresses and what to do with them. It is very flexible and particularly useful for fixing incomplete addresses, inaccurate addresses and hierarchial addresses. Each line contains a template for the original address and a corresponding replacement address.

Forward.bbs tells NOS how and when to make the connection to neighboring bbs's and how the message files are to be forwarded. It is only used for packet messages bound for a remote bbs. Amprnet or smtp mail is usually forwarded immediately.

Alias is the file that NOS uses to allow certain messages to be forwarded to several destination addresses. It can also re-address local names to specific destination addresses. A local name could be a first name, a callsign, or the name of a group, while an address always has an @ sign in it.

Ftpusers is the file that tells NOS what permissions to give to certain users, such as sysops and remote sysops. It gets its name from the FTP file transfer protocol, but also applies to AX.25, telnet, and all other forms of access. Recent releases of TNOS have renamed this file to "Security" to ease the confusion. One special entry in this file is named "univperm" which means "universal permission". It gives unknown users or those without passwords a base level of access permissions.

SIMILARITIES BETWEEN JNOS AND TNOS

The above files are similar in both JNOS and TNOS. In addition to basic packet and amprnet mail, both packages offer FTP file transfer, Netrom and telnet connectivity, and all features of regular packet bbs's. Special commands can be set up to access callbook servers, weather information, conference or chat rooms, shortcuts to things like DX clusters, and other services. You can find JNOS at http://www.tapr.org/tapr/html/softf.html under tcpip.

TNOS has several addtional features, including an Information server that is very easy to set up, an http server for WWW pages, and an NNTP news server. It was written for Linux, and takes advantage of this superior operating system. TNOS was written by Brian Lantz KO4KS and the website is http://www.lantz.com/tnos

WHERE TO NEXT?

Where do we go from here? Next time, I could write about the advantages of Linux, but it's so broad a subject that I hardly know where to begin or end. I could write about my own NOS setup, which keeps branching out in new directions. Drop me a line and let me know what interests you.

73 de N0RXD
n0rxd@n0rxd.ampr.org
atherton@blue.weeg.uiowa.edu

PROMOTING AMATEUR RADIO THROUGH SCHOOLS

by Michael Muldoon, KE0BX
and the SEITS Mail List

John Anderson, K0BKL recently asked on the SEITS Mail List: “Does anyone know about current Amateur Radio programs or Amateur stations at schools?”

Yes, John, as a matter of fact we do. SEITS member Fred Haberer, N0VXY, has a ham radio club that is both active and growing at WACO High School in Wayland, Iowa. Wayland is north of Mt. Pleasant and west of Winfield. Many of his students who have gotten ham radio licenses have been heard on the LINK system. At the current time the club has 6 licensed hams and 2 more studying hard. The club even has a club call, KB0SAL!!

Fred also is going a fine job in promoting our hobby. Here is a recent posting by the club on the SEITS Mail List about some new software and it’s uses to promote the hobby.

QST — New SSTV Software & School Kids
FROM — WACO High School Club Station KB0SAL in Wayland, Iowa.
SSTV — A Significant Revision to MultiMode Software

We have recently received slowscan pictures from the Mir Space Station, using a new update of Chris Smolinski’s MultiMode shareware for Macintosh. Until recently, SSTV software had not been available for the Mac. It works very well, requires no cards, no hardware mods or purchases—just a mic cable. Very nice.

Get Kids Involved — Many schools have Macintosh computers and no ham radio. With Mac satellite tracking shareware, kids can forecast a good pass and watch as Mir approaches. With a scanner or 2-meter rig, and a microphone cable you can show them Mir’s signals coming direct from space. You may open a very important door for them.

I recently used this kind of demonstration with a group of 21 young home-schoolers. Projecting the satellite tracking onto a screen let them watch Mir pass from night into day. They learned about the day/night terminator and got some idea of how fast a satellite travels. They stayed after the presentation to learn more.

Slow-scan is a real attention-getter. It’s worth a shot. MultiMode can be downloaded from Black Cat Systems at http://www.blackcatsystems.com/software/multimode.html
73, Fred, N0VXY
haberers@farmtel.net

WHAT ARE YOU DOING TO GET INVOLVED?

We have all heard the cries about the declining numbers of hams. Activity is down on our repeaters, and when you do hear someone it seems to be the same old bunch. Attendence at meetings are down everywhere. I’ve seen Field Day attendence come down to the point that in my area several clubs join forces just trying to get enough operators to run the thing!!

“But all kids today want to do is play video games” you say. “The Internet is stealing everyone” is heard. Yet Fred has shown us the way out. It’s to get ham radio out of the back room and show them more than a guy running CW, and even the whiz at 30 words per minute isn’t going to impress them. We need to work more public events, but even more important we need to have more *promoting* type events.

We need to have public showings of ham radio in public places. The local radio controlled airplane club in Ottumwa has hads a promotional mall show the last three years. And all sorts of people are becoming interested and joining the local club. We need to do the same for ham radio. We need mall shows, and we need open Field Days, where the object isn’t to win, but to promote ham radio and *have fun*. Most visitors to Field Day see guys so intent on winning that they don’t even stop to talk to the visitors. And they look so glum in their pursuit the visitor sees it as work not fun! So let’s see some ideas! Set up a demo, do a mall show, make Field Day a membership recruiting party! And if anyone wants to take on the challenge of doing some of these things in SEITS, step up!! I’m all for it but can’t do it all!!

I want thank Fred for all the work he is doing to promote our hobby. Good job, Fred!!!!

73 de Michael
KE0BX@KE0BX.#EIA.IA.USA.NA
muldoon@lisco.net

SATELLITE ELEMENTS

From time to time we will publish the Kemplarian elemaents used for tracking. I know there several in the group that use satellites fairly often, and probably more of us that at least try to monitor them occasionally. There are several shareware tracking programs available on the Internet including Winorb and STS Plus, which tracks more than just the shuttle.

Here are the latest satellite tracking elements for ham radio satellites as of this writing. They are presented in standard 2 line format.

AO-10
1 14129U 83058B 99028.89688500 .00000059 00000-0 10000-3 0 5605
2 14129 27.0431 46.4455 6008699 285.7546 18.5079 2.05825647 89555

RS-10/11
1 18129U 87054A 99056.70774924 +.00000097 +00000-0 +89665-4 0 06119
2 18129 082.9285 141.5456 0010727 310.7202 049.3021 13.72421333585078

UO-11
1 14781U 84021B 99056.93583718 +.00001347 +00000-0 +23114-3 0 01394
2 14781 097.9139 026.4789 0011332 181.1409 178.9769 14.70239920802140

RS-12/13
1 21089U 91007A 99056.86316366 .00000232 00000-0 23014-3 0 1368
2 21089 82.9233 179.8111 0029914 17.4404 342.7770 13.74123845404121

UO-14
1 20437U 90005B 99057.18518984 +.00000189 +00000-0 +89699-4 0 04318
2 20437 098.4652 133.7189 0010563 179.9424 180.1766 14.30122134474684

RS-15
1 23439U 94085A 99056.97587939 -.00000038 +00000-0 +13197-3 0 03825
2 23439 064.8125 232.2448 0154067 013.1719 347.3160 11.27533510171707

AO-16
1 20439U 90005D 99057.18102729 +.00000232 +00000-0 +10619-3 0 02408
2 20439 098.4921 138.3217 0010957 182.5780 177.5348 14.30159893474701

RS-16
1 24744U 97010A 99057.19313527 +.00039120 +00000-0 +73559-3 0 04777
2 24744 097.2310 323.5142 0006167 047.6916 312.4855 15.48450273111132

DO-17
1 20440U 90005E 99057.24366611 .00000253 00000-0 11390-3 0 2128
2 20440 98.4996 139.7755 0011293 180.9849 179.1309 14.30313003474754

WO-18
1 20441U 90005F 99057.18769774 .00000201 00000-0 94102-4 0 2237
2 20441 98.4963 139.5238 0011780 183.0727 177.0387 14.30265527474742

LO-19
1 20442U 90005G 99057.24289063 .00000325 00000-0 14157-3 0 2174
2 20442 98.5014 140.6645 0012007 181.1568 178.9582 14.30392719474786

FO-20
1 20480U 90013C 99057.54919476 .00000007 00000-0 80984-4 0 1220
2 20480 99.0365 273.2865 0541041 55.3542 309.7355 12.83249871424142

AO-21
1 21087U 91006A 99057.12911048 +.00000094 +00000-0 +82657-4 0 00165
2 21087 082.9422 313.4718 0035955 345.8265 014.1878 13.74625282405181

UO-22
1 21575U 91050B 99057.12306383 +.00000217 +00000-0 +86480-4 0 09362
2 21575 098.2146 102.7621 0006763 190.3613 169.7441 14.37266164399380

KO-23
1 22077U 92052B 99057.09802367 -.00000037 +00000-0 +10000-3 0 08580
2 22077 066.0789 289.3525 0015072 250.1714 109.7680 12.86318662307357

KO-25
1 22828U 93061F 99057.22387845 .00000203 00000-0 98438-4 0 6831
2 22828 98.4702 125.8781 0009443 206.3822 153.6878 14.28340326250579

IO-26
1 22826U 93061D 99057.20128175 +.00000115 +00000-0 +63384-4 0 07235
2 22826 098.4758 125.7361 0008321 225.9615 134.0877 14.27977738282425

AO-27
1 22825U 93061C 99057.21162052 .00000215 00000-0 10404-3 0 7063
2 22825 98.4731 125.3137 0007837 221.7147 138.3433 14.27859936282409

FO-29
1 24278U 96046B 99056.96366021 +.00000135 +00000-0 +17297-3 0 02407
2 24278 098.5443 023.0439 0351956 022.3142 339.2880 13.52661415124770

TO-31
1 25395U 98043B 99057.24099968 -.00000044 00000-0 00000+0 0 1029
2 25395 98.7683 131.4954 0002104 17.9846 342.1406 14.22541046 32842

GO-32
1 25398U 98043E 99057.18970625 +.00000027 +00000-0 +32020-4 0 01373
2 25398 098.7707 131.4576 0001502 027.3825 332.7436 14.22384387032857

Sunsat
1 25636U 99008C 99057.18839215 +.00000898 +00000-0 +25310-3 0 00142
2 25636 096.4745 011.4935 0151993 244.6691 113.8696 14.40866491000391

Mir
1 16609U 86017A 99057.54141961 .00025205 00000-0 19606-3 0 2616
2 16609 51.6573 190.9025 0012591 175.5687 184.5465 15.71492932743992

Happy satellite chasing, and maybe I'll hear YOU on the birds!!

JOURNAL NOTES

The deadline for the March issue is Monday, March 29. We will begin assembling and printing on Tuesday, March 30 with a target mailing date of Friday, April 2.

The April meeting will return us to the core of our area in Iowa City. Warmer weather should be with us by then so travelling to a meeting should be a pleasant drive.

As always, for the most up-to-date SEITS information, check into our website at www.seits.org. We are always adding new stuff, so if you haven't been there lately, you may be missing something!

Til next time. KE0BX