



Behind the WinLink Muddle: The Next Frontier for MARS

COMMENTARY

By Bill Sexton, N1IN

A funny thing happened to the Army MARS Winlink messaging system last December on its way from 2011 into 2012.

For a humiliating 34 days in December and January, the auxiliary's chief resource for civil communications backup languished under orders to *phase out*. It had been found to fail the rules for cyber-safety prescribed by the Pentagon. At first glance this surely looked like a bizarre fumble by the Army MARS leadership.

My take: There certainly was confusion, if not solely at MARS HQ. But I'm thinking of a deeper causation. This may well have been the first occasion MARS members butted up against America's emerging war on cyber-terrorism. And there's more to come. In other words, serious business, and not at all funny.

To see where this story is headed, you've got to go back to the beginning in 2007, when Army MARS was obliged to undergo an outside assessment of its communications security. That's a tale in itself, but you'll have to wait. For now let's just say the

inquiry had barely gotten under way when the Defense Department was shaken by a real whopper of a security lapse, one of potentially catastrophic proportions.

"The timing couldn't have been lousier," said Stephen G. Klinefelter, the retired colonel who now oversees Army MARS as a ranking civilian HQ staffer at the Network Enterprise Technology Command.

NETCOM, as it's usually known, is the 16,000-member outfit that runs the Army's global IT (information technologies) facilities. NETCOM is in the process of building a special relationship with the two-year-old Army Cyber Command, that is charged with protecting those facilities and the information they process from enemy eyes. (*SEE: The sidebar, "A Start at Becoming Cyber-Savvy."* – N1IN.)

Cyber Warfare, for Real

Long after the fact, the Pentagon revealed that in 2008 a toxic worm had invaded the U.S. Central Command's computer sys-



Photo A. Dressed appropriately for the flight deck, Pudge Forrester, left, W4LTX, is on duty as Army MARS government liaison. He accompanied Rep. Roscoe Bartlett (R-Maryland, center) and the congressman's press aide Lisa Wright observing naval pilots qualify aboard the USS Theodore Roosevelt off the U.S. east coast. Ashore, he was active during the controversy over the MARS Winlink messaging system. (Courtesy of Lisa Wright)



Photo B. Rep. Roscoe Bartlett (R-Maryland), a House Military Affairs subcommittee chairman who likes to be on the leading edge of defense planning, is co-leader of the bipartisan congressional caucus on protection against electromagnetic pulse (EMP) issues. "There is no dispute," he recently warned in the *New York Times*, "electric grids worldwide are vulnerable to potentially catastrophic damage from solar-generated EMP." (Courtesy of Lisa Wright)

tems. "One likely scenario," the *Washington Post* reported, "is that an American soldier, official or contractor in Afghanistan, where the largest number of infections occurred, went to an Internet café, used a thumb drive in an infected computer and then inserted the drive in a classified machine."

It was "the most significant breach of U.S. military computers ever," Deputy Defense Secretary William J. Lynn III said as he declassified the event two years after.

Needless to say, DoD set about erecting the mother of all firewalls. Rigorous regulations were screwed even tighter. Well over a year went into scrubbing all computers and networks worldwide. (Now the connections are moving into the cloud for even greater immunity.)

Another year had passed when Army MARS HQ issued the Dec. 2, 2011 order to *phase out* WL2K.

Anybody who tracks the ham radio blogs surely remembers the explosive reaction — instantaneous, angry, some-

The Value of Radio Amateurs

"There are lots of new technologies such as emergency cell phone structures for use in disasters. I have used them myself. Even so, they are not as fast on the scene as those amateur radio groups who are already there — and know their communities. That's our view, officially."

— Stephen G. Klinefelter, Col. (U.S. Army, retired)
Deputy Operations Officer,
Army Network Enterprise Network Command

times bordering on the hysterical. State and local customers of the Winlink system spoke up loud and clear, too. And all because a small-sized defense contractor in Alabama had filed a complaint about MARS with the DoD Inspector General four years previously.

The informant alleged that Army MARS was failing to comply with the precautions already required for DoD Information Systems — not just Winlink but MARS as a whole.

New Concepts to Learn

Well, I have to admit that in better than 20 years as a member, I'd never thought of MARS as a "DoD Information System." Nor do I recall encountering the phrase *Information Assurance* until the December 2 chief's message calling for WL2K to be banished "with immediate effect."

In case you, too, were puzzled, the DoD's own dictionary treats *Information Assurance* ("IA") pretty much as the cyber equivalent of our COMSEC (communications security), only in fancier language — perhaps the kind you might hear at a business school.

Presumably the Inspector General (IG) zeroed in on Winlink because it uses the public Internet as backbone connecting Winlink's HF access nodes. The Internet is far faster than HF and not beholden to radio-only's ups and downs of propagation. Still, the vulnerabilities of the Internet had been a concern at MARS HQ. But there was no feasible way around it, the Winlink Development Team insisted.

IG proceedings are confidential in order to protect whistle-blowers. It took special dispensation to confirm the mere existence of this one. However, other sources described the complainer as an unhappy former MARS member with canny insight on how to engage the IG system. "We were given an intractable

problem without a solution" was how the proceeding was seen at NETCOM.

Defense at the Goal Line

As Stephen Klinefelter of the HQ staff put it: "Very few people were aware of what the issues were here." The IA people had little conception of MARS (or amateur radio, for that matter), and even within NETCOM the left hand wasn't always aware of the right hand's moves.

Klinefelter drew the task of defensive coach in the final moments of a game running decisively against MARS. He's a retired Signal Corps colonel with his last seven years' active duty as the Chief Information Officer at West Point.

Now a civilian employee — as many military retirees become when their experience is needed — Klinefelter holds a high-pressure assignment as one of NETCOM's two deputy operations officers.

"Essentially," he explained in a telephone interview, "the nature of MARS is that it cannot be accredited (for *Information Assurance*) according to the current regulations and rules." So he set about urging a flat-out waiver from those regulations and rules "as a matter of common sense."

He pointed out that cyber-security in 2011 had become "a very different situation" since September 11, 2001 and subsequent compromises of security. Now the armed services have their new Cyber Commands up and running and cyber defense strategies have progressed significantly.

The nut of his case was that MARS — and amateur radio generally — offer a vital resource in disaster situations and their risk to security is minimal.

Put that way, NETCOM's case gained traction. The IG ruling against Winlink stood, but on December 14 the *Information Assurance* officialdom agreed to exempt Army MARS from the requirements. That rendered the IG decision moot.



Photo C. You could hardly tell it from the cover, but this highly-influential magazine broke one of the biggest computer-deception story in years. *Foreign Affairs*, monthly magazine of the Council on Foreign Affairs, was chosen to publish Deputy Defense Secretary William Lynn's revelation how hostile agents penetrated DoD networks in the Middle East in 2008. His article (mentioned in the upper left column) launched a new awareness of security issues throughout the IT realm. (Courtesy of *Foreign Affairs*)

One of the good things to come out of the case is that under reciprocity agreements, the Army waiver can be implemented by the other two MARS branches, though not to federal agencies generally.

But the Trains Had Already Left

There's a story that at the last minute Germany's Kaiser Wilhelm II had second thoughts about launching World War I. He commanded a halt. Battle-eager generals told their ruler sorry, but the attack forces were already on their way to the front and the trains couldn't be stopped.

In NETCOM's sprawling Ft. Huachuca, Arizona headquarters, the MARS Section had received the final IG ruling against use of Winlink. It was not aware that G3 Operations had a waiver all but signed. So the Chief was instructed to *phase out* Winlink.

As if that wasn't enough of a glitch, the initial December 2 notification went out in a message to the civil agencies using the system. MARS' own field leaders and the membership got no advance warning whatsoever. In fact, MARS members weren't officially informed until December 5 after a weekend of speculation and rancor. (Predictably, a MARS member on

the civil agency email list had played the news back on the Internet within minutes.) The blogs exploded.

"I seem to be watching Army MARS disintegrate before my eyes," wrote an outraged member out west. "No chain of command or (so) it seems from the Fort. Last chief build your toolbox. New chief, throw your toolbox away and all the money *you* — not the government — spent . . ."

Over the top, perhaps, but the writer's anger was suggestive of long-accumulating grievances besides the immediate problem. NETCOM staff later made a point of hearing the region directors out on those issues.

Washington Sends Help

The MARS chief's December 2 order brought a quick protest from Rep. Roscoe Bartlett (R-MD) to NETCOM's boss, the Army Chief Information Officer/G6 at the Pentagon.

Bartlett is chairman of the Tactical Air and Land Forces Subcommittee of the House of Representative. He'd been alerted by Pudge Forrester, the Army MARS government liaison in Washington and a former member of Bartlett's staff, about complaints from Winlink users in the state agencies. (*SEE: The sidebar: "A Bargain for Taxpayers."* — NIIN.)

Replying to Bartlett, Lt. Gen. Susan Lawrence, the Chief Information Officer, effectively countermanded the December 2 coordination alert message (CAM). In a letter made public by the congressman's office on Dec. 21 she stated that NETCOM "will release an updated CAM message shortly" clarifying that WL2K remains approved.

Astonishingly, the promised CAM message didn't arrive until 15 days later — after the year-end holidays — and it didn't do much clarifying. "Effective with this CAM," Chief Army MARS said, "CAM 14-2011 (the original phasing-out order) is rescinded." End of message.

So What Have We Learned?

The multiple miscues of December 2, 2011 through January 5, 2012 are hardly so obscure as to require further comment here. But there was more to the wrenching experience than just the glitches.

For Army MARS in particular, the combination of Internet firestorm and congressional scrutiny seemed to revive the long-lapsed interest of topside brass in their amateur backup force. As the old saying goes, a whack across the nose with a 2 x 4 will get a balky mule's attention.

But let's be fair: NETCOM and the higher-ups do have a war on their hands, too.

In Summary . . .

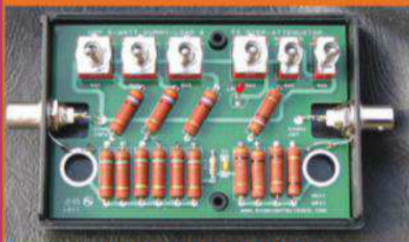
As a result of an IG complaint that was questionable to begin with . . . plus an affront to Winlink that had little basis in reality . . . along with the embarrassing lapses of communication within NETCOM and between MARS HQ and its field leaders . . . as well as the morale-busting confusion inflicted on the members by MARS HQ's long silences . . . despite the needlessness of it all, the end result is an unprecedented new level of concern for MARS from the chain of command above. Take note:

"In my opinion it (the WL2K storm) was not all bad," NETCOM staffer Al Melito said in a delayed New Year's message to MARS field leaders. "It definitely let it be known that the

CAN YOU COPY ME NOW?

QRP 5-W 4-Step-Attenuator
& Dummy Load

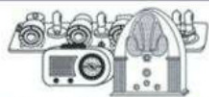
With this power step-attn in-line between transceiver and ANT, you can reduce output in half-power steps to see how low you can go! Bypass in RX maintains contact. Four attn pads can be switched in to go from 5W two 2.5 mW.



The Xtal Set Society

www.midnightscience.com

405-517-7347



ANTIQUE RADIO CLASSIFIED

Antique Radio's Largest Monthly
Magazine – 4,000 Subscribers!

Classifieds - Ads for Parts & Services

Articles - Auction Prices

Meet & Flea Market Info.

Radios, Ham Equip, Telegraph, Hi-Fi
TV, Books, Art Deco, 40s & 50s Radios

U.S. Rates: 1 year

\$36 (\$48 by 1st Class)

A.R.C., PO Box 1558

Port Washington, NY 11050

Web: www.antiqueradio.com

Email: arc@antiqueradio.com

Toll Free: (866) 371-0512 Fax: (516) 883-1077



Licensed Before 1988?

QCWA invites you to join with
those distinguished amateurs
licensed 25 years or longer.
Request an application from:

QCWA, Inc., Dept. WR
PO Box 2088
Malakoff, TX 75148-2088
USA

www.qcwa.org



Legislator on MARS: Bargain for Taxpayers

By Bill Sexton, N1IN



Photo D. Rep. Roscoe Bartlett (R-Maryland), center (under the Capitol dome), intervened with the Pentagon over the Army MARS Winlink case. An engineer and researcher before entering politics, Bartlett holds 20-plus patents on aeronautical and aerospace breathing equipment. He's shown at a briefing on a new transformer designed to survive electromagnetic pulse (EMP) damage from a solar eruption or nuclear explosion. That's Rep. Trent Franks (R-Arizona) behind him. (Courtesy of Lisa Wright)

Congressman Roscoe Bartlett isn't a ham, but his fiscally-conservative outlook gives him valuable insight into amateur radio's value to the country.

The Maryland Republican jumped into the debate after Army MARS HQ temporarily *phased out* its Winlink 2000 messaging system because of alleged security concerns last December.

"For the dollars spent," he said of the overall MARS program, "we get far more mileage here than almost anywhere else. That's because of the very large number of volunteers and all the equipment that they supply at no cost to the taxpayer."

Bartlett took his disquiet over the MARS action on Winlink directly to Lt. Gen. Susan Lawrence, the Army's Chief Information Officer whose duties include overseeing communications security. She immediately overruled the December 2 Chief Army MARS message suspending WL2K use.

"We had difficulty finding out what started this," Bartlett said. "It was going to eliminate Winlink which is depended on by a very large number of people for communications in an emergency. I am very pleased (it) has been resolved."

At his side during an interview earlier this year was Pudge Forrester, W4LTX, a ham since 1958 who formerly served for 11 years as a member of the congressman's staff. He now holds the Army MARS special staff billet of Government Liaison.

"We're looking for a continuation of the funding that has been there," Bartlett said in a telephone interview. "Cutting this would be a super-dumb thing." As chairman of the House Armed Services Subcommittee on Tactical Air and Land Forces, the 20-year congressional veteran is in a good position to make that point.

Army MARS volunteer force is very much alive and kicking. That is a good thing."

"The Army deeply appreciates the MARS volunteer workforce, and recognizes all the assets they bring to the table," wrote Lt. Gen. Lawrence in her letter to Congressman Bartlett. "With these volunteers' dedication, we intend for MARS to remain an important part of the nation's communications infrastructure."

On Friday, January 27, NETCOM's deputy G3 spent 90 minutes on the phone sharing views with the volunteer region directors, noting their needs and looking into the future. Maybe it was pure coin-

cidence, but that was about the same hour as the old weekly Chief's nets so much missed by the membership — a very promising augury.

After a two-year absence while Pentagon reorganization was underway, the annual three-service MARS conference is back on the calendar for this month. Significant organizational and operational decisions have been put on the agenda, I'm told.

So mark on your calendars for the three-service MARS meeting Saturday, May 19 at the Dayton Hamvention®. The three chiefs should have news to report.

— Bill Sexton, N1IN

A Start at Becoming Cyber-Savvy

By Bill Sexton, N1IN

For many MARS members, the Winlink 2000 episode last December opened the window on a whole new facet of military communications. It's an alien realm where unfamiliar terms like "IS," "IA," "CNAs," and "CND" parallel our COMSEC and FOUO as prosigns to remember.

And there's AR 25-2 which is somewhat akin to our DoDI 4650.02 but 95 pages longer — the CAM that briefly banished Winlink cited Army Regulation 25-2 (titled "Information Assurance") as its primary authority.

CNA is easy to define: "Computer Network Attack," as is CND, "Computer Network Defense." Information Assurance is more complex. The DoD Dictionary of Military Terms (2011) states:

- *Information Assurance — Measures that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and nonrepudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. Also called IA.*
- *Information System — The entire infrastructure, organization, personnel, and components for the collection, processing, storage, transmission, display, dissemination, and disposition of information.*

For members of Air Force and Navy-Marine Corps MARS, AR 25-2 basically implements DoDD 8500.01e which sets the standard for all "DoD-owned or -controlled information systems that receive, process, store, display or transmit DoD information, regardless of mission assurance category, classification or sensitivity . . ."

And this is the DoDD 8500 standard:

- *All DoD information systems shall maintain an appropriate level of confidentiality, integrity, authentication, non-repudiation, and availability that reflect a balance among the importance and sensitivity of the information and information assets; documented threats and vulnerabilities; the trustworthiness of users and interconnecting systems; the impact of impairment or destruction to the DoD information system; and cost effectiveness.*

As this was being compiled, DoD had under consideration a plan to place NETCOM within the Army Cyber Command. Army MARS presumably would accompany its long-time parent organization into the new environment. Whatever the final determination, the relevance of CND to MARS training and operations should be fairly obvious.

Where in the world will you find a Butternut antenna?

Just about anywhere!



Whether it's for your main home station antenna, a DXpedition antenna, or the portable antenna you use with your mobile home, your Butternut is ready to deliver big antenna performance in an efficient, reliable, compact design. Used in over 160 countries throughout the world and on countless DXpeditions.

Every ham needs at least one!

Butternut verticals are available to cover all bands from 160 to 6 meters

Check our web site

www.bencher.com

for the full line of finely crafted Butternut and Bencher products.

Bencher Butternut

**241 Depot Street
Antioch, IL 60002**

Call or write for Free color brochure:

847-838-3195

Fax: 847-838-3479



APRIL

LOWELL, MICHIGAN — The Amateur Radio Group of Youth in Lowell will hold the **ARGYL Hamfest** from 8 a.m. to noon on Saturday, April 7 at Lowell High School, 11700 Vergennes Street. Activities include a flea market, VE exams, door prizes, and refreshments. Tickets are \$5; elementary, middle, and high school students are admitted free. Contact: Al Eckman, (616) 450-4332. Email: <al.eckman@comcast.net>. Talk in 146.620 (PL 94.8) or 145.270 (PL 94.8).

CUYAHOGA FALLS, OHIO — The Cayahoga Falls Amateur Radio Club will hold the **58th Annual HAMFEST Electronic and Computer Show** from 8 a.m. to 1 p.m. Saturday, April 4 at Emidio & Sons Party Center, 48 East Bath Road. Activities include a flea market and door prizes. Tickets are \$6. Parking is free. Contact: Dan Atkinson, W8DFA, (303) 431-2090. Email: <skywarnohio@yahoo.com>. Talk in 147.27+.

RALEIGH, NORTH CAROLINA — The Raleigh Amateur Radio Society will hold the **40th Annual RARSfest and ARRL NC State Convention** on Saturday, April 7 from 8 a.m. to 3:30 p.m. at The Jim Graham Bldg., NC Fairgrounds, 1025 Blue Ridge Road. Activities include SKYWARN Spotter training, VE Exams, hands-on projects, youth lounge, DXCC card checking, meeting and forums, and cash prizes. A special event station, **W4DW**, will broadcast from 8 a.m. till 4 p.m. on Saturday. Frequencies are 7.235 and 14.235 (+/- QRM). Tickets are \$7 if you pre-register, \$8 at the door. Parking is free. Contact: Steve Ferrarini, KJ4BX, 107 Thomas Pl., Knightdale, NC 27545, (919) 247-8690. Email: <steve.kj4bx@gmail.com>. Website: <http://www.rars.org/hamfest>. Talk in 146.64.

GODALMING, UNITED KINGDOM — The Wey Valley Amateur Radio Group will air a special event station, **GR100MGY**, on Tuesday, April 10 to Sunday April 15 to honor the 100th anniversary of the sinking of the Titanic. Frequencies will be on eight HF bands from 3.5MHz to 28 MHz. QSL information can be found at <http://www.QRZ.com>. Contact: Michael Shortland, G0EFO, <michaels1@talktalk.net>.

STOUGHTON, WISCONSIN — The Madison Area Repeater Association will hold the **40th Annual Madison Hamfest** from 8 a.m. to 1 p.m., Saturday, April 14 at the Mandt Community Center, 400 Mandt Parkway. Activities include a 26,000-square-foot flea market and VE exams. The VE exams will begin at 10 a.m. Tickets are \$5. Contact: Paul Toussaint, N9VWH, (608) 205-1994, Email: <w9hsy@execpc.com>. Website: <http://www.qsl.net/mara>. Talk in 147.150 (+600, PL 123.0).

YAKIMA, WASHINGTON — **W7AQ - Yakima Amateur Radio Club** will hold the **Yakima Hamfest** from 9 a.m. to 4 p.m., Saturday, April 14 at the Selah Civic Center, 216 South 1st Street. Activities include VE exams, a 2-meter bunny hunt, door prizes, and food. Tickets are \$6. If you register before March 23, you will receive an extra door prize ticket. Contact: Lindsay Kooser (509) 965-6612. Email: <n7rhwa@arrl.net>. Website: <http://www.w7aq.org>. Talk in 146.660 (PL 123.0).

YORK, PENNSYLVANIA — The York Hamfest Foundation will hold the **2012 York Hamfest** from 8 a.m. to 1 p.m., Saturday, April 14 at the Porters Community Fire Company, 1199 Porters Road. The hamfest will be held rain or shine. Contact: KB3QLQ, <duane.sterner@yahoo.com>. Talk in 147.33 +600 (ctess 123.0 Hz).

VISALIA, CALIFORNIA — The Southern California DX Club in association with the ARRL and the San Diego DX Club will hold the **63rd Annual International DX Convention** from Friday, April 20 to Sunday, April 22 at the Holiday Inn Hotel and Convention Center, 9000 West Airport Drive. Activities include classes, forums, seminars, QSL card checking, CW pileup competition, exhibitors, and

a golf tournament. Website: <http://www.dxconvention.org/>. To register visit: <http://www.dxconvention.org/reg/>.

VISALIA, CALIFORNIA — Elecraft is sponsoring the **DX University**, Friday, April 20 at the Holiday Inn Hotel and Convention Center, 9000 West Airport Drive. Lecturers include AA7A, G3SXW, K4UEE, K9LA, N7NG, W3UR, W6OAT, W9KNI, and XE1KK. The all-day session will include topics such as propagation, optimizing stations and antennas, awards, ethics, remote operations, QSLing, and more. Registration is \$55. Contact: Wayne Mills, <n7ng@arrl.net> or Roger Western, <g3sxw@btinternet.com>. Website: <http://www.dxuniversity.com>.

PICKERING, CANADA — The North Shore Amateur Radio Club and South Pickering Amateur Radio Club will hold the **Durham Region Amateur Radio Hamfest 2012** from 9 a.m. to 1 p.m., Saturday, April 21 at the Pickering Recreation Complex, 1867 Valley Farm Road. Activities include a flea market, free coffee and tea, and a snack bar. Tickets are \$6 Canadian and children under 12 are admitted free. Contact: Durham Region Amateur Radio Hamfest, P.O. Box 53, Pickering, ON, Canada L1V 2R2. Website: <http://drhamfest.tripod.com>. Talk in 147.373+.

PERU, INDIANA — The Kokomo Amateur Radio Club will hold the **Seventh Annual North Central Indiana Hamfest** from 7 a.m. to 1 p.m., Saturday, April 21 at the Miami County 4H Fairgrounds, 1029 West 200N. Activities include a flea market, VE testing, and a raffle. The grand prize will be a 2-meter radio. VE testing will be conducted from 8 to 10 a.m. Tickets are \$5 at the door and free for anyone 17 or under, and to those who pass the VE exam. Parking is free. Contact: Steve Shepler, Box 824, Marion, IN 46952. E-mail: <shepler1@gmail.com>. Website: <http://www.nci-hamfest.net>. Talk in 147.345+.

GEORGETOWN, DELAWARE — The Sussex Amateur Radio Association and Sussex Technical High School will hold the **Delmarva Amateur Radio & Electronics EXPO** on Saturday, April 21 at Sussex Technical High School, 17099 County Seat Hwy (Rt. 9). Gates open at 6 a.m., Expo Begins at 7:30 a.m. Activities include tailgating, guest speakers, card checking, a raffle, VE Exams, Chinese auction, and a police K9 demonstration. Contact: Bill, KB3KYH, (302) 537-4755. Website: <http://www.radioelectronicsexpo.com>. Talk in 147.075 (PL 156.7).

SONOMA, CALIFORNIA — The Valley of the Moon Amateur Radio Club will hold its annual **ARRL Hamfest** from 8 a.m. to noon, Saturday, April 28 at the Sonoma Valley Veterans' Memorial Building, 126 First Street West. Activities include a full breakfast from 8 to 10 a.m., demonstrations of radio stations and emergency communication vehicles, displays, a swap meet, transmitter hunt, door prizes, and VE exams. VE exam registration begins at 9 a.m. Admission is free. Tables are \$10. Contact: Darrel, WD6BOR, (707) 996-4494. E-mail: <wd6bor@vom.com>. Website: <http://vomarc.org/>. Talk in 145.35 -600 (PL 88.5).

MAY

CADILLAC, MICHIGAN — The Wexauke Amateur Radio Club will hold the **50th Annual Cadillac Swap** on Saturday, May 5 at the Cadillac Junior High School, 500 Chestnut Street. Activities include commercial vendors and VE exams. Tickets are \$5, tables \$10. Contact: Alton McConnmell, (231) 867-3774, P.O. Box 163, Cadillac, MI 49601. Email: <nu81@yahoo.com>. Talk in 146.98 (No PL)

GREENSBURG, KANSAS — The Salvation Army Emergency Radio Network will air a special event station, **KS0SA**, from 1600 to 2100 UTC, Saturday, May 5 to honor the fifth anniversary of the Greensburg, Kansas Tornado. Frequencies include 10.115, 18.135, 7.255, and 14.040. Certificate and QSL available by sending a 9- by