



THE VOICE OF AMATEUR RADIO IN MISSISSAUGA COMMUNICATOR



VE3MIS/VE3RCX

Vol 9.10

October, 2006

From the Gavel President's Message – Where are you?



Hope you all had a wonderful summer and are all set to do some more shaking up of the air waves! There are several items coming up that I am sure you will want to participate in. We have special guest speakers, plus we are also now introducing the second general meeting will normally be an educational evening. More details to follow over the next few months.

I want to welcome our new newsletter committee members. Kim Cheong VE3KTC and Thomas Bernard (currently taking the basic licence course) will work with Tony VA3QC and myself over the next few issues and then work on their own from there. We welcome and appreciate their contribution to the club and acknowledge their assistance for this task. I am

sure we all will appreciate the work they will be doing for the club. Further, on the topic of the newsletter, we will now distribute it electronically to all members, and print off a copy for the few that do not have email. An amended version for visitors will be available, that has the numerous pages of minutes removed, so that they can get a better idea of the club. Also a new format will emerge over the while as well.

By now you will have had a chance to visit our club station for the last meeting in September - such a wonderful turnout. I am sure you agree the club station is the place to be for executive meetings, club projects and a wonderful place to operate from for contesting or just plain communications with equipment you may or not have.

The Halton County Radial Railway event went quite well, with many contacts being made. Somewhere around the sixty contact range as I recall, with a good time had by all. There were also a couple of Scout groups who also had a chance to talk on the radio to other amateur radio operators, plus there was a Scouting event with an amateur radio operator who also gave the boys a chance to talk too. Speaking of the Scouts, the last day of September, we set up a radio station for the Cubs to participate in amateur radio at camp Nemo, just above Oakville, North of the 407 off the second side road. We should always keep in mind ways that we can get the word out to people about amateur radio and it's vital role in emergencies and general communications. Plus being a great hobby as well!

We have confirmation of our guest speaker for October 19. Julian Fantino from the office of Emergency Management Ontario will be speaking to us about EMO and emergency communications. The meeting will be held in our regular room at St. Thomas A Becket Anglican Church, 3535 South Common Court, just west of the South Common Mall on Burnhamthorpe Rd. west of Erin Mills Parkway. Why not bring out a visitor that night - I am sure there is going to be a lot of interest in hearing what he has to say.

I also want to mention that there was a lot of effort in getting the club station up and running. It is with volunteers that this club functions. If you are not participating in something, please consider it, as that is what makes the club work and enjoyable for all. I am aware of several positions and event co-ordinators that have other commitments and we need people to step up. If you are willing to take the time to participate in the club, why not take that extra little effort and help out in co-ordinating it as well. If you want to step up to the plate, contact any on the executive to find out what opening we have.

Keep the airwaves busy and we will talk to you further down the log...
Dave VA3DFH

This Month

1. From the Gavel
2. Commentary
3. Club Calendar
4. ARES, What Does it Stand For
4. ARES First Deployment
6. 72Hour Emergency Kit
10. Amateur Radio in Hurricane Katrina Relief
12. Planning for the future
14. JOTA / JOTI
15. Halton County Radial Railway Museum report
16. RAC Application Form

Sunday Brunch

Sunday brunches are held on the first Sunday of each month. Time is 9:30AM at Shopsy's, 6986 Financial Drive Unit 5 Mississauga (at the corner of Mississauga Rd and Derry Rd). All are welcome to come out and have an opportunity to chat in an informal setting.

Sunday Brunch November 5, 2006

Club Nets

2 Metre / UHF Tuesday Night Phone Net

Join in on the chatter starting at 8:30PM every Tuesday on the club repeater. Hosted by various net controllers. Contact our VHF Net Managers, **Reg (VA3JQA)** if interested in becoming a net controller. 145.430MHz Tone 103.5 Minus (-) offset

75 Metre Sunday Night Net

Starts at 8:30PM every Sunday. Hosted by various net controllers. Contact our HF Net Manager, **Michael (VE3TKI)**, if interested in becoming a net controller.



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Commentary...



A new club year begins. Hard to believe that summer is over, but alas it is. Shorter days and cooler nights are here. This year we have new newsletter editors: Thomas Bernard and Kim Cheong (VE3KTC) who have graciously agreed to take over the duties from me. As with anything that has new people heading it up, there will be changes to the look and format and content. This is good and is as it should be. Otherwise the newsletter would become a little stale and frayed around the edges. You will notice in this issue that there is a theme – Emergency Preparedness and other related items.

As the transition of the new team takes place, I know that all of you will bear with them and be patient. I have always felt that the newsletter is a vital link to the club, particularly for those members who don't make it out to the meetings.

Another area of change within the newsletter will be that various members of the executive will be writing a column on the front page. This will take some of the burden off the president of the club to present a piece each month.

I look forward to working with the new team as they get experience and I hope that any of you out there may take pen in hand (or fingers to keyboard) and submit articles that may be of interest to your fellow members.

I enjoyed my 8 years of being the newsletter editor and even though I won't be directly involved in the future, I will be available to lend an ear or suggestion to the team. I trust that all of you will support them as well.

Tony (VA3QC)

Mississauga Amateur Radio Club Directors and Managers

PO Box 2003, Square One Post Office, Mississauga, Ont., L5B 3C6
Website: www.marc.on.ca
Email: ve3mis@rac.ca

Directors

President.....:	Dave Harford	VA3DFH	1st Vice President ...:	William Bressette	VE3WPJ
2nd Vice President.:	Tom Godden	VE3TWG	Treasurer	John Lorenc	VA3XJL
Secretary	Tony Champion	VA3QC 905-828-4004	Past President.....:	Robin Stubbs	VE3VVS

Managers

Membership	Reg Vertolli	VA3JQA	Education	Earle Laycock	VE3XEL
Ed. Asst (Theory)....:		Ed. Asst (Theory)	Ed. Asst (CW).....:		
Ed. Asst (CW).....:					
Repeater Mgr	Michael Brickell	VE3TKI	Repeater Asst 1	OPEN	
Repeater Asst 2	Asim Zaidi	VE3XAP	VHF Net.....:	Reg Vertolli	VA3JQA
HF Net.....:	Michael Brickell	VE3TKI	Public Service	Bob Boyer	VE3XBB
Club Station	Robin Stubbs	VE3VVS	Club Station Asst		
House	Bob Humphries	VE3HOW	Contests.....:	Rick Brown	VE3IMG
Contest Asst 1	Alex Malikov	VE3MA	Contests Asst 2.....:	Asim Zaidi	VE3XAP
Newsletter	Alex Szkabarnicki	VA3CKI	Special Events.....:	Bob Boyer	VE3XBB
Special Events Asst:	Bob Giddy	VE3IAB	QSL	Michael Brickell	VE3TKI
Field Day	Tom Godden	VE3TWG	Field Day Asst 1.....:	Tony Champion	VA3QC
Field Day Asst 2	Jody Levine	VE3ION	Field Day Asst 3.....:	John Duffy	VE3DRZ
Field Day Asst 4	Michael Brickell	VE3TKI	FSV Mgr	Robin Stubbs	VE3VVS
Programmes	Lorne Jackson	VE3CXT	Programmes Asst 1.:	Brian Jay	VA3BLJ
Programmes Asst 2:	Bob Boyer	VE3XBB	Webmaster (1).....:	Alex Malikov	VE3MA
Document Mger ...:	NOT REQUIRED THIS YEAR		Webmaster (2).....:	Dave Harford	VA3DFH

Public Service Events/ARES

Emerg Coord.....:	Sean Conlin	VA3MED	Emerg Asst 1.....:	William Bressette	VE3WPJ
Emerg Asst 2.....:	Michael Brickell	VE3TKI	Emerg Asst 3.....:	Lorne Jackson	VE3CXT
Emerg Asst 4.....:	Bob Boyer	VE3XBB	Emerg Asst 5.....:	Robin Stubbs	VE3VVS
Emerg Asst 6.....:	John Duffy	VE3DRZ			

Audit Committee

Auditor 1:	Robert Humphries VE3HOW	Auditor 2:	George Van Ryssen VA3GVR
Auditor 3:	John Duffy VE3DRZ	Auditor 4:	Sohail Anjum VE3ITU



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CLUB CALENDAR FOR 2005-2006

October, 2006

03 Tuesday VHF/UHF - 2 Metre Net
 05 Thursday Club Meeting
 08 Sunday HF - 75/80 Metre Net
 10 Tuesday VHF/UHF - 2 Metre Net
 12 Thursday Exec Meeting
 15 Sunday HF - 75/80 Metre Net
 16 Monday Basic Class 4
 17 Tuesday VHF/UHF - 2 Metre Net
 19 Thursday Club Meeting
 21 Saturday JOTA/JOTI
 22 Sunday HF - 75/80 Metre Net
 23 Monday Basic Class 5
 24 Tuesday VHF/UHF - 2 Metre Net
 27 Friday CQ WW DX Contest
 29 Sunday HF - 75/80 Metre Net
 30 Monday Basic Class 6
 31 Tuesday VHF/UHF - 2 Metre Net

November, 2006

02 Thursday Exec Meeting
 04 Saturday ARRL Sweepstakes
 05 Sunday Brunch – Shopsy's
 05 Sunday HF - 75/80 Metre Net
 06 Monday Basic Class 7
 07 Tuesday VHF/UHF - 2 Metre Net
 09 Thursday Club Meeting
 12 Sunday HF - 75/80 Metre Net
 13 Monday Basic Class 8
 14 Tuesday VHF/UHF - 2 Metre Net
 18 Saturday ARRL Sweepstakes
 19 Sunday HF - 75/80 Metre Net
 20 Monday Basic Class 9
 21 Tuesday VHF/UHF - 2 Metre Net
 23 Thursday Club Meeting
 24 Friday CQ WW DX Contest
 26 Sunday HF - 75/80 Metre Net
 27 Monday Basic Class 10
 28 Tuesday VHF/UHF - 2 Metre Net

December, 2006

01 Friday ARRL 160 Meter Contest
 03 Sunday Brunch – Shopsy's
 03 Sunday HF - 75/80 Metre Net
 04 Monday Basic Class 11

05 Tuesday VHF/UHF - 2 Metre Net
 07 Thursday Exec Meeting
 07 Thursday Club Meeting
 08 Friday ARRL 10 meter Contest
 10 Sunday HF - 75/80 Metre Net
 11 Monday Basic Class 12
 12 Tuesday VHF/UHF - 2 Metre Net
 17 Sunday HF - 75/80 Metre Net
 19 Tuesday VHF/UHF - 2 Metre Net
 21 Thursday Club Meeting
 24 Sunday HF - 75/80 Metre Net
 26 Tuesday VHF/UHF - 2 Metre Net
 29 Friday RAC Canada Winter Contest
 31 Sunday HF - 75/80 Metre Net

Provisional schedule below...

January, 2007

04 Thursday Exec Meeting
 07 Sunday Brunch – Shopsy's
 11 Thursday Club Meeting
 13 Saturday North American QSO Party
 20 Saturday North American QSO Party
 25 Thursday Club Meeting
 26 Friday CQ WW 160-Meter Contest

February, 2007

01 Thursday Exec Meeting
 04 Sunday Brunch – Shopsy's
 08 Thursday Club Meeting
 16 Friday ARRL International DX Contest
 22 Thursday Club Meeting
 23 Friday CQ WW 160-Meter Contest

March, 2007

01 Thursday Exec Meeting
 02 Friday ARRL International DX Contest
 04 Sunday Brunch – Shopsy's
 08 Thursday Club Meeting
 17 Saturday Russian DX Contest
 22 Thursday Club Meeting
 23 Friday CQ WW WPX Contest
 31 Saturday Ham-Ex 2007

NOTES

1. Meetings start 7:30PM at St. Thomas A Becket Church Hall, 3535 South Common Court unless otherwise noted.
2. Brunch is at 9:30AM unless otherwise noted.
3. Classes are from 7:00PM - 9:00PM at Meals On Wheels at 2445 Dunwin Drive

Visit our website: <http://www.marc.on.ca> for any updates of the calendar.



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ARES, What Does it Stand For and What Do They Do?

**By Sean Conlin VA3MED Emergency Coordinator
Mississauga Amateur Radio Emergency Services**

ARES stands for Amateur Radio Emergency Services we are the public service group that aids with communications when the normal lines of communication have failed. Such as what happened during the Ice storm of 1998 and when the regular and the cell phones failed, Emergency Service Communications failed, then the amateur radio operators stepped up to the plate and took over at the request of the request of Local and Provincial Government. To give you an example member's of the Mississauga Amateur Radio Club ARES Group assisted in staffing the Provincial Emergency Operations Centre amateur radio station.

In ARES we just don't do the large scale disasters that occur in the province we also small scale local emergencies that occur right here in our own city. When a fire struck an apartment building's main electrical in December 2004 Amateur Radio Emergency Services was called upon to provide communications for one of it clients the Canadian Red Cross Peel Branch after was requested to open up a reception centre for evacuees of the apartment building at a local high school members of the Mississauga ARES assisted with communications from the apartment building to the high school. For a full report on this incident please see which has been reprinted in this issue.

To keep up our skills of passing messages we also assist in providing communications for Walkathons and other events for anyone who requests our services.

In closing if you are interested in volunteering for the Mississauga Amateur Radio Emergency Service, We meet at 7:30 pm the third Thursday of the month at the Canadian Red Cross Ontario Zone Office at 5700 Cancross Crescent in Mississauga which is one block west of Hurontario off of Matheson Boulevard.

The following is a reprint of the MARC/ARES first official call out...

Mississauga ARES Group Gets First Deployment By Sean Conlin (VA3MED), Emergency Coordinator Mississauga

On the morning of December 20 2004, at 1030 hours, an apartment building at 2111 Roche Court suffered a major fire in the main electrical room. The Region of Peel Social Services requested that the Red Cross open a reception centre at a local Secondary School. Later, at 1400 hours, the Red Cross requested the Mississauga ARES Group to be placed on standby. Emergency Coordinator, Sean Conlin (VA3MED) attended the reception centre, at a local high school, to assist as a member of the Red Cross Disaster Services, as well as to monitor the situation.

At 1930 hours the Red Cross requested that ARES be stood down only to discover later that ARES would have been useful in providing communications between the incident site and the reception centre. This would have been helpful in keeping track of the number of people and families who were going to take advantage of temporary lodging offered by the Region of Peel Social Services and of those who were going to stay with friends and/or family.

Because of freezing temperatures and the lack of heat, water pipes burst overnight causing further damage to the building. On December 21 2004 at 1250 hours the Mississauga ARES Group was once again placed on standby as it was a possibility that the building was going to be deemed unsafe by local authorities.



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At 1320 hours the Red Cross requested that the standby go to full activation of the ARES Group as they would be opening a reception centre at the local Secondary School. As it so happened, several members of the Mississauga Amateur Radio Club, including a couple of Assistant Emergency Coordinators and ARES members were at the club repeater site conducting some maintenance work when Sean Conlin (VA3MED) requested that the Club Call Up tree be activated.

John Duffy (VE3DRZ), Bob Boyer (VE3XBB), Michael Brickell (VE3TKI), Tony Champion (VA3QC), Bryan Jay (VA3BLJ) and Dave Harford (VA3DFH) attended the Reception Centre for a briefing from Susan Fitzgerald, of the Red Cross Disaster Services and the Volunteer Resources Coordinator for the Region of Peel and Dufferin.

Susan wanted one of the ARES team who would be attending the incident location to have taken the Disaster Services Training course in order to assist in pre-registration, as she only had one other volunteer at this time. Assist Emergency Coordinators Michael Brickell (VE3TKI), John Duffy (VE3DRZ) and ARES Member Tony Champion (VA3QC) attended the 2111 Roche Court incident site and Assistant Emergency coordinator Bob Boyer (VE3XBB) and ARES Member Bryan Jay (VE3BLJ) remained at the Reception Centre, while others remained on standby at home.

Emergency Coordinator, Sean Conlin (VA3MED), monitored the situation from his office in downtown Toronto later went to both the Reception Centre and the Incident Site to assess the situation as soon as he was able to leave work. At 1830 hours, the Red Cross requested that communication be shut down and all operators attend the Reception Centre for dinner. At 2000 hours all operators were released from the call.

As this was the ARES Group first actual call out, some lessons have been learned and a debriefing session will take place at the next ARES meeting. The writer would like to thank ALL those members who attended this incident and all those who stood by in case they were required.

An ironic twist to this incident: as the communications were winding down, a member of St. John Ambulance advised the group that a multiple alarm fire in an apartment building in the area of Square One Shopping Centre was underway. It was later discovered that it happened to be the building that housed the Mississauga Club's 2 metre and 440 metre repeater but it was still on the air and remained unharmed thanks to the fast work of the Mississauga Fire and Emergency Service.

On December 29 2004 Emergency Coordinator Sean Conlin (VA3MED) received the following email from Susan Fitzgerald, Red Cross Disaster Services Coordinator: "I personally want to thank all of you who provided quick response and assistance to the folks who live at 2111 Roche Court."

With the email was an attachment from Katie Mahoney, the local councillor for the affected area.

I, the Mayor, and the Regional Chair and all of Council appreciate all that you did for the individuals and families. You all went above and beyond showing compassion and dedication to those we serve. We all hope that we never have to put emergency measures into place, but all of you showed your preparedness and willingness to give of yourselves unselfishly to assist those in need. From the bottom of my heart and on behalf of all of those you assisted, many, many thanks.

*Katie Mahoney
Councillor, Ward 8
City of Mississauga*



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Amateur Radio Emergency 72 Hour EMERGENCY DEPLOYMENT KIT

WB6FZH's Suggested Items for Radio Operators During Emergencies <http://www.tcoek12.org/~tcarc/hlist.html>

IDENTIFICATION and DOCUMENTATION

- Original Driver's License or ID Card Issued by State Government
- FCC Amateur Radio License (Copy OK)
- ID CARD of Specific Group (ARES, AREC, REACT, Etc.)
- If your ID Cards do not have your home address on it, have Utility Bill, Insurance Bill, etc. that shows your home address (you may need it to gain access to your home).
- Optional: Photo of your family and yourself
- Personal Address Book w/radio contacts
- Small Binder with Important Information
 - Net Frequencies and Functions (Keep it Current)
 - Simplex Frequencies and Functions
 - Plans for Repeater Failures (Simplex on Output? Alt Simplex)
 - Outline for Net Operation and Traffic Handling
 - Packet Frequencies and Identifiers (Digipeat Set-ups,etc)
 - Whatever materials you need to do your best work.
 - Blank Paper that fits this binder
 - Consider Plastic Page Protectors for some references
 - Detail Map of your area, Map of nearby area

RADIO & Portable Station EQUIPMENT

- Note: Separate VHF/UHF and HF complete inventories
- VHF/UHF Radio, HF Radio (Per your requirements)
- Microphone, Headphones, Earphone, "Y" adapter for 2nd Headphones
- OPTIONAL: Additional Headset with microphone
- POWER SUPPLIES- High Current Batteries(GEL/NICAD/ALK), Power Supply, DC charger, DC Cords Extra Batteries & Spare Fuses (Make list of REQ)
- DC Power Center- Cable to Main Battery meets connectors for multiple connections (Scanner, TNC, VHF, UHF, HF, Light, etc)
- VHF/UHF ANTENNA- Portable and Fixed Portable (for each band used or dualband)-
- HF ANTENNA- Fixed Portable (G5RV,etc), Mobile Antenna w/Counterpoise & support
- HF Antenna Support- Hanging, Hook, Poly Rope, Duct Tape, Counterpoise
- COAXIAL CABLE ADAPTORS- Barrell Adaptor, PL259 to BNC, Adaptors as required for your set-up, surveyors tape to mark cables.
- MFJ or similar ANTENNA TUNER/SWITCH w/cable
- LOW PASS FILTER- 1KW or 100W w/cable
- CLIP-ON GROUNDPLANE "Tigertail" 21" w/Aligator Clip
- "Mini-Mag" Flashlight with spare bulb and batteries
- Pocket Knife with built-in Tools or small tool kit.
- Cash, Coin and Credit Card info.(8 quarters,20 dimes, \$10,\$5,\$1)
- Band-aids, Coff-Drops, Towelettes, Tape, Sunscreen, Misc Pills.in Small Container
- SWR/Wattmeter to monitor RF output and antenna condition w/connector cable
- DC ADAPTORS for Polarized standard power connectors with fused wires, Molex, Voltage Adaptors, Etc.



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- MONITOR RADIOS- AM/FM/SW?, SCANNER(WX and Public Safety), CB/FRS and Perhaps HT to liason Frequency.
- Programming Information and Manual for your radios. List of the information programmed into the radio if RESET required.
- Spare 2mtr HT (AA battery Type)pre-programmed,w/tiger tail, 1/2 wave ant,w/case & acc.
- Pocket Card w/ Frequency/Channel information

Additional Radio Items- (stored separately)

- VHF "Brick" Amplifier w/cable to HT w/spare adaptors
- DC Extension power cable (10-15') to AMP, w/LG Alligator Clips, Molex, Power Pole,etc connectors
- Spare Fuses for Amplifier and other accessories
- 1/4 wave or 5/8 wave magnetic mount antenna with adaptors to BNC,SMA,PL-259
- Wall Chargers for HTs
- Gell Cell 12 volt Batteries for AMP & ACC, w/connectors and Cigarette Lighter Jack
- Extra 1/2 wave 2mtr antenna for HT
- Extra AA Alkaline or Lithium Batteries (also AC fast-charger w/batteries)
- Dozen Cable Ties, misc types.
- Pencils,pens,erasers,markers,pen-knife,paper,binder,white-out,Carbon Paper,plastic Envelope
- Flashlight- 3- "D"Cell type(spare batteries/lamp), Lantern w/batteries/Lamp
- Compass and ability to use it.
- Misc.Personal Items- W/case: Safety Items, First Aid,Sun glasses,Spare reading Glasses,Matches,Tweezers, Insect repellent,Kleenex,SunBlock,Sewing Kit,adhesive tape,Gause Pads 6- 4",handi-wipes,
- ARES Field Manual, and other refrences as required.
- MARS Members- appropriate references (report format,net procedures,refrences,etc.)
- FRS Radio- one or two w/batteries w/plan to contact family, local FRS Plan,etc
- ARES/MARS VEST- Safety Vest (reflector Tape),etc.

WRITING & Traffic Handling

- Spare Glasses in Hard Case
- Zippered See-Through Case for misc. items
- Pens, Pencils, Erasers (White-out?)
- Water-Resistant container for your papers
- Message Forms (Help List if required)
- Log Book (wear wrist watch, or have clock nearby)
- Clip Board with Paper (3 ring binder type best)
- Spiral Notebook (Organization, Name and Callsign on Book)
- Computer Disc with duplicate programs used, and Important information for display.
- Notebook Computer if required, 100% paper back-up

TOOLS & MISC.- MINIMUM Short Duration

- Assorted Wire Ends w/Crimp Tool for extending or repairing wires
- Roll of speaker wire and Power Wire
- 6" Diagonal Cutters
- 6" Needle Nose Pliers
- Wire Crimper/Cutter/Stripper
- Roll of UL Black Plastic Tape



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- Roll of Duct Tape
- Screw Drivers- Standard and Phillips
- Locking Pliers & Vice Grips
- Wrenches and Drivers
- Regular Pliers
- Hex Wrench, Spline Wrench, Square-Drive
- Wrench Suitable to turn off Gas Valve (8" Adjustable Crescent Wrench)
- BAG of connectors, plugs, jumpers, Coax Crimp-type Connectors, etc.
- Volt Ohm Meter & spare battery
- 12VDC Soldering Iron and solder
- Flashlight with spare bulb and batteries
- Case or Zippered Bag to store tools
- Inventory List of Contents of All Bags/Cases

TOOLS & MISC.- EXPANDED Longer Duration

- PRY BAR
- Claw Hammer, Assortment of Nails
- Assortment of Hooks, Eyes, Screws, Nuts, Bolts, and stiff wire.
- Tool Box Saw or Hack Saw with spare blades
- Folding Shovel
- Plastic Bags (HD Garbage..Small and Large) Clear or Black
- Folding Tarps (1 small, 1 medium)
- 50' of Hemp Rope (3/8 min) Poly OK if no hemp
- 50' of Poly Twine
- Siphon and container to transfer Gasoline or Kerosene
- Axe or Hatchet
- Jumper Cables for Car (Extra Long Best, in Bag because of acid)
- Road Flares
- Lanterns and Stove of Coleman type, with spare fuel, mantle and burner jet.
- 2 to 5 Gallons of Gasoline in Approved container with spout.
- Fire Extinguisher (ABC 3 to 10 lb)
- AC Generator (W/12V DC) with spares and fuel
- 2- 50 3wire Grounded AC Extension Cords 1-#12GA, 1#16GA
- Binoculars- Opera Glasses
- Roll of Paper Towels, TP (in plastic Bag) and 10 cotton Shop Rags
- Whistle on lanyard (signal mirror?) ID CARD ON LANYARD?

PERSONAL ITEMS- MINIMUM Short Duration Events

- Personal Medications (in adequate supply with written description)
- / Prescription Copy of drug and size tab, etc.)
- Extra Prescription Glasses and hearing aid batteries
- First Aid Kit (See Red Cross List for Recommended Contents)
- Snacks (High Energy, etc.)
- Liquid Refreshment- Water, Soda, Juice (No Alcohol)
- Throat Lozenges (Cough Drops, etc)



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- Headache Medicine (Aspirin,etc)
- Water Resistant Windbreaker/ Jacket
- Hat and Sunglasses and sunscreen (if required)
- Hankerchief
- Space Blanket, Plastic Drop Cloth,
- Spare Keys to your vehicle
- Back-up Credit Cards,Cash,Coin,PhotoCopy of Radio ID, DL, etc

PERSONAL ITEMS- EXPANDED Longer Duration Events

- 3 day supply of water (canteens, etc. transportable)
- Cooler with 3 day supply of food (w/prep.supplies etc)
- Camp or Military Style "Mess" Kit, and cleaning supplies
- Expanded First Aid Kit
- Foul Weather Gear, Poncho, Rain Hat, Regular Hat
- Sleeping Bag or Blanket/Pillow w/2 slips, (sit on it too)
- Toilet Articles (Over-night type kit) & TP supply
- Wind-up or Battery Alarm Clock
- Lantern or Flashlight with spare bulb and batteries
- Candles with waterproof matches
- Extra Underware and Socks
- Work Gloves
- Folding Chair with Name on It (antenna Base?)
- Electrical Tape, Duct Tape, Poly-Rope, Nylon twine

FOOD ITEMS

- Water- personal carrier, bottled, canned, bagged,(washcloth in baggie)etc.
- Canned Soda- Ginger Ale, Coke, 7up,Fruit Juice,etc
- Canned: Soup, beans, Chili, Tuna, Ravioli, Tortias, Crackers, etc.
- Peanut Butter,Crackers,Jam/Jelly,Cheese Spread,Chicken/Ham Spread,hard Candy
- Large Zip Lock Bags, Roll of Foil, Napkins(in Baggie)
- Can opener,knife,spoon, fork, Vegetable scraper,beer can opener,2nd Spoon
- Napkins/Paper Towels
- Instant Coffee, Hot Chocloate Packs, Soup Packs, Tea Bags,
- Hard Candy, Protein Bars, Gum, Favorite Candy,
- Sterno Stove, Spare Sterno, Pellet Stove, Pan w/handle & Lid,W/Bar or Tablet Fuel
- MRE, dried Food, Dried Fruit, Powdered Milk, Lemonade,etc.
- Boxing and inventory for the above items.
- Roll of Antacid Tablets, Bismith Liquid,
- 6- Garbage Bag for Trash (45 GAL), Rain Poncho, cover radios, bedding
- Paper Towel Roll for Napkins/Clean-up.

OTHER EQUIPMENT TO BE CONSIDERED

- Plan with family where to meet or how to communicate after or during the emergency. Even Designate relative out of area to check in with to coordinate in worst case
- FRS Radios (2) for Family w/spare batteries (plan to use it)
- Phone Patch with proper Plugs/Jacks and Phone Interface Connections



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- 12vdc High Current PS for 12V HF Radio Transceiver.
- Binder with Photocopied References of Value
- Sturdy Shoes and Protective Clothing
- Umbrella- Rain or Sun Shade (Antenna Support?)
- Golf Shirt, Pants, Belt,
- PAD / CUSHION for folding Chair
- Travel Alarm Clock,
- Portable radio with earphone and spare batteries
- Reading Book, Bible, pocket video game,

Amateur Radio Earning Praise, Respect in Hurricane Katrina Relief

<http://www.arrrl.org/news/stories/2005/09/16/100/>

NEWINGTON, CT, Sep 16, 2005--UPDATE! Amateur Radio is continuing to earn praise and respect as the Hurricane Katrina relief effort moves forward. Amateur Radio equipment and supplies arriving at the American Red Cross Hurricane Katrina relief staging area in Montgomery, Alabama, have been turned around as quickly as possible to accompany volunteers into the field. A team headed by Alabama ARRL Section Manager Greg Sarratt, W4OZK, now has been on duty for some three weeks, overseeing Amateur Radio volunteer intake and registration and trying to satisfy the ever-changing requirements of the Red Cross and other served agencies. Equipment started showing up last weekend.

"The American Red Cross and other served agencies are very thankful and appreciative that we are helping them out," Sarratt said this week. "I have talked with several ARC folks who said they could not operate without us!"

"I Have It Good"

ARES and MARS member Matt Hackman, KB1FUP, was among a Rhode Island contingent processed last weekend through the Montgomery marshaling center for duty in Mississippi. The New England volunteers were able to take advantage of the newly donated handheld transceivers, HF transceivers and antennas for use in and around Ocean Springs, Mississippi. Hackman said Red Cross personnel were using VHF simplex to keep in contact with each shelter. He and two other Rhode Islanders replaced operators rotating out of duty.

"We still have no potable public water and no land-line telephones," Hackman said this week, adding that cell phone service was intermittent. "I hope I am helping in some small way," Hackman went on to say. "People further west still have no power, no water--even for flushing toilets--and the emergency workers are in tents with no washing facilities, living on MREs. I have it good."

Shining Stars

Sarratt said his staging area has been slowing down the pipeline of available Amateur Radio volunteers because the need for operators is decreasing. He reports the Montgomery marshaling center has registered more than 100 Amateur Radio volunteers. Those still in the pipeline will replace operators already on the ground in affected areas when they rotate out, he said. Sarratt rescinded an urgent call for operators put out over the September 10-11 weekend.

The best estimate is that some 1000 Amateur Radio volunteers have helped out or are still serving in hurricane-ravaged Gulf Coast communities and at evacuee centers there and in other states. While prospective volunteers have been being



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told to stand by for now, that situation could change as restricted areas are reopened and as replacement operators are needed.

Amateur Radio has been the primary means of contact with the outside world for shelters that still lack reliable communication. An HF station at the Montgomery Red Cross staging area, N4AP, has been frequenting 3.965 and 7.280 MHz to keep in touch with other Red Cross shelters and kitchens throughout the region.

"We have deployed many great Amateur Radio operators to the field," Sarratt remarked. "Guys have traveled from all over the USA on their own dime to do the right thing and help others. I'm very proud of them." Sarratt said several "shining stars" in the field have made the volunteer effort work well and "kept Amateur Radio looking great."

ARRL Louisiana Acting Section Emergency Coordinator Al Oubre, K5DPG, reported this week that the emergency activation at the Louisiana State Office of Emergency Preparedness in Baton Rouge was winding down. Telephone and cell service around the state is slowly being restored, he said, and Louisiana does not need additional help at this time. A Red Cross marshaling center remains open in Covington, Louisiana.

Oubre said when St Bernard and Jefferson parishes dry out sufficiently, the Red Cross will then be able to move into that area and set up support services. At that point, he anticipates that more Amateur Radio volunteers may be needed.

Radio amateurs from Florida have been helping at the temporary Hancock County, Mississippi, emergency operations center at Stennis Airport. The county lost its EOC in the hurricane. Randy Pierce, AG4UU, said radio amateurs are serving as communicators and dispatchers for all the services at the EOC--including the fire department and emergency medical services.

Pierce said the Hancock County Sheriff's office, the County Commissioners and others have been very complimentary about Amateur Radio.

Radio amateurs along Mississippi's Gulf Coast have begun handling more health-and-welfare traffic. Louisiana Section Manager Mickey Cox, K5MC, says he and Benson Scott, AE5V, were among those passing H&W traffic via the National Traffic System (NTS). Cox was seeking outlets for incoming traffic bound for the affected areas.

Hams Helping at Out-of-State Sheltering Operations

South Texas Section Emergency Coordinator Jerry Reimer, KK5CA, reports Amateur Radio is continuing to support sheltering operations at the Houston Astrodome, but other shelters in Houston have closed or been consolidated. Hams have been shadowing officials and shelter workers and providing a communication link with the Harris County emergency operations center (EOC). South Texas SM Ray Taylor, N5NAV, says 160 shelters are open in his state.

In Rains County, Texas, some 60 miles east of Dallas, ARES/RACES member T.W. Ivey, K5IJT, reported his team has been keeping in contact with the county EOC via VHF repeater.

In Tullahoma, Tennessee, Jimmy Floyd, NQ4U, has been among a group of operators helping to staff a communications/command center for a shelter operation housing 170 evacuees. They've been relaying messages between the shelter site and the Red Cross center. "We have also been active in communicating with other shelters on HF and attempting to locate family and friends of the evacuees," Floyd said.

Amateur Radio operators concluded a shelter support operation at Oklahoma's Camp Gruber. "We were the communications backbone between responding agencies," said Mark Conklin, N7XYO. "We also passed tons of traffic, ranging from requests for water and food, supplies and bedding. In fact, Amateur Radio was the 911 system on Camp Gruber for many days."



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SATERN Operations Continue

Salvation Army Team Emergency Radio Network (SATERN) Liaison Officer Jeff Schneller, N2HPO, says TSA canteens are holding with their present complement of ham radio volunteers and may not rotate them out of service. "As operators need to leave, we may just scale down," he told ARRL. "We thank all those who are assisting and were willing to assist." He also thanked the American Red Cross for referring radio operators to SATERN.

SATERN volunteers Steve Hicks, N5AC, and John Beadles, N5OOM, are supporting a canteen operation in Waveland. "We drove up and down several streets, and everyone we talked to said they had not had a hot meal in a while," Hicks said in a PACTOR dispatch to Schneller. "We have set up a VHF/UHF antenna at 35 feet to reach a repeater in southwestern Hancock County. Hicks said they continue to ask about H&W traffic, "but based on what we have seen, I think it unlikely that we will have any traffic to run."

SATERN has continued monitoring 7.288 MHz and 3.965 MHz each half hour throughout the day and evening. In addition, the SATERN Net activates daily at 1400 UTC on 14.265 MHz.

Schneller, who was heavily involved in the September 11, 2001, Amateur Radio response in New York City, recommended that all Amateur Radio operators take the ARRL Amateur Radio Emergency Communications courses and FEMA home study courses.

Ham Radio a "Godsend" to Shelter

Jim Aylward, KC8PD, just returned to Ohio this week from volunteering in Ocean Springs, Mississippi. "Even though we all prepare for events we hope never occur, the hams I worked with from all over the country demonstrated that 'When all else fails, Amateur Radio is there' is a lot more than a slogan," he said. "It was the reality for thousands of people who needed effective emergency communication. When my shelter manager, who had never worked with hams before, told me that I had been a godsend, I was moved."

PLANNING FOR THE FUTURE (<http://www.rac.ca/regulatory/restructuring.htm>)

Amateur Radio in Canada and elsewhere is changing and to survive we must be sure to change with it. Britain, Gibraltar and Australia have already taken the dramatic step of introducing a new entry level license with considerable success. Should Canada consider moving in a similar direction?

Your understanding of, and input to, this issue is critical. We need your input.

In May of 2006 RAC formed a committee, headed by Midwest Director Bj. Madsen (VE5FX), to look into the possibility of submitting a proposal to Industry Canada on this subject. This committee is called 'The Advisory Committee on Restructuring of Amateur Radio in Canada'.

Most importantly, the Questionnaire: to give the committee the benefit of your thoughts on an Entry Level licence in Canada, be sure that you take a few minutes to complete the questionnaire.

(<http://www.insitefulsurveys.com/Survey.asp?SI=026277011611>)

THE FOUNDATION LICENSE CONCEPT (Bj. Madsen - VE5FX)

Around the year 2000 in Great Britain, studies indicated that within five years, if something drastic was not done, there would no longer be a requirement for Amateur Radio examinations. Why? Because there would no longer be sufficient interest in taking the exam to warrant maintaining a formal examination process. The Radio Amateur population was



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ageing and there were not enough new candidates coming in to keep the numbers constant, much less to promote growth in the hobby. And of course, the age-old adage of “use it or lose it” came to mind as well, as the private sector placed pressure on government to expand into the Amateur Radio portion of the spectrum. The RSGB’s solution to this serious problem was to introduce, in 2002, what was to be called a Foundation License, and to the delight of most, it has produced an amazing turn around in Amateur Radio in Great Britain! Within a year, there were over 4000 new licenses issued, one quarter of them to candidates under the age of 21 years, representing an 8% growth in Amateur Radio in the UK, and the growth continues. So, what is the UK’s Foundation License? Firstly and most significantly, it is based on the practical rather than the theoretical. The course takes 10 - 12 hours to complete and is not optional. It is taught by experienced Amateurs from established Radio Clubs and is based on a “knowledge of” rather than a “mastery of” radio technology. The main objective is to provide candidates with a level of knowledge that promotes safety and enables them to avoid potential interference. The examination involves a 25 question, multiple-choice, written test which is marked on the spot with feedback provided. Re-writes are available immediately if the candidate is unsuccessful. The RSGB has produced an excellent study guide, “Foundation License Now!”, written so that it can be used and understood by young people. The privileges offered through this license are fairly broad, but power levels are limited to 10 Watts, to reduce the potential for interference as well as to increase safety. License holders are allowed access to all UK ham bands and modes, from 135.7 kHz to 440 MHz, except for the 10 metre band. The callsigns issued are distinctive, carrying the number three in the prefix. So, M3AAA and MM3ZZZ are Foundation License holders. There is no time limit for the license and an upgrade to the Intermediate and Advanced level is not required but is, of course, strongly encouraged. Find out more about the Foundation License at: <http://www.rsgb.org/>

And now, it has also happened in Australia. Like Great Britain, Australia has also seen a significant decline in the number of candidates wishing to obtain their Amateur Radio license. This was partly arrested with the dropping of the Morse code requirement at the beginning of 2004, but apparently that was still not sufficient to stem the decline. In October of 2005, the Australian regulator, ACMA, introduced a three tier licensing structure where the first level was very similar to the British Foundation License. Since then, the Wireless Institute of Australia (WIA) has accredited over 100 assessors (similar to Canada’s Accredited Examiners) and they have over 35 clubs in the country offering training and assessment. So far they have already issued 246 new licenses with about 40 new applications arriving each week. This has had a very strong positive effect on clubs, giving them an entirely new initiative and much enhanced enthusiasm. The Foundation license in Australia has a very strong practical component. Each candidate must demonstrate to the assessor an ability to perform a number of tasks which are critical to the safe and correct operation of an Amateur Radio station. Additionally, a written exam is required, based on a ‘knowledge of’, rather than a ‘mastery of’, radio techniques. Foundation license holders have access to all Amateur bands from 80 metres to 70 cm with the exception of the 20 metre band. They are allowed to operate AM, FM, SSB and hand keyed CW at a maximum power level of 10 Watts. While their program is quite new, according to officials at the WIA, it looks like it has great potential. And in CanadaWe are experiencing similar problems in Canada: a reduced interest in obtaining an Amateur Radio license and a decline in the activity of Amateur Radio clubs. This has been an identified concern with RAC’s Executive and Directors for some time. Amateur Radio has a long history of providing fertile ground for technological development. Many young Amateurs choose to extend their early interest in radio by entering careers in the sciences and technology. With Canada’s increasing need for technically skilled workers, the promotion of Amateur Radio to young people can not fail to have a positive effect in this direction. Amateur Radio is not dying - it is changing, and we must be sure to change with it. New computer related technologies have recently expanded our potential for effective communications. Again and again, we see Amateurs across the country and around the world providing vital communications in emergencies when other modes fail. Amateur Radio is a vital National resource that we must do our best to bolster. At the February 2006 Board of Directors’ meeting, a motion was unanimously passed to attempt to deal with this disturbing trend. The motion enabled MidWest Director Bj. Madsen - VE5FX – to establish an Advisory Committee to study and report on the concept of restructuring Amateur Radio in Canada with the possibility of including a Canadian Entry Level Certificate. This committee has been established, and is made up of a cross section of highly motivated Amateurs from across the county:



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Howard Dickson - VE1DHD - from Seabright, Nova Scotia
 Jim Anderson - VE6JWA - from Edmonton, Alberta
 Neil Carleton - VE3NCE - from Almonte, Ontario
 Brian Jackson - VE6JBJ - from Airdrie Alberta
 Jim Dean - VE3IQ - from Ottawa, Ontario
 Earle Smith - VE6NM - RAC's President, ex officio member
 Bj. Madsen - VE5FX - Chairman - from Tisdale, Saskatchewan

Over the next while, this committee will study the Foundation License concept as currently in use in Great Britain, Gibraltar and Australia, and we will work toward making recommendations to RAC's Board of Directors. Should RAC move forward to propose an Entry Level type of Certificate to Industry Canada? If so, how might it best be done and what form should it take? If such a Certificate were to be introduced, it might be timely to re-think the whole Amateur Radio license structure in Canada. What other changes might be appropriate in the structure of Amateur Radio licensing in Canada? We anticipate that this process will lean heavily on input from the Amateur Radio community across the country, and our committee will be consulting widely with individuals and clubs. Do you have an opinion, a comment or a suggestion on this issue? Please feel free to send me an Email. I will share it with the committee and provide a response, if appropriate.

Bj. Madsen - VE5FX
 RAC MidWest Regional Director
 E-mail: ve5fx@rac.ca

The 49th JOTA / 10th JOTI

Reprinted from the Scouting "The Leader" magazine, August/September 2006 edition.

Two of Scouting's biggest international events, JOTA and JOTI, take place on the weekend of October 21 and 22, 2006. You can participate in either or both with your youth at very little cost. Go to the Scouts Canada web site at www.scouts.ca, click on "International" then "International Events Calendar", scroll down to JOTA/JOTI and download the booklet "JOTA: How Canadians Can Participate". The 48th International JOTA report is available from the same web page. For more information about the world wide reach of JOTA and JOTI, go to the international web sites at <http://home.hetnet.nl/~richard.middelkoop/> and www.joti.org.

As this is our 100th anniversary of Scouting, why not encourage Scouts to make contact with 100 other youth in Scouting during their JOTA/JOTI event?

Country	Contact Day	Time	Frequency	Net Control
Denmark	Saturday	1300 GMT	3.740 MHZ	
European Scout Net	Saturday	0930 GMT	14.290 MHZ	PA3BAR
Japan	3rd Sat. of Month	2300 local	21.360 MHZ	JA1YSS
Norway	Saturday	1530 local	3.740 MHZ	
Sudan	Sunday	1200 GMT	21.360 MHZ	ST2M
Sweden	Sat. even weeks	1500 local	3.740 MHZ	
United Kingdom	Saturday	0900 local	3.740 MHZ	G3BHK
United States	Sunday	2030 GMT	14.290 MHZ	K2BSA
World Scout Net	1st Saturday of Month	2200 GMT	Echolink 131124	PA3BAR

Please contact Bob VE3XBB for how our club is participating at the Goodyear Memorial Scout Camp in Hockley Valley on October 21st only.



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Halton County Radial Railway Museum Special Event 2006

On Saturday September 23, 2006, club members again operated a special event station at the Halton County Radial Railway Museum in Milton. We have run our special event station at the invitation of the Railway Museum each year since 1996 except once when we were rained out. The weather this year was cloudy, but there was no rain to contend with.

We set up our equipment as usual in the tiny Meadowvale station, which provides shelter on three sides, in the turning loop at the east end of the track. We have been able to put up permanent pulleys and lanyards on the towers which support the 600v cables used to supply the trains, so setting up an antenna is a simple matter of attaching the ends of the antenna to the lanyards and pulling them up into the air.

We decided this year to keep things simple, operating only on Saturday, and only on 40 meters. Over the years we have tried other bands as well, but the reality is that this band is where almost all the activity and interest in special events lies. Our "customers" are virtually all from the USA. We used the club's TS480-SAT and a 40m dipole antenna. This day unfolds in a very relaxing way. We operate for a while, chat, then ride the trains for a bit to get lunch or a coffee or ice cream, then go back to the station for more operating. An added treat is seeing the restored tramcars go by right in front of the radio. The day seems to pass really quickly in this very pretty environment with trees all around us, just beginning to change colour in the fall.

We were visited this year by a local scout troop. It so happened that earlier in the day we had talked to a ham in the US who was also operating from a Scout camp, so the two groups of Scouts were able to exchange greetings on the air. Operation consists of sitting in front of the radio calling "CQ Special Event VE3MIS" and hoping for responses. They seem to come in fits and starts, separated often by lots of apparently dead air and static. Sometimes we will have a mini - pileup, with several people calling simultaneously, which keeps the operators busy. Logging is simple, as we use Logger32 on a laptop connected to the radio, which means that frequency information is automatically put into the log. We often find that we talk to hams who have contacted us in other years.

The day began for some of us with an early breakfast at the 5th Wheel in Milton. We had our usual crew of enthusiastic participants during the day, most of whom got on the air. They were, in no particular order, and with apologies if anyone was missed: William VE3WPJ, Michael VE3TKI, Bob VE3HOW and his wife Mary, Dave VA3DFH, Fred VE3VRO and his wife Kathleen, John VE3DRZ, Peter VA3PKM, Reg VA3JQA and his son Quinn, Thomas Bernard, his wife Rohini, and their daughter, Lorne VE3CXT, and Jeff VA3WXM and his son Alexander.

We made 54 contacts during the day, not bad for an operation at the bottom of the 11 year solar cycle. By contrast, the best we have ever done is just over 60 qsos or so per day. By Wednesday of the week following the operation, requests for QSL cards and a certificate had begin to arrive. Based on past experience I expect to get requests from about a third of those who we talk to, or about 18. Reg VA3JQA took lots of pictures and is going to make up a certificate. We ask those who want a certificate to send us \$2 US to cover postage and material costs.

So another Halton Railway Special Event has come and gone, and we look forward to another one next year!



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RAC MEMBERSHIP APPLICATION/SUBSCRIPTION TO TCA MAGAZINE

Please enter applicable choice(s) _____

COMBINATION PACKAGE: 1 year RAC membership; (includes \$44.95 subscription for TCA) @	\$49.95 *	
1 year RAC membership only; no subscription to TCA @	\$44.95 *	
1 year TCA subscription; no membership to RAC @	\$44.95 * +	
Family membership; price per extra family member @ \$20.00 per year (one TCA per family) * (Does not apply to simple subscriptions.)	(\$20.00 x)	
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*Taxes applicable: 7% GST, 15% HST (NB,NS,NL) not included in the above amounts * Ontario PST of 8% applicable to TCA subscription without membership. PST (if applicable): 8%		

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City/Town:	
Province:	Postal Code:
Family Member Name	Family Member Call sign:
If you enter something on line above, a charge of \$20.00 will be added to your membership	
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Donation to the Defence of Amateur Radio Fund enclosed	\$
Donation to the Youth Education Programme enclosed	\$
Grand Total:	\$

PAYMENT OPTIONS (Cheque or)

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Card Expiry Date (MM/YY):
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Radio Amateurs of Canada Inc.
720 Belfast Road, Suite 217
Ottawa, ON
K1G 0Z5



STEPHEN ANDERSON

**CAN YOU
HEAR ME**

**WHEN IT
COUNTS?**

TO JOHN GRAVES, WIRELESS COMMUNICATIONS is a lot more than Verizon Wireless' catchy "Can You Hear Me Now?" tag line. It's about emergency responders hearing one another when it counts.

Graves, program director for the Government Emergency Telecommunications Service, which is part of the Department of Homeland Security, is one of the people trying to answer a key question revolving around wireless networks: Why are cellular networks among the first to fail during an emergency? "In emergencies, it's not just emergency workers using wireless, it's everybody," said Graves in Arlington, Va. "Everybody wants to call home. People pick up the phone and make a lot of telephone calls.

This causes the phone network, including wireless, to get congested."

According to Graves, the telephone network is built to have a call success rate of 99 percent on the busiest hour of the busiest day of the year. The problem: During national emergencies—think

**WIRELESS COMPANIES NEED
A 'PLAN B' TO STAY AFLOAT IN
THE NEXT BIG EMERGENCY**

BY WAYNE RASH

Hurricane Katrina and the Sept. 11, 2001, terrorist attacks—that success rate can drop as low as 10 percent. When wireless companies suffer outages due to equipment damage and lost connections to

the public service telephone network, PSTN (Public Switched Telephone Network) calls are routed to functioning networks, overloading them.

The challenge is closing that gap. The issue is on the front burner of everyone from the industry association

CTIA, which had its Wireless IT & Entertainment conference in Los Angeles Sept. 12-14, to wireless carriers and first responders. The race is on to prepare for the next big emergency, and it's not clear wireless companies can get it together due to interoperability, allegiance to serving customers and lack of communication among key players. As things stand today, there is no coordination among the companies preparing for the Next Big One. The bottom line: The industry may not be ready for the next emergency, whether it be a massive weather event, an earthquake, a terrorist attack or a pandemic.

In the meantime, each provider—ranging from Cingular Wireless to Sprint Nextel to Verizon Wireless to T-Mobile USA—is attacking the issue differently. Some are working to make sure that their networks can survive, others are making sure that they can coordinate the rebuilding process, and a few are focusing on the needs of first responders. “Always have a Plan B,” said Josh Lonn, regional director of development for the South region at T-Mobile in Frisco, Texas. “We have to spread our risk as much as we can.”

The company's Plan B: Assume the worst. T-Mobile had already moved important switches out of harm's way months ahead of Hurricane Katrina. In addition, the company hardened its cell sites, installing generators in every location possible and creating redundant communications. T-Mobile, unlike the other wireless providers in the area, was safe because of advance planning. Even then, T-Mobile network technician Louie White had to protect a massive switch with plastic and endure the winds and rain whipping through the Galleria building in Metairie, La. The switch and White survived, enabling T-Mobile to provide wireless communications in New Orleans and the surrounding area.

Joe Farren, director of public affairs for CTIA, told eWEEK his organization is working closely with the Department of Homeland Security and has a disaster preparedness and recovery certification program to ensure “members have taken a number of steps to prove that they're ready to respond to a disaster. So far, the big four national carriers have been certified,” said Farren, who's based in Washington. “Others are going through the process as we speak.”

Indeed, wireless giants are working to bolster networks ahead of the next emergency.

Sprint Nextel Vice President for Public Sector Programs Chris Hackett said the company, in Reston, Va., is eyeing vulnerable markets such as Florida and “hardening the cell sites.” Hackett said the company's hardening program includes putting generators into every cell site possible and arranging for fuel. Hackett said the Nextel system, which provides the ability to talk directly from device to device without a switch, is critical for first responders, and he wants to make sure that cell service is maintained during an emergency.

Capacity crunch

ACCORDING TO INDUSTRY EXPERTS, there are three things necessary to allow people to communicate during an emergency: Keeping existing capacity running, adding capacity where possible and prioritizing communications steps such as hardening cell sites and switches, which is already under way by wireless carriers. Placing critical equipment out of harm's way and having workers on standby are also important in keeping existing communications running.

Because there is more demand for communications during an emergency, capacity is critical, said experts. Using temporary cell sites to supplement or replace the existing infrastructure and adding alternate forms of communications such as amateur radio also can take the load off the commercial communications system.

Perhaps the most challenging part of the equation in ensuring critical communications take place is cultivating a willingness among com-

mercial operators to modify their phone systems to give users with critical needs priority. Graves is also in charge of the WPS (Wireless Priority Service), a program for prioritizing wireless traffic. Graves said that on 9/11, there was already a priority service in place for wired phones but that capability was lacking for wireless phones. The White House then ordered a wireless priority service. He said that within two months, T-Mobile and then Cingular were able to provide wireless priority in New York and Washington. “It took a year for the first carrier, T-Mobile, to offer nationwide service,” Graves said.

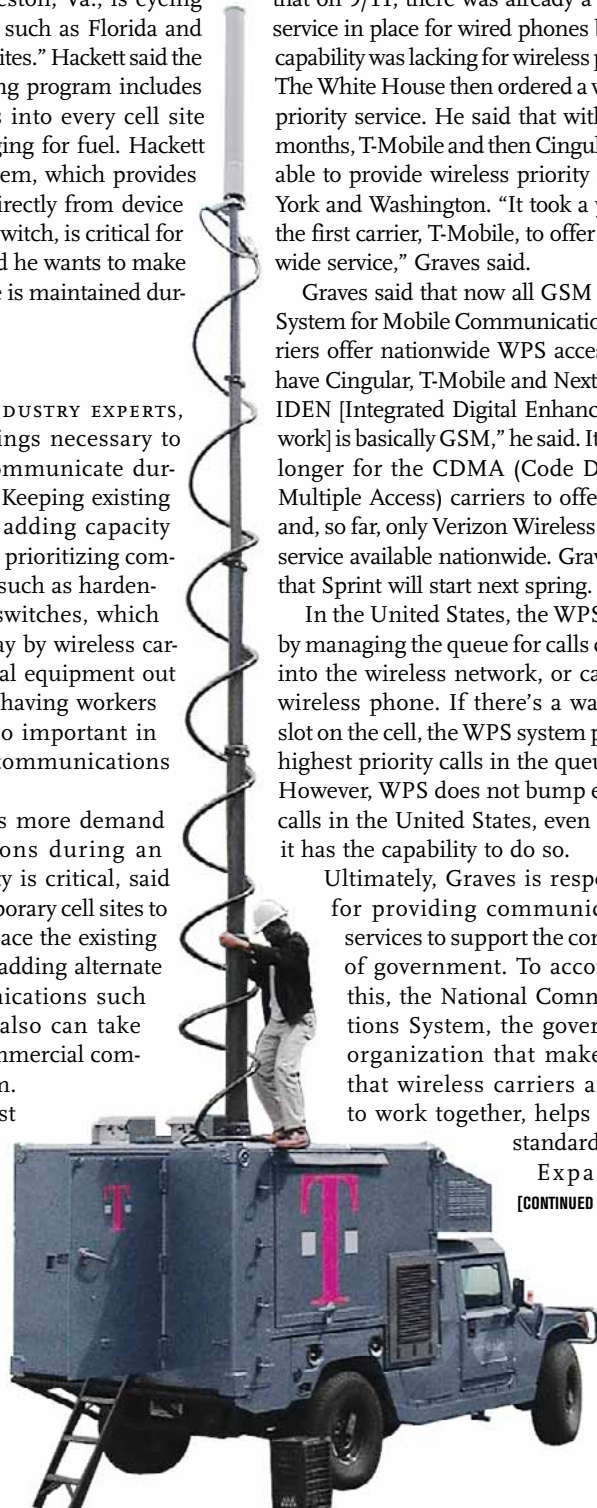
Graves said that now all GSM (Global System for Mobile Communications) carriers offer nationwide WPS access. “We have Cingular, T-Mobile and Nextel since IDEN [Integrated Digital Enhanced Network] is basically GSM,” he said. It's taken longer for the CDMA (Code Division Multiple Access) carriers to offer WPS, and, so far, only Verizon Wireless has the service available nationwide. Graves said that Sprint will start next spring.

In the United States, the WPS works by managing the queue for calls coming into the wireless network, or calls to a wireless phone. If there's a wait for a slot on the cell, the WPS system puts the highest priority calls in the queue first. However, WPS does not bump existing calls in the United States, even though it has the capability to do so.

Ultimately, Graves is responsible for providing communications services to support the continuity of government. To accomplish this, the National Communications System, the government organization that makes sure that wireless carriers are able to work together, helps set the standards.

Expanding
[CONTINUED ON PAGE 23]

The “Cell on Hummer” lets T-Mobile locate an emergency cell site nearly anywhere.



EMERGENCIES FROM PAGE 23

the communications capability can mean either adding more cell sites or providing better access to land lines. Depending on the nature of the emergency, expanding access to land lines may be problematic. "Mother Nature is pretty hard to outsmart," said Bill Smith, chief technology officer for Atlanta-based BellSouth, which was hit hard during Hurricane Katrina. "Well-prepared doesn't mean you're invincible," said Smith, noting that BellSouth thought it was prepared for a disaster, but the company wasn't ready for a major underwater cable to be taken out.

When capacity is severed, wireless companies are left with mobile cell sites, provided they can be connected to sites with switches. These mobile facilities called COWs (cell on wheels) or COLTs (cell on light trucks) can be driven into an area where coverage is needed and put into operation. In some cases, they can connect to a terrestrial T-1 line and, in other cases, use a microwave or satellite link. Nextel, for example, has a dedicated satellite COLT that's designed for long-term operation in a remote area and can be driven to the place where it's needed, locked down and left to run on its own. T-Mobile, on the other hand, has even developed a "Cell on Hummer" in which the company can provide cell service anywhere a Hummer H1 can go.

Planning for the future

EACH CARRIER INTERVIEWED BY EWEEK SAID it was preparing for emergency communications, but there was little agreement on what it meant to be ready.

For instance, Cingular Wireless has spent \$17 million on ensuring it can fix a damaged network quickly. "We have purchased emergency response equipment including [MACH (mobile access command headquarters)]. It's an office on wheels that provides satellite connectivity, data, voice and video," said Cingular's Director of Continuity Planning and Crisis Management Tina Brown, who's based in Atlanta. Cingular now has two MACH units, the larger of which can house up to 30 people.

MACH 2 is a smaller unit for quick deployments. MACH 1, which is about 1,000 square feet, is built into an expandable 65-foot trailer designed to work with

an external communications unit. "These two vehicles are very high-tech, military-grade communications facilities," said Brown, adding that the units can handle radio, VOIP (voice over IP) and video with capacity for 6M-bps transmission rates.

The company also is taking steps to make sure that the worst problems of the past won't be repeated. "We built a switch



Sprint Nextel's system is critical to first responders, Hackett said.

outside of New Orleans that's not quite as vulnerable," Brown said.

Brown said that Cingular is stepping up its plans to get ready for major events when they're known in advance. "For [Tropical Storm] Ernesto, we deployed part of our equipment to Columbia, [S.C.] to stand by to see where the storm was going to go and how intense it was going to be," she said. Brown said that the deployment included the smaller MACH 2 command unit, the emergency communications units, two equipment trailers and two RVs for sleeping. Generators were placed in Raleigh, N.C., she said.

While Cingular is adding generator backup power to some of its cell sites, the company isn't going as far as some others. "We're making sure we have N+1 redundancy on our backup power," explained T-Mobile's Lonn. "That's two times the redundancy in case our generators fail." Lonn said that T-Mobile is investing heavily in permanent generators for backup

power and in backups for the telephone company backhaul. The company has had a fleet of COWs, COLTs and portable generators for some time but is continuing to invest in more, Lonn said.

Verizon Wireless is taking a similar direction. "Reliability has always been in the back of our minds," said Hans Leutenegger, area vice president for network for the South, in Charlotte, N.C. "You have to be thinking reliability well before a disaster, but you have to have already done it when the disaster comes."

Leutenegger said that Verizon Wireless has permanent generators at every cell site where they're allowed, and he added the rest have portable generators. In addition to power, Verizon Wireless is making sure switch locations can withstand Category 5 hurricanes in Florida, he said. Verizon Wireless also uses two special fixed command centers, one on each coast for backup.

Sprint Nextel is in an unusual position. It's the communications company of choice for many first responders because of the company's support for direct communications between handsets. This ability for the first responders that the company focuses on to communicate without the need for the wireless switches or cell sites simplifies Sprint Nextel's solution but doesn't eliminate the problem of needing to provide power for its cell sites. According to Hackett, his company has made it a point to locate critical infrastruc-



Technician Louie White protected T-Mobile gear from Katrina's wrath.

ture where it's safe from most threats. In addition, he said that the company has developed the ability for switches to back each other up,

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and to move traffic to switches that are less crowded. Sprint Nextel also keeps a fleet of COLTs and emergency generators standing by in case they lose power or cell sites.

As strange as it may seem, one of the biggest challenges to preparedness for the wireless carriers is communications. But in this case, it's communications with government entities; first responders; NGOs (nongovernmental organizations) such as the Red Cross, Salvation Army and others;

their customers; and one another. Unfortunately, those efforts have not met with success in some cases. Each of the wireless companies tells stories of employees being prevented from restoring service because word never reached the people enforcing access or curfews.

BellSouth's Smith said phone service restoration after Katrina was delayed because police wouldn't let the company's technicians splice fiber after curfew. Smith said there needs to be a uniform credentialing plan.

Likewise, each of the companies has said that getting help from the government is very difficult and that, even when promised, such help rarely comes through. As a result, these companies have had to resort to hiring private security organizations such as Blackwater USA for security because police or National Guard troops never arrived when promised.

Meanwhile, some companies aren't used to working together. There is some progress on this front as Verizon Wireless and T-Mobile both routinely open their networks to anyone who can connect with them. "During Katrina, a lot of carriers were having problems with switches," Leutenegger said. "We allowed all customers to access our network. We just turned off authentication for all of our competitors, allowing them to make calls freely." The move is part

of Verizon's emergency checklist.

A Cingular spokesperson told eWEEK that his company's policy was to open its network. Steve Mondul, deputy assistant to the governor of Virginia for commonwealth preparedness, just wishes companies could do a better job of communicating with the state. Mondul said wireless companies haven't been planning enough for compatibility, something the government at all levels actually needs to see happen. "Compatibility is not a standard part of the planning. It needs to be

heavily in planning sessions with governmental entities at all levels. According to Sprint Nextel's Hackett, the company routinely conducts seminars for governments, first responders and others to discuss how to create and implement a communications plan. Then the company conducts exercises to practice its responses.

While many in government wish that the wireless carriers would communicate among themselves more effectively, there are limits on what's possible. For instance, too much communication among wireless carriers can be seen as collusion by antitrust authorities. In other words, two wireless carriers could reach an agreement on how to support each other in case of a major emergency and then be charged with antitrust violations for talking to each other.

However, there is at least one means for wireless carriers to work together. The



Cingular's Kevan Parker and Tina Brown put MACH 1 through its paces (above). MACH 1 has seats for 30 disaster recovery technicians (right).



institutionalized so that everyone knows that it's happening," said Mondul, in Richmond, Va.

While Mondul said he welcomed the efforts by the wireless companies to bring in equipment, he said that planning and coordination are still needed. "You don't want your generators on towers near major evacuation routes and major command centers to be running out of gas," he said.

Mondul said that planning is critical in working with state and local governments. "It would be really good to have the company technical reps meet so we can determine critical areas and needs and address them in the planning cycle rather than in the response cycle," Mondul said. "We need to develop a conceptual plan to deal with it, rather than having no plan."

Of course, the level of interaction with government varies by wireless company. Sprint Nextel, for example, has invested

National Coordinating Center for Telecommunications, or NCC, was created in 1984 after the breakup of AT&T to ensure the federal government's communications needs were met. Brian Carney, manager of the NCC, which is part of the DHS, said carriers could cooperate through his group.

On the local front, municipal and state governments have to find ways to work with wireless companies in their emergency operating centers and put lines of communication in place before a disaster happens. And, of course, the carriers themselves have to do as much as they can to be ready. "The reality is that it's a dangerous world," said Lonn. "I'm confident that we've done all we can and have a great ability to respond. I'd never say we're perfect, but I feel a heck of a lot better now than I did two years ago." e