


Michigan Section
ARES/RACES

Spring Emergency Coordinator's Meeting


31-May-2008



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Welcome


- Thank you for coming
- Thanks to Tim McKee for the accommodations



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Housekeeping


- Exits
- Restrooms
- Coffee / Donuts
- Break



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The bad news

- I expect you to work
- Where is the expertise, really?
- Participate **actively** and **constructively**
- Recognize different needs
- Respect your fellow ECs
- And who are they?



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Agenda


Time	Item	Length
10:30	Introductions/Welcome	15
10:45	MSP Targets	15
11:00	Recruiting	10
11:10	Discussion	10
11:20	EOC	15
11:35	Discussion	15
11:50	Packet	15
12:05	Discussion	10
12:15	Break	30
12:45	SET	15
13:00	Discussion	30
13:30	Electronic Meeting	10
13:40	Discussion	10
13:50	Close	10



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Michigan State Police

Goals for Amateur Radio




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FEMA Preparedness Report

- In it's 2008 "State Preparedness Report" to FEMA, MSP described the following priority for amateur radio:

Enhance and Support Amateur Radio Public Service Participation


The Amateur Radio Public Service Corp (ARPSC) is an established volunteer amateur radio operator organization committed to providing supplemental and/or back-up emergency communications upon request by a Government Emergency Management Organizations at the municipal, county, or state level. In addition, this service may be requested across municipal, county, state and international jurisdictional boundaries. Michigan intends to develop the ARPSC into a fully integrated communications team operating under common standards and procedures.



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FEMA Preparedness Report


- Associated with that priority, MSP outlined three targets:
 - Maintain and enhance the statewide Amateur Radio communications system.
 - Establish suggested standards for Amateur Radio Capabilities in local EOC's
 - Develop a Public Awareness and Education program to bolster the ranks of Amateur Radio participants.




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Amateur Radio Goals

- These targets were developed based on input from myself and Dale
- MSP broadened the language considerably to give us additional flexibility
- FEMA funding must be tied to these targets






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13 - Maintain and Enhance

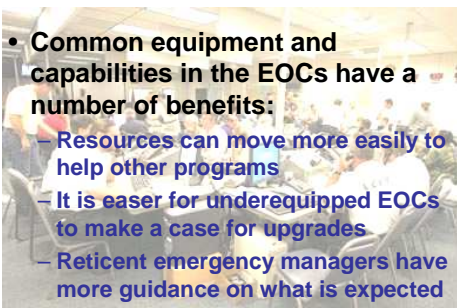
- This continues our current effort
- We continue to bring additional capabilities to local programs
- We must continue to also improve on our skills
- To this end, MSP continues to improve opportunities for us to engage in statewide exercises and drills in a meaningful way




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14 - EOC Standards

- Common equipment and capabilities in the EOCs have a number of benefits:
 - Resources can move more easily to help other programs
 - It is easier for underequipped EOCs to make a case for upgrades
 - Reticent emergency managers have more guidance on what is expected







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15 - Public Awareness

- Throughout the state many programs have limited resources
- Expanding the body of radio amateurs gives us a greater pool to draw from
- Public awareness of our role helps not only the size of our effort, but our ability to get cooperation






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13 – What to do

Maintain and enhance the statewide Amateur Radio communications system

- Throughout the state we have uneven capabilities.
- We need to strengthen all programs, weak and strong
- Enlist the aid of your District Coordinator
- Plan exercises well in advance




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13 - Discussion

Maintain and enhance the statewide Amateur Radio communications system

- Standards help give direction
- Forceful leadership – DEC's
- Get the basics first (Minimums)
- AR is redundancy function
- VHF locally
- Training
- What do we need to work on?
- Unfilled positions
- Tiered standards matrix
- Equipment specific cheat sheets




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14 – What to do

Establish suggested standards for Amateur Radio Capabilities in local EOC's

- EOCs are currently uneven
- Capabilities:
 - VHF/UHF Phone
 - HF CW and Phone
 - IP Packet
 - TV (ATV & SSTV)
- We probably should consider other modes, but at this point they are of limited utility




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14 - Discussion

Establish suggested standards for Amateur Radio Capabilities in local EOC's

- Later




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15 – What to Do

Develop a Public Awareness and Education program to bolster the ranks of Amateur Radio participants.

- Some programs actively recruit (e.g. Kent)
- Planned participation in fall Homeland Security conference
- Engage public in Field Day, other events
- Partner with local clubs




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15 - Discussion


Develop a Public Awareness and Education program to bolster the ranks of Amateur Radio participants.

- Next



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Recruiting

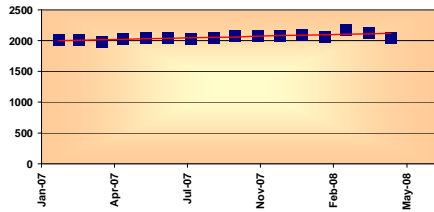



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MSP Target

Develop a Public Awareness and Education program to bolster the ranks of Amateur Radio participants.

Reported Membership






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Current Happenings/Plans

- Presence at fall Homeland Security Conference
- Some programs, especially Kent, have aggressive, effective recruiting programs





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Some counties are ...


- Ham in a day classes
- Partnering with local clubs
 - Get EM to a club meeting, get help from District Coordinator if necessary
- Actively advertising and recruiting at:
 - Skywarn
 - Field Day
 - SET
 - Local Hamfest
 - 4H programs
 - Preparedness fair



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Things we might do ...

- Jamboree on the air
- Participation at county fairs
- Library field station or display
- Santa-gram
- Field day in parks
- Space station QSOs in elementary schools
- Summer camp programs




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Equipping the EOC




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VHF Phone




- First Priority
- All emergencies are local, this is your bread and butter
- Understand your simplex footprint
- Train folks in relay
- Understand your repeaters
 - Emergency power
 - Vulnerability
 - Isolation from served agencies
- Link systems underused, poorly thought out (for our purposes)



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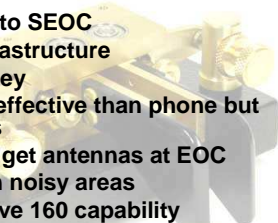
UHF Phone

- Fewer responders equipped than VHF
- In southeast, mostly used for MICON
- Better at getting through buildings
- Often used with cross-band repeaters
 - Responders in building with UHF HTs
 - Car outside cross-banding to VHF
- Very good within building
 - Many hospitals moving to complex phone systems, need backup within building




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HF Phone/CW




- Mostly to get to SEOC
- Needs no infrastructure
- Very, very dicey
- CW far more effective than phone but few operators
- Often hard to get antennas at EOC
- EOCs often in noisy areas
- Few EOCs have 160 capability
 - Needed for winter in solar minimum
- Need better understanding of propagation




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VHF Packet




- The most effective way to get to SEOC
- Has proven very helpful in the south
- Need infrastructure in the north
- We are doing poorly on “familiar user interface”
- Training needed for sending images
- Lots of training needed in EOCs that don’t have IP capability




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ATV


- Traditional ATV has proven effective but difficult
 - Complex to set up on scene
 - Expensive
- SSTV, even over FM, can be useful but rarely deployed





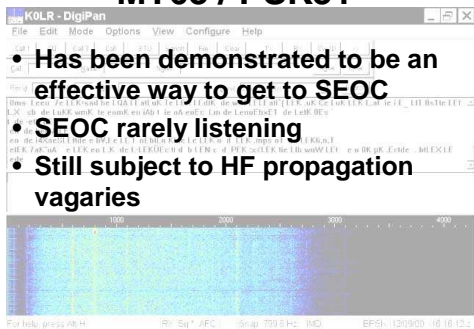
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Digital Voice



- Jury is still out
- Looks to be good for EOC to EOC and EOC to SEOC
- Will have few ops equipped for foreseeable future
- Expensive
- Need robust infrastructure
 - Not only a lot of infrastructure, but well thought out
 - Not clear the incentive is there to properly engineer the infrastructure without a statewide initiative
- Recommend go slow until we see District 1 results

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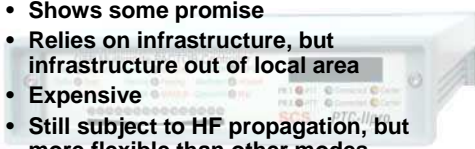


MT63 / PSK31

- Has been demonstrated to be an effective way to get to SEOC
- SEOC rarely listening
- Still subject to HF propagation vagaries


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HF Packet



- Not demonstrated effective
- Shows some promise
- Relies on infrastructure, but infrastructure out of local area
- Expensive
- Still subject to HF propagation, but more flexible than other modes
 - Use of distant infrastructure allows using higher frequencies, allowing more flexibility to respond to conditions

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MARS Circuits

- MARS has more frequency flexibility
- Sometimes this can be a help with propagation
- Few MARS operators

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Discussion

- EOC facilities differ
- Specific standards
- EM need to provide minimum facilities for equipment / security
- EM not aware of AR
- * Describe what each EOC should be able to do / engineering issues

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What should we do?

- What are county assets – govt and ar
- What is plan for county
- What capabilities EM needs
- Absolutely need to get consensus among AR ops

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Packet for the EOC



Traditional

- AX.25 only, terminal program or “packet” program with TNC
 - ↓ Unfamiliar user interface
 - ↓ Complex Routing
 - ↓ Large learning curve
 - ↑ Simple equipment
 - Mailbox at EOC



JNOS at EOC

- Provides AX.25 and IP
 - ↓ Unfamiliar user interface
 - ↓ Large Learning Curve
 - ↓ Complex Setup
 - Mailbox at EOC
 - ↑ Simpler routing
 - ↑ Converse Bridge



JNOS + Windows at EOC

- Provides AX.25 and IP
 - ↑ Familiar user interface for some
 - ↑ Easier Learning Curve for some
 - ↓ Complex Setup
 - Mailbox at EOC
 - ↑ Simpler routing
 - ↑ Converse Bridge
 - ↑ High message capacity
 - ↓ More equipment at EOC



IP End node at EOC

- Provides AX.25 and IP
 - ↑ Familiar user interface
 - ↑ Little / No learning curve
 - ↑ Simple setup
 - ↑ Simple routing
 - Requires HamGate within reach
 - Mailbox offsite (+ / -)
 - ↑ Less equipment at EOC

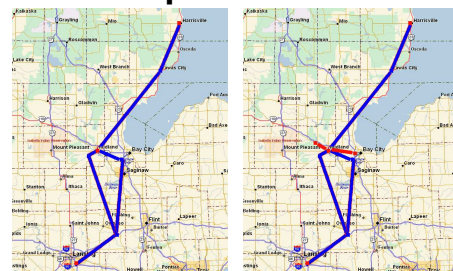


Setting up Infrastructure

- You must be in reach of a HamGate
- Need multiple paths out
 - Multiple HamGates with independent Internet connections
 - Internet plus RF
 - Prefer multiple RF
- Generally, only need to get as far as a working Internet

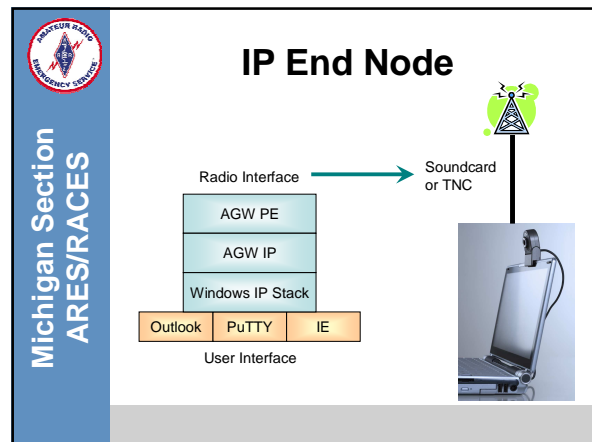
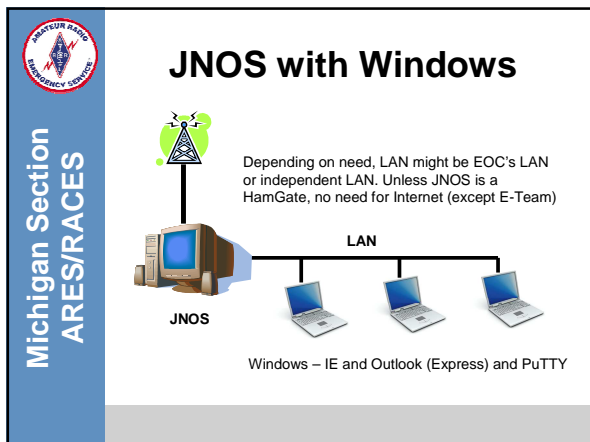


Example – Midland



Existing

Future



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Questions / Discussion

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SET 2008

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SET

- Date of SET
- Detailed scenario?
- Modes to explore
- Weaknesses to explore
- How to engage more agencies

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Date of SET

- Currently scheduled Oct 4-5
- Can have “during the fall season”
- Oct 4-5 is first weekend of bow season
- Should we select a different date?
 - Sep 14 Adrian hamfest
 - Oct 12 State Convention
 - Oct 18 Holland hamfest
 - Oct 18 ARRL EME Contest
 - Oct 25 Fall EC meeting (?)
 - September 27?



Detailed Scenario

- ECs have clearer expectations
- Allows scripted event like state exercises
- Less flexibility for programs to play to their specific needs
- Probably end up with fewer modes/situations



Modes

- Should we focus on modes known to be useful or explore less traditional modes:
 - ATV
 - SSTV
 - PSK



Weaknesses

- A few years back we emphasized simplex
 - Many programs found that helpful
 - Should we emphasize relays?
- Last year we focused on NTS
 - Should we engage NTS in a more complex way?



Agencies

- We have rarely engaged agencies in a meaningful way
- With some thought, agencies could better understand our capabilities
- Many agencies underserved:
 - Red Cross
 - Salvation Army
 - Hospitals
 - Health Departments
 - Police
 - Fire
 - DNR
 - Etc.
- All state agencies participate in statewide drills:
 - MSP, Guard, MDOT, DIT, HHS, Aging, Corrections, Supreme Court, Attorney General, etc.




Discussion

- In conjunction with district-wide exercises
- Each district test abilities
- NTS delegate sub-ncs like ics




Electronic Meeting



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Issues


- Any physical meeting is expensive
 - Lansing 543 miles
 - Chippewa 357 miles
 - Cadillac 437 miles
- No sign of gas getting cheaper
- Twice a year might not be enough



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Possibilities


- Echolink
 - Troublesome with large groups
 - Requires fast Internet connection
 - Problem with slow circuits
 - Timeout limits clumsy
 - Poor audio quality
- IRLP
 - Not reachable by many
 - Timeout limits clumsy
 - Poor audio quality



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Possibilities (continued)


- WebEx
 - Costs
 - Requires phone AND Internet
- Conference Bridge
 - Costs
 - Limited access
 - No slides
- HF Phone
 - Propagation
 - Not all ECs capable



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Echolink/IRLP Potential Fixes


- Echolink or IRLP nodes well placed throughout state
- Would allow all to get audio over radio
- Still need Internet for slides, but dialup OK
- Still have timeout clumsiness



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WebEx/Conference bridge potential fixes


- Send slides ahead of time
- Still have costs
- Conference bridge could be pre-empted



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Discussion

- Video coference
- Echolink from local EOC?



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Wrap-Up



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Upcoming


- Field Day 6/28
- Section Campout 7/11-7/13
- Section Convention 10/12
- SET in the fall
- Next meeting 10/25



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Meanwhile

- ARPSC Net
 - Sundays 5:00 PM 3.932
 - Sundays 8:00 PM Channel 41
- MIARPSC Yahoo Group
- ARPSC website updated frequently
 - Subscribe to the RSS feed



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Closing

- Thank you for coming
- And especially for your hard work on behalf of the citizens of Michigan
- Stay in touch
- Keep getting better



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Have a safe trip home

