



ONONDAGA COUNTY DEPARTMENT OF EMERGENCY COMMUNICATIONS

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M E M O R A N D U M

To: All Fire/EMS Agencies

From: Kevin Spraker, MDT System Administrator;
Edward Healy, MDT Project Manager

Date: March 22, 2012

Re: **MDT Hardware/Software Maintenance**

As we approach the five-year mark for the Dataradio data communications system and the Intergraph I/Mobile MDT deployment, we wanted to ask some questions and provide guidance to agencies to help keep their MDTs operating properly.

Do you have a plan in place to replace the MDT laptops?

Onondaga County provided Fujitsu tablet PCs to all fire/EMS agencies as part of the MDT system upgrade. The initial distribution was just that – a one-time-only event; you are responsible to replace the tablet when it becomes obsolete or unserviceable. Each agency should create a schedule of routine replacement so that you avoid MDT failure and having to replace devices “on the fly”. When replacing MDTs, don’t forget the mounting bracket, power supply, or external keyboard – your decision on what model to purchase may necessitate changing these items.

The 911 Center does not have a preferred device, only that the device meets the minimum requirements for the I/Mobile and RadioIP applications. The specifications are attached. The 911 Center will install and support the I/Mobile and RadioIP applications, as well as network connectivity setup to use the Dataradio network, the County wireless access points, commercial wireless access devices (“aircards”), or proprietary broadband access devices (“BlueTree” or “Nexus” units).

Does your agency have a person/company designated to perform routine PC maintenance on MDTs?

MDTs are tablet PCs, and as such require some care and feeding. They need to be cleaned periodically and maintained just like the PC in your office. Each agency should have someone, perhaps a firefighter or officer or private service, who is tasked with performing monthly routine maintenance on each MDT. The 911 Center will provide any necessary training or information this person will need to support the County applications. Ideally, the person should be familiar and comfortable with the Windows environment. Each agency should make sure the 911 Center Technical Services Office has that person’s name and e-mail address, so that as issues arise we can make notifications to each agency’s representative.

Isn't all this covered by the OCICS trunked radio system warranty?

No. The mobile data system is completely separate from the OCICS voice radio communications system. This was done by design so that issues/failures in one system does not affect the other system.

Does the County handle everything with the MDTs, including the modems?

No. The County supports the I/Mobile and RadioIP applications on the MDT itself, the Dataradio data modem in each vehicle, and the County wireless access point (if you have one; not everyone does). The County does not support the tablet PC hardware (the MDT itself); that ended with the three-year initial warranty in 2010. Once it is no longer serviceable the agency must provide the replacement. The County maintains a service contract for the Dataradio modem and antennae (currently, United Radio is the contract vendor); any repairs, removal, or installation are covered under that contract. PLEASE NOTE: if you utilize a vendor other than the contract vendor for removal or reinstallation of the modem, you may void the warranty and be responsible for repair or replacement of the modem, and you are responsible for the cost of removal/reinstallation.

What about the bi-directional amplifier (BDA) that the County installed in the stations?

The BDA installation was a one-time-only project. There is no maintenance support for the BDA device or antenna at this time. If the device fails or the antenna requires readjustment, you are responsible for repair or replacement. The 911 Center can help with advice or service recommendations only.

Several of my MDTs won't power up, but I can't see anything wrong with them.

The 911 Center has received many complaints of this type, and on checking the hardware we find the original laptop battery in the laptop is no longer functional. The vehicle feeds power to the laptop through the laptop's battery, so if the battery is no longer operational, the laptop won't boot or remain running. Laptop batteries typically last 1-2 years. If you Google "Fujitsu T4215 battery" you will find many vendors that will provide new batteries for around \$70-\$100 each. Remember to use 10.8v. 5200mAh replacements (which is 10.8 volts, 5,200 milliamps) made for the Fujitsu Lifebook series. "OEM" (original equipment manufacturer) is recommended, or you might get a cheap knock-off brand that costs less but doesn't last very long.

So what kind of maintenance needs to be done on the MDTs?

Each MDT should have routine maintenance performed on a periodic basis. For fire departments, once a month is usually enough. If you are a "high-end" user, like an EMS agency that uses an aircard and emsCharts, you may want to consider doing routine maintenance every two weeks.

- **Physical cleaning:** wipe off the screen and housing with a damp cloth; use water only, no special cleaners are required. A can of compressed air can be used to blow dirt/grit out of the fan port on the right side. Clorox wipes are helpful in cleaning the dirt/grit off the keyboard; use the compressed air to blow dirt out from between the keys. Don't use the Clorox wipes on the screen!
- **Memory maintenance / shut down:** like any Windows PC, the computer should be shut down and re-started periodically to clear memory and re-initialize the operating system. The sequence to do this with a live MDT is:
 1. Stop the I/Mobile application by pressing <alt><F4>.
 2. Once the I/Mobile application stops, perform a re-start of the PC (Start button, Shut Down, Restart).
 3. At the Windows login box, the password is "Onondaga" (username is "Administrator").
 4. Once Windows re-starts, the RadioIP VPN application will re-launch. In order to properly re-connect, the Dataradio modem must be on. If the vehicle is "always on", you don't need to do anything. If your vehicle's modem is turned on/off with the battery switch, you will need to turn the battery on to allow the modem to connect and then the RadioIP application to reconnect. You will see the Windows pop-up

“tool tip” for “RadioIP TCP/IP Mobile Gateway” go through the steps to re-connect, ending in “Registration Done”.

5. Once you see the “Registration Done” message, you can re-launch the I/Mobile application from the desktop (Fire or EMS versions, depending on which installation you have). The I/Mobile application should remember its logon information and re-connect you to the 911 CAD system.

IF YOU RECEIVE AN ERROR MESSAGE THAT YOUR VEHICLE IS ALREADY LOGGED IN USING MDTID “whatever”, this means that the security key used by the application has changed and the 911 Center does not have the new key. The resolution for this is to call the 911 Center fire dispatcher at 435-8881 and have them log off your vehicle. Then you can re-log the vehicle into service, and the CAD system will pick up the new security key from your MDT when you re-log on. Remember to CAPS LOCK; all passwords are in capital letters!

- **Operating system maintenance:** Unfortunately, Windows PCs require a lot of care to keep them running smoothly. This includes cleaning out old files on the hard drive, keeping the Windows system registry clean, and occasional defragmentation of the hard disk. These are things that need to be done to every Windows PC, not just MDTs. This should be performed by someone with familiarity with Windows maintenance, or a contract provider.
- **Anti-virus protection:** If your station has a high-speed access point, this is a window to the general Internet, and the County firewall can’t stop everything. We highly recommend that MDTs have a good anti-virus program running and updated periodically.
- **Windows operating system updates:** This can be a very trying subject, as any PC user knows. Microsoft issues updates to the Windows operating systems monthly (sometimes more frequently), and keeping up with them can be an onerous task. Many people set their PCs to automatically install critical updates, but since the MDT network is isolated from the general Internet, that isn’t possible. It is not mandatory to perform Windows updates as long as the original installation configuration remains unchanged. The I/Mobile application runs just fine with the Windows OS as installed. However, if you add applications to the desktop, or make other changes to the configuration, Windows updates may be required. In general, Windows updates are NOT necessary. If you want to keep the Windows OS up-to-date, it will likely mean dismounting the MDT and connecting it directly to your administrative network. That means getting some specialized instruction from us on what network settings to change.

SPECIAL NOTE: The current I/Mobile configuration runs on Windows XP only; it is not compatible with Windows 7. The 911 Center is preparing a system-wide upgrade to the newest CAD version, and the mobile application (which is called Mobile for Public Safety) will be compatible with both Windows XP and Windows 7. This is currently scheduled for October/November of this year. Until then, any replacement MDTs will have to be ordered with Windows XP (if possible) or have Windows 7 uninstalled and Windows XP installed.

As always, if you have any questions regarding the MDT system, contact Kevin Spraker at 435-1437 or KevinSpraker@ongov.net.