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GPS Responder

What is it?

The "*GPS Responder*" application was created to provide a simple way to enable Automatic Vehicle Location (AVL) leveraging existing hardware. It allows users on 32-bit Windows XP systems with GPS devices (built-in or an accessory (e.g., USB)) to send GPS coordinates to a third-party system, while not interfering with any other applications that may use the GPS data. The Next-Generation Incident Command System (NICS), sponsored by The Department of Homeland Security (DHS S&T), supports "*GPS Responder*" and creates a real-time geo-referenced data layer of resource positions that can be viewed in NICS, or many other geospatial platforms.

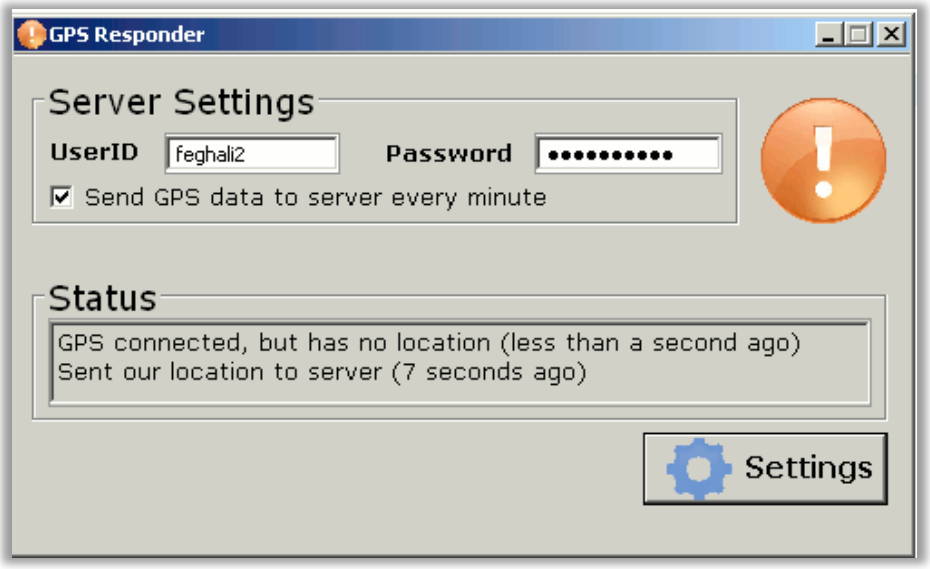
Who "owns" it?

While MIT LL currently supports "*GPS Responder*", it is scheduled to be open-sourced under the "MIT License" (http://en.wikipedia.org/wiki/MIT_License) and leverages the open-source "Hub4com" (http://sourceforge.net/projects/com0com/files/hub4com/) library. There is no charge to use "GPS Responder".

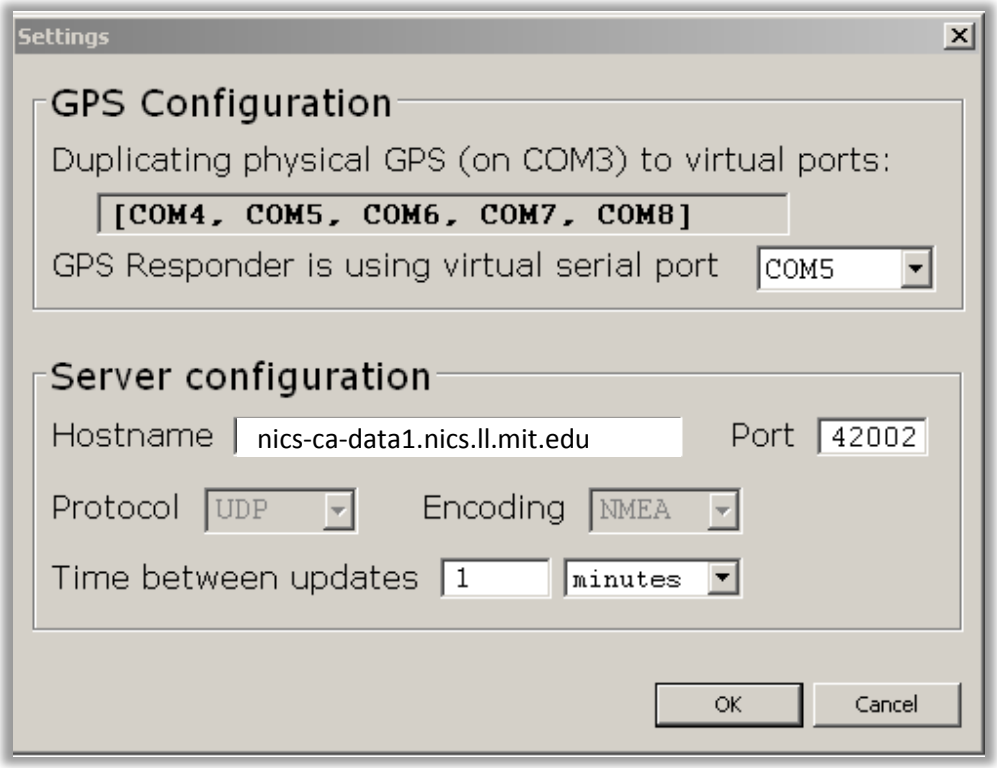
How does it work?

Data is sent from the user's computer to a remote server in "NMEA 0183**"** format. When GPS Responder is running there is an icon in the system tray, shown below.

Clicking on the icon will bring up the "*GPS Responder*" interface, shown below:



Clicking on the "*Settings*" button brings up the following panel of configuration options:



Notes:

- The GPS Configuration section (i.e.: virtual ports) will differ from machine-to-machine.

- Previous versions of "*GPS Responder*" have shipped with a default NICS hostname address of "datafeedvm1.atc.ll.mit.edu"; this address will still work, but all NICS users are requested to update their configurations to: "nics-ca-data1.nics.ll.mit.edu".

When "GPS Responder" is enabled on a compatible system, it will send location updates to the specified server at the time interval selected by the user. If the data is sent to NICS, it is processed and maintained in a GIS (Geographic Information System) mapserver and can be displayed in NICS by selecting the appropriate "Tracking" layer (For instructions, please visit the Help site: http://public.nics.ll.mit.edu/nicshelp/articles/data.php). The data can also be consumed directly from the mapserver in another viewing application by requesting the data in an OGC standard format (e.g., Web Map Service, KML, etc.).

Who uses it?

"*GPS Responder*" is in beta release and has been evaluated by several First Responder organizations to successfully create a zero-cost near real-time map-enabled layer of the organizations' resources.

How do I get it?

You can download the free app at: http://public.nics.ll.mit.edu/gps/gpsresponder.exe and the install documentation is available at: http://public.nics.ll.mit.edu/gps/GPSResponderQuickstart.pdf.

Contact information:

Please contact the MIT LL team with any questions: NICSSupport@LL.MIT.EDU.