PMmap... New Windows Based APRS Client Software

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Abstract:
Why was PMmap created? The software was created to fill the perceived need for APRS client software that not only follows the APRS spec. to the letter but also does APRS like APRSdos. The software was developed on a 133 MHz PC with 64 meg of Ram. PMmap has run also run on a 120 MHz Laptop with 16 Meg of Ram. The running on lesser computers fills the need for "Come as you are" emergency communications. Yes the software runs slow on the Laptop but not so slow as to be unacceptable.

Key Words:
PMmap, APRS, APRSdos, Windows, Software, Kiss, UnderTow Precision Mapping 5.0

Software Operating System:
PMmap is a 32 bit Microsoft Windows based software.

Additional Software Needed to Use PMmap:
UnderTow Precision Mapping Version 5.0
You have to be a registered user of Precision Mapping 5.0 to use PMmap.
The "PM" in PMmap obviously stands for Precision Mapping.

PMmap Features:
- The use of Precision Mapping gives the user the ability to zoom down to street level.
- The Map form as all the forms in the software are fully user sizeable.
- The font type and size on all forms is completely user configurable.
- PMmap remembers your form layout and size between sessions.
- The software follows the Microsoft standard for Windows programs. What this means is that if you have used any other Microsoft Windows software then you know how to use PMmap.
- PMmap will have a fully integrated Help System.
- PMmap is easy to setup. This is because all the setup information that is needed is located on one form.
- PMmap knows your time zone and wither or not your location is in day light saving time or not. It does this my using your PC System Date and Time. If you have set up your PC System Date and Time to the correct Date, Time and Time Zone then PMmap will change from Standard time to Daylight saving time when your Windows PC does so automatically. On the setup form there is a label that shows your current PC date and time in UTC format. There is a "Program Hint" that states if this is not correct then please correct your System Date and Time.
- Selecting an APRS Symbol for your station is easy. Just pick from the drop down list box.
- The software is fully APRS message capable. Including the APRS Queries.
- APRS messages are able to be sent with a different digi path than your APRS Position and Status packets.

- All packets sent by PMmap use the decay algorithm. All packets go out immediately. Then 2 seconds, 4 seconds, 8 seconds, 16 seconds, 32 seconds, 1 minuet, 2 minutes, 4 minutes, 8 minutes, 10 minutes, 20 minutes, 30 minutes. The 10, 20, and 30 minutes time frames are set by what digi path you have set for the particular packet. 10 minutes for 1 or no hops. 20 minutes for 2 hops. 30 minutes for 3 hops or more. If you change your Position or Status packets then PMmap immediately sends out the packet and then follows the decay algorithm. So new information is sent immediately and then decays. Old information is sent less often
- More than one message can be sent to a station. PMmap keeps on sending the first message until it is acked. Once acked then the next message for that station is sent and so on. You can also send messages to more than one station at a time.
- PMmap uses a TNC in only one Mode and that Mode is KISS Mode. I felt that this would eliminate a lot of user problems and complaints. The user is left to using a terminal program to put his or her TNC into KISS mode before running PMmap. PMmap will be shipped with Kissoff.exe. Kissoff.exe is a Dos based program that will take the users TNC out of Kiss mode. The only disadvantage to this approach is that the Alinco TNC based radios will not work with PMmap.
- If logging is turned on then a log file will be saved. The user is prompted for the name of this log file. Everything is logged including the user sent and received messages.
- Wither or not logging is turned on or not the software saves all raw packets that it hears. Raw packets are packets that have not gone through the software's APRS phaser. The packets have gone through the software's Kiss engine. These packets are stored in a list box on the Raw Packet form. This allows for 3 neat features. A user can at any time save to a log file the raw packets. What this means is that if the user sees an event of importance on his PMmap screen but does not have logging turned on but wished that he or she had then just save the Raw Packets to a file. When a log or History file is replayed to the PMmap screen the user can then click on the restore button and this will restore his screen back to were it was before the user played the log or history file. The user can scroll through the raw packet list box to see the packets in raw form.
- History (moving objects) files are saveable. The user is asked "What call signs do you want to save?". The user can type in up to 20 different call signs. What this will do is create a History file that contains only those call signs that were typed in. Replaying of a History file works the same way. The user is asked "What call signs do you want to be replayed?". What this will do is replay only those call signs that the user typed in.
- Find Call Sign Feature. The Find Call Sign Feature allows the user to search for a particular Call Sign. If the Call Sign was heard by PMmap then a form is displayed consisting of the Call Sign's Position, Status, Digi used, and a listing of that Call Sign's Raw Packets. Also by clicking on the "GoTo" button the users Map is zoomed to a 1 mile Radius and the station is centered on the Map.

Features Not Currently Implemented:
- APRS Objects
- APRS Weather Packets. Weather Symbols are displayed on map but the software at this time does nothing with the Weather Packets. This includes the weather watch and warnings.
- The Internet.
- GPS. The software displays GPS packets received. At this time it does not accept your own stations GPS packets on its own serial port.
- Rotatable Map form.

Conclusion:
PMmap has a long way to go before it is a full featured APRS client software. I plan at the DCC to have 5 CDs with which to distribute PMmap to my first beta testers. As of this writing I am the only one to use PMmap. I do not plan on implementing the missing features until the beta testing is completed. I want a rock hard foundation before I add any more features. Beta testers besides my undying gratitude will be registered users for free. The niche I am trying to fill with this software is having a Windows Based APRS Client software that follows the APRS Spec. and APRSdos to the letter.

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