

AN EARLY HISTORY OF THE DEVELOPMENT OF PACFORMS

BY Phil Henderson, KF6ZSQ, January 7, 2021

The recent passing of ham friend Tom Smith, KD6SOJ, reminded Phil that his early computer work involving Ham radio was to build some simple question/answer programs using DOS Command Line Basic that could respond to the California State OES Response Information Management System (RIMS) which was deployed statewide to coordinate responses to major disasters and emergencies. In the event of major emergencies (like large earthquakes) the internet and many phone lines would be down or not responsive, so that RIMS would not be available from the city to county or state. The alternative to the Internet is to use Amateur Radio voice and Packet systems. Amateur radio Packet allows computer generated information to be sent via amateur radio frequencies without the need for the internet OR telephone. RIMS generate computer forms that could be filled out by an entity to be sent up line to the County or State EOC. Tom's programs were simple and contained the important information required by one of three RIMS forms. These were questions and answers in text form that could easily be sent by amateur radio packet from city to county or even state. That data could eventually be entered into the RIMS system.

When Phil looked at what Tom had done, it occurred to him that this process could be enhanced for the user and receiver by taking the RIMS forms and re-modeling them to work with Amateur radio packet. I.E. a person familiar with the RIMS system could fill out the same form that has been modified internally (with the same external format) so that the extracted information could be sent by packet radio. This was accomplished by using JavaScript within the Form file to extract a question ID and corresponding answer to a simple text file that can easily be sent by packet. On the receiving end, a program written in Perl scripting language would put the data from the text file back into the same form used to generate the data so it could be viewed just like it was sent. Again, the RIMS system could be updated once it became available.

When Phil was an employed engineer, he learned how to build forms and program Perl script, so taking on this task was straight forward. This all started around 2004. The work with the RIMS forms evolved to a Packet forms system and additional forms for use with the cities to county in Santa Clara county. It was named PacFORMS by the then DEC, Larry Carr. The obvious next step was to link PacFORMS to Outpost. Outpost is a Windows computer program that automates the computer to amateur radio message transmission, taking care of the DOS like packet commands on both the sending and receiving end of the packet transmission. Outpost is written by Jim Oberhofer, KN6PE, EC of Cupertino¹. The first release of Outpost was in May of 2003. Jim worked with the packet users of the county to enhance Outpost to automatically open a PacFORM so that a user can fill it out. This version of Outpost was released in August of 2011. Then when submitted, the text file of IDs and values was generated and by a couple of clicks transmitted to the receiving station. That station has the same Outpost/PacFORMS installation and the text file is automatically put back into the original form. RIMS was eventually discarded by the state and cities for WebEOC, another web/internet system.

Santa Clara county has developed several paper forms that have been converted to PacFORMS including special forms for the county hospitals. Outpost/PacFORMS became a standard installation at the city EOCs, county EOC, and many packet users in the county. Jim O. is currently presenting and keeping up to date 3 levels of training classes for those wanting to be trained to use the packet system. These classes have evolved over time as packet use and Outpost have also evolved.

Although Outpost and PacFORMS have evolved over the years to meet changing form requirements, there comes a time when things evolve even more. In August of 2019, a new packet forms system that took advantage of some of the new HTML features was released in Outpost. This system was developed by some members of Los Altos ARES. These forms are named PackItForms² and work in a similar manner to PacFORMS.

For any additional information, contact Phil Henderson: kf6zsq@yahoo.com

1 <https://www.outpostpm.org/docs/Outpost-QST-April-08.pdf>

2 <https://www.scc-ares-races.org/data/packet/about-packitforms.html>