P1.7   AN AWIPS LOCAL APPLICATION TO STREAMLINE CRITICAL WEATHER OPERATIONS

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1. INTRODUCTION

During hazardous weather events, National Weather Service (NWS) operations rely heavily on coordination with emergency managers and storm spotters. The information obtained from these sources must be logged, assessed, and often disseminated. The ability of the NWS to protect lives and property during hazardous weather events depends on the expeditious performance of these and other tasks.

Until recently, paper logs were used at the National Weather Service in Fort Worth to document storm spotter activation, emergency management weather briefings, and all storm reports. The storm reports were also entered into a separate software application so local storm reports (LSRs) could be generated. The local AWIPS application WHIRL (Weather Hazard Interactive Report Logger) was developed to streamline and consolidate the logging and dissemination of critical weather information into one utility.

2. PROGRAM OVERVIEW

WHIRL is a graphical user interface (GUI) written in Tcl/Tk. The application is designed to run on multiple AWIPS workstations simultaneously. Upon opening, the user has the option of starting a new activity/report log or continuing a previous log. This function allows late reports of severe weather to be entered at any time.

The GUI is intuitive in form and allows users to enter weather reports and hazardous weather activities easily in the report log section of the application. Once the report is entered, the information becomes immediately available on all AWIPS workstations. This simultaneous access to real time information greatly facilitates hazardous weather operations. The LSR section of the GUI allows additional information to be added quickly for LSR creation and dissemination.

3. REPORT LOG

The report log portion of WHIRL (Figure 1, top) consists of pull down menus, radio buttons, and entry fields to allow activities and reports to be logged quickly and accurately. Since the date and time of the report are critical for verification purposes, the AWIPS system clock time is automatically input into the report once an entry is initiated. The affected county is selected from a pull down menu to save time and the source of the report can be selected from a list or entered as text. A radio button is also selected to indicate if the report was called in or solicited. Finally, the type of weather hazard can be selected from a pull down menu or entered manually. Once saved (via the **Save Report** button), the report is displayed in a log window at the bottom of the GUI (Figure 1) and will appear in any open WHIRL session. If the report meets severe weather criteria, the user is prompted to create an LSR. Logs are saved centrally as ASCII files and the current as well as past logs can be printed from the WHIRL GUI.
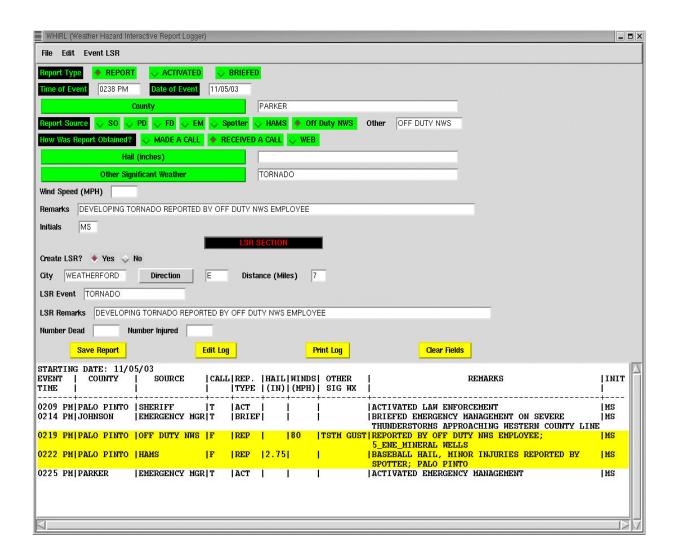
4. LSR

The LSR section of WHIRL (Figure 1) is automatically populated with data entered into the report log section of WHIRL when the user elects to create an LSR. The LSR section also allows the user to input specific locations of the event, the number of injuries or fatalities, as well as other important remarks that may need to be included in the report. Once saved, the LSR is created following the specific formatting guidelines needed by external sources for post processing. The report can be disseminated through AWIPS immediately upon completion of the LSR section. During an event, a log of the generated LSRs is also kept so that a post event summary of reports can be transmitted.

5. SUMMARY

The Weather Hazard Interactive Report Logger is a valuable tool used at the Weather Service office in Fort Worth. It allows information obtained during hazardous weather events to be logged quickly and easily. The information entered in the log is often used in the warning decision process and for post event verification. Local storm reports are also generated and disseminated as soon as a severe weather report is received, which is a valuable time saver over previous methods. WHIRL was developed and tested during the spring and summer of 2003 and has proven to be an essential part of hazardous weather operations.

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Figure 1. The WHIRL (Weather Hazard Interactive Report Logger) GUI. When a new hazardous weather report is to be logged, the user specifies the report type, date/time of report, affected county, and other relevant information in the Report Log section (top portion of GUI). If a hazardous weather report is being logged, the user is prompted to **Create LSR** if the hazardous weather report is meets NWS severe criterion. The LSR section of the GUI is automatically populated with information entered in the preceding Report Log section, and the user enters additional required information such as specific location of the severe weather event. When the **Save Report** button is pressed, the report is logged and appears in the log summary window at the bottom of the GUI. Reports that meet severe criterion are highlighted for easy identification.