

STORM SPOTTER IMPLEMENTATION INTO AWIPS

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I. INTRODUCTION

Storm spotters provide a great service to the National Weather Service. Their timely reports give us important ground truth information. This information is a necessity during severe weather operations. During a severe weather event, the issuance of a warning or advisory may depend on the information a spotter reports to us. Therefore, it is imperative that we know where our spotters are in relation to storms affecting our area.

In the past, there was no way to relate a particular radar feature to the exact locations of trained spotters in the area. Our main goal was to produce a graphical representation of storm spotter locations and implement it into AWIPS as a map overlay. This would more accurately aid us in determining which spotters to contact so that they might be able to corroborate what we see on radar. This report outlines the procedures and processes for creating a Storm Spotter Database and implementing it into AWIPS.

II. METHODOLOGY

A complete list of storm spotters, serving the Milwaukee/Sullivan Forecast Office, was compiled and entered into a Microsoft Excel spreadsheet. This list included such information as: Name, Address, Phone Number, Latitudinal and Longitudinal Information, Spotter ID, etc. The spotters' precise geographic location was identified through the use of DeLorme Street Atlas 2002. Upon completion of the spreadsheet, the file was converted into AWIPS format via a PC based conversion program, created by: Jay Laseman, NWS Omaha. The AWIPS-formatted files were then transferred to AWIPS and integrated into the system.

III. PROCEDURES

A. Produce a Storm Spotter List

1. Start Microsoft Excel

(NOTE: Instructions may differ slightly, depending on which version of Excel your office currently uses.)

- Open up Microsoft Excel, located in your Microsoft Office Suite.
- Start a new spreadsheet...Click **File** in the menu bar...**New**.
- A Window will pop up...select **Workbook** or **Blank Workbook**...then **ok**, if prompted.

2. Enter storm spotter data

- In row 1 of the spreadsheet enter the following text for the corresponding cells, as shown below.

(NOTE: The fields must be in exactly this format!)

ID	NAME	ADDRESS	CITY	STATE	COUNTY	LAT	LON	PHONE	NOTES	PHONE2	REMARKS
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- Continue down the spreadsheet and enter in all of the spotter information, using the example below.

(NOTE: You can enter any information you want in the notes and remarks fields.)

ID	NAME	ADDRESS	CITY	STATE	COUNTY	LAT	LON	PHONE	NOTES	PHONE2	REMARKS
50001	John Doe	123 Tornado Alley	Wichita	KS	Wichita	37.649	-97.251	(123) 456-7890	Trained		John.Doe@AOL.com

Once your spreadsheet for all of your spotters is completed and in the above format...

- Go to the page tabs on the bottom of the display, where it says **Sheet1**.
 - Right click on the **Sheet1** tab...click **rename**.
 - Rename the sheet as **spotters**, all in lowercase letters.

There will also be **Sheet2** and **Sheet3** tabs. These must be deleted.

- Right click on these tabs...click **delete**...then **ok**.

3. Save the spreadsheet

- Go to **File** in the menu bar...**Save As**...type **spotters** for the file name.

(Note: spotters must be in lower case letters.)

- The file will be saved as **spotters.xls** in the location of your choosing.

B. File Conversion into AWIPS Format...Using the Excel2Awips Conversion Program

The Excel2Awips conversion program was created by: Jay Laseman, National Weather Service WFO Omaha. This program is used to convert the Excel storm spotter spreadsheet into AWIPS text format. It is a zipped executable program for use on a PC.

1. Set up the Excel2Awips program

- Unzip the Excel2Awips.zip file into the folder where your Spotter spreadsheet, **spotters.xls**, is located.
- The following files will be extracted into this folder:
 1. Excel2Awips.exe
 2. Excel2Awips.vbp
 3. Excel2Awips.vbw
 4. frmReadExcelFile.frm
 5. frmReadExcelFile.frx
 6. README.txt
 7. Sample.xls

2. Convert the Excel spreadsheet into AWIPS format

- Click on the **Excel2Awips.exe** icon.
- A window will appear, asking for the location of the **spotters.xls** file. Select the location of this file and hit the **Process File** button.
- The program will generate 4 files in AWIPS format:
 1. spotters.dat
 2. spotters.goodness
 3. spotters.txt
 4. XXX-spotters.dat
- Copy the newly generated files to your network server.

*(NOTE: The program may find errors in the format of your spreadsheet. After hitting the **Process File** button you may see an error like, **Error in Excel File At Line 245**. This tells you to look for problems on line 245 of your Excel spreadsheet. At this time the program will also generate a basic error log for you to view, **FoundAnError.log**. After going to the spreadsheet and correcting the error, resave the file and try processing it again until the files are generated correctly.)*

C. Import the Spotter files into AWIPS

(Seek the help of your office's IT to properly perform this portion of the procedures.)

1. FTP the converted files into AWIPS

- Login to a Graphics workstation...
 - Open a telnet window on a Graphics screen.
 - Login to the workstation as fxa.
 - rlogin to ds1 as fxa.
- Rename the following preexisting files for backup...
 - cd /data/fxa/customFiles
 - cp spotters.dat > spotters.dat.1
 - cp spotters.goodness > spotters.goodness.1
 - cp.spotters.text > spotters.txt.1
 - cp **XXX**-spotters.dat > **XXX**-spotters.dat.1
- FTP the converted Excel files into AWIPS.
- Change the maxStaticIds to a number greater than the number of spotters that you have. (Refer to chapter 16 in the AWIPS System Managers Manual)

2. Change ownership of the files and run localization scripts

- Change ownership of the new files.
 - chown fxa:fxalpha spot*
 - chown xxx*
 - exit (Takes you back to fxa user)

- Make **XXX**-spotters.dat “station specific”
 - mv **XXX**-spotters.dat
 - MKX-spotters.dat
 - Exit (Takes you back to fxa user on your workstation)

- Run Localization scripts
 - cd /awips/fxa/data/localization/scripts
 - ./mainScript.csh f –station XXX XXX
 - exit

D. Display the Storm Spotters on AWIPS

1. Overlay the spotters onto the AWIPS display

- Restart D2D on the Graphics workstation.
- Reduce map to either State or CWA scale.
- Go to the map menu.
- Click on spotter readout.
 - A * symbol will be displayed, marking each spotter location.
- Set the cursor to sample.
- Move the cursor over one of the * symbols and the spotter information will be displayed in the following format...

Name	John Doe
Phone #, Notes	(123) 456-7890, Trained
City, State	Wichita, KS

IV. REFERENCES

Laseman, Jay. <jay.laseman@noaa.gov>. National Weather Service-Omaha, NE. Personal Correspondence.

Licitar, Kim. <kim.licitar@noaa.gov>. National Weather Service-Milwaukee/Sullivan, WI. Personal Collaboration.

National Weather Service, 2002: *AWIPS System Manager's Manual for Build 5*