

P1.10 AN EVALUATION OF THE USE OF REAL-TIME WEATHER DATA BY PUBLIC-SAFETY AGENCIES

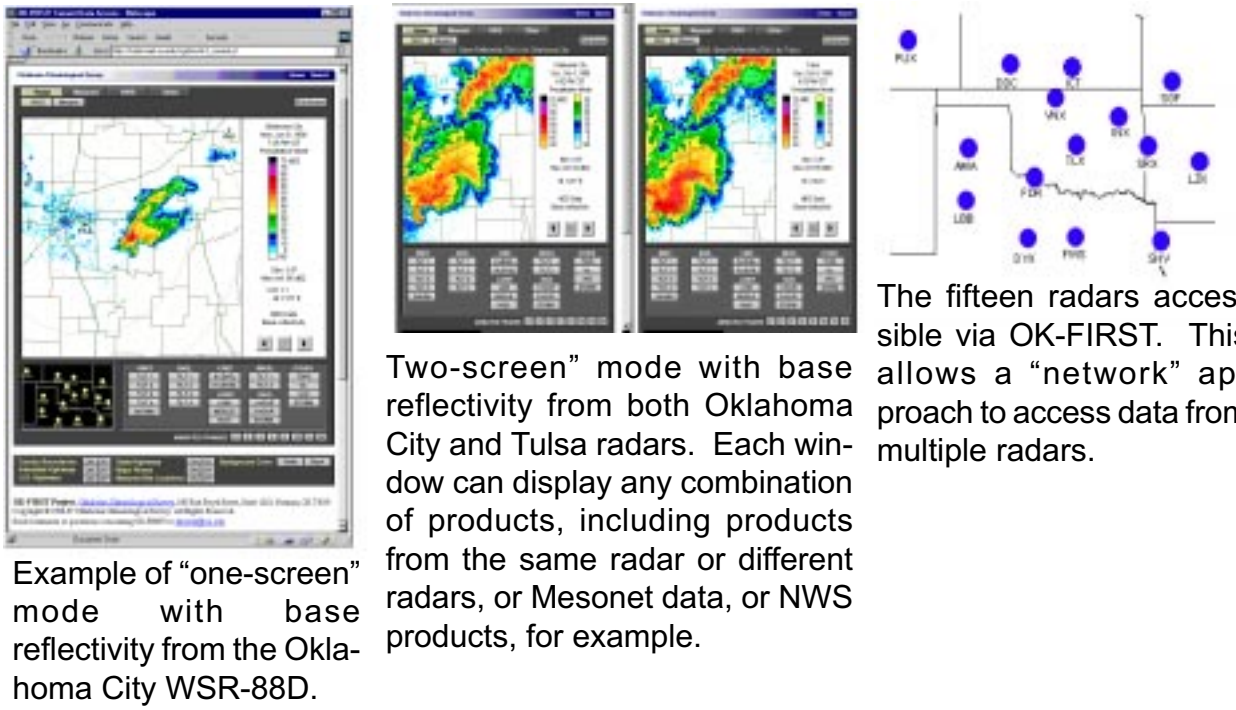
Dale A. Morris and Christopher Duvall
Oklahoma Climatological Survey
Norman, OK



INTRODUCTION

Through a program known as OK-FIRST, 65 public safety-agencies (63 in Oklahoma plus one each from Wichita Falls, TX and Fort Smith, AR) have free access to a large suite of environmental data in real-time. Each participant also graduated from one of three comprehensive training workshops that focused on computer literacy *and* basic data interpretation. The project continually solicits feedback from participants on various aspects of the program. Product usage logs are also analyzed to find areas for future product and software development or to discover potential training deficiencies.

Training materials and current data are available through Web pages. Current data are divided into four sections: NIDS (radar data from 15 radars), Mesonet (115 stations in Oklahoma), NWS, and Other. Each section is accessible in either a “one-screen” or “two-screen” mode (below). Radar and Mesonet data are displayed using custom “plug-in” software developed for web browsers.



SYSTEM USAGE: NIDS DATA

428,395 NIDS products accessed through September 1998. The lowest tilt of base reflectivity was the overwhelming choice of radar data.

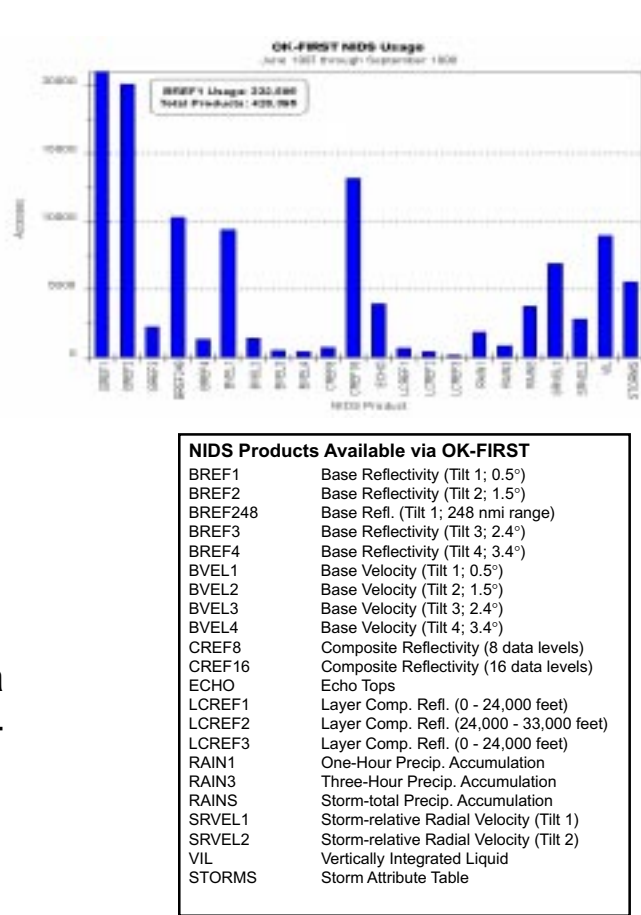
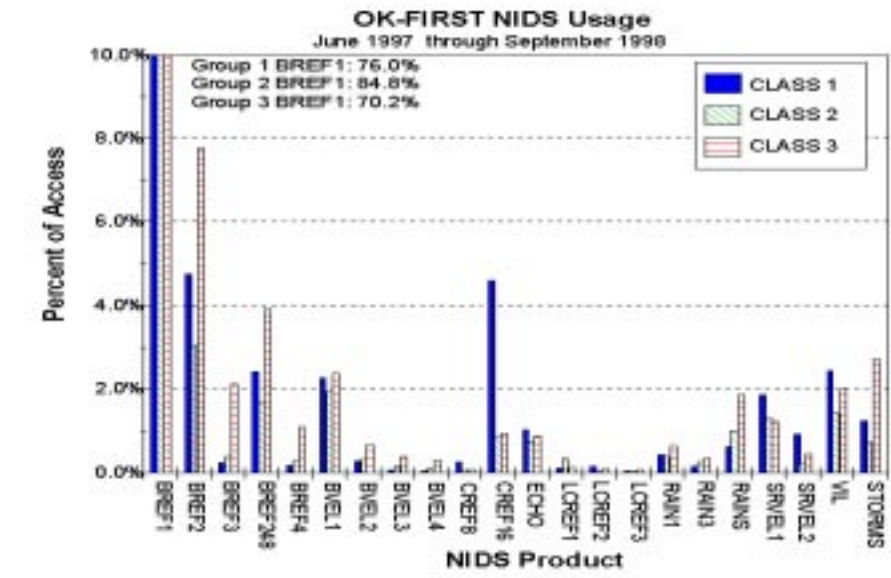
Other popular products included BREF2, CREF16, BVEL1, SRVEL1, VIL and STORMS.

A software upgrade allowed the display of storm attributes on CREF16. Thus, CREF16 usage has risen at the expense of STORMS.

Usage by training group (lower left) indicates that Class 3 viewed a wider range of products. Classes 1 and 2 accessed data over a longer time period (16 and 11 months) than Class 3 (6 months). Oklahoma weather was relatively inactive before Class 3 gained access.

Emergency managers and law enforcement tended to use a wider range of products than fire officials (lower right). Perhaps BREF1 and BVEL1 were useful to locate wind shifts.

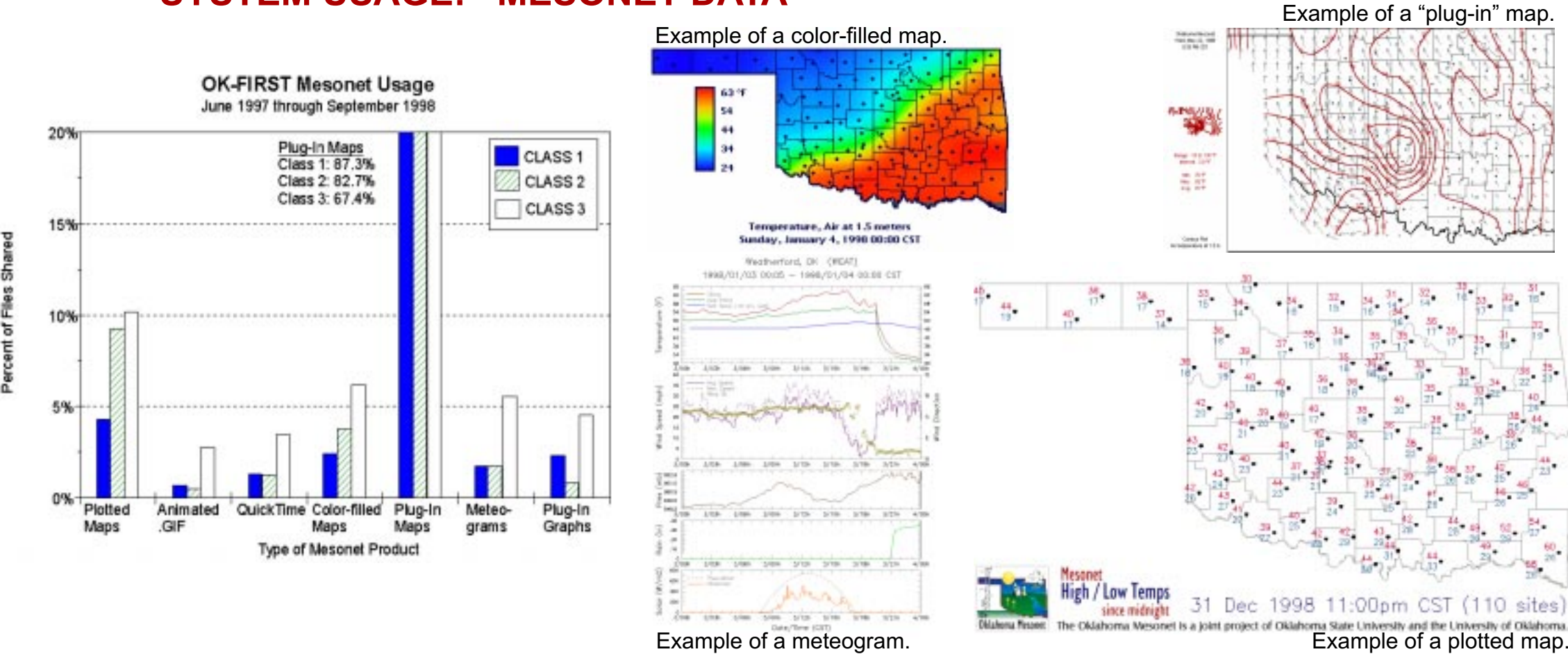
October 4, 1998 Tornado Outbreak: 25,000 NIDS files were accessed out of 86,500 product requests in 24 hours.



SYSTEM USAGE: MESONET DATA

- Plug-in maps had heaviest usage (67-87%).
- Automatically updating images.
- Interactive zooming & scrolling capability.
- Presented at the top of the Mesonet page.
- Plotted maps, color-filled maps, and meteograms were also popular.
- Pre-generated images.
- Small files for quick download times.
- Diverse product options available.
- Animations were used occasionally.
- Helpful to see movement of features.
- Large files were slower to download.
- Few types of pre-generated loops available.
- Future software will generate Mesonet loops on user machines.

Class 3 accessed a wider range of Mesonet products than Classes 1 and 2. Later training workshops focused more heavily on Mesonet interpretation.



PARTICIPANT SURVEY

Twenty four participants responded to a survey about various aspects of OK-FIRST, including the necessity of training and the importance of having access to various types of weather data. Questions were asked using a 5-point scale, with “1” indicating “Not Much Agreement”; “3” indicating “No Opinion”, and “5” indicating “Very Much Agreement”. Percentage of responses are displayed below. Ninety-two percent of respondents thought that ongoing training was important. Radar data, Mesonet data, and Watches and Warnings were the most important types of data. The data must be “local” and “real-time”.

Question	1	2	3	4	5
How important is it for you to have adequate training to use the program?	0	0	0	4	96
How reliable has the OK-FIRST program been for you?	0	0	0	46	54
How much has OK-FIRST increased your ability to inform and advise the public about potentially dangerous weather situations?	0	0	0	25	75
How necessary is ongoing training in order to maintain and enhance your ability to use and interpret products available through OK-FIRST?	4	4	0	29	63
How important is it for you to have access to:					
local data?	0	0	0	8	92
real-time data?	0	0	0	4	96
NIDS data?	0	0	0	4	96
Mesonet data?	0	0	0	8	92
Satellite data?	0	0	8	50	42
Fire Danger data?	0	0	16	42	42
Hydrological data?	0	0	17	33	50
Watches & Warnings?	0	0	0	12	88
NWS forecast data?	0	0	4	25	71
Forecast data from NWS computer models?	0	0	9	56	35

Corresponding author address: Dale A. Morris,
Oklahoma Climatological Survey, 100 E. Boyd,
Norman, OK 73019; E-mail: dmorris@ou.edu