

Whitney St. Charles



B.S. Computer Science: Software Systems
University of Tennessee at Chattanooga, 05/2008

“ ... When I was deciding where I would spend my summer working, I immediately thought of ORNL because I had had such a fantastic experience in the summer of '07...”

TEAMS Text-based Event Analysis and Mapping System

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Research Alliance in Math and Science

Computational Science and Engineering Division
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Oak Ridge, Tennessee



Introduction

- Imagine a natural disaster occurs in a coastal city ...

fires



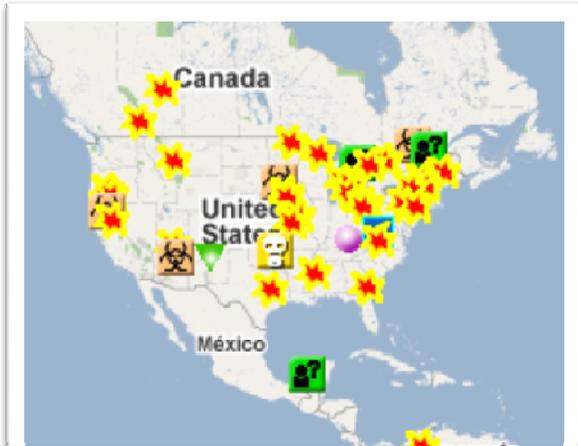
looting
...shootings



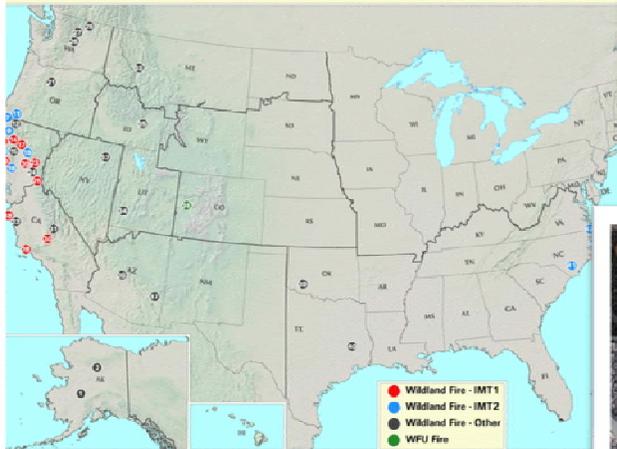
power outages



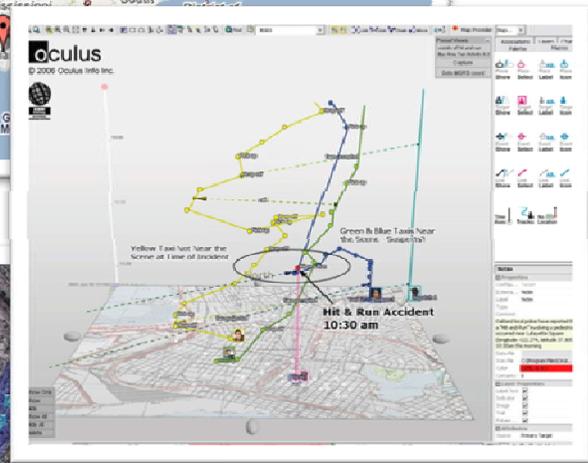
The Current Standard: Web Applications and Desktop Applications



Large Incidents - July 11, 2008



- | | | | |
|------------------------|--------------------------|---------------------------|----------------|
| 1 PORCUPINE RIDGE | 16 BEAR WALLOW COMPLEX | 31 CANYON COMPLEX | 46 NARROWS |
| 2 GOOSE SLOUGH | 17 MEU LIGHTNING COMPLEX | 32 YUBA RIVER COMPLEX | 47 HIGHWAY 20 |
| 3 ALPS COMPLEX | 18 IRON COMPLEX | 33 AMERICAN RIVER COMPLEX | 48 LANE 2 |
| 4 BLUE 2 | 19 YOLLA BOLLY COMPLEX | 34 BADGER MOUNTAIN | 49 WHISKEY |
| 5 MAD COMPLEX | 20 SODA COMPLEX | 35 BROWNS CANYON | 50 COAL CREEK |
| 6 HUMBOLDT COMPLEX | 21 SHU LIGHTNING COMPLEX | 36 GAP | 51 WING GATE |
| 7 UKONOM COMPLEX | 22 BASIN COMPLEX | 37 CAYUSE FIRE | 52 ROCKY CREEK |
| 8 LIME COMPLEX | 23 CLUB COMPLEX | 38 PLUTE | 53 TUSSOCK B. |
| 9 HELIX HALF-COMPLEX | 24 BTU LIGHTNING COMPLEX | 39 CLOVER | 54 SOUTH 1 |
| 10 WHISKEYTOWN COMPLEX | 25 MILL | 40 GOPHER | 55 EVANS ROAD |
| 11 KICKAPOO COMPLEX | 26 IMPERIAL | 41 MT CENTINIA | |



Research Activities

- Conducted a literature review of current event mapping techniques and software
- Determined probable user needs and developed system requirements
- Designed effective user interface and generated all graphical components
- Utilized Java desktop API to interface with the Google Map server create the event visualization platform
- Developed converter tool which allows users to view event data in the 3D Google Earth environment

Text-based Event Analysis and Mapping System (TEAMS)

File Help

TEAMS

Text-based Event Analysis and Mapping System

ASER
Applied Software
Engineering
Research Group

rio dell, ca

Search the event map

View Events Edit Events Create Events



Event Type:

Event Description:

Latitude:

Longitude:

Date:

Event Pictures:

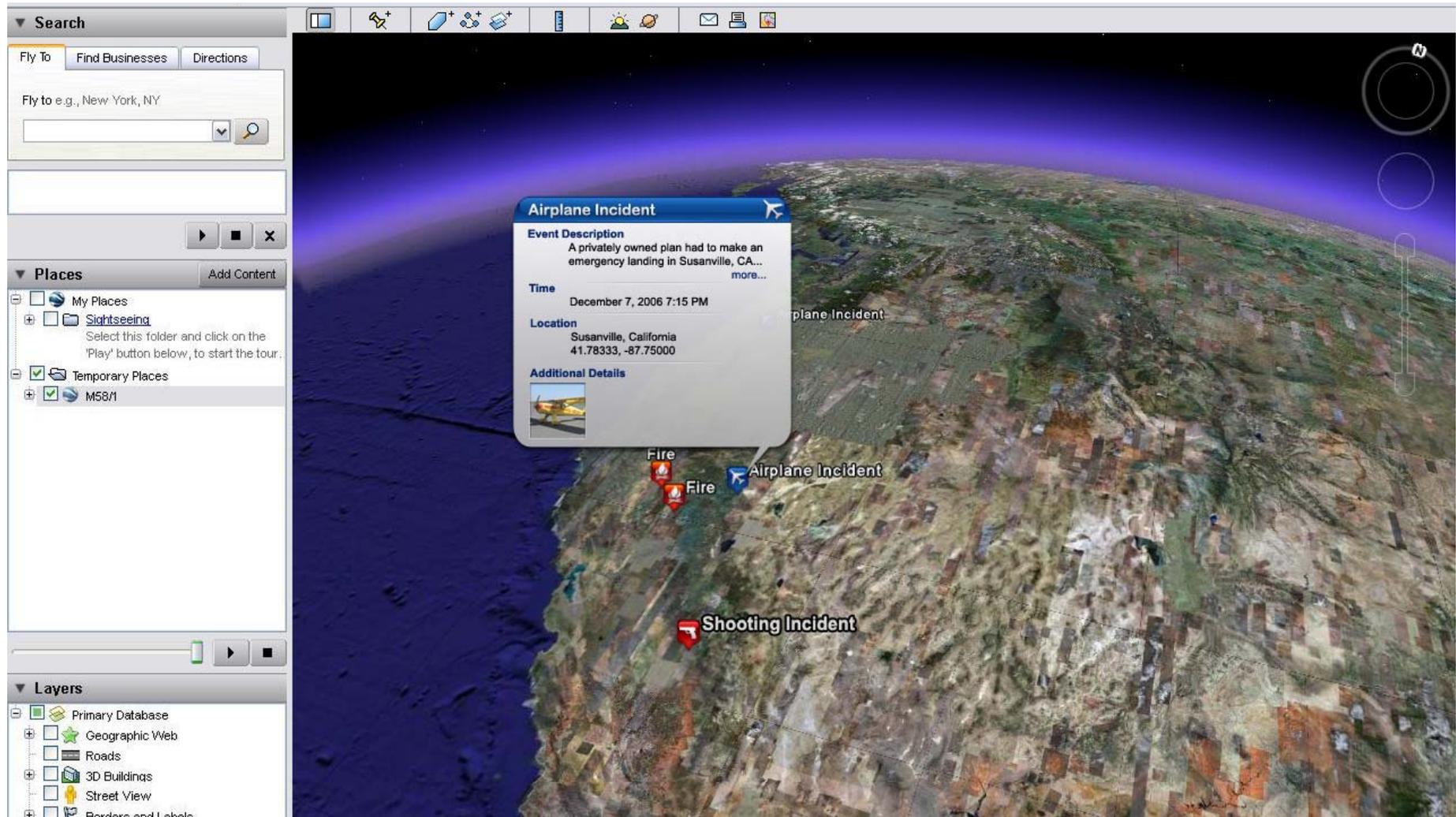
-
-

Preview



Select All
Clear All

Text-based Event Analysis and Mapping System (TEAMS)



Usage scenario

Load devices with local mission map

Carry mobile devices in field

- **Observe an event**
- **Record event**

Sync their devices to the primary application when they regain internet access

Formulate mission plan

- **Take all event reports into account**
- **Attempt to map safest/most effective route**



Whitney St. Charles



Computer Science: Entertainment Technology
M.S. Candidate
Carnegie Mellon University, 08/2008 - present

“... The work that I completed for Dr. Jiao, in both programming and design, has made a very powerful addition to my portfolio. I am very happy to say that I have already received an internship offer for the summer of 2009 in GUI design and implementation... Furthermore, I have no doubt that my experience at ORNL played a large part in my admittance to Carnegie Mellon for graduate school. I highly value all the time that I've spent with ASER ... ”

Questions