Common Operating Picture and Data Sharing in the Fire Service
ICS-1401

Introduction

FIRESCOPE defines a Common Operating Platform (COP) as an electronic based map which includes layers of information to help "paint a picture" (Common Operating Picture) of an emergency incident and planned event. This picture helps responders have better situational awareness in order to make more informed decisions on these incidents, regardless of what software platform an agency uses.

FIRESCOPE has identified that there are multiple software platforms that exist for analyzing the status of incidents. These platforms perform well and fulfill the needs of individual agencies; however, lack the ability to share the incident data with outside agencies across multiple platforms as an incident converges into a multi-agency response.

Problem Statement

A vegetation fire starts in a single agency jurisdiction which initiates a vegetation fire response. The responding agency uses an incident analyzing software platform so all of the initial responding units (via mobile computers/tablets) are able to see the shared data such as fire location, responding units via AVL, hazards and other pertinent information found within the platform. The Incident Commander arrives on scene and begins "painting a picture" using the software plat- form. The IC uses the platform to establish a rough outline of the fire, defines division boundaries, and identifies the staging area location. The IC then uses the platform to help analyze the fire's potential, projecting how many structures are threatened and formulates the initial Incident Action Plan. The IC then determines the need for several strike teams and requests mutual aid.

Arriving mutual aid units that may be using a different software platform are unable to see the picture the IC has painted through his/her agency's software platform. The mutual aid units are using a platform that has the same capabilities but does not communicate or share data with another software platform leaving the mutual aid units with less situational awareness than the initial responding units. The mutual aid units must fall back on use of paper maps, radio communications and face-to-face meetings to gain situational awareness of the incident.

Recommendation

FIRESCOPE recommends a common minimum data set to share regardless of what software platform is being used. FIRESCOPE believes that a single entity hosting all of this data would be ideal and minimize programming costs to create links for all platforms to share data. The following has been identified by FIRESCOPE as the minimum required information to be shared between Common Operating Pictures:

- Incident/Event Name/Number
- Incident Description
- Incident Start Date and Time
- Incident/Event Perimeter
- Incident/Event Direction
- Incident Size
- Direct Protection Area Layering
- Significant Events
- Threat Direction
- All ICS Compliant Mapping Symbology (Staging, Incident Command Post, etc.)
- Weather (Wind Direction and Speed, etc.)
- Known Safety Hazards
- Infrastructure Pertinent to Incident
- Files (i.e. video, documents, etc.)
- Notes
- Automatic Vehicle Location (AVL) - including geo-location and time stamp of unit
- Agency and Unit ID - the unit's Agency and unique identifying code
- Unit Type - the CAD's unit type designation

FIRESCOPE recommends following standards set forth by the National Emergency Number Association and the Association of Public-Safety Communications Officials (NENA/APCO) Emergency Incident Data Document (EIDD) working group, which is established to initiate the process of creating a National Information Exchange Model (NIEM) conformant, American National Standard (ANS) that will be used to share emergency incident information between and among authorized entities and systems. Information in this document is an information source for the designers, manufacturers, administrators and operators of systems to be utilized for the purpose of electronically sharing emergency incident information. Furthermore, this document is intended to be used by subject matter experts to develop the EIDD XML1 schema and associated artifacts, as well as information to be used by system manufacturers to understand the components associated with the EIDD incident information sharing standard. It is not intended to pro- vide complete design specifications or parameters or to assure the quality of performance for systems that process such equipment or services.

Conclusion

Agencies throughout California have been utilizing incident analyzing platforms to more effectively manage emergency incidents for several years now. There are many platforms that perform the same functions and house similar information to better mitigate emergency incidents. FIRESCOPE believes that a standard must exist in order to provide software platform developers minimum data that must be capable to be shared with an agency regardless of what software platform they use.

1 Extensible Markup Language (XML) is used to describe data. The XML standard is a flexible way to create information formats and electronically share structured data via the public internet, as well as via corporate networks.