International Wildland Fire Summit Paper #3

INCIDENT COMMAND SYSTEM (ICS)

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Introduction

As a result of severe fires over a number of years, national leaders have demanded a more coordinated approach to the management of wildfires. There have been many examples over the years of large numbers of fire suppression agencies making gallant attempts to minimize the devastation of uncontrolled wildfires. However, their ability to effectively cooperate with other fire agencies was limited by organisation and communication barriers. In the USA, State and Federal legislators, concerned at the lack of uniform emergency management protocols, directed federal, state, and local government to develop a common incident command system that would make a quantum jump in the capabilities of wildland fire protection agencies to effectively coordinate interagency actions and to allocate suppression resources in dynamic, multiple fire situations. This landmark direction created the beginning of the Incident Command System (ICS), and the ability of emergency response personnel to work together toward common objectives. Australia and New Zealand, faced with similar emergency response issues, evaluated incident management systems around the world, elected to adopt the ICS and modify it to meet their specific needs.

The community expects that emergencies will be dealt with safely, effectively and efficiently by emergency services. Experience has shown that at times parochial attitudes, internal politics, and the lack of communication result in poorly managed emergency operations. Lack of co-ordination between agencies and unclear accountabilities often results in safety issues being overlooked. There is therefore, a professional, social, political and economic demand for the management of emergency incidents to be enhanced wherever possible.

The complexity of incident management, coupled with the growing need for multi-agency and multi-functional involvement at incidents has increased the need for a standard inter-agency incident management system not only within a country/state but increasing internationally. Many countries have adopted similar or common systems of addressing emergencies. In addition a number have developed firefighting agreements based on a common system enabling interoperability when lending support to other countries. In the past this is usually to support adjoining States or Countries within the same geographical region. Since 2000 we have seen examples of this being broadened by support provision occurring from different hemispheres. In 2000 and 2002, Australia and New Zealand sent critically needed incident managers to the USA. Similarly early in 2003 the USA reciprocated sending fire specialists to Australia. Canada and the USA frequently exchange firefighting forces, especially along their borders. New Zealand sent firefighting forces to Australia in 2002 and 2003. ICS was also used during the wildland fire emergency in Ethiopia in 2000.

The Incident Command System may need to be adapted to suit a particular country's existing political, administrative or cultural systems, customs and values. Where the primary purpose is to enhance emergency management within a country, such adaptations are not only beneficial, but may be essential to have the ICS system adopted. If the purpose of adopting ICS is to enhance cooperation between countries, through the sharing of resources such as fire management teams, it is highly recommended that the sending country and the receiving country both use the same emergency management system. This paper suggests that such a system should be the ICS. Given that ICS is a proven model in many countries and given that training materials for ICS are freely available, there is considerable benefit to be gained by a country adopting this system.

Objective

The purpose of this paper is to recommend the adoption of a common international incident command system by all countries. This action will leverage the domestic capability of emergency response managers by utilizing other trained personnel within the country, will facilitate international training of fire managers, and will enhance the global interoperability of emergency managers. In many countries, emergency responders are periodically faced with overwhelming emergency situations, and additional emergency responders, trained to common operational procedures, are difficult to locate. The global capability to support other countries is often hampered by incompatible operating procedures or organizational incompatibilities.

Background

Incident management systems in one form or another exist in many countries. In most countries, local emergency operating protocols have evolved over the years to meet the specific demands of the jurisdiction. Many have been copied from the military command and control models. Unfortunately, most of these models do not provide consistent procedures or organizations throughout each country. The ICS is the most widely used incident management system. It was specifically designed to address the majority of management problems common to most complex incidents. These problems included:

- Inefficient supervisory span of control.
- Competing organizational structures
- Inconsistent or non-existent incident information
- Incompatible communication systems
- Uncoordinated planning across agency lines
- Unclear lines of authority
- Competing agency incident objectives
- Inconsistent terminology.

It took a considerable investment of time and effort to design an incident management system that could address all of those issues. ICS has a proven record in many countries around the world. ICS has been fully implemented in Australia, New Zealand, Canada, and the USA. Mexico and Costa Rica have interpreted the ICS training course into Spanish, and have begun to teach ICS to wildland firefighters. In addition, Taiwan, Bulgaria, and Mongolia have received ICS training, and new training programs are starting in India and South East Asia. Recently, the USA has adopted ICS as the national incident management system to manage all domestic emergency threats and responses.

ICS was developed on four basic principles.

1. The system must be organizationally flexible to meet the needs of incidents of any size and kind.
2. Organizations must be able to use the system on a daily basis for routine situations and major emergencies.
3. The system must facilitate a common management structure that integrates personnel from different locations and from a variety of agencies.
4. The system must be cost effective.

ICS Framework

The ICS framework provides an effective forum for interagency emergency management issues to be addressed. By establishing a unified command of the respective agency/jurisdictional representatives together at a single interagency incident command location, the following advantages will be achieved:

- One set of objectives is developed for the entire incident.
- A collective approach is made to developing strategies to achieve incident objectives.
- Information flow and co-ordination is improved between all jurisdictions and agencies involved in the incident.
- All agencies with responsibility for the incident have an understanding of each other's priorities and restrictions.
- No agency's authority or legal requirement will be compromised or neglected.
- Each agency is fully aware of the plan, actions, and constraints of other agencies.
- The combined effects of all agencies are optimised as they perform their respective assignments under a single Incident Action Plan.
- Duplication of effort is reduced or eliminated thus reducing costs and the chance of frustration and/or conflict.

From this unified approach, a single incident action plan is developed. Success in this area requires advance planning, understanding and acceptance within respective agencies. If not fully understood, it can cause confusion or be rejected.

ICS Principles

The ICS structure is based on the following principles:

Common terminology
Common terminology is essential in any emergency management system, especially when diverse or other than first-response agencies are involved in the response. When agencies have slightly different meanings for terms, confusion and inefficiency can result. In ICS, major organisational functions, facilities, and resources are predesignated and given titles. ICS terminology is standard and consistent among all of the agencies involved.

Modular organisation
A modular organisation develops from the top-down organisational structure at any incident. “Top-down” means that, at the very least, the Control/Command function is established by the first-responding officer who becomes the Incident Controller. As the incident warrants, the Incident Controller delegates other functional areas. In approximately 95 percent of all incidents, the organisational structure for operations consists of command and single resources (e.g., one fire truck, an ambulance, or a tow truck). If needed, however, the ICS structure can be scaled up to multiple layers that are implemented to meet the complexity and extent of the incident.

Integrated communications
Integrated communications requires a common communications plan, standard operating procedures, clear text, common frequencies, and common terminology. Several communication networks may be established, depending on the size and complexity of the incident.

Consolidated Incident Action Plans
Incident Action Plans describe response goals, operational objectives, and support activities. The decision to have a written Incident Action Plan is made by the Incident Controller, dependent on the duration and complexity of the incident. Incident Action Plans should cover all objectives and support activities that are needed during the entire operational period. A written plan is preferable to an oral plan because it clearly articulates responsibilities and provides documentation when requesting assistance. Incident Action Plans that include the measurable objectives to be achieved are always prepared around a timeframe called the operational period.

Manageable span of control
A manageable span of control is defined as the number of individuals or functions one person can manage effectively. In ICS, the span of control for any person falls within a range of three to seven resources, with five being the optimum.

Designated incident facilities
It is important that there are designated incident facilities with clearly defined functions to assist in the effective management of an incident. Every incident requires that control be managed from one identifiable Incident Control location. Additional facilities are designated as the complexity of an incident increases.

Comprehensive resource management
Comprehensive resource management is a means of organising the total resource across all organisations deployed at an incident. This includes:

- maximising personnel safety
- optimising resource use
- consolidating control of single resources
- reducing the communications load
- providing accountability
- reducing freelancing
- assigning all resources to a status condition
- managing day and night shift resources

- enabling sustaining resources during long duration (campaign) incidents.

ICS Organisational Structure

Many incidents – whether major emergencies or disasters (such as cyclones or earthquakes) or more localised incidents (such as accidents, hazardous substance spills or fire incidents) require a response from a number of different agencies. No single agency or department can handle every large-scale emergency situation alone. More usually, several agencies must work together to manage multi-agency emergency response. To co-ordinate the effective use of all the available resources, agencies need a formalised management structure that lends consistency, fosters efficiency, and provides direction during a response.

The ICS organisation is built around four major components:

1. **CONTROL** – the management of the incident

2. **PLANNING** – the collection and analysis of incident information and planning of response activities

3. **OPERATIONS** – the direction of an agency's resources in combating the incident

4. **LOGISTICS** – the provision of facilities, services and materials required to combat the incident.

These four major high-level structural components (as further illustrated in Figure One) are the foundation upon which the ICS organisation is built. They apply during a routine emergency, when preparing for a major event, or when managing a response to a major disaster.

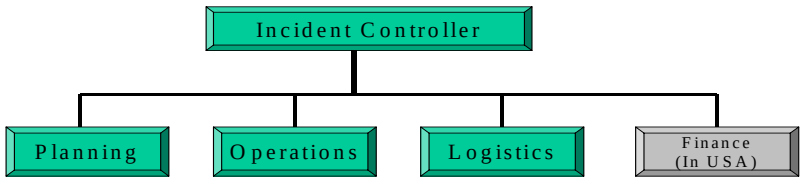

Figure One - **Four high level structural components**

The ICS structure can be expanded or contracted to manage any type and size of incident. The complexity of the incident more than the geographic size is normally the determinant for the Incident Controller establishing additional members of the Incident Management Team to fulfil management functions. ICS requires only one position to be filled – that of the Incident Controller. The Incident Controller carries out all of the

management functions and responsibilities until the complexity of the incident determines that he or she assigns someone else responsible for a particular function(s). This is only done when necessary. Figure 2 illustrates a complex organisational ICS structure for managing a complex wildland fire incident.

Incident Management

Incident management can be viewed as a system composed of inter-related components that function together to enable the best possible management of an emergency of any scale. As such, it is necessary to understand the function of individual components, as well as how they fit together.

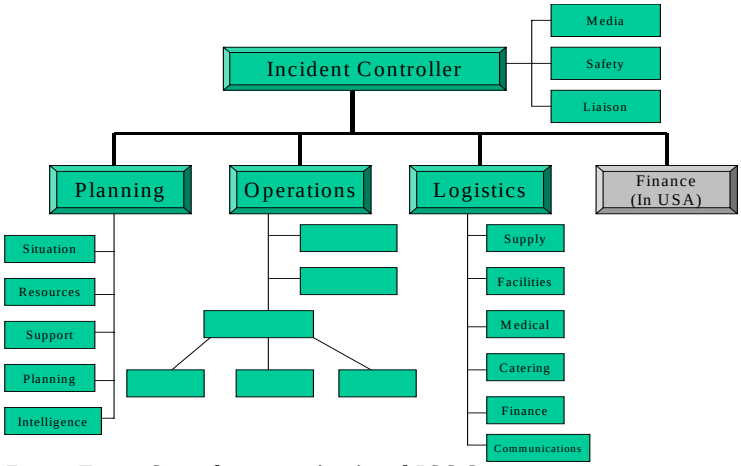

Figure Two - **Complex organisational ICS Structure**

The Incident Controller is responsible for the overall direction of the response activities in an emergency situation and is the person in charge of an incident. The Incident Controller will carry out all management functions and responsibilities until the incident assumes such a size that it requires additional functional roles to be appointed. It is important to distinguish between Incident Control, which relates to situations and operates horizontally across agencies, and Command, which operates vertically within an agency. Under ICS an incident has only one Incident Controller but a number of line commanders may be required depending on the number of agencies involved.

Conclusions

On a global scale emergency services consume large amounts of funding each year. Safety, effectiveness and efficiency are achievable where a seamless integration of agencies is possible at an emergency. A globally implemented ICS will improve firefighter safety, efficiency and effectiveness in management response. It will also limit damage to property and, most importantly, will save lives. ICS provides the model for command, control and co-ordination of an emergency response. It provides a means of co-ordinating the efforts of agencies as they work towards the common goal of stabilising an incident and protecting life, property, and the environment. Many emergencies, from vehicle accidents to large-scale disasters, require co-ordination across several agencies. It will also reduce the risk of agency overlap and potential confusion at an emergency through poor understanding and inadequate co-ordination.

It is critical that a common global incident management system is adopted that will enable any assistance to quickly function in an effective manner. ICS is that tool which can enable that goal to be achieved.