

*Symposium*  
FROM FORUM

## **Enhanced Firebar System**

Forum Communications International  
Your Single Source for First Responder Technology

972-680-0700

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## **Introduction**

The current focus on improving homeland security provides an opportunity to further enhance the nation's emergency communications systems. The need for emergency communications exists both in urban as well as in rural communities, in business operations and public safety.

In urban areas, many of the enterprises (airports, electric utilities, hospitals, schools, prisons, manufacturing plants, etc.) find themselves facing emergency situations every now and then. After an emergency occurs, the authorities try to manage the situation by making frantic phone calls to 911 operators and/or paging their own security personnel. Most often, the response to the emergency situation is 'after the fact' instead of executing a proactively well thought out plan.

In rural communities, emergency services are sometimes provided by voluntary firemen. The Independent Operating Company (IOC), i.e., incumbent phone company provides a 'Firebar' service to the voluntary firemen to facilitate communications between multiple individuals responding to an emergency situation. This service notifies the firemen about the emergency situation at hand and also places them in a conference so that they can co-ordinate their efforts. Some of the 'Firebar' systems deployed in the rural areas are limited in various ways. These systems have limited number of audio conferencing ports (usually 8 or less) and are limited in terms of provisioning multiple phone numbers that may belong to an individual fireman. Most of these systems are built using twenty-year old analog technology.

Forum Communications International, a world leader in audio conferencing technology, offers multiple next generation-solutions for emergency response communications. This paper describes the benefits of the **Enhanced Firebar** option now available with Forum's Symposium digital conference bridge.

## **The Pro-active Approach**

We live in the post 9/11 era. Manmade and natural disasters are a fact of life and will continue to happen. We have to equip our cities; communities and business sites with capabilities that help them proactively plan for and cope with these emergency situations swiftly. The first few minutes are crucial during an emergency situation and if communications between the first responders in those crucial moments can be speeded up, then the loss of life and property can be minimized. Forum Communications' Enhanced Firebar application is designed with that objective in mind.

## How does it work?

The Forum Symposium platform is Internet accessible. When configuring the Enhanced Firebar application, the system administrator will create multiple '**emergency groups**'. Each emergency group will contain the contact information of the individuals who will respond to the particular emergency type. Figure 1 shows a pictorial of the emergency specific groups on a given system. One fireman or first responder may be part of multiple emergency groups.

S.No.	Group ID	Group Name	Participants	Edit	Delete
1.	77840	5 Alarm Fire	Preston Baker	Edit	<input type="checkbox"/>
2.	29545	Bomb Explosion	Jeff Box	Edit	<input type="checkbox"/>
3.	81881	Chemical Spill	Eric Johnson	Edit	<input type="checkbox"/>
4.	84407	Gas leak	Mike Burbatt	Edit	<input type="checkbox"/>
5.	65907	Prison escape	Don Murray	Edit	<input type="checkbox"/>
6.	35117	rich's grp	Jeff Box	Edit	<input type="checkbox"/>

**Figure 1 – Group Set Up Page**

For each individual, the system can store up to four telephone numbers, email address, SMS<sup>1</sup> and Pager address. In addition, it is also possible to assign a working time shift (daytime, night time etc.) in which the individual will be available to take an emergency related phone calls. All of the availability information along with the contact information is kept in the system's database. The system assigns a unique 5-digit group ID to each emergency group. See Figure 1. This group ID 'remembers' all the contact related details of individual members of the group e.g., their multiple phone numbers (cell, office, home etc.), their e-mail or pager addresses, and information about their availability.

In the event of an emergency, the person responsible for initiating the conference between the group members, calls into the conference bridge and enters a code to initiate the immediate call out and the

<sup>1</sup> Short Message Service

Group-ID (IVR menus help expedite the process). The system then blast-dials to all 'available' group members simultaneously. As part of the dialing out process, it tries to 'find' the group members at one of the four given phone numbers. If a group member is not available at his/her first number, it will try to find him/her at the 2<sup>nd</sup> number, then the 3<sup>rd</sup> number, and then the 4<sup>th</sup> number respectively. In parallel to the first dial-out initiation, the system will immediately send emergency related alert messages to the member's e-mail, SMS and pager addresses. The alert message contains information that a member can use to dial back into the ongoing audio conference. The intent here is to bring together as many emergency related group members together on the conference call as possible and as quickly as possible.

### **The Benefits of the Symposium Proactive Approach**

There are several benefits of the proactive approach described above:

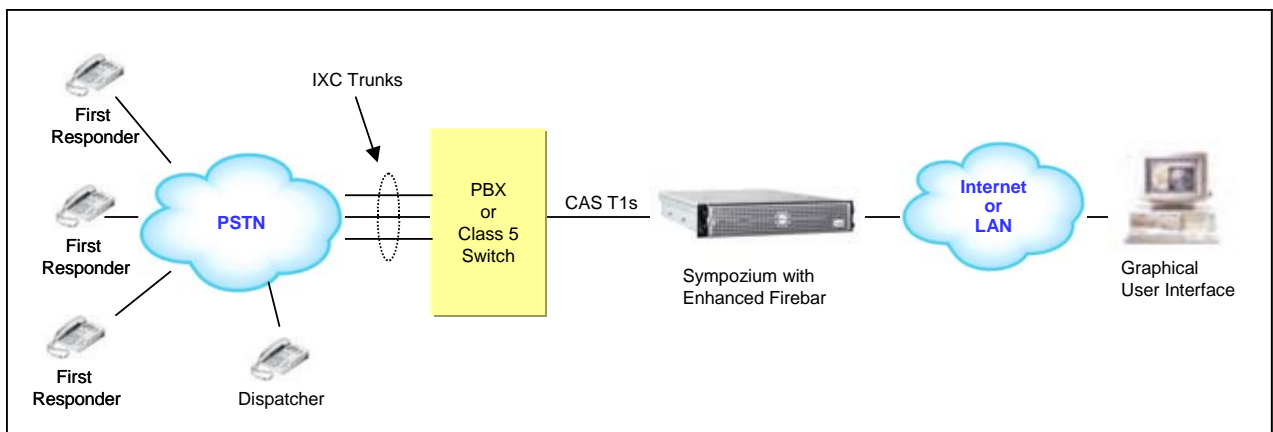
- 1) By having to pro-actively create 'emergency specific' groups, the agencies involved in handling emergencies are forced to pre-plan. As group members may belong to different organizations (Fire, Police, EMS etc.), this approach leads to better inter-agency co-operation before the emergency and better co-ordination when responding to one.
- 2) Use of 'availability' information as part of the first responder selection process increases the probability of reaching available individual responders and saves precious seconds in the response process.
- 3) Initiating immediate 'blast dialing' and simultaneous email/paging to multiple first responders reduces the overall time required to reach all emergency team members.
- 4) Use of 'find-me' capability further improves the probability of reaching individual first responders.
- 5) Integrating simultaneous email, SMS and Pager-based messaging increases the success in disseminating emergency related information.
- 6) The Symposium is versatile and can also be used as a notification system to cover a wide area in a general emergency announcement.
- 7) Use of audio-conferencing allows responsible parties to start communicating with each other usually in less than a minute.
- 8) By keeping a record of the audio and the accompanying event log with time stamps, post-event

analysis is simplified.

All of the capabilities described above contribute towards making the Symposium Enhanced Firebar system an excellent tool for improving communications between the first responders when faced with an emergency situation.

### **Adding a Symposium to Emergency Responders' Network**

The Symposium system is typically deployed behind a phone company's Class 5 central office switch, or an enterprise-based PBX as shown in Figure 2.



**Figure 2 – Typical Enhanced Firebar Installation**

The Class 5 switch or the PBX assigns a lead number to the trunk group set up on the T1s connected to the Symposium. It then routes all incoming calls destined to the lead number on to the T1 trunks. Upon receiving an incoming call, the IVR built into the Symposium guides the caller to enter the group ID and record the emergency related voice message. The Symposium's User Interface is accessible over the Internet. The system's administrator can access the GUI by typing the appropriate URL assigned to the Symposium on his/her browser. After logging in, the administrator can create the emergency specific groups as shown in Figure 1.

### **Utilizing the Symposium to Enhance Business Continuity**

Applications for the Enhanced Firebar are not limited to fire and medical response. This solution allows enterprise organizations to connect nationally or globally in the event of a regional emergency to immediately inform the support personnel to implement the appropriate contingency plan. With

Symposium's Enhanced Firebar functions and find-me capability, management is better equipped to handle non-emergency events as well. By pre-planning the information flow that is further aided by quick delivery, organizations can respond swiftly to changes in their business climate and better manage their resources.

## **Conclusion**

This paper described a proactive approach to handle communications when immediate events require immediate event management. Using the proactive approach, all the appropriate first responders required to handle a given emergency can be brought together on a conference call, literally at a moment's notice, thereby allowing them to respond swiftly to the emergency situation at hand. This functionality, built into Forum Communications' Symposium, can be used by IOCs and other CLECs to provide 'Enhanced Firebar' service to all types of response agencies. With the expandability and robust features of the Symposium, this solution can be customized for large urban response communications or smaller local response teams easily.

Enterprises can use the Symposium to disseminate a variety of information to appropriate personnel quickly and bring them together on a conference call if the situation requires immediate collaboration. Because the Symposium can host reservation-less conference calls and recurring conference call meetings in addition to emergency communications, this solution provides dramatic cost justification by reducing corporate conferencing costs.

This solution can save corporations millions of dollars by enhancing business continuity through coordinating local response teams as well as complex, worldwide resources.

For more details on Forum's complete line of conferencing products, please contact our technical sales department at 972-680-0700, ext. 2.

## **References**

[1] Homeland Security white paper by APCO International, August 2002. [www.apco911.org](http://www.apco911.org)