GlowMark and Tactical Imaging Tac-Tag Fire Exit navigation system case study

Colorado Springs Fire Department (CSFD) is pleased to announce the completion of the first live case study exercise utilizing the Tac-Tag structural navigation system at the University Campus Colorado Springs (UCCS).

The system is an innovative integration using a matrix of physically located fire retardant glow in the dark marker tags which have been designed in collaboration with Tactical Imaging USA and GlowMark UK. The Tac-Tag markers were placed at key points within a structure, coupled with a high quality Computer Aided Design (CAD) drawing that correctly plots the location of those physical tags on a floor plan accessible from a computer by an on scene incident commander. The system is designed to assist First Responders who need to quickly locate key points within a structure where there may be flammable liquids or gases using a color coded index and which enable the incident commander to receive location information from their team members within the building using the Tac-Tag matrix system of glow in the dark markers and a single radio call to accomplish those difficult tasks.

Physical case studies were carried out working with the facilities, emergency management and campus police teams to identify a suitable building for exercising our system utilizing realistic scenarios performed with, and without the aid of the Tac-Tag navigation system. Garry Kolb and Lenny Piazza CEO´s from Tactical Imaging USA and representatives for GlowMark UK were allowed to carry out the case study scenario with the assistance and cooperation of members of the Colorado Springs Fire Department and the University campus Police. The group was able to develop an exercise which truly reflected the value the Tac-Tag navigation system can bring to first responders who are entering a building that is not familiar to them or one that is familiar but presents a hostile environment with low or no light and other navigational challenges such as smoke and bad visibility.

The exercise was conducted using three separate fire companies and one officer from the University Police force. Several scenarios were run to test the usefulness of the Tac-Tag navigation system combined with the tagged floor plans for the incident commanders. The exercise was conducted in the University Hall building which consists of three stories with each floor quite unique and different to the next in its layout.

The scenario involved utilizing a smoke machine to simulate a fire and a dummy or live officer to simulate a downed officer. Each entry team was instructed to enter the building and to locate the fire and put it out whilst locating the downed officer and to then exit the building as fast as possible. This was all done under the conditions of having an “active shooter” (Gun

Man) in the building making it necessary for the team to exit the building through specific exits rather than the closest one under the radioed instructions of the incident commander.

For each individual case study scenario an alarm was set off to cause the fire doors to close. Then the incident commander instructed the entry team as to where the alarm was located by looking at the floor plan by the alarm panel and the team moved to that area of the building.

The total exercise consisted of four separate but similar case study scenarios being carried out utilizing different entry teams for each one some of whom were familiar with the building and some who were not. Overall the results of the exercise positively proved the value of the Tac-Tag navigation system in its real life functionality providing valuable feedback enabling us to carry out more research and to make additional improvements to the system.

During the exercise one of the entry teams who were not familiar with the building went down the wrong hallway that lead away from the alarm area and quickly found themselves on the wrong floor in the wrong wing of the building. Realizing their error they radioed the incident commander who asked them to locate and read the information on the located Tac-Tag over the radio. Once the tag information was read and relayed by radio, the incident commander was able to utilize the tag index to quickly zoom to the location in the building plan drawing. He immediately saw where they were and was able to give them instructions on how to get to the location of the alarm. He commented;

"I really liked to see how quickly I was able to locate the team and get them back to the right area."

A number of the participants also had very positive comments concerning the Tac-Tag system approach as a whole.

Russ Renck, Captain, Fire Station 10, Colorado Springs Fire Department said:

"As an incident commander I found the Tac-Tag system to be useful in both tracking the location of personnel and in being able to lead them out of a building by a specific route when necessary."

A Fire Battalion Chief said;

"The Tac-Tag system helps to address a concern I have had for the safety of fire fighters when responding to emergency situations that require the combined operation of Fire and Police Agencies. Our ability to direct fire fighters to areas deemed safe by the law enforcement personnel involved was something that we always hoped to have in those situations."

Steve Linhart, Director of Emergency management at UCCS commented:

"I found this system to be an invaluable tool in our ability to first, track our officer's movements, and then get assistance to him very quickly in a very complex and unfamiliar building."

Following the exercise the participants gathered in a meeting room to discuss the performance of the Tac-Tag Navigation System and offer suggestions for improvements designed to make it even more valuable.

There was unanimous consensus that the system delivered value and had the potential to save both lives and property. The Tac-Tag team representatives conversed with the First Responders asking for their suggestions for improving the system and they were able to get some very valuable feedback that will be incorporated into the Tac-Tag Navigation System and future product lines we will produce based on the important case studies and valid feedback.

The valid findings of this physical exercise have provided us with the knowledge that the system will deliver value by improving higher levels of safety to First Responders who were called to an incident in a complex building.

It was exciting to watch as fire fighters with no prior knowledge of the building entered at the wrong location, then got ‘lost’ and were quickly located and re-routed by the incident commander utilizing the Tac-Tag Navigation System and their radios. This was a resounding validation of all that we have been working on for the past few years!”

Seeing the navigation system in operation under realistic conditions has since enabled us to design a matrix of tactical glow in the dark markers, letters, numbers and symbols which can be integrated, placed and used in buildings to indicate potential hazards and to safely direct both people who occupy buildings and structures to the fire safety exits as well as aiding firefighters when entering a smoke filled building.

The physical exercise we carried out showed us there is real value in using our products for first responders and college and university emergency management personnel. We had realized and expected our system would help save time, property and lives in emergency situations and the exercises carried out really have proved that.

We have since designed a range of fire retardant products which are now under development as a result of more case studies and testing we have carried out.

We are very grateful to all of the personnel at the University Campus of Colorado Springs and the dedicated firefighters of the Colorado Springs Fire Department who took such an interest in our concept and volunteered their time and expertise to prove its value.

Thank you for your co operation.

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