For some, hearing the word bomb might bring to mind the picture of a disgruntled individual sitting in a basement, surrounded by objects that individually would be harmless, but when expertly combined can wreak havoc. For explosive investigators it might bring to mind the aftereffects of what that bomb can produce: fire, death and destruction.

Explosives investigation, part investigative science and part forensic science, encompasses many different experts in varying roles: bomb squads; firefighters; safety professionals such as insurance and private investigators; forensic chemists and other criminalists; and civil, electrical and mechanical engineers. According to Tom Thurman, former FBI special agent and current professor of fire, arson and explosion investigation at Eastern Kentucky University, each has a distinct role in a bomb investigation:

- The investigators at the scene, pick through the pieces, gather evidence and recreate the scene.
- The investigators out in the field interview witnesses, match the components to known bomb makers and develop the means, motive and opportunity.
- The experts in labs and on computers help piece it all together.

To investigate a bomb scene, you must take into account the different aspects. First, there’s investigating the scene in order to find components of the bomb and second there’s linking those components to the builder in order to put the person(s) responsible in jail, Thurman said.

Investigating a bomb scene poses a series of challenges to the investigator including:
- basic crime scene investigation skills, in conjunction with specialized disciplines,
- an understanding of the blast dynamics,
- the ability to recognize the components of a bomb (explosive and non-explosive)
- knowledge of what the forensic laboratory can do.

“When you gain the insight, experience and knowledge of how people - the bad guys - deal with explosives, it makes you a better detective and can better solve cases,” said Lt. Rich Sohan, Louisville bomb squad commander. “It’s like becoming a robbery detective – you want to learn as much as you can about the motives of the robber. I like to know how a bomber’s mind works, so I’m better able to solve these cases.”

An explosives investigator can be compared to a homicide detective trying to solve a crime, trying to recover shells or bullets, if it was a shooting, and interviewing people to identify the person who pulled the trigger or who was responsible for the murder, Thurman said.

“It’s the same thing with bombings,” he said. “It’s just that with bombings the crime scenes are difficult because the scene is not such as an orderly scene as you would have in most crimes.”

Bombing crime scenes are considered some of the most horrendous to investigate, not only because of the carnage to victims, but the destruction of property can make it difficult to locate any components of the bomb. Sometimes the blast is so intense ev...
Spring 2008

very small. are lucky to find any components of a used in a timed bomb. Investigators "It's always foremost in our minds." make sure it's safe.

a bomb placed in a building or a suspicious left in a place it shouldn't be or dynamite ally get calls concerning problems like a box explosion. The Louisville bomb squad seldom placed at an apartment door, Sohan said. 800 people. 

It's a challenge learning new things in a constantly changing environment," Sohan said. "It's a challenge to gain the experience to be able to deal with explosives" Investigating a bomb has multiple ele-

"Everything we come in contact with we have to treat as if it's the real thing," Sohan said. "You never know until you look inside of it or X-ray it as to what it contains." When dispatched to dispose of a bomb, when walking up to it, the only thing you can concentrate on is doing everything safely and as proper as you can," he continued. "But that can be hard to do because the walk you take down there may be the last time you ever walk again. In the field that is called the long walk, because usually you're by yourself, you're walking a minimum of 300 feet with a 90-pound bomb suit on and your hands are filled with tools to handle whatever you're going to check out. It's a long, lonely walk down and a long, lonely walk back up until you make the determination what's inside of it." CLOSE CALL Recalling a chilling incident, Sohan responded to a call of a bomb at a school where two juveniles placed a pipe bomb in front of the school in a covered trash can. The squad identified the bomb, defused it and shot out about 600 feet from the trash can. Sohan said. N o one was injured but if the bomb had gone off just before or just after school, the results could have been catastrophic.