



## Practice makes perfect

Simulation company delivers effective, real-world incident experience to thousands of emergency responders monthly with CommandSim, built on the Adobe® Flash® Platform



In responding to emergencies, practice not only makes perfect—it also saves lives. Each month, thousands of emergency responders use CommandSim simulation technology, created by Equipment Simulations, to conduct critical training exercises, building skills that translate to field performance. Helping to develop essential skills such as command, strategy, tactics, communication, and equipment usage, CommandSim enables responders to train safely, effectively, and economically—helping them in protecting communities and saving lives.

The breakthrough training platform is based on a host of Adobe technologies, including key elements of the Adobe Flash Platform—Adobe Flash Professional, Flex® Builder™, AIR®, and Flash Media Server—as well as Adobe Photoshop® Elements software. Equipment Simulations also relies on Adobe software to market CommandSim, using Adobe Illustrator®, Photoshop Extended, and Acrobat® Pro to produce marketing materials, as well as Adobe Dreamweaver® for its website and Adobe Acrobat Connect™ Pro for virtual meetings.



Conducting live training for emergency responders can be costly and dangerous. Typical 3D simulations can be costly to produce and difficult to deploy across computing platforms. CommandSim, on the other hand, is based on the Adobe Flash Platform which is easy to deploy without requiring plug-ins or software installations. CommandSim includes extensive training and a multimedia software environment that lets fire instructors simulate situations, such as the behavior of smoke, to teach firefighters how to recognize threats and rapidly take countermeasures.

“We based CommandSim on Adobe solutions because Adobe provides a trusted, industry-standard platform that is easy to deploy, without requiring plug-ins or software installations,” says Jonathan Kaye, president of Equipment Simulations. “Adobe solutions are also exceptionally easy to use for people without in-depth technical expertise, and they are affordable—a crucial factor for municipalities and other agencies striving to keep costs down.”

### **The search for a safer, better way to train responders**

Training firefighters and other responders has traditionally been a difficult task. Burning real structures is costly and dangerous. Tabletop exercises that use dioramas portray artificial, static conditions and most often require participants to be in the same physical location.

3D virtual reality simulations are the natural alternative to live training. However, most 3D simulations are expensive to produce and difficult to deploy because they typically require specialized software and support for playback. Additionally, the resulting training scenarios often require relatively advanced computer skills to create or lack the relevant, specific context of the real response area.

### **CommandSim: on-premise or online**

CommandSim, on the other hand, takes an entirely novel and more effective approach. It offers a way to create localized scenarios and is inexpensive yet delivers proven results.

The multiplayer CommandSim Edition includes extensive training and a multimedia software environment comprised of the CommandSim extensions for Adobe Flash Professional, Adobe Flash Media Server, and Adobe Photoshop Elements. “Most customers currently use the Department Edition on-premise within their Training Center, but several also make it available through their intranet,” explains Kaye. “Installing it on an intranet enables personnel at different geographical locations to participate in the same exercise, with zero travel and logistics costs or backfilling on-duty positions. The Adobe Flash platform solution eases the burden on IT support because they don’t have to install or maintain special software on each participating computer.”

The CommandSim platform is also available as a web-based hosted solution, via Influxis, a certified Adobe partner, or for individual use as a set of extensions based on Flash technology.

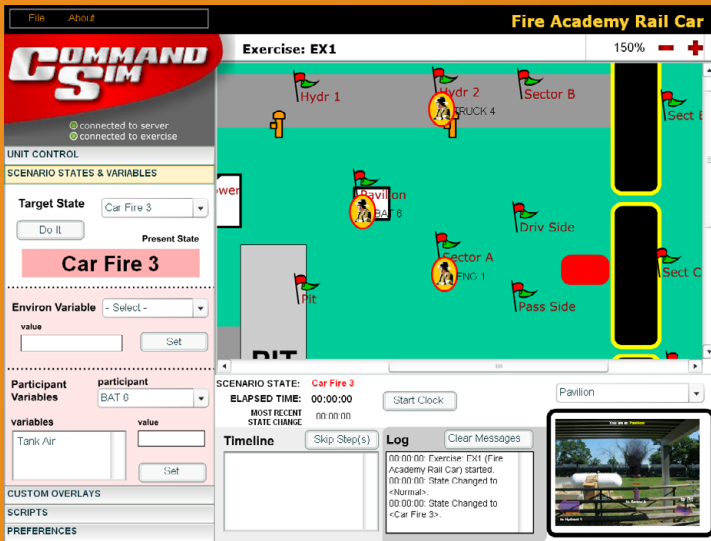
Soon to be included is a custom Adobe AIR application, CommandSim Checklist, developed using Flex, to replace the ubiquitous paper-based training evaluation forms.

Free training simulations produced with CommandSim are a popular feature on the *Fire Engineering* website. Among the most respected publications in the Fire Service, *Fire Engineering* hosts a multitude of CommandSim simulations online, used by thousands of responders each month.

“*Fire Engineering*’s focus is on providing the best and latest training, education, and management information for fire and emergency services personnel worldwide,” says Bobby Halton, retired fire chief and editor-in-chief of *Fire Engineering*. “We have received glowing feedback about how useful the simulations have been. The biggest benefit is that instructors can play out a fire over and over again to improve firefighters’ mental agility in the field.”

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**Jonathan Kaye, president, Equipment Simulations LLC**



One or more facilitators, through any standard web browser, monitor participant movement and control how the conditions unfold in the virtual incident, either manually or at pre-scripted intervals. For endless variety and challenges, facilitators can introduce injects and change conditions on the fly.

### Training for compliance with federal, state, and local guidelines

CommandSim training is compliant with the Incident Command System (ICS) within the National Incident Management System (NIMS), which provides a systematic protocol enabling agencies of all types and sizes to work together to improve emergency response operations.

“ICS and NIMS are vital components of the Department of Homeland Security,” says Jim Murphy, director of training at Equipment Simulations. “So we also teach responders how to prepare for small- to large-scale events based on the requirements of ICS and NIMS.”

Furthermore, federal funding from the National Institute of Environmental Health Sciences, through grant Award Number R44ES013908, helped support CommandSim’s development and field testing. Currently, the grant supports research with the Philadelphia Fire Department around HazMat, Anti-Terrorism, and Command.

### Invaluable context

CommandSim provides firefighters and other responders possessing even basic computer skills with a way to create customized scenarios based on hazards and conditions in their actual service area. Instructors can take digital photographs, videos, and panoramas and adapt them for training simulations by adding smoke, fire, vapor clouds, explosion effects, victims, and tools and equipment using Photoshop Elements and Flash Professional software. The

instructor can model virtually any variable to simulate an expanding and ever-changing emergency scene that can change over time in both good and bad ways.

Says Murphy, “The fundamental issue is that there are fewer fires in America each year; however, firefighter deaths and injuries have gone up dramatically. We are losing about one firefighter every three days in the line of duty. With CommandSim, fire instructors can simulate the behavior of smoke—which tells you a lot about what the fire is doing—to teach firefighters how to recognize threats and rapidly take countermeasures.”

The scenes can be played back on any computer without software downloads due to the fact that Adobe Flash Player is already installed on 98% of Internet-connected desktops and will work over networks and the Internet for multiple-site training.

“CommandSim is an invaluable tool for our students. It allows us to train in a dynamic, real-time environment, which can only be replicated with actual fireground operations,” says Ryan Peterson, CTC Administrator, Utah Fire & Rescue Academy. “The foundation of our curriculum is Risk Management and Strategic Decision Making, which is greatly enhanced through the use of CommandSim. We have provided training for hundreds of Fire Officers, who consistently provide positive feedback and high marks for CommandSim. We also design and facilitate

### Equipment Simulations LLC

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[www.EqSim.com](http://www.EqSim.com)  
[www.commandsim.com](http://www.commandsim.com)  
[www.fireengineering.com](http://www.fireengineering.com)

### In Partnership With

**Influxis**  
[www.influxis.com](http://www.influxis.com)

### Industry

Emergency Response

### Challenge

- Enable recurrent, team-based practice at a distance
- Deliver affordable, effective training for emergency responders
- Train and evaluate responder compliance with ICS, NIMS, SOPs, and NFPA guidelines

### Solution

- Training simulations
- Using the Adobe Flash Platform and other Adobe solutions, Equipment Simulations provides CommandSim, an affordable, effective solution delivered on-premise or online that helps responders train safely, effectively, and economically—assisting them in protecting communities and saving lives.

### Benefits

- Provided simulations proven as effective as live training, while helping to ensure safety and reducing costs
- Improved relevance by enabling instructors to base simulations on local jurisdiction and hazards
- Supported training for ICS, NIMS, and NFPA guidelines
- Enabled teams to train locally and via the Internet

### Toolkit

- Adobe Acrobat Connect Pro
- Adobe AIR
- Adobe Creative Suite Web Premium. Components used include:
  - Adobe Acrobat Pro
  - Adobe Dreamweaver
  - Adobe Flash Professional
  - Adobe Illustrator
  - Adobe Photoshop Extended
- Adobe Flash Media Server
- Adobe Flex Builder
- Adobe Photoshop Elements



CommandSim provides responders with a way to create customized scenarios based on a variety of hazards and conditions. Instructors can take digital photographs, videos, and panoramas and adapt them for training simulations by adding smoke, fire, vapor clouds, explosion effects, victims, and tools/equipment, using Photoshop Elements and Adobe Flash Professional software.

*“With Adobe solutions and CommandSim, we are filling the need for realistic, recurrent, safe, and affordable training for emergency responders.”*

**Jonathan Kaye, president, Equipment Simulations LLC**

Fire Officer promotional exams, utilizing CommandSim simulations. CommandSim provides the most accurate and realistic evaluation tool possible for our customers.”

The Spring Lake Park-Blaine-Mounds View (SBM) Fire Department in Minnesota is using CommandSim for training with a special emphasis on officers and chief officers. “The value CommandSim brings is enormous, because we can practice how we work in a no-consequence setting,” says Nyle Zikmund, fire chief for the SBM Fire Department.

**Relevant, customized learning on demand**

**For More Information**

[www.adobe.com/products/flashplatform/](http://www.adobe.com/products/flashplatform/)  
[http://www.fireengineering.com/index/training/fire\\_simulations.html](http://www.fireengineering.com/index/training/fire_simulations.html)

In other departments and industrial organizations across the United States and Canada, CommandSim is delivering real benefits. For Chesterfield Fire and EMS in Virginia, the innovative learning environment is used for promotional exams for firefighters testing for Lieutenant and for Battalion Chief. The CommandSim simulations include direct experience responding to incidents in buildings throughout the department’s service area, helping ensure that every candidate gets relevant, real-world experience.

“The feedback from personnel has been fantastic,” says Donald Hall, firefighter/paramedic, in the Technical Services Unit of the Chesterfield Fire & EMS. “Not only can we safely simulate incidents that our firefighters would face in our

communities, but we also are reducing out-of-service time because people can participate in the exams in their respective districts.”

**Documented performance improvements**

In two independent studies, CommandSim yielded performance in the simulator comparable with performance in live exercises, yet the cost and resource demands are substantially less. Moreover, the potential variety of scenarios is far greater than what is possible in a live setting, as is the potential to repeat exercises and maintain privacy from public attention.

“With Adobe solutions and CommandSim, we are filling the need for realistic, recurrent, safe, and affordable training for emergency responders,” says Kaye. “It is incredibly rewarding personally to hear reports from the field about how CommandSim is making a real difference in performance, to know we have a real impact on peoples’ lives. In one actual incident, the Commander pulled crews out of a building moments before it collapsed because of the signs recognized from practice using CommandSim. Even one call like that makes what we’re doing worthwhile.”



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