

Fire Control Room (*FCR*)

Virtual Reality (VR) Interactive Fire
Protection Systems Simulation

What is *FCR*?

Guardian Airwaves LLC's **FCR** is a virtual reality interactive prototype of a fire control room environment in a high-rise fire incident.

The **purpose** of **FCR** is to provide simulation of various fire incident stressors during which a battalion fire chief must make critical split-second decisions to save lives during a high-rise fire incident.

The **functions** of the **FCR** prototype are to:

1. Find the fire control room per captain's verbal instructions.
2. Monitor the fire protection systems and elevator banks.
3. Document alarm and elevator systems status using the radio and clipboard.
4. Communicate all findings immediately by radio to the Captain.
5. Locate elevator recall key.
6. Call down all elevators cars to lobby.
7. Communicate and calm trapped people in elevator cars.

This basic simulation's challenge is to orient themselves within an unfamiliar fire control room, interact with its systems, and follow communication protocols.



Who is *FCR* for?

Monitor
Report
Act



The FCR interactive training simulation prototype is for firefighters and engineers, who are involved in design, setup, maintenance, training, and updating a fire control room.

Floors of people's lives are dependent on decisions made in the FCR during a high rise fire incident.

Experiencing the *FCR*?

Guardian Airwaves LLC's **FCR** prototype was modeled after a fire control room in San Francisco downtown. A fire control room is located inside a building and is considered the nerve of the building. It is where the controls for the building's fire protection systems, fire pump, secondary water supply, air-handling systems, stairwell door controls, communications and elevator controls. Also located in the FCR is another key cabinet. The cabinet contains keys to all areas of the building to which firefighters will need access in the event of an emergency.



Panoramic Sketch of FCR by Lisa Revelli



3D Model of FCR by Lisa Revelli.

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organizational structure. This will also determine if a ML model can be applied in this scenario type.

Cast of Characters:

ML--0) Dispatch Center, AKA 1a
ML--1) Captain 6, AKA Lobby
ML--2) Battalion 12, AKA IC
ML--3) Elevator Control
ML--4) Operations
ML--5) Procter
ML--6) Trapped Male in Car B-Bravo
ML--7) Trapped Female in Car F-Foxrot
VR user - Sean, AKA Fire Control Room (Can name be typed in at start of module?)

*Characters are renamed by positions.

Overview

Theme / Setting

Thursday morning - 9:15am
You are a firefighter on San Francisco FD Engine 6. Your engine company has responded to a high-rise call, an alarm sounding on the 20th floor at the 5 Embarcadero Building, San Francisco.

VR User Asset #1: Firefighter's Suit. You can see your own gear if you look down or if your hands/arms are moved into view.

VR User Asset #2: Structure Fire Gloves

Still Photo of High Rise Building, no smoke. Maybe a BC on street with back turned from viewer.

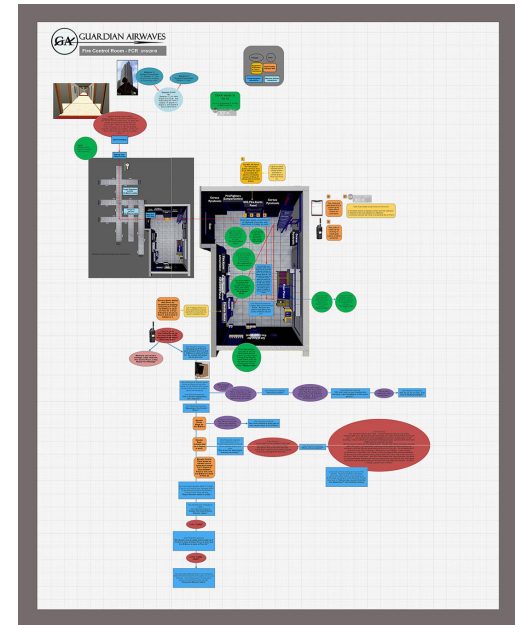
Battalion 12 is the incident commander (I.C.) out on street.

ML: Battalion 12 (on Radio traffic): "1A, Battalion 12. Can you give me a rundown on responding units?"

ML: Dispatch Center 1A: "Battalion 12, you have Engine 6 at scene. Also responding are Truck 2, Engine 14, Engine 11, Engine 2, and Engine 9. Time is 09 15 hours"

ML: Battalion 12: "Battalion 12 copy."

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The FCR prototype involved hours of research and interviews of SMEs who have experienced successes and errors while operating in the FCR.

A script narrative was created with the goal of drawing in the user into a real life experience of task operations and movement throughout the virtual space.

Using the *FCR*?

In the *FCR* training simulation, a simple sequential action response must be followed using the Vive controllers which are seen as your hands in the scenario.



You will have a clipboard or radio to use in this *FCR* scene and only one or the other can be used at a time.

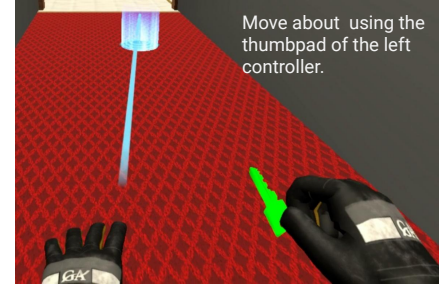


Using the *FCR*?

Pick up the FCR door key with your right hand by pressing on the controller's trigger.



Move about using the thumbpad of the left controller.



Elevator Interaction

The task to recall all elevators down to the lobby is achieved by finding the emergency elevator key and inserting it into the 'Fire Recall' keyhole. Then press the white button with the firefighter's hat. Pull the controller's trigger button to activate the recall.



Phone Interaction

Find out if there are people trapped in the elevators by using the phone to the right of the elevator banks. Select the elevator car and pull the controller's trigger.



Always check if the elevators are actively being called down to the lobby, document any malfunctioning elevator using the clipboard and communicate status to the captain.



Guardian Airwaves LLC designs and facilitates **fully immersive and interactive advanced training** for firefighters and public safety professionals that simulate medical response and extreme disaster incidents.

Our core belief is that the Loss of Life & Property is Preventable.

This can be accomplished through modern training technology provided **by Guardian Airwaves LLC.**

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