

E-SIM Event Simulator

A software tool (*Event-Simulator*) that models catastrophic events to a facility with the corresponding movement and interaction of people in the facility.

E-SIM enables risk managers to make well informed decisions about their facility design, operational processes, and emergency planning.



E-SIM Provides Analysis For:

Movement Planning

- Queuing Modeling
- Building Design Assistance
- VIP Movement
- Special Event Space Requirements

Special Studies

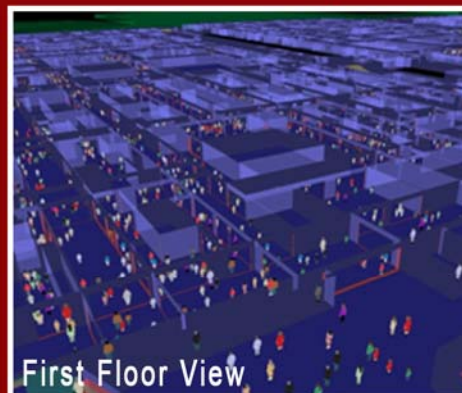
- Medical Planning (casualty estimates, locations)
- CBRNE Contamination
- Armed Intruders
- Explosive Events
- Fires

Protection Planning

- Evacuation Modeling
- VIP Protection
- Shelter-in-Place Planning
- First Responder Entry

E-SIM Visualization Capabilities

- Custom sky & ground graphics
- Fully explore the environment and structure(s)
- Zoom in and out capability
- Camcorder mode to create custom camera movements
- Easy camera panning to allow continuous movement
- Camera lock option to keep camera in place to track movement



First Floor View



Environment View

Sample Views

E-SIM Event Simulator

E-SIM provides physically, mathematically, and statistically accurate solutions to security and risk problems.

The *E-SIM Product Portfolio* is a set of tools to assist Risk Managers in making the most informed decisions possible.

Clients may select from the following:

Reports:

Threat Determination: Unless already provided by the client, ARA will begin with a threat determination study and use the most credible threat(s) for the *E-SIM* analysis

Movement Planning: Statistical analysis of personnel movement during the selected event in order to support movement planning decisions; includes recommendations for optimizing movement planning

Protection Planning: Statistical analysis of the protection elements evaluated during the selected event to support protection planning decisions; includes recommendations for upgrading or implementing design changes for desired level of protection

Special Event Planning: A holistic analysis of the special event which includes the impact on the facility and employees, the performance of current risk mitigation systems/equipment, and the effectiveness of current protection measures; recommendations for implementing operational changes, design changes, and mitigation measures are included

Briefings:

ARA provides all clients with customized briefings on the outcome of the *E-SIM* analysis

Videos:

All clients receive a video copy of the *E-SIM* scenario in order to facilitate further analysis, training, and planning

Software Tools:

ARA will provide customized software tools which the client may use to conduct their own further analysis in *E-SIM*. Tools include the ability to alter employee or crowd demographics, change views (from CCTV camera views to a threat agent view), move threat locations, etc. to assist with additional planning and preparedness.



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E-SIM AGENTS:

Humans are modeled as agents which are intelligent, autonomous software applications

Assign key characteristics to key individuals

Movement characteristics reflect demographics (speed, size, reaction time, etc.)

Agent behavior based on optimal choice or distribution of statistical human behavior