

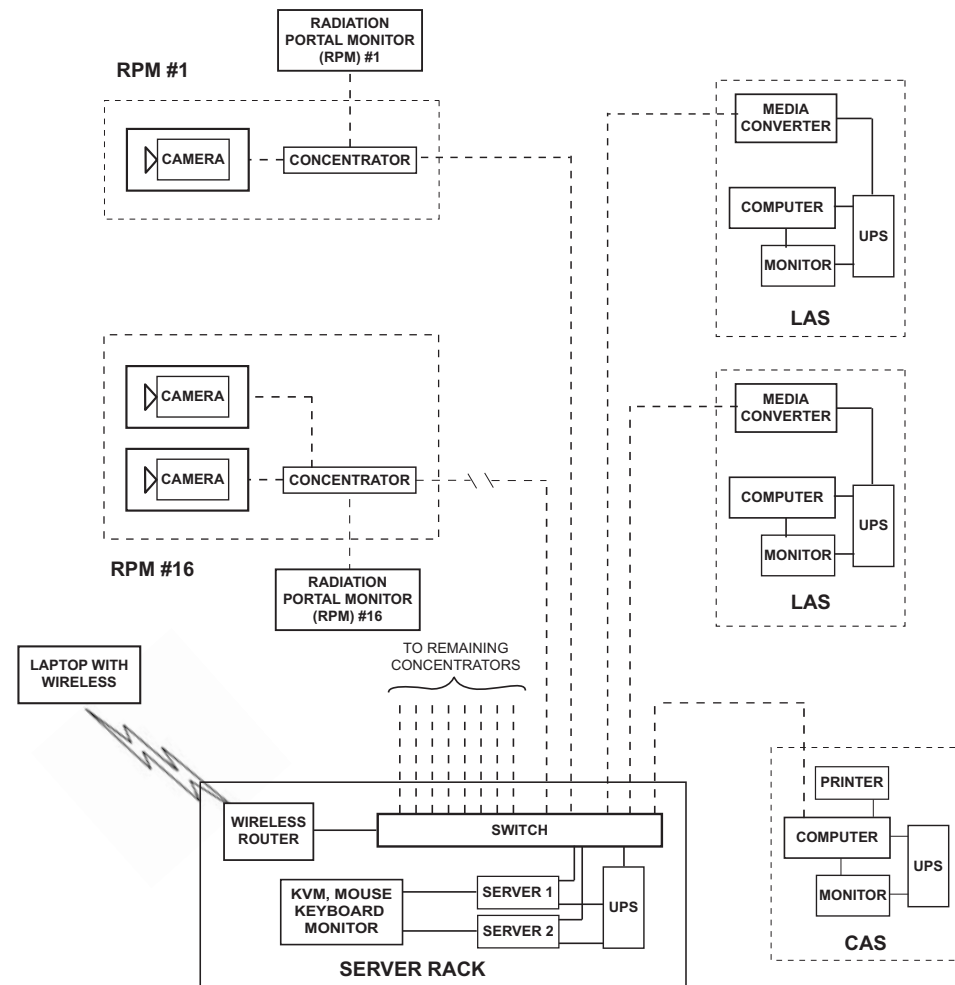
- RAVEN software has been designed with the user in mind. Local Alarm Stations (LAS) can be configured to only display information that will be useful to the local user.
- The Central Alarm Station (CAS) can be configured to display much more detailed information that is useful for alarm trending and other data analysis.
- Multiple LAS or CAS locations can easily be established and through the use of wireless routers these locations can be mobile.
- Multi-layered password protection will restrict unauthorized access to sensitive data or video and will protect the privacy of innocent individuals.



**Radiation  
Alarm  
Video  
Event  
Notification**



## Raven Server - Up to 16 Systems



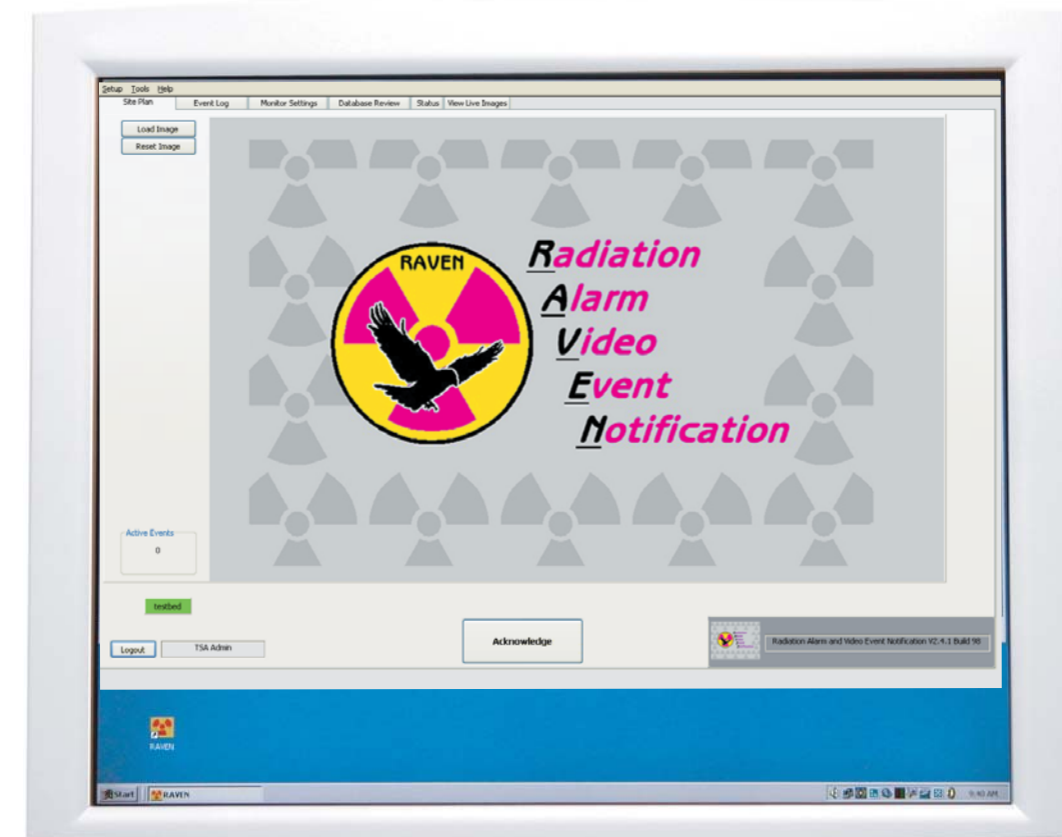
### Standard Equipment Shown

- Servers
- Monitor
- Switch
- UPS
- KVM Switch
- Keyboard
- Mouse
- RAVEN Software

### Optional Equipment Shown

- Single Camera Package
- Dual Camera Package
- IR Illuminators
- Concentrator Software
- Printer
- CAS Workstation
- LAS Workstation
- Camera Enclosures
- Media Converters

**Networked video and data monitoring solutions for single lane, multi-lane, and multi-location portal systems.**



RAVEN System Local Operators Screen

*TSA Systems has developed a software package to complement its outstanding array of radiation detection systems. Radiation Alarm and Video Event Notification or RAVEN was designed to both capture and view data and video images relating to a radiological detection incident.*

*Stored sets of data and video can be used in the rapid identification of the method of transportation of radioactive substances. Quick review of the incident can be made by using the on screen controls that allow the user to step through each image and pause whenever necessary. This allows the user to relay any identifying information to response personnel in the field for possible secondary inspection or other interdiction.*



**Site Plan Tab** - On this screen a photo or drawing can be imported into the program and the system location icons can be overlaid to show the exact location of each system. The icon will change color to indicate the type of alarm at each location.

**Database Review Tab** - The view shown below is displayed after the search criteria blocks have been enabled and the Search Database button has been activated. The system administrator has the ability to track any changes that may have occurred with a particular system. The frame by frame data and video match-up allows a user to approximate the location of a radioactive source within a vehicle.

**Status Tab** - The health of each system is displayed on this screen.

**View Live Images Tab** - Video images from system cameras can be viewed on this screen. Camera function, field of view, enclosure lens cleanliness, and surveillance can all be observed.

**Event Log Tab** - This screen will display all unacknowledged alarms or faults

Search criteria boxes allow the user to select the location, alarm type, and time/date range in order to customize the search

**Event Control Box** - Contains all the buttons required to review the video data stored during the event. The step forward and step reverse buttons are used when reviewing video to determine license plate or container numbers

Search results are displayed in this box. Selecting an individual event will cause that event to be displayed. Selecting a column heading will cause the search results to be sorted by that heading.

**Neutron Totals** - This box gives a numerical summary of the neutron information on the graph above. The "Current CPS" value will change as you forward or reverse step across the neutron graph.

**Comment Box** - Displays comments that have been entered when closing or editing an event

**Gamma Totals** - This box gives a numerical summary of the gamma information on the graph above. The "Current CPS" value will change as you forward or reverse step across the gamma graph.

**Acknowledge Button** - Used to silence the audible event notification.

**Event Details** - When "PrintScreen" is used to capture an image this is the place that lists the critical event time and location information as well as total alarms and occupancies

The screenshot shows the 'Database Review' tab of the RAVEN software. It features a search criteria panel on the left with options for location (lane\_6 to lane\_9), alarm type (Neutron Alarms, Gamma Alarms, Profile Data, Faults, All Events), and time/date range (Start Time: 4:18:34 PM, Start Date: 10/3/2010; End Time: 7:37:05 AM, End Date: 6/1/2011). Below this is an 'Event Control' box with play, pause, and step buttons. The main area contains two line graphs: 'Gamma (CPS)' and 'Neutron'. The Gamma graph shows a peak of approximately 140 CPS around 10 seconds. The Neutron graph shows a peak of approximately 180 CPS around 15 seconds. To the right of the graphs are two video viewports labeled '1st View' and '2nd View', showing a white truck from different angles. At the bottom, there are summary boxes for 'Neutron Totals', 'Gamma Totals', and 'Event Details'. The 'Event Details' box shows: Location: lane\_7, Start: 10/3/2010 5:55:12 PM, End: 10/3/2010 5:55:33 PM, Mode: Occupied, Daily Occupancies: 0, Speed: 0.00, Operator Id: test, Disposition Code: 10. A 'Comment Box' contains the text 'This is Test #1'. At the bottom right, a status bar displays 'Radiation Alarm and Video Event Notification V2.4.1 Build 98'.

This row of tabs allows the user to view detector data on an individual detector basis. This information may be useful in locating a radioactive source within a vehicle or may help in determining if there is a performance issue with a single detector.

## Database Review Screen



## Detailed Analysis Tool

**RAVEN Version Box** - Displays the version and build number of the RAVEN firmware on the computer or server



Actual Screen Capture