

# eRIM-Compass

## CCURE-800 to Compass dispatching system

### Overview:

The eRIM-Compass product allows the integration of new or existing CCURE-800 systems using APC-8x or iStar panels to the new Otis Elevator Companies' Compass Destination Dispatching System.

Otis Elevator has developed the Compass destination based dispatching system for elevators. This system controls the elevators in a bank of elevators such that grouping of individual floor requests will reduce time spent in the elevators as well as the cost associated with the energy consumption of these elevators.

Traditional security interfaces for elevator controls have been implemented using interposing relays to enable or disable the floor buttons to floors allowed for a specific user after using a reader located in the elevator cab. When the user selects a floor button, the selection causes a second "feedback" relay to activate telling the security system which floor the user selected. In this scenario the reader and all the controls are within each elevator cab.

Within a Compass system, users enter all data at kiosks located at each floor in place of traditional elevator call buttons. The system selects which elevator should be dispatched based on where the user is travelling to.

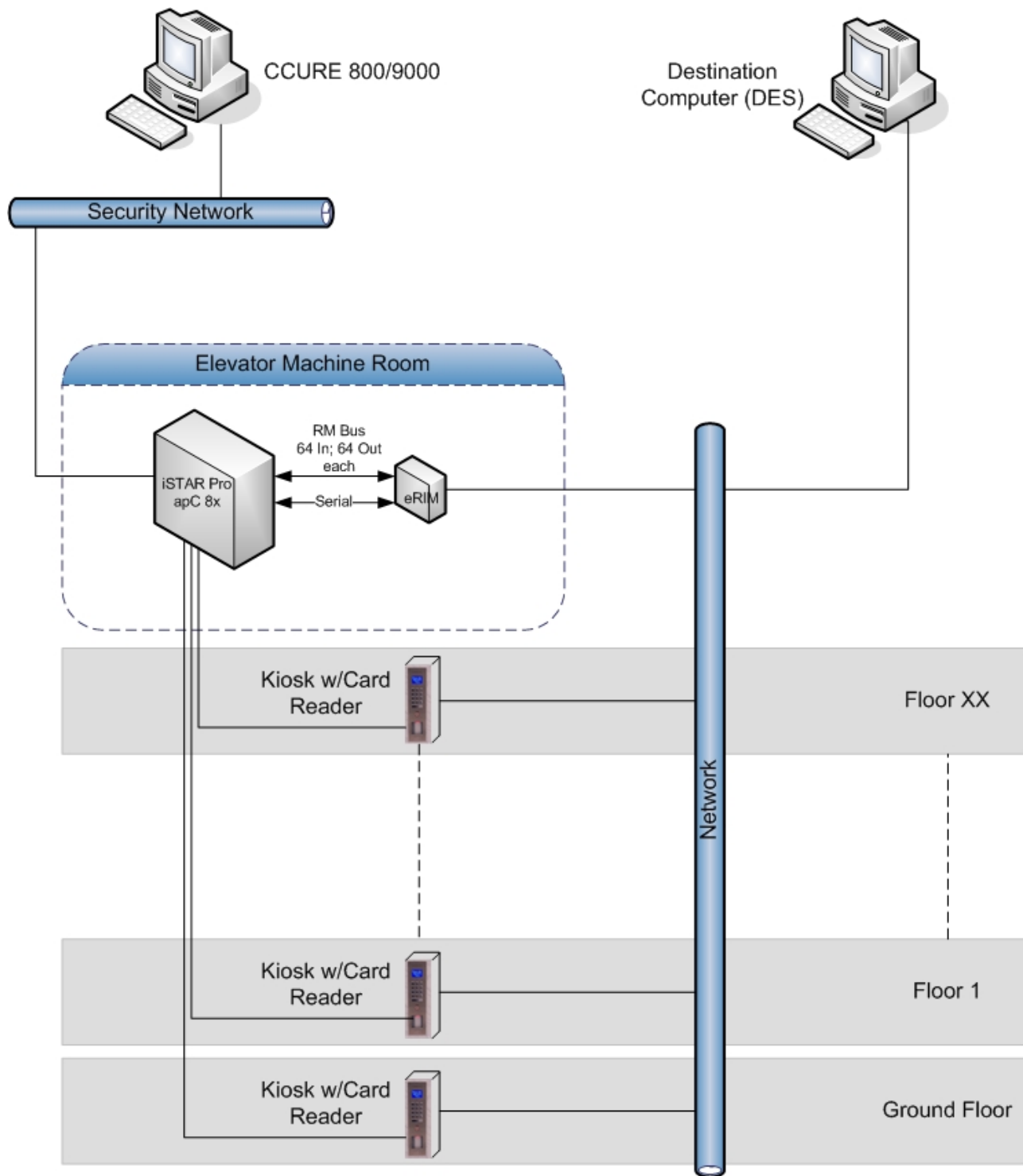
This new single point of entry for multiple elevators to multiple floors scenario changes how the security system is implemented. First, there is no relay interface available on the Compass system. Secondly, the only way to communicate to compass is via TCP/IP per the Compass protocol. For this application, the eRIM-Compass has been designed and implemented to integrate the TCP/IP protocol for Compass into an existing CCURE-800 system manufactured by Software House.

The eRIM-Compass translates the inputs and outputs previously connected to the relays into the format required by Compass. Each eRIM is capable of connecting to 3 I/O tracks from APC panels or iStar Panels allowing up to 192 inputs and 192 outputs.

Programming of the I/O translation for each track is accomplished via software program provided with each unit.

Programming of CCURE-800 is accomplished using the standard elevator control features within the system. Each elevator dispatch kiosk is programmed as a separate elevator with the card reader connected to CCURE and the data entry kiosk connected to Compass.

Otis Elevator to CCURE-800 Integration Block Diagram:



### Features Implemented in **eRIM-Compass** Version 2.1:

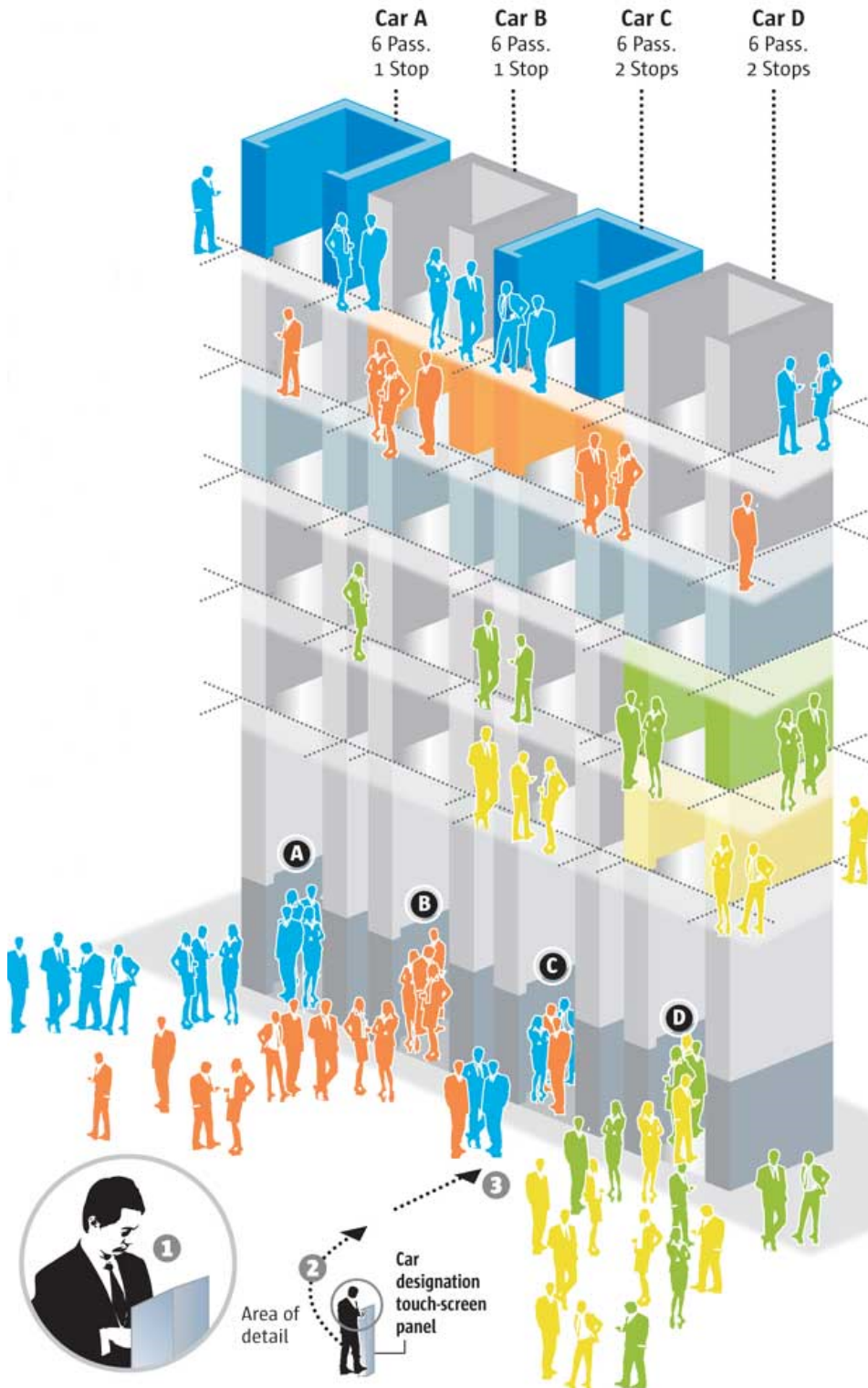
- Mode 3 operation of Destination Entry Computers (DEC) only. This mode has the Security System (CCURE) control all access to the floors by sending setup instructions to each DEC.
- Floor by Floor Secure/Authorization – Allows floors to be opened by the end user via CCURE-800/9000.
- Audit tracking – Enabled will transmit the floor selected by a user to the database in CCURE 800 for true tracking.
- DEC Offline monitoring – Displays offline events for each DEC in the system to the CCURE system monitoring station
- Destination Entry Server (DES) offline monitoring – Displays offline events for the elevator bank or group server should it go offline.
- Special Card functionality – Special cards such as VIP, Handicapped, Vertigo can be programmed into CCURE so that the elevator system responds with special actions for that user. For example: Handicapped would prompt the user with voice messages at the floor call station and also hold the doors open longer for a handicapped user.
- Message error checking – The **eRIM** monitors the communications to each DEC and DES and should there be a problem such as duplicate messages or no acknowledgement, the **eRIM** will automatically retry and repair the connection.
- Global DEC support – The use of a global DEC to allow a guard station for example to send users to floors across elevator groups is supported. This allows the Global DEC server and network switch equipment to be installed.

### Features Not Implemented in **eRIM-Compass** Version 2.1:

- Mode 1 operation of Destination Entry Computers (DEC). This mode allows a default user floor to be programmed so that when the users card is presented at a incoming turnstile DEC, the user is automatically instructed to the proper elevator. This feature would require duplication of I/O at the CCURE panel and could easily be implemented in the future.
- Mode 2 operation of Destination Entry Computers (DEC).
- Mode 4 operation of Destination Entry Computers (DEC).
- Rear Door operation for each elevator. This feature would require duplication of I/O at the CCURE panel and could easily be implemented in the future.
- Compass Inter-floor Matrix (CIM). This feature includes the ability to have specific floors allowed to access other floors as well as user segregation so that two users can be segregated to not ride the same elevator. It is not believed that this feature will be implemented although the segregation feature can be implemented in the future.
- Global PIN use. This feature allows a Personal Identification Number (PIN) to be used at the DEC screen for access control in-lue of an access card. This feature could be implemented in the future. At the present time an access card is used for access to a secured floor.

## Going up gets green

The Wells Fargo Center is replacing its elevator systems with a green solution, a regenerative elevator drive system. These energy-efficient elevators, when combined with a destination-based dispatching system, could realize energy savings of up to 40 percent.



### Smart elevators

The system works to keep each car load at about six occupants. It knows that floors 4 and 5 have the highest call density in up-peak traffic, so it directs the six passengers traveling to each of the two busy floors to individually assigned cars and rationally distributes the remainder. The result is fewer people per car and fewer stops per trip.

### Here's how it works

- 1. Enter your destination floor**, and the elevator system will assign you an elevator car.
- 2. Proceed to your assigned elevator**, which will be marked with your assigned letter.
- 3. Board your assigned elevator.** Once you are in the cab, you will not have to re-enter your destination floor again. Travel to your selected floor.

Each floor is equipped with a destination panel, so workers who want to travel between floors don't have to return to the lobby.



A display screen will show your floor and car letter.

Source: Otis Elevator Co.

Photo by Karl Gehring, Graphic by Severiano Galván, The Denver Post