

RICHARDS

ZETA

BUILDING INTELLIGENCE

OMEGA

## System Integrator Training Courses 2009

*Learning to integrate using the tools of tomorrow, today!*

Richards-Zeta's OMEGA System Integrator Training Courses are intensive and specialized, focusing on a select group of feature sets, including RZ's *perfectHOST* software platform and core product line, integration between disparate "open" and proprietary protocols, as well as the integration through *perfectHOST*, into a web-based environment using the Mediator and/or M2. Learn the power of OMEGA, the powerful software suite combining all the software and instruction required for configuration, application programming and graphics.

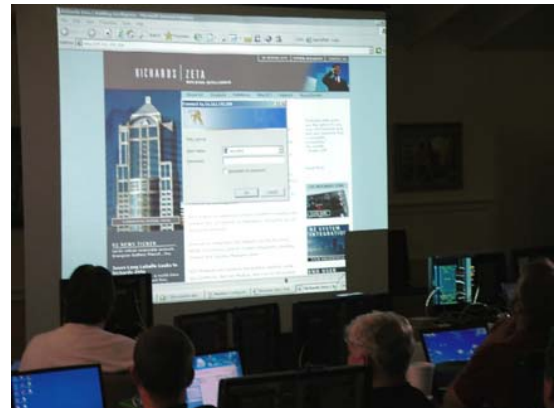
### **RZ-1, INTRODUCTORY: perfectHOST**

Prerequisite: Complete RZ Tutorial with RZ Democase

- perfectHOST programming
- RZ100
- RZ moZaic
- Expansion I/O)
- Mediator demonstration
  - o All new Richards-Zeta SI's and new technicians will be required to take this course.

Protocols which require the skill sets learned in RZ-1 are as follows:

*Carrier, Dunham-Busch, HSQ, JCI N2, York, McQuay, Staefa Smart I/II, CSI (TAC), Trane, Triatek, ACT, BACnet Level 4, Barrington, Compu-Aire, Functional Devices, Galaxy, Hydrolab, Neilses-Kulijan, Power Measurements, Secura Key, Two Technologies, and Multi-net.*



## RZ-2, INTRODUCTORY: RZ Mediator/ RZ M2 Centric

Prerequisite: RZ-1

- Hardware
- IP technical information
- OMEGA tools
- WebExpress
- WebScheduler
- WebSiteBuilder
- Backup/Restore
- Logging/Exporting
- Alarms, scheduled, trends
- RZ VAV-B, BACnet VAV controller
- RZ Intelligent Thermostats
  - o All new SI's will need to take this course. Protocols which require the skill set learned in RZ-2 are as follows:

*BACnet, BACnet/Ethernet, BACnet/IP, BACnet/MSTP, JCI N1, Automation Direct, Modbus RTU, Modbus IP, Barber Colman NW 8000, TCS Basys, Point 6, ABB, AEA, Siemens, and Dallas Bus.*



## RZ-3, INTEGRATION: 3<sup>RD</sup> party protocols “Plug-Fest”

Prerequisite: RZ-2

- Mediator drivers
- BACnet
- Modbus
- Johnson
- Barber-Colman
- RZ Drivers
- Staefa
- Trane
- LonWorks



***“RZ’s “plugfest” is a powerful ,collaborative, trainee event that clearly demonstrates the power of RZ Products and integration Solutions. Students are assigned a manufacture/protocol and within the classroom, build real integration with real product from Barber Colman, Johnson Controls, Trane, Dallas, BACnet ( ALC, Alerton , and others) , RZ and other.”***

*-Edmund B. Richards, President/CEO, Richards-Zeta Building Intelligence*



### **RZ-4, ADVANCED: perfectHOST**

Prerequisite: RZ-1, RZ-2

- Trending, logging, alarming
- Creating Templates and Macros
- Interpreting LAN traffic tables
- Error Counts
- Lan Diagnostics

### **RZ-5, ADVANCED: Mediator Troubleshooting and Advanced Topics**

Prerequisite: RZ-1, RZ-2, RZ-4

- Advanced Mediator/M2 troubleshooting
- Advanced RZ 100/RZ moZaic troubleshooting
- Upgrading Mediator/M2 hardware
- Template programming
- Error counters
- Lan traffic reduction
- Electrical Isolation
- Software upgrades and issues
- Dealer questions

### **RZ-6, SALES TRAINING: Bidding, Selling and Engineered Services**

Prerequisite: none

- Case studies and cost analysis
- RZ Selling points – advantages over competition
- RZ Bidding spreadsheet
- Value add selling (ex. Mediator as an upgraded resource)
- Handling customer objectives
- Closing the sale



***“The RZ Personnel are great. Dedicated, knowledgeable, friendly, approachable. Good Job!”.***

*-Hank Kahrs, President, KC Systems, Inc.*

***“I believe that the technology presented is the future of controls and that future is now. RZ did not forget the past and has thoughtfully included the ability to utilize legacy systems within today’s technology.”***

*-Ken Bartram, MacDonald-Miller Facility Solutions*



## Solution Summary

The Mediator™ is a middleware solution comprised of both hardware and software which is designed and built upon the open sourced technologies of Linux and Python. This domain agnostic integration framework is able to communicate with a number of disparate protocols. The MPX software framework plays a central role in the integration process by normalizing both IP and legacy serial based protocols, which in turn allows for intra-protocol communication, the uniform application of services such as logging, and the common presentation of information that is sourced from the array of intelligent machines found in buildings. Mediator's are designed to work together in groups or "clouds" which form the enterprise Intelligent Building Systems (IBS) architecture.

Using the Mediator's embedded suite of tools, custom web-pages may be designed and hosted on the Mediator that are then used to present a window into the real-time condition of building systems. Alarms, logs, control sequences and other common features may also be configured using these tools. Since the Mediator abstracts and treats all data in the same manner, there is no special distinction or friction associated with creating user defined causal relationships between sub-systems. Any value or combination of values taken from the HVAC, Lighting, Electrical, Security or any other system, can change the operation of others.

Since all points within the framework are identified by a unique identifier (URI) and all information can be presented in common formats, such as HTML or XML-RPC, the Mediator allows for a number of other parties to securely consume and manipulate this information.

These different parties might include both operations staff performing diagnostics and executives examining customer reports via their browser. These benefits are also extended to value add service providers that specialize in specific areas such as building systems analytics, predictive maintenance or renewable energy solutions which rely solely on the RZ Mediator as a systems aggregator; to tenants controlling their personal environment via their VoIP phone and other intelligent machines performing automated operations. Once this data has been liberated by the Mediator and these disparate protocols represented in a uniform IP-centric fashion, all of the information from these systems, which exist in virtually every building in the world, can now be leveraged for the sole benefit of improving operations.

***"We've been working with building integration and the BACnet Interest Group of North America for quite a while now and this class has really made it all come together for me. It's now real clear how BACnet fits into the larger IP picture. I understand the RZ vision and I think that it is really going to be the trend."***

*-David Thompson, BIGNA, Penn State University*

## Value Proposition

The value of the Mediator can be highlighted by the following points:

- a. Creates a number of customer options for vertical and horizontal integration solutions.
- b. Future-proof. It is a modular solution that is designed to evolve with current and potentially nascent IT requirements.
- c. Allows a “Best of Breed” execution strategy for migration and selection of building systems, applications and services.
- d. It is a scaleable solution that can meet the needs of projects of various sizes, without requiring additional specialized hardware or software.
- e. Opportunities exist to reduce both CAPEX & OPEX.
- f. Provides a powerful software framework that aggregates disparate building information and links these systems to Target Applications, such as Centralized Facility Operations Centers.
- g. Serves as a catalyst to Balance Energy and the Environment thru Orchestration (SOA)

## Company Overview

Richards-Zeta (RZ) is the manufacturer of a hardware and software solution known as the Mediator. The Mediator provides an integration framework, known as the Multi-Protocol Exchange (MPX), which allows for the convergence of multiple disparate building systems onto an IP network. RZ goes to market through a channel of trained System Integrators, located on 6 continents, which understand the unique requirements associated with the convergence of BAS and IT, building the foundation for Intelligent Buildings. These well trained parties have been delivering innovative “real world” solutions and are poised to continue doing so. In addition to manufacturing and supporting this solution, RZ also actively supports System Integrators and End-Users by providing engineering, configuration, programming and graphics services through Building Intelligence Group (BIG), a full-service division of RZ. By abating the pain traditionally associated with system integration, RZ integrators are freed to focus on applying technology in a manner that solves our customers’ actual problems, which in turn leads to well managed facilities.

## Why Attend? Ask yourself these questions?

- *Are you looking for opportunities to stay ahead of your competition?*
- *Are you trying to reduce labor costs, improve profit margins and increase your bottom line?*
- *Searching for opportunities to pursue new business opportunities?*

Richards-Zeta expands integration capabilities by offering integration with over 65 protocol drivers, teaching you the skills necessary to deliver new value added services to existing clients, while opening new doors of opportunity with new clients.

## Santa Barbara, CA

Also known as the American Riviera®, Santa Barbara is nestled between the Santa Ynez mountains and a sweeping shoreline overlooking the nearby Channel Islands. It's unique southfacing position results in a temperate climate with sunshine from dawn to dusk. The city of Santa Barbara and the Montecito area are known for their exceptional beauty and have a world-renowned flair, much of it reflected in the area's architectural mix of Mediterranean, Spanish Colonial, Monterey, Moorish, and Islamic styles. Montecito is home to many beautiful estates with every form of architecture and landscaping.

Santa Barbara offers escape and relaxation, along with the opportunities to contemplate the ocean, mountains, and engaging vistas, and to explore a bit of history and humankind's relationship to coastal ecology. The area offers a multitude of activities for active and passive vacationers: everything from swimming, boating, hiking, and sports fishing to the more exotic jet skiing, kayaking, whale-watching, windsurfing, horseback riding, and more. Or you can select your beach lounge chair, watch the scenery, and relax Santa Barbara-style. Take a scenic drive through the Santa Barbara wine-country, as featured in the motion picture *SIDEWAYS*. There are over 21,000 acres of vineyards in Santa Barbara County. At more than \$118 million, wine grapes are the most valuable crop in the county. Santa Barbara County is Wine Country for Southern Californians and a great discovery for any traveler. Many of the wineries have tasting rooms in which visitors are invited to learn about the various wines and offer tours to teach guests about the winemaking process.



## Things to do in Santa Barbara

The self-guided Red Tile Walking Tour, which is bounded by Victoria, Chapala, Ortega and Santa Barbara streets, touches many of the city's landmarks. Of special interest is the County Courthouse (1100 Anacapa Street), an architectural masterpiece completed in 1929. The Spanish-Moorish structure features tropical gardens and lush lawns. In addition, historic adobes and El Presidio de Santa Barbara State Historic Park (123 E. Canon Perdido Street; 805-966-9719) are snapshot-worthy. Hop aboard the Downtown Waterfront Trolley, which cruises the length of the Red Tile district for just 25 cents, or rent a whimsical quadricycle on State Street or Cabrillo Blvd.

Santa Barbara's historic Stearns Wharf features the Sea Center (Stearns Wharf; 805-962-0885), with live displays and touch tanks, and the Arts and Craft Show (Sundays; along Cabrillo Blvd.). From Stearns Wharf you will see a multitude of sailboats and fishing boats in and about the nearby Santa Barbara Harbor. A centerpiece at the Harbor is the Santa Barbara Maritime Museum (805-962-8404). This wonderful seaside museum features ship models, historic exhibits and floating exhibits.

If you're in search of a garden spot, there's a place for you. The Santa Barbara Botanic Garden (1212 Mission Canyon Rd; 805-682-4726) offers trails that wind through canyon, desert and other settings. Discover a variety of delectable items and much more when you visit the Farmers Market (Tuesdays; 500 and 600 blocks of State Street; and Saturdays; between Santa Barbara and Cota streets; 805-962-5354).

One of Santa Barbara's treasures, the Old Mission Santa Barbara (2201 Laguna St.; 805-682-4713) was founded in 1786. Its unique stone facade, which was copied from an ancient Roman book on architecture, has made the mission a popular subject for photographers. Rooms filled with artifacts and an old cemetery are open for exploration.

The Santa Barbara Museum of Art (1130 State St.; 805-963-4364) is known for innovative exhibitions and an unforgettable permanent collection, plus education programs for kids of all ages. Marvel at Greek and Roman antiquities, as well and works from nineteenth- and early twentieth-century American, French and English artists.





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### **Accommodations:**

**Hotel Santa Barbara**  
**533 State Street**  
**Santa Barbara, CA**  
**805.957.9300**  
**805.962.2412**

Located in the heart of downtown Santa Barbara, Hotel Santa Barbara is within walking distance of the the city's main attractions: The Santa Barbara Musuem of Art, Stearn's Wharf, East Beachand the Courthouse.

Complimentary  
Continental Breakfast is  
included with all rooms.

For reservations, please contact  
Scott at 805.685-1600.



### **Getting to the Hotel Santa Barbara:**

The Hotel Santa Barbara is conveniently located in the heart of Downtown Santa Barbara. No Rental Car is required in order to enjoy your stay. We recommended that you either catch a Taxi from the Santa Barbara Airport (aprox. \$25 one way, recommended) or contact Richards-Zeta for prices, availability and schedules for a shuttle ride.



## **Richards-Zeta Training Facility**

Richards-Zeta's Training Facility is located at its' corporate headquarters.

75 Castilian Drive, Suite 100  
Goleta, CA 93117  
(805) 685-1600  
(805) 685-1662

RZ will be providing a daily shuttle service picking up at the Hampotn Inn at 7:30am each morning and returning at 5:00pm.



## RZ -1 / RZ-2 Training Course Minimum Requirements

### All Students must bring the following:

#### 1. Laptop:

- a. With a Mouse
- b. With a 9-pin serial port connector or a USB to Serial Adapter
- c. With Microsoft Windows 2000 or later (XP preferred)
- d. Network/Ethernet configured with Internet Explorer 6.0 or Netscape Navigator 7.0 or later

#### 2. Training Software fully installed on laptop:

- a. perfectHOST
- b. GateKey Driver
- c. configTOOL
- d. WinSCP
- e. PLINK, PSCP, & PUTTY
- f. Hyperterminal

### Prerequisites:

Due to the intensity of the materials to be covered during the 5 day training period, it is required that each attendee complete the following prerequisites before the first day of class.

#### 1. RZ OMEGA Quickstart Guide

#### 2. RZ Training Videos

- a. 1.1.1
- b. 1.1.2
- c. 1.1.3
- d. 1.2.1
- e. 1.2.2
- f. 1.2.3
- g. 1.2.4
- h. 2.1.1
- i. 2.1.2
- j. 2.1.3
- k. 2.2.1
- l. 2.2.3

ANY QUESTIONS PLEASE CONTACT SCOTT RUGGLES AT (805) 685-1600 OR  
[sruggles@richards-zeta.com](mailto:sruggles@richards-zeta.com)

\* All of these documents and movies are available to download on our System Integration (SI) Secure Website.\*

## 2008 - 2009 Training Schedule

RZ-1/RZ-2: February 16-20, 2009

RZ-1/RZ-2: May 11-15, 2009

RZ-1/RZ-2: August 24-28, 2009

RZ-1/RZ-2: November 9-13, 2009

The schedule for RZ 3, 4 and 5 is to be determined. Please contact RZ if you are interested in this class.

\*\* The cost for Training is \$1,295 for RZ System Integrator's. The End-User cost is \$2,590.