

# Software Requirements

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## Mastering the Requirements Process **UPDATED**

*Build the Right Software the First Time*

**Washington, DC**  
September 14–16, 2009

**San Diego, CA**  
October 12–14, 2009

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## Requirements Modeling **UPDATED**

*Use Models to Improve Your Requirements Gathering and Systems Analysis*

**Washington, DC**  
September 17–18, 2009

**San Diego, CA**  
October 15–16, 2009

## 3 Days Topical Outline:

### Costs of Development

The requirements process defined  
Overview of the requirements process  
Cyclical requirements

### Project Blast-Off

Scope of the business area  
Identifying and using stakeholder maps  
Testable project goals  
Ensuring a viable requirements project

### Trawling for Requirements

Finding the real requirements  
Requirements for agile projects  
Techniques for eliciting requirements  
Using business events and use cases

### Functional Requirements

Identifying what the product must do  
Establishing the product use case  
Writing use case scenarios  
Requirements, not solutions

### Non-functional Requirements

Qualities of the product  
Usability, look and feel, security, etc.  
How to find non-functional requirements

### Managing Your Requirements

Specification templates  
Tracing requirements  
Prioritizing requirements  
Automated requirements tools

### The Quality Gateway

Stopping requirements creep  
Defining fit criteria  
Testing requirements

### Prototyping and Scenarios

Using prototypes to drive out requirements  
Low- and high-fidelity prototypes

### Your Requirements Process

Deciding your own process  
How to use a fast-track approach  
Planning iterative development  
Knowing when you have all the requirements

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# MASTERING THE REQUIREMENTS PROCESS **UPDATED**

*Build the Right Software—the First Time*

- Learn the complete process of eliciting, writing, and testing requirements
- Write universally understandable requirements
- Understand exactly what your customer wants—and needs

## Why Requirements—What's in it for You?

The problem is that people rely on software to help them do their work, but other people build it. Solving the problem means understanding the actual work of the business users—and what they need to do it. Requirements is about deducing the product that will add long-term value to the organization—and then writing requirements that lock the developers into the exact product.

## Getting It Right the First Time

Building software today means that you are in it for the long haul. And you know that there are more demands—and fewer resources—to meet those demands. Getting the software right—the first time—is the only way to succeed under these circumstances. Today's requirements process is incremental with quick cycle times. It uses prototypes and scenarios, and the requirements process ensures that you get the right result by writing a fit criterion to assure that the requirement is testable.

## Your Requirements

Requirements are the most misunderstood—yet the most crucial—part of systems development. If the requirements are wrong, you end up with loads of late re-work, or even worse, with the wrong system. Your requirements process must be your own, but it should be based on field-proven techniques and templates. This course presents the Volere process—used and improved by thousands of organizations around the world—and then shows you how you make it your own process. As a participant, you receive the Volere Requirements Specification Template—downloaded by more than 13,000 users—to take home with you. Your instructor has written requirements for dozens of projects and brings you insight that only comes from real world experience. You will learn insights and techniques that you can put to work right away.



## Take-Home Bonus

Each course participant receives a copy of Suzanne and James Robertson's book *Mastering the Requirements Process—Second Edition*.


## ABOUT THE INSTRUCTOR




**Tim Lister** is a software consultant at Atlantic Systems Guild, Inc., based in the New York office. He divides his time between consulting, teaching, and writing. With his business partner, Tom DeMarco, Tim is co-author of the book *Waltzing with Bears: Managing Risk on Software Projects*, which won *Software Development* magazine's Jolt Award for General Computing Book of the Year 2003-2004. Tim Lister and Tom DeMarco also co-authored *Peopleware: Productive Projects and Teams*. A member of the Cutter IT Trends Council, IEEE, and the ACM, Tim is in his twentieth year as a panelist for the American Arbitration Association, arbitrating disputes involving software.

*James Robertson and Suzanne Robertson are additional instructors for this course.*

## PUBLIC COURSE OFFERINGS

 **Washington, DC** September 14–16, 2009

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# REQUIREMENTS MODELING **UPDATED**

## *Use Models to Improve Your Requirements Gathering and Systems Analysis*

- Find and verify requirements with models
- Model as-is and will-be processes
- Model data and states to better understand requirements

All engineering disciplines use models to develop the products they intend to build. The reason is simple: Models help to uncover—and then clarify—the functional data, and control requirements for any product, including software systems. A poor set of requirements will cripple any project. Modeling the business and its requirements is a proven way of finding all the requirements and guaranteeing their accuracy. Once you know they are correct, you can use the requirements models as specifications for the designers and builders of the system.

### Learn How to Show What a System Is—Not Just What it Does

You can describe a system by what it is and by what it does. For example, consider this typical statement from a requirements specification: “The product must calculate the cheapest fare.” Beyond this innocent description of what the system must do lies a complex set of rules, procedures, data, and functions. Requirements modeling discovers the rules for calculating the cheapest fare, the algorithms needed, and the data necessary to complete and support those calculations. In other words, you build a complete model of the system.

You also can use models when eliciting requirements. A quickly sketched process model can be indispensable for displaying your understanding of the system during interviews. A data or class model reveals the policy of the system and any gaps are quickly discovered by a model constructed with your customer. A state model explains how a system behaves and thus clarifies the consequences of requirements.

### Put Techniques into Practice

This course includes frequent opportunities to apply the illustrated techniques. You work with our instructor to build models and prove or disprove example requirements. You construct models to elicit requirements and then feed them back to see if your understanding matches that of your customer. Learn to evaluate when each of the models is useful and what degree of detail is necessary.



### Take-Home Bonus

Each course participant receives a copy of James and Suzanne Robertson's book *Complete Systems Analysis* for class work and for later review of course material.

## 2 Days Topical Outline:

### Modeling

Objectives  
Requirements and systems analysis  
How modeling is used throughout product development

### The Context Model

Describing the scope of the problem  
How the work connects to the outside world  
Ensuring that the scope is accurate

### Event Partitioning

Need to partition large systems into smaller parts  
Business events  
Work's response to the business event  
How to find the business events

### Process Modeling

Event response process models  
Process specifications and data definitions  
Modeling viewpoints and how to use them

### Data Modeling

Class or entity models  
Classes, attributes, and associations  
Heuristics for finding classes and associations  
Relationship between process and data  
Using attribution to construct first-cut models

### State Modeling

State models and why we want them  
Link between state transitions and business events  
Modeling the states of classes

### Modeling the Product

Building models of the software product  
UML models  
Role of business events and adjacent systems  
Determining the product scope  
Business events and use cases

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**MASTERING THE REQUIREMENTS PROCESS** **UPDATED**

*Build the Right Software—the First Time*

**\$1,995**

**REQUIREMENTS MODELING** **UPDATED**

*Use Models to Improve Your Requirements Gathering and Systems Analysis*

**\$1,495**

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**REQUIREMENTS TRAINING WEEK COURSES**

**Monday – Wednesday**

Mastering the Requirements Process

**Thursday – Friday**

Requirements Modeling

**LOCATIONS**

Washington, DC

September 14–18, 2009

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*Build a week of specialized training from the Training Week courses in the same location and save \$500 off your registration fees.*

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**Training Course Schedule**

7:30 a.m. - 8:30 a.m. Registration and Continental Breakfast  
8:30 a.m. - 12:00 p.m. Course  
12:00 p.m. - 1:00 p.m. Lunch  
1:00 p.m. - 5:00 p.m. Course

**Satisfaction Guarantee:** SQE Training is proud to offer a 100% satisfaction guarantee. It's part of our commitment to provide you with the highest quality education and training products. If we are unable to satisfy you, we will gladly refund your registration fee in full.

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**Cancellation Policy:** Attendee substitutions are permitted. Registrants who fail to attend are subject to the full fee if they have not obtained a cancellation code from SQE Training at least 14 business days prior to the event start date. To obtain a cancellation code, call 904.278.0524 or 888.268.8770.

**Register Early:** The number of students per course is limited, and many courses fill to capacity. Register early to ensure your space in a given course.

**Forms of Payment Accepted:**

- Visa, MasterCard, or American Express
- Check or company purchase order is accepted. However, payment must be received before course registration is confirmed.

**Confirmation:** After payment, you will receive a confirmation notice containing course details (hotel, accommodations, etc.). Please bring the letter to the course for admittance.