SOFTWARE ENGINEERING TRAINING

Accelerate Your Career
& Empower Your Team

SATISFACTION *Guaranteed*

Relevant, Up-to-Date Content

Best Practices

Small Classroom Workshop Environment

World-Class Expert Instructors

NEW FALL 2008 SCHEDULE

REQUIREMENTS

Mastering the Requirements Process `UPDATED`

Requirements Modeling `UPDATED`

CMMI® & SOFTWARE MEASUREMENT

Introduction to the Capability Maturity Model Integration® (CMMI®) `NEW`

Business-Driven Software Measurement `NEW`

On-site Training Available—

For additional savings, bring this course to your organization for team training.

SQE TRAINING

Public Training
On-site Training
eLearning
Consulting

www.SQETraining.com

CHOOSE THE BEST LEARNING OPTION FOR YOU AND YOUR TEAM

P **Public Training Courses**

We provide the widest selection of specialized training courses—and we're expanding our selection all the time. Developed by top industry consultants, all courses are based on the latest industry practices and updated regularly to reflect current technologies, trends, and issues. Industry experts teach all SQE Training courses. We enhance your experience with expert instruction, content tailored to students' needs, and group discussions. We offer you the best training value in the software industry.

O **On-site Training**

Looking for ways to save training and travel dollars? Take advantage of the cost-effective convenience of on-site training. To provide your team the training they need without sacrificing project schedules or incurring travel time and expenses, bring our training to your facility.

TW **Training Week**

Maximize the impact of your training by combining courses in the same location to create a customized training week. Look for this **TW** marked on Training Week courses. Pair two and save $300!

For more information about SQE Training's courses and management consulting services, please visit www.SQETraining.com.

ON-SITE ADVANTAGE

For additional information or to receive a FREE quote, call 888.268.8770/904.278.0524, or email onsitetraining@sqe.com.

ON-SITE TRAINING

Looking for ways to save training and travel dollars? Take advantage of the cost-effective convenience of on-site training to get your team the training they need without requiring them to sacrifice project schedules or incur travel time and expense. Our on-site training offers many benefits:

- Save time and money—Bring team training to your location
- Manageable workloads—Schedule training around your projects, not the other way around
- Customizable content—Offer your team a training curriculum that adheres to your corporate goals, technology environment, and business needs
- Consulting services—Learn from instructors who are world-class consultants with exceptional qualifications and a broad range of real-world experience, augment your training programs with SQE Training's consulting services
- Small groups—Benefit from focused training that offers your team members individual attention with plenty of time for questions. Class sizes can range from 6–25 people
- Employee development—Develop the talent already on your team, increase employee satisfaction—and save company dollars

If you have six or more people to train, consider the advantages of on-site instruction

For additional information call 904.278.0524 or email onsitetraining@sqe.com.

WHO'S BEHIND THE TRAINING?

SQE TRAINING   **BETTER SOFTWARE MAGAZINE**   **StickyMinds.com**

SQE Training provides the widest selection of specialized software training courses available. Developed and taught by top industry consultants, all courses are based on the latest industry practices and updated regularly to reflect current technologies, trends, and issues. Find the training you need for software testing, development, management, requirements, and security. **www.SQETraining.com**

Easy to Register

Online:
www.SQETraining.com/register

Phone:
888.268.8770 / 904.278.0524

Email:
sqeinfo@sqe.com

Ways to Save

Take advantage of the different "Ways to Save" on training using our discount programs listed below. Purchase specialized software training for your whole team and save.

ON-SITE ADVANTAGE

Bring any course to your location for team training. Take advantage of this cost-effective convenience for your team of six or more. For a free quote, contact us at onsitetraining@sqe.com or 888.268.8770 or 904.278.0524.

BUILD-YOUR-OWN TRAINING WEEK

Attend a week's worth of specialized training in the same location and save $300. See page 3 for details.

POWERPASS

Add a StickyMinds.com PowerPass to any training purchase for only $125. With a PowerPass you save $100 on all future training registrations. What's a PowerPass? Visit **www.StickyMinds.com/PowerPass** to learn more.

*For **Group Discounts** or more details on our discount policy, contact the SQE Training Client Support Group at sqeinfo@sqe.com or call 888.268.8770 or 904.278.0524.*

BUILD-YOUR-OWN TRAINING WEEK

BUILD-YOUR-OWN TRAINING WEEK

Maximize the impact of your training by combining courses in the same location to create a customized training week. Pair two courses and save $300.
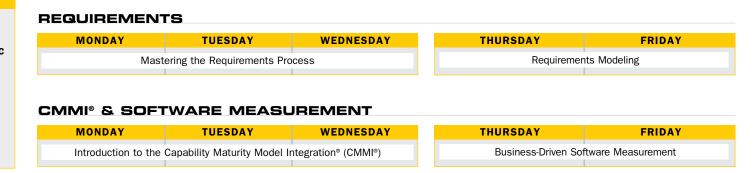
Pair any of these courses in the same location to build a week of training and save $300.

TRAINING LOCATIONS

REQUIREMENTS

September 8–12, 2008 — Washington, DC
October 6–10, 2008 — San Diego, CA

CMMI® & SOFTWARE MEASUREMENT

September 22–26, 2008 — Boston, MA
November 10–14, 2008 — Las Vegas, NV

REQUIREMENTS

MONDAY	TUESDAY	WEDNESDAY		THURSDAY	FRIDAY
Mastering the Requirements Process				Requirements Modeling	

CMMI® & SOFTWARE MEASUREMENT

MONDAY	TUESDAY	WEDNESDAY		THURSDAY	FRIDAY
Introduction to the Capability Maturity Model Integration® (CMMI®)				Business-Driven Software Measurement	

These additional courses are also available! Check online at www.SQETraining.com for dates and locations.

Agile Software Development Training

PRACTICAL TEST-DRIVEN DEVELOPMENT NEW
A Revolutionary Approach to Software Design and Programming

DESIGN PATTERNS EXPLAINED NEW
Principles, Practices, and Qualities of Good Design

SCRUM MASTER IMPLEMENTATION WORKSHOP NEW
Applying Lean-Agile Software Development Practices with Scrum

LEAN-AGILE TESTING PRACTICES NEW
Rapid Delivery of High Quality Software

USER STORIES AND ESTIMATION IN AGILE DEVELOPMENT NEW
How to Write User Stories and Estimate Development Time

Software Testing Training

SYSTEMATIC SOFTWARE TESTING
A Risk-Based Approach for Producing Better Software

MASTERING TEST DESIGN UPDATED
Techniques for Developing Focused Test Cases

SOFTWARE TESTING CERTIFICATION
Certified Tester-Foundation Level Training

JUST-IN-TIME SOFTWARE TESTING NEW
Powerful Tools for Fast-Changing Projects and Priorities

TEST MANAGEMENT
What Every Test Manager Needs to Know

EXPLORATORY TESTING IN PRACTICE NEW
Plan, Design, and Execute Tests Simultaneously to Find More Bugs—Faster

3 Days Topical Outline:

Costs of Development
The requirements process
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
Apprenticing, wikis, and other methods
Using business events and use cases

Functional Requirements
Identifying what the product must do
Establishing the product scope
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

MASTERING THE REQUIREMENTS PROCESS

Build the Right Software—the First Time   **UPDATED**

- 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 use software, 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—a test case for the requirement.

Your Requirements
Requirements are the most misunderstood—yet the most crucial—part of systems development. If the requirements are wrong, you end up 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 public 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

TW	**Washington, DC**	September 8–10, 2008
TW	**San Diego, CA**	October 6–8, 2008

TW *Indicates a Training Week course. See page 3 for details.*

For the latest information on this course and to download a PDF brochure, visit: www.SQETraining.com/mrp

REQUIREMENTS MODELING UPDATED

Use Models to Improve Your Requirements Gathering and Systems Analysis

- Verify system requirements with models
- Analyze needs based on requirements
- 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 and data 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 indispensible 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 your 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 public 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.

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 as 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

TW	**Washington, DC**	September 11–12, 2008
TW	**San Diego, CA**	October 9–10, 2008

TW *Indicates a Training Week course. See page 3 for details.*

For the latest information on this course and to download a PDF brochure, www.SQETraining.com/rm

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Modeling
Objectives
Requirements and systems analysis
How modeling is used in 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 model
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

3 Days Topical Outline:

Process Improvement Concepts and CMMI®
Exercise—Important process improvement ideas and CMMI®

Overview of CMMI® Model Components

Model Representations and Institutionalization
Exercise—Introduction to defining processes

Product Development—Part 1
Requirements development
Requirements management

Managing the Project
Project planning
Project monitoring and control
Risk management
Supplier agreement management

Project and Organization Support
Configuration management
Process and product quality assurance
Measurement and analysis
Exercise—Process definition and gap analysis
Using a process area
Decision analysis and resolution
Causal analysis and resolution

Product Development—Part 2
Technical solution
Product integration
Verification
Validation
Exercise—Impact of an engineering change

Improvement Infrastructure
Organizational process focus
Organizational process definition
Exercise—Process asset library "match game"
Integrated project management
Organization innovation and deployment
Organizational training
Exercise—Scenario evaluation

Managing Quantitatively
Organizational process performance
Quantitative project management
Exercise—Measurement implications of your process improvement goals

Supporting a Complex Environment
Organizational environment for integration
Integrated project management
Integrated teaming
Integrated supplier management

Tying It All Together and Next Steps

INTRODUCTION TO THE CAPABILITY MATURITY MODEL® INTEGRATION (CMMI®) `NEW`

Practical Software Process Improvement with Staged and Continuous Approaches

- Learn the fundamental concepts of the CMMI® process improvement model
- Review the five software maturity levels and their process areas (PAs)
- Examine the structure of the continuous and staged representations
- Find out how to improve software practices with CMMI®
- Take back the principles necessary to support an effective improvement program

David Consulting Group
www.davidconsultinggroup.com

Prepare Your Team and Organization for Serious Process Improvement

The Capability Maturity Model® Integration for software describes a proven process framework to dramatically improve the development and maintenance of software. CMMI® models are tools to help an organization improve its ability to develop and maintain high quality software products and services. Led by a Software Engineering Institute (SEI)-trained consultant and authorized lead assessor, this course helps you prepare to make the process and organizational changes necessary to implement a CMMI® program. Through exercises and group discussions, you learn and practice the steps to prepare for and implement a CMMI® program in your organization.

Implementing Successful Improvements

Learn the prerequisites and issues that must be addressed before beginning meaningful process improvements as structured by the CMMI®. Take away a practical understanding of the components of CMMI® models and their relationships to your organization. After participating in this course, students will be able to discuss the process areas in CMMI® models and locate relevant information in the model.

Who Should Attend

This course is appropriate for software development managers, leaders, and professionals with an interest in CMMI® as well as assessment, evaluation, and appraisal teams intending to use the CMMI®.

This course fulfills a prerequisite requirement as an official SEI Introductory CMMI® course and requires that students participate in all classroom activities to receive a certificate of completion. Students will have evening reading assignments on the first two days of the class.

CMMI® is a registered trademark of Carnegie Mellon University.

SQE Training, in collaboration with David Consulting Group, is arranging the Software Engineering Institute's authorized introduction to CMMI V.12 training course on September 22–24, 2008 in Boston, MA and November 10–12, 2008 in Las Vegas, NV, This training will be delivered under David Consulting Group's license agreement with the Software Engineering Institute.

Take-Home Bonus

Each public course participant receives a copy of *CMMI®: Guidelines for Process Integration and Product Improvement.*

ABOUT THE INSTRUCTOR

Will McKnight is an experienced process improvement specialist, who has worked on CMM®/CMMI®-based improvement programs in multi-national settings, in a wide range of organizations and types of software. He has more than twenty years of experience in all phases of the software development life cycle. Will's specialization in product development and management provides him with a deep, "hands-on" understanding of what it takes to provide practical guidance to organizations working to improve their processes. As an SEI-authorized Lead Assessor for SW-CMM®, he has performed numerous assessments. Will is also an SEI-authorized SCAMPI Lead Appraiser for CMMI®.

PUBLIC COURSE OFFERINGS

TW *Indicates a Training Week course. See page 3 for details.*

For the latest information on this course and to download a PDF brochure, visit: www.sqetraining.com/cmi

BUSINESS-DRIVEN SOFTWARE MEASUREMENT NEW

Develop and Improve your Software Measures and Metrics

- Develop software metrics that enhance the business value of software development
- Learn the steps for implementing a successful measurement program
- Customize a measurement strategy for your project, team, or organization
- Design strategies for metrics-based performance improvement and benchmarking

David Consulting Group
www.davidconsultinggroup.com

Measure What is Important to the Business

Establishing effective software measurements is critical for the success of software development projects and software process improvement strategies. In this interactive course, learn how to develop successful measurements to support your organization's business goals and drive business value in your organization. "Business-Driven Software Measurement" introduces the fundamentals of establishing objective-based measurements for your software organization at the project level, department level, and throughout your organization.

Learn about the different measures of productivity, quality, cost, and time along with guidelines for when—and when not—to use these measures. Discover the metrics needed to evaluate software development projects as well as software maintenance work. Practice what you have learned in small group exercises and gain unique insights into the challenges and benefits of collecting, interpreting, and reporting measurement data and resulting metrics.

Develop and Deploy a Software Measurement Program

Whether installing a completely new measurement program or introducing new, key measures into your organization, you need a step-by-step approach to be successful. Learn how to decide what metrics are important, where to begin, and how to overcome the almost inevitable organizational, cultural, and technical issues you will face. Take back the templates, definitions, data collection forms, questionnaires, and reports necessary to reach your goal.

Who Should Attend

This course is for software managers, project managers, QA managers, measurement specialists, and anyone interested in improving software measurement within their project, team, and organization.

This course is recognized for credit toward the Certified Software Measurement Specialist (CSMS) accreditation from the International Function Point Users Group (IFPUG). For more information, visit www.ifpug.org/certification/csms.htm.

2 Days Topical Outline:

The Need for Measurement
Why do we measure?
Meeting business needs
Applying measurement in software development and maintenance
What to measure and what not to measure

Measurement Categories
Productivity measures
Quality measures
Cost and time measures
Development vs. maintenance measures
Units of measurement—good, better, and best

Exercise—Calculate example project metrics

Selecting the Measurements
Establishing business value
The goal-question-metric paradigm
Customize practices to organizational maturity
Establish baseline performance measures

Exercise—Use business goals to select measurements

Implementing a Successful Measurement Program
Getting started
Key steps to success
Implementation strategies
Roadblocks, challenges, and hurdles
Building the measurement team
Establishing a roll-out plan
Opportunities for automation

Exercise—Organization readiness profiling

Reporting
Users of reports (target audiences)
Features, benefits, and applicability
Quantitative and qualitative analysis
Report examples

Performance Benchmarking
Using best practices for process improvement
How to compare your projects and your organization
Accessing industry benchmark data

Exercise—Establish performance improvement benchmarks

ABOUT THE INSTRUCTOR

Sheila Dennis *is the Vice President, David Consulting Group (DCG) and Director of Services, Software Measurement and Software Sizing Practices. She currently manages the global software measurement sizing and practice for DCG and has performed benchmarking and measurement consulting services for large IT providers, worldwide financial and insurance firms, and industry leaders in the telecommunications field. She is a recognized author, instructor, and invited speaker at metrics conferences.*

Tom Cagley is an additional instructor for this course.

PUBLIC COURSE OFFERINGS

TW	**Boston, MA**	September 25–26, 2008
TW	**Las Vegas, NV**	November 13–14, 2008

TW *Indicates a Training Week course. See page 3 for details.*

For the latest information on this course and to download a PDF brochure, visit: www.SQETraining.com/smp

TO REGISTER CALL 888.268.8770 OR 904.278.0524 • WWW.SQETRAINING.COM
FOR MORE INFORMATION ABOUT ON-SITE TRAINING, EMAIL ONSITETRAINING@SQE.COM

7

SOFTWARE ENGINEERING TRAINING

Accelerate Your Career & Empower Your Team

Mastering the Requirements Process `UPDATED`

Requirements Modeling `UPDATED`

Introduction to the Capability Maturity Model Integration® (CMMI®) `NEW`

Business-Driven Software Measurement `NEW`

BUILD-YOUR-OWN TRAINING WEEK

Maximize the impact of your training by combining courses in the same location to create a customized training week.

3 DAYS — $1995
Managing the Requirements Process
Introduction to the Capability Maturity Model Integration® (CMMI®)

2 DAYS — $1495
Requirements Modeling
Business-Driven Software Measurement

REQUIREMENTS TRAINING WEEK COURSES

Mon. – Wed.	Managing the Requirements Process
Thurs. – Fri.	Requirements Modeling

CMMI® & SOFTWARE MEASUREMENT TRAINING WEEK COURSES

Mon. – Wed.	Introduction to the Capability Maturity Model Integration® (CMMI®)
Thurs. – Fri.	Business-Driven Software Measurement

TRAINING LOCATIONS

REQUIREMENTS
September 8–12, 2008	Washington, DC
October 6–10, 2008	San Diego, CA

CMMI® & SOFTWARE MEASUREMENT
September 22–26, 2008	Boston, MA
November 10–14, 2008	Las Vegas, NV

Training Course Fee Includes*
- Tuition
- Course Notebook
- Continental Breakfasts and Refreshment Breaks
- Lunches
- Certificate of Completion
- Reference book (if applicable) *Textbooks are distributed for public courses only*

*Your registration fee includes $39 for a one-year digital subscription to Better Software magazine. If you are a current subscriber, your subscription will be extended an additional ten issues.

Training Course Schedule

7:30 a.m. - 8:30 a.m.	Registration (first day only) 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.

Public Training Policies: SQE Training reserves the right to make changes in course schedules, dates, locations, and accommodations and will make every effort to notify students within a reasonable period of time. However, SQE Training is not responsible for personal travel, accommodations, or other incidental expenses in connection with changes to a course.

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 six 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 (e.g., hotel, accommodations). Please bring the letter to the course for admittance.

EASY TO REGISTER

Online: www.SQETraining.com/register

Phone: 888.268.8770 / 904.278.0524

Email: sqeinfo@sqe.com

ON-SITE TRAINING
For more information about on-site training courses, contact SQE Training at 904.278.0524 or 888.268.8770 or email onsitetraining@sqe.com.

SQE TRAINING

SQE Training
330 Corporate Way, Suite 300
Orange Park, FL 32073

IF ADDRESSEE IS NO LONGER EMPLOYED:
Re-route to Director of Software Development