



PROCESS MANAGEMENT GROUP, LTD.

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The IT quality and testing experts
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CHANGING THE TESTERS PARADIGM

PROCESS MANAGEMENT GROUP, LTD.

- **Presented by:**
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PROCESS MANAGEMENT GROUP, Ltd.

PROCESS MANAGEMENT GROUP, LTD.

- Formed in 1992
- Dedicated to Software Quality & Software Testing
- Successful QA & Testing projects with several major US Organizations
- Assist in Migration from Level 1 to Level 2 (SEI CMM)
- Effective Integration of Project Management, Development Life Cycle and Testing
- Majority of PMG Staff are Certified Quality Analysts (CQA's) and/or Certified Software Test Engineers (CSTE's)

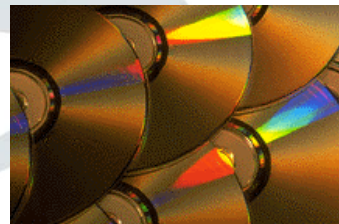
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PROCESS MANAGEMENT GROUP SERVICES

PROCESS MANAGEMENT GROUP, LTD.

- Quality Assurance
- Testing
 - Internal Practices
 - Project Specific
- Process Management



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PRESENTATION AGENDA

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- **Objective**
- **What is a “PARADIGM”**
- **What are common Testing Paradigms?**
- **What is the “New” Testing Paradigm?**
- **Why should Testing Paradigms Shift?**
- **How can Testing be effective in this new Paradigm?**
- **Recap**
 - Questions & Answers

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OBJECTIVE

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- **Address the ‘real world’ problems and situations that testers face**
- **Focus on Long Term Change**
- **Provide insight on performing effective testing when the desired prerequisites are not present**

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PARADIGM

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- **What is a Paradigm?**
 - Set of rules and understandings by which we view the world
 - Leads to how we act and how we perceive actions of others
- **What is a Paradigm Shift?**
 - When we change the foundation by which we view the world and events



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THE OUTSIDERS PARADIGM of Testing

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- **Testers:**
 - Don't Need to be Involved until Coding is Complete
 - Don't Contribute To The Project
 - Make The Project Take Longer & Cost More
 - Are Barriers to Implementation
 - Are Not Part of the Team
- **Testers Ask For Things That Don't Exist:**
 - Sound Requirements
 - Explicit Management Support
 - User Involvement

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TESTER PARADIGM Per The Test Analyst

- Testers must participate in the planning and requirements gathering activities of the project in order to be effective
- Testers cannot be effective without Sound Requirements
- Testers' objective is to:
 - Find Defects
 - Be Destructive
- Testing is most effective when automated tools are fully integrated into the testing process

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Test Analysts Paradigm Shift



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TESTER PARTICIPATION Paradigm Shift

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Common Paradigm:

Testers must participate in the planning and requirements gathering activities of the project in order to be effective

Paradigm Shift:

Any Tester participation in a project can make contributions to a project and reduce the risk associated with releasing a system

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TESTER PARTICIPATION Paradigm Shift

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- **Why?**
 - Lack of participation in planning often leads to insufficient time/resources to perform robust testing
 - How?
- **Pareto Principle**
 - Focus on the predominant 'causes' of problems
- **Get Most "Bang for the Buck"**
 - Obtain 80% of the value from 20% of the effort
- **Prioritize Test Cases**

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SOUND REQUIREMENTS Paradigm Shift

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- **Common Paradigm:**
 - Testers cannot be effective without Sound Requirements
- **Paradigm Shift:**
 - Although not ideal, testing can proceed without detailed requirements

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SOUND REQUIREMENTS Paradigm Shift

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- **Why?**
- **Requirements are widely recognized as:**
 - Key
 - Source of Most Defects
 - BUT, Often Weak or Non-Existent
- **Testers can:**
 - Demand That Requirements get Developed
 - Not test Until Requirements are Developed
 - Develop The Requirements
 - Test without Requirements

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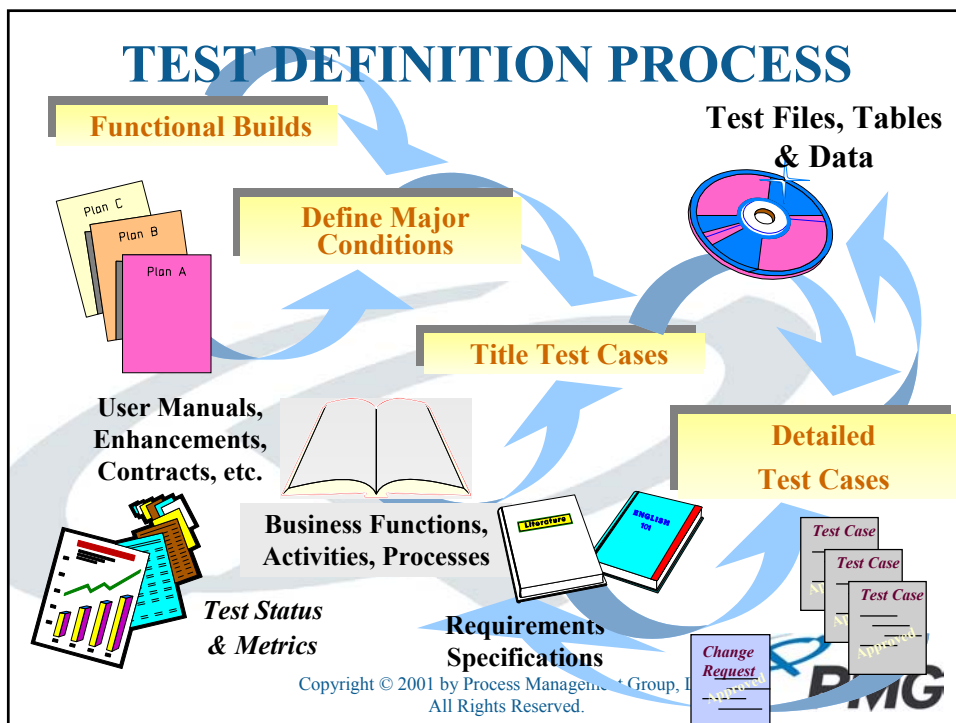


SOUND REQUIREMENTS Paradigm Shift

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- How?
- **We Recognize that Requirements are:**
 - Used to Develop Detailed Test Cases
 - Criteria for Test Pass/Failure
 - NOT the Sole Source of Information
- **Review the Test Case Definition Process**

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TITLED TEST CASES Now What?

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- **Detail Test Cases Based upon Observations**
- **Provide Details for Key Variables**
 - Use To Solicit Requirements
 - Opens Dialog
- **Detail Test Cases When it (appears) to be a Defect**

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TESTERS' OBJECTIVE Paradigm Shift

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Common Paradigm:

- A Tester should:
 - Be Destructive
 - Find Defects

• **Paradigm Shift:**

- A Tester should:
 - Aim to get the most defects corrected
 - With the least impact to the project schedule and budget

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TESTERS' OBJECTIVE Paradigm Shift

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- **Why?**

Good Testing gets positive recognition for contributing to a successful project.

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TESTERS' OBJECTIVE Paradigm Shift

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- **How?**

Focus on critical Success Factors

- **Tester Qualities**

- "Constructively Destructive"
- Detective Skills
- Ability to understand the system as the sum of its parts
- Skeptical but not hostile attitude
- Organized, flexible and patient approach
- Ability to be the bearer of bad news while remaining objective and positive



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TESTERS' OBJECTIVE Paradigm Shift

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Effective Defect Reporting

- Find defects early and report them as soon as possible
- Effectively describe the defects and show them as reproducible
- Temper enthusiasm
- Follow-up on defect reports
- You win some, you lose some
- Don't just report bad news!!!

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TESTERS' OBJECTIVE Paradigm Shift

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"The best tester is not the one who finds the most bugs or who embarrasses the most developers. The best tester is the one who gets the most bugs fixed."

- Cem Kaner

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TEST AUTOMATION Paradigm Shift

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Common Paradigm:

Testing is most effective when
automated tools are fully
integrated into the testing process

Paradigm Shift:

Manual testing and Selective
Automation will demonstrate value

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TEST AUTOMATION Paradigm Shift

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- **Why?**
- **Realities of using Test Tools**
 - No substitute for human eye and intuition
 - Pesticide Paradox
 - Automate the simple things
 - Should be able to manually recreate defects found by tools
 - Software tools aren't a substitute for software testers – they just help software testers perform their jobs better.
 - Generally most viewed as automation of Regression Testing; other areas can/should be pursued

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TEST AUTOMATION Paradigm Shift

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- **How?**

**Focus on areas of automation
that matches your environment,
budgets, skill sets, expectations
and will demonstrate value**

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TESTER PARADIGM Recapping the New Paradigms

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- **Any Tester participation can
contribute to a project and reduce
the risk associated with releasing a
system**
- **Although it's not ideal, testing can
proceed without detailed
requirements**

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TESTER PARADIGM

Recap the New Paradigms

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- **A Tester should:**
 - Aim to get the most defects corrected
 - With the least impact to the project schedule and budget
- **Manual testing and Selective Automation will demonstrate value**

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THE OUTSIDERS

PARADIGM SHIFT

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- **Testers:**
 - Contribute To The Project
 - Helps The Project Stay on Schedule & Within Budget
 - Facilitates Implementation
 - Are Part of the Team
- **Testers Contribute to the Building of:**
 - Sound Requirements
 - Explicit Management Support
 - User Involvement

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