

TL 9000 QMS Measurements R 3.5

- TL 9000 품질경영 시스템 성과지표 R 3.5 -

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Abstract

This study reviews the revisions and updates to the Release 3.5 version of the TL 9000 Measurements Handbook. This paper introduces the new organization of QuEST Forum Work Groups(WGs) and how to apply TL 9000 standards in software product lifecycle.

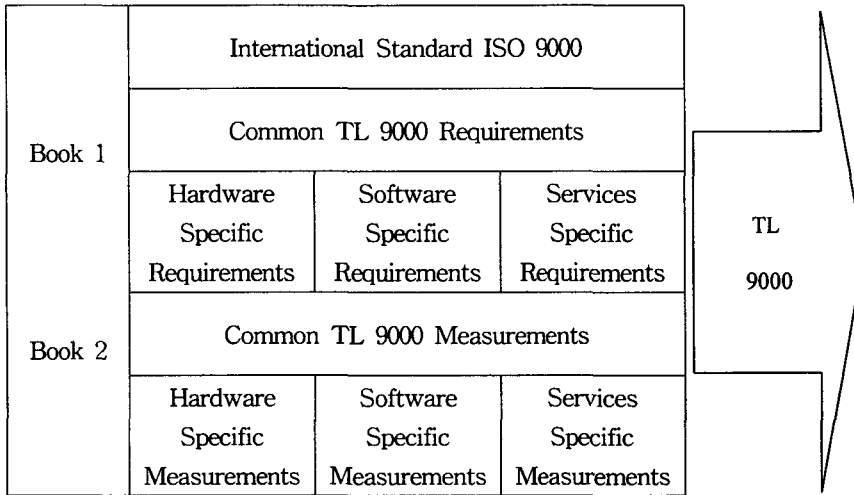
1. Introduction

1.1 TL 9000 Development History [4]

- | | |
|--|-------------------|
| · Requirements Handbook 2.5 | Early 1999 |
| · Measurements Handbook 2.5 | Fall 1999 |
| · RRS/MRS start of operations | January 2000 |
| · Requirements Handbook 3.0 | March 31, 2001 |
| · Measurements Handbook 3.0 | March 31, 2001 |
| · RRS redesign website on-line | February, 2003 |
| · Resource Handbook for Business Improvement 1.0 | January, 2003 |
| · Measurements Handbook 3.5 | March 31, 2003 |
| | |
| · Product Category Table 2.5 Usage required | - January 1, 2000 |
| · Product Category Table 3.0 Usage required | - July 1, 2001 |
| · Product Category Table 3.1 Usage required | - January 1, 2002 |
| · Product Category Table 3.2 Usage required | - October 1, 2002 |
| · Product Category Table 3.5 Usage required | - July 1, 2003 |

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1.2 TL 9000 Model [4]



1.3 Supply Chain

Supplier ...> Organization ...> Customer

1.4 Why Measurements [4]

- Forces accountability
- Provides a common language
- Gives a consistent measure across industry
- Provides a means for industry comparison
- Develops management information
 - Provides objective evidence
 - Identifies improvement opportunities
 - Enables effective use of resources
- Provides benchmarking opportunities

2. Work Group

2.1 Release 3.0 [2][4]

- Measurements Work Group
- Oversight Work Group

- Business Excellence Acceleration Model(BEAM) Work Group
- Governance Work Group
- Marketing and Communications(Marcom) Work Group
- Requirements Work Group
- Supply Chain Work Group
- Training Work Group

2.2 Release 3.5 [3]

- Measurements Work Group
- Telecom Supply Chain Work Group
- Oversight Work Group

2.3 The New Work Group Structure in 2003 [4]

- Global Work Group
- Telecommunications Business Excellence(TBE) Work Group
- Integrated Global Quality Requirements and Measurements(IGQ) Work Group
- Oversight Work Group

3. Change in the Measurements Handbook R 3.5

3.1 Summary of the Revisions and Updates [4]

- Simplify the counting rules and language wherever possible
- Add additional outage and software maintenance measurements to accommodate the needs of network operations personnel
- Eliminate the remaining differences between reported RQMS and TL 9000 measurements in order to eliminate duplicate reporting
- Add and simplify product categories to incorporate the needs of the supply chain and also expand registration opportunities to service providers
- Minimize changes in reporting of existing measurements and product categories
- Consider input from registrars, training providers, QuEST Forum members, registered organization surveys, ballot comments and deferred items from previous reviews.
- Work with the National Electronic Systems Assistance Center(NESAC) and European IPQM and RQMS Users(EIRUS) organizations to ensure the TL 9000 Handbook has the comparable measurements they use.

3.2 Change in the Handbook R 3.5 [3]

- Section 2 Structure
 - 2.2 Terminology(P 2-1)
- Section 3 Measurements Processing, Usage and Responsibilities
 - 3.4.2 Customer Base (P 3-2)
 - 3.5.3 Organization Responsibilities (P 3-3)
- Section 4 General Measurements Requirements
 - 4.1.1 Conformance to Measurements Profile (P 4-1)
 - 4.2.2 Acceptable Alternative Measurements (P 4-2)
 - 4.2.9 Format of Data Reported to the MRS (P 4-4)
 - 4.2.10 Benefits of Using TL 9000 Measurement Data (P 4-4)
- Section 5 Common Measurements
 - 5.1 Number of Problem Reports (NPR)
 - 5.1.4 Detailed Description
 - b) Counting Rules (P 5-2)
 - d) Calculations and Formulas (P 5-3)
 - e) Reported Data and Format (P 5-4)
 - 5.1.7 Example Calculations (P 5-6)
 - 5.2 Problem Report Fix Response Time (FRT)
 - 5.2.4 Detailed Description
 - b) Counting Rules (P 5-9)
 - d) Calculations and Formulas (P 5-11)
 - e) Reported Data and Format (P 5-12)
 - 5.2.7 Example Calculations (P 5-13~16)
 - 5.3 Overdue Problem Report Fix Responsiveness (OFR)
 - 5.3.3 Detailed Description
 - e) Reported Data and Format (P 5-17)
 - 5.3.6 Method of Delivery or Reporting (P 5-20)
 - 5.4 On-Time Delivery (OTD)
 - 5.4.4 Detailed Description
 - b) Counting Rules (P 5-23)
- Section 6 Outage Measurement
 - 6.1 System Outage Measurement (SO)
 - 6.1.1 General Description and Title (P 6-1)
 - 6.1.2 Purpose (P 6-1)
 - 6.1.4 Detailed Description (P 6-2)
 - 6.1.4.1 General Rules (P 6-3)
 - 6.1.4.2 Service Impact Measurement Rules (P 6-4)
 - 6.1.4.3 Network Element Outage Measurement Rules (P 6-7)
 - 6.1.6 Method of Delivery or Reporting (6-17)
 - 6.1.7 Examples (P 6-18)
 - 6.2 Engineering or Installation Caused Outages (EIO)
 - 6.2.1 General Description and Title (P 6-25)
 - 6.2.2 Purpose (P 6-25)
 - 6.2.3 Applicable Product Categories (P 6-25)

- 6.2.4 Detailed Description (P 6-25)
- 6.2.5 Sources of Data (P 6-27)
- 6.2.6 Method of Delivery or Reporting (P 6-27)
- 6.2.7 Example Calculations (P 6-27)
- Section 7 Hardware Measurements
 - 7.1 Field Replaceable Unit Returns (FR) (P 7-1)
 - 7.1.4 Detailed Descriptions
 - b) Counting Rules (P 7-2)
 - c) Counting Rule Exclusions (P 7-3)
 - d) Calculations and Formulas (P 7-3)
 - 7.1.6 Method of Delivery on Reporting (P7-6)
- Section 8 Software Measurements
 - 8.1 Software Installation and Maintenance (P8-1)
 - 8.1.4 Detailed Description
 - a) Terminology (P8-1)
 - b) Measurement Options (p8-2)
 - 8.1.5 Release Application Aborts (RAA) and Release Application Problems (RAP) (P8-4)
 - 8.1.6 Patch Quality : Corrective Patch Quality (CPQ), Feature Patch Quality (FPQ) and Manual Intervention Patches (MIP) (P8-9)
 - 8.1.7 Patch Propagation Delay (PPD) (P8-16)
 - 8.1.8 Software Update Quality (SWU) (P8-21)
 - 8.1.8.4 Detailed Description
 - b) Counting Rules (p8-21)
 - d) Calculations and Formulas (P8-22)
- Section 9 Service Quality Measurements
 - 9.1 Service Quality (SQ)
 - 9.1.4 Detailed Description
 - b) Counting Rules (P9-1)
 - 9.1.6 Method of Delivery or Reporting (P9-5)
- Appendix A
 - Table A-1 Product Category Definitions (PA-1)
 - Table A-2 Measurement Applicability Table (Normalized Units) (PA-34)
 - Table A-3 Definitions for Network Element Impact Outage Measurements (PA-44)
 - Table A-4 Transmission Standard Designations and Conversions (P. A-50)
 - Table A-6 Measurements Summary Listing (P. A-51)
 - Glossary (P. Glossary-1)

4. Requirement Handbook R 4.0 [4]

- EIRUS, QuEST : IPQM Team
- Results : 6 new TL 9000 adders
 - ; #1 : 7.3.1. H, S.5 In-Process Quality Measurements (IPQM) Data Reporting

- ; #2 : 7.3.1. H, S.4 IPQM Planning
- ; #3 : 7.3.1. H, S.4 note 1 IPQM Guidelines
- ; #4 : 8.2.3. C.1 IPQM Measurements Establishment
- ; #5 : 8.2.4.H,S.2 IPQM Implementation
- ; #6 : Glossary IPQM definition
- : New Appendix Tailoring Guidelines
- : New Approach for Appendix F (Customer Communication)

5. Discussions [1]

- Applicability of TL 9000 in Software Product Quality
- Software Product Lifecycle : Product Definition
Product Development
Product In Use
- TL 9000 Requirements : Product Definition
- TL 9000 Measurements : Product In Use

6. References

1. Suryan, W., Abran, A., Bourque, P. and Laporte, C., "Software Product Quality Practices : Quality Measurement and Evaluation Using TL 9000 And ISO/IEC 9126", Software Technology and Engineering Practice (STEP), 2002.
2. TL 9000 Quality Management System Measurements Handbook Release 3.0, QuEST Forum, 2001.
3. TL 9000 Quality Management System Measurements Handbook Release 3.5, QuEST Forum, 2003.
4. www.questforum.org