

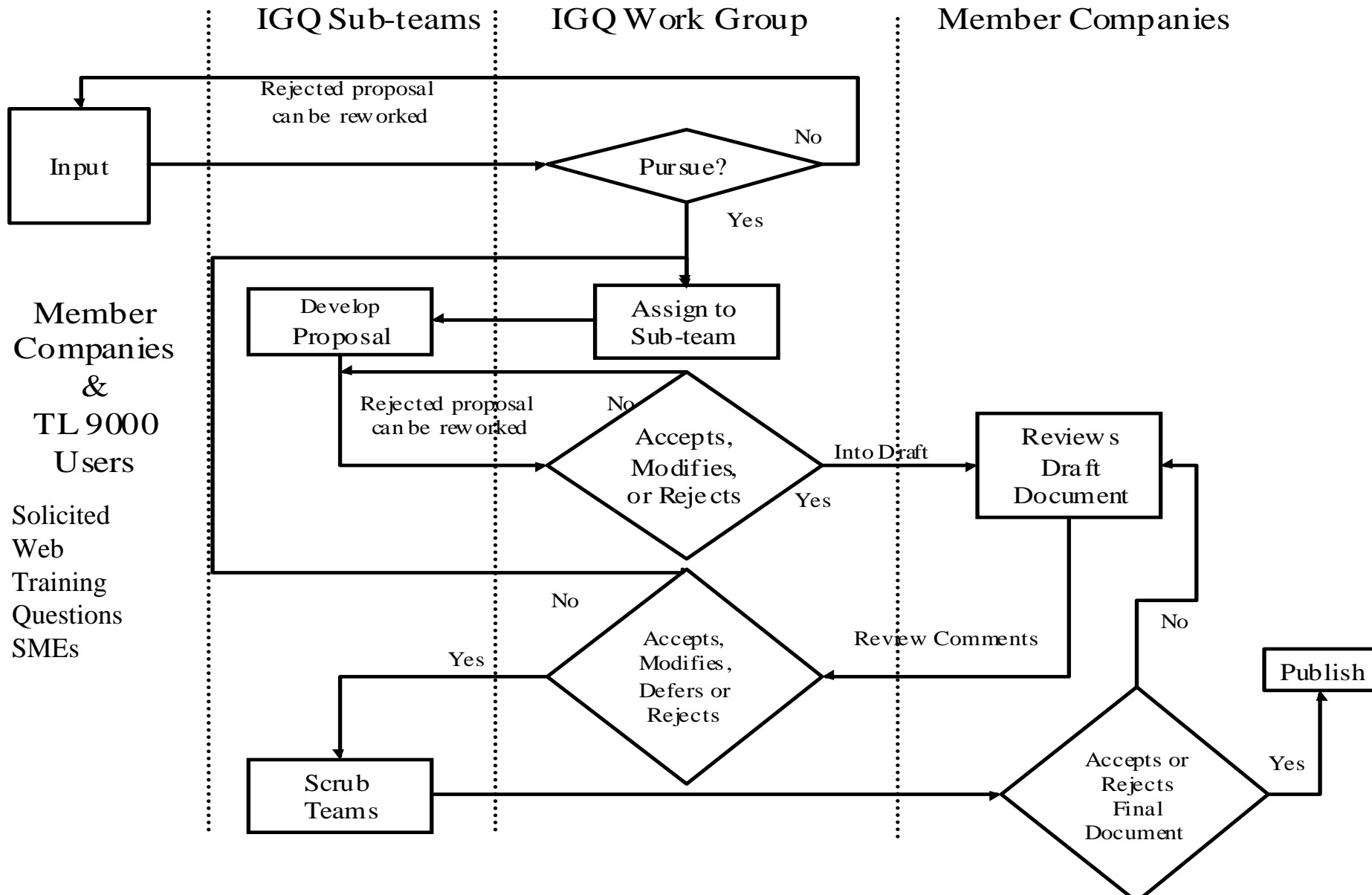
# Requirements Handbook 4.0 Overview

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# Process

# Handbook Production Process



# Summary

# Status

- Books printed
- Site licenses available to Forum members
- Working on translations:
  - Simplified Chinese, Korean, Japanese
  - Spanish, French, Portuguese
- E-Learning Available:
  - Delta Requirements and R. 4.0 Requirements

# Status

- “Map” from R3.0 to R4.0 for each adder completed – available at [http://www.tl9000.org/tl\\_hbks-req-changes-4.htm](http://www.tl9000.org/tl_hbks-req-changes-4.htm)
- All TL 9000 sanctioned training being revised and updated to reflect R4.0

# Status

- Publication date of June 30, 2006
- May use for audits conducted from July 1, 2006 through June 30, 2007
- Must use for audits on or after July 1, 2007
- Auditors must have delta training before conducting third party audit to R4

# Summary

- Sub-teams that worked on R4
  - Team 34
  - Design Process Measurements
  - In process Sub-team
  - Best Practices
  - OBM



# Team 34 Objectives

- Evaluate and analyze the TL adders: make recommendations where opportunities exist to improve effectiveness / value-add of the requirements in order to “raise the bar”
- Ensure consistency, **where appropriate**, between language / terminology used in ISO 9001:2000 and TL 9000
- Ensure language / terminology is used consistently within TL 9000 documents

# Team 34 Objectives

- Ensure “shall statements” are used consistently / appropriately within adders and notes
- Review adders to determine if there is a need for a documented procedure or some other alternative
- Review TL 9000 adders to determine if additional records need to be specified (as evidence of the effectiveness of the QMS)

# Team 34

## “Operating Principles”

- Where records are required to demonstrate performance or drive improvements, the Adder will be specific in that regard and will reference ISO clause 4.2.4
  - Note: Later decision around definition of “method” superseded this principle.
- Wherever possible, the need for records will be tied to key performance / business indicators / measures to help clarify value
- Example will appear as Notes vs. being included as part of the Adder

# Team 34

## “Operating Principles”

- If documented procedures are removed from an Adder, some means to measure effectiveness and continual improvement will be substituted
- Some requirements that mandate documented procedures may be revised to include an additional requirement for records where such evidence is determined to be needed
- Checklist of questions / criteria to ask when examining requirements consistent with team objectives

# Design Process Measures

- Based on EIRUS experience - develop
  - Requirement(s) to use proven design process measurement techniques (Test Tracking, Defect Measurements, etc.) as appropriate to each development project.
  - Provide guidance document (appendix to Book 1) on tailoring design process measurements to the project.
  - Add notes to include use of design process measures in process and product development.
  - These design process measures are not those which occur during regular on-going hw production.

# In Process

- Review industry standards to assess opportunities to strengthen the TL 9000 requirements in the area of Software Development

# Best Practices

- Review the NRIC\* Best Practices to ensure that they are addressed in the TL9000 requirements.
- Started with NRIC IV
- Included NRIC V and VI
- Final list included 456 items reviewed

\*Network Reliability and Interoperability Council – [www.NRIC.org](http://www.NRIC.org)

# Best Practices

## Examples

5-555	Equipment Suppliers should continually enhance their software development methodology to ensure effectiveness by employing modern processes of self-assessment. Formal design and code inspections should be performed as a part of the software development cycle. Test environments should be enhanced to provide more realistic network settings. Fault tolerance levels and failure probabilities should be shared with Network Operators and Service Providers.	7.3.1.C.1 - Project Plan 7.3.2.C.2 - Design and Development Requirements 7.3.2.H.1 - Content of Requirements 7.3.4 - Design and Development Review 7.3.5 - Design and Development Verification 7.3.6 - Design and Development Validation 8.5.3 - Preventative Action
5-501	Network Operators should report problems discovered from their testing to the Equipment Supplier whose equipment was found to be the cause of problem.	<ul style="list-style-type: none"><li>· TL9000 doesn't talk about Network Operator responsibility.</li><li>· QuEST/TL9000 should be pointing back to this BP.</li></ul>



# OBM

- OBM = Outcome Based Modifications
- Craft wording for 4.0 version to address the issue of alternative implementations
  - Options
    - a) reword specific requirements to make target behaviors more explicit and remove the “hows” where appropriate

OR

b) craft wording similar to CMM’s “practices” statement which would allow other methods as long as intent is met and quality and reliability are not sacrificed.

# OBM

- Document intent of the requirement as appropriate
- Develop wording for “Alternative Methods” statement to provide for the future
- Walk through list of 84 ( R 4 draft at that time) adders and decide case by case how to address each adder
- Minimal wording changes as a goal

# OBM

- **Method** - A means by which an activity is accomplished which is not necessarily documented but which is demonstrated to be consistent and effective throughout the organization. Effective implementation of a method is demonstrated by the existence of verifiable objective evidence (e.g., observation or record).

# Summary of Changes

- ISO base unchanged
- ~30% adders had no change
- ~30% minor changes (if meet today, still meet)
- ~40% major change or new
  - Intended result instead of method of doing
  - Design process quality measurements
  - Added required testing (regression, document verification, stress, abnormal conditions and system)
  - Broadened scope

# Results Numerically

- No change - 27
- Moved - 3
- Numbering - 1
- Minor – 21
- Deleted - 2
- Broadened scope - 7
- Major Change - 20
- Converted note to req. - 1
- New – 10

Net gain of 9 for 90 total

# Deleted

- 7.1.C.2 New Product Introduction
- 7.5.1.C.1 Organization's Support Program

# Broadened

- 7.1.**C.3** Tools Management (was S.3)
- 7.2.3.**HS.1** Organization's Recall Process
- 7.3.1.**HS.1** Migration Planning (was S.2)
- 7.3.2.**C.3** Requirements Allocation (was S.2)
- 7.3.3.**HS.1** Design and Development Output
- 7.6.**C.1** Equipment Identification (was H.1)
- 8.4.**HS.1** Field Performance Data

# Changed & New Adders



Microsoft Office  
Excel Worksheet



# Location of info

- TL 9000 users - [tl9000.org](http://tl9000.org)
- QuEST Forum members - [questforum.org](http://questforum.org)
- IGQ Work Group folders
- Will need to ID to access
- Questions – use “Contact Us” feature on either site

# Thank you!

- Additional information available on websites
  - TL9000.org
  - Questforum.org
    - IGQ Workgroup folders
    - Requires QF Member ID / password to access
- Contact Information:  
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