

Measurements Handbook Release 4.0 Status

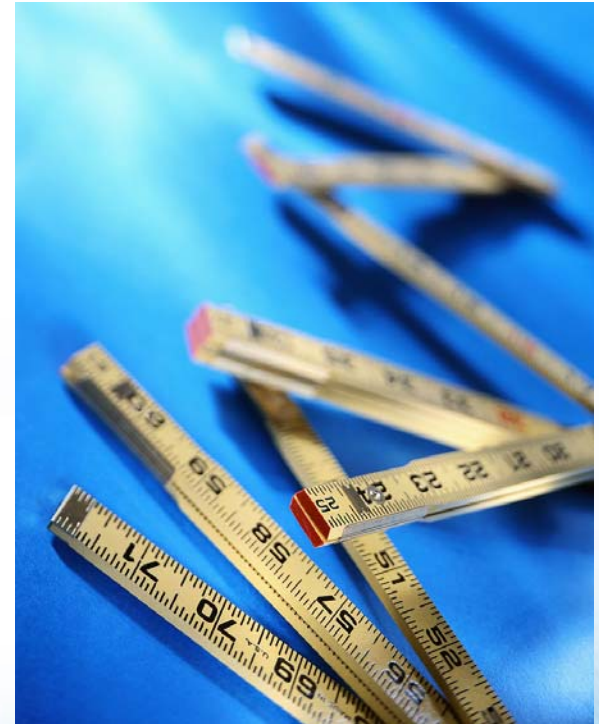
2007 Annual Meeting Workshop February 5, 2007

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Measurements R4.0 Status

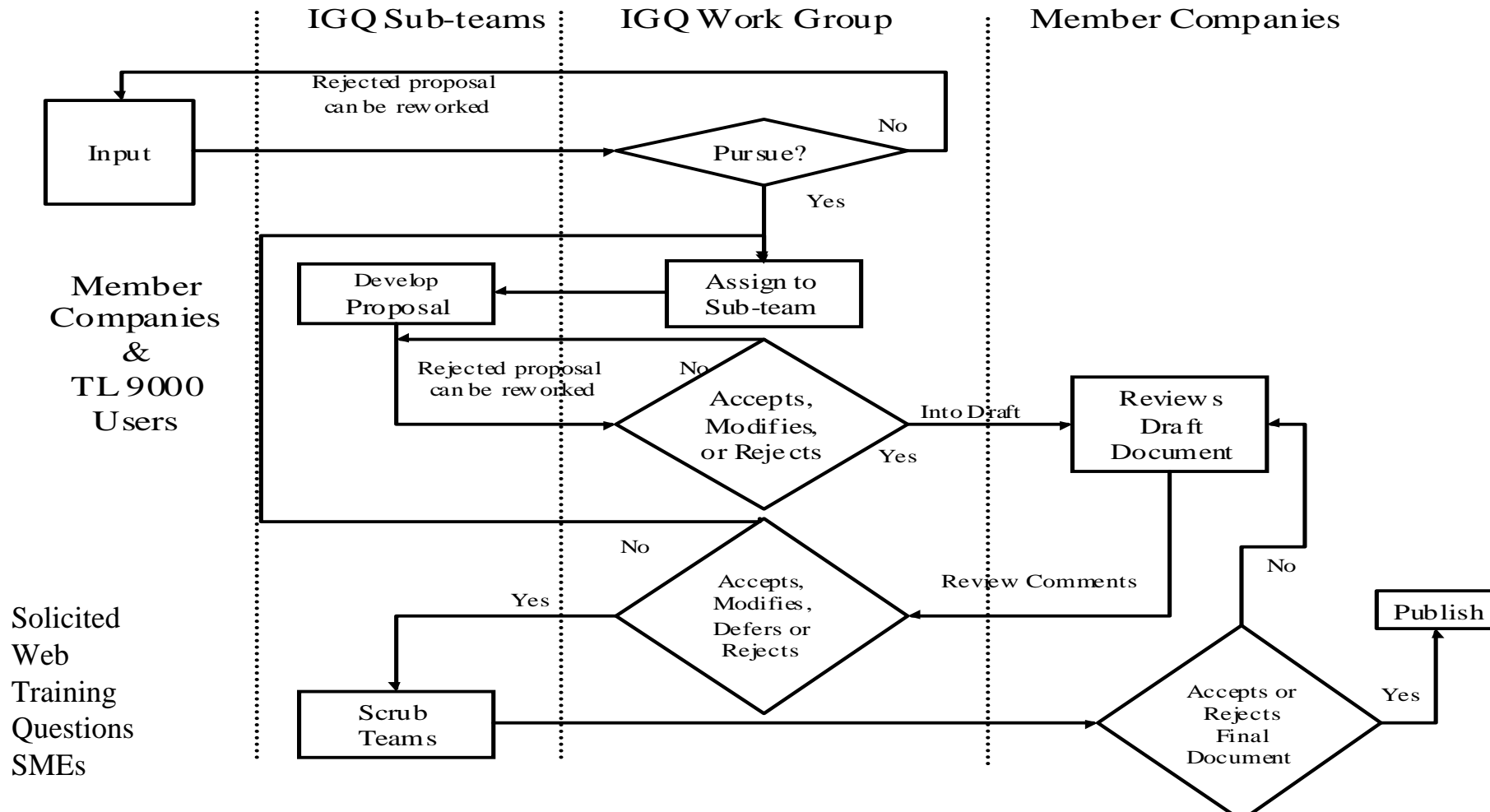
- Process Followed
- Comments Summary
- Proposed Section Changes
 - Sections 3 & 4 (General Measurement Requirements)
 - Section 5 (NPR, FRT, OFR, OTD)
 - Section 6 (SO, SONE, EIO)
 - Section 7 (FR)
 - Section 8 (CFQ, SPR)
 - Section 9 (SQ)
- R4.0 Implementation Requirements
- Other Measurements Information
 - Late Data Submission Rules



Process Followed



Handbook Production Process



Measurements Handbook R4.0 Comments Summary



R4.0 MHB Summary – Feb 2007

- No change suggested to existing “raw” data collection except for software measures
- Data for proposed new software measures should be available
- Proposals from section sub-teams were incorporated into R4.0 draft
- Draft sent out for review
- 628 comments received



MHB R4.0 Comments Summary

- 538 – Resolution accepted by IGQ
- 31 – Comments for Examples completed
- 59 – Comments for Appendices completed



General Decisions

- Expand measurement “Examples” to cover wider diversity of product categories
- Move “Examples” to web (as has always been done for “Product Category Tables”)
 - Better supports update flexibility
 - Can quickly add new examples where warranted
 - Based on FAQs
 - To support Alerts
 - Based on data submission failures
 - Examples: http://tl9000.org/tl_examples.htm
 - PCT: <http://tl9000.org/pct.htm>





Section 3 & 4 Changes – General Measurement Requirements



Section 3 & 4 Summary

- Updates to reflect current operation, roles, terminology
 - TL 9000 Administrator
 - Registration Management System
 - Data Submission Receipt
 - Performance Data Reports
- Customer Base
 - Use all customers where data available for accurate measurements
 - Customer base information must be retained to support potential data resubmission
- Monthly Data Submissions
 - Data required within 7 weeks of month close
 - Up to 1 year allowed for implementation



Section 3 & 4 Summary (Cont.)

- Improvements for users
 - Improved notifications
 - TL 9000 Administrator to proactively inform impacted parties about new information relevant to them
 - Web based input and administration systems
 - Resubmission rules
 - Data can utilize current PCT and HB requirements or those used when original data submitted
 - Requires TL organization to supply data to its TL registered suppliers
- Eliminated “N/A” as data submission value - just “Exempt”

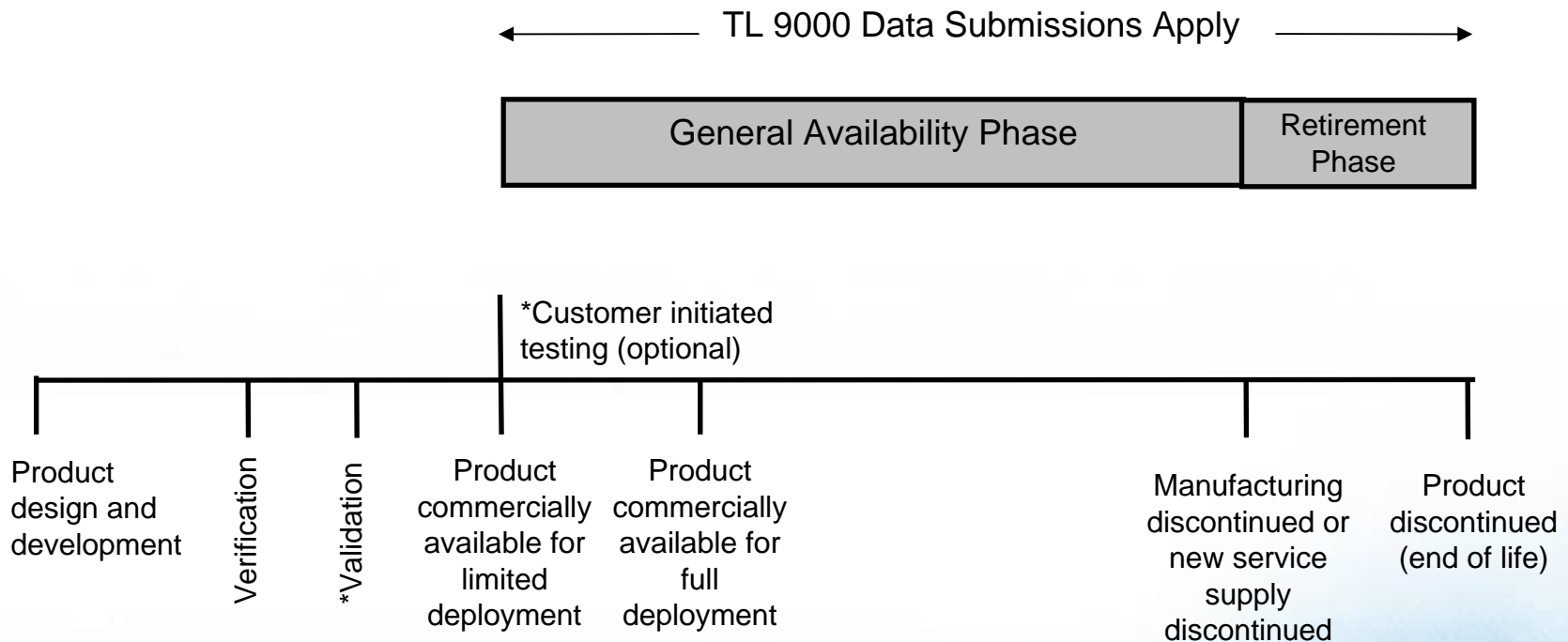


Section 3 & 4 Summary (Cont.)

- Clarifications to requirements
 - Data aggregation
 - Only allowed within single Product Category
 - Organization can make multiple submissions
 - Data for new releases of products within scope required @ GA, data for new products within scope ≤ 6 months from GA
 - Use of linked registrations
 - Data submission relative to product lifecycle



TL Data Submissions & Product Life Cycle



* External testing initiated by the organization that is deemed necessary to qualify the product for deployment, would be included in validation and executed prior to General Availability. Testing initiated by the customer occurs after the start of the General Availability phase.

Figure 4.2.6-1 General Availability Portion of Product Life Cycle and TL 9000 Data Submission



Section 5 Changes - Common Measurements



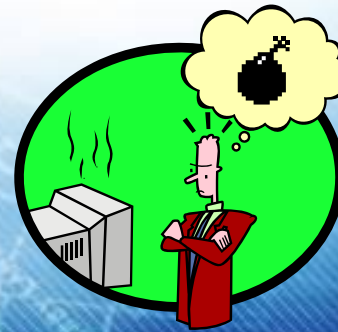
Section 5 Summary

- 5.1 (NPR), 5.2 (FRT), & 5.3 (OFR)
 - Clarified when and from where problems are counted
 - Starts at GA Phase as per previous chart
 - PRs from customer locations or labs
 - Product Category 9 (End-Customer Products) to use priorities (CR, MJ, MN)
 - Clarified differences between a problem report, a request for information, and “routine events”
 - Reworded severity level definitions to make them less “switch” centric (see next slides)



Problem Report - Critical

- Conditions that severely affect the primary functionality of the product and because of the business impact to the customer requires non-stop immediate corrective action, regardless of time of day or day of the week as viewed by a customer on discussion with the organization such as
 - Product inoperability (Outage),
 - a reduction in the capacity capability, i.e., traffic/data handling capability, such that expected loads cannot be handled,
 - any loss of emergency capability (e.g. emergency 911 calls), or
 - safety hazard or risk of security breach.



Problem Report – Major

- Product is usable, but a condition exists that seriously degrades the product operation, maintenance or administration, etc., and requires attention during pre-defined standard hours to resolve the situation. The urgency is less than in critical situations because of a lesser immediate or impending effect on problem performance, customers and the customer's operation and revenue such as
 - reduction in product's capacity (but still able to handle the expected load),
 - any loss of administrative or maintenance visibility of the product and/or diagnostic capability,
 - repeated degradation of an essential component or function, or
 - degradation of the product's ability to provide any required notification of malfunction.



Problem Report - Minor

- Other problems of a lesser severity than "critical" or "major" such as conditions that have little or no impairment on the function of the system.



Section 5 Summary (Cont.)

- 5.1 (NPR), 5.2 (FRT), & 5.3 (OFR) (Continued)
 - Requires measuring of FRT to SLA if formal SLA is in effect (as opposed to 30/180 days for PCT 1-6, 9)
 - Removed penalty reports from OFR calculation
 - Clarified deferral impacts to FRT and OFR calculation



Section 5 Summary (Cont.)



- 5.4 OTD
 - Clarified delivery interval contractual terms may be used to set CRD
 - Clarified that customer accepted delivery windows other than calendar day may be used
 - Combined OTIS into OTS reporting
 - Clarified reporting for line items that are part of a service delivery





Section 6 Changes - Outage Measurements



Section 6 (Outage) Summary

- Reorganized into 3 distinct sections (SO, SONE, and EIO) and simplified
- Combined reporting of total and partial outages for SONE (4 measures vs. 8)
- Admin and CCS outage reporting now integrated into partial outage definitions
- Lowered generic threshold to 15 seconds (from 30) for unscheduled outages
- Counting rules for customer induced delays
- Terminology Shift
 - Product Attributable Outage
 - Customer Attributable Outage
 - External Attributable Outage



Product Attributable Outage

- An outage primarily triggered by
 - a) the system design, hardware, software, components or other parts of the system,
 - b) scheduled outage necessitated by the design of the system,
 - c) support activities performed or prescribed by an Organization including documentation, training, engineering, ordering, installation, maintenance, technical assistance, software or hardware change actions, etc.,
 - d) procedural error caused by the Organization,
 - e) the system failing to provide the necessary information the to conduct a conclusive root cause determination, or
 - f) one or more of the above.



Customer Attributable Outage

- An outage that is primarily attributable to the customer's equipment or support activities triggered by
 - a) customer procedural errors
 - b) office environment, e.g., power, grounding, temperature, humidity, or security problems
 - c) one or more of the above
- Outages are also considered customer attributable if the customer refuses or neglects to provide access to the necessary information for the organization to conduct root cause determination.



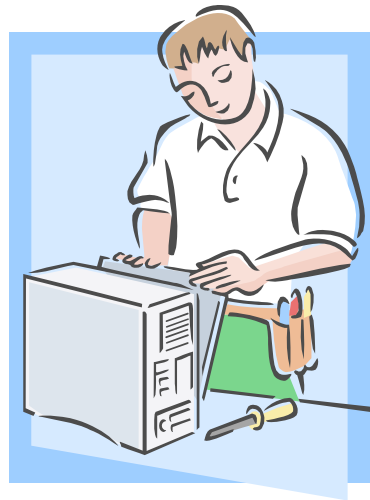
External Attributable Outage

- Events where causes are natural disasters such as tornadoes or floods, and events caused by third parties not associated with the customer or the organization (commercial power failures, 3rd party contractors not working on behalf of the organization or customer)





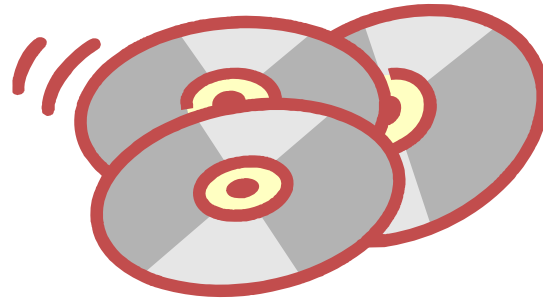
Section 7 Changes - Hardware Measurements



Section 7 Summary

- Field Replaceable Unit Returns
 - No changes to measurement philosophy
 - Clarifications and incorporation of Alerts are the only changes





Section 8 Changes – Software Measurements



Section 8 (Software) Summary

- Major rework
- R3.5 measurement set looks at different issues based upon architecture
- Several R3.5 measures felt not to be comparable
- Strong interest to see quality of corrections
 - Independent of product architecture
 - Independent of means for product maintenance
- Net result
 - Removed concept of “Options”
 - Removed “Dominant Release” requirements



Section 8 (Software) Summary

- New Software Fix Quality (SFQ) measure
 - Replaces CPQ/FPQ & SWU
 - Independent of product maintenance philosophy
 - Based upon # of fixes released, whether by update or patch
 - # defective fixes / # fixes deployed
- New Software Problem Report (SPR) measure
 - Adds benchmarkable subset of NPR
 - # of software PRs / Normalization Unit
 - Software problems require a software change to resolve or identifies faults in program code, design of data structures, or firmware. They exclude:
 - Faults in subscriber data
 - A hardware design problem but the solution or workaround is implemented in software



Section 8 (Software) Summary

- Also removed RAA/RAP, PPD, and MIP from Section 8
- Not included in R4.0 (but still being investigated)
 - On time development milestone measure (Benchmarking trial in progress)
 - Fix volume measure or index





Section 9 Changes – Services Measurements



Section 9 Summary

- Generic Service Quality measure - defective transactions
- Transactions to be measured identified in Table A-2
- Measures unsuccessful events instead of successful events



Product Category Tables

- 1.2.1 Legacy Packet Networks = 1.2.1 Public Packet Switched Network + 1.2.4 Frame Relay Switch
- 1.2.6 Packet Gateway moved into 1.2.6 Access Multi-service
- 1.2.5 Broadband Multi-service moved into 1.2.9 Routers
- 1.2.9 Routers split into 1.2.9.1 Core & 1.2.9.2 Edge – SOHO routers - 6.2.7



Product Category Tables

- 3.2.6.2 Analog Cable Transmission Equipment – Non-CPE cable analog transmission equipment including central office and remote based transmitters, receivers, and repeaters
- 3.2.6.3 Digital Video Cable Transmission Equipment – Non-CPE cable transmission equipment used in the transmission and manipulation of MPEG formatted Video signals located at a cable head end and hub locations
- 6.6 Network Security Devices - hardware and/or software security applications to protect against Worms, Trojans, Viruses and other malware
- 7.2.6 – Telecom Test Laboratory



Product Category Tables

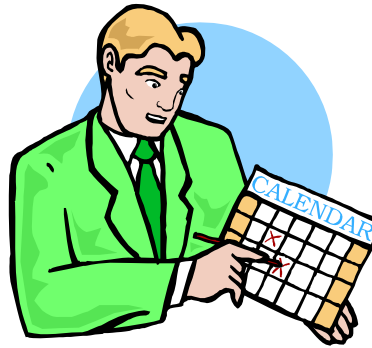
- 7.7 – Manufacturing Services
 - 7.7.1 Small Assemblies
 - 7.7.2 Printed Circuit Board
 - 7.7.3 Cable
 - 7.7.4 Electromechanical
- Old 7.7 Logistical Services now 7.7.5



Product Category Tables

- Split 8.1 Components
 - 8.1.1 Discrete Semiconductors
 - 8.1.2 Integrated Circuits
 - 8.1.3 Passive
 - 8.1.4 Electromechanical
- Revised A-2 and A-3 to match changes in sections 6, 8, and 9 of Handbook





TL 9000 R4.0

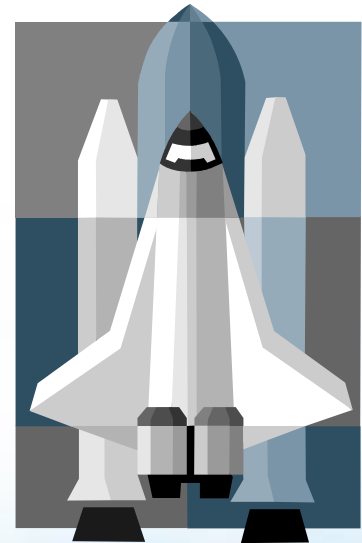
Measurements Handbook

Implementation Requirements



Meas R4.0 Implementation Rules

- Release of Measurements HB R4.0
 - Dec. 31, 2006
- May use for Jan. 2007 data
- Encouraged to use for Apr. 2007 data
- Must use for July 2007 data
- Monthly data submissions required on or before January, 2008 data
- Minimum of 1 month of 4.0 data required to upgrade to R4.0
- Rules defined in Alert 06-004A
 - http://tl9000.org/tl_alerts.htm



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7.0 Document



Other Measurements Information

- Late Data Submissions
 - Major problem impacting benchmark data integrity
 - QuEST Forum required additional discipline beyond CB review of DSR's
 - Provides for escalation up to and including registration suspension
 - Detailed in Alert 06-003A



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Late Data Submission Rules

Normal Submission Date period start

7 days before deadline
(Reporting period end
+ 6 weeks)

Automatic warning e-mail to Organisation

1 day before "late"

Automatic warning e-mail to Organisation

Late - Measurements
Submission missed
(Reporting period end + 7 weeks)

1st month or 2nd month's
data "Late" + 1 day
within previous 6 months

Forum Website shows
"Measurement
Probation"

Automatic
e-mail to
CB/Registrar &
Organization

Data submission received OK (1st or 2nd month in past 6 that were late) - Automatic
"Certified" status on Quest Website and automatic emails to Organization & CB/Registrar

1 month "Late" by 3 months
+ 1 day **or** 3rd month's data
"late" in last 6 months
past 6 months

Forum Website shows
"Registration
Suspension"

Automatic e-mail to
CB & Organization.
CB Web Site shows
"Certification Suspension"

Registrars Web changed to show Suspended status
Once data submission(s) received OK
"Certified" status only through CB/Registrar, emails inform CB/Registrars.

For any
submission
Difficulties -
Contact UTD
to resolve and/or
prevent
automatic
"Status" change

Late Data Submission Rules

Data Submission Suspension Process Monthly Data Submissions

✓ Data Submitted X = Data not Submitted L = Data Submitted Late

2007												2008
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
1 1 Month 6 - Data Missing	In	✓	✓	✓	X							
	Month end				Month end							
Status changes to: "DATA SUBMISSION PROBATION" - CB/Registrar Informed, "Certified" on receipt of data												
A month's data is late at ME+7W+1D												
2 2 Months 6 - Data Late or Missing	In	✓	L	✓	X							
	Month end		Month end		Month end							
Status changes to: "DATA SUBMISSION PROBATION" - CB/Registrar Informed, "Certified" on receipt of data												
If 2nd month's data in previous 6 months is not submitted or late, 2 nd Month's end + 7W + 1D												
1 1 Month's Data Late for 3 Months	✓	✓	X	✓	✓	✓						
			Month end		Month end	Month end						
Status changes to "REGISTRATION SUSPENSION" - "Certified" Status only through CB/Registrar												
If 1 month's data is > 3 months late = Month's end + 3 Months + 7W + 1D												
3 3 Months In 6 - Data Late or Missing	✓	L	✓	L	X							
		Month end		Month end	Month end							
Status changes to "REGISTRATION SUSPENSION" - "Certified" Status only through CB/Registrar												
If 3 month's data in previous 6 months is not submitted or late, at 3rd Month's end + 7W + 1D												



Thank you!

- Additional information available on websites
 - TL9000.org
 - MHB Examples & PCT's posted under "Handbooks"
 - Questforum.org
 - IGQ Workgroup folders
 - Requires QF Member ID / password to access
- Contact Information:
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