# Selecting the Correct TL 9000 Product Category

## Americas Region Workshop
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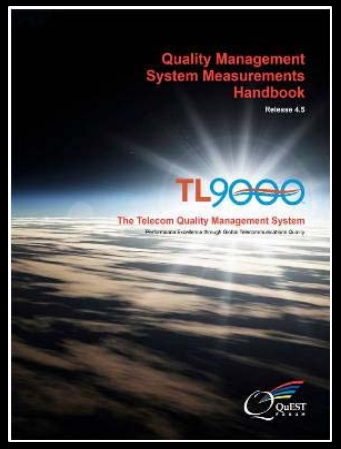
**Tom Yohe**
**Telmar Network Technology**
**IGQ Work Group Product Category Table Subteam Leader**

# Topics

- Workshop goal
- Responsibilities
- Quick start
- Product Families and Categories
- Scope of Registration
- Primary Function
- Summary

# Goal of the Workshop

Help you understand how to correctly select and verify TL 9000 product categories



# Importance

If an organization is in the wrong product category:

- The industry data will not be useful to it
- The data for everyone in that category will be impacted
- There is a missed opportunity to have valuable data in the “right” category.

**Obtaining comparable data requires reporting in the correct category**

# Organization's Responsibilities

- Identify product categories within its registration scope
- Maintain those selections as it business changes

# Certification Body's Responsibilities

- Validating the organization's product category selection
- Approve added categories

# Accreditation Body's Responsibilities

Verify the CB is effective in validating the organization's selection of product categories

# Registration Scope

- Identifies what is covered by your TL 9000 Certification
- Determines which products are to be reported on
- Therefore –

  Establishes which TL 9000 Categories apply

# Registration Scope

**Your TL 9000 scope and your selected product categories must match**

- Can't have categories not mentioned in your scope
- Must have categories for all areas covered by your scope

# Quick Start - Selection

1. Examine scope statement
2. Understand product's primary function
3. Compare function to product category definitions
4. Select product category

# Quick Start - Verification

1. Do you have most of the data needed for the required measurements?
2. Do the measurements and normalization factors seem reasonable for your product?
3. Are your competitors registered in this category?
4. Does your executive management agree?
5. Does your Certification Body agree?

# Basic Structure of the Product Table

| Category | Description |
|---|---|
| 1-6 | HW/SW/Systems in the network |
| 7 | Support services |
| 8 | Components and sub-assemblies |
| 9 | End-customer services |

# Product Category Families

1. Switching
2. Signaling and Network Control
3. Transmission Systems
4. Operations & Maintenance
5. Common Systems
6. Customer Premise and Enhanced Services
7. Service Products
8. Components and Sub-assemblies
9. End-Customer Services

**Note: more detailed Product Category descriptions can be found in the Supporting Information Section**

# Product Category Families (1/2)

| Family | Types or Sub-Families |
|---|---|
| **1. Switching** | Circuit switch, access multi-service, legacy packet, media gateways, application servers, SNC, and routers (core, edge, access) |
| **2. Signaling and Network Control** | SCP, STP, HLR, SL, Protocol Servers, Network Access Control, And Network Security |
| **3. Transmission Systems** | Outside Plant, Transport, Wireless, Ancillary Products |
| **4. Operations & Maintenance** | Test Systems and Operations Support Systems |
| **5. Common Systems** | Synchronization, General Purpose Computers, Power Systems, and Data Storage Systems |



**Note: more detailed Product Category descriptions can be found in the Supporting Information Section**

# Product Category Families (2/2)

| Family | Types or Sub-Families |
|---|---|
| **6. Customer Premise and Enhanced Services** | Enhanced Services, Terminal Equipment, ACD, PBX, Key Telephone Systems, and Internet Security Devices |
| **7. Service Products** | Network Installation & Provisioning, Engineering, Maintenance, Purchasing, Manufacturing, Logistical, and Business, General Support, Consulting, and Customer Assistance |
| **8. Components and Sub-assemblies** | Hardware Components, Electronic Assemblies, Optical Fiber and Devices, and Software Components & Tools |
| **9. End-Customer Services** | Voice, Wireless, Transport, Private Networks, Internet Access, Bulk Transport, and Video Broadcast |



**Note: more detailed Product Category descriptions can be found in the Supporting Information Section**

# Who is in what category?

- tl9000.org
- Main menu bar – “TL 9000 Registration”
- Left side menu – “Certified Registrations”
- Middle of page – “Advanced Search”
- Drop down list – category of interest
- Click “Search by Product Category”

# Search Result Example

## Search Results

Search Result

**Product Category:** 1.2.9.1 Core Routers

| Registrations | Company Name |
|---|---|
| Cisco Systems - TL 3463 | Cisco Systems |
| Dasan Networks Inc - TL 4394 | Dasan Networks, Inc. |
| Nortel :MSS-Passport - TL 1944 | Ericsson |
| Hangzhou H3C Technologies Co.,Ltd. - TL 6109 | Hangzhou H3C Technologies Co., Ltd. |
| Huawei Technologies Co., Ltd. - TL 2207 | Huawei Technologies Co., Ltd. |
| Juniper Networks, Inc. - TL 3428 | Juniper Networks, Inc. |
| NEC Network Products Ltd. Ichinoseki Plant - TL 1954 | NEC Groups |
| NEC Corporation - IP Platform Group - TL 3452 | |
| ZTE Corporation - TL 3161 | ZTE Corporation |

Click here to start a new search

# Who is in what category?

**Registration Profile**

- Company name
- Scope of Registration (ISO & TL)
- CB (registrar)
- Product Categories
- Locations

# Registration Scope

- TL 9000 Scope and product categories selected must align
- Best place to start selection process
- Should not list exact product categories in the scope area, listing your product names is Ok
- Once selected, categories listed in another section of the profile

# Registration Scope – Example 1

***HW & Software Systems Manufacturer***

*Design, Development, Manufacturing Operations and Support of Networking Solutions for the following product lines : DRS-1, x800, y800, z500, w7600, GGG 8800, GGG 8900, x0000, y0720, z2000, NMS x5310, NMS x5327, NMS x5454, NMS x5600, System Transport Manager, Solution Center (SC), Services Module (excluding other Line Cards) and including NMS Software and Port Adaptors. The Integration and Test Engineering group and the Technical Assistance Center (TAC) are included in their entirety.*

# Registration Scope – Example 2

***Systems Networks Manufacturer***

*Design, development, provision and servicing of Core and Edge IP Routers, Firewall VPN devices running Systems Networks Security Operating System*

# Registration Scope – Example 3

***Installation Services***

*The installation of central office equipment to specifications identified by telecommunications service providers.*

# The Tables

- Table A-1 Product Category Definitions
- Table A-2 Measurement Applicability Table (Normalization Units)
- Table A-3 Network Element Impact Outage
- Table A-4 Transmission Standard Designations and Conversions*
- Table A-5 Optical and Electrical Equivalency*
- Table A-6 Measurements Summary Listing*
- Table A-7 TL 9000 Data Submission Labels*

*not normally used for product category selection

# “Primary Function”

- Complex product categories
- Outage reporting is required
- Bold text in definition indicates the primary function of the product

# “Primary Function” Example

| Category Code | Category Name | Definition |
|---|---|---|
| 1.2.9.1 | Core | Packet **transport and routing** equipment primarily intended for use in the core of the packet network connecting other packet network elements together. This equipment is intended to provide high reliability and availability. |
| 2.2 | Common Channel Signaling (formerly Signaling Transfer Point (STP)) | Hardware/software signaling equipment with **common channel signaling (CCS) functionality** to support a variety of applications: CCS Signal Transfer/Router (i.e. STP - MTP, SCCP),CCS link terminations (i.e. end office, tandem office, wireless office,etc.), CCS packet interconnect (MTP, IPS7). |
| 2.6 | Network Access Control | Equipment used to **provide user authentication, authorization, and accounting (AAA) for network services** |

# “Examples”

- **Far right hand column in Table A-1**
- **Specific names of product types**
  - Circuit Switch: End-office, Tandem, Tandem access, Remote, MSC, SSP
  - Core Routers: IP core router, Broadband multi-service, Transport protocol converters
  - Network Security: IP Security (IPsec) Control server, Secure Socket Layer (SSL) Server, Transport Layer Security (TLS) Server, Tunnel Control
  - Home Base Station: Home base station, Femtocell, Access point base station

# TL 9000 Measurements

- Problem Reports (NPR)
- Fix Response Time (FRT)
- Overdue Fix Responsiveness (OFR)
- Outage (SO, SONE, SSO)
- On Time Delivery (OTD)
- Field Returns (FR)
- Software Fix Quality (SFQ)
- Software Problem Reports (SPR)
- Service Quality (SQ)

# Tips

What does your web site or catalog say your product is?

What is it that your customer is purchasing from you?

Remember, if you are providing a service, the service is the product i.e. if you are building circuit boards for another company your category is contract manufacturing.  It is not the category of the item you are building.

# Customer vs. Category

| Customer | Categories |
| --- | --- |
| Network Operator | 1-6 some 7 |
| OEM | 8 if HW product<br>7 if service |
| End customer | 9 |
| Internal | 7 |

# Rules of Selection

- The definitions of product categories in the TL 9000 Measurements Handbook Table A-1 shall be used by organizations in categorizing their products.

- An organization shall not classify a product in multiple product categories. Therefore, any product from an organization must be classified in exactly one product category.

# Rules of Selection

- General-purpose products, such as computers, shall be classified by specific function, e.g., signaling, when provided as a system designed for that function. Otherwise, they shall be classified in a separate category, for example, Common Systems-Computers, designed for the general-purpose product.

# Rules of Selection (cont.)

- A product shall be classified according to its primary function. For example, a digital transmission facility product with performance monitoring will be classified as a transmission product instead of an operations and maintenance product.

# Rules of Selection (cont.)

- The standard for classification is the product category, not the possible uses for the product. For example, if a product classification falls in the Outside Plant category, all products that are consistent with that category will be classified as such, even if the exact same product is sometimes used in the customer premises and even if a particular organization’s product is sold primarily into the customer premises market.

# Product Category Inquiry Process

Product Category Inquiry Process

**Step 1:**
Question Raised

**Step 2:**
TL Scope and publicly available information is reviewed by the Product Category Verification sub-team (PDR sub-team?)

**Step 3:**
If there appears to be an issue with correct product category selection, then a letter is prepared for TL 9000 Administration (QuEST Forum staff?) to send to the Primary Administrator, Alternate Administrator and CB for the registration in question. If not, then the person(s) who raised the question are notified and the inquiry is closed as per Step 7.

**Step 4:**
TL 9000 Administration (QuEST Forum staff?) sends the inquiry letter asking for supporting information to be sent within 30 days.

**Step 5:**
Material is forwarded to the Product Category Verification sub-team (PDR sub-team?) when received.

**Step 5a:**
If a response is not received within 30 days, the letter is resent to all addressees with a copy e-mail noting that the TL ID will be placed on suspension if a response is not sent within one week.

**Step 5b:**
The response is forwarded to the Product Category Verification sub-team (PDR sub-team?) when received. If it is not received within one week, then step 5c occurs.

**Step 5c:**
The organization is placed on suspension. The TL ID administrators and their CB are notified of this and that to come off of probation, they need to provide the requested material

**Step 5d:**
When the response received, it is forwarded to the Product Category Verification sub-team (PDR sub-team?) and the TL ID is taken off of suspension. It remains on suspension until then.

**Step 6:**
The material from the organization is evaluated.

**Step 6a:**
If the information is not sufficient, then an e-mail detailing what else is needed is prepared and given to the TL 9000 Administration (QuEST Forum staff?) to send to the organization and its CB. The process returns to Step 5 if this is needed.

**Step 6b:**
If the information is sufficient, then a determination is made concerning the validity of the product category selection. If valid, then the organization is thanked for their help and they, their CB, and the person(s) who raised the question are notified and the inquiry is closed as per Step 7.

**Step 6c:**
If the product category selection is not correct, then a letter explaining this decision and requesting the organization change their selection is prepared for sending by the TL 9000 Administration (QuEST Forum staff?). The organization has 14 days to remove the incorrect category. This will require action by the organization's CB if the organization has only one certified product category.

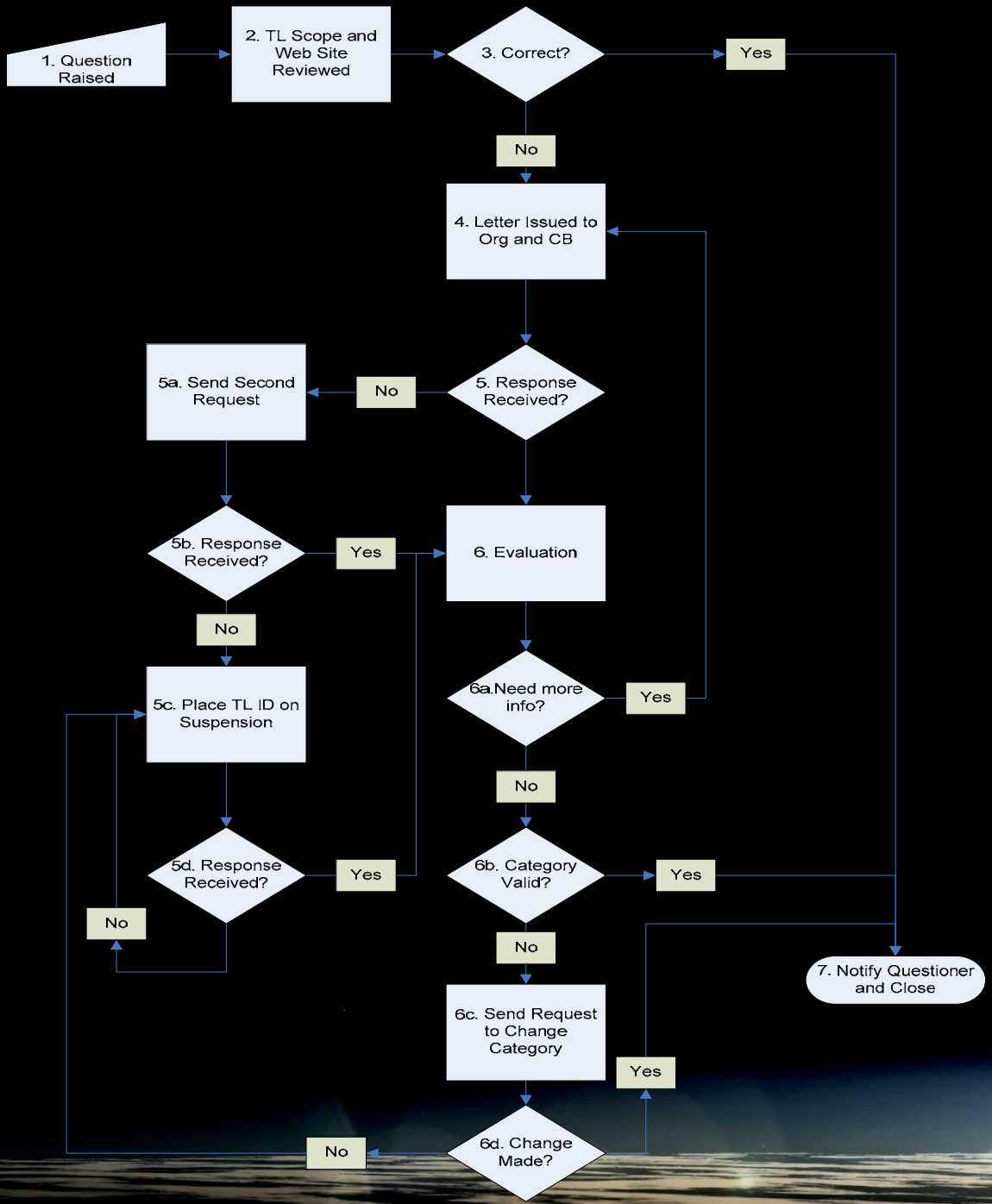
**Step 6c:**
If the incorrect product category has not been removed within 14 days, then the organization is placed on suspension and a notification letter is sent to them and their CB. The process then goes back to Step 5d until the correction is made.

**Step 7:**

If this step is reached directly from Step 3, the questioner is notified that the product category selection appears to be correct.

If this step is reached from Step 6b, the questioner, the organization, and its CB are notified that the product category selection appears to be correct.

If this step is reached from Step 6d the questioner is notified that the issue has been corrected. The organization is thanked for its cooperation with its CB copied.


1. Question Raised
2. TL Scope and Web Site Reviewed
3. Correct?
Yes
No
4. Letter Issued to Org and CB
5. Response Received?
No
5a. Send Second Request
5b. Response Received?
Yes
6. Evaluation
No
5c. Place TL ID on Suspension
6a.Need more info?
Yes
No
5d. Response Received?
Yes
6b. Category Valid?
Yes
No
7. Notify Questioner and Close
6c. Send Request to Change Category
Yes
6d. Change Made?
No

# Summary

- Correct category selection is critical
- View from stand point of customer
- Use available resources to determine and verify
- If in doubt - ask

# Resources

- http://tl9000.org/links.html
  - Latest edition of tables
  - On line help
  - “Contact us” to submit questions

Direct Link to Product Category Selection Guidelines
(the basis for this presentation)

# Contact Information


**Tom Yohe**


**tom.yohe@telmarnt.com**

**+1 972 836 0378**


**tl9000.org**

**Contact Us**

- Questions?

# Supporting Information

# Product Category Table Principles of Construction

- Product categories shall be defined so that they can be clearly assigned within a hierarchy of classification.
- There are well-established rules for classification.
- Product categories should not be separated artificially if they can be logically aggregated.
- Product categories should have clear definitions, which lend themselves to unambiguous interpretation.
- For each category, the level to which measurements may be aggregated shall be defined.
- Each product category specification shall consist of standard elements.
- The placement of the product in the hierarchy will reflect the dominant use of the product.
- Terminology used shall reflect standard technical meanings; wherever possible aligned to relevant standards such as ITU-T, ETSI, ANSI, etc.

# Switching

**Definition –**

Equipment used for the physical or virtual interconnection of communication channels in response to a signaling system. The switching category is broadly defined to include packet or circuit switched architectures.

**Types –**

Circuit switch, access multi-service, legacy packet, media gateways, application servers, SNC, and routers (core, edge, access)

# Signaling and Network Control

**Definition –**

Equipment used for the provision of signaling, i.e., states applied to operate and control the component groups of a telecommunications circuit to cause it to perform its intended function. In generally, there are five basic categories of signals commonly used in the telecommunications network: supervisory signals, information signals, address signals, control signals, and alerting signals. This category includes those signaling products that function within the telecommunications network and excludes possibly similar products that normally provide enhanced services outside the network, or on the customer premises such as ACD, IVR, or voice messaging systems.

**Types –**

SCP, STP, HLR, SL, Protocol Servers, Network Access Control, And Network Security

# Transmission Systems

**Definition –**

Equipment used for the connection of the switched and interoffice networks with individual customers. An integral part of the distribution network is the loop that connects the customer to the local central office (CO), thus providing access to the interoffice network.

**Sub-families –**

Outside Plant, Transport, Wireless, Ancillary Products

# Operations & Maintenance

**Definition –**

Equipment and systems used for the management, upkeep, diagnosis and repair of the communications network.

**Sub-families –**

Test Systems and Operations Support Systems

# Common Systems

**Definition –**

Any of a variety of specialized generic, shared equipment used to support network elements. Common systems include power systems and the Network Equipment-Building System (NEBS) that provides space and environmental support for network elements. These systems are located in central offices and remote building locations.

**Types –**

Synchronization, General Purpose Computers, Power Systems, and Data Storage Systems

# Customer Premise and Enhanced Services

**Definition –**

Equipment installed beyond the network demarcation point. Although commonly installed on the subscriber's premises, equipment with essentially identical function installed in the service provider's facility may also be classified as customer premises equipment.

**Sub-families –**

Enhanced Services, Terminal Equipment, ACD, PBX, Key Telephone Systems, and Internet Security Devices

# Service Products

**Definition –**

In addition to purchasing tangible hardware or software products, customers may also acquire service from an organization. Services include activities such as network engineering, installation and commissioning, product maintenance, network operation, etc., where the organization is responsible for the conduct of the activity in accordance with customer defined requirements. Services may be thought of as the result generated by activities at the interface between the organization and the customer and by the organization's internal activities to meet the customer needs.

**Sub-families –**

Network Installation & Provisioning, Engineering, Maintenance, Purchasing, Manufacturing, Logistical, and Business, General Support, Consulting, and Customer Assistance

# Components and Sub-assemblies

**Definition –**

Individual components or assemblies provided for use in telecommunications systems excluding those already covered by a specific product category in another product family. These items are typically used by other suppliers and not sold directly to service providers except as replacement parts.

**Sub-families –**

Hardware Components, Electronic Assemblies, Optical Fiber and Devices, and Software Components & Tools

# End-Customer Services

**Definition –**

End-user consumer and business customers acquire a vast variety of products from a service provider organization. These may be supplied on a buy, lease or rental basis and comprise services from simple pre-paid wireless phone service to complex solutions or outsourced facilities management of a customer organization’s entire telecommunications facilities.

**Types –**

Voice, Wireless, Transport, Private Networks, Internet Access, Bulk Transport, and Video Broadcast

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