Overview of ITU-T SG4 Work on Network Management

Wang Zhi-li
BUPT
ITU-T Study Group 4 Question 10 Rapporteur

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Outline

• SG4 scope
• SG4 working parties
• SG4 recent accomplishment
• SG4 current work items
• SG4 next step
1. SG4 scope

• Responsibilities:
  – Studies related to the management of telecommunication services, networks, and equipment, including support for next generation networks (NGN) and the application and evolution of the telecommunication management network (TMN) framework.
  – Other telecommunication management studies relating to designations, transport-related operations procedures, and test and measurement techniques and instrumentation.

• Lead Study Group on Telecommunication Management in ITU-T
2. SG4 Working Parties (1)

• WP 1/4: Designations, performance, and test equipment
  – Q2: Designations for interconnections among network operators
  – Q3: Transport network and service operations procedures for performance and fault management
  – Q4: Test and measurement techniques and instrumentation for use on telecommunications systems and their constituent parts
  – Q5: Jitter and wander test and measurement techniques and instrumentation for use on telecommunications systems and their constituent parts
2. SG4 Working Parties (2)

- WP 2/4: Telecommunication management capabilities
  - Q6: Management principles and architecture
  - Q7: Requirements for business to business and customer to business management interfaces
  - Q8: Framework for the management of Next Generation Networks including the convergence of voice, data and multimedia for wire-line and wireless
  - Q12: Telecommunications management and OAM project
2. SG4 Working Parties (3)

• WP 3/4: Telecommunication management information models and protocols
  – Q9: Management interface methodology and infrastructure management information models
  – Q10: Application specific information models
  – Q11: Protocols and Securities for Management
3. SG4 recent work achieved (1)

• 3.1 Recent Accomplishments
  – Designations and information exchange: M.1400 series specs.
  – Framework for end-to-end QoS measurement and supervision for leased-circuit services: O.220
  – Jitter and wander measuring equipment for digital systems which are based on the SDH: O.172
  – Requirements for QoS/SLA management over the TMN X-interface for IP-based services: M.3341
  – Guidelines for the definition of SLA representation Template: M.3342
  – Principles for the Management of NGN: M.3060
3. SG4 recent work achieved (2)

- TMN Interface Specification Methodology: M.3020
- CORBA-based management framework
  - X.780 series: Guidelines for defining CORBA MO
    - fine grain (0), coarse grain(1), service grain(2)
  - Q.816 series: CORBA-based management services
- BPON management: Q.834 series:
- Ethernet related management:
  - Q.838.1(EPON): Ethernet Passive Optical Network
  - Q.840.1(EoT): Ethernet over Transport
- Security for the management plane: M.3016 series
  - Overview(0), Security Requirements(1), Security Services(2), Security Mechanism(3), Profile proforma(4)
- Security Management Systems Requirements: M.3410
3. SG4 recent work achieved (3)

• 3.2 Joint work with other SDOs
  – With TM Forum:
    • eTOM Framework M.3050 series:
    • MTNM information model: M.3170
    • SID model, M.3190, as a supplement to M.3100
  – With MEF:
    • Ethernet related interface harmonization (Q.840.1)
  – With 3GPP SA5
    • Harmonization of management interface specification methodology: M.3020 (ongoing)
4. SG4 current work items

- M.1400 series improvements
- Global Telecom Data Dictionary
- O.172, O.173 improvements
- Principles for Self-Service Management (M.ssm)
- Generic network information model - protocol neutral (connection-oriented, connectionless) (M.3160)
- Common Management Services – protocol neutral
- Work together with other SDOs and Forums:
  - Specification Methodology harmonization with 3GPP.
  - NGN Account Management with 3GPP
  - ASON management harmonization with TMForum.
  - EoT management harmonization with TMF
  - IPTV Management, with ATIS TMOC
5. SG4 Next step (1)

- NGN network and service management
- IPTV management
- Home Network Management
- XML-based management interface
- Security management supporting service
- XML-based management protocol profile
5. SG4 Next step (2)

• New Questions to be added in SG4
  – Service Provider/Network Operator requirements and priorities for telecommunication management
  – Network and service operations and maintenance procedures
  – Common measurement techniques and results collections for use on NGN telecommunications systems and their constituent parts
5. SG4 Next step (3)

• **Strategic Work Areas under consideration**
  – Agile service management
  – Management support for customer centric services
  – Support NGN business models
  – Management of Service and Transport Resources
  – Management of Home networking
  – Build on the IT Industry/Telecom management linkage
  – Technology watch for NGN Management
  – Centre of Excellence for NGN Management
Thank you!