

3GPP TSG SA WG5 Status on Converged Management of Fixed/Mobile Networks

Multi SDO Workshop
Zurich

1- 2 November 2011

Contents

-  **Ongoing convergence work in SA5**
-  3GPP – TM Forum harmonization program
-  Cooperation with NGMN NGCOR
-  Requirements for Multi-SDO initiative

SA5 convergence related Rel-10 activity

- 📶 Study item on Alignment of 3GPP Generic NRM IRP and TMF Shared Information Data (SID) model (new TR 32.828).
- 📶 Study item on Harmonization of 3GPP Alarm IRP and TMF Interface Program (TIP) Fault Management (new TR 32.829).
- 📶 Study item on Alignment of 3GPP PM IRP and TMF Interface Program (TIP) PM (new TR 32.831).
- 📶 Work item on Alarm correlation and root cause analysis (impacts on 32.111-x series).
- 📶 Work item on Inventory Management Network Resource Model enhancements (impacts on 32.69x series).
- 📶 Rel-10 was frozen in March 2011.

SA5 convergence related Rel-11 activity

- 📶 Study item on Management of Converged Networks
 - Collection of use cases on converged management and multi-technology networks.
 - Identify the main operational problems to be addressed and provide a high level solution proposal for each of the main problems identified.
- 📶 Work item on definition of IRP framework enhancements to support Management of Converged Networks
 - New Stage 1 specification will capture the Requirements, benefits, context and use cases for the Management of Converged Networks
 - New Stage 2 specification will capture the list of NRM IRPs and Interface IRPs that support the requirements for Management of Converged Networks.
- 📶 Analysis of NGMN NGCOR operators' requirements
 - Ongoing clarification work with NGMN on draft NGCOR requirements.
 - Ongoing gap analysis to assess detailed impacts on SA5 specifications.

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3GPP-TM Forum Fault Management Harmonization

- 📶 Bi-weekly calls SA5 – TM Forum (complemented by some F2F meetings).
- 📶 SA5 analyzed TM Forum Fault Management requirements and identified necessary enhancements to the existing 3GPP Fault Management interface.
- 📶 The SA5 – TM Forum JWG will produce by end of 2011 a final report listing all issues which were discussed.
- 📶 For each issue in the list, a clear status agreed/not agreed is indicated and will be used by SA5 and TM Forum for further implementation.



3GPP-TM Forum Resource Modeling Alignment

- 📶 Bi-weekly calls SA5 – TM Forum (complemented by some F2F meetings).
- 📶 The SA5 – TM Forum JWG recommends federated domain specific models maintained by separate organizations while promoting a generic Umbrella model applicable industry-wide.
- 📶 Ongoing work on a set of documents (anticipated completion end of 2011):
 - “FMC Federated Network Model (FNM)”
 - “FMC FNM Umbrella Model”
 - “FMC FNM 3GPP/TMF Concrete Model Relationships”
 - “FMC FNM Model Repertoire”
 - “FMC FNM Initial Model Alignment Working Procedures”

3GPP-TM Forum next steps



Finalize governance rules and working procedures

- Ownership of the deliverables.
- Protection of intellectual property.
- Publication of deliverables.
- Maintenance of deliverables.

NGMN is moderating this activity on governance rules and working procedures

- Objective is to reuse as much as possible for multi-SDO project.
- Ad hoc working group is being established.

Final governance rules and working procedures will need approval from 3GPP TSG SA and PCG

- They will be submitted for approval when they are stable.

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Cooperation with NGMN NGCOR

- 📶 SA5 provided extensive feedback on NGCOR draft requirements
 - First feedback was sent from SA5#78 meeting in August 2011.
 - Additional feedback was sent from SA5#79 meeting in October 2011.
- 📶 SA5 participated in the NGMN partner meeting in Paris Sep. 7-8
 - Cooperation process between SA5 and NGMN has been agreed.
 - The requirements are discussed first with the partners of NGMN.
- 📶 A preliminary list of impacted SA5 specifications has been established
 - This is based on the current SA5 understanding of the current draft NGMN NGCOR requirements document.
- 📶 A detailed gap analysis is ongoing in SA5
 - The objective is to ensure a timely completion of solutions/specifications satisfying the NGCOR requirements.
 - The gap analysis can only be completed based on final NGCOR requirements.

SA5 specifications related to section 1 “INTRODUCTION TO NGMN NGCOR”



- 3GPP TS 32.101 Telecommunication management; Principles and high level requirements

http://www.3gpp.org/ftp/Specs/archive/32_series/32.101/32101-a00.zip

- 3GPP TS 32.102 Telecommunication management; Architecture

http://www.3gpp.org/ftp/Specs/archive/32_series/32.102/32102-a00.zip

- 3GPP TS 32.103 Integration Reference Point (IRP) overview and usage guide

http://www.3gpp.org/ftp/Specs/archive/32_series/32.103/32103-a00.zip

- 3GPP TS 32.150 Integration Reference Point (IRP) Concept and definitions

http://www.3gpp.org/ftp/Specs/archive/32_series/32.150/32150-a20.zip

SA5 specifications related to section 2 “HIGH LEVEL REQUIREMENTS FOR CONVERGED NETWORK OPERATIONS”



- 📶 3GPP TS 32.101 Telecommunication management; Principles and high level requirements
http://www.3gpp.org/ftp/Specs/archive/32_series/32.101/32101-a00.zip
- 📶 3GPP TS 32.102 Telecommunication management; Architecture
http://www.3gpp.org/ftp/Specs/archive/32_series/32.102/32102-a00.zip
- 📶 3GPP TS 32.103 Integration Reference Point (IRP) overview and usage guide
http://www.3gpp.org/ftp/Specs/archive/32_series/32.103/32103-a00.zip
- 📶 3GPP TR 32.828 Study on alignment of 3GPP generic Network Resource Model (NRM) Integration Reference Point (IRP) and the TeleManagement Forum (TMF) Shared Information/Data (SID) model
http://www.3gpp.org/ftp/Specs/archive/32_series/32.828/32828-a00.zip
- 📶 3GPP TR 32.829 Study on alignment of 3GPP alarm Integration Reference Point (IRP) and TeleManagement Forum (TMF) Interface Program (TIP) fault management
http://www.3gpp.org/ftp/Specs/archive/32_series/32.829/32829-a00.zip
- 📶 3GPP TR 32.831 Study on alignment of 3GPP Performance Management (PM) and TeleManagement Forum (TMF) Interface Program (TIP) Performance Management
http://www.3gpp.org/ftp/Specs/archive/32_series/32.831/32831-a00.zip
- 📶 3GPP TR 32.833 Study on Management of Converged Networks
http://www.3gpp.org/ftp/Specs/archive/32_series/32.833/32833-060.zip

SA5 specifications related to section 3 “GENERIC NEXT GENERATION CONVERGED OPERATIONAL REQUIREMENTS”



- 📶 3GPP TS 32.101 Telecommunication management; Principles and high level requirements
http://www.3gpp.org/ftp/Specs/archive/32_series/32.101/32101-a00.zip
- 📶 3GPP TS 32.103 Integration Reference Point (IRP) overview and usage guide
http://www.3gpp.org/ftp/Specs/archive/32_series/32.103/32103-a00.zip
- 📶 3GPP TS 32.150 Integration Reference Point (IRP) Concept and definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.150/32150-a20.zip
- 📶 3GPP TS 32.151 Integration Reference Point (IRP) Information Service (IS) template
http://www.3gpp.org/ftp/Specs/archive/32_series/32.151/32151-a10.zip
- 📶 3GPP TS 32.152 Integration Reference Point (IRP) Information Service (IS) Unified Modelling Language (UML) repertoire
http://www.3gpp.org/ftp/Specs/archive/32_series/32.152/32152-a00.zip

SA5 specifications related to section 4 “REQUIREMENTS FOR MODELLING AND TOOLING”



- 📶 3GPP TS 32.101 Telecommunication management; Principles and high level requirements
http://www.3gpp.org/ftp/Specs/archive/32_series/32.101/32101-a00.zip
- 📶 3GPP TS 32.103 Integration Reference Point (IRP) overview and usage guide
http://www.3gpp.org/ftp/Specs/archive/32_series/32.103/32103-a00.zip
- 📶 3GPP TS 32.150 Integration Reference Point (IRP) Concept and definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.150/32150-a20.zip
- 📶 3GPP TS 32.151 Integration Reference Point (IRP) Information Service (IS) template
http://www.3gpp.org/ftp/Specs/archive/32_series/32.151/32151-a10.zip
- 📶 3GPP TS 32.152 Integration Reference Point (IRP) Information Service (IS) Unified Modelling Language (UML) repertoire
http://www.3gpp.org/ftp/Specs/archive/32_series/32.152/32152-a00.zip
- 📶 3GPP TS 32.153 Integration Reference Point (IRP) technology specific templates, rules and guidelines
http://www.3gpp.org/ftp/Specs/archive/32_series/32.153/32153-a10.zip
- 📶 3GPP TS 32.154 Backward and Forward Compatibility (BFC); Concept and definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.154/32154-a00.zip
- 📶 3GPP TS 32.155 Requirements template
http://www.3gpp.org/ftp/Specs/archive/32_series/32.155/32155-a00.zip
- 📶 3GPP TS 32.622 Generic network resources Integration Reference Point (IRP); Network Resource Model (NRM)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.622/32622-a00.zip
- 📶 3GPP TS 32.626 Configuration Management (CM); Generic network resources Integration Reference Point (IRP); Solution Set (SS) definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.626/32626-a20.zip
- 📶 3GPP TR 32.812 Itf-N Implementation Conformance Statement (ICS) template
http://www.3gpp.org/ftp/Specs/archive/32_series/32.812/32812-700.zip

3GPP/TM Forum JWG Model Alignment draft specifications related to section 4 “REQUIREMENTS FOR MODELLUNG AND TOOLING”



-  FMC Federated Network Model (FNM)
ftp://ftp.3gpp.org/TSG_SA/WG5_TM/Ad-hoc_meetings/Virtual-TMF-Align/S5vTMFa172.zip
-  FMC FNM Umbrella Model
ftp://ftp.3gpp.org/TSG_SA/WG5_TM/Ad-hoc_meetings/Virtual-TMF-Align/S5vTMFa173.zip
-  FMC FNM Model Repertoire
ftp://ftp.3gpp.org/TSG_SA/WG5_TM/Ad-hoc_meetings/Virtual-TMF-Align/S5vTMFa174.zip

3GPP Generic Interface IRPs related to section 4 “REQUIREMENTS FOR MODELLUNG AND TOOLING”



- 📶 3GPP TS 32.302 Notification Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.302/32302-a00.zip
- 📶 3GPP TS 32.332 Notification Log (NL) Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.332/32332-a00.zip
- 📶 3GPP TS 32.342 File Transfer (FT) Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.342/32342-a00.zip
- 📶 3GPP TS 32.602 Basic CM Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.602/32602-a00.zip
- 📶 Note: only IS (stage 2) specifications are referenced for simplification - related SS (stage 3) specifications can be found at <http://www.3gpp.org/ftp/Specs/html-info/TSG-WG--S5.htm>

SA5 specifications related to section 5 “REQUIREMENT SPECIFICATION FOR FAULT MANAGEMENT INTERFACE”



- 📶 3GPP TS 32.111-1 Fault Management; Part 1: 3G fault management requirements
http://www.3gpp.org/ftp/Specs/archive/32_series/32.111-1/32111-1-a10.zip
- 📶 3GPP TS 32.111-2 Fault Management; Part 2: Alarm Integration Reference Point (IRP): Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.111-2/32111-2-a30.zip
- 📶 3GPP TS 32.111-6 Fault Management; Part 6: Alarm Integration Reference Point (IRP): Solution Set (SS) definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.111-6/32111-6-a40.zip
- 📶 3GPP TS 32.302 Notification Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.302/32302-a00.zip
- 📶 3GPP TS 32.306 Notification Integration Reference Point (IRP): Solution Set (SS) definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.306/32306-a20.zip
- 📶 3GPP TS 32.332 Notification Log (NL) Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.332/32332-a00.zip
- 📶 3GPP TS 32.336 Notification Log (NL) Integration Reference Point (IRP): Solution Sets (SS) definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.336/32336-a00.zip
- 📶 3GPP TS 32.122 Advanced Alarm Management (AAM) Integration Reference Point (IRP): Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.122/32122-a00.zip
- 📶 3GPP TS 32.126 Advanced Alarm Management (AAM) Integration Reference Point (IRP); Solution Set (SS) definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.126/32126-a10.zip
- 📶 3GPP TR 32.832 Study on alarm correlation and alarm root cause analysis
http://www.3gpp.org/ftp/Specs/archive/32_series/32.832/32832-a00.zip

SA5 specifications related to section 6 “HIGH LEVEL OSS REQUIREMENTS FOR INVENTORY MANAGEMENT” (1/2)



- 📶 3GPP TS 32.692 Inventory Management (IM) network resources Integration Reference Point (IRP); Network Resource Model (NRM)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.692/32692-a10.zip
- 📶 3GPP TS 32.696 Inventory Management (IM) Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.696/32696-a20.zip
- 📶 3GPP TS 32.622 Generic network resources Integration Reference Point (IRP); Network Resource Model (NRM)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.622/32622-a00.zip
- 📶 3GPP TS 32.626 Configuration Management (CM); Generic network resources Integration Reference Point (IRP); Solution Set (SS) definitions
http://www.3gpp.org/ftp/Specs/archive/32_series/32.626/32626-a20.zip

SA5 specifications related to section 6 “HIGH LEVEL OSS REQUIREMENTS FOR INVENTORY MANAGEMENT” (2/2)



- 📶 3GPP TS 32.302 Notification Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.302/32302-a00.zip
- 📶 3GPP TS 32.342 File Transfer (FT) Integration Reference Point (IRP); Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.342/32342-a00.zip
- 📶 3GPP TS 32.612 Bulk CM Integration Reference Point (IRP): Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.612/32612-a00.zip
- 📶 3GPP TS 32.662 Kernel CM Information Service (IS)
http://www.3gpp.org/ftp/Specs/archive/32_series/32.662/32662-a00.zip
- 📶 Note: only IS (stage 2) specifications are referenced for simplification - related SS (stage 3) specifications can be found at
<http://www.3gpp.org/ftp/Specs/html-info/TSG-WG--S5.htm>

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Requirements for Multi-SDO initiative

- 📶 Define the scope is the first priority
 - Better understand what needs to be done and who needs to be involved.

- 📶 Governance and working procedures come after the scope
 - Need to organize cooperation with other organizations in an open and transparent manner as equal partners.
 - Need to finalize 3GPP-TM Forum aspects first to be able to reuse them and avoid establishing two diverging cooperation processes.
 - Final governance and working procedures will need approval from 3GPP TSG SA and PCG.

- 📶 Dependency on detailed operators' requirements
 - Need to clarify the relationship between multi-SDO and NGCOR.

Thank you!