SMIng NMRG Proposal Status Report

52. IETF - Salt Lake City

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- Implementations
- DiffServ SMIng Module
- Compliance with Objectives (RFC 3216)
Implementations

- MODERES SMIng Parser by Emmanuel Nataf
- Written in Java (1.1.3)
- SMIng core frontend parser
- HTML generator backend
- Available from http://www.jsman.com/
Implementations (cont.)

- `libsmi` extension by Alexandros Zachos
- Written in C, extending the `libsmi`
- SMIng core and mapping frontend parser
- SMIv2/SPPI backends
- First prototype working, room for many improvements
- Integration into `libsmi` requires more time
- Not yet available
SMIg DiffServ Module

- Translation of the DiffServ MIB/PIB core into SMIg
- Mapping definitions for SNMP
- Mapping definitions for COPS-PR
- Produces SMIv2 MIB / SPPI PIB with the libsmi extension
- Posted to the working group mailing list
- Experience will help to improve SMIg proposal
Compliance with Accepted Objectives

4.1.1  +  The Set of Specification Documents
4.1.2  +  Textual Representation
4.1.3  +  Human Readability
4.1.4  +  Rigorously Defined Syntax
4.1.5  o  Accessibility
4.1.6  +  Language Extensibility
4.1.7  -  Special Characters in Text
4.1.8  +  Naming
4.1.9  -  Namespace Control
4.1.10 +  Modules
4.1.11 -  Module Conformance
4.1.12 +  Arbitrary Unambiguous Identities
4.1.13 +  Protocol Independence
4.1.14 +  Protocol Mapping
4.1.15 +  Translation to Other Data Definition Languages
Compliance with Accepted Objectives

4.1.16 + Base Data Types
4.1.17 + Enumerations
4.1.18 - Discriminated Unions
4.1.19 - Instance Pointers
4.1.20 o Row Pointers
4.1.21 + Constraints on Pointers
4.1.22 + Base Type Set
4.1.23 + Extended Data Types
4.1.24 + Units, Formats, and Default Values of Defined Types and Attributes
4.1.25 + Table Existence Relationships
4.1.26 + Table Existence Relationships (2)
4.1.27 + Attribute Groups
4.1.28 + Containment
4.1.29 + Single Inheritance
Compliance with Accepted Objectives

4.1.30  - Reusable vs. Final Attribute Groups
4.1.31  + Events
4.1.32  + Creation/Deletion
4.1.33  + Range and Size Constraints
4.1.34  + Uniqueness
4.1.35  - Extension Rules
4.1.36  o Deprecate Use of IMPLIED Keyword
4.1.37  + No Redundancy
4.1.38  + Compliance and Conformance
4.1.39  + Allow Refinement of All Definitions in Conformance Statements
4.1.40  + Categories
4.1.41  + Core Language Keywords vs. Defined Identifiers
4.1.42  + Instance Naming
4.1.43  + Length of Identifiers
4.1.44  + Assign OIDs in the Protocol Mappings
Compliance with Nice-to-Have Objectives

4.2.1 - Methods
4.2.2 - Unions
4.2.3 + Float Data Types
4.2.4 + Comments
4.2.5 - Referencing Tagged Rows
4.2.6 - Arrays
4.2.7 - Internationalization
4.2.8 + Separate Data Modeling from Management Protocol Mapping
Compliance with Rejected Objectives

4.3.1 - Incomplete Translations
4.3.2 - Attribute Value Constraints
4.3.3 - Attribute Transaction Constraints
4.3.4 - Method Constraints
4.3.5 - Agent Capabilities
4.3.6 - Relationships
4.3.7 - Procedures
4.3.8 - Associations
4.3.9 - Association Cardinalities
4.3.10 - Categories of Modules
4.3.11 - Mapping Modules to Files
4.3.12 + Simple Grammar
4.3.13 + Place of Module Information
4.3.14 - Module Namespace
4.3.15 + Hyphens in Identifiers