

# 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

# SMIng DiffServ Module

- Translation of the DiffServ MIB/PIB core into SMIng
- 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 SMIng 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 o 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