IEEE P802.3.1
project scope & objects

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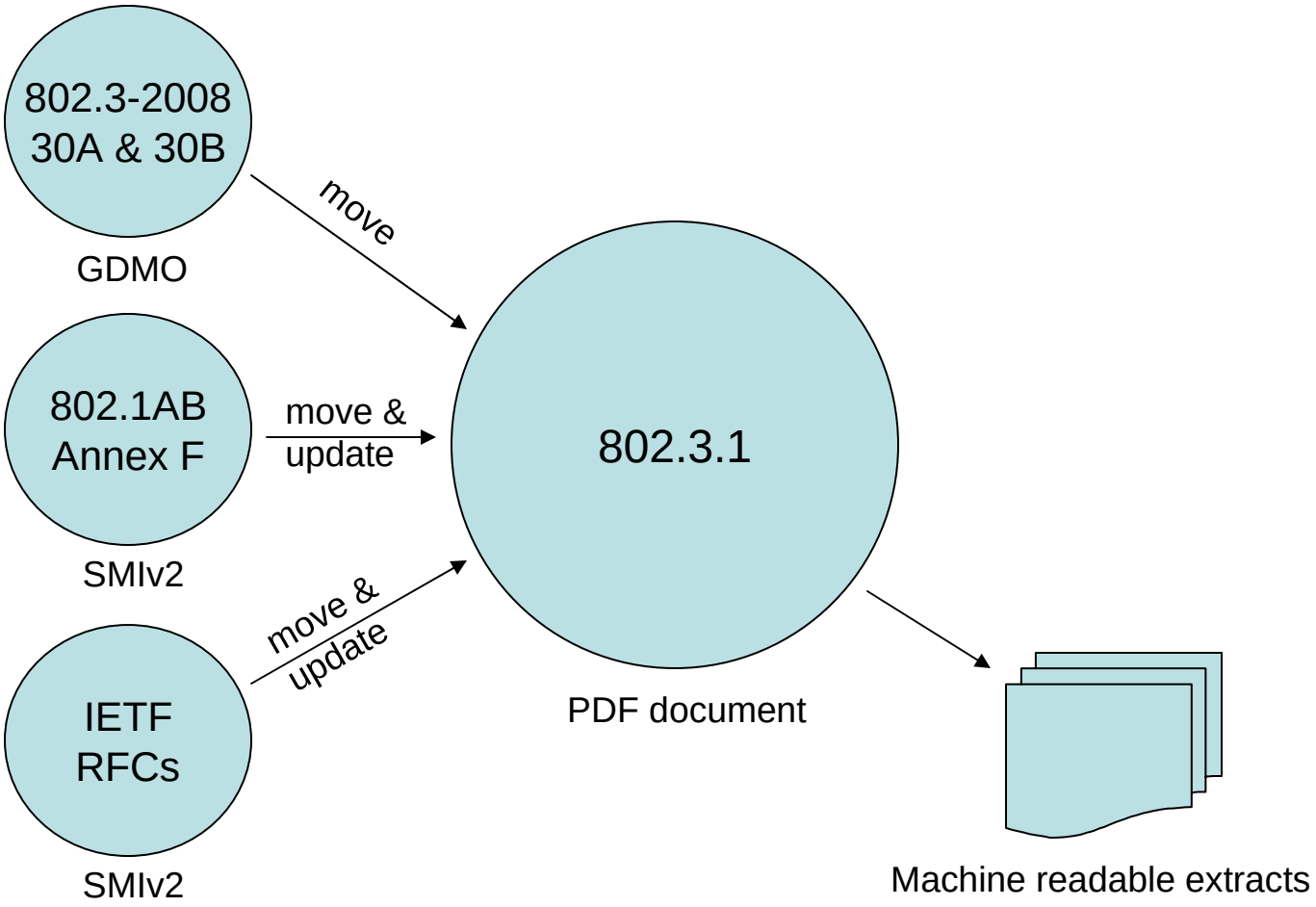
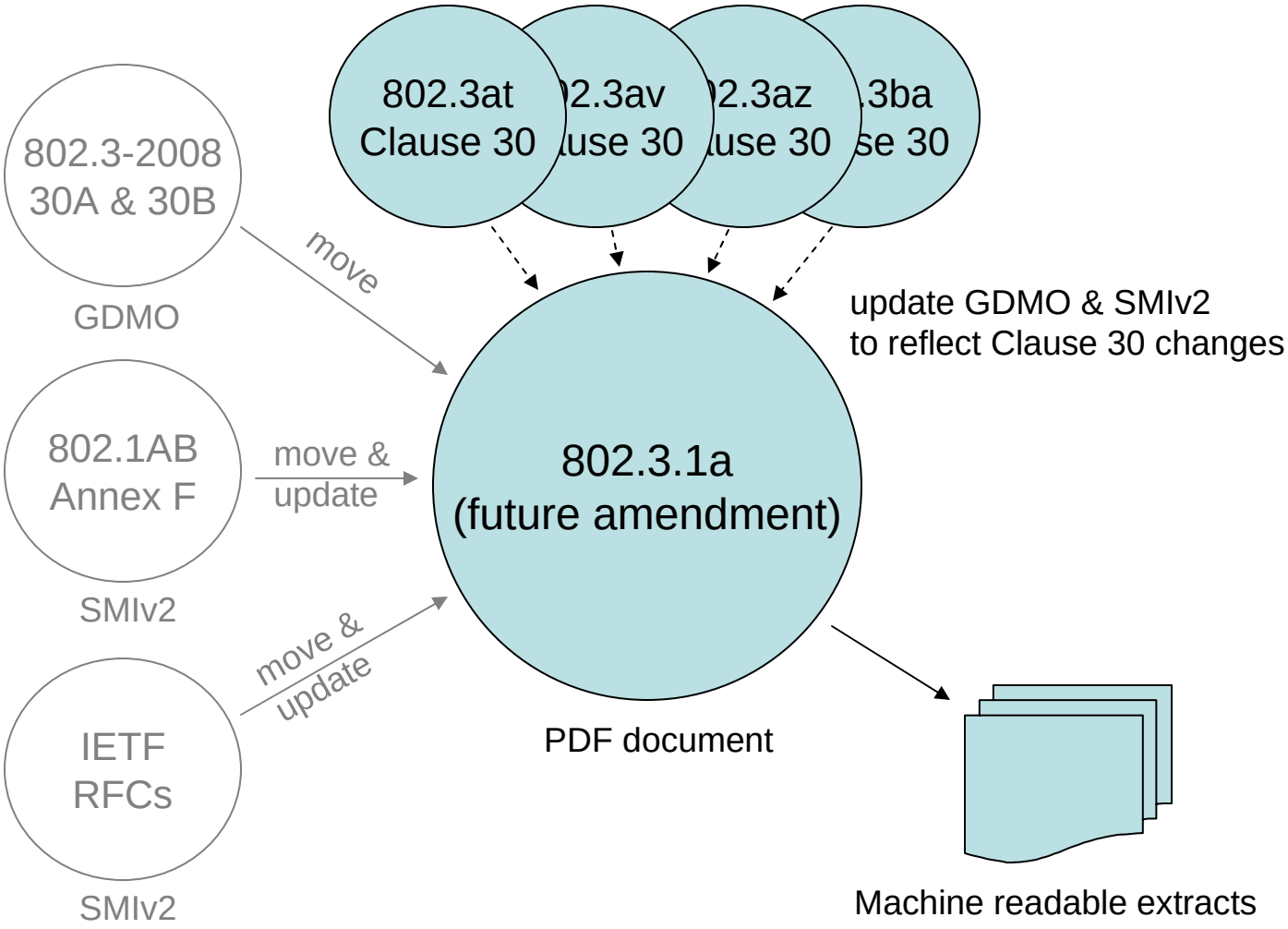
Initial Project



Future Amendment



Ethernet MIB modules

2108	Definitions of Managed Objects for IEEE 802.3 Repeater Devices using SMIv2	82
3621	Power Ethernet MIB	20
3635	Definitions of Managed Objects for the Ethernet-like Interface Types	64
3637	Definitions of Managed Objects for the Ethernet WAN Interface Sublayer	37
4836	Definitions of Managed Objects for IEEE 802.3 Medium Attachment Units (MAUs)	67
4837	Managed Objects of Ethernet Passive Optical Networks (EPON)	91
4878	Definitions and Managed Objects for Operations, Administration, and Maintenance (OAM) Functions on Ethernet-Like Interfaces	58
5066	Ethernet in the First Mile Copper (EFMCu) Interfaces MIB	90
802.3	Annex 30A & Annex 30B	123
	Total	632

Proposed Objectives

- Create a new standard – P802.3.1
- Include the MIB module definitions from
  - IEEE Std 802.3-2008 Annexes 30A and 30B
  - IEEE Std 802.1AB Annex F
  - IETF RFCs 2108, 3621, 3635, 3637, 4836, 4837, 4878, 5066
- Update the SMIv2 MIB module definitions to reflect changes from 802.3an (10GBASE-T), ap (Backplane), aq (LRM), and as (Frame format extensions)
- Produce draft standard and machine-readable extracts

TF motion #6

- Adopt the set of project objectives for P802.3.1 as shown in frazier_1_1108.pdf

- M: S. Carlson
- S: H. Frazier
- Tech >= 75%
- Y:11 N:0 A:0

TF motion #7

- Adopt the draft PAR for P802.3.1 as shown in par_draft_p80231.pdf.

- M: H. Barrass
- S: H. Frazier
- Tech >= 75%
- Y:11 N:0 A:0

Objectives motion

- Adopt the project objectives for P802.3.1 contained in frazier_3_1108.pdf

- M: H. Frazier
- S:
- Tech (>=75%)
- Y: N: A:

Broad Market Potential

a) Broad sets of applicability
b) Multiple vendors and numerous users
c) Balanced costs (LAN versus attached stations)

- Network management is an essential tool in the operation of all networks of greater than trivial size, and in most if not all application areas. Network management is applicable to all Ethernet operating speeds and media.
- There are hundreds of Ethernet vendors, including component, system and software suppliers, who produce SNMP-based network management functions and who depend on the availability of standards for SMIv2 MIB modules. There are countless end users who depend on the availability of these standards.
- GDMO MIB module specifications have traditionally been produced by the IEEE 802.3 working group to ensure that IEEE Std 802.3™ is technically correct and complete.
- Managed objects are defined with the explicit goal of balancing the cost between the LAN and the attached stations.

5 Criteria Motions

- Adopt the response to the Broad Market Potential criterion for P802.3.1 contained in frazier_3_1108.pdf

- M: H. Frazier
- S:
- Tech (>=75%)
- Y: N: A:

Compatibility

a) IEEE 802 defines a family of standards. All standards shall be in conformance with the IEEE 802.1 Architecture, Management, and Interworking documents as follows: 802. Overview and Architecture, 802.1D, 802.1Q, and parts of 802.1f. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with 802.
b) Each standard in the IEEE 802 family of standards shall include a definition of managed objects that are compatible with systems management standards.
c) Compatibility with IEEE Standard 802.3
d) Conformance with the IEEE Std 802.3
e) Managed object definitions compatible with SNMP

- The managed object definitions in IEEE Std 802.3 have always been specified in conformance with the referenced standards, and the proposed project will build upon the existing work and continue this practice, with no foreseen exceptions.
- An explicit objective of the proposed project is to document the MIB modules in a manner that is compatible with systems management standards.
- Compatibility and conformance with IEEE Std 802.3 will be maintained by way of ongoing amendment and revision projects for IEEE Std 802.3.1™.
- An explicit objective of the proposed project is to provide managed object definitions conforming to SMIv2, which is compatible with SNMP.

5 Criteria Motions

- Adopt the response to the Compatibility criterion for P802.3.1 contained in frazier_3_1108.pdf

- M: H. Frazier
- S:
- Tech (>=75%)
- Y: N: A:

Distinct Identity

a) Substantially different from other IEEE 802 standards
b) One unique solution per problem (not two solutions to a problem)
c) Easy for the document reader to select the relevant specification
d) Substantially different from other 802.3 specifications/solutions

- Currently, GDMO MIB modules for Ethernet are specified in Annex 30A and 30B of IEEE Std 802.3. These specifications will be moved to IEEE Std 802.3.1 in the course of the proposed project.
- There is no other IEEE 802 standard for Ethernet interface MIB modules. The SMIv2 MIB modules for Ethernet-like interfaces were formerly produced and published by the IETF, which has discontinued this line of work. The SMIv2 MIB modules produced and published by the IETF will be incorporated into IEEE Std 802.3.1 in the course of the proposed project.
- The GDMO and SMIv2 MIB modules will be published in a new standard, to be designated IEEE Std 802.3.1, making it easy for the document reader to select the relevant specification. The standard will be published in both the traditional format, as well as a machine-readable (ASCII) format, making it easier for network management software developers to use the specifications.
- Once the initial project for IEEE Std 802.3.1 has been completed, it will be possible to delete the GDMO specifications in IEEE Std 802.3. Future amendments and revisions to IEEE Std 802.3.1 will be performed as necessary to track amendments and revisions to IEEE Std 802.3.

5 Criteria Motions

- Adopt the response to the Distinct Identity criterion for P802.3.1 contained in frazier_3_1108.pdf

- M: H. Frazier
- S:
- Tech (>=75%)
- Y: N: A:

Technical Feasibility

a) Demonstrated system feasibility
b) Proven technology, reasonable testing
c) Confidence in reliability

- SNMP management agents have been implemented in a very diverse range of products. Nearly every type of product that provides an Ethernet interface is supported by an SNMP agent.
- Layer management entities and network management systems based on SNMP and SMIv2 have been in operation for many years.
- There is an enormous amount of field experience with implementations of the SMIv2 MIB modules for Ethernet-like interfaces. Not only have they been proven reliable, the very existence of these implementations improves the overall reliability of Ethernet networks by supporting network and device level monitoring and fault isolation.

5 Criteria Motions

- Adopt the response to the Technical Feasibility criterion for P802.3.1 contained in frazier_3_1108.pdf

- M: H. Frazier
- S:
- Tech (>=75%)
- Y: N: A:

Economic Feasibility

a) Known cost factors, reliable data
b) Reasonable cost for performance
c) Consideration of installation costs

- The cost factors associated with the implementation of Ethernet-like MIB modules conforming to SMIv2 are well known. The proposed project will not introduce any new cost factors.
- The large volume of units shipped suggests that SMIv2 conformant MIB modules entail a reasonable cost for the supplied performance. It is well understood that some very cost-sensitive applications do not implement SMIv2 conformant MIB modules or the SNMP protocol.
- The use of standards-based MIB modules and network management protocols lowers the installation and operating costs of large networks, by obviating the need for customized agents tailored to a specific protocol or MIB structure.

5 Criteria Motions

- Adopt the response to the Economic Feasibility criterion for P802.3.1 contained in frazier_3_1108.pdf

- M: H. Frazier
- S:
- Tech (>=75%)
- Y: N: A:

PAR motion

- Approve the draft PAR for P802.3.1 as shown in par_draft_p80231.pdf, and request approval from the IEEE 802 EC.

- M: H. Frazier
- S:
- Tech >= 75%
- Y: N: A: