***Background Information***

1. *Who are the requestors of the pilot?*

IEEE 802.1 WG

Glenn Parsons - chair

Marc Holness, Scott Mansfield – YANG Editors

1. *Are you developing open source for the purpose of:*
   1. *Incorporation or in parlance with a standard*
   2. *Unrelated to standards development*

YANG is a data modeling language used to model configuration data, state data, Remote Procedure Calls, and notifications for network management protocols (e.g., NETCONF, RESTCONF, etc.). IEEE 802.1 has projects to create YANG models for management of VLAN Bridges, Connectivity Fault Monitoring, Link Layer Discovery Protocol (among others). The YANG data model is treated like source code and will be an integral normative part of an IEEE Standard.

1. *What is the name of the pilot?*

YANG Model for VLAN Bridges

1. *What license is the code under today or do you anticipate the code to use?*
   1. *Apache*
   2. *BSD*
   3. *CERN*
   4. *Other (If other, please clarify):*

IEEE License:

All files contained within this sub-directory are considered to be intended as IEEE Contributions.

All issues entered into the trouble ticket system for this directory are considered to be intended as IEEE Contributions.

All pull requests submitted for this directory are considered to be intended as IEEE Contributions.

All contributions to IEEE standards development (whether for an individual or entity standard) shall meet the requirements outlined in the IEEE-SA Copyright Policy

Copyright release for YANG modules: Users may freely reproduce the YANG modules contained under /experimental/ieee/ so that they can be used for their intended purpose.

This license is used in the meta-data specified required by the IETF YANG Catalog GitHub repository. This process to use GITHUB as a repository for YANG module development for IEEE standards using the existing IEEE standards development policies was agreed with IEEE Legal in 2015.

1. *What platform is the code on today?*
   1. *GitHub*
   2. *SourceForge*
   3. *GitLab*
   4. *Other (if other, please note)*

The IETF YANG Catalog GitHub-based repository will be used for development purposes. Once the work is complete, the YANG model will be inserted into the IEEE Standards document.

1. *Are there any derivative works that exist today based in part or in whole with respect to the code? If yes, please explain.*
   1. *Yes*
   2. *No*

YES. The IEEE YANG code being developed needs to be leveraged by the ITU-T for the YANG that is being developed for the G.8013/Y.1731 Performance Monitoring capability.

In addition, implementers are expected to use the YANG models, including augmented versions, in their products.

1. *Are you working with anyone within IEEE on this project today? If so, in what capacity?*

A YANG interest group has been created and includes the editors of IEEE Standards that include YANG models. The 802.1 group also coordinates with the 802.3 YANG interest group as well.

Following is a list of the YANG work in 802.1 and 802.3:

* P802.1Xck – Port authentication
* P802.1Qcp – VLAN Bridges
* P802.1Qcw – TSN
* P802.1Qcx – CFM
* P802.1ABcu – LLDP
* P802.3.2 – Ethernet

1. *What is the proposed timeline for completion of the code?*

The timeframe for code completion related to IEEE 802.1Qcp is by second-half 2018. For the other 802.1 YANG models, the timeframe is late 2019.

1. *Has there been marketing or outreach with respect to the code development?*

From IEEE 802.1, there has been and will continue to be liaisons with IEEE 802.3, BBF, IETF, and ITU-T on the topic of YANG work that is on-going.

***About the IEEE Proposed Pilot Project***

1. *Is this new open source code developed or existing code? If not, when did the code embedding begin?*

IEEE 802.1Qcp provides the YANG model for VLAN Bridges. That model will be augmented by the other YANG models under definition in IEEE 802.1. The work is new source code development and the YANG model will appear in the IEEE Standard related to the project.

1. *If it is existing code:*
   1. *Does this code exist within an existing standard today?*
   2. *If so, will the update to this code be reflected in the update or revision to a standard?*
   3. *Will it be impacted by the update or revision of any standard?*
2. *Will this work be:*
   1. *Developed outside of the working group*
   2. *Within the working group*

The work will be developed within the working group.

1. *How much experience does your group have with open source?*

The editors of the document are very familiar with the YANG language and are aware of the tooling used by the IETF’s YANG Catalog Github. The management of the master branch for the IEEE YANG models is currently under the control of the IETF YANG Doctors. Github sub-branches are identified per project and are under the control of the appropriate IEEE YANG editor. Discussion on creating a guidelines document to aid developers has started. The guidelines document would augment the existing documentation for the IETF’s YANG Catalog.

1. *Will this work be:*
   1. *Referencing an existing standard*
   2. *Embedded in the standard*
   3. *A replacement towards the development of a standard*

This work will produce a Standard, that will reference other IEEE Standards (especially IEEE 802.1Q).

1. *Do you have any LOAs with respect to patents for the code and usability? If yes, please send those along. If no, please share whether it is because none are needed or there has not been any action taken to conduct the assessment.*
   1. *Yes*
   2. *No*

There are no known LOAs related to YANG model development.

However, LOAs on base standard (i.e., the protocols being managed) may apply.

1. *Do you have any LOAs with respect to patents for the code and usability? If yes, please send those along. If no, please share whether it is because none are needed or there has not been any action taken to conduct the assessment.*
   1. *Yes*
   2. *No*

No, there is widespread usage of YANG but there are no known usability patents.

1. *Is this a standards working group request?*

Yes. This is on behalf of the 802.1 WG. The YANGsters group is managed under the 802.1 WG and provides a focus for YANG coordination in the LMSC sponsor (IEEE 802).

1. *If there are any aspects of the standard incorporated in the code, what % and how so?*

The majority of P802.1Qcp is the YANG code. P802.1Qcp is an amendment to 802.1Q specifying configuration, management and monitoring of 802.1Q’s functions.

The code (YANG model) will be entirely embedded in an IEEE Standard – both in the text and as a PDF attachment. The YANG model will provide a management interface and the IEEE Standard provides the description of the YANG model.

In addition the code (YANG model) will be posted on an IEEE website (and potentially Github), as code for other network management (SMI MIB modules) currently is:  
http://www.ieee802.org/1/pages/MIBS.html