Towards a Solution to the VLAN Issue of gPTP

Japan Automotive Software Platform and Architecture

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A situation we should share.

[Background & Facts]
- 802.1AS prohibits the use of VLANs.
- 802.1DG does not specify the profile regarding time synchronization.
- AUTOSAR permits VLANs as an option.
- Whatever the standard, there will be products that perform time synchronization over VLANs.
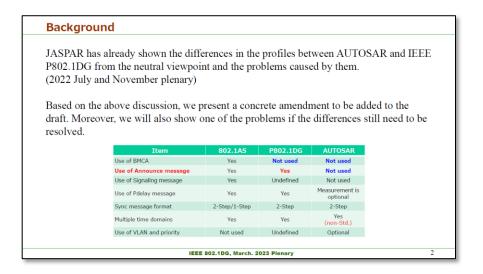
[Situation to be resolved]
- Mixing the above can cause problems.
- It is too late to eliminate VLAN form the automotive industry.
- There are no guidelines for handling VLAN in time synchronization.
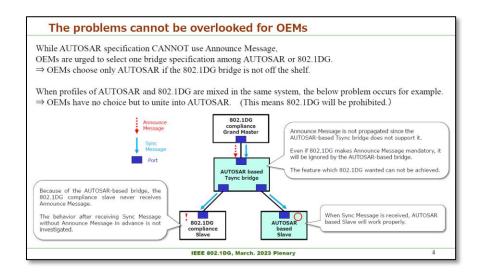
As SDV is gaining attention and TSN is becoming inevitable, Time Synchronization must be available and easy for OEMs.

We have a good precedent.

When we first proposed making "Announce Message" optional, we were criticized.[*]

Thanks to Don Pannel,
"Optional Use of Announce" was allowed.

The optional use of VLAN can also be discussed.

[*] dg-Nomura-JASPAR-Use-Cases-0314-v05, 06, 07

Conclusion

The purpose of this presentation is to make people aware of the existence of the problem.

For OEM engineers, this VLAN issue of gPTP is a **trap**.

I would like to ask for your open-mindedness in helping to solve the problem so that TSN can be used without worries.

AUTOSAR and JASPAR support the harmonization of the specifications. If necessary, we will make an additional presentation in March Plenary.