

Incorporating a Bridged End Station into the 60802 draft

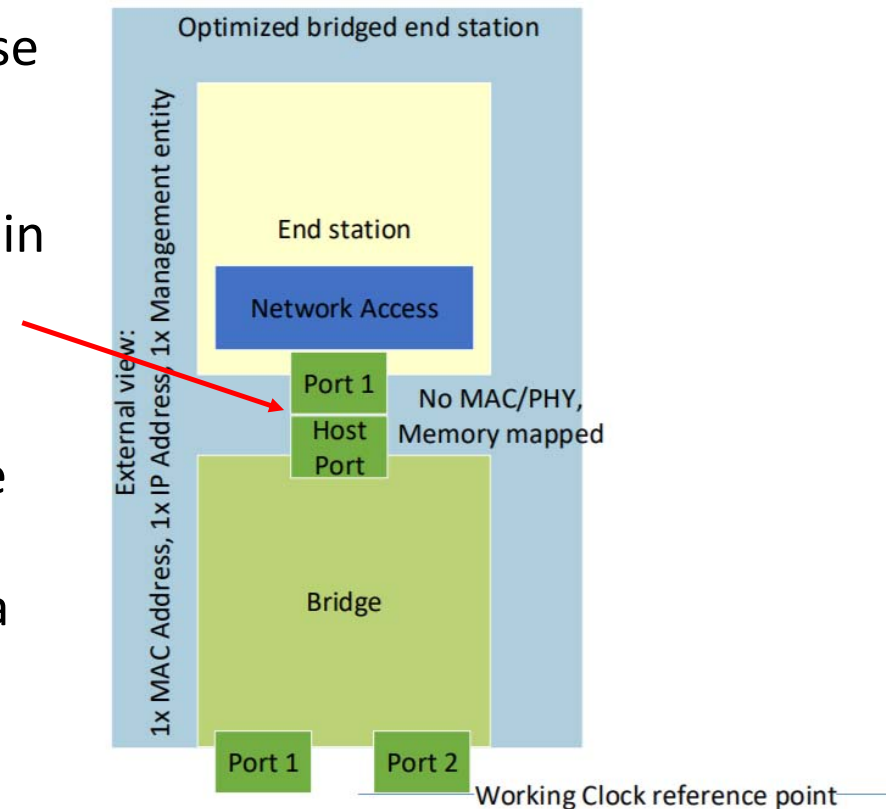
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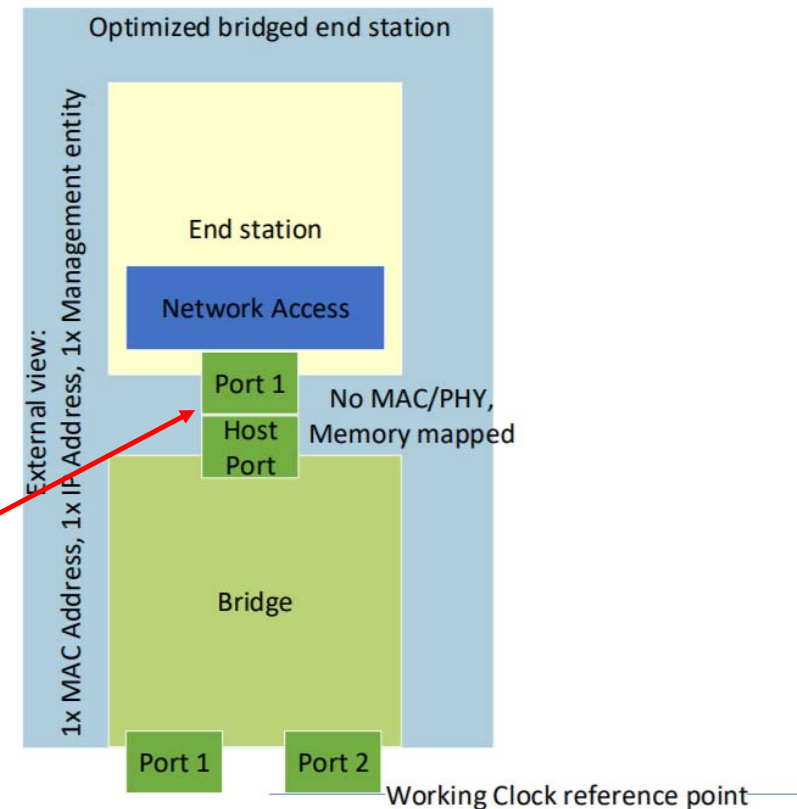
Problem Statement

- A “bridged end station” (an end station, connected to a “3-port” bridge) is a common use case in industrial automation.
- Very often, the interface between the interface between the end-station and the 3-port bridge is not an IEEE802 MAC but some standard (SPI, UART, parallel bus) or proprietary interface optimized for the IA-device use case.
- These bridged end stations are usually resource constrained.
- The 3-port bridge often needs to support only a subset of 802.1 features when compared to an infrastructure bridge.



Why define a “bridged end station”

- Historically, IEEE802.1 has elected to model such use cases as two distinct entities: a bridge and an end station. However, there are shortcomings to the model:
 - More difficult to account for the constrained device problem.
 - The 3-port bridge often needs to support only a subset of 802.1 features when compared to an infrastructure bridge.
 - The internal ports are not typically exposed to remote management.
 - If the internal port is to be subject to remote management then some type of management model is needed.



Proposal

- Add a normative section to clause 6 defining the bridged end station and its associated management model.
- Provide two conformance classes (ccA, ccB) of end station and bridged end station in clause 5.
- Provide a single conformance class for network/infrastructure bridges.

Thank you