More considerations for 10Mbps@15m multidrop

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Introduction

Both the automotive industry as well as industrial automation have identified use cases in which the support of a multidrop scenario for 10SPE@15m would be very useful.

The following slides describe the input that is required in order approve a(n optional) multidrop objective for 10SPE.

- Minimum requirements that have to be met
- Additional effort owing the multidrop channel access scheme
- Other

Automotive Topology Requirements

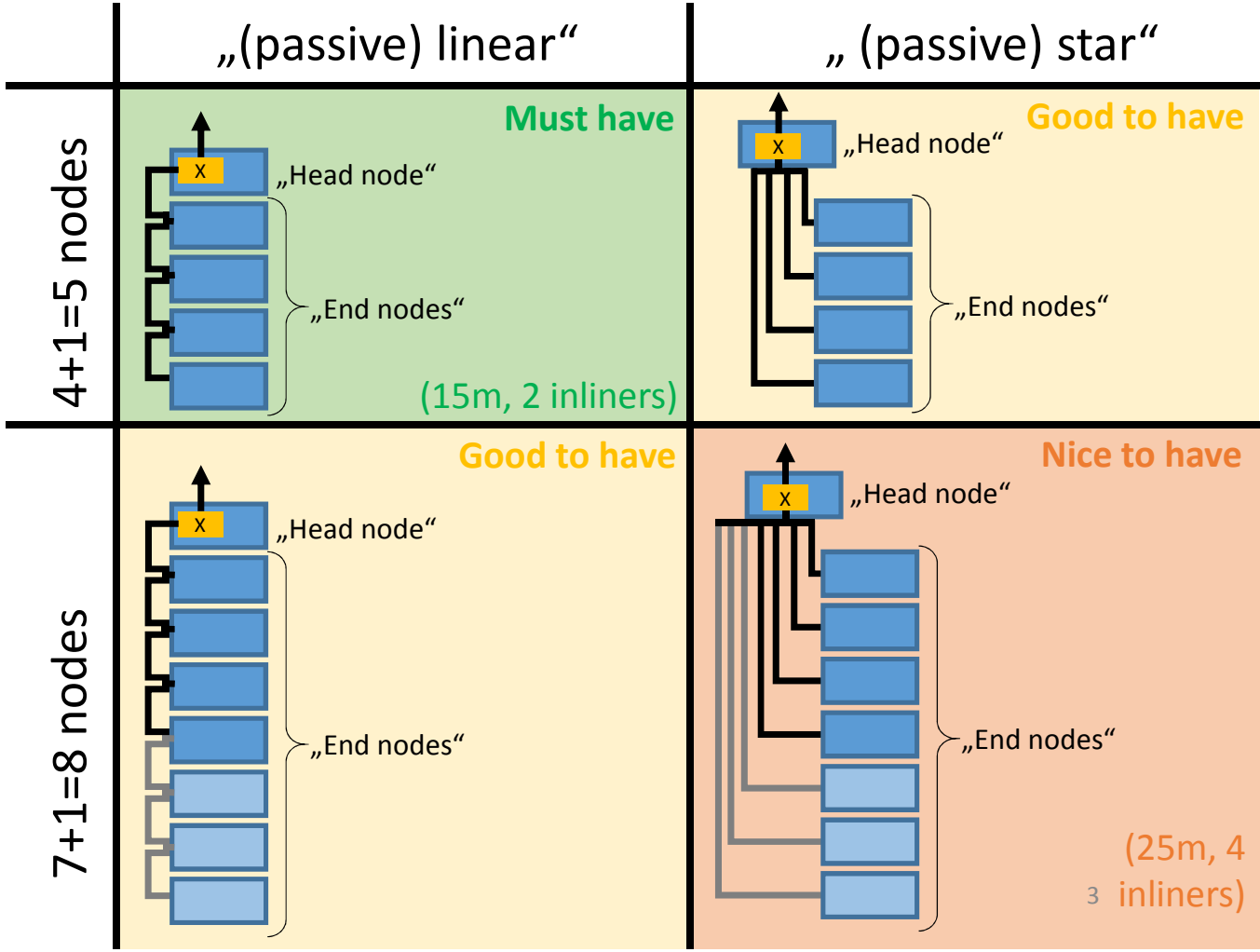
Can the “must have” scenario be supported with reasonable effort?

What is the difference in PHY effort between the a P2P scenario and the “must have” scenario?

Later: What is the difference in PHY effort between the different scenarios?

Additional parameters:

- 15m vs. 25m overall length
- 2 vs 4 additional inline connectors



Multidrop Channel Access Scheme

It has been investigated that in principle the EFM/EPoC multidrop scheme seems usable for the 10SPE@15m scenario.

Input is still needed on

- Additional effort in MAC especially in head node MAC (also in comparison to switched scenario)
- Later: Possibilities to arrange dynamic allocation of bandwidth at band end

Other Requirements

- We need a channel model asap, and for this measurements of channels, S-parameters of example multidrop link segments etc.
- An overview on the interrelations with AVB/TSN