802.3da Mixing Segment Model Correlation

May 2023

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Purpose

- Resolve differences to reference simulation in:
    - https://www.ieee802.org/3/da/public/050323/schreiner_3da_May_23.pdf
- Method
    - For model correlation use parameter's and <u>one</u> topology in: https://www.ieee802.org/3/da/public/0323/diminico_SPMD_01b_0323.pdf
    - With typical TX slide 4 >>https://www.ieee802.org/3/da/public/011723/diminico_SPMD_01_0123.pdf
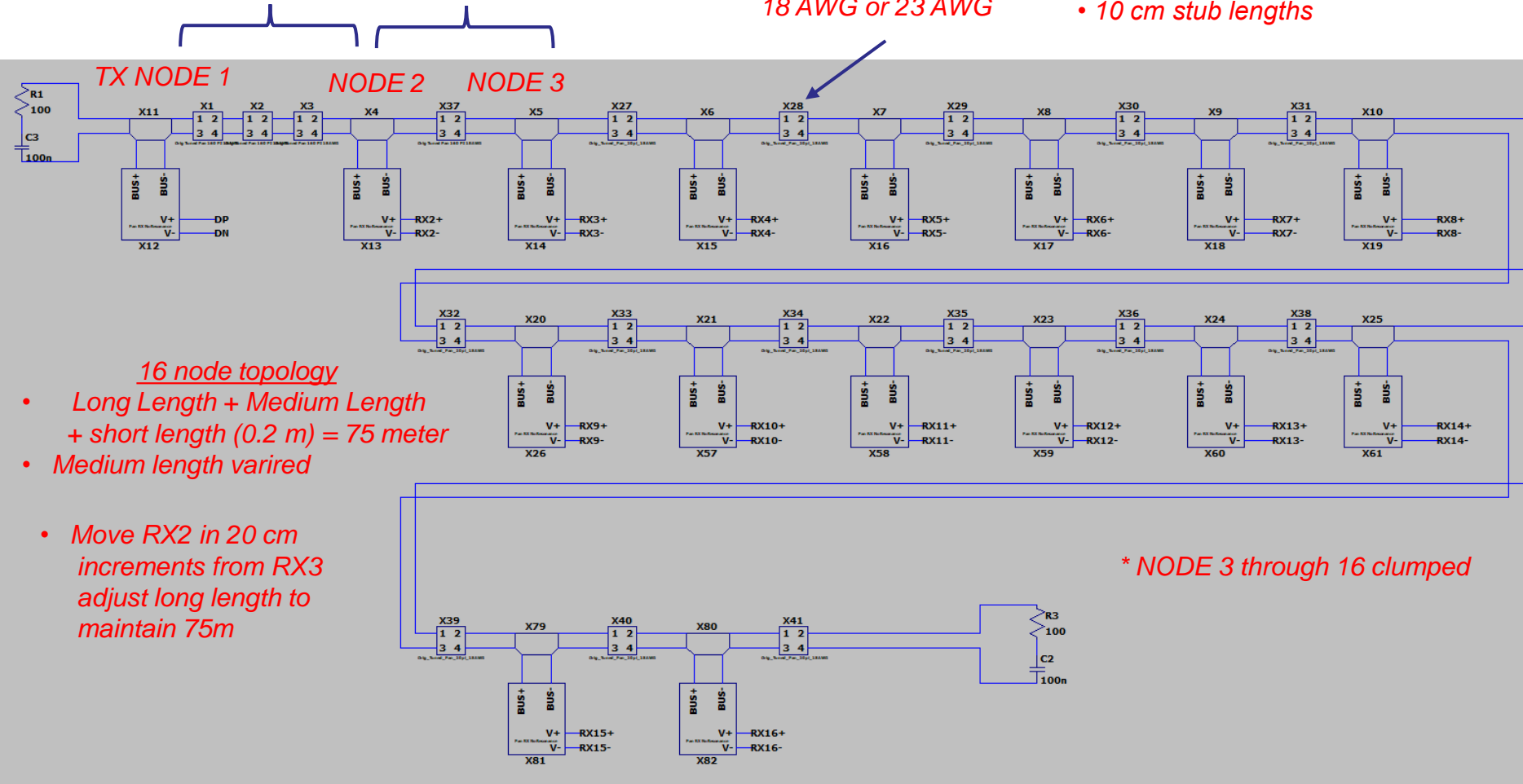
Mixing Segment Insertion Loss vs AWG

https://www.ieee802.org/3/da/public/0323/diminico_SPMD_01b_0323.pdf

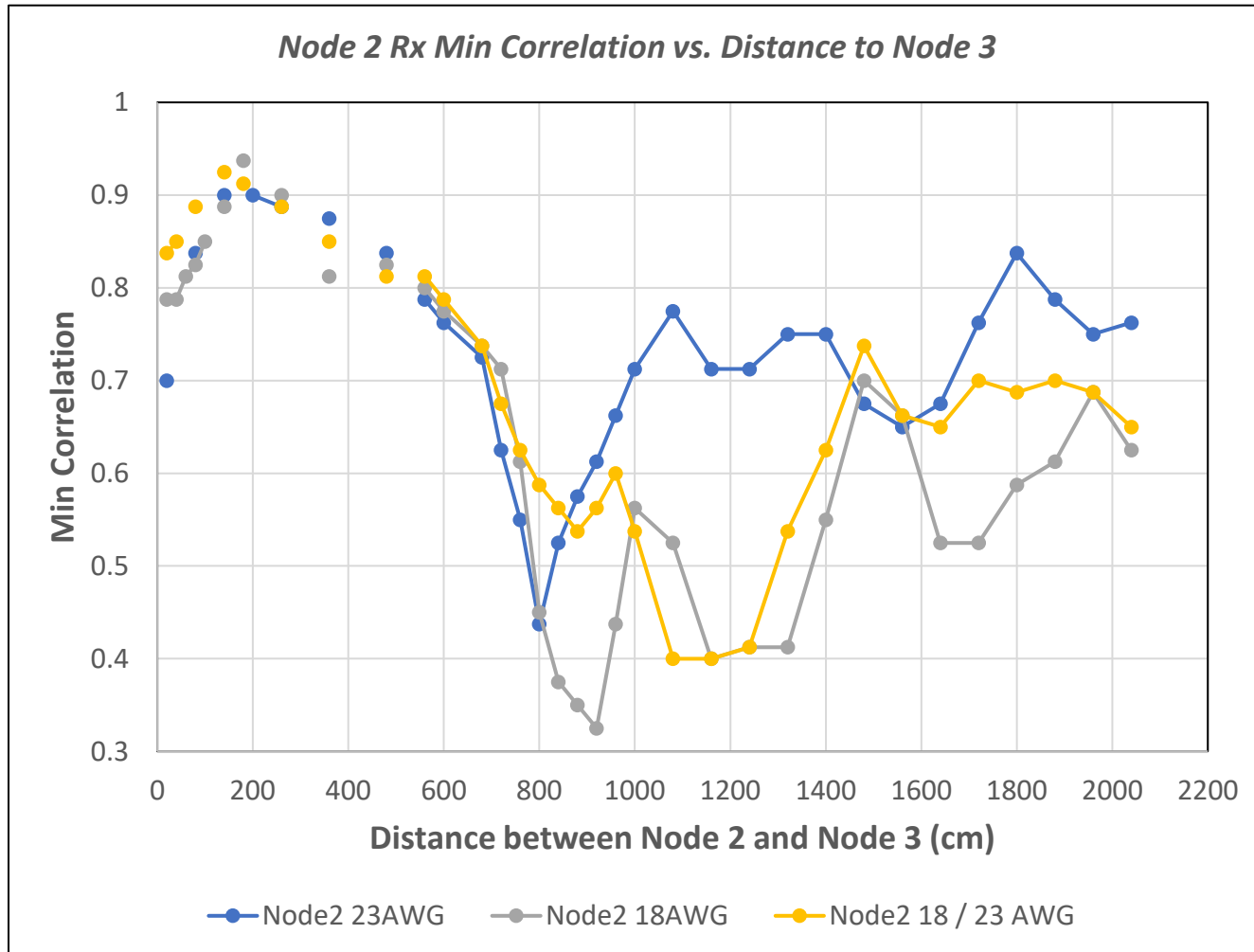Long Length
18 AWG or 23 AWG

Medium Length
18 AWG or 23 AWG

Short Length
18 AWG or 23 AWG

• 75 m, 16 node, clumped topology
• 80 uH, 30 pF node parasitics
• 10 cm stub lengths

16 node topology

• Long Length + Medium Length + short length (0.2 m) = 75 meter
• Medium length varired

• Move RX2 in 20 cm increments from RX3 adjust long length to maintain 75m

* NODE 3 through 16 clumped

Mixing Segment Insertion Loss vs AWG

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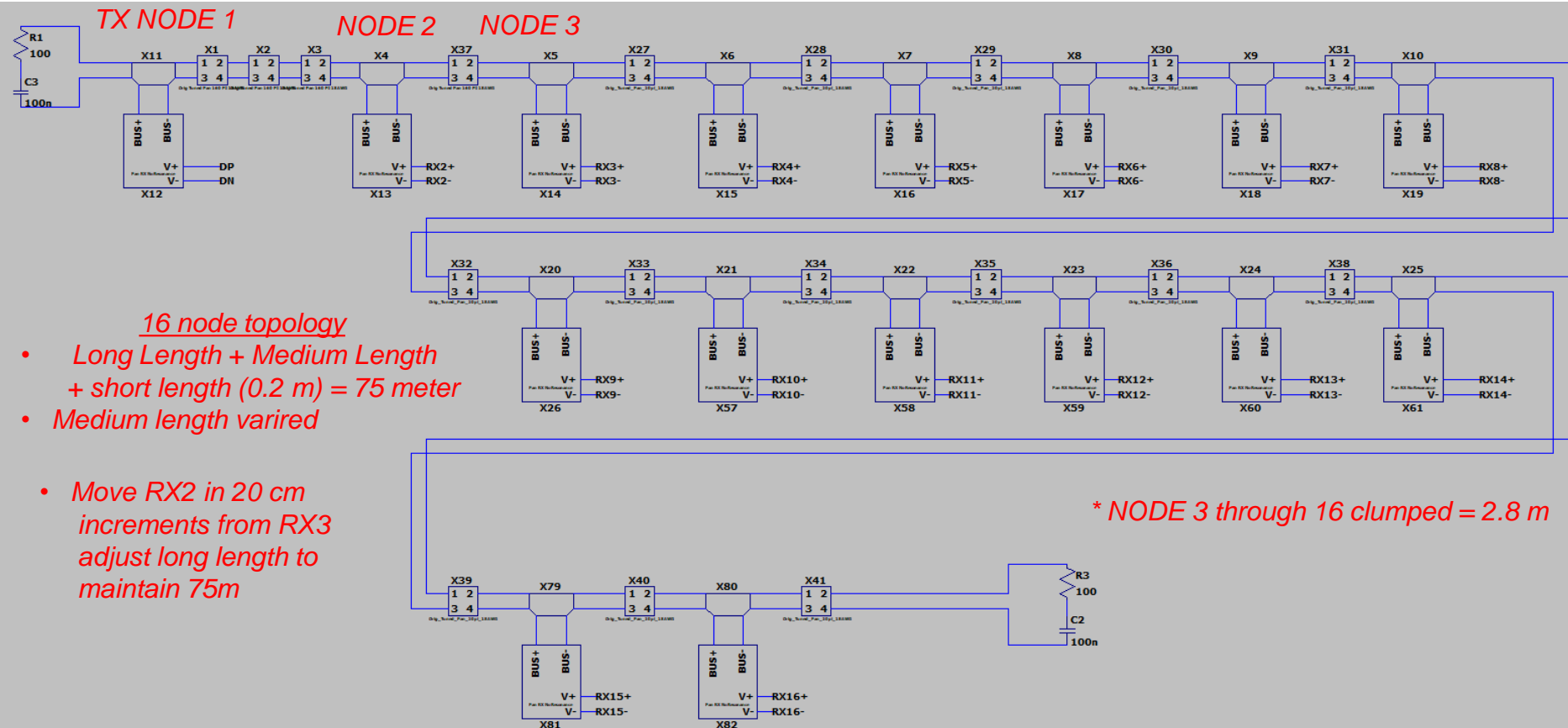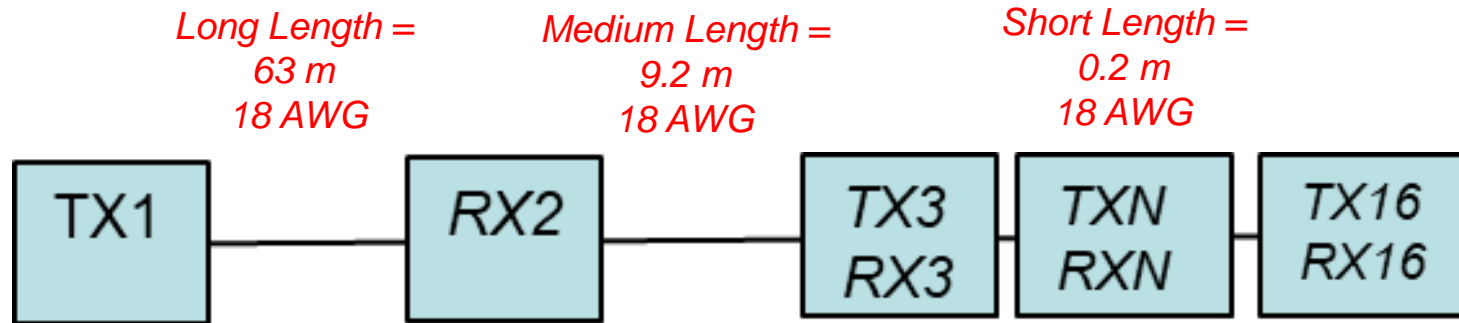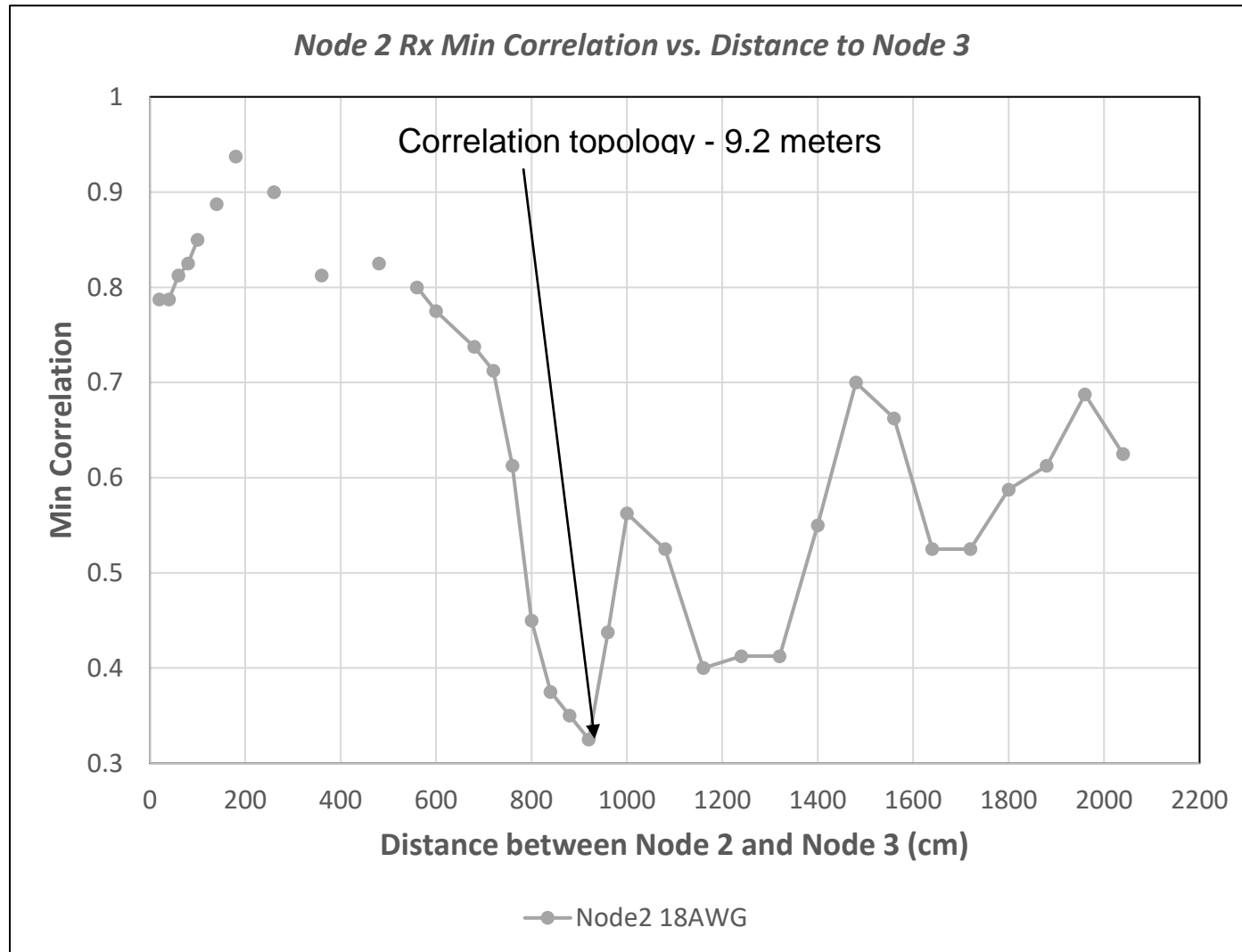- **Mixing Segment Insertion Loss vs AWG topology slide 4**

10 Mb/s SPMD Enhancement TG

Mixing Segment Correlation Topology

Mixing Segment Correlation Topology

Long Length =
63 m
18 AWG

Medium Length =
9.2 m
18 AWG

Short Length =
0.2 m
18 AWG

| TX1 | | RX2 | | TX3 RX3 | TXN RXN | TX16 RX16 |

• 75 m, 16 node, clumped topology
• 80 uH, 30 pF node parasitics
• 10 cm stub lengths

10 Mb/s SPMD Enhancement TG

Mixing Segment Insertion Loss vs AWG

- **Mixing Segment Insertion Loss vs AWG topology slide 8**