



Ethernet-based Metropolitan Area Networks

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Based on chapter 5 of:

M. Baldi, P. Nicoletti, "Switched LAN", McGraw-Hill, 2002, ISBN 88-386-3426-2

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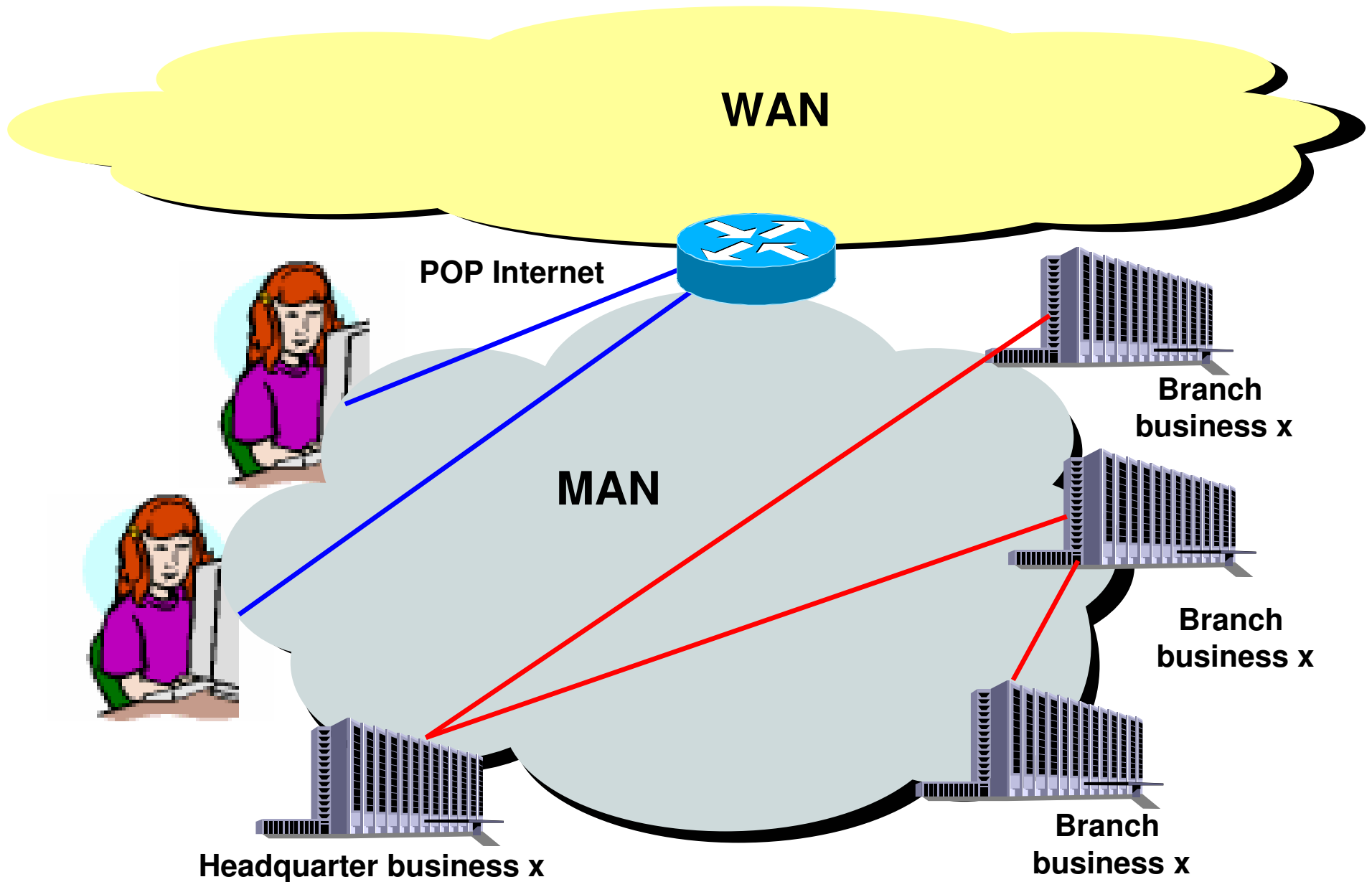
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Suitable standard transmissives

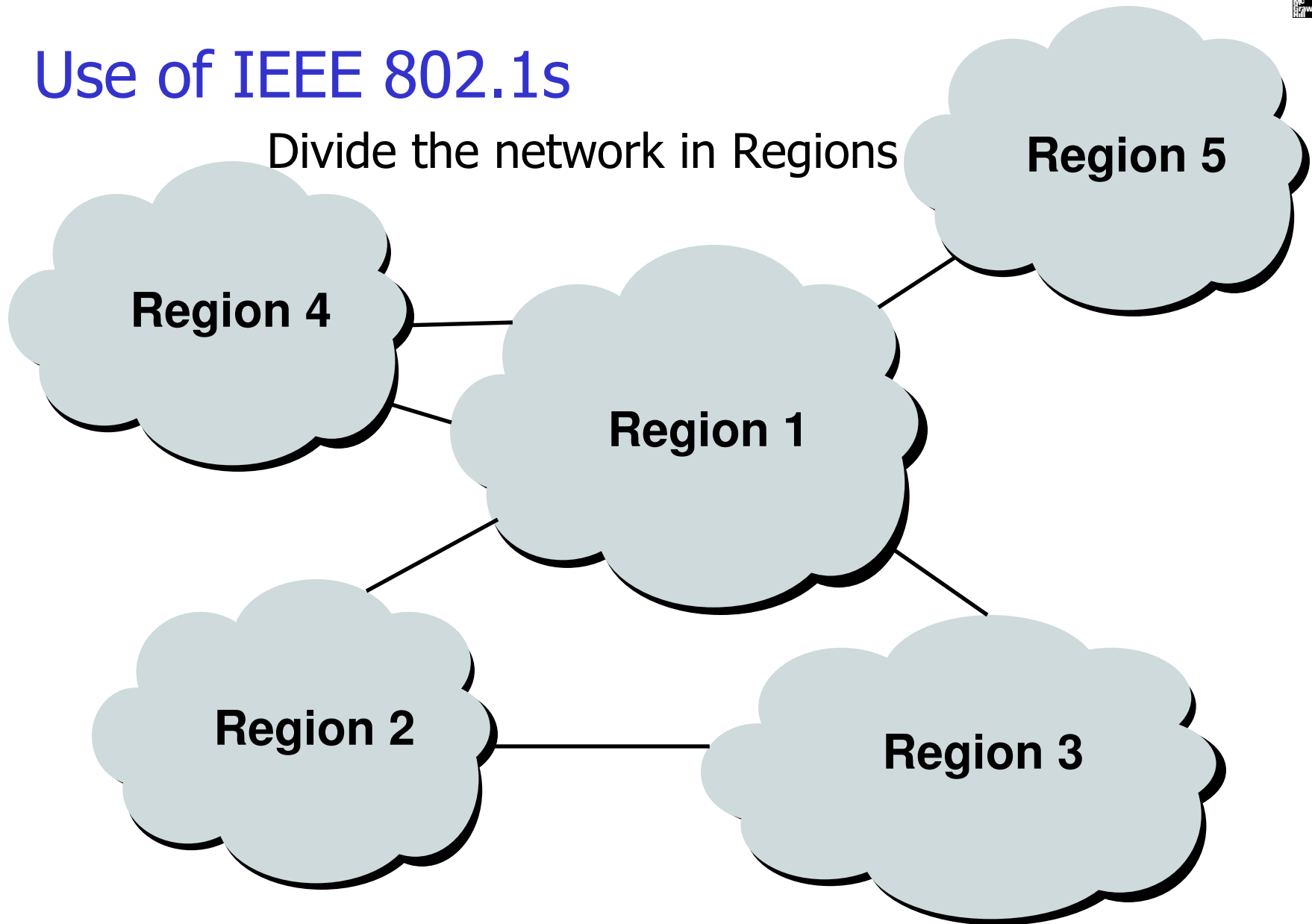
- 100BASE-FX → 2 Km
- 1000BASE-LX → 5 Km
 - Solution proprietary until 100 Km
- 10GBASE-LR → 10 Km
- 10GBASE-ER → 40 Km
- 10GBASE-W → integration with SONET/SDH
 - Use of components
 - Transmission on networks SONET/SDH
 - 10GBASE-LW → 10 Km
 - 10GBASE-EW → 40 Km

Applicative scene

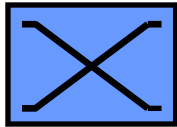


Use of IEEE 802.1s

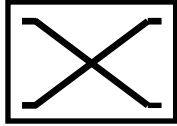
Divide the network in Regions



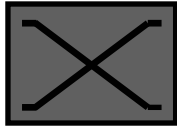
Region MST in a MAN Ethernet



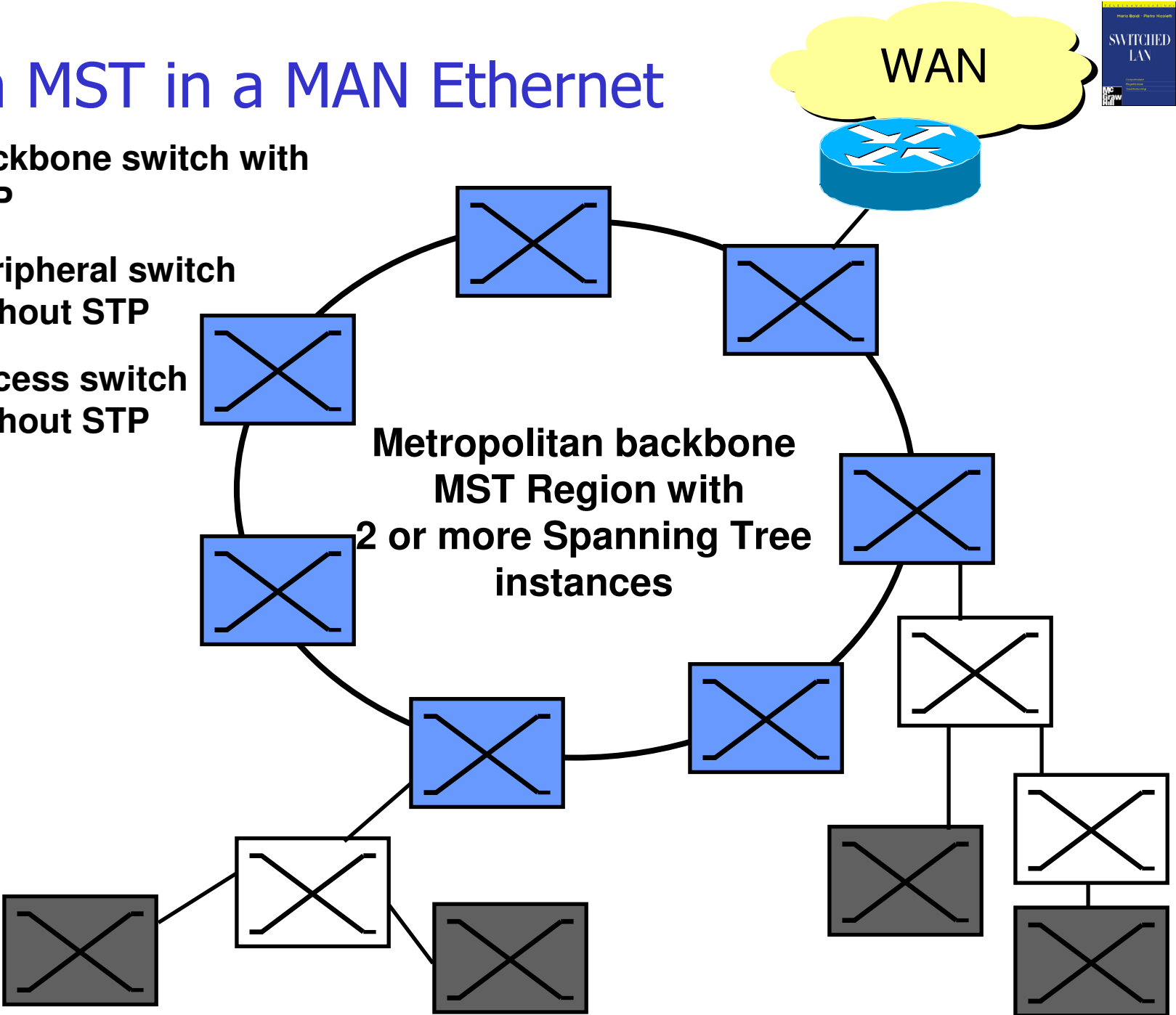
Backbone switch with STP



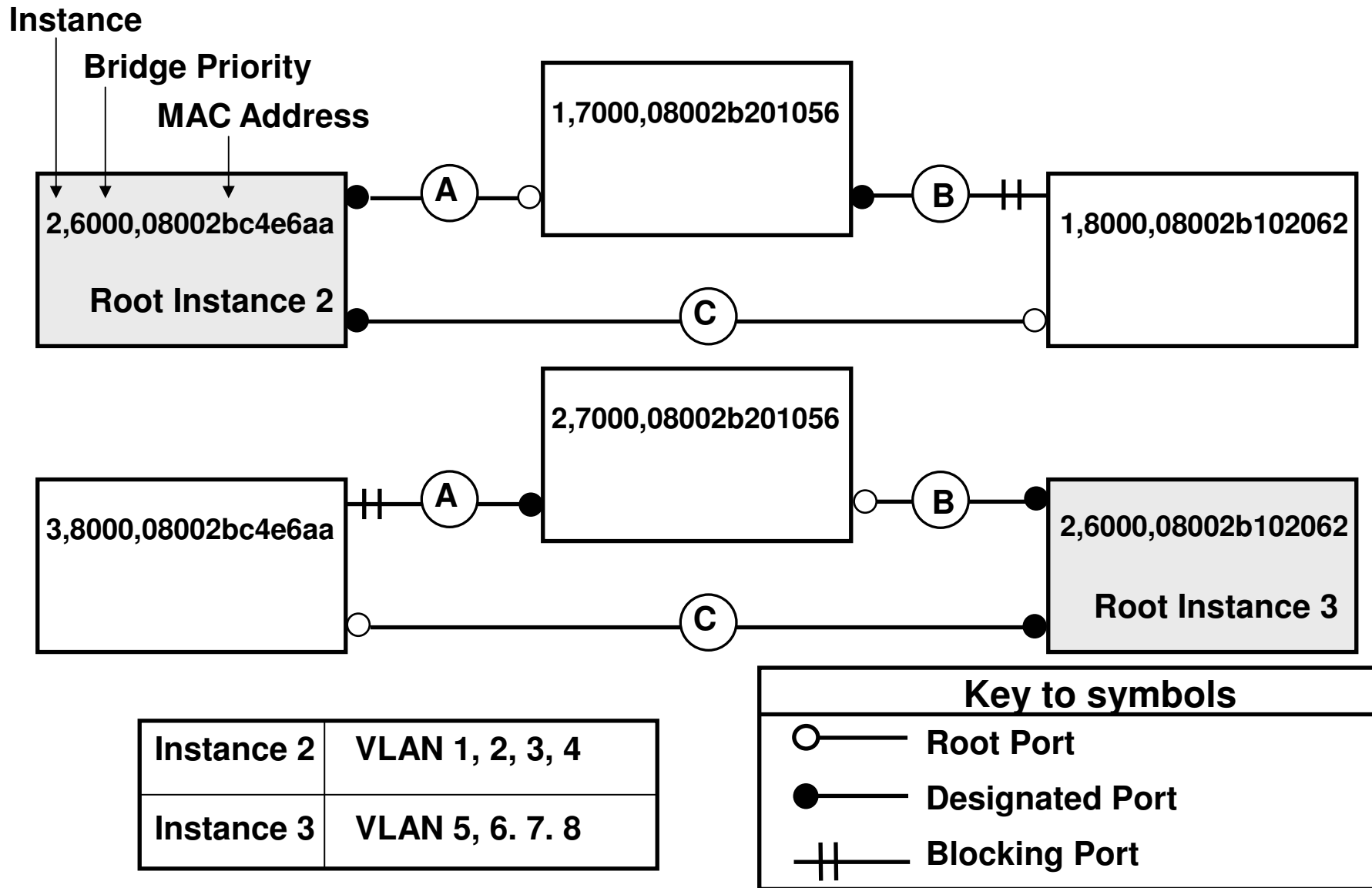
Peripheral switch without STP



Access switch without STP



Spanning tree and VLAN in MST Region



MAN MPLS

