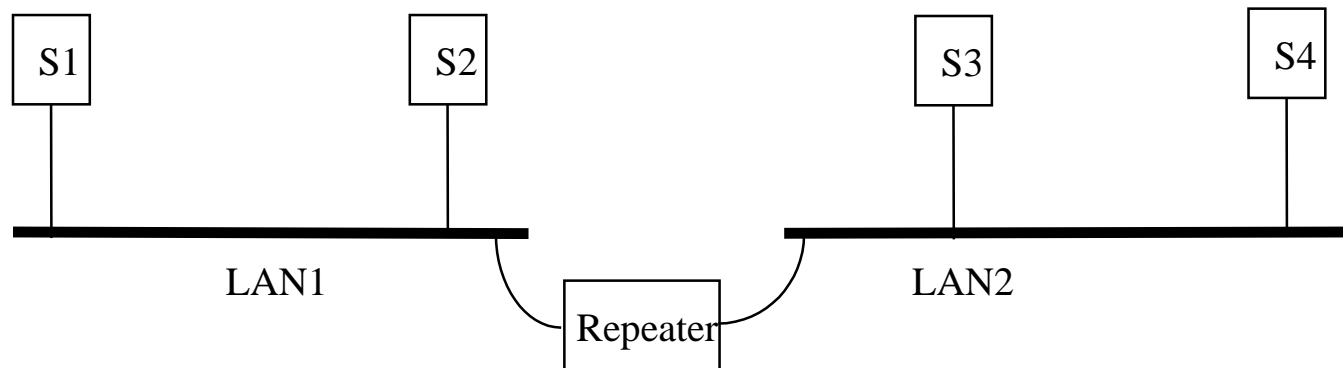


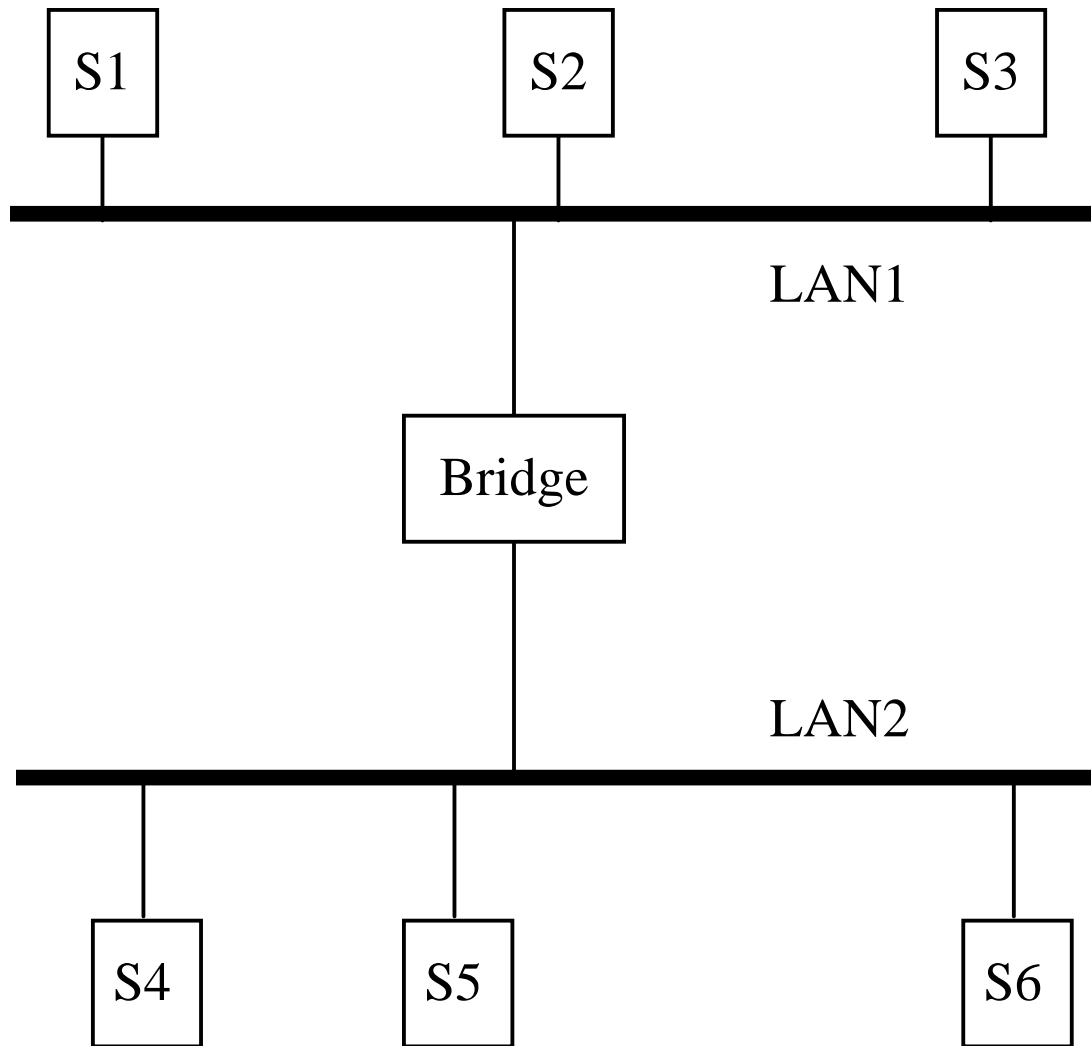
Bridges





A repeater operates at the physical layer and forwards everything between the two LANs.

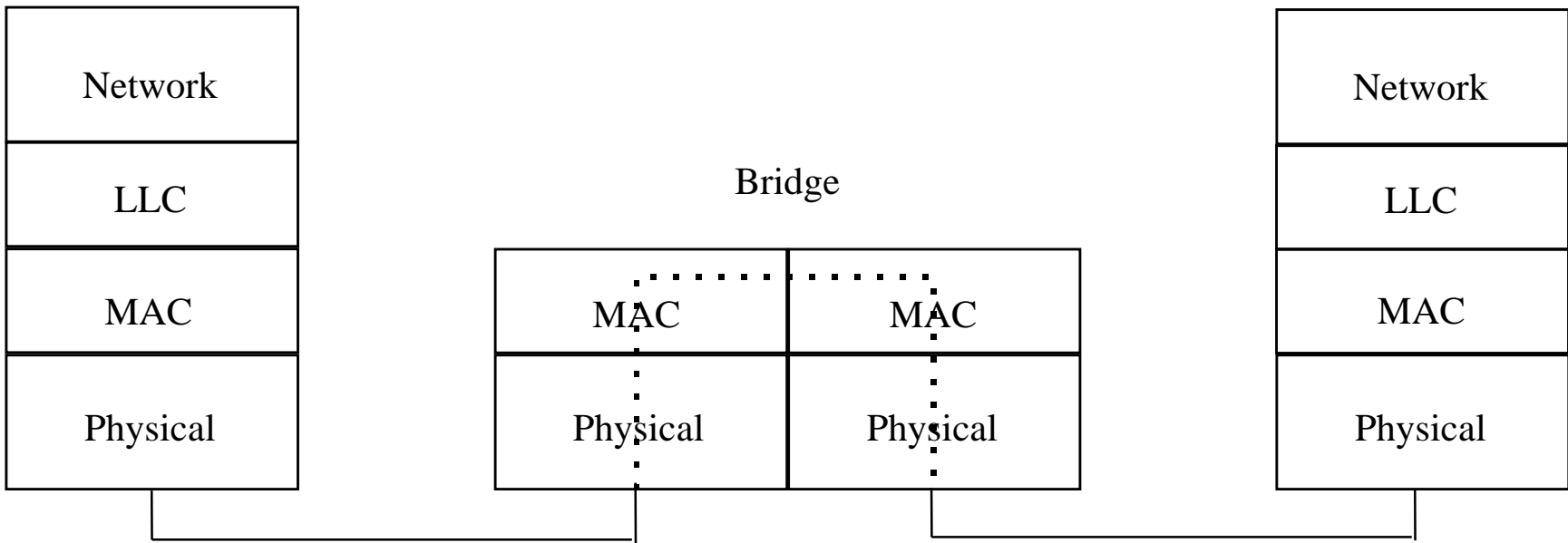
LAN1 and LAN2 are in the same collision domain.



Bridges

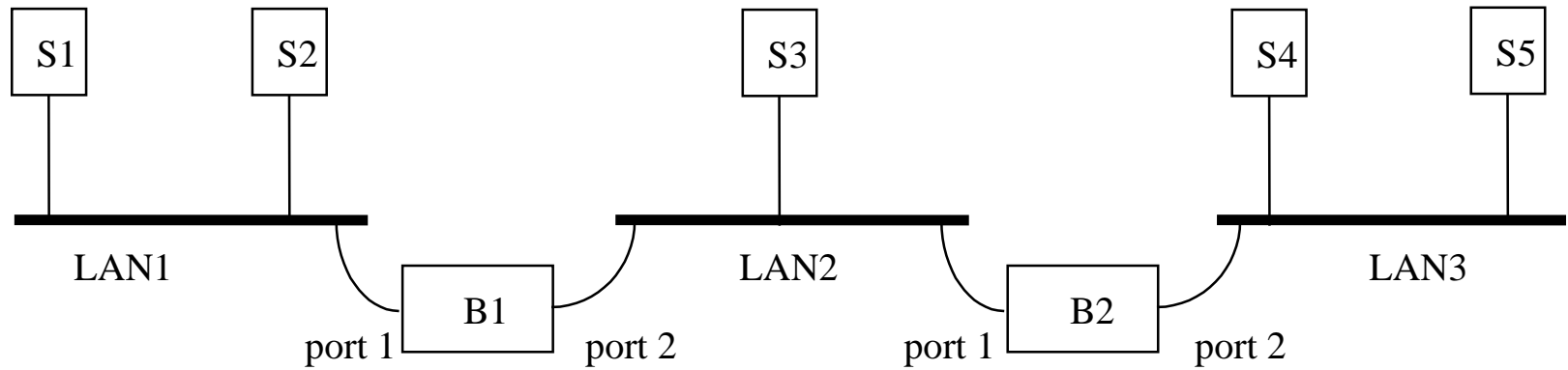
- Operate at the data link layer.
- Bridges use backward learning in recording source address on transmissions.
- Unlike repeaters, bridges will not forward a frame onto another LAN segment if it knows about the location of the destination node.
- *Bridge management gets more complicated when loops are possible in the frame route.*

Bridge



A bridge is a store and forward device that separates collision domains.

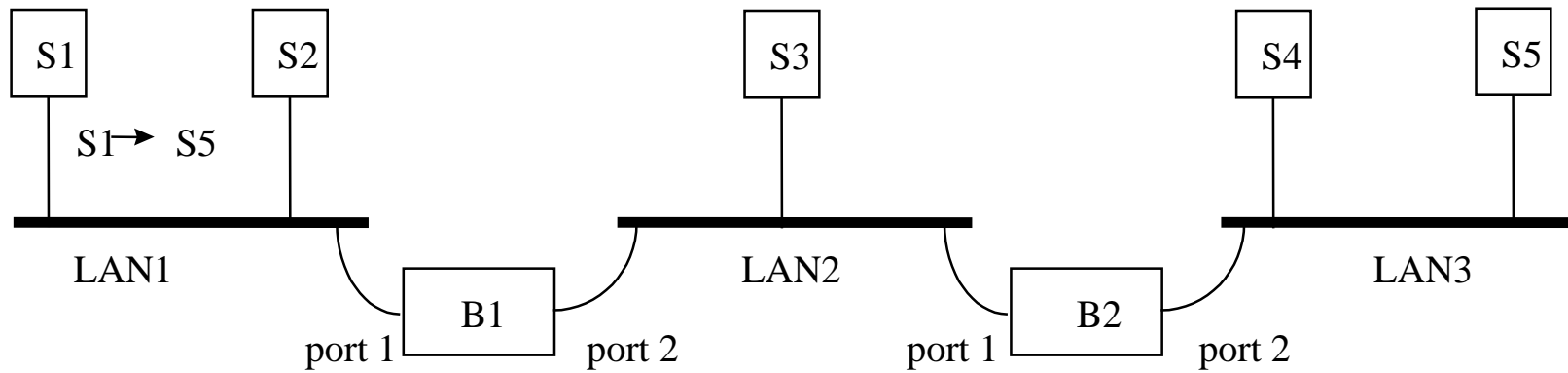




Address	Port

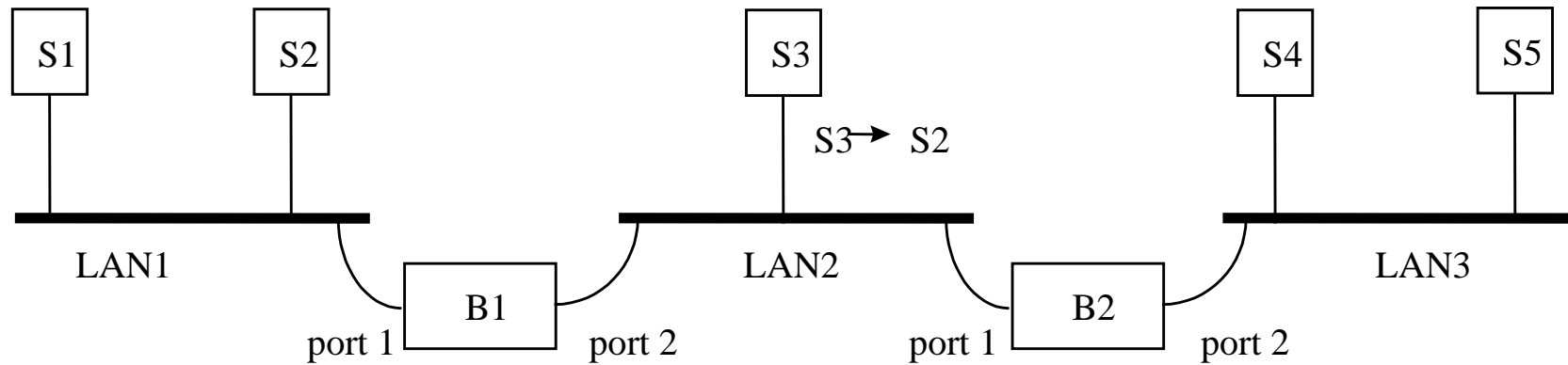
Address	Port





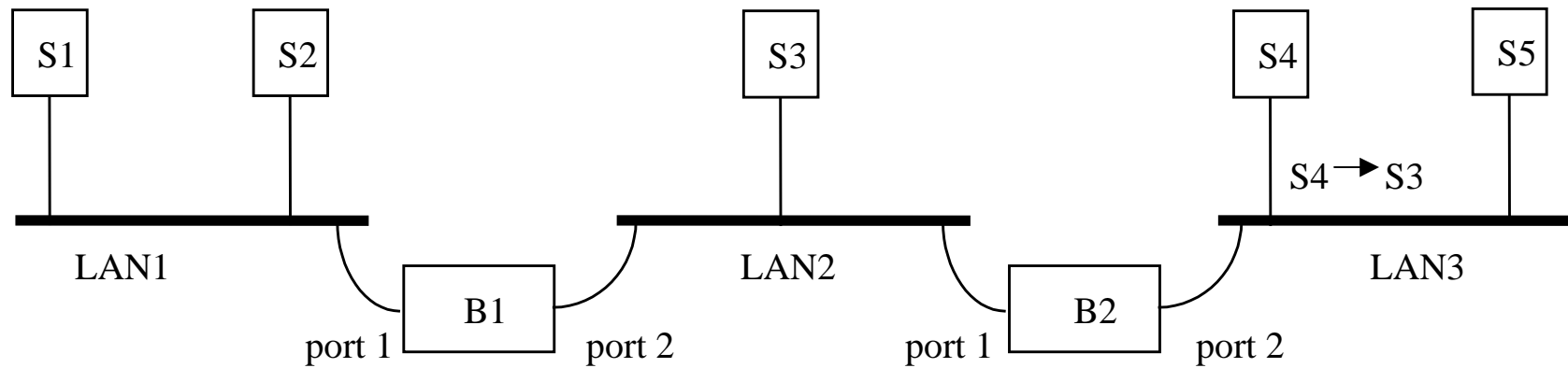
Address	Port
S1	1

Address	Port
S1	1



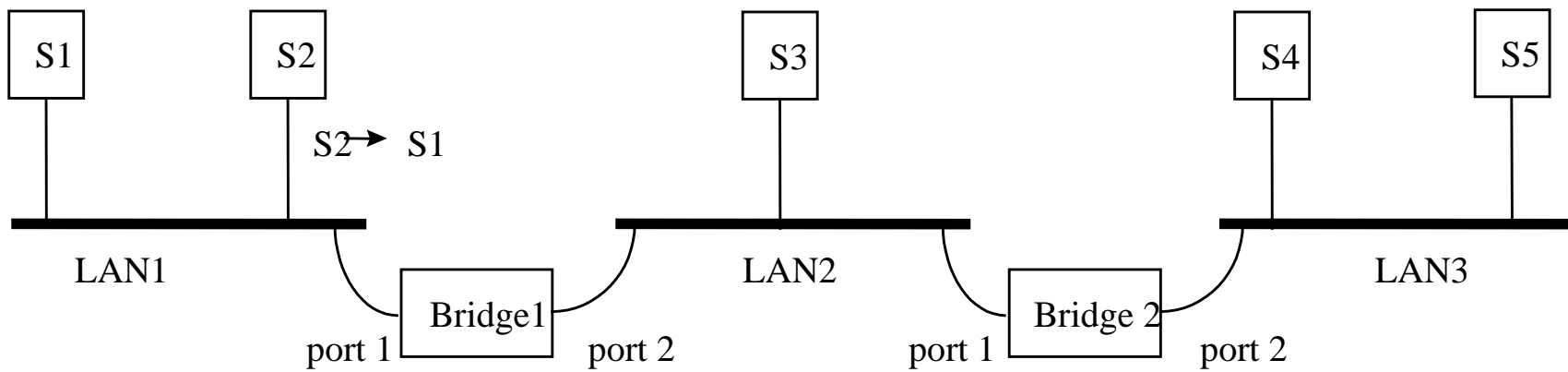
Address	Port
S1	1
S3	2

Address	Port
S1	1
S3	1



Address	Port
S1	1
S3	2
S4	2

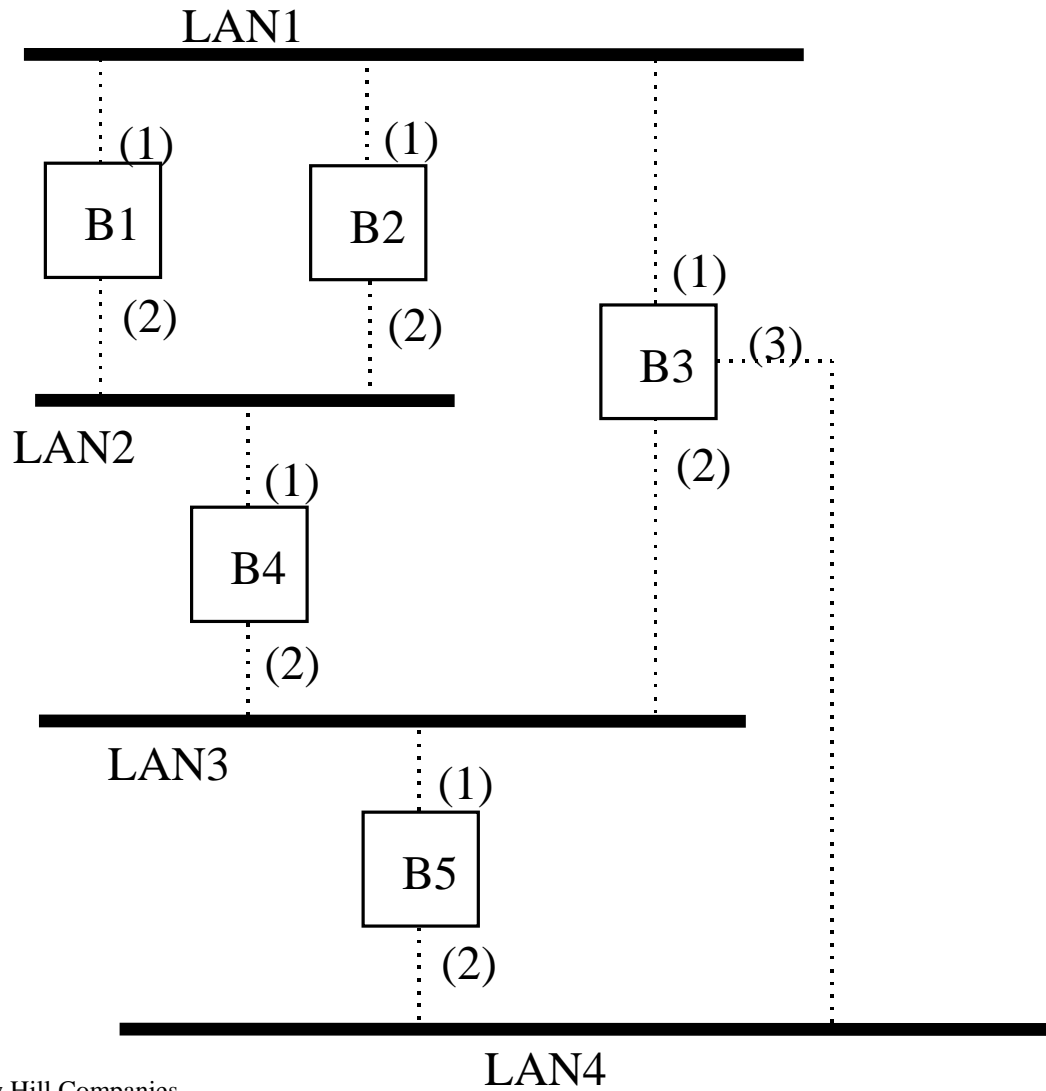
Address	Port
S1	1
S3	1
S4	2



Address	Port
S1	1
S3	2
S4	2
S2	1

Address	Port
S1	1
S3	1
S4	2

MANs with Bridge Loops



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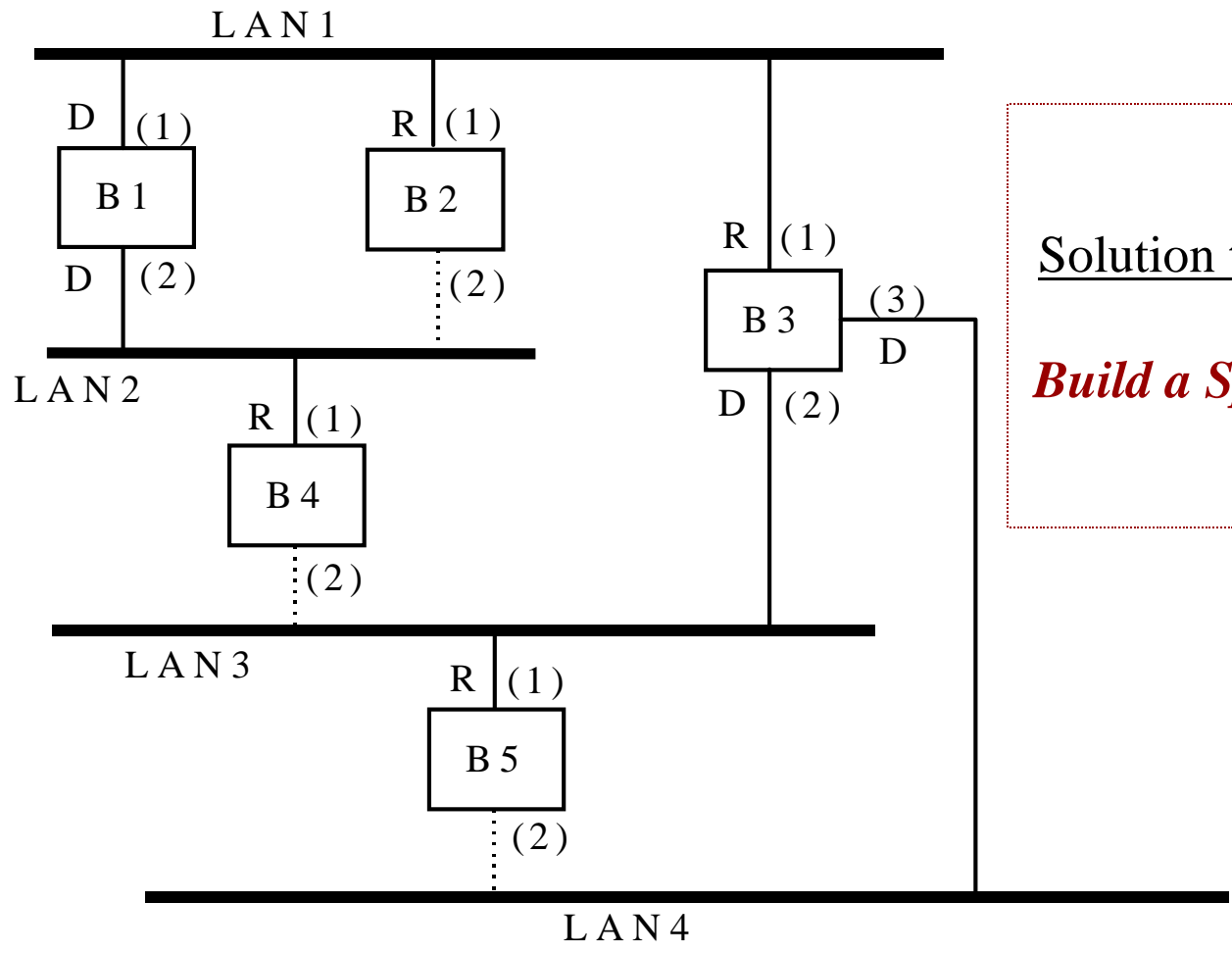


Leon-Garcia & Widjaja: *Communication Networks*

Networks: Bridges

Figure 6.86

MANs with Bridge Loops



Solution to bridge loops
Build a Spanning Tree!