

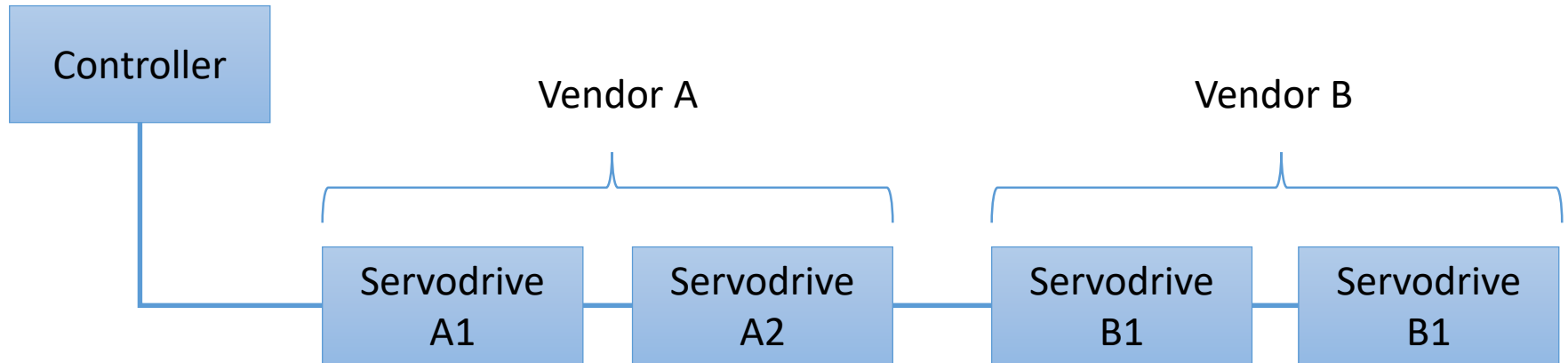
Use Case for IEC/IEEE 60802

Multivendor Motion Control

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Background information



Cascaded internal control loops:

Current: 31,25 μ s
Speed: 62,50 μ s
Position: 125,00 μ s

Communication relations:

Controller – Servo A1: 125,00 μ s
Servo A1 – Servo A2: 31,25 μ s

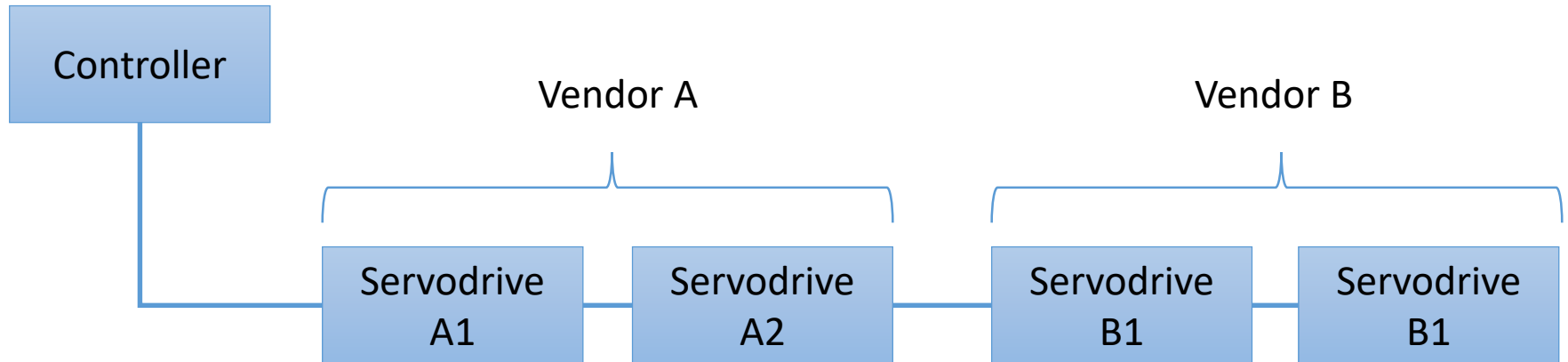
Cascaded internal control loops:

Current: 50 μ s
Speed: 100 μ s
Position: 200 μ s

Communication relations:

Controller – Servo B1: 200 μ s
Servo B1 – Servo B2: 50 μ s

Background information



Cascaded internal control loops:

Current: 31,25 μ s

Control loop timing is a very crucial topic for servo drive technology.

Cycle times have strong impact on hardware design and cannot be changed easily.

Communication relations:

Controller – Servo A1: 125,00 μ s

Servo A1 – Servo A2: 31,25 μ s

Cascaded internal control loops:

Current: 50 μ s

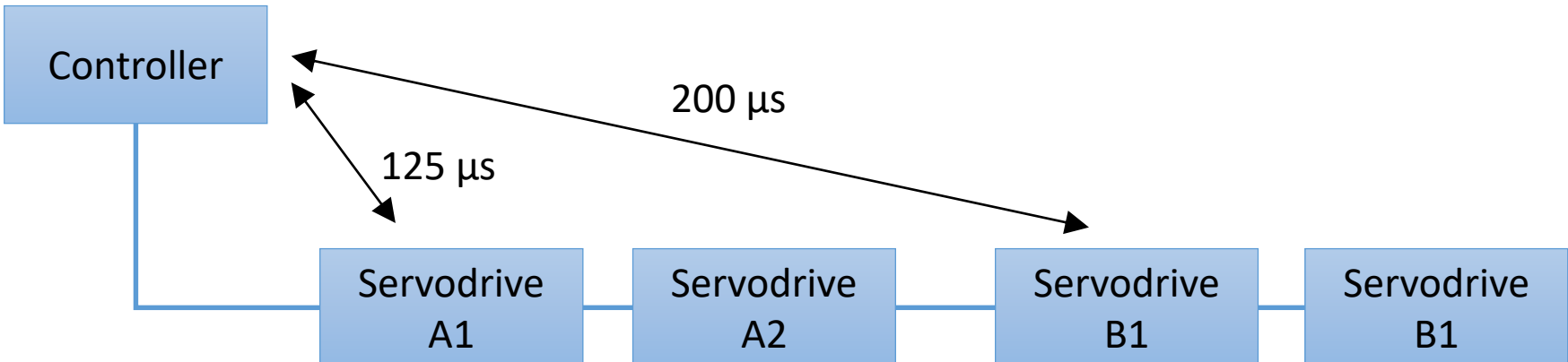
Position: 200 μ s

Communication relations:

Controller – Servo B1: 200 μ s

Servo B1 – Servo B2: 50 μ s

Timing Example



Cascaded internal control loops:
 Current: 31,25 μs
 Speed: 62,50 μs
 Position: 125,00 μs

Cascaded internal control loops:
 Current: 50 μs
 Speed: 100 μs
 Position: 200 μs

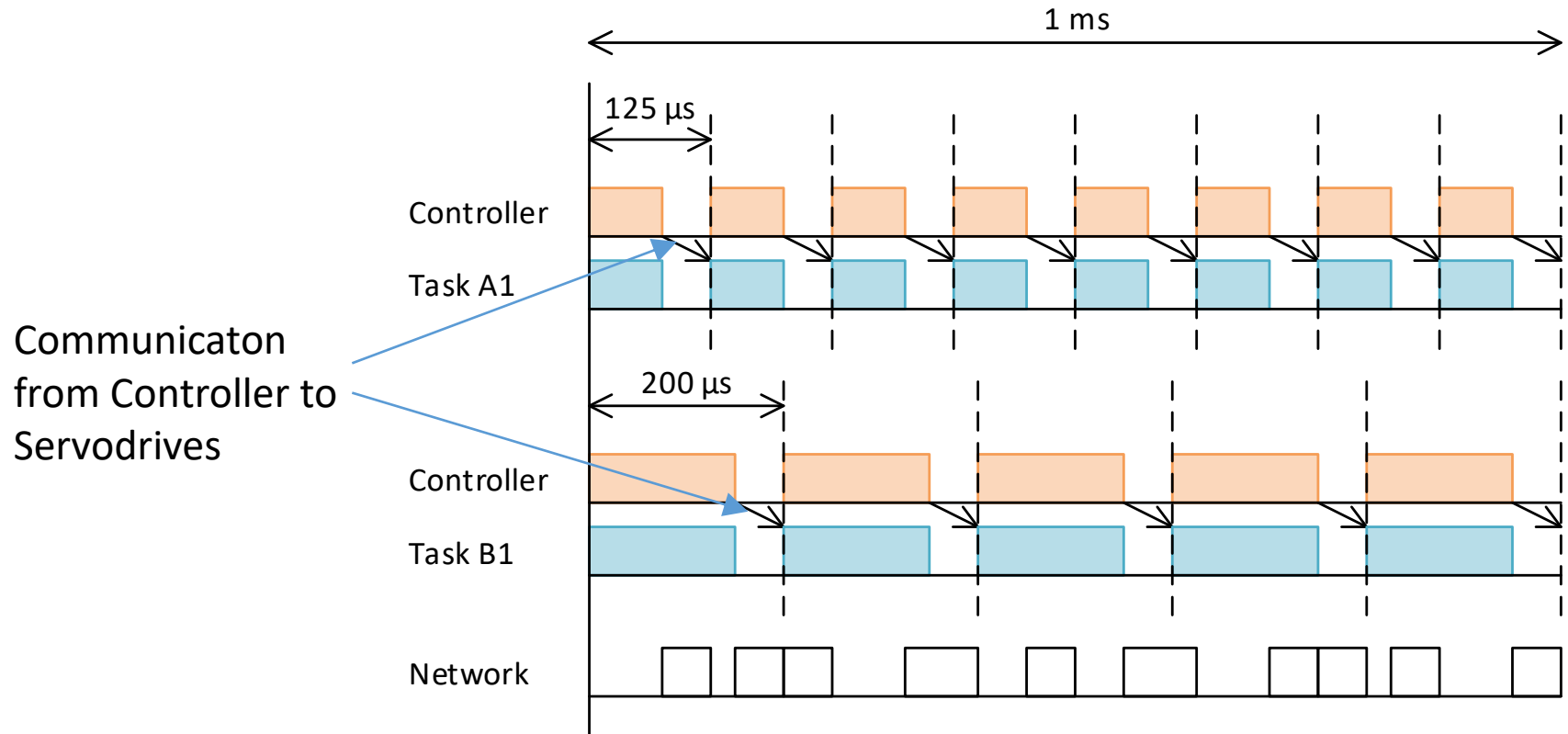
Communication relations:

Communication relations:

Controller – Servo A1: 125,00 μs	Controller – Servo B1: 200 μs
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Servo A1 – Servo A2: 31,25 μs *Servo B1 – Servo B2: 50 μs*
Both are of the same Traffic-Type (isochronous) and should share one Traffic-Class

Timing Example



Solutions?

Qbv-gating-cycle of 25 μs ?

→ Would waste bandwidth, because many slots would not use the gates