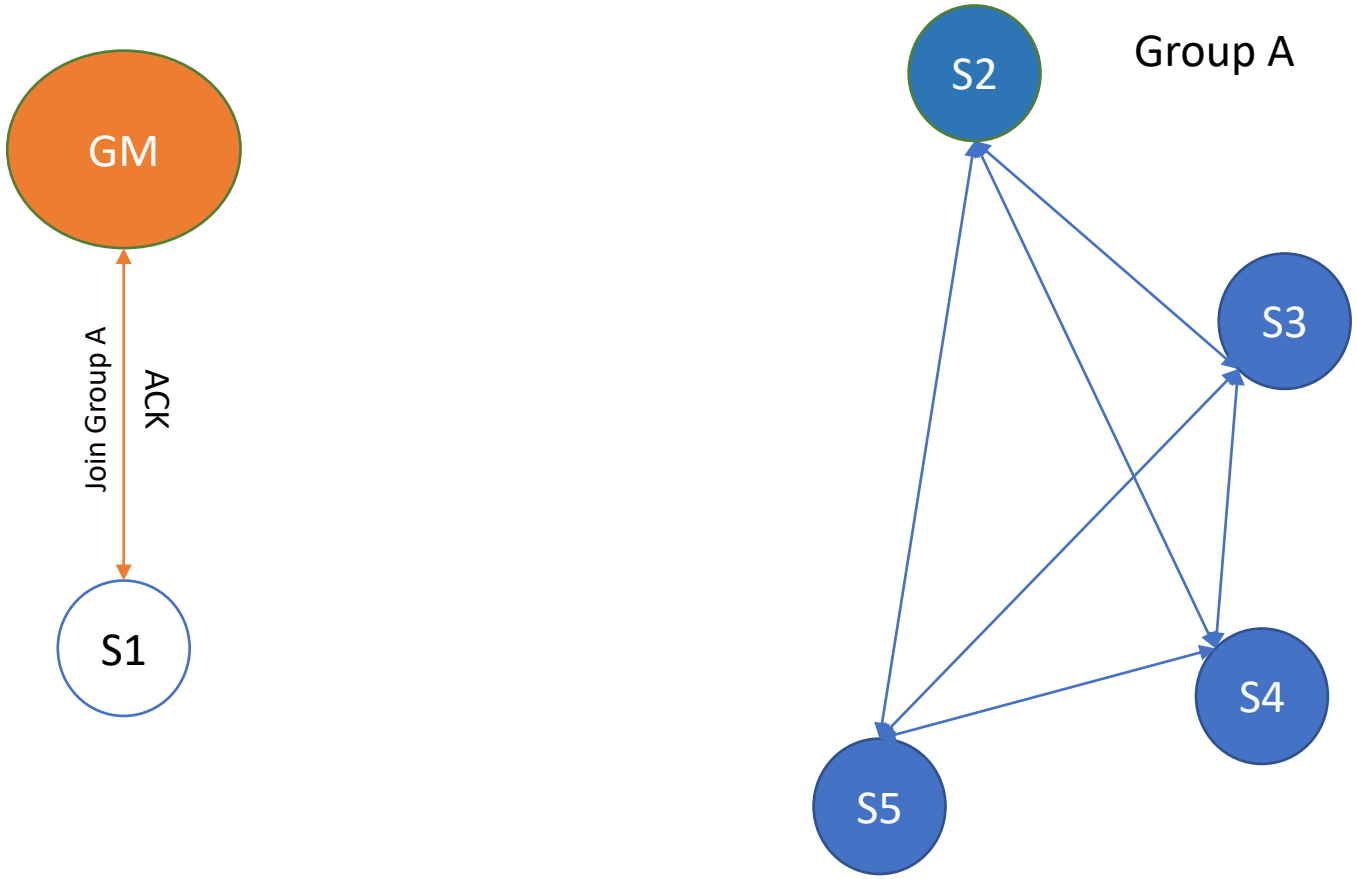
Distributed Systems

Stoltidhs Alexandros 2824
Koutsoukis Nikolaos 2907

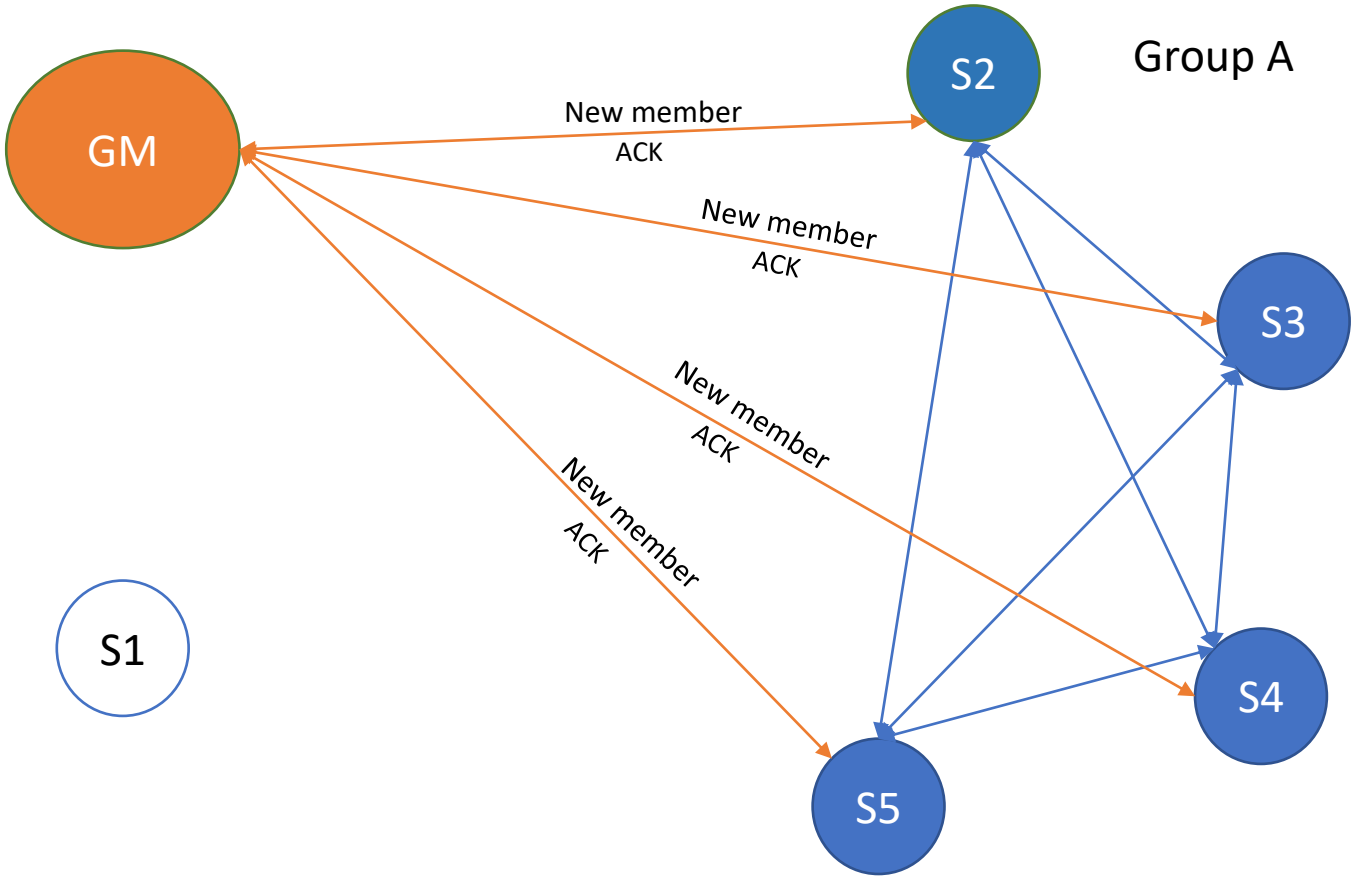
DEPARTMENT OF ELECTRICAL
& COMPUTER ENGINEERING

Group Join

Group join in group(Success)



Group join in group(Success)



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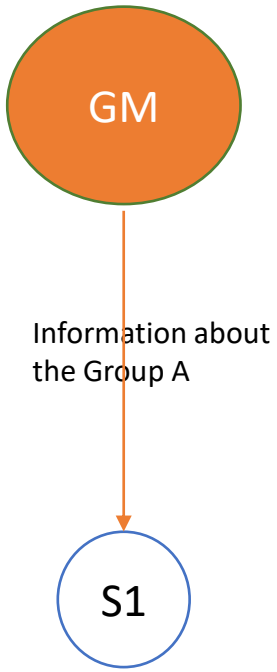
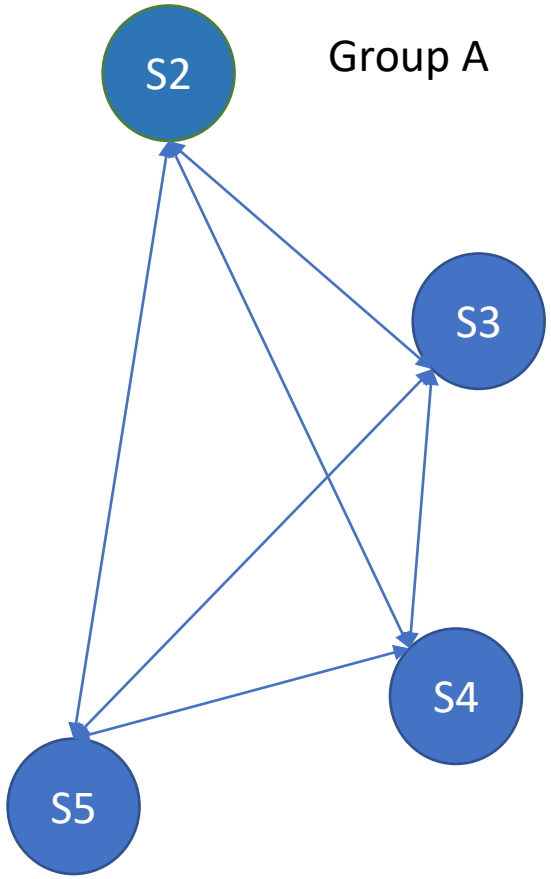
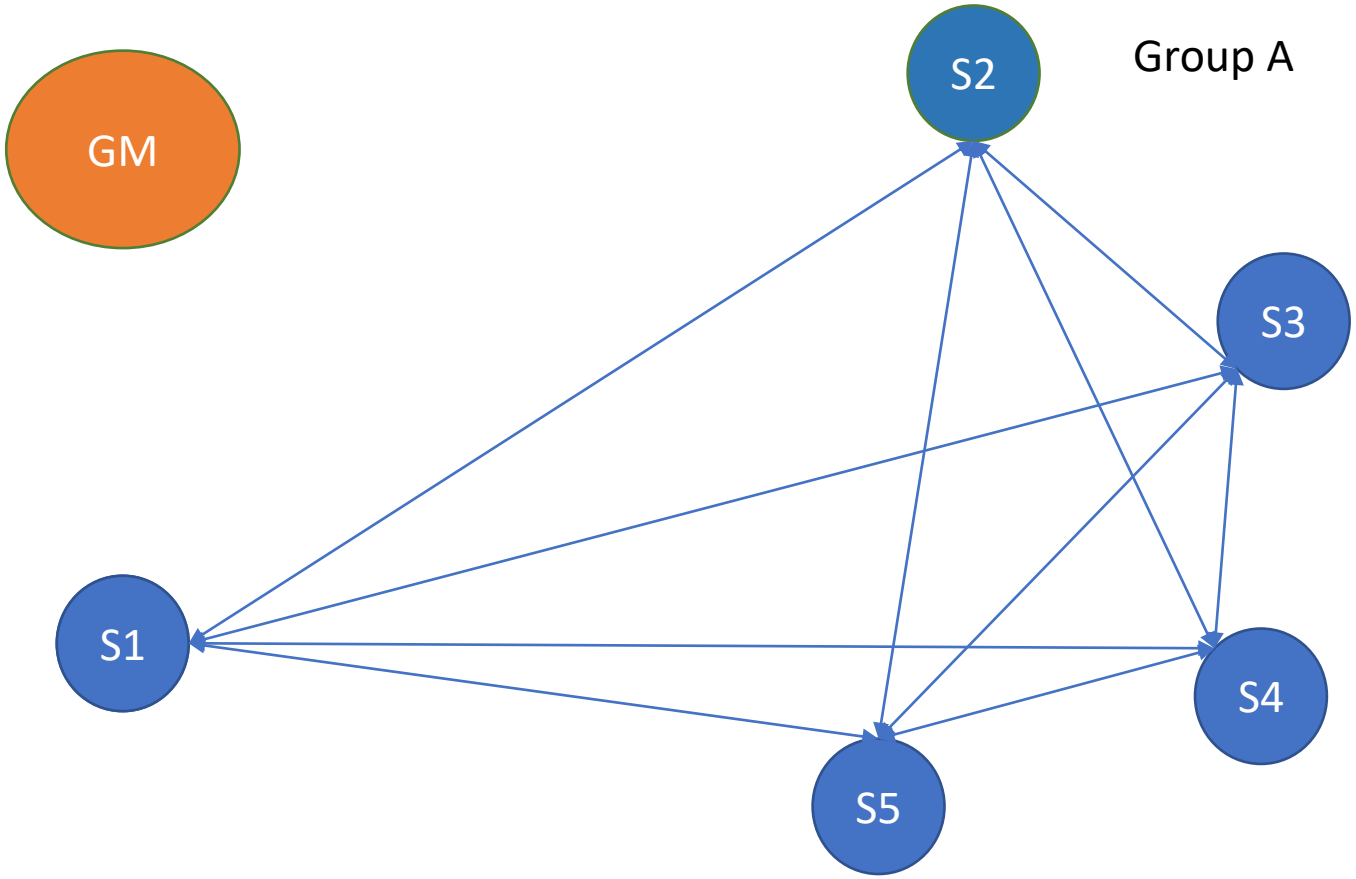




Group join in group(Success)



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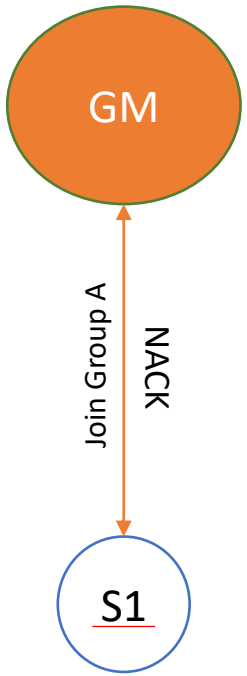
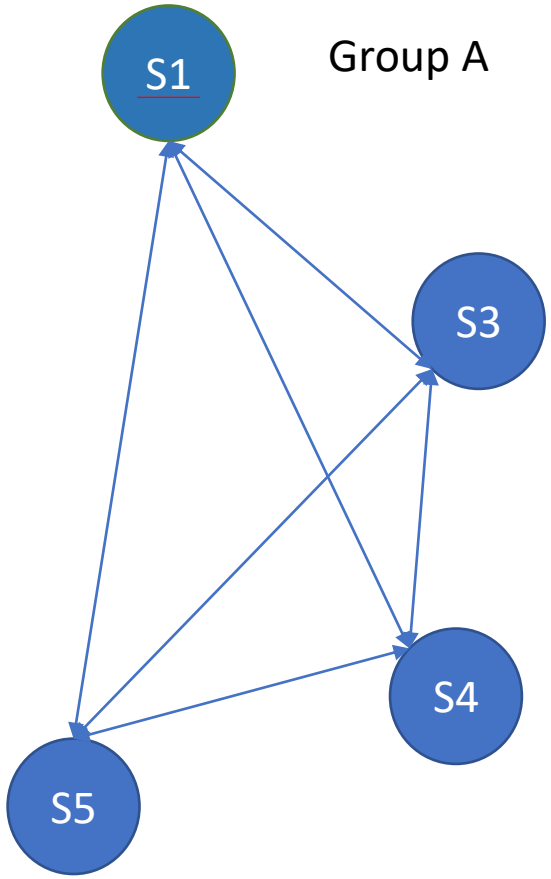
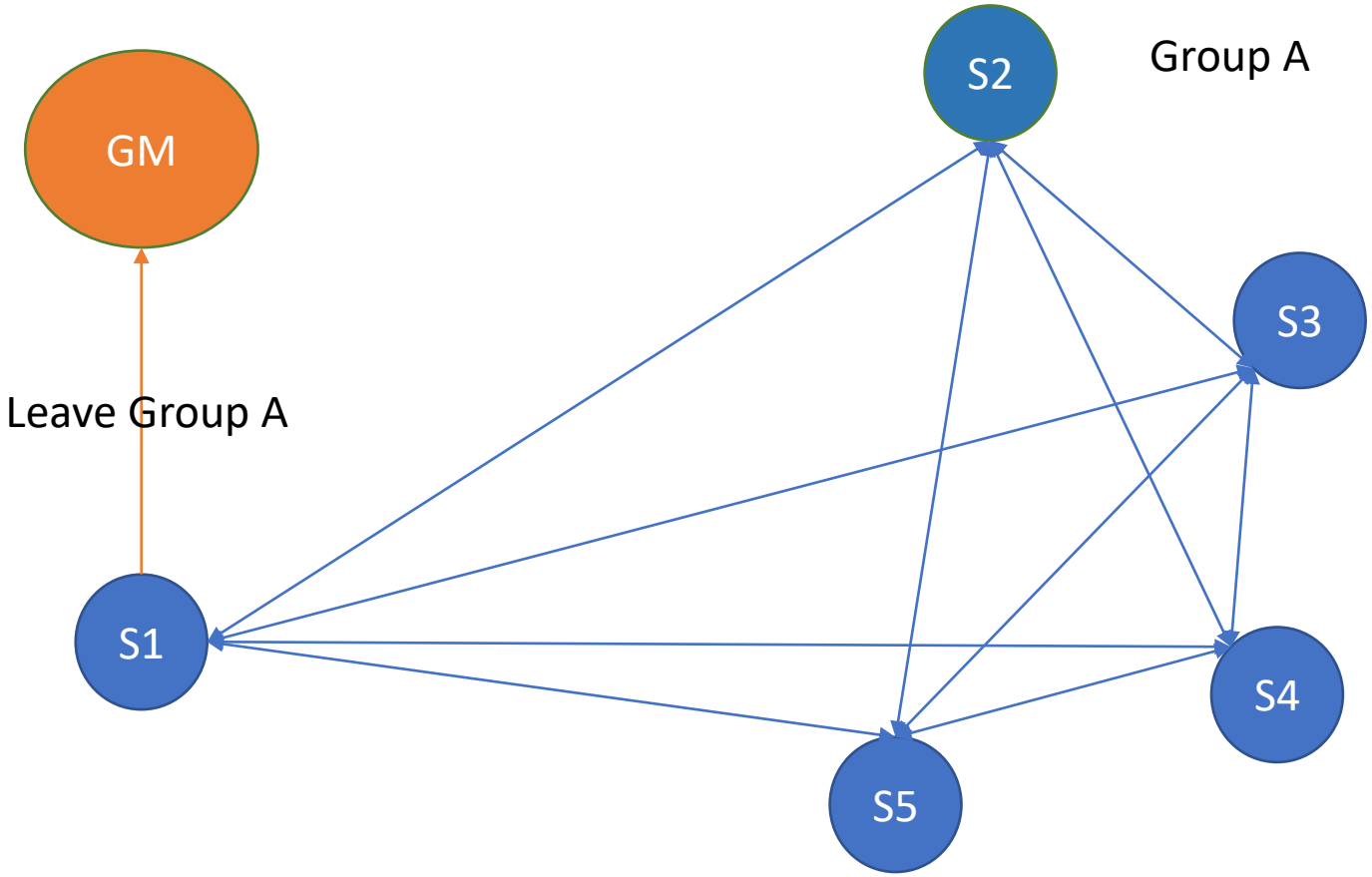




Group Leave

Group leave in group



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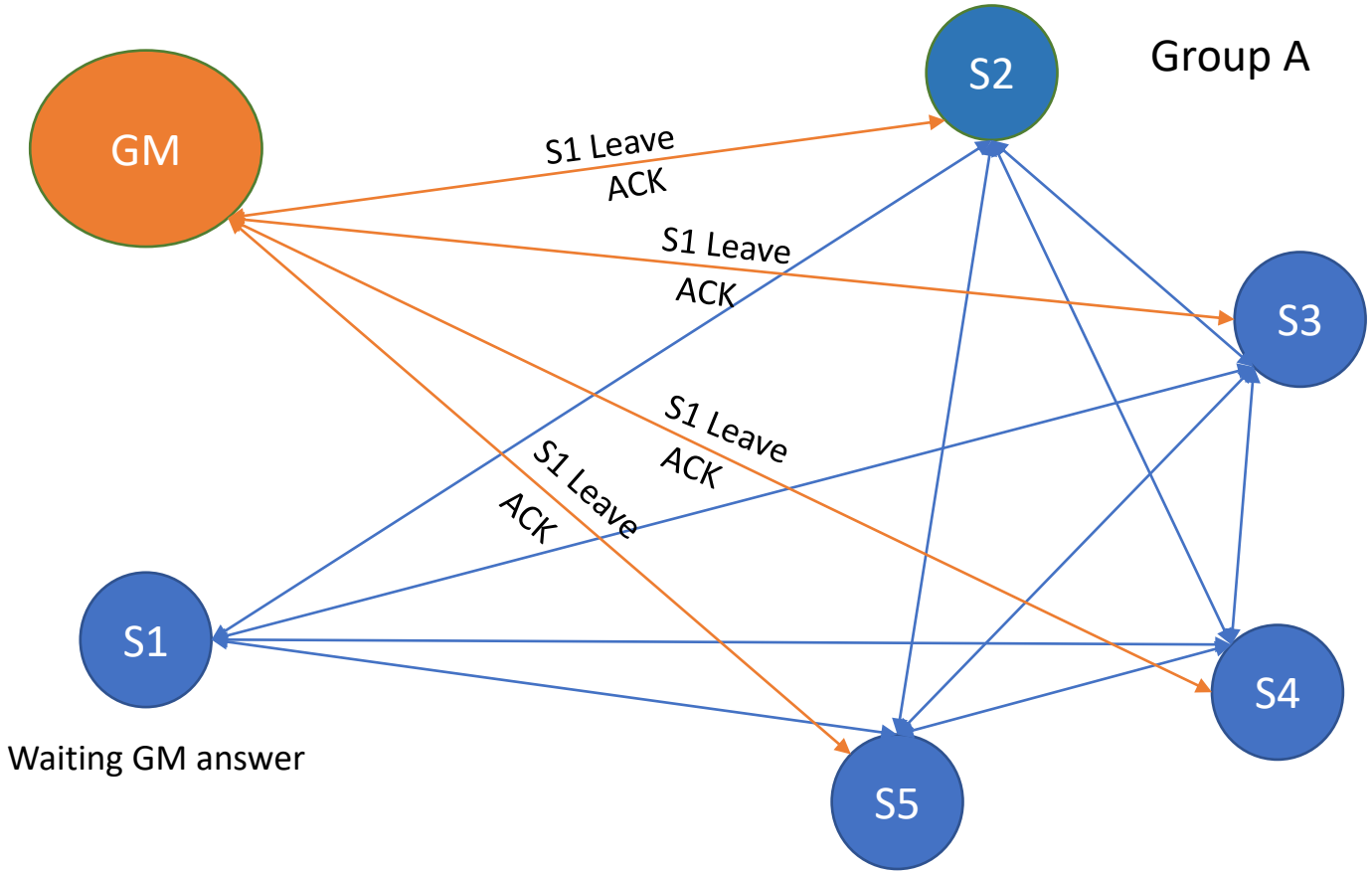

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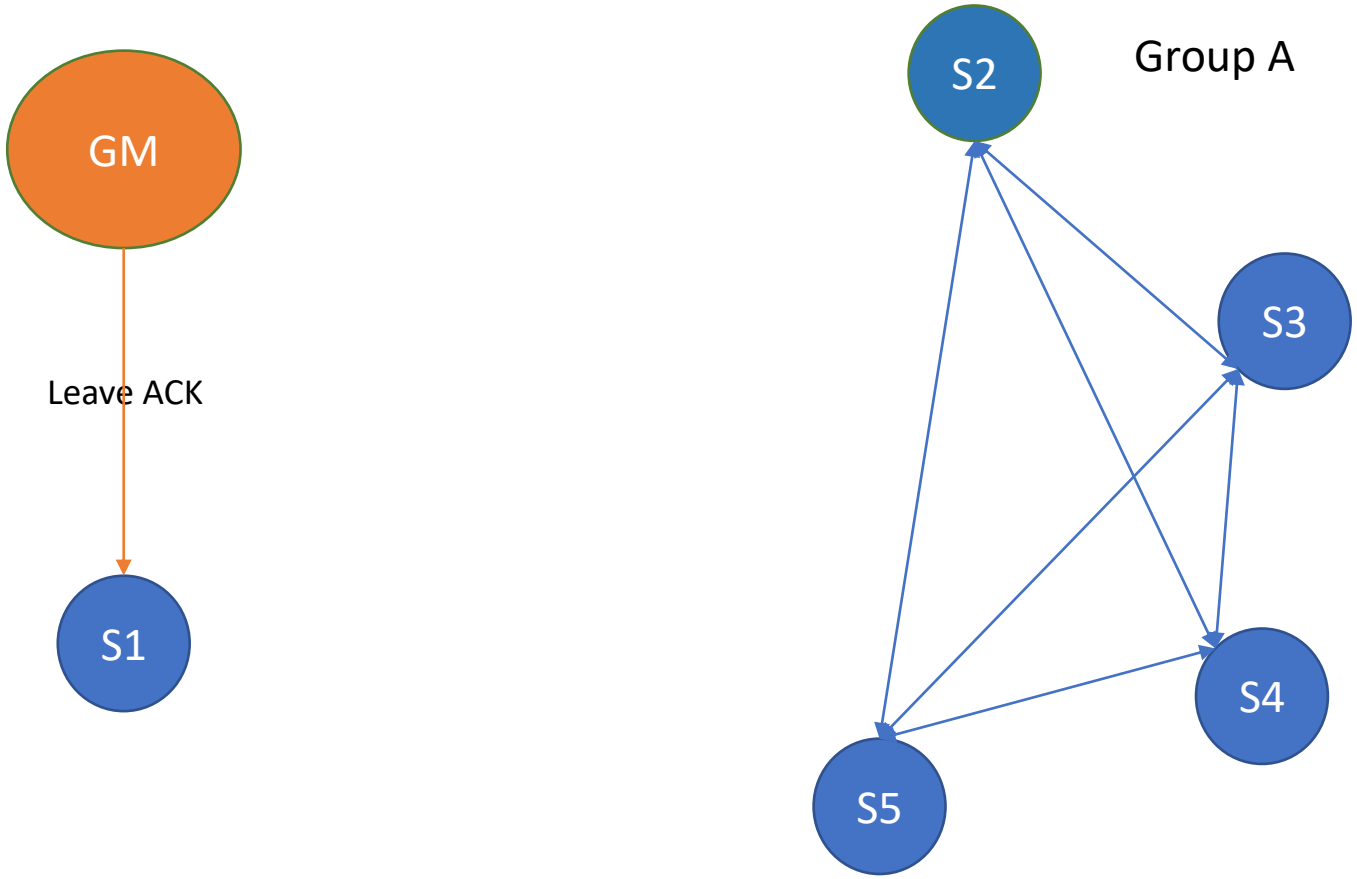
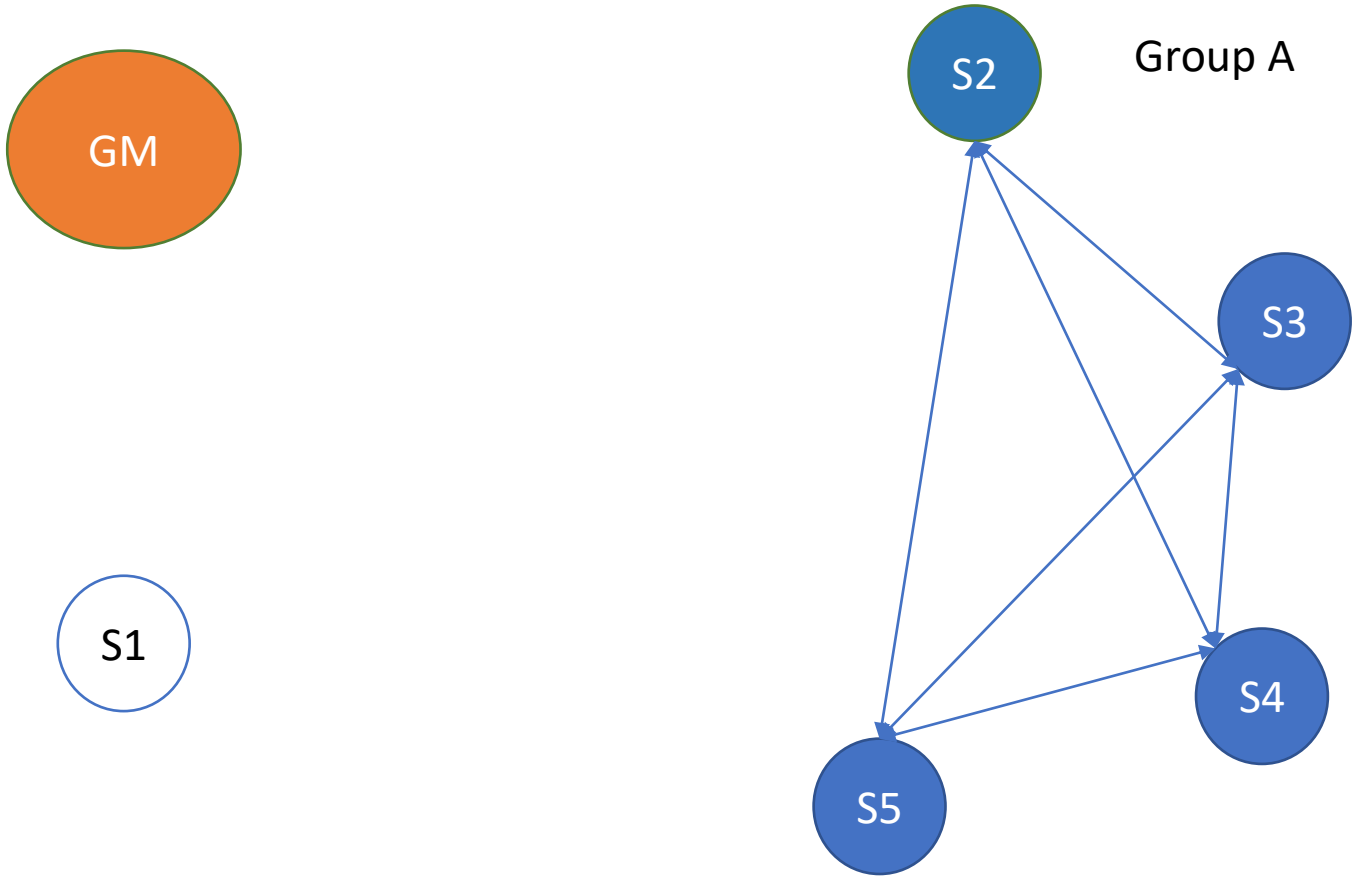
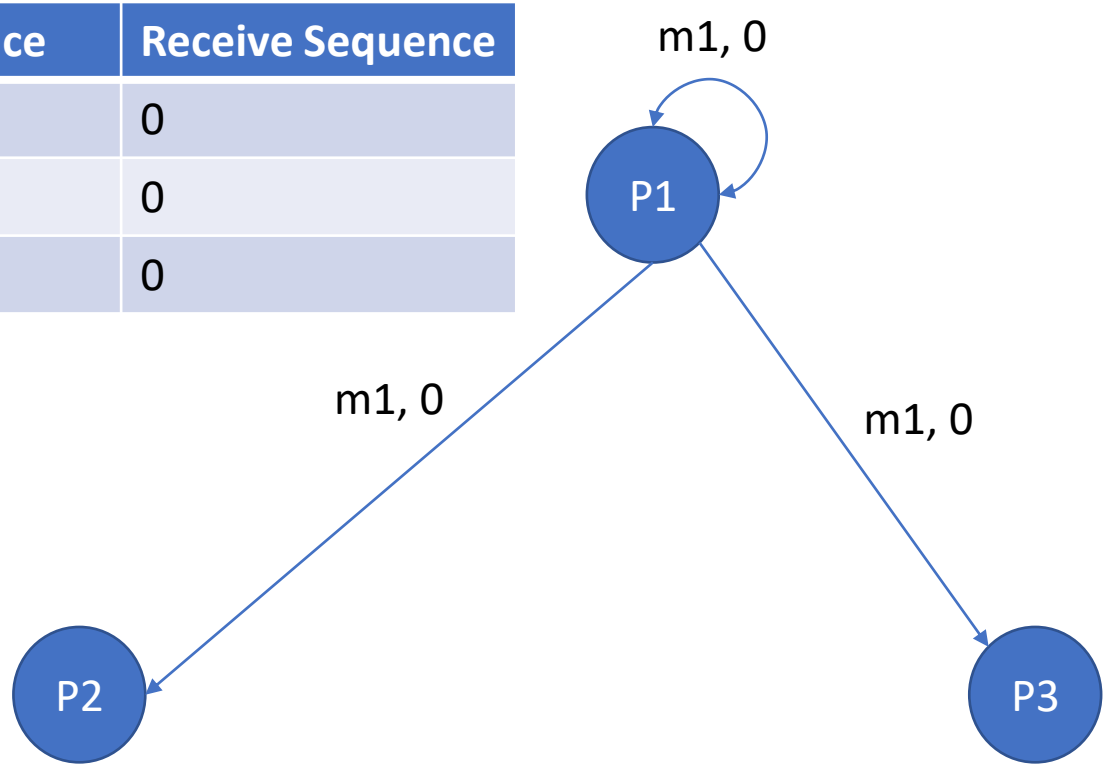


Group leave in group



FIFO Communication

Process	Send Sequence	Receive Sequence
P1	0	0
P2	0	0
P3	0	0



Process	Send Sequence	Receive Sequence
P1	0	0
P2	0	0
P3	0	0

Process	Send Sequence	Receive Sequence
P1	0	0
P2	0	0
P3	0	0

FIFO Communication

Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	0
P3	1	0

P1

P2

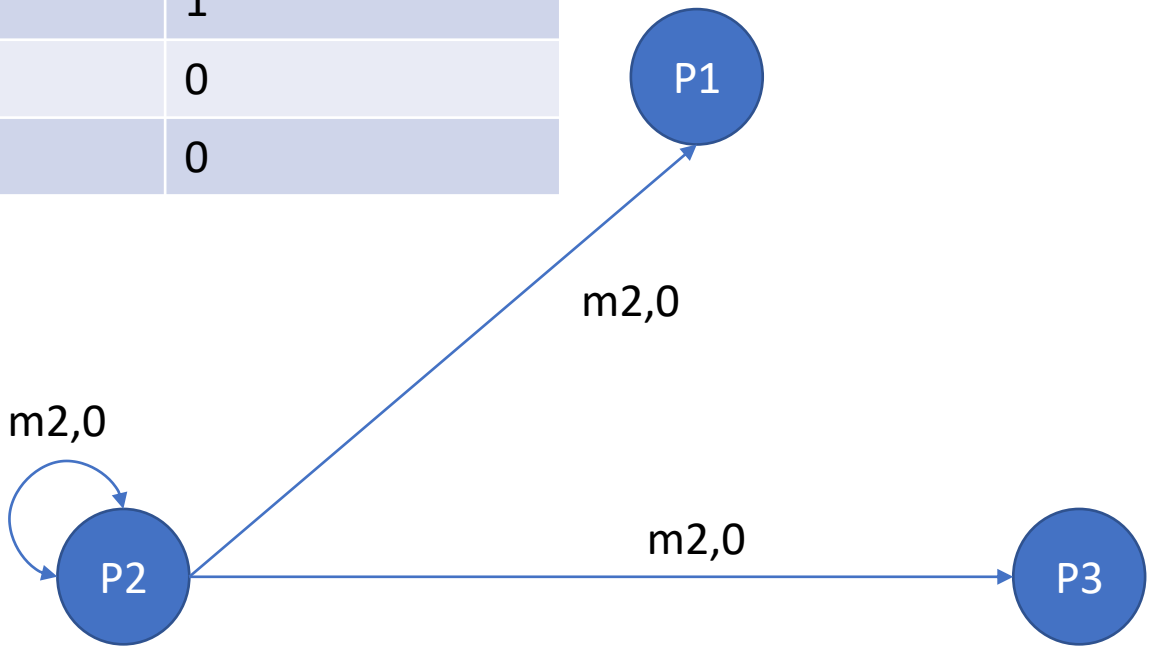
Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	0
P3	0	0

P3

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	0
P3	0	0

FIFO Communication

Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	0
P3	1	0



Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	0
P3	0	0

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	0
P3	0	0

FIFO Communication

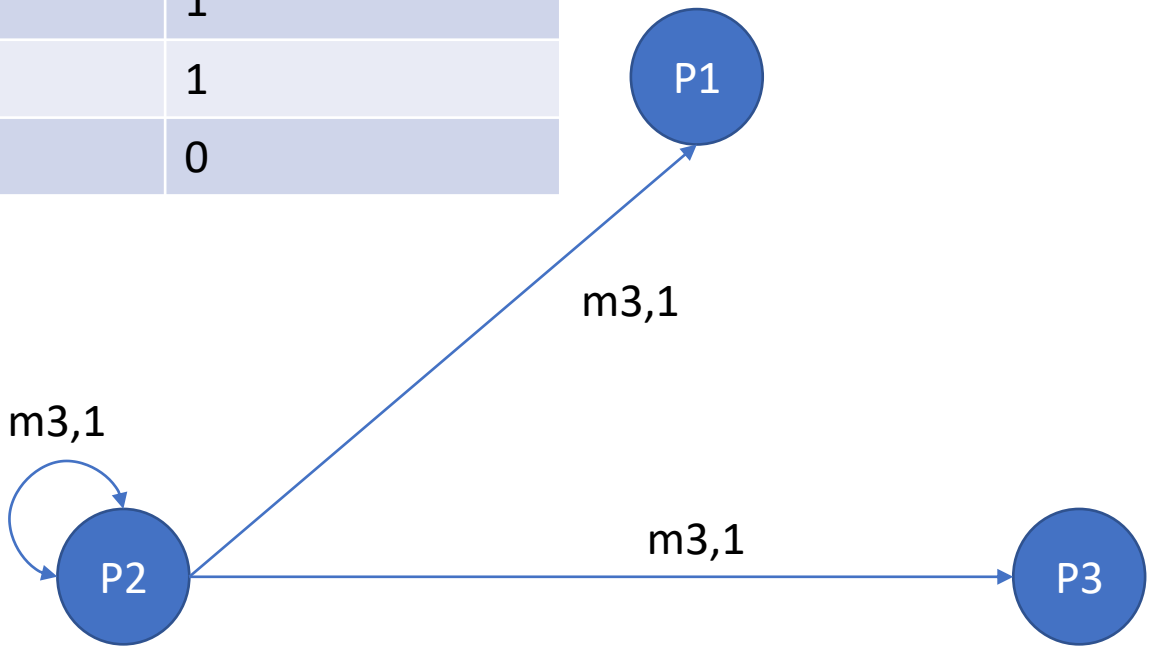
Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	1
P3	1	0

Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	1
P3	1	0

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	1
P3	0	0

FIFO Communication

Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	1
P3	1	0



Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	1
P3	1	0

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	1
P3	0	0

FIFO Communication

Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	2
P3	1	0

P1

P2

Process	Send Sequence	Receive Sequence
P1	2	1
P2	2	2
P3	2	0

P3

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	2
P3	0	0

FIFO Communication

Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	2
P3	1	0
P4	0	0

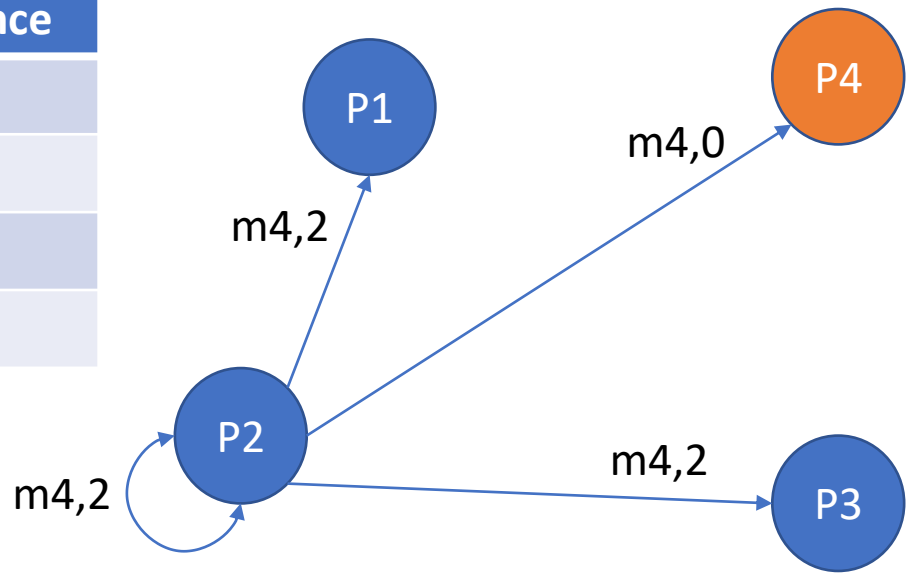
Process	Send Sequence	Receive Sequence
P1	0	0
P2	0	0
P3	0	0
P4	0	0

Process	Send Sequence	Receive Sequence
P1	2	1
P2	2	2
P3	2	0
P4	0	0

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	2
P3	0	0
P4	0	0

FIFO Communication

Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	2
P3	1	0
P4	0	0



Process	Send Sequence	Receive Sequence
P1	0	0
P2	0	0
P3	0	0
P4	0	0

Process	Send Sequence	Receive Sequence
P1	2	1
P2	2	2
P3	2	0
P4	0	0

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	2
P3	0	0
P4	0	0

FIFO Communication

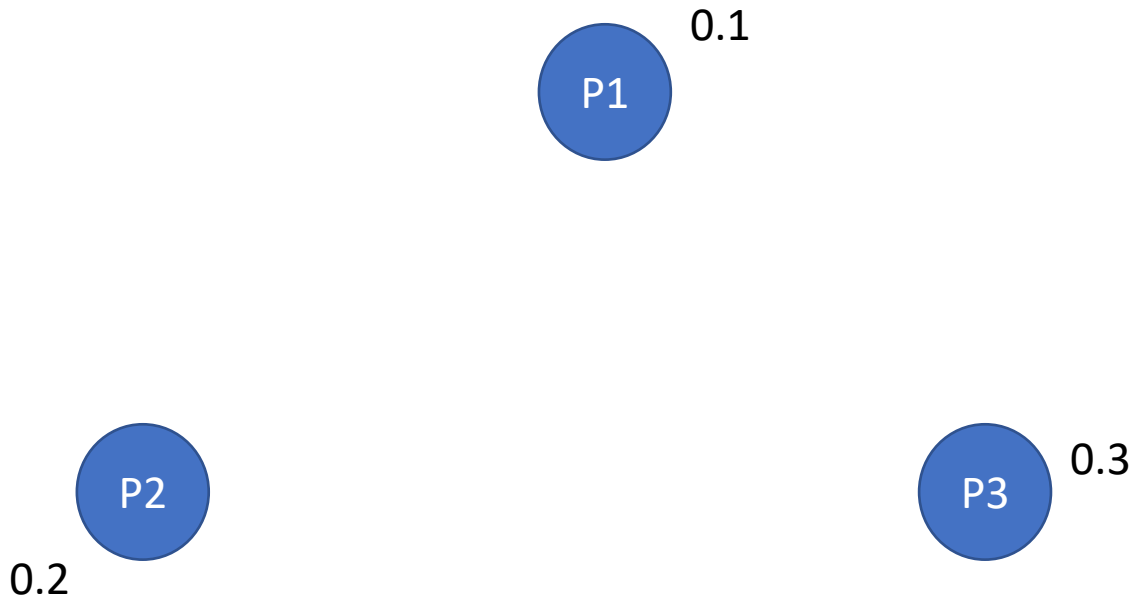
Process	Send Sequence	Receive Sequence
P1	1	1
P2	1	3
P3	1	0
P4	0	0

Process	Send Sequence	Receive Sequence
P1	0	0
P2	0	1
P3	0	0
P4	0	0

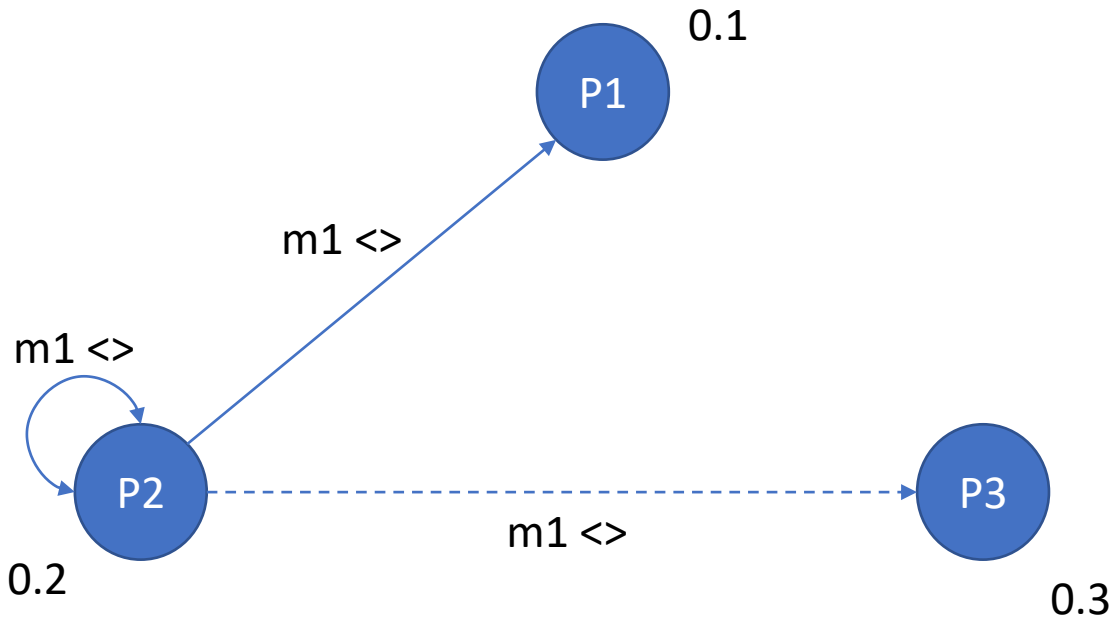
Process	Send Sequence	Receive Sequence
P1	3	2
P2	3	3
P3	3	0
P4	0	0

Process	Send Sequence	Receive Sequence
P1	0	1
P2	0	3
P3	0	0
P4	0	0

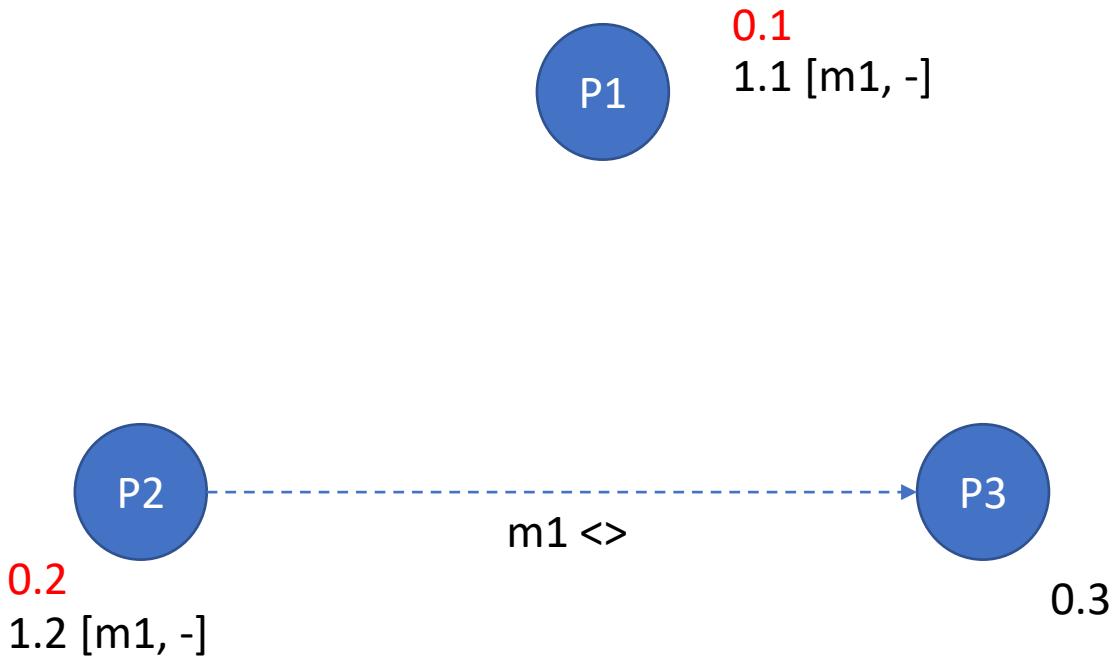
Causal Total Communication



Causal Total Communication

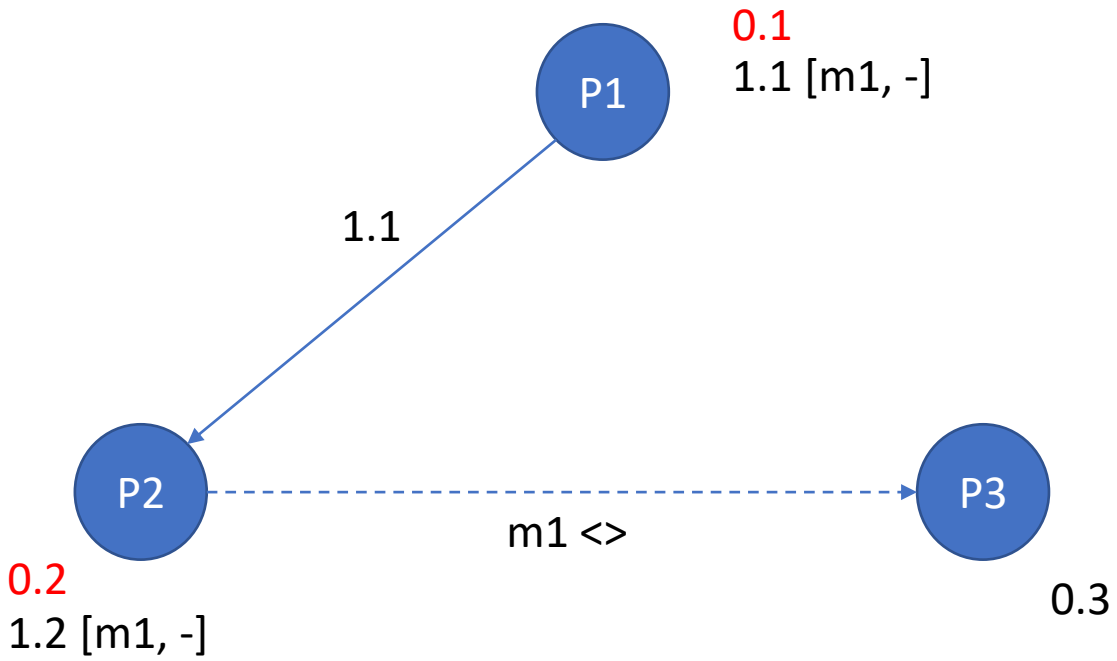


Causal Total Communication



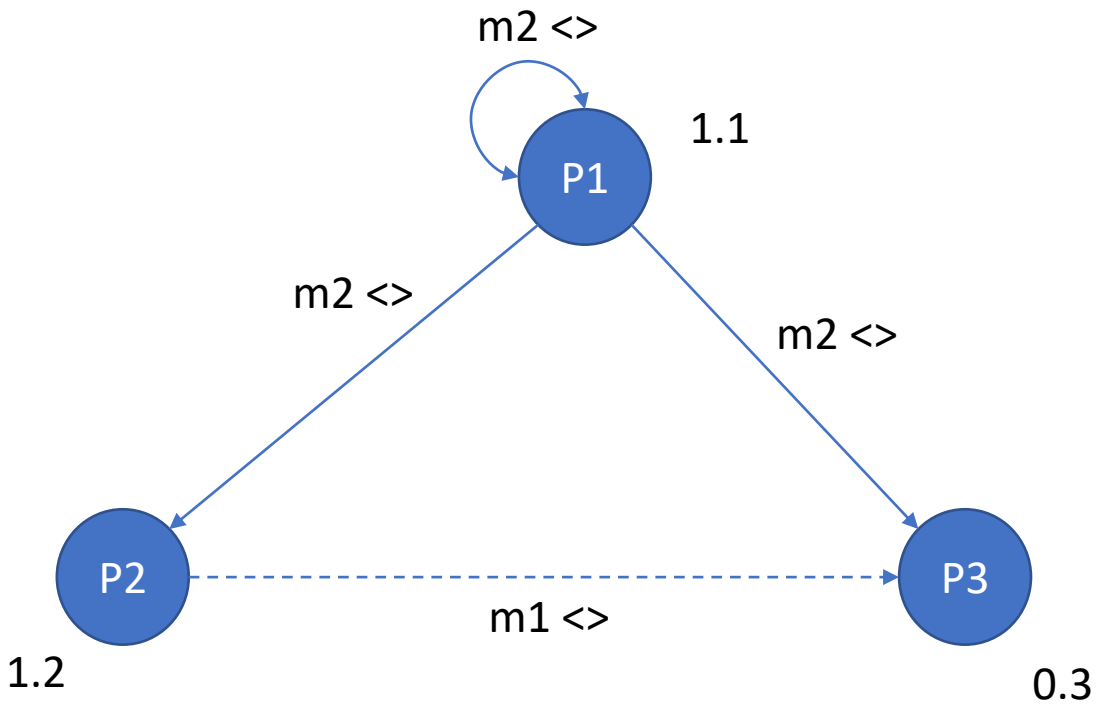
Proposals
1.2
-
-

Causal Total Communication

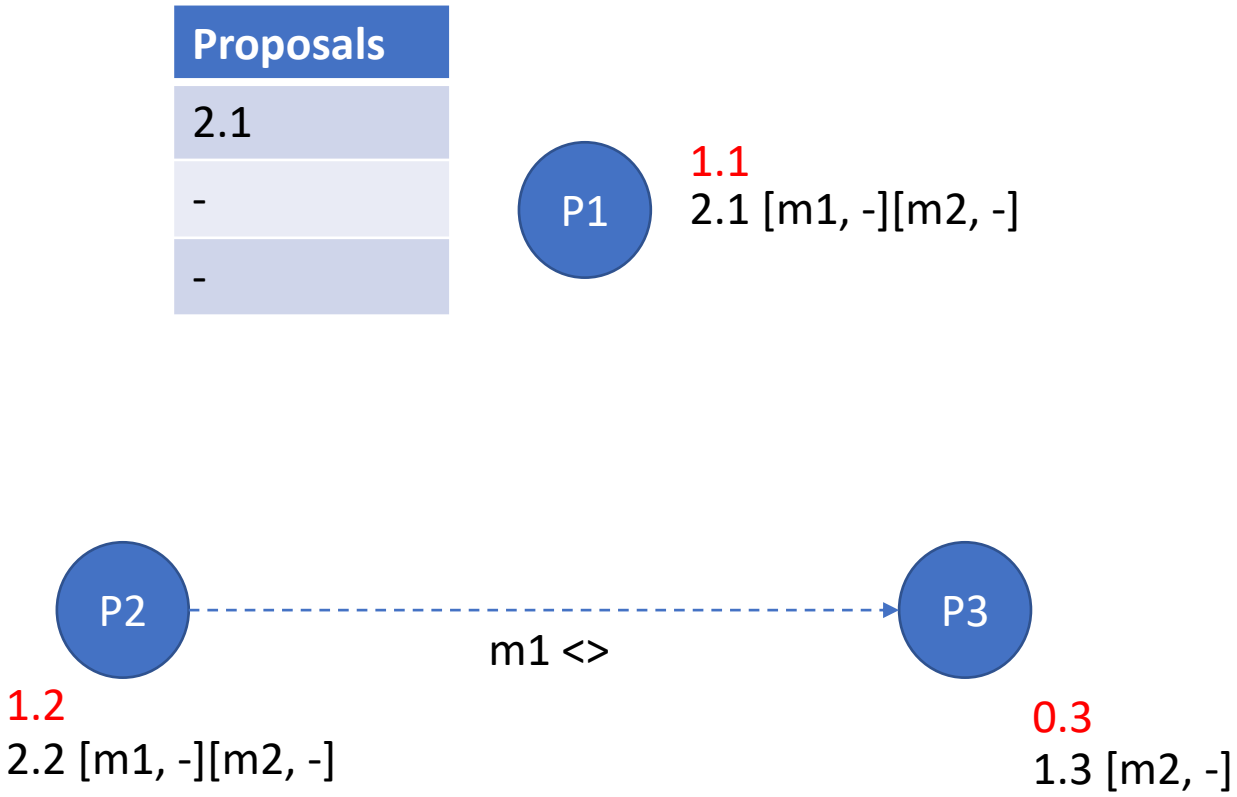


Proposals
1.2
1.1
-

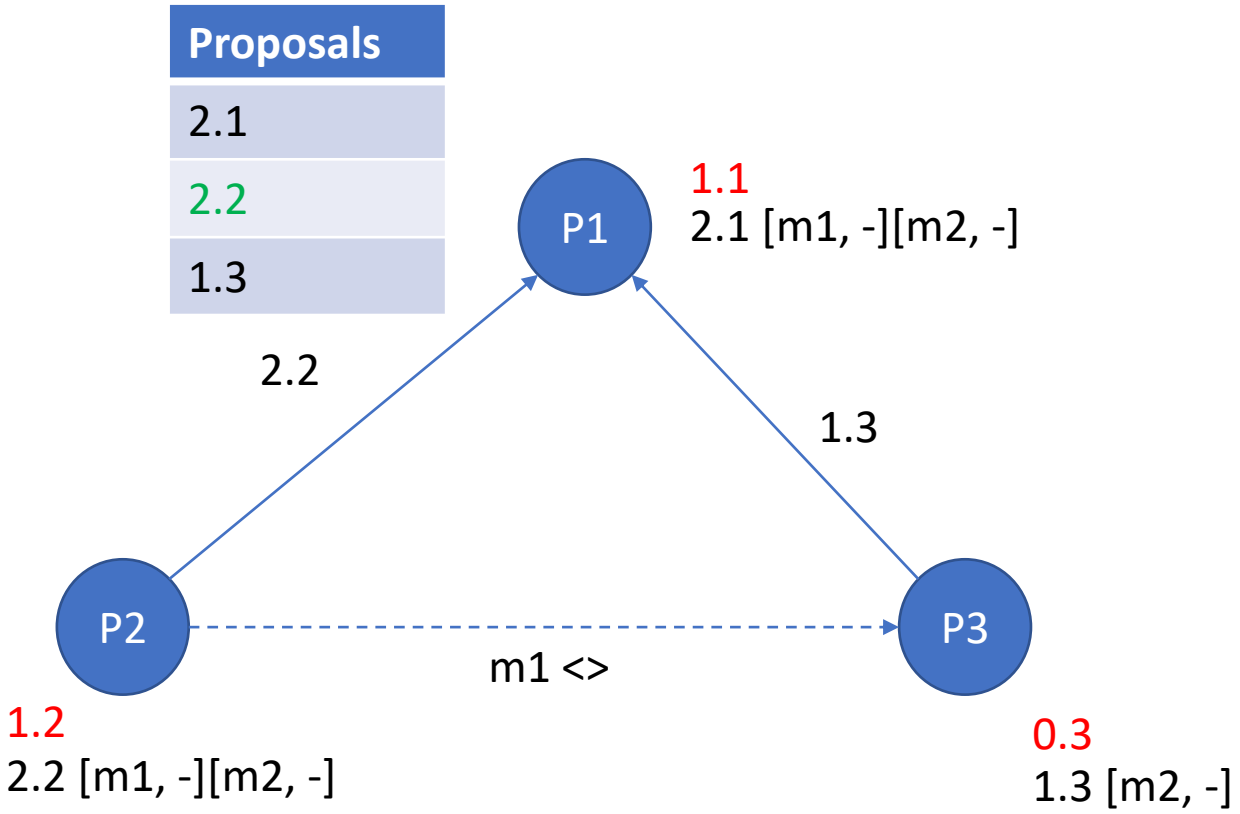
Causal Total Communication



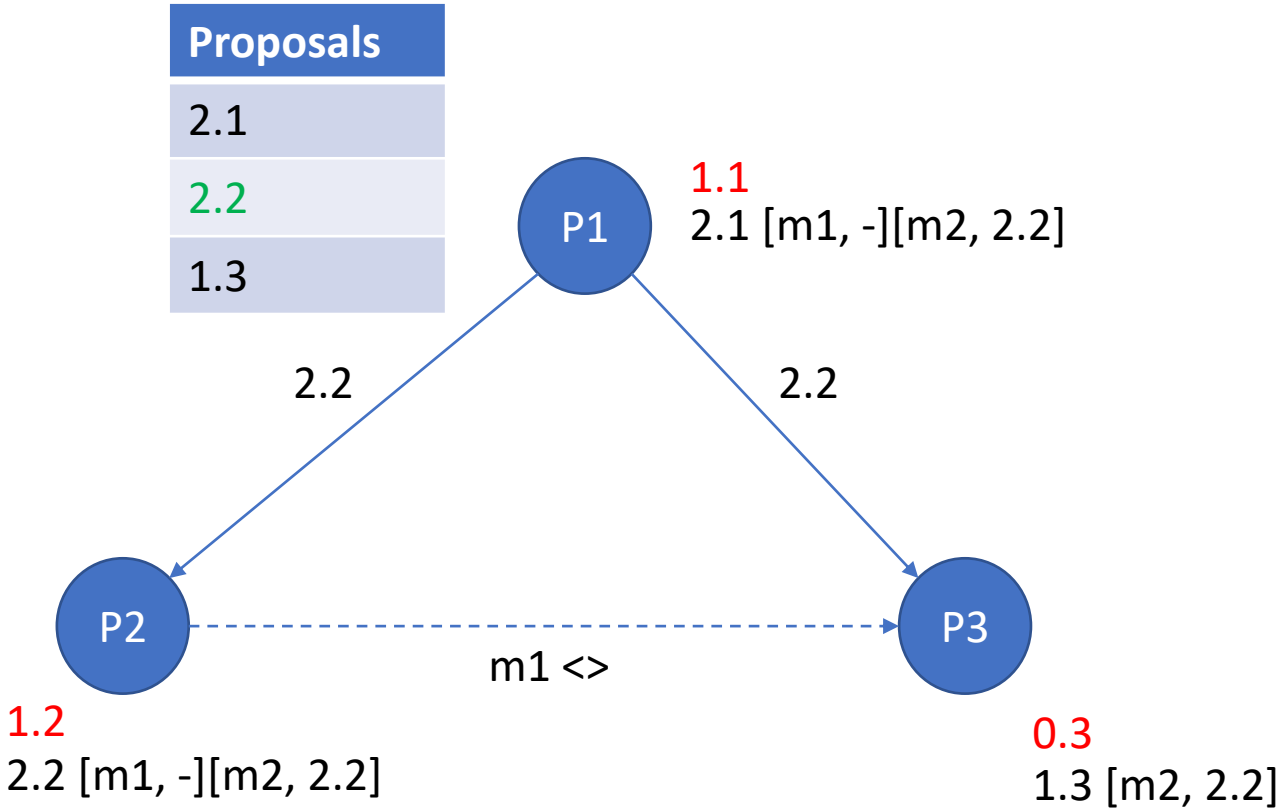
Causal Total Communication



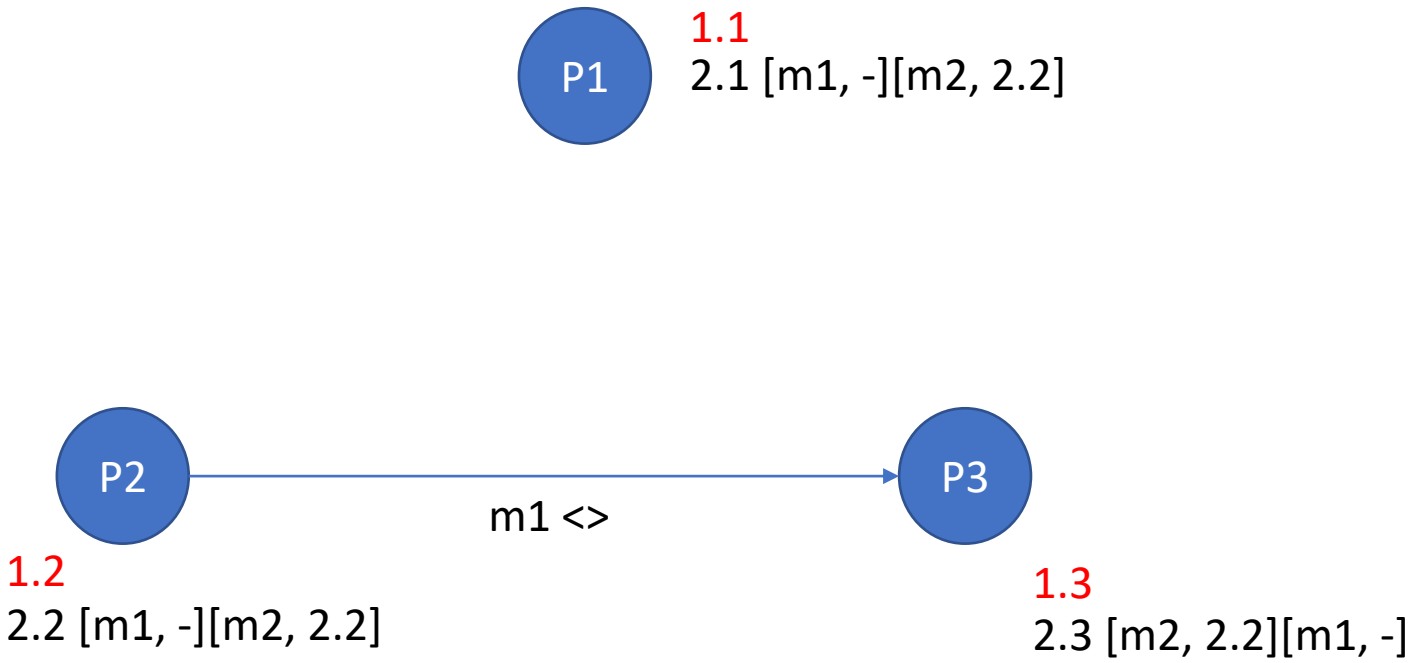
Causal Total Communication



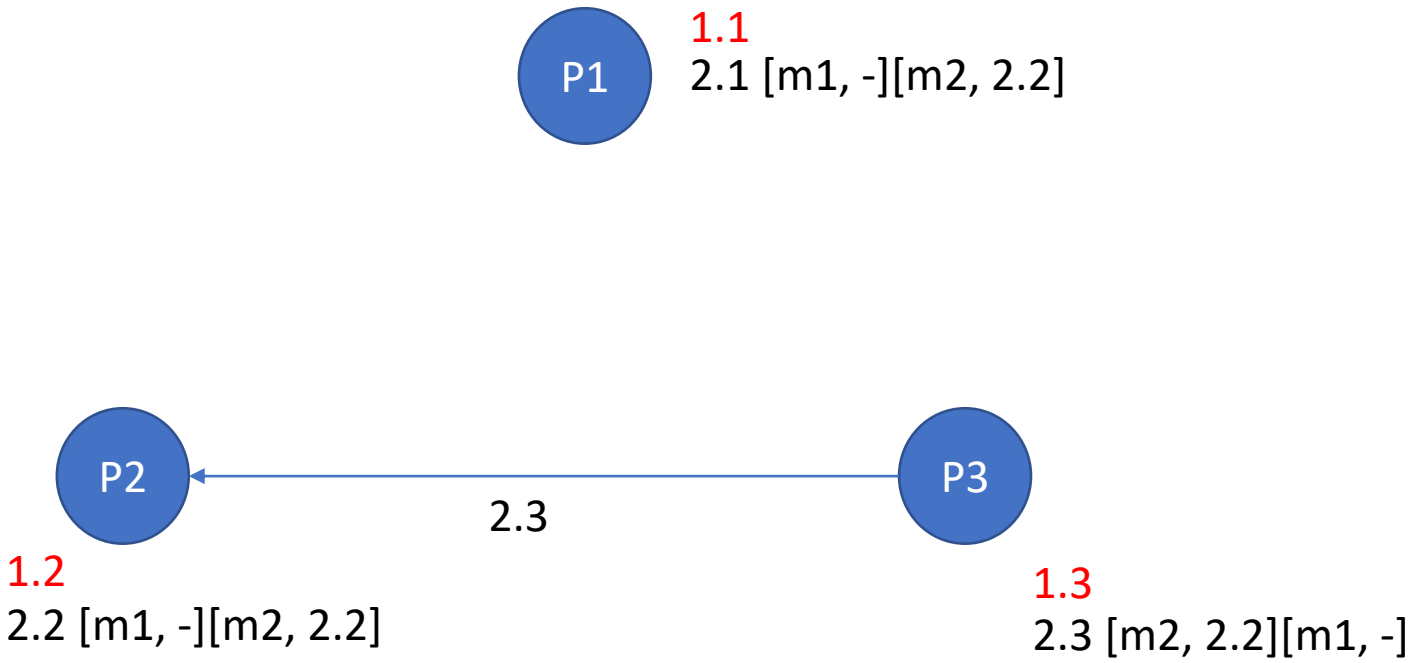
Causal Total Communication



Causal Total Communication

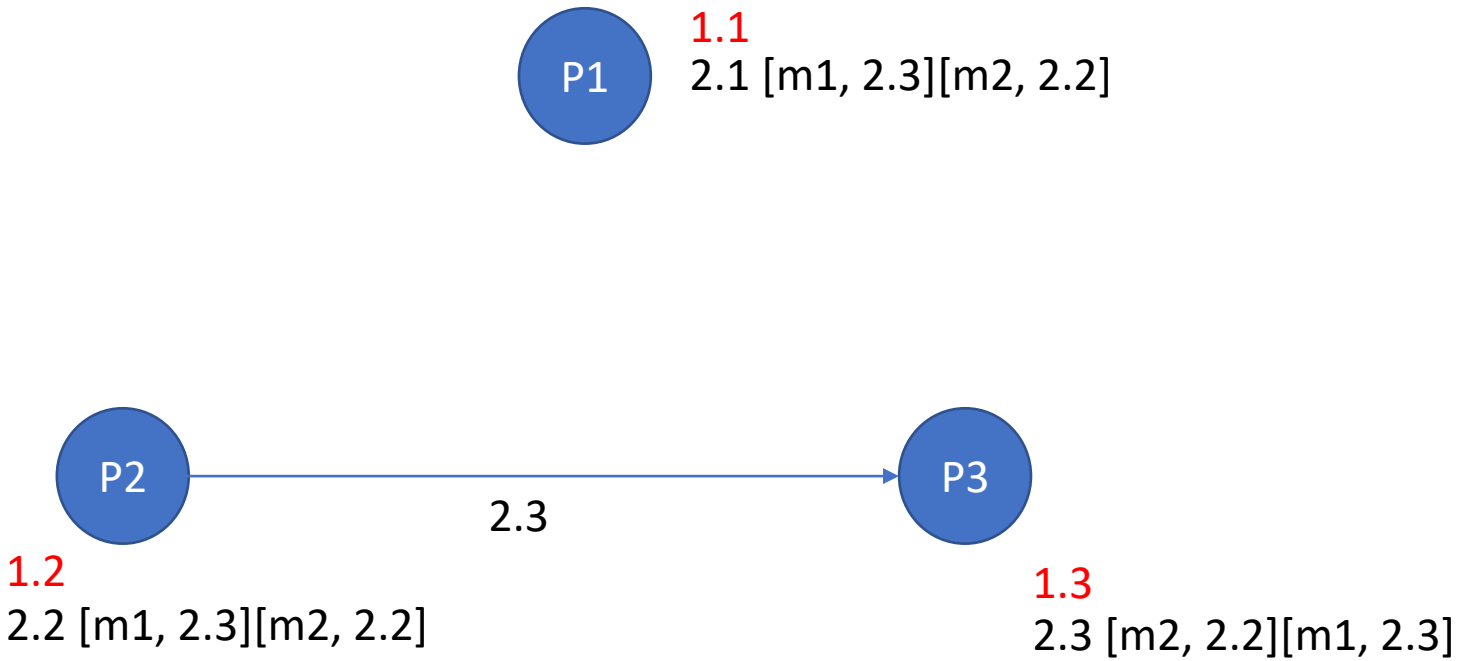


Causal Total Communication



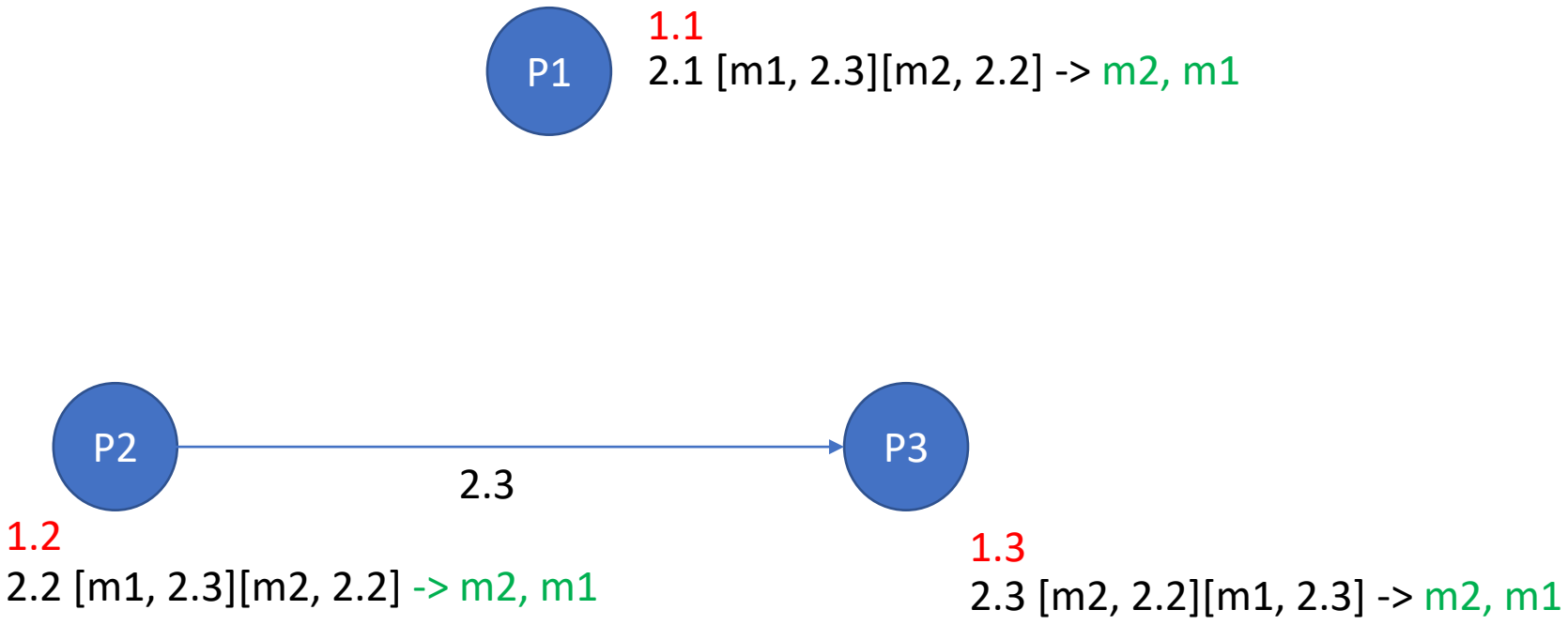
Proposals
1.2
1.1
2.3

Causal Total Communication

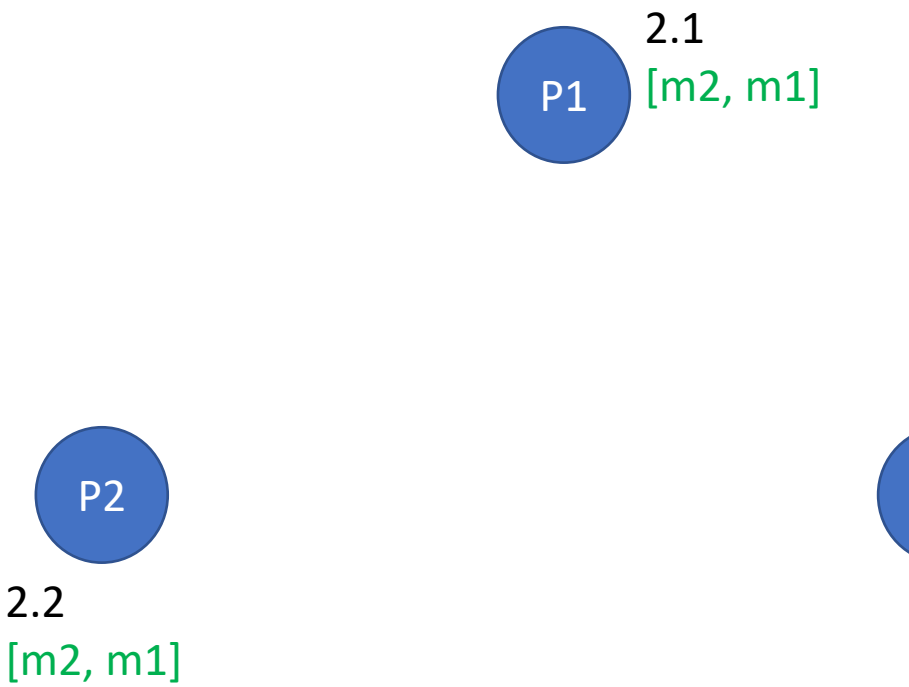


Proposals
1.2
1.1
2.3

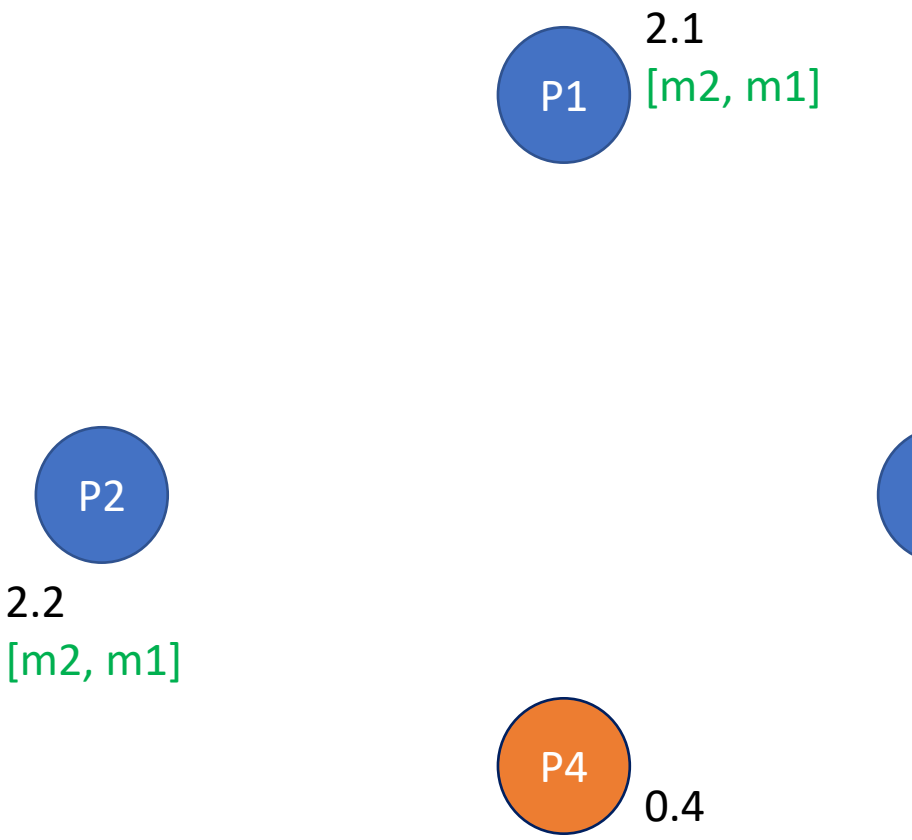
Causal Total Communication



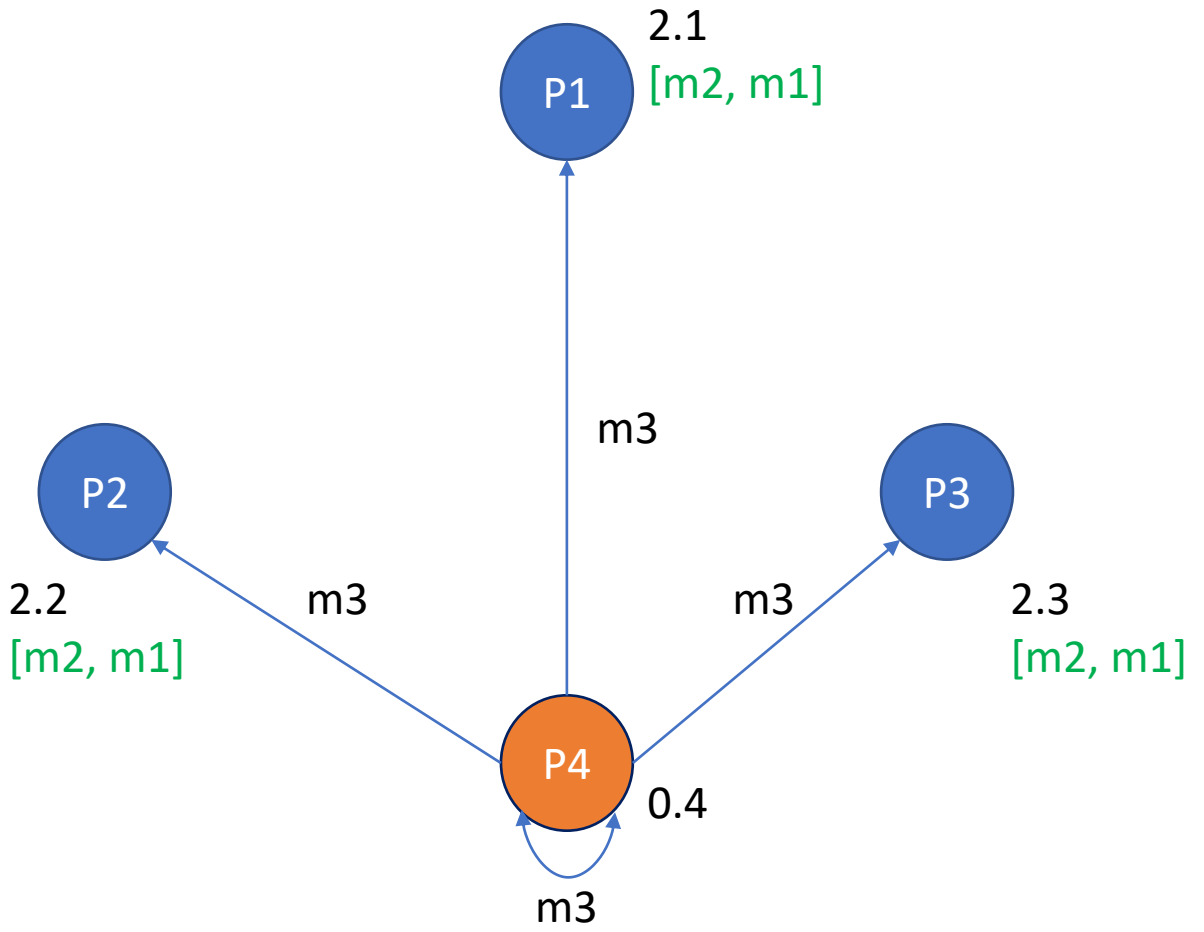
Causal Total Communication



Causal Total Communication

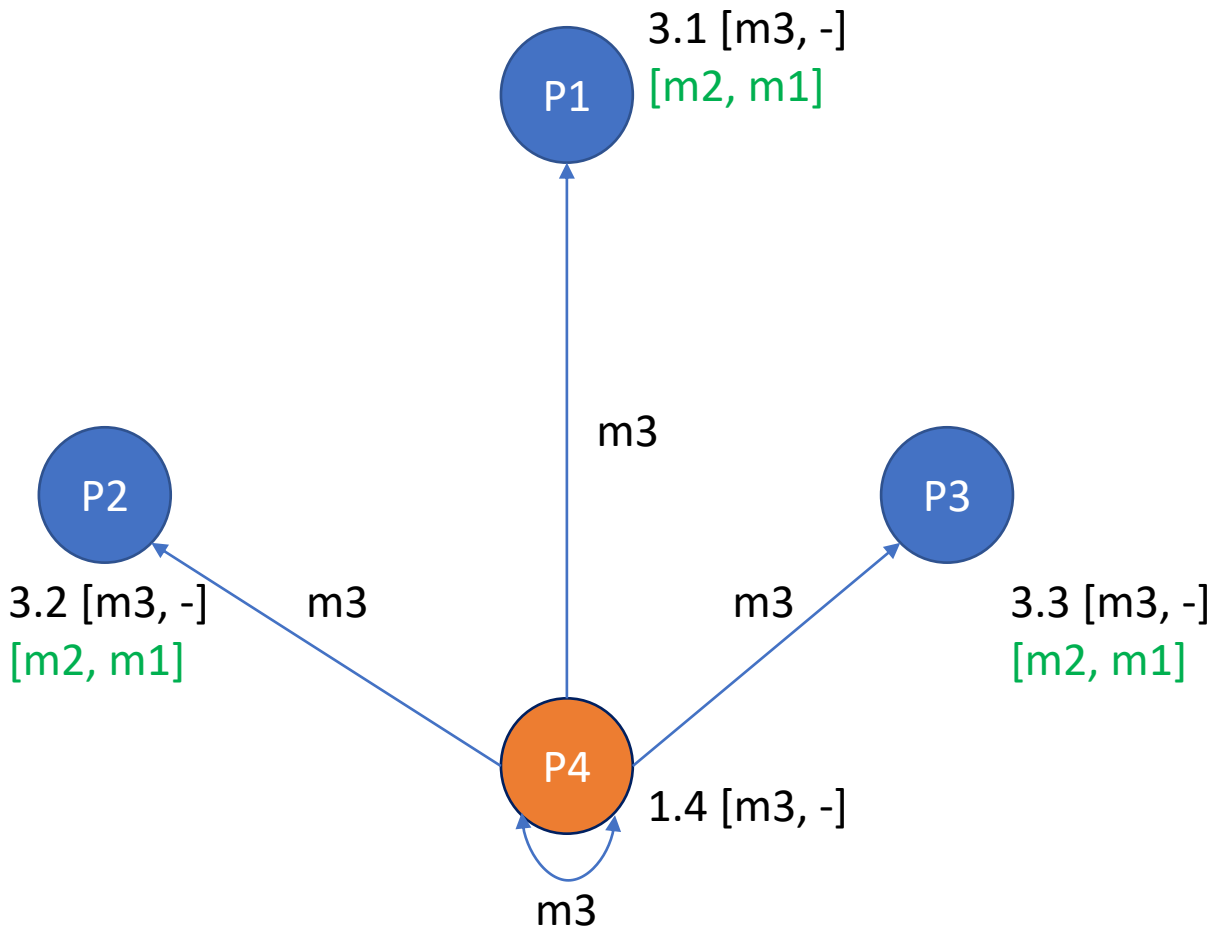


Causal Total Communication



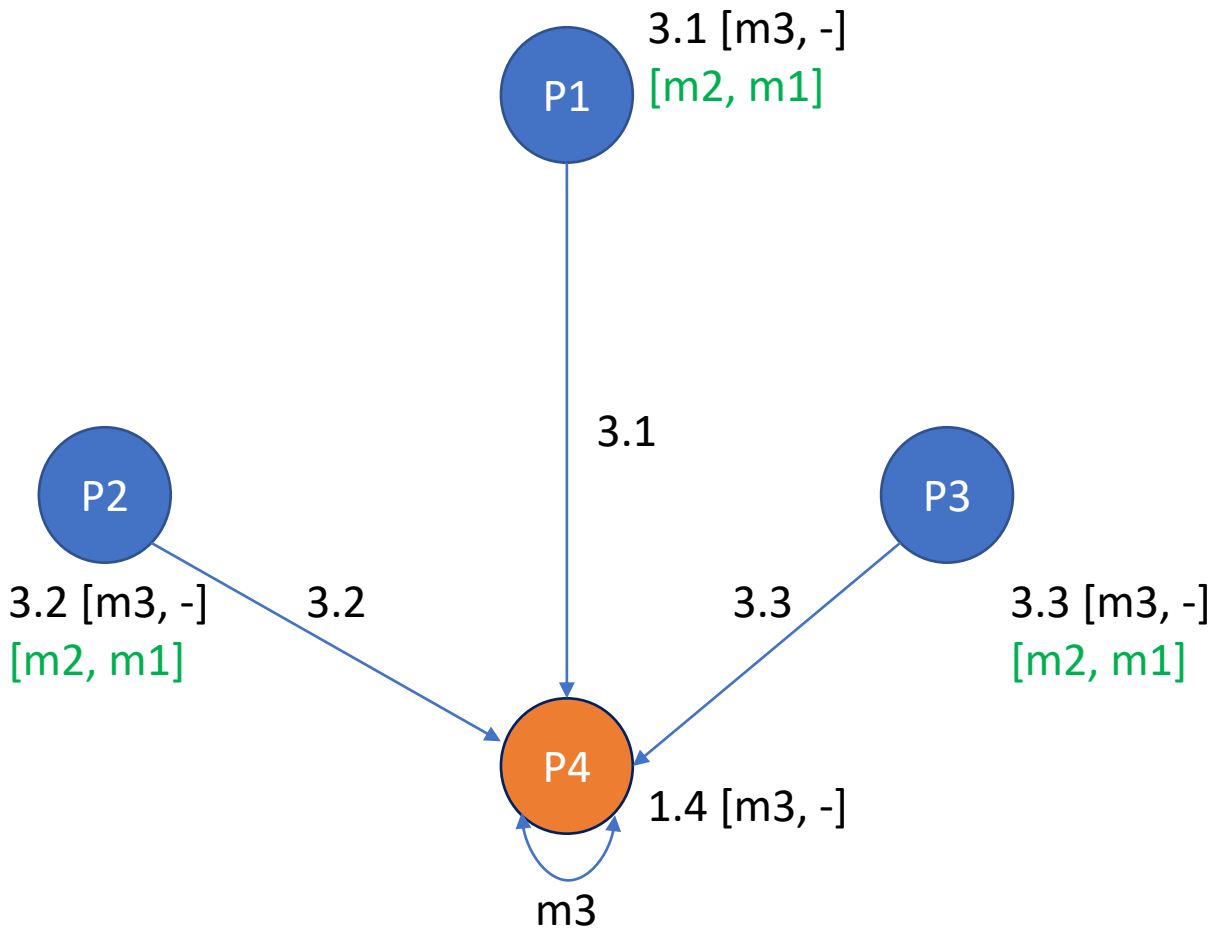
Proposals
0.4
-
-
-

Causal Total Communication



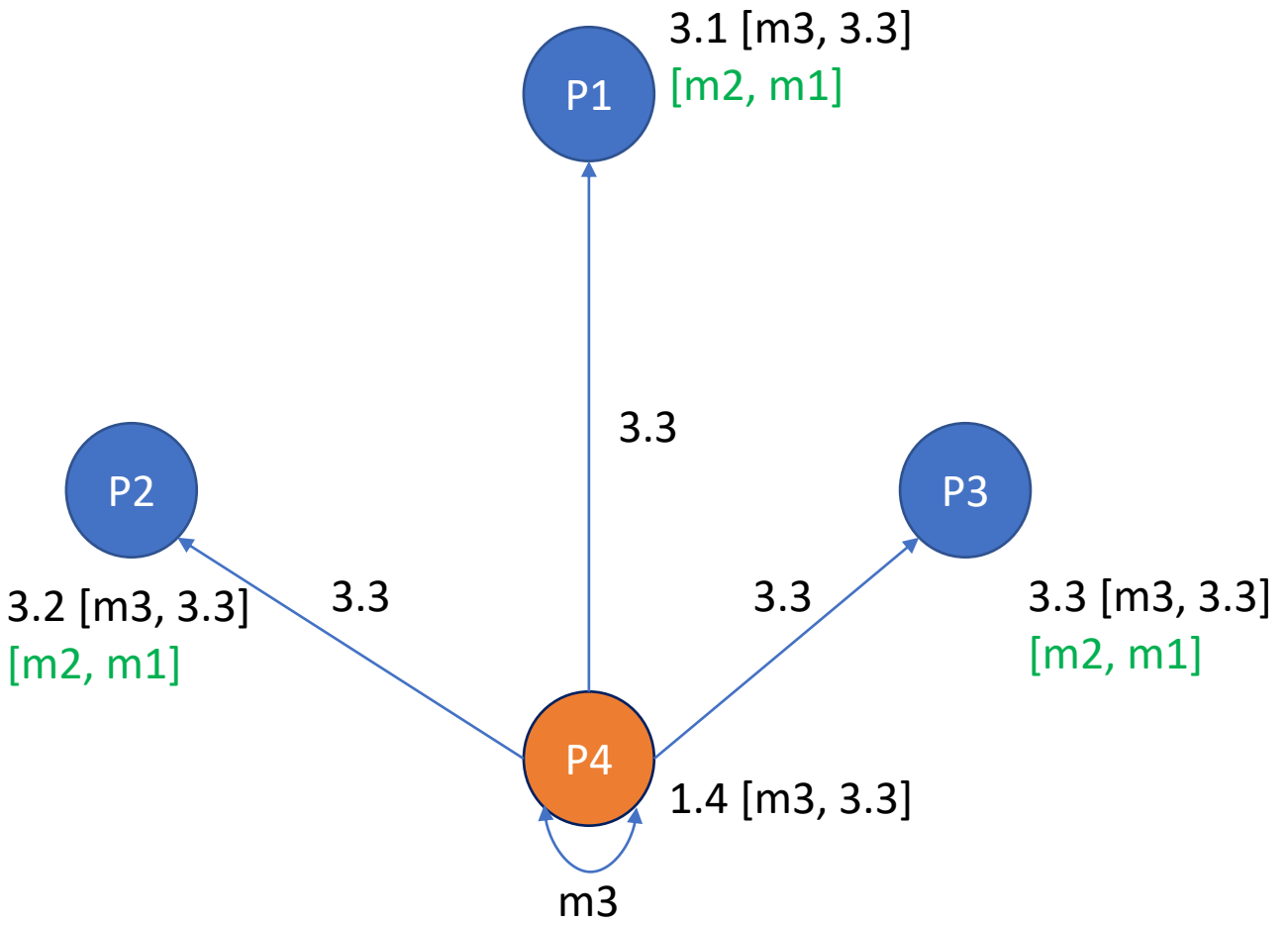
Proposals
1.4
-
-
-

Causal Total Communication



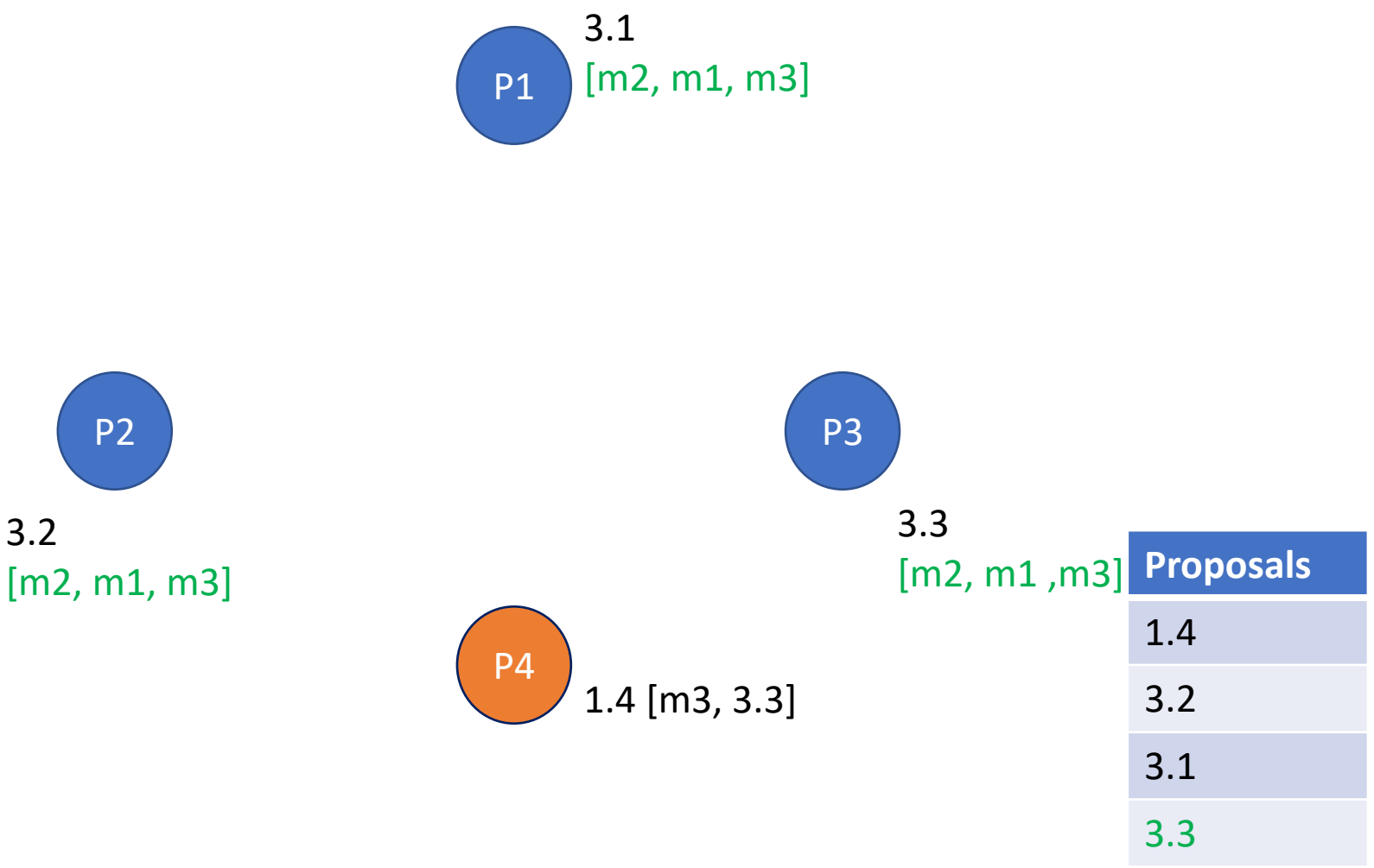
Proposals
1.4
3.2
3.1
3.3

Causal Total Communication

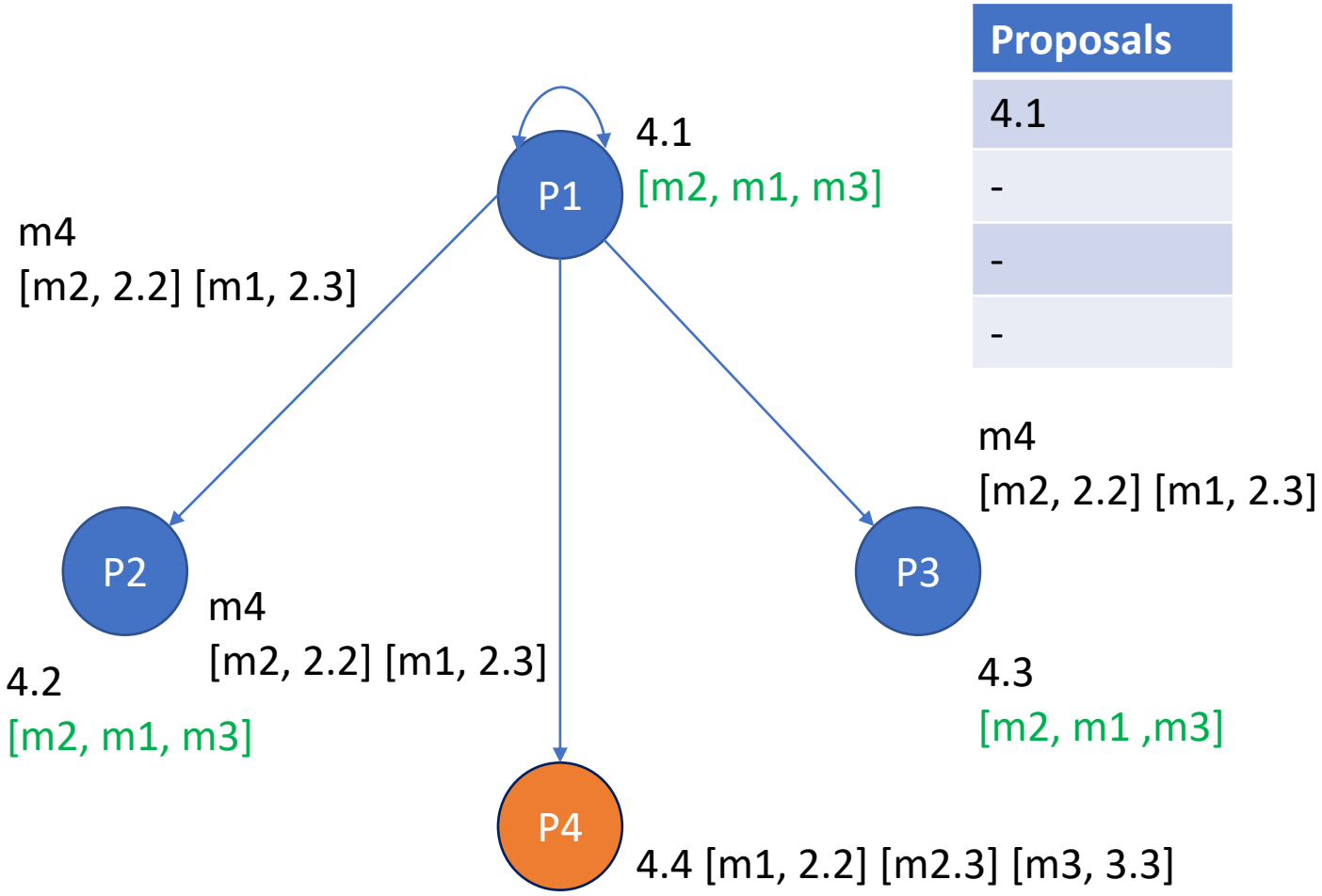


Proposals
1.4
3.2
3.1
3.3

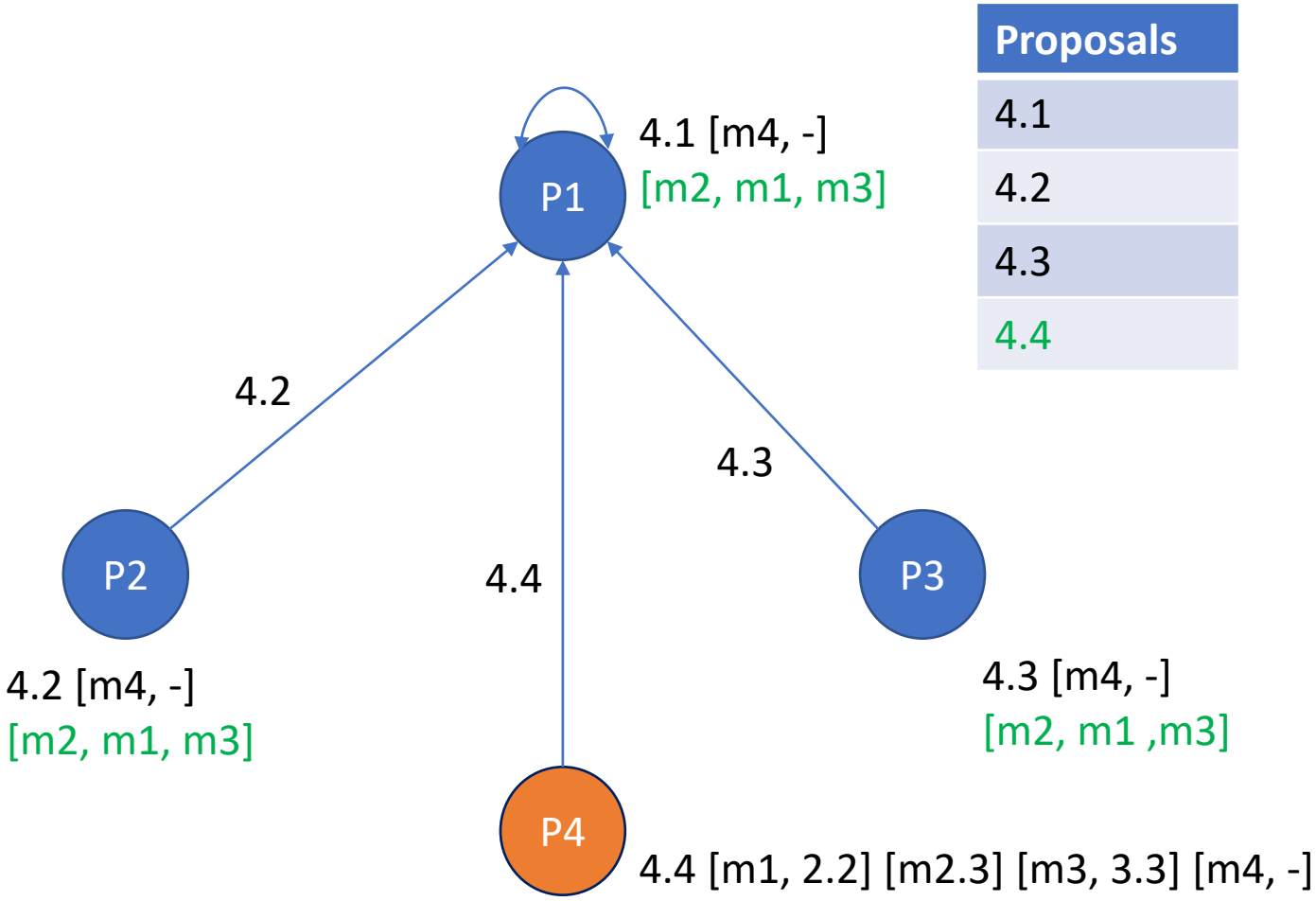
Causal Total Communication



Causal Total Communication

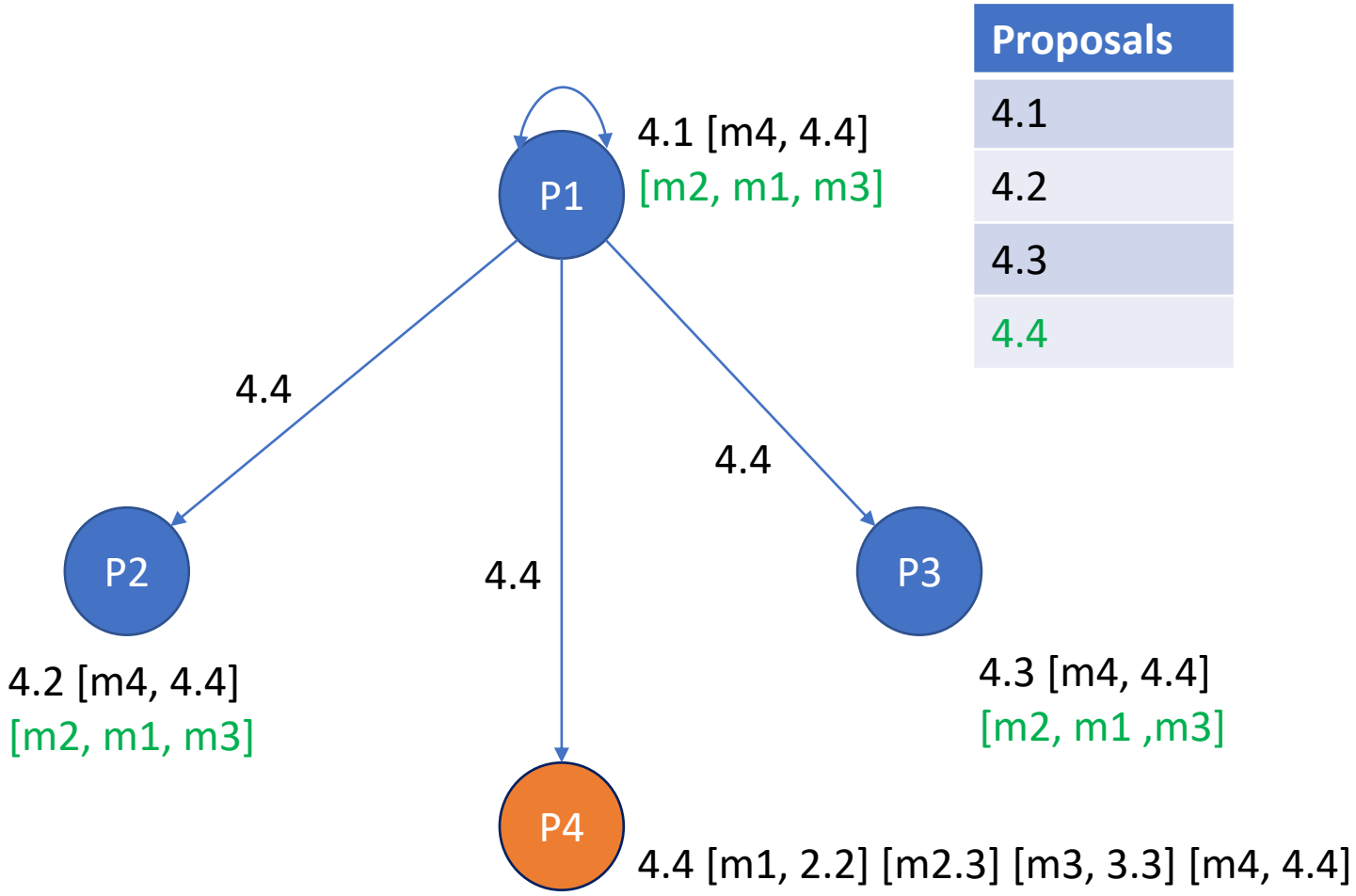


Causal Total Communication

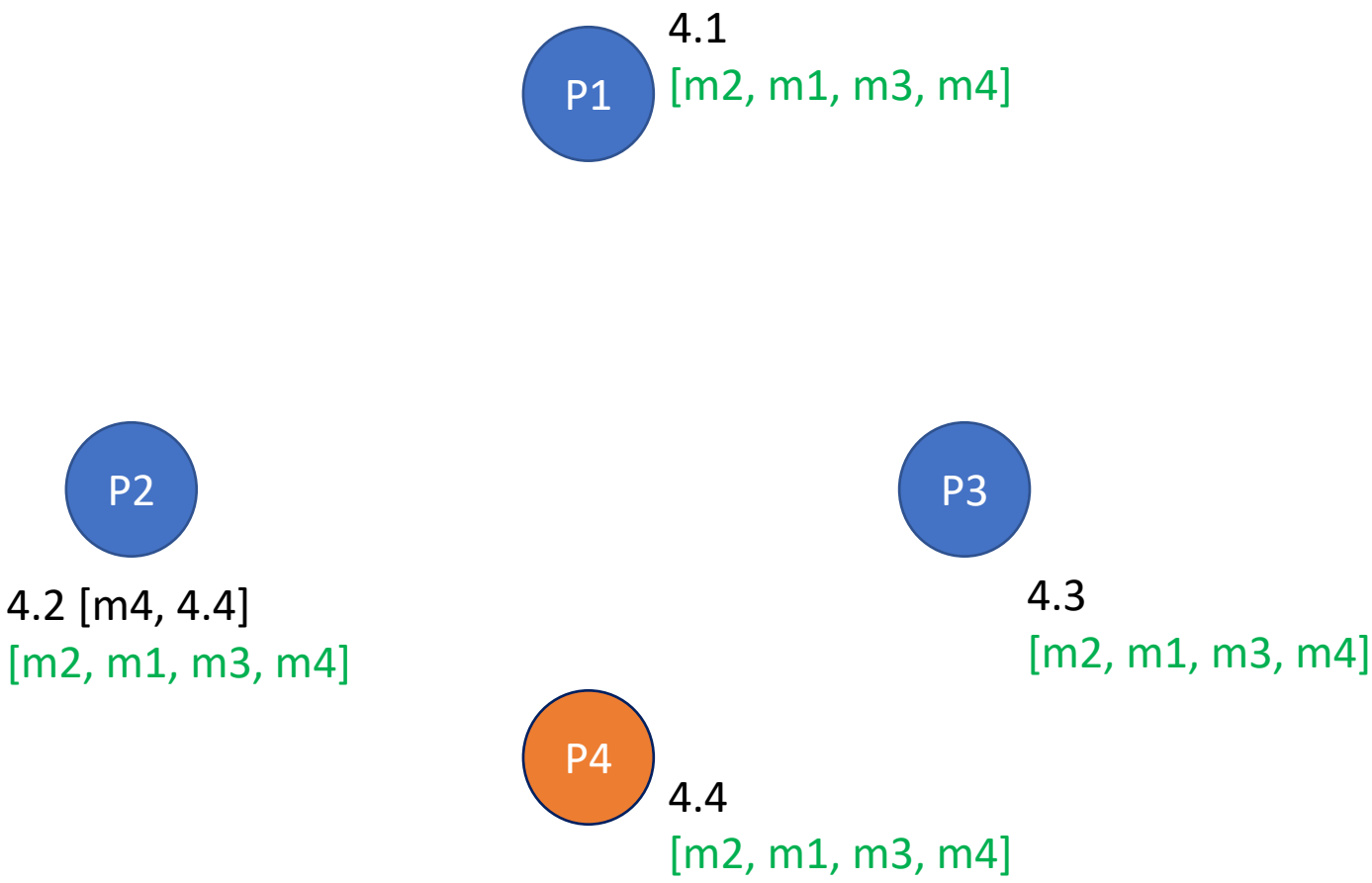


Proposals
4.1
4.2
4.3
4.4

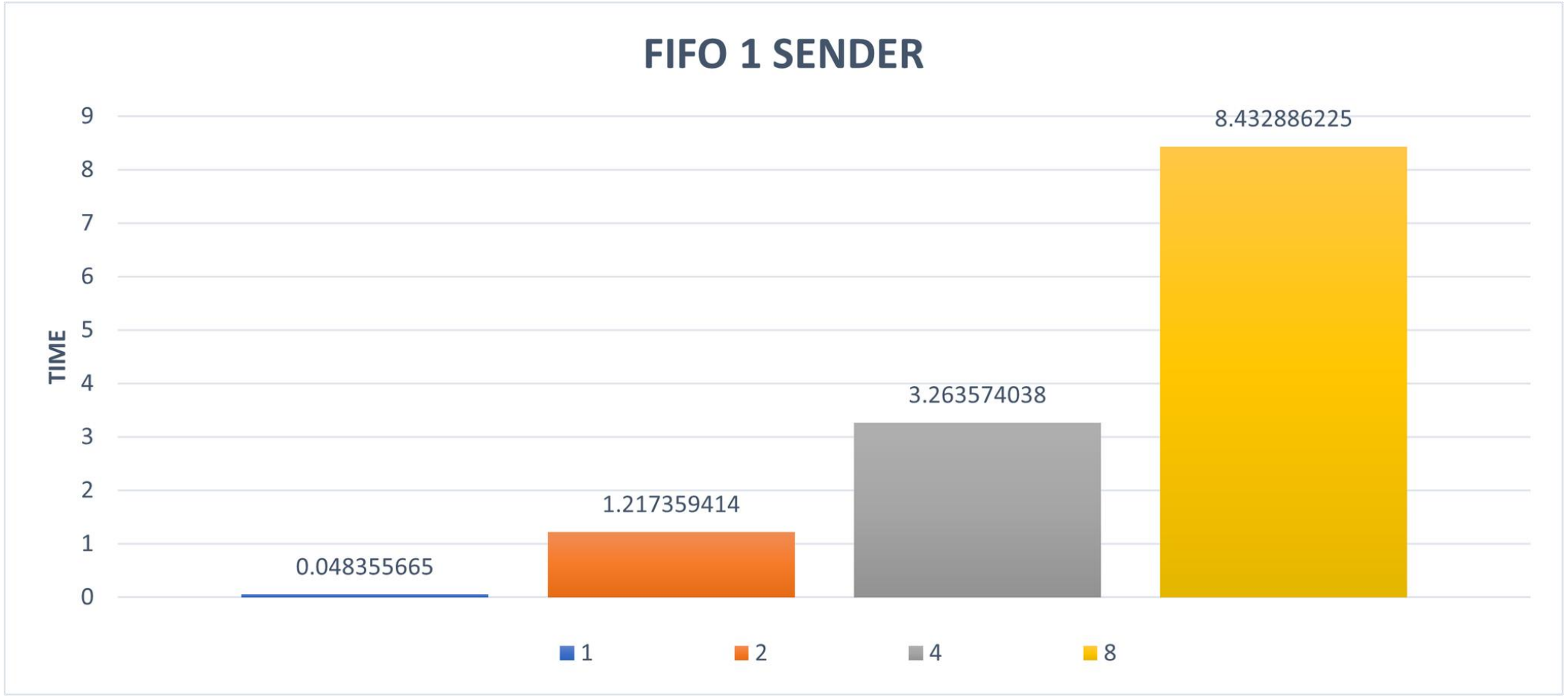
Causal Total Communication



Causal Total Communication



FIFO Benchmarks

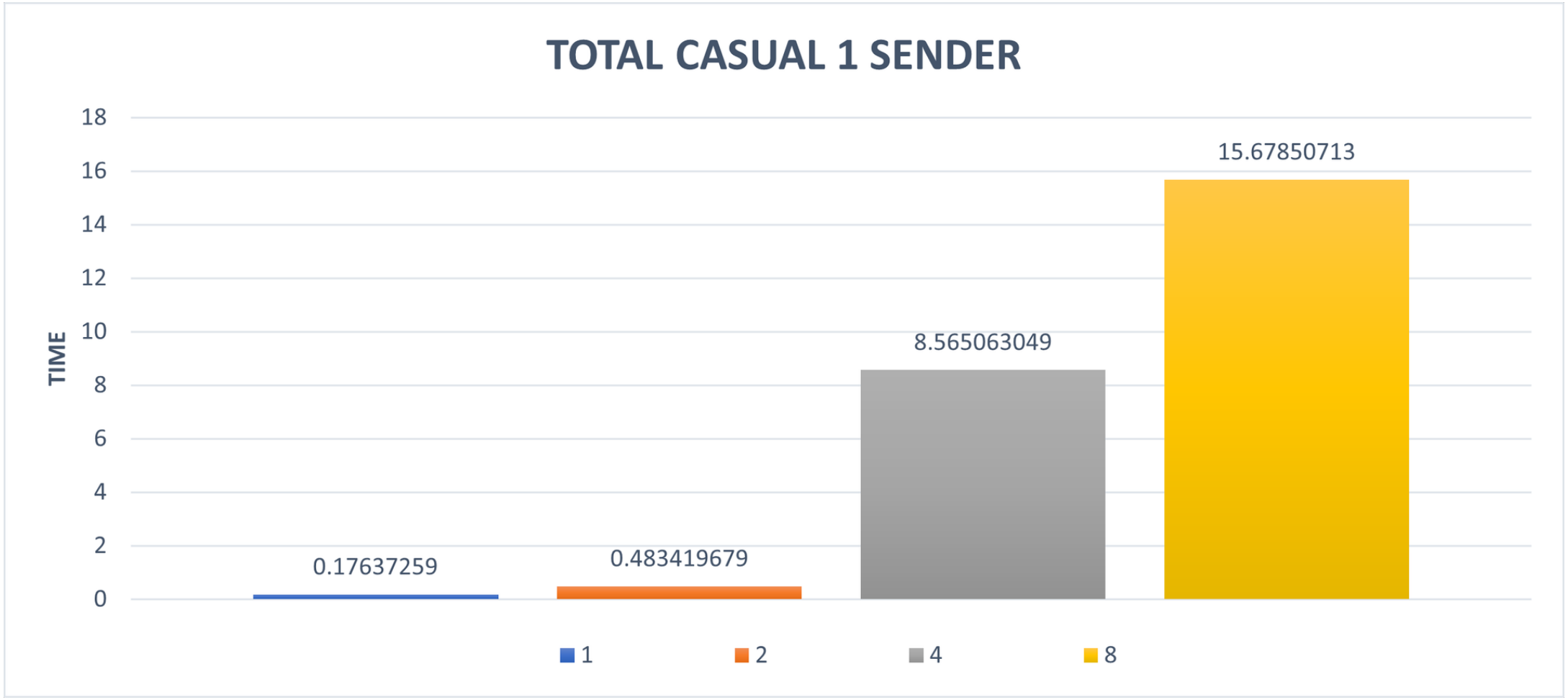


Each Sender Sends 20 Messages

FIFO Benchmarks

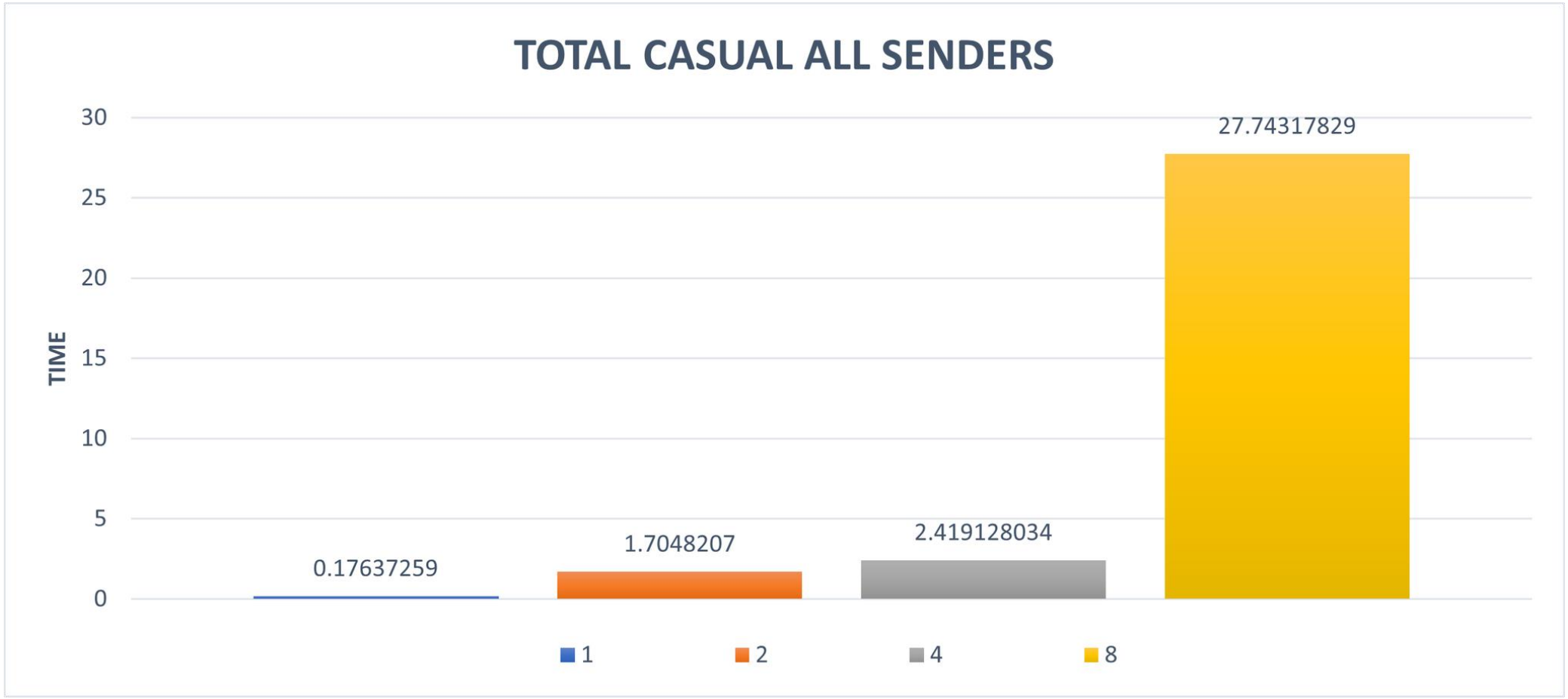
Each Sender Sends 20 Messages

Total Causal Benchmarks



Each Sender Sends 20 Messages

Total Causal Benchmarks



Each Sender Sends 20 Messages

Total Messages

For N Processes: N Inserts and N Updates are Sent (2N Messages Sent)

For N Processes: N Proposals are Received (N Messages Received)

1 in group TOTAL CASUAL
- AVG UDP/IP message per application message send: 2

2 in group TOTAL CASUAL
- AVG UDP/IP message per application message send: 4

4 in group TOTAL CASUAL
- AVG UDP/IP message per application message send: 8

8 in group TOTAL CASUAL
- AVG UDP/IP message per application message send: 16

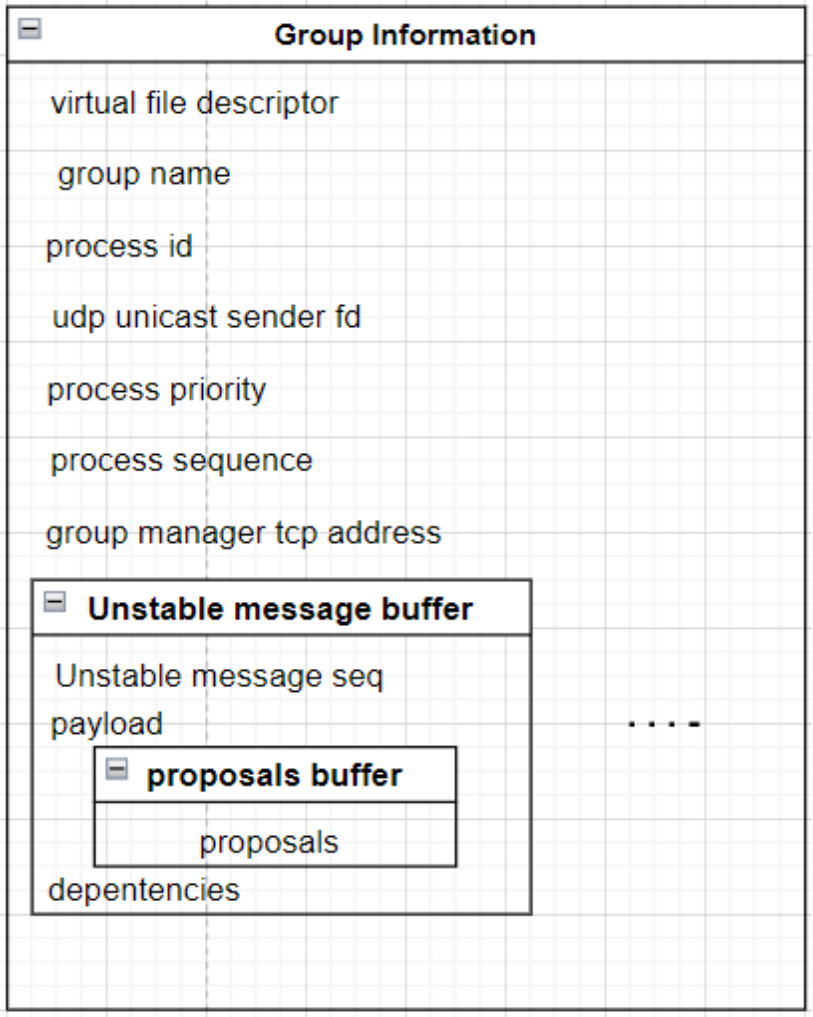
1 in group FIFO
- AVG UDP/IP message per application message send: 1

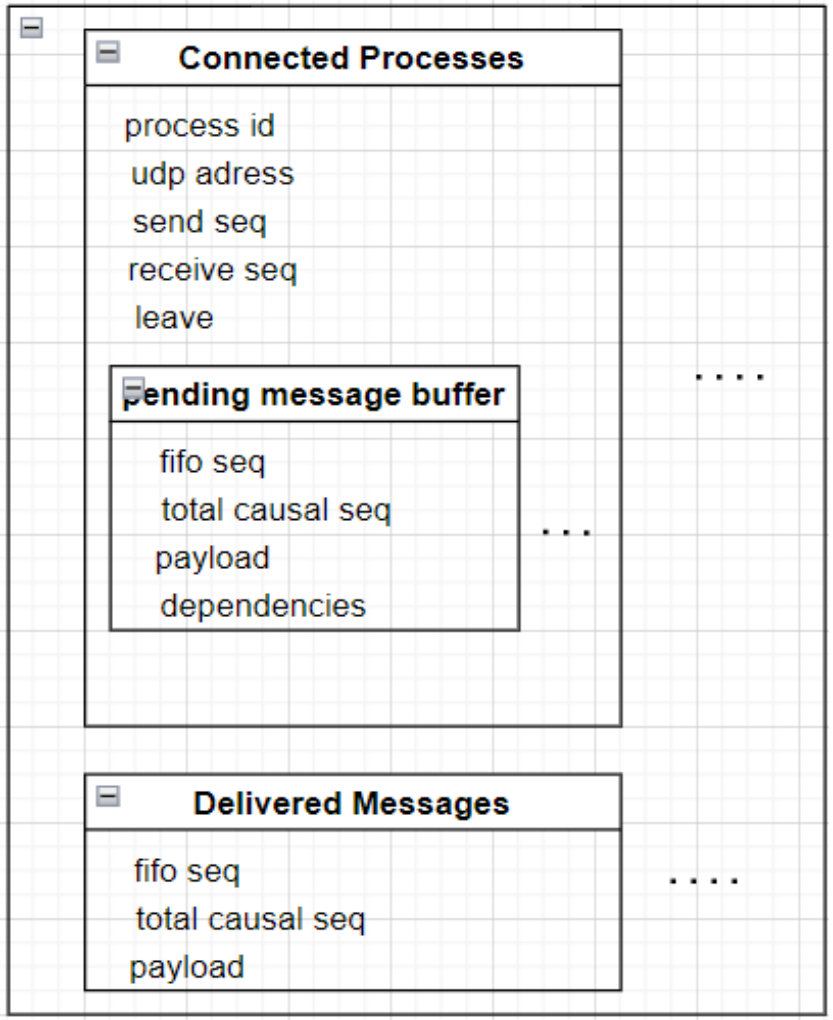
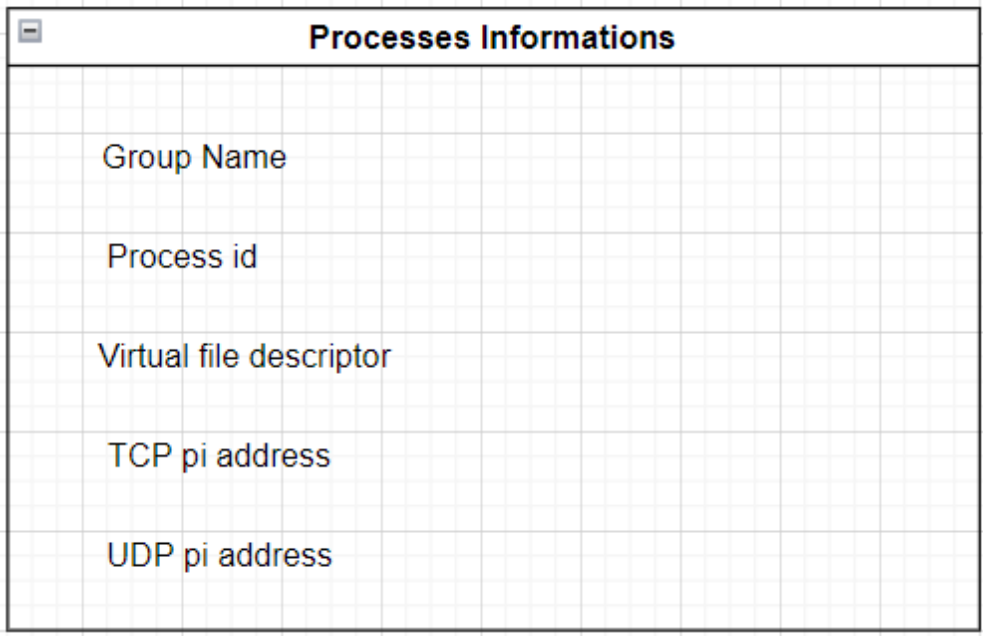
2 in group FIFO
- AVG UDP/IP message per application message send: 2

4 in group FIFO
- AVG UDP/IP message per application message send: 4

8 in group FIFO
- AVG UDP/IP message per application message send: 8

Process Structure





Group Manager Structure