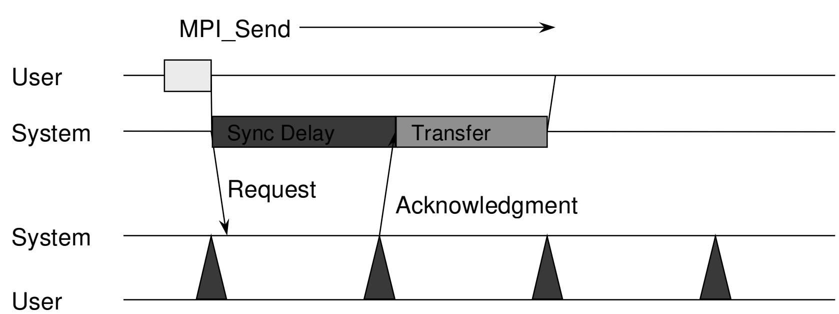
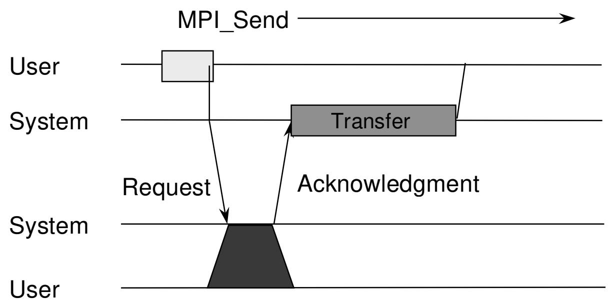
When are control messages handled?

- Polling
  - » During MPI calls or periodic “polls”
- Interrupts
  - » When message arrives at process (e.g., OS signals an I/O event)
- No method is “best”

Polling Mode MPI



Interrupt Mode MPI



- Cost of interrupt higher than polling (usually)

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Example of the effect of Polling

- IBM SP2 MPI_Allreduce times for each mode

Processors	Polling	Interrupt
2	105	260
4	179	490
8	259	746
16	357	1020
32	468	1302
64	670	1614

- Times in usecs. Similar effects on other operations.
- ***BUT*** some programs (with extensive computing) can show better performance with interrupt mode

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