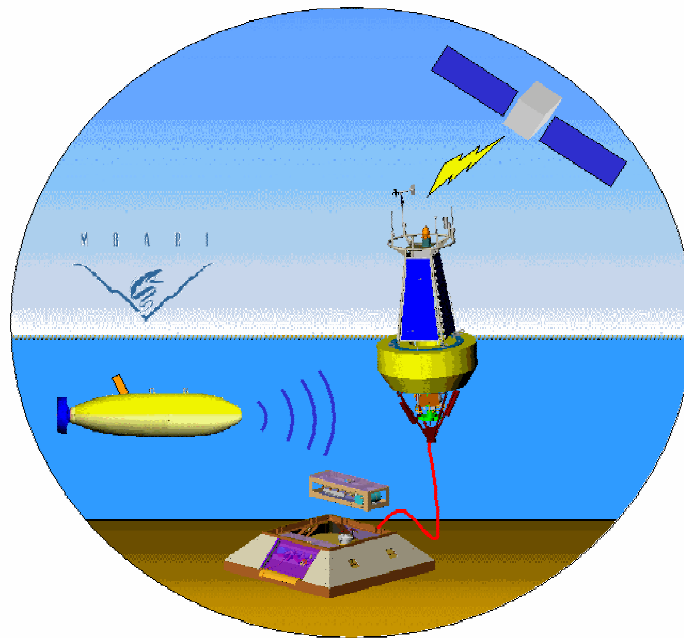


Architectural ideas for MOOS

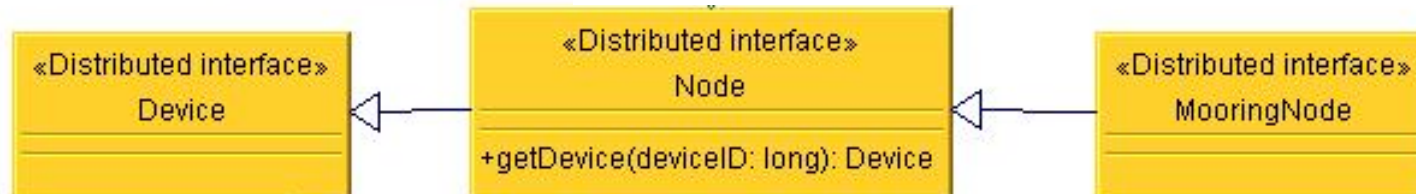


Tom O'Reilly
January 22, 2003
Rev. 1/24/2003

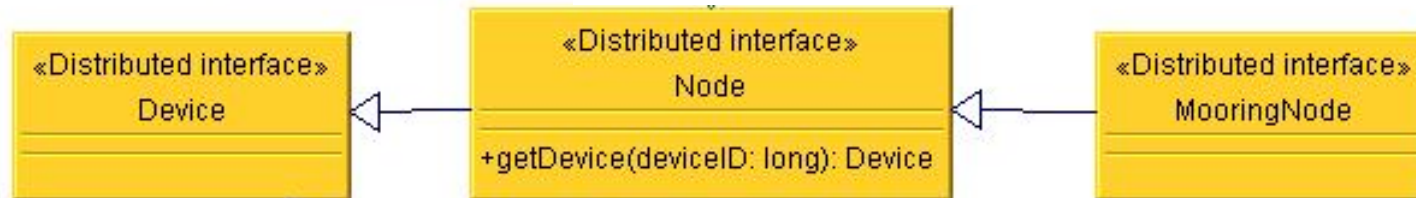
Distributed interface

- For “routine” data retrieval, methods for NMC work well,
 - i.e. node server has method `getPackets(deviceID)`
- How to control/configure an instrument?
 - No one-size-fits-all method
 - XML approach is not type-safe
- Each instrument has service interface, which implements specific control methods

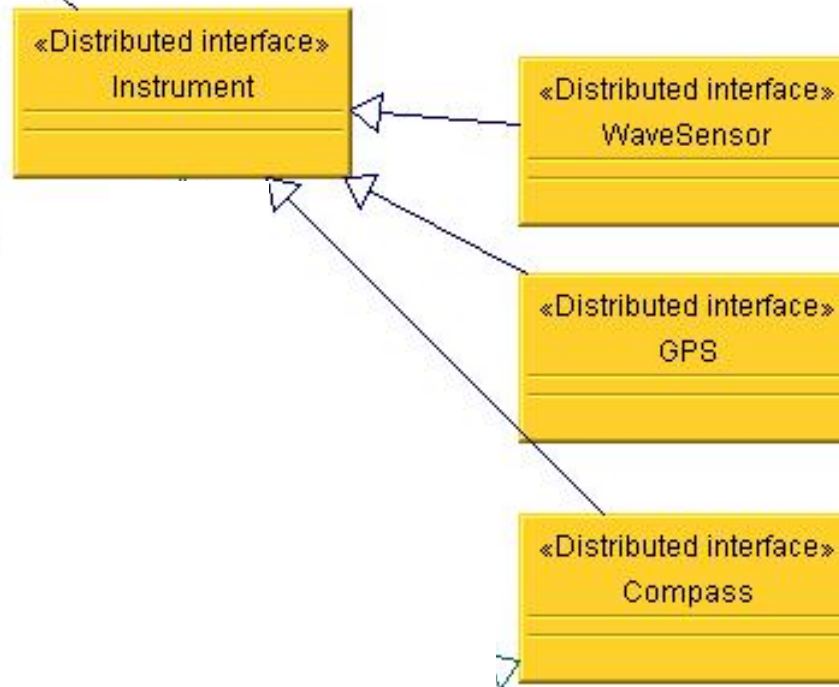
Shore usually gets
data through Node
interface.



Shore usually gets data through Node interface.

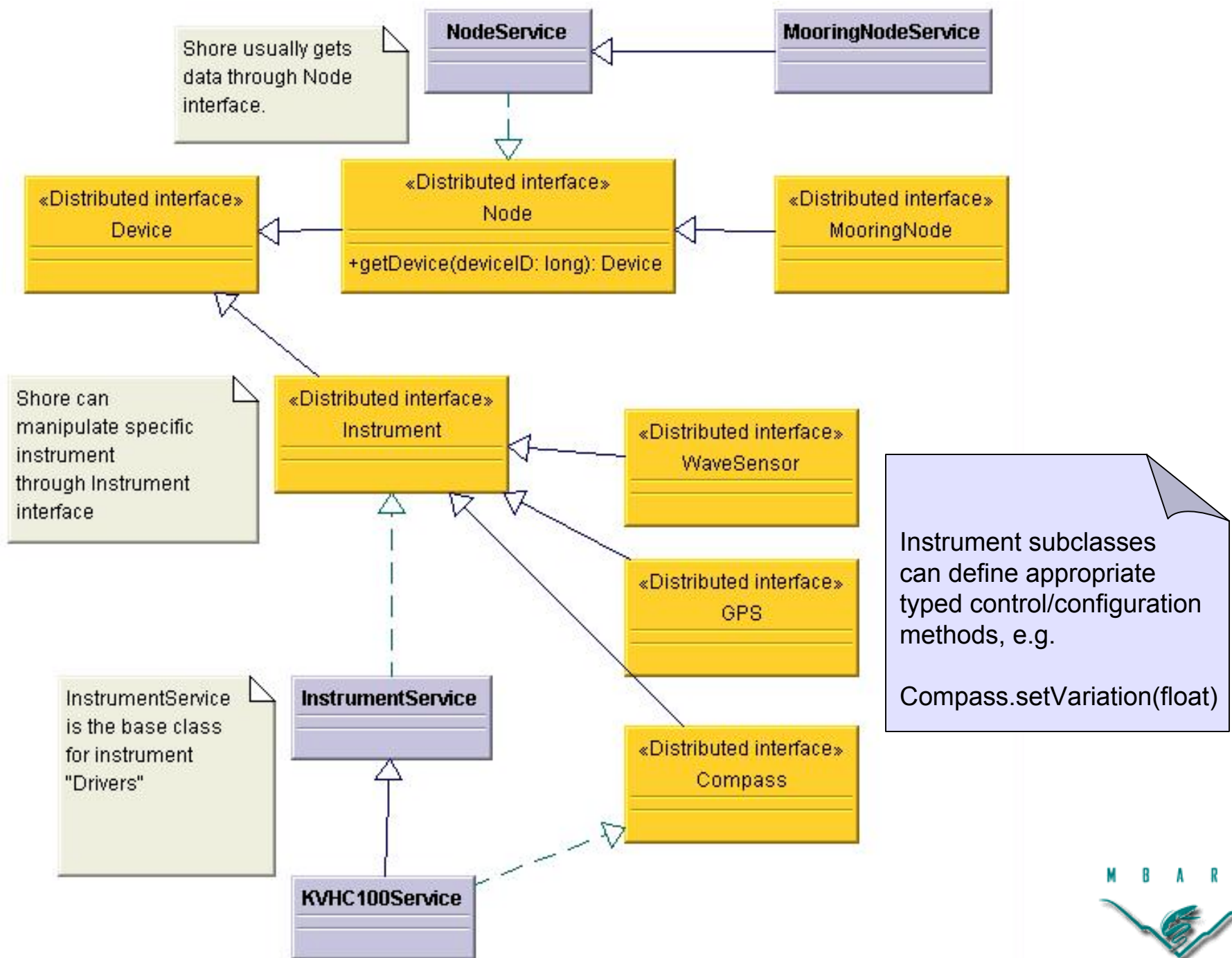


Shore can manipulate specific instrument through Instrument interface



Instrument subclasses can define appropriately typed control/configuration methods, e.g.

Compass.setVariation(float)

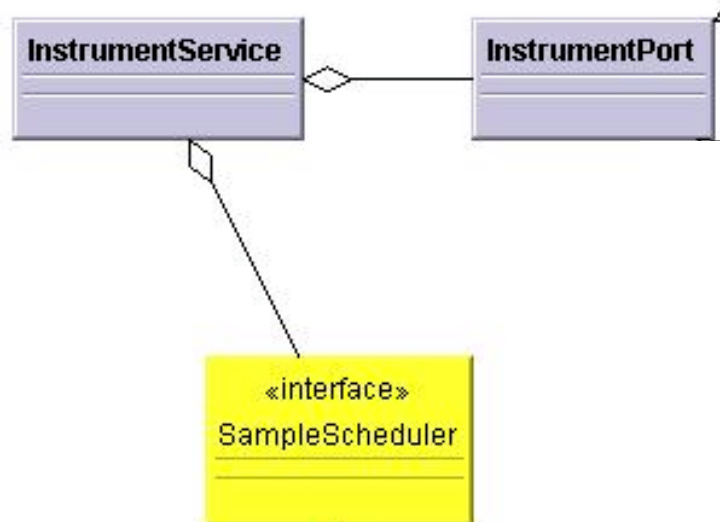


Environment-neutral instruments

- Instrument driver/service be insulated from details of installation environment
 - Moored network vs cable-to-shore vs desktop...

Environment-neutral instruments

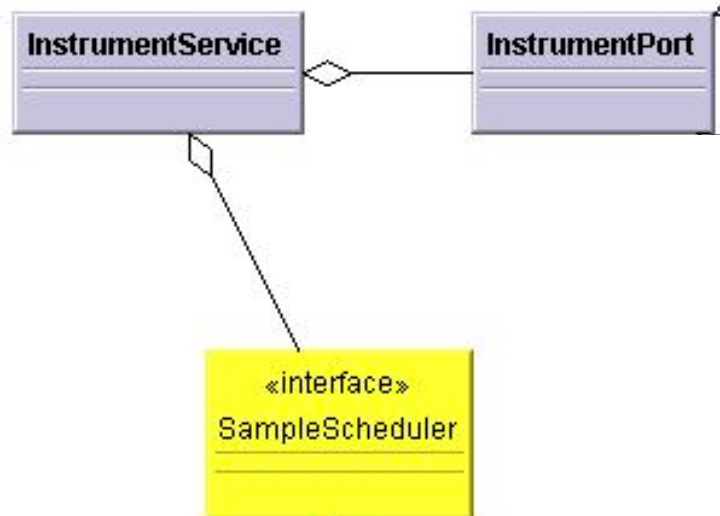
- Environmental details include:
 - Power management (DPA present?, puck present?)
 - Communications (RS-232, RS-485, multi-drop?)
 - Scheduling (should be able to schedule through instrument interface)



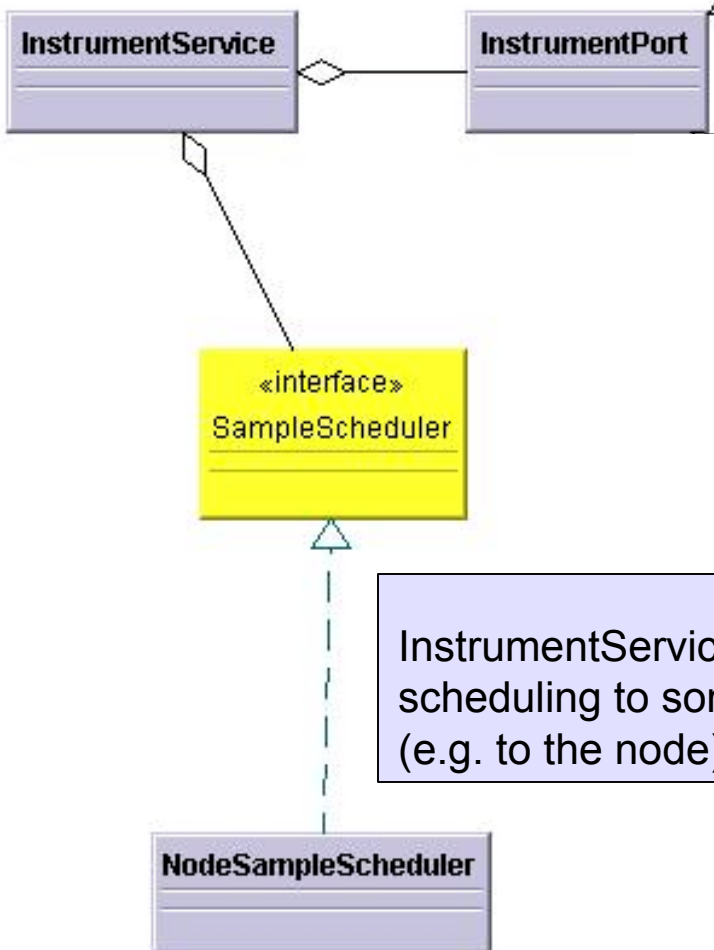
InstrumentService gets references to *interface objects* for instrument port and sample scheduler



Client can set schedule
through
`InstrumentService.setSchedule()`

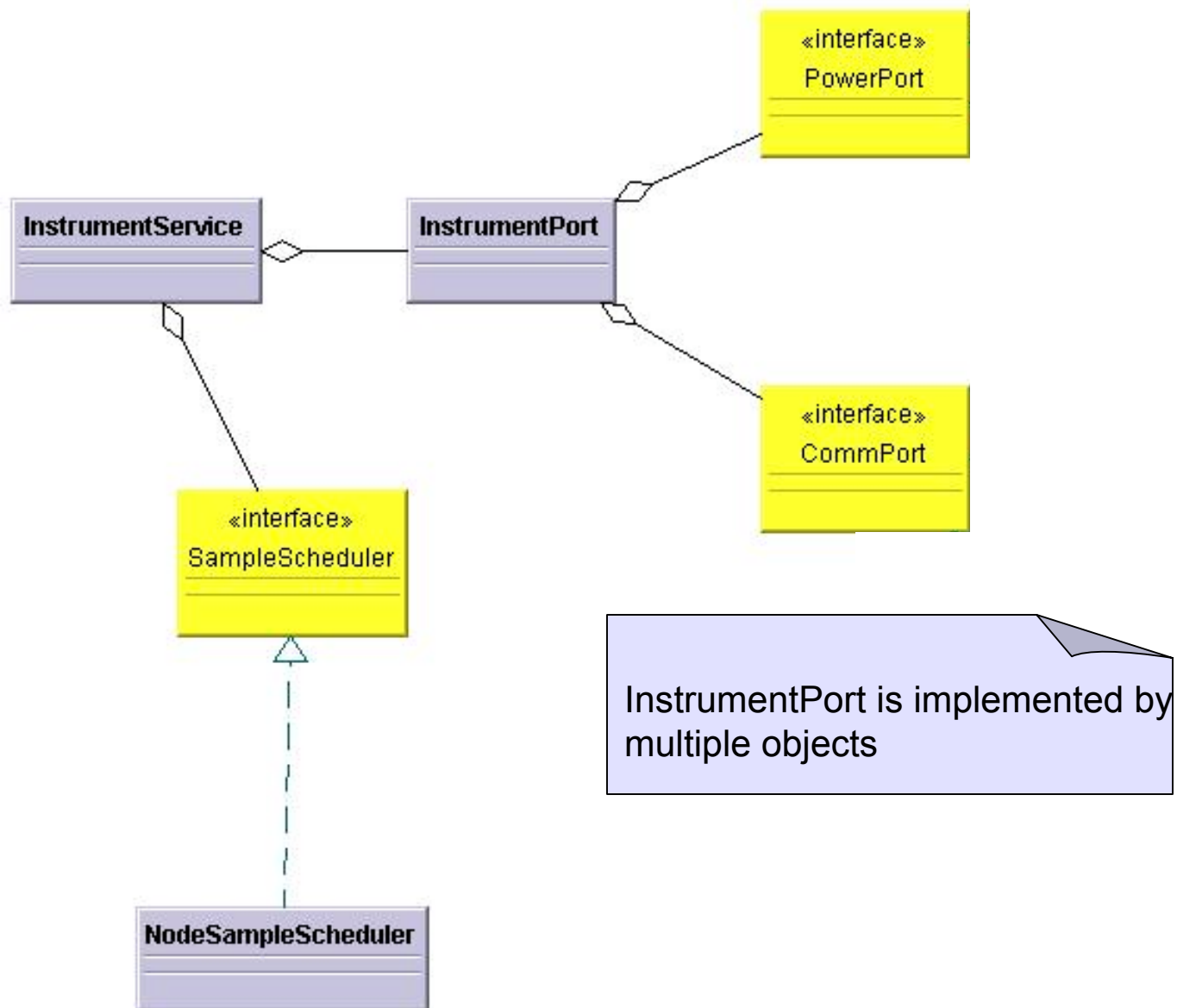


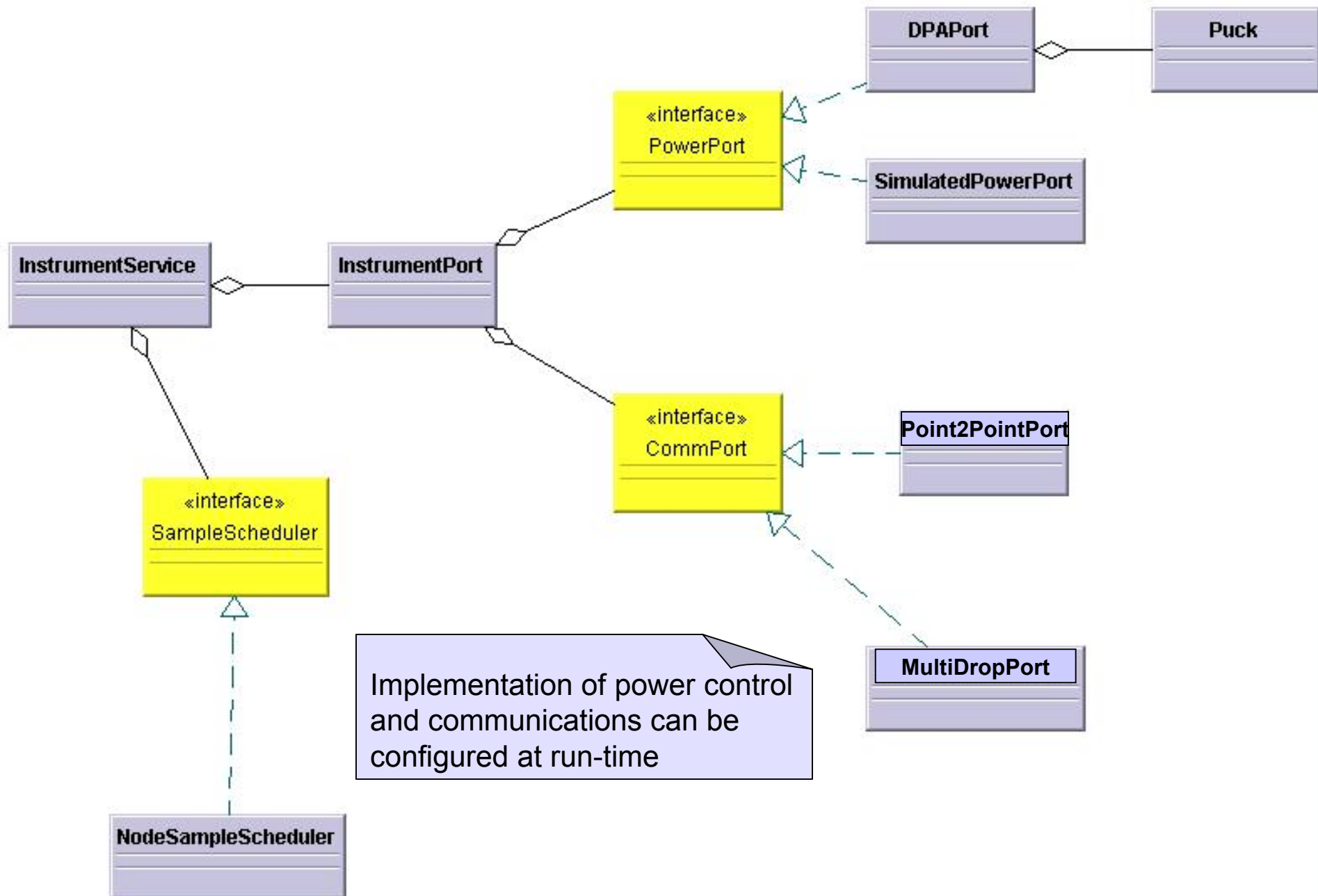
Client can set schedule
through
InstrumentService.setSchedule()



InstrumentService can delegate
scheduling to something else
(e.g. to the node)







Mooring node

