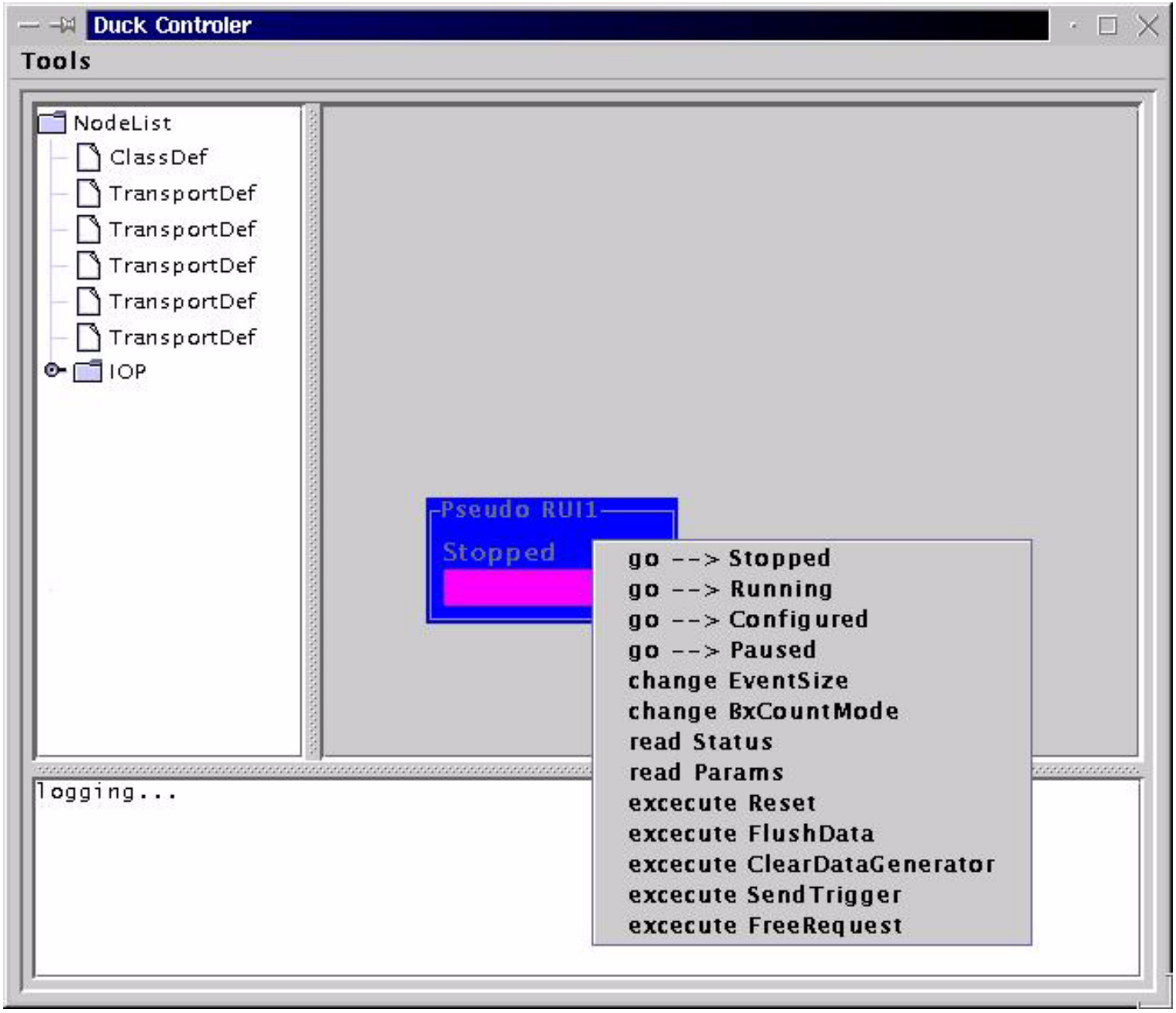
Integration of XDAQ / pseudoRUI

- functionalities of the pseudoRUI
  - on PCI trigger command:
    - generate dummy data of fixed (configurable) size
    - transfer (DMA) event to internal 32MB SDRAM
    - prepare event descriptor (Startaddress, size) and write to Fifo
  - options, features:
    - data are word counts or free running counter
    - fragment size is programmable (but fixed)
    - total reset or “flush data” implemented

Implemented software

- XDAQ application level:
  - class for low level hardware access
  - XDAQ application with SOAP control access
    - all functions can be excecuted by SOAP commands
    - XDAQ state model and state transitions implemented

- Control software
  - based on JAVA and jxdaq classes
  - can send all possible SOAP commands to pseudoRUI
  - implements XDAQ state model
  - user interface is simple GUI
  - Gui classes are generic:
    - need to program the functionality of his component
    - need to program the actions for state changes
    - the GUI is then generated automatically,


Duck Controler
Tools
NodeList
ClassDef
TransportDef
TransportDef
TransportDef
TransportDef
TransportDef
IOP
Pseudo RUI1
Stopped
go --> Stopped
go --> Running
go --> Configured
go --> Paused
change EventSize
change BxCountMode
read Status
read Params
excecute Reset
excecute FlushData
excecute ClearDataGenerator
excecute SendTrigger
excecute FreeRequest
logging...

Still to be implemented

- XDAQ i2o application
  - involved in data transfer
  - needs to set up DMA pseudo-RUI --> software RUM
  - DMA and interrupt of Galileo works
  - DMA slower than expected (...as usual...):
    - DMA bursts are even shorter than advertised in manual
    - instead of 64-bytes bursts only 16 - 48 bytes
  - software to interface to RUM under development (with Johannes and Luciano) (it is the harder part)