JEM SOFTWARE

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EXISTING SOFTWARE

- Configure FPGAs
- Load DSS buffer memories
- Load and read playback, spy memory
- Load, read and write, compare test vectors

Problem: Shell scripts directly calling VME driver utilities

FRAMEWORK

- 2 Concurrent CPUs with either VME LINUX or CERN VME driver
- PC with RedHat Linux 7.3

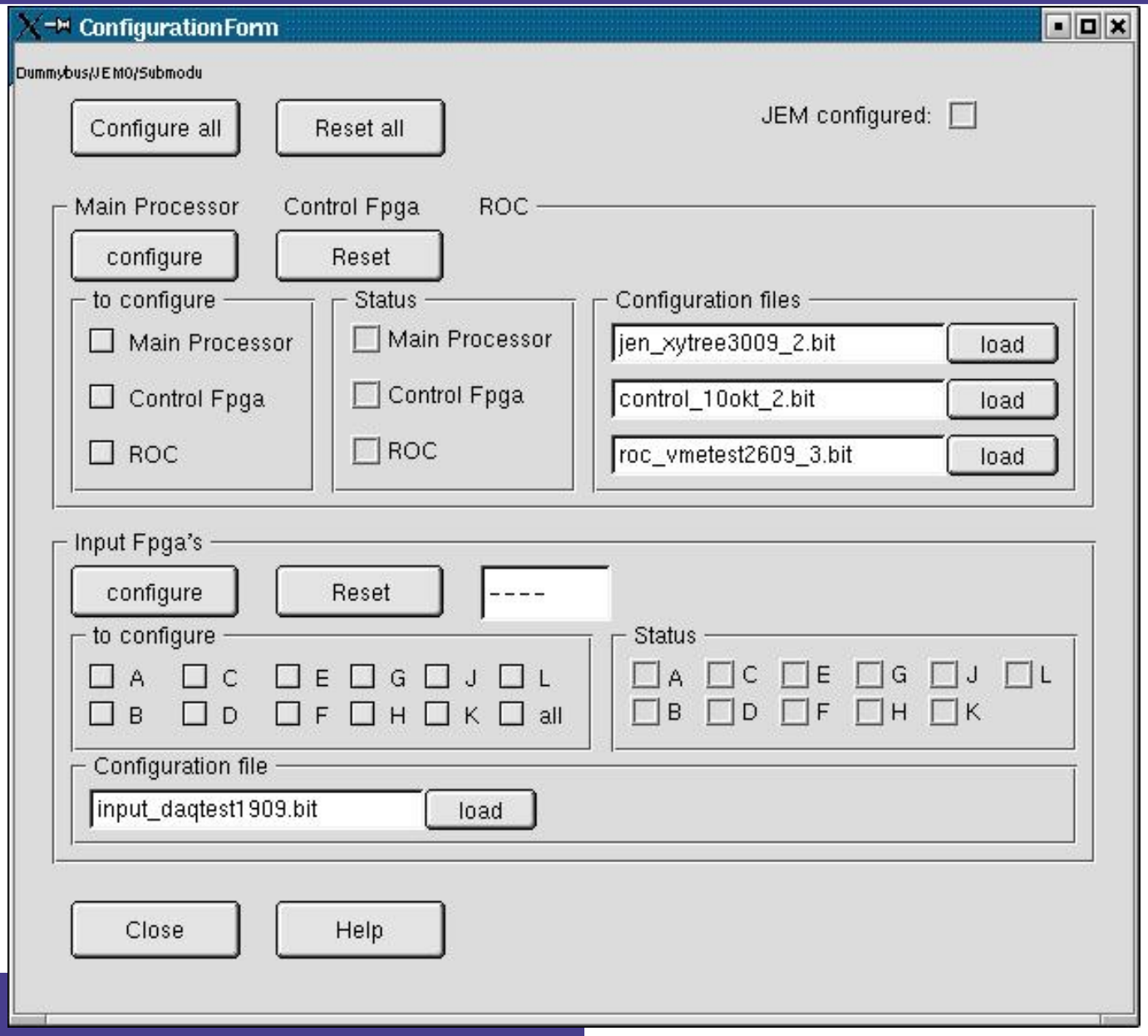
All existing software is running with both drivers on all CPUs.
On all CPUs the relevant software packages are installed (ATLAS online software, HDMC, CMT, CVS,...)

PROBLEM...

Using a different VME driver means rewriting existing software...

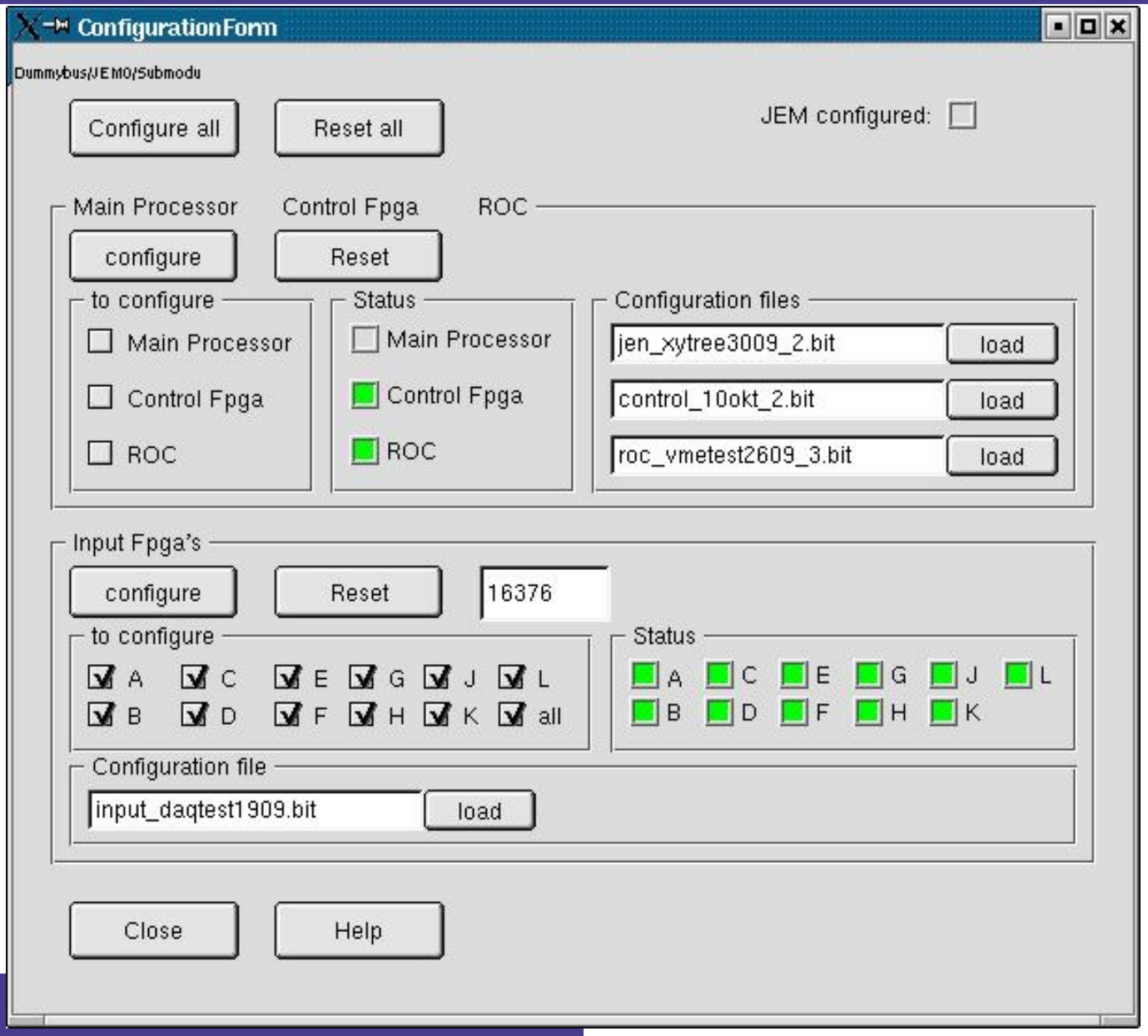
Simple shell scripts are not an elegant solution...

SOFTWARE MODULES (HDMC)



Cano Ay, new PhD student: Started with Gilles FpgaXilinxJEM file, Program to configure control FPGA, main processor and ROC

SOFTWARE MODULES (HDMC)



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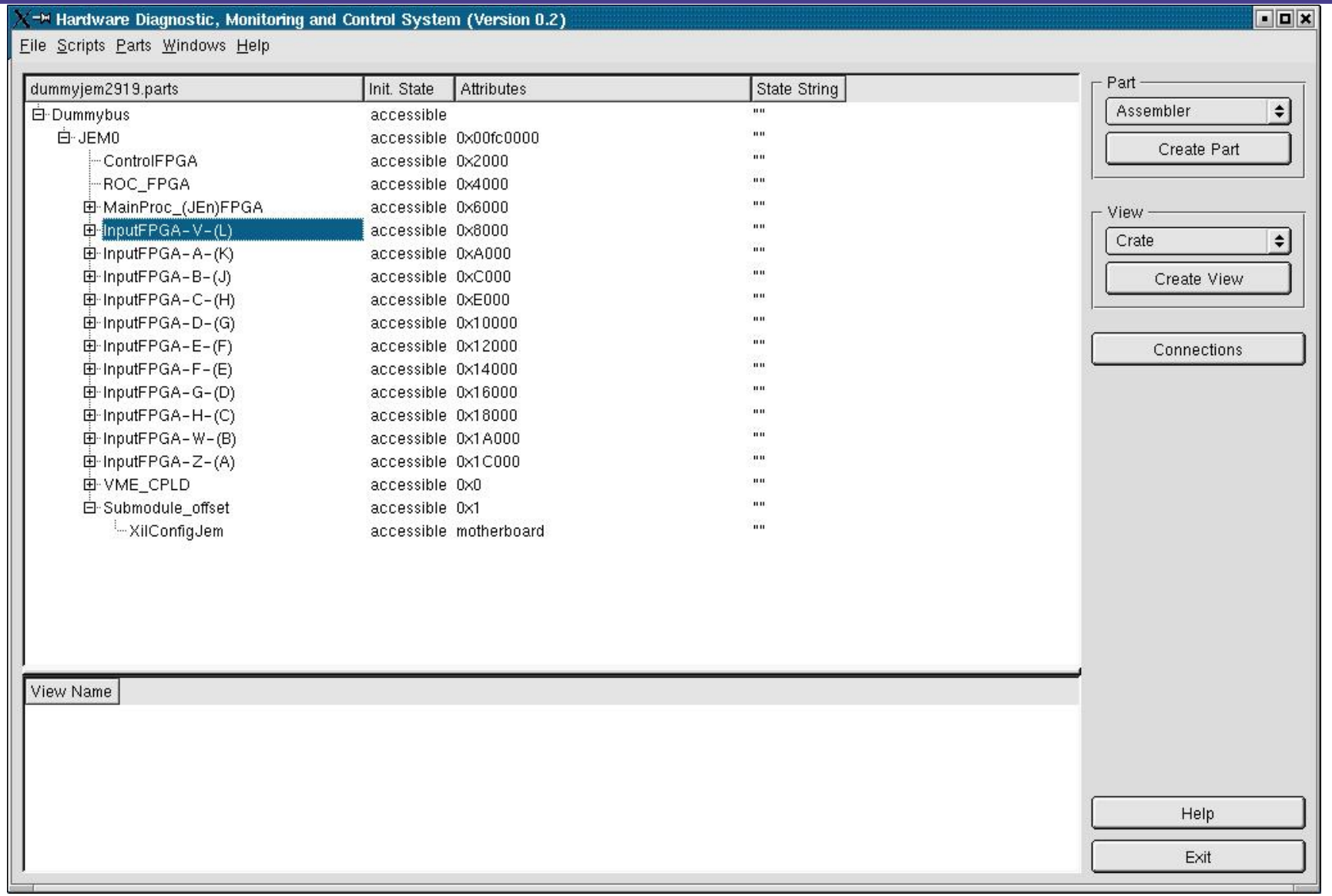
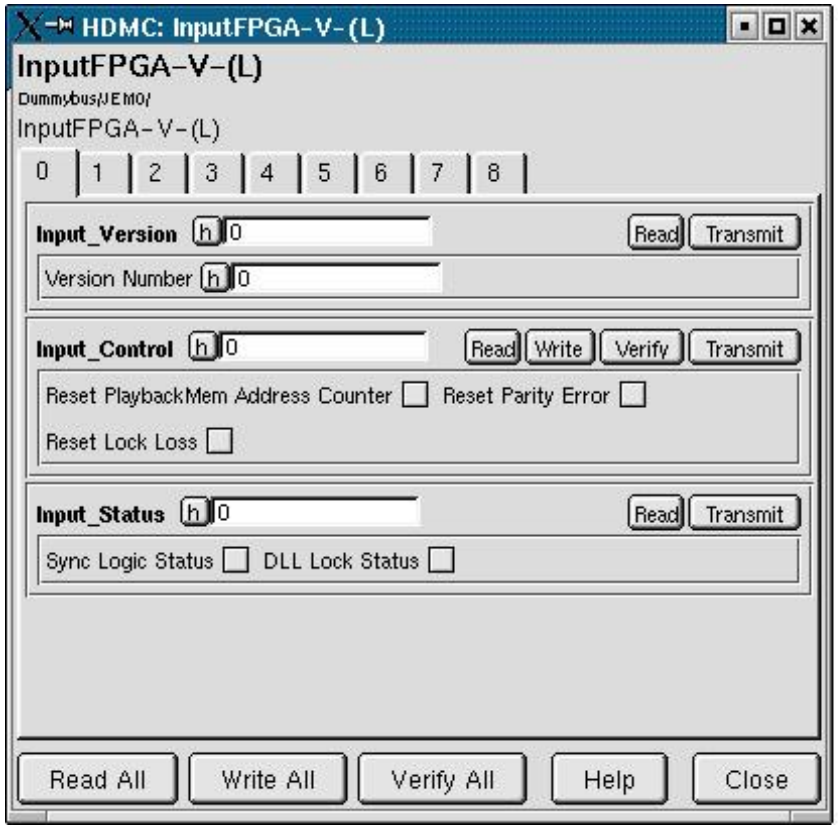
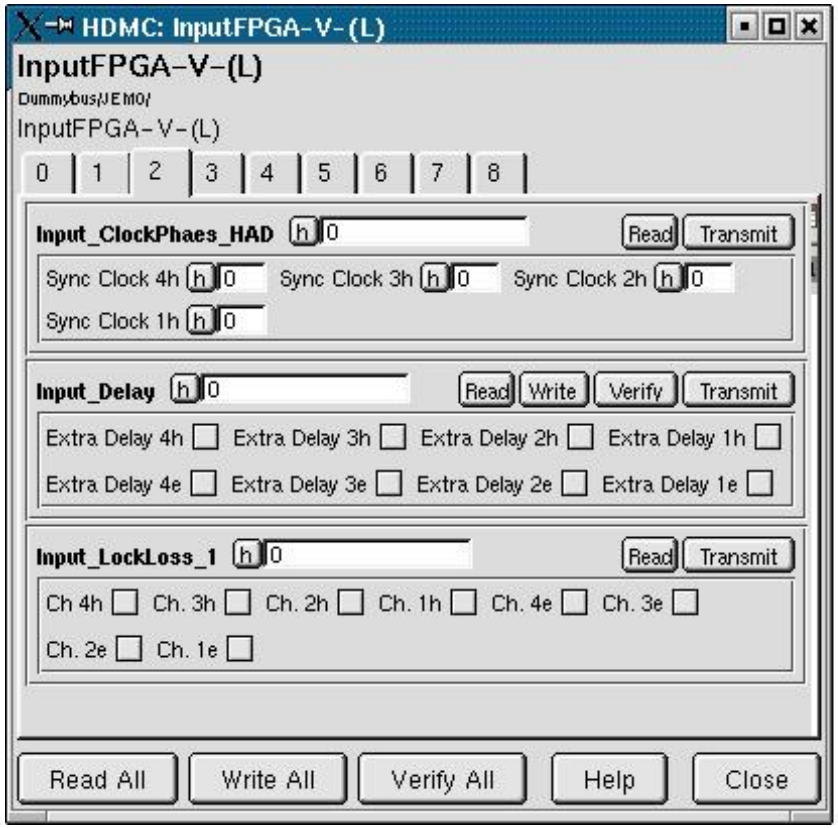
REGISTERS (HDMC)



INPUT FPGAs (HDMC)

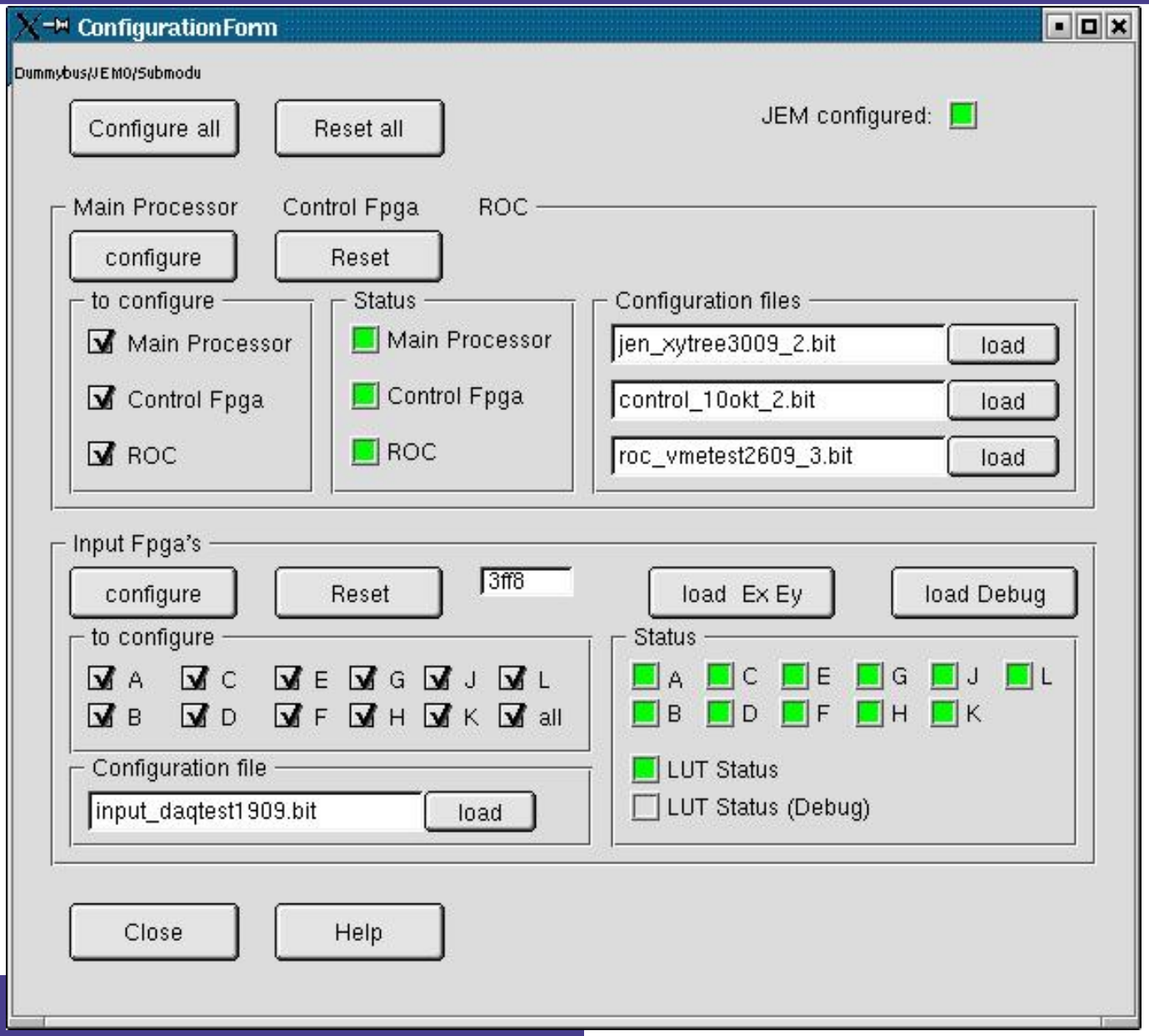




NEXT STEPS

- Convert all existing software packages to HDMC and module services
- Next step: Integrate lookup tables, Link status, parity errors
- Then: Test vectors
- Expected to be finished end of November
- If possible we would like to work together for a couple of days in November with UK software people.

SOFTWARE MODULES (HDMC)



Cano Ay, new PhD student: LUT included

Status

Difficult to DEBUG HARDWARE and to WRITE SOFTWARE at the same time.

Good news: PhD student who can work most of his time on software development

SUBSLICE TEST

- CPU from Mainz
- Online software if possible in HDMC/module services format
- Otherwise use existing shell script software

All new software will be written in HDMC/module services framework.