

INDISS with Thermo and Unit

Didier.Paen@simulationrsi.net

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INDISS CAPE-OPEN development

- **Thermo socket extension**
 - CAPE-OPEN access provided to native thermo
 - Integration of external thermo packages
- **Unit operation socket extension**
 - Dynamic interface extension
 - SteadyState execution used for initialisation
 - Tested with IFP CAPE-OPEN units
 - Remarks on standard unit interface
 - Persistence interface is not clear for me

RSI/CO-LaN test program

- Use of PROSIM Simulis thermo package licence for tests
- One day at RSI with CO-LaN CTO
- On-line tests on CO-LaN computer
 - Need for RSI to perform tests and to evaluate compliance
 - Commercial offer is efficient
 - Product installed at RSI
 - CO-LaN is just a light client:
 - No installation
 - CO-LaN action is required to enable the connection
 - Secure communication

Management of new releases compliance

- Definition of basic simulation use cases on INDISS
 - To replay previous tests
 - To identify any regression
- CO-logger report
 - Important to understand what happens
 - Technical point: behaviour with proprietary interfaces as extension on a standard object

Tests remarks

- **Use of properList in CalcEquilibrium call**
 - It's efficient to minimise CAPE-OPEN calls
 - It depends of the kind of application
 - The GetPropertyList is not really adapted
- **Name of second liquid phase**
 - A defined name is useful even in 0.93 standard
- **End of session**
 - Correction were required for CAPE-OPEN VB component

Multithreaded applications

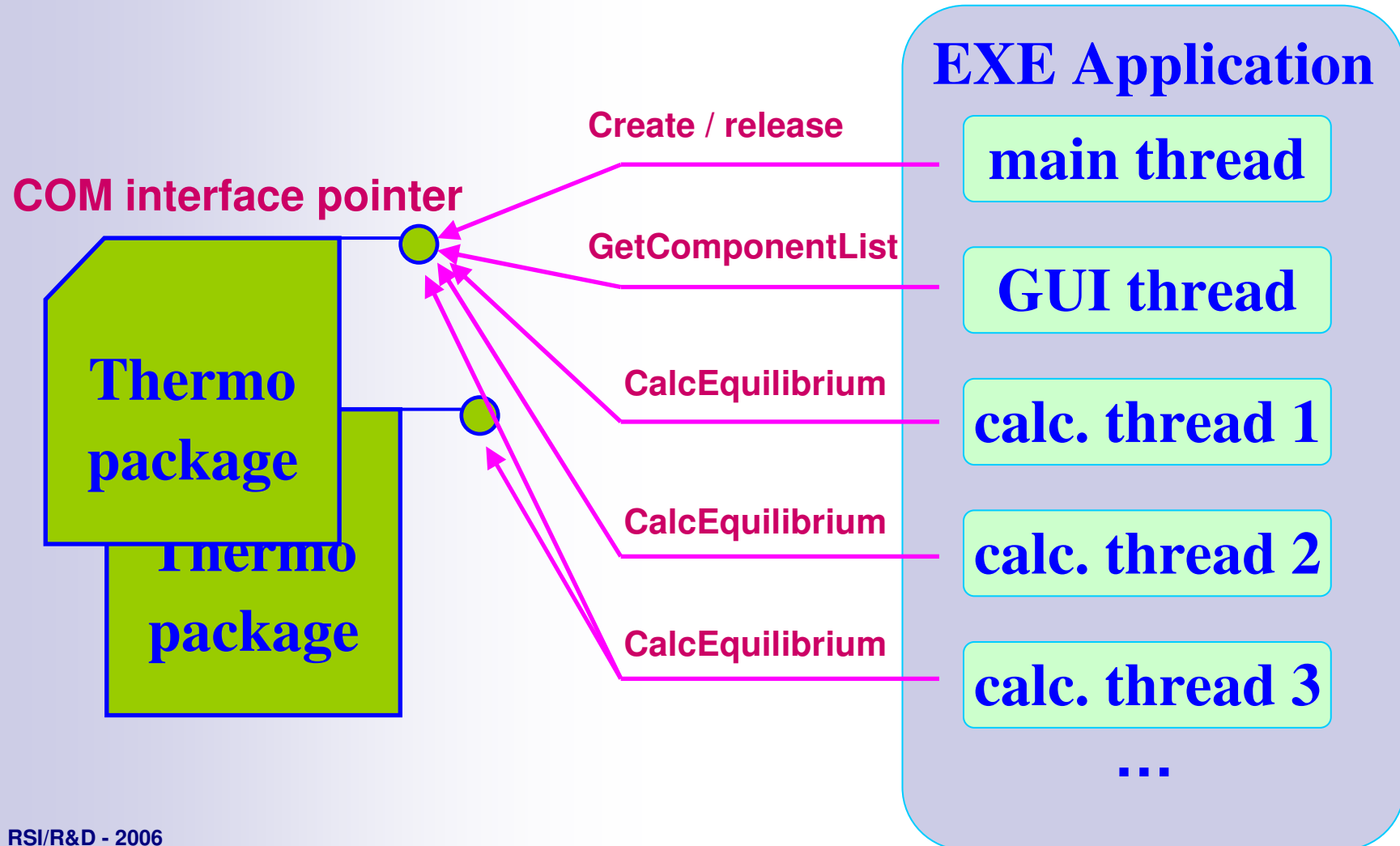
■ Hardware technology evolution

- Limit reached in term of CPU frequency
- Intel communication:
 - « The current trends in processor technology indicate that the number of processor cores in one IC chip will continue to increase »
- Multithreaded applications will be a need

■ Use of COM interface pointer

- Switch from apartment to free threading model, or multithreaded initialisation mode of application is required.
- Concurrent calls to thermo packages
- .Net CAPE-OPEN objects

Multithreaded application



Demonstration

