

## 7.3 CAPE-OPEN Logger

**Catching communication between PMEs  
and PMCs**

# Overview



- ▼ Description of CO Logger Prototype
- ▼ Future plans
- ▼ Questions

CO ▼ LaN



# Motivation

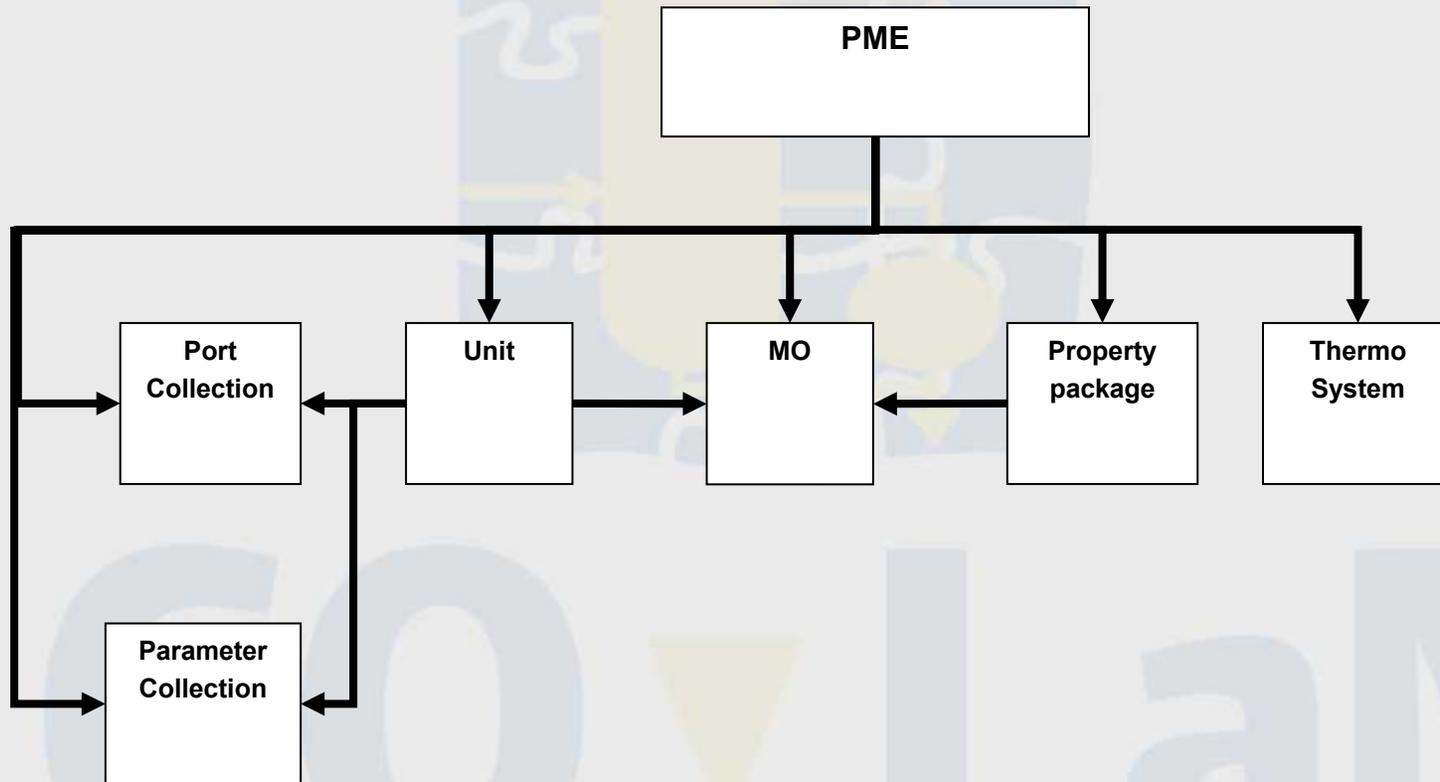
- ▼ Interaction of CAPE-OPEN components is complex and different for every PME.
- ▼ Interoperability issues often require someone to be able to debug both PME and PMC, or at least to be able to debug one of them.
- ▼ To add logging capabilities to all PMEs and PMCs retrospectively would be hard – logging would become a standards issue.
- ▼ PMC logs can only record calls to the PMC.
- ▼ PME and PMC developers have implemented their own logging mechanism at great cost.



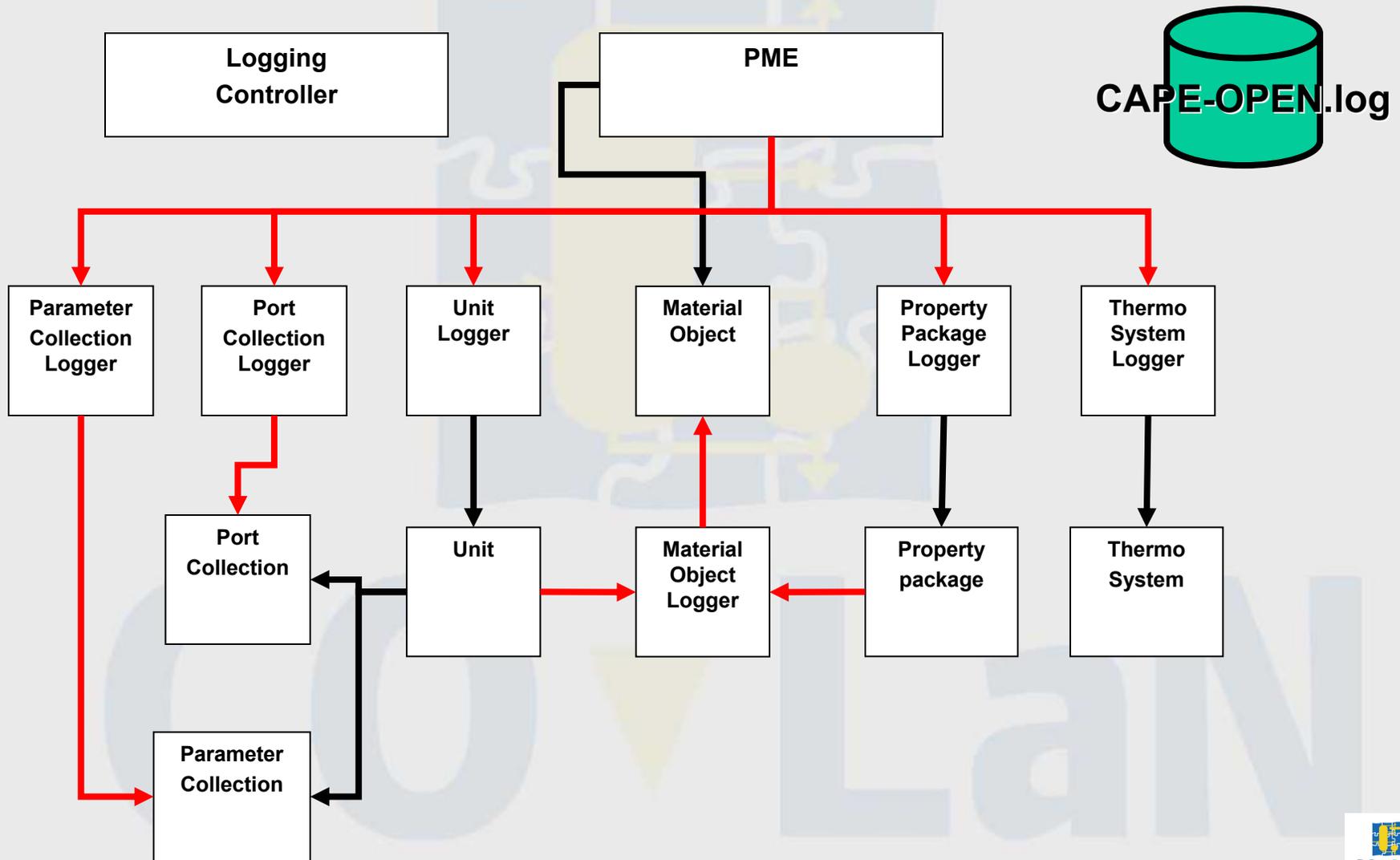
# Process engaged

- ▼ Development supervised by Interoperability SIG
- ▼ Prototype developed by AspenTech with help from SHMA (BP funding)
- ▼ CO-LaN consultancy funded 2 days Aspentech in 2004
- ▼ Distributed to a few CO-LaN members: Shell, Simsci-Escor, PSE, etc...
- ▼ Debug phase engaged

# CAPE-OPEN PME-PMC Communication



# CAPE-OPEN Logger/Tester Communication



# Scope of Prototype

## ▼ Controller

- ⇒ Allows selection of logged components
- ⇒ Sets required registry entries – admin privilege not required
- ⇒ Allows choice of destination for logging output

## ▼ Logger/Tester

- ⇒ Partial implementation –
  - Unit, Material Object, Property Package, Port, Collections, ThermoSystem
- ⇒ Does not cover
  - CO errors, Parameters, Simulation context
- ⇒ Not all methods have complete data reporting

# Current steps to log

- ▼ **Modify a file to define name of log file**
- ▼ **Launch the CO Logger controller**
- ▼ **Select which component to be logged**
- ▼ **Run the application running this component**
- ▼ **Once through, disable logging.**

# Modify CAPE-OPENLogs.ini file

**log4j.rootLogger=DEBUG, A1**

**log4j.appender.A1=org.apache.log4j.FileAppender**

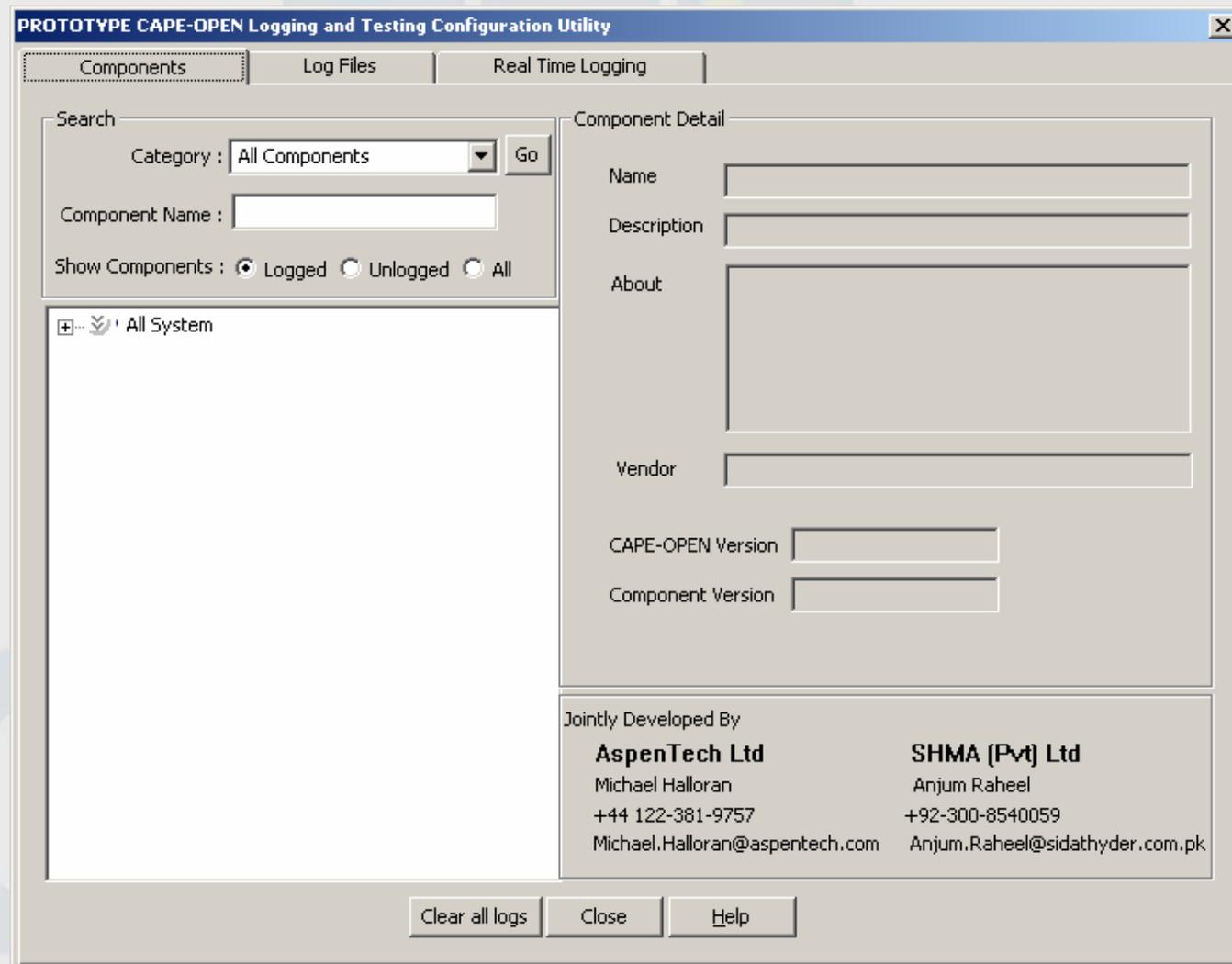
**log4j.appender.A1.Append=false**

**log4j.appender.A1.File=c:\\SIMULISinAP.log**

**log4j.appender.A1.layout=org.apache.log4j.PatternLayout**

**log4j.appender.A1.layout.ConversionPattern=%c %m%n**

# Opening the CO logger controller



# List all Thermo Systems

**PROTOTYPE CAPE-OPEN Logging and Testing Configuration Utility**

Components | Log Files | Real Time Logging

Search  
Category : All Components [Go]  
Component Name :  
Show Components :  Logged  Unlogged  All

**Component Detail**

Name: Simulis CAPE-OPEN® Thermo System  
Description: Simulis CAPE-OPEN® Thermo System  
About: Copyright © 2002-2003 ProSim SA  
Vendor: <http://www.prosim.net>  
CAPE-OPEN Version: 0.9.3  
Component Version: 1.0.0.1  
 Enable Logging

Jointly Developed By

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Clear all logs | Close | Help

# List all Property Packages

**PROTOTYPE CAPE-OPEN Logging and Testing Configuration Utility**

Components | Log Files | Real Time Logging

Search  
Category : All Components [Go]  
Component Name :  
Show Components :  Logged  Unlogged  All

Standalone Property Packages

- PPDS.CapeRefrigPackage.1
- TEST080505
- Test December 2
- PPINDISS
- HYP/SRK EOS HDA
- BenzWaterToluEtOH
- RSI/PDSPropertyPackage
- PPDS CO System Package
- PPDS.CapeEOSPackage.1
- PPDS.CapePetfracPackage.1
- PPDS CO Steam Package
- HDA280405
- HDA pour HYSYS
- HYP/SRK EOS 3 COMPS
- Test 040405
- Optimized HYP/SRK EOS HDA
- RSI/INDISSWaterAndSteam

Component Detail

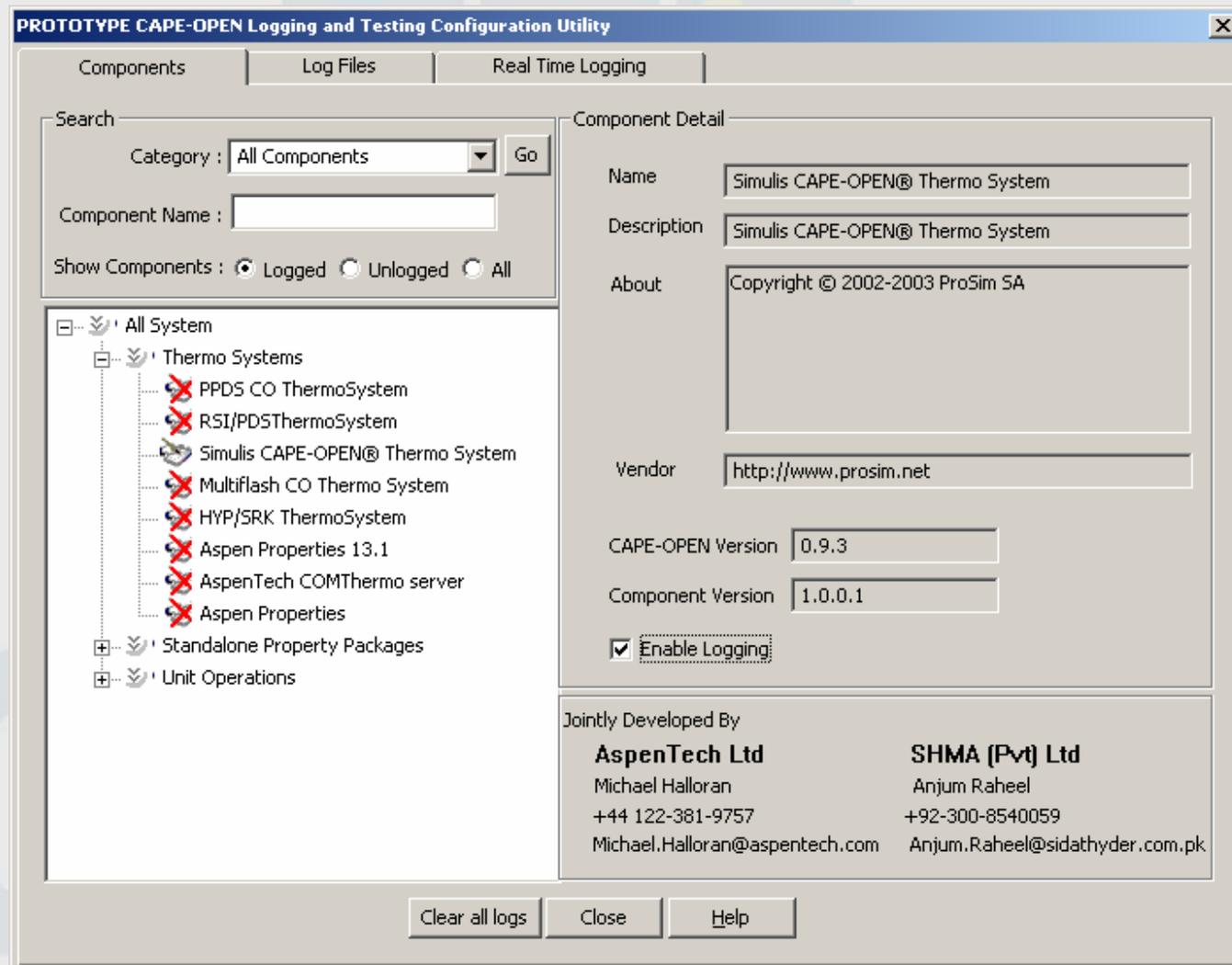
Name: TEST080505  
Description: Test for VALI May 08, 2005  
About:  
Vendor:  
CAPE-OPEN Version: 0.9.3  
Component Version: 1.0.0.1  
 Enable Logging

Jointly Developed By

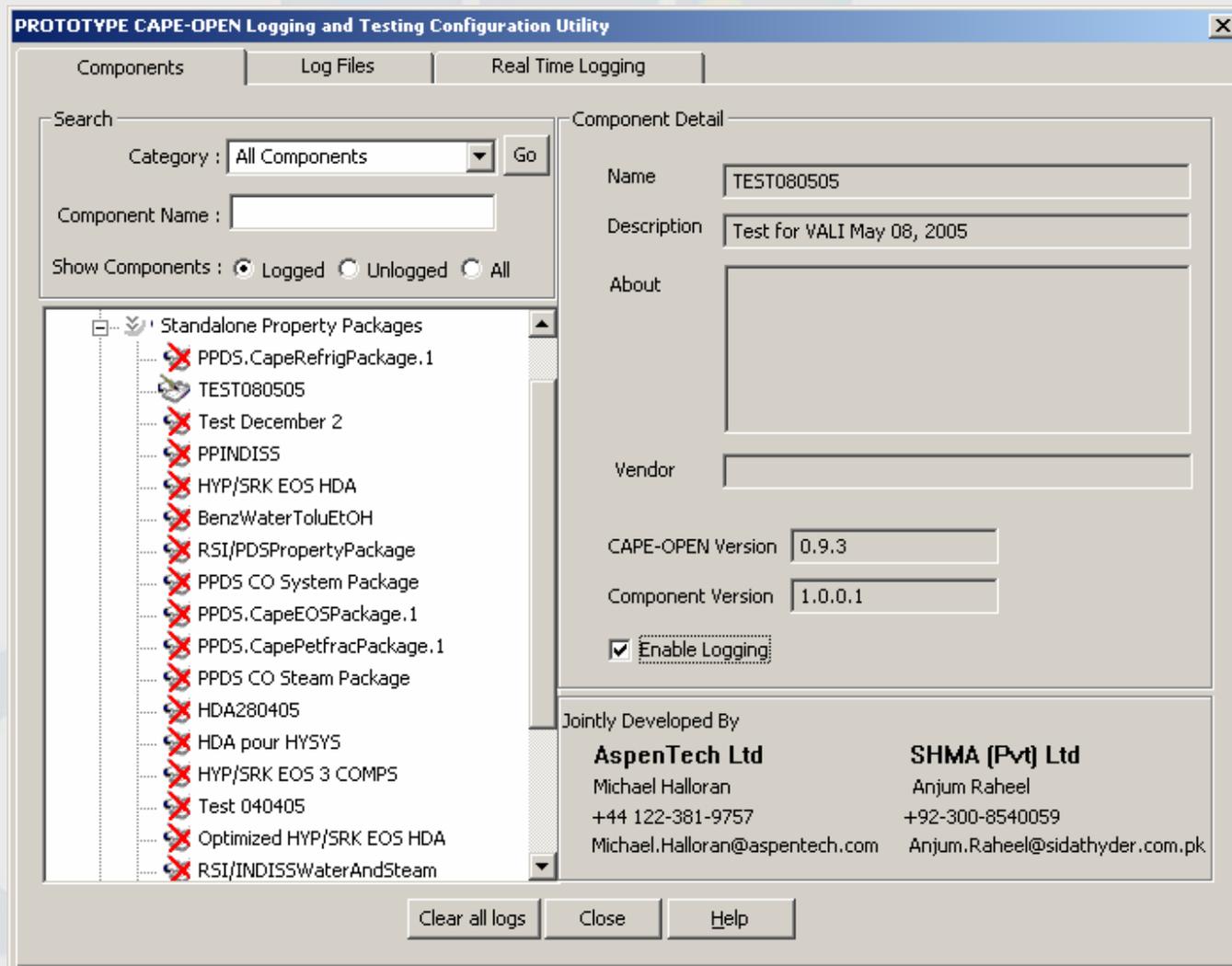
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Clear all logs | Close | Help

# Enable logging and close



# Or enable Property Package and close



# Status

- ▼ **Bugs fixing needed**
- ▼ **CO-LaN is conducting a review of what the Logger is currently able to do:**
  - ⇒ **Test with a number of PME and PMC of Logger behavior**
  - ⇒ **Test phase to end mid-July 2005**
- ▼ **MH develops technical specification for final product**
  - ⇒ **2 days CO-LaN consultancy already approved**
- ▼ **Production version available by end 2005.**