Errata and clarifications

Simulation Context COSE interface v1.0

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SUMMARY

This document describes clarifications and corrects errors in the CAPE-OPEN Simulation Context COSE interface specification version 1.0.

ACKNOWLEDGEMENTS

Many individuals and their organizations have contributed to this document.

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1.   Introduction

This document lists errata and clarifications that have been raised and added after the formal approval process for the CAPE-OPEN Simulation Context COSE interface specification version 1.0.

The intent is to clarify the interface specification where needed and to pinpoint what is missing in the specification document.

2.   Audience

This document is intended primarily for software developers who want to build CAPE-OPEN PMEs. It is also intended for the developers of other software components, such as Unit Operations and Reaction Packages, which make use of these interfaces.

This document is not intended for end-users of CAPE-OPEN software components or process simulation software.

3.   Clarifications

3.1   ICapeCOSEUtilities::NamedValueList (section 3.6.3)

Context 1:   The *ICapeCOSEUtilities* interface provides a list of *NamedValue* pairs. A *NamedValue* pair is a property of the COSE that can take different values for different COSEs. The value of the *NamedValue* pair may describe a capability of the COSE or other parameter required for the COSE. In the Simulation Context COSE Interface Specification, only one *NamedValue* pair is identified, ***FreeFORTRANChannel***.

Issue 1:   There is no mechanism for providing and documenting additional *NamedValue* pairs.

Recommendation 1:   The *NamedValue* list can serve as a mechanism to communicate PME specific capabilities such as support for CAPE-OPEN Thermo versions (1.0 or 1.1) to PMCs. Further, it was determined that the M&T SIG needs to be custodians of the names allowed in the *NamedValue* list. The following text will replace the current text in the description of the *NamedValueList* method:

SIGs and PME vendors can specify names to be included in the *NamedValues* list. The names of the *NamedValues* must be unique and the choice of values must be documented in either the CAPE-OPEN interface specifications or PME user's/programmer's manuals. Further, the PME vendor shall provide the M&T SIG the *NamedValue* pair name, the possible *NamedValue* values, and a description of its use. The M&T SIG shall maintain the list of names and allowed values to ensure that duplicate names are not used and that appropriate values are documented. The M&T SIG shall publish the *NamedValue* pair names and descriptions in a publicly-available internet web site provided by the CO-LaN.

Context 2:   PME vendors provide varying degrees of support for the *NamedValue* list in their implementation of the COSE Simulation Context interfaces. The COSE specification does not provide an explanation on what the return value should be if the PME's *NamedValue* list is empty.

Issue 2:   The return value for the *ICapeCOSEUtilities.NamedValueList* method for a PME that has an empty list of *NamedValues* is not specified.

Recommendation 2:   If the PME's *NamedValue* list is empty, the return value should be an empty *CapeArrayString*, that is, a string array that contains zero (0) elements. In the event

that a PME chooses not to provide a collection of *NamedValue* pairs, the PME should not implement the *ICapeCOSEUtilities* interface.

<u>Context 3:</u>	The COSE Simulation Context Interface Specification document contains typographical errors.
<u>Issue 3:</u>	A typographical error is present in each of the "Errors" sections for the method specification, where ECapeUnknown is misspelled.
<u>Recommendation 3:</u>	The typographical error shall be corrected and a revised specification issued.

4. Bibliography

1. "Thermodynamic and Physical Properties interface specification" v1.0, CO-LaN, 2002.