Methods & Tools SIG report

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Outline

- **Actions**
  - ➲ **Thermodynamic version support**
  - ➲ **Flowsheet monitoring**
  - ➲ **Common interface specification**
    - • **Collection**
    - • **Parameters**
  - ➲ **COSE Simulation Context interface**
- **Objectives next period**

Action: Thermo version support

♦ **Objective**

  ➲ **Provide a means for PMCs and PMEs to expose which version(s) of CAPE-OPEN thermodynamic interfaces are supported**

♦ **Progress: delivered**

  ➲ **Solution described in latest version of Unit Operation interface specification: refer to chapter 7**
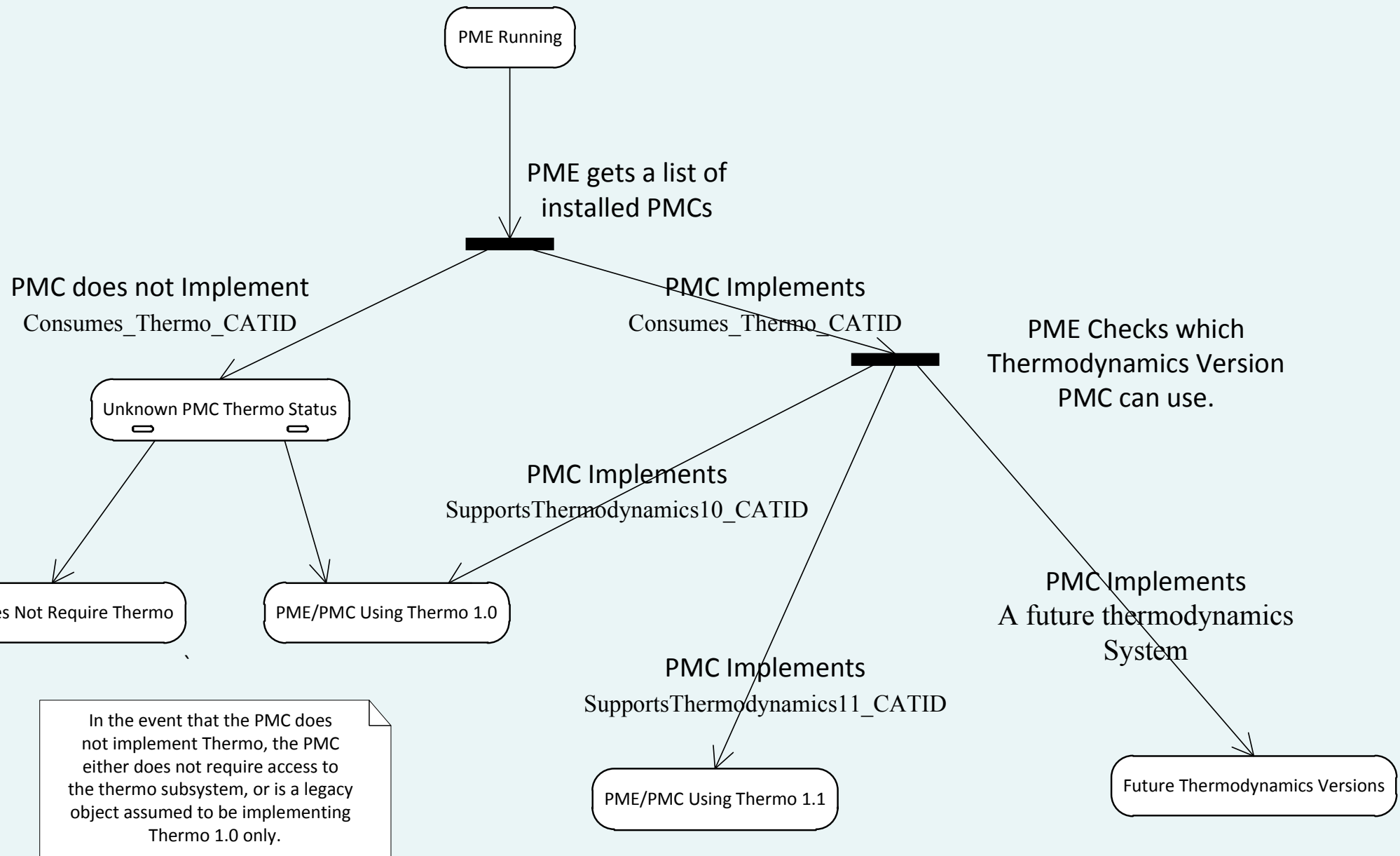
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Thermo version support

♦ **Context**

  ➲ **Useful for PME to know if a given PMC needs access to thermodynamic subsystem**

♦ **Solution**

  ➲ **Any PMC should be registered with following CATID**

   • **Consumes_Thermo_CATID: {4150C28A-EE06-403f-A871-87AFEC38A249}**

  ➲ **PMCs that consume thermodynamics will use the following two new CATIDs to indicate which version(s) of the thermodynamic interfaces are supported:**

   • **SupportsThermodynamics10_CATID: {0D562DC8-EA8E-4210-AB39-B66513C0CD09}**

   • **SupportsThermodynamics11_CATID: {4667023A-5A8E-4cca-AB6D-9D78C5112FED}**

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Thermo version support

PME Running

PME gets a list of
installed PMCs

PMC does not Implement
Consumes_Thermo_CATID

PMC Implements
Consumes_Thermo_CATID

PME Checks which
Thermodynamics Version
PMC can use.

Unknown PMC Thermo Status

PMC Implements
SupportsThermodynamics10_CATID

PMC Implements
A future thermodynamics
System

PMC Does Not Require Thermo

PME/PMC Using Thermo 1.0

PMC Implements
SupportsThermodynamics11_CATID

PME/PMC Using Thermo 1.1

Future Thermodynamics Versions

In the event that the PMC does
not implement Thermo, the PMC
either does not require access to
the thermo subsystem, or is a legacy
object assumed to be implementing
Thermo 1.0 only.

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Action: Flowsheet Monitoring

♦ **Objectives:**

➲ **Review, revise and publish the proposed draft for CAPE-OPEN Flowsheet Monitoring interfaces**

➲ **Provide demos**

♦ **Progress:**

➲ **Publicized in journal papers and conferences**

➲ **No formal review and publication yet**

➲ **Demos available from AmsterCHEM and US EPA**

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Action: Collection Common interface

- **Objective: Resolve issues with the Common interface specification**
- **Errata and Clarifications document drafted**
- **Addresses**
  - **A NULL Item pointer should be accompanied by an error condition**
  - **Collection lower index should be 1**

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Action: Parameters common interface

- **Objectives:**
  - ➲ **Publish recommendations for minimum level of parameter support by PMEs**
  - ➲ **Review dimensionality**
- **Progress:**
  - ➲ **Modifications brought to interface document**
  - ➲ **Errata and clarifications document drafted**
    - • **Addresses dimensionality for Boolean and Option parameters**
- **Next task:**
  - ➲ **complete revision of Parameters Common interface to eliminate ambiguities**

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Action: COSE Simulation Context interface

♦ **Objective:**

  ⊃ **remove ambiguities**

♦ **Progress:**

  ⊃ **Errata and Clarifications document drafted**

  ⊃ **Addresses Named Value list**

♦ **Future step:**

  ⊃ **Request For Comments and publication**

Objectives next period

- **Parameters Common Interface specification**
  - ➲ **Publish intermediate errata and clarifications document**
  - ➲ **Complete revision**
- **Publish errata and clarifications documents**
  - ➲ **Collection Common interface specification**
  - ➲ **COSE Simulation Context interface specification**
- **Flowsheet Monitoring**
  - ➲ **Conduct RFC**
  - ➲ **Discuss with software vendors plans for implementation**

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