Self certification proposal

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Background to Self Certification Proposal

- Proposal originating from 2014 AGM “Futures” session
- Need to quickly identify CO-compliant PMEs and PMCs
  - Of interest to modelers as well as to developers

- Who should define compliance and certify it?
  - Certification by CO-Lan is non workable
  - Proposal is self-certification by software vendors

- Dissemination
  - Certificates to be published on CO-LaN website

Certification process

- CO-LaN
  - Defines the required functionality for compliance level
  - Describes compliance tests

- Software vendor
  - Performs compliance tests
  - Indicates available CAPE-OPEN functionality
  - No obligation to document how it has been tested
  - Indicates to which version(s) of software certification applies

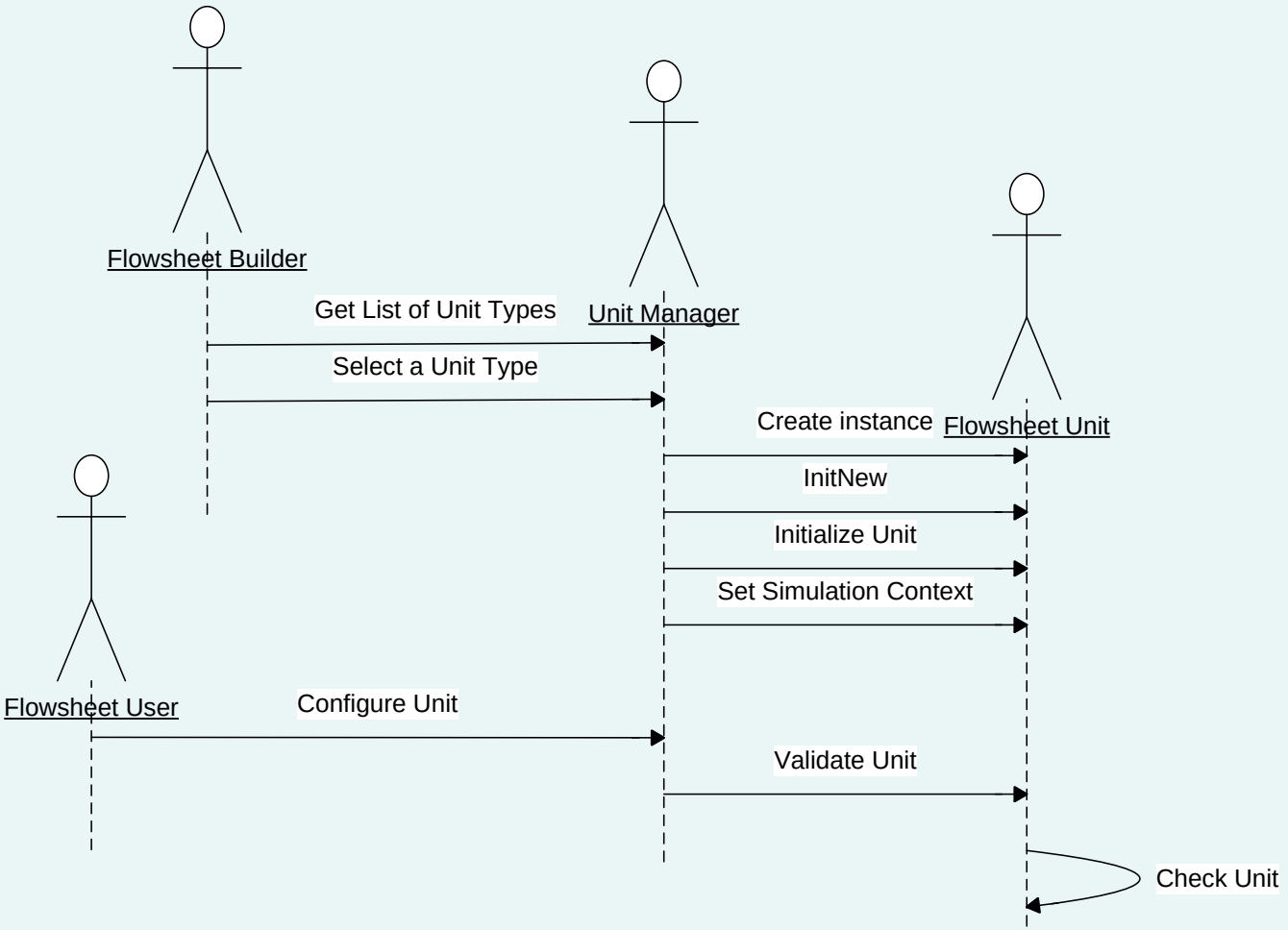
- CO-LaN publishes self-certification statements

Required functionality

- Extracted from CAPE-OPEN specifications
  - Mandatory/optional implementation of interfaces
  - Operability of methods per interface
    - Use Cases

- Scenarios of tests
  - Similar however slightly different for PMCs and PMEs
  - Aim at exercising as many methods as possible

UC-001: Add Unit to Flowsheet

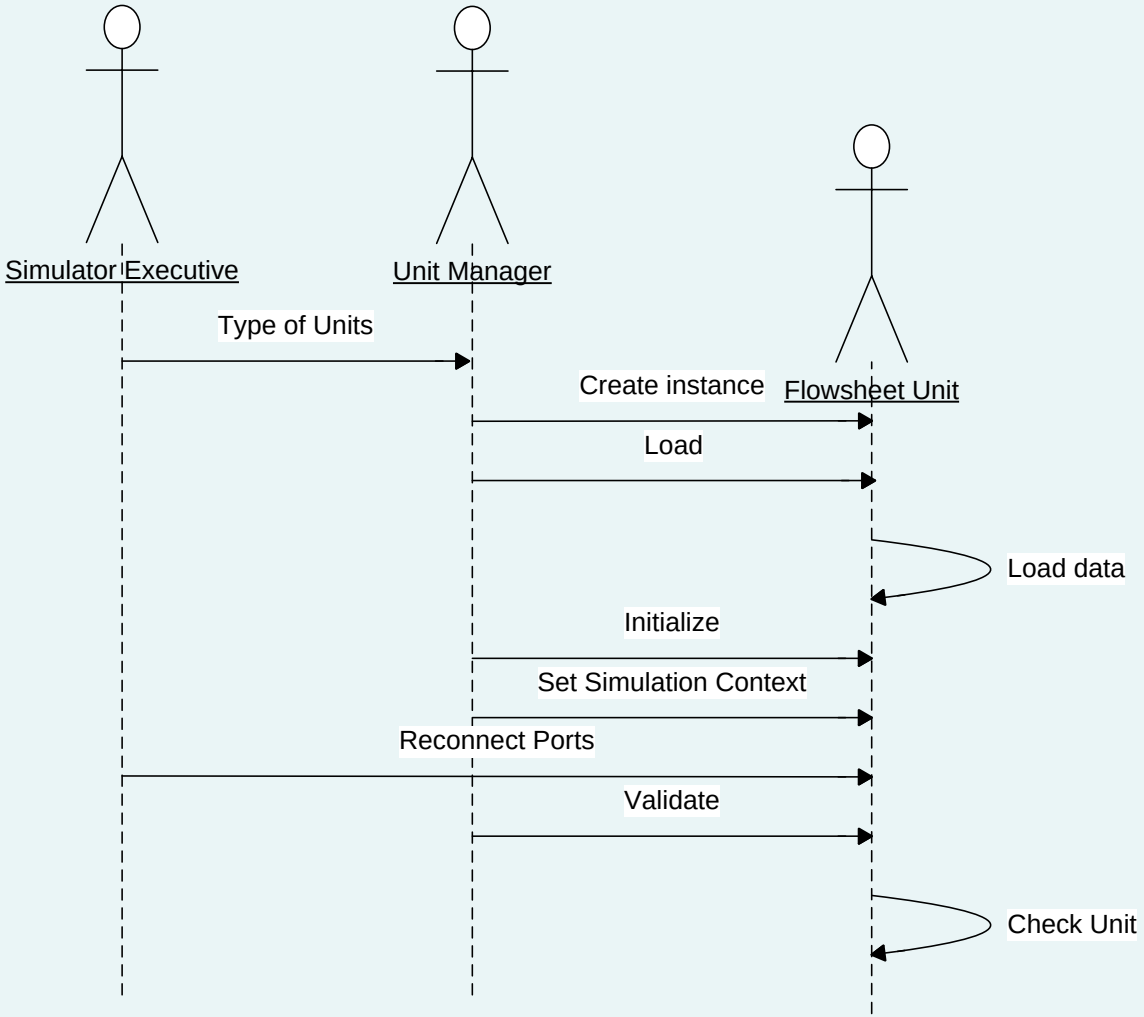


Scenario A-1

- Start from a Flowsheet with thermodynamics and compounds defined
  - Select a Unit Operation (UC-001)
  - Drop the Unit Operation in Flowsheet (UC-001)
  - Connect a material stream to each material Port (UC-002)
  - Edit the Unit Operation (UC-008)
  - Calculate the Unit Operation (UC-021)
  - Save the Flowsheet and exit the PME (UC-018)

- Checks how configuration, connection, validation, calculation and persistence are called.

UC-020: Retrieve Flowsheet



Scenario A-2

- Reload a Flowsheet containing a CAPE-OPEN UO
- Edit the Unit Operation (UC-008)
- Calculate (UC-021)
- Save and exit (UC-018)

- Checks how persistence is called, as well as configuration and calculation. Consistency with saved configuration checked: “connectivity data must be persisted by the simulator, including Port names.”

Publication of compliance

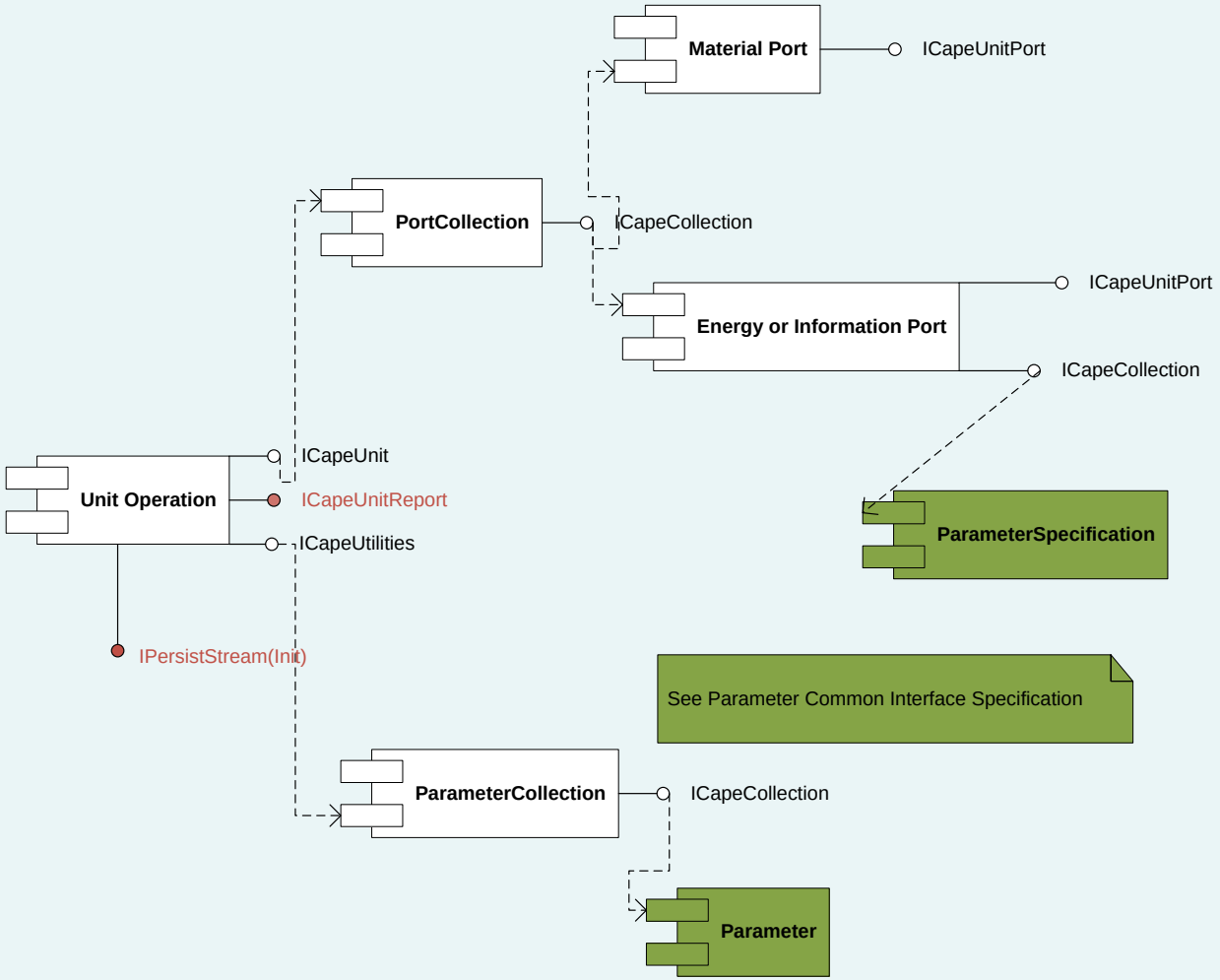
- In public area of CO-LaN website
  - Available to members as well as visitors
- PMEs and PMCs displayed in separate lists
  - Accessed from end-user viewpoint
- Each PME and PMC described in a separate page
  - Overall description and CAPE-OPEN functionality
    - Provided by software vendor
  - List of PMCs working in each PME
    - CO-LaN editing: based on functionality described
    - Ideally substantiated by videos and logs
      - Videos on CAPE-OPEN Youtube channel
  - Or List of PMEs in which a PMC is working

CAPE-OPEN functionality

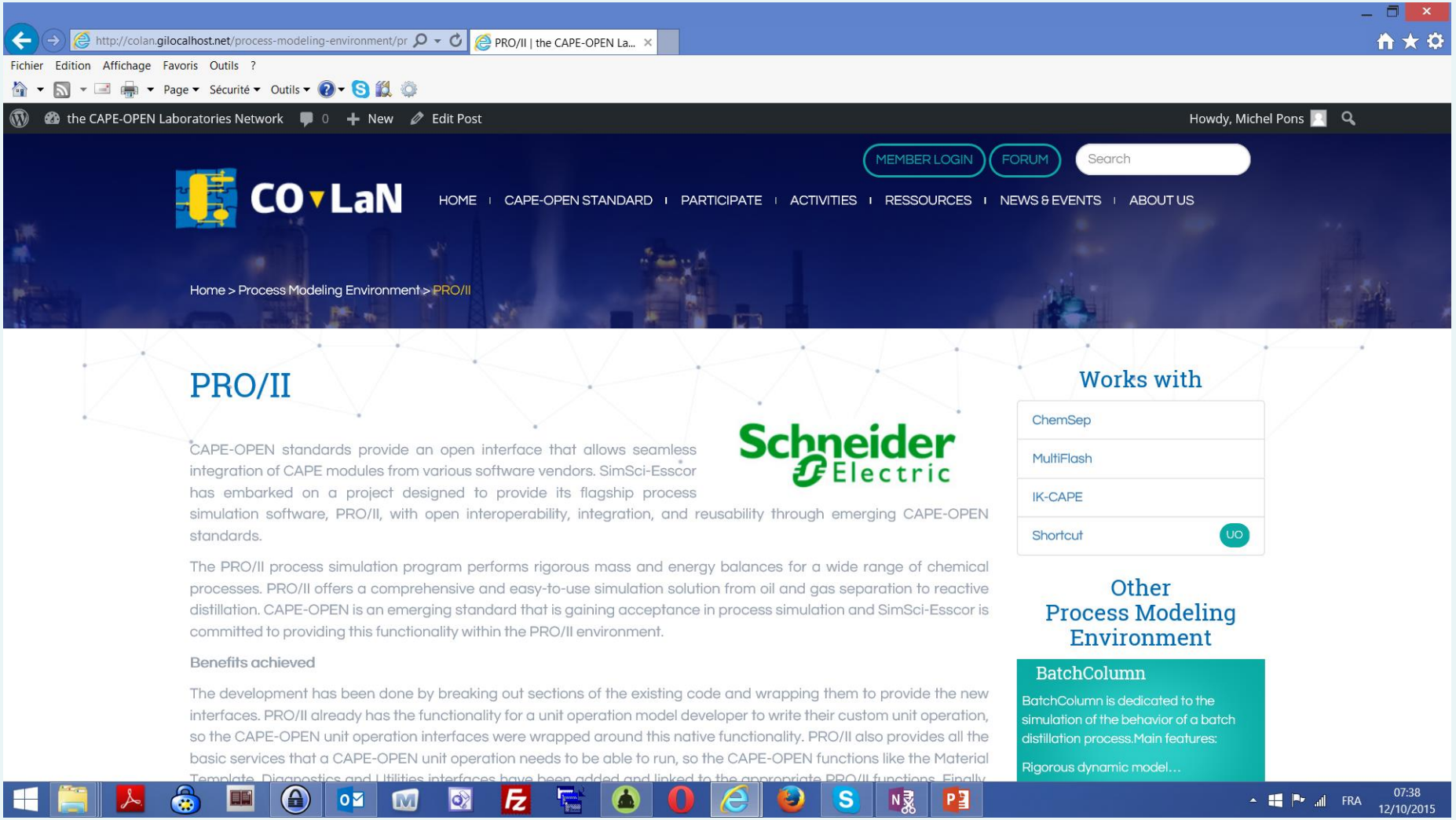
All objects are implementing Identification and Error Common Interfaces

Mandatory

Optional



Example: Page for PRO/II



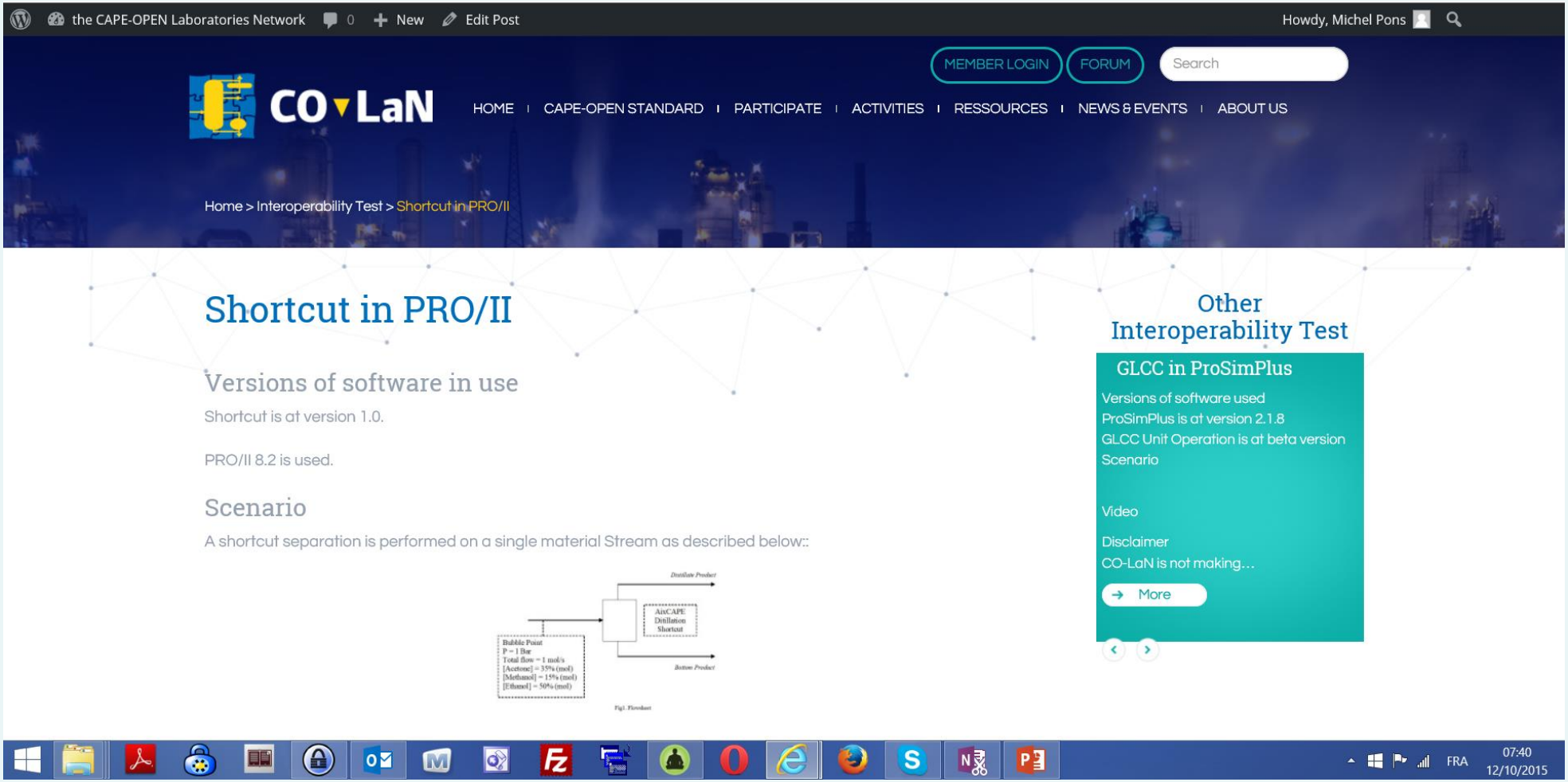
Example: page for PRO/II

- If self-certified by Schneider Electric, will carry a statement such as:

- Schneider Electric has certified that PRO/II from version 9.3 upwards has the following CAPE-OPEN functionality:
  - CAPE-OPEN Unit Operation socket
  - CAPE-OPEN Thermodynamics 1.0 socket
  - CAPE-OPEN Thermodynamics 1.1 socket

- More details may be provided under each item

Example of interoperability test



What if problems arise?

- Interoperability issues raised by CO-LaN or 3rd parties
- Compliance statement will be removed from CO-LaN website if:
  - An issue has been discovered and not resolved within an appropriate period of time
    - Period of time to be defined with software vendor
      - At least 3 months, no more than one year
      - During this period the software component will still be listed as compliant.
    - CO-LaN will not publish any information on the nature of the identified issues without permission of the respective software vendors.

CO-LaN services

- Available to:
  - Conduct the compliancy tests for self-certification
  - Help identify and resolve problems between respective software vendors.
    - Ideally any identified problems would be resolved between the respective software vendors without CO-LaN involvement.
    - If CO-LaN assistance is requested then CO-LaN (or a consultant providing services to CO-LaN) would need to be provided with the appropriate licences from the relevant software vendors.
- CO-LaN will charge for its services.

Thank you for your attention!

Views and comments welcome