

EDISON UI Scenario

EDISON CFD

UI (Information Architecture) Scenario Focused on Workflow Definition (v2.2)

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 - Simulations > "New Sim..."
 - [CS2] Search and reuse simulation
 - Simulations > Search > "Reuse this"
 - [CS3] Navigate and reuse simulation
 - Simulations > Navigate > "Reuse this"
- [TOP] Contents
 - [CS4] Search tool and creating
 - Contents > Simulation Tool > Search > "New Sim..."
 - [CS4] Navigate tool and creating
 - Contents > Simulation Tool > Navigate > "New Sim..."



Vocabulary

Case (or simulation case)

A simulation instance which is to be executed in resource with a specific parameter set.

Contents

Digital artifacts contained, managed, and provided in EDISON portal, including simulation tools, documents, online presentations, lecture and seminar notes, tutorials, manuals, and so on.

Model (or structure model)

Means a structure model that is to be translated into mesh, simulated and analyzed. For example, in CFD, there are 2D airfoils, 3D cylinders, and so on.

Model Type

There are popular structure model types such as 2D airfoil, 3D airfoil, 2D cylinder, 3D cylinder, and so on.

Postprocessor

Software tools to modify or visualize the simulation result. In most cases, a postprocessor refers a visualization tool.

Preprocessor

A preprocessor is a software tool to prepare simulation input files, in most cases of CFD – including mesh files. Most of preprocessors are modeling tools and mesh generators in CFD case.

Simulation

A combination of a simulation workflow, simulation cases, and results. It is the unit for a single 'simulation request' action.

Simulation Request

A message to EDISON middleware which envelopes a set of simulation cases, triggered (sent) by a button click in UI.

Simulation Tool

A simulation tool is a software to perform the simulation case(s), called as a analyzer or a solver.

Simulation workflow

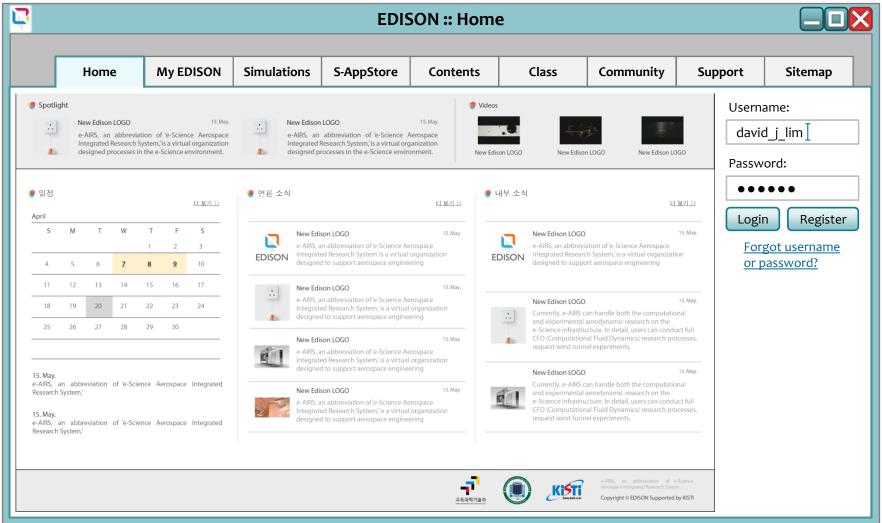
- A template for simulation case which can be either the combination of 'pre-simtool-post', or 'mesh-simtool-post'.
- In any case above, a simulation workflow does not have parameter set



OVERALL INFORMATION ARCHITECTURE

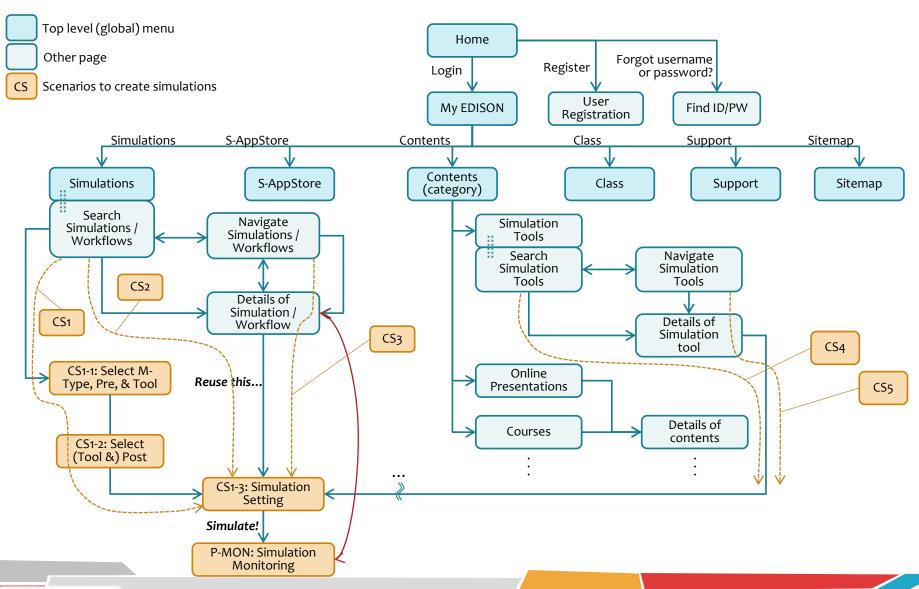


Home Page [P-HOM]: Top Menus





Overall Information Architecture





Menu Structure (1)

- Top (Tab) Menus are global
- Home (Home page) [P-HOM]
 - Event calendar, News, Notice(Announcement), Featured articles and contents, and so on.
 - Login → My EDISON [P-MED]
 - Register → User Registration [P-REG]
 - Forgot id/pw → Find ID / PW [P-FND]
- My EDISON [P-MED]
 - ... to be designed (basic concept is the same as former version)
 - Portlets are provided to bring information customized to the user
- Simulations [P-SIM]
 - New simulation → Create Simulation [CS1-1]
 - Search simulations/workflows
 - Navigate simulations/workflows

Details of simulation / workflow [P-DTS]/[P-DTW]

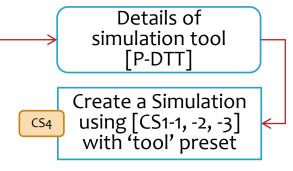
Reuse sim/workflow

by modifying spec [CS1-3]



Menu Structure (2)

- S-AppStore (Science AppStore) [P-SAP]
 - ... to be designed
 - Tool installation
 - Tool development
 - Tool management
 - ...
- Contents [P-CON]
 - Simulation Tools
 - Search simulation tools
 - Navigate simulation tools
 - Documents
 - Online presentations
 - ...



Menu Structure (3)

- ... to be designed
- Class [P-CLS]
- Community [P-CMT]
- Support [P-SPT]
- Sitemap [P-MAP]

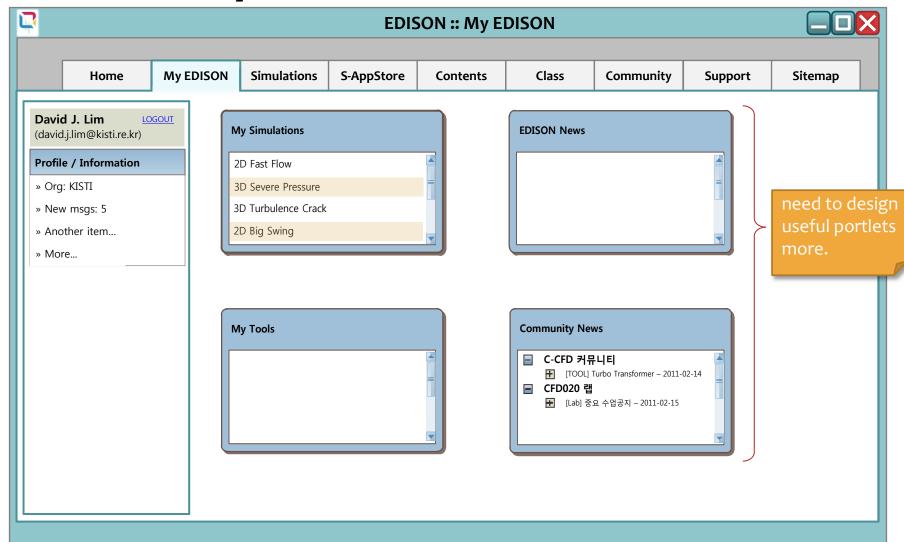


Home > Login > My EDISON My EDISON >

[TOP] MY EDISON [P-MED]



My EDISON [P-MED]





Simulations >

[TOP] SIMULATIONS



Scenarios in Simulations menu

- Clicking 'Simulations' tab menu leads to 'Search Simulations [P-SIM]'
- [CS1] Creating Simulation: 'New Sim...'
 - ▶ Simulations → Click 'New Sim...' link
- [CS2] Search & Reuse Simulation
 - ▶ Search Simulations → Simulation Details → Simulation Monitoring → Postprocessing
- [CS3] Navigate & Reuse Simulation
 - Navigate Simulations → Simulation Details →
 Simulation Monitoring → Postprocessing

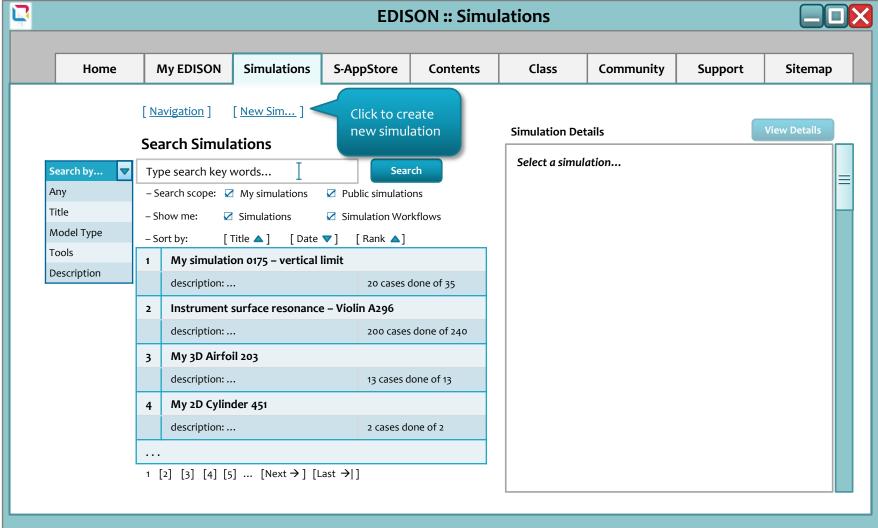


Simulations tab > "New Sim..." button (command)

[CS1] CREATING SIMULATION: SIMULATIONS > "NEW SIM..."

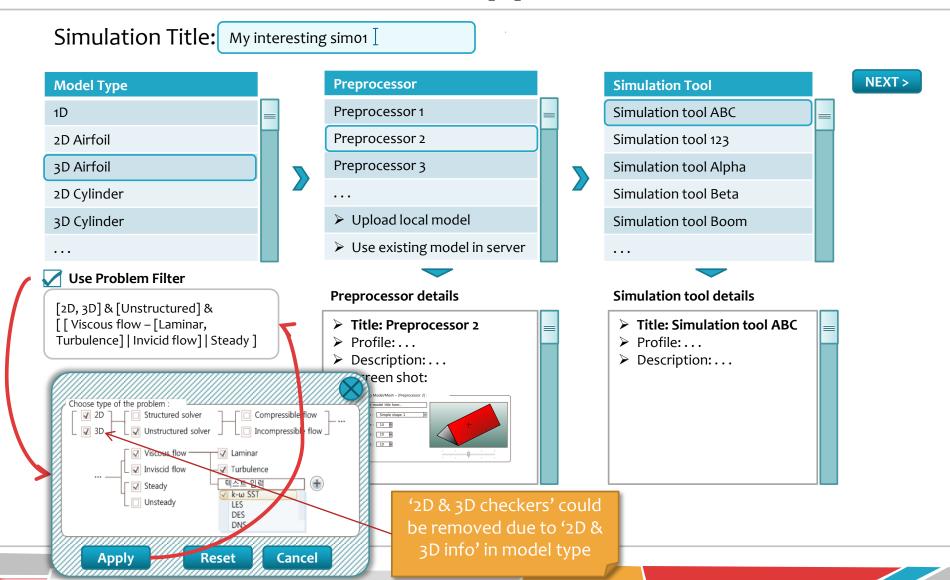


Simulations [P-SIM] = Search Simulations

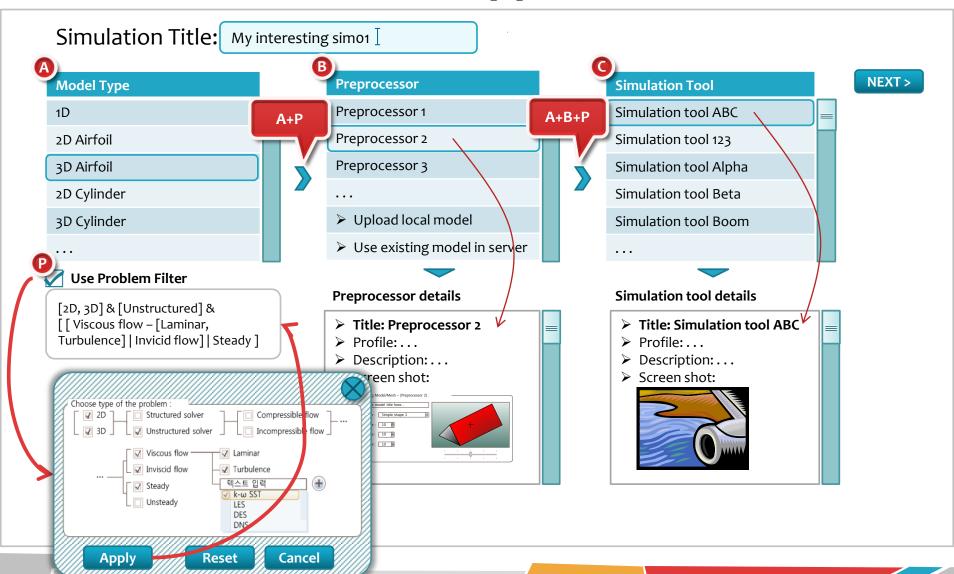




CS1-1: Select M-Type & Pre & Tool



CS1-1: Select M-Type & Pre & Tool



CS1-2: Select (Tool &) Post

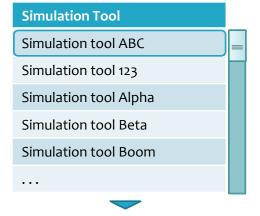
Title: My interesting simo1

< PREV

- ➤ Model type: 3D Airfoil
- > Preprocessor: Preprocessor 2
- > Problem filter: yes

[2D, 3D] & [Unstructured] & [[Viscous flow -[Laminar, Turbulence] | Invicid flow] | Steady]

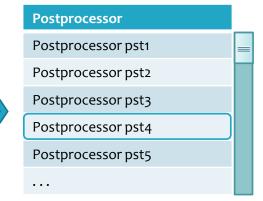
[CS1-2] pages on 1 page?



Simulation tool details

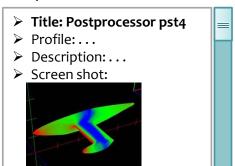
- > Title: Simulation tool ABC
- ➤ Profile:...
- > Description:...
- Screen shot:





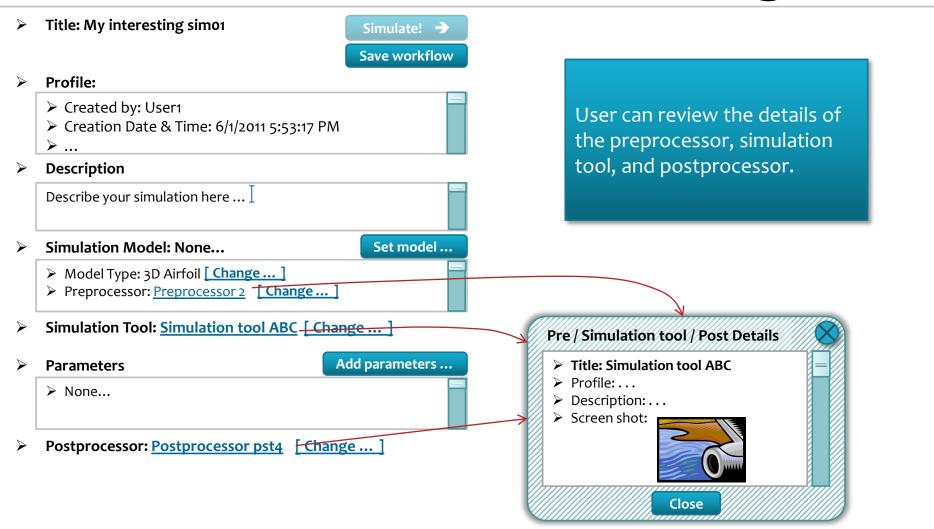
NEXT >

Postprocessor details



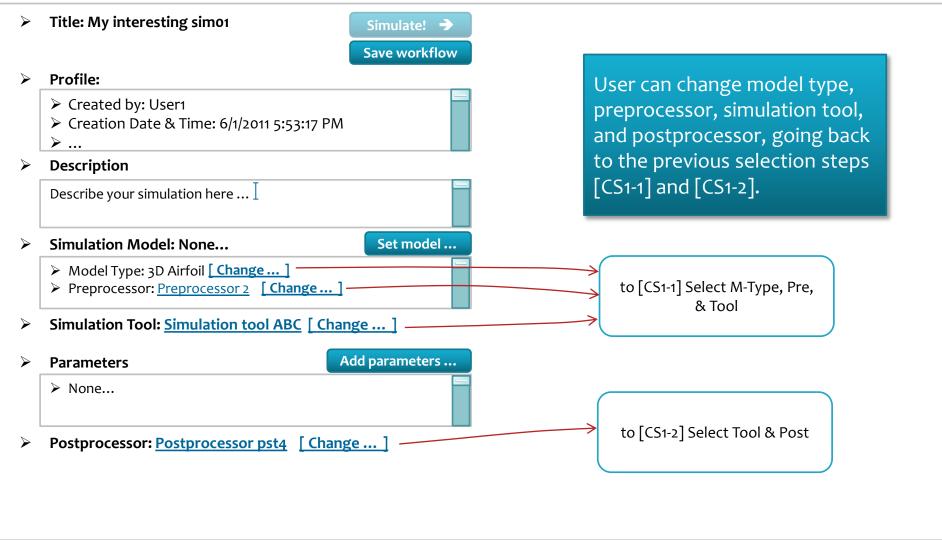


CS1-3: Simulation Setting



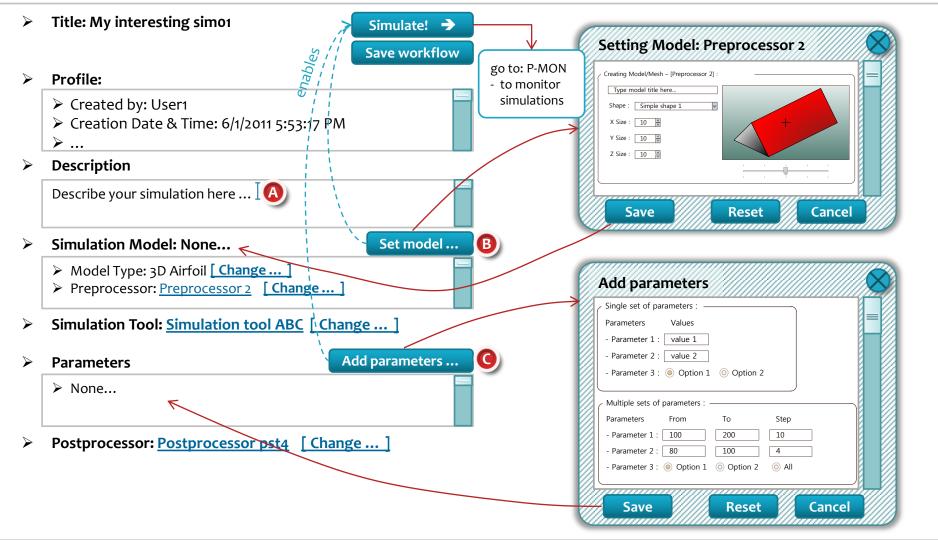


CS1-3: Simulation Setting



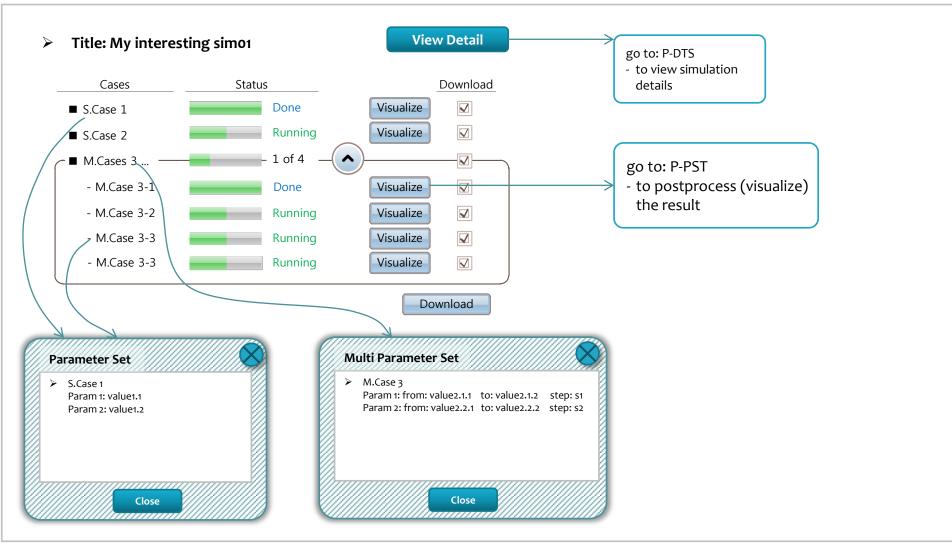


CS1-3: Simulation Setting





Simulation Monitoring [P-MON]

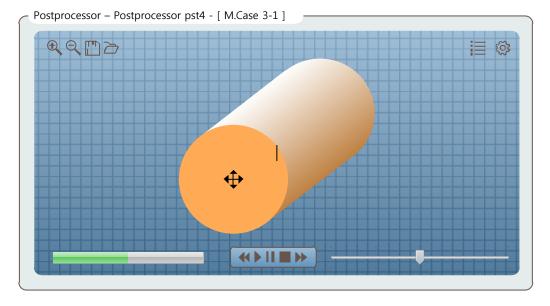




Postprocessing [P-PST]

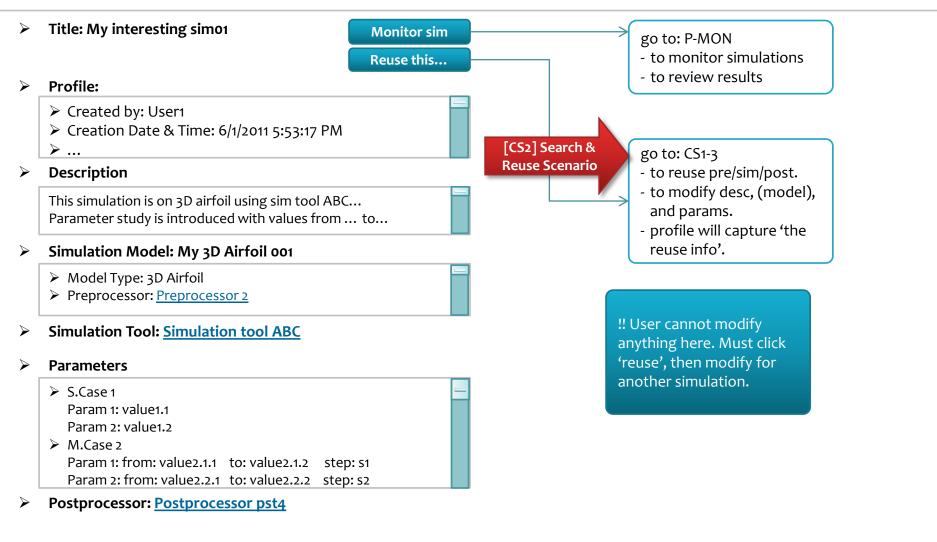
> Title: M.Case 3-1 of My interesting simo1







Simulation Details [P-DTS/DTW]



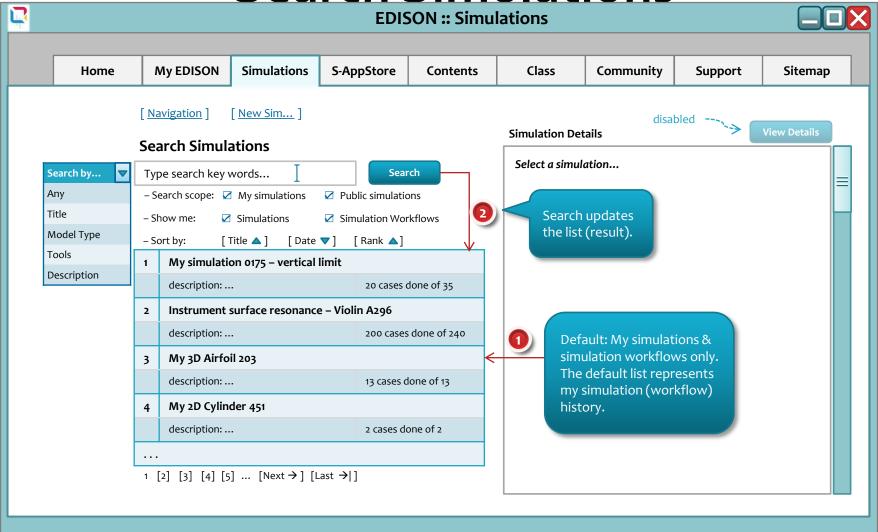


<u>Search</u> simulations → Simulation details → Simulation monitoring → Postprocessing

[CS₂] SEARCH & REUSE SIMULATION

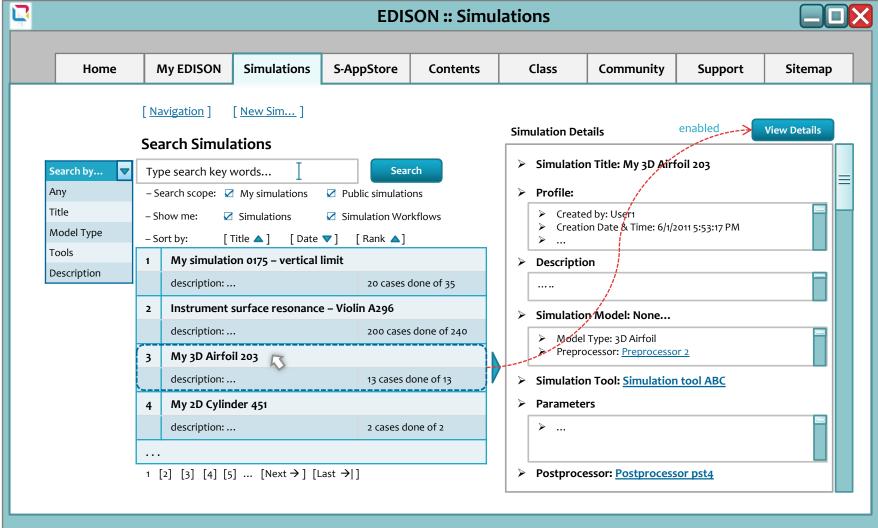


Simulations [P-SIM] (1) = Search Simulations



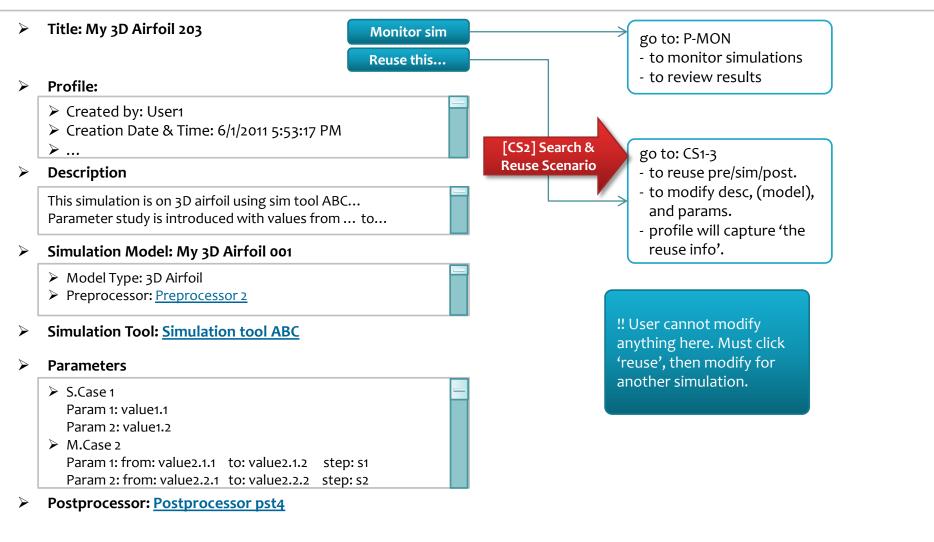


Simulations [P-SIM] (2) = Search Simulations



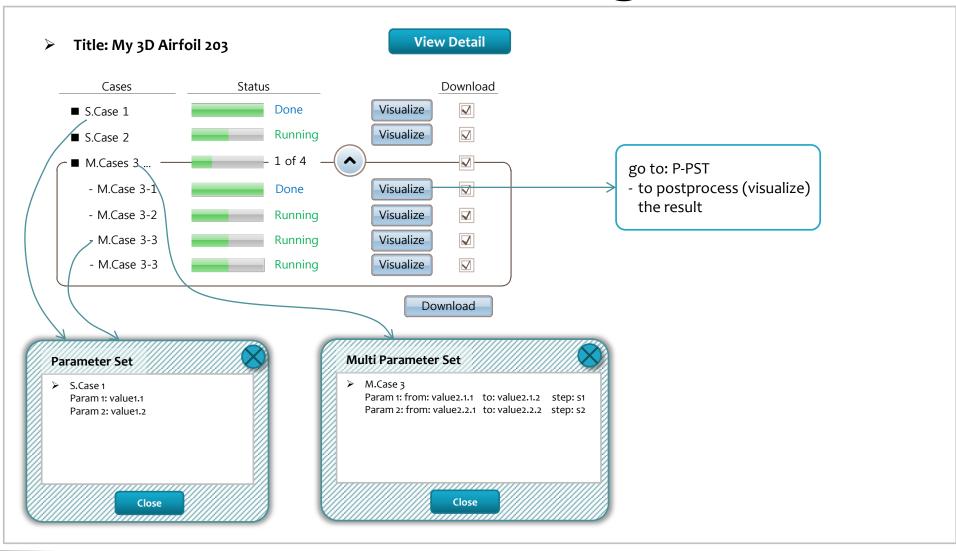


Simulation Details [P-DTS/DTW]





Simulation Monitoring [P-MON]

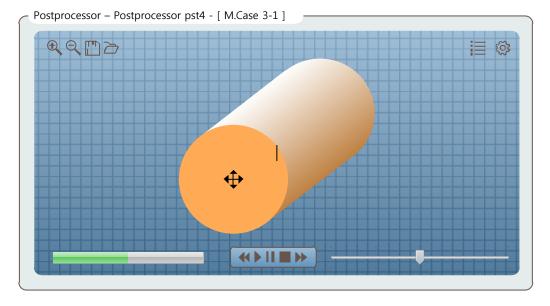




Postprocessing [P-PST]

> Title: M.Case 3-1 of My 3D Airfoil 203





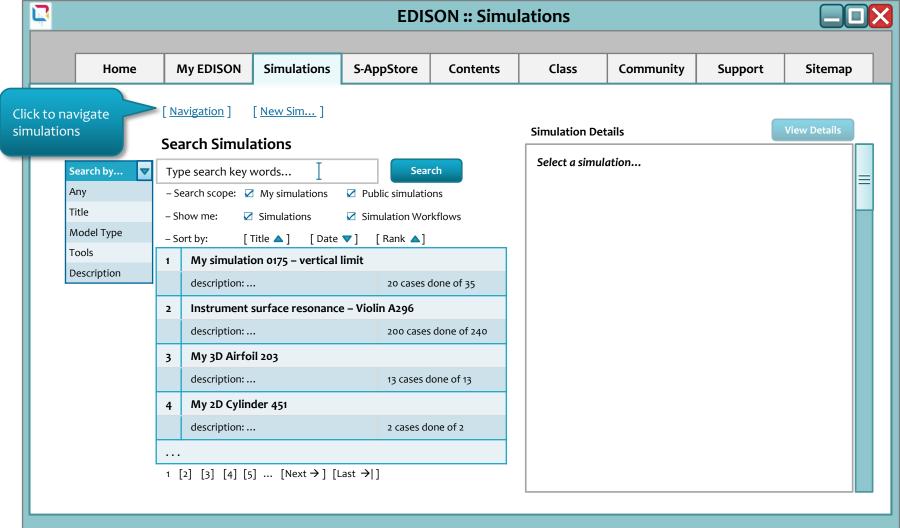


Navigate simulations → Simulation details → Simulation monitoring → Postprocessing

[CS₃] NAVIGATE & REUSE SIMULATION

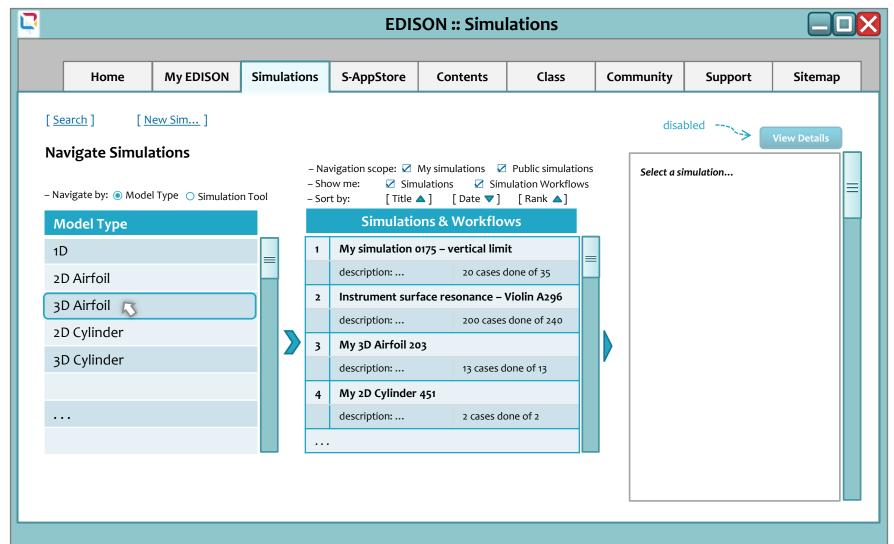


Simulations [P-SIM] = Search Simulations



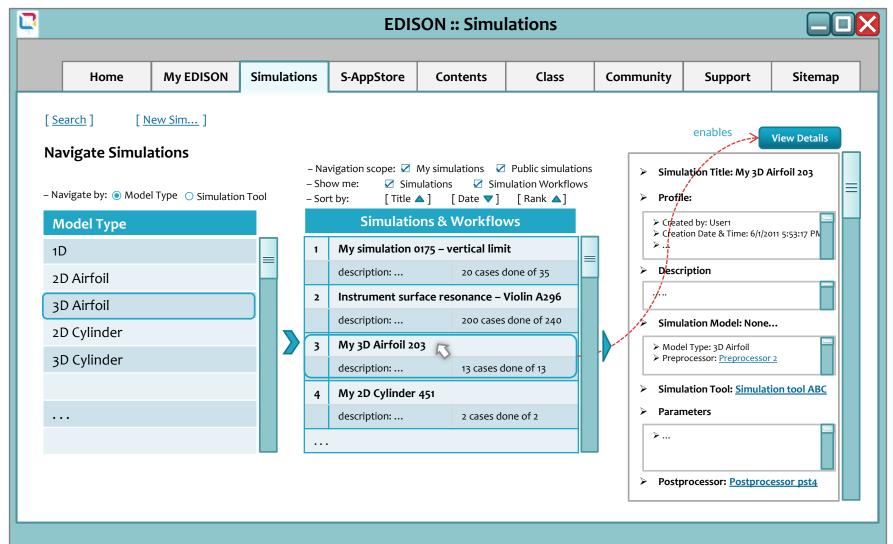


Navigate Simulations [P-NVS] (1)





Navigate Simulations [P-NVS] (2)





[P-DTS/DTW], [P-MON], & [P-PST]

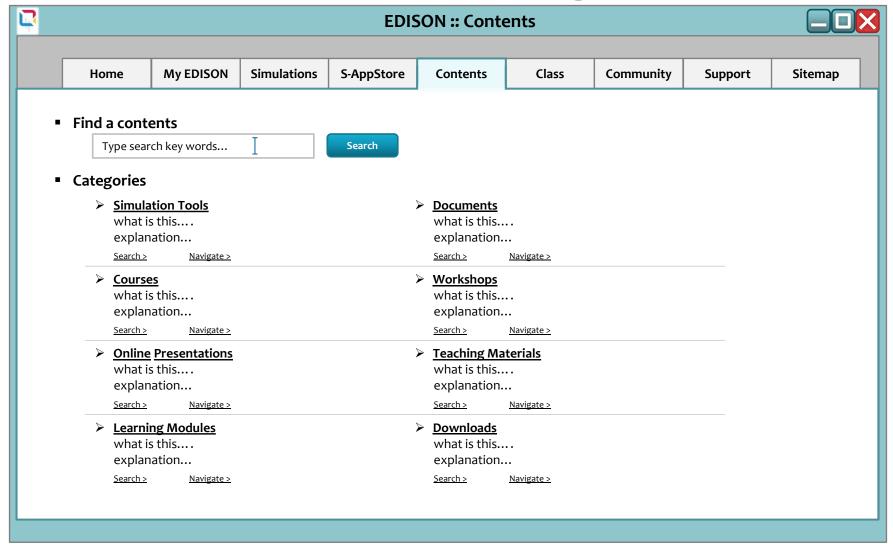
- Rest of [CS3] is the same as '[CS2] search & reuse'
 - Simulation (or workflow) Details [P-DTS/DTW]
 - Simulation monitoring [P-MON]
 - Postprocessing (visualization) [P-PST]



[TOP] CONTENTS



Contents (Category)





Scenarios of Creating Simulations from Contents (Simulation Tools)

- [CS4] Search Tool & Creating Sim
 - Search Simulations Tools > Simulation Tool Details > "New Sim..."
- [CS5] Navigate Tool & Creating Sim
 - Navigate Simulations Tools > Simulation Tool Details > "New Sim..."



Contents tab (> Simulation Tools)

- > Search Simulation Tools
- > Simulation Tool 'Details' > "New Sim..." button (command)

[CS4] SEARCH TOOL & CREATING SIM



Simulation Tools [P-TOO] = Search Tools



Simulation Tool Details [P-DTT]



[CS1-1, -2, -3], [P-MON], ...

- When clicking 'New Sim...' of [P-DTT]
- Rest of [CS4] is followed by
 - Creating Simulation [CS1-1, -2, -3]
 - Simulation Tool is preset (highlighted)
 - Model Type, Pre, and Post are filtered by Simulation Tool
 - ▶ Problem Filter (... to be elaborated more)
 - Simulation Monitoring [P-MON]
 - Postprocessing [P-PST]
 - Simulation Details [P-DTS]



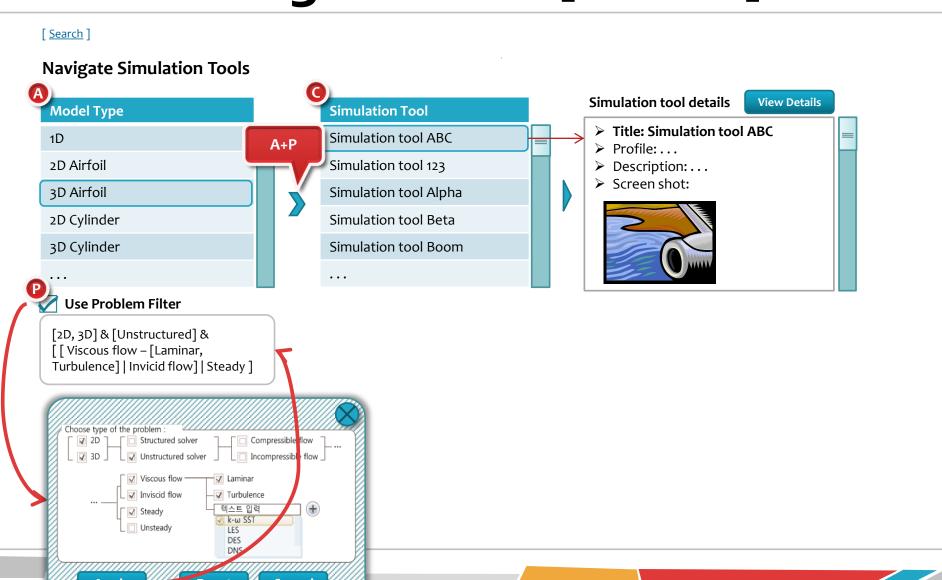
Contents tab (> Simulation Tools)

- > Navigate Simulation Tools
- > Simulation Tool 'Details' > "New Sim..." button (command)

[CS₅] NAVIGATE TOOL & CREATING SIM



Navigate Tools [P-NVT]



[P-DTT], [CS1-1, -2, -3], [P-MON], ...

- When clicking 'View Details' of [P-NVT]
- Rest of [CS5] is followed by
 - Simulation Tool Details [P-DTT]
 - Creating Simulation [CS1-1, -2, -3]
 - Simulation Tool is preset (highlighted)
 - Model Type, Pre, and Post are filtered by Simulation Tool
 - can preset Model Type using info from [P-NVT]
 - ▶ Problem Filter (... to be elaborated more)
 - Simulation Monitoring [P-MON]
 - Postprocessing [P-PST]
 - Simulation Details [P-DTS]

