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NUS National University of Singapore

A Port Digital Twin Software:

SINGAPort Studio v1.0 and Toolkit

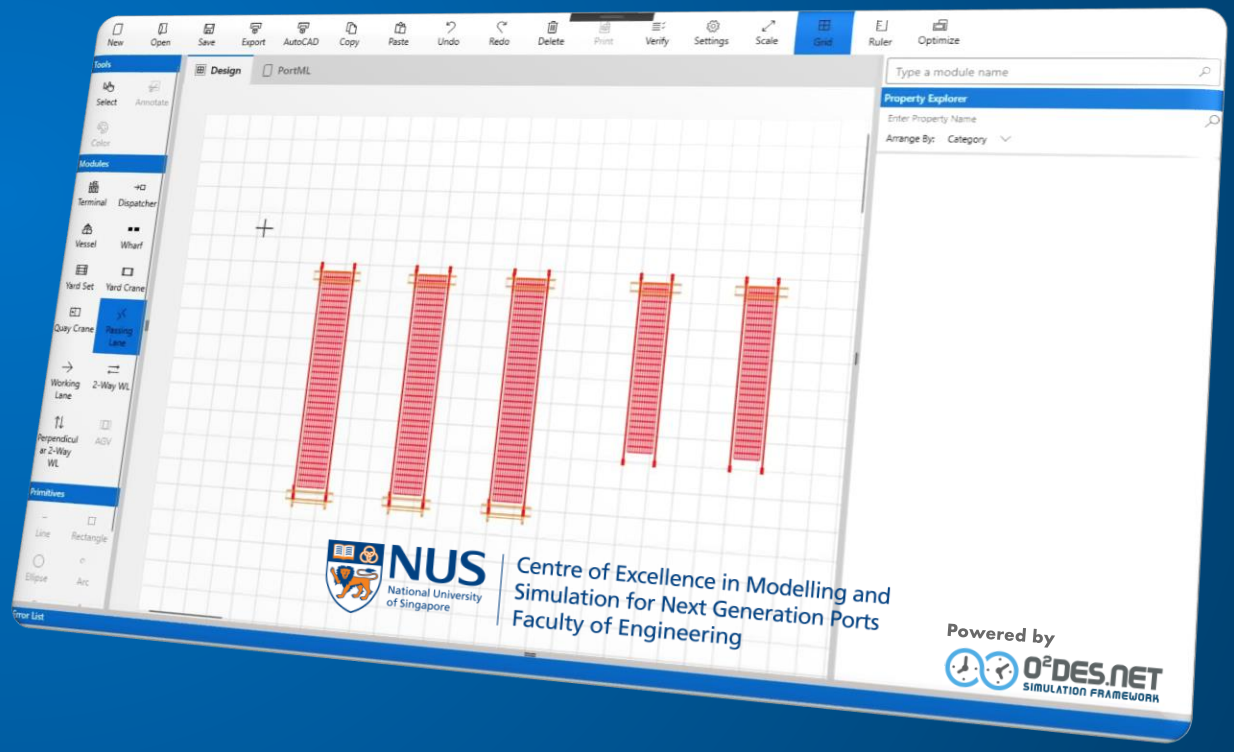
Designer and editor for next-generation analytical port simulation.

Integrated with PortML.

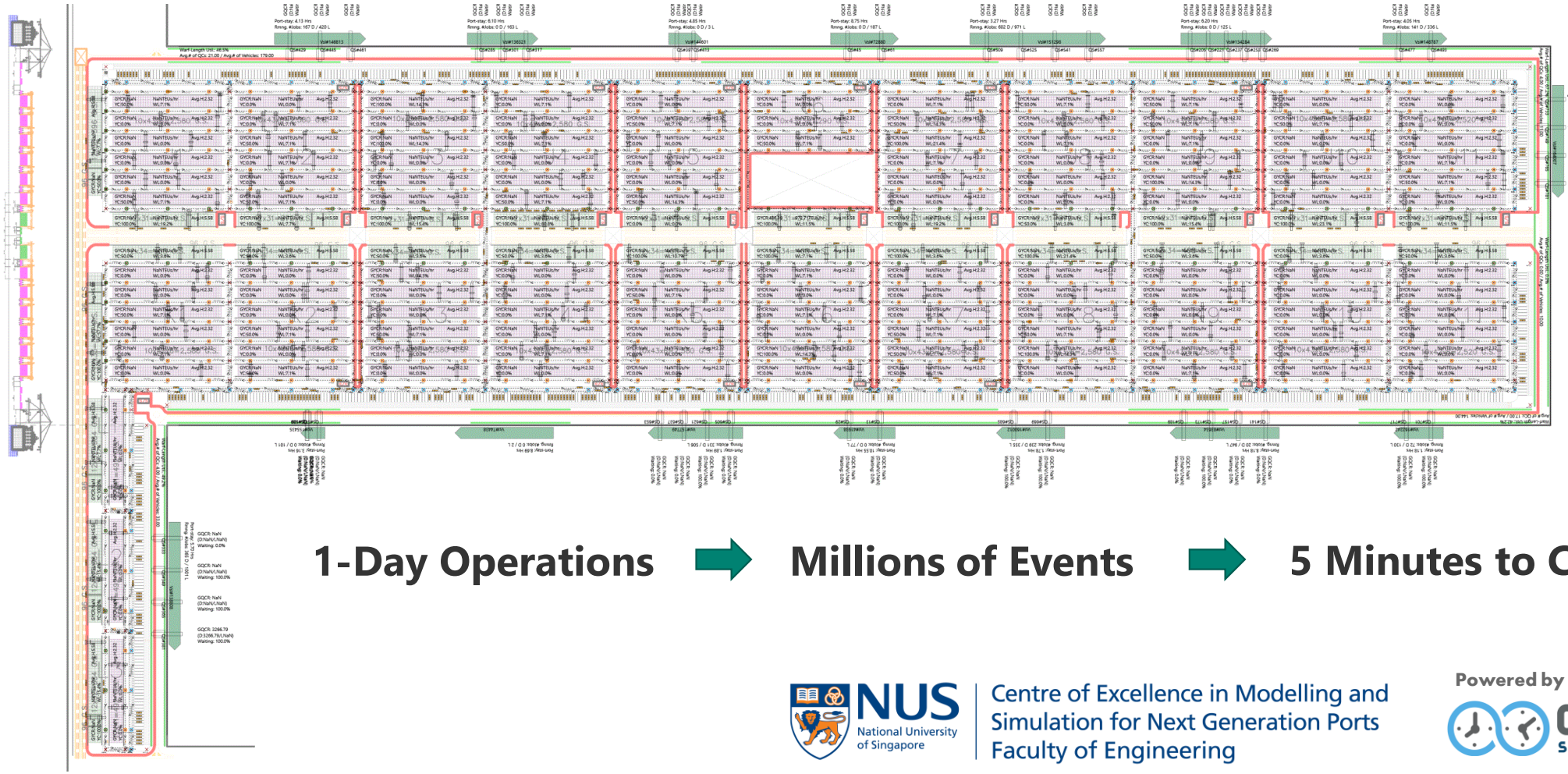
Scalability

Fidelity

Efficiency



Scalability – SINGAPort Studio



1-Day Operations ➡ **Millions of Events** ➡ **5 Minutes to Compute**

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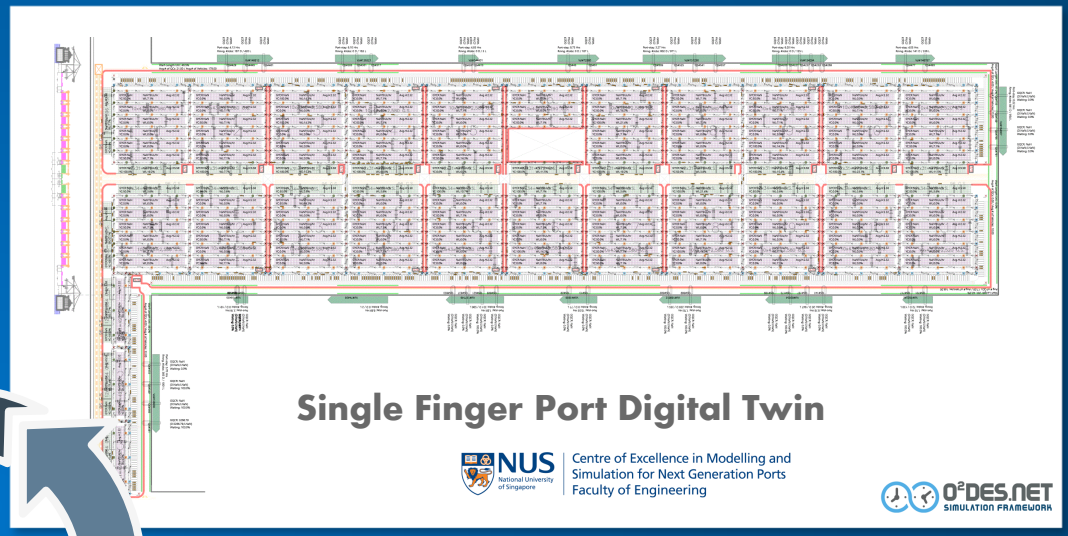
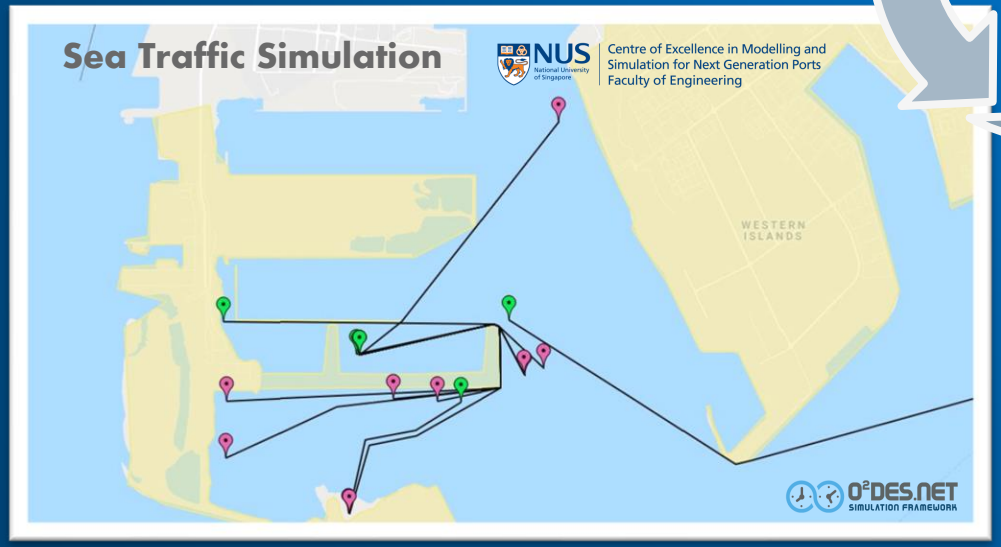
Faculty of Engineering

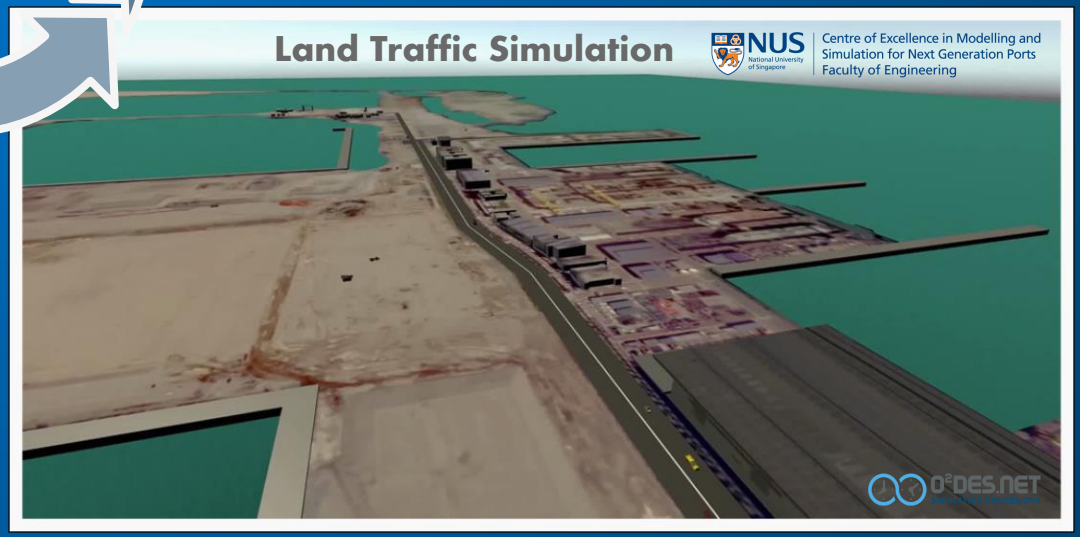
Powered by O²DES.NET SIMULATION FRAMEWORK

Scalability – SINGAPort Studio



Future Plan: High-Level Architecture / Cloud-Native Technologies





Fidelity – SINGAPort Studio

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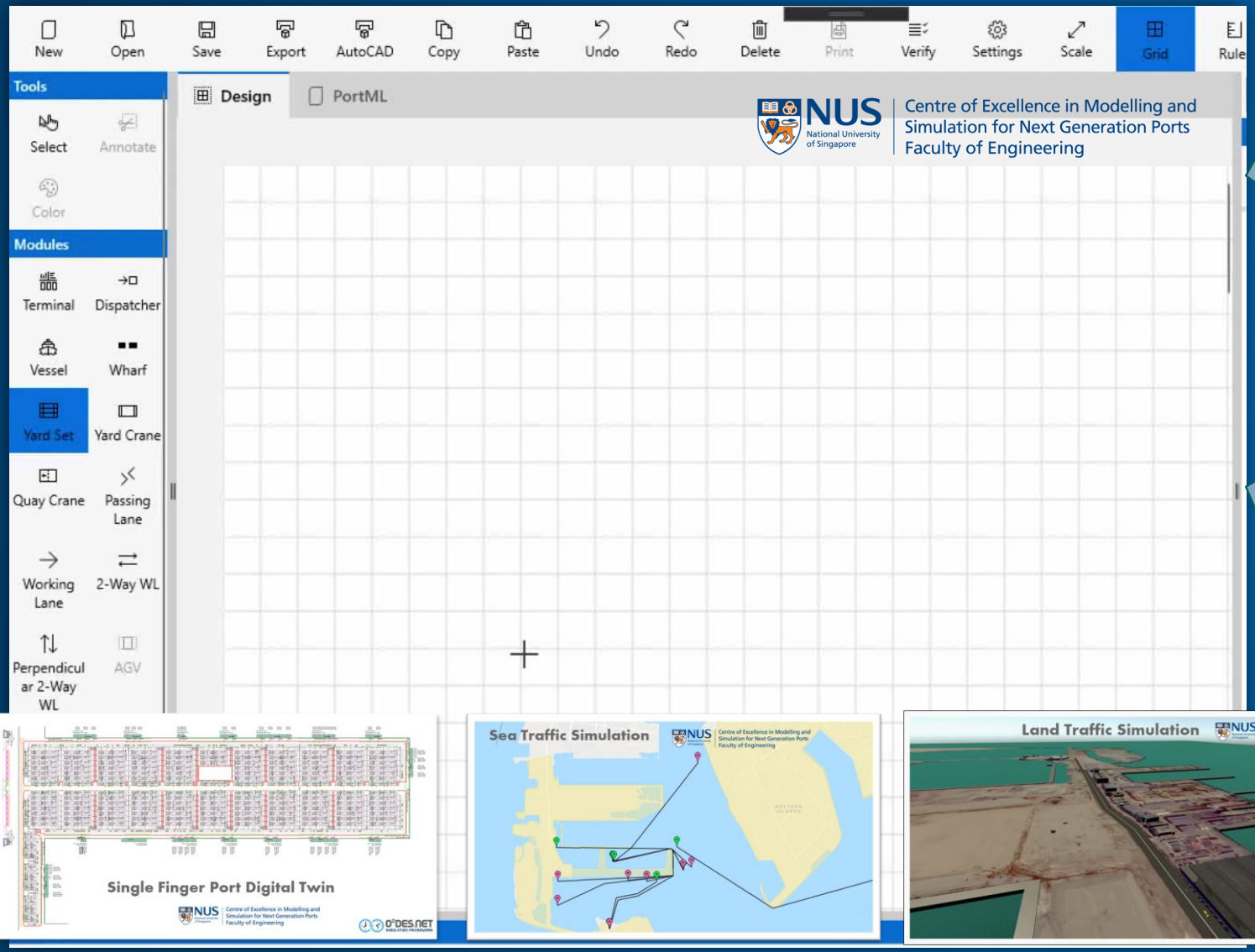
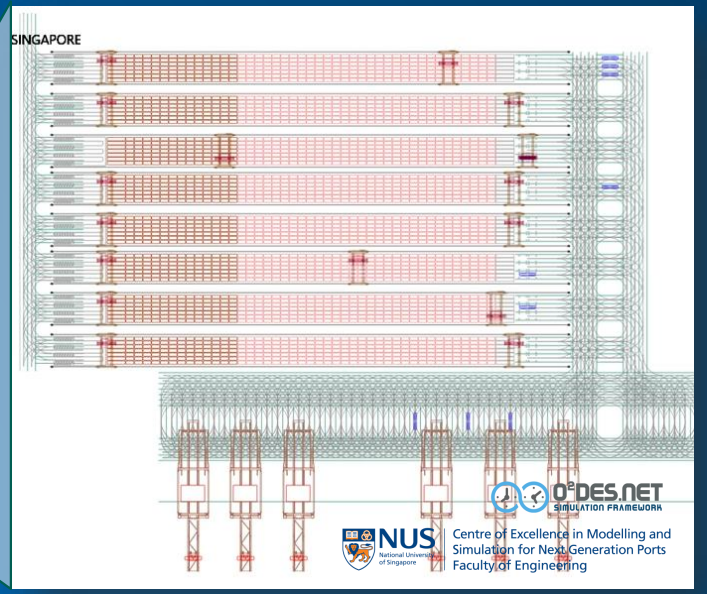
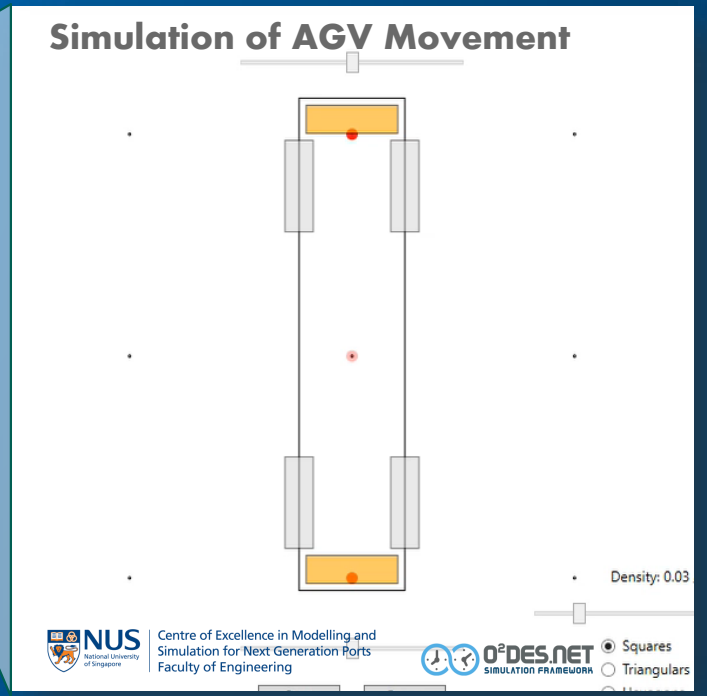






Fidelity – SINGAPort Studio

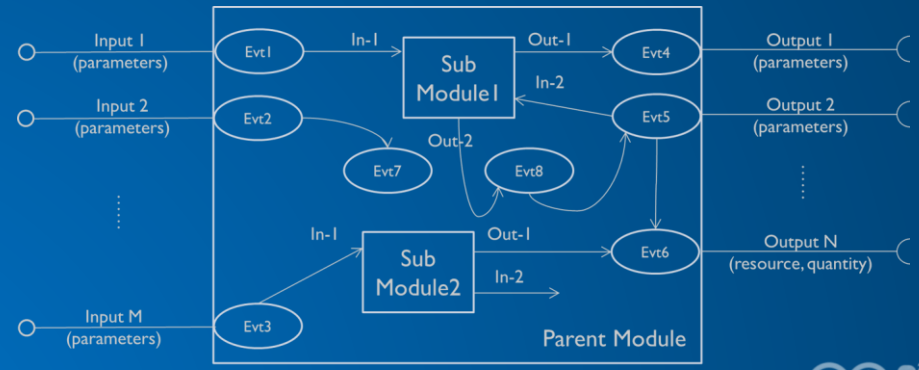
System Level

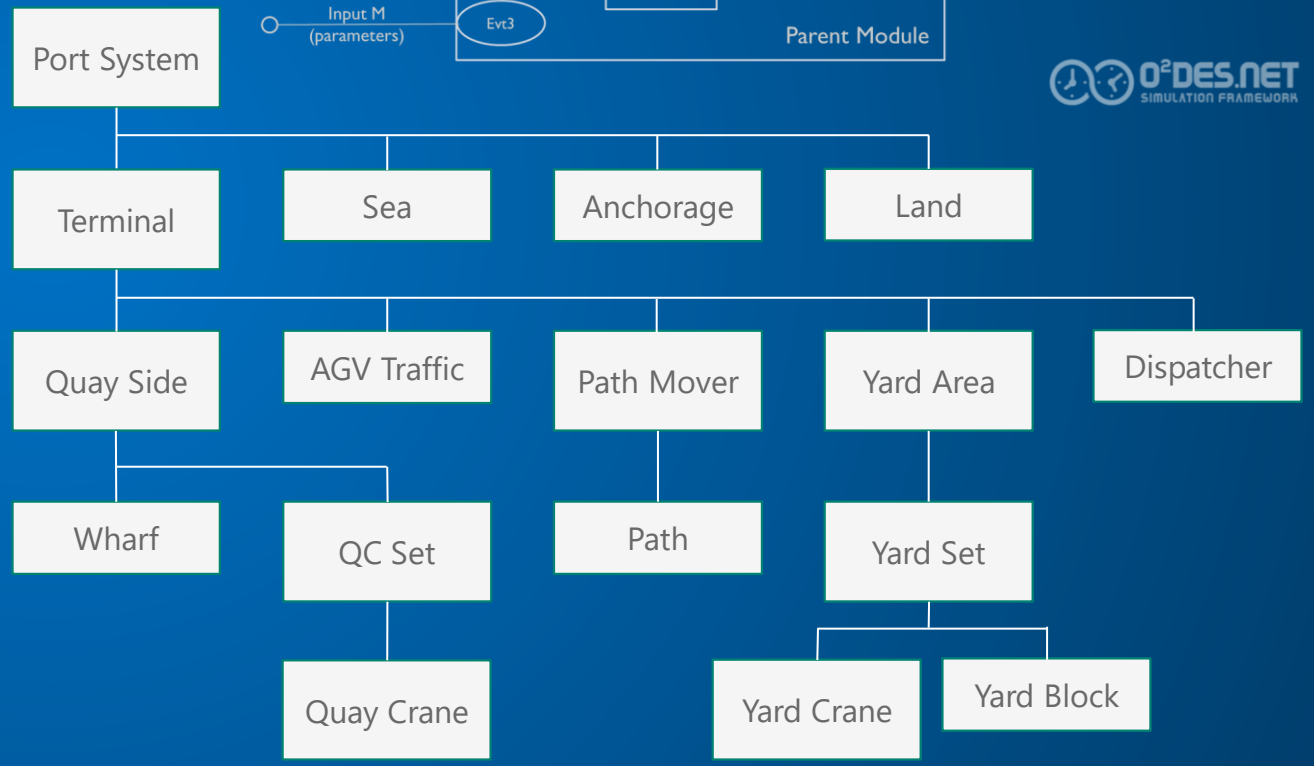
Terminal Level

Level Functionality Group

Level Working Unit

Level Equipment





Fidelity – SINGAPort Studio

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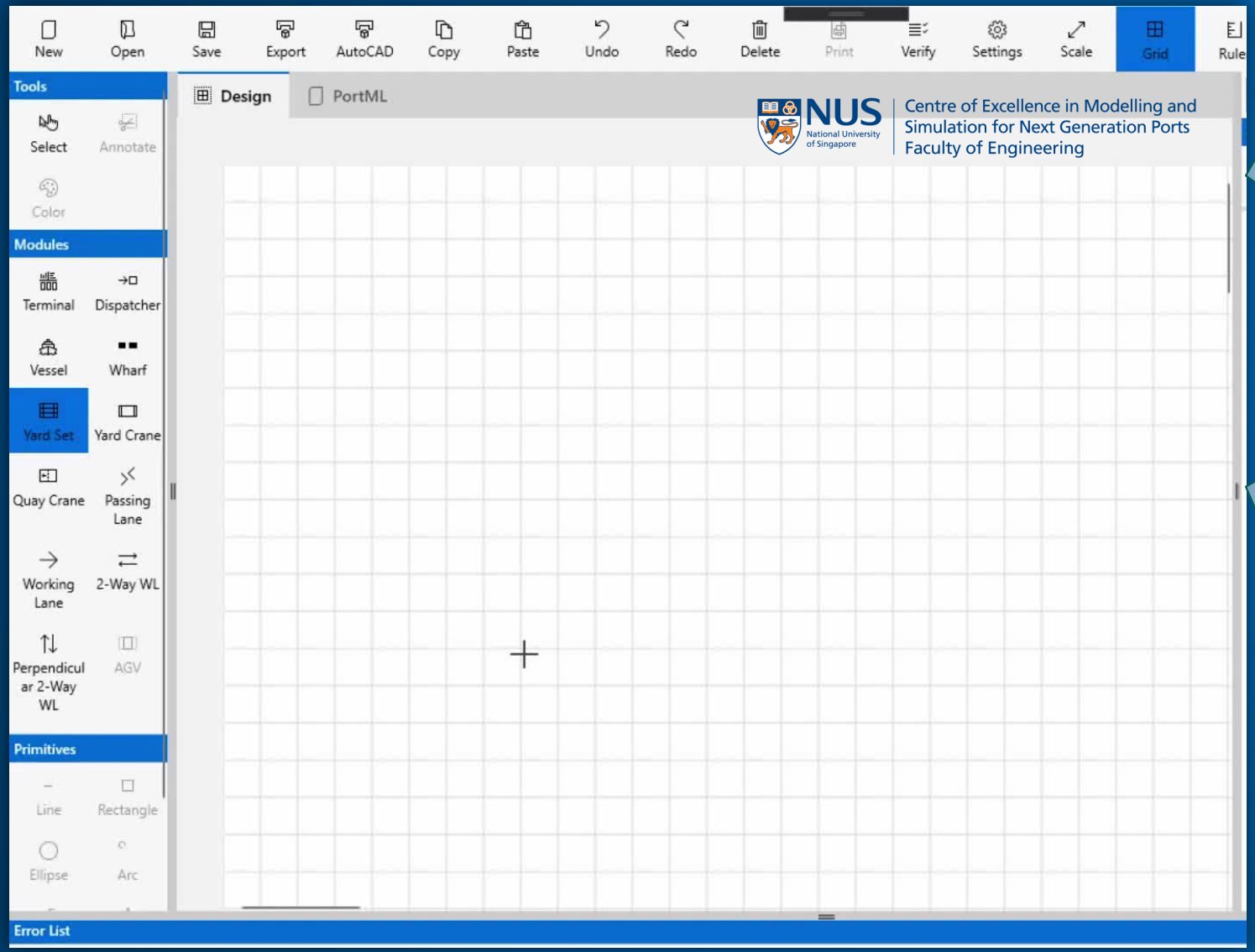
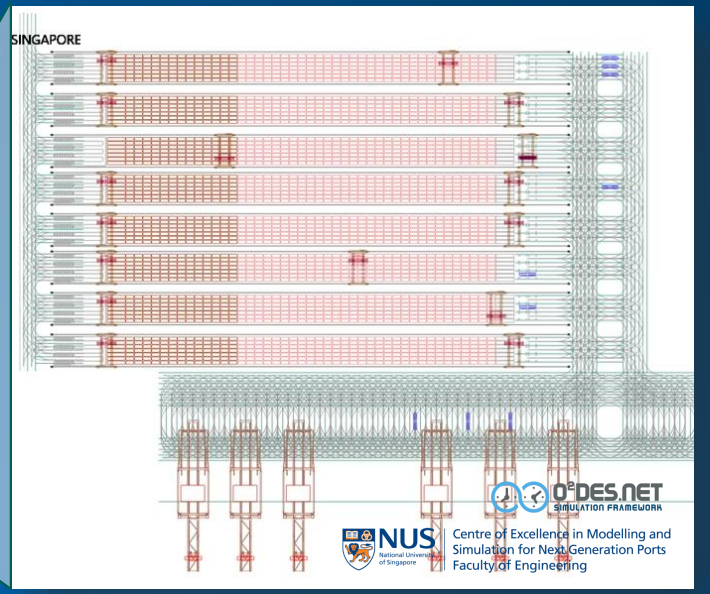
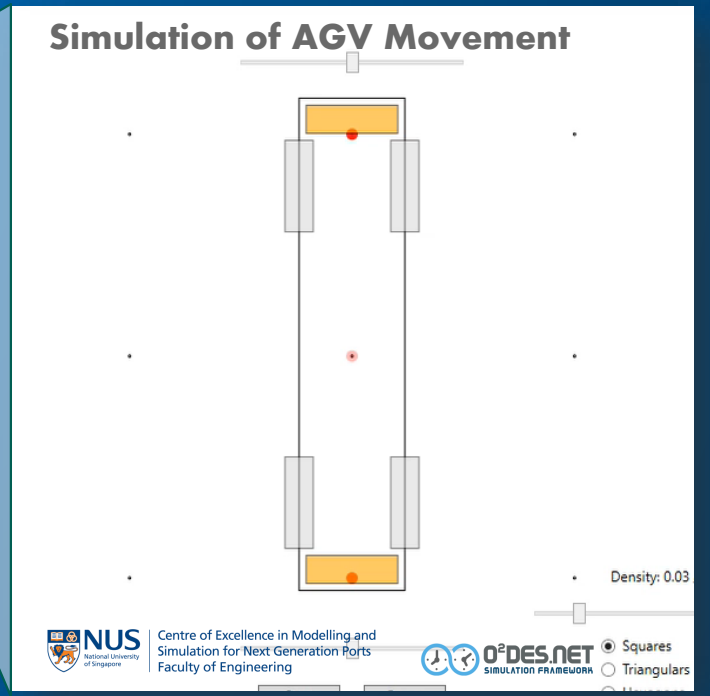
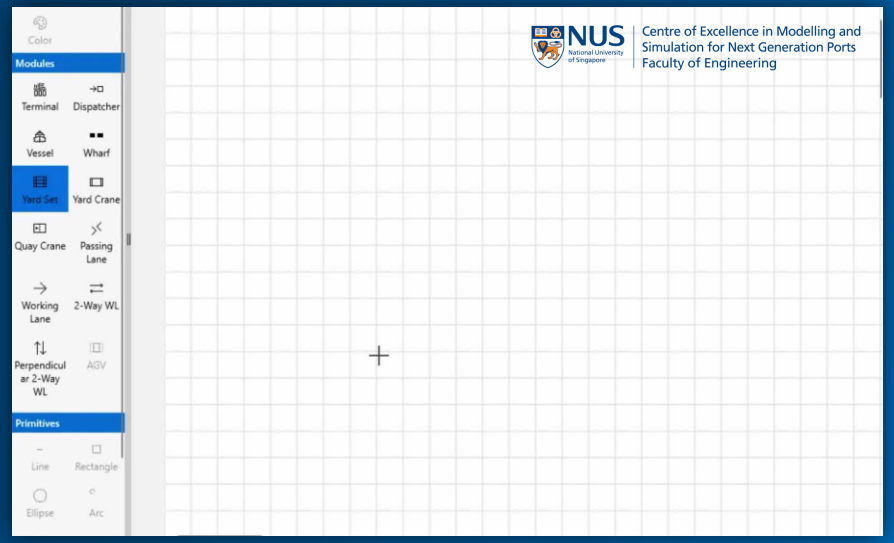


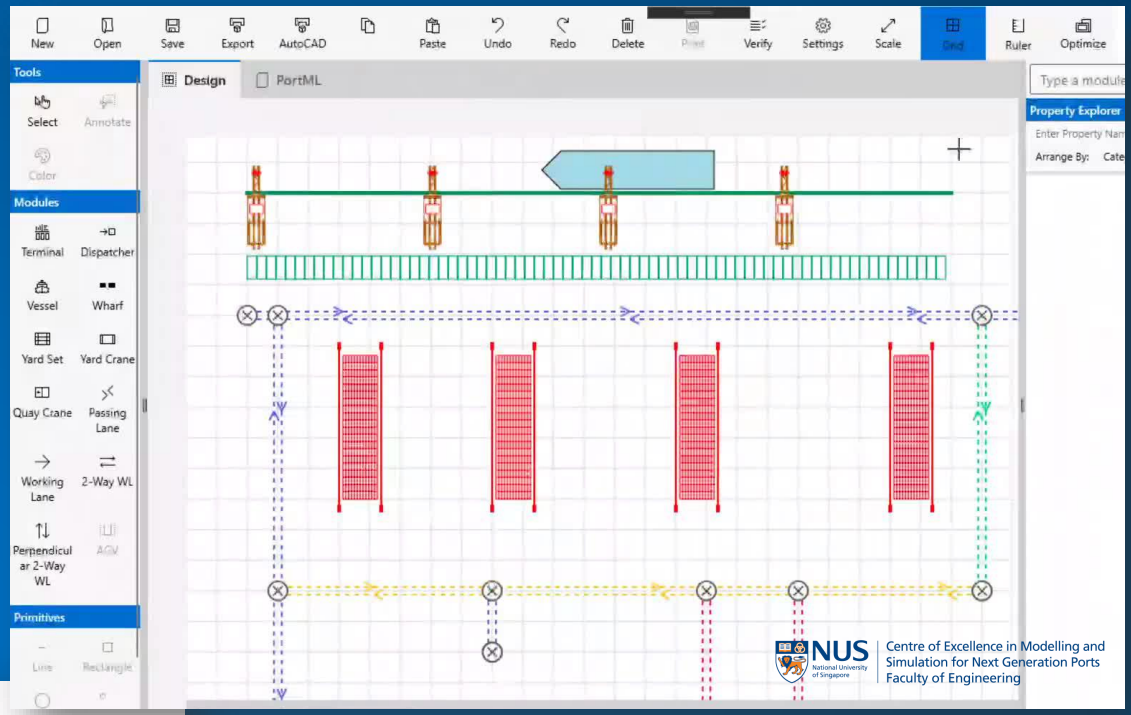




Efficiency – SINGAPort Studio



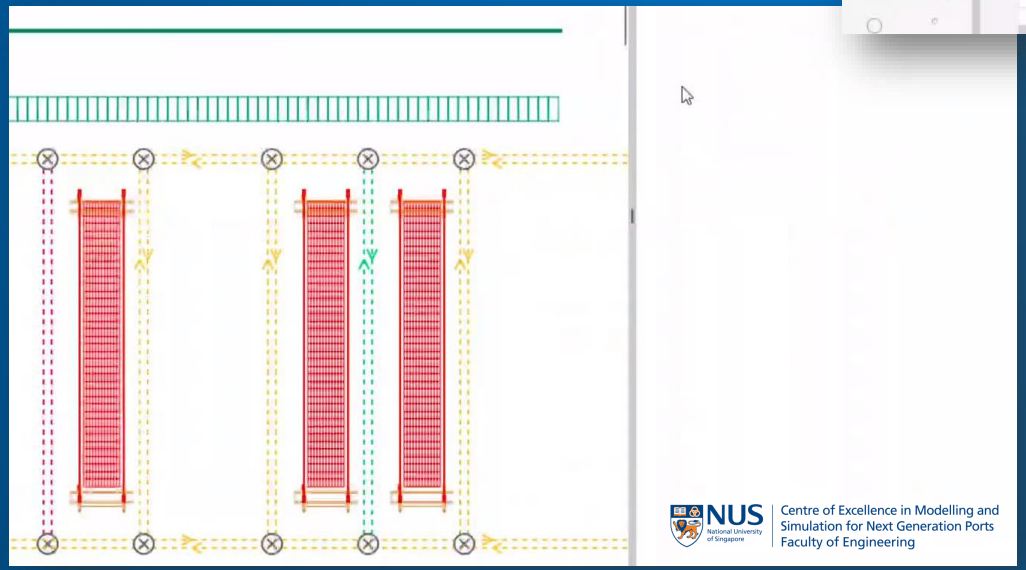
Explore and Identify the Optimal Design

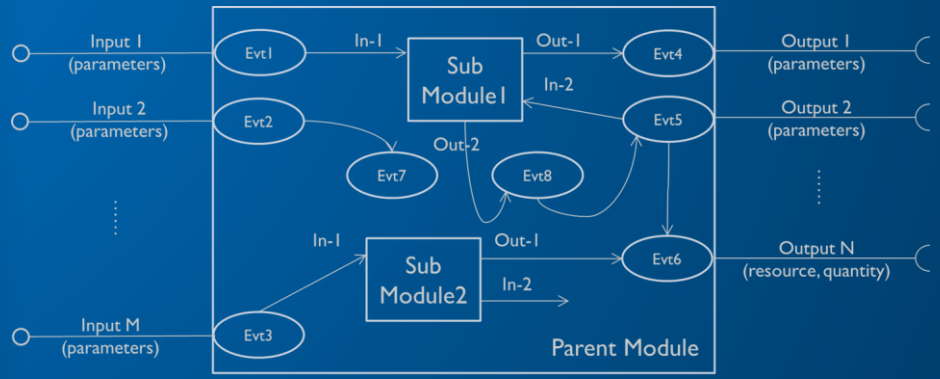


Detachable

Reusable

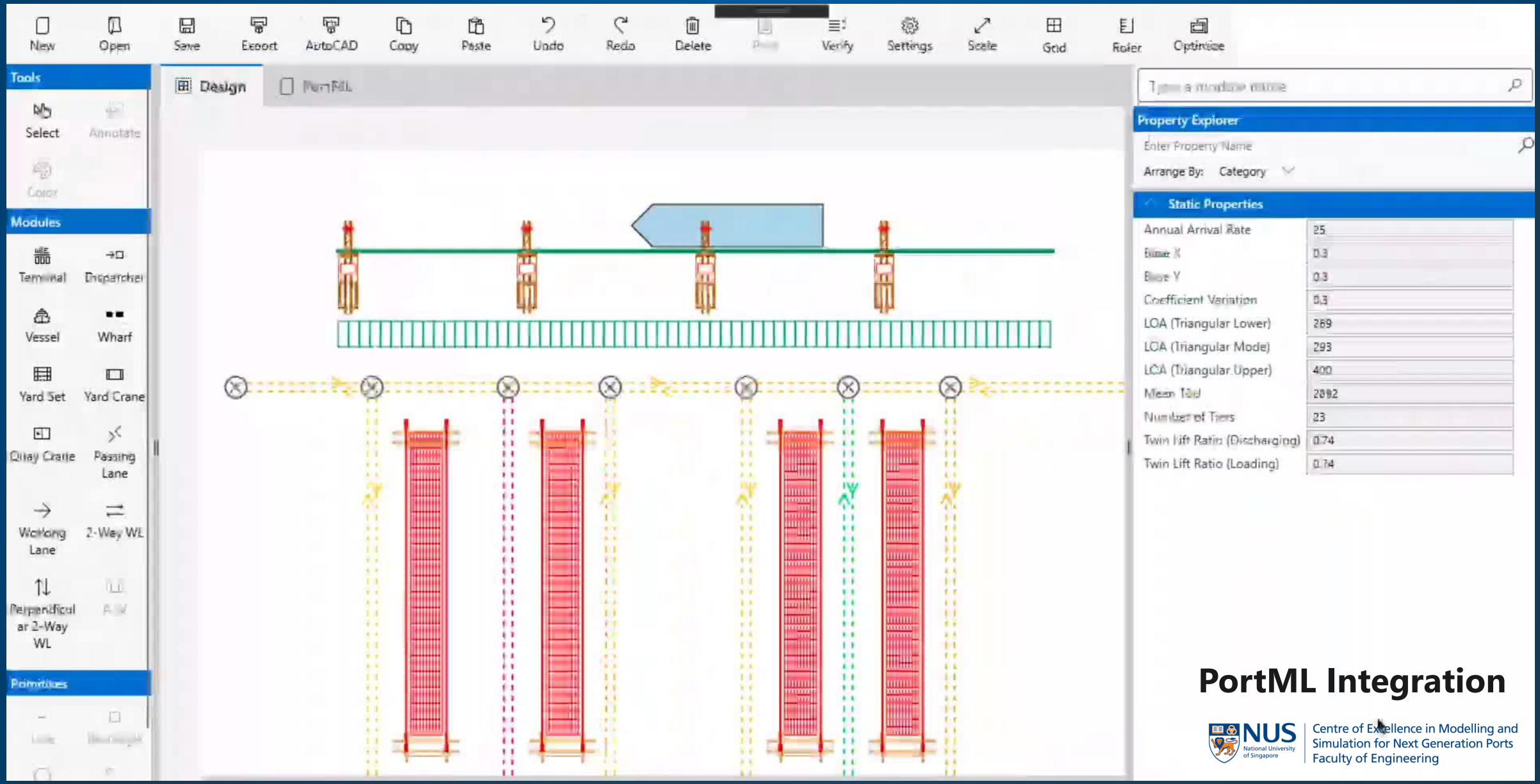
Reconfigurable





O²DES.NET SIMULATION FRAMEWORK

Efficiency – SINGAPort Studio



PortML Integration

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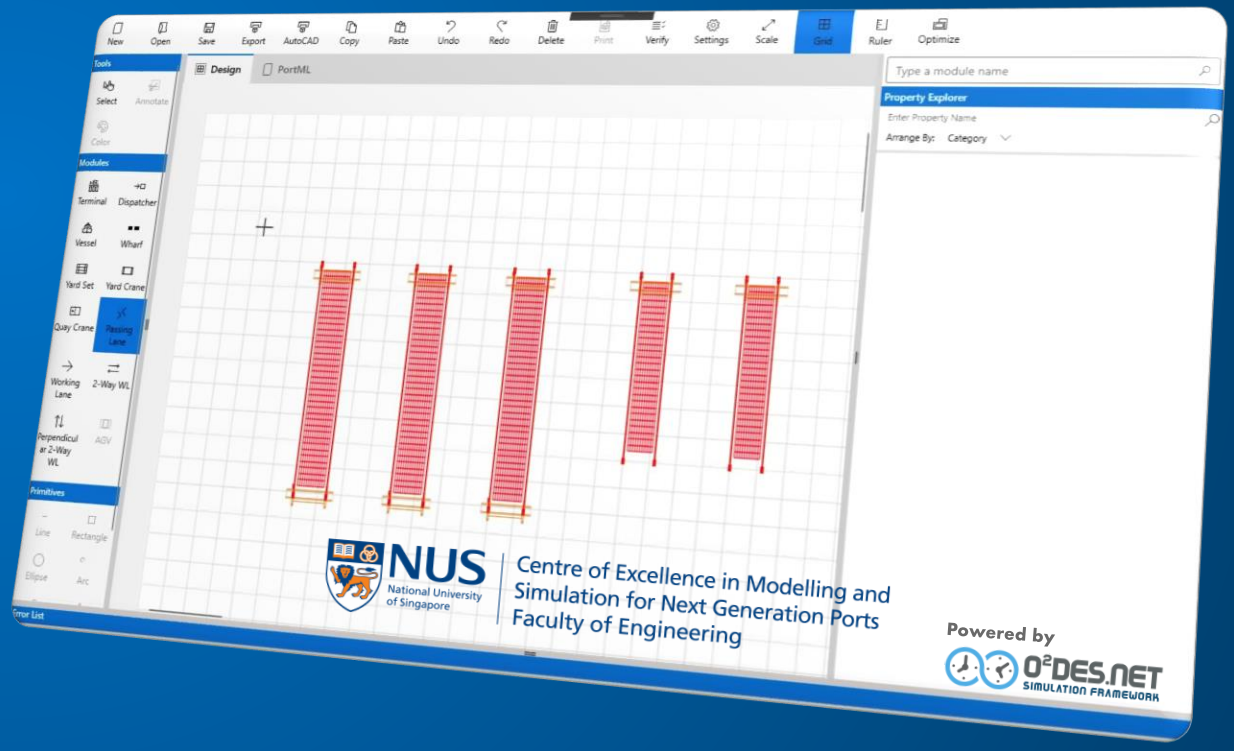
Goh Chun Lin,
Senior IT Engineer

Chung Yuk Kay Carl,
Senior IT Engineer



THANK YOU!

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