

3D Viz Tutorial

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1 Run the Application

After downloading the application from our website¹ extract the files. Open the application by clicking on the file *ISC_VR.exe*. Select your preferred display settings.

After starting the shortcuts are displayed.

- **Q** Opens and closes shortcut list.
- **1** Opens an example process.
- **2** Opens a payment process.
- **3** Opens an example industry process.
- **4** Opens an examination process.
- **U** Opens a process from an URL for visualization.
- **Esc** Closes application.

2 Process Model Visualization

Press one of the keys 1,2,3,4 or U to proceed. In the case of U enter a URL to a process model created with the CPEE ². More information how to create a model can be found in Section 4. Figure 1 depicts how arguments (data, role, resource) and mappings (direct, relative, discrete) for visualization can be selected. Direct and relative mappings are only possible for numerical values. Discrete mapping can handle all data types.

- **Direct** mapping uses the specified values without modification to change a nodes position or scaling. Direct mapping is usually not recommended.
- **Relative** mapping is similar to direct mapping with the exception that there exists an upper and lower bound. All variables are mapped to fit a value from 0 to 1.
- **Discrete** mapping draws swim line like visualization on the according axis.

For more information on the mappings and settings we want to refer to [1].

¹ <https://bit.ly/2wTT5za>

² <http://cpee.org/demo/cpee-cockpit/index.html?>

Style	Argument	Mapping
Position Y-Axis:	None	Direct Mapping
Position Z-Axis:	time	Relative Mapping
Scale X-Axis:	None	Direct Mapping
Scale Y-Axis:	None	Direct Mapping
Scale Z-Axis:	None	Direct Mapping
Label Front:	Name	
Label Top:	None	
Label Back:	None	
Label Bottom:	None	

Draw Model

Fig. 1. Tutorial process visualized with 3DViz.

3 Navigation

The applications navigation controls are influenced by 3D modelling tools. Hold left mouse button for view panning, hold right mouse button for rotation and use the mouse wheel for zooming. The keys WASD can be used for more precise movement.

4 Create a Process Model

Processes can be created with the CPEE³. Figure 2 depicts the CPEE landing page. Press *create new instance* enter a name into the pop up field and select *monitor instance*. Models can be created by right clicking on the circle in the Graph tab. A *Service Call* represents a node. On the top right of the website multiple links are available e.g. <http://cpee.org:9298/855/> P,S,C. P stands for properties and reveals the link needed for 3DViz. Simply copy this link and enter it into the 3DViz URL field.

³ <http://cpee.org/demo/cpee-cockpit/index.html>

▽

New

Repository:

Engine:

Instance:

create new instance

monitor instance

Fig. 2. CPEE landing page.

References

1. Gall, M., Rinderle-Ma, S.: Visualizing multiple process attributes in one 3d process representation. Tech. Rep. arXiv:1903.00283, arXiv (2019)