



# iQ3Connect

## Training and Experience Creator

### Introduction and Getting Started Guide

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## iQ3Connect Training and Experience Creator – An Overview

The iQ3Connect Training and Experience Creator is used to create immersive and interactive virtual training and experiences – referred to as XR experiences. Each iQ3Connect XR experience occurs within a 3D virtual environment and is composed of 5 primary components: resources, states, actions, timelines, and chapters.

**Resources** – resources are the assets that the XR experience will use. These can include:

- **3D assets** such as 3D models and point clouds
- **Multimedia assets** such as images, videos, audio files, pdf documents, 360 images/videos
- **Custom assets** such as viewpoints, information tags, animations, and style templates
- **iQ3 assets** such as the camera, menu, and workspace

When creating an XR experience, 3D and Multimedia assets must be manually added to the XR experience, Custom assets can be created directly, and iQ3 assets are inherent to the XR experience and are automatically available.

**States** – A State (sometimes referred to as a Scene) is a static depiction of the position, orientation, and configuration of the various Resources within the 3D virtual environment at a given moment of time (i.e. when the State is saved). A State may also define the behavior of assets (ex. locking the camera to a fixed position). Every training needs at least one State, but multiple States may be used.

**Actions** – An Action is an instruction that controls the behavior of the user, resources, or XR Experience. An action could be an instruction to load a State, move an object, start playing a video, display text, change the user's controls, or await a certain user input. All actions are contained within Timelines. Multiple Actions can occur simultaneously.

**Timelines** – A Timeline is a container for a set of Actions and defines when the Actions occur and for how long. Timelines are used to form the structure of the training. For example, in a step-by-step instructional training, a timeline may be created for each step in that training and would include Next/Back Actions to enable the user to easily navigate between steps (i.e. Timelines). Multiple Timelines can be active simultaneously.

**Chapters** – a chapter is used to define the starting timeline (i.e. entry Timeline) of the training, which is the Timeline that will play first when the user opens the training module. Only 1 Chapter is defined per training.



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#### How Resources, States, Actions, Timelines, and Chapters Interact

At its core, an iQ3Connect XR Experience is just a collection of Timelines. When playing a training, a user is always active in one or more timelines. These timelines, through the Actions defined in these Timelines, determine what the user sees, when they see it, what they can do, and how the XR experience responds to user inputs. The entry timeline(s) defined in the Chapter determines which timeline(s) will start when the XR experience first loads for the end user.

However, without loading 3D or Multimedia assets, the 3D virtual environment is just a blank space. To load these Resources, one of the actions available in a Timeline is the ability to load States. When a State is loaded, the 3D virtual environment is populated with the Resources as defined in that State. Only once a Resource is loaded into the 3D virtual environment via load State, can the Resource be viewed/interacted with. Some Resources (such as audio files and custom assets) don't need to be defined in a State and can be used by Timelines/Actions at any time. Once a Resource is loaded, it is persistent in the 3D virtual environment (and can be used across any number of timelines) until removed by a different State being loaded.

#### An Analogy

To help illustrate the concepts behind the 5 primary components used in an iQ3Connect XR Experience, it may be helpful to consider an analogy to Microsoft's PowerPoint. If we think of an XR experience as a PowerPoint presentation, then:

- **iQ3Connect Resources** – are the various objects that might be used to design a slide deck (i.e. text boxes, rectangles, images, etc.)
- **iQ3Connect States** – are the individual slides
- **iQ3Connect Actions** – are the animations, transitions, or interactivity that you build into the presentation
- **iQ3Connect Timelines** – are a combination of the animation player, that controls the timing of the animations, and the presentation recorder, which controls the timing of the slides themselves.
- **iQ3Connect Chapter** – doesn't have a direct analogy in PowerPoint, but if it did, it would be to a mechanism that determines which slide is opened first when the presentation plays.

It should be noted that this analogy has its limitations, as the components in iQ3Connect are generally more powerful and far reaching than their PowerPoint analog. iQ3Connect States, for example, can be loaded concurrently to view multiple States simultaneously, while iQ3Connect Actions can be used to control not just the 3D virtual environment, but the user's viewpoint and controls.



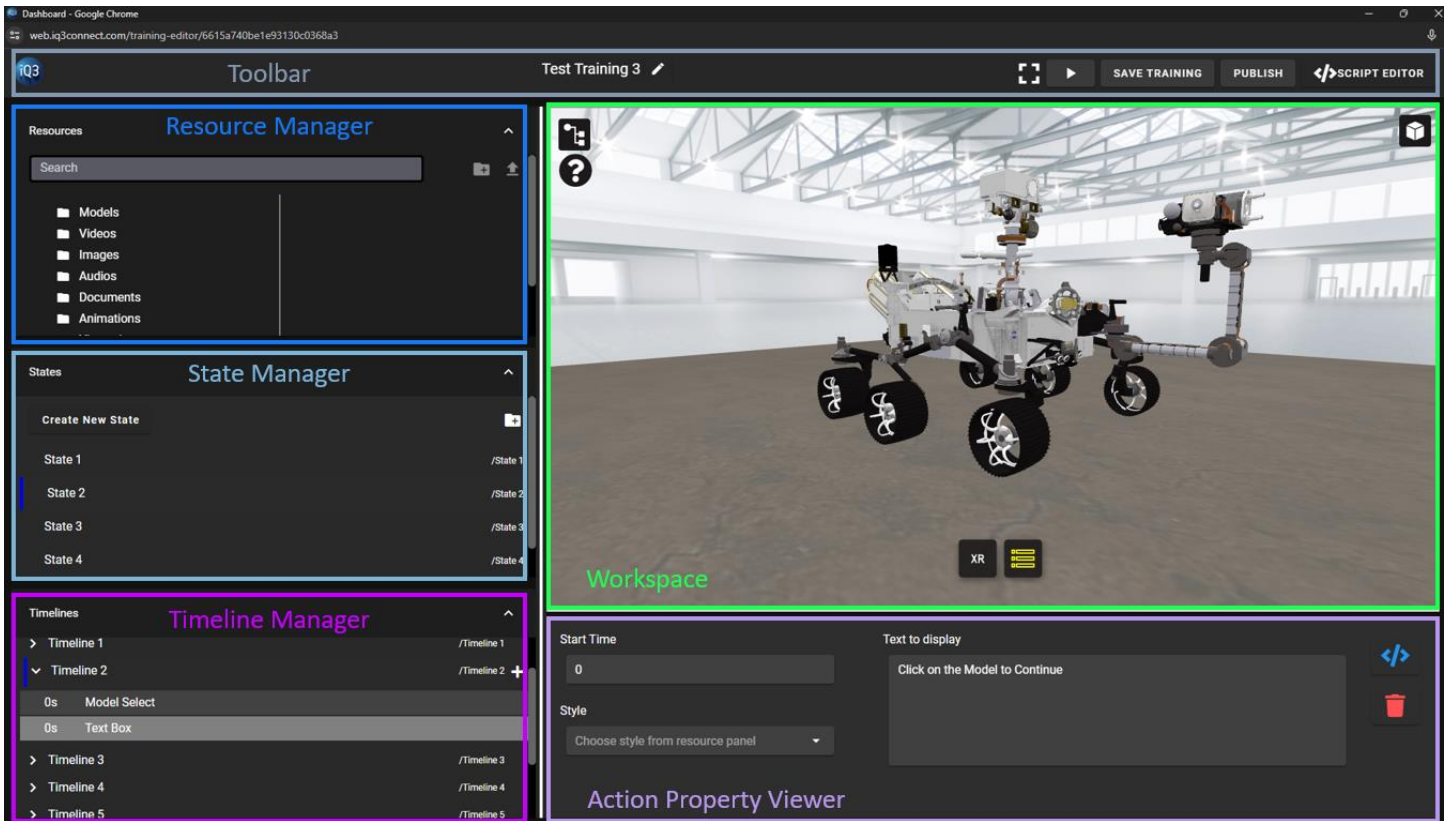
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## User Interface

The iQ3Connect Training and Experience Creator User Interface is composed of six major elements: the Toolbar, Resource Manager, State Manager, Timeline Manager, Workspace, and Action Property Viewer. The Toolbar is found at the top, the Resource Manager, State Manager, and Timeline Manager can be found in the left panel, the Action Property Viewer is at the bottom, and the Workspace occupies most of the remaining space.





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**Toolbar** – provides tools for managing the experience (ex. renaming, saving, playing, publishing) and the Creator User Interface (ex. opening the script editor, setting the Workspace to full screen).

**Resource Manager** – This is where resources (i.e. assets) which are needed for the experience can be created, imported, loaded, and managed. 2D and 3D assets such as models, videos, images, audio files, PDF documents, and information tags can be imported directly from the project in which the training was created. Other resources such as animations, viewpoints, and styles can be created directly.

**State Manager** – This is where States can be managed. A State is a static depiction of the 3D virtual environment which details the position, orientation, and configuration of the various resources used in the training.

**Timeline Manager** – This is where Timelines can be managed and Actions created. A Timeline is a set of Actions (ex. move object, start video, await user interaction) that are executed at a defined time. Multiple Timelines and Actions can be active simultaneously.

**Action Property Viewer** – The Action Property Viewer is where Action properties can be edited and managed (ex. start time, which object the action applies to, etc.). Information is only displayed here when an Action is selected from the Timeline Manager

**Workspace** – a 3D virtual environment in which the training or experience is created. Resources are loaded into the Workspace and are manipulated with various controls (ex. move/rotate, highlight) to create States and define Actions.