

ThingWorx Studio – Simplifying AR development for the enterprise

ThingWorx Studio, along with ThingWorx View, delivers a graphically rich user experience where information is superimposed over a physical product through one, universal browser application.

Through the use of these AR development and delivery tools, what was once a world of simple applications shifts towards full product experiences that enable end users in any industry, to better create, service, and operate their products.

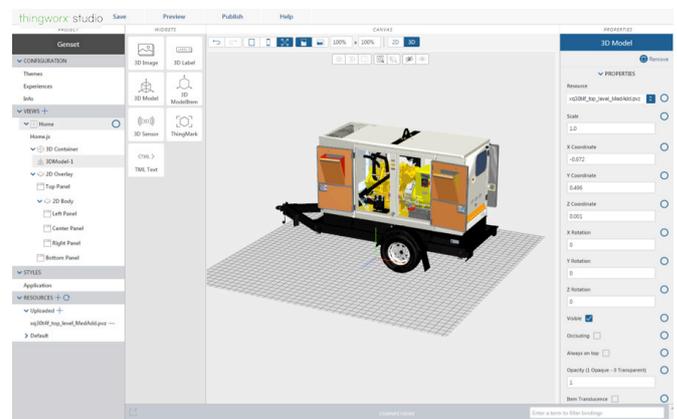
Why ThingWorx Studio?

Simple, Powerful and Scalable – AR for Everyone

- Rapid ‘codeless’ authoring of AR experiences
- Global service, managing access to all enterprise AR experiences
- ThingWorx View displays 2D, 3D AR and specific devicelevel information for all “things” through one universal application
- ThingMarks uniquely identify each individual discoverable object with ThingWorx View

Connecting AR with the Enterprise

- Leverage engineering data from tools like Creo or other 3rd party 3D CAD tools inside your AR experience
- Add additional animations and sequences created in Creo Illustrate



Screenshot of ThingWorx Studio dashboard

Open Platform for Democratized AR Development

- Broad support for devices, platforms, and 3D geometry
- Extensive enterprise system integrations such as ERP, SCM and CRM systems
- Quickly connect to IoT objects within ThingWorx or 3rd party device clouds



thingworx® studio

thingworx® view

ThingWorx Studio Components

ThingWorx Studio

ThingWorx Studio democratizes the creation of AR experiences for specific objects. It is a highly efficient and easy-to-use authoring tool for creating use-case specific experiences, which are delivered through ThingWorx View. Experiences built in ThingWorx Studio enable a composite view of digital and physical product data, dashboards, and alerts presented in 2D, 3D, and AR - without the need to write code.

Experience Service

Experience Service is at the heart of providing contextualized information within AR experiences in the enterprise. It manages the experiences and delivers relevant, contextualized information and analysis for each uniquely identifiable object in the enterprise. Experience Service includes an instance of ThingWorx, making connecting your IoT solutions to AR experiences seamless.

ThingWorx View

ThingWorx View solves the challenge of knowing which application goes with what object. It is a new way for users to experience their smart, connected world. ThingWorx View is a single application that universally recognizes objects through uniquely identifiable ThingMarks, and produces rich mobile user experiences of seamlessly connected real-time product data. This information is delivered via usecase specific experiences enhanced by 3D product navigation and AR interaction. ThingWorx View is the web browser for recognizable objects in the enterprise.

Augmented Reality and the Enterprise:

Augmented reality presents both interesting opportunities and challenges for developers trying to deploy applications with AR at scale. Creating AR apps at scale has been historically difficult, limiting the reach of how much and what can be developed.

Typically, the development of AR applications supported sales and marketing efforts to help companies sell more products or differentiate themselves in the minds of consumers. However, there are new possibilities for AR in the enterprise to improve service, operation and engineering/ manufacturing of products.

The challenges executing against these new opportunities include: how do you create AR experiences at scale, connect those experiences with real-time contextualized information and deliver it in a way that is both immersive, easy to understand and ultimately actionable for a user?

Application vs. Experience

Rather than creating many standalone, platform-specific app with ThingWorx Studio, solution builders can use the authoring tool along with ThingWorx View to create and dynamically deliver an "experience" – not just another app. This solves the problem of creating an app for every object. Instead of potentially creating millions of apps, you can have one app that can recognize an object and serve up immersive experiences to a user whenever and wherever it is needed.

ThingMarks

ThingMarks are uniquely identifiable marks on a specific object that are universally recognizable by ThingWorx View. ThingMarks need to be recognizable to ThingWorx View in order for the appropriate experiences and corresponding data to be delivered for the specific thing and use case. If a user sees a ThingMark on an object they should know that it is discoverable by ThingWorx View.

How Does It Work?

1. Objects are connected with enterprise system data and external data sources inside of Experience Service.
2. AR experiences are then created using ThingWorx Studio.
3. The experiences are then stored inside of Experience Service and recalled and populated with the correct, contextualized information for each object through visual recognition of the ThingMark via ThingWorx View.



Key Features

- Rapidly create AR experiences without writing code
- Extend the value of engineering CAD data with use in AR
- Support for multiple 3D file formats including Creo View, STEP, IGES, STL, OBJ & VRML
- Automatically optimize and reduce 3D data for high performing AR experiences
- Intuitive 3D navigation and interaction with objects
- Create UI layouts for mobile devices with interactive components
- Add sensor displays, which connect to live IoT data from physical objects
- Re-use animations sequences for instructional AR experiences
- Place ThingMarks for unique object recognition and tracking via ThingWorx View
- CSS editing to customize look and feel for experiences

- Connect to Thing Model inside ThingWorx for IoT object definitions and data
- Support for hands-on developers via JavaScript extensions
- Preview experiences prior to publishing to users
- Seamless integration between ThingWorx Studio and ThingWorx View for quick experience publishing and consumption

For more information on ThingWorx Studio visit:
<http://www.pdsvision.se/thingworx-studio>