Release Notes

3D Simulator Visualizer Platform

For
Hitachi America Ltd

Prepared by

Pivot Systems

Revision History

Version	Date	Summer of changes
1.0	03/06/2017	Initial Version
1.1	03/20/2017	
1.2	05/11/2017	
1.3	08/11/2017	Addition of 3D editor, Cam snapshots, shareURL,3D upload,3D simulated camera view
1.4	08/25/2017	3D editor enhancements,3D report, measurement tool
1.5	09/29/2017	Addition of camera addition, bug fixes,3D report enhancement, Create, Save/open of projects
1.6	11/15/2017	Save to Cloud,2DView Live window, Google marker and numbering on 2D VIEW, Report enhancements,3D camera coverage representation, coloring etc.
1.7	12/20/2017	Save Parking lot image and its availability in 3D Editor. Addition of multiple cameras in one go, Rendering Engine, Camera Switching during simulation, Simulation Manager, Clone, Publish 3D projects
1.8	12/29/2017	UI specific Changes, Fixes
1.9	02/26/2018	UI specific Changes, Addition of LiDAR sensor menu, Storage statistics, Admin Dashboard
2.0	03/30/2018	Measurement Toolset, Language Support, Point of interest annotation
2.1	04/13/2018	Floor Plan Measurement and Annotation, Report generation with measurements and point of interest data, UI enhancements
2.2 (Trial Version)	04/27/2018	Measurement toolset UX/UI improvements, Updated Logo and Name, Removed Signup feature, Added terms and conditions
2.3	05/04/2018	Minor Bug fixes
2.4	06/29/2018	Activity logging, email notifications, networking and cabling, 2D view enhancements, camera interaction improvements, 3D report enhancements, measurement enhancements
2.5	08/17/2018	Automatic account creation and email notifications edit feature for network cables, Floor-plan views and zoom feature, Sample 3D dome camera, Snapshot feature improvements for 3D reports, UI improvements
2.6	12/31/2018	Support optical and digital zoom for PTZ Cameras,180-360 Cameras, Camera Cloning, Working distance plane visualization in the camera frustum during Theater mode Grid scaling based on measurement unit, Unit conversion from 3D to real world units
2.7	4/19/2019	Export/Import Project, Lock/Unlock cameras, 2D Drawing measurement feature, wiring auto routing, 3D model integration and work flow for dome and bullet cameras
2.7.1	5/10/2019	Support for +/- 90 rotation of Dome camera, Rotation info real-time display, Placement of cameras on the highest level of the model,3D models for cameras
2.7.2	6/4/2019	Square shape for junction box badge, Camera frustum can

		be hidden and shown as per user need, Simulation view window changes, Snapshot feature on digital zoom
2.7.3	7/8/2019	90 degree Clockwise and Anti-Clockwise movements in Floorplan view using ctrl+arrow keys, Report enhancements, miscellaneous snapshot feature, Low poly 3D camera models, 3D model for LiDAR sensor, slow network bandwidth notification
2.8	7/19/2019	3D LiDAR sensor default orientation, Updated 3D LiDAR sensor name, Support for taking snapshots in 3D view mode , changed web application tab title
2.8.1	8/22/2019	Cable routing updates, Addition of sensor listing to sidebar UI, Update to Lidar Sensor parameters. Rotation values preserved on cloning
2.9	03/02/2020	Person, luggage support, SVG output of images, New viewmode and metadata exporting

CONTENTS

INTRODUCTION

This document contains the features in this release (2.9) of the 3D Simulator Visualizer Platform. It also documents the known problems and workarounds

ABOUT THE RELEASE

Features/improvements in this release include

- Support for Person and Luggage 3D objects.
- Add Spotlight and cast shadow of objects
- Generate and download SVG format output.
- Add new view mode and API for exporting metadata

COMPATIBLE PRODUCTS

This product has been tested on the following browsers

- Google Chrome Version 71.0.3578 (64-bit)
- Chrome: Version 71.0.3578 (32 -bit)
- Mozilla Firefox :68.0.0 (32-bit)
- Mozilla Firefox: 68.0.0 (64-bit)
- IE not recommended

FEATURES

The current product includes the following features

- Create, Open, Save Project (2D)
- Create, Open, Save Project (3D)
- Lens calculator – calculates lens focal length, field of view and pixel density
- Additions of cameras to 2D map view
- Select camera and model from a list of different vendors (2D)
- Upload of 2D object, drawings /images to the map view editor
- 2D Report generation
- 3D editor
- Support for major 3D files types
- Preloaded models for easy loading
- Addition and Positioning of cameras in 3D editor
- 3D camera simulated view of scenes
- Import/Export of scene/geometry and objects
- Upload of 3D models from direct URL, Dropbox
- Share project via URL
- Clone Project
- Facility to create camera snapshots
- Measurement tool in 3D Editor
- Numbering of cameras added to scene in 3D Editor
- Selection of camera brand and model in 3D Editor
- 3D Camera coverage box with coloring option
- Reference location markers for cameras
- 3D Model movement with freeze/release option
- Storage/Save of 3D Projects to the cloud
- Live 2D views with Top/Left/Right views
- Save of Parking lot area
- Add new camera specifications to the database one by one and by file template upload

- Add multiple cameras to the 3D model by marking the positions and placing it in a single button click
- Rendering engine for multiple cameras
- Camera Switching during simulation
- Screenshot for each simulated view
- Support for download and sharing of Reports via URL
- Support for movement with keyboard arrow keys ←↑↓→
- Scene explorer using collapsible list
- Storage statistics with pie charts in user account section
- Current mouse position on double click
- Additional controls to adjust the camera parameters on the simulation screen
- Admin Dashboard
- Distance measurement tool
- Measurement data save, annotation and display
- Measurement unit conversion
- Language support for Japanese, Chinese, German and Spanish Languages
- Point of interest annotation with markers set
- POI annotation data Save to backend
- Display of annotation info on clicking the annotation marker
- Floor Plan Measurement and Annotation
- Report generation with Saved measurement data and its screenshot
- Report generation with saved Point of interest and its screenshot
- Activity logging for tasks performed by each user
- Daily activity reports can be sent as email notifications to each user
- Automatic email notifications for tasks such as account activation, deactivation and disk storage utilization
- Network cabling simulation and cable length estimation
- Two separate view modes for2D views and floorplan views
- Mouse wheel scroll support on 2D views
- 3D reports include networking cabling details
- Length and area measurement end points can be edited
- Support for ".tga" texture formats
- Cube Axis Helper
- UI Control for increase/decrease badge size
- Support to set network controls at a fixed height
- Support optical and digital zoom for PTZ Cameras
- 180-360 Cameras
- Camera Cloning
- Working distance plane visualization in the camera frustum during Theater mode
- Grid scaling based on measurement unit
- Unit conversion from 3D to real world units
- Export project to Local drive/Network and 3rd party location (Dropbox)
- Import project from Local drive/Network and 3rd party location (Dropbox)

- Lock/Unlock Camera - option to lock all the camera's to the model at once and to unlock it. Cameras can be unlocked individually also
- Integrated 2D Drawing measurement feature
- Separate section for 2D Line drawings on sidebar
- Auto wire routing – option to pick the junction box location and to route the wire from the junction box to the cameras via floor, ceiling, custom height or as straight lines
- Option to resize the simulation window
- Integration of 3D camera models to replace the camera icons for dome and bullet categories and its workflow
- 3D low poly models for cameras
- Camera frustum can be hidden and shown as per user need
- Option to take snapshot when Digital Zoom is active
- 90 degree Clockwise and Anti-Clockwise movements in Floorplan view using ctrl+arrow keys
- Miscellaneous snapshot feature and inclusion of the said snapshot in reports
- Addition of 2D line measurement data to reports
- Enabled screenshot feature in 3D View

KNOWN ISSUES AND LIMITATIONS

- Large 3D models > 40 MB (zip) can crash the browser.
- Measurement tool doesn't fully support left/right views of the 2D view in 3D editor

- Some of the features not supported on IE version
- Locations of interest saved on the map view doesn't have a delete version

- Top/Left/Right views are not zoomed to fit the model for snapshots. Scaling adjustments to the model in the editor will help to produce more zoomed object in snapshots

- Webgl can crash for large models on 3D report generation

- Performance optimizations in the current release are only applicable for the real time rendering and have no effects on the maximum file size that can be supported.

- Google map cropping of selected area will not work with polygon or circle. It will work only for rectangle

- Network cables are not automatically aligned with the walls of the building, user may have to pick the points accurately to get correct results

- Snapshot feature on digital zoom not working on Hitachi Server as a dependency package has permission issues to get installed. Need to communicate with Hitachi Admin team
- Simulation Window Resize - The default size of the simulation window is now reduced by keeping the aspect ratio intact. Now the values displayed at the bottom of the window will be visible only on enlarging the window size. In case of LIDAR sensors, since the aspect ratio is less than one, the window needs to be taller (by resizing) for the values to be displayed.
- For Lidar Sensor, Def. Near limit and Def. Far Limit, depends on the target unit (feet or meter). This must be given in 3D units.
- Person and Luggage objects can now be added from menu bar and from simulation window. Additional controls added in simulation window for translation, rotation, scaling and locking of person and luggage objects.
- Spotlight can be added from simulation window and shadow can be casted.
- Snapshots can be downloaded in SVG format.
- Admin can grant permission for users to generate JSON API. Permitted users can now Generate JSON of current project and users(view mode users) for accessing JSON. Viewmode users can view the project and simulate cameras in the project.