



# Laser Scan Modeller

# 2015Q3

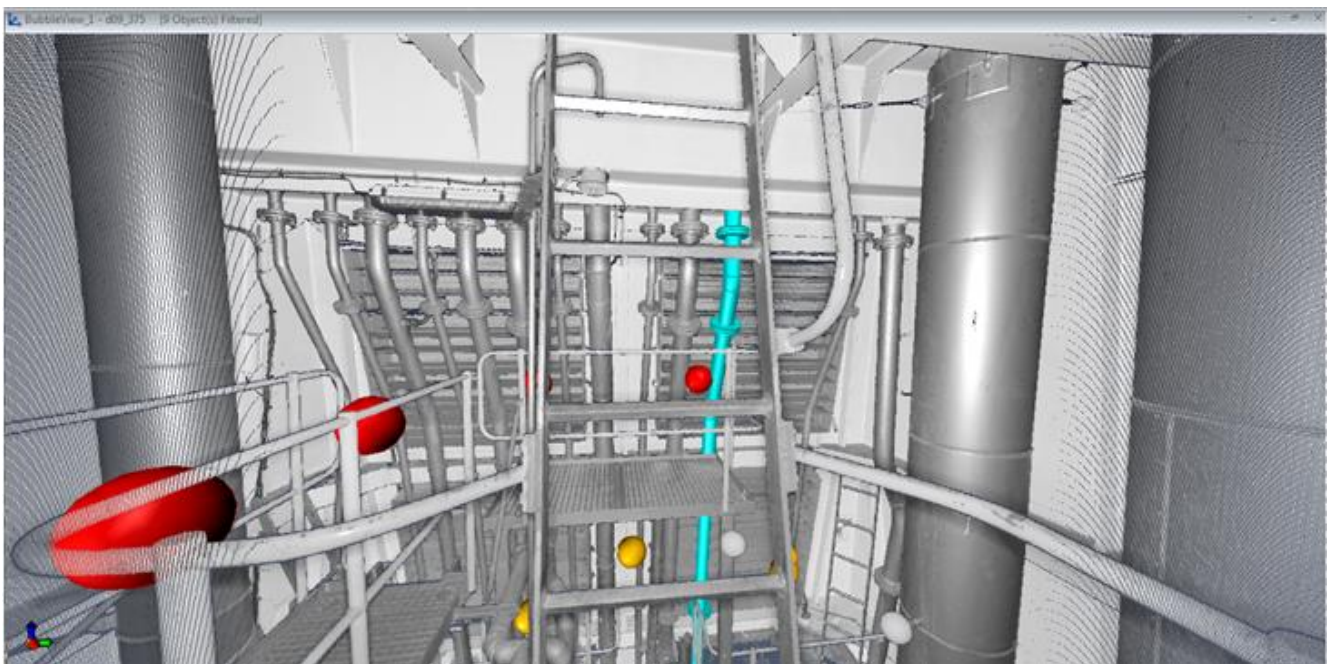
In the last decade the amount of retrofit/revamp projects has steadily increased and places high demands on design projects. Brownfield projects, changes in technology, expansion of production – all these factors place demands on design tools. Cadmatic Laser Scan Modeller is an integrated solution for the seamless use of data from laser scanners to the 3D model and construction data and boosts the possibilities to use laser scanning technologies for design projects.

## Laser Scan Modeller – Integrated solution for Point Clouds in 3D model

Gain efficiency in design with Laser Scan Modeller – now you can utilize point clouds directly in the 3D design tool during design using familiar tools. benefit from viewing and examining existing layouts when sketching the new layout, use point clouds for reference in measuring and fitting, while designing new items in detail or remodelling existing ones. While remodelling you can directly use the settings, library and components of Cadmatic for correct attributes and materials. Designers can decide when designing what needs to be remodelled – if anything, and minimize design errors.

### Benefits of using laser scanning technologies:

- Reduces time for surveys, operational down time on board and need for trips on site
- Fewer unknowns and assumptions regarding existing construction, significant decrease in rework due to instant availability of accurate dimensions and spatial geometry
- Scope of changes can be estimated quickly
- Lack of as-build electronic documentation available from the ship owner is no longer a need for concern



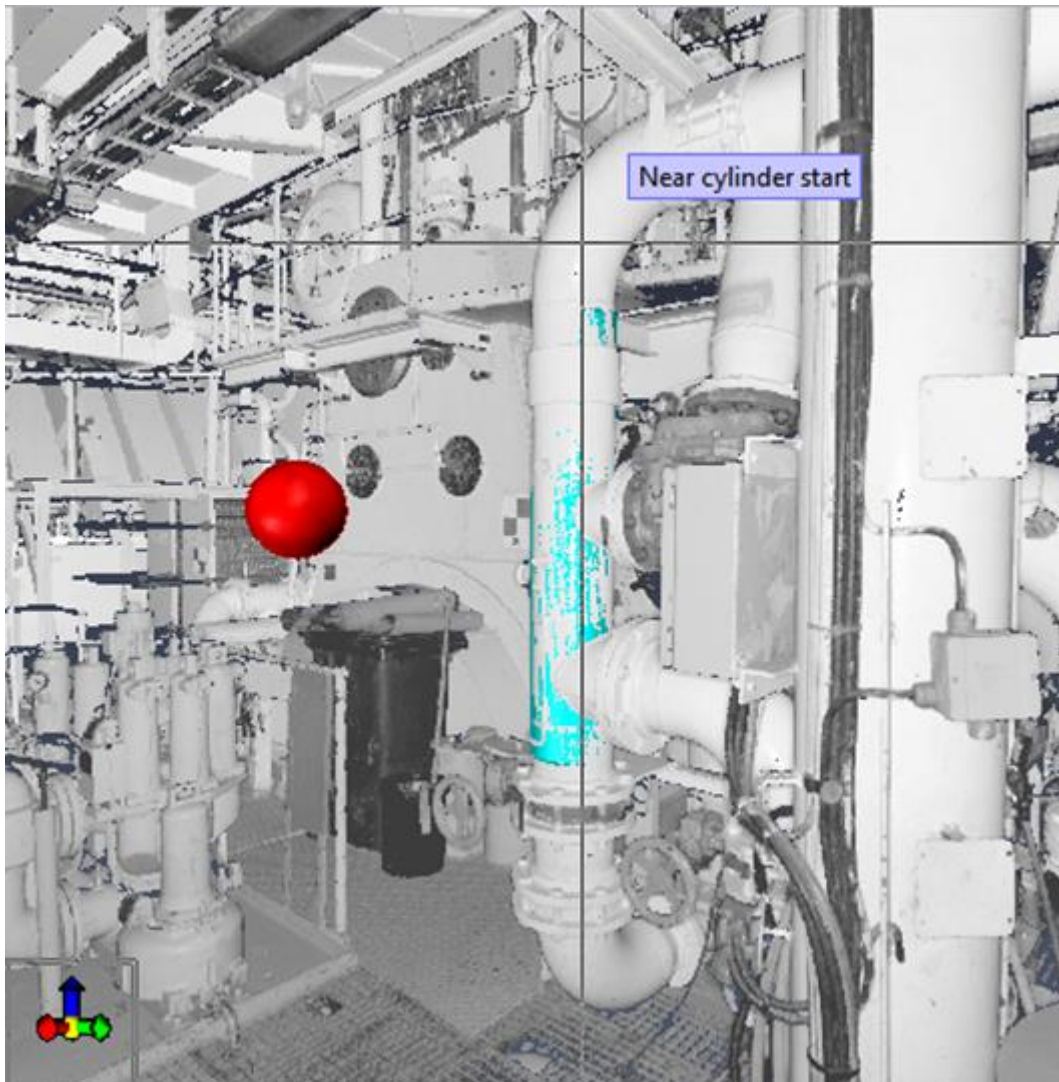
3D view shows location of available scans, point clouds and model objects

### Key features:

- No restrictions on laser scanning equipment and point cloud formats
- Intelligent map of scanners with annotations
- Active/inactive filters to boost performance
- Perspective bubble views presenting correct depth in view
- Create intelligent 3D components using specs and library
- Model produced is fully integrated with other Cadmatic Outfitting Design modules, including automatic isos and BOM generation, project review in eBrowser and integration with eShare – Information Management

After receiving point clouds from the scanner software the Cadmatic project administrator can import the point clouds into Cadmatic software and publish them in the project.

New views have been introduced for more efficient handling of point clouds: a scanner map for indicating the location of scanners on top of the layout, bubble views for photorealistic viewing and referencing and detail views that will update view box limits intelligently for the selected point cloud.



Example of modelling using the bubble view

Due to the limitations in how efficiently hardware can handle the huge amounts of point cloud data, the software scales point clouds visualized in 3D shaded views using active/inactive filtering of scanners and adjust limits for detailed views.

While working with point clouds the user can activate the required area with the scanner map, select bubble views and detailed views that optimally show the required area and start doing the layout of the 3D model. It is possible to select points for snapping in the point cloud and use the “fit to point cloud” functionality – to model 3D cylinders, specification driven pipes or other components. This model can also be used to extract project documentation for construction.