

Detect3D Fire and Gas Mapping Software Information Pack

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Detect3D

Introduction

Detect3D Software gives your organization the ability to perform 3D fire and gas mapping in-house. Developed by Insight Numerics, Detect3D works directly with your CAD files and uses the most advanced ray-casting algorithms to accurately account for *all* geometry – no simplifications or CAD re-working necessary.

Detect3D allows you to:

- Perform fire and gas mapping studies in-house optimally positioning detectors to comply with industry performance standards
- Reduce project duration by 80% of the time typically required by other solutions available on the market
- Better manage costs through the project lifecycle through our licensing structure, which allows unlimited design changes
- Share design updates between project teams
- Analyze complex detector layouts and geometries without the need to invest in additional hardware – Detect3D is designed for Windows-based laptops and workstations

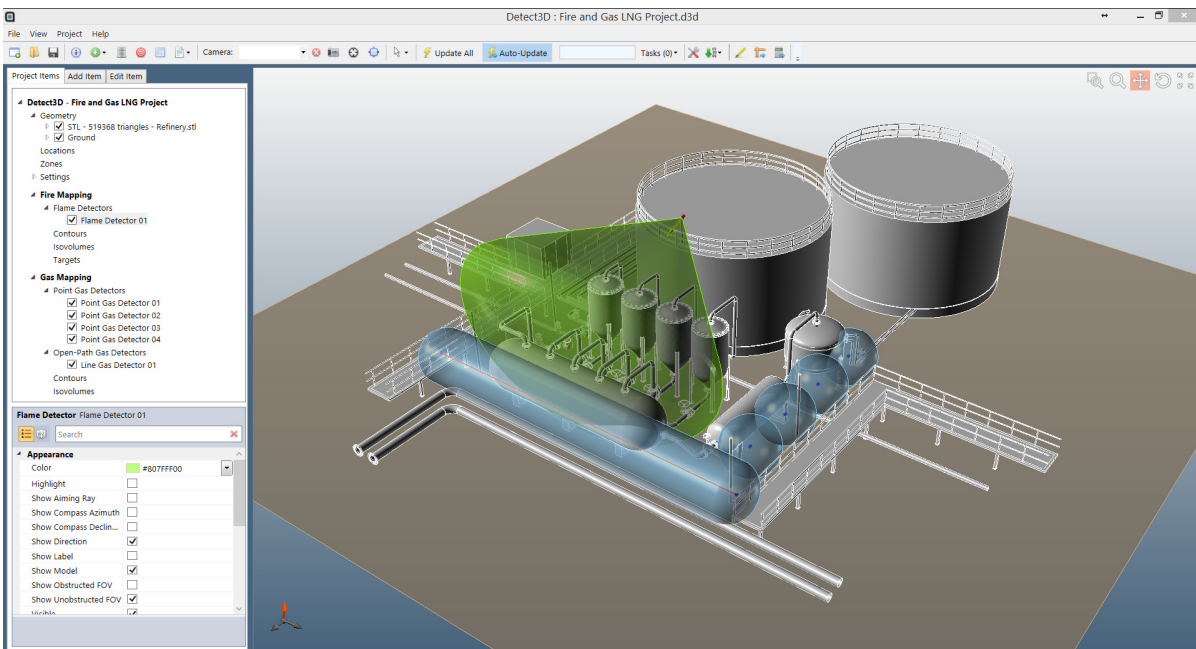


Figure 1. A screenshot of Detect3D showing a flame detector's field of view (green) and fields of influence for point and open-path gas detectors. Note that complex CAD geometries are easily imported and used in the fire and gas mapping study.

Capability Summary

- Supported CAD formats: .dgn, .dwg, .dxf, .stp, .igs, .obj, .stl
- Can be used without CAD – Detect3D includes a built-in capability to create 3D geometry from imported drawings in .png or .jpeg format
- Support for all optical flame detector types, including UV, IR, UV/IR, IR3 and video
- Users can create new flame detector models from manufacturer data sheets for use in the fire mapping simulation.
- Support for all point IR and open-path gas detectors, based on a designated LEL gas cloud size, with the ability to adjust and edit the cloud size to align with project-specific performance standards.
- Multiple risk grades can be added to each fire zone to isolate areas of particular concern.
- Visualization of detector coverage results in 2D (contours) and 3D (isovolumes)
- Volume-based coverage statistics for comparison with performance standards
- Maintenance and reliability assessments
- Automatic report generation to PDF and MS Excel, including any installation notes
- Output images for easy reporting in MS Word or MS PowerPoint.

Licensing

Once registered on the Insight Numerics website, users can download and use Detect3D in Demo mode without any license fee. Demo mode allows a user to access all features of the full version (loading geometry, placing detectors, viewing coverage etc.) with the limitation of a watermark on the 3D viewing window and images. In Demo mode, Detect3D projects cannot be saved.

Users can remove the watermarks and access the full capability by entering a valid license key purchased from Insight Numerics. The license key allows the user to access a network license which is available to everyone in your company. There are an unlimited number of users per license, though a single-seat network license allows only one user to use Detect3D at a time. If more than one user would like to use Detect3D concurrently each additional concurrent user requires another license.

Detect3D Network Licensing is priced per seat on an annual basis. Shorter licenses of 6, 3 and 1 months are also available. Please contact sales@insightnumerics.com for pricing.

Express License

The Express License was created with projects in mind that do not have 3D CAD models. It is a similar single-seat network license type as the Full License but with the one limitation that there is no 3D CAD import capability. Instead, geometry can be created using Detect3D's built-in geometry creation tools, based on drawings or CAD.

Viewing Mode

Detect3D's Viewing Mode allows any d3d files to be accessed and viewed by an unlicensed user at no cost.

Full License Value Proposition

Reduced Cost

Performing fire and gas mapping with Detect3D in-house optimally positioning detectors to comply with industry performance standards.

Design changes during the course of the project can be implemented seamlessly, resulting in better cost management and lower administrative overhead.

Reduced Time

An experienced user of Detect3D can perform a typical fire and gas mapping analysis at the rate of one fire zone per day. Even though the algorithms behind Detect3D are extremely powerful, the calculation time for a single flame detector in a complex geometry is typically less than one second on a mid-range laptop PC. There is no more waiting hours for a single simulation to complete. To further demonstrate this point, Insight Numerics has performed a full fire and gas mapping study on a relatively complex geometry within 10 minutes – this demonstration is available on [YouTube](#).¹

Improved Safety

Detect3D is the most advanced and accurate fire and gas mapping software product on the market. Giving engineers the best tools for positioning fire and gas detectors will result in improved site safety.

Express License Value Proposition

Reduced Cost

With a cost nearly ¼ of the Full version it is ideal for projects without CAD files or during the pre-FEED stages when no CAD is available.

Design changes during the course of the project can also be implemented quickly and efficiently, but they must be manually adjusted.

Improved Safety

With the same mapping capabilities as the Full Version you can expect the same accurate fire and gas mapping resulting in improved site safety.

Technical Support

The license fee includes full technical support from Insight Numerics.

The help file included with the software is extensive, and includes detailed tutorials designed to assist first-time users. The total time required for completing these tutorials is 14-20 hours, after which the engineer should be fully equipped to utilize Detect3D for fire and gas mapping studies.

Insight Numerics may also provide on-site or WebEx training for Detect3D upon request and condition of availability.

Getting Started

Simply create a user account on www.insightnumerics.com and download the free 10-day Demo version today.

More Information

For more information, visit www.insightnumerics.com or email info@insightnumerics.com.

1. <https://www.youtube.com/watch?v=bHze0r5-oSk&feature=youtu.be>

Detect3D System Requirements

Notes

Please note that **Microsoft .NET Framework 4 (Full)** is required. Detect3D will **not** run stably on the Client or Extended versions of the .NET Framework 4, only the Full version. Please also note that the current build for Detect3D is 64-bit only, and requires a 64-bit architecture and Operating System.

Software

Supported Operating Systems:

Windows XP SP3
Windows Vista SP1 or later
Windows 7
Windows 7 SP1
Windows 8

Supported Architectures:

x64

Prerequisites:

Microsoft .NET Framework 4 (Full), available from:

<http://www.microsoft.com/en-us/download/details.aspx?id=17718>

Hardware

Minimum:

1.5 GHz or higher with 4 GB RAM, integrated graphics, 2 GB hard disk space available.

Recommended:

2.3 GHz or higher with 8 GB RAM, 2 Gb dedicated Graphics, 2 GB hard disk space available.

Contact

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