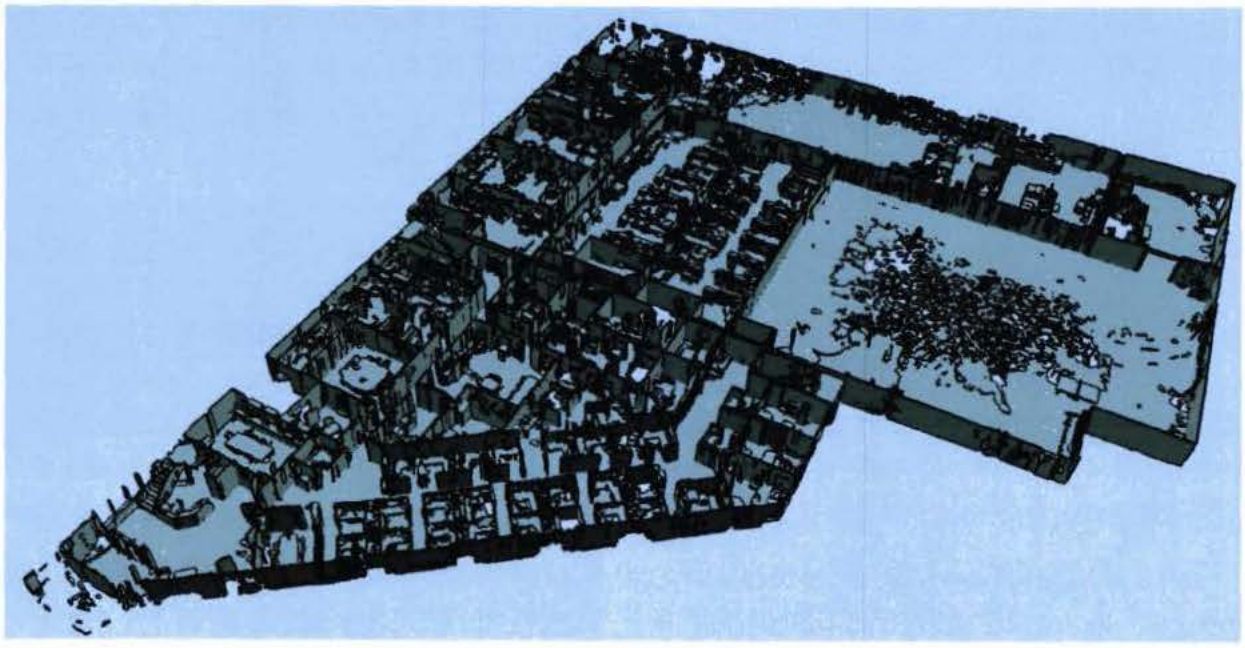
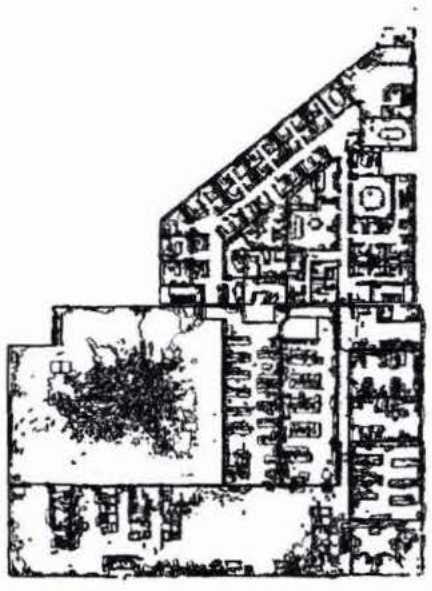


Environment mapping for live operations

Arithmetica

Main applications:

- Advanced situational awareness
- Anti-terrorism operations
- Line-of-site analysis



LIDAR and point clouds

Laser Imaging and Detection Ranging (LIDAR) scanning is widely used to survey 3D objects and environments with pinpoint accuracy. This high-speed technology creates data sets called point clouds consisting of hundreds of millions of data points. Point clouds look great until you get close up – then they dissolve before your eyes.

From point cloud to CAD model in seconds...

An impressive tool for military, defence and security services, Arithmetica's breakthrough software converts point clouds to high fidelity vector models in seconds, in a single step, automatically, without manual intervention. It works with the output from any scanner platform, whether mobile, terrestrial or airborne, as well as with point clouds obtained from other sources, for example photogrammetry.

Our software stops point clouds from disappearing by rendering roofs, walls, cars and any other obscuring objects as opaque surfaces, allowing you to build up a visual awareness of an environment and its hazards long before you enter it.

And because our software does this automatically and, quite literally in seconds, it can be used for planning of counter terrorism operations where every second counts.

About Arithmetica

Arithmetica creates new software technologies for clients anywhere in the world. We thrive on solving challenging and computationally intractable real-world problems. We offer in-depth knowledge of advanced ideas at the boundaries of computer science, physics, applied mathematics and statistics, plus the experience and programming expertise required to translate theoretical concepts into practical, easy to use applications.

Why is Arithmetica's software different?

Hitherto the conversion of point clouds into 3D models and plans has been a manual process – that is time consuming, costly and complex. But now Arithmetica have developed a unique solution that transforms this process, eliminating manual intervention and producing high fidelity vector models in a fraction of the time.

Our software uses advanced techniques at the interface of mathematical optimization and computational statistics to automatically and rapidly convert point clouds into accurate vector models consisting of lines and plane polygons.

Building on this unique capability, our software will also fully automate extraction of features from point cloud data, allowing the intelligent recognition, measurement and cataloguing of objects and built environments, and other forms of extracted knowledge.

"LIDAR provides a critical tool for live operations for military, defence and security services, allowing line of sight analysis and enabling fast, accurate assessment of an environment and its hazards before personnel are deployed."

Point cloud to 3D modeling software

- Rapid conversion of point cloud data to vector models
- Conversion for use in CAD environments
- Easy to use
- Fast processing and visualization of large data sets on portable devices
- Rapid conversion of data from both terrestrial and mobile LIDAR scanning systems

Unique integration with spherical vision systems and equipment

- Integration with our 360 and spherical video solutions
- Integration with maps, satellite views, building layouts and plans

Company info

Arithmetica develop ground breaking software solutions to solve real world scientific, medical and engineering problems.

Arithmetica Ltd
Unit 1A Shepperton Studios
Studios Road, Shepperton
Greater London. TW170QD
+44(0)208 783 1972

www.arithmetica.com

Arithmetica's point cloud conversion software has many applications in defence and security. Regular demonstrations can be seen at Stand N35.

Contact:Dr George Skrobanski Mobile: 078 5224 9402