PRESS RELEASE
26th November 2021
For immediate release

CCTV Design & Modelling Software

SGW are pleased to announce the implementation of CCTV Design & Modelling Software into the Consulting Practice.

SGW has invested in professional CCTV system design software and training for our CCTV & Security Design Consultants to use the software competently, for the benefit of future projects.

SGW now utilises the power of VideoCAD Professional 3D, one of the most powerful 3D & visualisation CCTV Design platforms available. By utilising professional 3D modelling software, SGW can model the proposed CCTV solution before our client commits to a system purchase, this allows SGW to provide our clients with accurate detailed CCTV design documentation, covering scene parameters, camera parameters, volumetric camera coverage, light levels & associated performance, based on the lighting levels, camera blind spot data, image depth-of-field, camera type, camera performance within the installed environment, day /night imagine performance, moving objects and many more parameters.

SGW strives to use design and modelling software, in conjunction with a matching test procedure, using the BS EN 62676 compliant Video Image Calculator (VIC) target to provide an end-to-end service, from concept design to image quality validation. After all, as IEC 62676-4 Section 5.2 states, "Without an OR [operational requirement] and a matching test procedure there is no practical methodology to assess whether the system can meet its required purpose."

SGW's adoption of the powerful software allows not only a full 3D rendered view of site layouts but also provides visual monitoring layouts to accurately emulate the images the operators will see from the camera in multiple lighting and weather conditions.
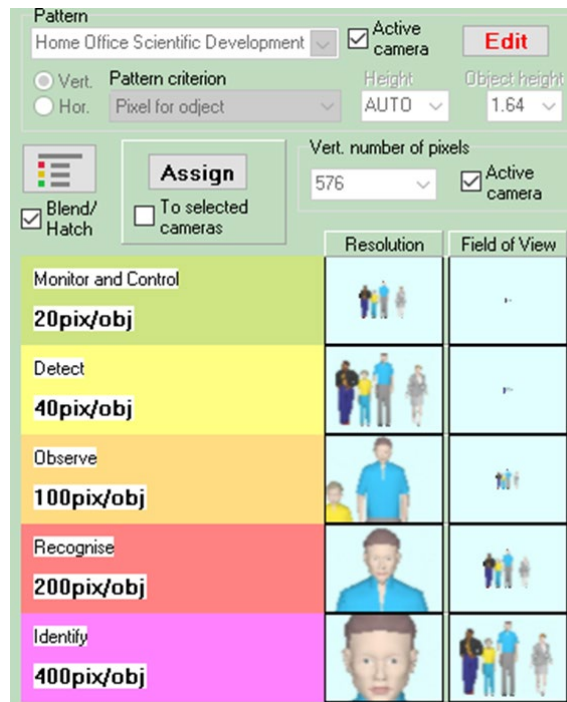
Software Interface – Operational Requirements Selection

VideoCAD is a drafting and calculating tool that helps SGW's consulting team define camera positions and angles of coverage when designing a CCTV system of any size. Without this software, client Operational Requirements for a CCTV system are more difficult to address properly and accurately due to many variables one can find in defining camera locations, angles of view, CCD chip sizes, object distances, recognition of faces or vehicle license plates. The software helps skilled and experienced design engineers to select the correct lenses, number of cameras and positions.
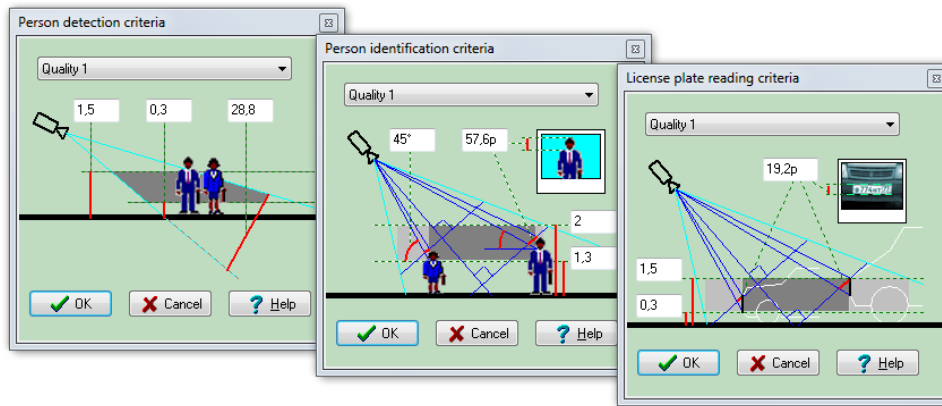

*Software Interface – Camera Location Parameters*

Using this software, SGW's design service can: -

- Determine the most suitable lenses, heights, and locations for camera installation to provide viewing areas with the possibility to detect and identify a person and read license plates.
- Choose the best camera location for the desired outcome using the graphics window with a CAD interface.
- Calculate the horizontal projection sizes of viewing, person detecting, identifying and license plate reading areas to draw them on the object plan.
- Measure distortions of the viewing area arising from natural obstacles.
- Calculate the image size of any object on a CCTV display (as seen by a camera), in the percentage of the display size, in pixels, TV lines and millimetres.

The software generates a drawing containing two projections of objects layout with their respective camera images. Also, the viewing areas are calculated, indicating cable distances, showing grid coordinates and text to be pasted into explanatory notes as an illustration as well.
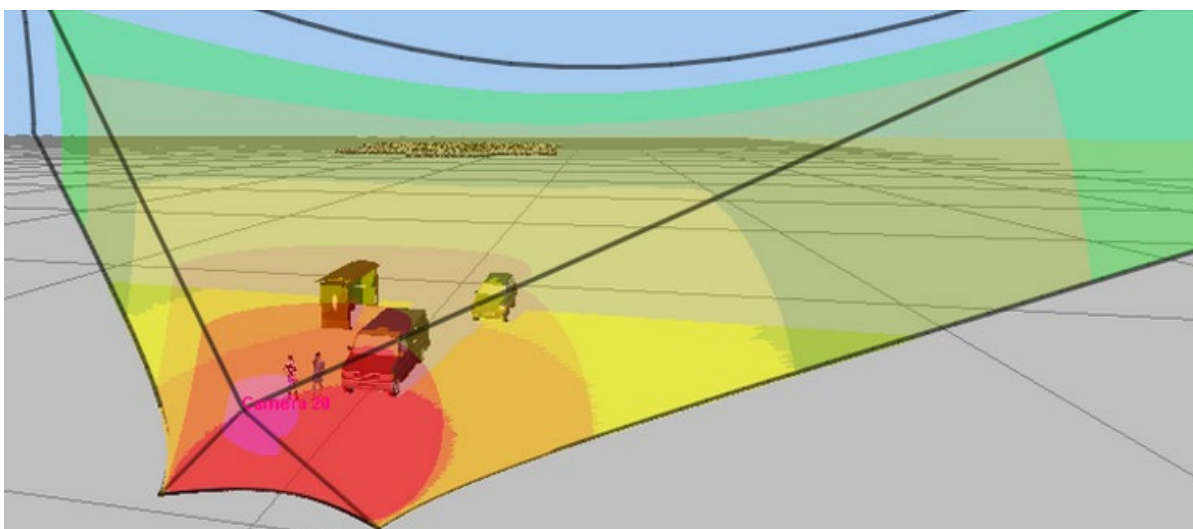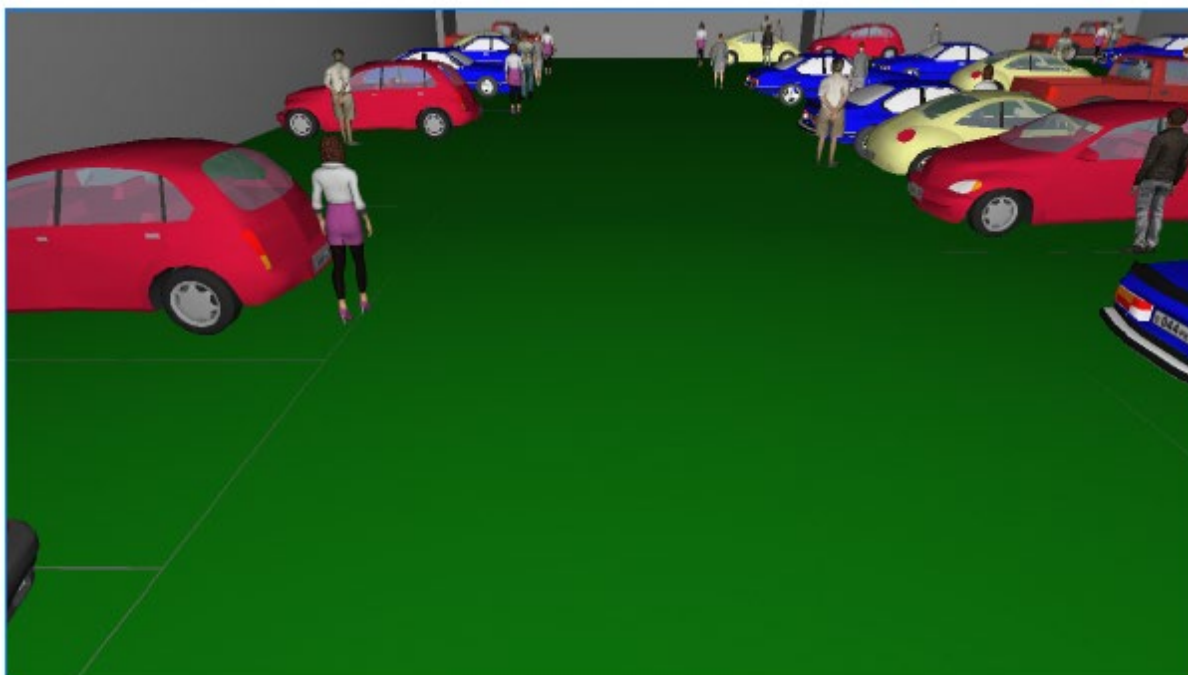

3D Volumetric Modelling showing pixel density at any given point of the field of view.
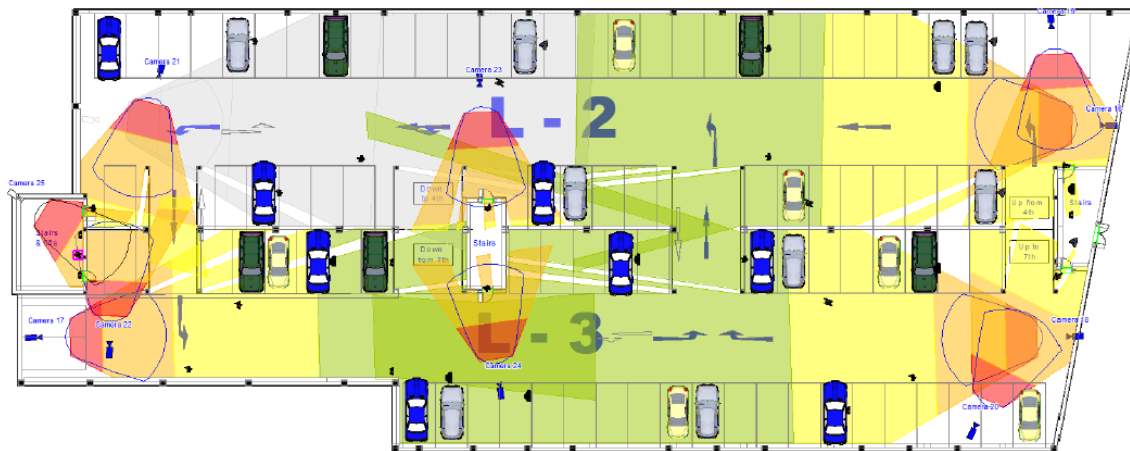
2D camera coverage showing camera coverage and pixel density based on camera type and mounting location.
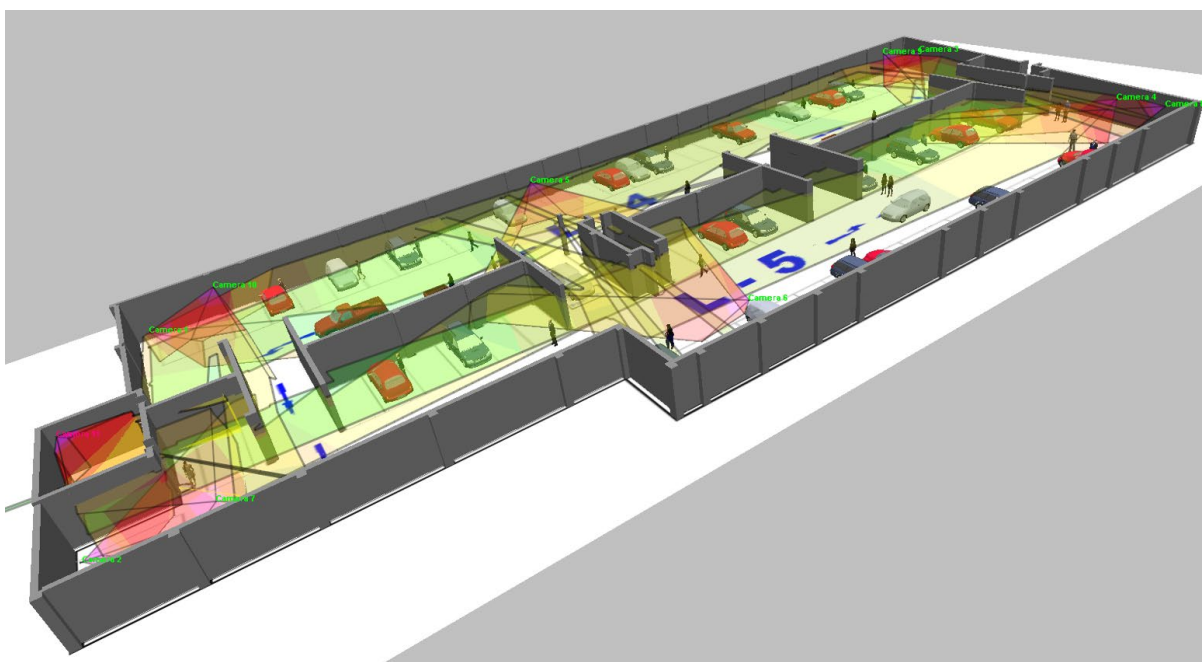
3D Modelling incorporating camera coverage and volumetric modelling.

Visual representation of the camera image within the car park.

Commenting on SGW's Adoption of 3D modelling software for Video Surveillance Systems (CCTV) Design, Simon Whitehouse, Managing Director at SGW said: *The use of 3D modelling in Video Surveillance Systems Design, allows our team to visually simulate the levels of coverage, the field of view, likely blind spots, and potential performance during the development of Level 2 Operational Requirements. It's often a challenge to suitably communicate where possible blind spots would occur if surveillance camera placement was to proceed in particular configurations without a suitable software simulation, so I'm convinced that our design software will help support the client to make an informed decision associated with approval and budget allocation aligned with an agreed Level 2 Operational Requirement and conceptual system design.*

Ends

NOTES TO EDITORS:

SGW Safety & Security Ltd (SGW) provides safety and security assessment, design and programme management consulting and training services for the protection of people, buildings and built infrastructure assets. Originally established in 2003, SGW now has a strong international footprint, with offices in the UK and Dubai, covering EMEA Regions.

For further information, please visit our website at: http://www.sgw-consulting.co.uk/

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