

VideoCAD for professional CCTV system design

We have all struggled at times when designing a CCTV system, trying to find the right lens for the right image, camera position, distances, etc. This time is now over, thanks to some smart programmers from Russia who have made the CCTV system design job easier, more accurate and more professional with their very clever drafting software called VideoCAD. We highly recommend it and if you get in touch with the author, just mention this article in CCTV focus, and you'll get a special discount.

VideoCAD is a drafting and calculating tool that can help you define camera positions and angles of coverage when designing a CCTV system of any size.

VideoCAD is user-friendly, allowing even beginners to use it effortlessly. Until now, many requests about a CCTV system would not have been addressed 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 licence plates. Even skilled and experienced engineers

have a hard time finding the correct lenses, number of cameras and positions. Thanks to VideoCAD this is no longer a problem.

VideoCAD practically boosts the quality of CCTV to new levels. There has been no such tool on the market until now.

So, what are the things you can do with VideoCAD? The list is quite extensive.

You can determine the most suitable lenses, heights and locations for camera installation in order to provide viewing areas with possibility to: detect and identify a person and also read license plates.

You can choose the best camera location for the desired outcome using the graphics window with CAD interface.

VideoCAD can help you calculate the horizontal projection sizes of viewing, person detecting, identifying and license plate reading areas to draw them on the object plan.

It is possible to measure distortions of the viewing area arising from natural obstacles.

VideoCAD allows you to easily 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.

VideoCAD can produce 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.

With VideoCAD it is also possible to produce a text file with full description of all the cameras in the project, viewing areas and cables. This can be easily pasted into the project as text or used as installation instructions.

You can study the influence of the criteria of person detection, identification and license plate reading on the sizes and location of the corresponding areas by changing the criteria according to the video image quality obtained.

You can study the principles of object representation in different viewing positions using test objects and the graphic window.

VideoCAD helps you calculate the length and the electric parameters of the cables.

VideoCAD optimises your system design by showing you minimum number of required cameras and cable, which increases your chances in winning various tenders.

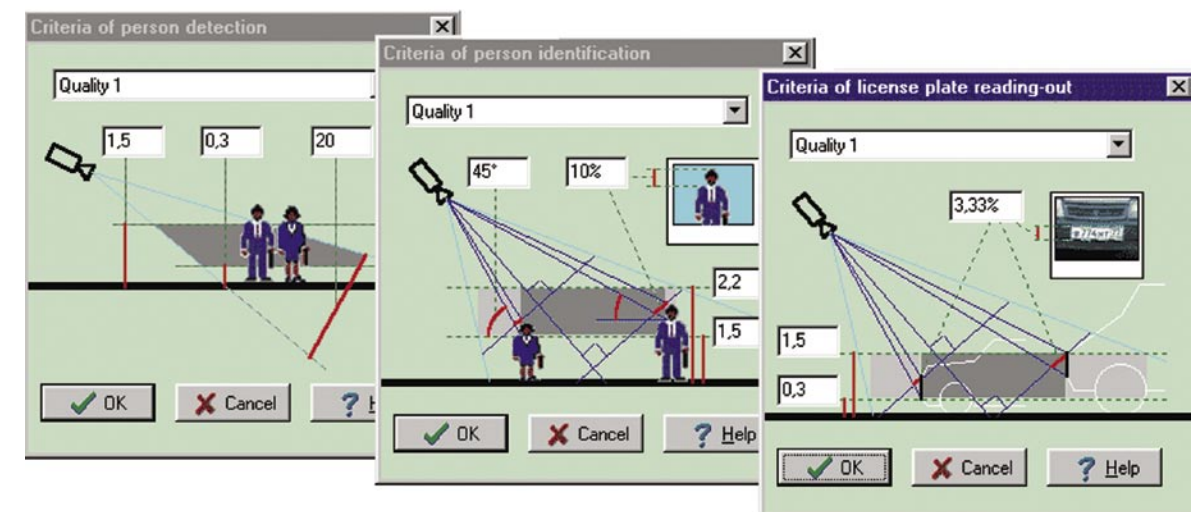
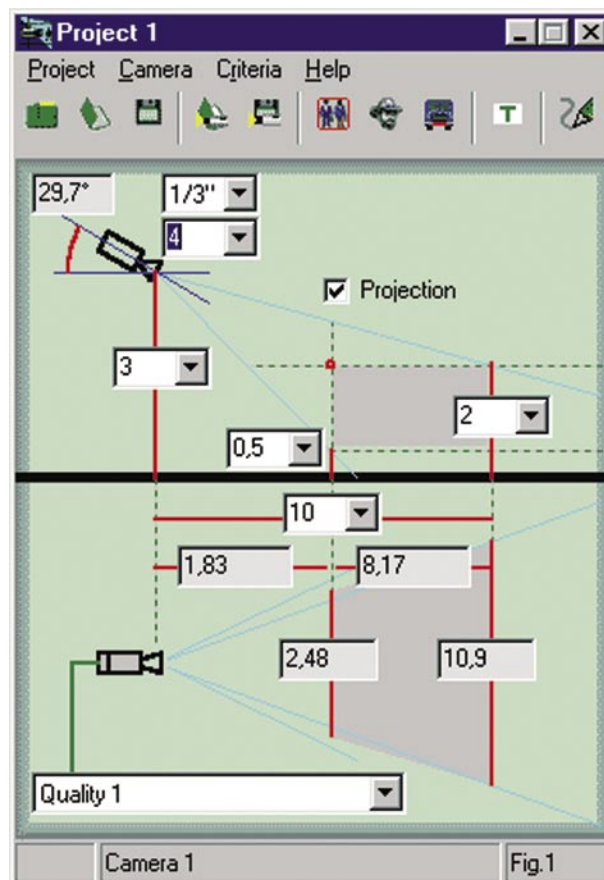
The automation in VideoCAD reduces your wasted time in trying to find out the correct camera position and improves the design quality.

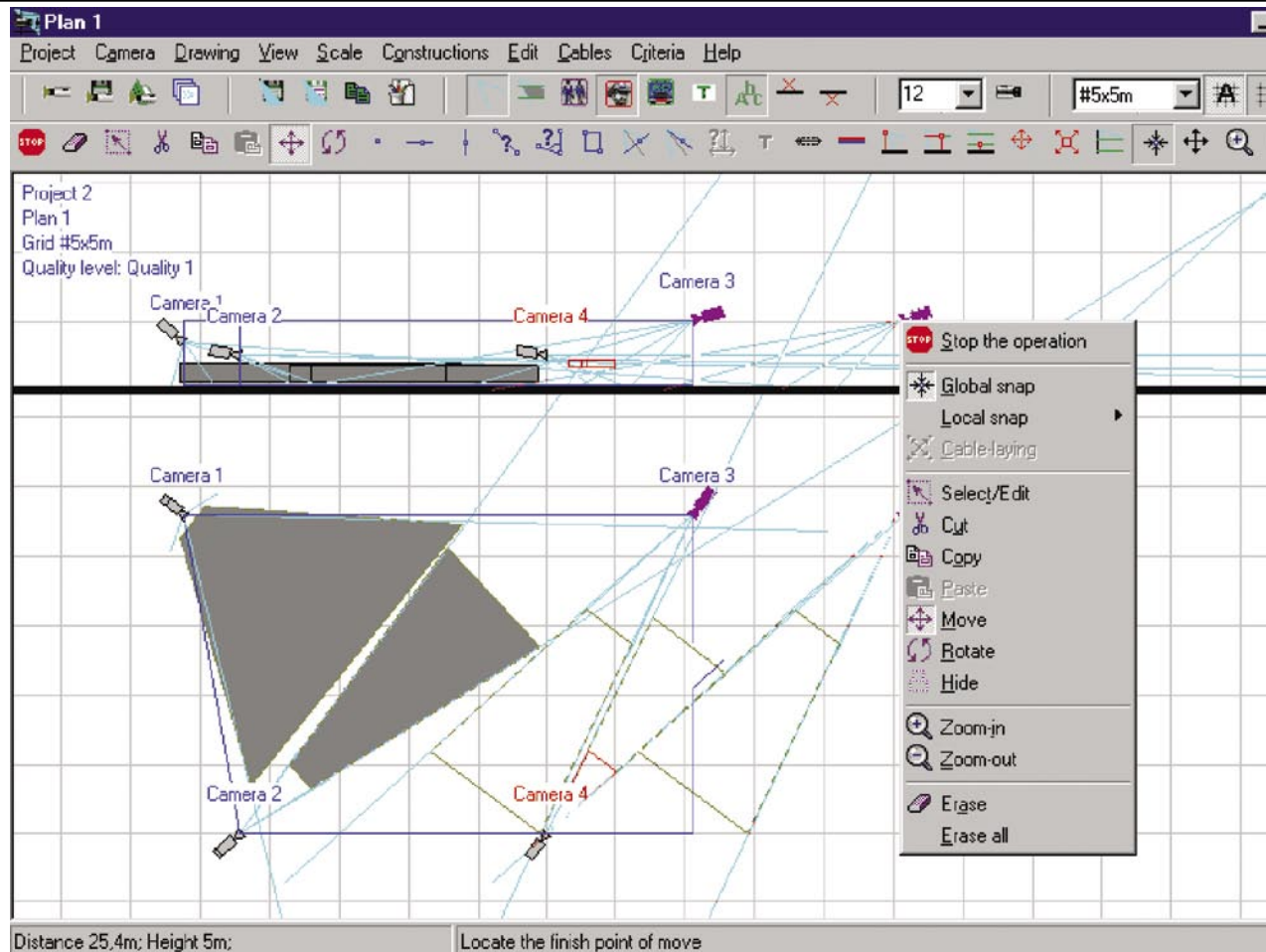
It is also helpful in reducing to a minimum at the system design stage, many uncertainties which can later arise as dispute situations, so the customer gets the optimum solution.

So, as can be seen from the screen shots shown in this article, VideoCAD offers quite a few clever calculations. Gone are the days when you had to guess the lens or angle of view, only to discover that what you suggested is not suitable, or perhaps you had 1/4" CCD camera instead of 1/3" and all the angles were wrong. With the VideoCAD you can be confident that your system design will be just about spot on.

To summarise, VideoCAD allows you to do the following:

- Calculate a view area horizontal projection according to the lens focal length, image sensor format, camera installation height, the required minimal and maximal heights and the maximal range of surveillance.
- Calculate the horizontal projections of the person detection
- Identify license plate recognition areas according to the lens focal length, image sensor format,
- Define the camera installation height, the required maximum height and range of surveillance
- Determine a full or partial object hitting in the





view area and calculate an object size on a display in percentage of a display size, pixels, TV lines and millimetres at the known sizes of a display using the actual object sizes, height above the ground and camera location distance.

- Display the view area actual image enabling to measure any parameters at any point using the graphics window.
- Save the actual view area image in graphical format.
- Create, save and load projects containing up to 100 cameras and up to 10 layouts.
- Export projects into text files.
- Keep the database of the person detection, identification and license plate reading criteria, depending on quality levels of video image.
- Calculate automatically the length and electrical parameters of cable.

All the calculations are real-time allowing to view the influence of each parameter specified upon the final result.

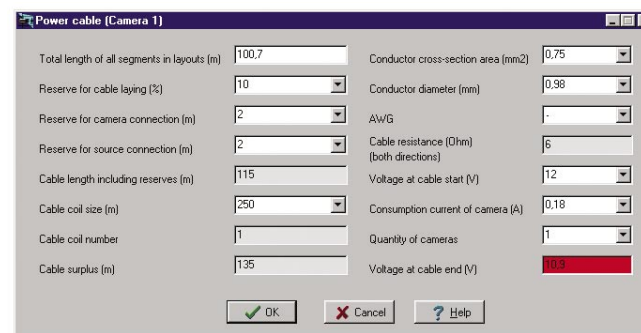
VideoCAD does not use any simplified formulas and techniques in non-typical situations

leading to considerable errors.

VideoCAD operates with any correct parameters either selected from the list or typed.

VideoCAD can be used for the prompt, but exact calculations of the view area projections to draw an object on a plan when performing a graphical part of a project. It can be also used to perform a view area scrupulous analysis to choose the most suitable camera location and lens parameters.

VideoCAD can be very effective for use in CCTV designer training. [•]





Why Wait?

www.SecuritySource.net

The Online Marketplace for the Security Industry: Burglary, Surveillance, Access Control, Fire, and Home Automation

With thousands of products from dozens of manufacturers, and more being added all the time, SecuritySource.net BuyDirect is the place to go for all your alarm security needs.

BuyDirect

ifs New Fiber Optic Universal Data Transceiver gives user option of transmitting all types of High Speed Serial Data over one optical fiber

International Fiber Systems Incorporated (IFS), a leading manufacturer of fiber optic transmission equipment, has announced the introduction of its D2510WDM Series Universal Serial Data transceiver. The IFS D2510WDM Series is the first environmentally hardened universal serial data transceiver that support data rates up to 512kbps. This unit provides transmission of a single RS-232, RS-422 or RS-485 serial data signal over one multimode optical fiber.

The IFS D2510WDM Transceiver is ideal for applications where there are many different types of serial data present. These include applications where multiple systems are being integrated over fiber and multiple camera manufacturers with different data protocols with different data rates are being used. Or in applications where fire alarm, access control and camera control data is required but operating with different data protocols and data rates. By utilizing the IFS D2510WDM transceiver the user can save time, labor and avoid confusion during installation. Instead of ordering different models of data transceiver for each data protocol application, the installer simply installs the IFS D2510WDM and connects the data transmission wires to the conveniently marketed and easily marked terminals on the unit. Having the wrong unit for the data protocol is eliminated.

Typical applications include traffic signalization networks for Intelligent Transportation Systems (ITS), and industrial security applications, where access control, CCTV camera pan-tilt-zoom, and fire and alarm control systems are to be integrated into a single point-to-point network. The IFS D2510WDM Series was designed to maximize the utility of newly constructed fiber optic cable plants, or to increase the information capacity of existing plants where the cost of pulling additional fiber may be prohibitive.

The D2510WDM Series may also be used for increasing the transmission distance of tradition-

al copper-based cabling networks. "Transmitting data over optical fiber with this equipment has an effective range of up to 3.6 miles, end-to-end.

That is far more than conventional copper-based cabling systems, where the distance may be limited to relatively short runs per segment and are susceptible to EMI/RFI interference", said Dave Sinise, IFS Product Manager.

"With the emergence of wide area data networking within modern security and ITS applications, consultants, systems integrators and dealers were looking for solutions from IFS, and we've responded to those requests," continued Sinise.

Additionally, many industrial security and factory automation systems present the user with difficulties such as electrical noise, radio frequency interference, and harsh environmental conditions that pose great demands on an out-of-plant fiber optic transmission network. "As the D2510WDM equipment is environmentally ruggedized to meet the requirements of NEMA TS-1/TS-2, these multiple data protocol fiber optic transceivers will be in great demand for these types of applications, which may require an ambient operating temperature range of -40 to +74 degrees C", said Sinise.

The D2510WDM series features LED indicators that assist the installer and user in easily ascertaining transceiver operating status without the need for special test equipment. In addition, dry relay contacts are provided to activate an external fault alarm in the event of a fiber break or loss of operating power, and these units are available in standalone or rack mount versions.

Like all IFS products, the IFS D2510WDM Series features true plug-and-play design that ensures easy installation without the need for any electrical or optical adjustments. And like all IFS products, it is backed by an exclusive Comprehensive Product Warranty. [•]