



**protoclea**

advanced image engineering



the **phorcas** network centric visual **security** manager

# phorcas

The proactive, powerful tool to fight sophisticated crime



# The Phorcas Network Centric Visual Security Management System

## introduction

Proliferating crime dictates that simplistic approaches to security are just not good enough any more. The increasingly sophisticated nature of crime demands a comprehensive approach to solve the problem. PHORCAS is a powerful tool against sophisticated crime.

By integrating tightly into a single User Management Platform, PHORCAS brings together all the available sensors and presents them in a fashion that fully supports proactive combating, control and management of any incident or potential incident. The presentation employs high quality video displays and high resolution graphics and there is sufficient logic within the system to enhance and improve overall levels of security and management.

Other integration platforms typically stem from the expansion of Building Management or Access Control systems and requirements. The PHORCAS, however, is a full-blooded network centric surveillance system that integrates security across the enterprise and is designed to present accurate, timely and high quality visual information to operators, allowing them to activate a series of pre-set procedures to deal with the given situation.

The PHORCAS offers security personnel a unified front end that sees and controls all of their systems from a single screen. It provides a platform that fully integrates DVRs, access control, perimeter alarm systems, fire systems and other components. Operators see a single system even in applications where 800 cameras or more are implemented.



This constitutes a system that offers:

- Real time recognition of threats;
- Immediate situation analysis;
- Networked collaboration and response co-ordination



## applications

Protoclea's PHORCAS is ideal for event and incident management in shopping centres, control rooms (both joint and specific), street surveillance, airports, railway stations, entertainment complexes and other public facilities. PHORCAS can also be applied in distributed systems. Typical applications lie in shopping centre control rooms, street surveillance control rooms, large industrial complexes and public facilities. PHORCAS also caters for the requirements of security remote control facilities (Joint Operations) and building management control rooms.



## full integration tool

PHORCAS offers a comprehensive visual view of the entire area of surveillance interest and has the capability to zoom into any area at a mouse click. Operators are presented with a multi-screen view of the incident to ensure that all aspects of security can be carefully considered.

This visual view is also enhanced by the addition of terrain/layout views that indicate the positioning of cameras, resources, fire doors and exits, staircases, elevators escalators and other key points.

## surveillance

Observers watching the system monitors are presented with active scenes in large format and dormant or stationary scenes are presented in a smaller format. Should activity occur in a dormant scene, it will automatically be brought into view in large format. This functionality makes it easy for observers to concentrate on areas where their attention is actually required, and monitoring is therefore less strenuous. A single observer is therefore able to monitor more screens more effectively, reducing overall control room running costs.



## alarm detection

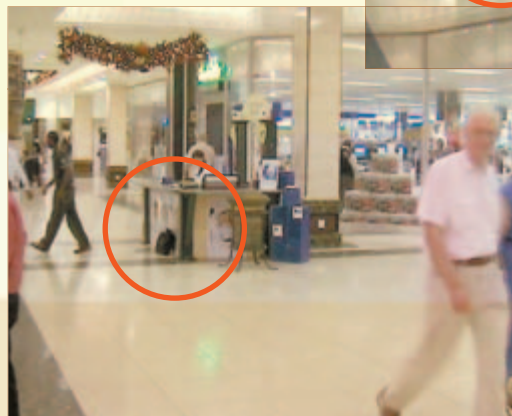
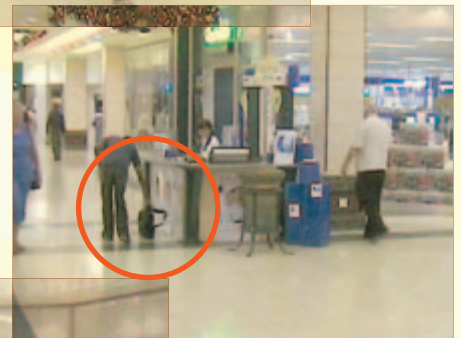
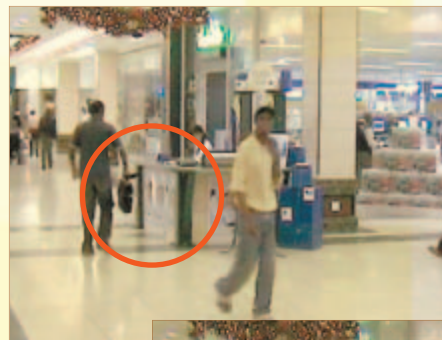
Alarms are automatically detected and the system includes tools that assist observers to recognise scenarios that would typically lead to an incident. Where incidents are confirmed, a fully automatic reaction activity program can be activated.

## status monitoring

As a full integration tool, PHORCAS offers users information from the Access Control system, including door status or access status, fire detection systems and alerts, the status of building facilities such as escalators, air conditioning, sprinkler systems emergency exits and access/egress points such as doors and windows, service hatches and fire escapes.

An audit process on all PHORCAS system functions enables precise, accurate monitoring of what took place during an incident and what actions were implemented. This is effective in ensuring that

mistakes are not repeated and that control room observers and operational staff learn from reviewing real experiences. The feature is also useful for identifying and analysing trends.



## image display

The images are displayed using the most modern very high resolution presentation technology in large video panels/walls that permit a wide range of image display and size of image options.

## image review

The PHORCAS capability to immediately review images from video recorders adds to the realism of incident management. Operators are also further prompted by guidance texts in dealing with any incident.

## hardware independent

As the PHORCAS platform is independent of hardware it remains unencumbered by the limitations that could be posed by any specific hardware. It is designed primarily to function as a security information tool and is structured in a way that it is possible to fully integrate with most systems available today. PHORCAS is not limited by image resolution or recording rates and will seamlessly mix analogue and digital products, standard CCTV and High Definition TV of all classes.

# architecture

The key to the powerful integration capability of PHORCAS is its unique architecture, which uses a standardised command set with product-specific drivers to integrate an extensive variety of OEM products.



# user interface

The front end of the PHORCAS system has been meticulously planned to present security operators with what they need most -- visual images of unfolding events and location maps showing actual location as well as direct command and control capability over the developing situation. The hardware and connections are hidden from operators so that a single system is seen, irrespective of whether there are as few as 8 cameras or as many as 800 cameras operating within the system.



The PHORCAS is also designed to permit the connection of multiple workstations to ensure sufficient human effort can be allocated to events. This distribution capability facility also allows operators to be spatially located in different rooms, buildings or at a remote headquarters many kilometres away.

# incident management

Random incident management or disaster management are considered specialised events and the mode of

operation is inherently different as it requires proactive input. PHORCAS is equipped with a fully integrated Command and Control system so that it becomes a Command Centre.



The system will concentrate on all images relevant to the incident or event. The main image could be one showing a group of armed

# event management

The event manager system within PHORCAS is designed around a powerful script-architecture which allows system designers to define exactly what should happen under whatever circumstance. Procedural steps can be established for dealing with fires, explosions, bomb threats, armed robberies or any other events. The software turns management of the access control, fire, guidance and display systems into a very easy task.

people holding up other people at a shopping centre. Another image may be focusing on their getaway car.

A further image could contain a map of the centre layout and a street map of the surrounding area. Likely escape routes can be anticipated and images from cameras at nearby highway onramps could be brought into play. These features allow the operator in charge to effectively deal with all aspects of an incident or event.



This capability extends to communication with external resources such as police and emergency services, as well as customers and members of the public through public address systems to instruct them on which exits to use, where to go and what to do. PHORCAS is therefore capable of facilitating complete disaster management.

# intelligent video software (IVS)

The PHORCAS system makes use of intelligent video software (IVS) in the full live analysis or subsequent review of images relating to any particular incident/event to assist in control or prevention. IVS enables automated image sensors to deliver, among others, facial recognition, number plate recognition, smoke detection and fire detection. It also enables accurate calculations of speed and distance from images recorded at different camera locations.

These IVS capabilities assist authorities with the successful prosecution and conviction of criminals and other offenders and in the development of more effective overall incident management.

## automated surveillance

The PHORCAS system was specifically developed to make use of modern Image Processing, IVS and other systems designed to reduce reliance on operators for mundane tasks, focusing instead on making best use of skilled operators where they add most value -- making real decisions that machinery and equipment, no matter how sophisticated, can't make.

These include:

- Sophisticated Motion Detection
- Image stabilisation
- Smoke and flame detection
- Object tracking (motion, appearance, disappearance)
- Number plate recognition (ANPR)
- Face detection and facial recognition
- Behavioural recognition (running, loitering etc)

ANPR and facial recognition are invaluable in traffic and parking control, the detection of vehicles

entering no-go areas and for effective monitoring and policing of parking too long in a time-restricted area or leaving a vehicle in a no-parking area.

Behavioural recognition and motion detection allow operators early warning of potential incidents. People running or loitering, movement in restricted areas, occupied vehicles kerb crawling or waiting next to an exit are all possible indicators of a potential incident and forewarning enables preventive measures to be implemented timeously.



The PHORCAS will also assist in detecting potential bomb threat incidents. Objects such as suitcases, bags, boxes and other containers that are left unattended are detected and highlighted for the control room operator so that an appropriate response can be immediately initiated.

The fire/smoke detection capability will draw control room operators' attention by highlighting on the screen any view that shows smoke or flames even before an alarm may be triggered. Such early warning is invaluable.

These unique capabilities mean that fewer operators, at lower cost, are required to more effectively man the same number of cameras with significantly improved overall performance.

## open interface

The Open Interface used by PHORCAS means that all controllable devices can be integrated and a suitable script set can be created to take advantage of unique features in the range of OEM products.

### physical address

Unit 70 Studio Park  
5 Concourse Crescent  
Lonehill  
Johannesburg  
South Africa

### postal address

PO Box 243  
Lonehill  
2062  
South Africa

### contact

**Tel:** +27 11 465-4312  
**Fax:** +27 11 465-4315  
**Sales:**  
[sales-desk@protoclea.com](mailto:sales-desk@protoclea.com)  
**Support:**  
[support-desk@protoclea.com](mailto:support-desk@protoclea.com)



**protoclea**  
advanced image engineering



**protoclea**  
advanced image engineering