



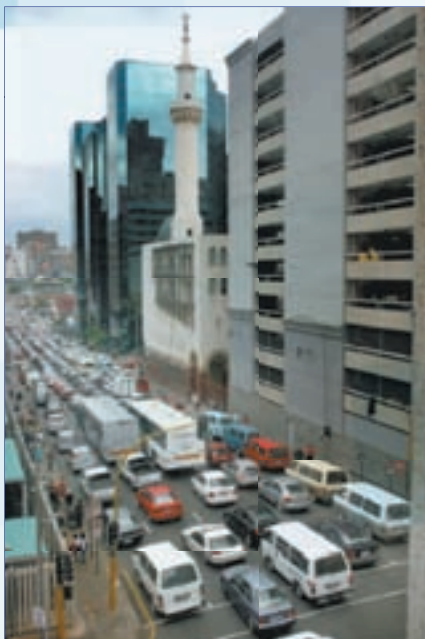
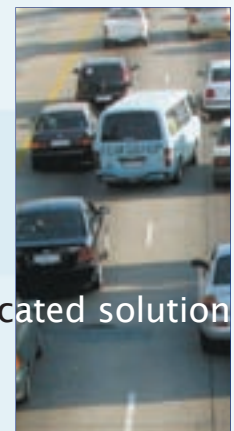
protoclea
advanced image engineering



the ARGUS platform for effective traffic management systems

argus

The proactive, powerful and sophisticated solution



The Argus platform for effective traffic management systems

the traffic explosion

Population growth, extensive and expanding urbanisation and wealth creation have led to significant increases in vehicle ownership and traffic on public roads. In major cities traffic congestion is no longer confined to peak hours. Traffic flows need to be monitored and managed.

Sophisticated CCTV camera systems, developments in intelligent video surveillance (IVS) and automatic number plate recognition technology, among others, are coming to the fore to offer urban administration and road traffic authorities sophisticated solutions for the management, control and policing of traffic.

integrated management platform

Protoclea's ARGUS provides a powerful traffic management support system that integrates into a single user management platform all available cameras, intelligent video surveillance (IVS) software and sensors. Protoclea's SINON provides sophisticated automatic number plate recognition.

The information is presented in a fashion that fully supports pro-active control and management of traffic flow, by displaying incidents, accidents, vehicle break-downs and other situations that impede traffic flow, weather conditions, unusual traffic build-up or congestion and other factors that may have an influence. The presentation employs high quality video displays and high resolution graphics and logic within the system enhance and improve overall levels of traffic management.

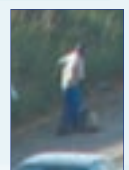
accurate, timely information

A full-blooded network-centric surveillance system that integrates a variety of systems and centres, the ARGUS presents accurate, timely and high quality visual information to traffic management operators, allowing them to activate a series of set procedures to deal with any given situation.

The ARGUS gives traffic management authorities a unified front end that sees and controls all of their systems from a single screen. Operators see a single system even in applications where 800 cameras may be implemented.

This constitutes a system that offers:

- Real time recognition of traffic problems
- Immediate situation analysis
- Networked collaboration and response co-ordination
- Recording of images/data sequences for evidence.



System Capability and Features

display

The system offers a very flexible format designed to rapidly adapt to user needs, whether it be visual monitoring of traffic, incident management or crime management.

intelligence

Intelligent video surveillance (IVS) technology is used in the ARGUS system to provide a host of features that are critical to effective traffic management. These could include:

- Automatic number plate detection using SINON
- Vehicle pattern detection
- Individual vehicle speed
- Average flow speed (all vehicles)
- Average speed between two points.

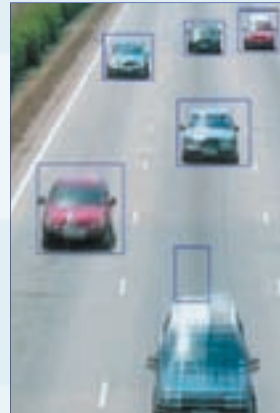
The ARGUS will also detect variances in vehicle behaviour that enable improved traffic management. This could include:

- Stationary vehicles
- Illegal use of lanes
- Improper use of emergency lanes



- Vehicles travelling in the wrong direction
- Irresponsible driving (swerving across lanes, excessive speed)
- Detection of non-vehicular objects (people/animals on the road).

general traffic control



Other features of the ARGUS system that improve the general traffic command and control for the authority include:

- Control of variable road or highway signage and driver information systems
- Seamless integration into databases such as a national traffic information system
- Information distribution to other cities/traffic control centres (warnings of traffic conditions likely to affect other centres or routes).



number plate recognition



The SINON Freeflow System is an automatic number plate recognition system that integrates fully into the ARGUS system. It can be applied to systems monitoring one or two traffic lanes or many lanes, modularly and cost-effectively. As a moving vehicle monitoring and number plate identification system, it can be used to:

- Pinpoint the whereabouts of vehicles that are stolen, involved in a crime or a hit-and-run
- Automatically create speeding tickets without human input in the image analysis.
- Measure the average speed of vehicles crossing two points many kilometres apart to identify vehicles that avoid speed traps but are generally significantly exceeding the limit between the two points.



There are three software modules in the SINON Freeflow System:

- The ANPR Remote Station (LRS), which is the highly configurable back end providing ANPR, alarm generation and data storage. Functionality includes licence plate recognition, vehicle colour identification, active health monitoring of all communications, alarm generation and video data storage. LRS monitors lanes for vehicles and detects via three triggering mechanisms: advanced video motion detection; licence plate detection/OCR (optical character recognition); or external triggers such as a loop or beam.



- The Operator Station (OpS), which is the front end/user interface for alarm handling, system configuration and report generation. Functionality includes: Alarm display and handling; operator privileges/access control; operator action logging; black list maintenance; reporting and statistics; system configuration; and data export.

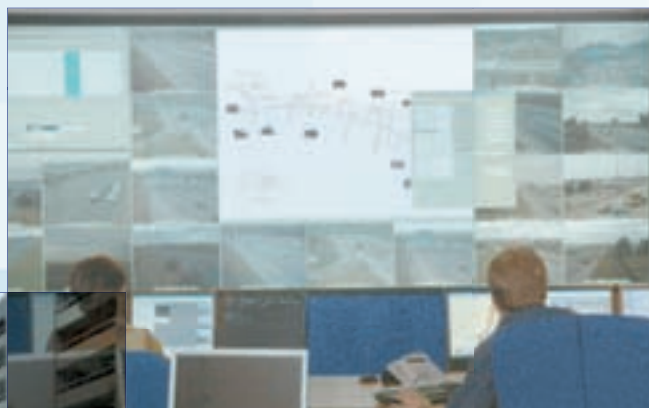
- The Database, which stores all of the traffic data captured. Functionality includes: Storage and search for all incident data captured; and storage of messages, alarms, operator actions and system configuration. It conducts self-maintenance and automatically cleans out old incident data no longer required.

design & configuration

The ARGUS platform integrates to non-specific hardware and is structured to fully integrate with most systems available today. It 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.

The unique architecture of ARGUS uses a standardised command set with product-specific drivers to integrate to an extensive variety of OEM products, offering the implementers and users of Traffic Management Systems options.

The ARGUS can be supplied as a partial solution or a complete solution, including all of the hardware requirements. It can also be supplied as a pure software solution for existing systems.



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