



Mirasys Solutions

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Agenda

- Mirasys Ltd. in a nutshell.
- Large scale Video Monitoring Systems
- Utilization of Video Content Analysis

Corporate Profile

- Finnish Private Company
 - Founded 1997
 - Owned by Private Equity Investors (Capman), founders and management
- Competent Team
 - Highly seasoned personnel
 - Emphasis in own Software IPR — 40 % of personnel investment
- Sales since 1998
 - Over 25 000 DVR/NVR licenses sold
 - Over 300 000 video surveillance cameras controlled
 - Number 5 worldwide, 3rd in EMEA in Software IP Surveillance
 - Sales partners in EMEA, North America and Asia



The Whole Story.

Innovation in High Resolution



Welcome to the leading Finnish provider of high-resolution video surveillance solutions for security applications..

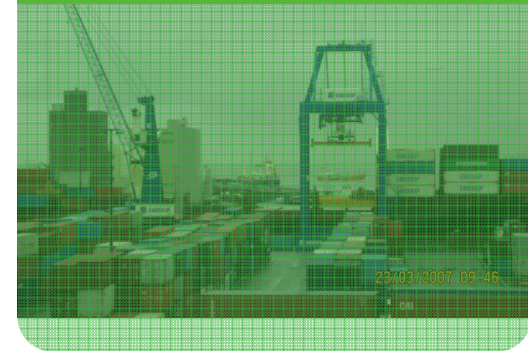
Capture it all in full detail, with fewer cameras, lower costs and smarter management.

Intelligent Image Analysis



- All systems optimized for full professional use
- Efficient handling of rich audio/video data
- User friendly intuitive management system
- Open interfaces for system level integration

Wide Area Surveillance



- Smooth and affordable upgrades as your business and needs grow
- No 1. in the advanced Northern European markets, 3rd in EMEA, and 5th Globally
- Fast Growing

Mirasys protects Banks



- More than 6 000 branch offices in Europe and Africa



Mirasys protects infrastructure



- Entertainment Arenas, Harbours, Airports and Border control in Northern Europe



Mirasys protects Bangkok City



- M.R. Sukhumbhand Paripatra, Governor of Bangkok said "...there will more than 20 000 cameras to cover the most important areas within next four years."
- Initial installation is 3 000 cameras

Video Content Analysis



Why VCA ? **Efficiency**

- Intelligent alarm/event configuration (no live view)
- Automated actions (light access control, security help)
- Object data independent of image (search from DB)

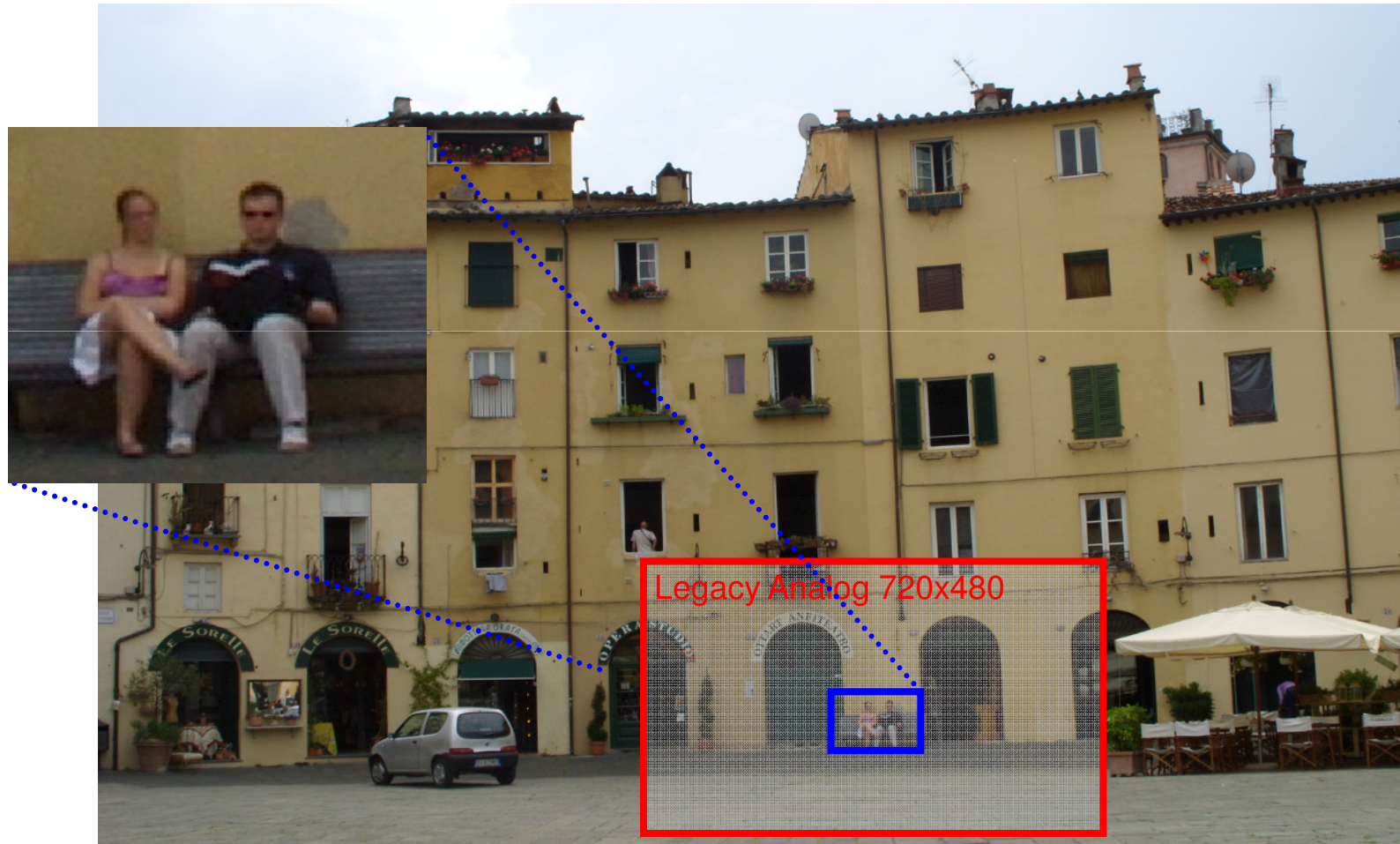
Common use cases

- People counting (up to 98% accuracy)
- Object size recognition (car park)
- PTZ control
- ANPR / text information on object
- Hot spot analyze (retail)
- Trip wire or fence protection (perimeter protection)
- Face recognition (light)



INNOVATION IN HIGH RESOLUTION

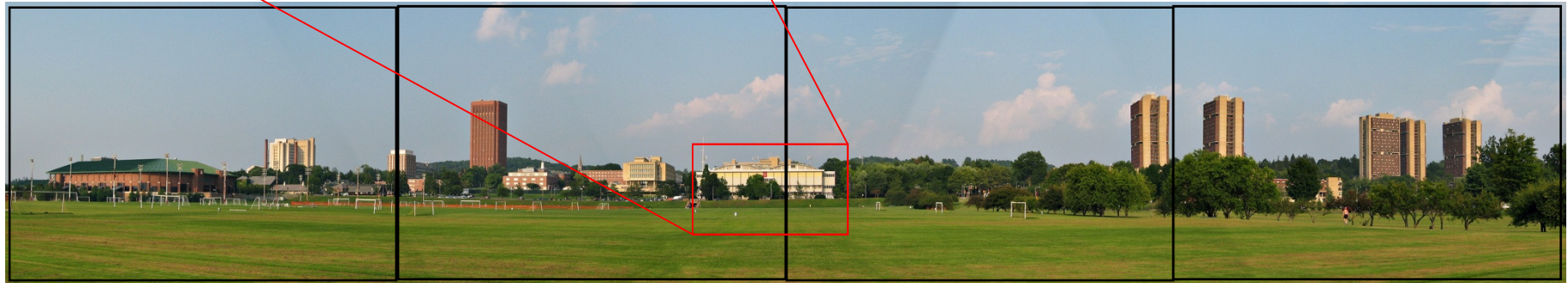
Megapixel cameras bring video surveillance to a new level: watch wide areas and see the smallest details – simultaneously!



Panoramic Surveillance



Instantaneous Digital Pan, Tilt & Zoom



180 to 360 degrees panorama views

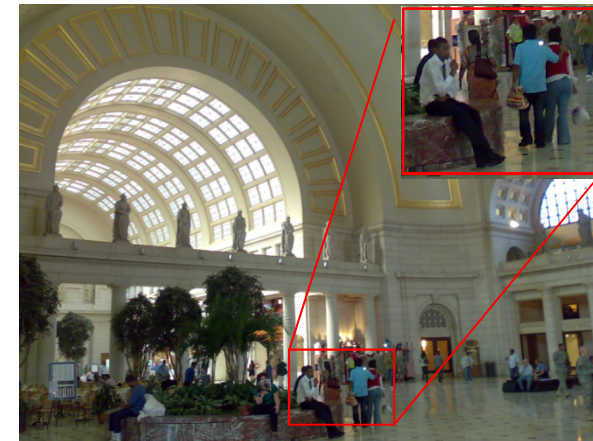
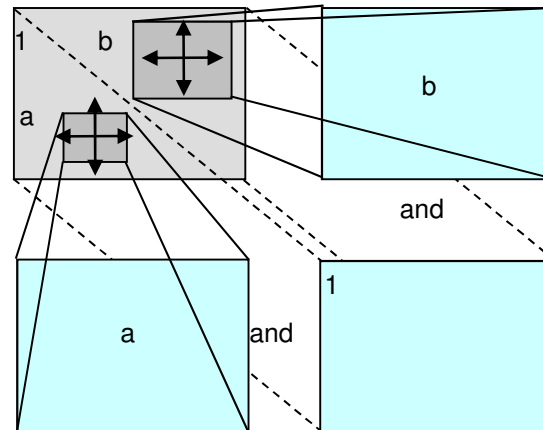
Zones of Interest



400 Pixels
(NTSC/PAL)



Legacy Mechanical PTZ allow either Full Image **OR** Zoomed Image, but not both.



With megapixel cameras, we can simultaneously display and record Full Image **AND** Digitally Zoomed Images

INTELLIGENT IMAGE ANALYSIS

Video content analysis helps the operator to detect objects and their properties without tiresome watching of screen patterns.



Objects are detected against the background and classified

Object Detection & Classification

Perimeter Protection



Objects crossing the tripwire
cause an alarm



Recognition of Text



Automatic recognition of
alphanumeric text

Object Counting & Tracking



Objects are counted and their movement is tracked.



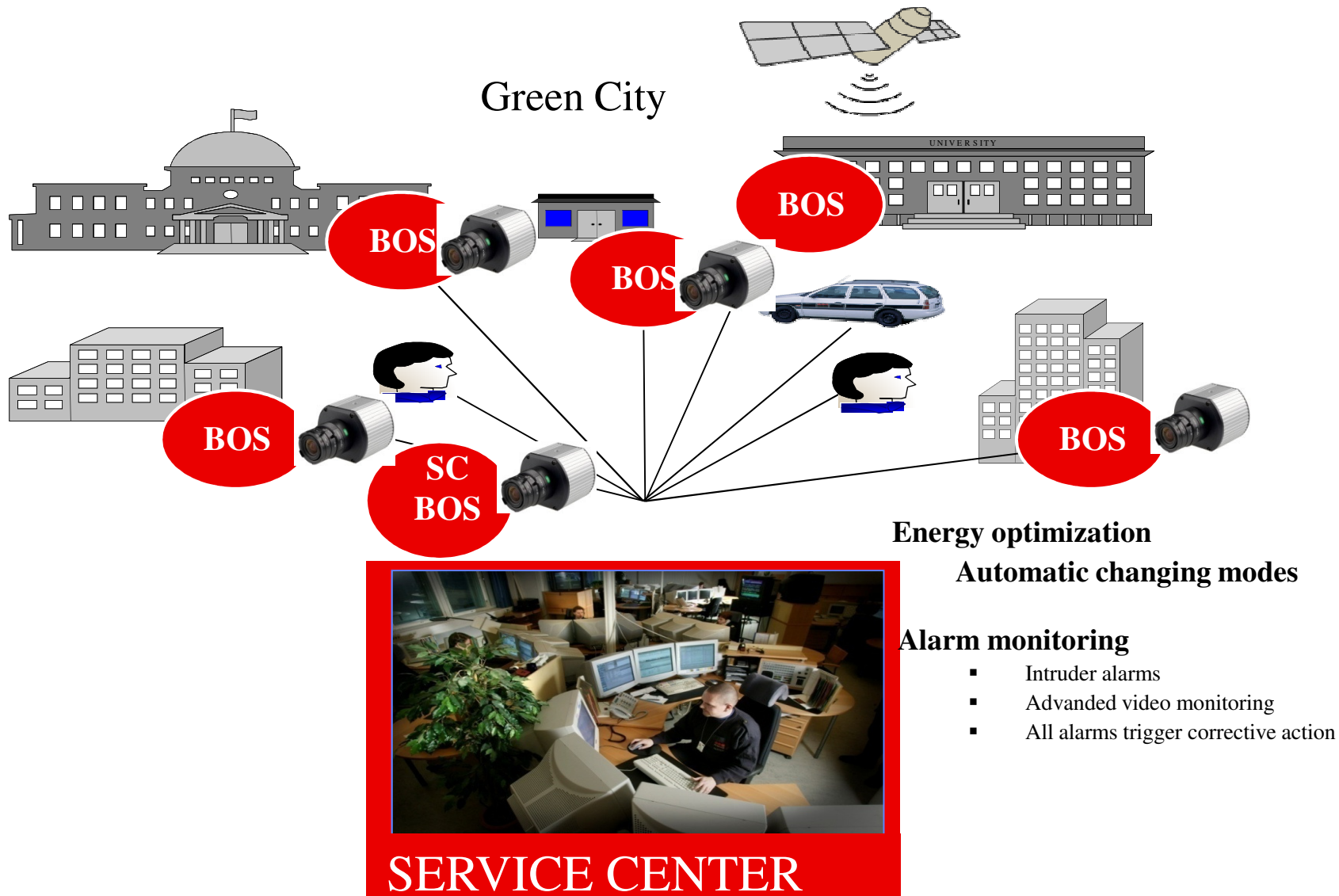
Face Detection



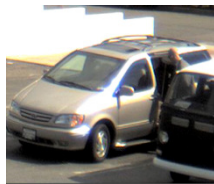
Faces appearing in camera view
are detected and extracted.

Efficient management of Green Building

MIRASYS 



Surveillance is in transition



Purpose	Prevent incident from happening	Generate alarm in case of incident	Deal with the actual incident	Reduce outcome of the incident
Camera surveillance tools	<ul style="list-style-type: none"> Intelligent video analysis (behavioral patterns, automatic recognition) 	<ul style="list-style-type: none"> Real-time video surveillance and analysis 	<ul style="list-style-type: none"> Alarm management Retrieval of incidents 	<ul style="list-style-type: none"> Evidence search video data Simulation of the incident
Other solutions	<ul style="list-style-type: none"> Physical perimeter protection Intelligent sensors 	<ul style="list-style-type: none"> Intruder and fire alarms Access control 	<ul style="list-style-type: none"> Security control & command centers Situational awareness 	<ul style="list-style-type: none"> Crisis management Communication systems
Market growth	High	Moderate	High	High

Traditional focus
 Future focus

Summary - Key Benefits



- Mirasys provides cost efficient solution for wide area and building surveillance.
- Mirasys solution integrates well into Building Management Systems
- Mirasys incorporates technologies and features that enables Green Buildings Initiatives



Thank you!

Back-up slides ...



Video Content Analysis

This is pure TV fiction:



Count people inside the van..



Read the license plate..

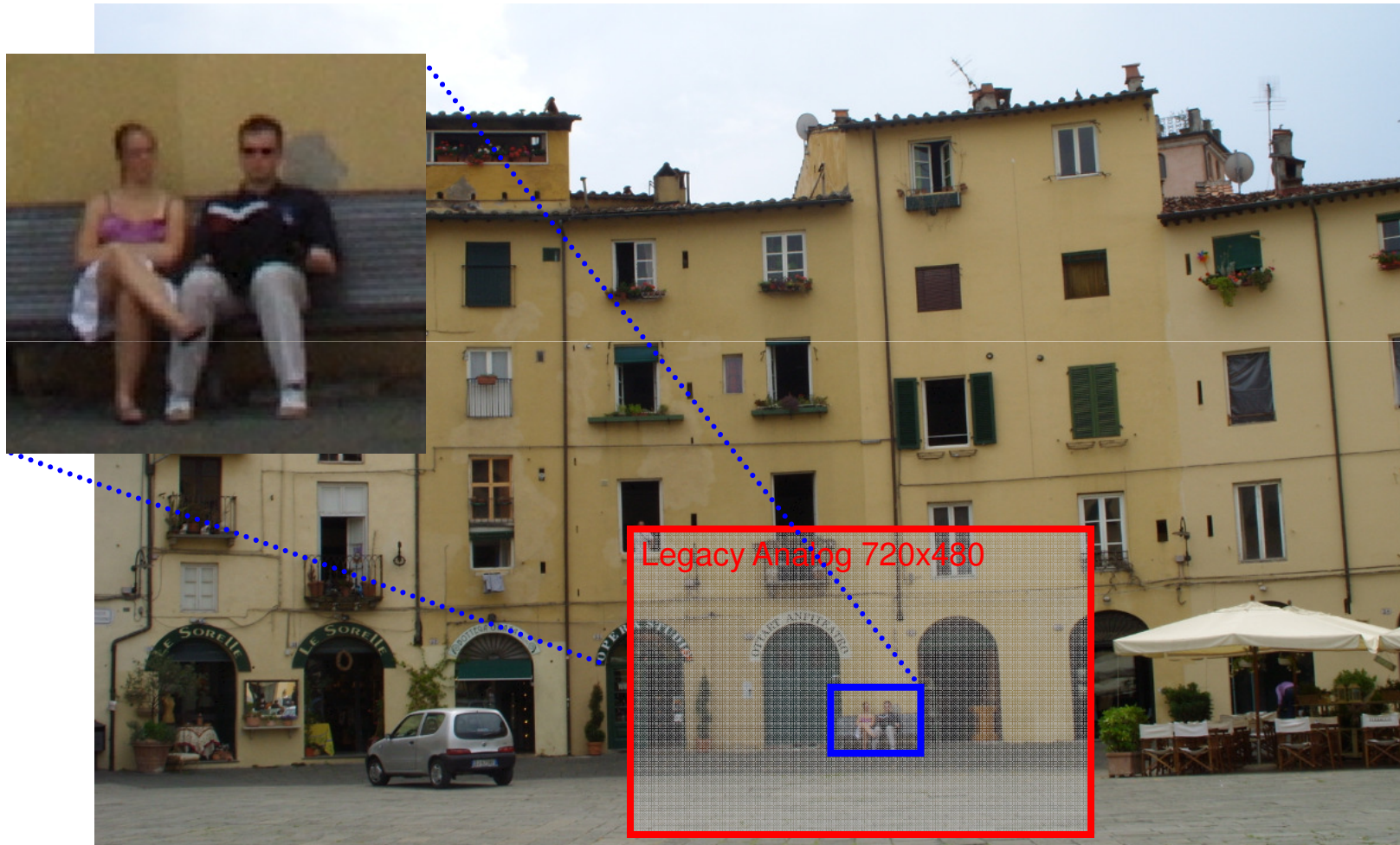


Spot the terrorist in the crowd..



Reconize one pixel as a person..

Megapixel Resolution



Object Detection & Classification



Objects are detected against the background and classified

More VCA functionalities

- Image stabilization
- Data mining (objects, texture, pattern, ...)
- Person falling to sleep
- Camera & light manipulation detection
- Object removing / leaving
- Car stopping, driving too slow / too fast / too often, ...
- Direction of movement (object against the normal stream)
- Crowd behavior / abnormal behavior of object in crowd
- Loitering detection
- Nature ignoring (snowfall, trees, birds, ...)



Mirasys protects groceries and convenience stores



- More than 5 000 stores in various sizes
- Both independently run as well as tightly controlled branded stores in from 4 camera to networked hundreds of stores
Enterprise solutions



Mirasys protects petrol stations



- More than 6 000 stations in Europe
- Both unmanned as well as service stations in from 4 camera to networked hundreds of stores Enterprise solutions



Mirasys protects Itella Logistics



- Itella turnover
1,688 Billion €
- Itella controls more
than 1 million ware-
house square meters –
half of them in Russia
- Implementation meets
Tapa standards



Mirasys protects schools



Stockwell Park High School, London

- Hundreds of schools around Europe and USA
- Both primary and secondary schools as well Colleges and Universities



Mirasys hit the evening papers



- Breakthrough that had public interest
- Although the title had an angle the stories were fairly positive

We are getting a lot of publicity at the moment.

Tim Loughton MP



Covered in BBC 9pm news



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School's CCTV 'Big Brother-ish'

A school has installed CCTV cameras in classrooms in a bid to avoid disputes between teachers and pupils and to tackle theft, the deputy head has said.

The surveillance system, with at least 68 cameras, is in place at Stockwell Park High School, in south London, which is currently being rebuilt.

Deputy head teacher Mike Rush envisages the number of cameras doubling when the rest of the building is complete.

Unions have described the measure as "Big Brother-ish" and inappropriate.

The teacher said there were already cameras in 28 classrooms as well as corridors and stairwells, and there are 40 more outside.

'Happy children'

Mr Rush said that the reaction from staff, children and parents had been entirely supportive.

"The children are very happy here because they know they are on a school site where they are safe.

"They are in a position where they are not going to be robbed and harassed and so on. The parents are very happy with it.

So far there are cameras in 28 classrooms

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