



AIRPORT SURVEILLANCE

INTRODUCTION



This document shows a summarized explanation for a suggested surveillance system for airports monitoring. This system aims to live monitoring for all of the airport facilities using High Resolution cameras to watch the security status & to spot any breaking for rules, traffic regulations & the general status of the monitored areas. The system also receives video & sends control signals in the central monitoring & controlling room, in addition to the remote control rooms.

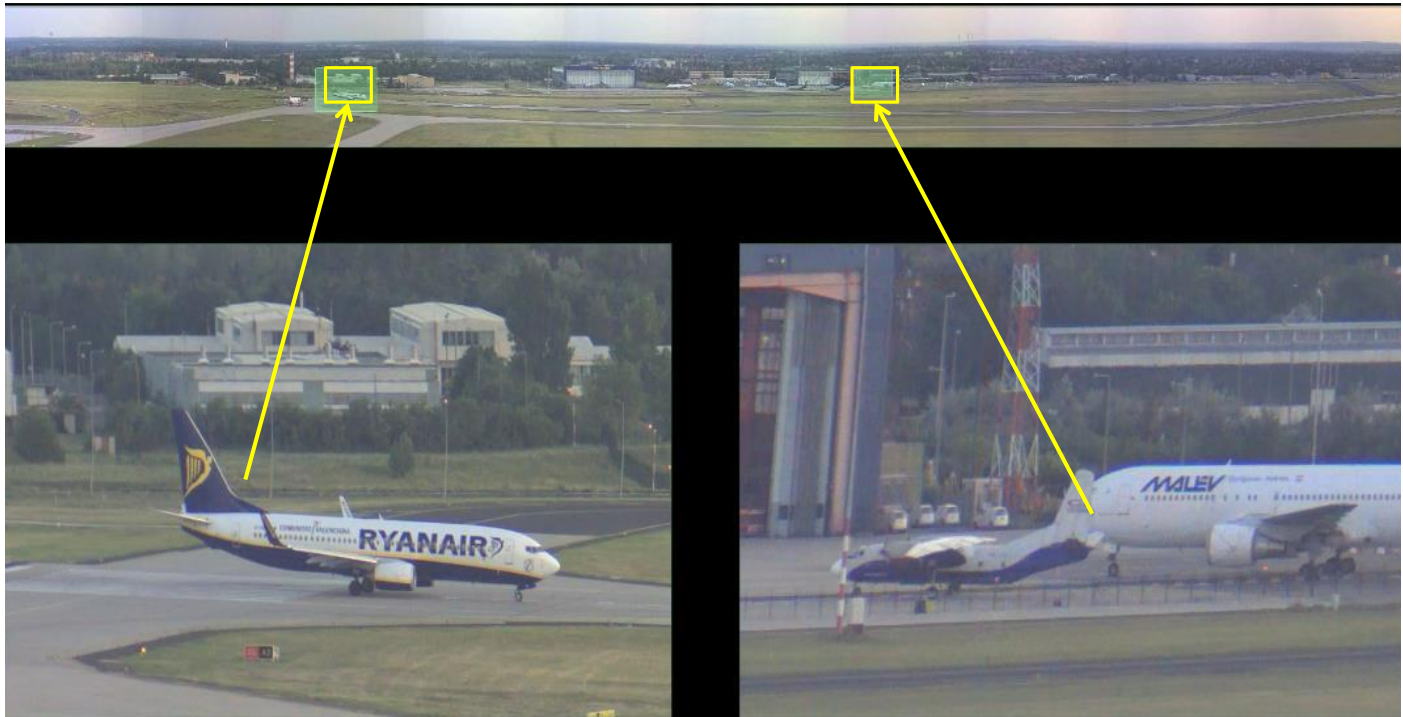
FEATURES & OPERATION OF USED SYSTEMS



GENERAL DESCRIPTION OF THE SYSTEM

- High resolution cameras of 14 & 20 mega pixel Real-Time are used to monitor airport facilities.
- Panoramic cameras up to 200 mega pixels are used to provide panoramic overview up to 360 degrees at the runways & outdoor areas.
- Each camera is equipped with infra-red for night illumination.
- Live video is being sent via a fiber-optics or wireless network to the central control room.
- Video streams are stored in the central control room.
- Central control room can be connected to remote control rooms in/outside the airport.

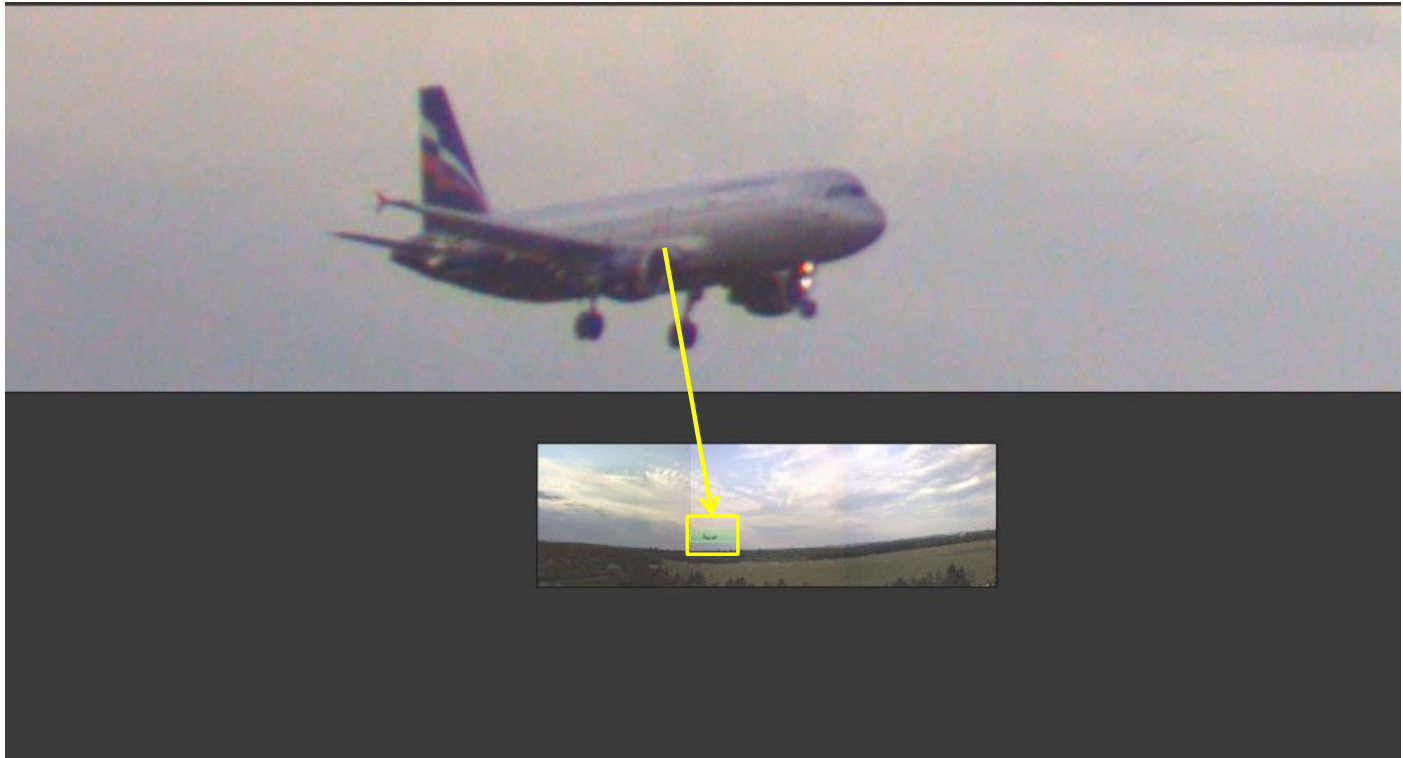
SAMPLES OF PICTURES OF HD CAMERAS



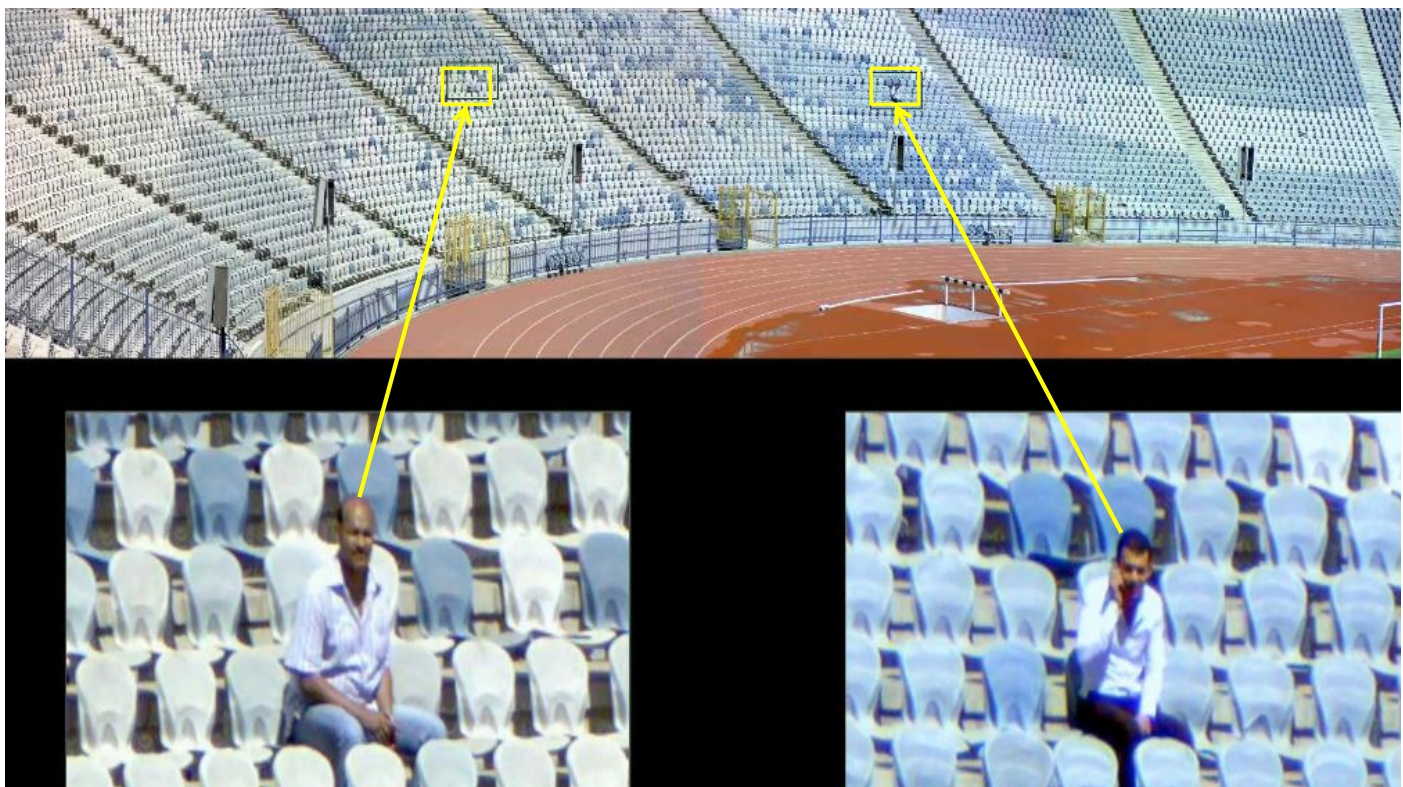
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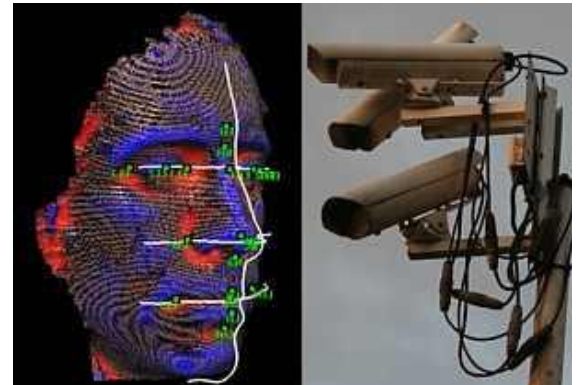


SAMPLES OF PICTURES OF HD CAMERAS



FACE RECOGNITION SYSTEM

It includes automatic system for faces recognition because of the HD pictures cameras produce. Photos of people can be shot & sent to facial recognition system & then search in data base of the person in the photo.



RECORDING PROCEDURE & MANAGING SECURITY SYSTEM

System consists of several recorders & an advanced management NVR that uses IP Based. It compresses the video using JPEG2000 tech, which is Servers that receive videos digital signals from cameras store it, archive it, in addition to live/recorded videos display functions & searching for recorded incidents.

The system displays an interactive, electronic map of sites, so the video can be displayed from the cameras simply by a mouse click on the camera location. Cameras adjustment is possible as well as all the correspondent units from the control room.



CONTROL ROOM COMPONENTS

CONTROL CENTER SERVER

The main server manages all TV monitoring operations, all work stations functions & also make coordination between other servers that does various functions.

NVR SERVER

It does the recording & archiving of the video, watch cameras signals & ensure its quality & managing storage space.

VIDEO WALL SERVER (OPTIONAL)

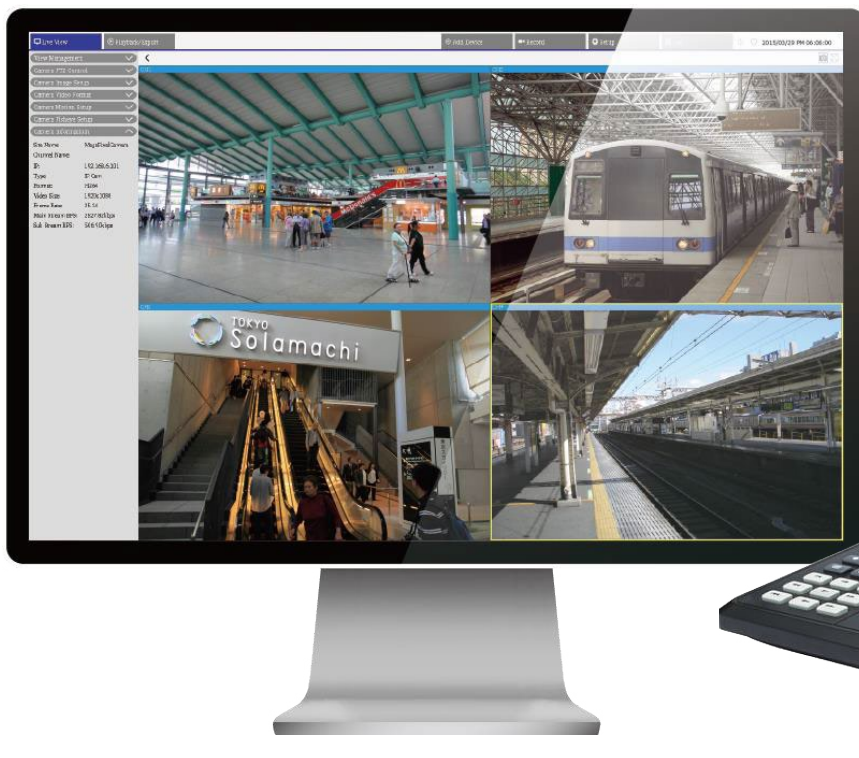
It displays several cameras on one large monitor separate from the users monitors. It can also be programmed to interact with warnings.



FOLLOWING: CONTROL ROOM COMPONENTS

CLIENT WORKSTATION

It consists of a computer loaded with required software for controlling the monitoring system including all its functions; live monitoring, displaying & recording. Station is equipped by keyboard, joy stick to ease dealing with the system.



FIXED HIGH DEFINITION CAMERAS

A very high resolution video images & the most possible small storage size is produced by the use of JPEG2000 Compression technology.

User can determine a specific part of the camera image to zoom-in using the intelligent zoom method "Sen-Zoom" feature to see little details clearly & be able to recognize people & cars plates.



BENEFITS

MAIN BENEFITS OF MONITORING BY FIXED HD CAMERAS OF SENSORTEC

- Wide Range of Control Regular TV/Cameras circles may fail to monitor some cases of law breaking because of the limited range they have, while a crime might have happened out of their range.
- No requirement of Operator As it is in mobile cameras, the HD camera is able to increase any part of the photo even after recording.
- A minimum Nr. Of Cameras is used which makes maintenance easy & saves on the fiber-optics.
- High Definition Allows an adequate vision that enables identifying facial features, cars plates & other important details that helps identifying the person who broke regulations.
- Complete Recording of entire vision range HD camera covers 5 times more than mobile cameras & more in detail, without omitting any part of the picture.
- Impossibility of mechanical breakdowns due to heavy usage, as it happens with mobile cameras.
- Works in low light circumstances or none at all, using infrared.

SAMPLES OF PICTURES OF HD CAMERAS



SAMPLES OF NIGHT PHOTOS TAKEN BY MOBILE CAMERAS ENHANCED WITH LASER



SYSTEM FEATURES

The system & all its components operates on internet using protocol IP Based.

Possibility of adding unlimited number of subsidiary control units.

System allow usage of interactive maps that responds "according to preset rules" to any warning by determining the warning area & displaying its video.

Continuous development for all system programs to ensure its effectiveness.

High level of dependency that guarantees stability of system's functionality.

Display & record high quality video according to latest coding systems.

Full record of all system components.

Customize authority of users to match the need.

It is easy to use the system & to control all factors. Possibility of attaching other systems making few modifications.

The system interacts in response to incidents.

All system's components are capable of resuming work normally after electricity is back.



200MP Real Time Panoramic Camera With Face Recognition

Applications:

- Airport / Runway Monitoring
- Border Area Monitoring



When extremely large-scale areas must be monitored with extraordinary quality The SensorTec Panorama cameras offer the solution. Our engineers' designs walk two different ways. One is based on a multi-sensor device that is actually a specially developed camera house, containing several dedicated Multi-megapixel cameras with lenses which are working synchronized.

Features

- Resolution: 53060(H) x 3790(V)
- Frame rate: 20fps @ 200Mp
- Operating modes: Day/Night - synchronized change on all cameras
- Video Compression: JPEG2000 - Wavelet (MPX24 Signal Processor)
- Image Sensor: 10pcs of 1-inch WDR color 20 Megapixel CMOS
- Scanning System: Progressive, no Interlaced Scanning
- Sensitivity: 0.02 lux F1.4 Day mode or 0.002 lux F1.4 Night mode-
- Gain Control: Fix, Auto, Blur or Noise priority
- Backlight Compensation: Whole picture or any area selectable
- Angle of View: 180 ° (H) x 14.2°(V)
- External IR illuminator Control: (Synchronized with Day/Night change)
- Sound in/Output (Optional): 1CH external 24 kHz/16bit
- Intelligence: Intergrated Motion Detection
- Ethernet: 10gbps SFP+ Socket
- Protection Classification: IP66
- Cooling System: Passive Heat Pipe
- Heating System: Active Automatic
- Cleaning System (Optional): Wiper with washer fluid pump and 5L internal tank



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