Base and Deployable
Automated Video Surveillance Systems
Automated Video Surveillance

Detects & Tracks Activity

Processes Video Data

Compares to a User Defined Alarm Map

Security Breach?
A Force Multiplier Technology

• Guards
  – Human Fatigue & Errors
  – Guard Turnover
• Budget Constraints
  “7% annual increase in guard expenditures ($1 billion/year) through 2006”
Automated Video Surveillance

Real-time processing of video/IR data to mitigate intrusions through automated...

- early target detection
- rapid threat assessment
- communication throttling
- responder notification
- event logging

COTS product...

- standalone system or
- integrated within a layered security system
Benefits

Early Threat Detection

Pixels on Target

VALUES FOR A CAMERA WITH 30º FIELD OF VIEW DIGITIZED AT VGA (640x480) RESOLUTION
Benefits

Rapid Threat Assessment

Geo-referenced Situation Display and Continuous Video

- Video during & after breach
- Video recording & playback
- Continuous Intruder tracks
Benefits

Communication Throttling

Prioritize Target Information Based upon Available Bandwidth

Video Background

Continuous Video Chip of Intruder

LAT/LONG

Intruder Location & Tracks
Benefits

Responder Notification

Network Solution

Local

Off-site

Compliant with emerging NGA (formerly NIMA) standards
Automated Video Surveillance Applications

Autonomous detection, assessment, notification & logging

- Established Perimeter Security
- High Value Asset Security
- Waterfront Security
- Rapid Perimeter Security
- Field Sensor Fusion
- Advanced Assess Control
GuardianWATCH...

Enterprise/Static Base System

- Interfaces to Existing Cameras
- Controls 100’s of Cameras
  - Video/IR
  - Fixed/PTZ
- Runs on PCs
- Integrates with other systems
ThreatSTALKER ....
Rapidly Deployable/Dynamic System

- 1 to 6 video surveillance stations
- Wireless encrypted comms
- Rugged PC command station
- Shipped in Pelican cases
High Value Asset Security

ThreatSTALKER Deployable – Portable Automated Video Surveillance
Automated Video Surveillance
Layered with Forward Sensors

Ground Sensor Triggered
Pan-tilt-zoom camera slews to location
Camera detects and tracks intruder
Responders receive live-video & tracks on a situation display
Stand-alone Automated Video Surveillance

Pan-tilt-zoom camera performs automated tour of area

Camera detects and tracks intruder

Responders receive live-video & tracks on a situation display
GuardianWATCH Core Competencies

Detecting Targets Within All Perimeters

Water Basins
Woods
Grasslands
Urban Environments
Guardian’s Unique Capability

- World Class Security Team
- Real-World Spiral Development Site
Guardian Solutions

World Class Security Team

Bill Klein (ret. Maj. General, SOCOM), Chairman
• Director of Operations and Training, U.S. Joint SOCOM
• Chief of Staff of the 25th Infantry Division, Chief of Staff of the XVIII Airborne Corps and Fort Bragg,

Ray Humphrey, Director of Global Business Development
• Security Director Digital Equipment Corporation and Xerox
• President, ASIS
• Former Board Member, Internat’l Association of Chiefs of Police Foundation

Russ Myers, Chairman, Technology Advisor Board
- Recognized DOD Intelligence Dissemination Authority
- Senior C4I advisor to the US Atlantic Command (USACOM)

Jimmy Pappas, (ret. Vice Admiral, US Navy)
- Cmdr. Norfolk and San Diego Naval Bases
- Senior C4I advisor to the US Atlantic Command (USACOM)
Unique Spiral Development Site

- Water Basis
- Beach Areas
- Jet Fuel Tanks
- Grasslands
- Woods
- Vessels
- Gulf Coast Gas Pipeline
- Parking Lots

Test Bed
GuardianWATCH & ThreatSTALKER

System Benefits

- **Proactive Real-time Automated Surveillance**
  - 100% surveillance, 100% of the time

- **Shared Real-time Video & Situation Awareness**
  - rapid threat intervention

- **Compliant with Emerging Federal Standards**
  - ensures coordinated on & off-site response

- **Low cost**
  - pays for itself in less than 10 months

- **Expandable – OPEN ARCHITECTURE**
  - third party application programs, maximizes life cycle
Guardian Solutions

- www.guardiansolutions.com
- Demonstration Van
Using GuardianWATCH Step 1

Defining Threats & Procedures

Map or Photo of Your Site

Computer Based Site Alarm Map

+ Site’s definition of threats

+ Responder Definition – who, when & what info

Compliant with emerging Federal Standards (ESRI Shapefile)
Defining Threats

Real-Time Parameters

- Geographic zone
  - Rule fires when target is in or crosses a zone.
  - Zone may be any size or shape area ranging from trip wires to large areas.
- Speed
  - Rule fires when target matches speed parameter (> , <, or between speeds - measured in fps, mps, mph)
- Direction/heading
  - Rule fires when target moves in a particular direction (> , <, or between heading 0 - 360 degrees)
- Time
  - Rule fires when event occurs at specific time (> , <, or between 24 hour clock)
- Day
  - Rule fires on certain days of the week (> , <, or between day of week)
- Size
  - Rule fires when target matches size parameter (> , <, or between size parameter - measured in sq feet or sq meters)
- Altitude
  - Rule fires when target matches altitude rule (> , <, or between altitude parameter - measured in feet or meters)
- HLS/DEFCON/MARSEC
  - Rule fires when DEFCON/MARSEC level is at or above level
- Confidence
  - Rule fires when target matches Confidence level (> , <, or between confidence level).
Simple Example

Setting Alarm Conditions

- No vehicle traffic when plane is docked
- No traffic allowed in direction of terminal

Diagram:
- Region 1
- Region 2
- Region 3
- Orange area: No traffic allowed in direction of terminal
- Red area: No vehicle traffic when plane is docked
Using GuardianWATCH Step 2
Alarm Map Programs All Cameras

Video, IR
Fixed, PTZ

Supports Target Handoff
- Fixed > PTZ
- Fixed FOV IDs targets broadcasts Lat/Long,
  PTZ then interrogates

Independent PTZ Target Tracking
Using GuardianWATCH Step 3

Automated Alerts

Detects & Tracks Activity

Processes Video Input

Compares To Alarm Map

Security Breach?
Using GuardianWATCH Step 4
Continuous Video & Situation Display

- Common Picture
- Sent to all Responders
  - Local
  - Off-Site
- Video recording & playback
Summary

GuardianWATCH
a cost-effective automated surveillance system
for the security of infrastructure assets

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