Video Analytics Applications

For enhanced security and real time response
We engineer meaningful technology solutions to help businesses and societies flourish.

- 24 Global offices
- 40+ Fortune 500 customers
- 245+ Active customers
- 400m+ Annual revenues in USD
- 11,000+ Mindtree Minds
IVSS Offering

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Why VCA?

- Operator fatigue leading to inefficiency
- Ineffectiveness of the existing system to detect alarms on time
- Quest for moving from human dependent to machine dependent
Video Analytics Hype Curve

- Peak of Inflated Expectations
- Plateau of Productivity
- Slope of Enlightenment
- Trough of Disillusionment

Inflated Expectations

"The boss wants me to create a computer algorithm that converts hindsight into foresight."
Over selling

DOGBERT’S TECH SUPPORT

YES, WE DO CLAIM THAT OUR SOFTWARE IS IDIOT-PROOF.

IF YOU BOUGHT IT, THAT’S PROOF YOU’RE AN IDIOT.

HIGH FIVE!
Trough of Disillusionment

Dogbert's Tech Support

Your mousepad is incompatible with your operating system.

Try rebooting the mousepad. If that doesn’t work, I’ll call you back.

How will you know?

I’ll watch you through your monitor.

Mindtree
Slope of enlightenment

• Right expectations beings set
  • Machines won’t replace the security guard but will aide him/her.
• Improved performance
  • Higher accuracy
  • Lesser nuisance alarms
• Application specific VCA taking off
  • Retail - People counting & Heat maps
  • Perimeter Protection – Tripwire & Sterile Zone
  • Vehicle classification
Case study

Protecting assets of an Oil Refinery in India
Auto PTZ Tracking
Auto PTZ Tracking

- Fixed cameras are overlooking the perimeter fence
- For every 3-4 fixed cameras, another PTZ camera mans the perimeter
- Any intrusion seen by the fixed camera are triggered by
  - Sterile Zone Violation
  - Tripwire
  - Loitering
- PTZ camera is triggered by the individual cameras in case of violation
  - First intruded object or Biggest Object
  - Cameras with priority for effective handling
- PTZ **camera tracks** the object subsequently
- Alarms are indicated to control room with Audio & Email alerts.
Auto PTZ Tracking
Auto PTZ Tracking
Auto PTZ Tracking
VCA Trends

• Analytics on Servers

• Analytics on Edge

• Analytics with Hybrid Model
Edge Analytics

• Benefits
  • Higher Accuracy of Analytics as it operates on Raw data
  • Moores’ law: CPU available/algorithm keeps increasing
  • Efficient Bandwidth usage
  • Lesser cooling requirements
  • Network outage won’t have any affect

• Deployment scenarios
  • Intrusion Detection
    • Tripwire
    • Sterile Zone monitoring
Server Analytics

- **Benefits**
  - High end analytics can run
  - Higher Situational awareness
  - Flexibility – Ability to configure any analytics on any camera
  - Easy to upgrade – analytics
  - Greater choice of VMS, Video Analytics

- **Disadvantages**
  - Higher Bandwidth and CPU requirements
  - Network outage can cause loss of video
  - Higher energy – High cooling requirements
What should you look for

- Performance
  - High accuracy
  - Real time alerts
  - Patented solution
  - Low false positives
  - Nuisance alarm
  - Self learning
- Ease of use
  - Easy to configure
  - Easy to deploy
- Good customer support
What should you look for

• Simplified licensing mechanism
  • No camera based mac address
  • No multiple activation codes to enter

• Transferable license to another camera
  • Warranty Or Replacement
What should you look for

- Economy
- Efficiency
- Effectiveness

Value for money
Video Analytics Software (VAS) Portfolio

- Audio Classification
- Audio Detection
- PTZ Auto Tracking
- Automatic Vehicle Counting & Classification
- Face Detection
- Video Stitching
- Video Smoke & Fire Detection
- Direction Violation
- Sterile Zone Monitoring
- Scene Change & Camera Occlusion
- Missing Object Detection
- Foreign Object Detection
- Guard Inactivity
- People Counter
- Significant Activity Detection
- Heat Maps
- Video Summarization
- Audio
- Content Analysis
- Display/Search
30+ Technology Partners
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