How smart is your surveillance system?
Face Detection & Recognition in a Crowd (iQ-Face)

Non co-operative

Multiple Faces

Distant Views

Ben - Guest

Tom - VIP

Peter - Staff

Ryan - Suspect

Kim - Staff

Lee - Guest

Sarah - Shoplifter

Convergence with iQ-Hawk

22 pixels between the eyes

Works well in low resolution

Wider Face angles
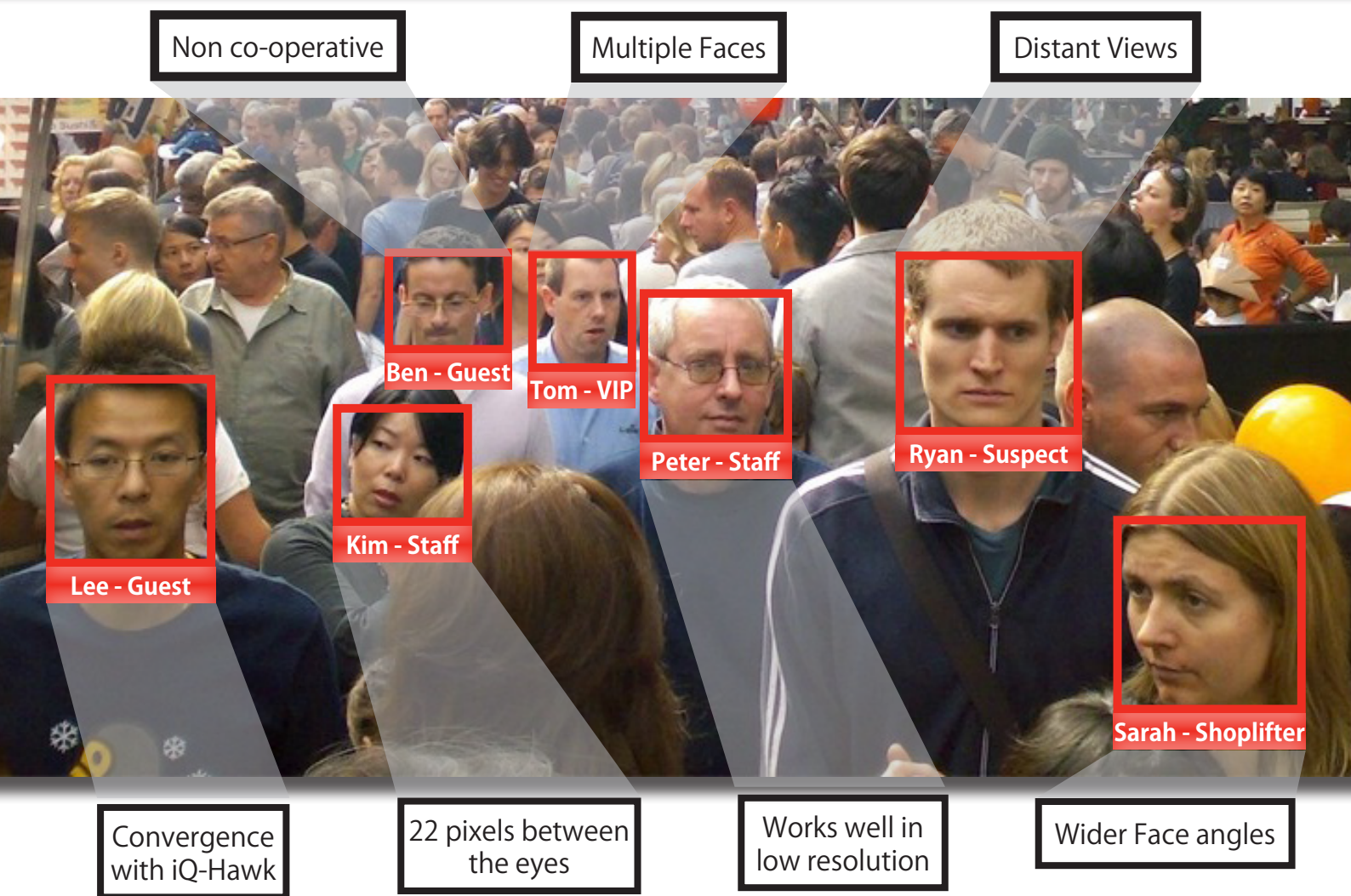
iOmniscient's iQ-Face is the world's first many-to-many Facial Recognition system that can operate in a crowded scene. iQ-Face is a family of various Face Detection (iQ-FaceD) and Face Recognition (iQ-FaceR) systems offered by iOmniscient. The iQ-FaceD can detect and record faces in busy environments for manual review. The more comprehensive iQ-FaceR incorporates iQ-FaceD and then automatically recognizes multiple faces which can be matched against a specified database or multiple databases.

iQ-Face excels in uncontrolled environments with variable lighting, continuous movement, low resolution and variable facial angles. It increases the probability of identification of wanted individuals in a crowd.

All iQ-Face systems are fully integrated with the iOmniscient range of Detection products and can operate with iQ-Hawk, which converges Detection and Identification systems in a single camera.

What makes iQ-Face different?

➤ Operates with low resolution cameras at a distance (requires only 22 pixels between the eyes)
➤ Excels in uncontrolled environments with non-cooperative individuals
➤ Detects multiple faces in a crowd (iQ-FaceD), and simultaneously recognizes them by comparing them with one or more specified databases (iQ-FaceR)
➤ Recognizes faces from variable facial angles
➤ Fully integrated with iQ-Series detection products
➤ Can integrate with other recognition technologies. eg. iQ-Driver Match (optional extra)
➤ Automates Surveillance with iQ-Hawk (optional extra) & multiple Video Analytics

See Through the Crowd
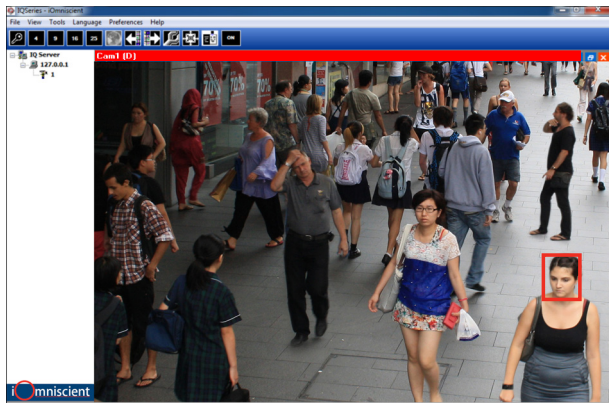
Operates at long distances and with low resolution
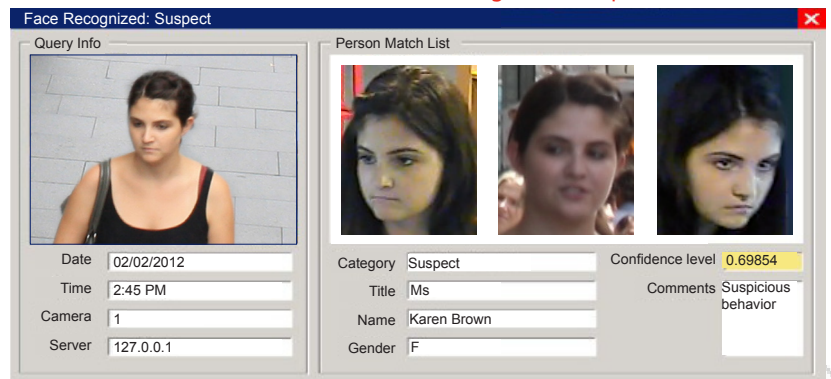
Face Detection (iQ-FaceD) Applications

➤ iQ-FaceD (which can be purchased separately) can detect the presence of faces even in a crowded scene
➤ Optimizes storage (by storing faces only)
➤ Selects quality video (e.g. only with faces & frontal view)
➤ Records faces based on time/date
➤ Expedite search & forensic analysis using face images only (eg. speed up police investigation)
➤ Face Counting
➤ Tailgating

Face Recognition (iQ-FaceR) Applications

➤ iQ-FaceR enables the system to present possible matches from faces stored in a database (or multiple databases)
➤ Queue Management to determine average, specific or individual waiting times
➤ Identifying potential threats in high security areas such as airports and banks
➤ Driver identification to verify vehicle ownership in secure car parks
➤ Improve customer service by identifying VIP guests in hotels or casinos
➤ Identifying blacklisted individuals such as shoplifters in a mall
➤ Tracking suspect footpath across non-overlapping cameras
➤ Advanced Access Control & Attendance System

Multiple Faces
22 pixels between the eyes
Wider Face angles
Works well in low resolution
Non co-operative
Convergence with iQ-Hawk
Distant Views

Uses low resolution (22 pixels between the eyes)
Track and recognize multiple faces in a crowd

Face Recognized: Suspect

Query Info

Date	02/02/2012
Time	2:45 PM
Camera	1
Server	127.0.0.1

Person Match List

Category	Suspect
Title	Ms
Name	Karen Brown
Gender	F
Confidence level	0.69854
Comments	Suspicious behavior

iQ-Rating Chart

Detection

	Limited	Average	Smart	Genius
Face Detection (one face, frontal view)	✔			
Face Detection (many faces, frontal view)	✔			
Face Detection (uncontrolled environment)		✔		

Convergence

	Limited	Average	Smart	Genius
iQ-Hawk				✔
iQ-Driver Match				✔

Recognition

	Limited	Average	Smart	Genius
Face Recognition				
Many to Many[1]				✔
Many to One[1]			✔	
One to Many (Access/Passport Control)[2]		✔		
One to One (Access/Passport Control)[2]	✔			

[1] Low Resolution requires 22 pixels, Uncontrolled Environment, Integrated with iQ-Hawk
[2] Higher Resolution requires minimum 40 pixels, Controlled Environment

See Through the Crowd

iOmniscient
High iQ Surveillance

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