

BioFace® Casino Loyalty

Identify and Track Customers via Facial Recognition



PROBLEM Casinos filled with Pachinko machines (a form of slot machine) are among the most popular entertainment centers in Japan. There are 180,000 of these Casinos across the country, each with about 1,000 machines. There is tremendously intense competition for customers. The most effective Customer Loyalty programs utilize information on the customer's gaming habits and history to customize their gaming experience and to provide the most desirable special offers and rewards. But a non-intrusive mechanism to collect this data was not available.

SOLUTION System AV, the major supplier of machines and security solutions for the gaming industry, realized that live Facial Recognition (FR) is the key technology to solve this problem. They partnered with PinnacleSoft to build the BioFace® Casino Loyalty application using the BioFace® Automated Biometrics ID System, a powerful software platform and SDK for application development.

The major elements of the Casino Loyalty system are:

1. *High resolution video cameras* invisibly embedded in the gaming machines to provide a constant video stream of each player for facial recognition .
2. *A database with facial images* of customers.
3. *A Customer Admin database*, with personal information for registered customers, and gaming history for all customers.
4. The *BioFace® Facial Recognition* server, which searches this database for a match against a player's captured image.
5. The *BioFace® Camera Server*, which collects the video from all the cameras at a location, captures still images in round robin sequence in periodic intervals (typically every 6 seconds), and submits the images to the Facial Recognition server for a potential match.

If no match is found, a new customer record is created with only the customer's facial image for identity, plus information per the gaming session. In the case of a match, gaming session information is added to the customer's history.



IMPACT Since Hollywood Casino's installation of BioFace® Casino Loyalty in 2006 has observed the following:

1. Continual increase in returning customers.
2. Customers play for longer periods of time.
3. Higher scores in customer satisfaction surveys.

CHARACTERISTICS

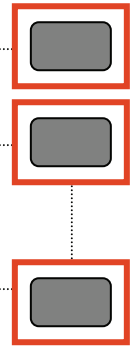
Market	Gaming Industry
Client	Hollywood Casinos
Location	Japan
Integrator	System AV Pinnacle Soft
SW Platform	BioFace® Automated Biometrics ID System
FR Algorithm	L1 Faceit® G6
Source Image	Live Video Embedded Camera
Cameras	1.3 Mpixel

FEATURES

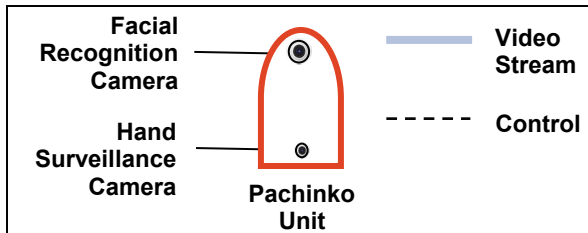
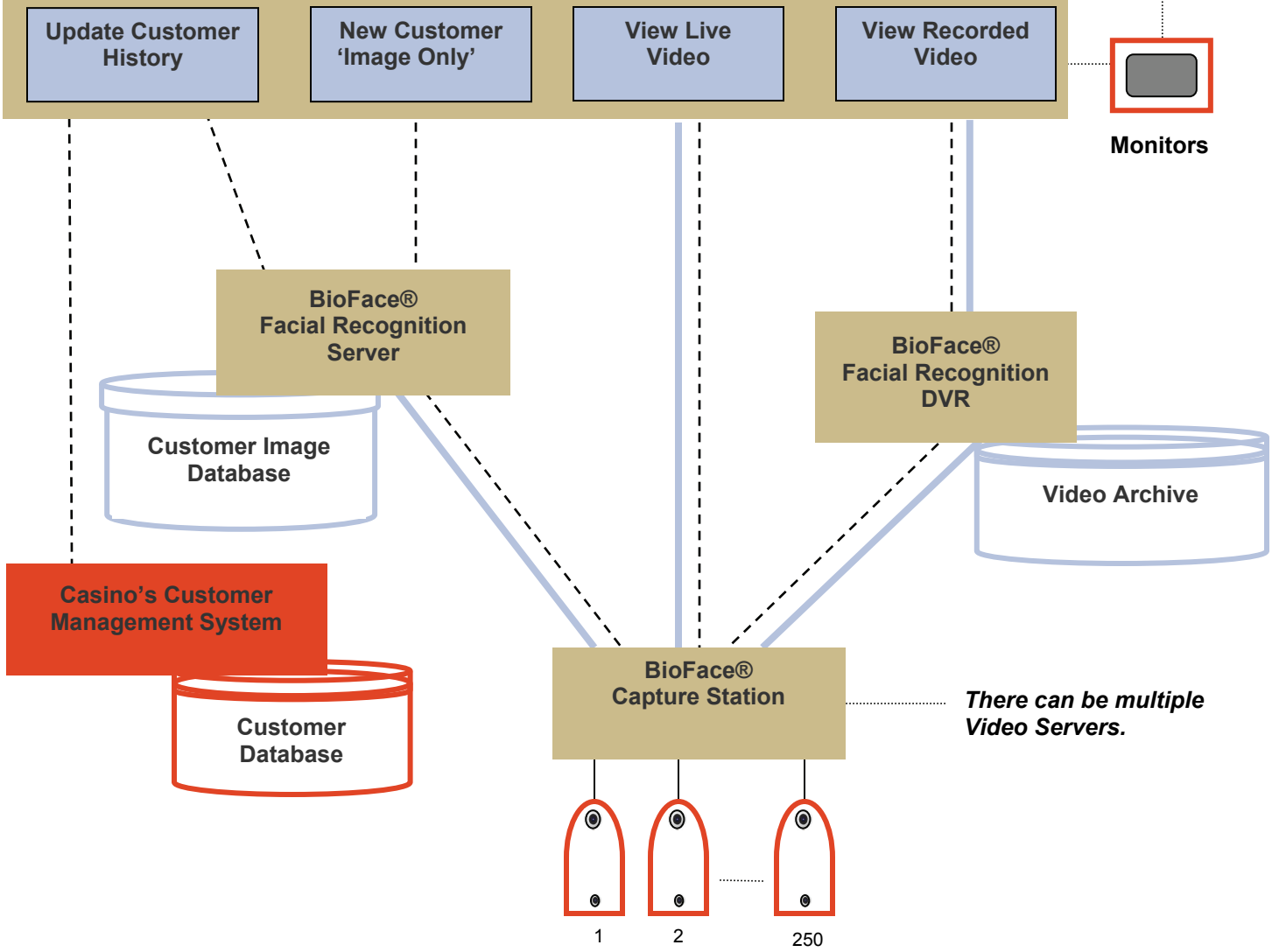
Database Size	Small: 70 Thousand Facial Images [Single Location]
Database Content	Customers
Search Type	1:N
Network	LAN
Facial Recognition Server	Intel dual Xeon 3.6 Mhz, 2G RAM
Capture Stations	Intel dual Xeon 3.0 Mhz, 1G RAM
Performance	
- Realtime 1:1 Search/Match	500msec / image
- Realtime 1:N	700msec / image

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via Facial Recognition



Monitors



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