

# **Iris Recognition: Technology, Background and its Future in Our Touchless Identity World**

**Iris Recognition Technology  
Identity Authentication**



## **Iris Recognition Webinar**



# Participants

## **Tovah LaDier**

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## **Tom DeWinter**

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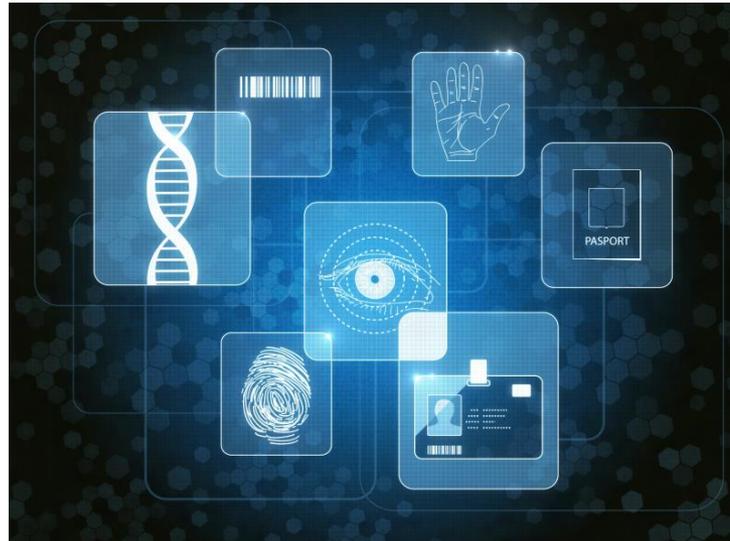
## **Jason Thomson**

Assistant Chief  
United States Border Patrol, HQ

## **Anthony Iasso**

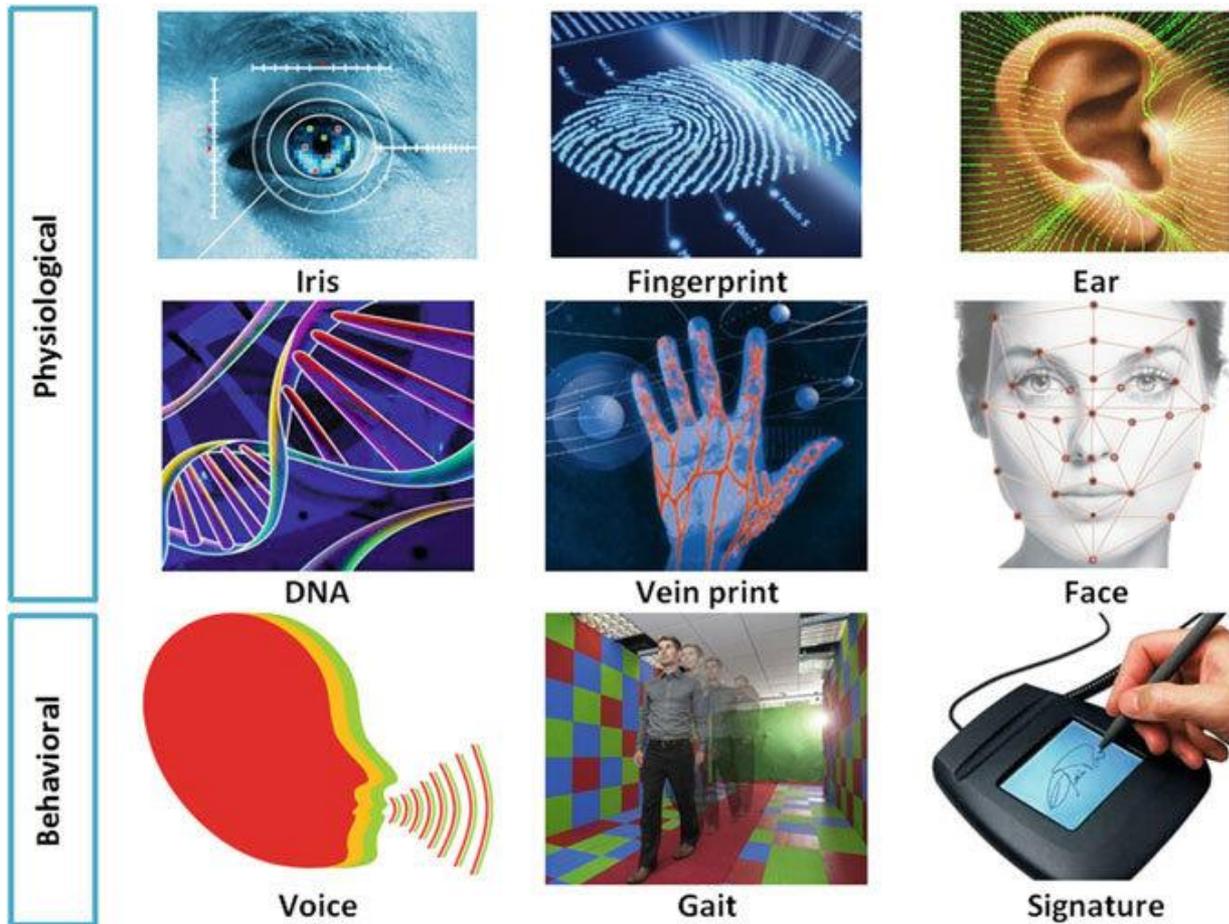
President  
Incidence Corporation

# Why biometrics?



Unlike other forms of authentication, such as passwords or tokens, biometric recognition provides a strong link between an individual and a data record. One area where biometrics provide the biggest benefit is in guarding against attempts to fraudulently establish identities.

# Type of Biometrics



**Most used biometrics**  
**Finger - Face - Iris**

# Biometrics in multiple vertical applications

	Item	Description	Vertical Market
M A R K E T S	Identification	<ul style="list-style-type: none"> <li>- Large scale National ID Project</li> <li>- Mid/small scale Civil ID Project</li> <li>- Corrections/Detainee Management</li> </ul>	Government, Public Institution
	Access Control	<ul style="list-style-type: none"> <li>- Passport/VISA System</li> <li>- Border Crossing</li> <li>- Physical Access Control</li> </ul>	Government, Corporate, Public Institution, Hospital, Bank, Airport, Harbor
	Time & Attendance	<ul style="list-style-type: none"> <li>- Exact Time &amp; Attendance Record (No Buddy Punching )</li> <li>- High Throughput</li> <li>- Large scale factory / tough environment (coal mine)</li> </ul>	Government, Corporate, Public Institution, Hospital, Construction Site, Coal Mine

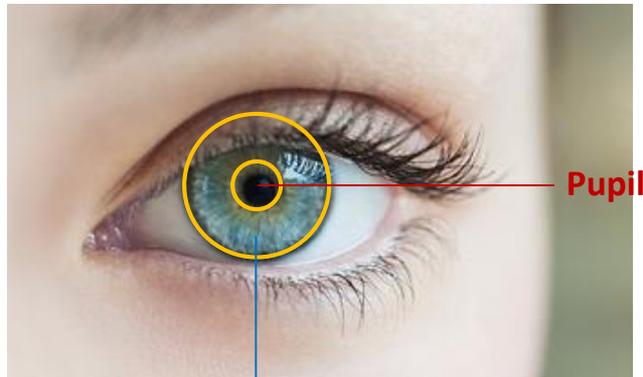
# Iris Recognition Solution



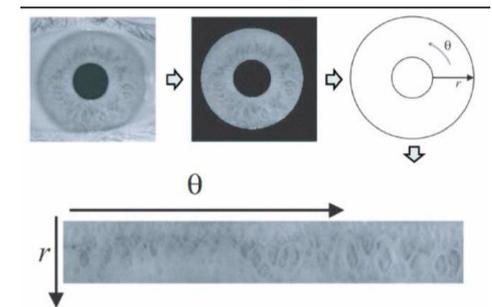
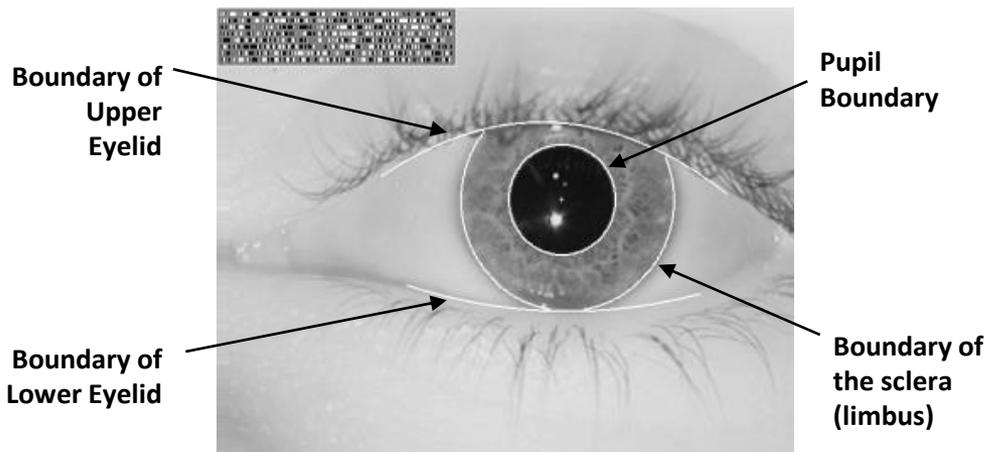
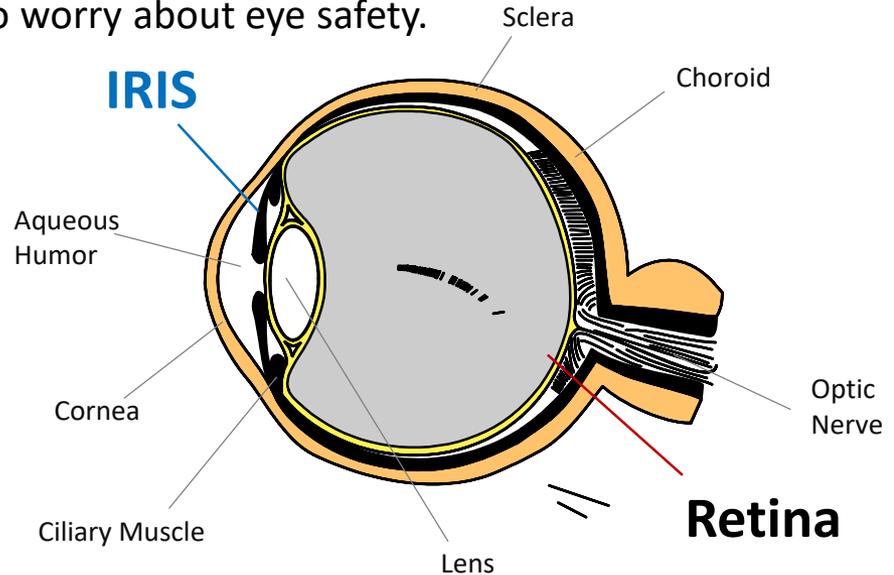
# The Iris is NOT the Retina

Capture Distance from 12 inches to 3 feet

- The donut shape of the eye except the black part (pupil) is the iris.
- Iris recognition technology is different from the retina scan. It is same as taking pictures using normal digital camera – there is no worry about eye safety.

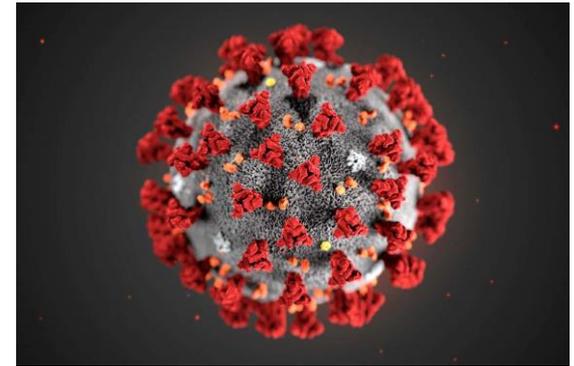


IRIS



# Contactless Biometrics in the COVID-19 Era

- Coronavirus pandemic has people concerned about contacting surfaces for fear of spreading disease
- Studies have shown COVID-19 can survive on plastic and metal surfaces for up to three days
- Some biometric devices require surface contact; many do not
- Ideally, biometric technology should work with Personal Protective Equipment worn by system users



# Iris Recognition Technology

## Positive Identification

After 12 months of age, the iris pattern is completed and does not change through life. The iris pattern is unique - left and right iris are different, the irides of twins are not the same

## Most Accurate

The probability of two individuals having the same iris pattern is 1 in  $10^{72}$ . The most accurate biometric technology commercially available as of today.

## Easy of Use

Just take a look from a distance of 12-inches (31-35cm) up to a one meter. Identification is possible even when wearing sunglasses or contact lens.

## Rapid Speed of Throughput

Iris recognition is especially powerful in a large scale environment such as airport or borderline where high throughput is needed (1:N recognition in 10's of millions database - less than 2 seconds)

## Non-Invasive

Iris recognition is non-contact and non-invasive which means it is safe from any harmful contamination among people.

## Highly Scalable

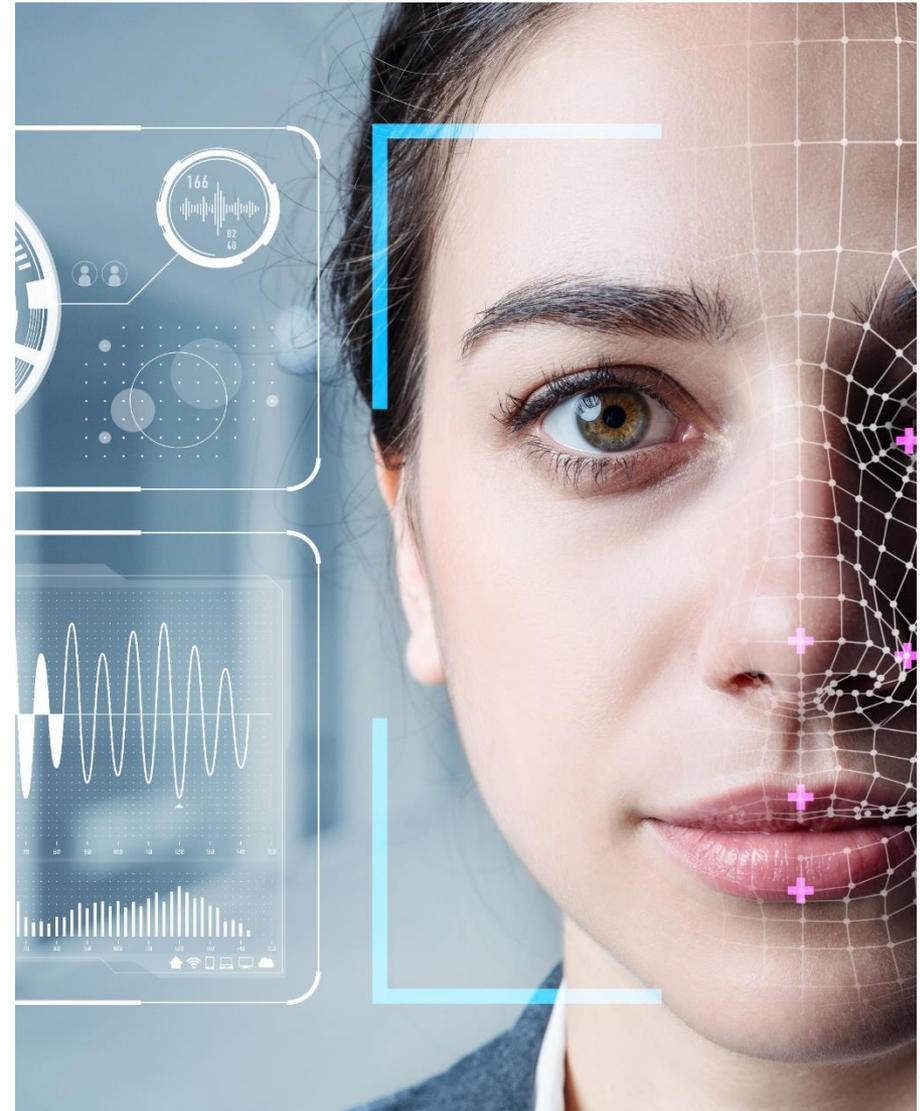
It's highly scalable from mid/small size office environment to large scale enterprise system or ultra large scale national ID project.

## Countermeasure

Iris becomes a higher standard of biometric security solutions. IrisAccess has perfect countermeasure solution for filtering photo, video or fake eye intrusion.

# Iris compared to other biometrics

- **Accuracy** -- Probability of false accept is lowest for Iris
  - Face will have challenges at 1:N scale particularly in the case of twins and family members
- **Cost** – Cost of the matching system processor is less for iris as compared to face and fingerprint
- **Standards** – Standards for iris interoperability and between iris vendors is clearly established for images
- **Hygiene** -- Always contactless



# Iris Camera Cost

- Price ranges from under \$1,000 to the \$15,000 range.
- The price varies directly with respect to capture distance
  - The further away the higher the cost of the capture device
- Similar price variance exists with face capture cameras too.
- Iris and Face are often combined in a single device reducing system cost.



# Government Iris Databases

Client	Notes
DOHA Airport Qatar – Immigration	15 M
Aadhaar Card - Unique ID Authority India	1.2 billion
Mexico National ID Program	130M capacity ~ 27 M enrolled
Columbia Military	> 300K
Pentagon Force Protection Agency	>90,000
US State Department	300K
Somaliland Voter Registration	1.4 M
York County Correctional Facility	>450K
Mexico Driver License – 5 States	>2 M
LA Sherriff Department	CJIS Pilot – LACRS ABIS Aug 2020
UNHCR – Refugee ID	>500K
UAE Expellee Program	15M
Iraq Government National ID	32M
NATO	1M
Paraguay Passport Program	>200K enrolled to date
Africa Health Care Initiative – Gates Foundation funded	100K enrolled , 50M by 2022
Dominican Republic National ID	~2M
Australian Department of Corrections - NSW	> 500K
OBIM – AKA US Visit (Including US Border Patrol data)	>2M
US DOD ABIS	>2M
State Department Diplomatic Security	>100K

# Iris Recognition around the World



Biometric identity service using iris recognition and fingerprint. Located in 65+ airports & venues



U.S. Customs & Border Protection uses iris recognition for identification on the southern border



Third busiest airport in Europe. Has been using biometric identification for 17 years



Qatar's principal and only international airport



Aadhaar is the world's largest biometric ID system with more than 1 billion registered users.

# Iris Recognition in U.S. Government Programs



- DOD BAT A
- State Department Diplomatic Security screening.
- U.S. Border Patrol E3 Program Detainee Management
- FBI CJIS Iris Pilot Program
- DMDC
- U.S. government ID cards PIV, CAC, TWIC
  - The card data model has a container for iris
  - DMDC is beginning to populate the CAC card with iris data



ENFORCEMENT SYSTEMS DIVISION

## **BIOMETRICS ON THE FRONT LINE**

Assistant Chief Jason R. Thompson



# Transportation Security – CATSA

- 34 airports deployed by Canadian Air Transport Security Authority.
- 180,000 - 200,000 participating employees.
- Employees carry their iris & fingerprint template on a secure smart card
- Integration with existing airport security systems.
- Operational since 2004.



# Canada Border Services Agency Nexus Program

**Expansion of enrollment centers for CBSA Canada Border.  
2.5 million registered travelers enrolled as of 2019.**



Border Modernization : X NEXUS Pass Interview Cen X NEXUS Iris Scan Locations X

www.cbsa-asfc.gc.ca/multimedia/bomo-prio/menu-eng.html

Home > Media Room > Video Gallery

## Border Modernization: Transforming for Tomorrow

Vid  
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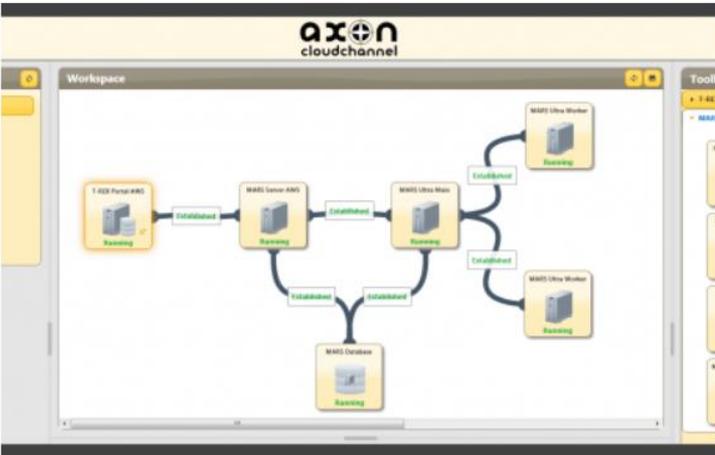
**ARIANNE REZA**  
Director General of Traveller Programs

00:02:45 00:05:18 CC

# DOD BAT A

- Anthony Iasso Incadence Corp

See The Kind of Work We Do at InCadence



# Gaining Acceptance Worldwide

Asset Protection  
Data Center Security

Lab Security &  
Bio Hazard  
Containment

Infrastructure  
Protection

Workforce  
Management

Hotels Clubs  
POS & Retail



This is a partial list, for representation only

# Gaining Acceptance Worldwide

## Transportation Security



Amsterdam Airport Schiphol



## Government & Public Safety



## Civil Identity



India  
UIDIA



Vietnam  
Multi-stage  
Government ID



Sultanate of  
Oman



Kingdom of  
Jordan



State of Qatar



Kingdom of  
Saudi Arabia



Canada/US  
Border



Mexico  
National ID Program



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# Get More Information



International Biometrics +Identity Association  
[www.ibia.org](http://www.ibia.org)



Iris ID  
[www.irisid.com](http://www.irisid.com)

