



TSA TWIC Program Operational Considerations and One Manufacturer's TWIC Pilot Experience



Biometrics in Action



MorphoTrak
SAFRAN Group

**(Formerly
Sagem Morpho)**

■ ■ ■ ■ ■ TSA TWIC Program

Topics Covered

- ▶ Overview of latest Notice of Public Rulemaking
- ▶ Operational Considerations of TWIC Implementation
- ▶ Interesting Lessons Learned – One Reader Manufacturers Experience



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■ Coast Guard Notice of Proposed Public Rulemaking


▶ Released March 27, 2009

▶ Risk Based Approach

- Based on “maximum consequence” of a terrorist attack; impact on nation’s health, economy, and security
- Three categories, high (A), medium (B), low (C)
 - Category A: vessels carrying more than 1000 passengers, vessels carrying dangerous cargoes, towing vessels
 - Category B: vessels carrying 500 to 1000 passengers, vessels carrying hazardous flammable or combustible material, towing vessels
 - Category C: vessels carrying less than 500 passengers, vessels carrying non-hazardous cargoes, offshore supply vessels, towing vessels, and offshore drilling units



Coast Guard Notice of Proposed Public Rulemaking

Risk Category	Marsec 1	Marsec 2	Marsec 3
A More than 1000 passengers CDCs	Biometric Match to Card Hotlist Check- Update weekly Card Authentication Certificate Check	Hotlist Check Update daily	Hotlist Check Update daily
B 500 - 1000 passengers HAZ MAT, Crude Oil	Once a month random Biometric Match to Card Hotlist Check- Update weekly Card Authentication Certificate Check	Biometric Match to card Hotlist Check Update daily	Biometric Match to card Hotlist Check Update daily
C Less than 500 passengers Non-HAZ MAT,	Visual inspection of Card Check Security Features Expiration Date Check CG random spot checks	No Change	No Change 

■ ■ ■ ■ TSA TWIC Program Operational Considerations

The biggest challenge for customers: TWIC Card interfaces provide access to different data elements on the Card

Data Encoded in TWIC Card	Contact Interface After PIN Entry	TWIC Contact	TWIC Contactless	TWIC Magnetic Stripe
Cardholder's Name	X			
Cardholder's Picture	X			
FASC-N	X	X	X	
Card Expiration Date	X		X	
Credential Series	X		X	
Credential Issue	X		X	
Person Identifier	X		X	
Organizational Category	X		X	
FIPS 95-2 Agency Code	X		X	
Association Category	X			
GUID	X		X	
Affiliation	X			
Agency/Department	X			
Agency Card Serial	X			
Issuer Identification	X		X	
Biometric Template	X			
TWIC Privacy Keys		X		X
Encrypted Biometric		X	X	

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The biggest challenge for customers:

- ▶ **Understanding how to read the TWIC card to get the data needed**
 - **Cardholder Picture is only available through contact read of card and PIN entry**
 - **Biometric authentication requires access to encrypted template via contactless interface and access to TPK (TWIC Privacy Keys)**
 - How is the TPK made available to the TWIC reader?
 - **Biometric authentication requires access to the TWIC Privacy Keys (TPK) – available only from magnetic stripe or a contact read of card (no PIN)**



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- ▶ **Integrating TWIC Card into Existing PACS**
 - **Define TWIC card registration in the existing PACS system**
 - Hotlist check during card registration
 - **Consider other systems that use existing PACS ID, do they need the TWIC card PACS ID?**
- ▶ **How is the TWIC Card going to be read at the gate, on the dock?**
 - **Driver for this decision is TCP/IP connectivity**



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▶ TCP Connectivity

- Contactless + Biometric Sensor + Hotlist Check
- Contact + Biometric Sensor + Hotlist Check

▶ No TCP Connectivity

- Manual load of Hotlist Check
- Contactless + Biometric Sensor + Magnetic Stripe Reader
- Contact + Biometric Sensor



■ ■ ■ ■ TWIC Pilot Program Port of Brownsville Overview

- ▶ **12 Outdoor Biometric TWIC Readers in Operation**
 - Locations range from Dock, Truck Lanes, Car Lanes, to Coal Yard
- ▶ **Port of Brownsville selected because of its harsh environment:**
 - Extreme temperatures and humidity
 - Dusty, grimy environment
- ▶ **Prime Contractor with Two Subs performing the installation**



■ TWIC Pilot Program Port of Brownsville Lessons Learned

- ▶ **Prime contractors and sub-contractors did not have TWIC cards early on**
 - **Didn't understand TWIC Card is not a touch and go card**
 - When read TWIC card is passing 27,000 bits or more of data; prox card only passes 26 bits of data
 - **Didn't understand the FIPS201 – TWIC card rules**
 - What data has to be read from the card, what is stored for future access what is always read from the card in real time
 - What data must the TWIC reader access to perform required functions



■ TWIC Pilot Program Port of Brownsville Lessons Learned

- ▶ **Conflicting messages from Local Coast Guard and TSA TWIC Team - this has now been addressed in the HomePort TWIC FAQs**
 - CG: TWIC cardholders must enter PIN to authenticate to card
 - TSA TWIC Team: TWIC cardholders do not need to know PIN for registration of TWIC card into PACS
- ▶ **TWIC Reader Specifications do not and were not meant to address operational considerations**
 - PACS registration of TWIC card should require a hotlist check
 - Non networked fixed readers are not required to check a TWIC card against the Hotlist
- ▶ **Functional Specification Conformance Tests (F-SCT) underway**
 - Major goals: identify inconsistencies and vague specifications, validate the test protocol

