

# TWIC<sup>®</sup> Stakeholder Communications Committee



March  
2018



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# Agenda

## **Introduction**

**U.S. Coast Guard –  
Reader Rule & Handheld Readers**

**TSA Office of Security Operations –  
TWIC® Compliance**

**TWIC® Program Metrics**

**TWIC® Next Generation (NexGen)**

**Credential Modes of Operation**

**Canceled Card List Mobile App**

**TWIC® Assessments**

**Open Discussion**

**Closing Remarks**

Stephanie W. Hamilton

CAPT Manning / CDR Fazio /  
LT Gasperetti

John Harris

Stephanie W. Hamilton

Drew Sindlinger / Douglas Ward

Gilles Lisimaque / Drew Sindlinger

Drew Sindlinger / Gerald Smith

Stephanie W. Hamilton / Drew Sindlinger

All Participants

Stephanie W. Hamilton



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# Introduction & Opening Remarks

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# U.S. Coast Guard

LT Gasperetti  
Cargo and Facility Division  
USCG



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# U.S. Coast Guard | Reader Rule

## *TWIC-Reader Requirements Final Rule*

- As we are now within 6 months of the implementation date of the TWIC Reader Rule, CG-FAC wanted to reiterate a Maritime Commons Blog post dated March 31, 2017 (<http://mariners.coastguard.dodlive.mil/2017/03/31/3312017-twic-reader-rule-update/>), and where units should expect to enforce TWIC reader rule “on time” at:
  - a) Facilities that receive vessels certificated to carry more than 1,000 passengers; and
  - b) Facilities subject to 33 CFR 105.295.
- USCG is still working to establish how/when all other facilities that were captured by the Final Rule language will have to comply with the TWIC Reader requirement; however, until then, facility inspectors should be socializing the above guidance for “on time” enforcement with industry.



# U.S. Coast Guard | Handheld Readers

## *USCG TWIC<sup>®</sup> Handheld Reader Status*

- CG-FAC is currently conducting technical evaluations of potential vendors. The current plan is once a vendor is selected, 250 readers will be issued out to the field. The current projected award date is late March to early April with distribution out to the field shortly thereafter.



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# TWIC<sup>®</sup> Compliance

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# Report of Civil Enforcement Actions

Summary Published March 14, 2018

## Background

Section 114(v) of title 49 of the U.S. Code gave the Transportation Security Administration (TSA) authority to assess civil penalties for violations of any surface transportation requirements under 49 U.S.C. and for any violations of chapter 701 of title 46 of the U.S. Code, which governs Transportation Worker Identification Credentials (TWICs). Specifically, section 114(v) authorizes DHS to impose civil penalties for a violation of any surface transportation requirement under title 49 U.S.C. or any requirement related to TWICs under 46 U.S.C. chapter 701.

## Annual Enforcement Action Summary

Annually, TSA publishes a summary of enforcement actions that indicates civil penalties for access control violations or fraudulent use of TWIC® between \$50 - \$6,000. Please see the Federal Register, [83 FR 11236 \(2018\)](#), for more information.

The screenshot shows the 'Enforcement Actions Taken by TSA in Calendar Year 2016' section of the Federal Register. It includes a table with the following columns: TSA Case File, Type of Violation, and Penalty Assessment. The table lists numerous cases, including violations of 49 U.S.C. 114(v) and 46 U.S.C. 701. Penalties range from \$50 to \$6,000, with some cases marked as 'Pending'.

**CY 2015:** 33 Enforcement Actions (24 Warning Notices | 9 Civil Penalties)  
**CY 2016:** 49 Enforcement Actions (31 Warning Notices | 18 Civil Penalties)  
**CY 2017:** 179 Enforcement Actions (118 Warning Notices | 29 Civil Penalties | 32 Pending)



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# TWIC<sup>®</sup> Program Metrics

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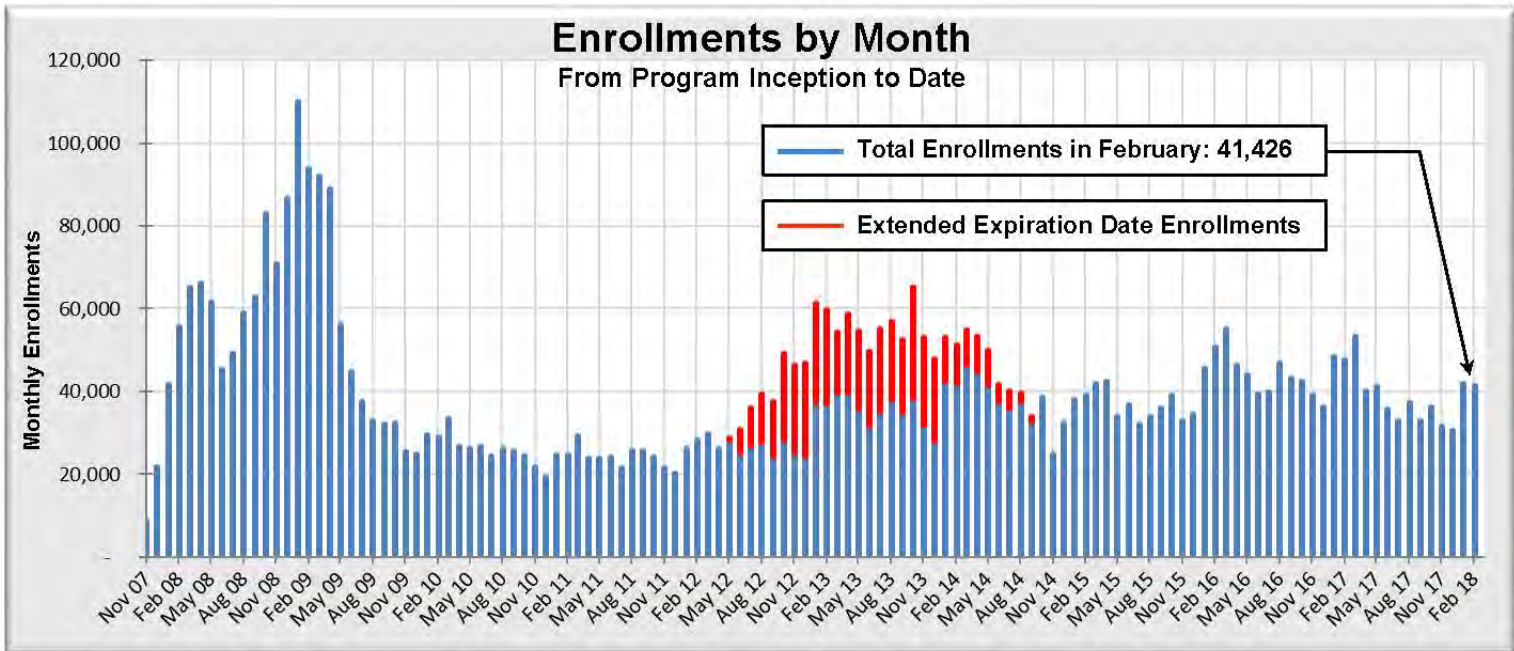
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# TWIC® Dashboard | March 2018

Program Statistics	Measurement (as of 03/01/18)
Total Number of Enrollments (Since inception-Oct '07)	4,768,771
Current Number of Active Cards	2,217,824
Total OneVisit Enrollments (Since inception-June '14)	1,300,248
Percent OneVisit Enrollments vs Total Enrollments	74%

TWIC Information and Resources	
<b>Call Center:</b>	855-DHS-UES1 (855-347-8371) Monday – Friday; 8:00 AM - 10:00 PM Eastern
<b>Website:</b>	TSA Website: <a href="http://www.tsa.gov/for-industry/twic">http://www.tsa.gov/for-industry/twic</a> USCG Website: <a href="https://homeport.uscg.mil">https://homeport.uscg.mil</a> UES Website: <a href="https://universalsalenroll.dhs.gov">https://universalsalenroll.dhs.gov</a>



Source: TSA OIA/PMD, March 2018.

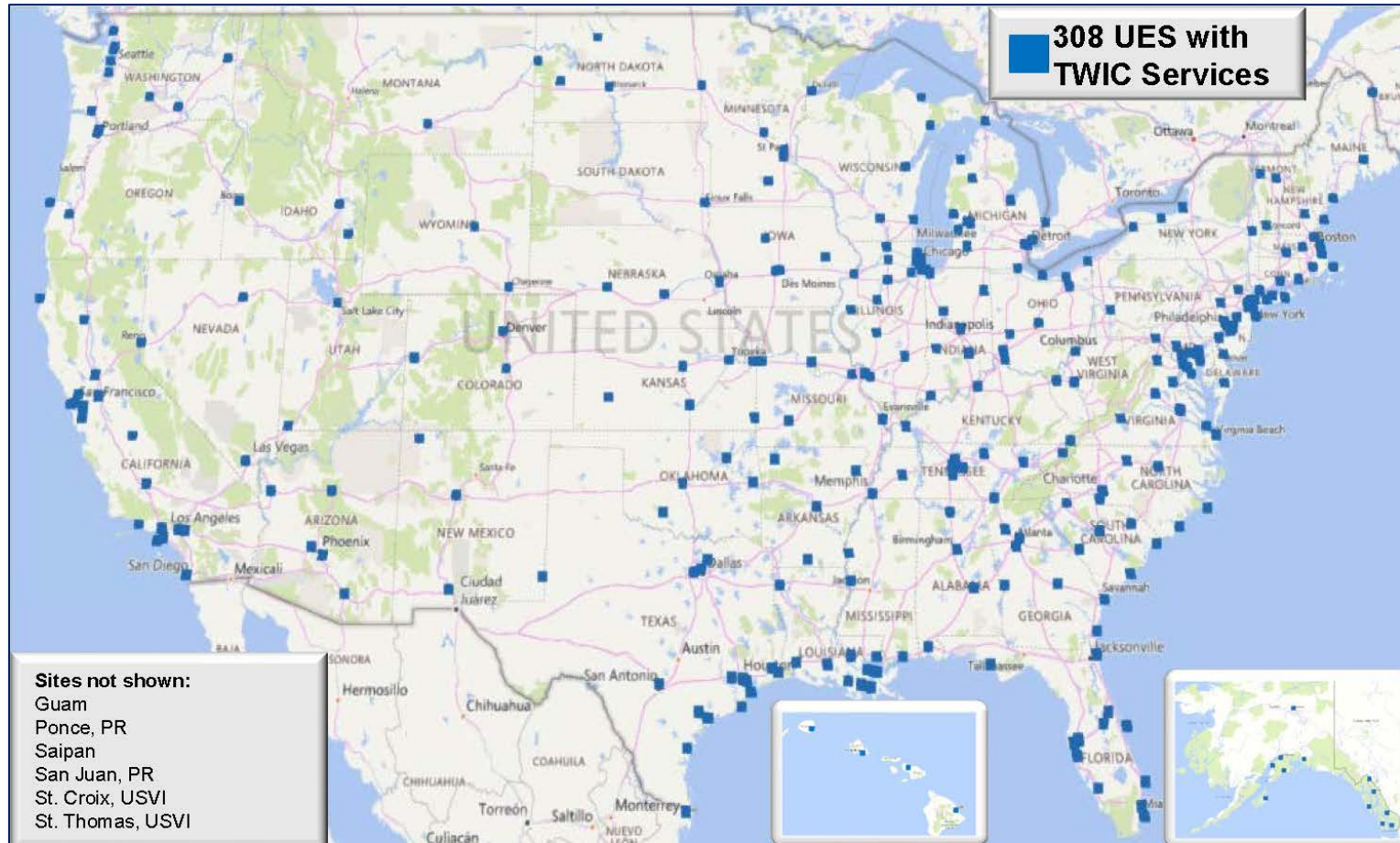


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# TWIC® Enrollment Centers | March 2018



Source: TSA OIA/PMD, March 2018.



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# TWIC<sup>®</sup> Adjudication & Redress Metrics

**~996K ENROLLMENTS**

**~53% Adjudicator Manual Review**



**2.6% PRELIMINARY DETERMINATION OF INELIGIBILITY**

**0.5%  
WAIVERS  
REVIEWED**

**0.6%  
APPEALS  
REVIEWED**



**0.3% | 0.5%  
WAIVERS | APPEALS  
APPROVED**

**0.16% | 0.08%  
WAIVERS | APPEALS  
DENIED**



Source: TSA OI/PPMD, February 2018.

**Two-year Period**  
**January 2016 – December 2017**

- *Approximately 53% of TWIC<sup>®</sup> enrollments are manually reviewed by adjudicators*
- *Small percentage (2.6%) of total TWIC<sup>®</sup> applicants receive a PDI*
- *Only about 1% of total applicants subject to redress process*
- *Less than 0.25% of total applicants receive waiver from TSA*



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# TWIC<sup>®</sup> Next Generation (NexGen)

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Office of Intelligence and Analysis  
TSA

Douglas Ward  
Security and Intelligent Documents  
U.S. Government Publishing Office (GPO)



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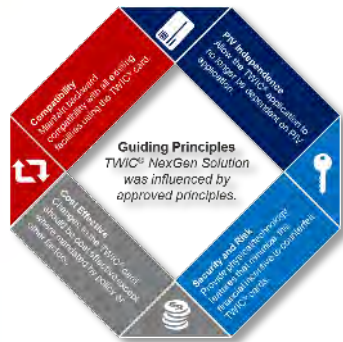


# TWIC<sup>®</sup> NexGen

## Physical Security Enhancements

TSA plans to implement physical TWIC<sup>®</sup> NexGen updates in fiscal year 2018.

The NEXGEN effort is focused on enhanced card functionality, new physical security features, and changes to the Technology Infrastructure Modernization (TIM) system to realize a NexGen card. Where TWIC<sup>®</sup> is used often as a “flash pass” physical updates to deter counterfeiting were a priority of TSA.



- **UPDATED DESIGN**

- Enhanced card substrates
- Covert, overt & forensic features
- Color-coded expiration field
- Optically variable devices

- **ENHANCED LAMINATE**

- Holographic images
- Switch effect designs
- Letter/shaped lenses
- Tactility (numeric and graphic)



Source: TSA OIA/PMD, September 2017.



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# TWIC<sup>®</sup> NexGen



## Transportation Worker Identification Credential

### TWIC<sup>®</sup> Authentication Features

The TWIC card maintains several overt design features to promote secure use of the credential.

1. Frontal facial photograph of the card holder.
2. Credential Expiration Date: Color-coded background that will update on annual basis.
3. Card Holder's Full Name: last name, first name, and abbreviated middle name (first initial followed by period) in capital letters.
4. Color Shifting Ink: TWIC text and Propeller design color shift between red, gold, and green (depending on lighting conditions) when viewed from different angles.
5. Facility: Card Identification Number (CIN) and Anchor design embossed on the card's laminate. (The CIN is an 8 digit number that can be validated to the CIN printed on the rear of the card, bottom left.)
6. Image Transition Effect: Compass changes to U.S. Flag design when viewed from different angles. (Laminate)



7. Letter Lenses: T, W, I, and C letters visible within circle designs using LED light source. (Laminate)
8. Kinetic image: Rope design color changes when viewed from different angles. (Laminate)
9. Image Glint/Reflection: Anchor image visible within Compass design using LED light source. (Laminate)
10. Shaped Lenses/Images: Star designs partially covering photograph with color changes when viewed from different angles. (Laminate)

TWIC authentication guidance provided in this document does not supersede facility or vessel physical security requirements established by the U.S. Coast Guard, designated maritime authority, owner, and/or operator. Please contact your entity's security office for more information.

For more information on the TWIC card, please contact TSA at [twic.issue@tsa.dhs.gov](mailto:twic.issue@tsa.dhs.gov).



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# TWIC<sup>®</sup> NexGen



## Transportation Worker Identification Credential

### TWIC<sup>®</sup> Authentication Features

#### Card Design Front

The TWIC card maintains several overt design features to promote secure use of the credential.

1. **Photograph:** Full frontal facial photograph of the card holder.
2. **Credential Expiration Date:** Colored-coded background that will update on annual basis.  

2018	2019	2020	2021	2022	2023	2024
2025	2026	2027	2028	2029	2030	2031
3. **Card Holder's Full Name:** last name, first name, and abbreviated middle name (first initial followed by period) in capital letters.
4. **Color Shifting Ink:** TWIC text and Propeller design color shifts between red, gold, and green (dependent on lighting conditions) when viewed from different angles.
5. **Tactility:** Card Identification Number (CIN) and Anchor design embossed on the card's laminate. (The CIN is an 8 digit number that can be validated to the CIN printed on the rear of the card.)



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# TWIC<sup>®</sup> NexGen



## Transportation Worker Identification Credential

### TWIC<sup>®</sup> Authentication Features

#### Laminate Card Front

6. Image Transition Effect: Compass changes to U.S. Flag design when viewed from different angles.



7. Letter Lenses: T, W, I, and C letters visible within circle designs using LED light source.

8. Kinetic image: Rope design color changes when viewed from different angles.

9. Image Glint/Reflection: Anchor image visible within Compass design using LED light source.

10. Shaped Lenses/Images: Star designs partially covering photograph with color changes when viewed from different angles. (Laminate)

TWIC authentication guidance provided in this document does not supersede facility or vessel physical security requirements established by the U.S. Coast Guard, designated maritime authority, owner, and/or operator. Please contact your entity's security office for more information.

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# TWIC<sup>®</sup> Modes of Operations

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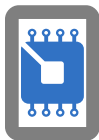


# TWIC® Modes of Operation

## Authentication & Identification

Based on the requirements of each facility/vessel and specific threat levels, TWIC® is designed to be used in various Access Control Systems at different levels of security.

### 01/ STATIC IDENTIFICATION



#### Proximity Card Emulation

- Contact or Contactless
- Verify digital signature
- Identify card using unique identifier or CHUID\*

### 02/ CRYPTOGRAPHIC AUTHENTICATION



#### 1 Factor: Something you HAVE

- Trusted issuance by TSA
- No biometric authentication
- Authentication certificate and private key

### 03/ BIOMETRIC IDENTIFICATION



#### 1 Factor: Something you ARE

- Biometric Authentication
- No card authentication
- Digital signature protects biometric templates

### 04/ COMBINED AUTHENTICATION



#### 2 Factor: Something you ARE & HAVE

- Biometric Authentication
- Card Authentication
- FASC-N verified against CCL

If you would like to discuss technology matters with the TSA TWIC® program, please e-mail us at [TWIC-TECHNOLOGY@TSA.DHS.GOV](mailto:TWIC-TECHNOLOGY@TSA.DHS.GOV).

\*FASC-N may be checked against the TWIC® Canceled Card List (CCL).

Note: TWIC® may have other modes of operation. This graphic details TSA's planned TWIC® modes of operation.

Source: TWIC® Authentication and its Use in Access Control Systems, TSA OIA/PMD, February 2018.



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# TWIC<sup>®</sup> Canceled Card List (CCL) App

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# TWIC® CCL Mobile Application

## Physical Security Controls

TSA planning to proceed with testing in Q3-FY 2018.

Prototype is designed to illustrate a list verification and supplement visual inspection of the TWIC® card. The application is being designed for Android and iOS devices.

Solution uses the Credential Identification Number (CIN) printed on the TWIC®:

- CIN compared to one list – Canceled CINs – which may be hosted in UES website and downloaded regularly.
- Facility/vessel users will be required to inspect TWIC® expiration date for validity (not included in canceled CIN list); behavioral prompt for facial inspection.
- Application and list are available to all stakeholders – no restrictions and eliminates Registration Authority.

### Mobile Application Phases

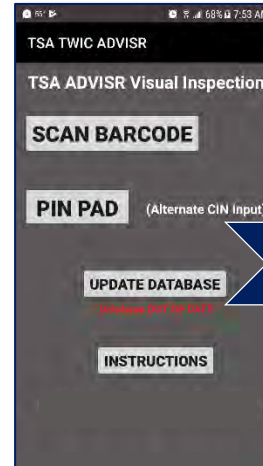


*Note: Application remains in development – design, graphics and interface are subject to change.  
Source: TSA OIA/PMD, March 2018.*

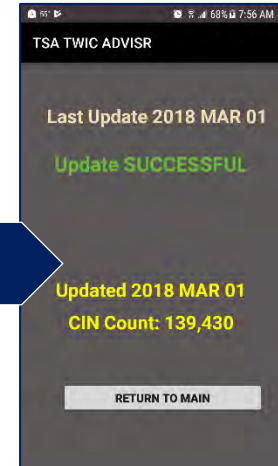


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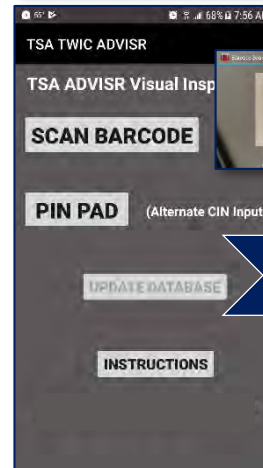
CIN Update



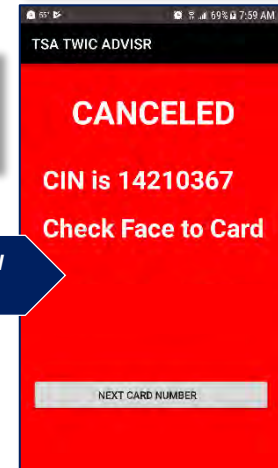
Updates in Seconds



Sample Workflow



Prompt Visual Inspection



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# TWIC<sup>®</sup> Assessments

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# TWIC<sup>®</sup> Assessments

## Evaluations of TWIC<sup>®</sup> Controls, Fees & Maritime Use

**Three (3) assessments on the TWIC<sup>®</sup> program's effectiveness at enhancing security and reducing security risks to facilities and vessels.**

In response to oversight recommendations and program requirements, DHS, TSA, and USCG are supporting the evaluation of the TWIC<sup>®</sup>. These assessments include analyses on:

- *Fee Structure & Cost(s) of Vetting*
- *Use of TWIC<sup>®</sup> to address Security Risks*
- *Operational Impact(s) & Vetting Standards*

### Effective Internal Controls for TSA Security Threat Assessments (Completed – December 2017)

TSA commissioned an independent assessment of TWIC<sup>®</sup> controls to verify that STA controls exist as well as whether TSA controls effectively mitigate TWIC<sup>®</sup> security risks.

### Assessing the Risk-Mitigation Value of TWIC<sup>®</sup> at Maritime Facilities (Ongoing – Early 2019)

In response to P.L 114-278, DHS commissioned an independent assessment on TWIC<sup>®</sup> focused on the security value of the program and credentialing process.

### Bi-annual Review of TWIC<sup>®</sup> Fee (Ongoing – Late 2018)

Based on statutory requirements and Federal guidance, TSA is conducting its bi-annual review of the TWIC<sup>®</sup> fees.

Source: TSA OIA/PMD, March 2018.



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# Discussion

## Open Discussion

All Participants

If you would like to discuss an issue with the TSA TWIC<sup>®</sup> program in private,  
please e-mail us at [TWIC.Issue@TSA.DHS.GOV](mailto:TWIC.Issue@TSA.DHS.GOV).



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# Contact Information

*Please do not hesitate to contact the TSA TWIC® program with questions or for more information.*



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# Appendix



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# History, Authority, and Statistics

**40,000+ Average Monthly Enrollments**

**2.2+ Million Active Credentials**

**4.7 Million+ Total Enrollments**

**\$60.00 Replacement TWIC® Card Fee**

**\$105.25 Reduced Enrollment Fee (w/HME or FAST)**

**\$125.25 Standard Enrollment Fee**

**487,629 FY17 Enrollments**

**536,346 FY17 Cards Produced**



# TWIC<sup>®</sup> NexGen Functionalities

## Capability Comparison

### Current Functionality (2007-2017)

Retrieval of Fingerprint Biometrics without PIN Submission

Designed for PIV/PIV-I Compatibility and Functionality

Credential Designed for Maritime Application and Use

Effective but Aging Security Features and Substrates

Reader/Access Specifications based on Configuration of TWIC<sup>®</sup> Card

### TWIC<sup>®</sup> NexGen Functionality (Planned)

**Secure Retrieval of Fingerprints/Facial Image without PIN**

- Permits contactless use of TWIC<sup>®</sup> for all biometric card objects.
- Eliminates need for PIN operations (optional use).

**Independent TWIC<sup>®</sup> and PIV Applications**

- Enables continued direct mail issuance\*, 5-year lifecycle.
- Permits contactless biometric user two factor authentication.
- Eliminates need for readers to access two (2) applications.

**Expanded PACS Support and Accessible Personal Information**

- Optional support for local PACS data, i.e., E-Stickers
- Personal information available via 2D barcode/secure read
- May support use of certain information across industries

**Enhanced Card Platform: Features and Personalization**

- Advanced overt, covert and forensic features.
- Updated production methods, formatted UUID and certificates.
- Incorporates Counterfeit Deterrence Best Practices

**TWIC<sup>®</sup> Card Backwards Compatibility**

- Minimizes disruption of existing TWIC<sup>®</sup> implementations.
- Provides flexibility to vendors on support of new features.
- Magnetic Stripe replaced/removed for security concerns.

*Note: TWIC<sup>®</sup> NexGen remains in development; planned capabilities and functionality subject to change.*

*PIV/PIV-I use of credential requires physical presence, biometric authentication and PIN selection/presentation to load/sign applications.*

*Source: TSA OIA/PMO, September 2017.*



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# Transportation Security Administration