



# Passenger Data Exchange

THE BASICS



WORLD CUSTOMS ORGANIZATION



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Introduction

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WORLD AIRLINE ASSOCIATION

# INCREASING NON-STANDARD REQUESTS

PNR:  
State Design



API:  
Web/Email



etc.

iAPI: Commercial Solution



WORLD GEOSPACE CORPORATION



# REQUIREMENTS IN EARLY 2000





# REQUIREMENTS TODAY

as of September 2013



WORLD ECONOMIC FORUM

# OBJECTIVE

- Understand the complexities of passenger data programs
- Increase awareness of existing international standards and airlines' capabilities
- Understand that ICAO, WCO and IATA can offer assistance and expertise

# DEFINITIONS

# PASSENGER DATA – WHAT IS IT?

Electronic data concerning passengers' identity (API) or travel reservations (PNR) which is used by public authorities for border control.

# API

VS

# PNR

Definitions



**API helps identify people you know about.**

For instance : people on a watchlist

```
*** ELECTRONIC TICKET ***  
F 1.1TEST/HEXAMRS'  
WW6ACWW 25JUL KBR4Z5'  
1 AC 870 M TU 10SEP YULCDG  
FONE-'  
1.WW6-T HEXA'  
2.WW6-C 1 111 1231231/PAX'  
3.WW6-A TEST TRAVEL AGENCY AC  
N3 CA'  
4.WW6-E SHAILESHD//HEXAWARE.C  
TKT-'  
1.1 K25JULWW6WW 0142123729112  
AP FAX-'  
1.1 SSRDOCSYYHK1 //11MAR84
```

**PNRGOV (from PNR) helps notice people and trends you did not know about.**

For instance: suspicious travel patterns



# PASSPORT

## ADVANCE PASSENGER INFORMATION (API)

Information about a person's identity.

- API can be useful for:
  - Immigration
  - Customs
  - Security

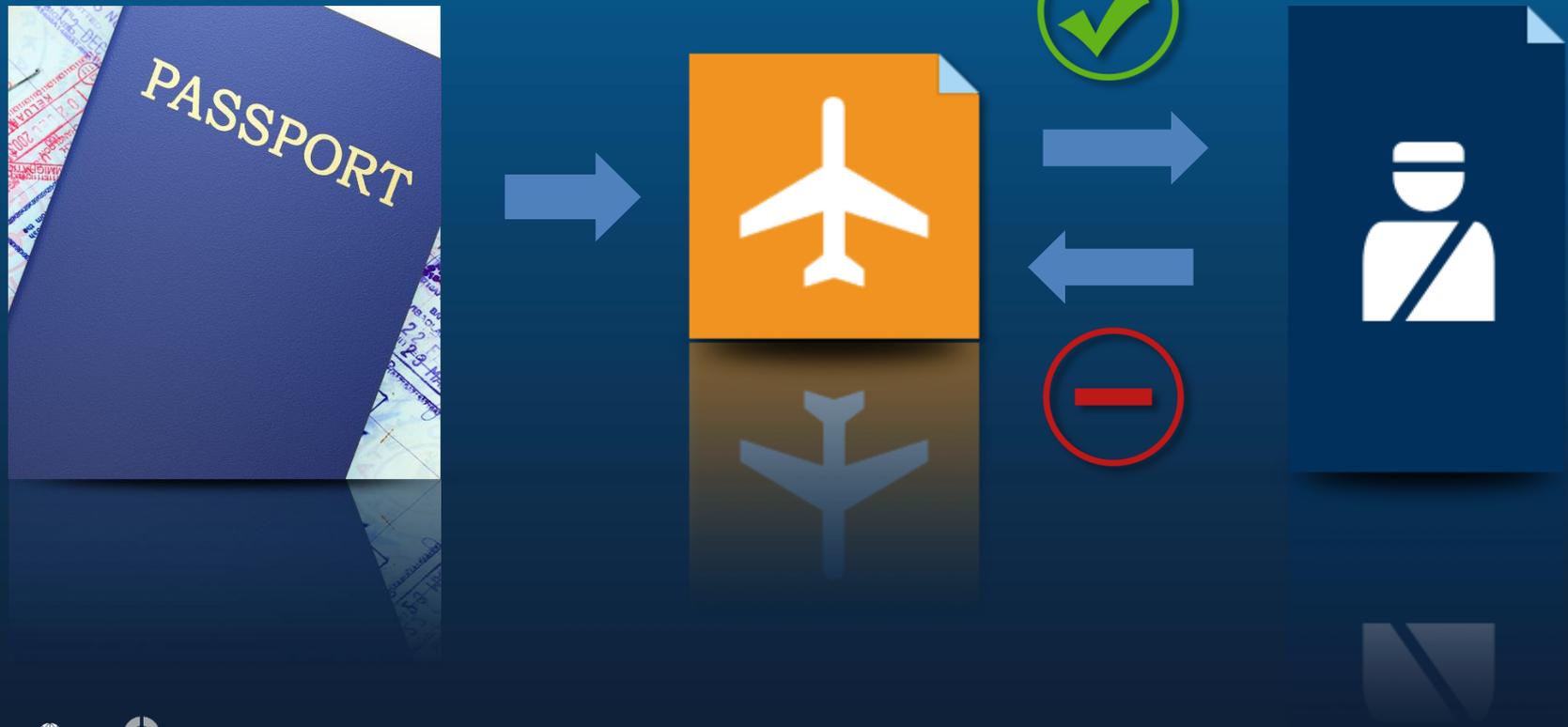
# API – TRANSMISSION

Legacy (Batch) API



# API – TRANSMISSION

Interactive API (iAPI)



# PASSENGER NAME RECORD (PNR)

Information about a person's travel reservation.  
It can be useful:

- For customs, law enforcement, security
- To help identify contraband, smuggling, etc
- To assist in risk assessment

# KEY PRINCIPLES

# KEY PRINCIPLES

“ACE” stands for

- Alignment with standards
- Cooperation with industry and other States (data protection)
- Efficiency: necessary data only



# SINGLE WINDOW



# DATA ELEMENTS

# AIRLINES' SYSTEMS ARE COMPLEX AND DIFFERENT

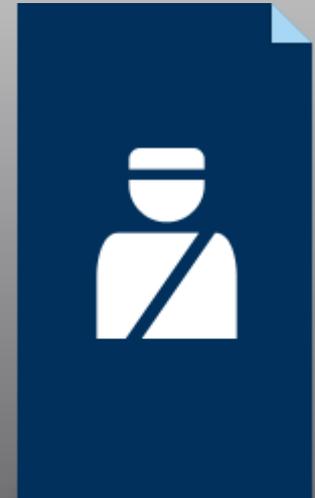
- API or PNR data may be stored in different airline systems
- PNR may look completely different from one airline to the other



# AIRLINES WITH SEPARATE SYSTEMS

```
*** ELECTRONIC TICKET ***  
F 1.1TEST/HEXAMRS'  
WW6ACWW 25JUL KBR4Z5'  
1 AC 870 M TU 10SEP YULCDG HK1 2055  
FONE-'  
1.WW6-T HEXA'  
2.WW6-1 111 1231231/PAX  
3.WW6-1 111 1231231/PAX  
N3 CA'  
4.WW6-E SHAILESHD//HEXAWARE.COM**NOTIFY'  
TKT-'  
1.1 K25JULWW6WW 0142123729112'  
AP FAX-'  
1.1 SSRDOCSYYHK1 //11MAR84/F//TEST/HEX
```

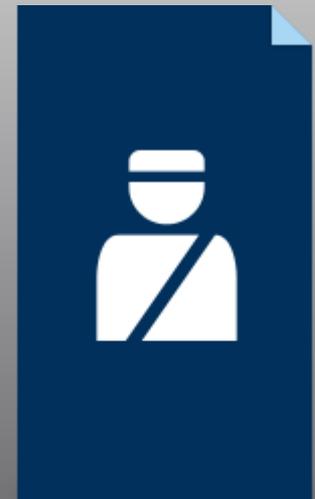
Reservation System



# AIRLINES WITH INTEGRATED SYSTEMS



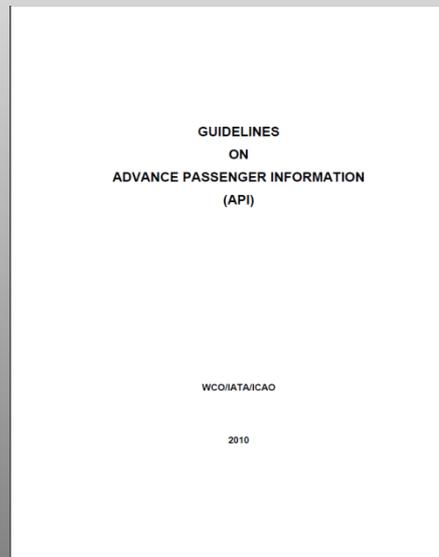
Reservation  
+  
Departure Control System



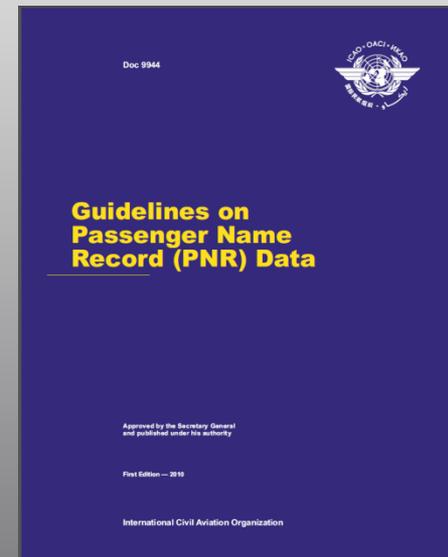
# WHERE TO FIND THE LIST OF DATA ELEMENTS



Standards and Recommended Practices for API, iAPI and PNR



API and iAPI data elements are listed in the WCO-IATA-ICAO Guidelines on API



PNR data elements are listed in the ICAO Guidelines on PNR Data (Doc. 9944)

# BENEFITS



# BENEFITS OF STANDARD TRANSMISSION

- ✓ Faster implementation
- ✓ Better compliance
- ✓ Cost control
- ✓ Reliable data
- ✓ Minimum impact on airport infrastructure

# HOW TO



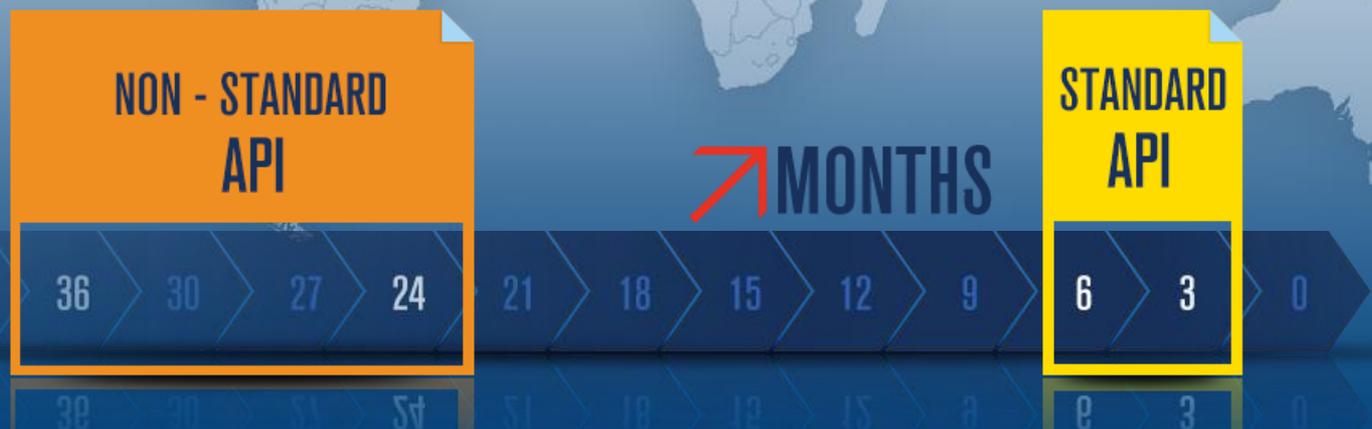
# HOW TO SET UP A PASSENGER DATA EXCHANGE PROGRAM

- ✓ **Determine your needs** - Is the data necessary?
- ✓ **Familiarize yourself** with global standards
- ✓ **Include stakeholders** early
- ✓ **Approach foreign States** for any data protection issues
- ✓ **Check** that appropriate legislation is in place
- ✓ **Seek assistance** from experts
- ✓ **Cooperate** and remain flexible

# LEAD TIME FOR API

For standard API, airlines need at least 3 to 6 months to

- Configure systems incl. peripheral systems like internet check-in and self-service kiosks
- Test connectivity
- Train staff



# COST AND FUNDING



Heavy costs of

- Capturing
- Formatting
- Transmitting data



- Costs of systems development
- Interactive API is a sophisticated system that requires particularly heavy investment

API is a border security requirement. States should not charge airlines (or passengers) in a bid to subsidize their own development costs.



WORLD CUSTOMS ORGANIZATION

can provide

**ASSISTANCE and EXPERTISE**

Contact email: [passengerdata@iata.org](mailto:passengerdata@iata.org)

Batch API



# Passenger Data Exchange

BATCH API



# DATA ELEMENTS

# ADVANCE PASSENGER INFORMATION (API)

- API includes data relating to the flight and to each passenger on that flight
- Data elements are contained in the API Guidelines
- This is an extensive list. States are urged to limit their requests for specific data elements to those deemed essential for their border control needs
- Annex 9 encourages States to limit passenger data to only those elements found in the MRZ

# API DATA RELATING TO THE FLIGHT

- Flight Identification
- Scheduled Departure Date
- Scheduled Departure Time
- Scheduled Arrival Date
- Scheduled Arrival Time
- Last Place/Port of Call of Aircraft
- Place/Port of Aircraft Initial Arrival
- Subsequent Place/Port of Call within the country
- Number of Passengers



# API DATA ELEMENTS RELATING TO EACH PASSENGER

- Surname/Given Names
- Nationality
- Date of Birth
- Gender
- Official Travel Document Number
- Issuing State or Organization of the Official Travel Document
- Travel Document Type
- Expiration Date of Travel Document



# TRANSMISSION TIMINGS AND FREQUENCY



# BATCH API TRANSMISSION TIMINGS AND FREQUENCY



## ➤ TIMING

Not earlier than 30 minutes before departure, preferably when the aircraft door has been closed and the aircraft readied for departure

## ➤ FREQUENCY

Single transmission ideally, or transmissions limited to the extent possible.

# MESSAGE STANDARDS

# BATCH API MESSAGE AND MODE OF TRANSMISSION

	FORMAT	TRANSMISSION MODE
<b>TRADITIONAL/LEGACY</b> Still the most common and widely recognized by the industry	<b>UN EDIFACT PAXLST</b>	Examples include : Type B and MATIP





# Passenger Data Exchange

INTERACTIVE API



# KEY PRINCIPLES



# INTERACTIVE API: BENEFITS

- Live information about passengers checking in
- Potential prevention of inadmissible passengers and related penalties
- Use for aviation security, since the information is available before the flight takes off

# INTERACTIVE API: COMPLEXITIES

- State systems must be able to respond in real time to reduce delays at check-in / boarding
- Systems must be available 24/7
- Back-up processes must be in place in case of system failure
- Processes must exist to deal with customers denied boarding
- The responsible authority should have a risk assessment facility to provide appropriate responses and assistance

# DATA ELEMENTS

# API DATA RELATING TO THE FLIGHT

- Flight Identification
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- Scheduled Departure Time
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- Last Place/Port of Call of Aircraft
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# API DATA ELEMENTS RELATING TO EACH PASSENGER

- Surname/Given Names
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- Official Travel Document Number
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- Travel Document Type
- Expiration Date of Travel Document

# TRANSMISSION TIMINGS AND FREQUENCY

# iAPI TRANSMISSION TIMINGS AND FREQUENCY



## ➤ TIMING

Usually sent when passenger checks in and presents their travel document (typically 24 hours to 1 hour prior to departure)

## ➤ FREQUENCY

One transmission at time of passenger check-in

+ Potentially a final message confirming passengers on board

# MESSAGE STANDARDS



# MESSAGE STANDARDS FOR iAPI



**UN/EDIFACT PAXLST**



**CUSRES**

(Customs Response)





# Passenger Data Exchange

PNR

# PRIVACY AND DATA PROTECTION

- PNR contains personal data
- Countries have different perspectives on how much is “private” or how much can be shared
- State to State agreement may be necessary
- Sensitive data should not be required

# DATA ELEMENTS

# PNR DATA RELATING TO THE FLIGHT

- PNR can contain as little as a name and flight number
- PNRs may or may not include elements such as:
  - Passenger name (may be limited to surname and first initial) ;
  - Itinerary;
  - Ticketing information;
  - General contact information;
  - Form of payment;
  - And a range of possible additional information/data. Refer to list in Doc 9944
- Penalties should not be imposed for incomplete or inaccurate data

# TRANSMISSION TIMINGS AND FREQUENCY

# PNR TRANSMISSION TIMINGS AND FREQUENCY



## ➤ TIMING

PNR transmission should be required as late as possible prior to flight departure to ensure complete data

## ➤ FREQUENCY

Repeated scheduled transmission and ad-hoc requests should be limited as much as possible

Some carriers may be able to transmit updates only, if changes were made

# MESSAGE STANDARDS FOR PNR



**PNRGOV**



**GOVREQ / ACKRES**

(Government Request /  
Acknowledgement of Reponse)



FOR MORE INFORMATION CONTACT  
[passengerdata@iata.org](mailto:passengerdata@iata.org)

# Alignment, Cooperation, Efficiency

