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2.4: Advance passenger information (API)

AIRLINE RESERVATION SYSTEM AND PASSENGER NAME RECORD (PNR) ACCESS BY STATES

(Presented by the IATA)

SUMMARY

This paper describes the current situation with respect to systems developed by air transport operators to contain, manage and disseminate information related to individual passengers' flight reservations. It will also describe the difficulties related to implementation of data access regimes proposed by a number of States, and of efforts under way to develop necessary solutions that address States' legitimate security needs whilst ensuring adequate levels of protection for individuals' rights to privacy.

Action by the Division is in paragraph 4.1.

1. INTRODUCTION

1.1 Long before September 11th, at least one State had already begun investigating the value of data held in airline reservation systems as an additional tool for enhanced risk assessment to be applied to flights arriving from international ports of embarkation. This process, now commonly referred to as PNR (Passenger Name Record) Access, is a wholly separate undertaking and should not be confused with Advance Passenger Information (API) regimes.

1.2 Under initial PNR Access applications, the government agency establishes a direct link between its computer system and that of the air transport operator, and "pulls" or extracts individual passenger reservation records. Those records, once retrieved, are then run against special software programs designed to identify data elements that may point to a passenger who represents a security risk. Once highlighted, analytical specialists can then manually review these records and identify those passengers who should be subjected to additional screening upon their arrival.

1.3 The issue of direct PNR access, and its potential impact on data privacy and the rights of persons traveling to States that have or will impose this requirement, has been the focus of significant

attention in the last two years. Currently, only the United States, Canada, Australia and New Zealand have legislation in place that makes government access to airline reservation data mandatory. A number of other States are exploring this process as an additional component of their border security strategy, and it is likely that more such requirements will be imposed in the coming two years.

1.4 In an attempt to address data privacy legislation and ensure passenger rights are protected, a number of official bodies have begun to call for changes in the way air transport operators collect, store and exchange passenger data during the course of their normal business operation. It is conceivable that the Division will be asked to endorse a recommendation that ICAO, itself, seek to establish global standards related to PNR construction and data elements that they could contain. This paper seeks to explain the difficulties associated with that proposal through a discussion of current system design differences and existing industry standards related to PNR construction and distribution of data among parties to the transportation chain.

2. AIRLINE RESERVATION SYSTEM DESIGN

2.1 Electronic systems developed by individual airlines over the past 4 decades have largely been based on specific operational requirements that differ from company to company. In their earliest versions, these systems were not designed to support exchange of data between operators, as the concept of interlining (transport involving two or more carriers under a single ticket) was not yet fully developed. Where exchange of data was required, it often involved the use of other processes outside of the carrier's own reservation systems. Based on this initial period of non-coordinated development, today's systems - while far more advanced than those of the 1960's - continue to be diverse in structure.

2.2 To enable a certain level of interoperability with regard to the need to exchange data in the emerging interlining environment of the 1970's, the airline industry - through IATA's Passenger Services Conference (PSC) - began to develop standards for PNR construction. These standards established certain minimum requirements for PNR's, and also established the methods by which supplemental information could be added to these records and exchanged between various parties to the transport chain. While these standards lay out how specific data should be categorised and entered, the standards do not mandate that PNR's must be constructed in a single, consistently ordered format.

2.3 The IATA Passenger Services Conference Resolutions Manual defines "Passenger Name Record" to mean a record of each passenger's travel requirements which contains all information necessary to enable reservations to be processed and controlled by the booking airline and the airline(s) participating in the carriage.[1]

2.4 When constructing a PNR, the applicable industry standards[2] mandate a minimum of five data fields that must be completed in order to finalise the record. These include 1) the passenger's name (or names, as a PNR can be for a single traveler or for a group of many); 2) Itinerary or routing; 3) Received from (the person making the reservation); 4) a phone contact; and 5) ticketing information. Frequently, information contained in the Phone and Received from fields does not relate specifically to the traveler or travelers named in the PNR - but may instead reflect the Travel Agent making the booking. The Ticketing field often reflects a time/date by which a ticket against that reservation must be issued. In some instances, a ticket number and date of issue may replace the ticketing time limit once that transaction has been completed, however that is not a universal application. Some systems insert this data as a separate SSR line, and simply amend the Ticketing field to indicate that a ticket has been issued.

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[1] IATA Passenger Services Conference Resolutions Manual, Recommended Practice 1008.

[2] IATA Reservation Services Manual, PADIS – Implementation Guide/Reservations Messages, ATA/IATA Reservations Interline Message Procedures – Passenger (AIRIMP) and ATA Standard Interline Passenger Procedures (SIPP).

2.5 Supplemental or requested service information may be added to the PNR, and is contained in designated elements of PNR construction. One element is the Special Service Request (SSR) field and the other is the Other Service Information (OSI) field. In both cases, the data is entered following a specific format that identifies the type of information contained in the SSR or OSI field and to which parties in the travel chain the information should be forwarded. Some SSR or OSI elements are for the use of the originating carrier only - other elements apply to all airlines involved in the itinerary. The specific information to be conveyed in the SSR or OSI is then entered in free text format. Only carriers that are specifically named in the formatted portion of either SSR or OSI fields receive those entries when the PNR is exchanged with a down-line - or interline - carrier.

2.6 Another tool within the PNR to convey information is the General Remarks field, which is normally viewable only within the system of the company that has inserted this data. General remarks are not normally transmitted to any other entity involved in the transportation chain.

2.7 SSR and OSI fields are frequently used to convey special services that the passenger is requesting, such as special dietary requirements, information concerning unaccompanied minor travel, loyalty program (FQTV) numbers, and requests for assistance transferring through airports and while on the aircraft. SSR and OSI fields can also be used to record requests for seats when they cannot be assigned at the time the reservation is made. Often, SSR fields are used to input the number of loyalty (frequent flyer) program members so that mileage will automatically be accrued.

3. PRINCIPLE DIFFERENCES IN AIRLINE RESERVATION SYSTEMS

3.1 While today's reservations systems contain predominately the same kinds of information concerning passengers to be transported, and that information can be exchanged between carriers using clearly defined methodologies, there are significant differences in the way the various systems interact with airport systems used during check in operations (Departure Control Systems or DCS). In some instances, passenger records in the Reservation system are overlaid or updated with information resulting from check in (i.e., seat assignments, number of checked bags, baggage tag numbers, frequent traveler account input, etc). In other cases, there is not such overlayment - and the data resulting from the check-in operation continues to reside only in the carriers' DCS.

3.2 For some carriers, particularly many of those involved in non-scheduled Charter operations, no formally structured PNR's are ever created. Instead, the Tour Operator will enter into the contract with the traveler, and will provide the carrier only with a basic passenger manifest. Of course, in these instances, the carrier is providing the sole source of transport and no interline connections are involved.

3.3 Many carriers today do not operate their own reservation or DCS systems, and instead rely on products and systems developed by commercial Computerized Reservation Systems (CRS) or Global Distribution Systems (GDS). In these cases, a carrier operating from one country may be relying on a CRS for reservations and check-in services that is based in another country - and accordingly - potentially bound by differing laws.

3.4 Since only portions of Airline Reservation Systems are regulated by Industry standards, significant parts of the underlying architecture vary. Any movement to impose changes on the industry with respect to the way that PNR's are constructed, stored or exchanged would require a massive restructure of the entire industry's underlying IT base. While no firm analysis has been undertaken to identify the final cost of such a restructuring across the industry - including within the Travel Agency community - some in the industry have estimated that the costs could conceivably exceed US $2 billion.

4. PUSH VERSUS PULL AND DATA FILTERING

4.1 In the ongoing negotiations between the European Commission and US Authorities, one of the more contentious issues related to PNR Access and data privacy are whether government agencies should reach into Airline systems and extract - or pull - data into their own database or airlines should devise methods by which they would transmit - or push - that data to the requesting government agency. A second issue relates to which data should in fact be exchanged, and how filtering mechanisms should be installed to ensure that only appropriate and agreed data are transferred in either a "push" or "pull" environment.

4.2 Within the air transport community, there is no absolute consensus on the issue of push vs. pull. In general terms, the initial costs associated with establishing connectivity to support a pull system (government retrieves data from the airlines' systems) are relatively minor in comparison to development of new systems. However, real and ongoing costs are incurred based on the number of times the government agency pulls PNR files and the amount of data that is transmitted in each instance. For carriers operating a large number of flights in an affected market, this cost could run to hundreds of thousands of dollars per year.

4.3 Establishing a system by which the carrier would extract data on affected flights and push that material to the requesting government agency would involve significant initial up-front programming expense, as well as the ongoing costs associated with data transmission. However, some carriers believe that a "push" approach may reduce the number of data extractions that might result in a "pull" scenario - thereby reducing overall costs.

4.4 Regardless, there is a consensus within the industry that access to PNR data by any government agency is in fact an intelligence gathering operation, and should be considered in light of that State's overall national security strategy. Accordingly, the air transport industry firmly supports the premise that the costs associated with access to airline reservation data should be borne solely by the government(s) requesting those data.

4.5 Similarly, there is no absolute consensus concerning how PNR data should be filtered, or even where that filtering should occur. A position emerging within the European Commission is that filtering should take place within individual airline systems, and that only filtered passenger data should be extracted and then pushed to a requesting government agency. Another concept would have carriers extract raw PNR data and transmit it to a secure intermediate body - where it could be filtered and the resulting "clean" data then forwarded to the requesting government agency. This concept has been established under "The Austrian Proposal" and has gained a certain level of support amongst governments and airlines.

4.6 Some have recommended that filtering must occur at the airline level - without first having a clear technical understanding of the difficulties that such programming would entail, nor of the massive capital expenditure that would be required. Others believe that a single filtering system - developed and implemented by a trusted intermediary service - would provide adequate data safeguards at a fraction of the cost.

4.7 As with the previous discussion, the air transport industry believes that any requirement to filter data transmitted under requirements of any State's national legislation should be the responsibility of the State(s) demanding access to that information. Carriers should be indemnified with respect to any civil liabilities that might arise from their compliance with legally imposed requirements to make this data available for government review, and should also be compensated for all expenses incurred in doing so.

5. GOVERNMENTS' ROLE IN AIRLINE RESERVATION SYSTEMS AND PNR CONSTRUCTION

5.1 Several individual government agencies, and even some inter-governmental bodies, have recently begun to consider policies under which airline reservation systems, and the methods by which PNR's are constructed, could come under formal governmental control. A paper may be discussed which, as a recommendation, calls upon ICAO to develop an international standard "to remove technical burdens that may impair the smooth implementation of those uniform practices, which could include the appropriate configuration of the PNR system."

5.2 With respect to PNR access regimes, we believe that it is absolutely critical that ICAO and its Contracting States seek to develop standards with respect to what States may, or perhaps even should require under such programs. Globally agreed standards are necessary in light of recent non-coordinated developments, and should be agreed to ensure harmonization of data exchange methodologies and in-line data filtering processes. We believe that this is ICAO's key role in this debate, and the air transport industry would support such a course of action.

5.3 However, the data contained within airline reservation records are part of a commercial transaction that supports and facilitates the provision of services that the passenger has purchased and which he or she expects to be provided. As such, it is little different from the data that is collected and exchanged between financial institutions when a customer makes a request to wire funds from one account to another. While there is a legitimate necessity to establish firm guidelines on how that financial data should be protected, there is no evidence that any government - or intergovernmental body - has ever sought to impose restrictions on the world's financial institutions to regulate what data can or should be part of that transaction.

5.4 Accordingly, the air transport industry would not support any movement toward inter-governmental regulation of PNR construction, whether through introduction of Standards by ICAO as part of Annex 9 to the Chicago Convention or through the imposition of any State's national legislation.

6. ACTION BY THE DIVISION

6.1 The Division is invited to note the issues raised by this paper, particularly with respect to:

a) discussions related to PNR Access regimes, and the exchange of personal data held in airline reservation systems;

b) development of Standards related to such exchanges; and

c) ICAO's legitimate role and authority concerning the regulation of internal business transaction within the air transport industry.

— END —