THE COMPARISON OF THE AMADEUS AND GALILEO DISTRIBUTION SYSTEMS FOR SELLING THE AIR TICKETS IN THE AIR TRAFFIC AGENCIES

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The contribution evaluates and compares the global distribution systems Amadeus and Galileo. It provides profound knowledge of actors and their mutual relations in the travel industry, flight ticket reservation as a phenomenon that has soared in the last several years. Travelers not only know how to efficiently reach far destinations in a relatively short time but they even use this system in high volumes. The contribution pointed out significant difference that exist between the two systems. It explains basic terms in the area of flight ticket reservations, introduces history and needs leading to creation of global distribution systems. A separate chapter focuses on evaluation of significant differences between the two systems. We verified certain opinions using a questionnaire. We conducted a survey, respondents were agents of reservation departments of Slovak and Czech travel agencies. Figures illustrate relevant processes related to making a reservation.

Keywords: Global Distribution System, Amadeus, Galileo, Flight Ticket, Booking, Agent

1 INTRODUCTION

„Information technology and business are becoming inextricably interwoven. I don't think anybody can talk meaningfully about one without the talking about the other."

Bill Gates

Information systems and business are indivisible these days, making it unreasonable to talk about one without the other.

As the world evolves, information, its quality, function and sheer volume are becoming the key drivers and enablers of evolution.

It wasn't long ago when only paper airline tickets were known to the world. The days of electronic processing technologies and information evolution bring global information & distribution systems offering new solutions and innovation. We may thereof re uncover & observe interconnections between various information systems used around the globe, where users expect various standards. In the present day we have several different systems with a global reach. In the following we offer a structured comparison of two main ones, GDS Galileo and GDS Amadeus on the levels of functionality, agent experience, practical evaluation and also interconnection capabilities.

The main operations in these CRS Systems are usually delivered by features collective called Global Distribution Systems (GDS), where GDS is generally preferred by travel agencies to offer ticket, hotel, car reservations & sales and other related services. GDS systems are usually run on high-availability (99, 9% & above) architectures and are able to process around 17000 messages a second under peak performance. They are built based on state-of-the-art business architectures and run on the latest infrastructure technologies, making them able to process requests scaling in billions in a very short time.

Historically, the first functional distribution system was developed by American Airlines (AA). In 1946 AA marketed the first experimental electro-mechanical reservation system called Reservisor, to which agents did not have a direct access as they do today. After 1959, the introduction of SABRE (Semi-Automatic Business Research Environment), multiple solutions emerged. In 1979 United introduced Apollo, the first system agents had direct access to.

Motivated by easier customer access, airlines played a key role in the development & growth of GDS companies.

The year 1987 was key in this development:

1987 – GDS Amadeus was built by the support of Air France, Lufthansa, Iberia & Scandinavian Airlines. GDS Galileo was launched by the support of British Airways, KLM Royal Dutch Airlines, Alitalia, Swissair, Austrian Airlines, Olympic, Sabena, Air Portugal & Aer Lingus. (Note: Galileo originally evolved from systems Sabre, Apollo & Worldspan.)

In the following the practical advantages of these systems will be highlighted.

2 DESCRIPTIONS OF KEY PROCESSES IN AMADEUS & GALLILEO

Both systems are operated using commands seen cryptic to the general public and the agents at first. Understanding IATA (International Air Transport Organization) abbreviations is key in developing a good command of the systems. In practice agents often have to deal with a degree of confusion customers experience seeing the complexities of the systems. They assume that simple directions, time & place should be enough to find the best travel option, whereas the opposite is true. The simple interfaces know by them are simplifications of rather complex environment (Figure 1).

Agents are required to attend trainings lasting several days in order to gain a sufficient understanding and skillset required to start working with the systems. Good command of English is key to master the features of GDS, e.g. the various tariff structures.

Figure 1 Ticket search interface developed for end users [1]

Differences between the systems can be seen immediately looking at the flight schedule. While in Amadeus it is possible to query the schedules via a single command based on option commands, the same operation is more complex in Galileo.

3 GDS AMADEUS

Amadeus offers technological solutions for travel agencies and is a global supplier of reservation services in the areas of tourism. It offers several business optimization options for its customers, e.g.:

- Analysis & implementation
- Account Management,
- Helpdesk & Technical Support,
- Trainings,
- Marketing.

Note: The Slovak market is traditionally serviced from Prague, Czech Republic since 1993.

3.1 GDS Amadeus in practice

In order to access Amadeus, the required software package has to be installed, which is accessed via a standard web browser (Internet Explorer 5.5 or later is recommended) by opening the following URL: https://amadeusvista.com/. The system is then loaded & accessed by clicking on the "Launch Amadeus Selling Platform" icon and by entering the alphanumeric access credentials. The credentials can be obtained from the Amadeus Help Desk.

Creating a reservation by the agent consists of the following four basic steps:.

1. Enter the first & last name of the passenger in the following format: Last Name/First Name Title. (ASCII only) – E.g. *Enter: NM1 KOVACSOVA/NATALIA MS.*
2. Add passenger contact, E.g. Enter: APE-nataliakovacs@gmail.com or APM-0909 909 909.
3. Enter the ticket issue deadline, e.g. enter: TKTL19APR.
4. Direction: entry – based on the availability

Since we mentioned cash payment as well, in the case of credit card payment, agents are required to verify payment option of this type at the airlines. Since these verifications are often cumbersome it is usually easier for the agent to process the reservation through the web interface of the given airline.

Each reservation can be displayed via a graphical interface as well.

Creating a reservation means to account the segments for the given passenger, which is the first step. An important part of each ticket reservation is the creation of masks, which are the actual valuations of the selected segments. The valuation can be done several ways in Amadeus.

1. FXX –informal value, not saved in the mask
2. FXP – valuation of reservation, saving of the price, mask creation. (Creation of TST - Transitional Stored Ticket).
3. FXR – Accounting of the segments into the next possible lowest tariff class. This approach can be used to the valuation of individual flight segments without the actual choosing of reservation.
4. FXB (best buy) –used to account the segments into the lowest possible tariff classes, saving the price & creation of the TST mask in one transaction command.

Manual search & combination of each tariff is usually time consuming, therefore Amadeus developed measures allowing agents to combine all the possible Airline offers into one place. This means it is possible to find the best combination via one access. Passenger seating is a process which can be done via the cryptic command or a more straightforward graphical interface, which is usually preferred not just by the passenger, but the agent as well.

The biggest advantage of GDS Amadeus is the fact that most of the major airlines work in it.

4 GDS GALILEO

The global share Galileo is more than 52000 of travel agencies world-wide. It is also member of online systems like Cheap Tickets, Orbitz, etc. In Slovakia it is represented in more than 47% of the travel agencies, globally in about 22.4 % of them.

The year 2001 is an important milestone for this distribution channel, when it became the basis pillar of Cendant Corporation – a key player of Travel Distribution Services division. In the year 2006 this division became independent and Travelport group was established, which today covers Worldspan as well.

The strategy of Travelport can be briefly explained as follows:

- *Growth:*
  - ➢ Growth investments focusing on differentiation & technological design

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> ➤ Establishment of an environment fostering business activities via an innovative process.

Decision making based on key findings related to economic situations, cost based investments *Continuous improvements* of quality, processes and effectiveness.

It is worth noting the Galileo 360 Fares database accounted to be the most advanced air fares database to date.

4.1 GDS Galileo in practice

Galileo Desktop is needed to work with the system. It allows access into 4 different reservation environments based on the operator preferences. It is possible to manage airline ticket, hotel or boat reservations, car rentals, or even cruises [2]. The software has minimal hardware requirements making it easily installable to any hardware.

It is possible to log into the system via login SON/Zxx (where xx are user initials) & password (set by the company before first write access to the system.) Later font & color settings can be tailored to user needs. Unlike in GDS Amadeus, Galileo does not allow text movement by mouse.

The following 4 basic steps are needed to create a reservation in GDS Galileo:

1. Enter passenger last and first name as: LAST NAME/FIRST NAME Title (ASCII only) –e.g.: *Enter: N. KOVACSOVA/NATALIA MS.*
2. Enter additional passenger contact information – e.g.: Enter: MT.nataliakovacs@gmail.com or *P.BTS*0909 909 909.*
3. Ticket issue deadline – e.g.: Enter: *T.TAU/19APR.*
4. Direction: e.g.: Enter – based on availability

Reservation valuation at Galileo is offered a similar way as is at Amadeus and is possible via several means:

1. FQBB – Valuation and accounting to the nearest lowest tariff. Class accounting is done by the command FQBBK
2. FQ – Valuation of chosen reservation classes
3. FQBC – has a similar function as FQBB, it allows to quantify the saved amount in case of accounting into a lower or lowest cost class, where in practice only the first 2 access codes are usually used.

After the successful valuation the system generates the FQBB mask.

Galileo does not support graphical masking, command line is supported only. The tariff structures displayed in Galileo & in Amadeus should be generally the same structure, however they are displayed using different commands. Seating is possible to manage via command line or via a graphical interface.

5 COMPRRISON OF GDS AMADEUS & GDS GALIELO

The basic characteristic of both systems is the demand for travel, where each trip planning begins with finding prices followed by reservation & the actual issue of tickets including all the related complementary services like managing changes, handling check-in and offering misc. services. For the agencies it is most important to sell the tickets, whereas the carrier wants to maintain its competitiveness.

Travel service agencies (e.g. airlines) are suppliers of tariff & other information to GDS systems. Based on a report about supporting travel agencies issued by Lufthansa in 2004 it is clear that agencies are leaders in ticket sales compared to online channels. In terms of services, GDS Amadeus & GDS Galileo have the following pricing models.

QGDS Galileo – services for travel agencies are free of charge.

GDS Amadeus –each travel agency is contracted to reach a monthly target quota of segments to be sold.

In terms of usage, as mentioned in the previous chapters, reservations and accountings are handled via different means & commands, e.g. the "@" sign is not used in Amadeus, compared to Galileo, where they are used extensively to manage changes.

ENTER		Amadeus	Galileo
Reservation	Segment reservation within class	SS1Y1	N1Y1
	Status change	1/HK	@1HK
	Segment cancel	XE1	X1
	Itinerary cancel	XI	XI

In terms of flight availability, there are also changes.

ENTER		Amadeus	Galileo
Availability	Display	ANVIELHR	AVIELHR
	Display w. carrier	ANVIELHR/AOS	AVIELHR/OS

Passenger name

ENTER		Amadeus	Galileo
Passenger name	Entering	NM1KOVACSOVA/NATALIA MS	N.KOVACSOVA/NATALIA MS
	Changing	3/1KOVACS/NATALIA MS	N.P1@KOVACS/NATALIA MS
	Cancelling	XE1	N.P1@

Ticket refund		GDS Amadeus	GDS Galileo
Ticket refund	Strong side	X	
	Weak side		X

Write to the system & encoding

Enter		Amadeus	Galileo
Write to the system		JIxxxxNK/SU	SON/ZNK
Encoding	Location decoding	DAN LONDON	.CE LONDON
	Country decoding	DC AU	.LD AU

There are significant differences in the command entries especially at ticket re-issue or re-validation. Considering the fact, that we believe work should not be manual for the agent, we have omitted these entries.

Our objective was to explain the differences from the point-of view of the agent. For this reason as well, each of the system providers have a way to offer their services online to the end customer. E.g. customers may access their itinerary 24/7 online using their reservation codes only.

GDS Amadeus is the owner of the domain www.checkmytrip.com, which is available in multiple languages (except Slovak or Czech). The site offers to its customers besides the ticket information additional services, e.g. local time airport orientation maps, weather forecast, metro maps, etc.

GDS Galileo mainly operates on the site www.viewtrip.com, where similarly as on www.checkmytrip.com it is possible to access all the necessary information using passenger last name and the reservation code. More than 3 million users use Travelport ViewTrip as their website of choice to manage & communicate (e.g. via e-mail) their travel plans, tickets, expense reports, etc. For users with reservations via Apollo, Galileo or Worldspan information is available on-line in 23 languages. ViewTrip users have access to basic travel tools, e.g. currency exchanges, visa & passport information, medical & other insurances and to the updates about the most important events at the travel destination.

Today people are used to work from anywhere, home, office or any place with on-line access to the internet. In order to access their services, Galileo offers its clients access to its terminal via www.galileoterminal.com. The service is free of charge and it operates on a similar principle as Galileo Desktop. Agents access the system using credentials delivered by the HelpDesk. The only disadvantage is the control via ClickPoint which is not supported by the terminal. For a successful connection to Amadeus a terminal client has to be installed, remote connection is not possible.

5 CONCLUSION

For this contribution, agents of selected Slovak travel agencies were interviewed focusing on both the distribution systems. The purpose was to gain understanding based on real experience, opinions used to evaluate pros & cons. Finally, additional information was gained using questionnaires. The following conclusions were drawn:

GDS Amadeus is quite popular among the colleagues working with airlines mainly due to its clarity, simplicity, interaction speed and up-to-date data. The graphical abilities are also extensively used mainly for ticket re-issue, managing refunds. Generally they all agree that it is a mature system, which thanks to the many changes can be easily mastered.

Comparing the practical sides in some areas gave us the following conclusions:

1. Flight availability

GDS Amadeus is simpler compared to GDS Galileo for flight class display.

Reservation class display		GDS Amadeus	GDS Galileo
Reservation class display	Strong side	X	
	Weak side		X

2. Basic entries

Basic entries		GDS Amadeus	GDS Galileo
Basic entries	Strong side	X	
	Weak side		X

GDS Amadeus is logical and it is not necessary to memorize the entries as opposed to Galileo. The entries used by Galileo are harder to memorize.

3. Ticket re-issue

Ticket re-issue		GDS Amadeus	GDS Galileo
Ticket re-issue	Strong side	X	
	Weak side		X

GDS Amadeus is logical and it is not necessary to memorize the entries as opposed to Galileo. The entries used by Galileo are harder to memorize.

4. Ticket refund

Again, GDS Amadeus is logical and it is not necessary to memorize the entries as opposed to Galileo. The entries used by Galileo are harder to memorize.
The refund is possible to be managed in one table in Amadeus vs. in Galileo it requires multiple steps.

5. Ticket issue for verification
GDS Galileo does not have such an option.

Comparing the features of GDS Amadeus & GDS Galileo side by side we have drawn the following

		GDS Amadeus	GDS Galileo
Ticket re issue for verification	Strong side	X	
	Weak side		X

conclusions:

- Global Distribution System Galileo is free of charge, unlike GDS Amadeus.
- Although the entries & commands used in these systems are different, each one of the have preferred and verified means to deliver airline tickets to the customers.
- Galileo offers easy online access to its services, Amadeus requires a client SW to be installed.

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