

# AMADEUS, SABRE, AND GALILEO AS PIONEER BOOKING SYSTEMS: A CRITICAL EVALUATION IN LIGHT OF TRAINING AND FIELD EXPERIENCE IN THE MIDDLE EAST 2011-2017

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## ABSTRACT

To be a trainee of three outstanding and leading air reservation systems in the world and basically in the Middle East region- Amadeus, Sabre, and Galileo are pioneers. To be a trainer for training mode using simulations/applications of these systems at labs of the University of Jordan in Jordan, Fayoum University in Egypt, and Pioneer Academy in Jordan is better than the former. To be a trainer for the three systems in the production mode in Royal Jordanian and other travel agencies is the best of all.

During training and practicing of this great and rich experience, the researcher recognized many areas of difficulty that trainees give complaints about. However, trainers can exclude some of them without any distortion of information provided. In this study, based on own elaboration from training experience- this research tries to shed light on some areas that may have much difficulty, especially for debutant trainees. The Research's methodology principally depends on the techniques of self-brainstorm, self-observation, and self-recording for the teaching and training experience.

The current study points out some obstacles in training and working on Amadeus, Sabre, and Galileo reservation systems. Also, the research proposes a workable approach with items ordered in a logical sequence of training especially of beginners. Finally, the study advises the holding companies of the three systems to redesign and provide their products and materials in simple and uniform packages by using either the cryptic or graphical mode through all of the system's versions and all of the soft and hard editions of it in all headquarters geographical areas of the world. Other advice for trainers and trainees have existed.

**Keywords:** *Amadeus, Sabre, Galileo Global Distribution System, Training Mode, Production Mode, Training Simulation*

## INTRODUCTION

Using a GDS effectively is the key skill of Travel Industry employees in areas where reservations for travel product are made (Baqir, 2016). A Global Distribution System (GDS) is a network operated by a company that enables automated transactions between travel service providers (mainly airlines, hotels and car rental companies) and travel agencies. Travel agencies traditionally relied on GDS for services, products & rates in order to provide travel-related services to the end consumers. A GDS can link services, rates and booking consolidating products and services across all three travel sectors i.e., airline reservations, hotel reservations, and car rentals (Business Dictionary, 2016).

### Problem of Study

According to the researcher's training experience and

research for different applications in labs or real field, the most common problems faced by the trainees are –

- There is no simplicity in some entries of Amadeus, Sabre, and Galileo systems.
- Different methods of training and working on these systems in airlines and travel agents.

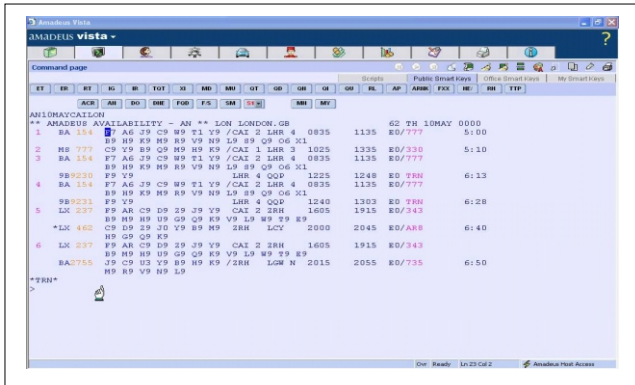
These situations bring difficulties and drain efforts of candidates who are seeking to work in these places.

### Objectives of Study

- To demonstrate some topics on those the candidates, have difficulty in training and working.
- To propose a concise approach for training especially of the beginners.

**RESEARCH METHODOLOGY**

**(A) Some Critical Areas of Amadeus Reservation System**



Amadeus is the European holding company owned by three main airlines and public shares. The three major airline partners are Air France 'AF', Iberia 'IB', and Lufthansa 'LH'. Amadeus empowering more than 3000 travel agency websites, more than 170 corporate sites serving 15 hotel chains, and more than 123 websites serving over 34 international airlines (Amadeus Amman, 2014). In the section, I display, based on the author's own elaboration from his training experience, some areas that may have much difficulty for debutant trainees.

**A. Availability and Segments**

Both schedule and availability can be displayed in four ways as it is shown in the following figure 1. It is enough only to depend on the first transaction code in all entries of availability. As a result, simplifying training and work on the system.

**Figure 1: Transaction Codes of Availability in Amadeus Air**

Displays by Neutral / Departure / Elapsed / Arrival time  
Both schedule and availability can be displayed in four ways:

Schedule	Availability	
N-as neutral	SN	AN
D- by departure time	SD	AD
E-by elapsed time	SE	AD
A-by arrival time	SA	AA

Source: Amadeus, 2006; Amadeus, 2013; Amadeus Amman, 2014

**B. Dual City Pair and its options**

It gives 2 flight displays in one entry. It is indicated with an asterisk after city pair as mentioned in figure 2 below. Unlike many colleagues, the author sees that

method is not businesslike especially for beginners.

**Figure 2: Dual City Pair of Availability AD15JANPRG/AOK\*25JAN**

```
** AMADEUS AVAILABILITY - AD ** PRG PRAGUE.CZ 254 WE 15 JAN 0000
1 OK 873 C9 D9 Z9 Y9 M9 B9 T9 / VNO PRG 1550 18 15 0/AT7 3:25
E9 L9 Q9 V9 I9

** AMADEUS AVAILABILITY - AD ** VNO VILNIUS.LT 264 SA 25 JAN 0000
1 I OK 870 C9 D9 Z9 Y9 M9 B9 T9 / PRG VNO 1905 2130 0/AT7 1:25
E9 L9 Q6 V4 IR
```

Source: Amadeus, 2013; Amadeus Egypt, 2013; Amadeus Qatar, 2013

**C. Long Sell**

Especially in the case of accompanying with other codes on entry. The following example in figure 3 provides more details with a passive segment. The author envisages that technique is not workable predominately for apprentices.

**Figure 3: Long Sell in Passive Segments**

```
SS AZI29 C 20JAN CPHMIL PK1/1150 1400/ABC123
```

Source: Amadeus, 2006; Amadeus, 2013; Amadeus Amman, 2014

**D. Segment Reconfirmation**

Reconfirmation on the flight segment booked by another CRS and the airline is participating in Amadeus needs creating the segment in PNR. The subsidiary example in figure 4 provides details. The author recognizes that technology is not handy basically for debutants.

**Figure 4: Segment Reconfirmation**

```
SS KL877 C 20JAN AMSBKK RRI
```

Source: Amadeus, 2006; Amadeus, 2013; Amadeus Amman, 2014

**E. Married Segment Control**

Whatever reasons, either a better level of availability or due to a legal requirement concerning traffic restrictions; if segments are married, it may not be possible to cancel, price, or ticket any of these segments individually. The attached figure 5 provides specifics. In this case the reservation staff will have to do more research on availability, consequently, more time is wasted.

**Figure 5: Married Segments**

```
--- MSC ---
RP/THRIA0980/
1 KL 434 Q 04NOV 4 THRAMS HK1 1 0225 0605 767 E 0 SB
2 KL601 Q 04NOV 4 AMSLAX HK1 1120 1335 74E E0 HS
```

Source: Amadeus Iran, 2011; Amadeus Amman, 2014

**F. Passenger Name**

Multiple passenger names in one entry. The author conceives that process is not workable especially for beginners. Examples are in the subject figure 6 beneath. The author sees that mode of entry is not businesslike ultimately for beginners and more mistakes happen.

**Figure 6: Multiple Names Entry**

NM2 HOBART/JAMES MR/BILL (CHD)	same family
NM1 NELSON/FRANK MR/EDWARDS/RICHARD MR	different family

Source: Amadeus, 2005; Amadeus, 2006; Amadeus Egypt, 2013; Amadeus Qatar, 2013; Amadeus Amman, 2014

**G. Low-Cost Carriers**

As shown in the below figure Emirates "EK" is the only validating carrier for Fly Dubai "FZ"; as they have an e-ticketing interline with each other and the booking includes "EK" Segment. This wastes time in searching for available options of booking as mentioned in figure 7 below.

**Figure 7: Interline Booking**

1	EK 928 Y 20 DEC 2 CAIDX HKI SEE RTSVC	1	1215	1745	772	E	0
2	FZ 011 Y 21 DEC 3 DXBDOH HKI	2	0220	0320	73H	E	0
TKTNG ALLOWED ON EK ONLY WHEN EK SEGMENT IS PRESENT IN ITINE SEE RTSVC							

Source: Amadeus Egypt, 2012; Amadeus Amman, 2014

**H. Other Service Information (OSI)**

As it is known all elements of OSI are used to advise airlines personnel to special information to assist in passenger handling (Amadeus Iran, 2010). However, British Airways obligates their agents to enter Virtual Miscellaneous Charge Order (VMCO) in the reservation to avoid the penalty by Amadeus Ticket Changer (ATC), as an example: OS BA MPD 1251798961242 (Amadeus Egypt, 2011).

**I. Ticketing and More Than One Entry and Options**

Some airlines –mentioned in figure 8 – uses TRDC and TWX entries in voiding first-time tickets and reissued tickets. This method requires highly trained and qualified staff.

**Figure 8: Airlines uses TRDC and TWX for voiding tickets**

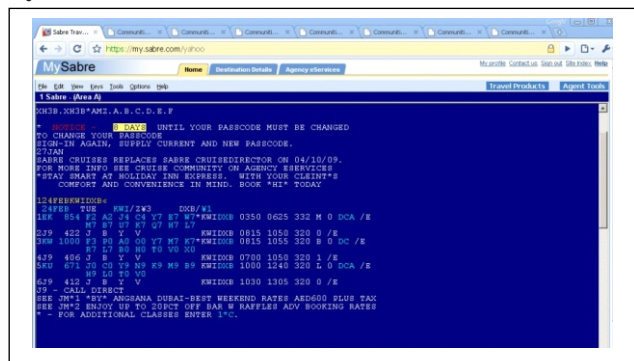


Source: Amadeus Egypt, 2011

OB = The Optional Payment Charge (OPC) is the fee (surcharge) depending on the form of payment. For example, Lufthansa Group Airlines offer payment options that are free of charge (ex: cash and invoice) and payment with an Optional Payment Charge (OPC) applies (ex: credit card) since November 2011 (Amadeus Egypt, 2011). Recommended workflow to ensure the insertion of the OB fees is the following:

- a) If possible enter the FP before the standard pricing transaction – no further checks or action required – upon pricing; Amadeus automatically adds the OPC if applicable.
- b) If the pricing transaction has to be done before the form of payment is known: Enter the pricing transaction with the option to quote the OB fee (e.g. FXP/R, FA-OBFCA).

**(B) Some Critical Areas of Sabre Reservation System**



The Sabre system has consistently been rated the number one Global Distribution System (GDS) in the world and continues to maintain a leadership position in bookings share. Sabre Travel Network connects travel buyers and sellers through the world's largest global distribution system, providing over 50000 travel agency locations with instant access to content from airlines, hotels, car rental companies, cruise lines and more (Sabre Middle East, 2007a; Sabre Middle East, 2010; Sabre Middle East, 2011).

In the section, I display, based on the author's own elaboration from his training experience, some areas that may have much difficulty for trainees especially beginners.

**J. Sign in and changing from Production Mode to Training Mode**

There is a considerable level of difficulty for most of the beginners to transfer from real mode to training mode in

Sabre Class and start working on Sabre system. An example is as in the following figure 9.

Figure 9: Conversion to Training Mode in Sabre

Dear Dr. Farouk,  
 KINDLY NOTE THE BELOW:  
 You need to update all IDs on CERT by removing the KEYWORD (NOPNRS) & (NOTKTS) to enable you to book & issue,  
 - Before you start updating you must be on **CERT mode on your ID 1212**.  
 On the blue screen using **CERT** (then enter)  
 - After that check, if your system on training mode by using the format \*M

```
*S<<
WO6G.WO6G*AI2.F
*M<<
CERTD
123JANAMMBAHYGF<<
 23JAN SAT AMM/2Y2 BAH/Y1
1GF 972 J7 C7 D7 I6 Y7 H7 M7 AMMBAH 1145 1500 320 L O DCA /E
   L7 B7 K7 X7 Q7 V7 E7 O7 N4 S4 W4
2GF 974 J7 C7 D7 I7 Y7 H7 M7 AMMBAH 2035 2350 320 D O DCA /E
   L7 B7 K7 X7 Q7 V7 E7 O7 N7 S7 W7
NO MORE - I* FOR CONX
SEE JM*1 SABRE PROMOSPOTS TEST AD S112CERT-07CERT.
O1Y1<<
 1 GF 972Y 23JAN 6 AMMBAH SS1 1145 1500 /DCGF /E
NAME CHG NOT ALLOWED FOR GF-Y FARECLASS
*
THIS IS TEXT ADVERTISEMENT.
```

Thank you,  
 Nadia A. Awad  
 Senior Training Executive  
 Sabre Travel Network / Jordan LLC | P.O. Box 941635 Amman 11194, Jordan |  
 Amman, Shmesani, Esam Al-Ajlouni St. Building 66, 3rd floor | Jordan  
 T: +962 65668777 | M-Jordan: +962 77 9009899  
 en.me.sabretravelnetwork.com

Source: Nadia, 2016

### K. Encode and Decode

The author views difficult for trainees to use the cryptic mode to enter different entries in this section. Examples are shown in figure 10 below.

Figure 10: Encoding and Decoding Models

W/-ALQANTAS	W/*LH
W/-APORLY	W/*CDG

Source: Sabre Middle East, 2007b

### L. To reset Passcodes

This may take place many times and lead to some troubles in training classroom. The following figure 11 shows an example to solve this problem.

Figure 11: Passcode Reset in Sabre

From:Nadia.Awad.ctr@sabre.com  
 To:faroukfaa01@outlook.com  
 CC:wasan131287@hotmail.com  
 Date: Tue, 8 Sep 2015 03:26:07 -0500  
 Subject: RE: greeting from Dr.Farouk University PCC WO6G  
 Kindly check the below format you need to make for all university IDs from the ID 1212 as its ADMIN USER  
 I reset the password for the ID 1212 and its ABCD123.

```
STEP ONE: HB1212<<
I ONE WO6G-A11 1212-WO6G
OFC-0000 ASO-240
SIGN IN ACCESS - WO6G
DUTY 6 9 *
UAT- ACCESS CREATE NOQUES SUBMGR 24TIME
STATUS - ACTIVE 02FEB14 PASSCODE
DATE PASSCODE LAST ASSIGNED - 05AUG15
H U CREATED BY WO6G-ANU 02FEB14 0805A
(this is the response)
08SEP15 0313A CST
STEP TWO: H/PASS ABCD123<<*
STEP THREE: H/AUTH FAROUK<<*
STEP FOUR: HE<<
DONE
```

To check all ids, use the format **H\*CST** then enter.  
 First, you need to use the ID 1212 and change the password then sign into the system after that you can go ahead with the above for the rest of the IDs.  
 Kindly advise if you need any further assistance,  
 Kindly use the below steps in order to see the rest of the agent's IDs:  
 Thank you,  
 Nadia A. Awad  
 Senior Training Executive  
 Sabre Travel Network / Jordan LLC | P.O. Box 941635 Amman 11194, Jordan |  
 Amman, Shmesani, Esam Al-Ajlouni St. Building 66, 3rd floor | Jordan  
 T: +962 65668777 | M-Jordan: +962 77 9009899  
 en.me.sabretravelnetwork.com

Source: Nadia, 2016

### M. Basic Passenger Name Record (PNR)

Update not allowed. This may occur during training for any of Agent ID. If this problem happens, a trainee will not be able to create a PNR. The following figure 12 gives specifics.

Figure 12: Steps to solve update not allowed message

```
*M<<
CERTC YOU MUST SIGN IN ON (CERT)
MODE FIRST, WITH YOUR ID
ADMIN-OP. FAROUK/1212
*S<<
WO6G.WO6G*AI2.A
HB101<<
T ONE WO6G-AT1 101-WO6G
OFC-0000 ASO-240
SIGN IN ACCESS - WO6G
DUTY 6 9 *
UAT- NOPNRS NOQUES NOTKTS 24TIME
STATUS - ACTIVE 11SEP15 PASSCODE
DATE PASSCODE LAST ASSIGNED - 11SEP15
H U CREATED BY WO6G-ANU 02FEB14 0732A
17OCT15 0241P CST
HB101<< (STEP ONE)
T ONE WO6G-AT1 101-WO6G
OFC-0000 ASO-240
SIGN IN ACCESS - WO6G
DUTY 6 9 *
UAT- NOQUES NOTKTS 24TIME
STATUS - ACTIVE 11SEP15 PASSCODE
DATE PASSCODE LAST ASSIGNED - 11SEP15
H U CREATED BY WO6G-ANU 02FEB14 0732A
17OCT15 0244P CST
H/AUTH NA<<* (STEP TWO)
H/UAT/D-NOPNRS<<* (STEP THREE)
HE<< (STEP FOUR)
DONE
H*101<<
T ONE WO6G-AT1 101-WO6G
OFC-0000 ASO-240
SIGN IN ACCESS - WO6G
DUTY 6 9 *
UAT- NOQUES NOTKTS 24TIME
STATUS - ACTIVE 11SEP15 PASSCODE
DATE PASSCODE LAST ASSIGNED - 11SEP15
```

Source: Nadia, 2016

**N. Multiple passenger names in one entry**

The author conceives that process is not workable especially for beginners. Examples are in the subject figure 13 beneath. The author sees that mode of entry is not businesslike ultimately for beginners and more mistakes happen.

**Figure 13: Multiple Names Entry**

-2ABDULAZIZ/AMIR MR/MAHA MRS

Source: Sabre Middle East, 2008; Sabre Middle East, 2010

**O. Infant Multiple Steps Entry**

The infant as a passenger needs two-steps entry. There some load for trainees is present to achieve these transactions. The figure 14 below gives more information.

**Figure 14: Infant Multiple Steps Entry**

I/ALI/AHMED MSTR\*12MAY12

3INFT/ALI/AHMED MSTR/12MAY12-2.1

Source: Sabre Middle East, 2008; Sabre Middle East, 2010

**P. Divide PNR Steps**

Divide a PNR needs multiple steps entry. Their much load for most trainees are present to achieve these transactions. The figure 15 below gives more information.

**Figure 15: Divide PNR Steps**

D2.1 or D1.1-2.1\*5.1

X1

6PAX

F

X3

6PAX

E

Source: Sabre Middle East, 2008; Sabre Middle East, 2010

**Q. Long Sell**

Especially in the case of accompanying with other codes on entry. The following example in figure 16 provides more details with a passive segment. The author envisages that technique is not workable predominately for apprentices.

**Figure 16: Long Sell in Passive Segments**

0BA902C29MARLHRFRALL1

Source: Sabre Middle East, 2007c

**R. Ticketing**

There are some cases prohibit to issue a ticket and waste time of reservation. Examples are shown in Table 1 and figure 17 below:

-The system electronic ticket failure codes

**Table 1: Ticketing Mistakes**

143	Passenger type not valid in the e-ticket airline system.
467	One or more segments not found in the e-ticket airline system.
114	Flight number does not match itinerary in the e-ticket airline system.
744	Missing or invalid airport check-in identification
395	Multiple errors
107	Airline code does not match exact itinerary in the e-ticket airline system.
913	Item/data not found in the e-ticket airline system.
144	Unable to process e-ticket restricted

Source: Sabre Middle East, 2011

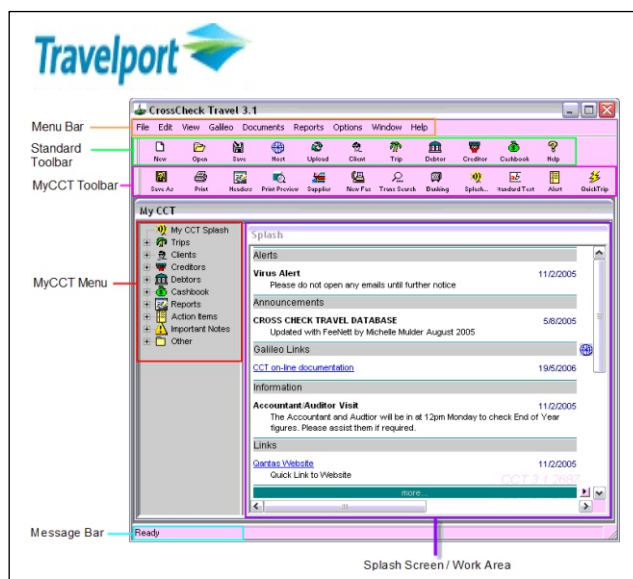
When no ticketing and /or baggage agreement exists with the second carrier:

**Figure 17: Ticketing and baggage agreement**

W/\*F9¥-ALSİK AIR  
 F9-422 FRONTIER AIRLINES/FRONTIER AIRLINES INC.  
 CANNOT ISSUE TKT-NO AGREEMENT-NO AGREEMENT ON FILE  
 NS- SILK ROUTE AIRWAYS/SILK ROUTE AIRWAYS  
 CANNOT CHECK BAGGAGE NO AGREEMENT ON FILE  
 NS

Source: Sabre Middle East, 2011

**(C) Some Critical Areas of Galileo Reservation System**



Galileo is a computer reservations system (CRS) owned by Travelport. As of 2002, it had a 26.4% share of worldwide CRS airline bookings. In addition to airline reservations, the Galileo CRS is also used to book train travel, cruises, car rental, and hotel rooms. The Galileo system was moved from Denver, Colorado, to the Worldspan datacenter in Atlanta, Georgia, on September 28, 2008, following the 2007 merging of Travelport and Worldspan- although they now share the same datacenter, they continue to be run as separate systems (Travelport Academy, 2016). Galileo e-learning is a learning management system, which enables trainees to access via the internet anytime and anywhere (Galileo International, 2006).

In the section, I display, based on the author's own elaboration from his training experience, some areas that may have much difficulty for trainees especially beginners.

### S. Basic Passenger Name Record (PNR)

Multiple passenger names in one entry. The author conceives that process is not workable especially for beginners. An example is the subject figure 18 beneath. The author sees that mode of entry is not businesslike ultimately for beginners and more mistakes happen.

**Figure 18: Multiple Names Entry**

```
N.1BROWN/ANTONMR+N.2SMITH/EVEMRS/NELMSTR*P-
C08+N.I/SMITH/LIOMSTR*27FEB07
```

Source: Caribbean Galileo, 2010

### T. Multiple Contact Entries

The author conceives that process is not workable especially for beginners. An example is the subject figure 19 beneath. The author sees that mode of entry is not businesslike ultimately for beginners and more mistakes happen.

**Figure 19: Multiple Contact Field**

```
P.PBMT*4636175-76 HELPDESK TRAVEL HATO AIRPORT
SI.YY*PBMH/4626708 C/0 DEANNE
```

Source: Caribbean Galileo, 2010

### U. Divide PNR Steps

Divide a PNR needs the multiple steps entry. Their much load for most trainees to achieve these transactions. The figure 20 below gives more information.

**Figure 20: Divide PNR Steps**

```
DPI.3-5
R.PSGR
F
R.PSGR
E
```

Source: Galileo Caribbean, 2010

### V. Direct Sell

Especially in the case of accompanying with other codes on entry. The following example in figure 21 provides more details with a direct sell itinerary. The author envisages that technique is not workable predominately for apprentices.

**Figure 21: Direct Sell in Galileo**

```
0BW977K13NOV GEOMIA NNI
```

Source: Galileo Caribbean, 2010

### W. PNR in Galileo

Booking Reference: many of trainees cannot differentiate between the Galileo locator and the locator of the Vendor airline. An example in figure 22 below provides more specifics.

**Figure 22: PNR in Galileo**

```
XKMF1G/MO AMMOU 5D2TMO AG 40262865 2MAR
1.3Attaallah/FaroukMR/NORHANMRS/MOHAMEDCHD*P-C05
4.GAD/WAFAAMRS
5.SAYED/SARAINF*20FEB13
1.RJ 502 Q 28MAR AMMCAI HK4 0900 0930 O* E SU
** VENDOR LOCATOR DATA EXISTS ** <*VL
** VENDOR REMARKS DATA EXISTS ** <*VR
** SERVICE INFORMATION EXISTS ** <*SI
** CUSTOM CHECK RULES EXISTS ** <*RU
FONE-AQJT/ INTL TRADERS AQABA 03 2013757 MOWAFK
TKTG-T*
```

Source: Galileo Field Training, 2013; Galileo Field Training, 2016

### X. Old Simulations for Training

Till writing this research all available applications for Galileo reservation system are dated back to the 1994 and 1997 years. They need more update to fit with the production and online mode (Own elaboration of the author).

## RESULTS AND DISSCUSIONS

This study is based on the academic experience of the researcher in both its teaching and training. It can be said that this study is the first of its kind with regard to some of the difficulties related to the training of the most famous Central Air Reservation Systems around

the world. Therefore, there are no literary references available to the researcher which can be compared with them positively or negatively.

The researcher finds that all the reports issued and training manuals for the reservation systems can be divided into three types:

- Reports containing up-to-date information on key service providers such as airlines, hotels and car rental companies.
- New amendments to the training entries, transactions codes and system responses.
- Basic and advanced training courses in central reservation systems.

**CONCLUSION**

This study brings focus on some training topics that trainees may find difficulty in learning in labs and real field and in training mode or production mode. The research main interest is in basic level in training and advanced and conversion levels are out of the area in this research. The advanced and conversion levels are proposed for future study.

It is clear that somehow similarity in some areas of the difficulty of the three systems and other specific ones. Finally, based on the concise display in this research, the author proposed on his own elaboration:

- For trainees and workable staff, I advise to use single entries and avoid multiple entries in all reservation's transactions.
- For trainers, to prevail the type of open book exams in all levels of training. Also, to follow a simple logical approach in training of the basic level as mentioned below:

Topic	Easy	Difficult	State what is easy or difficult
Sign in and Sign out			
Encoding and Decoding			
Air and Availability			
Creating Basic PNR (Basic PNR).			
Optional Elements for PNR			
PNR modifications			
PNR History			
Queues			
Printing an Itinerary and a PNR			
Fare Quote			
Pricing an Itinerary			
Hotel Reservations			

Car Reservations			
Ticketing			
Ticket Revalidation			
Ticket Voiding			
Ticket Reissuing			
Making Sales Report			

Source: The researcher own elaboration

- For owners, the holding companies of the three reservation systems should restructure and provide their products and materials in simple and uniform packages by either using the cryptic or graphical mode through all of the system's versions and soft or hard editions of it in all headquarters geographical areas of the world. Another advice is to update training simulations to keep in touch with the real field reservation; so there is no duplication of learning neither time nor efforts.

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