# The Evolution of Global Distribution Systems

## I.     INTRODUCTION:

Globalization has created the emergence of a host of new technologies aimed at integration of communication and services.  One such technology that has important application in the hospitality industry is that of Global Distribution Systems.  Another names for this technology are the automated reservation system (ARS) and the computerized reservation system (CRS). Global Distribution Systems are the "worldwide computerized reservation network used as a single point of access for reserving airline seats, hotel rooms, rental cars, and other travel related items by travel agents, online reservation sites, and large corporations" (BusinessDictionary.com).  This report is for the purpose of showing how these services work and what the technology can provide to customers and for business relationships.

## II.     BACKGROUND:

Today there are four major GDS companies.  These are Amadeus, Galileo, Sabre, and Worldspan.  Because of globalization and how it affects business, it is easier to travel now than it ever was before.  It is easier to do business over a long distance than before.  This requires that new ways for doing these types of business and of others, are needed.  The GDS does this by being the "electronic supermarkets linking buyers to sellers and allowing reservations to be made quickly and easily" (Das 2009).  Basically the GDS can be seen as the system that lets the internet work as the way to make transactions happen.  The first GDS began to be created in the 1950s and was functional in the 1960s (ITSA 2009), and the reason was to have a way for

keeping track of commercial airline flights and availability.

Before the concept of the GDS was a possibility there was a lot of time that was wasted by those employees who had to keep these things organized without an easy way to contact other airline and travel agencies. Now, with GDS, it is possible to come to one place and to have so many of these agencies available to you so that everything can be so much quicker and efficient, and so that it is more organized too.

GDS systems were some of the first of the electronic commerce businesses. These systems were owned and operated by other big companies, first ones being the airline companies. For example, SABRE and Apollo were owned by American Airline and United. In addition to the four which have been shown above, there are other smaller GDS but they are local to specific regions. The major four GDS will be shown here now and discussed with details.

## III. CAPABILITIES:

### III.a System Platform Capabilities:

The GDS system is operational 99.9% of the time, and access is available when it is up and running. It is capable of handling as many as 17,000 messages every second during the highest traffic times (ITSA 2009). These systems usually use the most advanced enterprise systems architecture, which allow the system to be extremely fast in responding to the user commands. Systems are built in a way that the user is able to make very large numbers of reservations in short time, because some agencies must book for parties or for businesses, and so on. The GDS is an incredibly fast machine and is able to use greater than 1 billion combinations of fare. The systems have more than 95% of available seats in the world, and represent more

than 750 airlines, 50,000 hotels, 400 tours, and 30,000 car rental sites (ITSA 2009).

### III.b  Benefits of GDS:

The overall purpose of the GDS system is the access to a worldwide distribution network. The system is linked to many airline and travel agency businesses.  The user may search for the specific time and destination, and other important points.  Because the system is connected with so many agencies and airlines, it will take this information about where the customer wants to go and when, and will check with all the linked businesses.  It can then return to the user, who is the person at the travel agency, those companies with the availability.  It can also show what the availability is, and give the chance to reserve for the customer.  The benefits this can give the business is very obvious.  Before, the travel agency must search each company one at a time to check for availability.  Also, the agent must wait for phone calls, the customer must wait for the agent to call them after they hear from the airline, and so it becomes a very long time waiting.

These system are also helpful to the travel agency by giving them the technology to improve their businesses efficiency.  Businesses find this a very beneficial service because it helps them to give their customer much better and quicker service.  Also with the computer technology organizing the schedules, and because the computer has every one of the businesses databases linked together, there is a lot less chance for any error with the scheduling.

One of the additional benefits of the GDS system is that it can find the cheapest prices. This is a very strong advantage to using the system, because businesses can have lower fees by using these systems instead of the using the older methods.  Less time spent on the phone with agencies will mean that less time is wasted, allowing greater productivity.  Also, customers save

money because the system will find the best priced deals. This will also encourage the competition in the airlines because those companies with higher priced tickets will see that they are not getting customers. So they will lower their price and this is good for the economy.

## IV.   MAJOR GDS SYSTEM:

### IV.a   Sabre:

Sabre is one of the oldest of the GDS systems. It has been operation from 1960, when it had only very limited reservation capability, to the 1980s when it has added the "advanced airline yield management systems" (Das 2009). Today it is still one of the top competitor. It has been acquired in 1996 by the company AMR (also owns American Airlines). Sabre has access to businesses in 45 countries and is special from other GDS system groups because of acting as provider for technologies and innovative research for the other travel sector. It has products also for travel commerce and to improve the airline/supplier operation capabilities. This way it is almost more for the logistical efficiency than for the booking and customer satisfaction.

Sabre has been founded in Texas, and has access to 60,000 travel agencies, 400 airlines, 55,000 hotels, 52 car rental company, 9 cruise line, 33 railroads, 229 tour operators (Das 2009). Again the company also has a very strong focus for optimizing the value chain for the travel industry by providing products and services for improving their business side efficiency (Das 2009). Sabre owns the company Travelocity.com, and Get There, "provider of web-based corporate travel procurement", and this include the reservation for air, hotel car and also for the meeting services. It has for clients "more than 800 leading corporations (Das 2009).

The main strength for Sabre is because of the good market position, presence in many areas of the world, a strong group of products, and having revenue from many different types of business. Also very important here is the "intellectual capital", which comes from the

information technology business services it has to offer. It has been growing in revenue, and is a very dangerous competitor because it has such a very strong competitive advantage in its services offered to businesses for businesses (Das 2009).

**IV.b   Amadeus**:

The Amadeus system is the youngest GDS system operational, created in 1987 with four airline companies (Das 2009). Air France, Iberia, Lufthansa, and SAS worked together to make Amadeus the first GDS to be operational and all had equal shares in the company. Now, however the SAS has sold its shares to the Amadeus Data Processing firm. Current shareholder amounts for the founding airlines are total 59.92%, with Air France (23.36%) having the most amount (Das 2009).

The Amadeus group has three primary corporate headquarters. Their data processing division is located in Erding, Germany, a city near Munich. This is their entire platform's technology nexus, and manages more than 500 million transactions daily, as well as more than 500,000 physical disc accesses per second during peak usage hours; response time is, on average, quicker than 0.3 seconds, and the firm claims to maintain 99.98% uptime of their system (Amadeus 2009). The firm's product research and development division is based out of Sophia Antipolis, an area near Nice, France. Lastly, their official corporate headquarters is situated in Madrid, Spain (Amadeus 2009).

Amadeus is offering to marketing, sales, and the distribution services of the ravel and tourism sectors. The database of this system is one of the largest in the world, as it operates in over 15,000 markets (Amadeus 2009) and contains more than 57,000 travel agencies sites, and also 10,500 airline sales office spread in 200 markets across the world (Das 2009). Also the firm

has developed a new system; made operational in 2007, their new system features a "next generation distribution technology platform" which operates based on open systems technology; the upgraded technology can now access 78,000 hotels (Amadeus 2009), up from 58,000 hotels and 50 car rental firms, among other services (Das 2009). In addition, through Amadeus' Traveltainment initiative, rolled out and operated by the Amadeus Leisure Group, the firm is able to offer its clients an array of pre-coordinated or custom-ordered vacation packages (Amadeus 2009).

Amadeus has an advantage over the other systems because of having access to the most travel agency sites. Also the Amadeus system has the most productive system platform in the world. In July 2001 Amadeus has purchased e-Travel, Inc. At the same time the company has made the business unit and this unit is working through e-Travel to give more business to corporate clients.

### IV.c Travelport:

Travelport GDS is a corporation which owns and operates both the Galileo and Worldspan GDS systems. In addition, the firm also owns several other subsidiaries, including: 1) Shepherd Systems, a company specializing in assisting firms in the travel industry with business and marketing intelligence; 2) aiRESTM, a "next generation server-based internal airline IT product suite" (Galileo 2009); and 3) THOR, a firm offering services in distribution and marketing for companies operating in the travel industry. The Travelport group is operational in markets of over 145 countries (Travelport GDS 2009). Travelport GDS has owned the Worldspan system since 1994, while the Galileo GDS system was only recently

acquired, in 2008 (Travelport GDS 2009).


**IV.c.i  Worldspan:**

The Worldspan Company has been founded in 1990 by the group of Delta Air Lines, Inc, Northwest Airlines, and also the Trans World Airlines.  Currently ownership of the company is Delta Air Lines, Inc. (40%) with majority (Das 2009).  Worldspan has only entered the internet technology arena in 1995.  It has grown a lot in the web-based travel distribution to 90 countries and territories;  there are 20,021 travel agencies, 421 airlines, 210 hotel company, 40 car rental company, 39 tour and vacation companies, and also 44 special travel service supplier (Das 2009).

Recently Worldspan has been making big movements to increase the size and breadth for its network.  These partnership have provided it with the technology, joint venture, and access to the useful products and services which have let it to be a strong competitor for the other big three names in the e-commerce area.  The companies the group has been with recently include Datalex, which provide the e-business framework and services for global travel companies; Digital Travel for global online tours; Kinetics Inc which creates many products and technologies for the airline companies; OpenTable.com for restaurant search and reservation type tools; and also Viator, for web-based service such as the data management, web-hosting, and general e-commerce (Das 2009).  On top of this is the company Orbitz LLC in 2001 which uses Worldspan for booking engine, and 2002 was when the company has launched the Worldspan ePricingSM.  This technology has given the very innovative technology that has made searching for the best price to be even more efficient than for other companies.

**IV.c.ii Galileo International:**

Galileo International was created in 1971 by United Airlines when its Apollo CRS became operational. At that time, it was solely for internal company use. Five years later however Galileo International created the Apollo Travel Services (ATS) division in their firm, and at this time they expanded away from Chicago to additional markets in North America and also in Japan (Galileo 2004). The ATS division separated from Galileo International in 1986, and the new independent group was called Covia.

The modern Galileo platform was created in 1993 when Galileo incorporated into the Galileo Company Ltd, by the company shareholder companies British Airways, Swissair, KLM Royal Dutch Airlines, Alitalia, and Covia. United Airlines chose then to sell 50 percent of its Covia shares to USAir, British Airways, Swissair, KLM Royal Dutch Airlines, and Alitalia; this created the Covia Partnership (Galileo 2004). Three years later an agreement was completed between the total 11 North American and European airlines: Aer Lingus, Air Canada, Alitalia, Austrian Airlines, British Airways, KLM Royal Dutch Airlines, Olympic Airlines, Swissair, TAP Air Portugal, United Airlines, and US Airways (Das 2009).

Galileo has access for business in every part of the world, including North America, Europe, the Middle East, Africa, and the Asian Pacific area. In these areas it has access to businesses in 115 countries, and over 49,000 travel agencies, 500 airlines, 227 hotel companies with 70,000 hotel properties (Galileo 2004), 33 car rentals companies, and also 368 tour groups (Das 2009). The company has become public traded since 1997 in the NY and Chicago SE.

Also, it has been purchased in 2001 by Cendant Corporation, at a cost of $1.8 billion. At this time it was the main part of the Cendant Travel Distribution Services Group, Inc. This group changed its name to Travelport Inc., in April 2006, and on August 23, 2006 the Cendant Corporation made the decision of selling Travelport Inc to a firm that was working with The Blackstone Group (Galileo 2004).

The strength of Galileo is that it has high market share and is well known in the world. It has strong relationships with many of the travel company, and its level of technology is very, very strong. However it is careful in selecting which technologies to invest in. It has a good partnership with the company Go, the United Kingdom's cheapest airline. There are a number of companies it owns that provide it with improving internet search technologies. The company has the weakness of too much focus with the distribution component. However the company wants to use this for its strength, and to make the distribution bigger to reach for more markets.

## V.    RECENT DEVELOPMENTS:

There is a problem that the CRS favors the very big major airlines: "CRS rules are one-sided and inadequate as they heavily favor major airlines at the expense of smaller and regional carriers, independent CRSs, travel agents, and consumers" (Galileo 2003). One of the danger that has been seen with these companies is how they allow the possibility for selecting specific agencies and companies. The GDS systems allow for selecting specific company like this. This mean there is the risk of ruining fair competition. Because of this there has been legal proceeding through the government organization USDOT (US Department of Transportation). This has mainly been pushed by Galileo which has tried in 2003 to have the USDOT put

"substantial changes to proposed rules to ensure final rules foster fair competition and protect customers" (Galileo 2003).

If the changes of rules are not allowed, then there is expected to be "opportunities for the resurgence of higher charges for smaller airline competitors" and "provide opportunities for airlines affiliated with CRSs to withhold inventories from competing CRSs, thereby potentially reducing inter-CRS competition" (Galileo 2003).  These proceedings have not yet been finished.

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