INTRODUCTION TO GDS (II)

Attention began to turn to computer systems to provide a means of displaying inventory information and accepting reservation details. This interest encouraged automation system developers to offer their skills in building computerised reservation systems. The first company to develop such a system was American Express with its Spacebank followed soon after by Telemax.

Spacebank and Telemax staff answered incoming toll free number calls for client hotel companies, using computer displays and reservation entry screens. Over time, concerns about vendor commitment and responsiveness to the hotel industry's evolving needs resulted in the formation of Micor, a Ramada Inns subsidiary where Hoteliers served Hoteliers through the provision of computer-based reservation services.

In the early 1970s, Western International Hotels (now Westin Hotels and Resorts), which was owned by United Airlines, developed a hotel version of United's APOLLO reservation system. The result was "Westron", which was activated in December 1974. In the years that followed, that reservation software was licensed to many major hotel chains including Hilton, Marriott, Quality Inns, Days Inns, Ramada Inns, Best Western and Holiday Inns. It served as the dominant reservations processing platform for the next 15 years.

The fact that US-based hotel companies lead in the development of hotel reservation technology was due to two factors: these large companies alone had the money needed for such expensive research and development projects and only they had the membership base large enough to justify these very costly undertakings. However, hotel chains outside North America soon followed in developing similar systems and reservation centres to serve their clients around the world.

Central Reservation Offices Opened Around the World

While hotel chains were developing computer reservation systems, the long-established hotel representation organisations were investigating the role computer systems could play for them. For many years these organisations had processed reservations for independent properties and chains that chose not to run their own central reservation operations. Now they began to design and build their own systems. Utell International, Leading Hotels of the World, Steigenberger Reservation Service and others were increasingly moving to automation.

Inventory and Hotel Reservations Systems

When first introduced, computerised hotel central reservation systems (CRS) recorded guest room inventory as either "OPEN" or "CLOSED" -- available or unavailable. Each hotel provided open/close status updates to their own Central Reservation Office (CRO)

by telephoning and telexing the CRO, or in a few cases, through the use of simple computer terminals.

Over time, the inventory control capabilities of hotel CRS were expanded. The first change allowed the computer to sell against an allocation of rooms. Here a hotel made a specific number of rooms available for sale by the CRO, reducing the chance of overbooking before the status could be changed (from open to closed) by the hotel staff. Sales controls such as close-to-arrival, minimum length of stay and sell-through were also implemented.

PMS: Property Management System

In recent years, many systems have been further enhanced to provide central reservation offices with full inventory data. In this situation the central system has the same availability information as the hotel and can sell down to the last available room without fear of overbooking.

Many hotel central reservation systems now include electronic links -- interfaces -- to the property management systems (PMS) installed in hotel properties. A CRS-PMS interface permits centrally booked reservations - resulting from either a GDS booking or a toll free telephone call - to be delivered to and automatically recorded in the PMS reservation file. It eliminates the need to manually type the reservation into the PMS once it is delivered to the hotel. This CRS to PMS reservation delivery function is termed a “one-way interface”.

In a few cases, the CRS to PMS link has been expanded to be a “two-way interface”. In a two-way interface, in addition to delivery of reservations from the CRS to the property PMS for automatic integration into the reservation file, room availability information is automatically delivered from the PMS to the CRS as reservations are made at the hotel.

Synchronisation of room availability information in a chain’s CRS with that in the PMS of each hotel is a continuing challenge. To eliminate the chance of room inventory data differences, some hotel companies are now redesigning their CRS and PMS systems to share the same file of inventory information. This feature is termed “single image inventory”.

Other recent significant enhancements to CRS include chain-wide guest history and automated yield management. In a system with chain-wide guest history, a guest profile with detailed preference information, together with stay data collected from each property’s PMS following guest visits, is maintained in the CRS for viewing by both CRO and property staff.

Yield management, also called revenue management, is provided by a computer program which may be installed in the CRS, the PMS or both. That program aids reservation managers in determining the number of rooms to offer at various rates each day. It also aids in evaluating the value of individual reservation requests. The yield management function may provide recommendations to the reservations staff or may be designed to automatically control room and rate availability.

GDS GAIN INDEPENDENCE

Deregulation of the U.S. airline industry in the 1980s provided airlines with an opportunity to "spin-off" their profitable reservation systems. Most GDSs were structured as independent corporations, owned by their associated airlines. In this new structure, the GDS companies were able to concentrate on their primary business of data processing. One immediate initiative of the GDSs was to begin expansion programs, either alone or through partnerships, to achieve world-wide distribution of their systems to travel agencies. The following charts illustrate the success of that global expansion program.

GDS Terminals by Geographic Area*

GDS	United States	Canada	Caribbean/ Latin America	Europe/ Russia	Far East	Middle East/Africa	Totals
Axess					11,900		11,900
Amadeus/System One	29,100	92	8,368	59,804	2,034	768	100,166
Galileo/Apollo	49,766	9,673	2,459	39,487	12,871	5,144	119,400
SABRE	77,994	7,181	8,590	13,428	14,246	1,452	122,891
SAHARA			1,500	1,400		100	3,000
Worldspan	34,934	172	1,268	10,208		1,368	47,950
Total	191,794	17,118	22,185	124,327	41,051	8,832	

This restructuring also allowed GDSs to increasingly focus attention on the non-airline suppliers such as hotels.

Between 1989 and 1993, this heightened interest in hotel reservation processing led to the redesign of the hotel booking modules by most GDSs, and implementation of substantial system enhancements designed to overcome the limitations of the past. GDSs are now able to sell hotel rooms very much like the CRO sales process. Room type, rate plan and rate descriptions have been extensively enhanced, along with hotel descriptions and search capabilities.

The Latest Enhancements

Since 1993 enhancements to GDSs have included continued expansion of descriptions, implemented automated information updating and installed seamless connectivity between GDSs and hotel CRSs.

Prior to development of seamless connectivity, all room, rate plan and package descriptions, as well as their associated rates and availability, were drawn from GDS databases.

Type A: An interactive link that operates in "real-time" without long delays.

Generally the level of detail in hotel product descriptions -- information about guest rooms and their amenities, explanations of packages and so on, is more extensive in hotel CRSs than in GDSs, principally because GDSs were not originally designed to store lengthy descriptions.

Now when a hotel CRS activates a seamless type link to a GDS, descriptions, as well as availability and rates for the items being described, are taken from the CRS database, communicated instantly to the GDS and then displayed on the GDS user screen. The result is a greatly expanded product description, combined with rate and availability data which is completely accurate since it is drawn from the hotel chain's own records.

Over the years, as the airline reservation systems became more sophisticated and offered more services, use of GDSs by travel agents steadily increased. Agents appreciate the convenience of "one stop shopping" for all their travel reservations needs. In turn, guests have benefited from the agent's ability to make instant hotel reservations (and to provide confirmation numbers) in almost every country in the world, reinforcing the role of the travel agent in the travel services industry.

This one stop shopping convenience is being increasingly enjoyed by consumers as well. GDSs are expanding consumer-direct access opportunities through development or expansion of their consumer use software. Travelocity (a substantial expansion of EasySABRE) and Galileo's consumer access software programs such as United Connection and British Airways Executive Travel Works allow individual travellers using online services such as America Online or CompuServe, using direct dial-in links or the Internet, to view and book the travel products offered in the GDSs.

IMPROVEMENT IN HOTEL RESERVATION CAPABILITIES

The speed of the computerised reservation process is mind-boggling when compared with the letter, telex and telephone options of just a few years ago. And the speed of the systems in the electronic reservation process continues to improve. This has greatly increased travel agent confidence in the reliability of these systems.
Improvement in the speed of delivery of a hotel booking through the GDSs occurred primarily because the connections linking hotel computerised CRSs to the GDSs improved. That evolution came in four stages.

Stage 1. ARInc/SITA

When they were first developed, hotel reservation systems did not have direct communication links to the GDSs for delivery of reservations and other information.

Instead they used ARInc (**A**eronautical **R**adio **Inc**orporated), a communication network jointly owned by the U.S. airlines as well as the SITA network, which was owned by airlines from around the world.

A side note: Seamless connectivity is like talking with someone in your own home.

In this arrangement delivery of hotel reservations was given a low priority. It took anywhere from two minutes to two days for a reservation request to be processed and a confirmation delivered to the travel agent. Generally the CRO staff manually typed each reservation request into their own computer system, or checked paper files for availability, and then typed a reply message back on the ARInc network. Since the reservationists at the CRO had to use two separate computers to establish the "link," this human interface was dubbed "swivel chair technology."

Type B: A form of link that uses dedicated telephone lines.

A side note: Type A connectivity can be compared to making a telephone call. You send your message and you receive a reply almost immediately

Stage 2.

The first step forward in the process was the introduction of Type B links between GDS and hotel central reservation systems. Dedicated telephone lines were used to link the systems. In addition, some hotel chains began to automate the entry of bookings received from the GDS and automatically issued a confirmation number.

A side note: ARInc messages could be compared to sending a letter. You mail your message, then wait for a reply. Sometimes response to your message is quick and sometime it is slow.

Type B was a huge improvement in speed and convenience for travel agents, but it still fell short in delivering a confirmation number to the agent. The reply to a booking request -- the confirmation number -- was placed in the travel agent's queue or electronic mailbox in the GDS. The travel agent had to complete their hotel booking request, "end their transaction" and display their message queue to determine if their booking request had been confirmed.

Stage 3. Type A

The next major step forward came in 1988 with the introduction of Type A Connection service for hotel bookings. Type A service meant that booking confirmations could now be returned instantly -- within seven seconds -- while the travel agent was still looking at their GDS hotel booking screen. Just as airlines could give instant, on-screen replies, hotels could now satisfy their client demand for a real-time reply.

A side note: Type B technology is similar to sending a fax. You know your message has been received and response is quicker.

Stage 4. Seamless Connectivity

The newest connection option between hotel CRS and global distribution systems to be developed is seamless connectivity. Incorporating several major technology advances, seamless connectivity allows much of the room description, rate and availability data displayed to a travel agent on a GDS CRT to be gathered directly from the hotel company's central reservation system. Until the introduction of seamless, hotel displays had been based on the GDS's limited hotel data bases. Now, hotel information can be supplied from the larger hotel reservation system data banks.

Seamless connectivity is generally accepted to be the direction of future hotel booking technology. More and more, experts predict that the information needed in shopping for hotel services -- room descriptions, amenities, packages, special arrangements -- will be provided directly from the hotel reservation systems. The result will combine:

- detailed product explanations, written in "reader friendly" language rather than in cryptic code.
- the most accurate information, especially about rates and availability, for every room in the hotel

Today the seamless process works like this:

Booking Stage	When the TA enters	The TA sees
1. General Availability Request	Location, date of arrival, length of stay **plus** any further optional qualifiers.	A list of available hotels which meet the specified qualifications.
2. Specific Availability Request	Identification number of a specific hotel.	Details of all available roomtypes and their rates with corresponding features, booking rules, deposit policies, etc.
3. Reservation Entry	Guest information (guest name, address, room/rate codes, guarantee information, etc.)	Instant reply with confirmation number and other general information about the hotel or "after the sale" marketing opportunities.

Overview of the connection links to GDSs

Connection Mode	Confirmation Delivery Time	Major Benefit over Previous methods
ARInc/SITA	2 minutes - 2 days	Allowed use of computers - replaced telephone calls
Type B	2 minutes - 2 hours	Much faster booking confirmation.
Type A	7 seconds	"Instant" confirmation.
Seamless Connectivity	7 seconds	Comprehensive descriptions and rate displays using information in the hotel CRS.

A WORD ABOUT THE IMPORTANT ROLE OF SWITCHES

As hotels implemented increasingly sophisticated and complex links to GDSs, they found a growing challenge in maintaining and expanding each of these connections. Initially every hotel company had electronic links to every Global Distribution System.

Between 1988 and 1990 two companies, THISCO and Wizcom International (a subsidiary of Avis Rent a Car), began assisting hotel companies with their GDS links by constructing communication switches. These switches permitted hotel CRSs to communicate in their own "language". They sent messages such as availability changes to the switch, which then translated them into the appropriate "language" for each GDS and then delivered them to the GDS.

When a GDS wished to send a reservation to a hotel company using a switch, the switch "translates" the message from that GDSs language and immediately delivers it to the hotel CRS.

The technology in these switches has played a major role in aiding many hotel companies who otherwise could not link to GDSs. They also greatly facilitated the move to seamless connectivity.

THE TRAVEL AGENT AND THE HOTEL BOOKING PROCESS

Not surprisingly, with the growth of the GDSs has come growth in the number of world-wide hotel reservations booked electronically. The number of electronic hotel reservations already 16.3 million by 1993, passed 26 million in 1995.

Source: HEDNA Research

Before the arrival of GDSs, travel agents and/or their clients reviewed guide books and directories for information about hotels. Often the information in these publications was limited and out-of-date. As a result, a search for a hotel room usually included a number

of calls to various properties (or CROs) to determine availability, rates, and room types,

1. **Speed of reservation entry and confirmation - unmatched booking efficiency.**
2. **GDSs now contain the negotiated or special room rates their clients require.**
3. **Twenty-four hour access —world-wide.**
4. **Rate and availability information in the GDS generally matches that at the hotel company CRO.**
5. **Hotel bookings made in the GDS are incorporated in the passenger name record, making it easier to track all travel arrangements and commission payments.**
6. **GDSs have proven themselves reliable at delivering reservations, eliminating unpleasant surprises when the traveller arrives at the hotel.**
7. **To facilitate analysis and commission tracking, travel agency management is insisting that all reservations — including those for hotels — be made in the GDS. Hotels not listed in a GDS will likely NOT be booked by those agencies.**

before a booking was finally made. This traditional three-step process of searching, calling and booking was both time consuming and costly for everyone involved.

With the speed of the global distribution systems, and the depth and accuracy

of hotel data they hold, travel agents are now less inclined to consult guide books and indexes, call tollfree numbers or hotel directly. Instead, they favour the fast search-and-selection process made possible by their GDS computers. In only a few seconds, a travel agent can view hotel rates and room types, book the accommodation and receive a confirmation of that reservation.

Travel agents now turn to their GDS terminals to book hotel reservations for seven main reasons:

CONCERNS CONTINUE

Travel agent confidence in, and use of, GDSs to book hotels has grown steadily to today's all-time high. Nonetheless, those same travel agents still feel several concerns about the electronic booking process:

- Do the GDS/CRO have true room availability information, or, when they show "sold out" are rooms still available?
- Will the hotel interface work? Are their systems reliable?

- Will I get a lower room rate if I call the hotel direct?

It is important that every hotel company take special care to ensure the integrity of the GDS booking process. Hotel staff must insure the accuracy of the information about their hotel in each GDS. The role hotel staff can play is described in Modules 2 and 3 of this Educational Kit.

THE CHANGING ROLE OF GDSs- THE NEW SALES OPPORTUNITY

Since their introduction in 1964, the GDSs have changed considerably. They have evolved from being lists of airline flights to become electronic supermarkets where every part of a journey can be sought and booked in a single operation. At the same time, sales opportunities for all those who offer their services through them have multiplied.

Today, hotels and hotel companies use the extensive property and chain description opportunities to describe themselves. They use the free electronic bulletin boards in each GDS to inform travel agents and other users of new promotions and special offers, purchase agent sign-in messages and availability screen "headlines" to communicate sales information, and participate in the electronic directories which provide full colour, vivid electronic catalogues of travel services. Many of these opportunities are identified on the following chart. Detailed explanations of all of these sales opportunities appear in Module 3.

HOTEL PARTICIPATION IN GDS - A BENEFIT SUMMARY

Hotels and hotel companies have become enthusiastic participants in GDS. This results from:

- 24 hour exposure
- access to more than 375,000 travel agent CRTs world-wide
- steady growth of opportunities to present and promote their product
- steadily rising number of reservations from GDS
- new generation of users - through on-line services

This module has:

- Explained the role of GDS in the travel booking process
- Explained how hotels have become part of the GDS electronic reservation process
- Explained the travel agent's role, needs, concerns, and benefits of using the GDSs
- Set the stage for Module 2 and 3 in which your opportunities will be described in detail.

Now . . .

- **Return to page 4 to see if you have met your learning objectives.**
- **Continue on with Modules 2 (Hotel Roles in the Electronic Reservation Process) and Module 3 (Selling Your Hotel Through the Global Distribution Network).**

Good luck.