

Before the Subcommittee on Aviation, Committee on Public Works  
and Transportation, House of Representatives

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COMMENTS ON "AIRLINE  
COMPETITION  
ENHANCEMENT ACT OF  
1992"

Statement of John H. Anderson, Jr.,  
Associate Director, Transportation Issues,  
Resources, Community, and Economic  
Development Division



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Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to testify on the proposal to enhance competition in the nation's airline industry through addressing some of the problems associated with airline-owned computerized reservations systems (CRSs). Major airline ownership of the CRSs used by travel agents to book most airline flights is often cited as a major barrier to competition in the airline industry. We have been examining the issues surrounding airline-owned CRSs for more than 6 years and have presented our findings in several reports and in testimonies before this and other interested congressional committees. Our testimony today will summarize our findings on the impact of airline-owned CRSs on airline competition and review how the proposed legislation addresses the problems.

Our basic points are as follows:

-- Prior analyses by GAO and the Department of Transportation (DOT) indicated that the airlines that own CRSs, especially those owning the two largest systems (Covia, owned primarily by United Airlines, and Sabre, owned by American Airlines), have benefited from substantial shifts of traffic and revenues from non-CRS-owning airlines and airlines owning smaller CRSs. These benefits persisted after 1984, when rules eliminating computer terminal display bias went into effect. Prior to the rules the CRSs were programmed to give preference to the CRS-owner's flights in listing available flights.

-- In our March 1992 report for the Ranking Minority Member of this Subcommittee, we found that DOT had not collected the necessary data on CRS market shares or travel agent booking patterns that would allow us to estimate precisely the current effects of CRSs on traffic and revenues. The CRS industry is changing and, as a result, the data that DOT collected for its earlier reports are becoming dated and increasingly less useful for assessing the CRS industry or the impacts of CRSs on airline competition. There have been some changes in the ownership of CRSs and in CRS technology in the past few years that may have reduced some of the anticompetitive impacts of CRSs.

-- Without current data on CRS market shares, we cannot evaluate the cost-effectiveness of solutions to the anticompetitive problems of CRSs, such as dehosting (requiring that CRS-owning airlines separate the CRS from their internal reservation systems) or divestiture (requiring that the owner airlines sell their CRSs). However, there are changes that are less costly and would address some of the anticompetitive problems that persist. These include (1) eliminating the remaining programming differences in the CRSs that make bookings on the CRS owner's airline easier and more reliable (e.g. host defaults whereby the system is programmed to assume the host airline if no other airline is chosen) and (2) eliminating certain restrictive provisions in the contracts between travel agents and CRS vendors. In our March 1992 report, we recommended that

the Congress direct the Secretary of Transportation to revise the Department's existing CRS rules to require that each CRS vendor eliminate those functional differences between host and participating airlines that can be eliminated without dehosting.

-- Because DOT has not moved expeditiously in finalizing new CRS rules, legislative action is appropriate. The proposed legislation would help improve competition in the airline industry and in the CRS industry by (1) requiring the CRS vendors to remove biases favoring the CRS-owning airline, (2) reducing restrictions in travel agent/vendor contracts, and (3) establishing arbitration procedures to protect airlines from excessive booking fees--the fees paid to the CRS-owning airline by participating airlines for each flight segment booked on a CRS.

-- The Congress should also consider requiring DOT to begin collecting data on the reliability of CRS data communications linkages, the market shares of CRS vendors, and the booking patterns of travel agents so that an assessment can be made of the effectiveness of the proposed measures after they are enacted. We recommended that the Secretary take these steps in our March 1992 report.

In the past few years, changes in the CRS industry may have ameliorated some of the anticompetitive effects. United has sold

half-ownership of Covia to USAir and a group of foreign airlines. The PARS system (used by TWA and Northwest Airlines) and the DATAS II system (used by Delta Airlines) have merged into a single system--Worldspan. Continental Holdings, Inc., the parent company of Continental Airlines, has acquired control over System One, formerly owned by Eastern Air Lines. Sabre and United, however, continue to dominate the industry because they control more than 60 percent of the travel agent locations and an even larger share of the bookings made on CRSs.

The CRS owners have introduced innovations over the years that have made it almost as easy and as quick for travel agents to book flights on other airlines as on the airline that owns the CRS. Yet, differences in ease of use and reliability remain as does the question of whether these differences have a substantial influence on a travel agent's choice of airlines when he or she makes a reservation.

The proposed legislation is designed to correct some of the remaining conditions that can unfairly bias travel agent booking patterns. Before addressing the legislation, I would like to review DOT's and our prior research in this area.

PRIOR WORK INDICATES THAT CRSs CAN  
HAVE ANTICOMPETITIVE IMPACTS

Before 1984, the CRSs gave preference to their owners' flights on the travel agent's computer terminal display screen. Since travel agents tended to book flights that appeared first, this gave the CRS owners an unfair advantage over their competitors. In 1984, the CAB issued rules governing CRS operations that prohibited such biased displays. There remained a concern that travel agents continued to favor the airline that owned the CRS used by the agent. This preference for the CRS owner is sometimes called the "halo effect," since it stems from the close business relations between the vendor (CRS owner) and the travel agent and the agent's confidence in the reliability of bookings made on the vendor's airline. These close business relationships may trace to the early nurturing of the agent by training agents on how to use CRSs and providing technical support. The additional ticket revenues earned by the CRS-owning airline because of the preference for its flights by travel agents using its system are called incremental revenues.

Initial GAO Study of CRSs Concluded Incremental  
Revenues Were Important Component of Profitability

We first examined the potential anticompetitive effects of airline-owned CRSs in a May 1986 report to the Congress.<sup>1</sup> We were asked to review conflicting studies on the profitability of the two

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<sup>1</sup>Airline Competition: Impact of Computerized Reservation Systems  
(GAO/RCED-86-74, May 9, 1986).

largest CRSs: American Airlines' Sabre and United Airlines' Apollo systems. A report by a consulting firm hired by 11 of the airlines that competed with American and United alleged that the CRS owners were earning supracompetitive profits as a result of their ownership of the systems. American and United countered that they were earning only normal returns, given the riskiness of their investments.

The consulting firm claimed there were several reasons for the large difference between its estimate of CRS profitability and the estimates made by United and American. We found that, in most cases, the CRS owners were correct in their approach to computing profitability. However, in one important area we disagreed with the CRS owners. Incremental revenue, the additional revenue a CRS-owning airline earns from travel agents favoring its flights in making bookings, should be included in calculating profitability.

We concurred with the consultant and with the conclusions of a Justice Department report that there were plausible reasons to believe that incremental revenues persisted, even after the rules eliminating display bias went into effect. Because the available evidence did not allow us to estimate the size of the incremental revenues, we recommended that DOT undertake a study to assess the probable persistence and size of these revenues. DOT was the appropriate agency for undertaking the study because it had data

collection authority to carry out its responsibility for monitoring compliance with the CRS rules.

We also examined the question of whether booking fees, the amounts paid by the participating airlines to the CRS-owning airline for bookings made by travel agents using the system, were substantially above the cost of providing the service. Because airlines have little choice but to have their flights listed on all the CRS systems, they must pay the booking fee charged or risk losing access to travel agents using the system. DOT was responsible for enforcing the CRS rules, therefore, it had access to the data necessary to assess the anticompetitive potential of excessive booking fees. We recommended that the Secretary of Transportation examine whether excessive booking fees were being used to reduce the competitiveness of airlines that did not own CRSs.

DOT Study of CRSs Concluded That Incremental Revenues Were Considerable and Booking Fees Exceeded Costs

DOT undertook the analyses we recommended and reported its findings in May 1988.<sup>2</sup> The DOT report estimated that, on the basis of data supplied by the CRS vendors, incremental revenues continued after the rules governing screen bias went into effect.

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<sup>2</sup>U.S. Department of Transportation, Study of Airline Computer Reservation Systems (DOT-P-37-88-2, May 1988).

The data showed that airline revenues in 1986 were about 14 percent higher for United and 15 percent higher for American because of incremental revenues. These were only moderately lower than the estimates of incremental revenues for the pre-rule period. Moreover, DOT did its own analysis of the halo effect. Its analysis showed that travel agents tended to book disproportionately large shares of tickets on the airlines that owned the CRSs that the agents used. The analysis showed that, in 1986, the halo effect increased American Airlines' revenues by nearly 40 percent and United Airlines' revenues by nearly 36 percent. CRS vendors continued to reap substantial benefits 2 years after the rule that eliminated display bias went into effect, according to DOT's analysis.

With respect to the reasonableness of booking fees, the DOT report concluded that fees charged by American and United were roughly double the cost of providing the service--even if capital cost and a provision for a reasonable profit were included. The DOT report also indicated that travel agents paid less than their share of the costs of the systems, while the participating airlines paid more than their share. It is likely that this situation continues in view of the relative bargaining position of the travel agents and the airlines. Even though travel agents cannot readily change systems, they are in a better position to negotiate fees than an airline that must be listed on every system. The CRS vendors compete with each other to sign up travel agents, and the

agents can choose among the alternatives. According to CRS vendors, many travel agencies receive discounts on CRS subscriptions and services. This suggests that the CRS vendors look to revenue sources other than agent subscriber fees to cover the costs of their services.

GAO Reported that Incremental Revenues and Excessive Booking Fees Caused Substantial Revenue Shifts and Called for CRS Rulemaking

In September 1988, we testified before this Subcommittee on the implications of the DOT's findings for competition in the airline industry and for competition in the CRS industry.<sup>3</sup> On the basis of 1986 data contained in the DOT study, we calculated that incremental net revenues and booking fees in excess of costs had resulted in the transfer of over \$300 million annually to both American and United from the other airlines. Because these transfers exceeded the costs of the services provided, they reduced competition in the industry by artificially imposing costs on some carriers, while subsidizing others. In the same testimony, we also pointed out that some of the provisions in the contracts between travel agents and CRS vendors limited the agents' ability to switch vendors and, therefore, perpetuated the revenue transfers to the larger vendors. These provisions included the 5-year minimum contract length, minimum-use clauses, and liquidated damages

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<sup>3</sup>Competition in the Airline Computerized Reservation System Industry (GAO/T-RCED-88-62, Sept. 14, 1988).

clauses--the requirement that an agent pay damages to the CRS owner if it breaks the contract before the expiration date.

While we made no specific recommendations, we did offer policy options for the Congress and we called upon DOT to open regulatory proceedings on CRS issues. DOT issued its Advanced Notice of Proposed Rulemaking on September 21, 1989. A proposed rule was issued in March 1991, but the date for issuing a final rule has been postponed several times and is now scheduled for December 11, 1992. The proposed rule readopts the 1984 rule and adds a few new provisions, including allowing agents to use a single terminal to access all CRSs and shortening the maximum subscription term in CRS contracts.

#### Subsequent Analyses Indicate That Incremental Revenues Persist

Subsequent analyses by both DOT and us supported the proposition that incremental revenues persist. Evidence that CRSs continue to provide their owners, particularly United and American Airlines, with substantial incremental revenues appeared in DOT's February 1990 Task Force report on competition in the airline industry.<sup>4</sup> The report noted that more recent studies done by the vendors estimate higher levels of incremental revenues from signing

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<sup>4</sup>U.S. Department of Transportation, Secretary's Task Force on Competition in the U.S. Airline Industry, Airline Marketing Practices: Travel Agencies, Frequent-Flyer Programs, and Computer Reservations Systems, Wash. D.C., Feb. 1990.

up agents to subscribe to a CRS than reported in DOT's 1988 report. While they varied widely in terms of the methodology employed, the incremental revenue estimates ranged from 43 to 71 percent for each vendor. According to the Task Force report, conservatively derived estimates for United and American often fell between 20 and 30 percent.

As part of our assessment of barriers to competition in the airline industry, we surveyed 520 travel agents in late 1989 on their booking behavior. We asked the agents if they had a preferred airline and why. More than one-third of the 215 agents who responded that they had a preferred airline indicated that they preferred their CRS vendor airline, in part because of more complete information on last-seat availability. Agents were asked to identify the single most important factor in choosing an airline. Of the 142 agents who responded, more than one-fifth cited the CRS as the single most important factor.<sup>5</sup> In a subsequent 1991 report, we presented the results of our statistical estimation of the importance of various marketing practices, including CRSs, on airline fares and market shares. Our analysis showed that when a carrier had a higher than average share of the CRS market at the two endpoint cities on a route, it had a higher share of the traffic on that route, after taking into account other factors. A higher market share, in turn, was associated with

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<sup>5</sup>Airline Competition: Industry Operating and Marketing Practices Limit Market Entry (GAO/RCED-90-147, Aug. 29, 1990).

higher prices, and this latter relationship was true only for the three largest carriers, including the two dominant CRS owners.<sup>6</sup>

Continuing Incremental Revenues May Be  
Due in Part to Architectural Bias

It appears clear that as of 1990, significant incremental revenues persisted, despite the rules outlawing screen display bias. Most airline industry analysts contend that these incremental revenues are the result of two factors. First, the ongoing business relationship between the CRS vendor and its subscribing travel agencies makes those agents more likely to book flights on the CRS vendor's airline. Second, it may be easier and safer to make bookings on the vendor's airline than on other participating carriers. This is because the vendor airline's internal reservation system is housed in the CRS it owns. Such systems are said to be hosted.

Today, only Sabre and Apollo systems have a single host, American Airlines and United Airlines, respectively. System One is currently unhosted and Worldspan is being redesigned as an unhosted system. Differences exist in the way the design, or architecture, of each CRS treats reservations and other procedures on the host airline compared with participating airlines. This architectural

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<sup>6</sup>Airline Competition: Effects of Airline Market Concentration and Barriers to Entry on Airfares (GAO/RCED-91-101, Apr. 26, 1991).

bias has several components. First, agents have real-time access to seat availability information and reservations capability for the host airline--i.e., the travel agent has access to the same information as the host airline's own reservations personnel. Many routine functions, such as obtaining quick confirmation of a booking, changing complex itineraries, and issuing boarding passes may be slightly easier, quicker, or more reliable when the agent is booking on the host airline's flights.

To enable agents to obtain information as reliably and easily for other airlines as on the host airline, the vendor needs to develop appropriate communications links, and the airlines must invest in the necessary equipment. Each CRS has established such links, usually called direct access, but reliability problems remain.

This leads to the second problem that remains. Although it is generally agreed that direct access features have become easier to use, agents booking on a nonhost airline may not be as confident that the reservation has been recorded accurately in the airline's internal reservation system as they would be when booking on the host airline. Travel agency representatives told us that because communications links for nonhost airlines are more circuitous, agents are more confident that reservations are accurately recorded when made on the host airline.

The proportion of incremental revenues that is due to architectural bias, as opposed to business relationships between the CRS vendor and travel agents, is unclear. However, DOT reported that industry experience suggests that it could be substantial. For example, when Continental Airlines joined Eastern Airlines and improved its communications link with Eastern's System One, Continental's share of bookings at System One agencies significantly improved. On the other hand, when USAir became a partner in Covia (the company that owns United's Apollo System), it kept its own internal reservation system and did not become hosted in Apollo or change the communications link. USAir did not gain incremental revenues from its ownership stake in Apollo. Finally, Midway Airlines reported that its share of bookings with Sabre agents increased after it began using Sabre as its internal reservations system.

Recent GAO Analysis Concluded Available Data Was Not Sufficient to Determine Whether Dehosting is Warranted

In response to a request from the Ranking Minority Member of this Subcommittee, we reported on March 20, 1992, on whether differences in CRSs' treatment of host and participating airlines allow the CRS-owning host to sell additional seats at the expense of other participating airlines. We were also asked to address whether separating owner-airlines' internal reservations systems from the CRSs (dehosting) would eliminate significant differences in CRS treatment more effectively than proposed CRS technology

improvements that are designed to eliminate or reduce further the functional differences in the systems that favor the host airline.<sup>7</sup> Our analysis focused on the narrow question of the appropriateness of dehosting as a solution to the problem of architectural bias and did not address any of the other CRS issues such as whether booking fees are excessive or vendor/subscriber contract provisions are too restrictive.

Because DOT had not gathered recent information on the CRS industry, we were unable to assess the relative merits of dehosting as opposed to technological solutions designed to improve communications links and the reliability of data transmissions. While there is testimonial evidence on reliability problems in CRS data transmissions, DOT has gathered no conclusive evidence on the extent of the problem, nor has it gathered information on the potential costs of dehosting to CRS vendors, nonvendor airlines, and airline passengers. Despite the fact that DOT has had a rulemaking proceeding underway since September 1989, it has not collected the kind of information necessary to evaluate the cost-effectiveness of dehosting or alternative approaches.

The CRS industry is changing and, as a result, the data that DOT collected for its earlier reports are becoming dated and increasingly less useful for assessing the CRS industry or the

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<sup>7</sup>Computer Reservation Systems: Action Needed to Better Monitor the CRS Industry and Eliminate CRS Biases (GAO/RCED-92-130, March 20, 1992).

impacts of CRSs on airline competition. Vendors have made and/or proposed technological changes aimed at improving the communications links, but DOT has not collected the information that would be needed to evaluate the effectiveness of the changes. New technological developments, such as Sabre's "seamless connectivity," might further improve the reliability and ease of communications. "Seamless connectivity" is intended to mimic the host airline's reservation's system by providing real-time information on seat availability on participating airlines.

Without up-to-date data on the industry, it is difficult to determine whether current incremental revenues, to the extent they can be tied to architectural bias, are of sufficient size to warrant the cost of dehosting. The dehosting alternative could prove costly for the airlines, both vendors and nonvendors. In our March 1992 report, we recommended that DOT begin to collect the data necessary to determine whether dehosting is warranted. Moreover, since DOT is scheduled to issue its final CRS rules later this year, DOT will need such data to assess the effectiveness of the rules.

Notwithstanding the difficulty in arriving at a definitive answer to the question of dehosting, we recommended that the Congress direct the Secretary of Transportation to revise the Department's existing CRS rules to require that each CRS vendor eliminate those functional differences between host and

participating airlines that can be eliminated without dehosting. There is broad agreement on the goal of achieving equal functionality, and there are steps that can be taken to move toward achieving this goal that are relatively inexpensive compared to dehosting. We do not rule out the dehosting solution as eventually being necessary to protect competition in the airline industry.

PROPOSED LEGISLATION CAN HELP IMPROVE  
COMPETITION IN THE CRS AND AIRLINE INDUSTRIES

We believe the proposed Airline Competition Enhancement Act of 1992 can contribute in important ways toward improving competition in both the CRS and airline industries. The bill focuses on four principal areas: functional equality, use of third-party software, travel agent contract provisions, and arbitration of booking fees.

Legislation Requires Carriers to Achieve Functional  
Equality 2 Years From Date of Enactment

As we recommended in our March 1992 report on architectural bias, the legislation calls for eliminating functional differences between host and participating airlines. DOT's long-awaited proposed rules do not require functional equality, but rather call for more study. We believe that these improvements can be made at a relatively low cost, and while it is unlikely that they will completely eliminate incremental revenues, they could remove an important source. Moreover, the 2 years allowed for meeting the requirement provide some time to gain experience with technological

improvements such as Sabre's "seamless connectivity" to demonstrate whether they can largely eliminate functional differences.

Finally, the CRS owners plan to continue to make innovations that may eventually lead to the virtual elimination of functional differences. The legislation requires that the elimination of functional differences is accomplished and sets a timetable for completing the process.

Removing Barriers to Use of Third-Party Hardware, Software, and Data Bases Might Reduce Travel Agent Ties to Specific Vendors

The proposed legislation would also allow travel agents to use personal computers (PCs) to access multiple CRSs. Currently, the CRS vendors impose licensing requirements on travel agents that prevent the agents from using personal computers to access more than one CRS from a computer terminal. While we have not specifically looked into this area, in its proposed CRS rulemaking, DOT would allow agents to use PCs to access more than one CRS. DOT argues that such a change would limit vendor monopolization of access to subscribers. Travel agents could access more than one CRS from the same terminal, and if the agents chose to access multiple systems, it might reduce the need of the airlines to participate in each CRS system and might give participating airlines some leverage over booking fees. DOT has suggested that the airlines could encourage agents to use the CRS charging the lowest fee to book their flights. This has the potential to help alleviate some of the anticompetitive problems associated with the

booking fees. On the other hand, CRS vendors and travel agent representatives told us that agents in the past have shied away from multiple access when it has been made available because it was difficult to use.

Eliminating Restrictive Provisions in Travel Agency/Vendor Contracts Could Enhance Competition in Both CRS and Airline Markets

The proposed legislation contains provisions prohibiting CRS contracts of more than 3 years, automatic extensions of contracts when new equipment is added, excessive liquidated damage clauses, and minimum use provisions. These changes in the relationship between travel agents and the CRS vendors are consistent with DOT's proposed rules and with our prior analyses. Giving travel agents greater opportunity to switch vendors and to use multiple systems will weaken the tie between the agents and the vendor airlines.

Existing CRS rules prohibit the tying of airline commission payments to travel agents to "use" but do not define "use." DOT's interpretation has been that the rule does not prohibit the tying of commissions to subscriptions. Therefore, minimum use clauses are equivalent to an agreement to use the system and effectively tie commissions to use. In prior testimony, we have pointed out the benefits from eliminating minimum use clauses and other restrictive conditions in travel agency contracts.

Arbitration of Booking Fees Can Protect Participating Airlines From Anticompetitive Abuses

The proposed legislation also calls for the arbitration of an increase in booking fees. This provision is especially important in light of the proposed changes in the contracts between the vendors and the agents. Eliminating restrictive agreements will improve the bargaining power of the agents and could lead to lower subscription fees. The proposal for arbitration of changes in the booking fees offers the participating airlines some protection against arbitrary rate hikes to compensate for any reduced travel agent revenues.

DOT MUST COLLECT THE NECESSARY DATA TO ASSESS THE IMPACTS OF CHANGES IN ITS RULES AND CRS TECHNOLOGY ON THE INDUSTRY

We believe that if the changes in the proposed legislation are enacted, they could help alleviate the anticompetitive problems stemming from dominance of the CRS industry by the two largest airlines. However, the effectiveness of the legislation or of DOT's proposed CRS rules cannot be assessed unless DOT collects the necessary data. We reiterate our recommendation that the Secretary of Transportation gather data both on the technical reliability of data communications linkages used by participating airlines as compared with the internal linkages used by host airlines and on the costs and benefits of dehosting CRSs. Such data would help DOT and others to assess the effect of CRS technical enhancements, such

as seamless connectivity, as well as the potential need for dehosting. We also continue to believe that the Secretary should establish a comprehensive and continuous program of gathering data on the CRS industry, including market shares of CRS vendors and booking patterns by travel agents using the various CRSs. Such data are critical whether DOT is to monitor the effectiveness of changes to its own rules, track the effects of the changes proposed in this legislation, or determine whether additional actions are warranted. We believe the Subcommittee should consider including this requirement in the legislation.

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In conclusion, we believe that the proposed Airline Competition Enhancement Act of 1992 is a step in the right direction and is an appropriate response, given what is currently known about the CRS industry. DOT has delayed too long in responding to continuing problems in this area, and legislative solutions appear to be necessary.

That completes my testimony. I will be glad to answer any questions that you may have.

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