A Competitive Market Structure for Air-To-Ground Service Will Maximize Consumer Benefits

Dr. Paul A. London

- The FCC's consistent policy objective over 30 years, and its Congressionally mandated goal under the Telecommunications Act of 1996, is to promote competition in all telecommunications markets, to the benefit of consumers.

  − A competitive market structure in the Air-to-Ground ("ATG") sector will benefit consumers, including air passengers who purchase ATG service as well as airlines who enter contracts for the installation of ATG systems on their planes.

  − Competition between providers would encourage service innovation and deployment of new technologies, create choices, and yield much lower, competitive pricing that simply will not exist if the current monopoly is extended.

- An auction cannot be used to determine the market structure, because the outcome will inevitably be a monopoly, which will harm consumers.

  − The auction of a single ATG license will yield a monopoly marketplace outcome, whether the auction is won by a single bidder or by a consortium consisting of multiple entities.

    * This is because the participants in the consortium will have no incentive to divide up the license so as to compete with one another after winning the bid. Rather, they will maximize their revenues and profits by staying together and offering service as a monopoly.

  − For similar reasons, under a system of "combinatorial" bidding in which participants could bid either for a single exclusive 4 MHz license or for varying subsets of the spectrum as part of a competitive two-license system, it is dangerously likely that the greatest amount of money will be bid for a single license and that the successful bidder will win a monopoly on offering ATG service.

    * This is because bidders seeking monopoly positions will benefit more, and therefore will be willing to pay more, than bidders seeking competitive ATG spectrum positions. A monopoly market structure is ideal for maximizing "producer surplus" (*i.e.*, economic rent, or payments to the producer(s) above opportunity costs). The "producer surplus" that bidders expect to achieve using spectrum (a key production input) will be the main factor determining their willingness to pay in an auction.

    * In addition, Verizon/AirFone would probably bid more for a continued monopoly than any two bidders will for two licenses, in part because it can use the monopoly to gain profitable customers for Verizon's terrestrial mobile service. A monopoly market structure for ATG thus has the collateral effect of skewing the terrestrial CMRS marketplace.

- While the "competition" experienced during the auction process may maximize revenue to the government, after the auction is concluded there will be no competition in the marketplace, and consumers will be harmed as a consequence.

- History shows that auctions of monopoly rights simply can not be called competition.

  * Indeed modern economics itself, including Adam Smith's "The Wealth of Nations," grew out of opposition to what were in effect auctioned monopolies that were prevalent in the 17th century system of mercantile economics.

• Competition in the ATG service will provide strong incentives for licensees to develop innovative technological solutions to problems. Experience in the telecom industry validates this point (*e.g.*, wireline telephone companies developed DSL over copper loops only after they faced cable modem competition). By contrast, monopolists lack incentives to innovate. For example, Verizon/Airfone with its monopoly on ATG service to date, allowed the service to atrophy until others came forward with ideas to develop it. By contrast, AirCell has developed new, less costly technology to serve the competitive general aviation sector.

• The problems with the current ATG service are largely due to the comfortable monopoly enjoyed by Verizon/Airfone, to the detriment of consumer welfare.

  - Verizon/Airfone has not kept up with new technology and moved to expand service to airline passengers and the airlines – and its monopoly control over the service gives it very little incentive to do so. Prior to this proceeding, it has never proposed waivers or rule changes to facilitate deployment of broadband.

  - The $3.99 per minute that Verizon/Airfone charges for ATG calls are a huge disincentive to usage for passengers who are used to paying perhaps 5 to 10 cents per minute on their own cell phones and a few dollars a month for Internet access. And the discriminatory preferences that the company offers to Verizon Wireless customers have a pernicious impact on terrestrial competition.

  - Airlines also want to be able to provide better communications service to customers and to derive revenue from these services. Current airline revenues from this service are miniscule and Airfone, despite its current monopoly, has done nothing to develop this market.

    * Broadband-capable satellite services are too costly (and utilize equipment that is too heavy) to provide a realistic competitive alternative for ATG consumers on domestic flights.

  - In the absence of competition, the Commission would face pressure to impose rate regulation on the monopolist or develop other mechanisms to protect consumers, none of which would work as well as a truly competitive market structure.

• Verizon/Airfone's monopoly should not be given a new lease on life in this proceeding when the Commission has a real opportunity to back the same kind of competition that it has encouraged successfully in other areas.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	**)**	
	)	
Amendment of Part 22 of the Commission's	**)**	
Rules to Benefit the Consumers of	**)**	
Air-Ground Telecommunications Services	**)**	**WT Docket No. 03-103**
	)	
Biennial Regulatory Review–Amendment	**)**	
of Parts 1, 22, and 90 of the Commission's	**)**	
Rules	**)**	

Declaration of Paul A. London
On Behalf of AirCell, Inc.

December 7, 2004

1. My name is Paul A. London. I am an economist with a Ph.D. in political economy and government and an M.A. in public administration from Harvard University. I have over three decades of experience working on economic issues in the executive and legislative branches of government, as well as in consulting and advocacy organizations. From 1993 to 2000, I served in the U.S. Commerce Department as a Senior Policy Advisor and as Deputy Undersecretary of Commerce for Economics and Statistics. Subsequently, I was a Visiting Fellow at the American Enterprise Institute (AEI) from May 2000 to May 2003.
2. I am the author of a book entitled "The Competition Solution: The Bipartisan Secret behind American Prosperity" that will be published by the AEI Press in February, 2005. A central point in the book is that difficult and contentious decisions by the Federal Communications Commission (FCC), the Civil Aeronautics Board (CAB), the Interstate Commerce Commission (ICC), the Securities and Exchange Commission (SEC), and other regulatory agencies, all aimed at promoting competition, made a major contribution to the defeat of inflation. These regulatory actions and other "micro-economic" policy decisions that all aimed to increase competition were the keys to the prosperity of the 1990s, and the modernization of the American economy since the 1970s. A copy of my *curriculum vitae* is attached to this declaration in the Appendix.
3. I have been retained by AirCell, Inc. to examine the issues relating to competition in the FCC's Notice of Proposed Rulemaking (Notice) (FCC 03-95) of April 28, 2003.

Specifically, I will explain, first, that, while spectrum auctions may be an economically efficient way to allocate specified blocks of spectrum in the context of a defined market structure, they are likely to be an extremely *inefficient* way to determine the market structure. This is because a combinatorial auction system is likely to yield a monopoly structure, which will impede efficiency and detract from consumer welfare. In other words, the mere fact that an auction is "competitive" does not mean that it is a useful tool for generating a competitive market structure unless the auction system itself is designed to yield competition for the long term. Second, I will show that the relevant categories of consumers for air-to-ground ("ATG") services – both (i) airline passengers and (ii) airlines – will benefit in the long-term from competition between ATG providers.

4. At the outset, I want to stress that, consistent with the FCC's efforts for the past three decades to expand competition in various areas of communications, Congress has directed the Commission to accelerate "private sector deployment of advanced telecommunications and information technologies and services to all Americans by *opening all telecommunications markets to competition*." (Telecommunications Act of 1996, Conference Report). Thus, the Notice makes clear that the Commission recognizes the central role of competition in lowering the costs of and expanding the market for ATG services. According to the Notice (¶ 3), the most important part of this rulemaking is to develop "rules that affect the provision of air-ground services *to consumers*" (italics added) and that current rules "may be impeding the efficient, *competitive* (italics added again) provision of services to the public." So the Notice shows that the Commission's interest still is clearly in the welfare of consumers and

shows that it also clearly recognizes that competition in the provision of ATG services will advance that interest. This is consistent with the values the FCC has pursued for the past three or four decades, and it should not permit a narrow and distorted definition of competition in terms of an auction to subvert these values and purposes.

5. The Commission's position in favor of competition that advances the interests of consumers is consistent with the role that the FCC has played since the early 1960s in seeking ways to gradually expand competition in the telecommunications industry. Not surprisingly, however, it still must deal with opposition from incumbent interests that continue to invent arguments for monopoly. It is important to bear in mind, therefore, that incumbent interests have always opposed competition but that they have always been proved wrong in communications and in other areas of the economy. More competition since the late 1960s has led to an explosion in usage of all forms of telecommunications services by businesses and individual consumers, supported the creation of dozens of new providers, encouraged the development of new technologies for both the upper end and mass markets, and made the United States a model, which much of the rest of world has been forced to imitate or fall far behind.

6. The current situation in ATG communications cries out for competition between multiple providers. There is now one monopoly provider (Verizon/Airfone) and the market reflects that fact. ATG calls cost $3.99 per minute (after a $3.99 connection fee unless you are a Verizon Wireless subscriber). Passengers clearly are unwilling to pay such fees so they make only 2.3 calls per day per equipped aircraft. As a result,

once costly but long obsolete ATG systems now bring in only insignificant revenue for the airlines (less than $3 million annually). All this suggests a market ripe for the kind of competition that will drive down prices and expand usage, promote innovation, and provide a needed new revenue stream for the airlines.

7. The Commission apparently is considering use of certain types of auctions for the ATG services that would determine the market structure, apparently in the hope that the auction process itself will constitute competition. However, the concept of this type of auction is misguided, as discussed further below. Multiple parties may "compete" for the ability to purchase rights to a single license in an auction process. While the "competition" experienced during the auction process may maximize revenue to the entity selling the licensing right (the government), after the auction is concluded there will be no competition in the marketplace, and consumers will be harmed as a consequence.

8. History shows that auctions of monopoly rights simply cannot be called competition. Indeed modern economics itself grew out of opposition to what were in effect auctioned monopolies which were prevalent in the 17^{th} century. For example, the English Crown auctioned off "monopoly privileges on all trade with the East Indies (India)" to the East India Company in 1600, a monopoly that lasted for centuries. Other powerful interests bought monopolies to sell tea, salt, collect taxes in a specific area, and carry on similar endeavors, as students of economic history know. In fact it is fair to say that the policy of auctioning off monopolies was the major characteristic of mercantile economics that the great apostle of competition and father of modern economics, Adam Smith, criticized in "The Wealth of Nations."

9. It is perverse to argue against Adam Smith and to contend that The Crown was supporting competition by auctioning what were in effect rights to exploit to the East India Company and other monopolists, yet this is what Verizon-Airfone is doing when it argues for "exclusive licenses" in this case. Calling an auction system that sanctions a monopoly "competition" is turning the insights and values of modern economics upside down.

10. I understand that the FCC is considering several "competitive" auction mechanisms that ostensibly would allow the marketplace to decide whether a single licensee should prevail or whether two providers should win the license and agree to offer two competing services. Under one approach, the FCC would merely auction a single ATG license, but bidders could include consortia of more than one entity who seek to share the license. Another approach would be some form of "combinatorial" bidding, whereby a party could bid on a single ATG license or on one license that is part of a two-ATG licensee system, or possibly on a 1 MHz or 3 MHz single ATG license. These are new variations of the auction approach, but unfortunately none of these so-called "marketplace" mechanisms are a substitute for competition. Indeed, they all virtually ensure the emergence of a monopoly provider, which is exactly what the Commission should want to avoid in its efforts to further empower consumers and liberate communications markets.

11. Of course, the auction of a single ATG license will yield a monopoly marketplace outcome, whether the auction is won by a single bidder or by a consortium consisting of multiple entities. This is because the participants in the consortium will have no incentive to divide up the license in order to compete with one another after winning

the bid. Rather, they will maximize their revenues and profits by staying together and offering service as a monopoly.

12. For similar reasons, if the FCC were to utilize a system of "combinatorial" bidding in which participants could bid either for a 1 MHz, 2 MHz, 3 MHz, or 4 MHz license (out of a total of 4 MHz available), as a single exclusive licensee or as part of a competitive two-license system, it is dangerously likely that the greatest amount of money will be bid for a single 4 MHz license constituting all of the available ATG spectrum, and that the successful bidder will win a monopoly on offering ATG service. Why? Because a monopoly market structure is ideal for maximizing "producer surplus" (*i.e.*, economic rent, or payments to the producer(s) above opportunity costs). The "producer surplus" that bidders expect to achieve using spectrum (a key production input) will be the main factor determining their willingness to pay – and auctions are an ideal mechanism for revealing parties' willingness to pay. Thus, if the market structure is determined through an auction process like the one being considered here, then the market structure will almost certainly be a monopoly.

13. While a monopoly ATG marketplace, the likely outcome of a "combinatorial" auction, may well maximize auction revenues, 1/ it assuredly will ***not*** maximize consumer benefits or social welfare. As in other segments of the telecommunications industry and elsewhere in the economy, continuation of the existing monopoly market

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1/ In adopting the law giving the FCC authority to conduct spectrum auctions, Congress recognized that there might be a trade-off between maximizing auction proceeds and other public interest factors, and specifically directed the FCC ***not*** to use "the expectation of Federal revenues" as the sole or predominant factor in making public interest determinations regarding a system of competitive bidding. 47 U.S.C. § 309(j)(7)(B).

structure for ATG service is likely to lead to higher prices, a narrower range of options for consumers to choose from, and slower deployment of new technologies.

14. Simply put, passengers and airlines that stand to benefit from a competitive ATG communications system cannot win if, as is likely, the current incumbent, Verizon/Airfone bids more for a monopoly than is offered for a competitive "two-license" system. If the bids under the two-license option are lower than that offered by a group that is bidding for a monopoly, the FCC will have sacrificed the long-term interests of consumers, deprived passengers and airlines of the benefits of competition over the long term, and subverted the aims that the Commission has championed in this and many other telecommunications markets.

15. What would be the advantages to passengers from competition between multiple providers in providing ATG services? The long-term advantages of competition are always difficult to predict, but the advantages of "liberating the energies of the people" (Woodrow Wilson's phrase) are usually much greater than analysts predict before the fact. Consider the impact of telecommunications competition on one company, Guardsmark, which I cite in my forthcoming book. The company provides security guards at thousands of locations around the country and has grown very rapidly since the early 1980s. It is now more than eight times as large as it was in 1980 when AT&T still dominated communications, is using far more telecommunications services per employee because of the explosion of fax, data, PDA and similar services, but is paying about half as much for service because competing providers want its business. The ability of this relatively small company to bargain with competing suppliers of telecom services, in my view is the most

important reason for this decline in costs and explosion of service options. Airlines and airline passengers want this same kind of ability to bargain between service providers, and the advantages to them might well be of the same order of magnitude.

16. It is indisputable that competition in ATG services would lead to the same kind of results that have benefited consumers in other areas. Competition between providers would encourage service innovation and deployment of new technologies, create choices, and yield much lower, competitive pricing that simply will not exist if the current monopoly is in effect extended. The Commission's series of *CMRS Competition Reports* provide extensive evidence on the state of competition in the commercial mobile industry, and the benefits of that competition for consumers. Subscribership and usage are increasing rapidly, prices are falling, and new products, services, and technologies are proliferating. These are exactly the results the Commission is seeking for consumers of ATG service, another CMRS service. There is certainly no economic reason not to seek similar competition in the ATG sector.

17. More specifically, consumers – both the air passengers who purchase ATG service and the airlines who contract with providers for the installation of ATG systems on their planes – will benefit from competition in the provision of ATG service. Marketplace competition will be beneficial to consumers even though, on any given plane or flight, only one ATG service may be available – just as consumers benefit from the existence of marketplace competition for terrestrial CMRS services, even if many individuals may enter two-year contracts that will "tie up" their usage with a single CMRS provider for a certain time period. The existence of marketplace competition will give airlines choices among competitive alternatives, and different

airlines will make service available from different ATG providers. In turn, the resulting competitive pressures will encourage ATG providers to offer competitive prices to consumers. In a competitive environment, consumers who value ATG service, and who dislike the prices, service quality, or other attributes of the ATG service available on one airline (or one class of flights) may opt for a different airline – which will give both airlines and ATG service providers incentives to reduce the prices and increase the quality of ATG service.

18. AirCell and Boeing in this proceeding have been solidly in favor of competition. They first proposed four licenses to provide ATG service, and more recently have supported a two license competitive solution. AirCell and Boeing are proposing to broaden the market for ATG communications (providing service to additional airlines and additional passengers) by calling for competition between service providers and at the same time developing technologies that could be expected to lower prices to consumers significantly.

19. Interestingly, Verizon/Airfone for its part has never mentioned in its submissions in these proceedings the fact that the high price of its monopoly services is certainly the most important reason for the failure of the current service, or suggested that it would lower these prohibitive prices. While saying that passengers want “broadband connectivity, high quality and reliability, (and) flexible rules” and promising “innovation” it never mentions anywhere the fact that $3.99 per minute ATG calls are a huge disincentive to use for passengers who are used to paying perhaps 5 to 10 cents per minute on their own cell phones and a few dollars a month for Internet access.

20. Not surprisingly, Verizon, which enjoys a monopoly now, wants "exclusive licenses" to provide ATG services. However, not only does it not mention the issue of price, it also avoids discussion of how it is using its current monopoly to promote its own terrestrial cellular service. The facts are, however, that Verizon tells its cellular subscribers that for a $10 fee they can have in-flight voice, data and fax calls for only 10 cents per minute, 2.5 percent of the $3.99 that it charges non-Verizon customers. If the Commission yields to Verizon and concedes "exclusive licenses," there is every reason to expect that the monopoly will continue to favor its own cellular customers, developing a pricing plan designed to maximize Verizon profits at the expense of consumers of other terrestrial CMRS carriers. Thus, another pernicious impact of granting Verizon an ATG monopoly is the likely collateral impact on skewing competition in the terrestrial wireless marketplace.

21. One important and dangerous outcome of such a situation would almost certainly be new pressure on the FCC for rate regulation, which would serve no one's interest. Yet in the absence of competition, passengers, including savvy business users, other cell phone companies, and airlines almost certainly will want rate regulation. To implement rate regulation, the Commission would have to select an appropriate cost methodology, such as rate-of-return regulation or forward-looking cost-based pricing, in order to set ATG prices at a level that protects consumers. The Commission would also have to determine the appropriate rate-of-return (or forward-looking cost of capital) to use in connection with such a cost methodology. The choice of such methodologies has proven to be extremely difficult and controversial in the wireline context. The Commission would also have to establish a pricing enforcement

mechanism, such as the tariffing system, and would have to set rules regarding ongoing changes to price levels, such as the complex price cap rules in the wireline context or the cable pricing rules used for setting basic cable TV rates. Moreover, the Commission would have to balance the rights of consumers to reasonable pricing against the reasonable economic expectations of the licensee, which may have bid for its spectrum based on an expectation of being able to charge monopoly prices. Finally, notwithstanding all the effort that is likely to go into designing such a system – or any alternative regulatory mechanisms that the Commission might be under pressure to develop in order to remedy the impacts of Verizon/Airfone's monopoly on ATG consumers – given the incomplete information available and the imperfect abilities of regulators, the results are likely to be less beneficial to consumers than the results of a truly competitive market structure.

22. Airlines as well as passengers will be hurt by the maintenance of monopoly based on "exclusive licenses" in ATG services. Several U.S. carriers are struggling at this point in time, and some have been forced into bankruptcy. All are looking for additional sources of revenue, as are airlines around the world. Currently a few airlines derive only minimal revenue from the Verizon/Airfone system and have little leverage with the monopoly supplier. This is the situation that prevailed in long-distance telephony in the late 1960s. Then, many American companies large and small were held hostage by AT&T and disliked having to deal with the giant monopoly. When the FCC in the late 1960s asked them if they wanted competition from MCI and other providers, they welcomed it and supported the FCC's

courageous and ultimately successful efforts to break the AT&T monopoly and introduce competition.

23. Airlines today could derive significant revenues from ATG communications. What they want is a choice of providers so that they can bargain between them the way corporations do in the terrestrial and data world. If the cost of service negotiated with a supplier was low enough, some airlines no doubt may offer free Wi-Fi connectivity to passengers as a way of filling seats. Choice would also allow airlines to bargain with providers for a higher share of revenues, which they might use as a competitive inducement to flyers. AirCell estimates that revenue from in-flight ATG services could reach $510 million a year. Airlines currently get about $3 million annually as their share of the revenues from current service. It is reasonable to expect that they will get substantially more as their share of the proceeds from real competitive service.

24. Airlines also will benefit from competition because it will allow them to sign shorter-term contracts, giving them flexibility to change services to their advantage and that of their passengers. The current monopoly system leads to rigid, long-term contracts which give airlines and consumers little flexibility.

25. Another question is whether satellite communications constitute competition for ATG connections. Verizon/Airfone cites a variety of satellite options to suggest that it will face competitors in domestic ATG communications. It is revealing to note, however, how expensive these alternatives are. The lowest prices among the satellite options currently available are offered by Globalstar & Iridium. Their prices range from $.55 to $1.60 per minute for voice communications, and these providers are essentially

incapable of providing broadband and similar services that will be qualitatively competitive with broadband ATG service. Even new systems now contemplated are likely to cost passengers in the neighborhood of $30 per flight for data and they require expensive airborne equipment that is not practical for short domestic flights or for smaller airplanes. 2/ Broadband-capable satellites – with their higher costs (up to $10 per minute for voice calls) – may be a useful option for international flights, but at this time they are not a competitive option for flights within the United States. The fact that Verizon/Airfone suggests that satellite phones can provide competition suggests that it has no intention of letting ATG prices fall significantly if it can keep its monopoly, and might instead use the continuing monopoly to entice business users to use its terrestrial system.

26. Contrary to Verizon's contention, monopolies – like the one that would be continued in ATG communications if there is only one provider – rarely innovate. Why should they? Monopolists have an interest in squeezing maximum profits from their existing (sunk) capital investments. They have no interest in "creative destruction" or in replacing old capital with new before it is literally worn out, although fast adjustments in technology are the essence of modernization in today's telecommunications markets, and indeed in the whole larger and more competitive world economy. Indeed, prior to this proceeding, Airfone had never once petitioned the FCC to amend the ATG rules to allow broadband service. Instead, Airfone has continued to provide expensive, narrowband service to fewer and fewer consumers, and it was the FCC that eventually launched this proceeding to benefit consumers, not

2/ AirCell Inc., Market Requirements for Broadband Airline Passenger Communications, September 13, 2004, p. 5.

Airfone. Leaving Airfone with a monopoly, therefore, could cause the service to stagnate once again, and might well have other costs, including the loss of a chance for the U.S. to develop export markets for technologies that are much more likely to be developed in a competitive ATG market than in one dominated by a monopoly.

27. Another long-recognized benefit of competition is that it provides strong incentives favoring technological innovation. Some have raised concerns that dividing the limited available ATG spectrum among two (or more) companies might create insurmountable difficulties and restrict the licensees' ability to provide broadband service. AirCell has submitted extensive technological evidence in the record of this proceeding demonstrating that this idea is simply incorrect. But even if this were a valid concern, competition in the ATG service inevitably will spur competing licensees to develop solutions to any technological difficulties that may arise.

28. Experience in the telecommunications industry validates this point. For example, in the wireline telephone context, it was thought up until the early 1990's that limitations on the bandwidth capacity of telephone companies' copper subscriber loops – and the very high cost of ubiquitously deploying fiber to the home – would preclude the telephone companies from providing high-bandwidth services on a large scale to mass market residential customers. The telephone companies' local loop monopoly at the time gave them little incentive to deploy new technologies to overcome this problem. However, when cable system operators began deploying "cable modem" service to deliver high-capacity Internet access to mass market residential customers, the telephone companies finally faced a competitive challenge that provided an incentive for them to solve the previously insurmountable

technological challenge of limitations on copper loop capacity. The result: high-bandwidth Digital Subscriber Line ("DSL") service over copper loops.

29. Thus, experience teaches that monopolists who face no serious competition lack any incentive to innovate or to develop new technologies for spectrum efficiency or other purposes, while providers facing competition have strong incentives to develop solutions to any such technological problems. Of course, the ATG sector itself provides the strongest validation of this point. As discussed above, despite a monopoly on service in the licensed ATG service to date, Verizon/Airfone has been content to let the service atrophy until others have come forward with ideas to develop it. On the other hand, as a competitive entrant, AirCell has developed new, less costly technology to profitably serve the much smaller general aviation sector.

30. In summary, the FCC should not risk auctioning a single ATG license because selling off a monopoly is not the equivalent of competition and is not in the interests of consumers or the airlines, whose passengers should be the ultimate beneficiaries of this rulemaking. Maximizing the "up front" sale price of this segment of bandwidth will not achieve competition or reflect combined wisdom of the marketplace on the technical merits of one license versus two licenses in the ATG band, but is a sure way to guarantee a monopoly in air-ground services.

31. The FCC's objective in ATG communications should be low cost, expanding service, and rapid development of new products for consumers. Neither the FCC nor passengers nor the airlines have any interest in continuing a monopoly of ATG communication, even if it is one that has been auctioned off. The interest of

consumers (passengers), airlines, and the country is in competition that will expand the market and create a leading edge industry in the United States.

I declare, under penalty of perjury, that the foregoing is true and correct to the best of my information, knowledge and belief.

Paul A. London

December 7, 2004

APPENDIX

Biography

Paul A. London, Ph.D.
December 6, 2004

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Education

1974	Harvard University, Kennedy School of Government (Ph.D.) Political Economy and Government
1974	Harvard University, Kennedy School of Government (M.A) Public Administration
1958	Harvard College (B.A.) Government (Magna cum laude)

Professional Career

2000 - 2003	Visiting Fellow at the American Enterprise Institute for Public Policy Research
1997 – 2000	Senior Policy Advisor at the U.S. Department of Commerce
1993 – 1997	Deputy Undersecretary of Commerce for Economics and Statistics
1980 – 1993	President, Paul A. London and Associates, Inc.
1978 –1980	Executive Director, Coalition of Northeastern Governors
1977 – 1978	Deputy Assistant Administrator for Conservation Policy at the Federal Energy Administration and the Department of Energy
1973 – 1977	Executive Director of the New England Economic Research Office of the New England Congressional Caucus
1972	Staff, Senate Banking Committee
1971- 1972	Legislative Assistant to Sen. Walter F. Mondale
1970 – 1971	AID Grantee India

1969 – 1970	U.S. Department of State detailed to the Kennedy School
1966 – 1968	U.S. Department of State: Detailed to the Agency for International Development, Saigon, Viet Nam
1965 – 1966	U.S. Department of State: Deputy Provincial Representative, Ba Xuyen Province, Soc Trang, Viet Nam
1962 –1964	Deputy U.S. Delegate to the Agriculture Committee of the Organization for Economic Cooperation and Development (OECD), Paris
1960 – 1962	Foreign Service Office, State Department Bureau of European Affairs, Office of Regional Affairs (European Common Market (EEC), OECD, NATO)

Books

Forthcoming	Working title: *The Competition Solution: The Bipartisan Secret Behind American Prosperity,* forthcoming from the AEI Press, February 2005.
1975	*Merchants as Promoters of Rural Development: An Indian Case Study,* Praeger Publishers. Based on 250 interviews with rural merchants selling fertilizer and irrigation equipment.

Articles and Book Chapters

2003	*Health Care Needs a Push to Modernize,* Newsday, Viewpoints, January 23, 2003, p. A30. Reprinted Detroit Free Press, and others.
2000	*Fed Must Fix Speculation, Not Inflation,* Newsday April 19, 2000. Reprinted in Houston Chronicle and others.
1998	*Clinton is a 'Tom Jones' for Our Times.* Newsday, August 22, 1998. Reprinted in Charlotte Observer, Houston Chronicle, and the St. Paul, Bowling Green and other newspapers.
1990	*Deficits in Trade and Leadership,* The Washington Quarterly, Autumn 1990 with Paula Stern
1989	*To Fight Inflation, Get Market Share,* The Washington Post, August 24, 1989
1988	*Slay Inflation with Rapid Growth,* The New York Times, Dec. 25, 1988

1988 *Awaiting President Greenspan,* The Journal of Commerce, Sept. 20, 1988

1988 *The Case for Competition,* The Washington Monthly, May, 1988

1987 *The Big Industries That Are a Big Drag on the Economy,* The Washington Post, Oct. 15, 1987

1987 *What Ford Can Afford,* The New Republic, June 8, 1987

1985 *Car Bomb,* The New Republic, Nov. 25, 1985

1983 *An Economic Allegory: It's Time to Think Big,* The New Republic, Jan. 31, 1983.

1983 *The Prospects for a Decade of Falling Energy Prices and Their Implications,* Public Utilities Fortnightly, Oct. 27, 1983.

1981 *How Fast Will Gas Prices Rise Under Decontrol?* Policy Forum, National Journal, August 8, 1981

1981 *Inflationary Secrets,* The New Republic, March 28, 1981

1978 *Making Redevelopment Politically Acceptable.* 10 page Chapter in "Revitalizing the Northeast" by George Sternlieb and James W. Hughes of the Center for Urban Policy Research Rutgers University.

1969 *Etude de Development, Region du Bandama, Structures de Modernisation et Cout de la Mise en Valeur,* @ 250 pages. Written with collaborators from International Systems Development, Inc. for the Government of the Ivory Coast.

Recent Professional Accomplishments and Undertakings

1993 – 2000 Department of Commerce:

Advised the Secretary of Commerce to increase the Department's involvement in health care policy because: 1) businesses pay a substantial share of the costs, 2) sector accounts for 13 percent of GDP and inflation is unabated in it, 3) IT in healthcare lags other sectors by a decade, 4) modernization would create large markets for U.S. technology and software companies, and 5) a modern, lower cost healthcare industry would be a competitive advantage for the U.S.

Represented the Department in the development of privacy regulations for electronic healthcare information under the terms of the Healthcare Insurance Portability and Accountability Act of 1996

Member of White House Task Force responding to the 1999 Institute of Medicine Report on medical errors (To Err is Human). Crafted important sections of the response which was drafted at the Agency for Healthcare Research and Quality (AHRQ/HHS)

Created the Working Group on the Pricing Outlook in 1994. Chaired the group which assembled the Department's 150-200 industry experts and reported quarterly on the inflation outlook in covered industries. The group's reports correctly predicted that inflation would not be a problem despite low unemployment because competition was preventing companies from raising prices.

Sought to modernize the collection of economic data by the Census by pushing for computerization of the process, which is still largely reliant on mailed or faxed information. Organized a series of meetings on this subject.

Served as Acting Undersecretary from 1993 into 1994, while the Undersecretary-designate awaited confirmation. Worked with the principal statistical agencies of the U.S. government on efforts to coordinate and computerize data collection and exchanges of information between agencies.

Participated in the analysis and release of quarterly and monthly economic data on GDP, trade, retail sales, investment from both the Census and the Bureau of Economic Analysis (BEA).

Testified before the Senate Banking Committee for the Department on the likely benefits of the NAFTA, 1993.

Testified before the House Appropriations Committee on the controversial issue of "Green GDP" and how it should be calculated.

Promoted extensive research based on a longitudinal Census database on job creation and destruction. The database shows that in most industries almost ten percent of jobs disappear in any given year while a similar number of new jobs are created. Additional research suggested the impact of trade, technology and similar variables on rates of job destruction and creation.

1980 – 1993 **Research and Consulting Projects**

Energy-related research projects included:

*Report on the Economic Costs of Failing to Assure Transmission Access for Qualified Facilities (QF) and Independent Power Producer (IPP) Generators,*1988, 44 pages, testimony before the Federal Energy Regulatory Commission on behalf of the American Iron and Steel Institute and the Ad Hoc Committee for a Competitive Electric Supply System

Eight Billion Dollars a Year for a Five Billion Dollar Service: Inflated Operations and Maintenance Costs for Natural Gas Transmission and Distribution, 34 pages for the NGSA, 1987

Developing Support in Washington for Expanded Hydro-electric Imports to the Northeast, 1986 for Hydro-Quebec. 84 pages.

The Role of Increased Natural Gas Supplies in the Northeastern Electric Utility Market, 21 pages for the NGSA

Natural Gas and Inter-fuel Competition in New England during the Mid-1980s, 77 pages plus appendices, 1985 for the NGSA

Why Natural Gas Consumers Should Support Decontrol, 1983 for the NGSA

Interruptible Natural Gas Prices in Florida, Alabama, Georgia, and North and South Carolina, 1983 for the NGSA

Analysis and Recommendations Regarding Public Service Commission's Order 82-10, 27 pages for Occident Chemical. Submission to the New York PSC.

Periodic reports to the New England Fuel Institute and the Independent Fuel Terminal Operators Association (oil dealers and terminal operators who favored the deregulation of natural gas)

Trade Related Projects:

Investment, Trade, and U.S. Gains from the NAFTA, 1992

Competitive Impacts and Trade Policy Issues Raised by the Effort to Suspend the Tariff on Ranitidine Hydrochloride, 1991 for SmithKline Beecham. A trade fight between SKB and Glaxo relating to anti-ulcer drugs.

Trade Issues in Biotechnology, 1990 for the clients of the law firm of Ginsburg, Feldman, and Bress.

Study of the likely effects of the success or failure of the Uruguay Round of trade negotiations on the U.S. economy over the medium and longer term. For the MTN Coalition. (See MTN press release October 12, 1990 – *New Calculations Suggest a $400 Billion Swing in U.S. GNP, etc.)*

Rebuilding American Manufacturing in the 1990s: The Case Against Steel VRAs, 1989 for the Coalition of Steel Using Manufacturers

The Effect of Imports of Plastic Injection Molding Machines on the National Security, 1989 for the lawyers representing the Japanese industry and some American users in a section 232 case.

The U.S. Tariff on Zinc Diecasting Alloys and the Uruguay Round, August, 1989 for Australian zinc and alloy producers. As a result of the paper, distorting tariffs on alloys were eliminated.

Competitive Market Structure Maximizes Consumers' and Society's Welfare