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## **Boeing Unveils High-Speed Global Communications Service - Live In-Flight Internet, E-Mail, TV; Available Next Year**

### **CNN, Loral, Alenia, Matsushita, Mitsubishi, CNBC to Participate**

**NEW YORK AND LONDON, April 27, 2000** -- The Boeing Company [NYSE: BA] today announced plans to develop a global communications network and other services that will revolutionize the way people travel. Called [Connexion by Boeing<sup>SM</sup>](#), the system will provide air travelers with an unparalleled array of high-speed data communication services via a space-based network -- all for about the same price as cellular phone service.

Using [Connexion by Boeing<sup>SM</sup>](#), commercial airline passengers soon will be able to access the Internet, e-mail, television, news and information -- essentially any form of high data-rate communication today's business or leisure travelers require -- in real-time at 40,000 feet. Intended to extend home- and office-like connectivity into the skies, Boeing's mobile broadband services will help keep people in touch, even when moving 500 mph. Other applications for [Connexion by Boeing<sup>SM</sup>](#) include corporate and private business jets, U.S. government platforms, and aircraft health monitoring.

"Boeing intends to be a leader in the new mobile economy -- and that means helping our airline customers and their passengers stay globally connected at all times," said Phil Condit, Boeing chairman and chief executive officer. "In commercial air travel today, you have a few choices -- you can read a book or a magazine or watch one of several movies. But soon, when you can watch a live soccer match or e-mail family or shop online or keep an eye on your stocks -- the airplane will begin to look like your home or office and the experience of travel will change."

Boeing has signed memoranda of agreement with CNN Inflight Services, Atlanta, Ga.; Mitsubishi Electric Corp., Tokyo, Japan; Alenia Spazio, a Finmeccanica Company, Rome, Italy; Loral Skynet® of Bedminster, N.J.; Matsushita Avionics Systems Corp., Bothell, Wash.; and CNBC, Fort Lee, N.J. The company currently is negotiating with prospective airline partners, and additional content and service suppliers.

While anticipated revenues for [Connexion by Boeing<sup>SM</sup>](#) have not been announced, analysts project the program's addressable market to be about \$70 billion over the next 10 years. Company officials said they hope to capture a significant share of that market with the venture's unique services.

With [Connexion by Boeing<sup>SM</sup>](#), airline passengers will be able to choose from a multitude of personalized communications services, including Internet and corporate intranet access, e-commerce, live television and entertainment, transmission and receipt of data, shopping, travel and destination information - all in real time. Airline operators also will benefit from in-flight access to aircraft and crew data.

Digital broadband capability, which provides increased bandwidth -- or a larger "pipeline" -- for two-way interactive applications, allows customers to send and receive data at rates equivalent to cable Internet access. To provide the capability to airborne travelers, Boeing will use advanced antenna

technology and existing satellites, while extending to a mix of new and existing satellites as the service matures.

"Clearly, this is an exciting growth market for Boeing," said Jim Albaugh, president of Boeing Space and Communications Group. "Commercial information and communications are areas where we understand the customer, where we bring unique solutions no one else has the capabilities or resources to provide, and where we can apply our knowledge of large-scale systems integration to provide mobile users seamless connectivity," Albaugh said.

The introduction of *Connexion by Boeing*<sup>SM</sup> follows the pending acquisition of Hughes Space & Communications and signals the move by Boeing into commercial, space-based communications markets.

Intended as a global service, initially *Connexion by Boeing*<sup>SM</sup> will be available to commercial airline customers operating in North America. Service later will be expanded to other regions, over ocean areas and onto other moving platforms. The system is already available for installation on private business jets today and will be available on commercial aircraft shortly. System installations are expected to begin in late 2001, with operability expected shortly thereafter.

"Our immediate task is to make these services available to the airlines and the three million airline passengers who board some 42,300 flights on Boeing-built planes daily. The system seeks a far broader market," Condit said. "Ultimately, we see *Connexion by Boeing*<sup>SM</sup> as an enabler for addressing civil and military information needs, such as air traffic management and integrated military communications."

With headquarters in Seattle, The Boeing Company is the largest aerospace company in the world and the United States' leading exporter. The company's capabilities in aerospace include commercial jetliners, military aircraft, rotorcraft, electronic and defense systems, missiles, rocket engines, launch vehicles, and advanced information and communication systems. The company has an extensive global reach with customers in 145 countries and manufacturing operations throughout the United States, Canada and Australia.

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From xSP News, available at <http://www.internetnews.com/xSP/article.php/349991> (last visited on Sep. 7, 2004).

**April 28, 2000**

## **Boeing Aims Plan for In-Flight Communications Service**

By **[Carol King](#)**

[The Boeing Co.](#) Thursday revealed plans to develop a global communications network that will provide air travelers with an array of high-speed data communication services via a space-based network.

Commercial airline passengers soon will be able to access the Internet, e-mail, television, news and information in real-time at 40,000 feet, using the network, dubbed Connexion by Boeing. Intended to extend home- and office-like connectivity into the skies, the Boeing ([BA](#)) mobile broadband service is expected to have a price comparable to cellular phone service. Other applications for the communications system will include corporate and private business jets, U.S. government platform and aircraft health monitoring.

Digital broadband capability, which provides increased bandwidth for two-way interactive applications, will allow customers to send and receive data at rates equivalent to cable Internet access. Boeing will use advanced antenna technology and existing satellites, while extending to a mix of new and existing satellites as the service matures.

To date, Boeing has signed memoranda of agreement with CNN Inflight Services, Mitsubishi Electric Corp., Alenia Spazio, Loral Skynet Matsushita Avionics Systems Corp. and CNBC. The company has ongoing negotiations with prospective airline partners, and additional content and service suppliers.

The introduction of the service follows the pending acquisition of [Hughes Space & Communications](#) and signals the move by Boeing into commercial, space-based communications markets. Boeing is regarded as a leader in the aerospace industry; its capabilities include the manufacture of commercial jetliners, military aircraft, rotorcraft, electronic and defense systems, missiles, rocket engines, launch vehicles and advanced information and communication systems.

"Clearly, this is an exciting growth market," said Jim Albaugh, president of Boeing Space and Communications Group.

"Commercial information and communications are areas where we understand the customer, where we bring unique solutions no one else has the capabilities or resources to provide, and where we can apply our knowledge of large-scale systems integration to provide mobile users seamless connectivity."

From Boeing News Release, available at [http://www.boeing.com/news/releases/2001/q2/news\\_release\\_0106131/html](http://www.boeing.com/news/releases/2001/q2/news_release_0106131/html) (last visited on Sep. 7, 2004)

## American, Delta and United Airlines Join With Connexion by Boeing to Pursue Broadband Inflight Connectivity Venture

Connexion by Boeing  
News Conference -  
Highlights

28.8

56

200

[28.8](#) | [56](#) | [200](#)

Connexion by Boeing  
News Conference - Full  
Version

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[28.8](#) | [56](#) | [200](#)



In order to view this video you will need the RealPlayer plug-in installed in your browser.

[View the Conference with Windows Media Player](#)

In order to view this video you will need the Windows Media Player plug-in installed in your browser.



### Innovative Technology Will Conveniently Keep Airline Passengers Connected to Internet While In Flight

WASHINGTON, D.C., June 13, 2001 - American (NYSE:AMR), Delta (NYSE:DAL) and United (NYSE:UAL) airlines today announced a new partnership with Boeing (NYSE:BA) aimed at providing millions of worldwide airline passengers each year with two-way broadband connectivity to e-mail, the Internet, corporate intranets, live television and entertainment, and other services while in flight.

In a joint news conference, three of the world's leading airlines and [Connexion by Boeing](#) announced they have signed a Letter of Intent to pursue forming a new global business venture to provide broadband communications and data services to commercial aircraft. The proposed venture would be jointly owned by Boeing and the three airlines, with Boeing serving as the major shareholder with overall management responsibility.

"It will take this kind of collaboration to bring a high-quality service to the airline passenger and the entire marketplace," said Scott Carson, president, Connexion by Boeing. "Each of the airlines and Boeing bring together a critical mass to help ensure success for this service with airline passengers and the global airline industry."

Upon signing definitive agreements, Boeing and the airlines each will contribute funding, certain intellectual property, and other assets necessary to carry on the business of the proposed venture. As part of the definitive agreements, the three airlines will equip a total of 1,500 aircraft with the venture's innovative, high-speed broadband Internet connectivity service, which will retain the Connexion by BoeingSM name. The timing of the first installation will be in the second half of 2002.

"This is an exciting new frontier for each of the founding airlines," said James A. Beer, vice president, corporate development and treasurer for American Airlines. "Our goal is to bring a high-quality service to the market - one that will materially enhance the

productivity of passengers while in flight. This joint effort between the four companies is essential to ensuring we create a service that will be valued by customers."

The next steps will involve the three airlines and Boeing working together to further develop the venture's service offering and business plan, and complete the definitive agreements required to launch the new service.

"The three airlines and Boeing bring exceptional familiarity with aircraft and leading-edge space and aviation technology," said Ray Valeika, senior vice president - Technical Operations, Delta Air Lines. "This provides the expertise necessary to develop a quality product that is attractive to the industry as a whole."

"There currently is no service comparable to this in the market," said Larry DeShon, senior vice president - Marketing for United Airlines. "Each of the airlines brings an unprecedented level of knowledge about the in-flight connectivity needs of passengers. In the end, it is passengers who will truly benefit from this service."

Current long-term forecasts show the worldwide commercial airplane fleet of about 14,500 jetliners growing at a rate of 4.8 percent a year. In the next 24 hours alone, 4.7 million people will board 41,500 flights around the world.

"The scope of the installations will allow the venture's system and service to be designed and developed for reasonable costs," said Boeing's Carson. "That's good news for both the airlines and their passengers."

Connexion by Boeing, the first truly broadband communication service for people on the move, is the market-leading initiative working to bring today's high-speed, cable-quality Internet and company intranet data services to the airborne environment. Airline passengers will soon be able to choose from a multitude of personalized real-time services including Internet and corporate intranet access, e-commerce, live television and entertainment, transmission and receipt of data, shopping, travel and destination information. Airline operators also will benefit from in-flight access to airline and crew data not available through traditional communication channels. For additional information, visit the Connexion by Boeing web site at [www.connexionbyboeing.com](http://www.connexionbyboeing.com).

American Airlines, a subsidiary of AMR Corp. (NYSE: AMR), is celebrating its 75th anniversary in 2001. With a fleet of 719 aircraft,

American is one of the largest scheduled passenger airlines in the world and employs more than 117,000 people around the globe. Together with its regional affiliate, American Eagle, American serves 238 cities in 51 countries with more than 4,100 daily flights. American is the only airline to offer "More Room Throughout Coach." For more information, please visit <http://www.aa.com/>.

Delta Air Lines' goal is to become the No. 1 airline in the eyes of its customers, flying passengers and cargo from anywhere to everywhere. People choose to fly Delta more often than any other airline in the world on 5,234 flights each day to 367 cities in 64 countries on Delta, Delta Express, Delta Shuttle, Delta Connection carriers and Delta's Worldwide Partners. Delta is a founding member of SkyTeam, a global airline alliance that gives customers extensive worldwide destinations, flights and services. For more information, go to <http://www.delta.com/>.

United Airlines offers nearly 2,300 flights a day on a network that spans the globe. United NewVentures is a wholly owned subsidiary of UAL Corp. that was created to focus the airline's Internet initiatives and investments into one company. United.com, the official Web site for United Airlines, allows passengers to research flight, schedule and fare information and purchase travel on over 500 airlines worldwide. More information and a complete list of available services and functions can be found at <http://www.united.com/>.

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From Computerworld, available at <http://www.computerworld.com/mobiletopics/mobile/story/0,10801,66221,00.html> (last visited on Sep. 7, 2004)

## **Airlines Break with Connexion by Boeing**

News Story by [Jennifer DiSabatino](#)

DECEMBER 03, 2001 ([COMPUTERWORLD](#)) - The three U.S. airlines that were teaming with The Boeing Co. to develop a high-speed Internet service for use on planes all said last week that they have pulled their financial support for the joint venture.

Citing the harsh downturn in business that has hit the travel industry since the Sept. 11 terrorist attacks, officials at American Airlines Inc., Delta Air Lines Inc. and United Air Lines Inc. said the planned Connexion by Boeing service has become an unaffordable luxury item, at least until the economy improves.

Chicago-based Boeing confirmed that its joint venture with the three airlines has been suspended. But Boeing spokesman Terrance Scott said the airplane manufacturer will continue the Connexion project with German airline Lufthansa AG, which has also announced plans to offer the service in its aircraft.

"There is some funding [from the airlines], but we're not dependent upon that to go forward," Scott said. "We're still on track with Lufthansa."

Some of Boeing's private aircraft and government customers have also shown an interest in Connexion, he added. "What they're looking at is, can we accelerate [implementation of] the service?" he said.

Lufthansa affirmed that it plans to stay involved with the project. But Boeing and Lufthansa are now eyeing a much smaller deployment of the Connexion service than originally envisioned, starting with 80 planes by late next year.

Fort Worth, Texas-based American, Atlanta-based Delta and Chicago-based United all signed on to help fund the development of Connexion in June. The first hint that they were wavering came two months ago, when Delta said it was re-examining the proposed schedule for testing and rolling out the service in the wake of the terrorist attacks.

Andy McDill, a spokesman for subsidiary Delta Technology Inc., said last week that Delta's decision to withdraw from the joint venture with Boeing is temporary.

"We're suspending it for the moment," McDill said. "It's a financial and resource issue at this point. We still believe [in high-speed Internet access on planes]. We just need to focus on our core business." He gave no indication of when Delta might resume its funding of Connexion's development.

Connexion is being designed to provide airplane passengers with broadband access to the Internet, e-mail and other services. Airlines will have to retrofit their planes with Ethernet-type wiring and phased-array antennas to use the service, according to Boeing.

*Laura Rohde of the IDG News Service contributed to this report.*

**Read accompanying story:**

- [Service Still Eyed as Possible Security Tool](#)

**Connexion Lost**  
*Plans for rolling out the Connexion by Boeing technology have changed dramatically since Sept. 11.*

**THEN**

Boeing was working with four airlines to offer the Internet access service in 1,500 planes starting in the middle of next year.

**NOW**

From Ananova, available at [http://www.ananova.com/business/story/sm\\_460827.html](http://www.ananova.com/business/story/sm_460827.html)  
(last visited on Sep. 7, 2004)

**Ananova:**

## **American Airlines, United, Delta pull out of Boeing's internet system**

Boeing Corp said AMR Corp's American Airlines, Delta Air Lines and UAL Corp's United Airlines have withdrawn their financial support for Boeing's Connexion system, a project intended to connect airline passengers to the internet, the Wall Street Journal reported.

The Connexion system was originally scheduled for installation on as many as 1,500 of their jetliners beginning in mid-2002.

Boeing said the airlines decided to pull out following the Sept 11 terrorist attacks in the US.

The airlines, which are losing millions of dollars each day, told Boeing that Connexion was among ventures now considered expendable, the report said.

"They told us that it is likely that they would come back as customers rather than as equity partners," said a spokesman for Connexion, based in Seattle.

The Connexion project, described by the Journal as Boeing's most ambitious diversification efforts, appears to be in jeopardy now that the three largest US airlines have pulled out as partners on the project.

However, some company executives weeks ago suggested the focus had shifted to providing airborne security by transmitting data or video to ground controllers.

Several senior Boeing executives, including Boeing chairman and chief executive officer Phil Condit, have suggested the Connexion business may be able to evolve into one that serves the heightened interest in aviation security. So far, Boeing has released no detailed plans about what that might involve; nor has it said who would pay for it.

Boeing's primary rival in this arena, a partnership comprising Airbus Industrie and Tenzing Communications Inc of Seattle, previously said some of its plans for Internet-in-the-sky have been scaled back while others are on indefinite hold.

A spokesman for American Airlines said the carrier is "still very interested in high-speed internet service for our customers, but right now we are concentrating all of our efforts on our core operations."

He could not estimate how long the company would wait before it begins examining the internet venture again, but people familiar with the situation said it probably would be at least a couple of years. NNN

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From Boeing website, available at <http://www.boeing.com/connexion/background.html>  
(last visited on Sep. 7, 2004)

## **Connexion by Boeing<sup>SM</sup>**

### **Focus on anytime, anywhere connectivity**

Connexion by Boeing<sup>SM</sup> is a mobile information services provider revolutionizing the way people on the move communicate, inform and entertain themselves. It does so by providing high-speed, two-way Internet-based connectivity to aircraft in flight.

### **The Connexion by Boeing<sup>SM</sup> service**

Connexion by Boeing serves two important market segments: commercial aircraft operators and their passengers as well as executive aircraft, including operators of private and government executive jets.

Using laptops or personal digital assistants (PDAs), passengers can enjoy secure broadband access to the Internet, personal and business e-mail accounts and company intranets. They also will be able to send and receive attachments and view entertainment - all at DSL-like speeds.

Connexion by Boeing's value extends beyond passenger services. The service also brings value to aircraft operators, enabling them to use Connexion by Boeing's extraordinary bandwidth to obtain operational efficiencies, improve customer service and enhance security. A worldwide network of ground stations and round-the-clock customer care support the service.

The Connexion by Boeing service is currently available to the executive services market in the United States, including operators of private and government aircraft. Commercial airline passengers will be introduced to the service in the first quarter of 2003, when both Lufthansa German Airlines and British Airways begin three-month service demonstrations. Japan Airlines and Scandinavian Airlines System (SAS) have announced plans to equip long-range jetliners in their fleets with the service beginning in 2004.

Full-scale launch of the Connexion by Boeing service is scheduled for early 2004, beginning with trans-Atlantic and Asia-Europe routes.

### **The Connexion by Boeing<sup>SM</sup> advantage**

Connexion by Boeing is backed by the resources and reputation of The Boeing Company. The system and service were devised by leveraging The Boeing Company's extraordinary breadth in space, satellites, communications and aircraft and by working intensively with 15 leading airlines worldwide in a process known as Connexion Working Together. The process contributed significantly to a common vision for passenger and operator benefits, and to ensure that the system and service are integrated seamlessly into airline fleets.

### **Further information**

Connexion by Boeing  
PO Box 3707, M-C 14-75  
Seattle, WA 98124-2207  
[www.boeing.com/connexion](http://www.boeing.com/connexion)

From The Guardian, available at <http://www.guardian.co.uk/airlines/story/0,1371,1218396,00.html> (last visited on Sep. 7, 2004)

## Boeing in control of broadband in the skies

**David Gow**  
**Monday May 17, 2004**  
[The Guardian](#)

Boeing, the troubled US plane-maker, is stealing a march on its European rival, Airbus, by seizing control of a market worth up to \$2bn (£1.1bn) a year in ten years: broadband in the skies.

Today an Airbus A340, flying from Munich to Los Angeles on flight LH452, will allow passengers to connect their lap-tops or mobiles to wireless broadband at 35,000ft.

The connection to the web, enabling passengers to send emails and link up with their company's intranet, is provided by Boeing via a series of satellites.

Scott Carson, president of Connexion by Boeing, says 50 aircraft will offer internet access by the end of this year and 150 by the end of 2005. Lufthansa is offering a flat rate of \$29.95 for an entire flight, including access to its free FlyNet portal giving news, weather and travel information.

The German carrier, which has installed FlyNet on five A340s and plans to equip its entire long-haul fleet of 80 Airbus and Boeing jets by the spring of 2006, is one of four airlines to sign up to Boeing which has lost its traditional dominance in plane sales to its European rival.

Mr Carson, who has signed deals with SAS, JAL and All Nippon Airways, said he was in talks with Singapore Airlines, China Airlines and British Airways to offer the same service.

Three US carriers were about to sign up until the September 2001 terrorist attacks sent the American aviation industry into a decline but Mr Carson says one US customer should emerge by the end of the year.

BA, which concluded a commercial service trial a year ago, is in protracted talks with Boeing which says the new service reduces the weight and number of wires in the traditional cabin, cutting fuel consumption.

Mr Carson says the service is targeted at the male executive aged under 54 and earning more than \$150,000 a year, with 62% of business travellers saying they are very interested in broadband in-flight access.

The cost of the basic three-hour connection should be \$14.95, though Lufthansa is offering 30 minutes at \$9.95, charging 25 cents a minute thereafter.

Mr Carson, who has easily outdistanced Airbus, whose own offering lags far behind, says the service will later this year offer "live" rebroadcast TV. He says it will also be extended to ships from mid-2005 while airline crews will control flight operations better, including security.

From Boeing News Release, available at [http://www.boeing.com/news/releases/2004/q1/nr\\_040105j.html](http://www.boeing.com/news/releases/2004/q1/nr_040105j.html) (last visited on Sep. 7, 2004)

## **China Airlines Selects Connexion by Boeing for In-flight Connectivity**

**SEATTLE, Jan. 5, 2003** - China Airlines (CAL) and [Connexion by Boeing<sup>SM</sup>](#), a business unit of Boeing (NYSE: BA), announced the signing of a Letter of Intent that will bring high-speed connectivity to travelers on commercial flights in and out of Taiwan. The LOI calls for the broadband data and entertainment service to be installed on the CAL long-haul fleet of aircraft beginning in late 2004. Financial terms were not disclosed.

"China Airlines is a clear leader in enhanced passenger service in a market that continues to openly embrace and implement new technologies," said Connexion by Boeing President Scott Carson. "We couldn't think of a better way to celebrate the new year going forward than to proudly announce China Airlines as our newest customer for in-flight mobile connectivity."

"As Internet technology improves, people depend on it more and more in everyday life," said Brian Chou, senior vice president of China Airlines. "China Airlines is proud to be the first airline in Taiwan to introduce in-flight mobile connectivity to better serve the needs of its passengers."

Initially, the agreement with Connexion by Boeing will cover CAL's long-haul fleet including Boeing 747-400 and Airbus A340-300 aircraft, and CAL will extend the service to other aircraft at a later date. The agreement outlines connectivity on certain long-haul flights between Taipei and Europe, and Taipei and North America. Specific routes also will be announced at a later date. In the interim, China Airlines and Connexion by Boeing teams will work together to define the installation schedule and levels of service that will be offered to CAL passengers.

Connexion by Boeing continues to build momentum as it prepares for the introduction of full-scale commercial service in early 2004. Lufthansa, Scandinavian Airlines System (SAS) and Japan Airlines have signed on as customers for the fastest available in-flight Internet, data and entertainment service. Singapore Airlines and All-Nippon Airways also have announced their intent to install the Connexion by Boeing service on their long-haul fleet of jetliners.

### **About Connexion by Boeing**

Connexion by Boeing is the mobile information services provider bringing broadband Internet, data and entertainment connectivity to mobile travelers. In addition to the commercial service offering, the Boeing business unit recently announced a high-speed connectivity solution for the business aviation market. For service-specific information visit [www.connexionbyboeing.com](http://www.connexionbyboeing.com) or for general information [www.boeing.com/connexion](http://www.boeing.com/connexion)

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## **New Era to Begin in 2004 with In-Flight High-Speed Connectivity**

### **Connexion by Boeing concludes record-setting year as it prepares for start of commercial service**

SEATTLE, Dec. 30, 2003 – [Connexion by Boeing](#), a business unit of The Boeing Company, (NYSE:BA) made history repeatedly in 2003 with a series of unprecedented breakthroughs in mobile connectivity. In 2004, a new chapter in the history of travel will be written when airlines begin offering real-time, high-speed Internet, intranet and e-mail access in flight for their laptop-toting passengers.

"History will record 2004 as the year when air travelers for the first time could choose to be connected while in flight to family, colleagues and friends," said Scott Carson, president, Connexion by Boeing. "With the ability of modern jetliners to directly link cities that can be 16 hours or more apart, keeping in touch becomes increasingly important for productivity as well as for the traveler's ability to maintain a healthy balance between work commitments and obligations to family, friends and community."

A first glimpse of the new world of in-flight high-speed connectivity was made available in early 2003 to passengers of Lufthansa German Airlines and British Airways. The three-month service demonstrations, involving daily round-trip flights between Frankfurt and Washington, D.C., then London and New York, generated a series of historic firsts. Among them:

- The first in-flight high-speed Internet access by passengers on commercial airline flights.
- The first in-flight, high-speed Virtual Private Network-secured corporate intranet access by passengers on commercial airline flights.
- The first regulatory authorizations to operate wireless devices aboard commercial airliners in flight.
- The first in-flight wireless Internet access by commercial airline passengers.
- The first two-way video-teleconference between the air and the ground during a commercial airline flight.
- The first two-way, real-time e-mail exchange in flight between two airline passengers flying on different airplanes.
- The first creation and publication of a web page on the Internet during a commercial airline flight, including written and photographic content.

The success of those trials, along with the ongoing Connexion Working Together process, involving more than 20 of the world's leading airlines, led to the first definitive

airline service agreements for Connexion by Boeing. Combined, Lufthansa, Scandinavian Airlines System (SAS) and Japan Airlines have placed initial orders to equip more than 100 of their airplanes.

Singapore Airlines and All-Nippon Airways also have signed letters of intent to equip their long-range fleets with the Connexion by BoeingSM service, and progress is being made toward definitive agreements. When final, Singapore and ANA will join Lufthansa and SAS as four of the leading airlines in the Star Alliance to offer in-flight broadband connectivity. In addition, Connexion by Boeing is gaining momentum in the executive-jet market: Kingdom Holding Co. of Saudi Arabia announced plans to install the Connexion by Boeing system, initially on a Boeing 747.

Connexion by Boeing is the only real-time, high-speed service available to commercial airline passengers, and the only service offering full, Virtual Private Network-secured access to personal and work-related e-mail accounts and intranets. Commercial airline service will begin in spring 2004 with Lufthansa. The service also is available to operators of both private and government executive jets, directly through Connexion by Boeing or through a partnership with Rockwell Collins.

Among other achievements in 2003, a major milestone was reached in July at Geneva, Switzerland, when the World Radiocommunication Conference approved the use of a range of radio frequencies for satellite-based communications for aeronautical purposes. The allocation cleared the way for regulatory authorities within each country's airspace worldwide to authorize certain in-flight connectivity services such as Connexion by Boeing. Agreements also were reached with satellite service providers, including Eutelsat, Intelsat and Space Communications Corporation.

### **About Connexion by Boeing**

Connexion by Boeing, recipient of the 2003 World Travel Award for World's Leading High-Speed Internet Services Provider, brings broadband Internet, data and entertainment connectivity to travelers. The Boeing business unit recently announced a high-speed connectivity solution for the business aviation market, and definitive service agreements with Lufthansa, Scandinavian Airlines System and Japan Airlines to equip their long-haul aircraft with the service beginning in early 2004. In addition, All-Nippon Airways, Singapore Airlines and Kingdom Holding Co. have announced their intent to install the Connexion by Boeing system on their long-range aircraft. For information about the Connexion by Boeing service, visit [www.connexionbyboeing.com](http://www.connexionbyboeing.com). For general information, visit [www.boeing.com/connexion](http://www.boeing.com/connexion).

From Boeing News Release, available at [http://www.boeing.com/news/releases/2004/q4/nr\\_040325j.html](http://www.boeing.com/news/releases/2004/q4/nr_040325j.html) (last visited on Sep. 7, 2004)

## **Connexion by Boeing Announces Pricing for High-Speed In-Flight Internet Service**

### **First-of-Its-Kind Service to Offer Customers Real-Time, Affordable Access for Less Than \$30 per International Flight; Leading Airlines Prepare for Rollout**

SEATTLE, Wash., March 25, 2004 – [Connexion by Boeing<sup>SM</sup>](#), a business unit of The Boeing Company [NYSE:BA], today announced pricing details for its high-speed in-flight Internet service scheduled to become commercially available this spring.

Connexion by Boeing has created a model that enables airline passengers to affordably extend their on-the-ground connectivity experience. The result is more choices for how to use their time in the air using either of two initial pricing plans, which will vary depending on flight length:

- **Flat Rate Pricing Option:** (Unlimited access to the Internet) \$29.95 for long-haul flights (more than six hours); \$19.95 for medium-haul flights (between three and six hours); and \$14.95 for flights less than three hours.
- **Metered Pricing Option:** 30-minute starter package for \$9.95 with rates of \$0.25 per minute thereafter.

The pricing is based on extensive customer research conducted individually and in conjunction with leading airlines in Europe, Asia and the U.S. and is intended to be affordable for all travelers seeking secure, reliable access to the people and information that are important to them. Connexion by Boeing SM, which provides a broadband connection to the aircraft, is the only Internet service that offers users a high-speed, real-time experience comparable to the one they currently enjoy at the office or at home, including unrestricted virtual private network (VPN) access to personal and work-related e-mail accounts and intranets, as well as entertainment applications and an in-flight portal for customer service and support.

“This is truly about increasing the connectivity choices for airlines and their passengers,” explains Connexion by Boeing Vice President of Marketing and Corporate Sales David Friedman. “Pricing puts the final puzzle piece in place for a successful commercial launch that will in turn revolutionize the way people work, communicate and entertain themselves while mobile, and really expands the choices they have for doing so.”

“Our research shows that 38 percent of frequent travelers are willing to pay at least \$25 per flight for full, high-speed access to the Internet and their corporate network,” said Forrester Research analyst Henry Harteveltdt.” In-flight broadband Internet access is a highly desirable amenity, especially among frequent business and leisure airline travelers. Airlines that don't offer passengers this kind of service risk losing a key segment of their customer base to carriers that do.”

Lufthansa will be the first airline to launch the Connexion by Boeing service on commercial flights originating from Germany this spring. Connexion by Boeing also has service agreements with several of the world's leading passenger airlines including Scandinavian Airlines System (SAS), Japan Airlines and ANA. Singapore Airlines and China Airlines also have expressed their intent to install the service in subsequent months.

Unlike narrowband services in the market today, the Connexion by Boeing service eliminates unexpected surprises by ensuring that business and leisure travelers won't have to change their terrestrial habits, count minutes or compute their kilobytes to gain access to the Internet and e-mail applications. Connexion by Boeing is also working directly with third-party mobile service providers to further simplify the customer experience and offer them the opportunity to have high-speed Internet access in planes through their home provider. As those agreements solidify, passengers will be able to log onto the Connexion by Boeing service using the same ID and password they might use in the home or office and have streamlined billing and customer support.

“We've met several significant industry and technology milestones to get to this point including: gaining international regulatory approvals; establishing an extensive global ground and satellite network; conducting successful service trials and securing airline commitments; and achieved unparalleled technology developments,” added Friedman. “We look forward to working with our airline partners to make true in-flight Internet access an affordable reality.”

### **About Connexion by Boeing**

Connexion by Boeing, recipient of the 2003 World Travel Award for World's Leading High-Speed In-flight Internet Services Provider, brings high-speed Internet, data and entertainment connectivity to travelers. Connexion by Boeing also offers a high-speed connectivity solution for the business aviation market and has announced plans to enter the maritime market. For information about the Connexion by Boeing service, please visit [www.connexionbyboeing.com](http://www.connexionbyboeing.com).

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From Crain's Chicago Business, available at [http://www.chicagobusiness.com/cgi-bin/news.pl?post\\_date=2004-03-25&id=11898&rel=1](http://www.chicagobusiness.com/cgi-bin/news.pl?post_date=2004-03-25&id=11898&rel=1) (last visited on Sep. 7, 2004)

March 25, 2004

## **Stuck in the air? Surf the Web**

Boeing's Internet service lands first airline client

By [Kelly Quigley](#)

Boeing Co. on Thursday said its passenger Internet service will debut next month on Germany's largest carrier, Deutsche Lufthansa AG, and will be followed by several more European and Asian airlines later this year.

Chicago-based Boeing declined to disclose terms of its deal with Lufthansa, but said the airline would pay a one-time fee to have its fleet outfitted with the service, dubbed Connexion by Boeing. Boeing will continue to own and maintain the equipment, and will share revenues with the airlines.

Passengers will have the option of paying \$9.95 per hour of Internet use, with 25 cents for each additional minute, or paying a flat rate that varies depending on the length of the flight. For unlimited access, passengers will pay \$14.95 for flights three hours or less, \$19.95 for flights three to six hours and \$29.95 for long-haul flights longer than six hours.

### **Big bucks for Boeing**

By 2010, when Boeing thinks the market for passenger Internet service will mature, the aerospace company expects Connexion to generate between \$2.5 to \$3 billion annually. "We think we can capture roughly between 4,500 and 5,000 of the 14,000 aircraft that will be flying at that time," a spokesman said.

In addition to Lufthansa, Boeing has reached definitive agreements with Scandinavian Airlines System (SAS), Japan Airlines System Co. Ltd. and All Nippon Airways Co. The spokesman said the company is close to reaching deals with Singapore Airlines and China Airlines.

There are still no U.S.-based carriers to sign on for the new service, but Boeing said that will change very soon. "There's been a real uptick in domestic interest in the last six to eight months," the spokesman said. "U.S. airlines are moving away from day-to-day survival," and starting to look at new ways to generate sales and compete with their rivals, he said.

Boeing is in talks with "most of the major" U.S. airlines, and expects some decision-making in the near future, he said, declining to say which carriers have expressed interest in the new service.

Some domestic carriers, including Elk Grove Township-based United Airlines, have opted for a different service provider. United, a unit of bankrupt UAL Corp., in November began offering e-mail service from Verizon Airfone, a unit of New York-based Verizon Communications Inc. (ChicagoBusiness.com, Nov. 11).

From Forbes, available at

[http://www.forbes.com/technology/networks/2004/06/17/cz\\_qh\\_0617wifi.html](http://www.forbes.com/technology/networks/2004/06/17/cz_qh_0617wifi.html) (last visited on Sep. 7, 2004)

## Coffee, Tea Or Broadband

Quentin Hardy, 06.17.04, 3:00 PM ET

SILICON VALLEY - Most [Wi-Fi](#) hot spots offering wireless high-speed Internet connections have failed to find a sustainable business model, since it's hard to make people pay for something they often get for free. Fee-based Wi-Fi on airplanes, however, looks like it is taking off.

Last month, German carrier Lufthansa began offering on-board Wi-Fi on flights between Munich and Los Angeles, charging \$30 for a connection lasting the duration of the flight. Asian destinations are to be added soon. **Boeing** (nyse: [BA](#) - [news](#) - [people](#)), which installed the gear and runs the service, thinks it can eventually put the service on 4,500 of the world's 13,500 commercial jets.

"We believe we can generate business of \$500,000 per airplane per year, for revenues of about \$2 billion," says Scott Carson, chief executive of Connexion by Boeing, the aerospace giant's in-flight Internet group. Carson says Boeing plans to charge \$30 for flights longer than six hours, \$19.95 for flights of four to six hours, \$14.95 for shorter flights and \$9.95 for a 30-minute trial.

No one gets prices like that on the ground, of course. Two days after Lufthansa initiated its service, Cometa Networks, a national purveyor of Wi-Fi hot spots, shut down, citing insufficient investor returns. Cometa had been formed in December 2002 by a group including **AT&T** (nyse: [T](#) - [news](#) - [people](#)), **IBM** (nyse: [IBM](#) - [news](#) - [people](#)) and **Intel** (nasdaq: [INTC](#) - [news](#) - [people](#)). Cometa's partners included **McDonald's** (nyse: [MCD](#) - [news](#) - [people](#)), which offered a free hour of Wi-Fi for the price of a meal, and book retailer **Barnes & Noble** ([BKS](#)), which charged \$11.95 a month.

The onboard connection is not as fast as a land hot spot, either. Boeing figures it delivers 20 megabits a second from the ground to the aircraft, and one megabit a second back to the ground. Since the service is shared, individuals get about 100 kilobits a second each.

A long plane flight full of anxious business travelers, however, is a very different marketplace from McDonald's. "People on planes want full Internet access--not just e-mail--and they're willing to pay for it," says Henry Harteveltdt, travel analyst at Forrester Research. "Airlines, which pay probably \$500,000 a plane to get Wi-Fi, won't do this if only 2% of people will pay. Our research shows something like 38% of frequent travelers will pay for this." For its part, Boeing anticipates running a profitable business on an uptake rate of 6% of total travelers.

For Boeing, running a consumer service company is a break from tradition as well. Discounting the brief period after World War II when underutilized machine shops turned out bedroom furniture, this is Boeing's first consumer business. Carson says Boeing contracted out virtually all the hardware--the onboard antennas linking the plane to a satellite, which then feeds data back and forth with a terrestrial [server](#), comes from Japan's Mitsubishi Electric, and the internal Wi-Fi gear is from **Cisco Systems** (nasdaq: [CSCO](#) - [news](#) - [people](#)). Boeing wrote software, managed



[Can Wi-Fi Save Lives?](#)

[In Pictures: Gadgets & Gizmos](#)

[Profiting From Wi-Fi](#)

[Sky-High Wi-Fi](#)

**Commentary:** [The Great Disruptor](#)

**Poll:** [Where Do You Use Wi-Fi?](#)

**Video:** [Behind The Wi-Fi Explosion](#)

the project and interacted with some 22 airlines, most of which Carson expects to sign up over time.

"The airlines asked us to charge the customers," he says. "They said, 'If we have it ourselves, we'll find a way to charge nothing.'"

Users are already employing onboard Wi-Fi to make Internet phone calls, likely killing the modest returns from the expensive onboard phones. Carson expects **Verizon Communications** (nyse: [VZ - news - people](#)) to move its onboard phone service to Wi-Fi.

In addition to consumer use, the airlines are planning to use Wi-Fi for onboard medical diagnostics, weather updates, and in-flight equipment monitoring, so ground mechanics arrive at a flight knowing what needs to be serviced.

From The Wall Street Journal, available at <http://webreprints.djreprints.com/974390656496.html> (last visited on Sep. 7, 2004)

## MIDDLE SEAT MAILBOX

By SCOTT McCARTNEY



Dow Jones WebReprint Service®

April 6, 2004

# In Search of an In-Air Connection

## Readers Are Willing to Pay Airlines For a Good Web Connection in the Sky

If airline executives needed a little encouragement, here it is: Middle Seat readers want to stay connected when traveling, and they are willing to pay for a good Internet connection.

Last week's column looked at the two leading in-flight data links, one that's cheap for airlines and provides pricey, hard-to-use in-flight e-mail through seat-back telephones, the other a soon-to-be-launched satellite-based service that offers broadband Internet access through wireless connections in the cabin. The e-mail system is cheap for airlines but of limited utility; the Wi-Fi broadband system is expensive for airlines to install, but more useful for passengers.

A few U.S. airlines — United, Continental and US Airways — offer the in-flight e-mail system through their Verizon Airfones. But while several European and Asian carriers are pushing ahead with the broadband **Connexion by Boeing** service, no U.S. carriers have ponied up. Not that they aren't interested — United, American and Delta Air were all early investors in the Boeing venture, but pulled out after the 2001 terrorist attacks.

Those airlines and others need to do something: Discount carriers are entertaining customers with satellite television and radio services, while bigger airlines are still showing old movies on small screens, or nothing at all.

Live TV is great, particularly for leisure customers. Business travelers, however, want their time to be productive, and that means working, not watching ESPN. They want to get to the Internet, get to their e-mail and bring the office onboard the airplane. Hotels have done it, and readers clearly want airlines to join the digital age as well. And the clunky in-flight e-mail system offered through Verizon by Tenzing Communications, which is backed by Airbus, won't cut it — at least not without big-time improvements. Readers had several complaints about it, starting with how difficult it is to use to its per-kilobyte pricing. (Some comments have been edited.)

Thomas Kowall recently tried to use the Tenzing system on recent flights between Paris and the U.S.: "Instructions buried at the back of the in-flight magazine. No useful way for me to anticipate cost because have no way to estimate number of KBs that would be transmitted. Not traveling with cord to connect laptop to phone. What am I willing to pay? On 11-12 hour CDG-SFO flight, could do the better part of a day's work. Value to me, delighted to pay \$10-\$20, willing to pay \$20-\$30. But what I really want is ease of use. How about a flat fee, and Wi-Fi?"

Dr. Kowall notes that the current situation with airlines is somewhat similar to that with hotels five years ago when they were struggling to provide Internet access. "The stages were, 'It's too expensive,' 'We'll install in our Business Center,' and now plug-and-play in-room. Marriott in Nagoya has a system that is exactly what I want in-flight. It's easy to use, works reliably, plug-and-play. Cost? None — built into room charge. So an airline business model already exists."

For airlines, building anything into ticket prices is wishful thinking since most markets are highly competitive, and both business and leisure fares continue to come down. But I do think that for the most-prized customers of all — the road warriors — there is much to be gained for an airline that brings the Internet onboard successfully. Being able to stay connected on a six-hour, cross-country flight could easily sway airline choices in heavily traveled business markets. Ultimately, for airlines that cater to business travelers, this stuff is going to be a necessity, not an option.

Thomas Baker: "I'm a frequent flier and routinely ignore movies and TV in order to catch up on work-related reading, or to use my computer. I find my frequent coast-to-coast flights among the most-productive periods of any money. I can only imagine that the addition of e-mail connectivity and Web access would enhance that productivity. In fact, I would be willing to pay for a flight that offered it as a premium service (to me, JetBlue and Frontier are OK for leisure travelers, but satellite TV is a huge productivity destroyer). In fact, I would even go out of my way to take a different flight if it meant having the service."

Les Kratter: "One more-important point is that many larger organizations are moving to Virtual Private Network Connections, a private pipe through the Internet. This will not work on the Verizon service. ... I would use the high-speed service in a flash if it actually worked. This price is not much more than some hotels."

Howard Alt: "I wouldn't change my carrier choice because of the availability of wireless Internet, but they'd almost certainly get the incremental \$30 from me for each flight if the service was available."

Still, that may be too expensive for some road warriors. Robert W. Meyer: "When someone offers wireless broadband for \$10 per trans-Atlantic flight, sign me up."

Once they get a bit further past their financial crises, I expect to see some U.S. airlines take the plunge on Internet access. But some travelers have other priorities.

C.F. Ward: "Throw away both services and give me two more inches of leg space. They are just trying to divert my attention from an awful seat."

From Computerworld, available at <http://www.computerworld/mobiletopics/mobile/wifi/story/0,10801,91619,00.html> (last visited on Sep. 7, 2004)

## **Boeing sets pricing for in-air Internet access** **Lufthansa plans to launch its in-air service this spring**

News Story by Bob Brewin

MARCH 25, 2004 ([COMPUTERWORLD](#)) - The Boeing Co. has set the pricing for its airline passenger high-speed Internet service at \$29.95 for unlimited use on long-haul flights of six hours or more. And it will charge \$19.95 for flights lasting between three and six hours. Analysts said the fee schedule would likely attract business travelers.

Boeing, based in Chicago, also said it would offer a metered pricing option for its Connexion by Boeing service starting at \$9.95 for 30 minutes and 20 cents a minute thereafter.

Deutsche Lufthansa AG in Bonn is expected to launch the service this spring on flights from Germany to multiple international destinations.

Boeing has leased transponders on satellites that provide global coverage for the Connexion service, according to spokesman Terrance Scott. These satellites provide 20Mbit/sec. download speeds to the aircraft and 1Mbit/sec. upload speeds.

Passengers will be able to connect to the service from laptop or handheld computers over 802.11b Wi-Fi access points installed in the aircraft. Those access points will provide raw data rates of 11Mbit/sec., Scott said.

All of Connexion's airline customers, which include the Scandinavian Airlines System division of SAS AB, Japan Airlines System Corp., All Nippon Airways Ltd. and Singapore Airlines Ltd., will initially offer the service to passengers through Wi-Fi, with some carriers adding Ethernet connections to seats at a later date.

Alan Reiter, an analyst at Wireless Internet & Mobile Computing in Chevy Chase, Md., said he believes the service will be "a winner for airlines because a lot of business travelers will jump on this" rather than spend hours of downtime on a plane.

Chris Kozup, a Boston-based analyst at Meta Group Inc., concurred, saying his studies have shown that business users are more willing to pay for Internet service in environments where they are captive and have few choices for a connection to their e-mail and other Internet services.

Kozup said the cost of the Connexion service is minuscule compared with the price of a ticket in the front of the plane, where a first-class seat from the U.S. to London on the United Air Lines unit of UAL Corp. can run over \$10,000.

Carl Oppedahl, a patent attorney at Oppedahl & Larson LLP in Dillon, Colo., said he would "gladly pay" the Connexion prices for an Internet connection but would like to see the service expanded to all flights, domestic as well as international.

From Boeing News Release, available at [http://www.boeing.com/news/releases/2004/q3/nr\\_040823j.html](http://www.boeing.com/news/releases/2004/q3/nr_040823j.html) (last visited on Sep. 7, 2004)

## **iPass Wi-Fi Network Gets its Wings with Connexion by Boeing**

### **Wi-Fi access in the sky closes productivity gap for the more than half-million business travelers who use the iPass network**

**REDWOOD SHORES, Calif., and SEATTLE, Wash - August 23, 2004**

[Connexion by Boeing](#), a business unit of The Boeing Company (NYSE:BA), and iPass Inc. (NASDAQ: IPAS) today announced an agreement to deliver iPass enterprise customers secure in-flight Wi-Fi Internet connectivity. Through the agreement iPass users will have access to the Connexion by BoeingSM mobile Internet service through the iPass Global Broadband Roaming network. Now, enterprise IT managers and CIOs can provide their mobile workers with a near-seamless, high-speed wireless experience to manage their time at hotels, airports and now on airplanes – more productively. This agreement marks Connexion by Boeing’s first contracted Wi-Fi enterprise access provider.

Connexion by Boeing, the only real-time, high-speed connectivity service available to commercial airline passengers and iPass, which operates the world’s largest Wi-Fi roaming network with over 11,000 active hotspots in 33 countries, complement each other perfectly. Through the iPass Global Broadband Roaming (GBR) network and the Connexion by Boeing service, the more than 528,000 distinct monthly iPass users will be able to connect to their corporate networks, send and receive emails with attachments, access files and business applications and surf the entire Internet while in the air. This partnership combines two great services to benefit the enterprise and the corporate ‘road warrior,’ changing the way business is conducted on the road and, now, in the air.

“Wi-Fi, for business travelers, will rival extra legroom as a ‘must-have’ airline amenity,” said John Yunker, an analyst with Byte Level Research. “iPass and Connexion by Boeing make a good fit. Connexion by Boeing provides Wi-Fi in the sky while iPass provides start-to-finish connectivity for the business traveler across thousands of locations.”

Connexion by Boeing has agreements with major air carriers that operate at airports serviced by iPass including Copenhagen Airport, Narita/New Tokyo Airport and Changi Airport. In total, iPass offers broadband access at 121 airports in 21 countries – including 49 of the world’s busiest as measured by passenger volume, making the Connexion by Boeing service an important link in a continually growing chain of broadband connectivity designed for mobile enterprise users.

“Having a proven and secure method for enterprise travelers to connect to real-time high-speed Internet-based services is critical for doing business in a global environment,” said Connexion by Boeing Vice President of Marketing and Direct Sales David Friedman. “Our agreement with iPass addresses that need and provides us with a proven market partner that will help ensure the Connexion by Boeing service is readily available in key markets and airports served by our airline customers. As Wi-Fi providers in the transportation and travel sectors have found, there are tremendous numbers of business travelers who rely on their corporate IT organization to equip them with advanced connectivity capabilities and we want to be a part of that solution.”

The Connexion by Boeing network will now enter the iPass Enterprise Ready certification program, where it will be certified by iPass as Enterprise Ready by passing a rigorous testing regimen to ensure service availability, as well as interoperability with policy and security tools, such as virtual private networks, personal firewalls and virus protection.

“As a frequent long-haul flier myself, no one will be more thrilled to see the Connexion by Boeing service integrated with the iPass GBR network,” said Anurag Lal, vice president of business development at iPass. “Some of the flights I’ve taken last well over 12 hours, so increased productivity in the air is greatly needed. Users of this service will no longer have to wait the length of their flight – a full business day – for the vital business information that can help win that important deal or address a critical business issue. The iPass and Connexion relationship brings the industry closer to ultimate goal of anywhere, anytime secure connectivity.”

#### **About Connexion by Boeing**

Connexion by Boeing, recipient of the 2003 World Travel Award for World's Leading High-Speed In-flight Internet Services Provider, brings high-speed Internet, data and entertainment connectivity to travelers via a broadband connection to the aircraft. Connexion by Boeing has definitive agreements with Lufthansa, Scandinavian Airlines System, Japan Airlines, ANA and Kingdom Holding Co. to equip their long-haul aircraft with the service. In addition, Singapore Airlines, China Airlines and Korean Air have announced their intent to install the Connexion by Boeing system on their long-range aircraft. Connexion by Boeing also offers a high-speed connectivity solution for the business aviation and maritime markets. For more information, please visit [www.connexionbyboeing.com](http://www.connexionbyboeing.com).

#### **About iPass**

iPass Inc. (NASDAQ: IPAS) delivers enterprises simple, secure and manageable connectivity services for mobile workers as they move between office, home, and remote locations. iPass combines its global network of dial-up, Ethernet and the world’s largest Wi-Fi footprint with support for campus wireless LANs and home broadband connections to deliver a unified and comprehensive solution. The award-winning iPassConnect™ user interface, centralized management, leading security features and powerful policy enforcement make iPass services the choice of hundreds of Global 2000 corporations including General Motors, Hershey Foods and Underwriters Laboratories. Founded in 1996, iPass is headquartered in Redwood Shores, Calif., with offices throughout North America, Europe and Asia Pacific. For more information visit [www.ipass.com](http://www.ipass.com).

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From Boeing News Release, available at [http://www.boeing.com/news/releases/2004/q2/nr\\_040511j.html](http://www.boeing.com/news/releases/2004/q2/nr_040511j.html) (last visited on Sep. 7, 2004)

## **The New Era of Inflight Connectivity Is Here: Connexion by Boeing and Lufthansa Announce the World Premiere of Airborne Internet**

**SEATTLE and MUNICH, Germany, May 11, 2004** – [Connexion by Boeing](#), a business unit of The Boeing Company (NYSE:BA), and Lufthansa German Airlines today announced that passengers on LH 452, flying on May 17, 2004 from Munich, Germany, to Los Angeles, Calif., will be the first in the world to experience real-time, WiFi-based, high-speed Internet connectivity on a commercial flight route.

The Connexion by Boeing<sup>SM</sup> service comes to life in partnership with Lufthansa's FlyNet® portal onboard Lufthansa's A340-300 aircraft. Via the FlyNet® portal travelers get free updates to current news, travel information, shopping possibilities and frequent flyer details, whereas the Connexion by Boeing fee-based service allows travelers to surf the Worldwide Web, send and receive emails with attachments and set up a secure data connection via a Virtual Private Network (VPN) to their corporate intranets or mail servers.

"In close partnership with Lufthansa, our global launch customer, we have now achieved our shared vision of giving the Internet wings," said Connexion by Boeing President Scott Carson. "This is the historical first step for Connexion by Boeing to use available technology to affordably enhance the way people on the move communicate, work and entertain themselves."

Connexion by Boeing will offer the service to passengers for a flat rate of US \$29.95 dollars for the entire flight or a metered option of US \$9.95 for 30 minutes and 25 cents per minute thereafter.

The Connexion by Boeing service has been installed so far on 5 aircraft in Lufthansa's long-haul fleet. Lufthansa has committed to install the service on all of the airline's long-haul aircraft and will offer real-time, high-speed connectivity to passengers traveling on all long-haul routes from Munich and Frankfurt by 2006.

### **About Connexion by Boeing**

Connexion by Boeing, recipient of the 2003 World Travel Award for World's Leading High-Speed In-flight Internet Services Provider, brings high-speed Internet, data and entertainment connectivity to travelers via a broadband connection to the aircraft. Connexion by Boeing has definitive agreements with Lufthansa, Scandinavian Airlines System, Japan Airlines, ANA and Kingdom Holding Co. to equip their long-haul aircraft with the service. In addition, Singapore Airlines, China Airlines and Korean Air have announced their intent to install the Connexion by Boeing system on their long-range aircraft. Connexion by Boeing also offers a high-speed connectivity solution for the business aviation and maritime markets. For more information or to subscribe to the Connexion by Boeing e-newsletter, please visit [www.connexionbyboeing.com](http://www.connexionbyboeing.com).

From Boeing News Release, available at [http://www.boeing.com/news/releases/2004/q2/nr\\_040510j.html](http://www.boeing.com/news/releases/2004/q2/nr_040510j.html) (last visited on Sep. 7, 2004)

## **Infonet and Connexion by Boeing Announce Plans to Deliver "Wi-Fi in the Sky" Capabilities to MobileXpress™ Customers**

### **Agreement Will Make Infonet the First Global Managed Network Service Provider to Offer Secure In-Flight High-Speed Internet Access**

**El Segundo, Calif. and Seattle** – May 10, 2004 – Infonet Services Corporation (NYSE:IN), a leading provider of global communications services for multinationals, and [Connexion by Boeing<sup>SM</sup>](#), a business unit of The Boeing Company (NYSE:BA), today announced plans to deliver in-flight, real-time, high-speed Internet capabilities as part of Infonet's MobileXpress™ service portfolio.

MobileXpress, Infonet's next-generation mobile/wireless service, expands its customer's remote access reach to more than 120 countries, including secure access to thousands of Wi-Fi hotspots in airports, hotels and public venues around the world.

As part of a signed Memorandum of Understanding (MOU), Infonet will expand the geographic reach of its wireless services to include those airlines serviced by the Connexion by Boeing real-time, high-speed Internet service. In linking the two service offerings, airline passengers who have subscribed to MobileXpress will be able to use their existing accounts to gain the benefits of secure, seamless, real-time Internet access when in flight. According to Forrester Research, "In flight broadband Internet access is a highly desirable amenity, especially among frequent business travelers, with research showing 38 percent of frequent travelers are willing to pay at least \$25 per flight for full, high-speed access to the Internet and their corporate network."

"The addition of the in-flight service addresses a key venue being sought by today's mobile workers," said Marc Patterson, Vice President and Managing Director of Infonet's Mobility Services. "By delivering the Connexion by Boeing capabilities as part of the MobileXpress service portfolio, end-users will increase their flexibility, while IT organizations retain the benefits of strong security, consolidated management and unified invoicing. The service offering is exciting and highly complementary to Infonet's secured mobility solutions, furthering our mission to provide secure access anytime, anywhere."

Given the global appeal of the new capabilities, Infonet plans to offer the integrated service offering to multinational customers worldwide later this year, with service trials initiating in the summer. In addition, Infonet is scheduled to grow its number of active "on the ground" Wi-Fi hotspots to more than 10,000 by the end of the year. By combining this strong on-the-ground coverage with Connexion by Boeing's in-flight service, MobileXpress will be able to provide the type of ubiquitous, on-demand remote Internet and VPN access that mobile executives are increasingly demanding.

"Through our planned associate service provider agreement with Infonet, the Connexion by Boeing service will become more accessible to passengers on commercial flights throughout the

world," said Connexion by Boeing Vice President of Marketing and Direct Sales, David Friedman. "Infonet's global distribution model and complementary services will appeal to business and leisure travelers as well as corporate organizations looking to balance end-user simplicity and security with seamless manageability."

#### **About Connexion by Boeing**

Connexion by Boeing, recipient of the 2003 World Travel Award for World's Leading High-Speed In-flight Internet Services Provider, brings high-speed Internet, data and entertainment connectivity to travelers via a broadband connection to the aircraft. Connexion by Boeing has definitive agreements with Lufthansa, Scandinavian Airlines System, Japan Airlines, ANA and Kingdom Holding Co. to equip their long-haul aircraft with the service. In addition, Singapore Airlines, China Airlines and Korean Air have announced their intent to install the Connexion by Boeing system on their long-range aircraft. Connexion by Boeing also offers a high-speed connectivity solution for the business aviation and maritime markets. For more information, please visit [www.connexionbyboeing.com](http://www.connexionbyboeing.com).

#### **About Infonet**

Infonet Services Corporation, known for its quality of service, is a leading provider of managed network communications services for nearly 3,000 multinational entities. Employing a unique consultative approach, Infonet offers integrated solutions optimizing the complex relationship between enterprise applications and the global network. Extensive project management capabilities are the foundation for the services and solution offerings (broadband, Internet, intranet, multimedia, videoconferencing, wireless/remote access, local provisioning, application and consulting services) positioning Infonet as a single-source partner for multinational entities. In particular, Infonet IP VPN solutions offer multinationals a unique combination of Private and Public IP services as well as a full set of Managed Security and Mobility Services.

Rated "Best in Class" overall in Telemark's survey of Global Managed Data Network Services, Infonet has also won "Best Customer Care" and "Best Carrier" at the World Communication Awards. Founded in 1970, Infonet owns and operates The World Network ®, accessible from more than 180 countries, and provides local service support in over 70 countries and territories.

Infonet's stock is traded on the New York Stock Exchange under the symbol IN. Additional information about the company is available at [www.infonet.com](http://www.infonet.com).