

The Tower of David is among the notable sites in Jerusalem. Boeing is strengthening and expanding its partnerships in Israel—a nation whose relationship with Boeing is as old as the country, which was founded 60 years ago.

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# Built to endure

El Al operates exclusively Boeing airplanes, including the 777. The airline historically has put Boeing jetliners to good use, including operating them on routes that set records for the longest nonstop commercial flights.

GAIL HANUSA PHOTO



This year Israel commemorates its 60th anniversary. During its lifetime, the nation and Boeing have seen their partnership grow and flourish

By MAUREEN JENKINS

For sure, relationships are the glue that allows Boeing to maintain strong bonds with its commercial and government customers across the globe. And in most cases, these bonds eventually develop into partnerships, as each side helps the other grow.

That's especially been true in Israel, a country where Boeing and its products have played a supporting role since the modern state's founding in 1948—60 years ago. On both the commercial and military side, Israel has been a strong Boeing customer; likewise, Boeing has been a key partner of the country as it evolved from a fledgling state into a technologically advanced economy with a highly skilled work force.

"It's a comprehensive relationship that is mutually beneficial and has us working together as suppliers, partners and customers," said Boeing International President Shep Hill. "El Al, Israel's leading airline, celebrates its 60th anniversary later this year. It started business with a Douglas C-54 transport borrowed from the military. Today, it continues to fly only Boeing planes. And the Israeli Air Force started with the B-17 Flying Fortress back in 1948."

But why? The reasons are many; the roots run deep.

Explained Tom Pickering, president of Boeing International Relations from 2001 to 2006 and U.S. ambassador to Israel from 1985 to 1988: "The United States' strong supportive relationship with Israel over the years has made it an easy working relationship for Boeing. Boeing has what Israel would call a multifaceted relationship—it not only sells products, but *purchases* items on the military and commercial sides. Even prior to globalization, Israel was a high-tech country with well-developed international business relationships. It became natural to us to seek products in Israel that would meet our needs.

"Because it was very early on a relationship that prospered in the various areas, it was a relationship that was complementary," he added. "[Boeing was] both buyer and seller; [Israel was] both buyer and seller. It was a relationship balanced in the way we did business."

In 2003, Pickering appointed David Ivry, a former Israeli ambassador to the United States, head of the National Security Council, Director General of the Ministry of Defense, and Commander of the Israeli Air Force, to coordinate Boeing's companywide business activities in Israel.

"First, from the defense point of view, the Israeli Air Force—which is one of the best in the world—uses Boeing products, and that helps promote Boeing products," said Ivry, an aeronautical engineer and pilot who also has held leading positions within the Israeli business world. "Second, we can say the same about the commercial side. El Al is using 100 percent Boeing products, and they have a very good record for safety and security. Israel is a small country but has a good history of selecting good products."

Arkia, another significant player in the aviation and travel business in Israel, also operates an all-Boeing fleet. The airline is slated to be the first Israel-based carrier to operate the 787; parent company Nakash Group of America ordered two 787s in late 2006.

And when it comes to supplying technological know-how and parts to its Boeing partner, Israel has stepped up. "The quality demanded by Boeing is such that it forced the local industry to come up to standards so they can compete on a global scale," Ivry said. "We are trying to make a really good team between Israeli industries and Boeing in selling to other countries."

Both Boeing and Israeli industry have their "own very high demands for quality and capability," Ivry said. "Israeli high-tech industries are famous for having front-line systems which are produced here for the challenges the defense industry is facing."

Today, Israeli industry supplies parts for many Boeing commercial and military products, including the F-15, the AH-64D Apache Longbow, and the 737, 777 and 787 airplanes (see story on Page 35).

From platform sales to joint production agreements like those between Boeing and Israel Aerospace Industries, these reciprocal ties

have paid off for both sides and in many ways, Pickering said, serving as a model for other Boeing relationships around the world.

Israel's "highly skilled work force provides top-quality products to Boeing; that enables us to deliver value to our customers," Hill said. "Our 60-year relationship with Israel has helped Boeing grow and evolve into a premier global aerospace company. Through mutual collaboration and partnerships, the best of both sides are used to develop the technology and deliver a final product that generates value for all."

### SECURITY ALWAYS PARAMOUNT

Over the past 60 years, Israel's national identity has been forged from adversity, making its citizens and government resilient and putting a premium on security. With a military that largely relies upon call-up reservists

(mandatory military service for both men and women has been an Israeli hallmark), citizens play an active role in maintaining their own security.

That's one reason, Pickering explained, that "there was an early attachment to aviation, the feeling they needed an air force. Israelis have gotten used to the reality that they live in an unpredictable part of the world. They, more than any other people I know of, are prepared to deal with change.

"It's a country with a very strong tradition of 'tell it like it is,' with intense politics where there are many views," he added. "It's a country of immigrants from many parts of the world."

German, French and Czech aircraft played early roles in Israel, but the 1960s ushered in an era that has largely featured American-built military planes ever since. The Boeing-Israel

partnership "was established along the way by Boeing [selling] good products and services to the defense industry," said Ivry. "The customer wants a reliable product, and the Boeing product has a very good reputation."

Trust is essential to doing business in Israel—and, as it does everywhere, takes time and history to build. Within the country, Pickering and Ivry said, Boeing has traditionally been viewed as an American company, a private-sector ally in Israel's quest for security and its citizens' mobility across the globe.

"In Israel, 'Boeing' was interchangeable with 'airplane,'" Ivry said. "Even now, a lot of people will say, 'I flew Boeing,'" rather than the name of a specific airline. Added Pickering: "Israel has much less concern about 'foreign companies' than other countries do, because they see a close relationship with the United States as a strategic advantage."

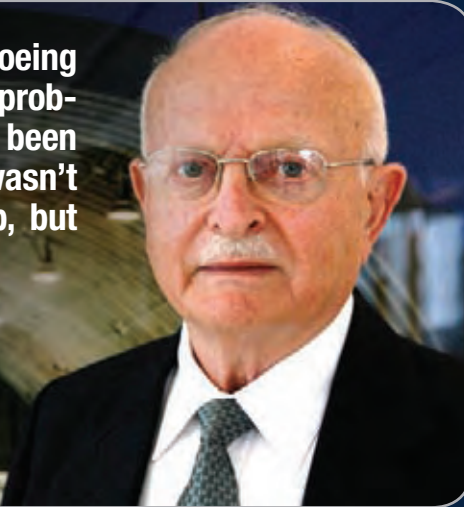
This U.S. relationship is "a very important national security asset" to Israel, Ivry said. After the Six-Day War in 1967, he said, McDonnell F-4 Phantoms and Douglas A-4 Skyhawks became mainstays of the Israeli Air Force. Today, the country flies a large fleet of F-15I jet fighters—the first U.S.-made fighter that includes Israeli contractors in its production. The Israeli Air Force also operates the AH-64D-I, an Apache Longbow helicopter that features Israeli-specific systems and technologies.

"One of the major advantages Boeing has is we respond very quickly to problems, especially with defense," said Ivry. It's been a "really reliable relationship. It wasn't a customer-supplier relationship, but much more a partnership." ■

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— David Ivry, President of Boeing Israel



## Israel at a glance

**Official name:** State of Israel

**Modern state established:** May 14, 1948

**Location:** On the southeastern coast of the Mediterranean Sea

**Area:** 20,770 square kilometers (8,019 square miles)—slightly smaller than the U.S. state of New Jersey

**Population:** About 7 million

**Median age:** 28.9 years

**Official language:** Hebrew

**Key cities:** Jerusalem (capital), Tel Aviv-Yafo, Haifa, Be'er Sheva, Petah Tikva

**Gross domestic product, 2007:** \$184.9 billion

**Estimated GDP growth rate, 2007:** 5.1 percent

**Key industries:** High-technology fields, diamond cutting and polishing, agriculture, construction, transport and communication, tourism

**Major export partners (2006, in order):** United States, Belgium, Hong Kong

**Major exports:** Machinery and equipment, software, cut diamonds, agricultural products, chemicals, textiles and apparel

**Major import partners:** United States, Belgium, Germany, Switzerland, United Kingdom, China

**Major imports:** Raw materials, military equipment, investment goods, rough diamonds, fuels, grain, consumer goods

**Military spending as part of GDP, 2006:** 7.3 percent

Sources: CIA/The World Factbook, Israel Ministry of Foreign Affairs

# Shalom from Israel

Meet some of the many Boeing employees who work in this nation

*Quality specialist, Supplier Quality, Commercial Airplanes*

**Years at Boeing:** 5

**On representing Boeing in Israel:** "It's a kick! Boeing has such an incredible name and presence here. People hear what you do and it raises eyebrows. I feel a strong sense of pride representing Boeing."

**Challenges of working internationally:** "Staying tied to my group, which is scattered throughout Europe, and to my Boeing 'customers' in the United States. I'm 10 hours ahead of Seattle. Sometimes I can leverage that time difference, so that I can have information they need by the first thing in their morning. But sometimes they'll need something from me when I'm asleep, or vice versa."

**Why working in Israel is rewarding:** "It's rewarding to assure the flow of quality assemblies to colleagues almost half a world away. Of course, Israel is an interesting country with an incredibly diverse society, and you meet people from very different backgrounds. In the end, my job is about bringing together people and products."



**Bob  
Goldrich**

*Office manager, Boeing Israel office*

**Years at Boeing:** 35

**Challenges of working internationally:** "Our office must deliver and coordinate a full range of services to all Boeing employees in Israel: Finance and accounting, payroll, timekeeping, relocation, customs clearance, travel, local procurement, facilities management."

**Proudest moments at Boeing:** "The arrival ceremonies for the F-15I and the Apache Longbow helicopter. I felt proud to know that people who work at my company designed and built these aircraft that help Israel defend itself."

**Why working in Israel is rewarding:** "Boeing has a strong, cohesive in-country profile and is highly respected in Israel. There's a lot of prestige in my role."



**Dorit  
Shaashua**

*Vice president, Israel, Integrated Defense Systems*

**Years at Boeing:** 8

**On representing Boeing in Israel:** "Representing Boeing in Israel demands that Boeing understands the culture here and, on the other side, that Israelis understand the company's culture. That understanding and the genuine relations with the customer help us work together for the best solution."

**Why working in Israel is rewarding:** "As an Israeli who works for Boeing, seeing our company and its people and products help this ally of the United States gives me lots of satisfaction."

**Proudest moment at Boeing:** "A few years ago, I was taxiing in a TA-4 aircraft at an Israeli Air Force base. Suddenly, approaching us on the ramp was an F-15I loaded with a few JDAMs for an integration test. Watching this F-15 taking off with the JDAMs that the Boeing team worked hard to deliver made me so proud. But I wanted to share the experience with someone. I had my cell phone, so I called the Boeing Israel program manager for JDAMs in St. Louis and said to him, 'Guess what I just saw!'"



**Avi  
Barber**

TOP AND MIDDLE: MOTI MILROD PHOTO  
BOTTOM: PETER GEORGE PHOTO

## Boeing has had important role in development of aerospace in Israel

By MICHAEL LOMBARDI

**M**ighty things are born from adversity, and Israel's aerospace heritage is no exception. And Boeing has played a part in the growth and development of the nation's aerospace industry.

The aviation history of Israel was born out of necessity, as airplanes became both a bridge to the rest of the world and a decisive force for defense and victory. Shortly before Israel's formation in 1948, the need for air power to protect the emerging state inspired the formation of a small clandestine air force called Shirut Avir—which on May 14, 1948, became the Israeli Air Force.

The fledgling service was equipped with a handful of airplane types including 62 British-built Spitfire Mark IXs and 25 Avia S-199s (German Me-109s built in Czechoslovakia). Within a year the Israeli Air Force had acquired 30 different types of airplanes, including a Boeing B-17G.

Other airplanes from Boeing and its predecessor companies that became part of the IAF include the P-51 Mustang, the T-6 Texan and the C-47. When Boeing Stratocruisers were being eclipsed by brand new 707s, five of the still-useful Stratocruisers found their way to Israel where they were converted to freighters. In fact, the world's only surviving intact Stratocruisers today are part of the collection of the Israeli Air Force Museum, near the city of Be'er Sheva.

Later conflicts required more advanced jets that first came from European nations. But in the late 1960s, the United States began supplying Israel with the McDonnell Douglas A-4 Skyhawk and F-4 Phantom II.

Currently the IAF employs all versions of the F-15 Eagle, including the advanced F-15I "Ra'am" ("Thunder"), a version of the F-15E Strike Eagle. The IAF also operates the AH-64A Apache and AH-64D Apache Longbow helicopters—known as the "Petan" and "Saraf" in IAF service.

# Strength in the skies



Among the aircraft the Israeli Air Force acquired in its first year was a Boeing B-17G. Today, the service operates the F-15 fighter and the Apache helicopter. BOEING ARCHIVES PHOTO

Upon its founding, Israel was surrounded by adversarial states on three sides and by the Mediterranean Sea on the fourth. The only way to go was "to the skies"—or in Hebrew, "El Al," the name of Israel's largest airline.

El Al's inaugural flight took place in September 1948, bringing home Israel's first president, Chaim Weizman, from Geneva in a Douglas C-54. The airline was formally established as a state-run carrier on Nov. 15, 1948, and began operations in July 1949 with routes from Tel Aviv to Rome and Paris. Like the Israeli Air Force, El Al began with former military aircraft and surplus planes including Douglas DC-3s and DC-4s.

The airline soon purchased longer-range Lockheed Constellations. But with the coming of the jet age, the "Connies" were retired in favor of the new Boeing commercial jets.

El Al's changeover to an all-Boeing fleet began with an order for three Rolls-Royce-powered 707-458s, the first delivered in a formal ceremony at Boeing Field on May 7, 1961. In attendance were officials from the government of Israel and El Al, as well as Albert Rosellini, then the governor of Washington.

On June 15, 1961, El Al's 707 set a record for the longest nonstop commercial flight, flying the 5,682 miles (9,144 km) from Tel Aviv to New York in 9 hours and 33 minutes.

El Al continued to turn to Boeing to support its growth plans. Being a small airline from a country facing uncertain times, the 1968 deci-

sion to acquire the 747 was one of the most ambitious events in El Al's history.

The airline has put its 747s to good use on long-distance routes. In May 1988, it set a record for the first ultralong-haul passenger flight from Los Angeles to Tel Aviv, completing the 7,574-mile (12,189-km) journey in 13 hours and 41 minutes.

El Al not only depended on the 747's range but also its strength. As part of an evacuation airlift operation in May 1991, a single El Al 747 transported a record-breaking 1,087 passengers from Addis Ababa, Ethiopia, to Tel Aviv.

El Al continued to increase its global coverage. The airline, now privately owned, serves more than 40 destinations on four continents. El Al operates Boeing 747s, 767s and 777s, along with the Boeing 737 and 757 for regional service. Also using 757s is Israeli carrier Arkia.

Just as aviation has contributed to the advance of global peace and prosperity, aviation has also contributed greatly to Israel's ability to defend itself and "bring the blessings of progress to all the country's inhabitants," as is stated in the nation's declaration of independence. ■

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# Partners in Israel

Boeing has a long history of working in partnership with many aerospace firms in Israel and continues to seek such relationships for common benefit. Here's a peek at some of Boeing's extensive involvement with Israel's aerospace industry.

## Elbit Systems Ltd.

Elbit Systems is a defense electronics company that's engaged in programs worldwide. The Haifa-based firm operates in many areas, including aerospace, land and naval systems; unmanned air vehicle systems; data links; and military communications systems and radios. Elbit had \$1.98 billion in sales in 2007, up 30 percent from \$1.52 billion in 2006.

Elbit and its subsidiaries—including the U.S.-based companies EFW Inc. and Vision Systems International (an EFW joint venture with Rockwell Collins)—provide numerous components for Boeing products, including

- Avionics for the V-22 and F/A-18.
- Laser guidance systems for the Laser Joint Direct Attack Munition.
- The Joint Helmet Mounted Cueing System.
- Structural components for the F-15, 737 and 787.
- Structural parts and forthcoming avionics hardware for the AH-64D Apache Longbow.

## Israel Aerospace Industries

IAI develops aviation and aerospace technology for the defense and commercial markets. IAI provides an expansive range of services and products in areas including aircraft, missiles, satellites, avionics systems, advanced radar, precision-guided munitions, and unmanned aerial vehicles. The company recorded \$3.3 billion in sales in 2007, up 18 percent from 2006.

IAI designs and manufactures various components for the Boeing 787 Dreamliner and makes structural components for F-15 aircraft. Other notable IAI activity with Boeing includes

- The Arrow missile project. In 2003, IAI and Boeing signed an agreement to manufacture components of the IAI-developed Arrow

missile in the United States. The Arrow missile is part of the full Arrow antiballistic missile system, the world's first operational antiballistic missile system.

- Systems for the UK Royal Air Force's Nimrod maritime surveillance aircraft. IAI subsidiary Elta Systems Ltd. delivered and supports the Electronic Support Measures System for the Nimrod aircraft—for which Boeing was the tactical command system integrator.

## Rafael Advanced Defense Systems Ltd.

Boeing has cooperative ties with Rafael Advanced Defense Systems, formerly known as Rafael Armament Development Authority. Rafael designs, develops, manufactures and supplies a wide range of advanced defense systems, including air-, ground-, and sea-launched precision munitions, electro-optic systems, electronic warfare systems, unmanned systems, armored protection, breaching munitions, and space technologies.



Israel aerospace companies handle work on different Boeing aircraft, including the F-15. BOEING PHOTO

# Who's who among Israel's airlines

Israel's airlines serve a market that's a magnet for international tourists—but where geopolitics can affect tourism trends. Here's a quick look at some of the major carriers that serve this nation of about 7 million people.

## El Al Israel Airlines

**Approximate number of jetliners:** 37

**Key jetliners in fleet:** Boeing 737-700 and -800, 777-200ER, 747-400 and -200, 767-300ER, -200ER and -200

El Al was formed in 1948 and now serves about 40 destinations on four continents. Since the beginning of the jet age, the carrier has operated only Boeing airplanes. In 2005, the carrier was privatized. According to Standard & Poor's, the carrier recorded revenues in 2007 of \$1.93 billion, up 16 percent from the previous year.

## Arkia Israeli Airlines

**Approximate number of jetliners:** 2

**Key jetliners in fleet:** Boeing 757-300

Arkia operates scheduled domestic service, mainly with turboprop aircraft. The airline also operates international charter flights and scheduled service to destinations in Europe and in the Mediterranean region using

757-300s. As a sign of the airline's future growth plans, its parent company, Nakash Group of America, ordered two Boeing 787-9 Dreamliners in December 2006. With that order, Arkia will be the first Israeli airline to offer 787 service to its passengers.

## Israir Airlines

**Approximate number of jetliners:** 3

**Key jetliners in fleet:** Airbus A320, A330

Israir offers scheduled service domestically, as well as from Tel Aviv to New York. It also provides charter service to destinations in Asia, Europe and North America. Israir became the first (and only) Israeli airline to order Airbus airplanes, when it placed a firm order in April 2007 for two A320s.

## CAL Cargo Air Lines

**Approximate number of jetliners:** 2

**Key jetliners in fleet:** Boeing 747-200 Freighter

CAL Cargo Air Lines operates scheduled cargo flights carrying perishable goods and general cargo to Europe and the rest of the world. The company is privately owned by the Nir Shitufi agricultural cooperative.