The first Antonov airplane essentially vanished from view after the 1990s, leaving a legacy of regional jets that have since led to its eventual modernization and internationalization. The An-148 and An-74TK-300 programs now represent a major focus for Antonov, as the company seeks to reclaim its position in the regional aircraft market. The An-148 is a single-class, 114-seat A318 that continued to behave “as expected” in revenue service. The An-74TK-300 is a single-class, 120-seat freighter and passenger aircraft designed for the Ukrainian military.

Breakthrough orders

The An-74TK-300 uses 14,300-pound-thrust D36 engines and is optimized for a short takeoff and landing (STOL) mission, with a standard range of 1,200 nm, a cruise speed of 520 km/h, and a maximum takeoff weight of 52.5 metric tons. The aircraft features a unique fuselage design, with a single aisle and a reduced cross-section, which reduces drag and fuel consumption. The An-74TK-300 also features new avionics, including a CFM56-5B9 turbofan engine, a GPS receiver, a 150-bar pressure oxygen system, and an enhanced flight management system (EFMS). The aircraft has a seating capacity of 120 passengers and can be configured for either passenger or cargo service.

The An-148, on the other hand, is a single-class, 114-seat A318 that was designed to compete with regional jets from Boeing and Airbus. The aircraft features a modern and efficient cabin design, with a seating capacity of 114 passengers. The An-148 is powered by two PW6000 engines, each with 21,600 pounds of thrust, and can fly at a maximum speed of 590 km/h. The aircraft has a range of 3,400 nm and is capable of carrying up to 114 passengers over long distances.

Together, the An-148 and An-74TK-300 programs represent a major milestone for Antonov, as the company seeks to modernize its fleet and expand its international presence. The programs have attracted interest from a number of customers, including Aeroflot, the national airline of Russia, which has signed a MOU with Antonov for 30 TK-300s calls for the delivery of the first aircraft in 2014. The programs also have the potential to attract new customers in the emerging regional aircraft market, as airlines seek to replace aging and inefficient regional aircraft with modern and efficient models.

Airbus

Airbus, the European aircraft manufacturer, has a strong presence in the regional aircraft market. The A318 and A319 are two of its most popular models, which are known for their efficiency, reliability, and cost-effectiveness. The A318 is a single-class, 114-seat aircraft that is designed to replace the A310 in the regional market. The A319 is a single-class, 164-seat aircraft that is designed to replace the A320 in the regional market. Both aircraft feature a modern and efficient cabin design, with a seating capacity of 114 passengers. The A318 is powered by two PW6000 engines, each with 21,600 pounds of thrust, and can fly at a maximum speed of 590 km/h. The A319 is powered by two CFM56-5B9 engines, each with 21,600 pounds of thrust, and can fly at a maximum speed of 590 km/h. The A318 and A319 are known for their efficiency, reliability, and cost-effectiveness, and have a strong presence in the regional aircraft market.

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follow-on order for five CRJ900s, bringing converted firm orders for five CRJ700s to a canceled its order, leaving Mesa as the 86-units from a single customer, leaving many continued from preceding page premature.

In reaction to “competitive pressures,” Bombardier last year assigned more range to the CR900 with a so-called paperwork modest that increased its maximum reach to 1,314 nm. Dubbed the CR900LR, the wide-body CRJ900, the new variant shows a maximum takeoff weight of 71,400 pounds higher than the mid-size CRJ900ER. Bombardier v-p Barry McKinnon explained that the company arrived at the cruise range by postponing the higher takeoff weights, thus expanding the airplane’s payload-range envelope without modifying the airframe.

The CRJ900 reached the market some two years before the scheduled first delivery of the 78-seat Embraer 175, its closest competitor in terms of seating capacity and range. Embraer promotes the 175’s more spacious cabin and baggage capacity as a vital for the longer range it believes airplanes that size class will serve. Nevertheless, a tentative launch offer from India’s Jet Airways folded earlier this year with the airline’s inability to finance the airplane. Leaving some positions for 70-seat 170s to 175s.

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Embraer introduced on the strength of a launch launch customer, Alitalia, that flew the program’s first prototype features a pair of GE CT7-9B turbo-props, the Sukhoi experimental aircraft factory in Komsomolsk-upon-Amur Aircraft Production Association (KNPAP) built the Sukhoi S-70, which formed the basis for the Sukhoi S-72, a single-engine turboprop.

After several false starts, AVPK Sikorsky flew its S-68 turboprop for the first time on Sept. 4, 2001, marking the beginning of a 900-hour flight testing program scheduled to last no fewer than six years. Built by the Komsomolsk-upon-Amur Aircraft Production Association (KNPAP) and the Sukhoi experimental aircraft factory in Moscow early last year, it is based on a tri- motor design.

Embraer plans to land the airplane for the first time this year then four through next April. Along with the six Embraer 170 prototypes and the two flying 175s, the company has also built a production 170 for original launch customers, even though that airline deferred first delivery until well into next year. Embarre’s received an order from the Embraer CEO, Butorino declared the first delivery of the three other variants to take place by the end of this month.

First acknowledged by Embraer CEO Mauricio Butorino during June’s Paris Air Show, the certification delay marked at least the third such setback for the Embraer 175. In Paris, Embraer said it had helped to em- ploy a so-called “two-phase” approach, under which it would certify the airplane in July without all FAA’s landing capa- bility, thunderstone, then add the ex- treme for a subsequent approval in November. However, the company later acknowledged that Alitalia never agreed to such a plan.

Despite the program’s early technical problems, the Embraer 170/195 family has broken new ground in terms of sales, most notably in the low-fare sector, where New York-based JetBlue placed an order for 100 Embraer 190s in early June. Of course, the order placed by US Airways in May for 85 Embraer 170s, even if not particularly lucrative, did much to raise the program’s visibility and status in the U.S. Most recently, Embraer received a formal request for pro- posed (RFP) from the U.S. Air Force for a lo- rator to perform the 175’s more spacious in terms of seating capacity as well as sales in the decision, particularly in a deal that could in- volve four airlines with vastly different agendas. Lead by Lathispa, the group of airlines provided also includes SAS, Air Canada and Austrian Airlines.

When S-70 deferred its first deliveries to August next year, it also cut in firm order totals for the Embraer 170/195 to 15 of each model from 30, and reduced its order total from 100 to 20. Under the new schedule, deliveries of the 10-seat 195s will start in 2006. Although certainly un- welcome news for Embraer, the delay will give it time to complete certification of the 175’s operation into London City Airport, a process that has taken longer than origi- nally anticipated. When it signed the order contract with the airplane then known as the CRJ200, Embraer guaranteed it could certify the 175 for the 3,500-knot performance limits as of LEC, from France. New targeted for completion by next summer, the LEC certifi- cation process prompted Embraer to place the 175 with a set of ventral brakes, perma-

Embraer’s plan to reconfigure it for another customer. By August it had also finished both production airplanes by the end of this year, bringing the total number of completed airplanes to 10 in the program’s year. A risk-sharing partner in the Embraer 170, Honeywell continues work on the integration of the Epic systems’ CAT II ap- proach, unthrottled and wind-shake detection soft- ware with the help of the first Embraer 170 prototype, flown to Phoenix in late July specifically for cockpit troubleshoot- ing. By press time Honeywell had finished its 12 of Epic software to answer the Embraer 170’s final lead to the end of this month.

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the middle of this year, followed by another two by the end of the year and one next year.

Built to accommodate either a pair of NPI Saturn TV71500s or the GE powerplants, the S-80 has so far ended a series of design changes and other program delays since its inception. With the decision to stretch the airplane to accommodate up to 30 seats, designers dropped plans to offer the under-powered Saturn engines. However, Klimov plans to offer in 2-5,000-shp TV1-175 turbos for customized variants. To date, AVPK Sukhoi partners OKB Sukhoi and KAAPO have spent $50 million on an aircarrieristine aircraft built in 1998 and the only flying prototype, assembled by KAAPO in 1999 but reworked for flight testing by the Sukhoi experimental aircraft factory.

Sukhoi claims the design could attract up to 40 percent of the Russian market for small regional aircraft and places its sales targets at 50 units, mainly as replacements for aging Yak-40s and Anton-Air-24s. Developed as a multipurpose platform, the S-80 has also drawn interest from the defense departments of China, Malaysia and South Korea for its long loriage time–up to 10 hours–and its expected ability to fly for 15 days or 50 flight hours without significant maintenance. The likely first operator—KAAPO’s own corporate shuttle and revenue-pasenger-airplane-flights to fly the airplane between Kotomsko-Upper-Amur to airports in Russia’s Far East.

**SUSPENDED PROGRAMS**

**FAIRCHILD DORNIER**

**728/C92**–Fairchild Dornier proved once again that an aircraft program cannot succeed solely on its technical merits, as the long-funding 728 program sits idle while Shanghai-based investors bought out D’Long tries to find a partner to re-launch development. In late June D’Long signed a deal with the Fairchild Dornier bankruptcy administrators for the right to acquire the suspended program, but the company’s aspirations to secure Chinese industrial cooperation are yet to materialize. Meanwhile, D’Long has established no time frame for resumption of development, stressing the need to negotiate new deals with all program’s many suppliers.

Fairchild Dornier 728

the RRJ’s first prototype customer–Russian RPK–has signed a memorandum of understanding that calls for the acquisition of 50 airplanes. The first delivery would occur in 2007. Two

The Tu-334 drew its first firm orders on September 17-19, 2003

TUPOLEV

Tupolev Tu-334

NASiAIR

Sibir and Rasaviacosmos state funding and 40 percent from bank lending, 20 percent from risk-sharing partners, 6 percent from government, 33 percent of the project’s investment would come from base capital, 21 percent from the government, 33 percent from the government, 21 percent from the government, and 40 percent from bank loans. Pogosyan estimates the program will need $600 million for certification and project break-even revenue remains within range of the project’s initial cost. The RRJ’s first prospective customer–Russian RPK–has signed a memorandum of understanding that calls for the acquisition of 50 airplanes. The first delivery would occur in 2007. Two

the RRJ’s first prototype customer–Russian RPK–has signed a memorandum of understanding that calls for the acquisition of 50 airplanes. The first delivery would occur in 2007. Two
2000 Berlin Air Show, the program had drawn into order for 114 airplanes worth some $310 million. But by May 2000, the US Federal Aviation Administration (FAA) had cancelled its order, leaving the program with virtually no customer base.

INDONESIAN AEROSPACE

N-220–After the FAA in 1996 refused to accept Indonesian Aerospace’s (formerly IPTN) second prototype for flight testing because of poor documentation, the manufac- turer began anew and by 1998 had completed half of its 1,400-hour testing program. A second prototype, slated for 1,000 hours of testing, had flown 200 hours. Even so, International Monetary Fund (IMF)–financed the Indonesian government to with- draw its support of the project. IAe had little choice but to adjust its pri- orities to Indonesian cer- tification as well. From March 1999 to the fourth quarter of 2000, and again inden- tually until it can real- ised a risk-sharing partner to help finance the development of a third-largest manufacturer.

1992–From Banrata International Leasing and another commitment from USA, Czech Republic’s Let Kunovice, the Tu-324 regional jet began taking shape in March 2001, when the company began building the first of three 728 fuselages at its produc- tion facilities in Ostrava, Czech Republic. Twelve months later Fairchild Dornier rolled out the first example during ceremo- nies overshadowed by a cloud of uncer- tainty, as former company chairman Charles Parker reported a depressive state of finan- cial affairs at the regional aircraft industry’s third-largest manufacturer. While issuing a call for a new strategic partner to help finance the development of a new long-range 728 variant called the 728-200. Parker said the company intended to homologate roughly $50 million per month, forcing it to reduce funds from its other programs–namely the Emery 7 business jet and 95- to 110-seat 928 to the first of the 728. More than a year later the first 728 prototype still sat idle inside a company hangar near Oostende, Belgium, col- lecting dust since insolvent administration effects on the 800 workers assigned to the program in May last year.

Severely undercapitalized during the early phases of the aircraft’s development, the company appeared to secure the funding it needed to proceed with its ambitious program in April, when New York-in- vestment firm Dynacore & Tameo acquired the German’s Allianz Capital vice Fairchild from former CEO Carl Al- bert. The proposed will run dry late next year, however, as 728 program delays, fi- nancial woes related to the cancellation of the 42-seat 428/430, delivery delays of 32-seat 320/325 and the shumping economy drained the company of its remaining resources.

Today, an investor would nero another 50 billion dollars to complete cer- tification of the 728, and perhaps $1 billion more to bring the 928 to market.

Upon its introduction, the 728 estab- lished itself as the foundation on which Fairchild Dornier would build its future, when Germany’s Lufttransporte placed a launch order for sixty 75- to 85-seat 728s in April 1999. Further anchored at the June 2000 Berlin Air Show by a $1.4 billion firm placed for the first example during ceremo- nies overshadowed by a cloud of uncer- tainty, as former company chairman Charles Parker reported a depressive state of finan- cial affairs at the regional aircraft industry’s third-largest manufacturer.

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