The active passenger commercial fleet experienced a net increase of about 600 aircraft during 2011, including 1,100 new deliveries. A320s and 737NGs account for many of these, along with strong growth of large regional jets. Deliveries and re-activations are analysed here for each aircraft type along with storage and retirements.

The development of the commercial fleet during 2011

In total, the fleet of active passenger aircraft worldwide experienced a net increase of 580 units during 2011 *(see table, page 8)*. About 1,100 new aircraft were delivered and another 300 aircraft of all types were re-activated from storage. These figures are both similar to 2010's. These gains were offset by 810 fleet reductions from aircraft that were parked, retired, destroyed, or converted to freighter.

The fleets of each aircraft type, from large regional jets (RJs) to the largest widebodies, are compared on 1 January 2011 and 1 January 2012, to examine the changes in the fleet for each type during the year. Types are split into three different categories: aircraft in production; aircraft out of production; and very old types *(see table, page 8)*.

Current production aircraft

There are three major groups of current production aircraft: large RJs; narrowbodies; and widebodies. By the end of 2011, there were 11,883 active aircraft of types that are currently in production. Figures to note included: the delivery of 1,094 new aircraft; the reactivation of another 128 from storage; 171 aircraft being parked; 37 retired; and three destroyed *(see table, page 8)*. The fleet therefore experienced a net increase of about 1,030, offset by fleets of out-of-production aircraft declining by 450.

Large RJs

Large RJs now account for over 1,000 active aircraft. This is expected to grow further in the coming years with continuing deliveries of the Embraer E-jets (which still have a healthy backlog), as well as several new RJs set to enter the market. This includes the Bombardier CSeries, COMAC ARJ21, Sukhoi Superjet 100 and the Mitsubishi MRJ.

Overall, the large RJ fleet had a net increase of 125 during 2011, with the 140 aircraft delivered and three re-activated from storage, being offset by 17 aircraft parked, and one destroyed *(see table, page 8)*.

Embraer E-jets

The active Embraer E-jet fleet increased by 97 net units in 2011, 90 of which were the larger E-190 and E-195s. Only seven were for E-170s and E-175s.

In 2011 11 E-170s and E-175s were delivered *(see table, page 8)*. Flybe took delivery of four aircraft (all owned by operator), while Oman Air took three (one owned, and two on operating leases from Bank Dhofar). The remaining four were taken on leases from individual airlines and lessors. Five E-170s and E-175s were parked, and one aircraft was re-activated by GECAS.

The largest operators of E-170s and E-175s are Shuttle America (67 aircraft), Republic (62), Compass Airlines (41) and LOT Polish (24), among several others.

91 E-190s and E-195s were delivered during 2011 *(see table, page 8)*. The largest delivery was to Azul, which took delivery of 12 aircraft. Azul owns three aircraft, while the others are leased from BOC Aviation (2 aircraft), the CIT Group Inc (2), Unicredit Leasing SpA (2), Triadentes Portfolio A Ltd (2) and ORIX Aviation (1).

Austral Lineas Aereas took delivery of 11 aircraft, all of which it owns. Tianjin Airlines owns and operates 10 newly delivered E-190s and E-195s.

Other deliveries were made to Lufthansa Cityline, China Southern, BA Cityflyer, Finnair, jetblue, Aeromexico and Virgin Australia among others.

The largest E-190 and E-195 operators are Jetblue (49 aircraft), Air Canada (45), Tianjin Airlines (41) and Azul (38), among many others.

Of the total fleet of E-jets, 426 are owned by their operators, 325 are on operating leases, and 30 are on financial leases. The largest lessors are GECAS (90 aircraft), Delta Airlines (36), Jetscape (17) and VNBC 9 Pty ltd (16).

CRJ-900/-1000

The CRJ-900 and CRJ-1000 active fleet increased by 23 aircraft during 2011, accounted for by delivery of 17 new CRJ-1000s and 16 new CRJ-900s *(see table, page 8)*, and offset by the parking of 10 CRJ-900s.

Of the 16 CRJ-900 deliveries, Eurowings (a Lufthansa subsidiary) took delivery of seven aircraft, all leased from Lufthansa. PLUNA and Estonian Air each took three aircraft, while Iraqi Airways took two and Libyan Airlines one. All are owned by their operators.

Six of the 10 CRJ-900s to be parked were from Libyan Airlines, possibly due to the political unrest of 2011. Brit Air and Andes Lineas Aereas parked two aircraft each during 2011. Mesaba and Mesa Airlines operate the largest fleets of CRJ-900s with 39 and 38 aircraft respectively.

2011 saw the delivery of the first SSJ100s and COMAC AR21s. Five SSJ100s were delivered in 2011, with some to Armavia and others to Aeroflot. There is a firm order backlog of 197 for the type.

Brit Air took delivery of 10 of the 17 new deliveries of CRJ-1000s during 2011. All were leased from Constellation Finance Ltd.

Air Nostrum took delivery of the remaining seven aircraft. It owns one aircraft, while the rest are leased, with three from Banco Santander, two from HEH Aviation and one from Montrose Global Capital. Brit Air and Air Nostrum are the only two operators of CRJ-1000s.

In the total fleet of CRJ-900s and CRJ-1000s, 104 are owned by their operators, and 160 are on operating leases. The largest lessors of CRJ-900s and CRJ-1000s are Delta Airlines (51 aircraft), Wells Fargo Bank (25) and Lufthansa (23).

Other RJs

The first COMAC AR21s and Sukhoi SSJ100s were delivered in 2011.

Two new RJs that are due to come into production over the next few years are the Bombardier CSeries and the Mitsubishi MRJ.

The Sukhoi Superjet is the only one to enter service as of 2011. At the end of 2011, eight Superjets were classed as active *(see table, page 8)*. Three of these are Sukhoi testing aircraft and the remaining five are in commercial service. Four are operated by Aeroflot, on financial lease from VEB-Leasing, and the other is owned and operated by Armavia. The Sukhoi Superjet also gained 23 orders during 2011 *(see table, page 8)*, including orders from Moskovia Airlines and Kuban Airlines.

Little changed in the COMAC ARJ21 fleet, with 10 orders in 2011.

The Bombardier CSeries is not in production yet, but gained 43 orders during 2011, of which 28 were for the smaller CS100 *(see table, page 8)*, including orders to Braathens and undisclosed customers. The CS300 gained 15 orders *(see table, page 8)*, five from Braathens, and 10 from Korean Air.

Similarly, the Mitsubishi MRJ neither gained nor lost orders during 2011.

Narrowbodies

The in-production mainline narrowbody commercial jet fleet comprises two families of aircraft, and is the largest sector of the entire commercial fleet, with 8,257 active aircraft at the end of 2011 *(see table, page 8)*. This is a net increase of 736 aircraft from a fleet of 7,521 at the start of the year, accounting for the largest portion of increase of the aircraft types currently in production.

The increase comes from a net rise of 378 A320 family aircraft, and 358 737NG family aircraft *(see, table page 8)*.

The A320 family active fleet stood at 4,588 aircraft at the end of the year, while the 737 Next Generation (NG) family stood at 3,669.

Of the overall increase of 736 narrowbodies, there were 769 deliveries and 100 re-activations which were offset by 115 parked aircraft, 35 retirements and one aircraft destroyed *(see table, page 8)*.

A320 family

The active A320 family fleet increased by 378 in 2011, and has become the most numerous aircraft type in the global fleet. The number delivered was similar to that delivered in 2010 *(see Development of the passenger jetliner fleet during 2010, Aircraft Commerce, April/May 2011, page 4)*. The majority of deliveries were A320s, with 266 delivered, but there were also 62 A321s, 41 A319s, and nine A318s delivered *(see table, page 8)*.

The net increase of nine A318s was due to 10 aircraft being re-activated during 2011 (all by GECAS on operating leases to Avianca), and one active aircraft being retired (by Frontier Airlines). Two further aircraft were retired by GECAS after being parked in 2011.

The active A319 fleet increased by 41 aircraft during 2011 *(see table, page 8)*. This is accounted for by the delivery of 41 new A319s and the reactivation of another 22, while 22 others were parked.

easyJet took the most new A319 deliveries, with 13 new aircraft, 11 of which it owns, while two are leased from SMFL Aircraft Capital.

Other airlines to take delivery of new A319s in 2011 were Turkish Airlines (6 aircraft), Alitalia (5), LAN (4), TAM (3), Tibet Airlines (3), Lufthansa (2), Germania (2), Sichuan Airlines (1) and CSA Czech (1).

In the total fleet of A319s, 719 aircraft are leased, with the largest lessors being ILFC (124 aircraft), and GECAS (122). Others include the CIT Group Inc (37) and RBS Aviation Capital (34). In total, the largest operators of A319s are easyJet (166), US Airways (93), Delta (57) and United (55), among many others. EasyJet owns most of its fleet (112), while the others are leased. Most operators of A319s have a mix of owned and leased aircraft.

The majority of the 22 re-activated aircraft were done so by airlines from lessors. ILFC was the largest re-activator of A319s, with eight aircraft, five of which went to Aerogal. Lufthansa parked the most A319s, with seven former Lufthansa Italia examples going to storage.

The A320 is the most numerous type in service, with 2,631 aircraft active at the end of 2011 *(see table, page 8)*. The largest fleets of active A320s are operated by jetBlue (120 aircraft), China Eastern (112), United (97), TAM (86), USAirways (72), and Delta (69). Air Asia, Air France, Alitalia and Vueling also have fleets of over 50 active aircraft.

Of the active fleet of A320s, 1,007 aircraft are owned by their operators. Lessors own the remaining 1,624 aircraft.

The A320 family had 369 deliveries in 2011, and by the end of the year the A320 type had an active fleet of 2,631; 263 more than the 737-800 which is the second most numerous type.

Operating leases account for the majority of these (1,366), while another 202 are on financial (or capital) leases.

GECAS is the largest lessor with 258 aircraft in its portfolio, while ILFC is the second largest with 153. Other lessors include AerCap, Aviation Capital Group, BOC Aviation, RBS Aviation Capital and the CIT Group Inc.

The A320 fleet experienced a net increase of 266 in 2011 *(see table, page 8)*. There were 303 new deliveries, which is the highest number of any type during 2011, and 35 aircraft were re-activated from storage. This gain was offset by the parking of 60 aircraft and the retirement of 28 *(see table, page 8)*.

Of the new deliveries, 128 are owned by their operators, while the rest are leased.

China Eastern was the largest receiver of operator-owned aircraft, followed by easyJet and China Southern. Of the lessors, GECAS took the highest number of new aircraft (31).

These are operated by a variety of airlines, including China Southern, Avianca and Virgin America. Other airlines to add to their A320 fleets in 2011 were Air France, Air China and BA, among others.

The A320 also experienced a large increase in the backlog of orders. 1,434 orders were placed in 2011 *(see table, page 8)*, which supersedes the second most popular type, the 737-800, by 1,085 units. The A320's order success in 2011 is mainly explained by the launch of the A320neo. Current A320 operators placed the majority of the orders.

35 aircraft were re-activated from storage *(see table, page 8)*, while the majority of the 60 aircraft that were parked were done so on return to lessors. The retired aircraft were universally early build aircraft, with Air India retiring the most (six).

Finally, the A321 experienced a net increase of 62 active aircraft in 2011, taking the active fleet to 676 *(see table, page 8)*.

The largest A321 fleets are with US Airways (63), China Southern (57) and Lufthansa (54). 335 A321s are owned by their operators, 283 are on operating leases, and 58 are on financial leases.

The largest A321 lessor is ILFC (81), while other lessors such as GECAS, MacQuarie Finance and the CIT Group Inc lease 15-20 aircraft each.

During 2011, 66 new A321s were delivered, with eight re-activated *(see table, page 8)*. However, 12 were put into storage.

44 of the new deliveries are owned by their operators, with these deliveries split between Lufthansa, Saudi Arabian Airlines, Sichuan Airlines, Turkish Airlines and US Airways, among others.

Lessors that took delivery of new aircraft include Vietnam Aircraft Leasing Co, which took delivery of eight aircraft; all on operating lease to Vietnam Airlines. Other lessors took deliveries in smaller numbers.

737 NG family

The 737NG family of aircraft is the second most numerous, and the active fleet reached 3,669 at the end of 2011. This comprises the 737-600 (68 aircraft), 737-700 (1,067), 737-800 (2,378), and the 737-900 (156) *(see table, page 8)*.

The 737-600 is the smallest of the 737NG family, and can be compared with the A318. 68 737-600s were active in 2011, but no new aircraft were delivered *(see table, page 8)*. The largest fleets are with SAS (28 aircraft) and WestJet (13). A total of 33 aircraft are owned by their operators, and the remainder are all leased. The largest lessors are ILFC and NBB Leasing Co Ltd.

The 737-700 experienced a net increase of 39 aircraft in 2011, taking the active fleet to 1,067 *(see table, page 8)*. The fleet is dominated by Southwest Airlines, which operates 372 aircraft.

There are several other airlines with large 737-700 fleets, including: WestJet, China Eastern, China Southern, United, and Gol.

636 737-700s are owned by their operators, while 431 are on lease. The largest lessors are GECAS (81 aircraft), ILFC (65) and BOC Aviation (32).

Only 43 new 737-700s were delivered in 2011 *(see table, page 8)*, with the largest delivery to Southwest Airlines (18), all of which are owned by Southwest.

14 aircraft were delivered on lease, with the CIT Group Inc accounting for five of these (all went to KLM).

The 737-800 is the second most numerous aircraft, with an active fleet of 2,378 at the end of 2011. There was also an order backlog of 1,545 at the end of the year *(see table, page 8)*.

980 aircraft of the active 737-800 fleet are owned by their operators, 1,180 are on operating leases, 187 are on financial leases, and 31 are sub-leased.

The largest 737-800 lessors are GECAS (248 aircraft), ILFC (126), RBS Aviation Capital (85), Aviation Capital Group (57), NBB Leasing Co Ltd (53), and the CIT Group Inc (53). Similarly to the A320, there are numerous other smaller lessors with 737-800s in their portfolios.

There were 292 deliveries of 737-800s during 2011 *(see table, page 8)*, again second only to the A320. 42 of these were to GECAS, and then passed on to operators such as American Airlines, Pegasus Airlines, Garuda Indonesia and Xiamen Airlines.

The 737-800 also gained 349 orders in 2011 *(see table, page 8)*, again ranked second to the A320.

The largest of the 737NG variants, the 737-900, experienced a net increase in active aircraft of 22 in 2011. 24 new

COMMERCIAL PASSENGER JET FLEETS FROM 01/01/2011 TO 01/01/2012

	2011			Additions		Reductions				2012			Orders
	Active	Parked	Backlog	Deliv.	Re-activated	Frtr conv	Parked	Retired	Destroyed	Active	Parked	Backlog	in 2011
Current production aircraft													
Large RJs													
E-170/-175	317	4	50	11	1		5			324	8	53	14
E-190/-195	377	9	197	91	2		2		1	467	9	207	101
CRJ900	238	2	22	16			10			244	12	10	4
CRJ1000	5		45	17						22		29	1
COMAC ARJ21	4		187							4		197	10
CS100			33									61	28
CS300			57									72	15
SSJ100	3	1	147	5						8	1	165	23
MRJ			15									15	0
Total	944	16	753	140	3		17		1	1,069	30	809	196
Narrowbodies													
A318	44	12			10			3		53			0
A319	1,187	28	219	41	22		22			1,228	28	178	0
A320	2,365	88	1,637	303	35		60	28		2,631	99	2,768	1,434
A321	614	10	232	66	8		12			676	14	409	243
737-600	68									68			0
737-700	1,028	6	476	43	6		6	4		1,067	6	329	-104
737-800	2,081	20	1,488	292	19		13		1	2,378	14	1,545	349
737-900	134		193	24			2			156	2	311	142
Total	7,521	164	4,245	769	100		115	35	1	8,257	163	5,540	2,064
Widebodies													
A330-200	385	6	144	37	3		11			414	14	115	8
A330-300	334	6	135	43	6		2	1		380	2	145	53
A340-500	29	5	4				2			27	7	2	-2
A340-600	95	2					1			94	3		0
A350			583									555	-28
A380	42	2	193	26						68	2	186	19
767-300	601	25	25	15	9		16	1		609	31	21	11
767-400	37									37			0
787-8	5	1	613	4	1		1			9	1	551	-58
787-9			234									305	71
777-200	539	9	22	6	6		3		1	547	6	16	0
777-300	321		190	52			3			370	3	290	152
747-8			32	2						2		35	5
Total	2,388	56	2,175	185	25		39	2	1	2,557	69	2,221	231
In production total	10,853	236	7,173	1,094	128		171	37	3	11,883	262	8,570	2,491
Out-of-production aircraft													
BAe 146	71	64			13		11	2		73	60		
Avro RJ	125	38			4		16	2		113	48		
Fokker 70	45	2			2					47			
Fokker 100	178	64			8		23	17		161	64		
717	124	31			5			1		129	25		
737-200	196	169			9		26	36	2	169	158		
737-300	675	142			20	7	59	60	1	618	131		
737-400	405	38			14	10	43	4	1	368	60		
737-500	323	47			12		40	5		291	74		
757-200	697	73			8	26	46	11		652	79		
757-300	55						1			54	1		
MD-81/82/83	508	221			33	1	68	45	1	466	216		
MD-87	31	33			1		7	7	4	25	28		
MD-88	137	13					4	4		132	14		
MD-90	87	21			9		36			60	48		
A300-600	91	40				6	22	13	2	65	45		
A310-200	2	13			1			7		3	5		
A310-300	89	10			1		9	8		78	13		
A340-200	25	2					4	1		20	6		
A340-300	199	13			4		6	3		196	13		
767-200	93	46			4	7	10	12		82	38		
747-300	27	8			5		7	2	1	23	9		
747-400	360	42			7	7	24	10		337	48		
MD-11	18	2				1	1			17	2		
Total	4,561	1,132			160	65	463	250	12	4,179	1,185		
Very old types													
F.28	42	41			2		4	28		39	16		
BAC 1-11	10	3					1	2		8	3		
727-100	20	18			1		3		1	17	20		
727-200	50	45			3		7	12	1	45	37		
DC-8	2	4			1			1		3	3		
DC-9	133	153			3		25	40	1	97	148		
707/720	2	8								2	8		
Narrowbody total	259	272			10		40	83	3	211	235		
A300B2/B4	16						1			15	1		
L-1011	7	12					3	4		4	11		
DC-10-10/-15	2	2						1		2	1		
DC-10-30	13	9					3	8		9	5		
DC-10-40		5						5					
747-100	6	6					2	1		4	7		
747-200	18	14			1		6	8		11	13		
747 SP	18	3								18	3		
Widebody total	80	51			1		15	27	0	63	41		
Out of production total	4,900	1,455			169	65	514	360	15	4,453	1,461		
Fleet total	**15,753**	**1,691**	**7,173**	**1,094**	**297**	**65**	**685**	**397**	**18**	**16,336**	**1,723**	**8,570**	**2,491**

There were 359 737NG deliveries in 2011, and the active fleet had reached 3,669 by the end of the year.

737-900s were delivered, and two were parked *(see table, page 8)*.

16 of the new deliveries were to Lion Air, of Indonesia. Lion Air owns nine of these, while the remaining seven are leased from DVB Bank SE (3), Credit Agricole CIB (2), BNP Paribas Lease Solutions (1) and Northern Sky Investments (1).

Other 737-900s were delivered to Turkish Airlines (two aircraft on lease from Citibank), two aircraft each owned and operated by Korean Air and Somon Air respectively, and one aircraft each owned and operated by United and SpiceJet.

The largest 737-900 fleets are with Lion Air (55), United (45), Korean Air (18) and Alaska Airlines (12).

117 of the total fleet are owned by their operators, with the remaining aircraft leased. No lessor dominates the 737-900 leasing market, with several lessors having a few aircraft each.

The 737-900 gained 142 firm orders, to bring the total backlog to 311 *(see table, page 8)*. This will substantially increase the 737-900 fleet in the future. Lion Air, Alaska Airlines, Delta, United, Turkish Airlines and the CIT Group INC all placed orders.

Widebodies

Widebodied aircraft still in production include the A330-200/-300, A340-500, A380, 767-300, 787-8, 777-200/-300) and the 747-8. This section also includes new aircraft not yet in production, but with firm orders outstanding, such as the A350 and 787-9.

The group of widebodies in production experienced a net increase of 170 active aircraft during 2011. 185 were delivered, and a further 25 were re-activated *(see table, page 8)*. Deliveries were 28 higher than in 2001, and were mainly accounted for by Boeing aircraft. These 28 deliveries were offset by 39 aircraft being put into storage, two retirements and one aircraft being destroyed.

Net orders for 231 Airbus and Boeing widebodies were taken, which included 329 orders and 88 cancellations. The largest orders were for 152 777-300s, 71 787-9s, and 53 A330-300s.

Boeing still dominates the widebody fleet, with 1,574 of the current production types active at the end of the year. Boeing also dominated new sales in 2011, with 181 net orders, 152 of which were for the 777-300, and 13 for the 787-8/-9 family.

Airbus current production widebodies stood at 983 active aircraft at the end of the year. It won 50 net orders.

A330

The active A330 fleet experienced a net increase of 75 aircraft in 2011, of which 29 were A330-200s, and 46 were A330-300s *(see table, page 8)*.

The largest fleets of A330-200s are operated by Emirates (26), Air China (22) and TAM (20). 125 of the active A330-200 fleet are owned by their operators, with the rest leased. The largest lessors of A330-200s are ILFC (61), the CIT Group Inc (31) and GECAS (26).

37 A330-200s were delivered in 2011, with 27 on lease, and 10 owned by their operators: China Southern (4), TAM (2), Air China (1), Oman Air (1), China Eastern (1) and Hawaiian (1).

Deliveries to lessors included six to Aircastle Investment, all on operating lease to South African Airways. Air Lease Corporation also took six aircraft (on operating lease to Alitalia (3), Vietnam Airlines (2) and Air China (1)), while the CIT Group Inc and Credit Agricole CIB took delivery of three A330-200s each.

The CIT Group Inc aircraft are on operating lease to Jetstar Airways (2) and Garuda Indonesia (1), while the Credit Agricole CIB aircraft are on financial lease to Korean Air (2) and China Eastern Airlines (1).

There was a net increase of 46 A330-300s in 2011 *(see table, page 8)*, which included 43 deliveries and six re-activations offset by one retirement and two aircraft being parked. This was the second largest widebody fleet increase for the year.

Of the 43 deliveries, 19 were to operators that also own the aircraft, while the rest were on lease. AerCap had six aircraft delivered, which were then leased to Virgin Atlantic (5) and Asiana (1). Three of the Virgin Atlantic aircraft were then sub-leased to China Airlines (2) and Ryan International (1). Citibank NA (leased to Aeroflot (2) and Etihad (1)), the CIT Group Inc (leased to Eva Air (3), Air China, Cathay Pacific and EgyptAir were next highest and each took delivery of three aircraft each. One further aircraft was retired by GECAS, and Aircastle Investment and Thai Airways parked two respectively.

Both the A330-200 and A330-300 experienced an increase in the backlog of orders, with the A330-200 gaining eight in 2011, and the A330-300 gaining 53 *(see table, page 8)*.

A340-500/-600

Although the A340-500 and A340-600 are still classed as in production, there were no deliveries during 2011 and there is only a backlog of two A340-500s.

The A340-500 fleet comprised 27 active aircraft at the end of 2011 *(see table, page 8)*, which is a net fleet reduction of two during the year, because two were parked. These were two aircraft for TAM.

Of the 27 active aircraft, 16 are owned by their operators with the rest leased. Union Three Leasing is the largest lessor with four aircraft on operating lease to Etihad.

The A340-600 also experienced little

The first 787s were finally delivered in 2011, with just three being delivered to All Nippon Airways. The 787-8/-9 had an order backlog of 856 at the end of the year; larger any other widebody and larger than all narrowbodies, except for the A320 and 737-800.

change in 2011. Only one aircraft was parked, an ILFC example on lease to Virgin Atlantic.

59 A340-600s are owned by their operators, and another 35 are on lease. ILFC is the largest lessor of A340-600s with 12.

A350

The A350 is a new aircraft type that had gained significant previous orders. However, the A350's firm orders decreased from 583 at the end of 2010, to 555 at the end of 2011 *(see table, page 8)*. This is due to 28 cancellations.

Orders are still in place for over 30 airlines and lessors, however. The largest orders have been placed by Emirates (120), Qatar Airways (80), United (75) and Asiana (40).

A380

The A380 fleet grew by 26 during 2011, following an equal number of deliveries *(see table, page 8)*.

11 deliveries are owned by their operators including Lufthansa (4), Singapore Airlines (3), Emirates (2) and China Southern (2). The rest were delivered on financial leases. The largest of these was to Credit Agricole CIB (five aircraft), with these aircraft leased to Korean Air (4), and Air France (1). Other aircraft on lease were delivered to Emirates, Qantas, and Air France.

Following these deliveries the total active fleet of A380s was operated by Emirates (20), Singapore Airlines (14), Qantas (11), Lufthansa (8), Air France (6), Korean Air (5) and China Southern (2).

The A380 also gained 19 orders in 2011 *(see table, page 8)*, which were placed by Hong Kong Airlines (10 aircraft), Qatar Airways (5), Lufthansa (2) and Skymark Airlines (2).

767-300/-400

The 767-300 (and -300ER) is the dominant of the 767 family, and remains in production despite 787 deliveries starting in 2011. 15 767-300s were delivered in 2011, with nine re-activated. Another 16 aircraft were parked and one retired *(see table, page 8)*, giving a net increase of eight active airframes. This took the active fleet to 609.

Japan Airlines (JAL) took the largest delivery with six new 767-300ERs delivered in 2011, all of which are owned by the operator. All Nippon Airways (ANA) took delivery of five, but all were on lease from several lessors. LAN Airlines took delivery of three aircraft, and Azerbaijan Airlines took delivery of the other four. All are operator-owned.

In terms of the nine re-activations, four were put into service by Aerospace Finance Asia, with three operated by Aerosvit, and the other by LOT Polish Airlines. Royal Brunei Airlines previously operated all four. The other re-activations were by individual lessors and airlines. Similarly, the 16 767-300s put into storage during 2011 were done so by several individual airlines and lessors.

At the end of 2011, the largest 767-300 operators were Delta (73 aircraft), American Airlines (58), ANA (55) and JAL (48). Of these aircraft, 303 were owned by their operators, 277 were on operating leases, 19 on financial leases, with the remaining 10 sub-leased. The largest lessors of 767-300s were ILFC (47 aircraft) and GECAS (32). The 767-300 also gained 11 orders through 2011.

The 767-400, although still classed as a current production aircraft, has no outstanding orders, nor were any delivered during 2011. There were no other changes to the 767-400 fleet, with all operated by Delta and United.

787-8/-9

After lengthy production delays, the 787 finally entered service in 2011. Three 787-8s were delivered to ANA, which owns all three aircraft. The other active 787-8 airframes are Boeing's test aircraft. Despite this, the 787-8 did experience a net decrease in orders of 58 aircraft during 2011, due to cancellations and transfers of orders to the larger 787-9.

The 787-9 won 71 firm orders during 2011, from Etihad, ILFC, Air France, KLM, Qantas, Singapore Airlines and Virgin Atlantic, among others. The 787-8/-9 have an order backlog of 856.

777

The total active 777 fleet increased by a net 57 units during 2011 *(see table, page 8)*. The 777-200 fleet increased by a net eight units, while the 777-300 fleet grew by 49.

Six 777-200s were delivered in 2011, to Ethiopian Airlines (3), Air Austral (1), Qatar Airways (1) and CEIBA Intercontinental (1). The operators own all of these. A further six 777-200s were re-activated during 2011, three by TAAG Angola Airlines (owned and operated), two by Omni Air International (on operating lease from US Bank Trust NA), and one by Turkmenistan Airlines (owned and operated). Three 777-200s were parked, with one destroyed (EgyptAir).

Of the entire 777-200 active fleet in 2011, 359 aircraft were owned by their operators, 159 were on operating leases, and 28 were on financial leases. The biggest lessor of 777-200s is ILFC with 37 aircraft.

The 777-300 fleet experienced larger changes than the 777-200 fleet. 52 new 777-300s were delivered, with three aircraft parked; a net increase of 49 aircraft *(see table, page 8)*. Two of the parked aircraft belong to Singapore Airlines, while the other belongs to Siam Hire Purchase Ltd, which was on lease to Thai Airways International.

Of the new aircraft, 37 are owned by

Despite the global economic downturn, the total number of aircraft in storage increased by only about 30 aircraft in 2011 to 1,723. The majority of these, 1,461 aircraft, were types that are no longer in production and mainly old aircraft that are unlikely to be re-activated. Only 262 aircraft of types currently in production were in storage at the end of 2011.

their operators, with 15 leased. The largest deliveries were to Emirates (11 aircraft: eight owned and operated; and three leased from Jackson Square Aviation), Turkish Airlines (seven owned and operated), and Cathay Pacific (six aircraft: four owned and operated; and two leased from BOC Aviation).

In the entire fleet, 185 aircraft are owned by their operators, 155 are on operating leases, with 25 on financial leases. The biggest lessors of 777-300s are ILFC (33 aircraft), GECAS (29), and BOC Aviation (15).

747-8

The 747-8F was first delivered in 2011, with the 747-8I passenger version yet to enter service. Boeing's test airframes are the two 747-8I airframes classed as active in 2011. By the end of 2011, there were 35 confirmed orders for the 747-8I *(see table, page 8)*. These were from Lufthansa (20), Korean Air (5), Arik Air (2) and eight from an undisclosed buyer. This is a net increase of three orders over 2010. The Arik Air order and an undisclosed buyer accounted for these three aircraft.

Out-of-production aircraft

This group comprises older types, that were manufactured in the 1980s, 1990s and up to 2005 in some cases, but are no longer in production. It includes large RJs, narrowbodies and widebodies. Since the types are no longer manufactured, their numbers decline each year as aircraft are converted to freighter, retired, parked or destroyed.

The active fleet declined by 382 during 2011 to 4,179 *(see table, page 8)*. This includes 394 large RJs, 2,964 narrowbodies and 821 widebodies. There were 1,185 of these types in storage at the end of 2011.

In 2011 160 out-of-production aircraft were re-activated from storage, but 463 were parked, 250 were retired, 12 were destroyed, and 65 were converted to freighter.

Large RJs

Out-of-production large RJs include the BAe 146, Avro RJ and the Fokker 70 and 100.

The active BAe 146 fleet actually increased by two to 73 *(see table, page 8)*, because 13 aircraft were re-activated and 11 parked during 2011.

Meanwhile, the active Avro RJ fleet decreased by 12, since 16 aircraft were parked, and only four re-activated *(see table, page 8)*. About half the 16 parked aircraft had been operated by Brussels Airlines, following return to lessor Trident Aviation. A further four aircraft were parked on return to lessor Triangle Regional Aircraft by Blue1. There were a total of 108 BAE 146s and Avro RJs in storage at the end of 2011.

The Fokker 70 fleet experienced little change in 2011. Two aircraft were re-activated, owned by Aircraft Leasing No 3 Pty Ltd, on operating lease to Alliance Airlines.

The active Fokker 100 fleet decreased by 17 aircraft during 2011 *(see table, page 8)*. 23 Fokker 100s were parked, including 13 by lessor Synergy Aerospace, which were operated by Avianca. There were 64 Fokker 100s in storage at the end of 2011.

17 aircraft were also retired during 2011, including eight owned and operated by KLM Cityhopper. Eight aircraft were also re-activated during 2011 by individual airlines and lessors.

Narrowbodies

Out-of-production narrowbodies include the 717, 737 'classics', 757, MD80 family, and the MD90.

The active 717 fleet increased by five units during 2011 *(see table, page 8)*. Five were re-activated, three operated by Blue 1 (two on lease from Bavaria Intl Aircraft Leasing, and one from Pembroke Group Ltd), and two operated by airTran Airways (both on lease from Boeing Capital Corporation).

The active 737-200 fleet decreased by 27 to just 169 aircraft, including nine re-activations *(see table, page 8)*. Many more aircraft were parked, however, with many also being retired from storage as well. A large number were in storage or parked at the end of 2011.

A similar story can be seen for the rest of the 737 'classic' fleet: the 737-300, -400, and -500.

The active fleet for this family declined by 126 units to 1,277, while the number in storage during the year increased by 38 to 265. There were 230 reductions in the active fleet, including 17 freighter conversions, 69 retirements and two destroyed aircraft. More than 140 aircraft were put into storage, although 46 were re-activated.

The 737-300 dominates, and its active fleet decreased by 57 to 618 during 2011. The largest fleets are with Southwest Airlines, China Southern, and Lufthansa.

The 737-400 fleet decreased by 37 aircraft in 2011, giving an active fleet of 368 at the end of 2011 *(see table, page 8)*. The largest fleets are with USAirways, Malaysia Airlines and Alaska Airlines.

The 737-500 fleet reduced by 32 units to 291 aircraft at the end of 2011 *(see table, page 8)*. The largest fleets are with United, Lufthansa and Southwest Airlines.

The active 757-200 passenger fleet reduced by 45 units in 2011 to 652 active aircraft *(see table, page 8)*. 26 757-200s were converted to freighter, but most of these were aircraft that were already parked at the start of the year. A large number of parked aircraft were also retired. Additional aircraft were parked and retired during 2011.

The largest active passenger 757-200

The fleet of active passenger and stored aircraft at the start of 2011 had their numbers reduced by 65 aircraft that were converted to freighter during the year. This included 17 737-300s/-400s, 26 757-200s, one MD-80 and 21 widebodies.

fleets remain in the USA with American Airlines, United, and Delta.

The 757-300 experienced little change with one aircraft parked in 2011.

There were 80 757s in storage or parked at the end of 2011.

The MD-80 fleet was still active in large numbers, with 623 MD-80s of all variants active at the end of 2011. This is a reduction of 53 active aircraft *(see table, page 8)*. The largest fleets are with American Airlines, Delta, and Allegiant Air. Accounting for 34 re-activated aircraft, there were 107 net reductions, mostly including aircraft being parked or retired, but also the first MD-80 to be converted to freighter.

The active MD-90 fleet reduced by 27 units to 60, with 36 aircraft parked and nine re-activated *(see table, page 8)*. All nine re-activations are owned and operated by Delta.

China Southern parked 12 aircraft, because they were transferred to Delta. Hello Airlines parked three aircraft, for transfer to Delta. Saudi Arabian Airlines also parked 19 MD-90s, while Japan Airlines parked two.

There were 306 MD-80s/-90s in storage or parked at the end of 2011.

Widebodies

Out-of-production widebodies include the A300-600, A310-200/-300, A340-200/-300, 767-200, 747-300/-400, and the MD-11.

The active A300-600 fleet reduced by 26 aircraft during 2011 *(see table, page 8)*. There were 43 reductions in the year, including six freighter conversions, 13 retirements and 22 aircraft parked. Japan Airlines (JAL) parked its entire A300-600 fleet.

There were 45 parked or stored A300-600s at the end of 2011.

The active A310 fleet almost entirely comprises A310-300s, with only three A310-200s active and 78 A310-300s at the end of 2011.

The A310-300 active fleet reduced by 11 aircraft *(see table, page 8)*, accounted for by aircraft being retired and parked by Air India, Mahan Air, and Pakistan International Airlines (PIA). The largest remaining fleets of active A310-300s are with Air Transat, Mahan Air, and PIA.

There were 18 stored or parked A310-200s/-300s at the end of 2011.

The older A340 types (-200 and -300) still form an integral part of many airlines' long-haul fleets, with most aircraft produced still being in active service.

Four A340-200s were parked during 2011 and one aircraft retired. The active fleet declined to 20. Aerolineas Argentinas and South African Airways are the largest operators of A340-200s.

The A340-300 fleet underwent minimal changes through 2011. The active fleet was reduced by three units to 196 *(see table, page 8)*. The largest operators of A340-300s are Lufthansa, Air France, Cathay Pacific and Iberia.

The active 767-200 fleet is in decline, and reduced by 11 units in 2011 to just 82. Seven freight conversions took place in 2011, with 10 aircraft parked and a further 12 retired *(see table, page 8)*. The largest remaining passenger fleets of 767-200s are with American Airlines, US Airways, and United.

The out-of-production 747 fleet is dominated by the 747-400. The active 747-300 fleet only numbered 23 aircraft at the end of 2011, while the active 747-400s numbered 337 *(see table, page 8)*.

This was a 23-unit reduction from the end of 2010. Seven 747-400s were re-activated including two by British Airways (BA) (owned and operated) and two by Transaero Airlines (one each on lease from VEBL and SB Leasing Ireland).

24 747-400s were parked during 2011, while 10 747-400s were retired, including two by BA. Seven 747-400s were converted to freighter *(see table, page 8)*.

The largest remaining 747-400 operators are BA, Qantas, Lufthansa, Cathay Pacific, United, Delta, Transaero, Thai Airways and Virgin Atlantic. Of the active 747-400 fleet, 214 are owned by their operators, 117 are on operating leases, while the remaining six are on financial leases. There are numerous lessors of 747-400s with none being dominant in the market.

The MD-11 fleet experienced few changes in 2011, with one aircraft parked and one converted to freighter *(see table, page 8)*. The remaining active passenger fleet now comprises just 17 aircraft, operated by KLM (10) and World Airways (7).

Old aircraft types

This aircraft group consists of very old aircraft types, most of which entered service in the 1960s and 1970s. This fleet declined from 259 to 211 active narrowbodies, and from 80 to 63 active widebodies; an overall drop of 65 aircraft.

Narrowbodies include the F.28, the BAC 1-11, 707/720, 727-100/-200, DC-8, DC-9. All these fleets are in decline, with the DC-9 having the largest active fleet of this group with 97 active aircraft. 45 727s were also active at the end of 2011 *(see table, page 8)*.

Very old widebodies include the A300B2/B4, L-1011, DC-10-10/-15/-30/-40, and the 747SP/-100/-200. One 747-200 was re-activated, while 15 were parked and 27 retired *(see table, page 8)*. These aircraft, however, are only a small percentage of the overall fleet and so have little impact on the overall trends of the commercial fleet. AC

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