

EUROCONTROL Short-Term Forecast

December 2010

**Flight Movements
2010-2012**



EUROCONTROL Short-Term Forecast, December 2010. IFR Flight Movements 2010-2012.

Summary: 2010 leaves with a whimper.

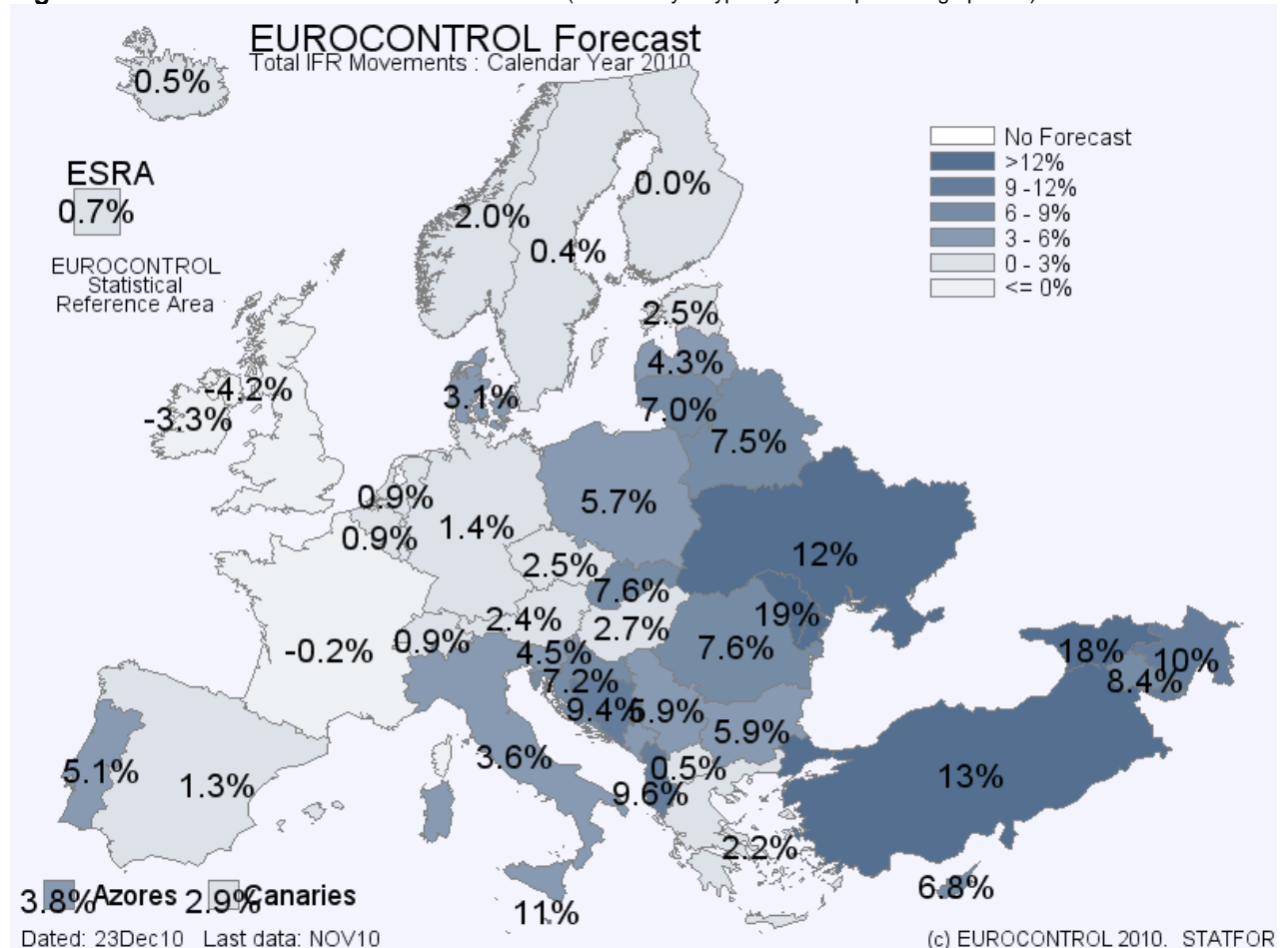
Airlines may still be basking in the warm recovery of the Summer, with higher yields, load factors and profits, but the Winter timetable is showing markedly weaker growth and December has added to the growing tally of cancellations. Even without the ash-cloud there were some 2.5 times as many weather- and strike-related cancellations this year as in 2009. Exit 2010, limply behind 2006 in terms of number of flights.

2011 is forecast to see 3.6% growth in flights across Europe, lifted by the bounce-back from the ash-cloud, but also as airlines continue to search for the right level of capacity to meet the post-economic crisis demand. 2012 will be similar (3.9% growth), the difference being equivalent to the extra day of the leap year.

The upside- and downside-risks to the forecast are probably in balance across Europe as a whole, but in individual States we will continue to see strong divergence: some at the high end of the forecast, others at the low. The downside risks include the looming weight of austerity measures; the upward creep of fuel prices and the weakening euro; changes in airline growth strategies in the face of changes to aviation taxation in 2011 and especially the arrival of the Emissions Trading Scheme in 2012. On the upside, the high load factors continue to suggest unsatisfied demand with the potential for a stronger Summer than actually forecast; and a quieter year for weather and strikes that could add as much as 0.5% to growth.

The forecast will next be updated in February 2011, together with the medium-term forecast.

Figure 1. Growth of IFR movements in 2010 (Uncertainty is typically ± 0.15 percentage points.)



1. INTRODUCTION

The Statistics and Forecast Service (STATFOR) of EUROCONTROL produces a short-term (two years) forecast of IFR flights in Europe. This is published four times per year: independently in May and December, and as an integral part of the medium-term forecast in February and September.

This update of the flight forecast uses the improved method that was first put into operation in February 2009 and enhanced in February 2010. This method is outlined in Annex C. The main improvements are:

- The short-term forecast is now network-based, ie it forecasts zone-to-zone traffic flows for some 8,000 zone-pairs rather than forecasting each State independently as in the old method.
- The short-term forecasts are aligned with the medium-term forecast for the first two years at this zone-to-zone level of detail: they are short- or medium-term views of the same data.
- That alignment means that increasingly in the later months of the short-term forecast, economic factors influence the growth forecast.
- The short-term forecast incorporates future schedule data.

Reporting of the forecast for this summary report remains focused on the main flows for each State, and for the EUROCONTROL Statistical Reference Area (ESRA08). The ESRA08¹ represents the whole of Europe. It is a large, stable subset of the Member States used for comparison purposes since 2009.

In the remainder of this document:

- Section 2 looks at what has changed since the last forecast, and what this says about trends in growth.
- Section 3 summarizes the forecast for 2010.
- Section 4 outlines the forecast for 2011 and 2012.

The next short-term forecast will be published at the end of February 2011 as part of the medium-term forecast.

1 See www.eurocontrol.int/statfor/faq for map of ESRA08.

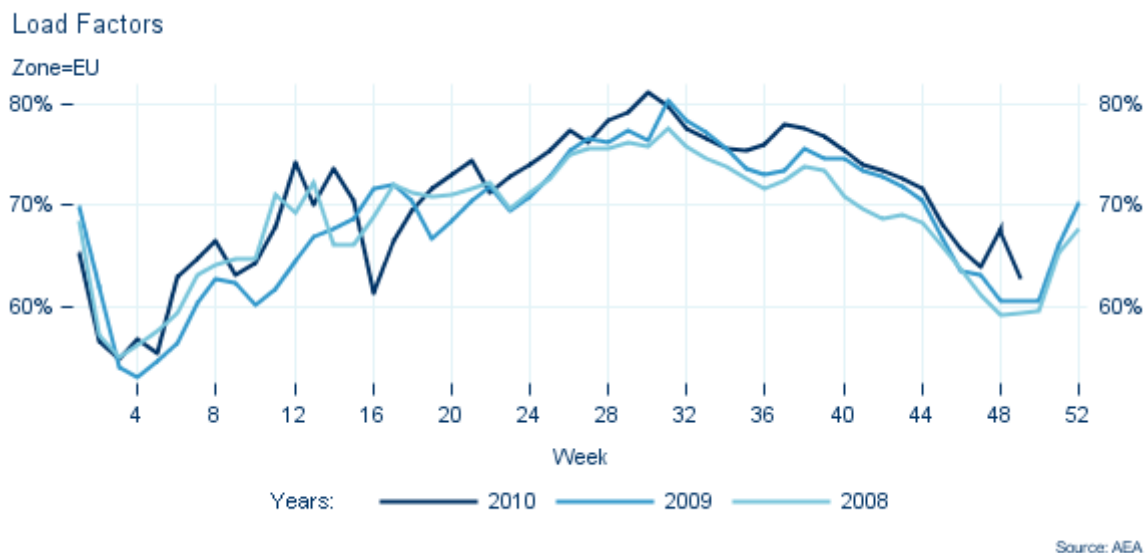
2. RECENT TRAFFIC TRENDS

In 2010, aviation in Europe finally pulled out of the economic stall and began to climb again. Indeed, during the Summer months, growth of passengers, freight and flights alike exceeded the expectations of many (including our own forecasts). Yields improved strongly, load factors raced to new heights (AEA, Figure 2), though the number of flights in many States remains below that from before the financial crisis.

However, neither Nature nor Man has been kind to aviation this year: barely a month has passed without passengers and shippers being confronted with significant flight cancellations as a result of weather, the ash-clouds, strikes and capacity shortages. We reported in detail on the 100,000 or so flight cancellations in our ash-cloud report². With snow continuing to affect traffic in late December, we now estimate that more than 160,000 flights have been cancelled during the year: that's 1.5% points off total growth and even without the ash-cloud effects, it is 2.5 times as many cancellations as in 2009.

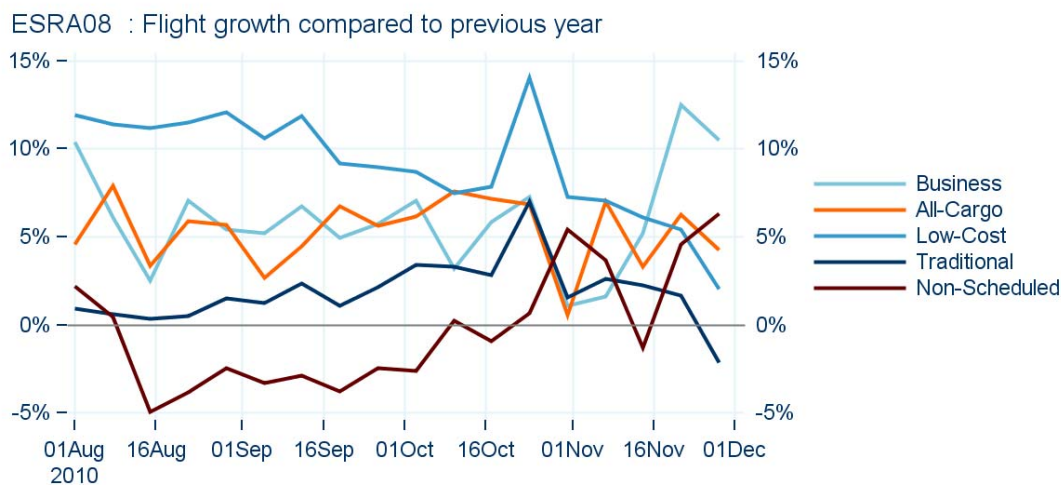
The Winter timetable has begun weakly. There is still growth (after allowing for one-off events), but several low-cost carriers have scaled back their growth (Figure 3), and since they have been the main contributors to growth for most of the last year, this means a deceleration in growth overall.

Figure 2. Load factors have remained strong, except during the ash crisis. (Source: AEA)



Source: AEA

Figure 3. Growth per market segment in recent weeks.



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² Ash-cloud of April and May 2010: Impact on Air traffic, STATFOR Doc 394, www.eurocontrol.int/statfor.

The recovery has been less uniform than the 2009 downturn, both in economic terms and in terms of flights. Flight growth is concentrated in a few States, and on a few traffic axes. Since the previous forecast, Turkey and Germany have been the States adding most traffic to the European network (Figure 4), with Italy at times not far behind. The economic crisis, and a series of general strikes has reduced traffic in Greece overall; and the UK and Ireland will both end the year with fewer flights than the already-reduced levels of 2009, although before the recent weather crisis, they were showing signs of growth again, so the prospects for 2011 are better.

Figure 5 shows traffic growth to the top 6 destinations outside Europe. Russia has been a clear source of growth this year, and indeed for one month during the Summer passed the US as the main external partner for Europe. As the graph suggests, this remains however a seasonal flow with much stronger Summers than Winters.

Figure 4. States contributing much in changing traffic flows in the European network in Aug-Nov 2010 period (threshold=|45| flight/Day).

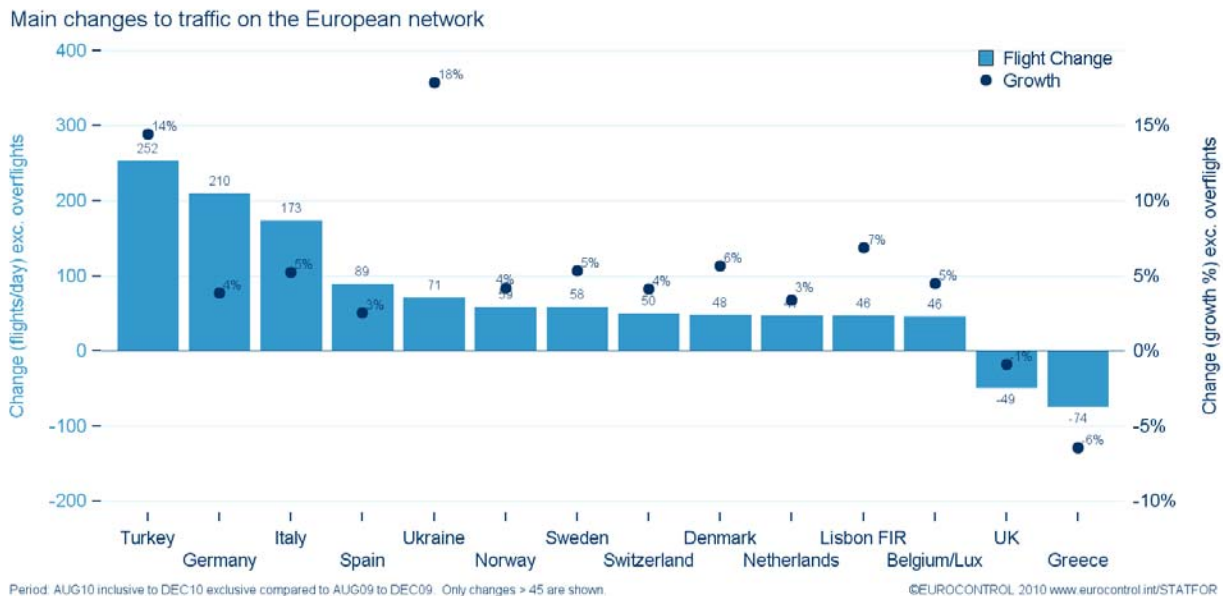
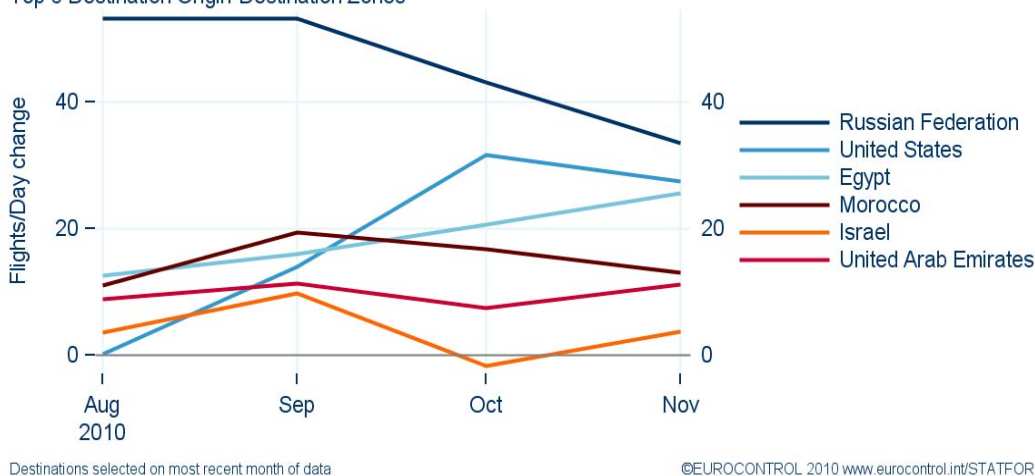


Figure 5. Main changes in flows from outside Europe in the last four months.

Departures from ESRA08. Flight change (per day) compared to previous year
Top 6 Destination Origin-Destination Zones

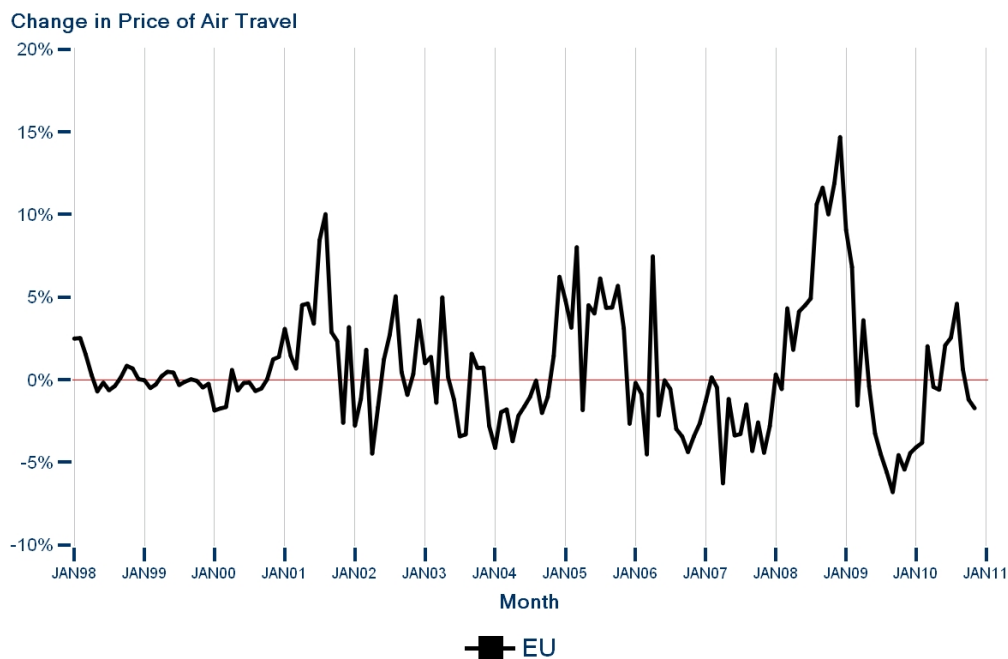


Financially, IATA now forecasts a return to profit in 2010, albeit a very weak one in the case of European airlines. Two contributors to that have been that for much of the year, the fuel price has been relatively stable (Figure 6) and carriers have in general also been able to increase ticket prices over the Summer (Figure 7). However, in the last month or so, the weak euro and a climbing oil price have begun to push fuel prices higher, whilst ticket prices this Winter have begun to slip again.

Figure 6. Oil prices have begun to climb again (Source: EIA, Eurostat, IATA).



Figure 7. Real ticket prices in EU have decreased by 1.7% in November 2010. (Source: Eurostat)



3. THE FORECAST FOR 2010

The year 2010 shows every sign of ending in its accustomed manner: with major disruptions, this time largely from the weather. Details per state and region are provided in Annex B as well as in the map in Figure 1.

Figure 8 shows that the month began by losing more than 10% of flights to snow, with the weekend of 18-19 December again affected. The forecast uses actual data only up to the end of November, so we have adjusted the December 'forecast' downwards to take account of these events.

As a result of this, December is forecast to have fewer flights than December 2009 (Figure 9), even though December 2009 was itself badly affected by snow. The combination of the weak Winter timetable and the low December traffic is that the overall forecast for 2010 is revised downwards, compared to the September update, to 0.7%. That leaves the number of flights in 2010, 9.5Million a fraction below those of 2006.

Details per state and region are provided in Annex B as well as in the map in Figure 1.

Figure 8. December has already seen major disruption to traffic.

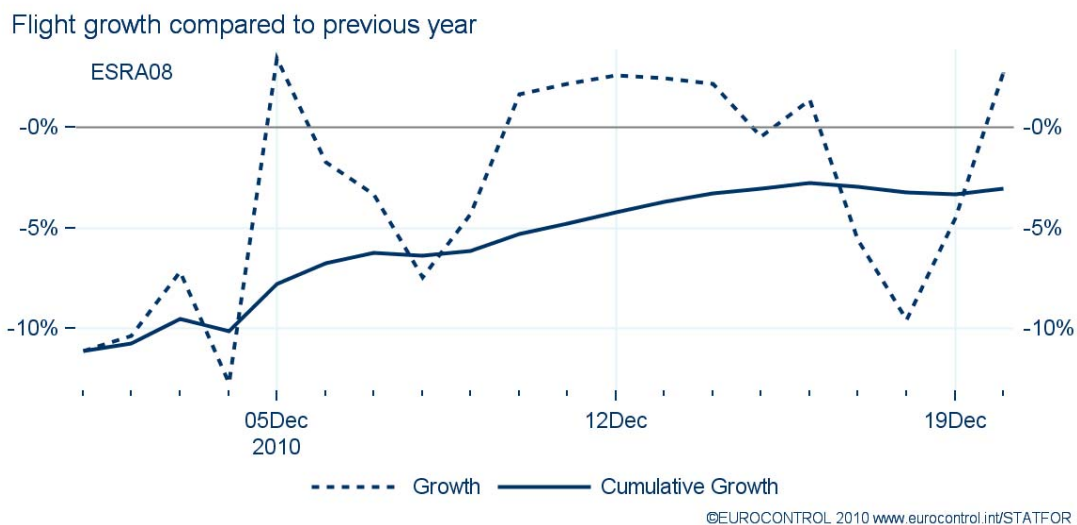


Figure 9. Traffic growth in the ESRA08. (For all States, see Annex A.)

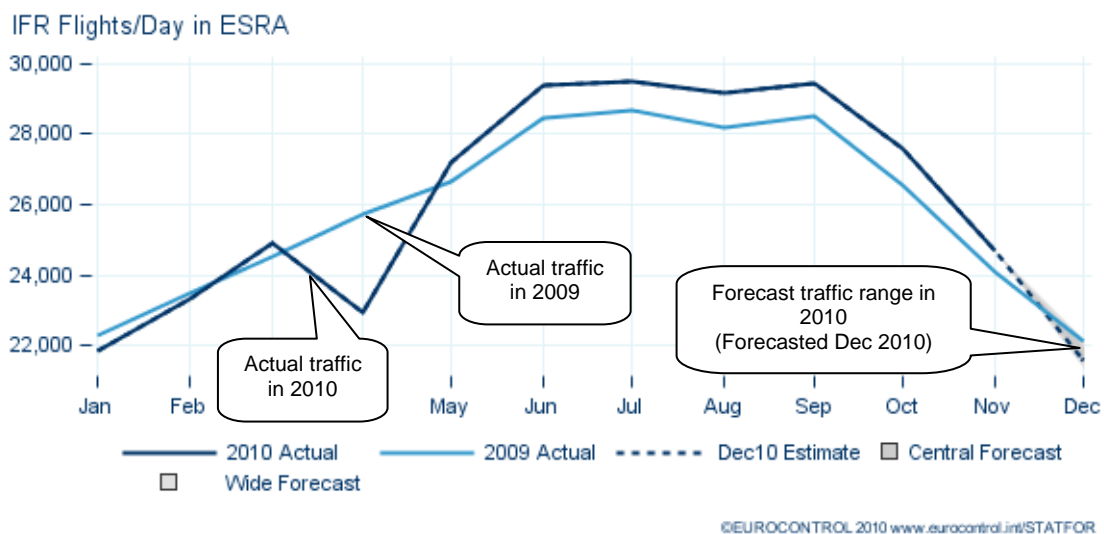
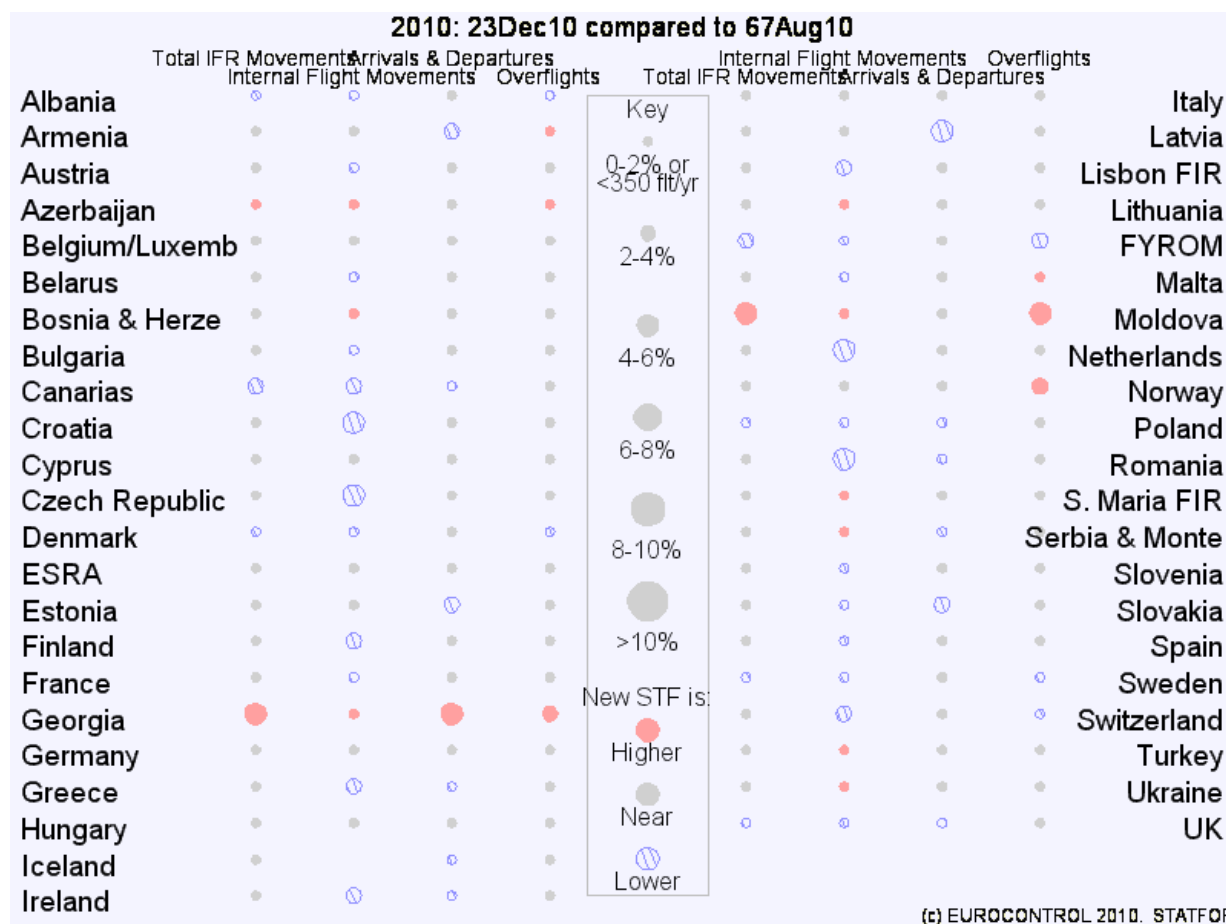


Figure 10 compares the new short-term forecast for 2010 as a whole with the one published in September 2010. The numbers on the chart highlight the *differences* between the new forecast and the one made in August 2010, in terms of percentage point *change in growth* of IFR movements in 2010. So for example, the forecast for Albania total flights has reduced by between 0 and 2 percentage points, which is takes it below the narrow forecast range, so a small blue circle is shown.

For the largest regions, Figure 10 shows that all of the changes are within the forecast range (grey). Generally there are more downward revisions (blue) than upward (red). The larger changes, for example for Georgia and Moldova are a result of sustained, or accelerating, high growth, especially in overflights.

Figure 10. Difference between the new forecast and the *previous* Short-Term Forecast, in terms of total growth in 2010.³



³ Note that because internal flows are often small, percentage changes can be large, which is why many of the largest circles are in the 'internal' column.

4. THE OUTLOOK FOR 2011 AND 2012

The 25-month span of the forecast extends to the end of 2012. Figure 11 shows the forecast for the whole of 2011, which is for 3.6% growth across Europe (+- 1.5%) leaving total flights in 2011 still 2% below 2007's volumes. Figure 12 shows the forecast for the whole of 2012, which is for 3.9% growth across Europe (+- 1%): there are many factors influencing 2012, but the additional growth over 2011 is equivalent to the leap year's additional day.

A significant feature of 2011 will be bounce-back, comprising:

- the fairly certain bounce-back from the ash-cloud disruptions which will add 1% point to total growth in 2011. This is a matter of arithmetic rather than economics.
- and the much less certain traffic recovery hinted at by the continuing high load factors, as air carriers continue to search for the right level of capacity and to make other structural changes to their offers to try to match the much-changes post-economic crisis demand.

There are a number of notable risks:

- The economic uncertainty, as austerity measures in a number of major European markets begin to bite; and as other States are pushed towards austerity by the sovereign debt markets. Rising unemployment and reduced household income will clearly reduce demand for air travel. The German and Turkish economies have grown strongly in 2010 (3.5% and 8.3% respectively), but both will moderate in 2011 (2.1% and 5.9%). Italy has been a source of flight growth in 2010, but its economy only grew by 1% in 2010, and 0.8% is expected in 2011.
- The potential for fuel prices to continue to rise (as discussed in section 2, Figure 6), limiting airlines' willingness to increase flight frequencies if that would threaten load factors.
- The interaction between the strategies of airlines and changes to aviation taxation. With tax increases in Germany, UK, Austria and decreases in Ireland, airline responses are likely. Already cuts amounting to 1% off German local traffic have been mentioned. All this is before the start of the Emissions Trading Scheme, which kicks off in January 2012 (and whose estimated effects influence this forecast through its link to the medium-term forecast).
- The short-term forecast is strongly influenced by recent trends in growth, but these have been very variable. After the experience of Summer 2010, there is reason to think that some of the State-level forecasts for the Summer months of 2011 are on the low side – the high load factors suggest unsatisfied demand. Even on moderate economic growth, higher growth in flights would be quite feasible for some States.
- Moreover, as noted earlier, even without the ash-cloud, cancellations this year due to weather and strikes have been 2.5 times the 2009 rate. The current spate of bad weather could easily run into the New Year (as happened last year); and with government austerity packages, the prospects for industrial unrest seem strong for 2011. The extent to which these interruptions to service continue at the same rate will influence growth, with up to 0.5% of additional growth available for a 'quiet' year.

Across Europe as a whole, these risks probably balance out. At the State level, there will be stronger divergence: some States nearer the high end of the forecast, others at the low end.

A. ACTUAL GROWTH SINCE PREVIOUS FORECAST

Table 1 shows actual growth in IFR movements in each State or region in Aug-Nov 2010 period, compared to the same period 12 months before. For reference, the forecast range is shown from the previous short-term forecast, published in August 2010.

Table 1. Actual growth per State, Aug-Nov 2010 vs. Aug-Nov 2009, with details of the previous forecast range.

State	Actual Growth	Forecast	
		Low	High
Albania	10.7%	5.7%	12.3%
Armenia	9.1%	6.0%	12.7%
Austria	3.7%	2.8%	8.9%
Azerbaijan	14.1%	4.2%	10.1%
Belarus	11.0%	5.4%	11.9%
Belgium/Luxembourg	4.5%	-0.4%	5.4%
Bosnia & Herzegovina	11.4%	5.6%	12.6%
Bulgaria	6.9%	4.6%	10.7%
Canarias	3.0%	3.6%	9.2%
Croatia	8.6%	2.6%	8.7%
Cyprus	5.8%	4.6%	10.4%
Czech Republic	7.6%	4.0%	10.1%
Denmark	5.7%	5.0%	10.4%
ESRA	3.3%	1.4%	6.5%
Estonia	4.1%	3.7%	10.0%
FYROM	-1.2%	3.2%	11.6%
Finland	5.8%	2.0%	7.1%
France	1.8%	0.2%	5.8%
Georgia	28.1%	6.8%	13.8%
Germany	4.8%	1.0%	7.1%
Greece	2.1%	0.3%	5.8%
Hungary	4.1%	2.4%	9.1%
Iceland	3.3%	0.3%	5.0%
Ireland	3.7%	1.5%	6.5%
Italy	6.0%	2.8%	7.5%
Latvia	5.5%	4.3%	11.2%
Lisbon FIR	6.8%	3.8%	9.5%
Lithuania	9.4%	7.1%	14.2%
Malta	15.3%	5.9%	12.2%
Moldova	28.3%	5.3%	13.0%
Netherlands	5.5%	1.6%	6.8%
Norway	4.5%	1.6%	5.5%
Poland	9.3%	8.4%	13.9%
Romania	10.8%	7.8%	13.9%
S. Maria FIR	2.8%	-0.6%	6.0%
Serbia & Montenegro	5.7%	5.5%	11.5%
Slovakia	12.0%	5.5%	12.0%
Slovenia	5.1%	2.8%	8.9%
Spain	3.9%	1.1%	7.0%
Sweden	4.9%	2.5%	7.1%
Switzerland	2.2%	1.4%	7.4%
Turkey	11.8%	9.9%	14.9%
UK	-0.4%	-0.6%	4.0%
Ukraine	16.6%	9.9%	16.2%

B. FORECAST FOR 2010, 2011 AND 2012

Note that, from the August 2010 forecast, the mid range (25th-75th percentile) of the short-term forecast are aligned with the low-high scenarios in the medium-term forecast, and growth in 2011 is calculated with reference to the same scenario in 2010, not the baseline in 2010.

Table 2. Summary of forecast total IFR flight growth per traffic zone.

		2006	2007	2008	2009	2010	2011	2012	Ave. 2012/ 2009
Albania	H	.	.	.	.	9.7%	8.7%	8.7%	9.0%
	B	2.7%	19%	4.5%	8.9%	9.6%	7.1%	7.8%	8.1%
	L	.	.	.	.	9.6%	5.2%	7.1%	7.3%
Armenia	H	.	.	.	.	8.4%	5.4%	6.7%	6.8%
	B	2.6%	11%	8.0%	-6.7%	8.4%	3.3%	5.5%	5.7%
	L	.	.	.	.	8.3%	1.8%	4.8%	4.9%
Austria	H	.	.	.	.	2.5%	5.5%	5.6%	4.5%
	B	4.1%	8.1%	2.0%	-7.6%	2.4%	4.0%	4.7%	3.7%
	L	.	.	.	.	2.3%	2.1%	3.8%	2.7%
Azerbaijan	H	.	.	.	.	1%	11%	9.9%	10.6%
	B	.	4.3%	13%	0.5%	1%	9.6%	9.0%	9.6%
	L	.	.	.	.	1%	8.2%	8.2%	8.9%
Belarus	H	.	.	.	.	7.7%	8.3%	5.4%	7.1%
	B	13%	18%	16%	-8.6%	7.5%	6.9%	4.5%	6.3%
	L	.	.	.	.	7.5%	4.9%	3.5%	5.3%
Belgium/Luxembourg	H	.	.	.	.	1.0%	5.7%	3.9%	3.5%
	B	4.9%	4.2%	0.7%	-7.9%	0.9%	4.3%	3.3%	2.8%
	L	.	.	.	.	0.8%	2.5%	2.6%	2.0%
Bosnia-Herzegovina	H	.	.	.	.	9.5%	1%	9.1%	9.7%
	B	5.5%	19%	8.5%	3.1%	9.4%	8.7%	7.9%	8.7%
	L	.	.	.	.	9.3%	6.5%	7.0%	7.6%
Bulgaria	H	.	.	.	.	6.0%	7.7%	6.7%	6.8%
	B	1.6%	11%	7.7%	-0.2%	5.9%	6.0%	5.6%	5.8%
	L	.	.	.	.	5.9%	3.8%	4.3%	4.7%
Canary Islands	H	.	.	.	.	3.0%	4.0%	3.7%	3.6%
	B	4.0%	1.7%	-0.2%	-13%	2.9%	2.6%	2.9%	2.8%
	L	.	.	.	.	2.9%	0.5%	1.5%	1.6%
Croatia	H	.	.	.	.	7.3%	6.9%	7.9%	7.4%
	B	2.4%	17%	6.0%	0.1%	7.2%	5.2%	6.8%	6.4%
	L	.	.	.	.	7.1%	3.2%	5.9%	5.4%
Cyprus	H	.	.	.	.	6.9%	6.5%	6.3%	6.6%
	B	4.1%	12%	12%	-1.7%	6.8%	4.6%	5.4%	5.6%
	L	.	.	.	.	6.7%	2.6%	4.0%	4.4%
Czech Republic	H	.	.	.	.	2.6%	6.1%	6.1%	4.9%
	B	2.4%	5.6%	5.5%	-5.0%	2.5%	4.6%	5.2%	4.1%
	L	.	.	.	.	2.4%	2.7%	4.3%	3.1%
Denmark	H	.	.	.	.	3.2%	4.4%	3.7%	3.8%
	B	2.9%	4.8%	-0.3%	-8.5%	3.1%	3.3%	3.4%	3.3%
	L	.	.	.	.	3.1%	1.5%	2.7%	2.4%
Estonia	H	.	.	.	.	2.7%	8.8%	4.9%	5.4%
	B	-5.7%	12%	13%	-12%	2.5%	7.2%	5.0%	4.9%
	L	.	.	.	.	2.5%	5.2%	4.9%	4.2%
FYROM	H	.	.	.	.	0.5%	1%	9.3%	6.7%
	B	6.8%	3.9%	2.0%	-0.1%	0.5%	8.6%	8.2%	5.7%
	L	.	.	.	.	0.4%	6.2%	7.5%	4.7%
Finland	H	.	.	.	.	0.1%	8.2%	2.6%	3.6%
	B	1.4%	-0.3%	6.3%	-7.7%	0.0%	7.1%	2.2%	3.1%
	L	.	.	.	.	0.1%	5.2%	1.3%	2.2%

		2006	2007	2008	2009	2010	2011	2012	Ave. 2012/ 2009
France	H	.	.	.	.	-0.1%	5.0%	4.5%	3.1%
	B	3.9%	6.0%	-0.2%	-7.3%	-0.2%	3.7%	3.8%	2.4%
	L	.	.	.	.	-0.2%	1.9%	3.0%	1.5%
Georgia	H	.	.	.	.	18%	14%	6.3%	12.7%
	B	-1.2%	9.7%	0.0%	-3.6%	18%	12%	5.7%	12.0%
	L	.	.	.	.	18%	1%	5.0%	11.0%
Germany	H	.	.	.	.	1.5%	5.3%	4.5%	3.7%
	B	4.2%	4.6%	1.4%	-7.0%	1.4%	3.9%	3.9%	3.0%
	L	.	.	.	.	1.3%	2.0%	3.1%	2.1%
Greece	H	.	.	.	.	2.3%	3.1%	5.0%	3.5%
	B	3.2%	9.9%	3.4%	-0.8%	2.2%	1.4%	3.9%	2.5%
	L	.	.	.	.	2.2%	-0.3%	2.8%	1.6%
Hungary	H	.	.	.	.	2.8%	6.3%	5.6%	4.9%
	B	4.4%	1.8%	1.1%	-2.3%	2.7%	4.6%	4.7%	4.0%
	L	.	.	.	.	2.6%	2.4%	3.6%	2.9%
Iceland	H	.	.	.	.	0.5%	6.5%	7.1%	4.7%
	B	4.1%	5.7%	4.2%	-7.8%	0.5%	5.0%	6.6%	4.0%
	L	.	.	.	.	0.4%	3.5%	6.1%	3.3%
Ireland	H	.	.	.	.	-3.2%	8.1%	5.7%	3.4%
	B	5.4%	5.9%	0.5%	-12%	-3.3%	6.5%	4.7%	2.6%
	L	.	.	.	.	-3.3%	4.7%	3.9%	1.7%
Italy	H	.	.	.	.	3.7%	4.9%	4.5%	4.4%
	B	4.0%	8.4%	-2.4%	-5.1%	3.6%	3.5%	3.5%	3.5%
	L	.	.	.	.	3.6%	1.8%	2.4%	2.6%
Latvia	H	.	.	.	.	4.5%	8.3%	2.9%	5.2%
	B	13%	15%	11%	-8.4%	4.3%	6.8%	3.3%	4.8%
	L	.	.	.	.	4.3%	4.6%	3.4%	4.1%
Lisbon FIR	H	.	.	.	.	5.2%	3.4%	3.6%	4.1%
	B	5.7%	6.3%	2.7%	-7.2%	5.1%	2.0%	2.7%	3.3%
	L	.	.	.	.	5.0%	0.0%	1.6%	2.2%
Lithuania	H	.	.	.	.	7.2%	7.4%	6.1%	6.9%
	B	6.0%	13%	12%	-12%	7.0%	5.9%	5.6%	6.2%
	L	.	.	.	.	6.9%	3.7%	4.7%	5.1%
Malta	H	.	.	.	.	11%	8.8%	7.9%	9.1%
	B	0.2%	8.1%	3.4%	0.7%	11%	7.2%	6.5%	8.1%
	L	.	.	.	.	11%	5.3%	6.1%	7.3%
Moldova	H	.	.	.	.	19%	14%	9.8%	14.4%
	B	7.8%	25%	18%	6.7%	19%	13%	9.0%	13.6%
	L	.	.	.	.	19%	11%	8.0%	12.5%
Netherlands	H	.	.	.	.	1.0%	5.7%	3.9%	3.5%
	B	6.0%	4.9%	-1.6%	-8.6%	0.9%	4.6%	3.5%	3.0%
	L	.	.	.	.	0.8%	2.9%	2.9%	2.2%
Norway	H	.	.	.	.	2.0%	5.2%	3.3%	3.5%
	B	6.1%	4.5%	2.6%	-4.4%	2.0%	4.3%	2.6%	3.0%
	L	.	.	.	.	1.9%	2.8%	1.8%	2.2%
Poland	H	.	.	.	.	5.8%	7.6%	8.5%	7.3%
	B	16%	13%	1%	-7.6%	5.7%	6.1%	7.6%	6.5%
	L	.	.	.	.	5.6%	4.2%	6.5%	5.4%
Romania	H	.	.	.	.	7.7%	7.1%	7.5%	7.4%
	B	1.3%	4.0%	2.7%	-2.3%	7.6%	5.2%	6.3%	6.4%
	L	.	.	.	.	7.5%	3.0%	5.0%	5.1%
Santa Maria FIR	H	.	.	.	.	3.9%	4.5%	4.2%	4.2%
	B	0.9%	1.7%	6.5%	-2.6%	3.8%	3.0%	3.2%	3.3%
	L	.	.	.	.	3.7%	1.1%	2.5%	2.4%

		2006	2007	2008	2009	2010	2011	2012	Ave. 2012/ 2009
Serbia&Montenegro	H	.	.	.	.	6.0%	8.1%	7.5%	7.2%
	B	8.7%	16%	8.6%	3.3%	5.9%	6.4%	6.5%	6.3%
	L	.	.	.	.	5.8%	4.3%	5.5%	5.2%
Slovakia	H	.	.	.	.	7.7%	7.3%	6.9%	7.3%
	B	3.8%	-1.6%	6.4%	-2.4%	7.6%	5.7%	6.0%	6.5%
	L	.	.	.	.	7.6%	3.7%	5.0%	5.4%
Slovenia	H	.	.	.	.	4.6%	5.6%	5.1%	5.1%
	B	3.7%	15%	6.8%	-4.2%	4.5%	3.9%	4.0%	4.1%
	L	.	.	.	.	4.4%	1.9%	3.1%	3.1%
Spain	H	.	.	.	.	1.4%	3.9%	3.9%	3.1%
	B	5.1%	8.4%	-1.8%	-9.5%	1.3%	2.4%	2.9%	2.2%
	L	.	.	.	.	1.3%	0.3%	1.8%	1.1%
Sweden	H	.	.	.	.	0.4%	5.6%	5.1%	3.7%
	B	3.8%	2.8%	3.9%	-11%	0.4%	4.4%	4.7%	3.1%
	L	.	.	.	.	0.4%	2.8%	4.0%	2.4%
Switzerland	H	.	.	.	.	1.1%	4.4%	4.1%	3.2%
	B	2.4%	5.9%	0.3%	-7.1%	0.9%	2.9%	3.4%	2.4%
	L	.	.	.	.	0.9%	1.2%	2.6%	1.6%
Turkey	H	.	.	.	.	13%	7.1%	7.9%	9.3%
	B	8.0%	9.2%	8.6%	4.2%	13%	5.8%	7.1%	8.5%
	L	.	.	.	.	13%	4.0%	5.8%	7.4%
Ukraine	H	.	.	.	.	12%	8.7%	7.2%	9.5%
	B	1.3%	8.2%	8.7%	-6.9%	12%	7.7%	6.5%	8.8%
	L	.	.	.	.	12%	5.7%	5.4%	7.7%
UK	H	.	.	.	.	-4.2%	5.2%	5.0%	1.9%
	B	3.4%	3.5%	-1.4%	-9.4%	-4.2%	3.9%	4.5%	1.3%
	L	.	.	.	.	-4.3%	2.4%	3.9%	0.6%
ESRA02	H	.	.	.	.	0.7%	5.0%	4.6%	3.4%
	B	3.9%	5.1%	0.4%	-6.6%	0.6%	3.6%	3.8%	2.7%
	L	.	.	.	.	0.5%	1.9%	2.9%	1.8%
EU27	H	.	.	.	.	0.1%	4.9%	4.4%	3.1%
	B	3.5%	5.6%	0.3%	-7.2%	0.0%	3.5%	3.7%	2.4%
	L	.	.	.	.	0.0%	1.8%	2.8%	1.5%
ESRA08	H	.	.	.	.	0.8%	5.0%	4.7%	3.5%
	B	3.7%	5.0%	0.4%	-6.6%	0.7%	3.6%	3.9%	2.7%
	L	.	.	.	.	0.6%	1.9%	2.9%	1.8%
SES	H	.	.	.	.	0.1%	4.9%	4.4%	3.1%
	B	3.6%	4.9%	0.4%	-6.9%	0.0%	3.5%	3.6%	2.4%
	L	.	.	.	.	0.0%	1.8%	2.8%	1.5%

C. NEW SHORT-TERM FORECAST METHOD

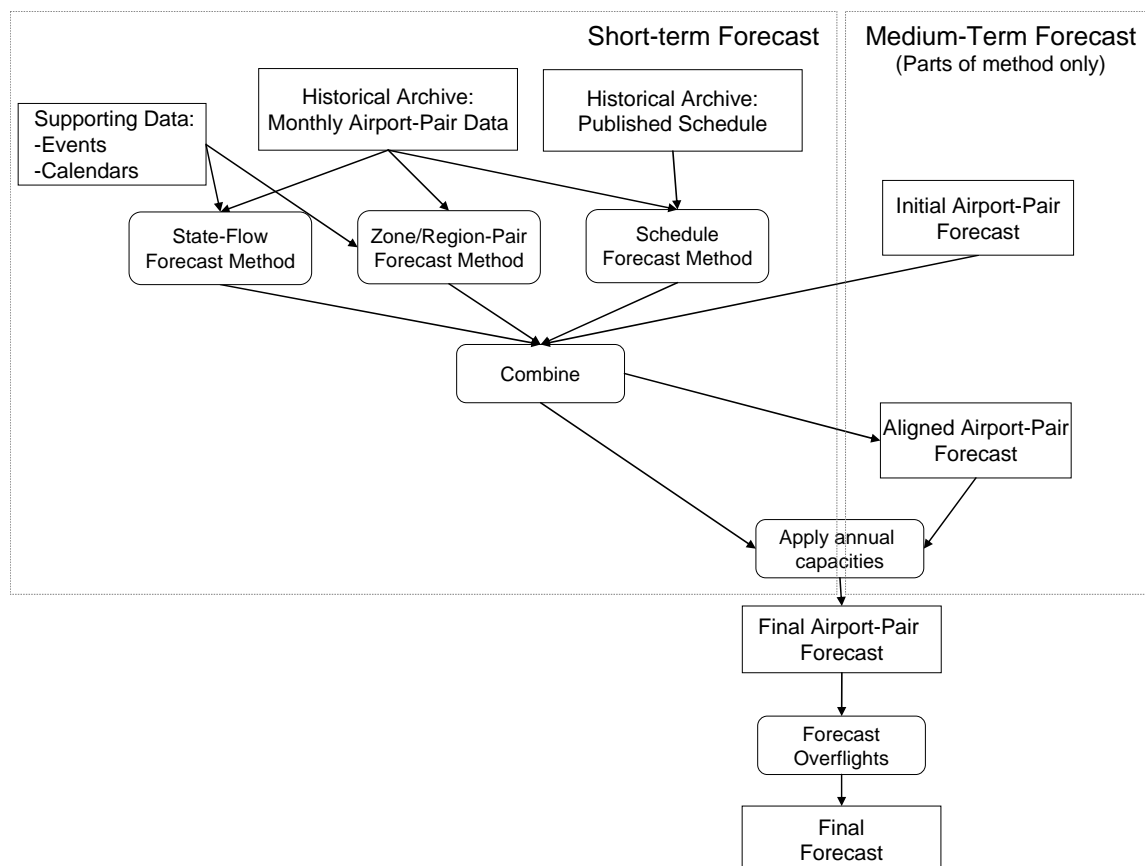
The new short-term forecast method combines inputs from several forecasts. Time-series modeling plays a large part. Final traffic is capped to match airport capacities.

The short-term forecast focuses on time-series modeling of traffic trends month-by-month. The final result is in terms of numbers of flights per month per pair of zones or regions: within Europe origin-destination zones are used (groups of airports often smaller than States); outside of Europe, large regions are used (groups of States). Four separate forecasts (with differing horizons and time and geographical resolution) contribute to the forecast as a whole (see Figure 13):

- The State-flow forecast method is the previous method. It has been used for several years for published short-term forecasts. It forecasts each State separately, and within the State, separate forecasts for a few main 'flows': internals, overflights etc.
- The zone or region-pair forecast is largely based on time-series methods for some 8000 series.
- The schedule method uses data from published schedules for future months, and comparisons of previous schedules with actual flights.
- The first years of the medium-term forecast also contribute a view of future traffic.

The combined forecast is then capped by airport capacities, using the same method as used in the medium- and long-term forecasts. Overflights are calculated using both the trends identified in the short-term forecast, and the base-year flight patterns used previously in the medium-term forecast. The result is a single forecast from which short- and medium-term views can be reported.

Figure 13. Summary of short-term forecast method.



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