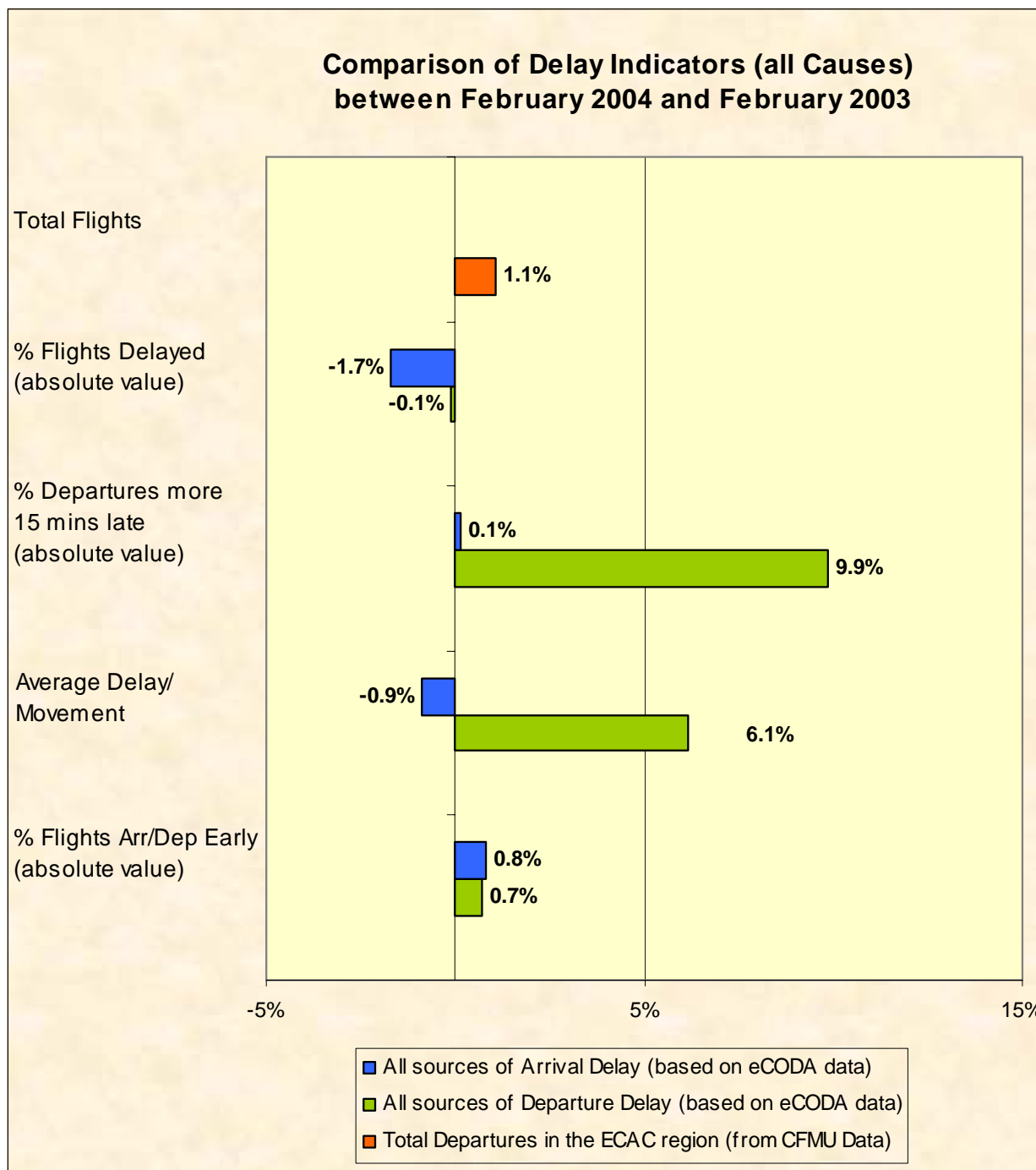


## Delays to Air Transport in Europe February 2004

February 2004



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## FOREWORD

This report represents an overview of the delay situation in the European Civil Aviation Conference Area. It is based on delay data supplied by the CFMU and airline data from eCODA, and has been prepared by the Central Office for Delay Analysis (CODA), a service of the European Air Traffic Management Programme (EATMP).

The report consists of an overview of the reporting period, a summary of the main delay effects, and a series of charts and graphics, which illustrate the main characteristics of the reporting period. A glossary of terms and abbreviations used throughout the report is given in Annex 2.

***In this report the definition of the CFMU ATFM departure delay is based on the difference between the scheduled off-block time and the calculated off-block time, taking into account slot time and estimated taxi time. Airline data from eCODA is based on real recorded delays.***

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## 1. SUMMARY OVERVIEW

Traffic increased by just one percent when compared with February 2003<sup>1</sup>. For the first time since March 2003, the Average Delay per Movement for departure traffic, due to all causes of delay, increased by six percent to eleven minutes. Arrivals, on the other hand, had a one percent decrease, just over eleven minutes. ATFM delay increased by nine percent.

### TRAFFIC SITUATION FOR FEBRUARY 2004<sup>2</sup>

Departures throughout the ECAC region increased by one percent and were slightly above the 2001 level. Domestic traffic decreased by almost two percent and International traffic rose by three percent. Three quarters of the busier countries (those with more than one thousand two hundred and fifty flights per month) had an increase in International traffic, with the largest real increases in Norway, Spain and the Canary Islands. On the other hand, France, Germany, Switzerland and Italy had the largest falls. Turning to the domestic traffic, Norway, the Canary Islands and Spain had the largest increases whereas France, Germany and Italy had the largest decreases.

Among the busier airports (those with more than two thousand and five hundred flights per month), sixty percent of them had rises in traffic levels, with the largest real increases at Manchester, Vienna and Prague. At the other end of the scale, Zurich, Nice and Cologne/Bonn had the largest decreases.

As in previous months, Barcelona-Madrid was the busiest city pair, with nineteen hundred flights in each direction. Rome-Milan/Linate was the only other pair with more than one thousand flights in each direction. Compared with February last year more than twenty percent of the busier pairs had an increase in the number of flights of ten percent or more. Fuerteventura-Las Palmas, La Palma-Tenerife/Norte and Stockholm-Oslo had the largest real rises, whereas Madrid-Barcelona continued the downward trend seen in January, with Cologne-Bonn and Trondheim-Oslo also having significant decreases.

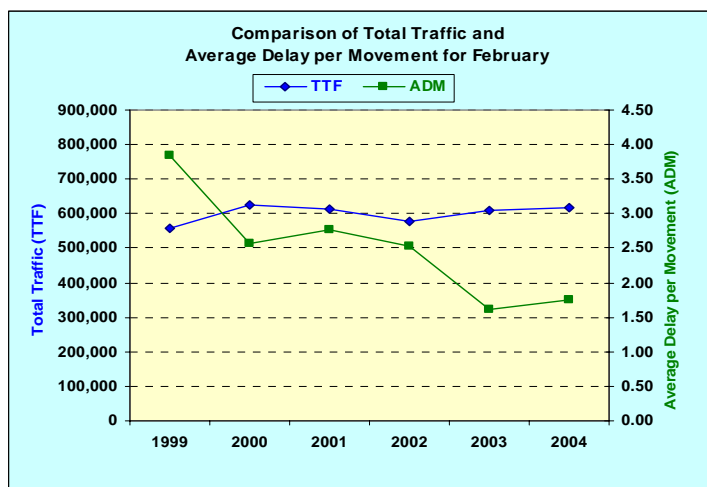
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<sup>1</sup> 2004 being a leap year, in order to have meaningful comparisons with 2003, figures adjusted to compensate for the extra day in February are used in this report.

<sup>2</sup> The analysis was based on the CFMU database which contains details on all IFR flights in the ECAC region.

**ATFM DELAY SITUATION FOR FEBRUARY 2004**

Delays due solely to ATFM measures increased by nine percent compared with the same month of last year (February 2003 had the lowest delay level since 1998). The Average Delay per Movement also rose and was up by eight percent to one and three quarters minutes. Weather was the main cause of the delay and accounted for forty percent of all ATFM delay, followed by ATC Capacity, Airport Capacity and ATC Staffing/Equipment.



Delayed flights increased by one percent while the percentage of flights delayed stayed at eight percent, as in February 2003. Flights delayed by more than fifteen minutes increased by almost eight percent, with flights delayed by more than one hour rising by twenty four percent.

Not all ATFM delay was caused by ATC; almost sixty percent of the total ATFM delay in the ECAC region was due to regulations put in place to protect airports. Compared with 2003, the share of the delay due these restrictions increased by one percentage point and the actual amount of the delay was up by seven and a half percent. Frankfurt, Rome, Amsterdam, Milan and London were the most affected by airport-related regulations. Two third of the airport-related ATC delay was caused by weather, followed by airport capacity (twenty percent) and ATC capacity (five percent).

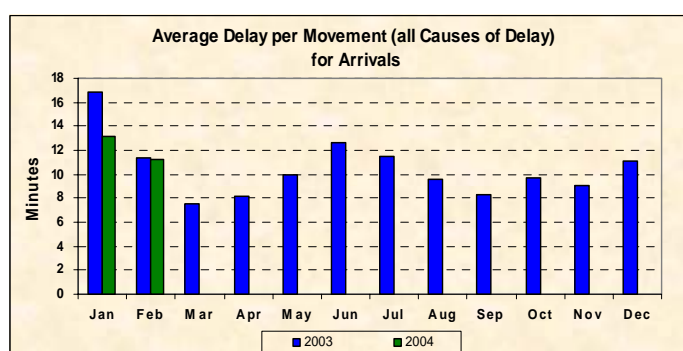
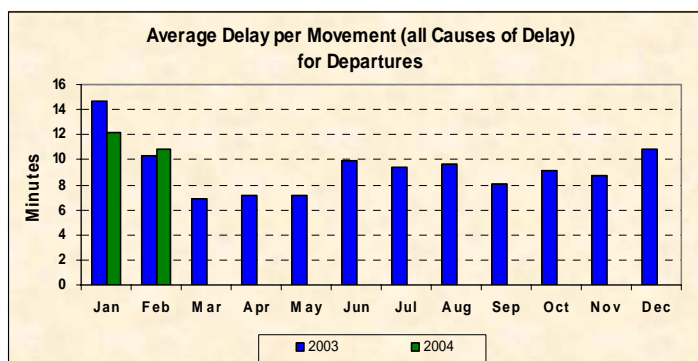
Based on the locations of the most penalising regulations, traffic (including overflights) using the airspace of Italy, Germany, France, the United Kingdom and Switzerland had the largest share of the ATFM delay and between them, they accounted for three quarters of the total ATFM delay in the ECAC region. Compared with last year, Italy, Maastricht and the Netherlands had the largest increases, whereas the United Kingdom, Switzerland and Denmark had the largest decreases.

When the traffic handled is taken into account (again including overflights), Switzerland, Italy and the Netherlands were the most penalising countries, with an Average Delay per Movement of more than one minute. Compared with February 2003, there were minor increases or decreases in average delay and they were less than one minute.



## eCODA DATA FOR FEBRUARY 2004

The Average Delay per Movement for departures, for all causes of delay, was eleven minutes; an increase of six percent on February last year. Forty one percent of flights were delayed on departure, with more than a quarter delayed by more than fifteen minutes. However, twelve percent of flights departed before their scheduled time.



The Average Delay per Movement for arrivals, again for all causes of delay, was just over eleven minutes; a decrease of one percent on February last year. Forty percent of flights were delayed on arrival, with twenty percent delayed by more than fifteen minutes. On the other side, thirty three percent of flights arrived before their scheduled time.

Among the busier airports, forty seven percent of them had an Average Delay per Movement of ten minutes or more, with Venice (twenty one minutes), Milan and Turin (eighteen minutes each) and Paris/Charles de Gaulle (seventeen minutes) having the largest average delay. Compared with February 2003, fifty one percent of the busier airports had an increase in average delay of one minute or more, with the largest rises at London/Luton and Venice, both up by ten minutes, followed by Turin, Belfast and Milan/Malpensa. These increases were offset by large decreases at Amsterdam (down five minutes), East Midlands (down four minutes), Paris/Orly and Budapest (both down three minutes). In all, eighteen percent of the airports had a decrease in average delay of one minute or more. All the airports had a proportion of their traffic departing before their scheduled time, with East Midlands having the largest, with thirty three percent and Helsinki having the lowest, with three and a half percent.






Looking at the busier airports as destinations shows that the traffic arriving at Rome/Fiumicino had the largest Average Delay per Movement, with nineteen minutes and was followed by Venice (eighteen minutes) and Milan/Linate (sixteen minutes). Compared with February last year, forty one percent of the busier airports had an increase in average delay of one minute or more, with three of them, Helsinki, Venice and Valencia having a rise of five minutes. At the other end of the scale, there was a large decrease at London/Stansted (down thirty four minutes), followed by Prague, Paris/Orly and Amsterdam. As with departures, all the airports had a proportion of their flights arriving before their scheduled time, with Belfast and Palma de Mallorca having almost fifty percent of their flights landing early, followed by London/Luton, London/Gatwick and London/Stansted.

The most affected city pairs, due to all causes of delay, were Paris/Charles de Gaulle-Nice (almost twenty five minutes), Paris/Charles de Gaulle-Barcelona (twenty four minutes) and Paris/Charles de Gaulle-Toulouse (twenty three minutes). Paris/Charles de Gaulle appeared as the departure airport in the first six most affected city pairs. Compared with February 2003, more than sixty percent of the city pairs had an increase in Average Delay per Movement, with a quarter of them having a rise of three minutes or more. The largest increase was between Paris/Charles de Gaulle-Barcelona (up thirteen minutes), followed by Innsbruck-Vienna (up ten minutes), Paris/Charles de Gaulle-Toulouse and Cologne-Hamburg (both up nine minutes). On the positive side, more than a quarter of the city pairs had a decrease of one minute or more, with thirteen percent having a decrease of three minutes or more. The largest decrease was between London/Heathrow-New York (down by thirteen minutes).

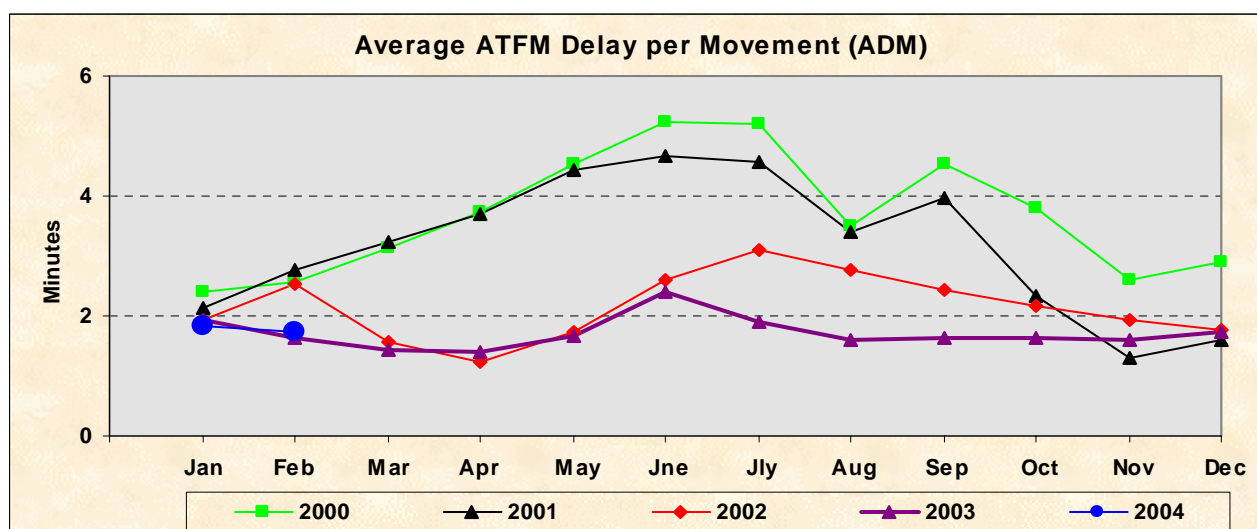
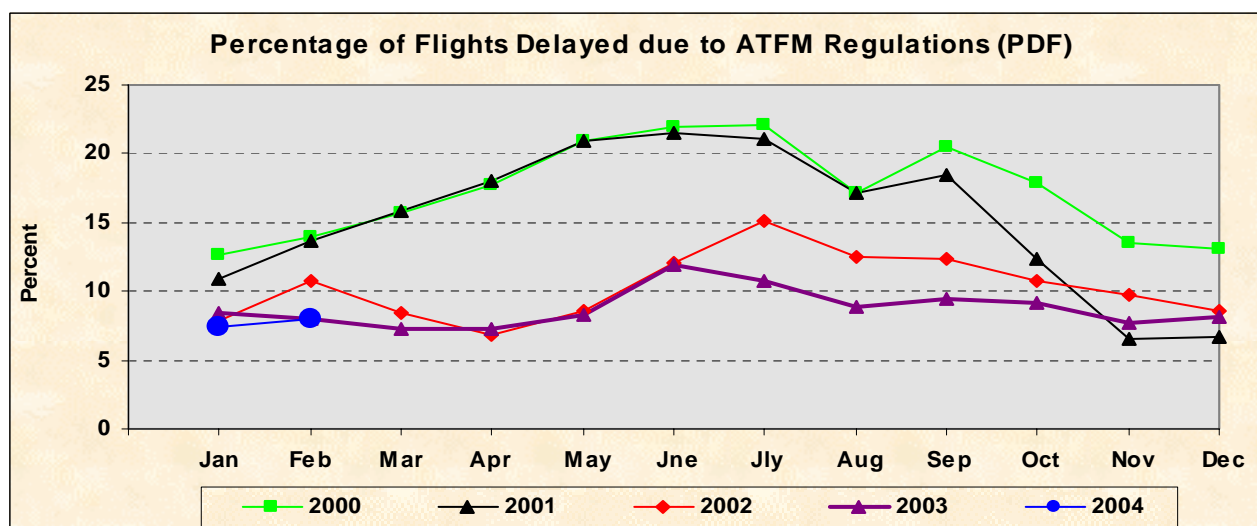
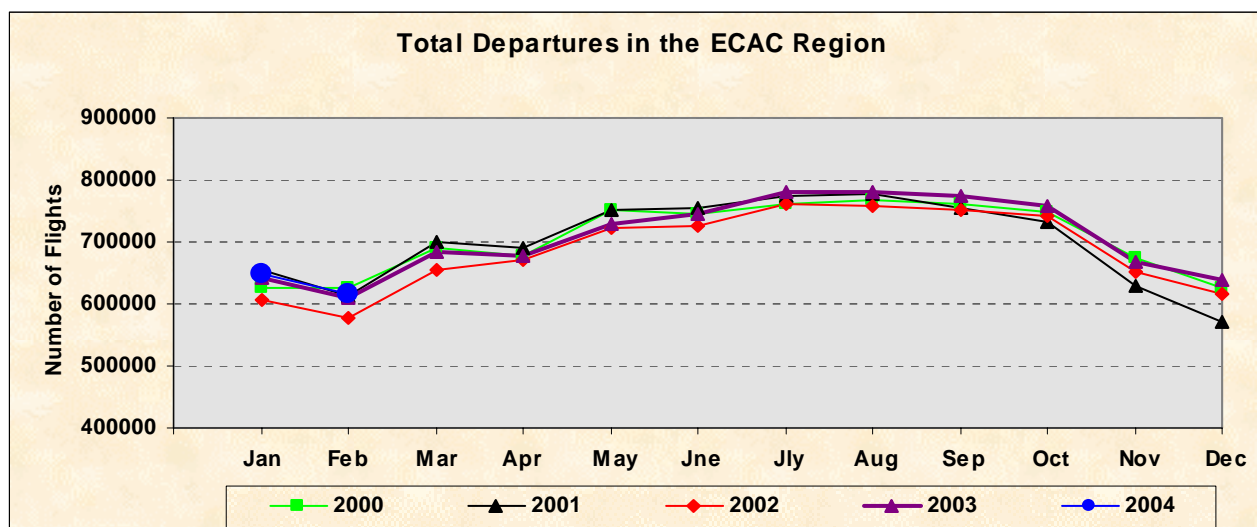
An analysis of the delay causes and categories, grouped by IATA codes, shows that just over twenty percent of them had an increase in delay share, with the largest rises in the Miscellaneous, ATFM Staff/Equipment En-Route and ATFM Weather at Destination categories, whereas the Flight Operations and Crewing, Damage to Aircraft & EDP/Automated Equipment Failure and Airport Facilities categories had the largest decreases (only those categories with more than one percent of the delay were taken into account).

Technical & Aircraft Equipment was the most penalising direct delay category, with nine percent, followed by Weather, Restrictions at Departure Airport and ATFM En-Route Demand/Capacity.

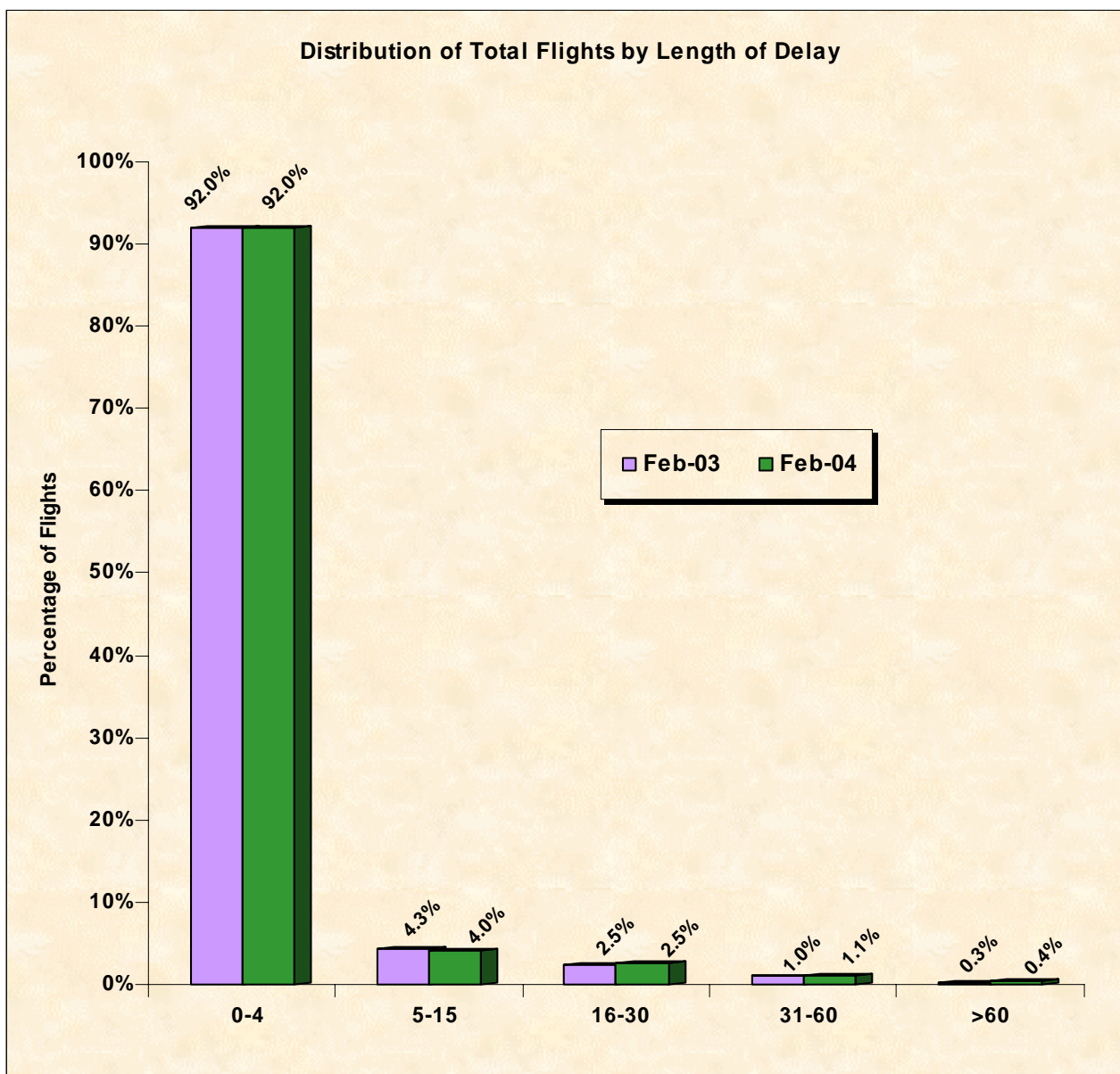
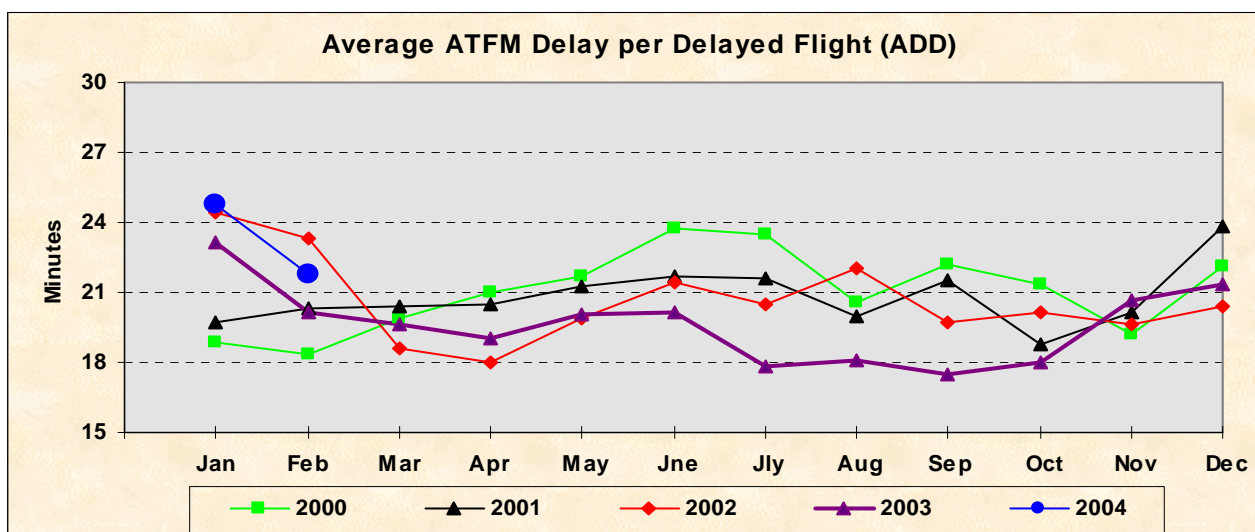
## SUMMARY OF SIGNIFICANT EVENTS

-  Adverse weather conditions including heavy snow, strong winds, fog and low visibility, closing airports for short periods.
-  Radar problems at Amsterdam, Edinburgh, Malaga, Toulouse and Ljubljana ACCs; frequency problems in Greece over TIGRA; ILS maintenance/unserviceability at Palermo, Helsinki and Paris/Orly; frequency problems at London and Bordeaux ACCs; VOR outage at Dublin.
-  Staff issues at London, Geneva and Zurich ACCs; industrial actions at Paris airports and Bologna.
-  Work in progress at Palermo, Catania and Barcelona; disabled aircraft on runway at Linz; aircraft accident/incident at Cannes and London/Stansted.
-  Military activity (firing exercise) at Shanwick.
-  Other items: ski restrictions during the weekends; new ATC sectorisation at Seville and Zurich ACCs; introduction of a new data processing system at Brest ACC; bomb alert at Torino; restrictions to protect the new Shannon ACC; high demand in Morocco following an earthquake.

## 2. Year on Year Trends in Main Indicators

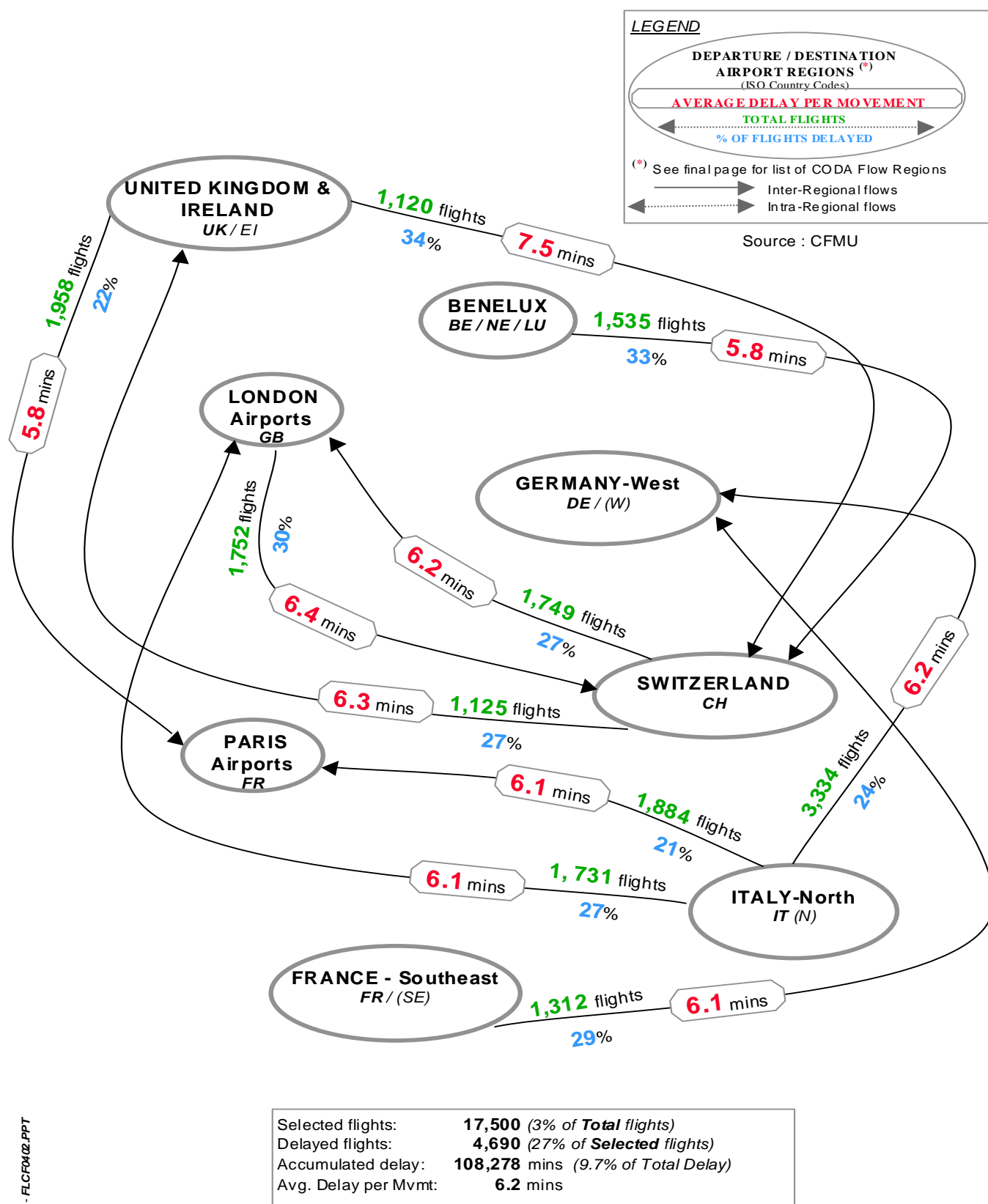


Source : CFMU ATFM Data



Source : CFMU ATFM Data

## 3. Most Affected Traffic Flows by CODA Regions



ATFM Delay Situation on 10 Regional CODA Traffic Flows (>1,000 flights)  
in February 2004



## 4. Most Affected and Most Dense Traffic Flows

**MOST AFFECTED TRAFFIC FLOWS (CFMU)**

Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM
1	United Kingdom & Ireland	Switzerland	1,120	567	379	33.84	8,397	22.16	7.50
2	London Airports	Switzerland	1,752	796	530	30.25	11,119	20.98	6.35
3	Switzerland	United Kingdom & Ireland	1,125	529	309	27.47	7,030	22.75	6.25
4	Switzerland	London Airports	1,749	834	474	27.10	10,873	22.94	6.22
5	Italy-North	Germany-West	3,334	1,306	816	24.48	20,513	25.14	6.15
6	Italy-North	London Airports	1,731	826	468	27.04	10,626	22.71	6.14
7	Italy-North	Paris Airports	1,884	800	397	21.07	11,444	28.83	6.07
8	France Southeast	Germany-West	1,312	603	384	29.27	7,941	20.68	6.05
9	BENELUX	Switzerland	1,535	820	499	32.51	8,952	17.94	5.83
10	United Kingdom & Ireland	Paris Airports	1,958	635	434	22.17	11,383	26.23	5.81
11	BENELUX	Italy-North	1,541	1,018	431	27.97	8,499	19.72	5.52
12	France Southeast	London Airports	1,125	390	238	21.16	5,756	24.18	5.12
13	Switzerland	BENELUX	1,534	868	413	26.92	7,679	18.59	5.01
14	Iberian Peninsula/Canaria	Germany-West	2,905	1,227	741	25.51	14,329	19.34	4.93
15	London Airports	France Southeast	1,120	275	171	15.27	5,387	31.50	4.81
16	Paris Airports	Germany-West	2,527	923	510	20.18	11,989	23.51	4.74
17	Italy-North	Italy-South/Malta	8,686	1,450	1,113	12.81	41,149	36.97	4.74
18	Paris Airports	Switzerland	1,470	467	312	21.22	6,810	21.83	4.63
19	Italy-North	Other	1,853	271	197	10.63	8,093	41.08	4.37
20	United Kingdom & Ireland	BENELUX	3,723	1,268	697	18.72	15,776	22.63	4.24
<b>Totals</b>			<b>43,984</b>	<b>15,873</b>	<b>9,513</b>	<b>21.63</b>	<b>233,745</b>	<b>24.57</b>	<b>5.31</b>

**MOST DENSE TRAFFIC FLOWS (CFMU)**

Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM	ADM-Rank
1	Nordic States	Nordic States	60,066	879	436	0.73	13,191	30.25	0.22	29
2	United Kingdom & Ireland	United Kingdom & Ireland	27,964	1,908	941	3.37	15,060	16.00	0.54	24
3	Iberian Peninsula/Canaria	Iberian Peninsula/Canaria	23,860	1,517	655	2.75	12,202	18.63	0.51	26
4	Germany-West	Germany-West	20,875	3,290	1,776	8.51	39,105	22.02	1.87	11
5	Other	Other	9,343	12	2	0.02	27	13.50	0.00	33
6	Italy-South/Malta	Italy-North	8,740	1,035	668	7.64	21,615	32.36	2.47	6
7	London Airports	United Kingdom & Ireland	8,729	1,243	637	7.30	10,542	16.55	1.21	14
8	United Kingdom & Ireland	London Airports	8,716	2,147	1,075	12.33	21,737	20.22	2.49	4
9	Italy-North	Italy-South/Malta	8,686	1,450	1,113	12.81	41,149	36.97	4.74	2
10	Greece/Cyprus	Greece/Cyprus	8,679	146	108	1.24	8,908	82.48	1.03	18
11	Italy-South/Malta	Italy-South/Malta	7,646	984	589	7.70	18,932	32.14	2.48	5
12	Other	London Airports	7,412	159	98	1.32	2,959	30.19	0.40	27
13	London Airports	Other	7,339	1,208	605	8.24	9,522	15.74	1.30	13
14	Balearics/Spain East	Iberian Peninsula/Canaria	7,227	1,072	445	6.16	7,313	16.43	1.01	19
15	Iberian Peninsula/Canaria	Balearics/Spain East	7,189	1,160	540	7.51	8,450	15.65	1.18	16
16	Germany-West	Other	7,170	1,079	623	8.69	11,203	17.98	1.56	12
17	Other	Germany-West	7,150	369	202	2.83	3,855	19.08	0.54	23
18	Germany-East/Czech Rep	Germany-West	6,538	1,147	631	9.65	13,442	21.30	2.06	9
19	Germany-West	Germany-East/Czech Rep	6,514	230	84	1.29	1,418	16.88	0.22	30
20	Paris Airports	Other	6,328	1,186	667	10.54	13,178	19.76	2.08	8
21	Other	Paris Airports	6,313	361	149	2.36	3,276	21.99	0.52	25
22	Balearics/Spain East	Balearics/Spain East	5,942	389	217	3.65	4,022	18.53	0.68	20
23	Turkey	Turkey	5,682	0	0	0.00	0	0.00	0.00	34
24	BENELUX	Other	4,775	1,085	526	11.02	9,201	17.49	1.93	10
25	Central Europe	Central Europe	4,643	0	0	0.00	0	0.00	0.00	35

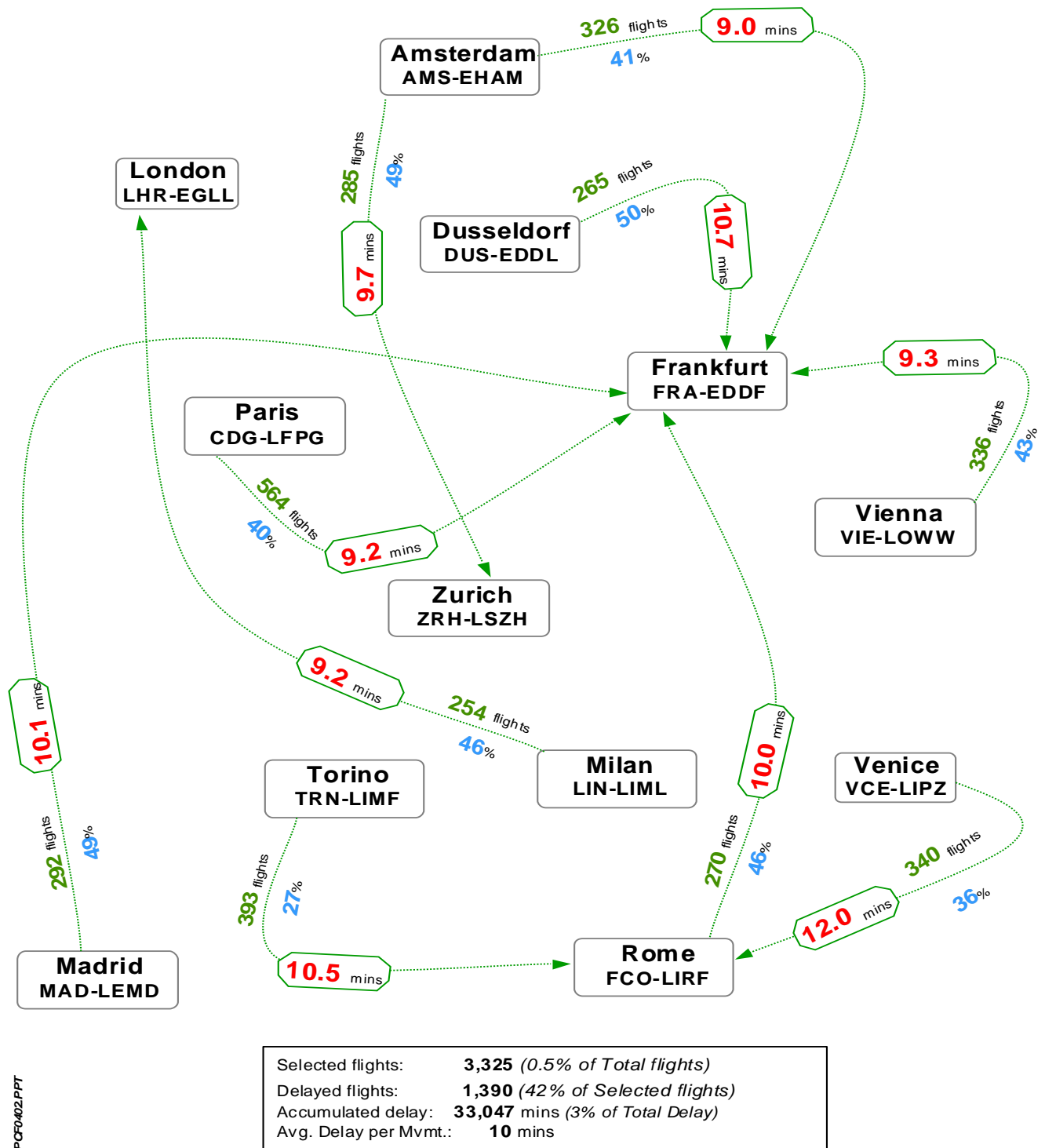
Source: CFMU ATFM Data

## 5. Most Affected City Pairs

**AVERAGE DELAY PER MOVEMENT**

Source : CFMU

Total Number of Flights &amp; % of Flights Delayed



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**ATFM Delay Situation on 10 City Pairs (>250 flights) in February 2004**



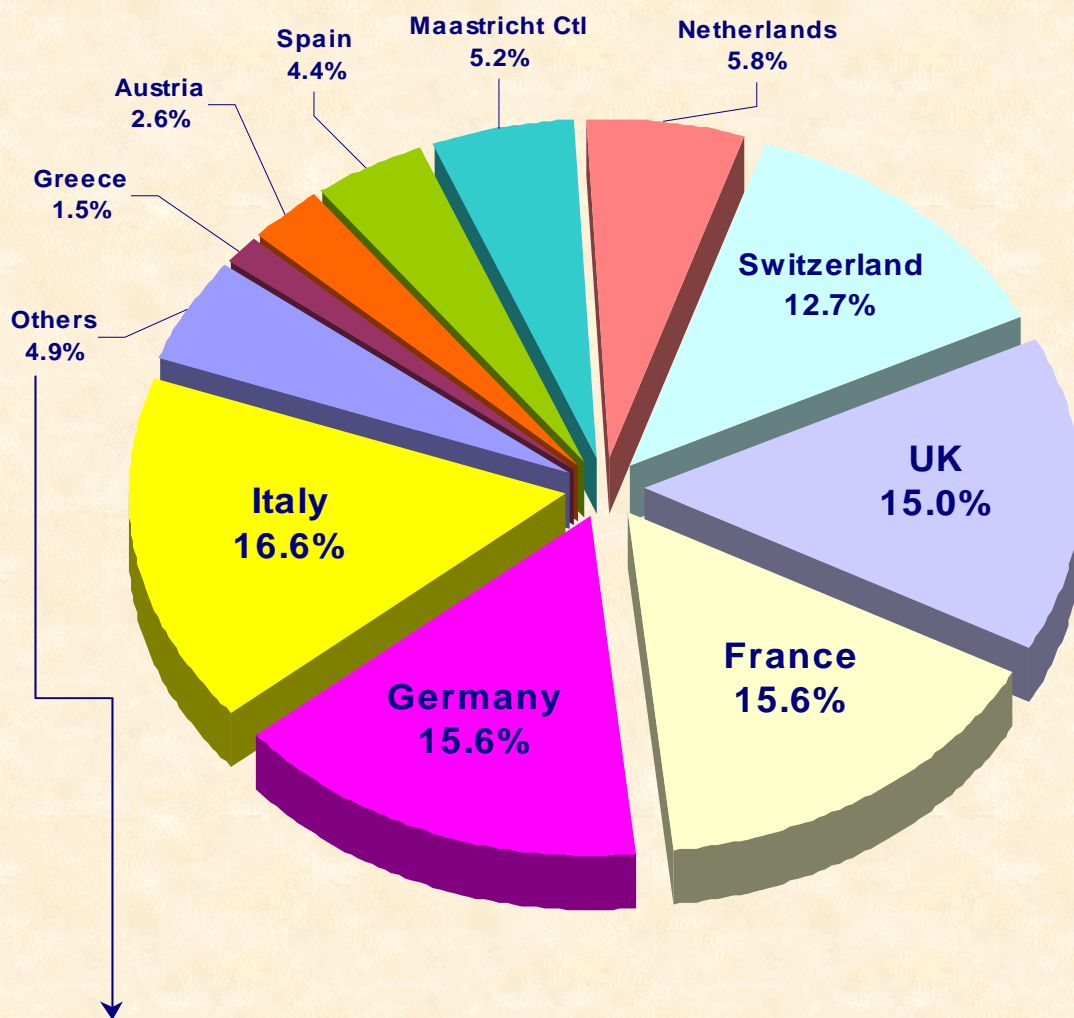
## 6. Most Affected and Most Dense City Pairs

MOST <u>AFFECTED</u> CITY PAIRS (CFMU)									
Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM
1	Venice/Tessera	Rome/Fiumicino	340	140	124	36.47	4,064	32.77	11.95
2	Dusseldorf	Frankfurt	265	181	132	49.81	2,843	21.54	10.73
3	Torino/Caselle	Rome/Fiumicino	393	128	107	27.23	4,129	38.59	10.51
4	Madrid/Barajas	Frankfurt	292	204	142	48.63	2,939	20.70	10.07
5	Rome/Fiumicino	Frankfurt	270	203	123	45.56	2,695	21.91	9.98
6	Amsterdam	Zurich	285	179	139	48.77	2,773	19.95	9.73
7	Vienna	Frankfurt	336	220	145	43.15	3,116	21.49	9.27
8	Paris/Charles-De-Gaulle	Frankfurt	564	335	225	39.89	5,207	23.14	9.23
9	Milan/Linate	London/Heathrow	254	193	118	46.46	2,341	19.84	9.22
10	Amsterdam	Frankfurt	326	212	135	41.41	2,940	21.78	9.02
11	Brussels	Frankfurt	278	166	116	41.73	2,494	21.50	8.97
12	Zurich	Frankfurt	329	184	128	38.91	2,943	22.99	8.95
13	London/Heathrow	Frankfurt	501	301	213	42.51	4,386	20.59	8.75
14	Rome/Fiumicino	Venice/Tessera	346	53	37	10.69	2,944	79.57	8.51
15	Berlin-Tegel	Frankfurt	478	284	186	38.91	4,047	21.76	8.47
16	Paris/Charles-De-Gaulle	Zurich	342	212	150	43.86	2,863	19.09	8.37
17	Zurich	Amsterdam	286	194	106	37.06	2,389	22.54	8.35
18	Frankfurt	Rome/Fiumicino	268	88	62	23.13	2,177	35.11	8.12
19	Milan/Linate	Rome/Fiumicino	1,196	390	254	21.24	9,588	37.75	8.02
20	Geneva	London/Heathrow	301	167	104	34.55	2,404	23.12	7.99
Totals			7,650	4,034	2,746	35.90	69,282	25.23	9.06

MOST <u>DENSE</u> CITY PAIRS (CFMU)										
Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM	ADM-rank
1	Barcelona	Madrid/Barajas	1,943	567	230	11.84	3,830	16.65	1.97	14
2	Madrid/Barajas	Barcelona	1,915	492	248	12.95	3,859	15.56	2.02	13
3	Rome/Fiumicino	Milan/Linate	1,199	142	84	7.01	2,492	29.67	2.08	12
4	Milan/Linate	Rome/Fiumicino	1,196	390	254	21.24	9,588	37.75	8.02	1
5	Palma De Mallorca	Barcelona	870	211	121	13.91	2,213	18.29	2.54	11
6	Barcelona	Palma De Mallorca	856	2	1	0.12	7	7.00	0.01	30
7	London/Heathrow	Paris/Charles-De-Gaulle	818	208	109	13.33	2,674	24.53	3.27	9
8	Paris/Charles-De-Gaulle	London/Heathrow	815	291	171	20.98	4,000	23.39	4.91	5
9	Athens	Makedonia	689	0	0	0.00	0	0.00	0.00	31
10	London/Heathrow	Amsterdam	684	171	110	16.08	2,714	24.67	3.97	7
11	Munich	Berlin-Tegel	682	8	0	0.00	0	0.00	0.00	32
12	Berlin-Tegel	Munich	681	109	50	7.34	1,316	26.32	1.93	15
13	Amsterdam	London/Heathrow	679	220	134	19.73	3,443	25.69	5.07	3
14	Makedonia	Athens	674	36	30	4.45	2,711	90.37	4.02	6
15	Dusseldorf	Munich	665	156	88	13.23	2,601	29.56	3.91	8
16	Hamburg	Munich	660	156	65	9.85	1,930	29.69	2.92	10
17	Munich	Hamburg	659	95	33	5.01	596	18.06	0.90	19
18	Palma De Mallorca	Madrid/Barajas	658	153	71	10.79	1,025	14.44	1.56	17
19	Madrid/Barajas	Palma De Mallorca	657	4	0	0.00	0	0.00	0.00	33
20	Munich	Dusseldorf	654	56	35	5.35	710	20.29	1.09	18
21	Rome/Fiumicino	Catania Fontanarossa	652	75	47	7.21	1,148	24.43	1.76	16
22	Toulouse/Blagnac	Paris/Orly	648	78	47	7.25	573	12.19	0.88	20
23	Paris/Orly	Toulouse/Blagnac	644	60	28	4.35	460	16.43	0.71	22
24	Catania Fontanarossa	Rome/Fiumicino	642	180	106	16.51	3,813	35.97	5.94	2
25	Fuerteventura	Las Palmas	614	17	12	1.95	260	21.67	0.42	23

Source: CFMU ATFM Data

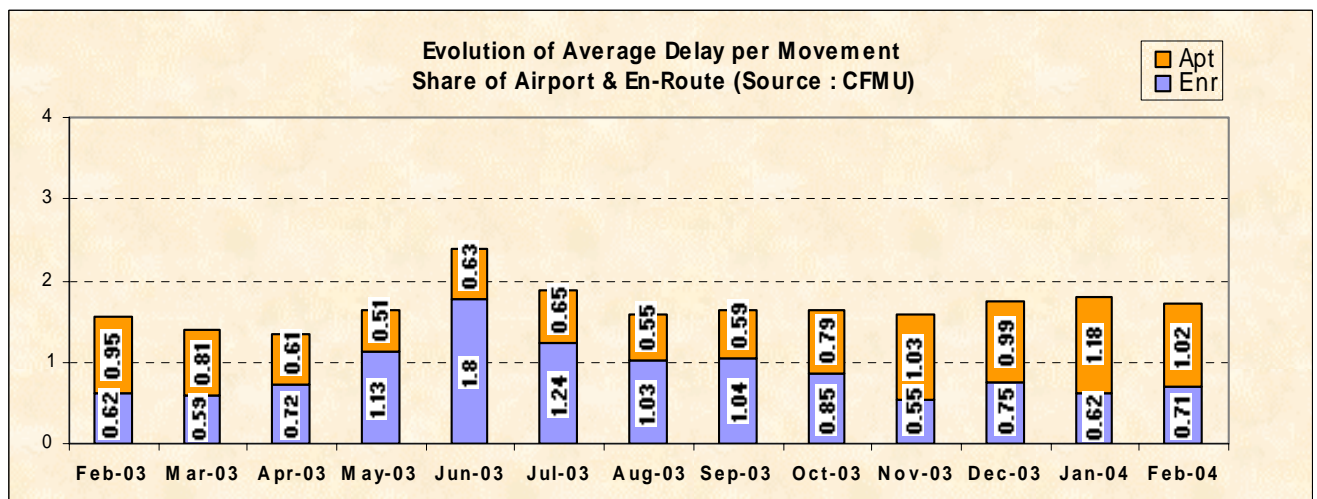
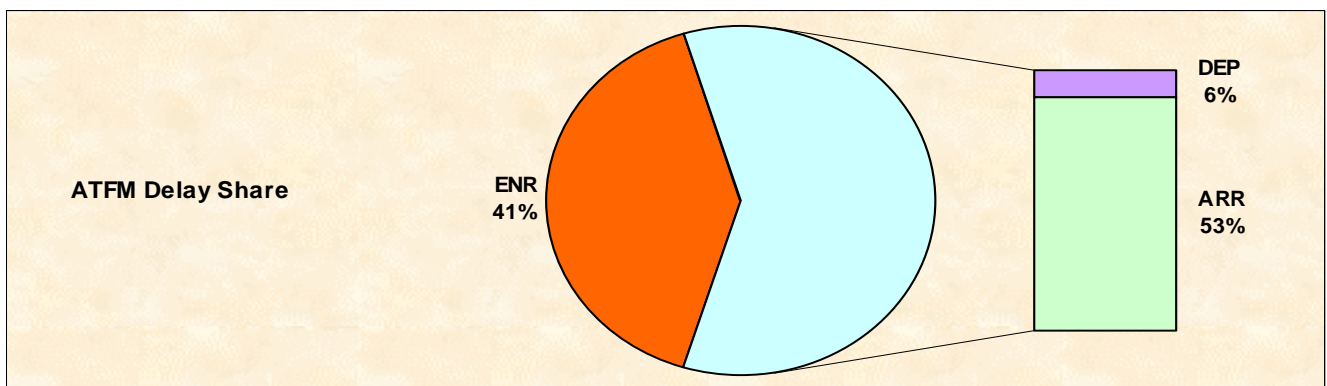
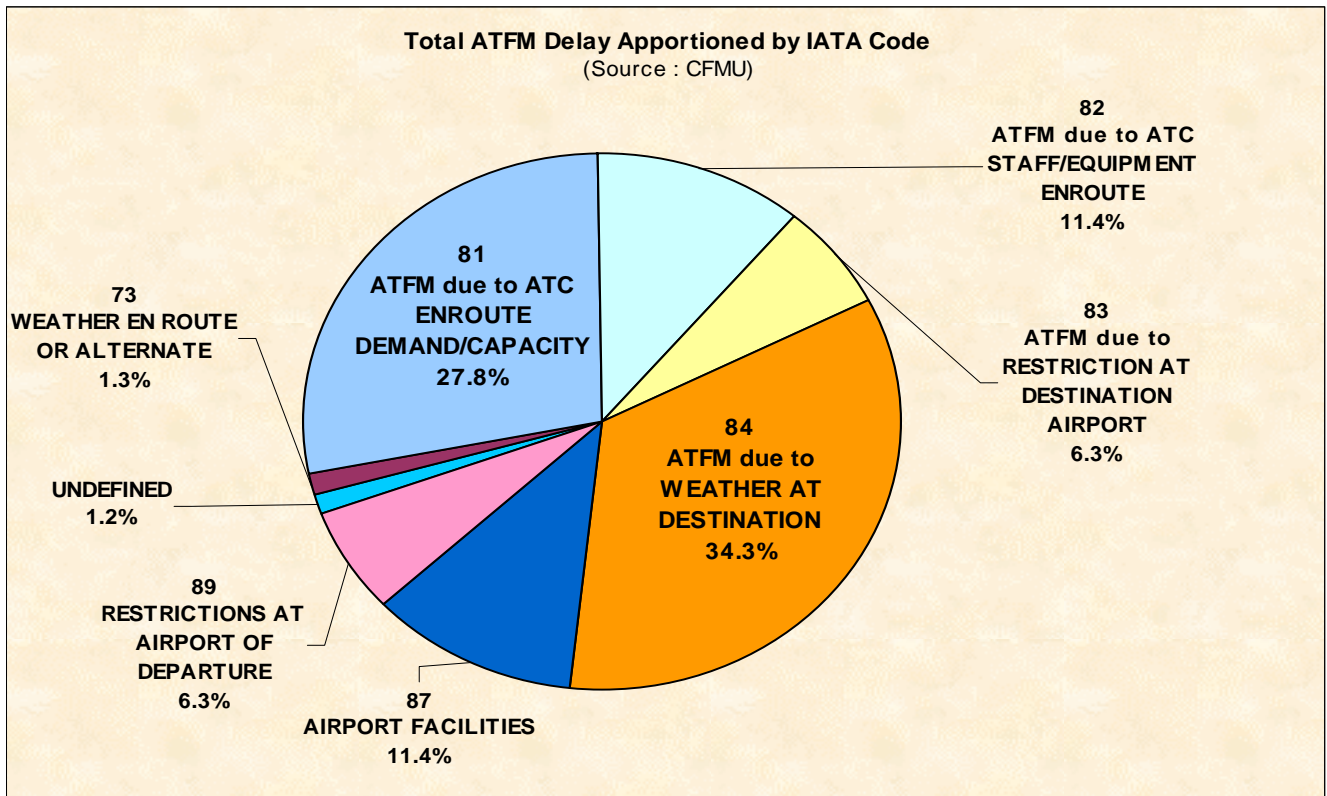
## 7. ATFM Delay Share by Country

**ATFM Delay Share as Imposed by Country**  
based on the most penalising regulation*(Source : CFMU)*

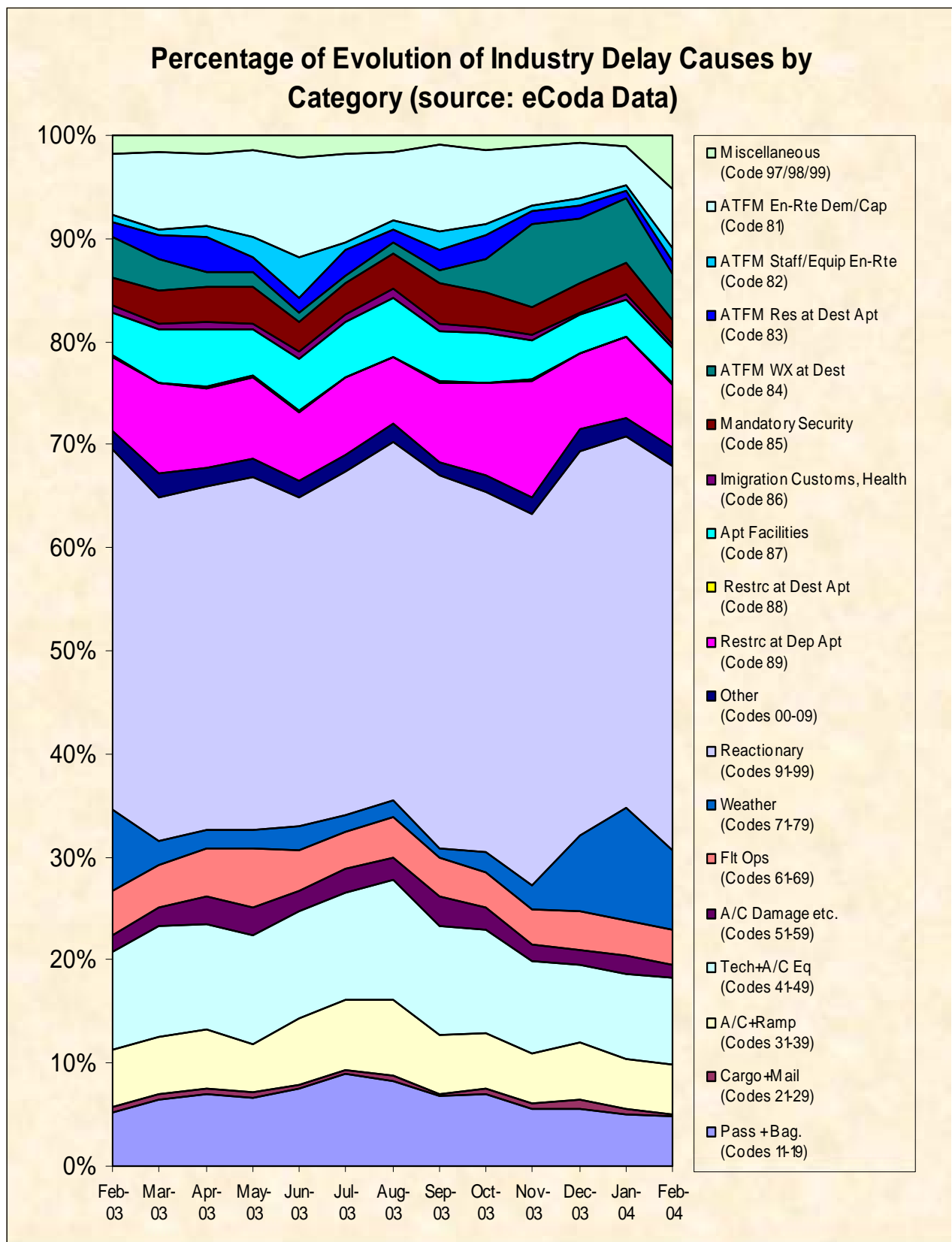
**Others =** Belgium, Canary Islands, Cyprus, Czech Republic, Denmark, Egypt, Finland, Iceland, Ireland, Morocco, Norway, Poland & Sweden.  
*(The remaining countries did not cause delay)*

Feb 2004

# 8. Reasons for ATFM Delay

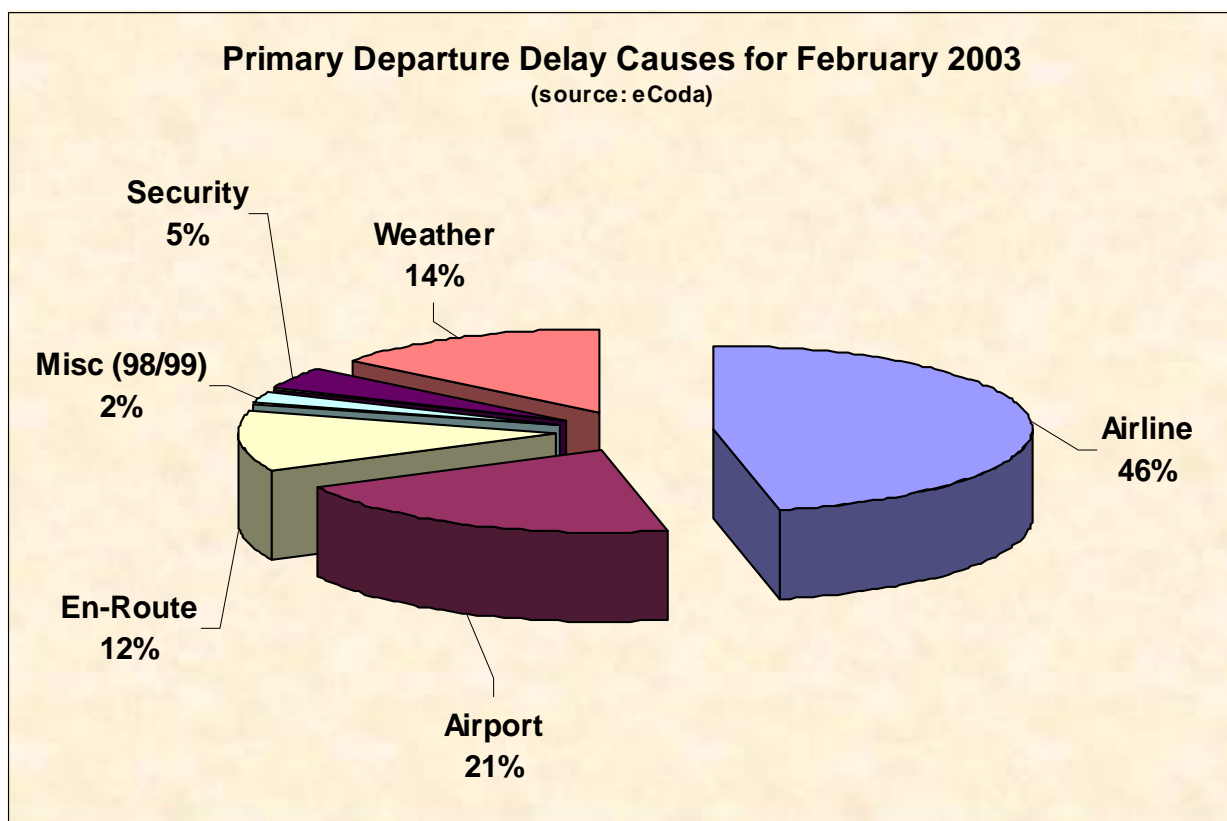
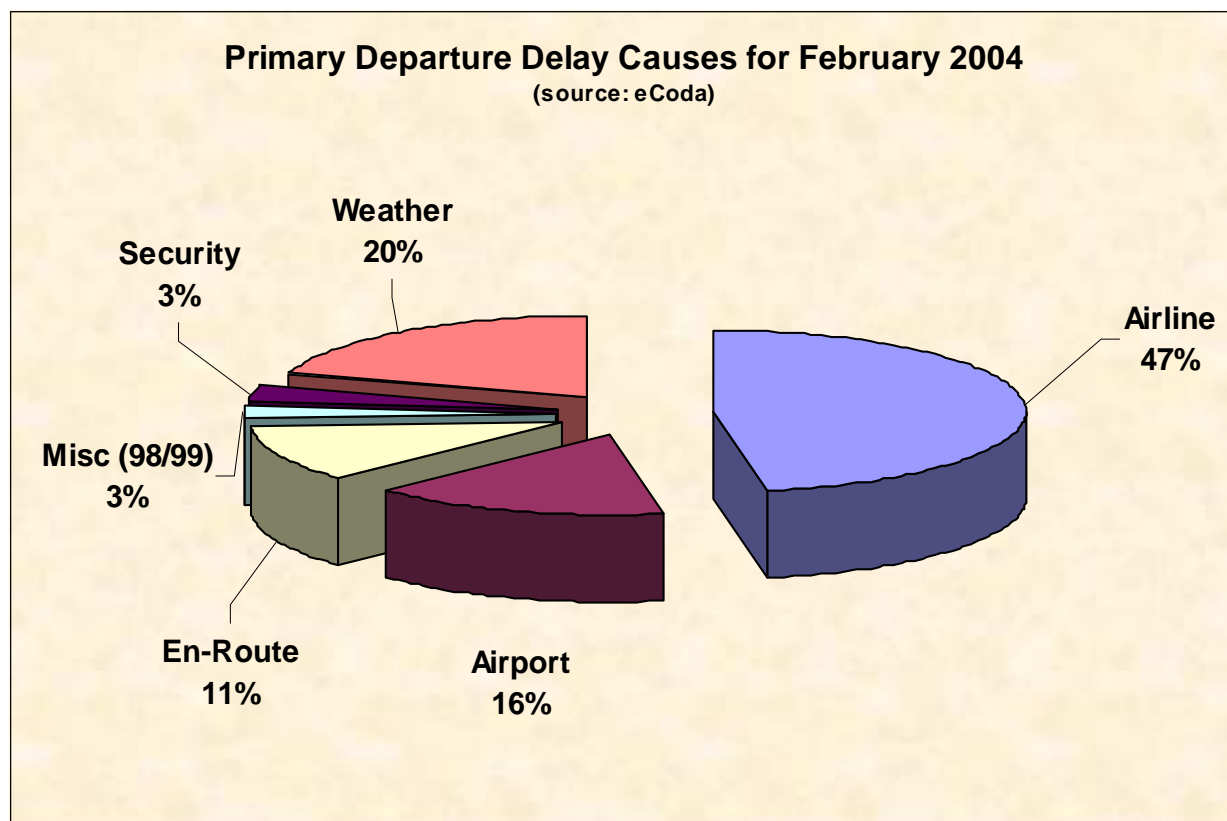


## 9. Consolidated Evolution of Industry Delay Causes by Category





## 10. Primary Departure Delay Causes



## Definition of CODA Flow Regions (Annex 1)

Definition of CODA Flow Regions

## Glossary of Terms and Abbreviations (Annex 2)

### Delay Parameter Abbreviations

<b>TTF</b>	Total Flights
<b>TRF</b>	Total Regulated Flights
<b>TDF</b>	Total Delayed Flights
<b>PRF</b>	Percentage of Regulated Flights
<b>PDF</b>	Percentage of Delayed Flights
<b>TDM</b>	Total Delay in Minutes
<b>ADM</b>	Average Delay per Movement
<b>ADR</b>	Average Delay per Regulated Flight
<b>ADD</b>	Average Delay per Delayed Flight

### Glossary of Terms

<b>AEA</b>	Association of European Airlines
<b>ATFM</b>	Air Traffic Flow Management
<b>ATS</b>	Air Traffic Services
<b>CFMU</b>	Central Flow Management Unit
<b>CODA</b>	Central Office for Delay Analysis
<b>EATMP</b>	European Air Traffic Management Program
<b>ECAC</b>	European Civil Aviation Conference
<b>EDAS</b>	European Delay Analysis System
<b>ERA</b>	European Regions Airline Association
<b>EURACA</b>	European Air Carrier Assembly
<b>IACA</b>	International Air Carrier Association
<b>IATA</b>	International Air Transport Association

## Standard IATA Delay Codes (Annex 3)

### Others

00-05	AIRLINE INTERNAL CODES
06 (OA)	NO GATE/STAND AVAILABILITY DUE TO OWN AIRLINE ACTIVITY
09 (SG)	SCHEDULED GROUND TIME LESS THAN DECLARED MINIMUM GROUND TIME

### Passenger and Baggage

11 (PD)	LATE CHECK-IN, acceptance after deadline
12 (PL)	LATE CHECK-IN, congestions in check-in area
13 (PE)	CHECK-IN ERROR, passenger and baggage
14 (PO)	OVERSALES, booking errors
15 (PH)	BOARDING, discrepancies and paging, missing checked-in passenger
16 (PS)	COMMERCIAL PUBLICITY/PASSENGER CONVENIENCE, VIP, press, ground meals and missing personal items
17 (PC)	CATERING ORDER, late or incorrect order given to supplier
18 (PB)	BAGGAGE PROCESSING, sorting etc.

### Cargo and Mail

21 (CD)	DOCUMENTATION, errors etc.
22 (CP)	LATE POSITIONING
23 (CC)	LATE ACCEPTANCE
24 (CI)	INADEQUATE PACKING
25 (CO)	OVERSALES, booking errors
26 (CU)	LATE PREPARATION IN WAREHOUSE
27 (CE)	DOCUMENTATION, PACKING etc ( <i>Mail Only</i> )
28 (CL)	LATE POSITIONING ( <i>Mail Only</i> )
29 (CA)	LATE ACCEPTANCE ( <i>Mail Only</i> )

### Aircraft and Ramp Handling

31 (GD)	AIRCRAFT DOCUMENTATION LATE/INACCURATE, weight and balance, general declaration, pax manifest, etc.
32 (GL)	LOADING/UNLOADING, bulky, special load, cabin load, lack of loading staff
33 (GE)	LOADING EQUIPMENT, lack of or breakdown, e.g. container pallet loader, lack of staff
34 (GS)	SERVICING EQUIPMENT, lack of or breakdown, lack of staff, e.g. steps
35 (GC)	AIRCRAFT CLEANING
36 (GF)	FUELLING/DEFUELLING, fuel supplier
37 (GB)	CATERING, late delivery or loading
38 (GU)	ULD, lack of or serviceability
39 (GT)	TECHNICAL EQUIPMENT, lack of or breakdown, lack of staff, e.g. pushback

### Technical and Aircraft Equipment

41 (TD)	AIRCRAFT DEFECTS.
42 (TM)	SCHEDULED MAINTENANCE, late release.
43 (TN)	NON-SCHEDULED MAINTENANCE, special checks and/or additional works beyond normal maintenance schedule.
44 (TS)	SPARES AND MAINTENANCE EQUIPMENT, lack of or breakdown.
45 (TA)	AOG SPARES, to be carried to another station.
46 (TC)	AIRCRAFT CHANGE, for technical reasons.
47 (TL)	STAND-BY AIRCRAFT, lack of planned stand-by aircraft for technical reasons.
48 (TV)	SCHEDULED CABIN CONFIGURATION/VERSION ADJUSTMENTS.

### Damage to Aircraft & EDP/Automated Equipment Failure

51 (DF)	DAMAGE DURING FLIGHT OPERATIONS, bird or lightning strike, turbulence, heavy or overweight landing, collision during taxiing
52 (DG)	DAMAGE DURING GROUND OPERATIONS, collisions (other than during taxiing), loading/off-loading damage, contamination, towing, extreme weather conditions
55 (ED)	DEPARTURE CONTROL
56 (EC)	CARGO PREPARATION/DOCUMENTATION
57 (EF)	FLIGHT PLANS



**Flight Operations and Crewing**

- 61 (FP) FLIGHT PLAN, late completion or change of, flight documentation
- 62 (FF) OPERATIONAL REQUIREMENTS, fuel, load alteration
- 63 (FT) LATE CREW BOARDING OR DEPARTURE PROCEDURES, other than connection and standby (flight deck or entire crew)
- 64 (FS) FLIGHT DECK CREW SHORTAGE, sickness, awaiting standby, flight time limitations, crew meals, valid visa, health documents, etc.
- 65 (FR) FLIGHT DECK CREW SPECIAL REQUEST, not within operational requirements
- 66 (FL) LATE CABIN CREW BOARDING OR DEPARTURE PROCEDURES, other than connection and standby
- 67 (FC) CABIN CREW SHORTAGE, sickness, awaiting standby, flight time limitations, crew meals, valid visa, health documents, etc.
- 68 (FA) CABIN CREW ERROR OR SPECIAL REQUEST, not within operational requirements
- 69 (FB) CAPTAIN REQUEST FOR SECURITY CHECK, extraordinary

**Weather**

- 71 (WO) DEPARTURE STATION
- 72 (WT) DESTINATION STATION
- 73 (WR) EN ROUTE OR ALTERNATE
- 75 (WI) DE-ICING OF AIRCRAFT, removal of ice and/or snow, frost prevention excluding unserviceability of equipment
- 76 (WS) REMOVAL OF SNOW, ICE, WATER AND SAND FROM AIRPORT
- 77 (WG) GROUND HANDLING IMPAIRED BY ADVERSE WEATHER CONDITIONS

**ATFM + AIRPORT + GOVERNMENTAL AUTHORITIES****AIR TRAFFIC FLOW MANAGEMENT RESTRICTIONS**

- 81 (AT) ATFM due to ATC EN-ROUTE DEMAND/CAPACITY, standard demand/capacity problems
- 82 (AX) ATFM due to ATC STAFF/EQUIPMENT EN-ROUTE, reduced capacity caused by industrial action or staff shortage, equipment failure, military exercise or extraordinary demand due to capacity reduction in neighbouring area
- 83 (AE) ATFM due to RESTRICTION AT DESTINATION AIRPORT, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights
- 84 (AW) ATFM due to WEATHER AT DESTINATION

**AIRPORT AND GOVERNMENTAL AUTHORITIES**

- 85 (AS) MANDATORY SECURITY
- 86 (AG) IMMIGRATION, CUSTOMS, HEALTH
- 87 (AF) AIRPORT FACILITIES, parking stands, ramp congestion, lighting, buildings, gate limitations, etc.
- 88 (AD) RESTRICTIONS AT AIRPORT OF DESTINATION, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights
- 89 (AM) RESTRICTIONS AT AIRPORT OF DEPARTURE WITH OR WITHOUT ATFM RESTRICTIONS, including Air Traffic Services, start-up and pushback, airport and/or runway closed due to obstruction or weather<sup>3</sup>, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights

**Reactionary**

- 91 (RL) LOAD CONNECTION, awaiting load from another flight
- 92 (RT) THROUGH CHECK-IN ERROR, passenger and baggage
- 93 (RA) AIRCRAFT ROTATION, late arrival of aircraft from another flight or previous sector
- 94 (RS) CABIN CREW ROTATION, awaiting cabin crew from another flight
- 95 (RC) CREW ROTATION, awaiting crew from another flight (flight deck or entire crew)
- 96 (RO) OPERATIONS CONTROL, re-routing, diversion, consolidation, aircraft change for reasons other than technical

**Miscellaneous**

- 97 (MI) INDUSTRIAL ACTION WITH OWN AIRLINE
- 98 (MO) INDUSTRIAL ACTION OUTSIDE OWN AIRLINE, excluding ATS
- 99 (MX) OTHER REASON, not matching any code above

*SOURCE: Provisional list composed by IATA*

<sup>3</sup> Restriction due to weather in case of ATFM regulation only, else refer to code 71 (WO)

## Correlation between IATA Delay Codes and the CFMU Reasons for Regulation (Annex 4)

CORRELATION BETWEEN IATA DELAY CODES AND THE CFMU REASONS FOR REGULATION					IATA	
REASON FOR REGULATION	CODE	REGULATION LOCATION	EXAMPLE	CFMU	CODE	DELAY CAUSE
ATC Capacity	C	D	Demand exceeds the capacity		89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E			81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
		A			83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC Ind Action	I	D	Controllers' strike		89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E			82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A			83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC Routeings	R	E	Phasing in of new procedures		81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
ATC Staffing	S	D	Illness; traffic delays on the highway		89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E			82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A			83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC Equipment	T	D	Radar failure; RTF failure		89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E			82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A			83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Accident/Incident	A	A	RWY23 closed due accident		89	RESTRICTIONS AT AIRPORT OF DEPARTURE
Aerodrome Capacity	G	D	Lack of parking; taxiway closure; areas closed for maintenance; demand exceeds the declared airport capacity		87	AIRPORT FACILITIES
		A			87	AIRPORT FACILITIES
		D			89	RESTRICTIONS AT AIRPORT OF DEPARTURE
De-icing	D	D	De-icing		87	AIRPORT FACILITIES
Equipment non-ATC	E	D	Runway or taxiway lighting failure		87	AIRPORT FACILITIES
		A			87	AIRPORT FACILITIES
		D			98	INDUSTRIAL ACTION OUTSIDE OWN AIRLINE
Ind Action non-ATC	N	A	Firemen's strike		98	INDUSTRIAL ACTION OUTSIDE OWN AIRLINE
Military Activity	M	D	Brilliant Invader; ODAX		89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E			82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A			83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Special Event	P	D	European football cup; Heads of Government meetings		89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		A			83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
		D			89	RESTRICTIONS AT AIRPORT OF DEPARTURE
Weather	W	D	Thunderstorm; low visibility; X winds		73	WEATHER EN ROUTE OR ALTERNATE
		E			84	ATFM due to WEATHER AT DESTINATION
		A			89	RESTRICTIONS AT AIRPORT OF DEPARTURE
Other	O	D	Security alert		81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
		E			83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
		A				