



Do Hubs have a future?

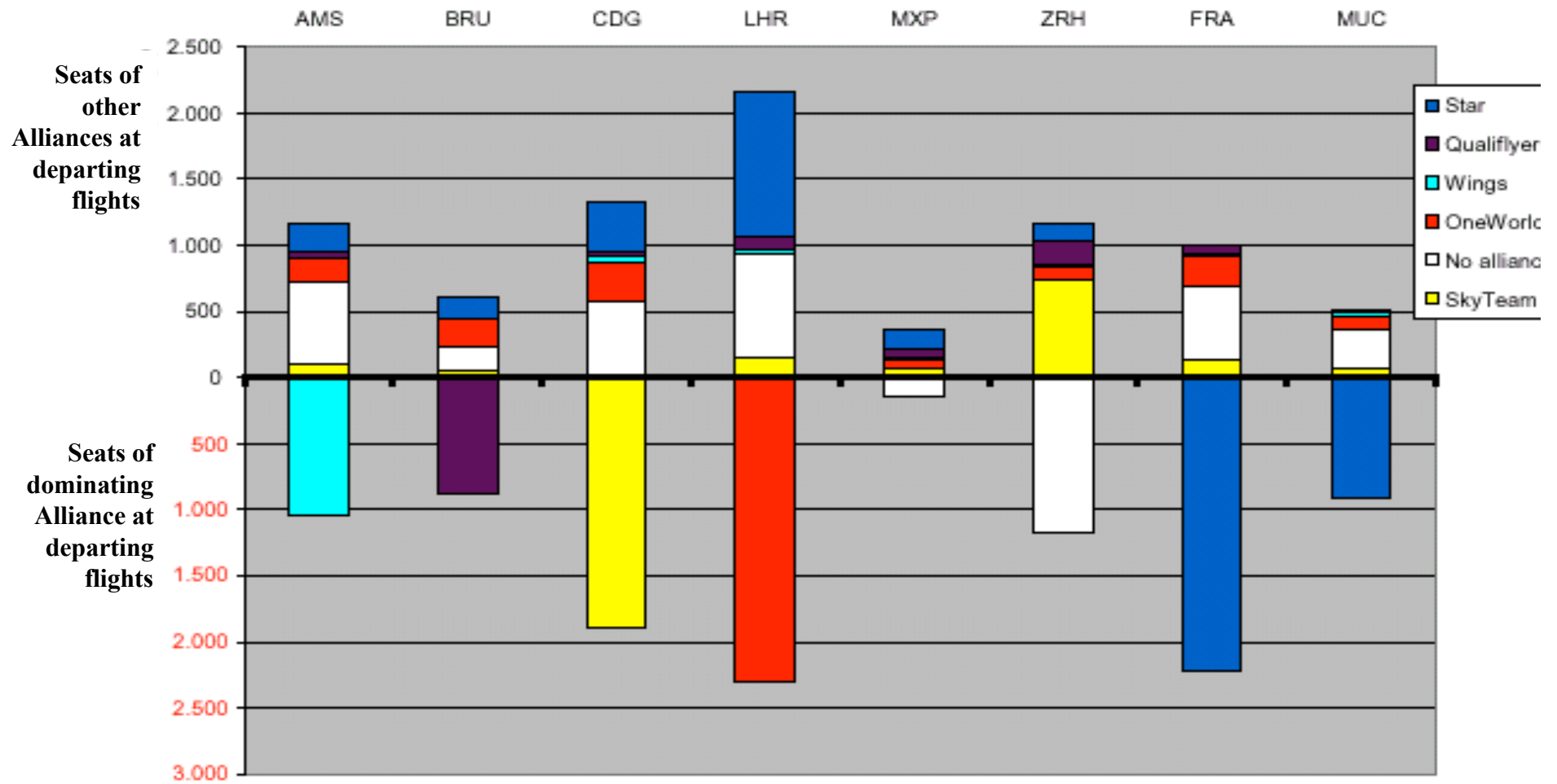
- a view from the Past



A condensed History of Hubs

- Europe: Hubs were initially Home Bases of the National Carrier
- US: Nationwide Domestic Networks emerged after Deregulation
- European Liberalisation finally paved the way for global alliances

Market Share of Alliances at European Hubs in Juli 2001





Traffic Development at European Hubs 1990 & 1996-2000

Airport	Terminal Passengers (millions) (arrival + departure)						Transfer Passengers (millions)						% share of Alliances (Hub carriers) of Terminal Passengers					
	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000
FRA	28,7	38,0	39,6	42,1	45,9	49,4	12,9	18,1	18,7	19,8	22,5	24,7	53	61	64	65	65	68
MUC	11,2	15,4	17,6	19,1	21,1	22,9	0,8	3,5	4,4	5,0	5,7	6,2	43	49	50	53	56	57
VIE	5,5	9,0	9,6	10,5	11,1	11,8	0,8	1,8	2,1	2,8	3,1	3,4	55	57	60	63	65	68
CPH	12,0	16,0	16,6	16,5	17,5	18,8	4,0	6,4	7,6	7,7	7,8	8,2	* (only SAS)	64	65	65	64 *	64 *
AMS	16,2	27,3	31,0	34,0	36,4	39,3	4,4	11,0	13,1	14,3	15,5	16,5	51	62	61	60	63	61
ZRH	12,3	15,8	17,9	18,9	20,7	22,5	3,6	5,1	6,7	7,5	8,9	10,1	58	60	64	68	69	69
BRU	8,5	13,4	15,8	18,5	20,0	21,6	0,4 *	2,6	4,0	5,4	6,2	6,8	35 *	42	44	54	56	57
LHR	42,6	55,7	57,8	60,3	62,0	64,3	11,9	18,9	19,1	19,5	19,5	18,9	-	55	53	53	52	51
LGW	21,0	24,1	26,8	29,0	30,4	32,0	1,7	3,6	5,2	5,7	7,2	7,0	-	34	38	41	42	42
CDG	22,1	31,4	35,1	38,5	43,5	48,1	2,2	11,3	13,2	14,6	14,8	16,2	53	57	58	57	59	58
ORY	24,2	27,3	25,0	24,9	25,3	25,4	1,0 *	3,0 *	4,0	5,0	3,3	3,4	70	53	50	49	50	51

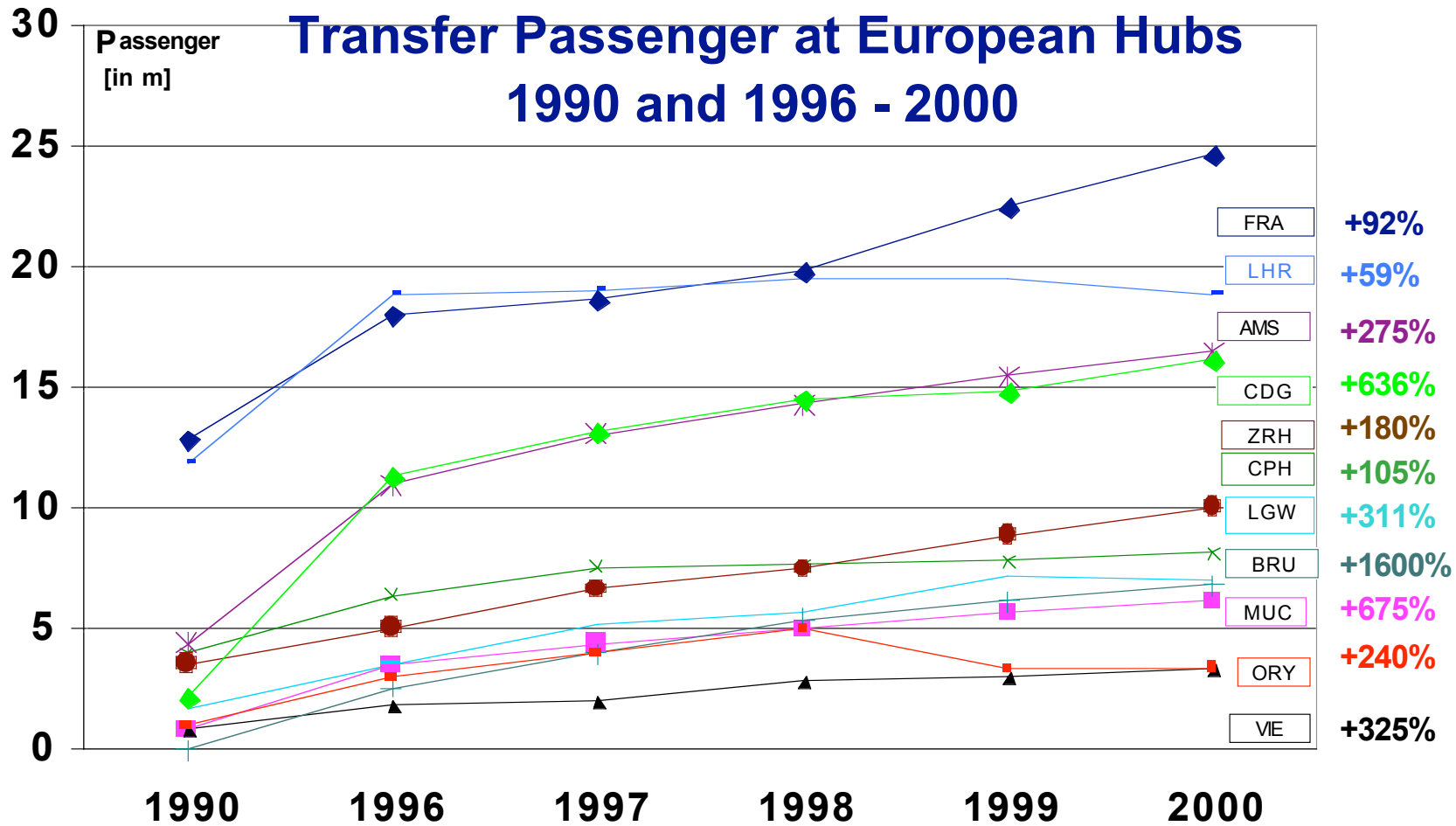


Share of Transfer Passengers at European Hubs in 2000

FRA	50%
MUC	27%
ZHR	45%
CPH	44%
AMS	42%
CDG	34%
BRU	31%
VIE	29%
LHR	29%
LGW	22%
ORY	13%



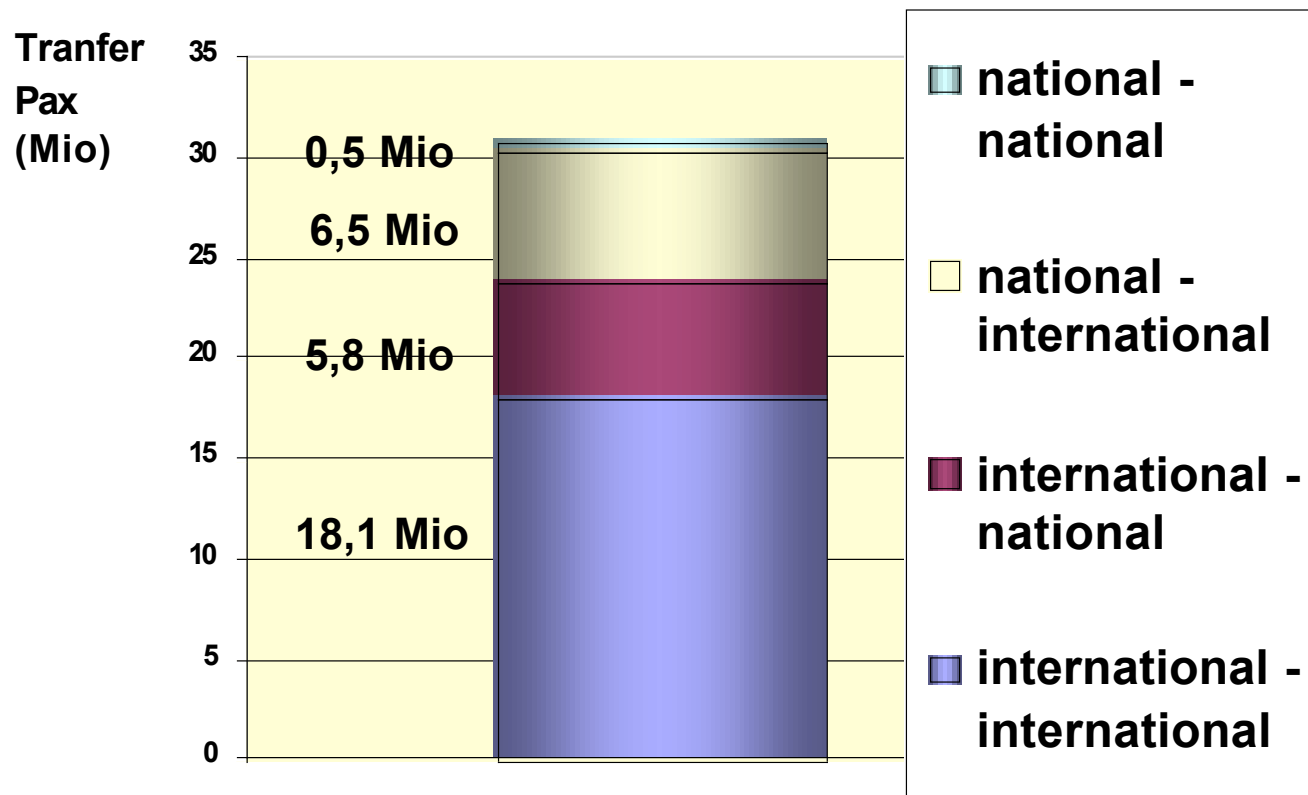
Between 1990 and 2000 the number of connecting passengers on these 11 European hubs has increased +177% (10,7% p.a.) while the number of local passengers has only risen +46% (3,9% p.a.). Total passenger grew +74% (5,7% p.a.).





Split of Transfer Passengers

Share of Transfer Passengers in 2000 at the German Hubs FRA & MUC





What makes a Hub attractive?

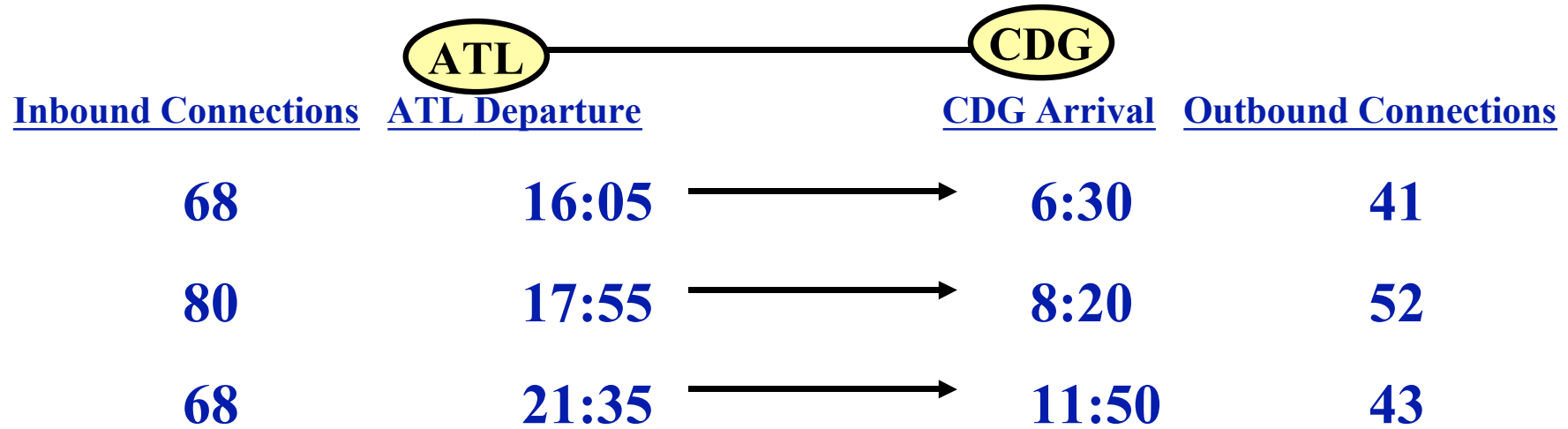
- Direct Flights (Number/ Timing)
- Convenience / Transfer Convenience
- Clear Lay Out / Easy Orientation
- Minimum Connecting Time / Short Distances
- Low Rate of lost or damaged Baggage
- Range of Services / Facilities (Shopping, Gastronomy, Banks, Trolleys, Lounges and other Recreation Areas, Lavatories etc.)
- Cleanliness and Atmosphere
- Friendliness of Staff



The boosted Potential of integrated Hubs

- Three Flights linking ATL and CDG are optimal timed to capture Traffic Flow

Annual industry O&D traffic:
 114 pax per day each way



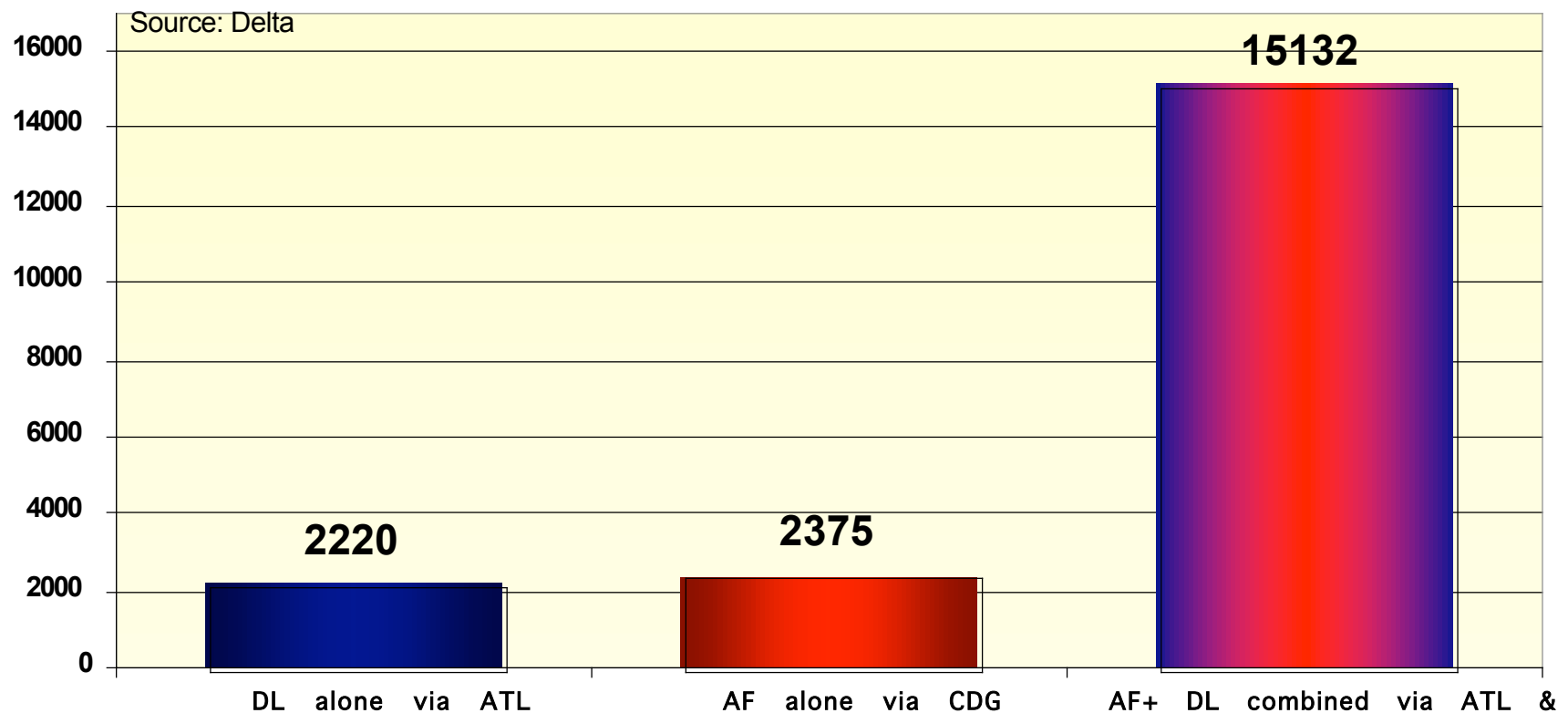
Source: Delta

Notes: Max Connect Time 3hrs; Min Connect Time 50 min ATL, 45 min CDG; Max circuitry of 20%



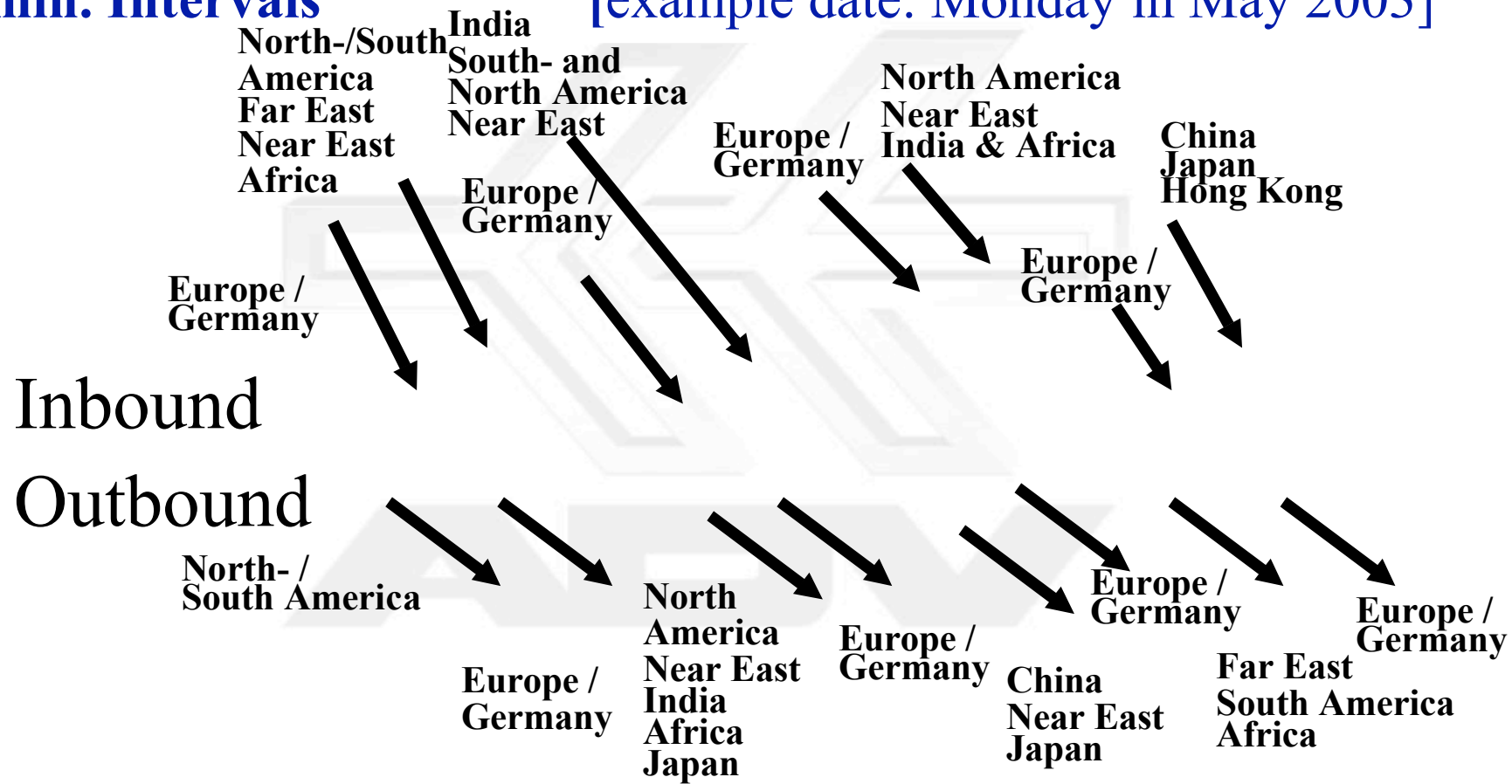
The boosted Potential of integrated Hubs

- the DL & AF example shows a sixfold increase through transatlantic market combinations





**In- and Outbound Capacity (in Seats) of STAR in Frankfurt in
 10 min. Intervals** [example date: Monday in May 2003]



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 Berlin, 17. Mai 2003



Destination Region of Scheduled Pax from Germany	Geographical Direction of the Flight	Pax Share acc. to Flight Dir.	Most suitable Foreign European Hub(s)
N-Europe	North	7%	CPH
N-Europe / Far East	East	10%	CPH
S-E-Europe	South-East	9,5%	VIE
W-Europe / N-America	West	50%	AMS / LON (only NA)
S-W-Europe / C-S –America	South-West	8,5%	PAR
S-Europe / Africa / Near East (Far E.)	South	15%	ZRH



•**Situation prior to the ECJ Decision:**

Star Alliance and Sky Team well positioned

Qualiflier left the Market

Wings is hardly developing

Oneworld still has no Antitrust Immunity for BA and AA

If Oneworld would have received the Antitrust Immunity the Market
would be different:

e.g. STR-FRA-CHI-RNO Routing shortened to STR-LON-RNO

Reaction of Competitors would have triggered of a cascade effect
which would have led to many new direct transatlantic links



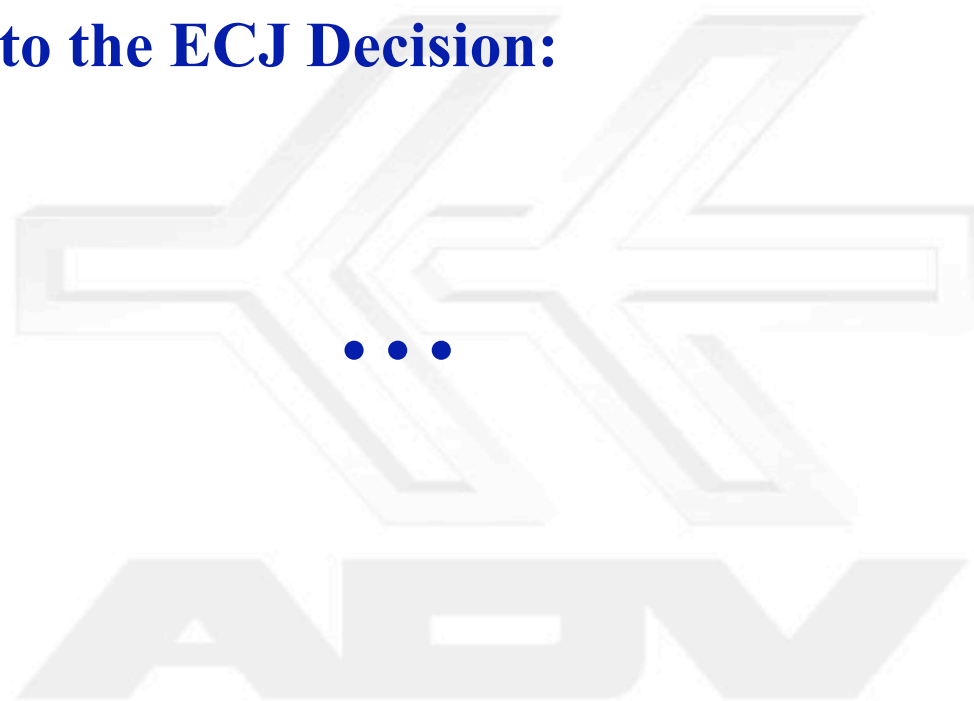
Interconnections on LON – US Flights

	<u>European Carriers</u>	<u>US-Carriers</u>
not connecting	56%	41%
connecting in US	8%	43%
connecting in LON	36%	16%

Source: CAA UK



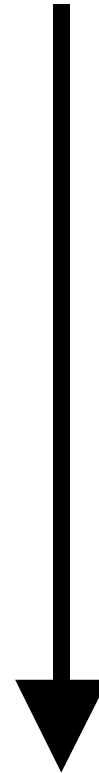
• **Situation after to the ECJ Decision:**





Types of Co-operation in the Future?

Route codeshare
Network codeshare
Marketing Co-operation
Shared Support Services
Joint Operations
Franchising
Equity Participation
Full ownership / Ownership control



Deeper
Alliances



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Future Aspects

- **Hubs' need for HSR Connections will drastically increase**
- **Low Cost will affect / partly destroy the traditional European Feeder Networks**
- **Introduction of A380 will offers new potential for reducing costs per Seat Mile by bundling traffic flows**

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So – Do Hubs have a Future ?



but... **Yes!** but...

but... but...

but...