



BA (and BOAC & BEA) Reservations Computers - a trip down *memory* lane

A snapshot of things as they were 50 years ago when I joined British Airways Computer Training programme and then a trip backwards and forwards through past and more recent history

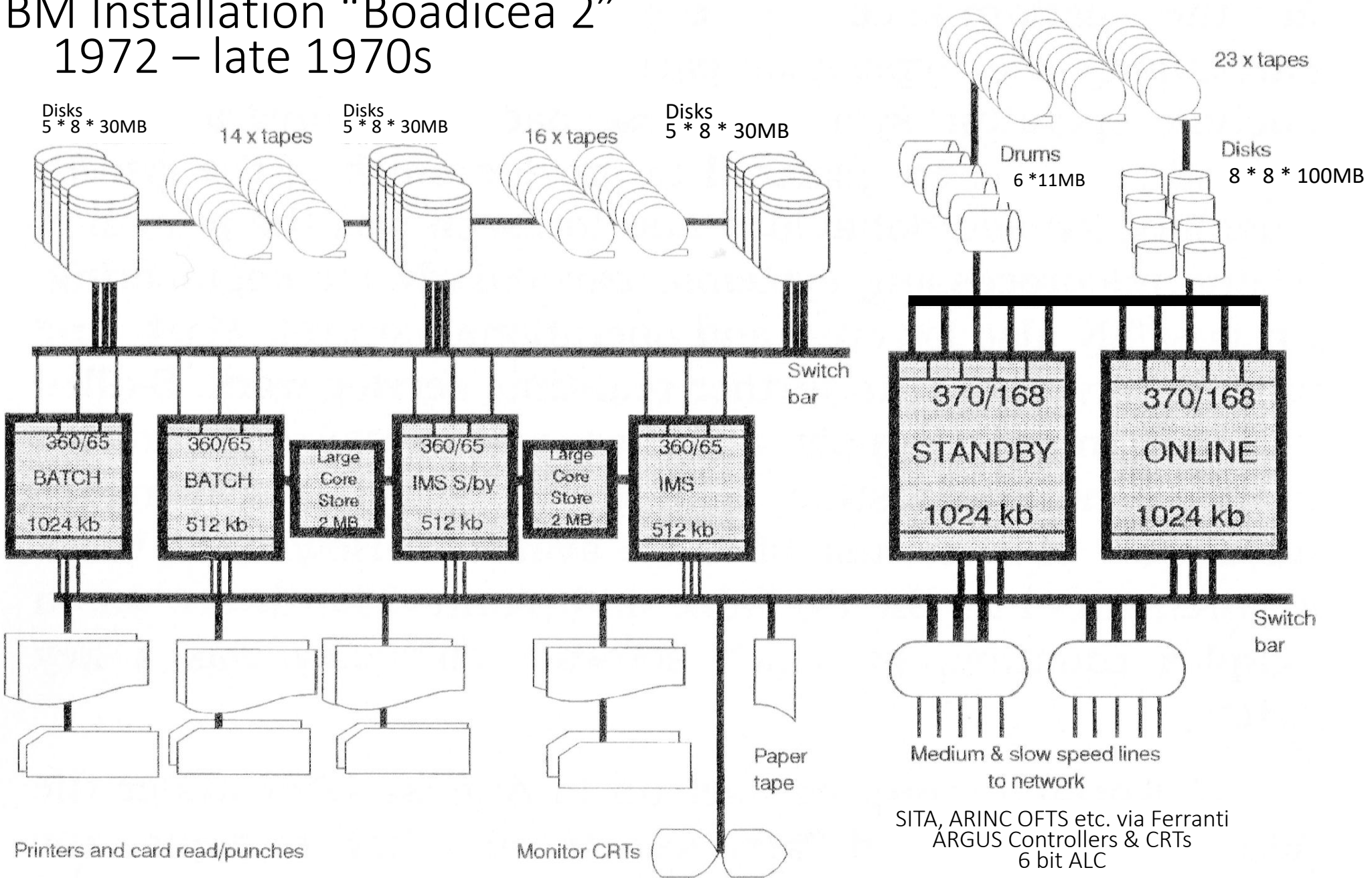
SBU3A Science, Engineering and Transport

2nd July 2026

Andy Frith



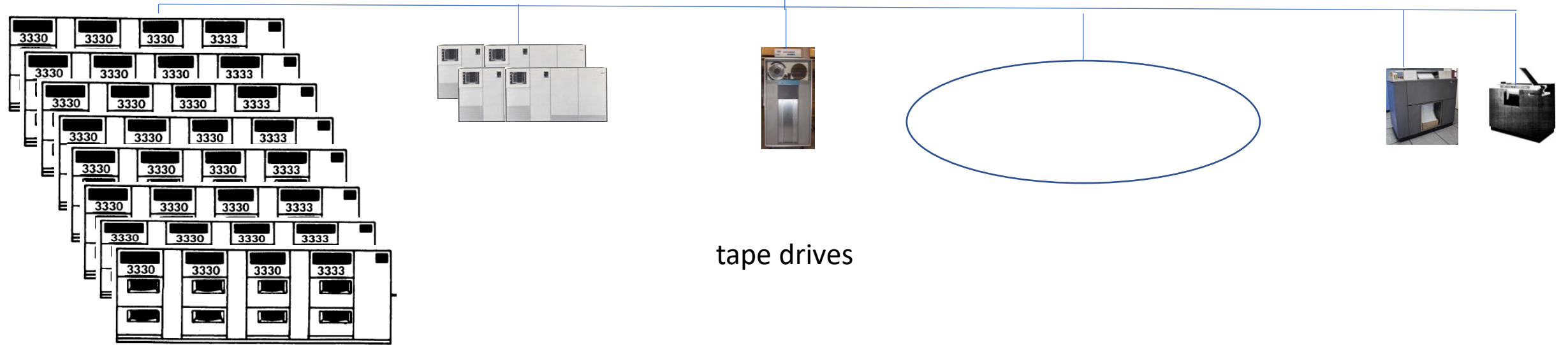
BABS IBM Installation "Boadicea 2" 1972 – late 1970s



BABS Real Time "Live" system 1972

- Live database 21 * 100MB (2.1GB)
 - (top tier phone, e.g. Samsung S28 Ultra ~1TB)
 - BUT channel connected so speed impressive

- 1MB memory (up to 4MB later 16MB max)
 - (top tier phone, e.g. Samsung S28 Ultra ~16GB)
- 3 - 5 Million Instructions Per second (MIPS)
 - (Billions of Operations per second)
- Virtual Storage (but not initially used)

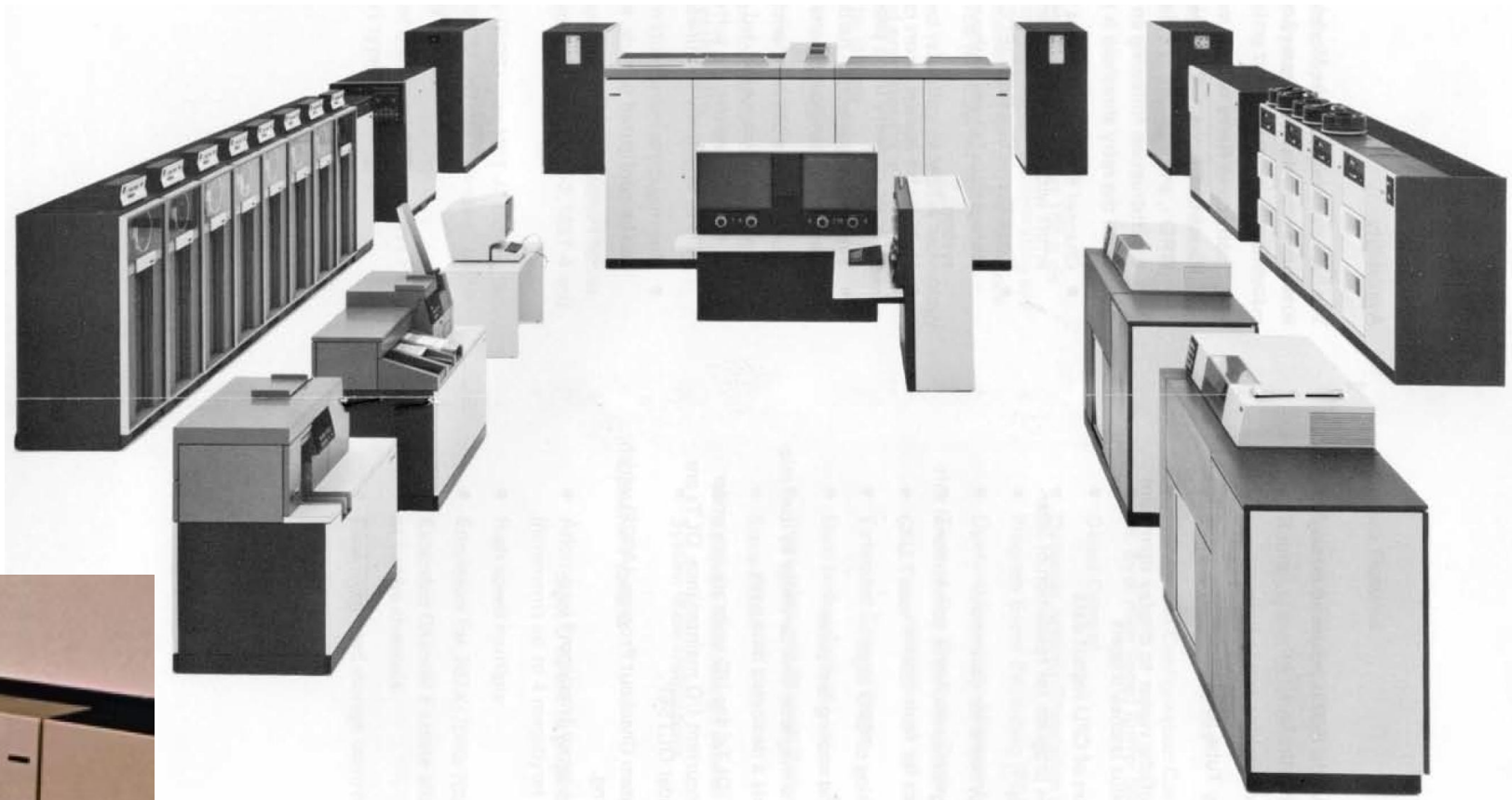


8*8*3330 (100MB)
 = 8000MB
 live database = 2100MB
 fully duplicated

2 * 2 * 2305 (11MB)
 = 44MB
 V fast access / short term

medium and slow speed network
 SITA, ARINC OFTS etc. via Ferranti
 ARGUS Controllers & CRTs
 6 bit ALC

printers & card
 reader / punch



Typical IBM 370 Installation:

(left to right)

tape drives

card punch / readers

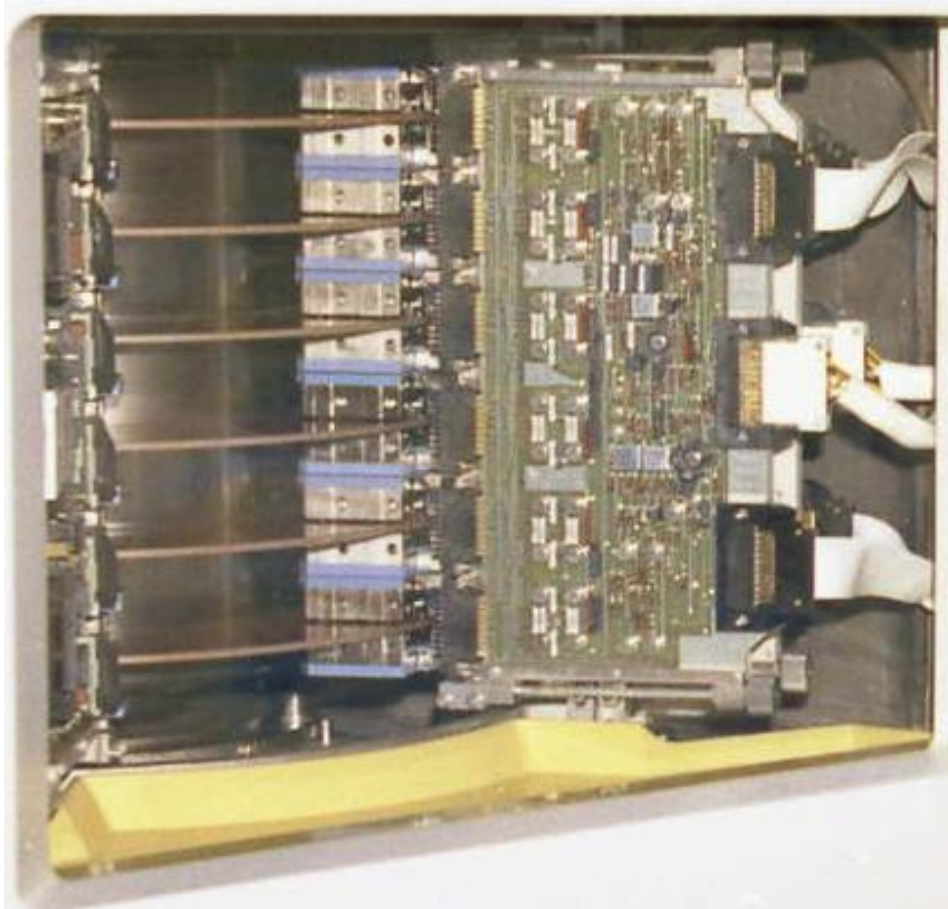
CPU & console

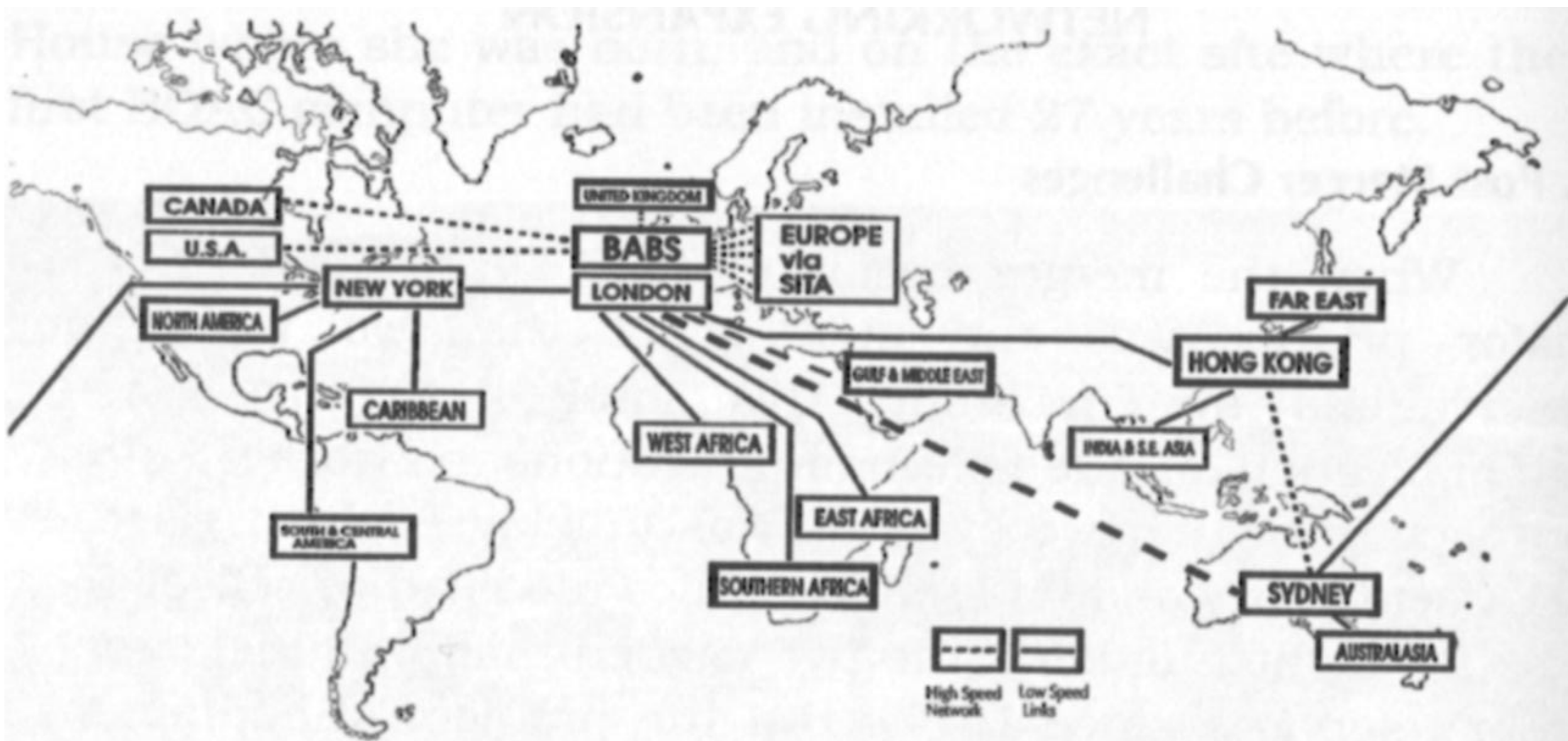
line printers

2305

3330

Inside the 2305 "drum" & 3330 disk drives with 3316 disk





British Airways network after the merger, c 1975

BOAC & BEA early reservations 1

	BOAC		BEA	
1952-1959	Early days of “computing”, extension of punched card machines mainly financial, accounting & electromechanical inventory			
Mar 1960			Real Time Res system design starts	West London AT
Nov 1961	Standard Lorenz Electronic Res Sys (ERS)	Victoria Terminal (only)		
1962			Passenger Acceptance Control Equipment (PACE)	
Nov 1963			Contract with Univac for Res system	West London AT
Dec 1963	IBM 1401 (card based inventory)	Britannia House, LHR		
1964	<i>American SABRE—1st PNR system. IBM developing into PARS^(*1) with AA & PanAm</i>			
1964	IBM proposes Res on IBM 360/40			
Sep 1964			Univac 490s installed for BEACON ^(*2)	West London AT
1965			Passenger Acceptance & Load Accumulation (PALA)	
Apr 1965	“Blue Book” study into “IT over the next 10 years”		BEACON res on UNIVAC with UniSet	West London AT
Aug 1965	£6m for BOADICEA ^(*3) (Res & DCS) using IBM 360/50, disks with CRT			
Aug 1965	<i>SAS – SASCO – reservations inventory</i>			
Apr 1966	£9m approved for BOADICEA 2 (total £33.5 to 1980)			
Jun 1966			“IMPACT” study initiated	
	(*1) Programmed Airline Reservations System			
	(*2) British European Airways Communications Network (later Computer Network)			
	(*3) British Overseas Airways Digital Information Computers for Electronic Automation			

BOAC & BEA early reservations 2

	BOAC		BEA	
Jul 1966	BOAC & IBM start joint development of IPARS ^(*4)			
Sep 1966	IBM 360/50 for Res development	Victoria Air Term (temp)		
Jun 1967	New BOADICEA "datacentre" opened	Boadicea House, LHR		
Jun 1967	2 * IBM 360/65 for BOADICEA	Boadicea House, LHR		
? 1967	<i>Swissair Message Switching on ACP</i>			
Nov 1967	<i>AER LINGUS reservations cutover on ex AA "drum" machine</i>			
Mar 1968			BEACON for PAR, AMS & DUB	
Apr 1968	<i>AIR FRANCE ALPHA reservations on UNIVAC</i>			
May 1968	<i>CONTINENTAL 1st PARS cutover</i>			
Sep 1968	BOADICEA res cutover IPARS/ACP(4)	Boadicea House, LHR		
Sep 1969	BOADICEA DCS Check-In			
Nov 1969			Pax Acceptance & Load Control (PALC)	LHR T1
1969	Edwards Committee report recommends closer BOAC & BEA working but led to a Govt White Paper recommending a merger			
Feb 1970	<i>BRANIFF COWBOY res system on IBM</i>			
Mar 1970	<i>KLM TROPICS Res on IBM</i>			
Apr 1970			Pax Acceptance & Load Control (PALC)	West London AT
Jul 1970	<i>FINNLOAD in Helsinki</i>			
	(*4) International Programmed Airline Reservations System			

BA reservations 1

	BA
Mar 1973	IBM 370/168 for BABS ^(*5) ordered
Apr 1973	Public announcement of new £7m system for combined airline would be IBM based
May 1973	IPARS sold to PanAm and TAP
Feb 1974	Check-In sold to United
May 1974	BABS (aka RTA) operational on IBM 370/168 (etc.) on ACP8 ^(*6) & IPARS
Jul 1975	BOADICEA cutover to BABS
Jul+ 1975	RTB at WLAT with ex BOADICEA IBM 360 for FICO, DISC, hosting & later CARGO (BA80)
Feb 1976	BEACON cutover to BABS
Feb 1976	SAUDIA contract for RTB service
Feb 1978	DCS sold to Korean
1978	Ticketing sold to JAL
Nov 1978	1st plug compatible machines (2 * Amdahl V6 for RTB)
1979	Online International Fares
May 1980	2 * Amdahl V7 for RTZ
May 1981	Site rationalisation announced
Feb 1983	RTA moves to WLAT becoming RTZ
	(*5) British Airways Booking System (some say Business System)
	(*6) Airline Control Program

BA reservations 2

	BA	
May 1983	OLYMPIC cutover to inhouse version of RTB	
May 1983	Queens's Award for export achievement (software, system and hosting sales)	
Jul 1984	Reservations moves from WLAT to LHR (TBC)	
Mar 1985	RTZ moves to Comet House (LHR)	
Apr 1985	RTZ "survival task force"	
May 1985	RTB moves to Comet House (LHR), then closure of WLAT	
Aug 1985	RS13 operational for Yield Management	
Apr 1986	RTZ "slightly coupled" on 2 * NAS 9060	
1986	BA response to US CRs entering Europe involved in creation of Galileo CRS with other IBM users	
Feb 1987	BA Privatised	SAUDIA cutover from RTB to inhouse system
Nov 1990	RTZ/BABS cutover to TPF2.3/HPO ^(*7) "Loosely Coupled"	
Nov 1997	RTZ/BABS cutover to TPF4.1 and latest IBM CPUs	
1999/2000	Y2K	
Aug 2000	BA & Amadeus agree 10 year "outsourcing" deal	
Jan 2001	Amadeus "take over" running of BA TPF systems @ LHR with mostly seconded BA staff	
Feb 2002	BA TPF Res systems migrated to Amadeus Erding (Munich) datacentre – END OF A ERA	
Jan 2011	BA FICO, DISC & CARGO migrated back to LHR	
	(*7) T ransaction P rocessing F acility H igh P erformance O ption	

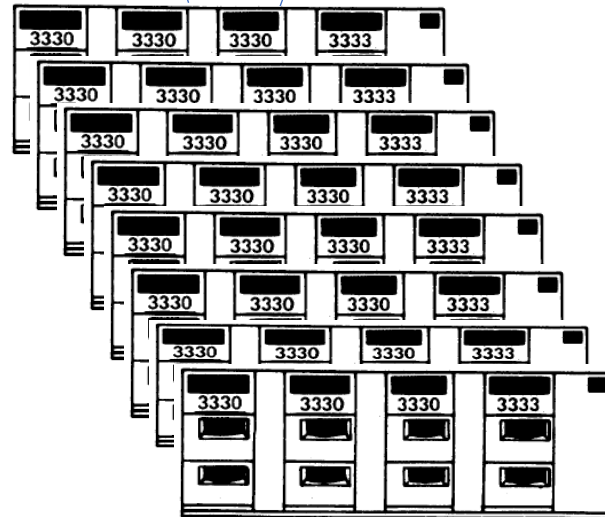
BA BABS "Slightly Coupled"



Read Write access



Read Only access



Standard Disks so only one processor can be allowed to modify data records

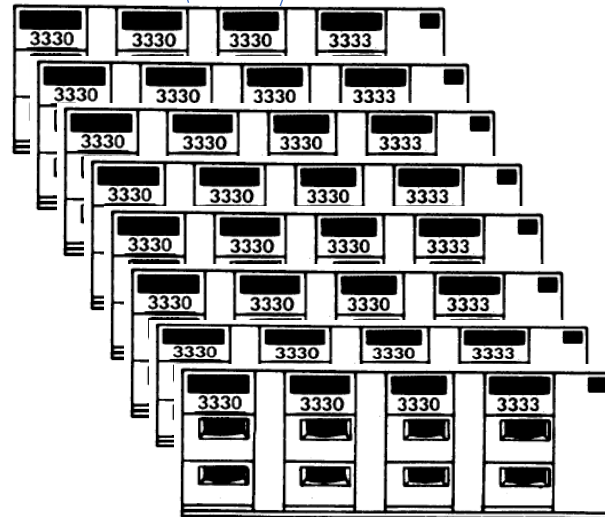
BA BABS TPF2/HPO 1990



Read Write access



Read Write access

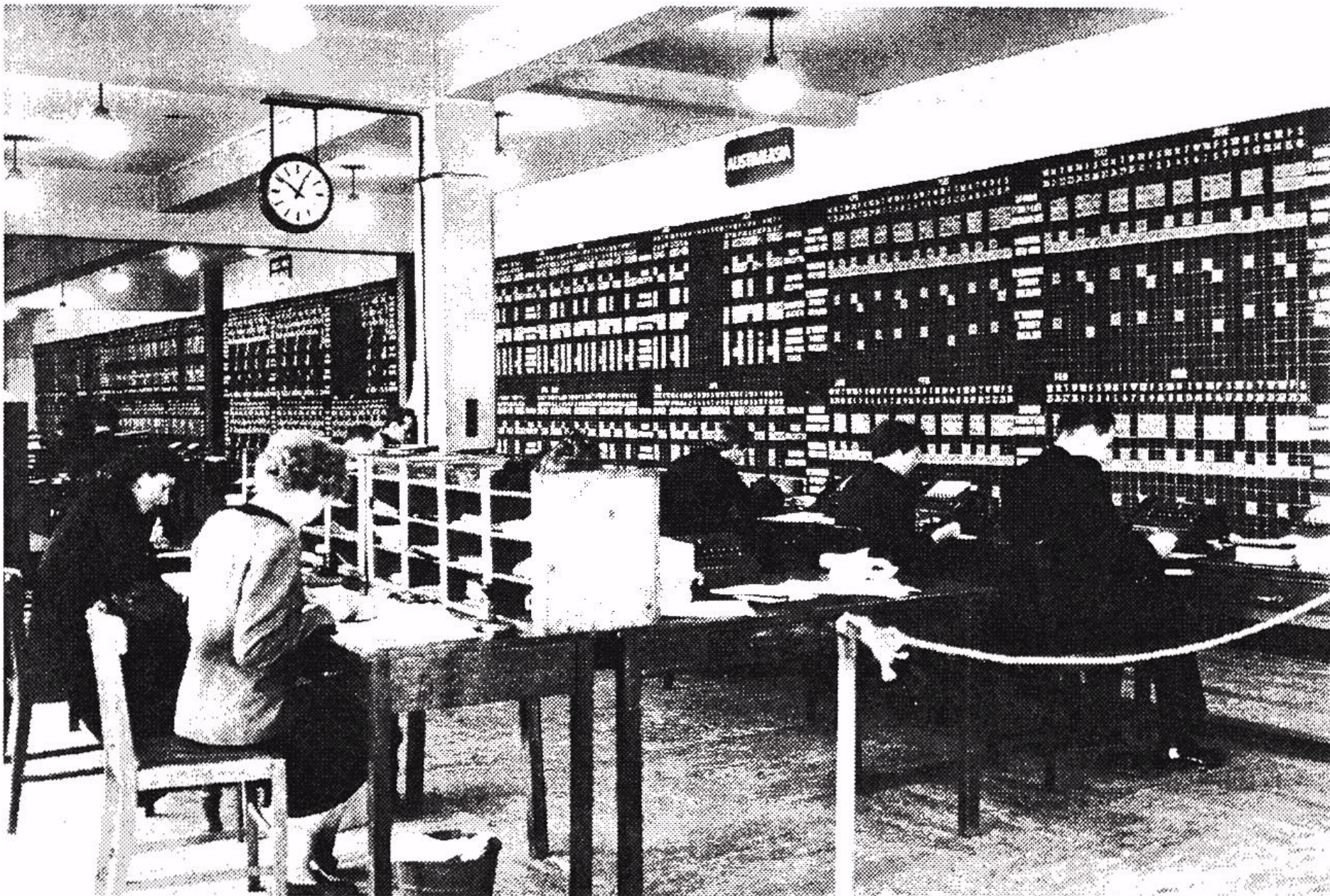


Disks with modified control microcode specific for TPF to allow "locking" of data records to prevent simultaneous updates from another processor



1953
BEA FlightMaster

BEA FlightMaster, Dorland Hall



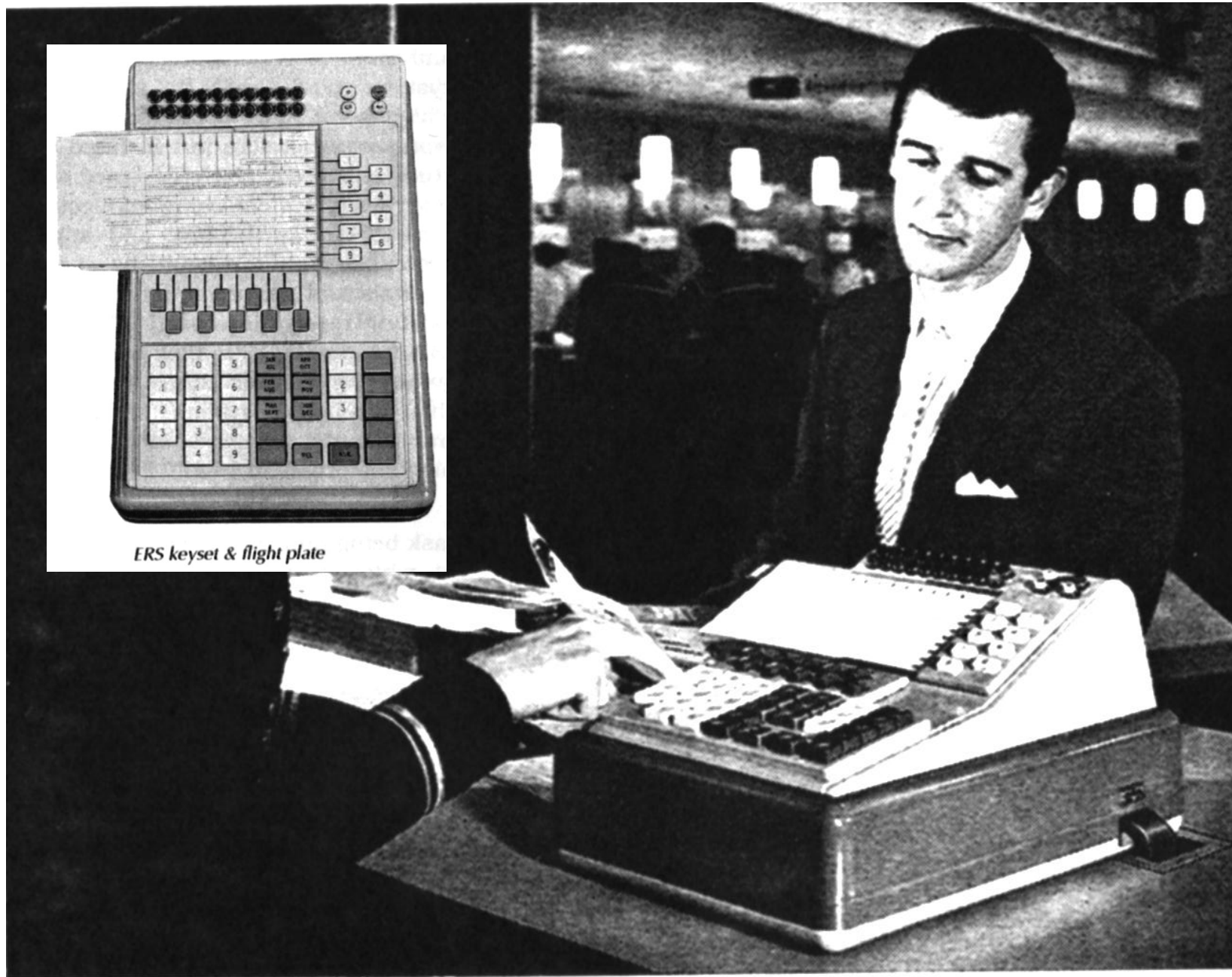
mid 1950s
BOAC
Reservations
Control

BOAC Reservations Control, Victoria, mid fifties

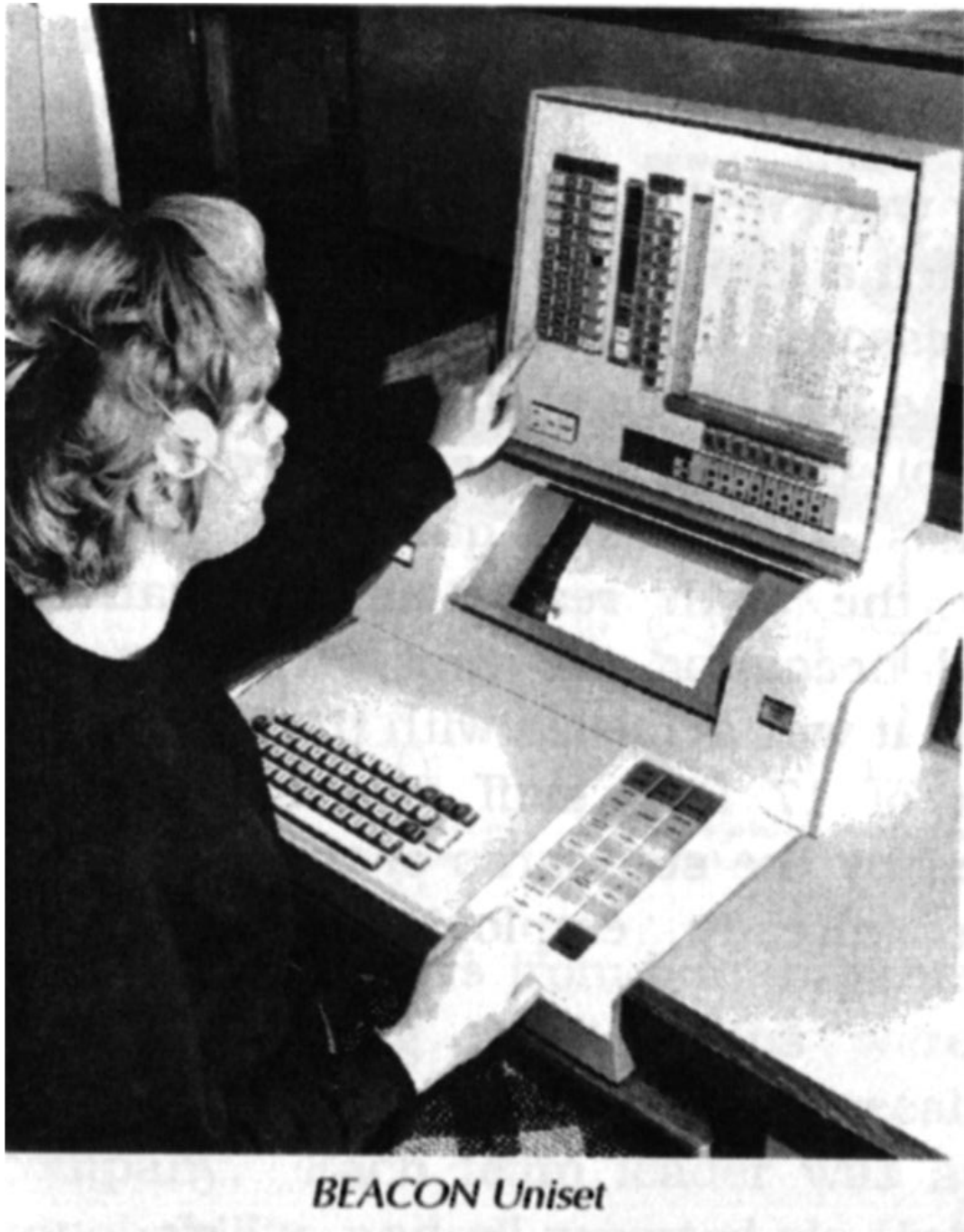
1961
BOAC ERS Lorenz



ERS keyset & flight plate



ERS set in operation



1965
BEACON UniSet

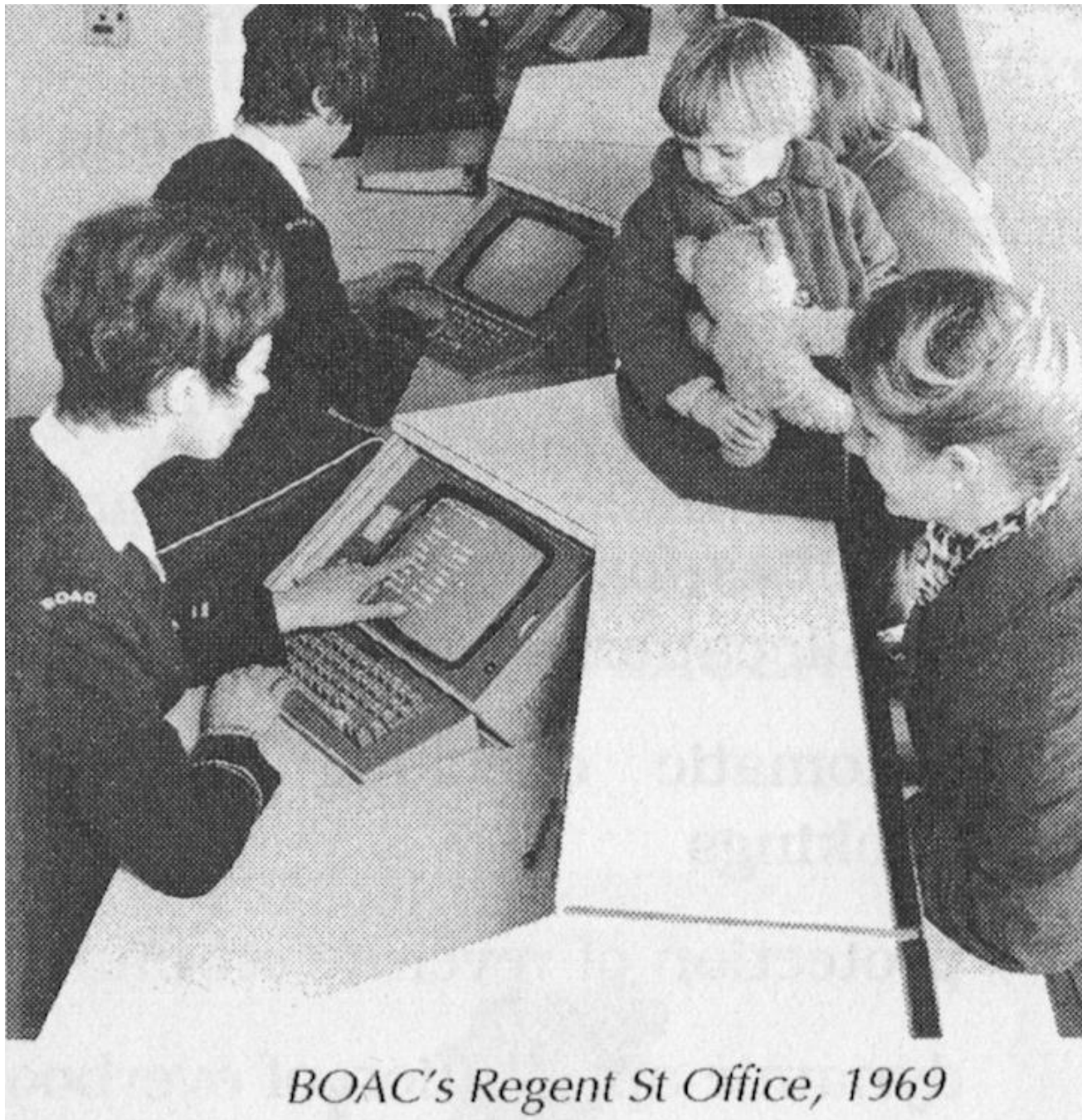
BEACON Uniset



PALC set at Heathrow Terminal 1

Nov 1969 - WLAT
Apr 1970 - LHR T1
BEACON PALC

1969
BOAC ALC CRT



BOAC's Regent St Office, 1969

AVAILABILITY

Full entries

A21JULLONCDG	Availability-date-city pair
A21JULLONCDG0900	Availability-date-city pair-specify time of departure
A21JUL/WICK/STORNAWAY/	Availability-date-city pair-full city names used
A21JULLONCDGB	Availability-date-city pair-class of travel specified (B)
A21JULLONSF0BA	Availability-date-city pair-specific carrier (BA)
A21JULLONAGP.	Availability-date-city pair-specific fares/cls availability (if only 1 FED based fare)
A21JULLONCDG.PEX	Availability-date-city pair for PEX fare
A21JULLONCDGB/D	Forward availability scan in B class for date-city pair
A21JULLONCDGY/D.PEX	Forward availability scan for PEX seats (use any economy booking class before the /)
AMONLHRJFK	Availability by day of week

PASSENGER DETAILS

Namefield

-2MIGGINS/JMR/AMRS	Basic Name
-I/1BUNTING/BMISS	Infant Name
-1FORBESHAMILTON/LADY	Hyphenated name hyphen omitted
-99ANTARCTICTOUR	Group Name

AIR SEGMENTS - BOOKING

Booking from Availability

N1M2	To book 1M Class line 2
N1C2J3	To book 1C Class Line 2 J Class Line 3
N1C2*	To book 1C Class from indirect availability starting at Line 2 nearest Class booked on subsequent Flt if specified Class not shown
N1M1Q	To book 1M Class Line 1 Status QQ
N1S1M	To book 1S Class Line 1 Status MM
N1M3S	To book 1M Class Line 3 Status SA

Direct Segment Entry

0BA5120M23FEBLHRJERNN1	Basic Entry
0BA019J20DECLHRHKGLL1	To waitlist
0BA615C20MAR92GOALGWQQ1	Unbooked segment
0BA0MSNNLHRQQ3/10001100 0YY0CZRHLHRQQ1	Unbooked-No date
0A	Arrival Unknown (ARNK)
0AF123Y23NOVCAICDGHK1-LONAFMH	Confirmed by LocalOffice(7Characters Mandatory) After initial entry and EOT further amendments will generate teletype to other carrier (i.e. if cancelled)

In addition to my own memory I must acknowledge the following source:

BABS BEACON AND BOADICEA

by

Brian Harris

which goes much deeper than my presentation.

almost impossible to find these days
(around £60 incl. P&P on ebay!)

but

Bucks Council Libraries do have a copy in the “Reserve Store”

BABS BEACON
AND BOADICEA

Brian Harris



A History of Computing in British Airways
and its Predecessor Airlines

BRITISH AIRWAYS