hUGHT International, Z1 May IV/J /ys

CO-OPERATION IN ACTION AEROSPACE EEC
Name Purpose Customer/supplier Programme

CF6-50

CFM56

Larzac

M45H

Olympus 593

RB.199

Tyne

A300B Airbus

Ten-tonne engine

Alpha Jet and Corvette

VFW 614

Concorde

MRCA

Atlantic and Transall

GE/Snecma/MTU

Snecma, GE

Tu'-bomeca, 29-4%, Snecma 23%,
MTU 22-6%, KHD22%,
others 3%

R-R (1971) 60% devel, 65% prod;
Snecma 40% devel, 35% prod
R-R (1971) 60%; Snecma 40%

Turbo Union (R-R (1971),
MTU, Fiat)

Snecma 44%, MTU 28%,
R-R (1971) 20%, FN 8%

Production sharing: GE68%, Snecma 22%, MTU 10%. First delivery June 1973. First batch of 51 to be completed end 1974 Programme begun 1969, but US Govt delay on core engine contri-bution. Snecma adopting other partners in its 50% share Franco-German agreement March 1972 after Snecma/Turbomeca agreement January 1969. First run May 1969; first flight March 1971; high-speed test-bed June 1973; 17 prototype and 18 pre-series engines in manufacture
Started 1965; first run December 1968; first flight in VFW 614 July 1971; certification end 1973; 15 flight engines ordered
Started 1962; flew in Concorde March 1969; first production delivery June 1972; 61 prototypes; first production batch 90 Co-operative development: first run at Patchway September 1971; first flight in Vulcan FTB April 1973; RB.199S now running in three countries; ultimate production envisaged 2,500 to 3,000 engines Programme begun 1958 and production of final Mk 21 under way; 752 engines ordered

A300B

Alpha Jet

Atlantic

Concorde

Europlane
F.28 Fellowship

Helicopters

Jaguar

Mercure

MRCA

Exocet

Airbus

Trainer/ground-attack

Maritime ASW

SST

QStoi project
Small airliner

Puma
Gazelle

Lynx

Attack/trainer

Short/medium-range
airliner

Multi-role combat
aircraft

Anti-ship

Airbus Industrie (Aerospatiale,
Deutsche Airbus, Fokker-VFW,
HSA, Casa)
Dassault-Breguet, Dornier

Dassault-Breguet, Fokker,
Dornier, Siebel, Aeritalia,
Sabca, Fairey, Aerospatiale
in Secbat consortium
. BAC/Aerospatiale

BAC, MBB, Saab-Scania, Casa
VFW-Fokker, HFB, Shorts,
Rolls-Royce
Aerospatiale, Westland,
Turbomeca

Westland, Aerospatiale,
Rolls-Royce (1971)
Sepecat(BAC, Dassault-
Breguet)

Dassault-Breguet with Aeritalia,
Casa, Sabca, FW Emmen,
Canadair
Namma as customer, Panavia
Aircraft as supplier (BAC,
MBB, Aeritalia)

Government agreement May 1969; Airbus Industrie formed Decem-ber 1970; first flight October 1972; two aircraft flying. 16 firm orders, 22 options from Air France, Iberia, Lufthansa and Sterling Started 1969; contract May 1972; first flight end 1973; production deliveries end 1976. Two assembly lines. 200 trainers for France, 200 ground-attack for Germany
Started 1958; first batch of 60 for France and Germany; second batch of 27 for Netherlands and Italy. Production almost completed. R-R Tyne engine built by consortium

Government agreement November 1962; first flight March 1969; four aircraft flying; 1,387hr flying at 1.1.73; certification end 1974; first delivery early 1975. Orders BOAC 5, Air France 4, Iran Air 2, China 3
Joint study for a short-range airliner
Risk-sharing programme has developed successive versions; first flight May 1967; certificated 1969; orders 55 at end 1972 Government agreements 1967 and 1972; shared production; first deliveries Puma June 1969, Gazelle December 1971; orders:— Puma, France 132, UK 40, others 62, civil 11: Gazelle, France 50, UK 142, others 8, civil 83
First flight March 1971; in service 1975; ordered for RN and UK Army and French Navy
Government agreement 1965; first flight September 1968; French deliveries begun 1972; two assembly lines; 200 planned for each country; exports reported
Design begun 1966; first flight May 1971; certification expected June 1973; delivery October 1973; orders:—Air Inter 10

UK, Germany, Italy sharing costs approx 421%, 42i%, 15%. Planned numbers UK 385, Germany 322, Italy 100; first flight early 1974; 9 prototype, 6 pre-series ordered; production deliveries about 1978

Milan
Hot
Roland
M arte I

Otomat

Infantry anti-tank
Vehicle anti-tank
Anti-aircraft
Anti-radar/tv guidance

Anti-ship

Aerospatiale, EMD, etc, in
France; Plessey, Morfax, Smiths,
Manchester ROF, Newton Derby,
Sperry in UK

Euromissile

Matra, HSD

Matra/Oto Meiara

17% British share of production of all Exocets. No development share

Joint company representing Aerospatiale and MBB. Programme begun 1964. Production started Milan 1971, Hot and Roland 1972

Programme begun 1963; French Air Force trials 1971-72; production begun July 1972. EM Dassault, GEC-Marconi Electronics, Royal Ordnance Factories, Aerospatiale, Plessey, Houston-Brandt, SNPE First firing April 1971; first guided target impact February 1972. In service with Italian Navy 1973. Air-launch under study. Sub-contractors:— Thomson-CSF, Thomson-Brandt, Turbomeca, SNPE

Aerosat

Cos-B

ECS/OTS

Helios
Heos-A2

L.3S

Meteosat

Sret

Symphonie

ATC satellite Esro, Canada, USA

Gamma-ray research
satellite
European
Communications Satellite

Solar probe
Highly eccentric-
orbiting satellite
Franco-German

three-stage launcher
Stationary weather
satellite

Cesar consortium (MBB, BAC,
Casa, Etca, Selenia, Aerospatiale)
Star, Mesh, Cosmos consortia

MBB/Nasa
Esro/MBB

CNES/Aerospatiale, MBB, SEP

Esro: Cosmos and Mesh
consortia

French satellite on
Russian launcher

Franco-German
telecoms satellite

Dassault-Breguet, Crouzet, RTC,
Saft, Aerospatiale, Matra, SAT

Cifas consortium (MBB,
Thomson-CSF, SAT, Siemens,
Telefunken)

Emerged from French Dioscures satellite in co-operation with USA. In 1971 project became ATC. Canada and two European partners joined France. Esro/USA negotiations under way 1973. ATC launches scheduled 1976-1977 and 1977
Esro gamma-ray research satellite for launch by Thor-Delta in 1974

For European communications and Eurovision in 1980s. Orbital Test Satellite for launch in 1976 competitively studied by Star, Mesh and Cosmos consortia
Due for launch July 1974 and October 1975
First Heos-A2 for Esro launched January 1972. Heos-A1, launched by Thor-Delta in 1968, is now complete
Lower-cost European launcher proposed by France. Europa III first stage. CNES managing, Aerospatiale prime
French programme Europeanised in 1971. France, UK, West Germany, Italy, Sweden, Switzerland, Belgium, Denmark sharing cost. Cosmos and Mesh consortia making eight-month study for Esro. Launch scheduled for 1976 by Thor-Delta for 1977 Garp programme t"
Sret 1 launched April .1972 on Russian launcher with Molnya with solar cell experiment. Sret 2 experiment on thermal control scheduled for end of 1974
Franco-German treaty of January 1963. Cifas consortium selected 1968. Contract 1971. Launcher undecided. Prototype due January 1974; first flight model April 1974; second September 1974