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Front cover: Grumman's X-29 typifies the unstable high-speed aircraft that benefit from the canard configuration. Starting on page 19,
B. A. Burns outlines the aerodynamic niceties of such layouts.

EDITORIAL

EFA under threat

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inisters of Defence from
Europe's prospective partners on
the European Fighter Aircraft
programme had planned to meet in Rome
during March to agree to start the EFA project definition stage, and perhaps tie up the last loose ends on outstanding small matters like work-sharing and design leadership. The meeting has been post-poned, and may now not take place until late May or early June.
One of the partner-company's senior executives, British Aerospace chairman Sir Austin Pearce, must be stung with disappointment. Only last week he urged European politicians and industry to accelerate the programme, and identified time-wasting as a major cause of the cost increases caused by collaboration. Collaboration—trans-national or inter-national—has its merits, but its drawbacks must equally be acknowledged. The procedures are time-consuming, and consumed time costs formidable quan-tities of money. At worst it can mean increases of up to 70 per cent in programme costs.
The remedy, in Sir Austin's own words, lies in cost-effective political action. Getting the right kind of political action depends on the European Governments showing a commitment to collaboration which at present is not much in evidence. The Germans and British are both suffering from funding problems. Germany has not yet decided on the size of its EFA requirement, and so cannot begin to negotiate realistically about its work-share. The UK and German governments have each instituted cuts in defence spending which put commitment of EFA funds further down the line. The UK has stretched the Tornado programme, and must now look at 1997 as a likely in-service date for EFA, as opposed to 1995.

Neither German nor British govern-ments have shown a willingness to put even their own nation's interest first, and departmental pride is allowed to inhibit possible spending. The German Department of Research and the Department of Economics were asked to help in Euro-fighter funding, but refused on the grounds that the Department of Defence should fund a military aircraft programme itself.
In the UK the Ministry of Defence has always been expected to find its own share of development funds, there being no evident civil application for a 9-5 tonne

fighter. Other departments are allowed to overlook the potential benefits to them-selves. The Department of Industry does not acknowledge that there are substan-tial technology spin-offs from a fighter programme. The Department of Employ-ment ignores the fact that its resources will have to meet the bill for massive unemployment benefits if layoffs follow the failure to keep large sectors of the aerospace industry in continuous employ-ment.

Only France among the European part-ners has, to Sir Austin's chagrin, declared and maintained a "national aerospace strategy". France has also taken an export-led stance, and geared the develop-ment of new aircraft to the potential export market, without allowing that consideration to govern France's own military requirements.
With that kind of commitment from the other governments, Europe could make a more positive start on its combat aircraft programme. Such a commitment would help to hold the costs down, and would meet the several forces' requirements. The longer they prevaricate, the higher the cost, and the greater France's (justified) disenchantment with her partners.
The more the EFA decision is delayed, moreover, the greater is the impetus for individual governments to split the programme. They could go ahead alone, as Britain's EAP or France's ACX, or both, could do; or they could set up separate partnerships on rival programmes, with proposals such as the Northrop-Dornier ND.102. Or they could buy off-the-shelf from the United States, with serious consequences to European manufacturers. Even if none of those proves to be the enemy, other threats are lurking in the wings. The Royal Navy is assembling a powerful argument that the programme should be cancelled in favour of a super-sonic Stovl Harrier replacement. British Aerospace has two teams working on supersonic vectored thrust aircraft, in the P.1216 and P.103 projects, and McDon-nell Douglas is also interested in AV-8B successors for the Marine Corps and possibly for the US Air Force.

With so many recognised and as yet unknown enemies, EFA badly needs friends. Adherence to the original programme, commitment from the part-ners, and early resolution of the Franco-British stand-offishness would allow friendships, and EFA, to prosper.

FLIGHT International, 23 February 1985