

NAVIGATION ALEXANDER CAMPBELL / LONDON

ESA urges movement on Galileo

But European Space Agency says that despite dispute over funding, satellite programme is a good test for co-operation

Europe's troubled Galileo satellite navigation project could yet serve as a "good model" for future joint space programmes despite continuing international squabbles over its funding, says European Space Agency (ESA) director-general Antonio Rodotà.

He emphasised the urgent need for progress on Galileo at a European Union space policy workshop in London on 20 May, saying that "without a decision soon the collected expertise will disappear... there are 1,000 people involved. You cannot destroy it one day and hope to rebuild it the next day."

Galileo is a joint ESA-EU project, and Philippe Busquin, EU commissioner for space policy, agreed that "it will be a great triumph for the [European] Commission and ESA to reach a decision... a test of European ability to co-operate in areas such as space".

However, Spain is still objecting to German/Italian leadership of the €3.2 billion (\$3.7 billion) project. UK science minister Lord Sainsbury called for Spain to be publicly shamed for its delaying tactics: "We need to stop messing around and vote on the current position on [workshares]. If it is seen publicly

that one country is standing out against a general consensus, it will need to make its case in public."

Supporting Sainsbury, Rodotà said: "It would not be a problem embarrassing Spain or anyone else."

Busquin says Galileo could represent a new strategy for ESA – to boost its funding from European member states by launching satellites with military, as well as civil, applications.

Under its charter "ESA cannot finance defence research – not officially", Busquin says, "and states want to keep their independence in defence matters...but the line

between defence and security is very narrow". The EU is allowed to fund civil security projects.

Satellite navigation has obvious military uses, as does the Global Monitoring for Environment and Security (GMES) project, which will use Earth observation satellites to monitor ice movements, but also to watch Europe's borders.

Jack Metthey, EC director of space and transport research, says that the involvement of national defence ministries "is developing" in projects such as GMES and Galileo that "by definition can be used for military applications".

REPORT GRAHAM WARWICK / WASHINGTON DC

GAO warns of weapon systems immaturity

Most US weapon systems enter development and production with much less maturity than wider industry best practices would allow, according to a report by the US General Accounting Office (GAO). This causes technical problems, cost growth and schedule delays, says the Congressional watchdog.

The GAO assessed 26 major defence programmes, and found that all "proceeded with less knowledge at critical junctures than suggested by best practices". The agency assessed technology maturity at the start of development, design stability at the critical design review midway through development, and manufacturing process control at the start of production. The maturity at each stage was compared with that achieved in the best commercial product-development programmes.

Although the report makes no recommendations, it singles out several programmes for criticism, and a handful for praise. The Lockheed Martin Boeing F/A-22 stealth fighter entered development in 1991 with key technologies still immature, the GAO says, and only 26% of engineering drawings had

been released by the 1995 design review. Late drawing release contributed to parts shortages, cost increases and flight-test delays. The GAO believes production costs will continue to increase, but the US Air Force argues production cost reductions will keep the programme within budget.

The GAO believes the Boeing Sikorsky RAH-66 Comanche combat helicopter shows promise of being a "best practices" programme, if only because most of the critical technologies have been matured over "many years of difficult development". Delaying the design review to April allowed drawing release to reach the 90% mark, the report says. Despite a generally favourable assessment, the report points out that the time to obtain initial capability has increased from nine years to 21.

The GAO argues that a low-risk entry path to production requires a "knowledge-based" approach, where high levels of product knowledge – measured by technology maturity, design stability and manufacturing process control – are demonstrated at critical points in the development cycle.

APPOINTMENT

New boss for Boeing France

Yves Galland, a former French minister, has been appointed president of Boeing France to help the US manufacturer win business in the country. He has been tasked with ensuring that French industry is more involved in Boeing programmes.

Tom Pickering, vice-president in charge of international relations for Boeing, says the appointment is a signal that the US aircraft manufacturer is not influenced by the strained relations between France and the USA. "We decided a year ago that a French person was needed to represent Boeing at the highest level in government and industry," Pickering says, adding that "we are a private company and it's up to us to decide what we want to do commercially and industrially".

Galland, French industry minister in 1995 and finance and foreign trade minister from 1995 to 1997, denies that his political party may not greet his appointment with much enthusiasm, given that as foreign trade minister he had been pushing sales for Boeing's arch rival, Airbus, and he rejects the notion that his position is that of a lobbyist.



Galland: 'not a lobbyist'

LOW-COST CARRIERS

Branson eyes Virgin Blue float

Virgin Group chairman Richard Branson is considering a flotation of his Australian low-cost carrier Virgin Blue before the end of this year. The move comes after the airline reported a pre-tax profit for the year to 31 March of A\$158 million (\$103 million) – treble the result of a year ago – and net profit up from A\$35 million to A\$110 million. Plans for the float have yet to be finalised with Virgin Blue co-owner, Patrick Corporation, however, amid reports that managing director Chris Corrigan is now reluctant to give up 5% of Patrick's 50% stake in the airline, which was agreed when the logistics group bought half of the airline for A\$260 million last year.