

Dog Eats Dog

On the eve of 2006 Galileo finally became tangible reality. Launched from Balkonur, Kazakhstan, atop a Soyuz-Fregat vehicle, the first Galileo-In-Orbit Validation Element (Giove A) was rocketed beyond Earth's atmosphere in the early morning of 28th December 2005. Galileo is a joint initiative of the European Commission (EC) and the European Space Agency (ESA) to build a Global Navigation Satellite System (GNSS). The system is interoperable with GPS and GLONASS and will operate under civilian control at all times, except in the direst emergency. Claimed to be more accurate than the US GPS system, the services foreseen are many, and include navigation and positioning applications in transport, telecommunications, fishery, agriculture and oil prospecting. In addition to Europe, several other countries are participating in the project, among which Israel and China.

Tripartite Mission

Weighing in at 600kg, Giove A has during its two-year mission to accomplish three tasks. Firstly, securing use of the signal frequencies allocated by the International Telecommunications Union. The second part of the mission will consist of determining radiation characteristics of the three Medium Earth Orbits at altitude 23,222km to be circulated by the projected constellation of thirty satellites (27 + three active spares). Finally, critical technologies contributing to the future operational constellation have to be examined and checked. These consist primarily of two signal-generation units and two rubidium atomic clocks with a stability of 10 nanoseconds per day.

European Spirit

In the second half of the 1990s, in many ways a period of exaggeration, abundant optimism, unrealistic claims of growth and happy-go-lucky mindsets, Galileo was scheduled to become operational in 2008. Today, the more modest estimated date of completion is 2010. The decision taken at the beginning of the 1990s to build an own GNSS originated in old and established European spirit: building one's own core technology to warrant independency from others. This spirit had always appeared very fruitful. For example, it resulted in the 1970s in the development of the Arian launcher and production of the Airbus. Galileo has been advocated as an infrastructure that will give European nations guaranteed access to a space-borne, precise, timing and location service, independent of the US. However, from its inception the Galileo initiative faced controversy and met with dispute: not all governments within Europe embraced with the same eagerness the idea of operating an own GNSS.

Very Incorrect

One of the main opposing arguments expressed by critics was, why develop a system at huge costs which does more or less the same as two other systems already in existence and available for use by everyone all over Europe? What are the long-term benefits of such redundancy? Others challenged the chosen business model.

With respect to the issue of business model, the following. The total bankruptcy of former centrally-planned economies belonging to central and eastern Europe around 1990 produced some substantial change in the social mindset all over Europe. Suddenly many governments within Europe acknowledged the intrinsic superiority of the free-market economy, and this whilst just two decades earlier welcoming the free market as an economic construction for guiding the "support and demand" behaviour of mankind was considered to be politically incorrect, very incorrect.

But now, swapping from social mindset to a commercial way of thinking, European authorities were no longer satisfied with providing within the framework of Galileo a positioning infrastructure for the benefit of all European citizens and the welfare of the entire population of the globe. They also wanted to claim a piece of the augmentation-services revenue cake. The mass-market, for whom meter-level accuracy is more than enough, would be served free of charge. The professional market, however, where it demands high-precision positioning, will have to pay for commercial services the potential of which are described as tremendous. And this whilst there already exist specialised firms providing augmentation services to the high-precision market, on top of existing positioning infrastructure; many with a lot of experience in the job.

So what? What's wrong with that? What is wrong is that the builder and maintainer of the navigation and positioning infrastructure thus enters into business competition with his own customers: the users of the infrastructure paying for high-precision services. It is as if a government built a transport infrastructure consisting of motorways, and then allowed only the general public to drive along them in their own cars, forcing the transport sector to hire trucks from the government for transport of goods. It is as if a manufacturer of total stations began carrying out surveying projects, so setting himself up as a competitor to his own customers.

Nearly a century of communism and socialism demolished in the hearts of so many well-meaning European citizens the challenge of entrepreneurship. European authorities in expressing their deep and passionate regret at this, overnight hoisted to the zenith the flag of commercialism. Nobody seems to realize that generating governmental revenue by stepping into commercial activities is both inappropriate and ineffective. It can be based only upon a complete misinterpretation of the essentials of the free-market economy, and certainly does not provide a solution to historically induced entrepreneurial inertia amongst the citizens of Europe.