

## Session 3 – GALILEO ON THE WAY TO A DUAL SYSTEM?

### A CASE AGAINST

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The views expressed are personal views.

## Introduction

- In early 1990s GNSS was identified as an essential tool for implementing the European Transport Policy.
- To meet EU Directives for safe transport of people and goods a GNSS providing “Guarantees of Service” and carrying “liability” commitments was identified.
- Both these aspects require that EU MS have sovereign control of a GNSS - GALILEO
- Four Services were identified; Open, Safety of Life, Commercial and a Controlled Access Service – The Public Regulated Service.

## PRS

- The PRS is a service reserved principally for the public authorities responsible for civil protection, national security and law enforcement. These applications demand a high level of continuity, especially in situation of crisis or presence of threats.
- The access to PRS is controlled and therefore requires technical (e.g., secured cryptology), procedural (e.g., security accreditations) and, potentially, also decisional means (e.g., instructions from the Joint Action), to ensure the adequate control of the users.
- The development of PRS is part of a Transport Council programme. The development is funded by all Member States.
- A fundamental principle is that all Member States shall have equal access to information to enable them to develop and use receiver equipment for all Galileo services including PRS
- Potentially there are numerous PRS users with widely differing operational needs, behaviour and levels of confidence.
- There has been considerable debate on the need for PRS and its use. The GSB Working Groups contributed to this debate.

## Pre-December 2004 Scenarios for PRS

GSB Working Groups worked on four scenarios for use of PRS to identify “what if” impacts

- Scenarios ranged from basic civil use (road tolling) to military applications.
- Principles assumed for all scenarios:
  - The responsibilities for Galileo and the management of PRS, in particular, shall be in accordance with Council Regulation 1321/2004 and Joint Action 2004/552
  - Galileo is a civil system under civil control. Protection measures appropriate for a civil strategic infrastructure are appropriate. (Air Traffic management, Power Generation and Distribution systems etc).
  - Implementation of reasonable measures to prevent a security incident from occurring together with means to detect a security incident within a time that allows the operator to respond before operations can be compromised
  - The actions of one (or more) Member State shall not impact on the security of the Galileo system as a whole or the security interest of other Member States.

## Member States Conclusions – December 2004

### Council Conclusion of December 2004:

6. “Recalls that Galileo is a civil programme under civil control, and consequently that any change to **that principle** would require examination in the framework of Title V TEU and, in particular, articles 17 and 23 thereof.”
12. Underlines the need to restrict the amount of overspends to the consequences of..... security.....
15. Urges the Commission to .....facilitate the exchange of classified information between participants....

## Consequences of Dual Use

Assume Dual Use meaning: fit for offensive operations.

- Consequences:
  - Increased threat to SoL and open signals. Impact on Guarantees, liability, global performance, Certification of SoL – all underwritten, ultimately, by Member States
  - Requirements “creep” to include military requirements leading to unnecessary complexity for government civil users and increase in cost
  - Requirement for “Command and Control” far greater than required for government civil use. Significant increase in cost to MS. Duplicates Operating company task
  - Requirement for increased protection levels. System would need protecting to military levels
  - Requirement to increase data classification levels to match impact of compromise. This could deny some manufacturers access to data in the short term thus impacting competition for operational phase User Equipment.
- These requirements have not been agreed between Member States

## Conclusions - 1

- EU MS are building a civil system for commercial exploitation and civil government use. The use of PRS for military applications by some Member States could substantially impact the security interests of Member States using it for the advertised purposes
- There has been no MS agreement to change the principle that Galileo is a civil programme under civil control.
- There has been no agreement between Member States to increase security and command and control requirements appropriate to enable Dual Use.
- There is a very limited budget – need to focus on prime objective of programme not scheme up requirements inappropriate for a civil system. The customer (Member States) will need convincing of the need to provide additional funds to make Galileo suitable for Dual Use.
- The Programme has a difficult enough task to meet timescales without uncertainties on objectives. The Council Conclusions defined these. Moving objectives will introduce delays.

## Conclusions - 2

- Attempts to make Galileo suitable for Dual use will impact: threat to Open and SoL signals; certification, costs and complexity of the system and user equipment; will require increase in necessary protection levels, raise data classification levels and require a central Command and Control facility more complex than envisaged in the Council Regulation and Joint Action
- Until or unless all Member States agree to the necessary increase in requirements, security levels and funding to make Galileo suitable for Dual Use then I suggest that it is not suitable for military operations.