GAMMA

GAMMA - Global ATM Security Management

Funding: European (7th RTD Framework Programme)
Duration: Sep 2013 - Nov 2017
Status: Complete
Total project cost: €14,511,483
EU contribution: €9,124,760

Background & policy context:

GAMMA is a project worth around fifteen million Euros, co-financed by the Research Executive Agency of the European Commission within the Seventh Framework Programme (FP7). The project stems from the growing need to address new air traffic management threats and vulnerabilities due, for instance, to the increased reliance on distributed enterprise computing and the automated flow of information across a ground and airborne network.

Objectives:

The GAMMA project stems from the recognition that while the SESAR initiative is effectively addressing some security issues in the new global ATM scenarios, there is a need to extend this scope to ensure a comprehensive assessment of the full set of security threats and vulnerabilities affecting ATM, considered as a system of systems and covering operational as well as technological aspects. In addition, there is a need, not completely met by SESAR, to establish a comprehensive framework for managing ATM security once SESAR deployment is engaged to minimise the effects of ATM crises brought about by security incidents.

The GAMMA vision is to adopt a holistic approach for assessing ATM security, maintaining alignment with SESAR and reaching the following main objectives:

- Extend the scope of threat assessment performed within SESAR to a more comprehensive system of systems level, inclusive of all ATM assets and all forms of threats.
- Develop a Global ATM Security Management framework, representing a concrete proposal for the day-to-day operation of ATM Security and the management of crises at European level.
- Define the architecture of an ATM security solution, suitable to support the security management of the global ATM system.
- Design and implement prototype components of the ATM solution so as to demonstrate the functionalities and operations proposed for the future European ATM.
- Set up a realistic validation environment, representative of the target ATM solution, through which to perform validation exercises aimed at validating the feasibility and assessing the adequateness of the procedures, technologies, and human resources issues proposed.

GAMMA is strongly driven by the End Users present in the consortium supporting the project activities from the threat and vulnerability analysis to the validation of the developed concepts. The international dimension will also be considered with special reference to interoperability with US systems.

Parent Programmes:
FP7-SECURITY - Security

Institute type: Public institution
Institute name: European Commission
Funding type: Public (EU)

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Technologies:
- Aircraft operations and safety
- Intelligence and surveillance systems

Development phase: Research/Invention

STRIA Roadmaps: Network and traffic management systems
Transport mode: Air transport
Transport sectors: Passenger transport, Freight transport
Transport policies: Safety/Security
Geo-spatial type: Other