



International cooperation in security research

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FOI



Security Research

- GOP (Group of Personalities) report
- PASR (Preparatory Action Security Research)
 - 2004, 2005, 2006 (15 M€/year)
- ESRP (European Security Research Programme) – FP7





 **global objectives of the PA:**

The main goals:

- To contribute to the improvement of Security of European citizens
- To enhance EU Industrial Competitiveness
- To reinforce the basis to underpin policy decisions

European Commission 6 PASR Infoday, Brussels 23 March 2004



Maximum funding

- **Projects**

- Industrial Research: 75%
- Pre-competitive development activities: 50%
- Management : 100% (up to 7% of overall Community contribution)

- **Supporting Activities**

- 75% of eligible costs
- This amount may include up to 10% for management (financed at 100% rate)

Priority missions

1. Optimising security and protection of networked systems
2. Protecting against terrorism (including bio-terrorism and incidents with biological, chemical and other substances)
3. Enhancing crisis management (including evacuation, search and rescue operations, control and remediation)

Priority missions (ctd.)

4. Achieving interoperability and integration of systems for information and communication
5. Improving situation awareness (e.g. in crisis management, anti-terrorism activities or border control)



Optimising security and protection of networked systems

Aim: to analyse established and future networked systems and services, such as communications systems and services, utility systems and services, transportation facilities, networks for (cyber) commerce and business and identification of their interdependencies, with regard to the security of use and vulnerabilities, to show how to minimise social/economic impact of and implement protective security measures against both electronic and physical threats.

Relevant issues for Projects:

- Development of standardised methodologies and decision tools for assessing the nature of the potential threat to critical networked infrastructures and to assess the respective vulnerabilities and to conduct security impact assessments to measure the security of the critical parts of a complete chain.
- Demonstration of measures for enhanced protection and assurance of elements critical to public, private and government infrastructures (including financial systems) to maintain security in an enlarged Europe and to re-establish the functioning of a chain using alternative means.
- Development of detection, prevention, response and alert



Protecting against terrorism (...)

Aim: to identify and prioritise the material and information requirements of governments, agencies and public authorities in combating and protecting against terrorism and to deliver technology solutions for threat detection, prevention, identification, protection and neutralisation as well as containment and disposal of threatening substances (including CBRN and explosives in general) and weapons of mass destruction.



Protecting against terrorism (...)

Relevant issues for Projects:

- Demonstration of effective integration of active and passive sensor techniques, suitable for a wide range of platforms and data correlation techniques for detection and identification systems.
- Development of models of large scale dispersion over large areas and using multiple routes of high risk pathogens of concern to produce a validated model for use by public authorities.
- Demonstration of the viability of technologies and protocols for personnel, facilities and equipment decontamination against biological or chemical or other substances.
- Assessment and identification of the overall needs of an enlarged EU for biosafety level 4 laboratories in order to guarantee optimal complementarity and development of an effective methodology for networking.
- Development of measures for an effective fight against terrorist financing.



Enhancing crisis management (...)

Aim: to address the operational and technological issues that need to be considered from three perspectives: crisis prevention, operational preparedness and management of declared crisis. This includes such activities in relation to life threatening substances (NBRC or explosives)

Relevant issues for Projects:

- Development of shared information management tools and models to facilitate the efficient integration of diverse emergency and management services with attention to *inter alia*: organisational structures, inter-organisational co-



Achieving interoperability and integration of systems for information and communication

Aim : to develop and demonstrate interoperability concepts for (legacy) information systems in the domain of security, enabling the linking of existing and new assets in clusters to offer improved performance and enhanced adaptive functionality. To support interoperability, system providers need to involve end-users and standardisation.

Relevant issues for Projects:

- Develop and demonstrate with existing and potential categories of users, concepts and architectures for internationally interoperable systems and standards, for example in control and command as well as communication and information exchange systems and international law enforcement communication systems. Attention should also be given to dependability, organisational aspects, protection of confidentiality and integrity of information.



Improving situation awareness (...)

Aim: to identify the main threats that could affect Europe, particularly land and sea borders and assets of global interest, by appropriate information gathering, interpretation, integration and dissemination leading to the sharing of intelligence. Concepts and technologies for improved situation awareness at the appropriate levels could be developed and demonstrated.

Relevant issues for Projects:

- Demonstration of concepts, technologies and capabilities for situation awareness systems, to enhance surveillance of land and sea borders, especially supporting measures for new land borders in EU-25 and assets of global interest.
- Demonstration of the appropriateness and acceptability of tagging, tracking and tracing devices by static and mobile multiple sensors that improve the capability to locate, identify and follow the movement of mobile assets, goods and persons, including smart documentation (e.g. biometrics, automatic chips with positioning) and data analysis techniques (remote control and access).



Supporting activities

A small number (to a maximum of 10) of supporting activities are foreseen in 2005 and should be instrumental in the preparation of the future ESRP or addressing human factors related to security.



Supporting activities

- Studies in support of security solutions with a particular emphasis on human perception of security or on specific fields related to policies having a high relevance for the security priorities of the PASR



Supporting activities

- Standardisation needs for equipment and services associated with security
- Studies on the feasibility of joint use of large scale research, testing and evaluation infrastructures in security research



”..they should respect certain broader principles:”

- i. The relevance of the activities to the objectives of the Preparatory Action: to prepare for a broad constituency and coverage of subjects relevant for the further ESRP; and to contribute tangible and demonstrable improvements in security that can be brought to “maturity” within the timeframe of the Preparatory Action



”..they should respect certain broader principles:” (ctd)

- ii. The complementarity of the activities with the on-going projects and supporting activities from the call PASR-2004 and from Framework Programmes in order to avoid duplication and ensure synergies



”..they should respect certain broader principles:” (ctd)

- iii. The stimulation of market conditions and innovative mechanisms to create opportunities for European industry to gain a comparative advantage
- iv. The ability of the consortium to carry out the activities successfully, and to ensure the management of the intellectual property and where applicable, the proper treatment of classified information



”..they should respect certain broader principles:” (ctd)

- v. The building of sustainable and effective partnerships, networks and working methodologies between (public) users, industry and research organisations



PASR portfolio (i)

Funding				Funded Projects	
	No	Yes	Grand Total	2004	2005
Mission Priority	60	3	63	VITA	HITS/ISAC, TRIPS
Networked Systems	32	2	34	IMPACT	PALMA
Protection	37	3	40	CRIMSON	MARIUS, PATIN
Crisis management	18	2	20	SUPHICE	ROBIN
Interoperability	86	5	91	TERASEC, ASTRO+, ISCAPS	SOBCAH, PROBANT
Situation Awareness					
Grand Total	233	15	248		



Security Research



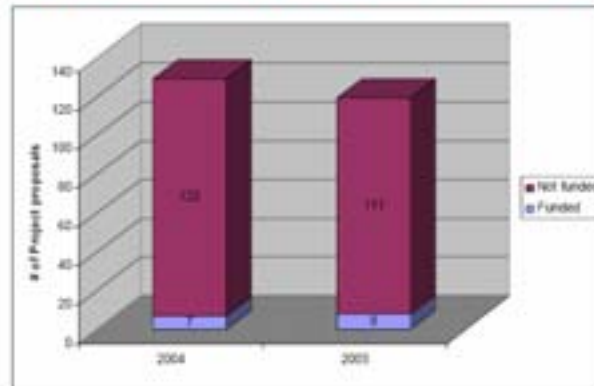
Lessons Learnt

Analysis of the PASR-2004 and PASR-2005 proposals portfolio

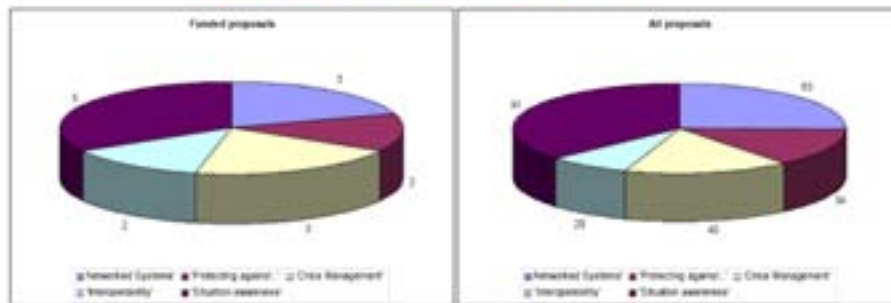




PASR-2004/-2005 Project Proposal Portfolio



Conclusions (i) Distribution over priority missions



- Less covered security topics:
 - Critical infrastructure protection (excl. CIIP)
 - CBRN protection





Conclusions (iii)

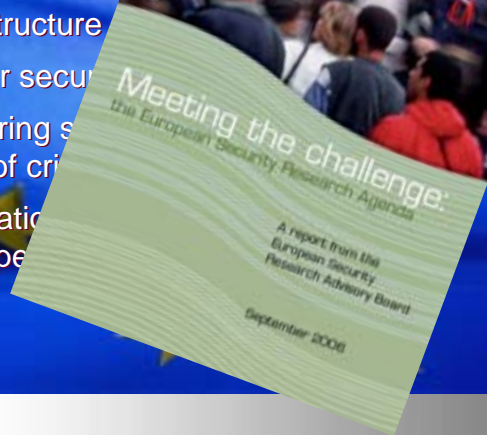
Timeline of an Incident

- Less covered security topics:
 - Prevention
 - Consequence management



ESRAB – working group

- Protection against terrorism and C...
 - Infrastructure
 - Border security
 - Restoring s...
 - Integrating interope...
- of rules
society
ation



ESRP

- European Security Research Programme
- FP7
- 250 M€ (2007; increasing ?)



Cooperation with USA

- Ongoing negotiation between DHS and FOI
- Exploring areas of interest...
- CBRN
- *Training and learning and*
Detection of explosives





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