Research for a Secure Europe

Presentation by Dr Ernst van Hoek, (ex) WEAG Chairman
Lay out

- History
- What is Security Research?
- Relation to Defence Research
- How can it work
- What it means for Aerospace Research
- Conclusions
History

• Start in 2003: first exchanges of ideas and setting up of Personalities Group & sherpa’s
• Motivation: International Terrorism & Crime biggest concerns of Europeans
• So far: EU not involved in Defence or related activities
• Personalities Report early 2004
• First projects in 2004
Security Research

• Advance capabilities for
  – information
  – protection
  – post disaster management
  – co-ordinated support
• Dealt with at local and regional levels
• European wide approach only starting
• PASR & ESRP
Security Research (2)

• Is not a discipline
• Is applied research
• Has commonality with Defence Research
• Has attracted high interest
• Is now politically relevant
• This could be a disadvantage as well!
International co-operation

• Assumes National activities

• Disappearing borders
  – For citizens
  – For the economy
  – For criminals
  – For terrorists!

• Governments slow to adept to it!
Reflection: Defence R&T – International Co-operation

• Defence R&T Characteristics:
  – Cooperation started during Cold War
  – Applied Research
  – Outcome protected: limited market mechanisms
  – Directed by governments
  – National orientations
  – Transparency limited
  – Was important for Allied Success
Security Research & Defence

- Defence technology usable
- Co-operative tools available
- Content: look at inventory of projects ("Assets")
- Can we use them?
- We can use at least the ‘Culture’, but probably much more
- Role for European Defence Agency
  - Still to be defined
  - Will have to be in line with Commission activity
Existing Assets

• Tools:
  – MoU
  – Contracts / general conditions
  – Network

• Technologies:
  – Structure - Taxonomy
  – Multi disciplinary studies
  – Technical results
Actual application

• Radar:
  – Technologies for new small radars such as FM-CW radar (anti drug use?)
  – Looking through walls

• Materials
  – Damage tolerance
  – Self repairing

• IT
  Internet technologies

• Protection:
  – Flares
  – Ballistic protection /
  – Crew safety
Actual application (2)

- Modelling and Simulation
  - Synthetic environment and training
  - MED-LOG
- CB technologies
  - Detectors
  - Protection
- Space based technologies
  - High resolution sensors
  - Low cost ground station (RAPIDS)
Aerospace particular

- Vulnerability while flying
- Psychological effects highly relevant
- Economic impact
- Strong high-tech content
- Measures should be all inclusive, partial solutions have very limited effect
Aerospace particular (2)

- Integrated design for future aircraft
- The Human factor will always be the crucial one
- Permanent Training & Simulation
Way forward

• Seek synergy between projects by defining themes and clusters
• Provide link between technologists, industry, policy makers and executive organizations
• Think in advance about keeping the advance on lawbreakers / catastrophes
Way forward & Conclusions

• As borders lose their meaning, make sure to think in terms of regions / continents in your approach
• Only efficient co-operation can make a difference.
Methodologies and Solutions in Support of PASR and ESRP + ...

From

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