# EDA Bulletin

**E u r o p e a n   D e f e n c e   A g e n c y**

## Catherine Ashton, Head of the European Defence Agency

Baroness Catherine Ashton

"In its first five years the Agency has already played a key role in improving the Member States' military capabilities, needed for the Common Security and Defence Policy. The EDA has been instrumental in identifying the gaps in our cooperation and to focus on areas where we can make real progress, such as helicopter crew training. This underlines the added value of the EDA with its integrated, pragmatic and output-oriented approach.

In the coming years, we will need to continue this successful work. We need to identify innovative solutions for the challenges we are facing. Seeking synergies between civilian and military capability development, including in dual use capabilities, will be an important part of this work and EDA could play a key role in this field.

As High Representative / Vice-President, I will also be the Head of the EDA and will continue to encourage civil-military coordination in capability development in Europe."

# Contents

# EDA at Five

**Alexander Weis,** Chief Executive

In 2009 the ten year mark of the European Security and Defence Policy was celebrated with numerous publications, seminars and conferences. As a younger institution, becoming operational in early 2005, the European Defence Agency has a shorter history. Nevertheless, the five years milestone may also provide a good opportunity to assess the progress made so far and to look ahead at the coming period.

So, what are the results of the Agency's work up till now? And what can we expect in the next five years?

## Capability-driven integrated approach

Some take it for granted that EDA is capability-driven. However, developing military capabilities is a complex process, which is influenced by different needs, from military requirements to industrial interests. The challenge is to involve all relevant actors in order to realise the prime objective: to increase Europe's military capabilities for crisis management. In its first five years EDA has continuously stressed the importance of an integrated way of working, bringing military planners, research and armaments expertise but also industry early in the process together. This has not been easy - as it never had been done before at the European level - but increasingly EDA has been successful. With the Capability Development Plan (CDP) in place since mid-2008 the Agency has a solid basis for a capability-based approach, serving short and longer-term needs. This approach has been recognised more and more by the Member States as an important input for their national planning. The selected 12 CDP priorities are guiding other EDA activities. R&T and Armaments initiatives have been connected to these. The work led by the Industry and Market Directorate on industrial capacities in the area of Future Air Systems is equally linked to the CDP.

## Concrete results

But what are the concrete results, I am often asked. The boxes on pages 4 and 5 list the EDA achievements - not all of them, but the most important ones. Let me highlight a few of them.

The Agency's work on helicopter training has been particularly productive. In fact, the initial activities last year have already increased operational capacities, for example Czech



Gap Multinational Helos Exercise 2009

MIDCAS signatures, June 2009, Le Bourget



and Swedish crews received helicopter tactics training as part of an EDA study, helping to prepare them for their future deployment to Afghanistan - an excellent example, by the way, how EDA is helping our pMS to meet NATO urgent operational requirements. This training is now the focus of a Cat B project with 5 contributing Member States. This year will also see the continued development of the Helicopter Training Programme (HTP), creating for the first time ever European-level training. The initial focus will be 'hot and high' flying – once again delivering against the real world requirement. The HTP underlines that capability improvement is not always a matter of equipment procurement.

Another important work strand is the insertion of Unmanned Air Systems (UAS) into regular air space. As such flying UAS in the same air space as civil manned aircraft does not seem to add any capability. Yet, it will become a crucial enabler for crisis management. The use of UAS is increasing year after year and both for security in Europe as well as for deployed operations elsewhere. Flying these unmanned aircraft in normal air space is quickly becoming a prerequisite for these missions. In June last year the contract was signed for the MIDair Collision Avoidance System (MIDCAS), an EDA project with the participation of five Member States led by Sweden. It aims at developing a demonstrator by 2012, equipped with sense and avoid technologies, enabling an Unmanned Air Vehicle to "look around" and, if needed, to change its course in order to avoid a collision with other aircraft. The potential impact of the MIDCAS project is enormous. The technologies are unique and the insertion of UAS ultimately will need a global coverage.

## Codes of Conduct

Without an open and transparent European Defence Equipment Market (EDEM) and a strong European Defence Technological and Industrial Base (EDTIB) efforts to improve Europe's military capabilities will fail. Harmonised military requirements, collaborative R&T investment and cross-border armaments cooperation programmes need to be complemented by these two important elements. From its early days the Agency has paid much attention to these topics. By now three Codes of Conduct are in place: the Code of Conduct on Defence Procurement (active since July 2006), the Code of Conduct on Best Practice in the Supply Chain (March 2007) and the Code of Conduct on Offsets (July 2009). These three Codes mark a breakthrough for changing nationally protected equipment markets and procurement polices to opening up a truly European Defence Equipment Market. The Agency's work on the EDTIB has also progressed, with initial focus on the ammunition sector and, already mentioned, Future Air Systems.

## Looking forward

Counting one's blessings is nice to do, but more important are the future challenges. The coming years will pose additional problems under the impact of the global economic crisis. Defence budgets will not escape from the wider government expenditure cuts. With little room for reducing personnel costs and operational expenditure, investment is likely to suffer most from budget cuts in the short term. The need to combine efforts and invest together, through collaborative R&T and armaments cooperation, will further grow in these circumstances. Rather than falling back in national solutions European cooperation should be the road to take.



Alexander Weis

*The key challenge at the institutional level will be to coordinate our efforts systematically, in particular with the European Commission but also with the European Space Agency and others. Avoiding duplication of efforts, ensuring complementarity and coherence of the respective activities for the benefit of the European Union as a whole and its Member States has to become a natural reflex. We have to move from a case-by-case to a systematic approach. European Framework Cooperation is the key term and the practical tool to activate the huge potential of synergies in order to make best use of European taxpayer's money. This is what pMS rightly expect from the European institutions and EDA is ready to take its share of responsibility.*

The Lisbon Treaty provides the EU Member States with new opportunities, also in the defence area. The Common Security and Defence Policy (CSDP), succeeding ESDP, now has a Treaty basis and, in that context, EDA is specifically mentioned. Permanent Structured Cooperation in the field of Defence is the real new element. It provides additional chances for improving Europe's defence performance, as long as it is capability-driven. It should be open to all Member States, as they all can contribute to better European capabilities but not necessarily always in the same area. Rather than rushing into implementation it would be much better to explore the details of Permanent Structured Cooperation, such as criteria definition and selection. Naturally, all Member States need to be involved in these discussions.

# EDA achievements since 2004

## Projects & Programmes

### HELICOPTERS AVAILABILITY

- Helicopter Training Programme (starting 2010)
- Future Transport Helicopter
  (Initial Operational Capability (IOC) 2020+)

### INSERTION UAS INTO NORMAL AIRSPACE

- MID-air Collision Avoidance System (MIDCAS) (demonstrator 2012) - € 50m / 48 months
- Military Airworthiness

### NETWORK ENABLED CAPABILITY (NEC)

- EU NEC Concept noted by PSC
- NEC Implementation Study in Progress

### MARITIME SURVEILLANCE (MARSUR)

Wise Pen Think Piece intermediate Report delivered, contributed to GAERC November 2009 conclusions, final report in March 2010;

- MARSUR Networking Demonstration Phase preparation ongoing, phase starts end of 2010;
- Maritime Mine Counter Measures ad hoc Category B project with 12 cMS plus Norway in full swing;
- Future Unmanned Aerial Systems ad hoc Category B project progressing with 7 cMS.

### CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR (CBRN)

- Identification Monitoring Equipment Development and Enhancement Programme ad hoc Cat B project launched, 9 cMS plus Norway;
- civ-mil CBRN EOD Staff Planners and Incident Commanders Course conducted with 33 participants from 10 pMS.

### COUNTER IMPROVISED EXPLOSIVE DEVICES (CIED)

Intermediate Search train the trainers course successfully conducted, 27 participants from 12 pMS.

### JOINT INVESTMENT PROGRAMMES IN R&T

- JIP Force Protection (ex: sniper detection) - 3 years / € 55 m
- JIP Innovative Concepts and Emerging Technologies (ICET) - 2 years/€ - 15.5 m

### INTELLIGENCE

- Open Source Intelligence (OSINT) Pilot courses: completed
- Intelligence analysis pilot courses: in progress
- Common Standardized User Interface (CSUI): Concept Demonstrator delivered

### INTELLIGENCE SURVEILLANCE & RECONNAISSANCE (ISR)

- ISR Architecture CST approved
- ISR Architecture design study: in progress
- Imagery CST: in progress

### STRATEGIC TRANSPORT

- European Air Transport Fleet (EATF)
- Intra-theatre mobility evaluation study

### ADVANCED EUROPEAN JET PILOT TRAINING (IOC: 2015)

### SPACE

- European Satellite Communications Procurement Cell (IOC : 2010) - CAT B launched
- Earth Observation
- Multinational Space-based Imaging System (MUSIS) (IOC 2018)- Connectivity to Global Monitoring for Environment and Security (GMES)
- Critical Space Technologies for European non-dependences
- Space Situational Awareness - mil requirements and synchronisation with ESA. CST drafting in finalisation.

### CIS

- Information Exchange Requirements studies: delivered

- Information Exchange Gateways: in progress

- C4i EU Battle Group reference Architecture Study: in progress

### COMMUNICATIONS

- Software Defined Radio Technological Demonstrator: ESSOR: (€ 129 m + connectivity with the European Commission)

- SDR: Up-to now: EDA + Cion funding approx. 50 million Euros (excl. cat B)

- Radio Spectrum: World Radio Conference 2012 preparation in Progress

- EDA coordination with EC, 10 projects for approx. 50 million euros (excl. cat B)

### LOGISTICS

- EU TPLS Platform (operational since 07/2009)

- Fuel and Energy (starting up)

- Seaborne Logistic Support

- Medical Support

### CAMP PROTECTION

- Future Interoperability of Camp Protection Systems (€ 8 m)

### COLLABORATIVE R&T CAT B PROJECTS FOR 2007-2008-2009

- Projects approved by the Steering Board - € 278 m

- Contracts signed - € 222 m

## Policies & Strategies

### STRATEGIC FRAMEWORK

- Long Term Vision

- Capability Development Plan

- European Defence Technological and Industrial Base Strategy

- European Strategy for Armaments Co-operation

- European Strategy for Defence R&T

### REGIME ON DEFENCE PROCUREMENT

- Code of Conduct on Defence Procurement

- Code of Best Practice in the Supply Chain

- Electronic Bulletin Board (operational)

- Code of Conduct on Offsets & Offsets Portal (operational since 7/2009)

Air 4 All Meeting March 2008

# An EDA as ambitious as the Lisbon Treaty

**Brigadier General (R) Jo Coelmont,** Senior Associate Fellow at Egmont-Royal Institute for International Relations and former Belgian Military Representative to the EUMC.

EGMONT

When invited to write this article and to "think out of the box" an African proverb came to my mind "If you do not know which way to go forward, look back to see where you are coming from".

### Initial expectations

The Declaration of Laeken, December 2001, called to review the Treaty of Nice by using a new and daring formula: a Convention, likewise aiming at new and daring proposals. At the Convention the idea was born to support the European Security and Defence Policy (ESDP) with an agency focused on defence capabilities. From the start it was clear that the aim was not to set up another traditional Armaments Agency. On the contrary, a more ambitious goal was set, with a strong European and highly political stamp. The approach would be holistic, top-down, with special attention to partners with civilian counterparts, in particular to cooperation with the European Commission, but also with NATO and other relevant organisations.

### No more institutional shortfalls

Is the EDA at present able to live up to these original high expectations? The answer is yes. With its capability-driven approach, the EDA has in the meantime established the appropriate structures under a strategic framework guiding its activities. Its cooperation with the Commission has already produced some remarkable results, in particular concerning regulations on procurement of defence equipment. Encouraged by the EDA's Capability Development Plan several Member States have changed their traditional thinking concerning defence planning in terms of number military units and weapon systems for a more holistic approach aiming at deployable capacities and being more output-oriented; that is to increase deployable capabilities for crisis management operations.

Expectations concerning political top-down guidance have indeed been met by the well-functioning Steering Board in Defence Ministers composition, with the participation of the Commission and chaired by the High Representative as Head of the Agency. After the entry into force of the Lisbon Treaty, Catherine Ashton, High Representative and Vice-President of the Commission, will also act as the Head of the Agency. This is important to continue with the high-level political steering of EDA. Direct contacts between the High Representative and the highest political leadership in capitals on capability issues will remain of crucial importance, as crisis management will continue to call on the Member States' forces. So, no need for any change in the institutional arrangements. We clearly run out of any institutional lacuna!

### Yet EDA is questioned

Nevertheless, some critical and justified questions are raised on the effectiveness of the EDA. Its ongoing programmes are all very valuable, but they are far below the original ambition level. The most frequently asked questions relate to three distinct issues: Is EDA able to solve the strategic shortfalls with concrete projects? Does EDA enjoy sufficient political support to realise these projects? Is EDA able to generate some short- term results? These are all pertinent questions. Of course, it is up to the Member States - the 'owners' of the Agency - to decide what initiatives will be taken, but there should also be scope for other inputs. Hence some suggestions on the three issues raised.

### Capabilities Generation Conferences

The past teaches us that even repeated calls on the Member States to harmonise or review their defence and armaments planning lead to marginal results. The fact that strategic shortfalls persist is ample proof. Many Member States do not feel responsible to develop such capabilities and thus remain more or less passive observers, also within the EDA. However, inspiration can be found in proven methods when Member States are faced with a similar problem, in particular at the launch of a given military crisis management operation. The number of required troops and capacities are always beyond the technical and political abilities of a single country. They are collectively gathered through "Force Generation Conferences".

So, why not organise within the EDA a kind of "Capability Generation Conferences", aiming to fill up the common identified shortfalls within a reasonable timeframe? In such a joint endeavour Member States would be prepared - on a voluntary basis: (1) to revise their national defence plans; (2) to do away with national military capabilities proven to be redundant at the European or Alliance level; (3) to pool assets and capabilities, including logistics and training facilities in order to generate savings; (4) to take a fair share in the programmes aimed at solving strategic shortfalls; and, last but not least, (5) to actively contribute to the negotiations as long as it takes to reach full success.

By its nature, this would lead to a kind of permanent conference, but also to a continuously relevant EDA. Hopefully, this can be done with the involvement of all Member States involved. If not, it could be part of a Permanent Structured Cooperation within the EDA.

## EDA yearbook

In the times of extra budgetary restrictions as we are now experiencing, it is important to ensure broad <u>political and public support</u>, not only for the EDA but for the Common Security and Defence Policy (CSDP, now replacing ESDP) as such. For the general public, but also for many politicians, CSDP remains unknown or, at best, misunderstood. Individuals searching for updated information concerning civil and military capacities to support CSDP often turn towards publications provided by think tanks and agencies outside the Union. Hence the proposal to entrust the EDA, in association with the EU Institute for Security Studies, the EU Military Committee and the new Crisis Management and Planning Directorate, to publish annually or bi-annually a comprehensive report on CSDP, on its policies, capabilities and current operations. The main focus would be on the development of civil and military capabilities to support crisis management operations, on initiatives taken by Member States and by the Union as such. Member States would be invited to present their respective contributions and projects. This list of possible topics is far from exhaustive, but the objective should be clear: to provide <u>the</u> reference publication on the state of the art of CSDP. Oriented to a broad public such a publication will undoubtedly provide a valuable contribution in safeguarding the remarkably high level of goodwill we currently enjoy within public opinion throughout the Union for a genuine European Defence policy. It is not exactly a "White Book" although it could provide input to some of its chapters. And yes, it would ease the way to another "out of the box" idea.

## EDA supporting EU Battlegroups

Simultaneously, the EDA and the EU Battlegroups have become reality. The added value the Battlegroups and the multinational integration favoured by this concept cannot be underlined sufficiently. However, the financial costs for the "lead nations" cannot be neglected either. These costs are not so much related to the training of the multinational forces. They are in particular high, because for each Battlegroup a specific deployable Force Headquarters (FHQs), together with its logistical support, is needed. My suggestion is to put the EDA in charge of concluding the necessary transport arrangements for all EU Battlegroups on standby, including for concurrent deployments. Moreover, the EDA could also be called upon to furnish the required communications and other logistic facilities to mount up to four deployable FHQs. This would serve the interoperability and the efficiency of the Battlegroups and would make the concept more attractive for Member States' participation. It is just one example of a project that can generate results relatively quickly. Logistic support for other Command and Control arrangements could be furnished as well.

All EU Member States signed up to the Lisbon Treaty and its objectives. Now is the right time to act accordingly, to take profit of the efficiency bonus we all had in mind when creating the EDA and to inject even more "top-down" and "out of the box" thinking, while remaining within the Treaty limits, but as ambitious.



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# Five Years of EDA Collaborative Defence R&T

**Christian Bréant,** EDA R&T Director

### Establishment of the EDA

When the European Defence Agency was established under its Joint Action of 12 July 2004, R&T was defined as one of its four main functions. Bertrand de Cordoue, the first EDA R&T Director, was appointed by the Chief Executive in October 2004 to take this work forward. The EDA work programme for 2005 assigned one flagship action to every functional Directorate: the R&T Directorate was tasked with preparing and launching, as an ad hoc or opt-in project, a technology demonstration for Long Endurance Unmanned Aerial Vehicles (LE UAV). This project resulted in the signature, in 2005, of the first contract under the EDA operational budget involving the R&T Directorate: the study digital LOS and BLOS data links for LE UAV. At the same time the Agency took over a number of functions in the area of collaborative R&T formerly carried out by the Western European Armaments Organisation (WEAO) including a number of running contracts for R&T projects, funded by different groups of EDA participating Member States (pMS).

### Defining the Task

The first EDA R&T Steering Board took place on 22 April 2005. It defined the Operational Concept of the Directorate and established the 12 Capability Technology areas (CapTechs), each devoted to specific technology areas or clusters, within which co-operative activities would be developed. The CapTechs were activated progressively from July to December 2005. The CapTechs were grouped in 3 major blocks corresponding to the three major capability domains (IAP for knowledge, GEM for Engagement, and ESM for Manoeuvre).

By June 2005, the staffing of the Directorate was completed and the Agency moved to its current home in the Rue des Drapiers in central Brussels. The rest of the year saw the rapid development of the tools and techniques needed to support multinational R&T co-operation and, the recruitment of the 12 CapTechs moderators from both Government and Industry.

### Developing the Tools

Successful R&T cooperation requires a robust underpinning legal and financial framework. In addition to the pre-existing EUROPA MOU, available for use by some pMS, in Spring 2006 the General Conditions applicable to ad hoc research technology projects and programmes of the European Defence Agency were approved. They remain the principal instrument for defence R&T cooperation in the EDA framework. In the same year the Agency also concluded a formal arrangement with Norway, allowing that country to participate in EDA projects and programmes. By the end of August 2006, EDA was fully responsible for the R&T projects previously running under WEAO. During 2006 and 2007 new co-operative projects were planned and launched through the CapTech networks: the documents establishing the first EDA ad hoc R&T project was signed on 6 June 2007.



**Evolution of EDA R&T Projects**
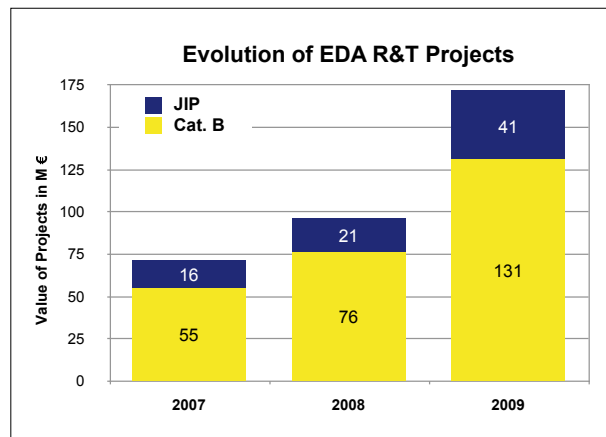
### A Step Change in Cooperation

Although the EDA built on methods and techniques developed earlier, the Agency has made significant strides forward into new forms of cooperation. The EDA Steering Board established in November 2006 the first Joint Investment Programme, on Force Protection, in which 19 pMS and Norway agreed to invest € 55 million in a programme of research covering 18 technology areas in the field of Force Protection, a main challenge driven by operational needs. The establishment of this programme required both the Agency and pMS to prepare and establish new approaches to critical areas such as financial management, competition and Intellectual Property Rights. Exploiting the experiences from the Force Protection programme, a second Joint Investment Programme on Innovative Concepts and Emerging Technologies was established in May 2008, with 10 participating Members plus Norway, and a budget of € 15.6 million.

Profiting from experience gained during the first three years of implementation of new instruments and methods, the R&T Directorate together with participating Member States, developed a European Defence R&T Strategy. From this work, the CapTechs configuration was revised, making clear the systems' oriented approach for some of the areas. The new format was implemented on April 2008. Furthermore, 22 R&T priority areas were defined and the R&T Strategy was further elaborated being endorsed by the EDA Ministerial Steering Board on 10 November 2008.

As shown in EDA's defence data R&T cooperation between pMS has improved significantly from 2006 to 2008 at the European level, going up from 9.6% to 16.5% which means an increase over 70%.

And at the same time, R&T cooperation between pMS under the EDA umbrella has also improved, by more than a factor two from 2007 to 2009, rising from € 71 m to € 172m.

### The European Integrated Dimension

Defence R&T cooperation in Europe is not new, but the creation of the Agency, its success in building up robust and effective tools and techniques, its linkage with the three other key dimensions for developing future capacities (harmonisation of capability requirements, armaments cooperation, industry & market), and the willingness of its pMS to work more and better together will now be enhanced by the coming into force of the Lisbon Treaty. The relationship with other key



Cryptography laboratory

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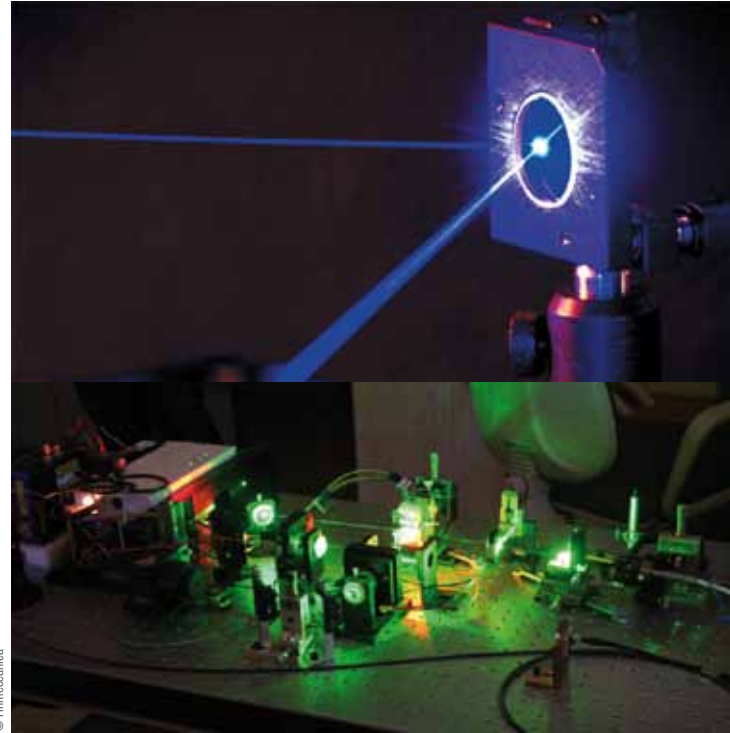
players in the field of R&T such as the European Commission and the European Space Agency but also with key actors like NATO, will grow stronger and will allow European investment in research and technology to be mobilised more effectively to improve the defence capabilities of the Union.

# Guidelines for facilitating SMEs' access to the defence market

Approved on 9 October 2009 by the EDA Steering Board, the Guidelines provide non-binding recommendations for possible measures to be implemented by national authorities to support Small and Medium-sized Enterprises (SMEs) operating in the defence market. They have been developed to direct the governments' attention to SMEs and to create favourable conditions for participation of these companies in the defence market. The Guidelines address a number of issues crucial for SMEs: access to information, equal conditions for main- and subcontractors, minimum reaction time for smaller contracts, protection of SME-owned IPRs and fostering industrial cooperation with SMEs in R&D/R&T projects.



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# Workshop "R&T All on Board":
## Towards More Collaborative European Defence R&T

**By Attila Simon,** EDA Technical Project Officer

Attila Simon

On 29-30 October 2009 Malta hosted a Workshop titled "R&T All on Board". The workshop was attended by more than hundred participants representing national Ministries of Defence, laboratories, industrial associations and companies. It aimed at finding ways to enhance the involvement of all EDA participating Member States (pMS) in European collaborative R&T programmes and projects. The need to narrow discrepancies between the defence R&T investments of pMS is quite clear when looking at national defence R&T budgets: 19 pMS invest less than 2% in the overall defence R&T expenditure in Europe. Generally speaking, the workshop has opened the door to identifying priorities and specific actions for promoting investments in the pMS less involved in European defence R&T collaboration.

On the first day the programme *"Setting the Scene"* presented the EDA R&T cooperation framework, the organisation of R&T activities and experiences of the pMS in multinational collaboration. Separate sub-sessions were dedicated to the three CapTech clusters (Information Acquisition and Processing - IAP; Guidance, Energy and Materials - GEM; Environment, Systems and Modelling - ESM). On the second day the session *"Working together"* addressed possible new ways of collaboration and enhancement of participation of less involved pMS in European R&T collaborative programmes and projects.

Comprehensive presentations by EDA staff, representatives of the pMS, industry and the AeroSpace & Defence Industries Association of Europe (ASD) promoted open discussion, giving the opportunity to identify priorities and actions for the way ahead. From identified priorities short and mid-term actions can be taken by R&T stakeholders, but long term actions will require the wider involvement and consensus of governmental decision makers and industry. Besides the harmonisation of different interests, significant funds will also be needed in the longer term to achieve deeper involvement of all Member States in European defence R&T collaboration.

Member states have agreed the following short-term actions:

- better information for the less involved pMS, SME, laboratories and academia;

- development of new tools to collaborative R&T projects;

- development of specific tools for the less involved pMS;

- establishment of a new Extranet Forum dedicated to the initiative *R&T All on Board,*

and proposed mid-term priorities:

- to launch a Joint Investment Programme more dedicated to the specificities of less involved pMS;

- to promote emerging technologies in collaborative R&T projects;

- to extend the European Defence Research Centres (EDRC) initiative to small and medium enterprises and academia in the less involved Member States.

Concerning long-term needs further and extensive measures are required to:

- develop new industrial competences in the less involved pMS;

- manage technology demonstrators by EDA or OCCAR.

The workshop has created a new discussion and information forum and brought R&T experts concerned together. It provided an opportunity to discuss the specific problems of the less involved Member States, on both the governmental and non-governmental side, and promoted a better understanding between them and the more experienced pMS.

"R&T All on Board" Workshop

# Code of Conduct on Offsets Comes into Force

## EDA's I&M Offset Team

Just six months after its entry into force, on 1 July 2009, the Code of Conduct on Offsets is up and running: an extraordinary achievement which, to a large extent, is to be credited to subscribing countries'[1] dedication and efforts to translate intention into action. To fully understand why it matters so much, one has to put offset in a wider perspective.

Offset remains one of the most controversial practices in defence procurement - frequently inefficient, unnecessarily duplicative and market distorting. And yet in the midst of discussions whether to abolish or maintain offset practices, it is evident that offset is a global phenomenon, unlikely to fade away in the foreseeable future. Consequently, a European unilateral decision to completely eliminate offsets would place its defence industry in an adverse position in the global marketplace. All the same, it does not mean that given no recourse, offsets are a necessary evil - there is a lot to be done. The Code of Conduct on Offsets aiming at limiting adverse effects of offsets on defence markets is just the first step in this direction. Of course, it will not solve all the problems overnight. Nevertheless, its implementation by 26 countries is already changing offset "behaviour patterns" through consistently injecting more transparency, providing for "smart" offsets to help develop capability-driven, competent and competitive defence industrial capacities, clarifying offset requirements and introducing a 100% (of the value of the procurement contract) cap on offsets.

Six months is a relatively short period to be able to assess the implementation of the Code, but the first results begin to emerge, already making headway in the use of offsets in defence procurement.

First of all, the 26 subscribing countries publish and regularly update on EDA offset portal detailed information on their national offset policies and practices, including national regulations and guidelines, offset requirements criteria and modalities. In the past, the compendium of reliable background data on offset was rather scarce and difficult to get hold of, unless through costly subscription to commercial services. The EDA Steering Board decided that public access to such information is crucial to clarify offset requirements. Therefore, transparency introduced by the Code of Conduct on Offsets is a gateway to start limiting their adverse impact.

Second, several countries that subscribed to the Code of Conduct on Offsets are in the process of changing their offset guidelines to adjust them to the Code's provisions. This proves their commitment to bring about the objectives embedded in the Code.

Last but not least, the EDA Steering Board established a Reporting and Monitoring System to help ensure uniform application of the Code's provisions and accountability amongst subscribing States. It is operated through a state-of-the-art electronic tool developed by the Agency. So far the subscribing countries reported on over ten offset agreements signed since July 2009. Again, this is a very promising signal demonstrating that - even if legally non-binding - the Code of Conduct on Offsets can make a difference.

Nevertheless, the Code is not a cure-all for offset but rather the beginning of a new, incremental process that breaks the deadlock and enables addressing offsets in a more pragmatic way. Application of abatements in offset is one of our immediate focuses this year. But there are also wider aspects that need our attention and we are currently investigating, in particular the global dimension of offsets and the dialogue with third countries on limiting their adverse effects.

**(http://www.eda.europa.eu/offsets)**
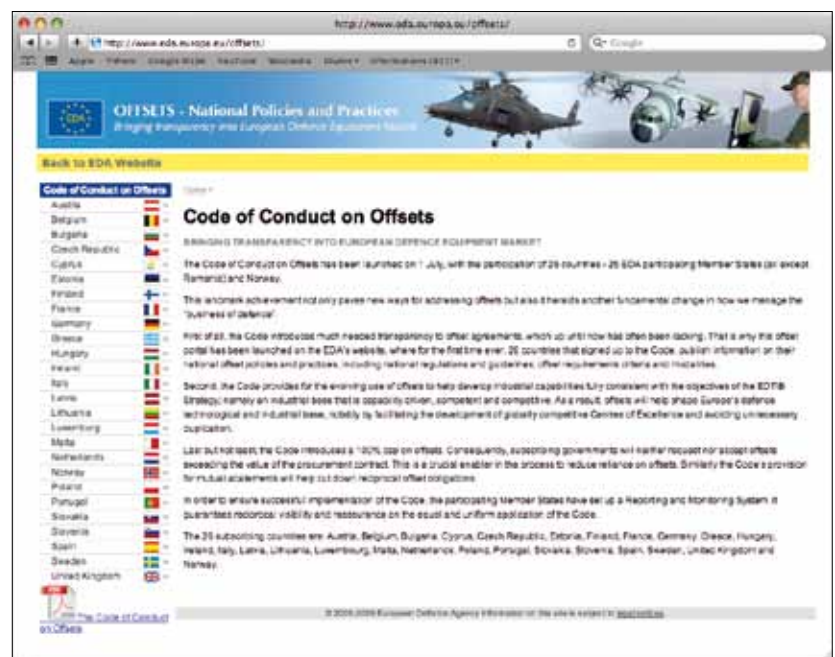


[1] 25 out of 26 EDA participating Member States (all except Romania) and Norway.

# Capabilities Progress

**Jon Mullin,** EDA Capabilities Director

The second Semester of 2009 was extremely busy and all about delivery. It saw the Agency building on the actions derived from the Capability Development Plan (CDP) in the Summer of 2008, and a few other areas notably Maritime Surveillance (MARSUR) and the European Air Transport Fleet (EATF). Indeed, 2009 was characterised by the development of the CDP Actions through work aimed at the short, medium and longer term.

In terms of delivering effect in support of current operations now, this edition of the Bulletin outlines work on delivering Counter Improvised Explosive Device Search capability, the Third Party Logistic Support Platform and its contribution to current operations, helicopter training, the European Satellite Communication Procurement Cell (ESCPC), the Common Standardised User Interface (CSUI) and CBRN EOD training. Additionally, our MARSUR Wise Pens have proved to be a most effective catalyst in bringing the Naval aspects to the Commission's work and they have liaised closely with the range of EU Agencies and other actors in this complex and key area. Their aim is to seek synergies and assist in developing operational capability across the civilian-military piece.

Our current work can be summarised through the material we addressed at the Autumn Capabilities Steering Board (SB) which we scheduled around four areas: the Future, promoting Efficiency and Effectiveness, the need for our pMS to Prepare to Commit and the Means to facilitate collaborative capability development.

The Future item related to the updating of the CDP which we have now scheduled for the end of 2010. Specifically, the CDP Team's work will start looking across the landscape of the capability spectrum in order to identify major collaborative opportunities starting in the area of Land Manoeuvre, and they will look to developing the Lessons Identified input with an EUMS/EUMC lead. The aim will be to formulate additional high priority actions in which our pMS will invest. We will also start an exercise that will look at targeting the major collaborative opportunities in the 2030-40 environment, so that we can initiate communities of interest and the necessary R&T work.

In these days of financial stringency, every Euro counts and the SB looked to focus our Pooling and Sharing work under the Efficiency and Effectiveness item. Rotary Wing featured as a high priority, but there is a real desire to push forward across a broad front, particularly in the areas of logistics, medical and Intelligence Surveillance and Reconnaissance (ISR) sensors. Under the broader item heading of "efficiency", ideas of best practice were introduced, with presentations on Whole Fleet Management, the UK/French Complex Weapons initiative and Germany's LEOBEN managing the international Leopard fleet.

Prepare to Commit highlighted specific work where a range of commitments, from funding to facilities and people, would be required to progress to the next stage. The list illustrates that significant progress is being made:

- MARSUR - staffing the Wise Pens' work and participation in networking experimentation
- C-IED - exploitation work
- C-ManPADS - landscaping work
- Camp Protection - future options, including active protection

- Biological Equipment Development and Enhancement Programme Cat B
- Maritime Mine Counter Measures Cat B project
- Future Unmanned Aerial System Cat B project
- European Satellite Communications Procurement Cat B project - catalogue delivered and cell ready to be established
- Network Enabled Capability - next steps
- Common Standardised User Interface - a real practical NEC application - operational demonstrator phase is next
- Third Party Logistic Support - platform now needs to be extensively used by pMS
- European Air Transport Fleet - Letter of Intent now signed by 14 Ministers of Defence
- Helicopter Training Programme - now approved by Ministers



The SB concluded by looking at the mandate of our Integrated Development Teams under the final item of the Means.

This all sets the Agency and its Capabilities community up for a busy 2010 where there will be a further emphasis on looking to maximise the benefits of the considerable EU investment through the Commission and the Agencies on what we would describe as dual use Civilian-Military capabilities. There is only one source of money, and that is through our taxpayers, so we need to make it all count in the delivery of capabilities for our armed forces in support of the post-Lisbon Common Security and Defence Policy.

# EATF: reducing military airlift capability shortfalls in Europe

**Dimitrios Moutsiakis,** EDA EATF Officer and **Laurent Donnet**, EDA Project Officer for Deployability

The signature of the EATF Letter of Intent (LoI) on 17 November 2009 by fourteen Ministers of Defence (Belgium, Czech Republic, Finland, France, Germany, Greece, Italy, Luxembourg, the Netherlands, Poland, Portugal, Slovakia, Spain and Sweden) expressed the clear political will to move forward and enhance efforts to increase the military airlift provision within Europe.
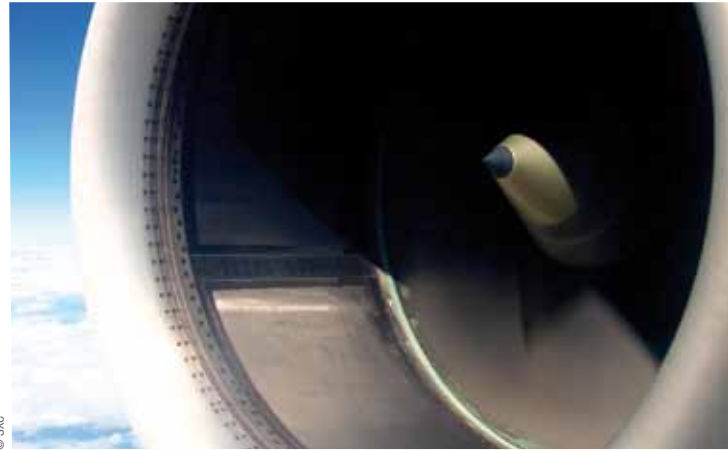
The EATF will be a flexible and inclusive partnership between national and multinational military air transport fleets and organisations in Europe, aimed at the enhancement of standardised air transport services. The provision of those services will be implemented through cost-effective pooling, sharing, exchange and/or acquisition of various capabilities, including aircraft, training programs, cross-servicing activities, cargo handling, maintenance activities, spare parts, etc. EATF will consist of a framework federating different projects identified, different structures and different types of assets, in order to create synergies through far-reaching cooperation and coordination.

The aim is to develop concrete solutions to better use existing and future airlift assets made available by the participating Member States (pMS) for military needs to meet national, EU, NATO and other frameworks operational requirements as well as to improve the airlift provision within Europe. Though the intention is not to create a supplementary air transport structure within Europe, but to better coordinate and strengthen existing and/or future ones.

The long term vision of the EATF is to establish a robust network linking various European air transport entities aiming at the efficient employment of all present and future air transport capabilities made available by the pMS for military needs, regardless of type or origin.

Depending on national policies, the level of involvement within the EATF initiative is different per Member State. Right now, work is carried out in a modular way through different work strands and projects. A list of prioritised work strands give pMS the opportunity to identify areas they want to address together with other participants. Respective Ad Hoc Working Groups (AHWG) are then created to address the issues. Diplomatic clearances, future EATF governance mechanism, training, harmonisation of rules, regulations and documents and establishment of multinational air transport units are some of the areas covered by the existing work strands.

Within the Project Team EATF the two major activities of 2010 are the following:

- to map the European military airlift environment using the EATF landscaping study to be launched in January aiming at identifying the strengths and weaknesses of the current environment and describing ways to optimize its structures, processes and procedures;

- to provide recommendations for the harmonisation of the existing diplomatic clearances mechanism through the EATF diplomatic clearances study also to be started in January. The goal is to describe a detailed roadmap to go from the existing European diplomatic clearances system to a better and more efficient mechanism.

Nevertheless, more issues will be tackled at the same time in 2010. To quote Alexander Weis last November after signature of the LoI: "A new milestone for the EATF has been reached. Now, we have to work hard on elaborating the details of the different forms of pooling and cooperation".

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# The Helicopter Training Programme

The Helicopter Training Programme (HTP), approved on 17 November 2009, aims to increase the opportunities for crews to come together to share experience, discuss best practice and integrate these tactics, techniques and procedures into their training in preparation for their operational deployments. Initially, the HTP will consist of two flying exercises a year. One will focus on the environmental challenges faced by crews, the second will concentrate on developing interoperability and preparing crews for participation in complex, multinational missions in a high-threat theatre. The HTP will also include an annual symposium, which will ensure that the challenges of the operational world are brought into the training environment. The first exercise of the HTP will take place in Spain in June and Luxembourg has offered to host the first symposium in the autumn of 2010.

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# CSUI - Single Workspace for Intelligence

**Johan Truyens,** EDA Project Officer Information & Intelligence

On 3 November 2009 EDA organised the final presentation of the concept demonstrator of a single workspace for the business of intelligence. The project, called "Common Standardised User Interface (CSUI)", is deemed unique. No other organisation or entity has developed this capability. Therefore, the CSUI demonstrator is the only available one. Based on the very positive feedback from around 300 intelligence and information management experts, it was proposed to transform the "CSUI Concept Demonstrator" in a "CSUI Working Prototype" to be tested in an operational environment. In the first half of 2010, EDA's participating Member States (pMS) will be asked to agree on a pragmatic way ahead.

## Main Purpose and Challenges

The central aim of the CSUI is to support civilian and military entities in their end-to-end intelligence production process via a single, integrated workspace that is technology neutral and vendor agnostic.

The CSUI emerged from two earlier, but related projects that were initiated by EDA's pMS. Since both projects were based on similar processes and underlying technologies, it was agreed by the pMS to fuse them into one new project.

In 2008, discussions with the pMS led to a number of challenges: some were related to information management, others rather to project management. Below is a limited list of issues and concerns that had to be considered when shaping the project:

• Various levels of organisational complexity at national level.

• A myriad of toolsets & the existence of ongoing projects: most initiatives seemed well-intended, some missed a coherent and structured approach, and most focused only on a very limited set of functionalities (e.g. search and information retrieval, and link analysis).

• Specific functionalities. Member States raised the point that audit trails, problem analysis, source and content evaluation, data exploration from various angles, structured evidential argumentation, and the need to reduce the risk for cognitive biases should be integrated in the project.

• The CSUI should also be in line with the NEC-principle of "One person, one information profile, wherever connected".

## Core Structure

In order to meet these challenges, it was agreed to design an interface where users would see processes, services, and functionalities. This was mainly achieved by introducing a tab-structure that represents seven different core activities in the intelligence production process. Since the project was designed from the outset to serve military and civilian entities, it was decided not to stick too strictly to military terminology. Therefore, the core activities were identified as:

• Requirements
• Data-entry & acquisition
• Search & information retrieval
• Data transformation
• Data exploration & analysis
• Assessments & production
• Dissemination

For each of the core activities, it is foreseen to have a variable list of services and functionalities. These are organised in the left column tab-structure. The list of available services, functionalities, underlying software, and access to data/information/intelligence will be in function of the user's individual profile.

## Innovation

The innovative part of this project is that the interface presents relevant functionalities directly to the user. The list of functionalities is based on a "maximum"-approach, rather than a "lowest common denominator"-approach. There were two main motivations for this:

• pMS should be in a position to connect their software to the functionalities of the CSUI

• A user should not worry about which underlying software is used to perform the activated functionalities.

Apart from these two issues, there are at least two additional advantages:

• In case the CSUI would be used at national level, the user would already be familiar with a substantial set of functionalities when deployed at an international staff, or in an operation. As such, the time and cost for mission-specific training could be reduced considerably

• Competition remains possible at application level.

Based on the discussions with, and the feedback from the experts, it is clear that the CSUI-approach is no duplication of any ongoing efforts at EU or NATO.

## Cost Effectiveness

If all pMS would join the project, the major advantage would be that the output of the project itself could be shared with other EU Institutions. At that point those EU Institutions, and their respective national government entities, could then further develop and/or integrate specific services and data sets in their specialised functional domain (e.g. law enforcement, border protection). This approach could be achieved by a framework contract managed by a Board of Governors: it would allow parallel, spiral development, and could lead to intelligent standardisation.

In case only a limited number of pMS and/or EU Institutions would participate in the project, they would still realise economies of scale for the common development, maintenance, and improvement of the CSUI.

Given the generic character of the CSUI-approach, it can easily be adapted to support any initiative that implies information management in domains such as maritime surveillance, CBRN, C-IED, and vetting processes for third party logistics to name just a few high visibility topics.

## CSUI Working Prototype

The major purpose of transforming the current "CSUI Concept Demonstrator" into a "CSUI Working Prototype" is to test the innovative approach in a real operational environment. By using a framework contract for this project, pMS will be in a position

• To buy the CSUI when they are convinced of its advantages

• To further develop generic, or very specific connectors for the CSUI

• To join forces with EU Institutions

• To share the costs of maintenance of the CSUI

## Way ahead

The first trimester of 2010 will entail further discussions with the pMS in order to negotiate the terms and conditions for launching the CSUI follow on activities..

Although the CSUI Working Prototype might be available sooner, assessing the benefits of this commitment to this project should be seen in a 3-5 year timeframe from now. pMS should think about how they will invest in an end-to-end intelligence production workspace from 2012 onwards.
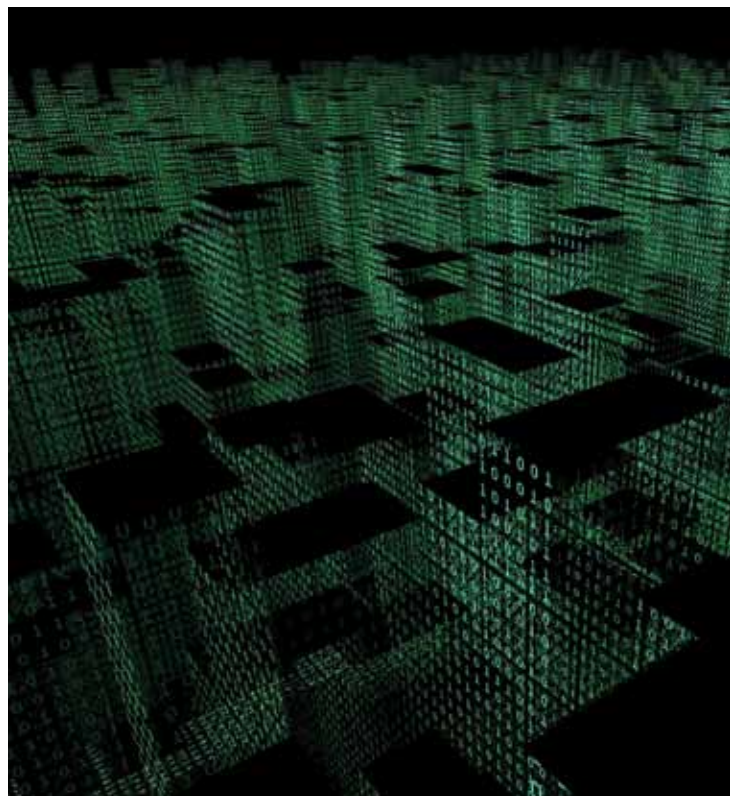
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# Multinational CBRN EOD Incident Commander's and Staff Planner's Cours

**Commandant Larry Rooney,** IE and **Frank Kämper,** EDA Project Officer Protect.

Larry Rooney

Frank Kämper

This pilot course was the most recent product of the Project Team Chemical Biological Radiological Nuclear Explosive Ordnance Disposal (PT CBRN EOD), which is a multinational expert group of CBRN and EOD specialists who combined to integrate two specialised fields to address the new threat of Improvised Explosive Devices (IEDs) with toxic CBRN agents as their main payload.

The PT had already produced several tangible deliverables by way of policy and conceptual guidance, which have been noted at European Union Military Committee (EUMC) and now underpin the work of professionals in all EU Member States. This progress was reinforced by a highly successful Tabletop Exercise (TTX) for CBRN EOD Operatives in November 2008. As a main conclusion of the TTX the PT subsequently identified a new capability gap and saw the need to advance the upskilling of those who would be required to work as CBRN EOD Staff Planners in the operational theatre as well as take command and control of a CBRN EOD incident.

The PT was concerned to reach the right target audience for any such training and contracted consultants, Hotzone Solutions, to devise and present a course, tailored to the generic needs of the incident commander in particular and senior staff planners in general. Invitations were dispatched for EDA participating Members States (pMS) to send appropriate military and civil experts to attend the course from the 06 - 11 December 2009 at the Belgian CBRN Centre of Excellence in the Engineer Department in Jambes.

The one week pilot course was pitched at a "Train the Trainers" level and was successfully attended by 33 military and police force participants from 10 pMS. Course participants were provided with information in a wide range of subjects, enriched by case studies and discussions between professionals addressing all aspects of planning for and responding to a CBRN EOD incident, all of which was handed over at the end of the course as a "take home package" with the aim of allowing pMS to develop tailor-made courses for their own soldiers and first responders.

The CD-ROM also gives access to the Incident Commander's Planning Tool, which is currently being developed by the PT CBRN EOD and EDA IT Section and is available for all interested pMS online via the EDA Extranet Forum as a demonstration version. The Incident Commander's Planning Tool encapsulates all the provisions of CBRN EOD Policy and Guidance and will provide a resource for incident commanders, worldwide, facilitating them in the management of the multiple resources deployable in a CBRN EOD mission.

As a complementary measure the PT together with Hotzone Solution developed a CBRN EOD Incidents Commanders proficiency standard, which will now be staffed aiming for a recognised European training standard consequently bringing EU preparedness in this field to a much higher level, both in the ESDP context and in terms of national counter-terrorism measures.

# Combining SatCom Procurement

**Rodolphe Paris,** EDA SATCOM, SSA and Radio Spectrum Project Officer

Following more than two years of preparation, on 15 October, France, Italy, The Netherlands, Poland and the United Kingdom launched the European Satellite Communication Procurement Cell as an EDA Ad Hoc Cat B project. In this article I will describe the main challenges, opportunities and milestones related to this initiative.

## ESCPC and its objectives

ESCPC stands for European Satellite Communication Procurement Cell. This acronym may sound complicated at first sight but it refers to key words "Europe" and "Procurement" for Satellite Communication (SatCom) services. SatCom capacity - measured in megabits and leased in megahertz per month - is today an intangible asset, massively used by all armed forces operating at the information age. Communication and Information Systems (CIS) deployed abroad need a permanent broadband connectivity between theatres and headquarters for key services such as imagery, videoconferences, secured intranet. All of this requires a lot of SatCom capacity. This capacity is today delivered by various national space systems or by commercial operators worldwide.

The overall aim of the ESCPC is to unify the procurement of commercial SatCom capacity in order to reduce costs, promote ease of access and improve efficiency to deliver a better connectivity to armed forces of the EU Member States. It will primarily serve EDA participating Member States' national needs, CSDP operations and may also serve interested third parties such as the EU Satelllite Centre, the European Space Agency, FRONTEX, EEAS, EUMS, etc. Recent lessons learned from operations ATALANTA and EUFOR Chad-CAR are excellent illustrations of the need to set up and run a cell specialised in connectivity services. So, the relevance of the ESCPC will remain fully valid.

## Development of the ESCPC concept

SatCom as a topic was put in EDA's 2005 Work Programme, as European efforts in this area can be optimised both in military SatCom (MilSatCom) and in commercial SatCom. Whereas the MilSatCom issue may be addressed as of 2010, it appeared that coordination in commercial SatCom could improve scattered efforts to procure such key services, taking into account the dispersed demand facing major SatCom operators - three of them make 80% of the market to serve mainly media & telecom operators - so the European defence needs are neglected by operators.

Once this idea addressing short term SatCom issues was seeded and validated by studies carried out in 2005 and

2006, EDA and pMS within the Project Team SatCom refined the aim, designed the scope and the implementation of the ESCPC to fit heterogeneous requirements and various procurement schemes within supporting pMS: France, Italy, Poland, the Netherlands and the UK.

ESCPC is one of the first projects delivering real services to improve EU defence capability for today's national and CSDP operations. The role of the ESCPC consists in acting as a booking office, promoting a service catalogue delivered by a provider EDA has just selected and stimulate the future business with contributing Member States.

## ESCPC in practice

The ESCPC will deal with commercial SatCom channel or transponder leases - in megahertz per month - to provide a wireless connectivity solution between theatres and headquarters, linking various platforms and elements like Opeation Headquarters, Field Headquarters, EU Battegroups, Unmanned Aerial Vehicles, Component Commanders, ships, etc. These connectivity solutions can be considered as a particular service in the portfolio of outsourced logistic services supporting any national, EU-led or coalition operation within the EU and abroad. As a matter of fact, the ESCPC is linked to the TPLS (Third Party Logistics Support) Platform the Agency is putting in place. Whereas TPLS is a transverse approach focusing on intermediation of economic operators for any logistic services, in the case of ESCPC, EDA acts as the Contracting Authority for specialised on-demand services (SatCom) that are invoiced to contributing Members.

## Next milestones

The Category B project was launched on 15 October 2009. The Agency has not yet dealt with this kind of "service-oriented" asset, without any R&T aspects, but it can count on pMS subject matter experts and on the experience of the SatCom Project Officer, having launched this "inter-service" activity for the French MoD. This flexible and centralised procurement scheme of "indefinite quantify / indefinite delivery" of SatCom services is being subscribed by 5 contributing Member States but the project is open to all Member States. The project is now promoted through a road show. The potential business this centralised procurement can generate is about € 10-30 million per annum. This turnover can be reached within 2012 with potential benefits in terms of economies of scale of circa 10%.

The EDA commitment covers a 3-year pilot activity (2010-2012), which consists of two phases. Phase One (ongoing) is dedicated to the selection of a contractor, which has delivered a service catalogue with retail prices and now supports EDA business development (road show) as well as the ESCPC establishment. Phase Two (operational phase) is expected to start by

summer 2010 with the future interaction between pMS, EDA and the contractor, to "operationalise" the service catalogue by dealing SatCom capacity orders and related telecom services.

Scheme (displayed many times including steering board)





Poster (part of marketing plan, foreseen in the EDA Contract, as a deliverable):



SATCOMBw



ATV launched by Ariane 5

# Maritime Surveillance

## Why a Wise Pen Team?

Initially tasked by the Steering Board (SB) in 2005, the Agency is currently tackling several work strands under the heading of Maritime Surveillance. While the topics "Maritime Mine Counter Measures" and "Future Unmanned Aerial Systems" are already being addressed in ad hoc Category B settings, "Maritime Surveillance Networking" is still being worked on in a Working Group chaired by Finland and comprising 15 participating Member States (pMS).

At the end of 2010, a demonstration phase with six volunteer pMS is foreseen which will prove the value of data and information-sharing for a better informed decision-making for Common Security and Defence Policy (CSDP) operations in the Maritime Domain.

As of today, the EU Commission, European Agencies, and the Council General Secretariat are working on Maritime Surveillance. However, work is being tackled from a range of different requirements. While the EDA is addressing this topic in the context of CSDP, the Commission and Agencies are tackling it from civilian security, economic and safety related angles in the context of the EU Integrated Maritime Policy

Also, the EU Member States and other CSDP maritime actors are working on Maritime Surveillance. Responsibilities for Maritime Surveillance in EU Member States are diverse, respective legal foundations are heterogeneous, terminology used in the context of Maritime Surveillance differs both in terms of wording and meaning, and the available technology and access to sensors for all parties working on Maritime Surveillance varies widely.

The current overall security environment in the maritime domain for the EU and its Member States is characterized by a spectrum of threats which encompass illegal migration, a variety of organised crime activities, environmental, economic, asymmetric and non-conventional threats as well as the classical military threats. Due to this complexity, the current situation simply does not allow a strict division into civilian and military related aspects of security. Instead it demands a well coordinated approach in order to protect the interests of the EU and of the international community successfully. In addition to the required European comprehensive approach, it is vital that the Maritime Surveillance capability also links with all relevant non-EU partners, be it nations or organisations.

Taking this complexity of Maritime Surveillance into account, the EDA Steering Board supported the proposal for EDA to nominate a "Wise Pen" for producing a Maritime Surveillance CSDP "think piece" in order to contribute to an integrated EU approach, and to focus the Agency's further work in this field.



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Five major seafaring pMS nominated high calibre candidates who now form the "Wise Pen Team". Team members are Vice Admirals (retired) Fernando del Pozo (Spain), Sir Anthony Dymock (UK), Lutz Feldt (Germany), Patrick Hebrard (France), and Ferdinando Sanfelice di Monteforte (Italy). The Team started its work in mid July 2009.

From the very beginning, the Team was strongly supported by the former Swedish Presidency which regarded the establishment of an integrated approach to Maritime Surveillance vital in order to ensure synergies between sectoral policies.

Consequently, the Wise Pens' Intermediate Report served as input for the Council meeting in Brussels on 17 November 2009.

Invaluable for the substance of the Wise Pen Team work, however, are the excellent relationships established with and the cooperation of critical stakeholders on the Brussels scene and at the national level: the EU Commission, the Council General Secretariat, EUMC and EUMS, several agencies like EMSA, FRONTEX and ESA are just a few of the European actors. In addition, major external stakeholders like NATO, the USA and Canada provide insight and first hand experience for the Team.

Having delivered the well appreciated Intermediate Report to the EDA SB in October 2009, the Team is currently collecting further input for the Final Report which is due to be delivered to the EDA Capabilities SB in March 2010.

Continuing strong support of the current Spanish Presidency promotes the Wise Pen Team's work and will guarantee the delivery of a substantial Final Report which will contribute significantly to an EU integrated approach to Maritime Surveillance and to the Commissions work on an integrated Maritime Policy.

# A different approach to achieve comprehensive Maritime Surveillance

## by the Wise Pen Team

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During the past six months of our work for EDA on a Maritime Surveillance "Think Piece" we have had ample opportunity to discuss this topic. Even for us old salts, it has been a surprise to discover the huge number of actors with different responsibilities in maritime safety, security and defence, just within the EU. All three pillars (in pre-Lisbon Treaty language), some ten Directorates General and five Agencies, not including those closely related to but not belonging to the EU, such as ESA, MAOC-N and CECLAD -M, have direct responsibility for Maritime Surveillance. Even this large number reflects only a part of maritime activity; naval and coast guard activity as well as all kinds of trade play also important roles. Finally, Maritime Surveillance does not take place without satellite and space involvement, and data input by the scientific community.

The importance of cooperation with third parties is another crucial issue. NATO with its ambitions and capabilities is in a process of developing its own solutions. Since Alliance initiatives and concepts necessarily reflect the views of 21 EU Member States (which are also full members of NATO) as well as the USA and Canada, European Maritime Surveillance initiatives would be well advised to identify similarities which present an early opportunity to identify a common way ahead.

Based on this first hand insight into the different requirements and experiences and having got at least a good flavour of the real complexity of Maritime Surveillance, we now know more precisely what we want and do not want to achieve: we are focused on Europe, but will create bridges to third countries and the commercial world. We want to find a comprehensive way in which "cross-pillar", cross-sector and cross-border recommendations will be the core of our Think Piece. Effectiveness, affordability, a clear division of labour between all relevant actors, and the conformity with the legal framework will be major benchmarks for these recommendations. They will be based on a clear set of definitions and follow the principle that as a first step basic data[1] must be shared without restriction.

As we are aware of the general reluctance to share information and knowledge, we will propose a step by step approach to overcome this problem and to develop an information sharing culture. Key to

initial success will be the readiness of decision makers at various levels to act accordingly. Likewise, associated cultural challenges as different languages and education between the civilian, military, commercial and financial worlds have to be overcome and a new culture must be engendered which favours building trust and confidence between all actors.

Although, we do not know yet what implications the Lisbon Treaty will have in general, we think that a comprehensive approach to Maritime Surveillance has to overcome objections based on existing principles.

While we cannot see any need for changes in the responsibilities for safety (civilian) and defence (military) related aspects, we believe the grey area in between -security- provides ample opportunity for improvement. From our perspective, we could achieve a mutual understanding between all authorities involved based on the principle of "supporting" and "supported" command roles.

Technology wise, we have seen some very encouraging solutions. We do not expect interoperability and architecture to be problems for cooperation. We do not see the benefit and, therefore, are not in favour of a centralized and/or hierarchical "system of systems"; instead we prefer the concept of a federated or "family" of systems.

With regard to a suitable legal framework we believe that sometimes legal or regulatory barriers are being used to protect sectoral solutions. But we are convinced that ways and bridges can be found which will meet the concerns of different authorities while serving their own interests and creating mutual benefit.

We think experimentation and time limited exercises could demonstrate that information sharing is an important step towards better maritime safety, security and defence.

The Commission's Integrated Maritime Policy (IMP) involves security activities, such as protection of ports and shipping, law enforcement and border control. We conclude that the IMP and CSDP in the end should be coordinated.

The Commission's Green Paper "Towards a future Maritime Policy for the Union" refers to the EUMC's work in the maritime dimension of CSDP. From our perspective, Operation "Atalanta" could offer a realistic opportunity and challenge to begin such a process of coordination and cooperation.

Although a common set of procedures, regulations and templates will be key to success, what we need most is a culture of co-ordination as an essential element of information sharing to serve our mutual interest: "Maritime Safety, Security and Defence."

[1] We assess data as being the first and lowest level of the sequence: data - information - knowledge.

# First EDA Counter-IED course: towards a better European IED search capability

The deployment of European contingents in the Iraqi and Afghan theatres of operation highlighted the danger posed by Improvised Explosive Devices (IEDs), which caused most of the casualties suffered by the forces operating in those areas. Engineer units dedicated most of their assets to try to minimise such risks, adopting new equipment and new procedures, while all forces improved their knowledge on the specific subject, in order to reduce themselves the impact of such threat on operations. Specific equipment such as jammers used to neutralise remotely controlled IEDs (RC-IEDs) were deployed.

In order to increase the pressure on insurgent organisations it is however necessary not only to adopt a defensive stance - which is normally done at manoeuvre units level that possess a basic search capacity - but also to seize the initiative adopting an offensive Counter-IED (C-IED) capability in order to interdict the adversary from using what has become its principal weapon. At the Battle Group level one of the best tools available to seize the initiative is Military Search.

This was the topic of the first C-IED Military Search course organised by the European Defence Agency. EDA's role is certainly not that of directly providing training to the armed forces of the Member States, but rather to support them in their effort to improve their defence capabilities. The course, which took place in Rome from 30 November to 18 December was defined as "intermediate", and thus was aimed at the first level of specialist search capability, the one which is considered vital for allowing the tactical level commander to have an offensive C-IED capability. The 27 attendees were all officers or senior NCOs from 12 different nations with four additional observers. The Italian Army Engineer School provided the organisational and logistic support, the course being hosted in the Counter-Obstacle Training Centre (CEAC is the Italian acronym), which is the Italian national Centre of Excellence for C-IED training for all Italian armed and police forces.

Training took about 90 per cent of the course, focused on search methods on different subjects and targets. Person search, vehicle search and patrol search were carried out at a higher degree of assurance compared to the basic level normally provided to the war-fighter, while teams were also provided training for searching more complex environments such as buildings (in a non disruptive manner), routes, venues, critical infrastructures and large areas. Theoretical and practical training, which included all the steps from the identification of the critical areas, to the planning up to the final debriefing, was carried out by multinational teams, with elements rotating in the different roles, under the leadership of instructors provided by Geoforensic Specialist Search International (GSSI), a UK-based company, formed by former military and police specialists, which won the contract from EDA for this activity. During the three-week course all personnel acquired sufficient skills to take over a trainer position or an advisor position when back in his country. However the EDA aim was not only to train the trainers; about 10 per cent of the course was specifically aimed at discussing all capability lines of development, and thus knowledge on doctrine, organisation, materiel, leadership, personnel training and selection and facility issues, facility issues, in order to bring suggestions to the participating Member States on how to organise their own military


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search capability. A few nations already have such facility but most don't, and courses like that organised in Rome by the EDA will allow EU Member States to build up their capabilities in this field based on a common concept, which in the end will lead to interoperability in the field.

Heavily based on intelligence, the aim of C-IED is to hit the terrorist organisation "to the left of the bang"; while defensive search allows protection of one's own assets, offensive search will provide a very potent capability to collect intelligence and deny the adversary its resources. "This is particularly important for the intelligence framework to allow us to put a strategy together, to put effects into place and


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to attack the network, and in that way we can actually reduce the threat," the GSSI responsible for the course said.

On 17 December the Course received VIP visitors, including many Italian Army general officers as well as some of the Military Attachés of the participating Member States. Following a briefing and a route search demonstration, the guests attended the certificates awarding ceremony; attendees received their certificates of qualification from the hands of Brig.Gen. Antonio Di Bello, the Commanding General of the Italian Army Engineer School, and from Italian Air Force Colonel Giuseppe Secco, EDA Capability Manager Manoeuvre. VIPs and attendees then visited an industry exhibition which included numerous state-of-the art items linked to IED search and neutralisation.

The course organised in Rome last December must be considered a first step along a roadmap which aims at providing a full search capability, and the second step will take place next summer with an EDA-sponsored Advanced Search Advisor course which will further enhance the nations' knowledge, which will be once again hosted by the Italian Army Engineer School.



Jim Blackburn, EDA's Project Officer C-IED, who organised the Course with the Italian Army.

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# Talking about real savings: Airworthiness

**Jan Plevka,** EDA Airworthiness Officer

At the EDA Steering Board meeting in November 2008, Defence Ministers, with an aim to realise significant savings and timely delivery of new air systems, approved the creation of a European Military Airworthiness Authorities (MAWA) Forum and an associated roadmap for a European military airworthiness harmonisation and implementation.

### MAWA 2009 activity

During 2009, the MAWA Forum developed its current structure and held three meetings in the EDA premises in Brussels and one meeting in Prague, at the invitation of the Military Aviation Authority (MAA) of the Czech Republic.

Additionally, two specific airworthiness conferences were organised, the first in Olomouc under the Czech Presidency and the second in Brussels under Swedish Presidency. These meetings highlighted the state of art of existing military airworthiness and the issues to be considered for European harmonisation .

The aim of these meetings was to define and refine the regulatory environment of MAWA Forum to fulfil the requested work in order to develop a common harmonised military airworthiness concept.

The current activities of MAWA Forum are set up along four axes, each one corresponding to an objective of the MAWA Roadmap. They resume the general principles of a controlled airworthiness environment, i.e. a common regulatory framework, common certification processes, common approach for organisation approval and common design and certification codes/standards.

### A common regulatory framework…

The MAWA Task Force 1 is in charge of providing a cover regulation, which defines general principles of military airworthiness. It defines particularly the different stakeholders in airworthiness, i.e. the aircraft designer and constructor, the National Military Airworthiness Authority (NMAA) and the military aircraft operator. A document entitled European harmonized military airworthiness Basic Framework has been developed and supported in principle by the participating Member States (pMS).

### Certification processes…

The MAWA Task Force 2 has to establish certification processes and procedures for military aircraft in their design and production phase, as for the related products and parts.

### Maintenance Organisation Approval…

The role of the MAWA Task Force 3 is to develop maintenance organisation approval criteria. These requirements deal with the continuing airworthiness, i.e. all requirements and actions necessary to maintain the level of safety defined and accepted by all the stakeholders. This concerns the maintenance organisation, but also the engineers training and licensing.

### … and certification codes and standards

The MAWA Task Force 4 is developing certification codes/ standards and safety requirements in order to meet an acceptable and accepted level of safety for the non-civil Airframe State aircraft.

### Way ahead

A year later, in November 2009, the EDA Steering Board in Defence Ministers' formation provided a political declaration, in which they acknowledge the need for European harmonisation. They encouraged NMAA to strive for the early development and national implementation of European Military Airworthiness Requirements (EMARs) and also encouraged the MAWA Forum to carry out work to fill the gaps in a common approach to military airworthiness.

The development of harmonised common EMARs, procedures and processes is to be, as far as possible, consistent with International Civil Aviation Organisation (ICAO), European Commission (EC) and European Aviation Safety Agency (EASA) principles.

The forthcoming documents will be based on Regulation (EC) 216/2008 and its subsidiary documents. But will also take into account specific aspects of non-civil airframes and military operations.

To conclude, we could say that a Leitmotiv for MAWA Forum could be "As civil as possible, as military as necessary".

To achieve the objectives, the MAWA Forum and his Task Forces asked for assistance in the domains of certification criteria, aircraft occurrence database and the development of a military joint airworthiness authorities' organisation.

These supporting studies, based on civil expertise and experience, will guarantee the respect of airworthiness spirit and so, the capacity of a future recognition by civil authorities.

## EDA's 2010 Annual Conference: "Bridging Efforts - Connecting Civilian Security and Military Capability Development"

On 17 November 2009 the Council of the European Union underlined the importance of the European Union's comprehensive approach to crisis management and the need to identify possible synergies between civilian and military capability development. The Council acknowledged the possible economic benefits of finding civil-military synergies in capability development, and the added value of dual use capabilities.

Titled "Bridging Efforts - Connecting Civilian Security and Military Capability Development", the 2010 edition of the European Defence Agency's Annual Conference aims at producing practical results to take civil-military synergies in capability development forward. The Conference will contribute to further enrich the debate on civil-military synergies at European level and explore possible future roles for the EDA as a facilitator to maximise complementarity and synergy between relevant actors.

### Keynote speeches will be given by:

- Mrs. Baroness Catherine Ashton, Head of the European Defence Agency, High Representative of the Union for Foreign Affairs and Security Policy and Vice President of the Commission

- General Håkan Syrén, Chairman of the European Union Military Committee

- Mr Pier Francesco Guarguaglini, President and Chairman of the Council of AeroSpace Industries Association of Europe.

The Conference will be held on 9 February 2010 in Brussels, back-to-back with a Spanish Presidency Seminar on EU Capability Development for Crisis Management, to take place the next day. Two panels consisting of high level experts from the civilian security and defence sectors will discuss the reality of today and further explore future avenues of cooperation.

More information: eda.annualconference2010@eda.europa.eu
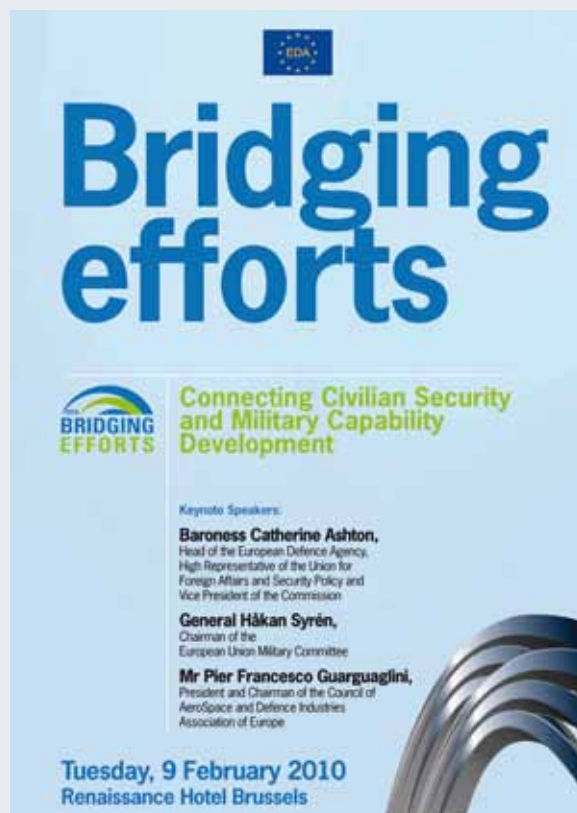
# Towards UAS integration into civil airspace: the MIDCAS project

**Gérard Mardiné,** Sagem, MIDCAS Standardization Support Group leader and EUROCAE WG73 vice-chairman

Gérard Mardiné

The MIDair Collision Avoidance System or MIDCAS project was launched in September 2009 following contract signature at the June Paris Air Show. Its purpose is to demonstrate the baseline of solutions for one of the key challenges which needs to be addressed and solved to open the way to future routine Unmanned Aircraft Systems (UAS) operations into civil airspace, commonly called 'non segregated airspace' by reference to current military UAS flights in restricted/segregated airspace, namely the avoidance of mid-air collisions with other aircraft.

The proposed solutions must be acceptable by the manned aviation community and be compatible with non-segregated UAS operations by 2015. Especially safety, interoperability and performance aspects have to be carefully analysed and discussed to ensure seamless integration. This is why the MIDCAS project includes a significant effort to support the relevant standardisation activities (EUROCAE Working Group 73) and to inform and get feedback from all interested stakeholders as the development of pertinent and acceptable solutions can only progress in parallel with widely agreed principles, requirements and standards.

The first workshop meeting was held on 3 December 2009, to present and discuss initial considerations about the Concept of Operations (CONOPS) for UAS mid-air collision avoidance. The meeting was hosted by the European Aviation Safety Agency (EASA) in their Cologne headquarters premises. Indeed EASA is, together with EUROCONTROL, a major European aviation body for UAS integration.

The EASA representative's welcome speech focussed on the increasing involvement of EASA for UAS integration and the good spirit of cooperation between the involved European bodies. The EDA representative underlined the necessity to widely share the MIDCAS technical results with the aim of defining an agreed European standard.

Thirty specialists from EASA, EDA, NATO, European Air Navigation Service Providers, commercial pilots association, aeronautical labs, flight test bodies and MIDCAS participating Nations Ministries of Defence and consortium companies had fruitful initial discussions about practical implementation and associated operational requirements driven by the application of the International Civil Aviation Organization (ICAO) regulations related to the Rules of the Air as described in ICAO annex 2. The MIDCAS project safety process was also presented.

The UAS mid-air collision avoidance CONOPS is obviously a key input for the development of associated technical solutions. Further progress on this topic will be achieved in 2010 through active discussions within EUROCAE WG 73, supported, amongst others, by MIDCAS technical activities outputs.

Six open MIDCAS workshops are planned in the frame of the four-year duration of the MIDCAS project, in order to inform all relevant aviation community stakeholders about the objectives, outputs and progress of the project as well as to get continued feedback.

The first workshop will be hosted by EUROCONTROL in their Brussels premises on 16 February 2010. The agenda will include a general presentation of MIDCAS objectives, methodology, timeframe and expected outputs together with a synthetic focus on initial activities, including the CONOPS for UAS separation and mid-air collision avoidance. Time will also be allocated to open discussion sessions to exchange ideas with the audience.

So, rendez-vous in Brussels on 16 February 2010!



Notional description of UAS mid air collision avoidance
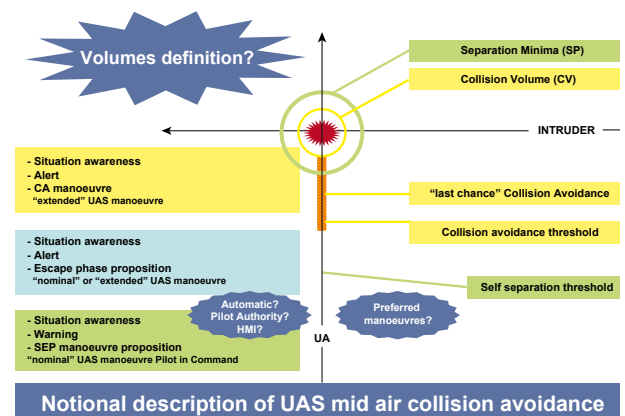
Dr.Gunnar Hult, from FMV (Sweden), representing the MIDCAS contributing Member States, Alexander Weis, Chief Executive of EDA, and Lennart Sindahl, Executive Vice President Saab at the MIDCAS contract signature.

# Software Defined Radio: recent developments

**Tero Solante,** EDA Principal Officer SDR

Present and future crisis management operations not only require allied forces to be interoperable, but also for these forces to be interoperable with others, like civilian security and public safety authorities.

European troops need to be supported by efficient, robust and interoperable communication systems for effective logistics and combat readiness. An example is the tactical communication systems that are used to order replenishment of supplies such as ammunition.

Nowadays, this is all done through combat network radios and tactical field communication systems but these are not always interoperable among the coalition.

In the near future, this problem can be mitigated with the help of Software Defined Radios (SDR). These radios are designed to accommodate several waveforms for multiple applications; in simple terms, SDR provides one radio to fulfil many purposes. This is made possible by downloading the same coalition waveforms into the different host platforms.

The EDA project ESSOR is developing a SDR technology demonstrator for a European Secure Software Defined Radio. This programme has been established by six contributing Member States (Finland, France, Italy, Poland, Spain and Sweden) and is being managed by the Organisation Conjointe de Coopération en matière d'ARmement (OCCAR). Likewise, the European Commission has started a study called European software defined radio for wireless in joint security operations (EULER) to provide public safety with SDR demonstrator.

At the moment, there are more than ten SDR studies or projects ongoing in the Europe. They all concentrate on SDR technology, waveforms and platforms. Even though, in some cases, they have similar goals, they are more complementary than overlapping. Nevertheless, none of them truly address the standardisation and certification needed for SDR products. Therefore, EDA has established a subgroup under Project Team SDR to form a networked capability on a European level. The subgroup aims to facilitate and foster a common SDR architecture and standards as well as a certification capability for European military and civilian security users.

The 'SDR days' workshop at EDA in March 2009 brought together all the important players, including European industry who agreed the first steps should be to concentrate on the public parts of the Software Communication Architecture (SCA), which is based on the US Joint Tactical Radio System (JPEO JTRS) program.

This was followed an EDA organised SDR conference in Finland in November comprising international key stakeholders and speakers from EDA, ESSOR, US, NATO, ETSI and Wireless Innovations Forum (former SDR forum). The main achievement during these two days was the consensus on standardization work share. It was seen appropriate that SDR standardisation should be divided into at least two different baskets. The first one being the public, one where Governments act mainly as observers and the work is market driven. The second basket includes more sensitive issues, like security and crypto, where the governments will remain in control. There might be a third basket which deals with Nation sensitive information. Further work is needed to analyse and to agree the specific contents of these baskets. That will happen in co-operation with SDR key stakeholders.

SDR conference in Finland in November 2009

# The relevance of the Agency's Defence Data

**Paul Horrocks,** Statistics Officer - EDA Planning and Policy Unit

Paul Horrocks

## Overall trends

Now that EDA has collected defence data for three years the beginning of trends in defence expenditure are starting to emerge. In 2008, the 26 participating Member States spent collectively € 200 Billion on defence. This is a large amount of money, but in terms of the percentage of the Gross Domestic Product (GDP) defence expenditure has been declining steadily, from 1.78% in 2006 to the current level of 1.63% of Europe's €12.2 trillion economy. In nominal terms European defence expenditure has stayed level at or just above the € 200 Billion mark in the last three years, but in real terms defence expenditure fell by 4.3% in 2008.

If defence expenditure is examined as a proportion of the total European Government expenditure the fall has been even steeper than that compared with GDP, standing at 3.78% in 2006 and at 3.51% in 2008. Moreover, this occurred during a period of considerable economic growth, before the impact of the global economic crisis in the second half of 2008 became visible. Therefore, defence expenditure will most likely show more serious drops for the years 2009 and beyond. According to the European Commission the EU's economy contracted by -4.0% in 2009. The 2010 forecast is for GDP to fall -0.1% and the Government deficit as a percentage of GDP is forecast to be -7.3% of GDP. With this economic landscape the prospects for investing more in key defence areas does not look very promising, with certain sectors of defence investment already showing worrying signs of downward trends over the past three years.

## Trends in specific areas

Even though defence expenditure has been falling in real terms between 2006 and 2008, some of the components of this spending have been falling faster than overall expenditure. Notable are some of the critical areas for future capabilities, in particular Research & Development expenditure, which has fallen by € 1,1 Billion between 2006 and 2008. In the last two years it fell 9.9%, which in the current government budget tightening does not bode well for the future of Europe's ability to develop world class technologies. Research & Technology, a subset of R&D, has also been falling over the past three years, albeit at slower rate than R&D: it decreased from € 2.66 Billion in 2006 to € 2.48 Billion in 2008 (a -7.7% drop over three years).

However, through the darkness there are rays of light in certain crucial areas such as total investment, which has increased from €38.80 Billion in 2006 to €41.91 Billion in 2008. The core reason behind this increase is not the R&D (part of equipment investment) but procurement which has increased from €29.1 Billion in 2006 to €33.3 Billion in 2008 or a 14.4% increase over three years and now represents a substantial 20.9% of total European defence expenditure (the collective benchmark agreed by participating Member States is 20%).

Another positive trend is that the participating Member States are increasing collaborative expenditure. European collaborative defence equipment procurement - meaning between at least two Member States - as a percentage of total equipment procurement has increased from 20.9% in 2006 to 21.2% in 2008. Although it might be a bit early to draw overall conclusions, this seems a promising sign that collaboration has been recognised by participating Member States as an important method to improve European military capabilities and to save money by investing together.

Even more promising is the increase in European collaborative R&T spending. As a percentage of total R&T investment it has increased from 9.6% in 2006 to 16.5% in 2008. This trend is in line with the Agency's call to spend more together in Europe on R&T and it marks excellent progress in the direction of realising the collective 20% benchmark, agreed by Ministers in November 2007. It also demonstrates the recognition that money spent collaboratively will increase economies of scale and reduce duplication between European countries, giving Ministries of Defence more technology results for each collaborative euro spent. EDA has seen an increasing share of this R&T come through its doors and will endeavour to ensure that the collaborative funds are spent in the most efficient and expeditious manner in order to ensure that capabilities are delivered to participating Member States.

## Future use of defence data

The economic crisis presents many challenges, but also offers opportunities, namely for increasing collaborative investment. EDA's defence data exercise is an excellent tool to track these trends and to measure the progress made towards realising the benchmarks on European collaborative expenditure. The defence data will also be important in the context of the Lisbon Treaty, in particular for Permanent Structured Cooperation which refers to expenditure as one of its criteria.

No doubt, Government budgets will be under pressure in the coming years and within that will be defence expenditure. Therefore European defence collaboration provides the optimum route in order to get more out of increasingly limited financial resources.

## EDA is "Committed to Excellence"

The European Foundation for Quality Management (EFQM), a non profit organisation promoting and supporting the implementation of sustainable business excellence in Europe, has recognised and certified EDA as an organisation "Committed to Excellence".

"EDA has demonstrated its commitment to organisational improvement through a structured approach, open to independent external validation", said Alexander Weis, EDA's Chief Executive. "This continuous improvement effort is becoming part of our organisational culture", he added.

## What does the EFQM recognition mean?

The EFQM recognition as an "organisation Committed to Excellence" means that EDA has significantly progressed on the way to Business Excellence. In particular, EDA has successfully developed a structured approach and built relevant knowledge and expertise in using EFQM Model and Tools for continuous and sustainable performance improvement.
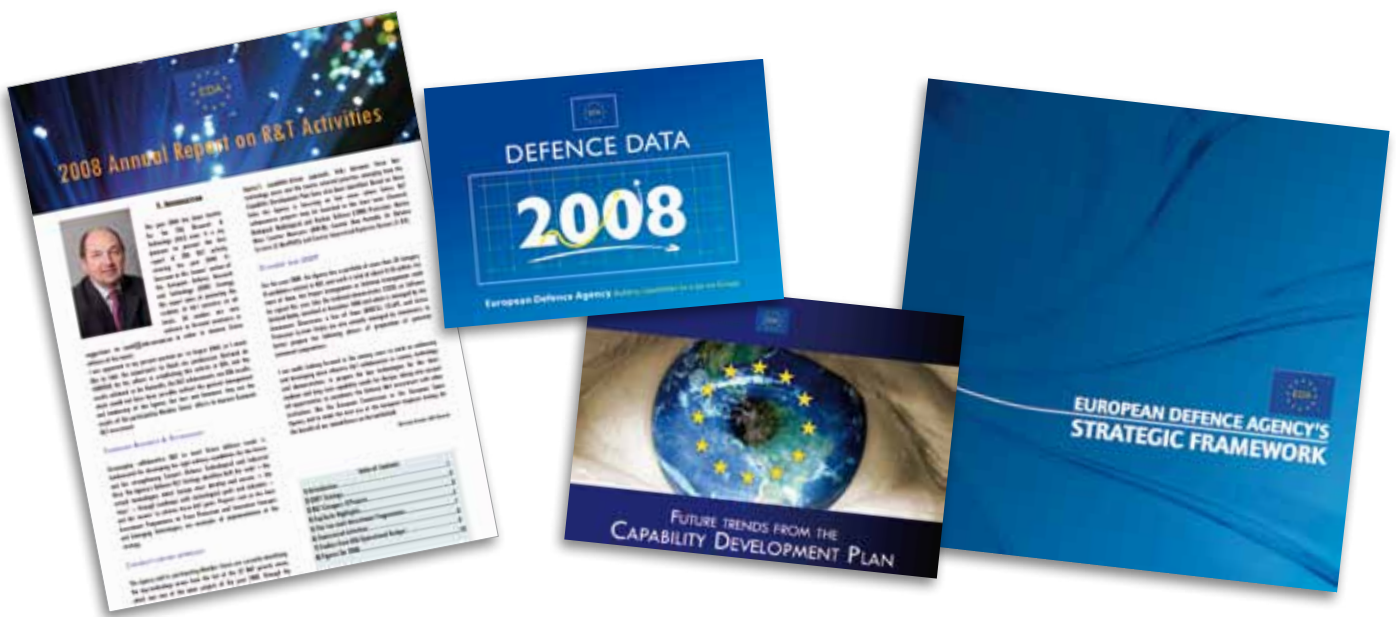
This has been demonstrated in practice by conducting a comprehensive self-assessment and deployment of improvement projects and then confirmed through an external validation conducted by independent EFQM assessors on 9-10 November 2009.

EFQM Validation team and EDA Committed to Excellence team



# New Eda Publications



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