EUROCONTROL

CMAC Newsletter

Steady progress made in ATM cyber security

*One of the more significant outcomes of the ICAO Air Navigation Conference held at the end of 2012 (ANC/12) was that cyber threats were identified as an impediment to the implementation of the **Global Air Navigation Plan** (GANP).*

In consequence, the Conference called upon ICAO to establish a mechanism for addressing cyber security issues. In this context, the Conference noted that ICAO's *Air Traffic Management Security Manual* (Doc 9985), was available. EUROCONTROL was a major contributor to this manual through its work on NEASCOG (NATO EUROCONTROL ATM Security Coordinating Group) and the SET (ATM Security Team).

As an immediate response to the call made at ANC/12, the ICAO **Threat and Risk Working Group** (TRWG) was tasked with including cyber and CNS security issues in its ongoing work, with the aim of identifying credible cyber threat scenarios and the risk they pose to aviation.
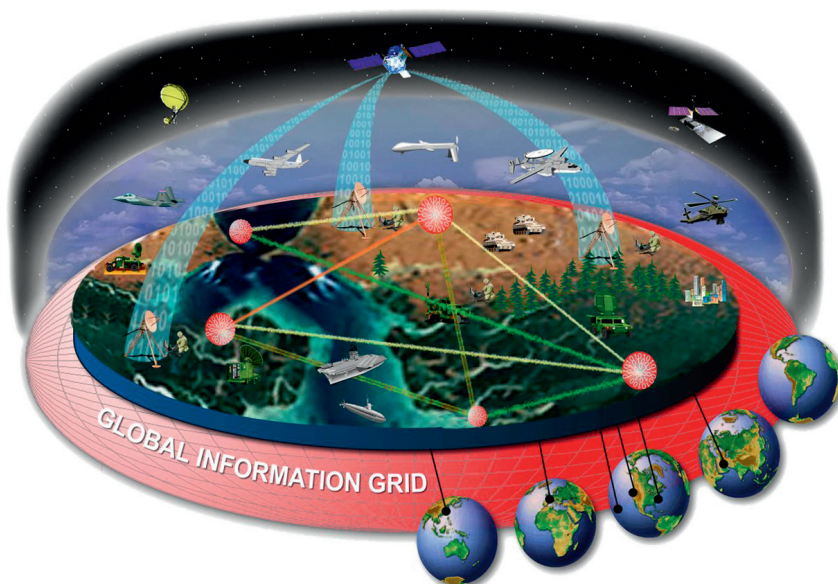
The **NEASCOG ATM Threat and Risk Assessment Document** is a standing contribution to ICAO's work. The working group entrusted EUROCONTROL with the development of a threat matrix of surveillance security issues. The Agency's ATM Security Unit is coordinating internal and external contributions to this important activity, notably with the **NEASCOG ATM Security Threat and Risk Assessment Task Force** (ASAT).

ICAO's TRWG has identified the upcoming NEASCOG CNS Security Workshop (14 June 2013) as an excellent opportunity to cross-check and validate the initial results of its work on cyber and CNS security.

Another important ICAO endeavour is to avoid overlaps and duplication in cyber security developments. To this end, ICAO will liaise and closely coordinate with other entities, such as the **ECAC Study Group on Cyber Threats to Aviation and the EUROCAE Working Group 72 (Aeronautical Systems Security)**. EUROCONTROL is also contributing to these two groups in order to ensure that the ATM dimension is fully addressed in the framework of cyber security developments.

At its 30th meeting, NEASCOG hailed the '**White Paper on Cyber Security in ATM**', developed by the ATM Security Unit, as a builder of its revised programme of work for the coming years. This programme of work will have a strong cyber component.

The White Paper was first introduced at the ATM Security Information Days (October 2012), in a joint presentation with EDA (the European Defence Agency). EDA stressed the need for civil-military cooperation in cyber security since both face the same challenges.

The White Paper is expected to provide an agreed common cyber security baseline for civil and military players in ATM. This is considered a basic requirement for building trust between the two. The document has been sent to the parent bodies of NEASCOG for consideration. The parent bodies of the NEASCOG are the CMIC (Civil/Military Interface Standing Committee) and the NATO ATM Committee.

The White Paper is the outcome of the follow-up to the **SWIM Security Workshop** (25 June 2011), organised by NEASCOG. This workshop also marked the beginning of a fruitful collaboration between the ATM Security Unit and the SESAR Joint Undertaking (SJU), whose Senior Advisor for Military Affairs is a NEASCOG member.

Another important outcome of the **ATM Security Information Days** (October 2012) was the urgent call to develop training material which includes modules on cyber security. An **Education Awareness and Training Plan** was mooted. The ATM Security Unit is developing training material in coordination with ICAO.

On a European level, the **Cyber Security Strategy of the European Union**, dated 7 February 2013, is a major milestone. It makes a clear call for strong civil-military cooperation in cyber security. Synergies between civil and military approaches in protecting critical cyber assets should be enhanced, dialogue promoted and associated industrial R&D and technological innovations coordinated in the research agendas of both civil and military organisations.

The Strategy will be complemented with a **Directive of the European Parliament and of the Council** concerning measures to ensure a high common level of network and information security across the Union. The Directive provides a solid framework for cyber security at national level. It creates a Competent Authority (CA), responsible for the **National Strategy and Cooperation Plan.** Air Transport (airports, air carriers and ATM) is named as one of the critical infrastructures that are essential for the maintenance of vital economic and societal activities. The Directive is expected to be approved in the first quarter of 2014.

In deploying PENS (the Pan-European Network System), a joint EUROCONTROL team from DNM[1] and CMAC[2] is carrying out a number of visits to national security operation centres to learn how States currently address cyber security in ATM.

As a follow-up, a **workshop** will take place on **5-6 November 2013** to 'share experiences establishing and operating national security operation centres and to identify a possible way ahead for security governance and trust for the ATM network'. This activity will broadly contribute to the development of centralised services for security, as proposed by EUROCONTROL.

In 2012, ATM and cyber security were recognised by ICAO as being major components of the Aviation Security Programme. In 2013, we should expect the first concrete results. The framework is prepared and ready; a variety of organisations and actors are busy taking the initiative further, so helping to keep ATM safe and secure.

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[1] Directorate Network Management
[2] Civil Military ATM Coordination Division