



INTERNATIONAL WORKSHOP ON MILS: ARCHITECTURE AND ASSURANCE FOR SECURE SYSTEMS

20.01.2015

Amsterdam, The Netherlands

Co-located with the HiPEAC Conference 2015

CALL FOR PAPERS

Workshop description:

MILS* is a high-assurance security architecture based on the concepts of separation and controlled information flow. The MILS architectural approach is all about decomposition of a system design into well-understood components and their interactions with the goal to achieve composable security and composable assurance for the designed system.

The security and assurance composability is a grand challenge which we undertake to meet using the MILS architectural approach.

Security composition seeks to define a secure system from trustworthy components and system architecture. The framework for composable security is a separation kernel (which has overlapping functionality with a hypervisor) that creates partitions to separate different security domains. Such a separation kernel often needs to support real-time because there are many use-cases in embedded systems.

An assurance composition targets creating assurance argument for the overall system from arguments of its components and system's security architecture. We selected Common Criteria to define such a composable assurance framework for MILS system. Amongst others, at the workshop a MILS System Protection Profile draft for a MILS separation kernel will be presented and discussed.

Workshop topics:

The workshop topics are but not limited to:

- MILS architectural approach for security and safety
- MILS components and eco-system
- MILS use-cases, e.g. from avionics, automotive, communications, industrial automation, medical, railway, consumer and similar domains.
- Real-time separation kernels
- MILS certification
- MILS testing and vulnerability analysis of MILS systems
- Cross-European/world-wide high-assurance security
- Formal methods for MILS systems as a basis for high assurance

Paper/Presentation submission:

Submissions do not need to be full papers: this is a workshop and we are looking for interesting experience, work, and ideas (possibly preliminary and exploratory) that will stimulate discussion and thought.

Submissions should be in PDF format between 3-12 pages.

We recommend the guidelines for ACM SIG Proceedings.



Electronic submissions:

The submissions page at Easychair is open:
<https://easychair.org/conferences/?conf=mils15>

Important dates:

Position papers due:	20 November, 2014
Reviews/decisions:	19 December, 2014
Camera ready versions:	11 January, 2015
MILS Workshop:	20 January, 2015

Organiser:

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FP7 EURO-MILS project
<http://www.euromils.eu>

Workshop committee:

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** Historically MILS stands for "Multiple Independent Levels of Security" and today is considered as a proper noun.*