KRONO-SAFE

# [K-NEWS] SUMMER 2018

## EDITORIAL

Dear reader,

This first issue of our *K-NEWS* quarterly newsletter marks seven years of technological innovation and new exciting software product developments at KRONO-SAFE. Throughout the past years, the KRONO-SAFE team has continued to grow and strengthen its ASTERIOS product offering in the area of the safety-critical, real-time embedded software industry.

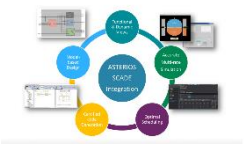
The perfect storm of proliferation, complexity and **multi-core** architectures hitting the real-time embedded systems market creates a unique opportunity for the makers of software development tools for these systems. As major industries are hitting the wall of productivity, reliability and performance with existing tools and methodologies, KRONO-SAFE offers a completely new approach to the embedded software engineering cycle and delivers a suite of tools that elegantly meet all the needs of embedded systems development. Its success and adoption in all major industries, including Aerospace & Defense, Automotive, Railways and Industry, proves that the ASTERIOS solution can dramatically **reduce the cost of software engineering** while delivering systems that are **ultra-reliable** and **high-performance** by design, not by iteration. The transition to multi-core architectures is pushing many software engineering teams to re-evaluate their tools and methodology, and KRONO-SAFE' breakthrough technology can easily meet their requirements.

We will cover in our newsletter KRONO-SAFE new product announcements and insights as well as inform you about upcoming events and recent publications and round off with some interesting news.

We hope you enjoy reading the first edition of *K-NEWS* and if you need any further information on anything in this newsletter or indeed you have a general question, we would love to hear from you.

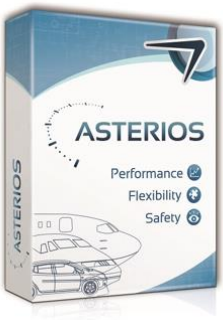
Didier Roux,
CEO

# PRODUCT INSIGHTS



**ASTERIOS and ANSYS SCADE connector now available!**

The plugin developed by KRONO-SAFE and ANSYS allows to couple **ASTERIOS** and **ANSYS SCADE** respective products in order to create an unique flow that can automatically generate, from a model-based software specification, a "correct by construction" schedule for a critical multi-rate real-time applications.




NEW VERSION

K18

**ASTERIOS Developer K18 just released!**

We are continuously committed to build better software that comes with unmatched features and support for complex critical applications running on Multicore platforms like the ones that can be found today in the aerospace, automotive and industrial markets.

ASTERIOS Developer is the unique market solution offering the benefits of an integrated development tool-chain with an exhaustive simulator, a formal language based upon a time-triggered architecture model capable of deploying automatically the optimal deterministic scheduling policy for multi-core safety-critical real-time applications.

This new K18 release, available since beginning of July, comes with the following new features and enhancements:

- New version of PsyC formal language
- Error Management with support for fatal and non-fatal sanctions.
- New simulator version based on GCC compiler and GDB debugger
- Support for timing prototyping on multi-core
- Enhanced UI

If you would like to have more information about ASTERIOS Developer K18 release, please feel free to contact us at contact@krono-safe.com

# CONFERENCES & WEBINARS


**[Webinar] Applications temps-réel critiques: Passer au muticoeur (presque) sans effort**

Recently, KRONO-SAFE and Safran Electronics & Defense jointly hosted a webinar (in French language) focused on the certification of safety critical application running on multi-core platforms. If you missed the live show, you can watch the full recording.


**[Conference] KRONO-SAFE awarded of the Paris Air Forum Trophy**

Created in 2014 by Aéroport de Paris, La Tribune and Forum Media, the Paris Air Forum brings together a succession of debates, conferences and keynotes involving the personalities that make the news, major decision makers and experts in the aerospace, defense and space sectors .

The objective: to decipher the challenges of the present and the challenges of the future to better address the challenges of tomorrow. As with every edition, the new generations are an integral part of this reflection with the presence of some fourty of the most innovative startups in the Innovation Village, they are the ones who open the sessions with percussive pitches.

KRONO-SAFE has been **awarded** among the eight start-ups selected for the Paris Air Forum 2018 trophies.

# NEXT EVENTS

Need a platform for rapid development and commercial exploitation of your services and products connected to the Internet of Things (IoT)?

Join us on **Oct 19, 2018** at the 3rd edition of **S3P ALLIANCE DAY** hosted by ALTRAN (Neuilly-sur-Seine, France).

You will discover during this day:

- The latest innovations of the S3P Project
- Live demos of members of the S3P Alliance
- How large industrial integrators and SMEs (AIRBUS, ALSTOM, ALTRAN, SAFRAN, SCHNEIDER Electric, SURTEC, THALES, ...) use the S3P project platforms.


**Nov 6, 2018 Bristol (UK)** - Now in its fifth year, the mission of the **High Integrity Software** conference is to share challenges, best practice and experience between software engineering practitioners. The conference features talks from industrial and academic specialists which disseminate experience and knowledge of important techniques and methods that are applicable across industry sectors.

# LATEST BLOGS


**[Blog] How to ensure tasks' timing properties: ASTERIOS vs POSIX-like RTOS**

In this blog post, it is showed how POSIX can be used to implement basic real-time applications and it will points out the differences, advantages and disadvantages in comparison to ASTERIOS RTK regarding:

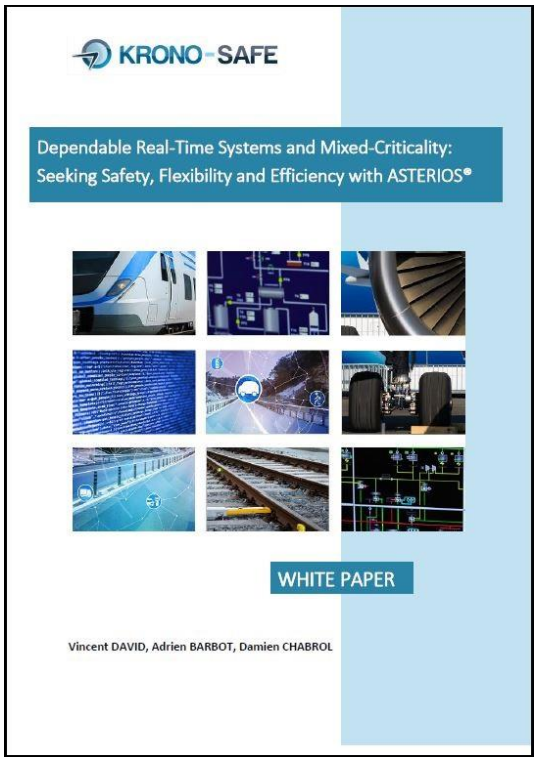
- **Determinism**: how to ensure tasks' timing properties and communications?
- **Implementation complexity**: what's easier with an API when it comes to implementation? What are the drawbacks in comparison to a dedicated programming model like Psy?

**[Blog] Demystifying the PsyC language**

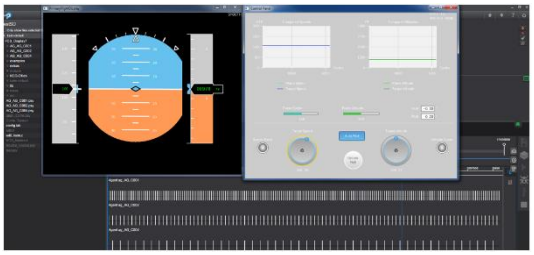
You've maybe heard that our tools are based on our own "formal" language to specify the behavior of a real-time application, and maybe you think that you need to learn a completely new paradigm. The good news is, you don't, and in this blog we explain why.

# WHITE PAPERS

If you are interested in learning more on the ASTERIOS technology, have a look at our white papers




# WORKSHOPS & DEMOS



**[Demo] Flight Control System use case**

The first seamless timing constraints management: from model to multi-core target

Based on a Flight Control System use case, the demo starts with the timing constraints description thanks to ANSYS SCADE Suite/Architect, followed by the generation of the associated dynamic architecture until its execution on multicore target with ASTERIOS tool suite.

Want to see the demo? Let's contact us at contact@krono-safe.com