



April 2008

A New Companion for Model-Based Design

- [PARS](#)
- [ORNL](#)
- [Diamond](#)
- [The MathWorks™](#)
- [SMT8121](#)
- [Distributors](#)
- [Previous eNews](#)
- [eNews in HTML](#)



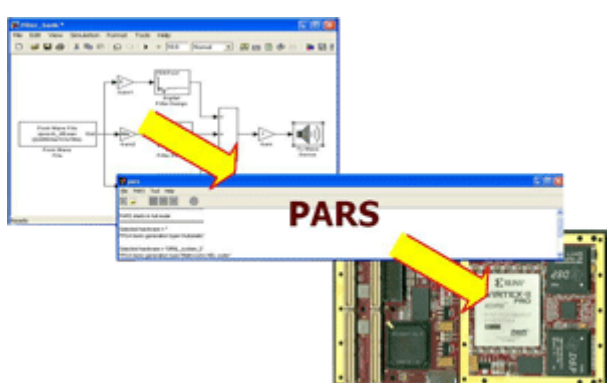
PARS, a breakthrough multi-DSP/FPGA design tool is helping engineers at the Oak Ridge National Laboratory (ORNL) to rapidly develop an advanced simulator for the US Army's next generation counterfire radar system.

Created as a value-add companion to The MathWorks™ model-based design flow, PARS was used by Dr. Mark Buckner's ORNL team to automatically generate target code from the single Simulink™ model that represented their entire application. Code was then distributed across the underlying multi-DSP/FPGA hardware using 3L's Diamond multiprocessor tools. Diamond support enabled the application to communicate with the host-side running under Simulink and brought Hardware-In-the-Loop (HIL) capability to the development system.

Mark's valuable engineering resources were focused onto application development, not learning various tools and writing C and VHDL code. The complexities of generating all the DSP, FPGA, booting, communication and synchronization code was handled by the design tools.

With PARS now boasting multiple design wins, the latest version supports the RTW-EC and HDLCoder from The MathWorks™. Support for the new Sundance SMT8121 development platform is also in place and a new version with added capabilities for profiling DSP and FPGA subsystems and managing memory blocks is scheduled for release in the early summer.

Take a tour of the PARS environment [here](#)



I'M ON A PLANE!

In the near future you will be able to make calls and send texts to your colleagues, friends and loved ones, from your own mobile phone and in the comfort of your own airplane seat!

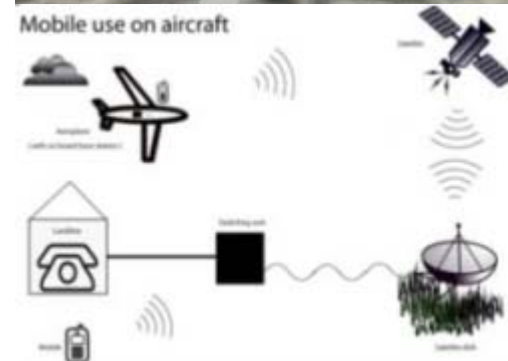
The UK 's communications regulator, Ofcom, has given the green light for aircraft to install systems that will allow passengers to make calls and send texts. More countries are expected to follow suit. Airlines can apply for spectrum licenses and on-board base stations, or picocells will go live above 10,000ft. Aircraft calls will link up with mobile operators via satellite, and, it just may be that the enabling technology at the heart of this revolution is Sundance technology.

With availability of Sundance's second generation SMT8121 communications development platform, developers of passenger aircraft communications systems have a flexible, low power high performance solution that was expressly designed to enable 'round-the-corner' communications services such as in-flight mobile.

Used as the environment of choice for High Speed Direct IF by some of the world's leading electronics companies, the SMT8121 delivers 1Gbps performance and features low power, high performance FPGAs and DSPs connected to high speed data converters. It is supplied with the 3L Diamond design environment that allows designers to easily implement algorithms on any of the available DSPs, FPGAs and PowerPCs.

The days of the plane as a no-mobile-zone are numbered.

For more information on the SMT8121 click [here](#)



Need to select a data converter? It's as easy as ADC.

With Sundance's second generation SMT8121 focused on applications where sampling speed, data conversion accuracy, high input bandwidth and power consumption are key, the choice of analogue-to-digital conversion technology was critical.

Sundance engineers selected dual channel fast GHz ADC technology from e2v technologies. The e2v solution met the GHz performance needed by the SMT8121 without compromising on power consumption, dynamic range or linearity. The e2v solution also supported deployment of the SMT8121 across its range of target markets including aerospace, defence and satellite.

"The investment made by Sundance in our ADC technology is testament not only to the technical performance of our solutions but also the cost advantage we provide in very high performance systems." said Andrew Benn, Product Marketing Manager at e2v.

e2v



SMT8121

