

## PRESS RELEASE



Wednesday 19 December 2012  
For Immediate Issue

### **Europe's Largest Defence Contractor Chooses j2 for Eurofighter Typhoon**

EADS-Cassidian has adopted the j2 Universal Tool-Kit Software for Current and Future Projects, Including The Eurofighter Typhoon

j2 Aircraft Dynamics Ltd is proud to announce that Cassidian have adopted the j2 Universal Tool-Kit software for flight-physical investigations on current and future projects, including the Eurofighter Typhoon.

This major validation of the integrated Flight Sciences Tool-Kit from j2 showcases its flexibility from small General Aviation, UAVs, Transport Aircraft through to 4<sup>th</sup> Generation Fighter Aircraft. The fully integrated solution provided by the j2 Universal Tool-Kit means that all models are kept in a common database and analyses are performed in a consistent, version controlled environment.

The j2 system is able to integrate existing FORTRAN models and then add additional contributions (e.g. engine inlet flow) by simply adding in the corresponding component from within j2. Additional model inputs were applied to control stores configuration as well as mode switches. All this was achieved within a couple of weeks of completing the training course. This means that very rapidly and easily, detailed and trusted models can be built by mixing existing systems with additional components provided by j2 into a complete validated aircraft.

When asked about the speed and ease of using j2, Hans-Jörg Steiner (COEA11 - Aerodynamics & Methods) said, "It was easy to integrate trim schedules for leading edge and canard deflection as a function of flight state and store configuration via look-up tables..... Trim calculations were performed for the complete flight envelope and j2 was able to find a valid trim solution even at very high AoA with strong nonlinearities in the lift and moment characteristics." This concise observation amply demonstrates the power of the trimming algorithms within the j2 software.

When looking at the Linear Analysis and Charting Hans-Jörg Steiner further commented, "I spent days in the past developing the code for the analysis to produce a single chart. With j2 multiple charts can be done in minutes at the click of a button so I no longer have to write any code."

Stephan Hitzel (Dr.-Ing., Expert Aerodynamic Design and Numerical Methods) said, "We have worked with j2 Universal Tool-Kit now on a variety of projects, which demonstrates its versatility. It provides a completely integrated environment for our aerodynamic and flight-physical analyses and has had a major impact on reducing our project development cycles. From an early stage, future projects will benefit from a fully integrated view via j2."

Paul Jenkins (Snr VP Sales and Marketing j2 Aircraft Dynamics) said, "this continued support from EADS Cassidian and the very positive intent in this testimonial is very valuable to j2. These are complex areas of analysis and this ringing endorsement by Cassidian of the analytical power within the j2 Flight Sciences Took Kit will move j2 along the acceptance curve for other projects I am sure."

The j2 Universal Tool Kit software is a fully commercial off the shelf software suite which is now used within major aircraft manufacturing OEM,s, flight test activities, engine manufacturing OEM's, Simulator OEM's and in aircraft accident investigations.

**Ends**

**All enquiries should be directed in the first instance to:  
Mr Paul Jenkins, SNR VP Sales and Marketing**

Mob: +44 7908 818724

Ph: +44 (0)845 0529489

Email: [Paul.jenkins@j2aircraft.com](mailto:Paul.jenkins@j2aircraft.com)

Website: [www.j2aircraft.com](http://www.j2aircraft.com)

## **NOTES TO EDITORS**

### **J2 Aircraft Dynamics**

J2 Aircraft Dynamics has evolved a state-of-the-art engineering analysis software tool for the assessment and visualisation of aircraft in flight. Highly effective and popular, the J2 Universal Tool-Kit is easy to use and provides a constant and expert companion in the development of aircraft's flight dynamics. For further information please visit

<http://www.j2aircraft.com>.

The J2 Universal Tool-Kit comprises:

- **J2 Framework:** handles all the configuration control and plug-in management and provides a data centric approach to aircraft design and analysis.
- **J2 Developer:** enables users to integrate their existing approaches with the model building capability provided by [J2 Builder](#).
- **J2 Matlab Toolbox:** allows the full capability of the **J2 Universal Tool-Kit** with Simulink Model Files.
- **J2 Builder:** quickly constructs a reliable aircraft model ready for assessment.
- **J2 Freedom:** enables users to create trim and response scenarios and use these models together with previously created aircraft to perform static and dynamic analyses.
- **J2 Visualize:** enables designers to create monitors, graphs and traces with which to view data either as an analysis is underway or as a post processing tool.
- **J2 Virtual:** provides a unique 3-D viewing capability, which shows the aircraft and its characteristics during any manoeuvre.
- **J2 Active:** enables organisations with existing solutions that partly fulfil their design and engineering needs to take advantage of the J2 Universal Tool-Kit's unique design capabilities – without abandoning their own simulations.
- **J2 Elements:** enables automatic calculation of total aerodynamic coefficients and derivatives through integrated strip theory.
- **J2 Classical:** enables the derivation of state space models, calculation of eigenvalues/eigenvectors, estimation of modes of motion and the display of the results. Further benefits include the ability to be able to linearise the system at the point in time and automatically calculate modes of motion, frequency/damping and key aircraft characteristics.
- **J2 Performance:** The j2 Performance plug-in uses the existing aircraft model data and enables searches and max/min values to be found coupled with new trim rules required to achieve the same. The user is able to run point performance analyses on Maximum Lift/Stall Calculations, Turning and Manoeuvring Flight (load factors), Ground Run Velocities, Maximum Rate of Climb & Ceiling. The parameters are presented as either trimmed values or instantaneous ones depending upon the particular area of interest.

- **J2 Flight:** enables the use of j2 software in the full analysis of flight test data including data regression, re-prediction, flight matching, PID and test flight 3D visualisation. Test flight manoeuvres can also be rehearsed in simulator using **j2 Host** software.

## **Cassidian**

**Cassidian** is the defence and security division of the [EADS](#) group and a major provider of global security solutions, lead system integration and aerial, land, naval and joint systems. It is the second largest division of [EADS](#). Until 17 September 2010 it was known as **EADS Defence & Security**. In 2011, Cassidian – with around 28,000 employees – achieved revenues of € 5.8 billion.<sup>[1]</sup> Cassidian's headquarter is located in [Unterschleissheim, Germany](#) and has several offices located across [Europe](#), [USA](#), [India](#), [Mexico](#) and the [Middle East](#).

Cassidian focuses on global security and systems, lead system integration, platforms and value added products and services to civilian and military customers around the world. Its portfolio includes land, naval and joint systems, air systems (aircraft and unmanned aerial systems), intelligence and surveillance, secure communications, cyber security<sup>[2]</sup> as well as test systems, missiles, services and support solutions. Cassidian's slogan is *Defending World Security* and its mission is *to support the people whose mission is to protect the world*