MxD 14-01-06	Category: Recurring Manufacturing, Quoting Process, Engineering Change
Title:	Blade Multidisciplinary Design and Analysis (BladeMDA)
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What is BladeMDA? A single, web based user interface (UI) which progresses through all stages of product development and manufacturing by aggregating feedback from powerful analysis tools.

The Blade MDA program was conceived as a one year transition of the work developed under the DARPA AVM program towards a commercially viable product. The goal was to develop an integrated design and analysis software tool suite capable of providing real-time multi-disciplinary feedback throughout the development cycle of a complex composite structure. The wind turbine blade domain was chosen because it represented a complex series of interactions from aerodynamics, stresses and laminates all the way through manufacturing and product financials. The competitive commercial nature of the industry demanded an accurate software tool, while the multidisciplinary approach promises to boost the competitiveness of those developers who can field such a product.

Thus the last goal of the blade MDA software suite was to develop a truly seamless and hands-off model and analysis integration. This was done primarily by focusing on geometry which could be defined explicitly. The prescriptive nature of aerodynamic surface lofts make for a robust, machine defined geometry which is still parametric while remaining completely hands-off by human intervention. Indeed, a user of Blade MDA never takes part in meshing or load and boundary condition application, they never need to know how to operate Finite Element Analysis Software at all.

BladeMDA website: https://www.siminsights.com/projects/apps/blademda/