



Partner Spotlight: Materialise

Lieve Boeykens, Brand Manager at Materialise, discusses Additive Manufacturing and Topology Optimization software, Materialise 3-matic, available through the Altair Partner Alliance.

APA: Why or how was Materialise founded? What opportunities were there in the market?

Lieve: Back in 1989, Fried Vancraen, CEO of Materialise, was working as a Research Engineer and Consultant at the Research Institute of the Belgian Metalworking Industry when he saw his first 3D Printer at a research institute in Bremen, Germany. Immediately recognizing the importance of this technology, even at such an early stage, Fried set out to get a printer of his own. Due to the fact that the research institute he was working for was unable to invest in the technology at that time and he was unable to find other partners to purchase one of these incredibly costly machines, Fried made the bold decision to start his own company, Materialise, which opened its doors in July, 1990. He invested all he had in this new venture. From early on, this forced Materialise to develop applications and software that would enable the Company to use its 3D-printer efficiently and effectively in the creation of high-value products.

APA: What problems is Materialise 3-matic meant to solve?

Over the years, Materialise has developed a strong foundation for digital CAD. Materialise 3-matic is the ideal tool to re-work an existing design and it is at its best when the data concerned is scanned or organic data, when no CAD files are available anymore...

Materialise 3-matic allows for quick design changes by avoiding returning to CAD but immediately allowing you to make the adjustments on the STL level thus saving time and making the design optimization iterations times shorter.

APA: What are some of the benefits of using Materialise 3-matic for Additive Manufacturing?

Lieve: The standard format of Additive Manufacturing is STL which immediately exclude the necessity to have a CAD file again. Materialise 3-matic can assure that the end result is a watertight buildable STL file.

APA: Which applications is Materialise 3-matic intended for? Are there any unique applications that Materialise 3-matic works for that your competition does not?

Lieve: Materialise has developed several spin-off's based on Materialise 3-matic technology; these applications are mainly in the mass customization market. Examples are Phonak Hearing Aids, RS Print (3D printed shoe soles), Custom Osteotomy Guides (e.g. Signature for Biomet)

Above applications illustrate the strength of Materialise 3-matic working on organic data, yet with an engineering twist added to it. It is not just freeform design but the design changes are made in an engineered way.

APA: What are the major (essential) inputs required from the user?

Lieve: For Altair users, the most complete start is to work with the results of the topology optimization and the CAD file of the design space. Materialise 3-matic contains very performant Boolean operations, making it easy to combine work on the topology result with the original design space.

APA: How much time is required to learn and start using Materialise 3-matic?

Lieve: We typically provide a two-day training course for Materialise 3-matic, however we have experienced that people can also get started after a web demo and using the collateral material provided.

APA: What's next for Materialise...what can we look forward to?

Lieve: We are working on further integration with the Altair software and will invest in making the work on topology data more user friendly.