Altair

Partner Alliance

Key to Metals AG

PARTNER SPOTLIGHT

Partner Spotlight: Key to Metals AG

Neil Baumann, COO, discusses material information software, Total Materia, available through the Altair Partner Alliance.

APA: What prompted the development of your software? What problem is Total Materia meant to solve?

Neil: Work on the very first Total Materia database began in 1993 as a result of an academic project to provide a comprehensive material property data tool for a foundry looking to consolidate part of their data management processes. From there, it was clear that a resource of this nature could provide serious benefits in the form of data control and time savings on a business level. In 1999 we launched our first commercial online database which focused on steel materials to begin with. Having a purely Web information resource of such kind for engineers was a novel and even pioneer concept at that time. Total Materia is used worldwide to provide comprehensive material information about metallic and non-metallic materials across the entire engineering business and to help make faster, smarter decisions about materials and their selection.

APA: What are the benefits of using Total Materia for material information?

Neil: Total Materia is the most comprehensive database of materials information available and the breadth and depth of information fulfills a critical requirement in the context of material management. All too often, business cannot allocate resource to compile information in such detail about their focus materials let alone keep all of this information up to date and current. In addition, innovation in finding new possible materials from the 450,000 materials inside Total Materia is a

distinct benefit as well as the search and comparison tools to make decisions about materials with less risk.

APA: Are there any unique applications that Total Materia works for that your competition cannot?

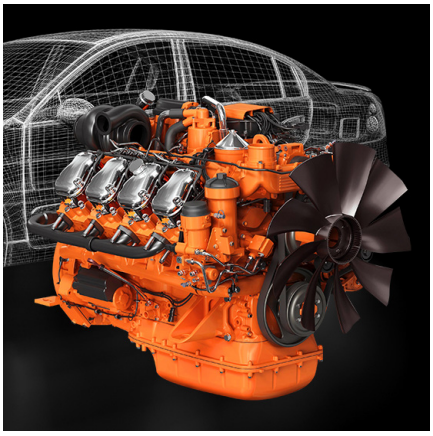
Neil: Total Materia covers metallic and non-metallic materials in one platform and along with our comprehensive Extended Range module of non-linear, advanced properties provides a completely unique all-in-one solution which is unrivalled in the industry. On top of that, there is much more information available such as corrosion information, joints data as well as industry trending information such as additive manufacturing and compliance information related to material conformity.

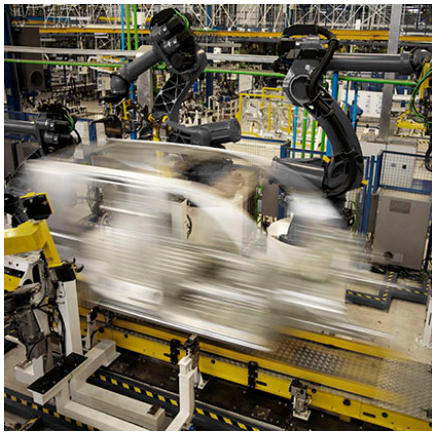
APA: How much time does it take to learn and start using your software?

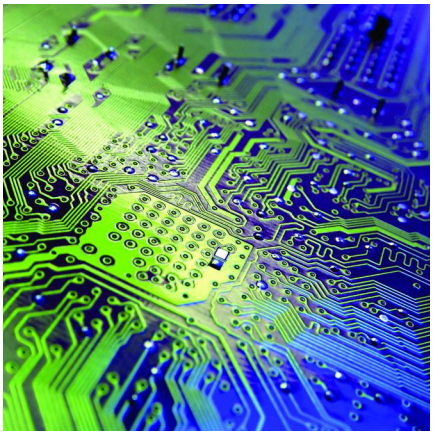
Neil: Total Materia is designed to guide users through the information and functionalities in an intuitive way and as complexity increases with new datasets and tool developments we continue to focus on various ways to improve the user experience at every turn. Our technical and customer support teams provide strong back up to the product as well and are flexible in providing on-demand trainings for our customers.

APA: What are the biggest challenges or problems that customers in your target market face and how do you address their needs?

Neil: On the most basic level, our customers need to find reliable, precise and complete information about materials and then depending on the task at hand, use that information to make stronger decisions in the context of their project. If we take a CAE engineer as a typical profile, the biggest challenge they face is to find experiment data such as stress-strain and fatigue data to run simulations as accurately as possible. Total Materia not only allows them to save hours per week in looking for data but allows them to go above and beyond by providing many additional alternative materials that could easily do the job better.





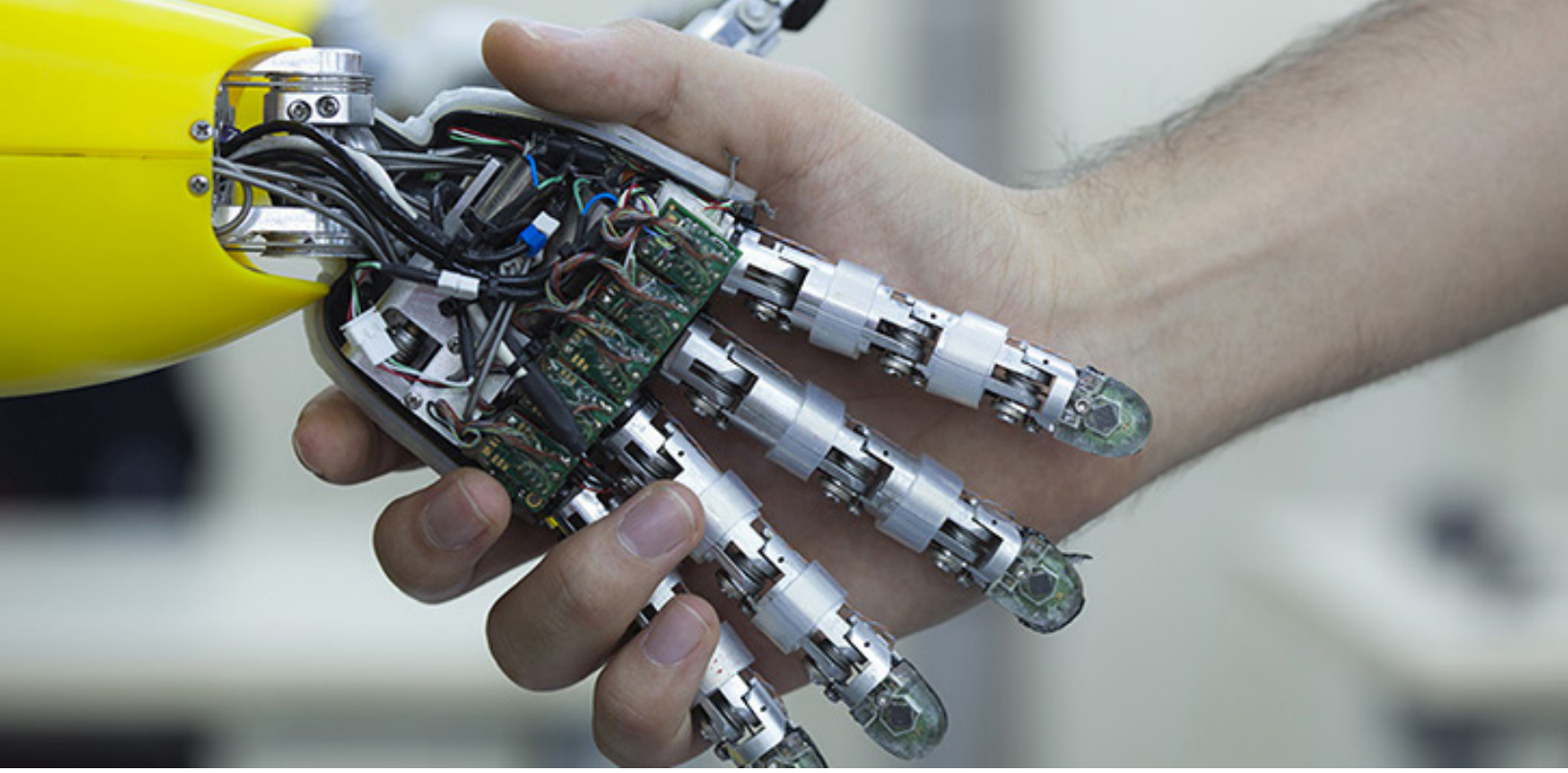


APA: Describe a typical workflow of Total Materia.

Neil: Total Materia can provide a huge amount of assistance to combat a multitude of challenges and with different workflow solutions available. If we focus on the subject of accurate material selection, Total Materia immediately provides a unique advantage since the amount of materials and related information means the pool of information from which the selection will take place is vast. More than 450,000 materials can be narrowed down to a reasonable amount based on search criteria of the user and from there, the viable candidates can then be compared on charts according to property criteria, compared side by side and even at the property level where properties and charts for different materials can be viewed in a range of data visualization tools. When the engineering decision is made based on the technical performance of the material, typically it is not the end of the story. As a bill of materials is created, the procurement teams need to turn this into reality with the supply chain constraints in front of them. To find international equivalents, they can call upon the 20 million connections between materials in the cross reference tables to find suitable, lower cost equivalents, without jeopardizing the integrity of the original selection.

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

Neil: Total Materia continues to do the basics better and better and specifically our drive to add more depth to the information inside the database has never waned. In the past several years and looking further into the future, our focus is on providing stronger workflow tools to help leverage all of that information to make the best possible decisions about



materials and material selection. On top of that, we continue to work on better ways for Total Materia to integrate into our customers ecosystems with their other engineering and information tools, with a firm eye on Industry 4.0 and the strong contribution we can make.

For more information about Total Materia, visit the solution page.