



# NEWS RELEASE

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**SIGMETRIX ADVANCES ITS REVOLUTIONARY CETOL 6 SIGMA SOFTWARE WITH VERSION 8.1.2**  
*Achieves Milestone Delivering the Most Accurate Manufacturing Variation Analysis and Tolerance Optimization Solution on the Market*

**MCKINNEY, Texas – March 10, 2009** – Sigmetrix, the leader in providing precise, easy-to-use mechanical variation analysis and tolerance optimization software, announced today the availability of its CETOL 6 Sigma Version 8.1.2 software for CATIA, Pro/ENGINEER, and SolidWorks CAD systems for both 32-bit and 64-bit Windows XP. Version 8.1.2 includes all of the powerful, next-generation features of the CETOL 6 Sigma re-architecture which revolutionizes the way product development teams deliver higher-quality products by shortening the tolerance analysis development time, resulting in lower cost.

“Sigmatrrix’ history of providing the most advanced tolerance optimization and assembly variation software for our customers is the reason that we are the leaders in this market,” said Tim Bogard, Sigmetrix, founder and CEO. “We continue to advance our software for mainstream engineers and have promised to deliver the most accurate results in less time that have the highest correlation to what actually happens in manufacturing”, he added. “This recent release of CETOL Version 8.1.2 delivers on that promise.”

**CETOL 6 Sigma**

Delivering higher-quality products requires more precise, efficient analytical tools that are more comprehensively integrated into the mechanical CAD system. CETOL is radically different than other solutions on the market because of its unique modeling, analysis, and interrogation technologies – *enabling the most accurate manufacturing variation analysis and tolerance optimization solution on the market.*

CETOL 6 Sigma provides the valuable insight required to confidently release designs to manufacturing through several powerful and unique features that enable engineers to more quickly and precisely predict the critical variation in assemblies:

**Advanced Assembly Modeling and Verification Technologies**

CETOL 6 Sigma is built on the Functional Interface Relationship Modeler™ (FIRM™). This underlying technology, developed by Sigmetrix, allows for the rapid creation of precise assembly, part, and feature sensitivity matrices used by post processors to produce a comprehensive set of analyses. These analyses are then used to optimize tolerance design with respect to manufacturing process variability.

- The embedded CETOL Tolerance Model Advisor™ radically reduces model development time and dependency on subject matter experts. The easy-to-use interface enables 3D tolerance analysis to move from specialists working late in product design into the mainstream design engineering organization where decisions can be made faster and much earlier in the design process.
- Assembly sensitivity results are presented in animated, graphical, and list views along with key contributor results.
- Very precise statistical and worst case tolerance analysis results are displayed and available to edit on-the-fly within the modeling environment.

CETOL's analytical solvers run much faster and deliver higher-quality results versus other approaches on the market, especially since there is no need to completely re-simulate the tolerance model every time it changes. CETOL focuses on an advanced mathematical representation of assembly variation – considering the true physical contact conditions realized when parts are assembled in the factory. The results from CETOL – versus other Monte Carlo simulation-based methods which can easily be 50-100% off – much more closely align with actual measured results from manufacturing. These results are achieved without the need for a modeling specialist and without the time required with competitive products to produce a model with reasonable accuracy.

### **True Sensitivity Animation**

The CETOL Sensitivity Animation Viewer™ provides the product team with a virtual prototype view of how an assembly model responds to the variation that might be expected on a set of critical features. These variations can be due to part manufacturing or assembly process error, or even due to environmental effects. The software analyzes these conditions and, within the CAD system, animates how the entire assembly adjusts as a key dimension is allowed to vary within its' tolerance range. Since the animation is shown on the precise surfaces on the CAD model, any user can zoom into a level of resolution that is greater than what any typical inspection equipment can measure. Engineers, designers, manufacturing planners, and even managers use this powerful virtual prototype view to easily and quickly identify critical-to-quality dimensions that would need further investigation before releasing a design to manufacturing.

### **Advanced Reporting and Interrogation**

CETOL's Tolerance Information Manager is designed for the users of the modeling and results data allowing for rapid comprehension of the stack-up data and for investigating "what-if" scenarios. The View Wizard steps the user through the process to set up any view that may be needed by users in other parts of the design-to-manufacturing process.

The power of this tool can be leveraged across all functions in the PLM process:

- Prototype teams can validate design tolerances of initial test parts and seamlessly provide feedback to the product design team.
- Manufacturing teams can simultaneously verify their ability to successfully assemble a product by evaluating each factory or part supplier's manufacturing process capability data.
- Manufacturing and Quality managers value the additional insight gained from graphical overviews of each part's individual tolerance contribution and relative impact on the final product.
- A Warranty manager is capable of 'reverse engineering' a product defect to identify the root-cause features and dimensions – potentially eliminating a full product recall.

Most importantly however, these reports provide multiple yield predictions specific to that overall product assembly – a critical decision support feature.

### **CAD System Integration**

Delivering high-quality products also requires very tight integration with the native CAD system. A successful integration requires a clear understanding of the CAD modeling practices of the users, the electronic drawing documentation practices, the data management practices, and the underlying connectivity allowed through the API's provided by the CAD vendor. Taking full advantage of being fully-associative to the CAD model, but not dependent on the modeling practices, has given the CETOL integrations with each of the major CAD systems, Pro/ENGINEER, CATIA V5 and SolidWorks, a clear advantage over competitors. Through these intelligent integrations, CETOL allows multiple ways to view model information and interact seamlessly. The integration requires only the most basic functions of the CAD system – eliminating the need for more advanced CAD modeling skills required with competitive products.

Sigmatix has long-term software integration partnerships with the 3 leading mechanical CAD software companies – holding Gold Partner status for over 15 years with PTC, over 5 years with Dassault Systems' CATIA V5 and more recently have been awarded the SolidWorks Solution Partner.

### **About Sigmetrix, LLC**

Sigmatix designs, develops, markets and globally supports tolerance analysis solutions used to unite the "ideal" world of product design with the "real" world of manufacturing and assembly. With over 20 years of research and development, Sigmetrix is focused on eliminating the error between predictive tolerance models and measured physical results in the factory. Through intuitive modeling technologies, engineers construct very precise tolerance variation models directly from the CAD geometry. Sigmetrix advanced analytical solutions and specialized services allow companies in virtually all industries to gain profound insight into the behavior of their products. This insight allows customers to objectively balance competing requirements and achieve exceptional return on their investment. For more information, please visit [www.sigmetrix.com](http://www.sigmetrix.com).