**Product Overview**

The 3D Springback component provides a one-step method for springback correction of 3D models within pressed metal tooling manufacturing applications. This readily integrated solution enhances your application with an automated solution for tool engineers accustomed to time-consuming and error-prone remodeling of CAD geometry to compensate for springback. Tool engineers benefit from higher-productivity and shorter delivery times.

The component consists of a single API, enabling rapid development of a springback compensation feature without requiring mathematical expertise unique to this specialized application. Whether your specification for overcrown comes from a tooling engineer’s experienced eye, measured prototypes, or FEA simulation results, 3D Springback smoothly transforms the original design data into the surface shapes needed for machining pressed metal tooling.

3D Springback is concise and easily integrated into existing manufacturing software. The component integrates with your ACIS-based application through a single application programming interface (API). Through the user interface of your application, you provide users the ability to select fixed edges and faces on the model and ‘form-to’ shaping constraints that define the difference between the target part’s shape and tooling model’s shapes. 3D Springback uses that information to generate a smooth deformation function to calculate the resultant part geometry, producing a 3D tooling model ready for machining.

The transformed model is ready for machining with:

- The geometric continuity (positional, tangency, curvature) of the original, maintaining the model for use on Class-A parts
- Smooth surface geometry, eliminating the need for post-processing or surface fairing normally required with reverse-engineering or surface-fitting methods
- Unchanged model topology, retaining all of the original model’s non-geometric information and attributes on the transformed die-face model for use in the user’s PDM/PLM system

**Support and Services**

Spatial offers training and support services for application developers to benefit from Spatial’s years of experience and expertise in 3D application development. Our Professional Services experts focus on resource conservation during development, as well as code optimization and acceleration of time-to-market, to maximize your product’s revenue potential.

**Meet User Demand:** 3D Springback is a highly desired cost-saving feature among tool engineers in the pressed metal tooling industry.

**Deliver High Performance:** 3D Springback delivers high performance through a robust and very fast deformation engine.

**Rapidly Develop New Features:** With a single API, simple user interface, and easy setting of deformation parameters, 3D Springback aides in rapidly developing new features.