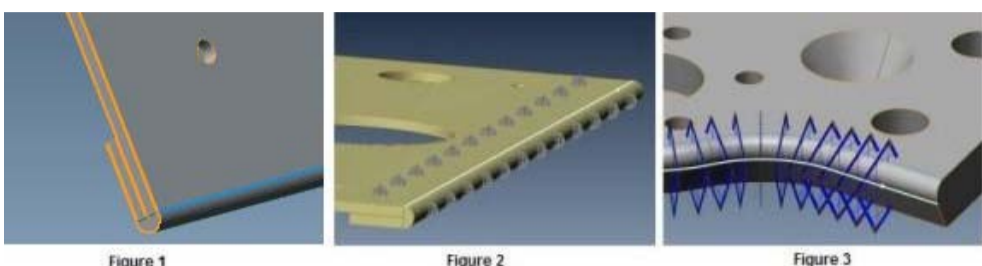


# IMM Flash

September 2011

## Management of CAD topology in PolyWorks V12 brings major benefits to end-users

We are pleased to announce that PolyWorks/Inspector V12 now fully manages the B-rep topology of imported CAD models. B-rep topology is a mathematical representation describing how CAD faces, edges, and vertices are connected to each other. When a CAD model is defined in a native file format, such as CATIA V5 or UG, the B-rep topology is directly imported and used by PolyWorks. In the case of IGES or STEP files containing no topology information, PolyWorks now offers powerful healing and stitching capabilities to reconstruct topology.



Using these new capabilities, we are able to analyze internal CAD curves and introduce curve classification methods, as shown in Figure 1. Sharp edge and fillet tangent curves are now automatically identified and displayed in orange and blue respectively. This classification helps operators quickly understanding the structure of their CAD model and its underlying curves. In addition, CAD curves can now be globally or partially sampled to quickly create measurement objects.

In Figure 2, a fillet tangent curve is used to create a set of Hemmed Edge comparison points.

In Figure 3, a set of Profile gauges is created by uniformly sampling a user-specified range on a fillet tangent curve. Creating the nominal components of measurement objects has never been so quick and easy.

## New intuitive curve reshaping tools cut surfacing time by more than 50%

In addition to parametric 2D sketching, PolyWorks/Modeler V12 offers a major upgrade of its curve creation, reshaping, and fitting technology. Early feedback from key customers indicates that the new curve-reshaping tools produce the most important gains in productivity. Users now have access to four reshaping techniques:

- A curve dragging technique, whereby users quickly delimit the width of the edited zone using the mouse wheel, and then drag a picked point to a new location, locally reshaping the curve.
- A curve reconstruction technique that reconstructs curve segments using a smooth interpolation.
- A point-anchoring technique that allows users to explicitly pick the entry and exit points of the edited zone and anchor guidance points to locally reshape a curve.
- All of the above-mentioned tools fit the reshaped zone on a polygonal model. A new 3D dragging technique has been developed to allow editing curves in 3D without fitting.

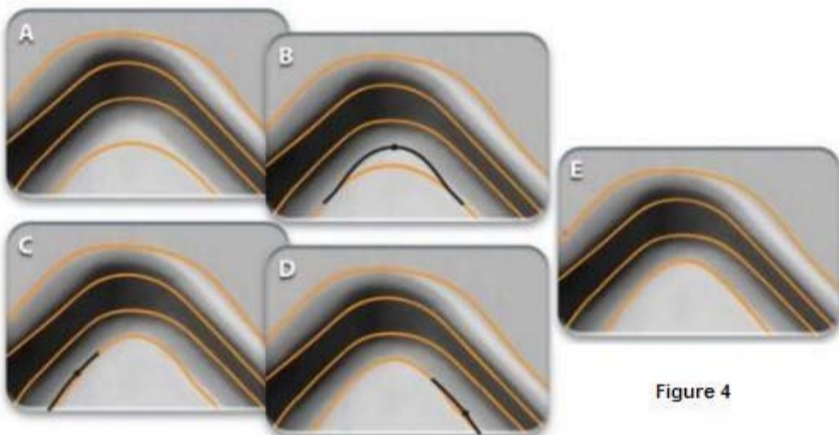


Figure 4 demonstrates curve dragging over a polygonal model. With a single drag operation (B), a curve is brought to a new location. Two additional drag operations (C) and (D) are needed to straighten the curve on the left and right sides and finalize the curve reshaping task. In a few seconds, a major shape change is performed intuitively, without having to specify any mathematical parameters.

Efficient curve reshaping tools have a significant impact on the time needed to lay down curves on a polygonal model and fit NURBS surfaces to reverse-engineer a digitized part. Preliminary benchmarks comparing V11 and V12 have shown that the total time needed to build a surface model has been cut by more than 50% on average for large surfacing projects.

## Success of the first 5 Billion Microns Fun Run & Walk at CMSC 2011

On July 26, 2011, InnovMetric was the proud sponsor of the first 5 Billion Microns Fun Run & Walk, held as part of the *Coordinate Measurement Systems Conference* on the grounds of the Arizona Biltmore Hotel in Phoenix, AZ. More than 50 courageous runners showed up early to beat the heat and kick off the second day of the conference with a healthy start.



We invite you to lace up your running shoes and join us for the second edition of the run during CMSC 2012 in New Orleans, LA, on July 16-20, 2012.

## Follow us on Twitter and Facebook

Become our friend on [Facebook](#) to receive updates and photos of the events and projects we are working on. Simply "Like" our page and you'll receive our posts directly on your Facebook wall.

You can also follow us on [Twitter](#) to learn in real-time about new patches and official releases.



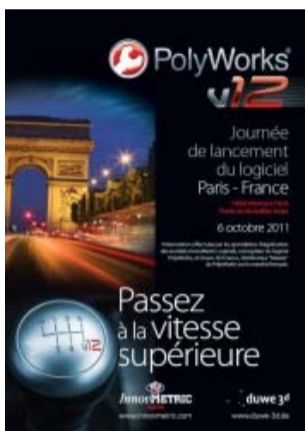
## The PolyWorks V12 Product Launch Tour Visits China and France

Our team is hitting the road this Fall to present the new features of PolyWorks V12 for users in China and France.

More than 100 people have registered so for the PolyWorks V12 Launch to be held in Shanghai and Beijing on Sept. 20-22, 2011. To register, visit the official [site](#) of the event.



A PolyWorks V12 Launch will also take place in Paris, France, on October 6, 2011. More than 50 people have registered so far. You can still register on the official [site](#) of the event.



## Upcoming Events

September 20-22, 2011  
[PolyWorks V12 Product Launch](#)  
Shanghai and Beijing, China

September 20-22, 2011  
[Quality Expo Chicago 2011](#)  
Chicago, IL, USA

October 3-7, 2011  
[MSV 2011 - International Engineering Fair](#)  
Brno, Czech Republic

October 5-7, 2011  
[5th International Specialised Exhibition - AUTO INDUSTRY and AUTO COMPONENTS](#)  
Togliatti, Russia

October 6, 2011  
[PolyWorks V12 Product Launch](#)  
Paris, France

October 11-13, 2011  
[South-tec 2011](#)  
Charlotte, NC, USA

October 13-18-19, 2011  
[SolidWorks 2012 Rollout with SolidXperts](#)  
Quebec, Montreal, Sherbrooke, Canada

November 2-4, 2011  
[Aircraft Engine World China](#)  
Shanghai, China

November 29 - December 2, 2011  
[EuroMold 2011](#)  
Frankfurt, Germany

Visit the Events section [here](#).

## New PolyWorks Distributors

NTS Inc.  
Territory: Canada and USA  
PolyWorks bundled with: Noomeo  
Contact: Mohamed Serraji  
[www.ntsconsulting.ca](http://www.ntsconsulting.ca)

## Tips & Tricks Newsletter

If you're interested in learning useful PolyWorks tricks, subscribe to our weekly [Tips & Tricks](#) newsletter.



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