

## Virtual Colonoscopy: new algorithm for improved diagnosis of subtle details

At the University of Antwerp, an algorithm for improving the diagnostic quality of virtual colonoscopy was developed. This algorithm provides you with a full coverage of the region of interest, visualizing masses in the colon like polyps and tumors and all this with minimal distortion.

In contrast with traditional tools using centerline tracking to create an unfolded view of the colon, we present here a technique based on cylindrical parameterization. This unfolds the colon on a cylinder, resulting in only very minor distortions of the image. Additionally there is a significantly better viewing of the colon wall, including what is hidden behind colon folds, and as such provides medical staff with an excellent tool for setting diagnosis.

### What makes our technique unique?

#### Full coverage with reduced distortion

In the figure below an illustration is given of the flattening technique compared to a commercially available software package currently used in virtual colonoscopy. The technique provides a 100% coverage of the colon surface, even allowing a view of the inner surface of the diverticula. The cylindrical parameterization makes the visualization less prone to distortion. The commercial software introduces significant curving in the flattened view. This in turn introduces a higher error rate in screening of the colon surface.

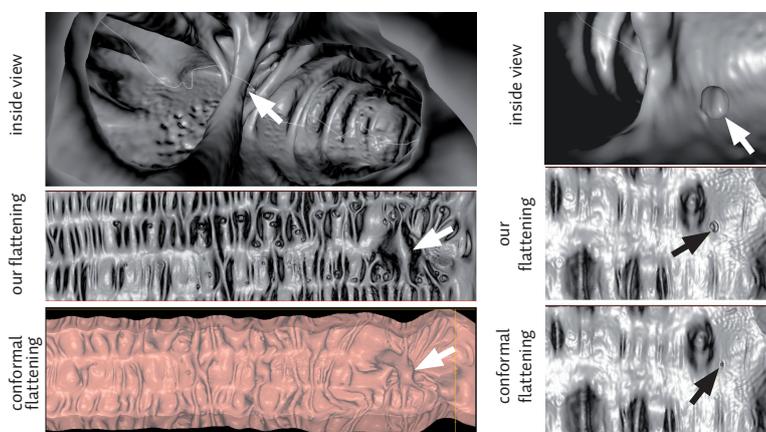
#### Improved diagnostic quality

The commercial software changes the scale of a pathological mass. The cylindrical flattening technique shows this mass in more realistic proportions.

### What can we offer?

We are offering you the opportunity to evaluate this new technology and see how it can fit in your portfolio and commercial solutions. Our algorithm has a diagnostic relevant added value to the current commercial available software and algorithms.

We are looking for partners to further develop this technology into a commercial product.



### IP-position

T. Huysmans and J. Sijbers, "Method for Mapping Tubular Surfaces to a Cylinder", European patent application number EP09162289.4, submitted June 9, 2009.

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