



# NPC Newsletter

Volume 6

October 2004

## A Word From the President

Nel PreTech Corporation continues to face new challenges in an ever changing and competitive business environment. Given the dynamics of our position, Nel PreTech has employed a new 7 member "Board of Advisors". We are proud and grateful to have the talents of 3 current or past CEO's and Chairman's of major U.S. and international corporations. Also, we have two gentlemen with executive management experience: One with a fortune 500 firm and

the other with a "Big Eight" accounting firm. This tremendous opportunity will afford Nel PreTech with the best resources for strategic planning and management advice. The message: "Our Success is Your Success"!!! Look for board member profiles in our upcoming newsletters and other information media. As always, I would like to thank our loyal customers for their continued patronage and support.

Regards,

*David M. Nelson*

David M. Nelson  
 President  
 Nel PreTech Corporation

### • Note From the Editor

• Thank you for reading our newsletter for fall of 2004. We hope you will enjoy it and find it informative. Our interactive crossword puzzle is now online at [www.nelpretech.com/crossword](http://www.nelpretech.com/crossword). We are always striving to reach out to our loyal clients and keep them updated on the latest happening here at Nel PreTech.



### Brookfield Accreditation

Our laboratory facility in Brookfield Wisconsin was audited in August by A2LA and became accredited in September.

#### Contact us at:

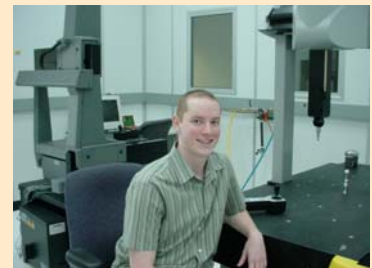
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## A New Tech Added to NPC

In April of this year Chad Manning was added to the NPC team. He has a background in telecommunications and electronics. His knowledge and experience adds to Nel PreTech's reputation for a skilled and diverse group of technicians.





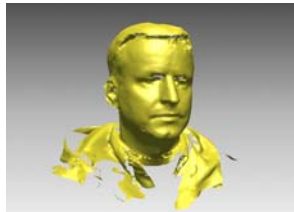
## Reverse Engineering—What is it?

By: Jason Johnson, Technical Director Nel PreTech Corporation

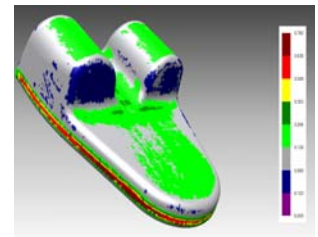
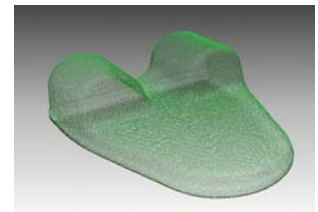
Nel PreTech now has the capability of performing detailed part digitization for reverse engineering purposes and advanced part deviation analysis using color maps. Part scanning is accomplished using Konica Minolta's Vivid 910 Non-Contact 3D Laser Scanner shown above. With the click of a button, this scanner can capture over 300,000 points of data in a couple of seconds. All of this data can be imported into 3<sup>rd</sup> party software for further analysis, where traditional measurements such as lengths, widths, hole sizes, hole locations, etc can be extrapolated and placed into a typical Nel PreTech report form. This data can also be used to generate a 3D CAD model for archiving purposes or to build a new tool mold for part production. If you like, we can even scan your head for novelty purposes and export the data out to file format of your choice for viewing in CAD software such as Pro-E or Catia. A lot of customers now a days are



Bob Buhle from ITW Engineered Components poses as a model for a novelty head scan.



asking for color map deviation analysis of their parts. With these reports, customers can see how their parts are varying over the entire surface of the part, instead of a simple length or width taken in a couple of spots. With Inus Technology's Rapid Form 2004 software, we can take scan data of a part from our Vivid 910 3D Laser Scanner and compare it to a nominal CAD model to generate these color maps. Color maps show 3D color images of the scanned parts at different viewing angles where each color represents a different range of deviation. For instance, in the photo shown on the right, gray represents 0.00-0.13mm deviation while red shows deviation in the +0.5-+0.64mm. These colors and ranges can be customized to your preference.



## Outsourcing

A company's competitiveness depends on their ability to deliver quality products to their clients or into the marketplace in a timely and efficient manner. It may also depend upon their ability to test those products at a lower cost and to a tighter deadline.

Outsourcing your inspection requirements can help maximize your profits or reduce capital outlay. It may also enable you to use the capital for more productive purposes. In effect, it is the most cost efficient way of enabling you to concentrate on your core business.

Outsourcing inspection is an option many companies are considering. Equipment costs, calibration costs, accreditation requirements, software upgrades, and operator knowledge all become the problem of the third party inspection house. With departments being lean after the economic downturn a company may not be able to accommodate a fluctuating work load. Instead of allocating resources and expenditures to handle these periods, outsource your inspection requirements to a qualified inspection lab.

We all know economic times have been difficult over the past few years and companies are reluctant to invest in capital goods. So, if demand for inspection exceeds capacity, be aware of outsourcing, it can and should be beneficial.