PowerINSPECT 2012

Electrode Wizard - Inspection for PowerINSPECT OMV

PowerINSPECT

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Important Notices

PowerINSPECT

Electrode Wizard - Inspection for PowerINSPECT OMV Pro

Introduction

The Electrode Wizard - Inspection is part of the Delcam software integrated electrode solution. It automates the entire PowerInspect OMV Pro: starting from creating a PI document, loading the CAD model from a selected .trode file; building probe paths for inspection groups from points created in PowerSHAPE electrode stage through exporting the NCprogram, loading the result and exporting the inspection report.

The user is prompted to create a best fit, if needed, using the PI GUI that can adjust the electrode datum to compensate for eventual machining or positioning inaccuracy.

Step 1 - Configuring the Electrode Wizard - Inspection

To make the process even more automatic the user can, and should, set some paths and settings the first time they run the OMV Electrode Wizard.

A click on the wizard bitmap on the Wizard first page raises the following dialog:


The settings are:

 - Part files - Default CAD Files folder - location of the .trode files

- OMVOptionFile - path to the Option File needed for post-processing the cldata . There is one provided with the Wizard that produces results instead of an NC program that allows loading the results immediately for demonstration purposes

- Controller NCPrograms folder -

-Probepath SafeZ - the height of the safe Z links for the probe path

-Probe point - a combo offering two alternatives - probe centre or tip. The selection should match the option file is setting.

- Probe tool - number of the tool that will be output to the NCProgram - e.g. T1

- Results pre-processor script - this is specific to some machine tools. This text box can be left empty for most option files including the option file installed with the Wizard.

- Controller results folder - this is the location where the controller writes the result file to.

Once finished all the settings press Save button to save the configuration to a config file.

Step 2 - Loading the CAD file

Press   the Browse button to raise a file selector and select the .trode file you are about to work with.
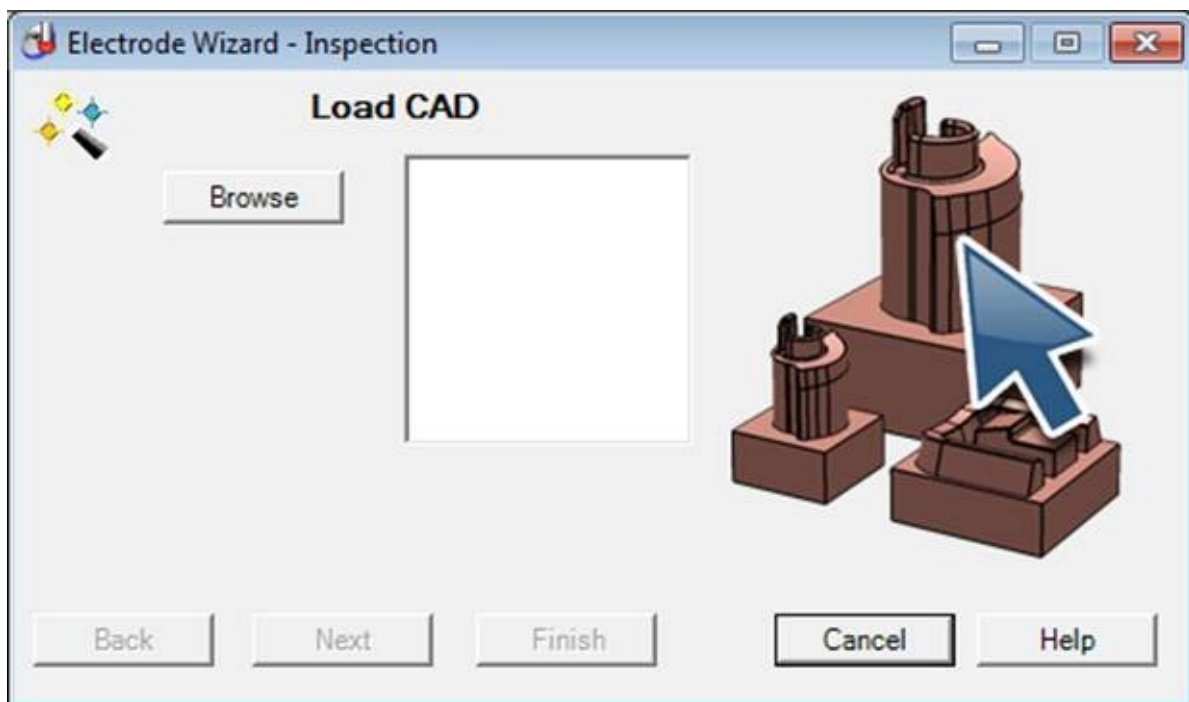
Trode files can contain more than one electrode - as a result all electrodes will be listed in the Listbox:
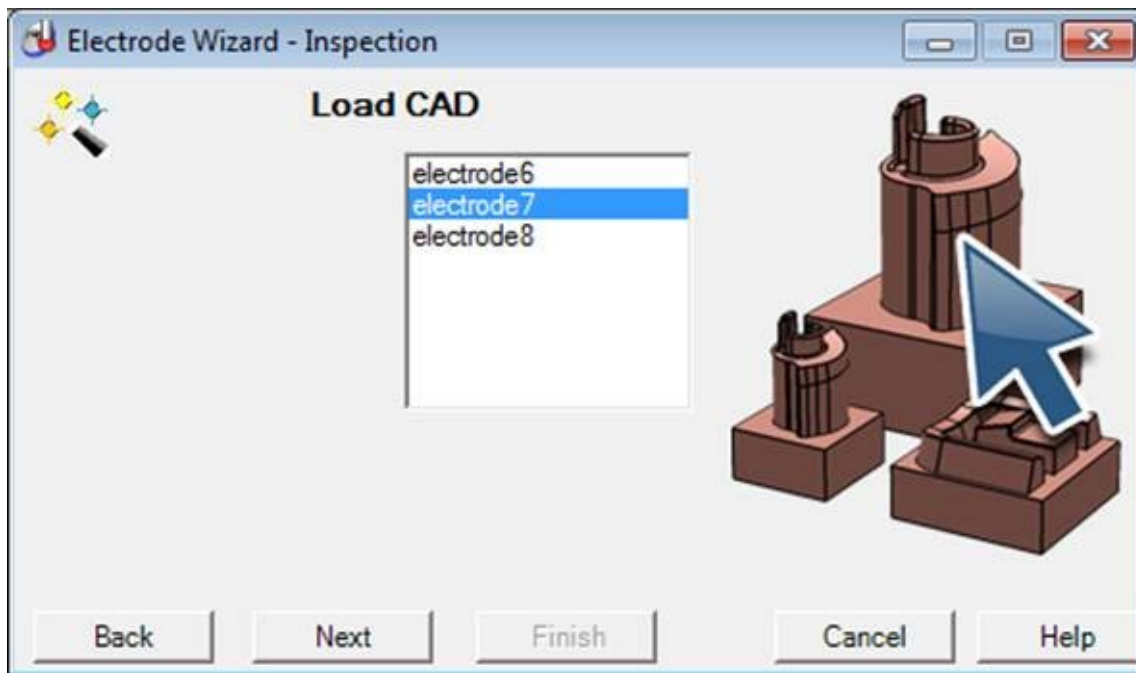
Select the one you are going to inspect and press the Next button to proceed.

If you realise that you have selected the wrong .trode file you can press the Back button that will take you back to the step where you can select another .trode file.

Step 3 - Creating PPaths

The Wizard will take you to the next step where a list of rougher, semi-finisher and finisher would be added to the list box ready for selecting the one that has been clamped for inspection.

Select the one you are inspecting eventually change the SafeZ values for the probepath(s) that are going to be created from points positioned during the modelling stage (in PowerSHAPE).
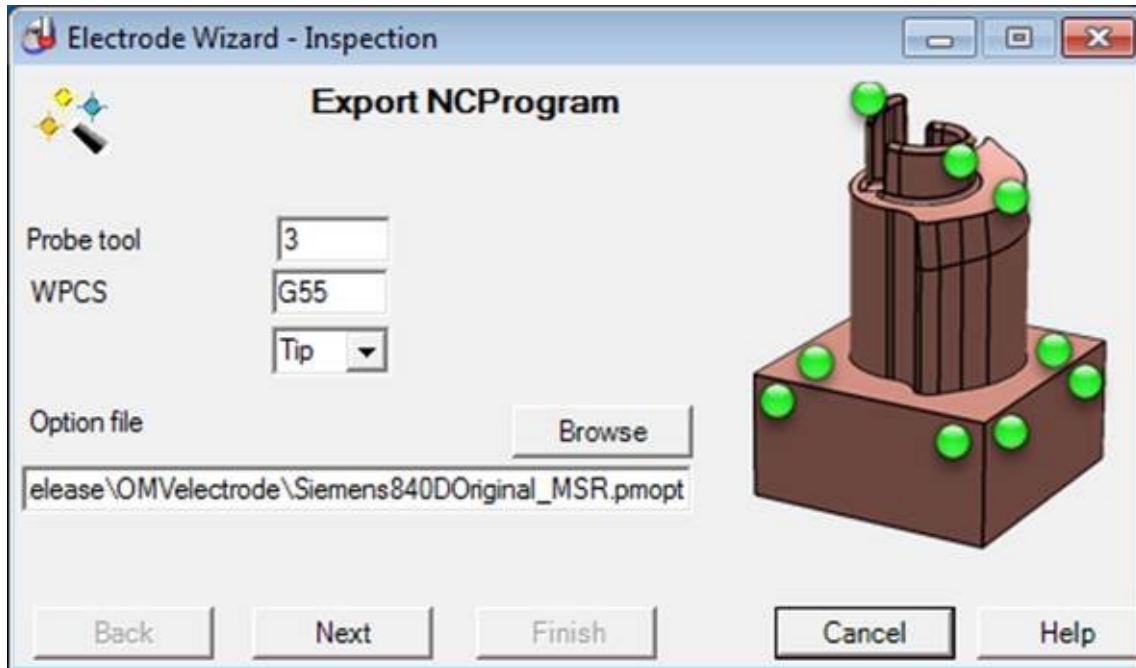
Press Next to create the probe paths.
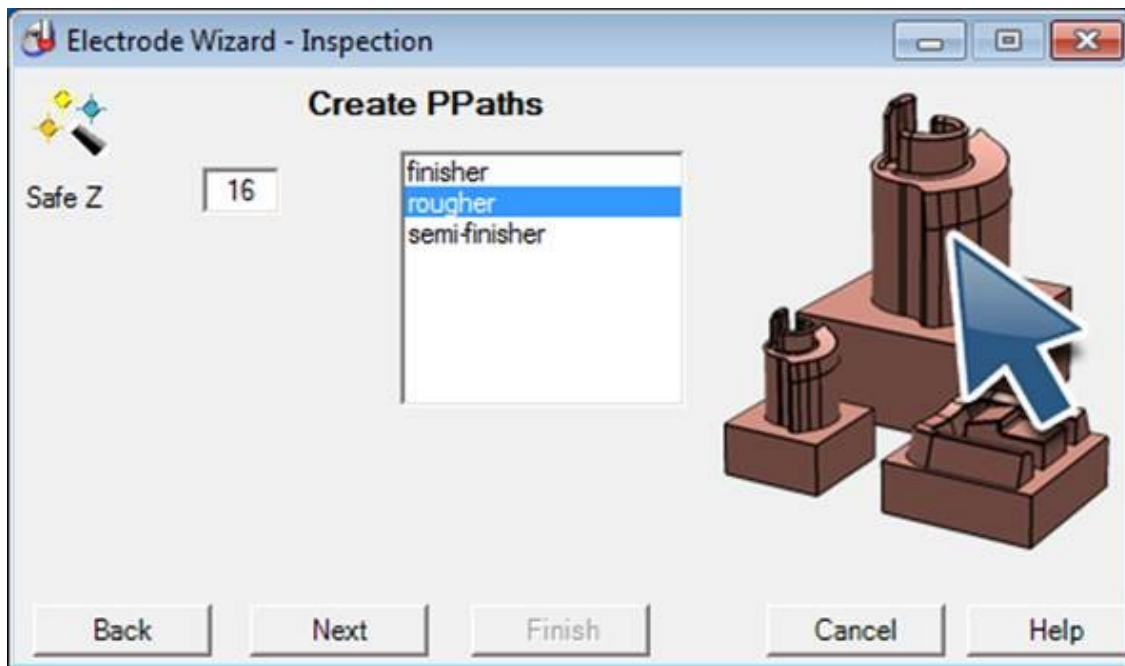
Step 4 - Selecting a region to inspect
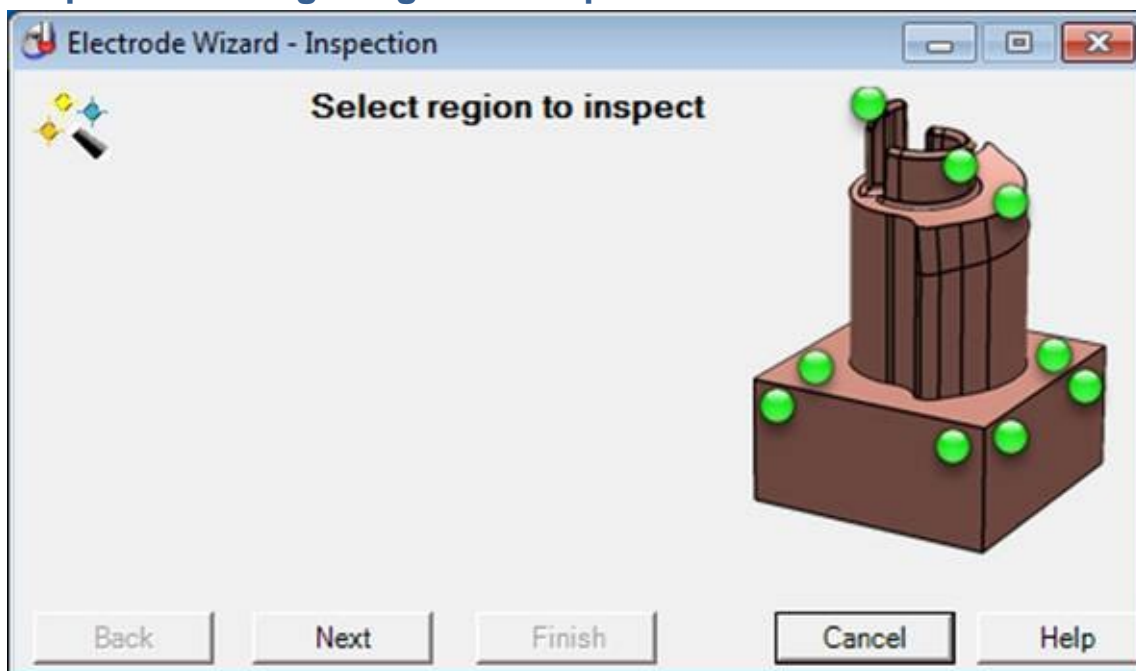
At this step a region can be set in the sequence tree to export part of it to the cldata file and NCProgram.

Press Next to move to the Export NC Program page.

Step 5 - Export NCProgram

This page will display the current settings from the config file - those pre-set in the Configuration dialog. They can be changed for this particular NCProgram before pressing the Next button.

Step 6 - Load results

The results will be loaded from the .msr file

## Step 7 - A prompt to create a Best Fit

The user is prompted by a message box to create a best fit item from PI GUI.

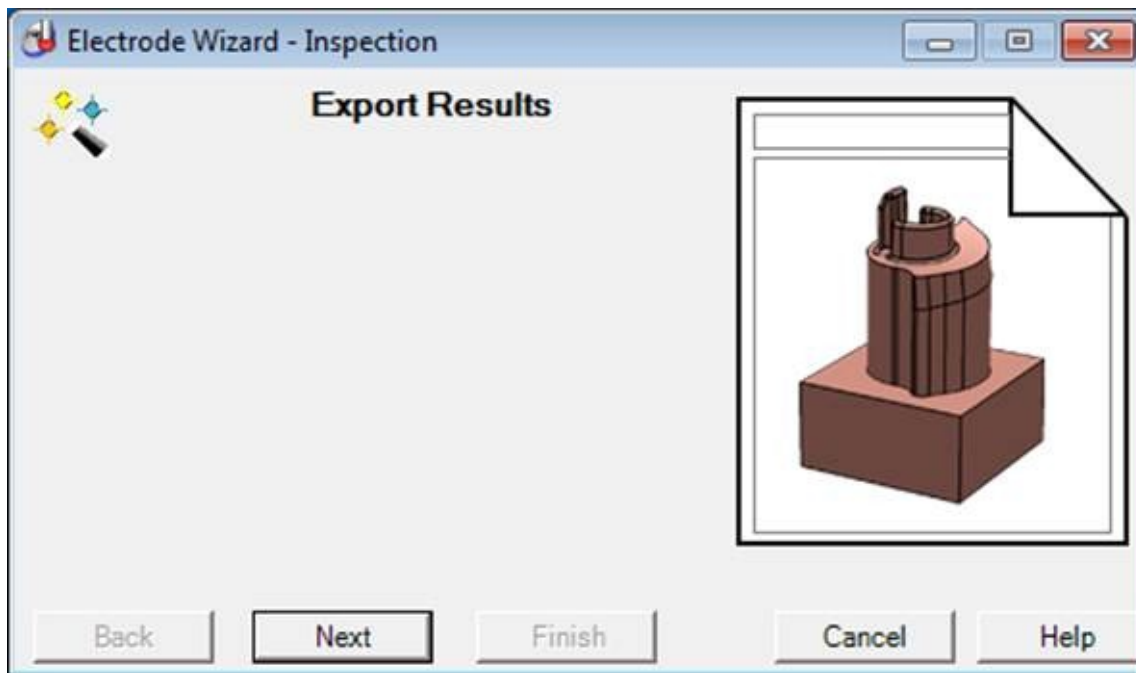This is just a prompt so pressing OK will not cause any changes to the document.

Pressing Next will run a check whether the inspection groups are within the specified tolerance limits. This will result in a red cross or green tick image displayed on the Wizard form.
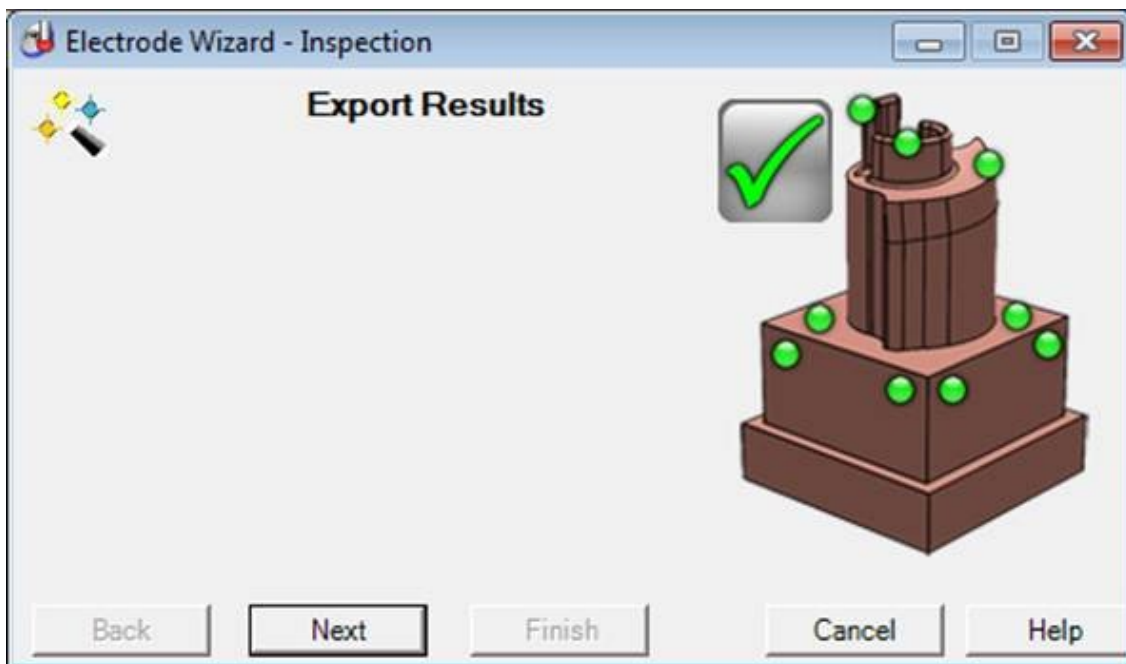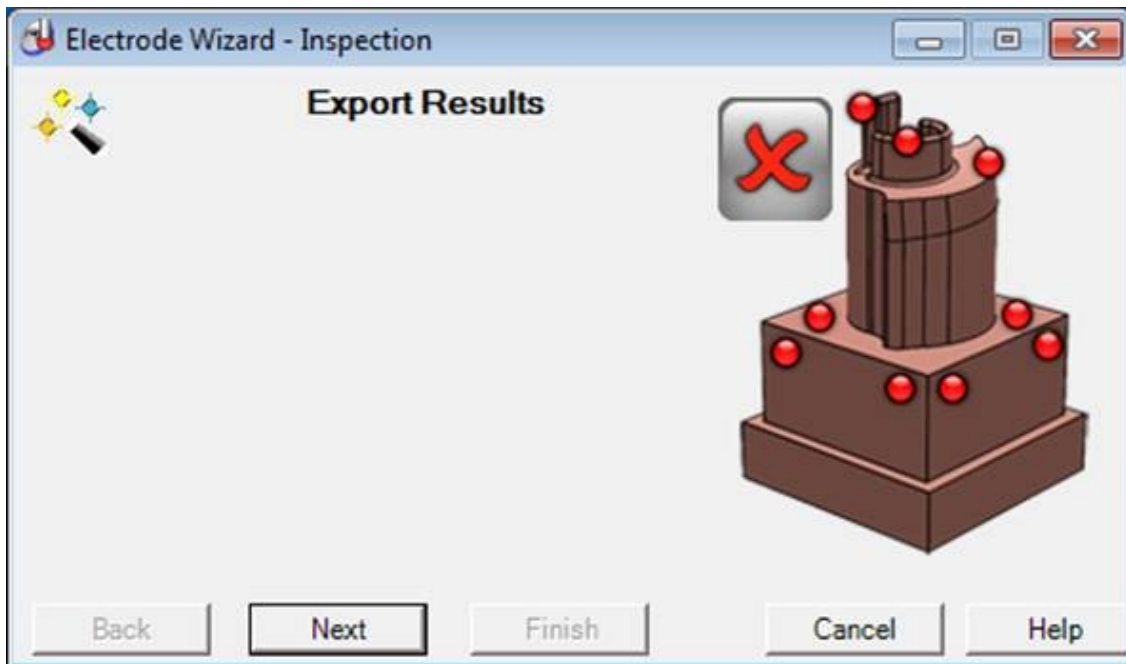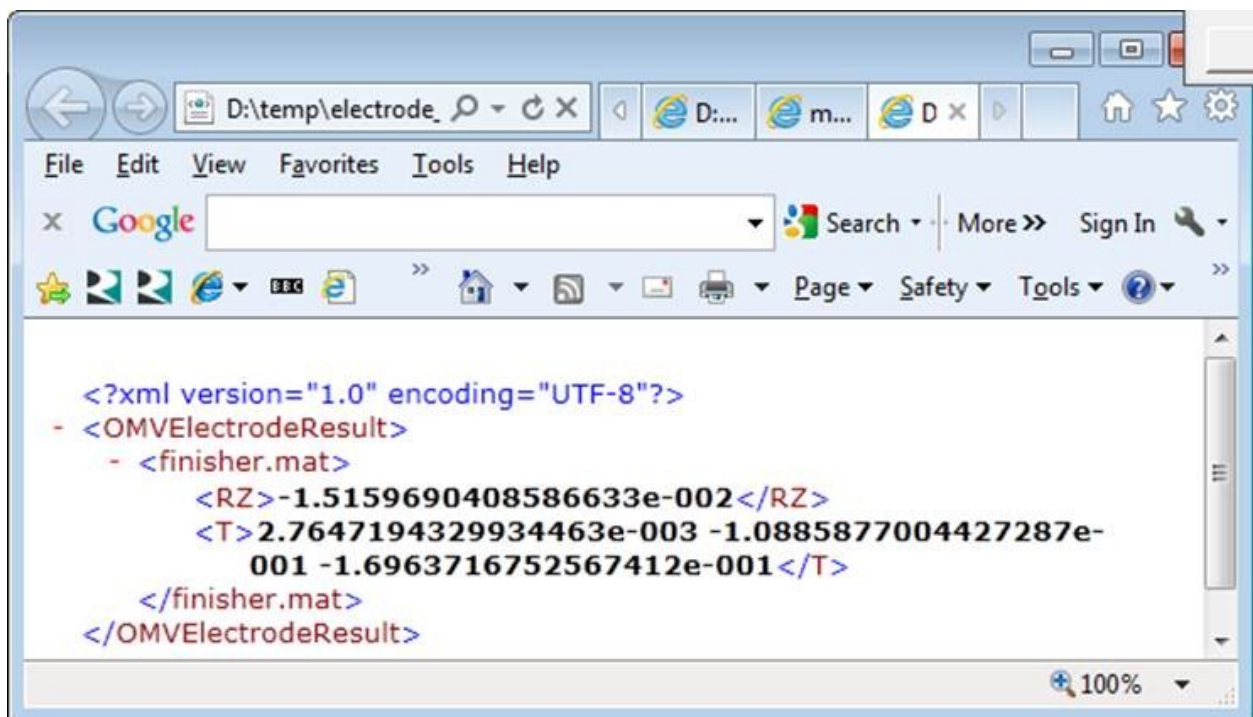

Step 8 - Export results

Pressing Next will create automatically the PI built-in html report.

Pressing for a second time the Next button will search for a calculated BestFit item in the sequence tree and will export it to an xml file.


```xml
<?xml version="1.0" encoding="UTF-8"?>
- <OMVElectrodeResult>
  - <finisher.mat>
        <RZ>-1.5159690408586633e-002</RZ>
        <T>2.7647194329934463e-003 -1.0885877004427287e-
            001 -1.6963716752567412e-001</T>
     </finisher.mat>
  </OMVElectrodeResult>
```

Step 9 - Last page

The Finish button is activated. On pressing it all files created for the inspection of this particular electrode will be saved to the .trode file selected in the beginning of the session.