
Bentley InRoads Group of Products

Exporting InRoads Data for Construction

1. Introduction

Once you have completed your design, you often need to transfer the data to other products, another software package or a data collection instrument or a numerically-controlled grader, for example. The InRoads Group of products offers several ways to accomplish this transfer. This document covers the use of the LandXML Translator, the Upload Trimble Add-In and the Export Leica DBX 1200 Add-In.

2. Before You Start

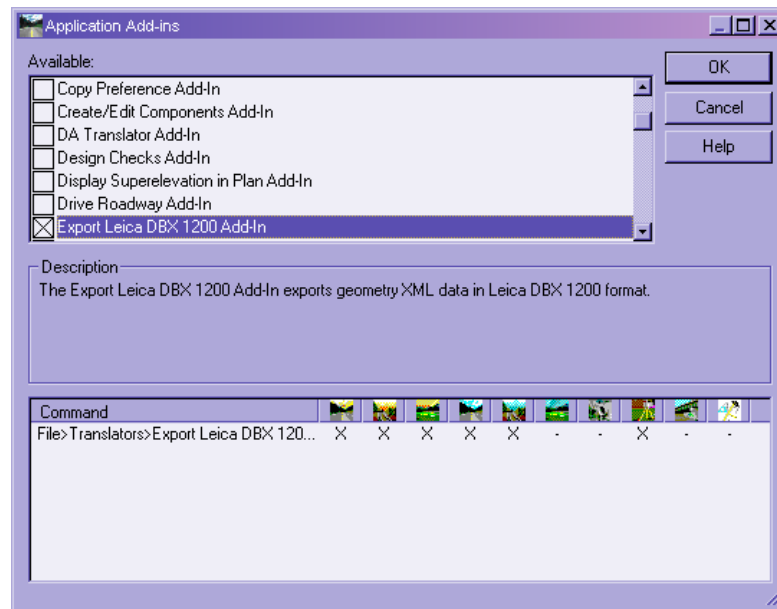
Before following the steps outlined in this document, you should have already created a geometry project containing one or more horizontal alignments. If you plan to export surface data, you should already have your DTM created as well.

2.1. Application Add-Ins

The Upload Trimble Add-In and the Export Leica DBX 1200 Add-In are available in the following InRoads Group products:

- InRoads Suite
- InRail Suite
- InRoads Site Suite
- InRoads
- InRail
- InRoads Survey
- Bentley PowerSurvey

To access these two add-in applications, select the *Tools > Application Add-Ins* command and toggle on the checkbox beside the name of the add-in you wish to use. This dialog lists all add-ins that are available on your workstation and shows the path to the command(s) once added in as well as their availability by product.



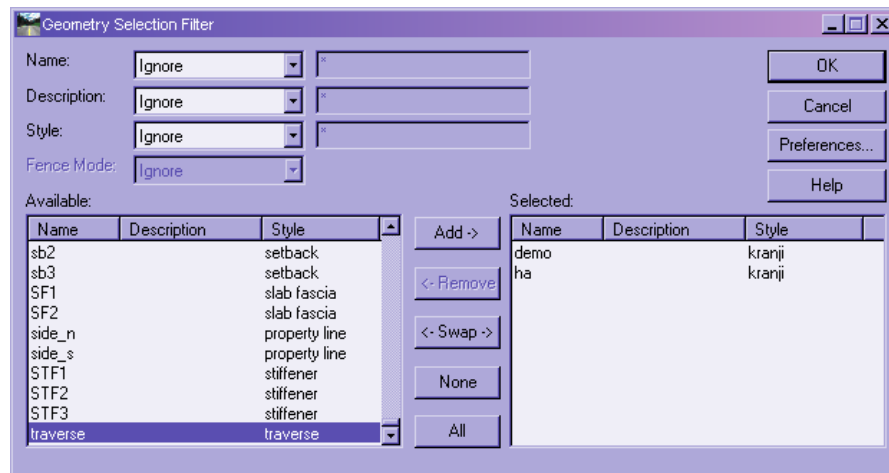
Application Add-Ins Dialog

The LandXML Translator is available in all InRoads Group products and is found on the *File > Translators > LandXML Translator* menu.

3. LandXML Workflow

3.1. Exporting Geometry

1. Select the *Export Alignment* tab of the *File > Translators > LandXML Translator* command.
2. Set the *Geometry Project* field to the project containing the alignments you wish to export.
3. To select the alignment(s) to be exported, you have three methods: You can key in a comma-separated list (wildcards are allowed) in the *Include* field, or you can use the *Locate* button beside the field to select the alignment, or you can use the geometry selection filter by placing your cursor in the *Include* field and selecting the *Filter* button which brings up the *Geometry Selection Filter* dialog shown below:



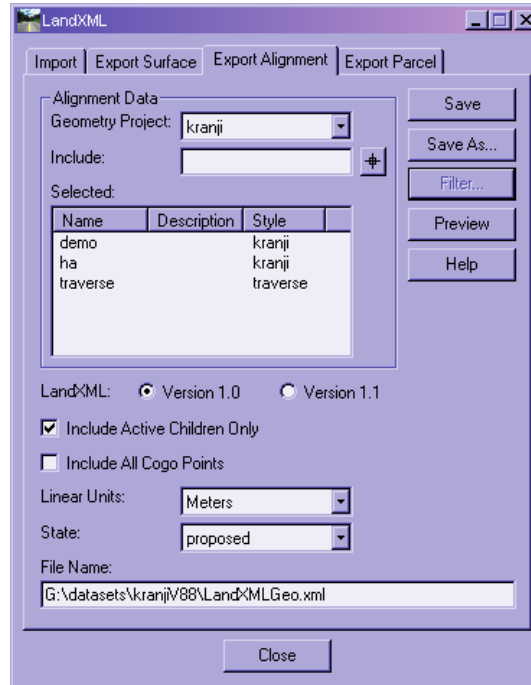
Geometry Selection Filter Dialog

The *Name*, *Description* and *Style* fields can be used to limit the alignments shown in the *Available* list.

Note: If you use the *Locate* button to select your alignment, you can add to the *Selected* list by depressing the CTRL key while selecting additional alignments.

4. Set the *LandXML* option to *Version 1.0*. Toggle on the *Include Active Children Only* option if you wish to include only the active vertical alignment.
5. Set the *Linear Units* to match your design. If your project is metric, your linear units will automatically be *Meters*, but if your project is imperial, you must choose *International Feet* or *US Feet*. Set the *State* field to match your data as well.

- Key in a file name in the *File Name* field and select the *Save* button or use the *Save As* button to navigate to a directory. Your dialog should look similar to the following figure:

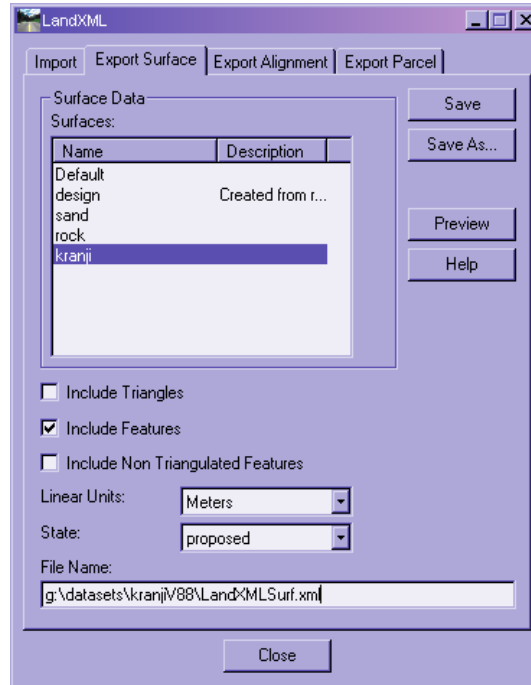


Export Alignment Dialog

3.2. Exporting Surfaces

- Select the *Export Surface* tab of the *File > Translators > LandXML Translator* command.
- Select the desired surface(s) in the *Surfaces* list.
- Toggle on the *Include Features* option, but make sure the *Include Triangles* option is not toggled on
- Set the *Linear Units* to match your design. If your project is metric, your linear units will automatically be *Meters*, but if your project is imperial, you must choose *International Feet* or *US Feet*. Set the *State* field to match your data as well.

- Key in a file name in the *File Name* field and select the *Save* button or use the *Save As* button to navigate to a directory. Your dialog should look similar to the following figure:



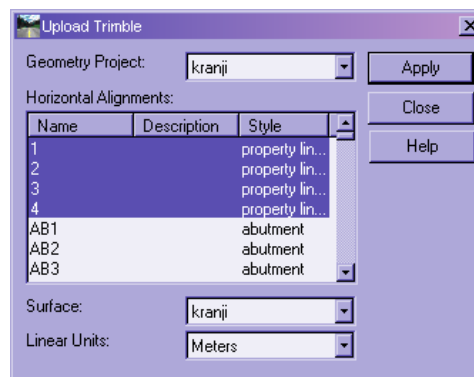
Export Surface Dialog

4. Upload Trimble Add-In Workflow

You must have Trimble Link™ installed on your workstation to use this command. The Trimble Link™ software is included in the *TrimbleLinkEngine* subdirectory on the media containing the setup for your InRoads Group of products.

If you have not already done so, turn on the Upload Trimble Add-In as described in §2.1.

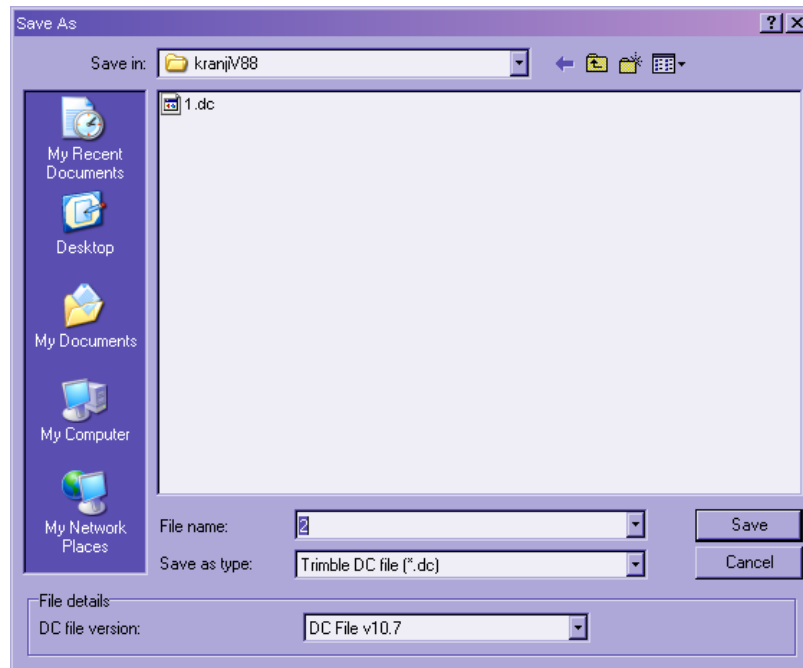
4.1. Exporting Geometry and Surface



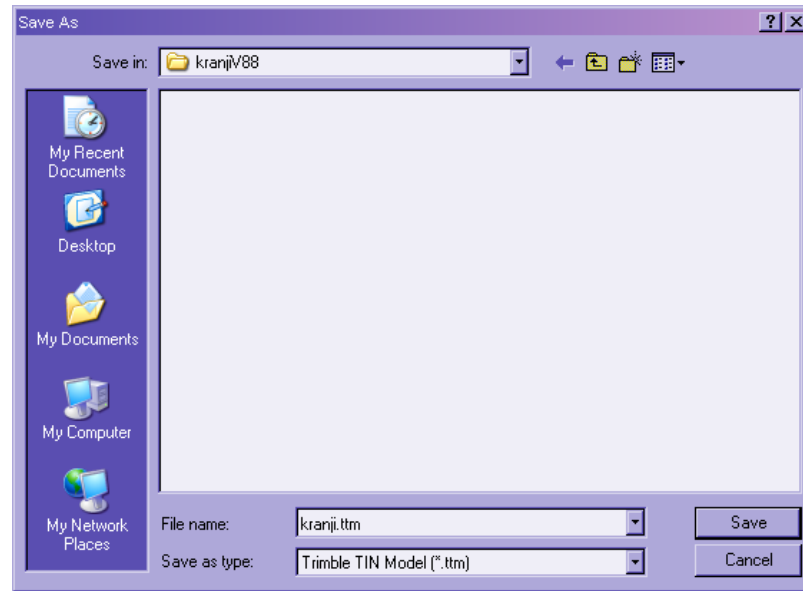
Upload Trimble Dialog

- Select the *File > Translators > Upload Trimble* command.
- Set the *Geometry Project* field to the project containing the alignments you wish to export.

3. Select the alignment(s) to be exported by highlighting the alignment in the *Horizontal Alignments* list.
Note: You can select a group of contiguous alignments by depressing the SHIFT key and selecting the first and last alignments in the group. You can also select non-contiguous alignments by depressing the CTRL key and selecting each alignment to be exported.
4. Set the *Surface* field to the desired surface and set the *Linear Units* to match your design. If your project is metric, your linear units will automatically be *Meters*, but if your project is imperial, you must choose *International Feet* or *US Feet*.
5. Select the *Apply* button and a *Save As* dialog will display allowing you to specify a Trimble DC file name for each selected alignment and a Trimble TIN Model (TTM) file name for the surface.



Save As Trimble DC File Dialog



Save As Trimble TIN Model Dialog

Note: If this is the first time you have accessed Trimble Link™, you will be presented with a dialog requesting your Authorization Code. To obtain an authorization code, visit <http://www.trimble.com/tlsreg.asp>.

5. Leica DBX 1200 Add-In Workflow

If you have not already done so, turn on the Export Leica DBX 1200 Add-In as described in §2.1.

5.1. Exporting Geometry and Surfaces

1. Select the *File > Translators > Export Leica DBX 1200* command.
2. If you are exporting alignments, toggle on the *Geometry Project* option and set the field to the project containing the alignments you wish to export.
3. Select the alignment(s) to be exported by highlighting the alignment in the *Horizontal Alignments* list.

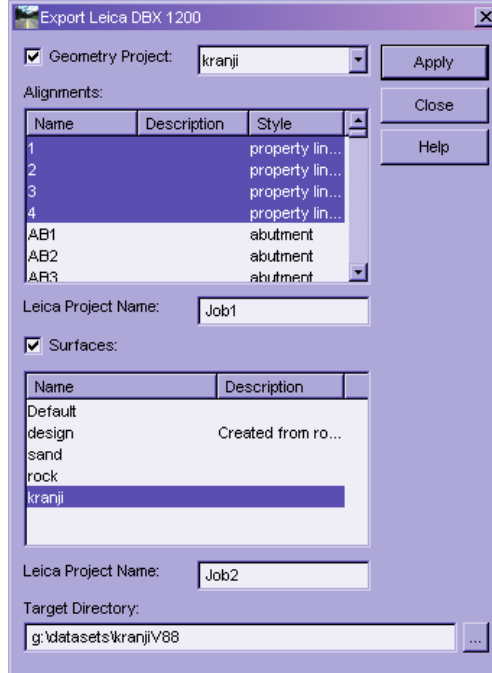
Note: You can select a group of contiguous alignments by depressing the SHIFT key and selecting the first and last alignments in the group. You can also select non-contiguous alignments by depressing the CTRL key and selecting each alignment to be exported.

4. Key in a name in the *Leica Project Name* field below the *Alignments* list.
5. If you are exporting surfaces, toggle on the *Surfaces* option and select the surface(s) to be exported.

Note: You can select a group of contiguous surfaces by depressing the SHIFT key and selecting the first and last surfaces in the group. You can also select non-contiguous surfaces by depressing the CTRL key and selecting each surface to be exported.

6. Key in a name in the *Leica Project Name* field below the *Surfaces* list.
7. Set the *Linear Units* to match your design. If your project is metric, your linear units will automatically be *Meters*, but if your project is imperial, you must choose *International Feet* or *US Feet*.

8. Key in a directory name in the *Target Directory* field or use the *Browse* button beside the field to select a directory. Select the *Apply* button and the various *.X** files will be created that are required by Leica.



Export Leica DBX 1200 Dialog

6. Glossary

Terms used in this document are:

DTM	Digital terrain model
TIN	Triangulated irregular network
TTM	Trimble TIN model