Export/Import Tools

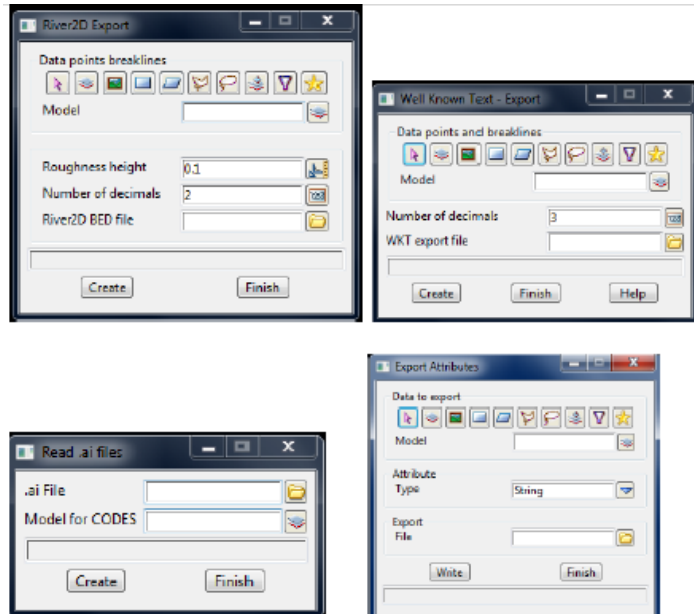## Eliot Sinclair & Partners Ltd

END USER: Samuel Cech
CLIENT: Eliot Sinclair and Partners Ltd

12d DIMENSIONS:

Customisation

Project Summary

Not every software package makes it easy to export 12d Model data to it. A number of Eliot Sinclair & Partners ("ESP") clients were using software packages that were open source (or not widely used), and thus custom export macros provided the best results. Below are some examples.

For more information

To find out more about how you can create better designs faster with the 12d Model solution for civil engineering design, visit www.12d.com.

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The Challenges

1) An ESP client working on the Wimakeriri River fish habitat studies was using a software package by the University of Alberta - River2D, a two-dimensional depth averaged finite element hydrodynamic model which has been customised for fish habitat evaluation studies.

The requested export format needed to contain point and break lines to allow the River2D package to perform its own triangulation. Roughness height value was also supplied, but more was needed to optimise efficiency on this important project.

2) ESP was supplied an Adobe Illustrator file in an older version, which they were unable to open. The ASCII file was deemed to likely be corrupt, so they decided to create a custom import tool for 12d Model to extract as much information as possible.

3) ESP client SCIRT needed the ability to import and export complex multi level attribute groups for many strings, and while there are many native options in 12d to do these exports, most only allow for one type of string.

4) ESP's internal GIS package for cadastral information, Quickmap, allows for the import and management of custom information. They were eager to upload points and lines into Quickmap in order to show nationwide areas they have surveyed and benchmarks established on sites that could be reused by future surveys. Because Quickmap is an Access Database system that utilises WellKnownText, they needed another export tool from 12d Model.

The Solution

With these various challenges to overcome, the best idea seemed to be to engage the skills of their 12d Model Customisation expert to write 12d Model macros.

The Result

With the right 12d Model macros, the ESP team was able to:

- help optimise their client's River2D work on the Wimakeriri River
- extract all the relevant information from the corrupted Illustrator file
- assist SCIRT with importing and exporting complex multi-level attribute groups for many strings with their macro that recognises both drainage and super strings
- create the export tool they needed for working with Quickmap.

With these successes under their belt, ESP plans to utilise the power of 12d Model macros even more in the future.

Wimakeriri River
Photo credit: Environment Canterbury

12d® Model

Roads and Highways

12d Model's design option is the smarter solution for the design, modification and maintenance of Road and Highway projects.

Enjoy advanced 3D tools to design local and major roads, intersections, roundabouts, highways, interchanges and much more.

Ports and Dredging

12d Model is the solution for port infrastructure and dredging, easily managing the very large datasets and complex volume calculations often required by these projects.

A complete range of flexible and customisable volume calculation tools allow teams to extract and present the information quickly and easily.

Land Development

12d Model is the most versatile solution for the creation of sustainable land development projects, including residential, commercial and industrial developments, recreational areas, landfills, and agriculture projects.

Easily manage all aspects of your land development project from earthwork quantities, road design utilities and drainage design.

Airport Infrastructure

12d Model provides a solution for the design, construction and analysis of new airports, as well as the upgrade and maintenance of existing runways and airport infrastructure.

Easily manage large airport infrastructure projects and share data across multi-disciplinary teams.

Rail

12d Track has been specifically designed for the survey, design and construction of light, heavy and high speed rail projects.

Extensive railway tools in 12d Track allow the rail designer to quickly and easily design their projects. These options are built on the existing 3D modelling and design tools available in 12d Model.

Mining Infrastructure

12d Model's powerful set of exploration, site investigation, survey and analysis tools are crucial for the initial design, construction and ongoing operation of mining projects.

Comprehensive tools for the survey, design and construction of access roads, railways, earthworks and services allow for the coordinated design and management of mining infrastructure from within 12d Model.

Drainage, Sewer and Utilities

12d Model provides comprehensive tools for the design, analysis and optimisation of stormwater and sewer projects using rational, dynamic (hydrograph) and 2d drainage methods.

Powerful clash detection management allows for efficient 3D modelling of service networks such as gas, electricity, telecommunications and water prior to construction.

Surveying

12d Model is a complete surveying package providing the tools to manage all facets of surveyed data including LIDAR, topographical, as-built, conformance, traversing, geodetics, data mapping, labelling and much more.

The 12d Field option runs on a ruggedized tablet and gives the user access to full 12d Model functionality, allowing you to take the entire project into the field with the most comprehensive pick-up and set-out tools.

Oil and Gas

12d Model assists with the design, construction and mapping of oil and gas pipelines, original site exploration and the wide range of infrastructure required for oil and gas projects.
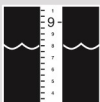
Accurate 3D modelling and the ability to share data between users allow teams to quickly and easily coordinate designs.

Construction

12d Model is the ultimate software for construction with powerful set-out options, direct interfaces to machine control and detailed conformance reporting and auditing.

Manage 3D data and control volumes, quantities and progress claims with 12d Model. Set-out your project and undertake conformance and as-built surveys live on-site using 12d Field.

Rivers, Dams and Hydrology

12d Model handles very large datasets and interfaces with a wide range of analysis packages, making it perfect for flood studies and the management of rivers and dams.

12d has partnered with industry leading analysis software, allowing users to apply 2D drainage analysis from within 12d Model.

Environmental

12d Model's ability to handle very large datasets combined with flexible and comprehensive 3D analysis and modeling tools make it perfect for a wide variety of environmental projects.

Existing workflows can adopt 12d Model easily as it allows users to directly interface with GIS systems and most software packages and file formats.

Why Choose 12d?

- Powerful data processing & intelligent functionality.
- Modular, easy to update & completely customisable.
- Seamless integration with major industry software and hardware.
- Used in over 55 countries worldwide.
- Friendly support & training from industry experts.

12d Model