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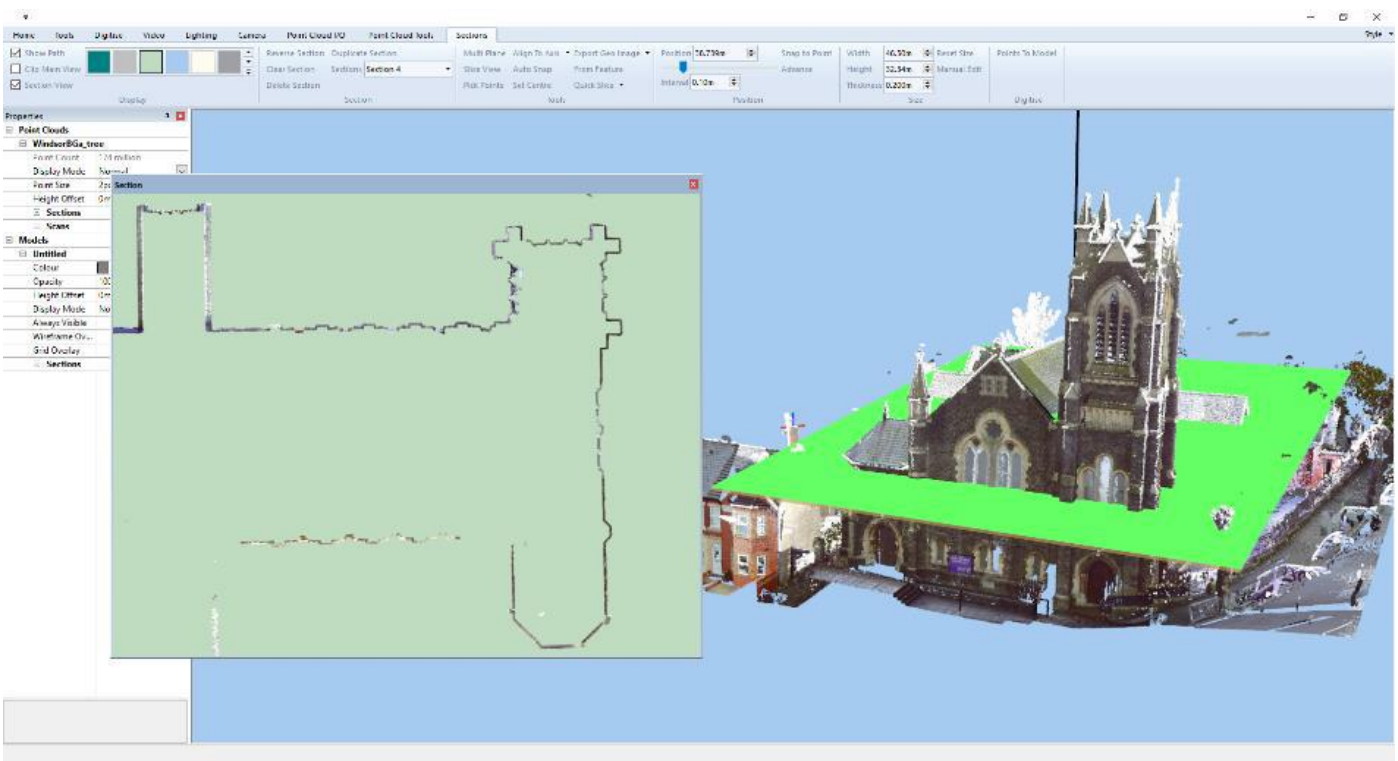
AiC April 2018 Newsletter

This time last year, we were preparing for the annual **GeoBusiness 2018** show with a sneak preview of our new ⁿ4ce developments. It's now out in the open with the launch of ⁿ4ce v4.00, including point clouds, AutoCAD 2018 DWG support and new licencing. We've also launched our new website with lots of useful advice and support materials, to help you get to grip with all these new features, some of which will be discussed later. So, come and visit us on **Stand N2** and attend our workshop on **Tuesday 22nd at 12.30pm (Room F)**, to see the latest developments. It's free, but we'd suggest you pre-register here: https://goo.gl/sjw6ph . We are also supporting the Ale trail and handing out freebies, including the limited ⁿ4ce v4.00 button badges.

ⁿ4ce v4.00 – New Features and Improvements

One of the major new developments is the release of our point cloud processing. This is available with ⁿ4ce Professional and ⁿ4ce Designer editions, with varying functionality. Lite users have not been left out, with the introduction of features previously only available with Pro and Designer. These include generating points from CAD in Models, rather than in a Coordinates folder. With v4.00, we now support AutoCAD 2018 DWG/DXF files, but be warned; if you import this into AutoCAD 2019, a false message will appear stating that the DWG was created by an educational copy of AutoCAD and not for commercial use. Ignore this message! Further revisions to our DWG/DXF read/write software will bring this up to date with AutoCAD 2019 and future releases.



Please be aware that your current "off the shelf" laptop may not be up to processing large point cloud files. We use the graphics card to store and process point cloud data and recommend high end independent cards with the latest software driver updates. These graphics cards will be increasingly used to improve speed and capacity with ⁿ4ce. We have had some issues with Quadro cards and some E57 files have not been recognised by our point cloud engine. There appear to be format variations which we're addressing as we identify them!

The point cloud engine can also import LiDAR grid data files and allow the extraction of polygonal areas for further processing in ⁿ4ce. With the ability to extract pixel image intensity from aerial photography, this makes for near realistic images.

New functionality:

1. Point Cloud Engine
    - Import E57, LAS\LAZ, PTS, CSV point cloud data. Export LAS\PTS\CSV
    - Multiple shader modes from RGB, Intensity, User Defined, Grey Scale etc…
    - Single point digitisation of coded survey data from the cloud
    - Hide\Constrain the data in the view,
    - Multiple section types though the cloud (Designer Only)
    - Feature extraction (Designer Only)
    - High resolution orthographic image generation
    - Surface extraction,
    - Shape detection (Designer Only)
    - Transformations.
2. AutoCAD 2018 DWG/DXF read and write support.
3. Construction Depths (Designer Only). Groups can now be built up from thicknesses of other predefined materials. Volume reports include individual volume of each material in the groups.

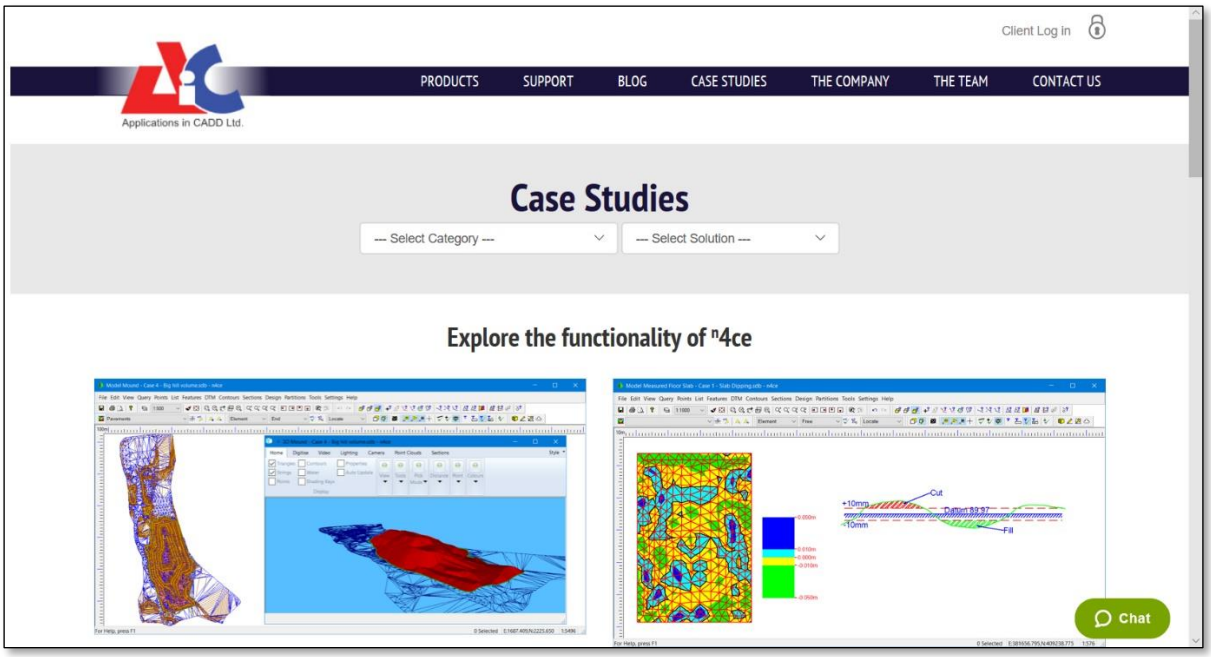
Improvements:

1. Database changes to improve SDB
2. Redraw of aerial Images (TIFF, JPG and PNG) hugely sped up (memory dependent)
3. Perpendicular Offsets via infield coding
4. New cross hair cursor to screen extents
5. Unnecessary viewports removed from exported AutoCAD drawings
6. Real-time height shading speedup
7. Solid hatches are imported from AutoCAD correctly
8. Solid hatches can now be generated instead of predefined patterns made from dense line work
9. Line simplification built into tools which reverse engineer CAD line work. Especially useful when generating points from curved contours or similar polylines. Sensible use can reduce overall point count by around a factor of 25, but still preserve the overall shape and geometry
10. Lite now has some of the tools to reverse engineer CAD drawings, which were previously reserved only for Professional and Designer users
11. Trimble JXL files are now supported, including images tagged onto points
12. Leica Icon CSV files containing Observations are now supported. Must be renamed to .ICN for import though
13. Option under Settings\Observations to control import of GNSS statistics when importing Leica HeXML and Trimble JXL files

****Important**** due to changes to the v4.00 database, earlier releases of ⁿ4ce will not be able to open v4.00 SDB's, but v4.00 can open all previous release SDB's. Both v4.00 and earlier releases of ⁿ4ce can reside on your computer, side by side, using the same default settings.

New Website and Case Studies

If you are using n4ce v4.00, then you will have visited our new website to download this release.



New AiC Website and Case Studies

One of its new features is the Case Studies page. Whilst we can manufacture examples and training data, it helps if we can use real data to demonstrate the power and features within our software. If you have a project that you'd like to share, then please contact us.

Golf Day Sponsorship

AiC will be supporting The Severn Partnership charity golf day, in aid of Lionheart. It is being held at the Shifnal Golf Club, on 21st June.

We are also sponsoring Leica's annual golf day with prizes. This year it is being held at the Warwickshire, on 26th June.

Last year we supplied golf balls and nicely engraved tankards for the longest drive and nearest the pin, as shown opposite. This year we intend to be different – wait to see what we have decided on!

Andrew will join Phil will be on hand with our Sonar boat and demonstrations of our point cloud software.

The plan is to have this close to the nearest the pin(t) on a hole over water.

n4ce Software Training Courses

The following dates have been reserved for these courses. Two dates are available for each course.

Wednesday 2nd May and Wednesday 20th June - Beginners

This course will take you through basics of n4ce, how it is set up and the code table, with hands on exercises. CAD will be introduced, including the creation of symbols and generating points from CAD. General Import/Export will be covered along with feature creation, model creation and editing.

Thursday 3rd May and Thursday 21st June- Intermediate

Carrying on from the Beginners course, sections, volumes and Drawings will be discussed in detail. Introducing select List and automatic filtering of height text, plus more options for generating points from CAD. Only attend on this course if you understand the basics!

Friday 4th May and Friday 22nd June- Point Cloud

This is aimed at n4ce Pro and Des users and will cover importing, isolating points, sections, auto recognition of features, height shading and best practice for processing point clouds. We have only two dedicated training machines so feel free to bring along your own power workstation.

These courses are being held at our offices with a maximum of eight per course, so it's on a first come basis. Course notes and refreshments will be supplied and we can provide computers, if necessary. Please indicate at time of booking if you need a computer and/or if you have any special dietary requirements

Course costs are **£175.00 + VAT** per person, per day. We can also offer one-to-one training at our offices for **£350.00 + VAT,** or alternatively, we can also come to your offices which may be cheaper where training for 4 or more people is required. Our daily rates are **£795.00 + VAT** plus travel and subsistence, where applicable.

Please Contact **Debs** for all your training needs at debs@appsincadd.co.uk

Irish Training – Innovate NI

We are joining forces with our Irish agent, InnovateNI, to put on training course on our n4ce software in Belfast. This three-day course runs from Tuesday 24th April to Thursday 26th April focussing on:

> *All elements of Coding, the effects it has on Surface Modelling & Data Presentation, not to mention simplifying the Data Collection process in the field. Modelling of Survey Data [Captured in the field] & Proposed Design [Change 2D Designs to 3D], to enhance every day Set-out using platforms such as DTM's, Road Alignments etc., for GPS, TPS & Machine Control Systems. After this 3-Day Course, you will have covered all aspects of Data Capture, Data Processing, Data/Design Validation & Output to Construction Environment, for both engineering infrastructure on Machine & Off-Machine.*

Booking can be made directly with InnovateNI, using this link: https://goo.gl/WXi7fp