

Release notes for 2.3.0 (from 2.2.6)

Version 2.3.0 includes a range of improvements.

New/Improved features (p:IGI+ and Metis Transform)

- We have introduced the concept of 'auto-artefacts', extending the autographs to all meaningful artefacts: graphs, maps, palettes, pages, statistics, rule sets, dynamic sample sets
 - all artefacts can now be tagged, have a clickable help link added, and include a notes section for explanation / comments
 - users can add / edit existing tags, links and notes – this provides a way to document a project
 - tags can be used as filters in the artefact manager
 - p:IGI+ ships with a set of updated auto-artefacts, including palettes and pages
 - users can create their own auto-artefacts, which can be added at the user or company level
 - companies can set up and manage a shared folder for their own auto-artefacts
 - tags, links and notes are saved with all artefact templates
 - IGI can live update the auto-artefacts to provide a quick response to requests for new autographs etc.
 - all existing IGI autographs have been updated, with added notes to show the source, and links to ig.NET pages explaining the use of the artefact
- Support for uncertain values has been added to the p:IGI+
 - for continuous data we support uncertainty specified as a standard deviation
 - for discrete data uncertainty is expressed as a probability for each category
 - a default mapping is built to assign data from the vitrinite reflectance standard deviation to the vitrine reflectance mean as an uncertainty, thus error bars will be seen on VR plots where the VR data has standard deviation reported
 - the machine learning tools will return prediction uncertainty for regression, classification and clustering (where available)
 - regression uncertainty is derived from predictive uncertainty on the test set; this will be improved upon when we introduce full probabilistic models
 - where present, uncertainty is shown on the visual query tool for brushed samples
- Error bars are shown on scatter, depth, multi-depth and single track multi-property depth plots
 - error bars are drawn to + / - 1 standard deviation
 - error bars are styled using any applied colour palettes, and are brushed on selection of the sample
 - error bars can be shown on log and linear axes
 - error bars are drawn by default but can be turned off in the graph manager layout tab
- Two new data 'statistics' tools have been added for reporting purposes:
 - Contingency tables will allow you to select two text properties, and count the co-occurrence of values in both – this is sometimes called a cross-tabulated count table
 - counts can be shown, or the values provided as a percentage

- Pivot tables will allow you to select two text properties, and one numeric property, and show the mean, standard deviation, or, mean +/- standard deviation and optional counts in the co-occurrence – this is sometimes called a cross tabulated statistics table
 - display precision can be chosen for the statistics
- the contingency and pivot tables can be restricted to a sample set
- results can be copied to the clipboard
- Editing overlays has been improved
 - when editing an overlay, the graph screen size is preserved to ensure the overlay editing shows what will be seen on the graph, and aspect ratio remains unchanged
 - text, rectangles and ellipses can be rotated
 - the rotation is done to preserve the relative orientation (to a line) regardless of the aspect ratio of the plot
 - overlay elements with names / legend entries now have the names shown in the editor for easier selection
- Graphs have been improved:
 - the sizing of a graph now sets the graph area size only, with the window size adjusting to the remaining content, making it easier to copy graphs at an identical size for reports
 - you can now just copy the graph, without needing to hide the legends, or copy both graph and legends
- Visual query has been improved:
 - the properties used in visual query can now be defined and updated in the user settings allow you to customise what you see in visual query and maintain this between projects
 - users can now assign values to samples for all currently brushed samples using visual query (label samples option)
- Palettes have been improved:
 - a new set of default colour palettes for both continuous and discrete properties have been added to make creation simpler
 - users can set transparency for all entries in a colour palette easily, or if desired set it for just the individual entries
 - show all / hide all entries has been moved to the Show column header
- Maps have been improved:
 - users can add an image as an underlay on the map, registering the image to map similarly to graphs
 - the image link is remembered as part of the map so will remain shown as long as the path remains valid
 - the transparency of the image can be set
 - an image legend string can be added to the map
 - users can now colour individual elements in shapefiles based on the value of a selected element in the database
 - new autofill options have been added to allow the user to select useful palettes for shapefiles
 - transparency can be set at the individual entry level, or for all colour used

- Pages have been improved:
 - the existing analysis pages have been removed from the default project
 - interpretation pages have been added as auto-artefacts
 - new page showing all properties with data, which can now show properties with data across the whole project, in a specific analysis / property group, and / or in a given indicator
 - key columns can now be written to user settings to define a default set
 - it is now possible to remove a property from a page using a right click option on the page header
- It is possible to edit an equation for a project property, which will recalculate the values for the project property
 - when creating project properties, units and ratios of the inputs will be fixed to the default unit and ratio
- Machine learning tools will be sent contextual information, including any key columns, and location name, latitude, longitude and base measured depth automatically
 - these are indicated on the model manager

Metis Discover specific features

- Querying in Discover has been made easier using quick search criteria. Common query properties are now shown on the starting screen
 - users can still add more complex criteria if needed
- Deleting samples, wells and harmonisation is all done via a new web application Transform Online

Metis Transform Online:

- Metis Transform Online is a new web application for data managers used to add, edit and remove data within Metis
- Access to the Metis dashboard, harmonisation, upload PVT files and activity log is available from the sidebar
- For members of the PVT foundation partnership PVT files, including source reports in excel or pdf format or ProdML files can be uploaded and assigned to a sample via Transform Online
- Bulk PVT data is extracted from valid ProdML files and ingested into the Metis database.
 - this data is then available in p:IGI+ using the PVT property model

Metis Transform specific features

- Project merge can now be undertaken only within a sample set if desired
- Wells (candidate wells) can now be manually created in Transform

Property model

- A complete PVT property model, relevant to geochemistry has been added, including
 - base PVT group with commonly measured bulk parameters and lab metadata
 - PVT-GC group for a PVT compositional analysis, stored as mol fraction

- PVT-MSep for multiple stage flash derived bulk properties (density, gas-oil ratio, formation volume factor, gas gravity)
- PVT-DLib for differential liberation derived bulk properties (density, gas-oil ratio, formation volume factor, gas gravity)
- PVT-Un for unknown derivation bulk properties (density, gas-oil ratio, formation volume factor, gas gravity)
- PVT-Visc group for flow assurance related measurements
- PVT-Flow for well site flow measurements including contaminants
- .Any properties have been added for use in autographs etc.
 - new set of autographs for PVT data
- PVT-Ref group for tracking the source of PVT information for each sample
- A new Routine Core Analysis group has been added to store basic petrophysics related information
- A comprehensive new XRF (X-Ray Fluorescence) group for elemental analysis of solids has been added, supporting inorganic geochemistry, with an eye to carbon storage monitoring
 - additional properties in the Water and Phys analyses groups to support measurements related to measure of gas in the water and sediment
- Improved the calculation of gas ratios to ensure maximum population of data
- Water depth has been added to the sample if needed
- Additional compounds in the GCMS groups to support recently identified peaks from labs, especially APT
- Various additions to aliases to improve linking for a range of properties and labs

Fixes

- When changing the search term in the property selector we now always return to the top entry to ensure the user sees the most relevant suggestions
- Rule sets now only write the source rule name if the value is changed
- In project merge allow the user to generate a sample set of merge conflicts even when no merge is possible
- We've fixed a few issues with the colour picker to allow the correct selection of transparency in all cases
 - this does mean the user must always select OK to confirm the change of colour
- We've removed the database identifier from the pages, which used to confuse users, so now just a current row number is shown
- The warning about the use of the "." as the decimal separator is only shown once now
- Fixed an issue with deleting project properties used across multiple pages and artefacts
- Keyboard shortcuts for brushing (Ctrl+B) and pan/zoom (Ctrl+P) should now always work when a graph is in focus
- PCA will always create component scores (PC1, 2, ...) in the correct order
- Fixed an issue where undoing an action with the property help window open cause p:IGI+ to crash badly
- Fixed the writing for CSV files to ensure values with carriage return and/or line feeds embedded were saved correctly with a wrapping symbol

Known issues

- The “Sitka” font family does not work when copying graphs – it displays fine, but the graphs will not copy correctly. We advise users to not use this font family, which has some known issues in Windows
- When a lot of graphs are open at the same time, or after long use of p:IGI+ sometimes you get no points shown on a graph, and a text error message saying “E_OUTOFMEMORY: Ran out of memory (****)”. To address this save the project, close p:IGI+, restart, and open the project. We are still exploring the issue
- Occasionally when resizing graph windows the data view can pan unexpectedly. This is a rare event, and we have not yet been able to isolate a fix. If the original zoom extent is saved, then the user can recover to the desired view by opening graph manager (Ctrl+G) and selecting to restore the zoom

Installation issues

Requires .NET framework version 6.0