Release Guide
ERDAS IMAGINE 2020 Update 1

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About This Release

This document describes the enhancements for ERDAS IMAGINE 2020 Update 1 (v16.6.1), including IMAGINE Photogrammetry (formerly LPS Core) and ERDAS ER Mapper. Although the information in this document is current as of the product release, see the Hexagon Geospatial Support website for the most current version.

Update 1 is a highly targeted release to address a handful of critical issues identified with new features late in the development cycle for ERDAS IMAGINE 2020. As such this document highlights the changes for Update 1, but also covers ERDAS IMAGINE 2020 as well. The critical issue areas addressed by Update 1 are:

- Pyramid generation
- Grow Features operator
- Predict Using Machine Learning operator
- Viewshed tool
- Subpixel Classifier

This release includes both enhancements and fixes. For information on fixes that were made to ERDAS IMAGINE for the v16.6.0 and v16.6.1 releases, see the Issues Resolved section.

This document is only an overview and does not provide all the details about the product's capabilities. See the online help and other documents provided with ERDAS IMAGINE for more information.

Development of ERDAS IMAGINE 2020 focussed on ensuring that virtually all aspects of ERDAS IMAGINE run in 64-bit. Consequently, the installer has been split into three separate installers: ERDAS IMAGINE 2020 64-bit; ERDAS IMAGINE 2020 32-bit; and ERDAS ER Mapper 2020. The same split is available for Update 1 installers.

ERDAS IMAGINE Product Tiers

ERDAS IMAGINE® performs advanced remote sensing analysis and spatial modeling to create new information and perform analysis. In addition, with ERDAS IMAGINE, you can visualize results in 2D, 3D, movies, and on cartographic-quality map compositions. The core of the ERDAS IMAGINE product suite is engineered to scale with your geospatial data production needs. Optional modules (add-ons) providing specialized functionalities are available to enhance your productivity and capabilities.

IMAGINE Essentials® is the entry-level image processing product for map creation and simple feature collection tools. IMAGINE Essentials enables serial batch processing.

IMAGINE Advantage® enables advanced spectral processing, image registration, mosaicking and image analysis, and change detection capabilities. IMAGINE Advantage enables parallel batch processing for accelerated output.

IMAGINE Professional® includes a production toolset for advanced spectral, hyperspectral, radar processing, and spatial modeling. This tier comes standard with ERDAS ER Mapper.

IMAGINE Photogrammetry maximizes productivity with state-of-the-art photogrammetric satellite and aerial image processing algorithms.
New Platforms – ERDAS IMAGINE 2020 Update 1

Full Installers
Prior releases required installation of the base product before Updates could be installed. For example, to install ERDAS IMAGINE 2018 Update 2 (v16.5.2), ERDAS IMAGINE 2018 (v16.5.0) must be installed first.

ERDAS IMAGINE 2020 Update 1 and future Updates will no longer be incremental. They will be Full Installers. Therefore, they can either be installed as a stand-alone (install ERDAS IMAGINE 2020 Update 1 without first installing ERDAS IMAGINE 2020), or as an update to an existing install (installing ERDAS IMAGINE 2020 Update 1 even if ERDAS IMAGINE 2020 is already installed will update the existing installation to v16.6.1).

As a Full Installer, it is no longer possible to roll back an Update to the previous version. So, for example, ERDAS IMAGINE 2020 was updated with ERDAS IMAGINE 2020 Update 1, then an uninstallation removes the entirety of ERDAS IMAGINE 2020. Consequently, “rolling back” now involves uninstalling ERDAS IMAGINE and re-installing the preferred previous version.

New Platforms – ERDAS IMAGINE 2020

True 64-bit Installer
On modern 64-bit computers, being able to run as a true 64-bit application allows full exploitation of the computer’s resources, including addressing more than 4GB of memory.

Hexagon has been transferring more ERDAS IMAGINE executables to run 64-bit. With each release, a few non-GUI applications (jobs) were made available in both 32-bit and 64-bit and the user could configure which one was run in the Session Manager. In ERDAS IMAGINE 2018, we released the Ribbon GUI (ewkspace.exe) in both 32-bit and 64-bit, but whether applications launched from either of these configurations ran as 32-bit or 64-bit (if available) was still variable, depending on the 64-bit configuration settings. This mixed approach presented some problems including the lack of transparency to the user as to whether the job they were about to execute would run 32-bit or 64-bit.

Consequently, ERDAS IMAGINE 2020 is clearly split into two separate installers (plus a third one for ERDAS ER Mapper). Now, the entire suite runs as 32-bit applications or the entire suite runs as 64-bit. This means users running ERDAS IMAGINE 2020 64-bit are sure that any feature they utilize is running in 64-bit and can exploit larger amounts of system memory and other resources.

This split makes configuration tasks straightforward. If you use Python with ERDAS IMAGINE 2020 32-bit, then the 32-bit version of Python is required. If you want to configure CSM/MSP to work with ERDAS IMAGINE 2020 64-bit, then the 64-bit CSM/MSP is required, etc.

Note that all three installers (ERDAS IMAGINE 2020 64-bit, ERDAS IMAGINE 2020 32-bit, and ERDAS ER Mapper 2020) can be installed on a single computer if needed.
If 64-bit is available, why is ERDAS IMAGINE 2020 32-bit being offered? Unfortunately, not every program could be ported to 64-bit, usually because there was a dependency on a third-party component that is only made available in 32-bit. These occurrences are very limited compared to the number of programs that have been successfully included into ERDAS IMAGINE 2020 64-bit. However, there is a possibility that a production workflow is depending on one of these capabilities and so ERDAS IMAGINE 2020 32-bit is being provided so that customers who need these capabilities can continue to use them if needed.

The functionality that is only available in ERDAS IMAGINE 2020 32-bit is as follows:

- Image Equalizer
- Image Catalog
- StereoSAR DEM
- IMAGIZER
- External Projections
- Surfacing Tool (deprecated in favour of Terrain Prep tool)
- ESRI Grid support
- MultiGen OpenFlight format support
- Oracle Geospatial Raster support
- ArcSDE support
- TerraModel TIN support
- IRS Sensor Model
- MapInfo support
- Geodatabase support

Depending on component availability, some of these capabilities may be offered in the 64-bit version of ERDAS IMAGINE in the future.

**ArcGIS 10.7**

ERDAS IMAGINE 2020 (32-bit) has been tested and declared Supported when using an installed and licensed version of ArcGIS 10.6, 10.6.1 and 10.7 in order to provide Geodatabase support libraries.

Alternatively, the IMAGINE Geodatabase Support component (based on ArcGIS Engine 10.7) can be installed to provide Geodatabase support.

Please note that at this time ArcGIS 10.7.1 is not supported.

**Licensing**

ERDAS IMAGINE 2020 installer no longer attempts to automatically install Geospatial Licensing tools as part of its installer. If customers want to use Geospatial Licensing tools (for example to set up a floating / concurrent license server), Geospatial Licensing 2020 tools must be downloaded separately.

It is strongly recommended that customers upgrade to the newest version of Geospatial Licensing 2020. If in doubt, see Windows’ Add or Remove Programs utility to determine the version currently installed.

The appropriate download can be found on the Downloads section of the Hexagon Geospatial web site.
New Technology – ERDAS IMAGINE 2020 Update 1

SIPS 2.4.13a Support
The installer has been updated to use the Unclassified SIPS v2.4.13a XML file to control default Image Chain display parameters.

Extended versions of SIPS can be acquired via the IMAGINE Defense Productivity Module (DPM)

New Technology – ERDAS IMAGINE 2020

New Operators for Spatial Modeler
Hexagon continues to add operators to Spatial Modeler. New (or modified) operators with a brief description of their capabilities are described below. See the ERDAS IMAGINE 2020 Help for the full details of each operator, and visit Hexagon Geospatial Community > Spatial Recipes page, for examples of Spatial Models that use many of these capabilities.

Classify Buildings

This operator identifies points from the input point cloud that fall on buildings and reassigns them to Building class (Class 6). The operator requires that points that fall on the ground in the point cloud have already been classified and assigned to Ground class (Class 2). If the ground points in the input point cloud are not classified, you can classify them using the Classify Ground operator.

The classification is performed by analyzing the geometric relationship of the non-ground points to their neighbors, looking for planar areas above ground that satisfy the specified height and area criteria.

Extract Building Footprints
The operator extracts building footprints based on points in the point cloud that have been classified as Building points (Class 6) and requires that points in the point cloud that fall on the ground and on buildings have been classified to the Ground class (Class 2) and the Building class (Class 6) respectively.

**Compute Ground Sampling Distance**

This operator computes the ground sampling distance for a point cloud by analysing the distance between adjacent points. By default, the first 1000 points having last and single returns are included in the computation. You may override this by putting data on the SelectionCriteria port. Typically, the output from this operator is used to specify the cell size when converting from point cloud to raster.

**Calculate Cell Size**

This operator calculates appropriate ground-space pixel dimensions for an input grid or image that is to be resampled. This is most frequently required if the input grid is a referenceable grid to be orthorectified (such as a NITF image with embedded RPCs), or if the input grid is to be reprojected to a different CRS.

The algorithm used has also been integrated into standard ERDAS IMAGINE resample dialogs so that the default pixel size populated into the dialogs should attempt to retain the optimal level of precision (without over-sampling).
Grow Features

Grow features operator extracts features from raster data and seed pixel(s) by growing the seed pixel(s) into larger regions. Regions are grown by adding neighbouring pixels that are spectrally similar to the seed pixel(s). Each neighbour pixel is evaluated to measure if it is spectrally similar to the seed and, if it is, it is incorporated into the region. The enlarged region then has new neighbours to be evaluated. This process continues until no new neighbours are added to the region being grown (or one of the other growing constraints is met).

The improved region growing algorithm has also been integrated into the 2D Views vector editing tools:
Initialize CART Regressor

This operator defines and trains a CART regressor that is used as an input for estimating data using the Regression Using Machine Learning operator.

Initialize Random Forest Regressor

This operator defines and trains a Random Forest regressor that is used as an input for estimating data using the Regression Using Machine Learning operator.

Predict Using Machine Learning

This operator performs regression on the input data using the trained regressor specified on the MachinIntellect port. The input data can be of type IMAGINE.Features or IMAGINE.Raster.

Augment Training Data

This operator provides additional training data in order to improve the model's performance.
This operator creates additional training data for Classify Using Deep Learning by modifying existing training data. Depending on the selected options, it will produce rotated, scaled, translated and flipped versions of the input training data.

Assess Object Detection Accuracy

Object detection accuracy assessment is a process in which the result from object detection is compared to ground truth data to measure the agreement between the two. This operator performs accuracy assessment by comparing the rectangular bounding box and class attribute of the objects that represent the ground truth with the objects detected from the object detection.

Densify Geometry

Densify Geometry operator adds vertices to the geometry of the input features using a maximum distance factor. If the distance between two vertices is larger than MaxDistance, a new vertex is inserted halfway between the two vertices. This repeats until no segment between vertices is larger than MaxDistance, or until the output geometry exceeds the size of MaxSize.

Smooth Geometry

Smooth Geometry operator smooths the geometry of the input features using a weighted-average smoothing algorithm. Smoothing shifts the position of points on a geometry in order to remove small perturbations and capture only the most significant trends. Unlike simplification, smoothing preserves the number of points in a geometry but improves their appearance. The operator offers control over the algorithm through a densification tolerance, look-ahead count, and weighting factor.
Arrange Items

Selects, arranges, and duplicates values from a list or table given the order specified on the RangeList port, to create an output list or table.

Examples:

Given DataIn \([-2, 0, 2, 3, 7, 8]\) and RangeList \([0, 1, 3, 0, 3, 5]\), DataOut results in \([-2, 0, 3, -2, 3, 8]\)

Given DataIn \([-2, 0, 2, 3, 7, 8]\) and RangeList \([0:2, 1:4]\), DataOut results in \([-2, 0, 2, 0, 2, 3, 7]\)

This operator is often used in conjunction with the output created by the Sort Items operator so that a set of values can be ordered in the same manner as another set of values. For example, consider two Tables, one consisting of Class Names and another consisting of the Histogram values associated with those Class Names. If the Class Names Table is sorted alphanumerically, the Table of Histogram values could be re-organized so that the Histogram values are still ordered correctly against their corresponding Class Names by using the Indices output by Sort Items as the RangeList input to this operator.

Catch Error

This operator transforms the condition of whether an error occurs in the execution of the contained submodel into a boolean result.

This operator can be useful, for example, in allowing an iterative submodel to execute to completion over a collection of dataset references of uncertain applicability. If the submodel illustrated below were placed into an Iterator fed by a Multi Filename Input operator result, any file names that were not appropriate for the Raster Input operator contained in the Catch Error submodel would end up in the BadFilenameOut list.
Contents of an Iterator operator using Catch Error:

Catch Error submodel:

Color Input

Creates a Color. Double-click the operator to open its configuration dialog. The Color Chooser opens. The Color to be output is placed on the Input port, which is hidden by default.

Combine

Combines multiple lists into a single list. A new List/Table is created consisting of each element of the Lists/Tables provided, in the order provided (Collection1’s element will be followed by Collection2’s element, etc.). This is an expandable operator, so you can add as many Collection ports as required.

The model below shows how to Combine two Tables together.
Compute GLCM Texture

Computes a texture feature for an input image. The specified texture feature is computed from various statistical properties of a per-pixel internally generated gray-level co-occurrence matrix (GLCM).

Texture Computations using a Grey-Level Co-Occurrence Matrix are usually considered to be "second order" measures of texture present in the original image. Traditional texture measures are usually considered "first order" since the texture measures are statistics calculated from the original image values, like variance, and do not consider pixel neighbor relationships. Conversely "second order" measures consider the relationship between groups of two (usually neighboring) pixels in the original image.

Such texture measures are considered highly useful as derived information for input into other processes such as image classification, especially Machine Learning, and other purposes, such as to identify built-up areas in the example below:
Note that GLCM calculations are highly compute intensive and so benefit from the presence of a GPU-enabled graphics card running OpenCL.
Create Dice Boundaries

Create Dice Boundaries splits up the boundary of an image into smaller, regularly sized and spaced boundaries that can be used for subsetting. Neighboring new boundaries can overlap each other by an extent specified by the XOverlap and YOverlap ports.

The example Spatial Model shown below uses the Create Dice Boundaries operator to create a regular grid of area polygon geometries over an image, which could then be used for Zonal Change Detection or Deep Learning feature extraction.
Create Image Pyramid

This operator ensures the existence of an image pyramid and statistics for an image dataset.

It produces or verifies the existence of a persistent, optimal sequence of images, each of which is progressively lower in resolution than the preceding image in the sequence. The primary use of an image pyramid is to increase rendering speed and reduce aliasing artifacts when visualizing the image at scales larger than its original resolution.

If you want to ensure that all image pyramids are of the type (Generator) and are created using the downsampling method specified or you want to force new image pyramids to be created, use the Delete Image Pyramid operator ahead of this operator.

It also ensures that image statistics are available for the image. This occurs even if a suitable image pyramid is already present.

One major advantage of this new mode of generating pyramid levels is the ability to create PYRX format pyramid files. These use ECW compression and consequently are not only fast but also take up far less disk space than traditional pyramid file formats.

In the example below, the original satellite image was 713MB in size. Three different formats of pyramid file were generated and the image displayed Fit to Frame. The PYRX pyramid file is 1/10th the size of the other two formats while maintaining display quality.

Please note that Create Image Pyramid replaces all the functionality formerly provided by Create RSETs. Create RSETs should no longer be used.
The new modes of generating pyramid files have also been built into the Raster Output operator, Image Commands tool (Home tab > Information group > Metadata pulldown > Edit Image Metadata) for batch creation of pyramids, the Image Metadata dialog (Home tab > Information group > Metadata pulldown > View/Edit Image Metadata), as well as any application that uses Spatial Modeler for performing its processing. The type of Generator used by default, as well as the associated downsampling technique, can be controlled via Preferences.

Note: if routinely running ERDAS IMAGINE 2020 32-bit (as opposed to the 64-bit version) you may encounter errors regarding insufficient memory when processes attempt to create .pyrx formatted pyramid files for larger image files. If this occurs there are two possible workarounds (other than running ERDAS IMAGINE 2020 64-bit):

- In the Preference Editor (File > Preferences) reduce the amount of memory allowed for the Spatial Modeler to run by changing Percentage of Available Memory to Consume to a lower value (such as 30%). This allows the ECW/JP2 Encoding engine more memory to perform the compression

- Or, alter the Pyramid Layer Generator preference from the default setting to “Always use the RRD Pyramid Generator”. This effectively sets the software to produce pyramid files in the manner it did prior to the 2020 release.

**Delete Image Pyramid**

Delete Image Pyramid deletes existing image pyramid from a raster image.

All image pyramids that are discovered will be deleted (if possible). This includes:

- ERDAS Reduced Resolution Dataset (*.rrd)
- Extended compressed image pyramid (*.pyrx)
- NITF RSET
- Minifiles
- GDAL Overviews (*.ovr)

Pyramids that cannot be deleted include:

- Pyramids internal to IMAGINE Image (*.img)
- Pyramids from Wavelet Compression (*.ecw, *.jp2, *.sid)

**Enhance Contrast Using CLAHE**
Contrast Limited Adaptive Histogram Equalization (CLAHE) algorithm is a technique used to enhance contrast in images. Traditional Histogram Equalization uses a single transformation derived from the image histogram to transform all pixels. As such it is difficult to derive a single transformation that can balance the contrast in dark, light and mid-tone areas of the histogram, especially when the data being displayed has a dynamic range larger than 8-bit (and the rendering software or display device only supports 8-bits per color channel).

So techniques such as CLAHE were developed to spatially adapt the transformation and reveal the detail in dark and bright areas of a raster while maintaining contrast in mid-tone areas. For example, CLAHE can enhance hidden detail in the shadows cast by large buildings, clouds, etc. In these locations the pixel DN values will be low, but for sensors with 10, 11, 12-bit or greater dynamic ranges there may still be a wide range of values present, but the global look-up table used to render the image to an 8-bit per color channel display bins all those shadow areas into a few dark bins (i.e., low visual contrast). The spatially adaptive nature of CLAHE allows the inherent contrast in these shadow areas to be broadened and brightened to balance with neighboring non-shadow areas.

For example, here’s a 12-bit color image with both bright areas and dark shadows that with a standard LUT shows little detail in the shadows:

The screenshot below shows the result of using the Enhance Contrast Using CLAHE operator with a Contrast Retention Factor of 0.2:
As can be seen, contrast is enhanced in the shadow areas without saturating the already bright areas.

Get TIFF Options

Creates the format specific output option dictionary for Tagged Image File Format (TIFF), which can then be fed to the Raster Output operator to control format-specific output parameters, such as wanting BigTIFF format, an alpha channel persisted, data compression, etc.

Resize Matrix
The purpose of this operator is to take an existing Matrix and alter the dimensions of that Matrix by either removing rows and/or columns or adding new rows and/or columns (or any combination thereof). If adding new rows and/or columns, the values to be used in those new cells can be specified. If removing rows, they are removed from the bottom of MatrixIn, and if removing columns, they are removed from the right side of MatrixIn. Similarly, if adding rows, they are added to the bottom of MatrixIn, and if adding columns, they are added the right side of MatrixIn.

If extending MatrixIn in one dimension only (either rows or columns), you may supply a Matrix for InitialValues. If extending the number of rows, the Matrix provided for InitialValues must have the same number of columns as MatrixIn. It may have either a single row or as many rows as are being added to the Matrix. If it contains a single row, all rows being added to the Matrix are filled with the single row. If extending the number of columns, the Matrix provided for InitialValues must have the same number of rows as MatrixIn. It may have either a single column or as many columns as are being added to the Matrix. If it contains a single column, all columns being added to the Matrix are filled with the single column.

Examples using a MatrixIn with five rows and nine columns:

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
\end{bmatrix}
\]

- Setting NumRows of 8 and NumColumns of 14 will extend the Matrix by three rows and five columns and set the new cells to InitialValues, which must be a Scalar. If InitialValues is -1, MatrixOut would be:

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1
\end{bmatrix}
\]

- If InitialValues is a Matrix with one row and nine columns,

\[
[3 \ 5 \ 7 \ 9 \ 11 \ 13 \ 15 \ 17 \ 19]
\]

column 0 of the added rows will be set to the value in cell 0,0 in the InitialValues Matrix, column 1 of the added rows will be set to the value in cell 0,1 in the InitialValues Matrix, etc. MatrixOut would be:

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
3 & 5 & 7 & 9 & 11 & 13 & 15 & 17 & 19 \\
3 & 5 & 7 & 9 & 11 & 13 & 15 & 17 & 19 \\
3 & 5 & 7 & 9 & 11 & 13 & 15 & 17 & 19 \\
\end{bmatrix}
\]
If `InitialValues` is a Matrix with three rows and nine columns,

\[
\begin{bmatrix}
11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 \\
21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 & 29 \\
31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 & 39
\end{bmatrix}
\]

the first added row will be set to the values in row 0 of the `InitialValues` Matrix, the second added row will be set to the values in row 1 of the `InitialValues` Matrix, and the third added row will be set to the values in row 2 of the `InitialValues` Matrix. `MatrixOut` would be

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 \\
21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 & 29 \\
31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 & 39
\end{bmatrix}
\]

**Resize Table**

![Resize Table Diagram]

Adjusts the number of rows in a Table (up or down). The `InitialValues` port takes a Table as input and so this operator can be used to append Tables together.

**Set Matrix Values**

![Set Matrix Values Diagram]

The purpose of this operator is to take an existing Matrix and modify specific cells of that Matrix with user-specified values.

If only `RowRangeList` or `ColumnRangeList` is provided (the cells in all columns of one or more rows or all rows of one or more columns are being set), you may supply a Matrix for `Values`. If only `RowRangeList` is provided, the Matrix provided for `Values` must have the same number of columns as `MatrixIn`. It may have either a single row or as many rows as are specified in `RowRangeList`. If it contains a single row, all rows specified in `RowRangeList` will be filled with the single row. If only `ColumnRangeList` is provided, the Matrix provided for `Values` must have the same number of rows as `MatrixIn`. It may have either a single column or
as many columns as are specified in ColumnRangeList. If it contains a single column, all columns in ColumnRangeList will be filled with the single column.

Note that both RowRangeList and ColumnRangeList are 0-based indices. I.e. the first row is row 0, the second row is row 1, etc.

Examples using a MatrixIn with five rows and nine columns:

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
\end{bmatrix}
\]

- Setting a RowRangeList of 1:3:4 (three rows) and ColumnRangeList of 2:4 (three columns), will set the cells at 1,2, 3,3, and 4,4 to Values, which must be a Scalar. If Values is -1, MatrixOut would be

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & -1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & -1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & -1 & 1 & 1 & 1 & 1 \\
\end{bmatrix}
\]

- RowRangeList of 2:4 with no ColumnRangeList will set all cells in rows 2, 3, and 4 to Values. Values may be either a Scalar, a Matrix with one row and nine columns, or a Matrix with three rows and nine columns.

If Values is a Scalar, all cells in rows 2, 3, and 4 will be set to that value. If Values is -1, MatrixOut would be

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
-1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 \\
-1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 \\
-1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 \\
\end{bmatrix}
\]

- If Values is a Matrix with one row and nine columns,

\[
\begin{bmatrix}
3 & 5 & 7 & 9 & 11 & 13 & 15 & 17 & 19
\end{bmatrix}
\]

column 0 of rows 2, 3, and 4 will be set to the value in cell 0,0 in the Values Matrix, column 1 of rows 2, 3, and 4 will be set to the value in cell 0,1 in the Values Matrix, etc. MatrixOut would be

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
3 & 5 & 7 & 9 & 11 & 13 & 15 & 17 & 19 \\
3 & 5 & 7 & 9 & 11 & 13 & 15 & 17 & 19 \\
3 & 5 & 7 & 9 & 11 & 13 & 15 & 17 & 19 \\
\end{bmatrix}
\]
• If **Values** is a Matrix with three rows and nine columns,

\[
\begin{bmatrix}
11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 \\
21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 & 29 \\
31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 & 39 \\
\end{bmatrix}
\]

row 2 will be set to the values in row 0 of the **Values** Matrix, row 3 will be set to the values in row 1 of the **Values** Matrix, and row 4 will be set to the values in row 2 of the **Values** Matrix. **MatrixOut** would be

\[
\begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
11 & 12 & 13 & 14 & 15 & 16 & 17 & 18 & 19 \\
21 & 22 & 23 & 24 & 25 & 26 & 27 & 28 & 29 \\
31 & 32 & 33 & 34 & 35 & 36 & 37 & 38 & 39 \\
\end{bmatrix}
\]

**Set Table Values**

**Set Table Values** sets the values of specified rows in a Table.

If the same row number is specified multiple times in **RangeList**, the value of that row in the Table will be set each time. That means that if **Values** is a Table, the value of that row in **TableOut** will be what it was set to the last time that row was specified in **RangeList**. For example, if **TableIn** is [83,208,180,96,45,234], **RangeList** is [1:3,1:1] and **Values** is [34,27,160,69], **TableOut** will be [83,69,27,160,45,234].

**Sort Items**

**Sort Items** takes a List or Table and creates a List or Table of values and a List of indices (0-based), which are sorted via the specified **Order** (Ascending/Descending).

For example:

- **Ascending order.** Given **DataIn** [ 15,12,17,13 ], **DataOut** is [ 12,13,15,17 ] and **Indices** is [ 1,3,0,2 ].
- **Descending order.** Given **DataIn** [ 15,12,17,13 ], **DataOut** is [ 17,15,13,12 ] and **Indices** is [ 2,0,3,1 ].

The output Indices are used in conjunction with the Arrange Items operator so that a set of values can be ordered in the same manner as another set of values. For example, consider two Tables, one consisting of Class Names and another consisting of the Histogram values associated with those Class Names. If the Class Names Table is sorted alphanumerically, the Table of Histogram values could be re-organized so that the
Histogram values are still ordered correctly against their corresponding Class Names by using the Indices output by this operator as the RangeList input to the Arrange Items operator.

Update Image with RPCs

Some image format readers do not automatically recognize the associated Rational Polynomial Coefficient (RPC) information. In this case, the user must manually geometrically calibrate (update) the RPC information to the image so that ERDAS IMAGINE can use that information to accurately georeference the data. This operator uses the RasterFilename and SensorModelName to locate and use an RPC file to update the image.

The optional RPCFilename is offered as an input in case the operator fails to automatically locate the file.

Updated Operators

Classify Using Machine Learning

A new output port called TrainingAttributeImportances has been added. When the operator is run, this port produces a dictionary containing the names of the attributes used for classification and their associated importance to the classification. These values range from 0 to 1 and the summed importance of all training attributes is defined to be 1. If MachineIntellect does not support this output measure, all importances are equal to \( 1/\text{number of training attributes} \).

The importance values can be extremely useful in identifying the most important input variables contributing to successful classifications (and perhaps more importantly in identifying the unimportant variables so they can be excluded from later classifications, making the classification process more efficient).
Initialize Naïve Bayes

This operator defines and trains a Naive Bayes classifier that is used as an input for classifying data using the Classify Using Machine Learning operator.

A new input port called TrainingAttributesScaling can be used to scale the training attribute values to a similar range. Scaling may improve training speed and classification accuracy.

Orthorectify

Data in a raster stream may be georeferenceable rather than being georectified (in older parlance, the data is geometrically calibrated with a 2D or 3D geometric model as opposed to being rectified to a projected coordinate system). Under normal circumstances, Spatial Modeler will maintain the georeferenceable state, but some workflows might require that a georeferenceable raster be persisted in its georectified state. The Orthorectify operator fulfills this role.

In ERDAS IMAGINE 2020 the Orthorectify operator has been updated with a number of new ports in order to combine functionality that previously required use of a Warp operator.

- CellCalculationMethod
- AllowApproximation
- ApproximationTolerance
- ApproximationMaxOrder
- ApproximationGridSize
- UsePyramids
Set to NoData

The input NoDataValue port now accepts a Raster as input. This is useful for using one raster layer to mask another.

If the input to NoDataValue is Scalar, the input raster stream is filtered so that every pixel value that matches the value specified on the NoDataValue port is marked as NoData in the output raster stream.

If the input to NoDataValue is Raster, pixel locations in that raster that are marked as NoData are marked as NoData in the output raster stream. Note that areas outside the raster extent of the NoDataValue raster are considered NoData.

Any pixels in the input raster stream that were already marked as NoData remain marked as NoData. The original value of pixels marked as NoData is not maintained.

Shared Operators
The following operators are licensed for use by licensed users of IMAGINE Advantage, IMAGINE Professional, GeoMedia Advantage, and GeoMedia Professional.

Spatial Models using these operators will not be executable using IMAGINE Essentials or GeoMedia Essentials.

Accumulate Flow

The Accumulate Flow operator is part of a collection of grid operators used for hydrological analysis. It takes a FlowRaster and computes the flow accumulation for the entire surface.

The AccumulationRaster produced by the Accumulate Flow operator contains data where each pixel value indicates the total number of pixels that contribute to the flow into that pixel. Pixels with a value of zero indicate headwater pixels (pixels that have no inflow, only outflow). Pixels with a value of NoData indicate no flow. The AccumulationRaster can be used as part of hydrological analysis workflows to identify river/stream networks or to identify drainage outlets, which can be used to find watershed (drainage basin) areas.
Calculate Flow

Calculate Flow operator is part of a sequence of operators to identify drainage networks and watersheds. Calculate Flow operates on a Raster of continuous surface elevation data, such as a Digital Elevation Model (DEM). It generates a FlowRaster where each pixel value represents the direction that runoff would flow (in effect, the steepest slope) over the terrain.

For each pixel, the slope of the line segment connecting the center of the pixel with the centers of the eight adjacent pixels is computed, taking both horizontal and vertical distance into consideration. The horizontal distance between the pixel center and the centers of the four directly adjacent pixels is equal to the pixel resolution. The horizontal distance between the pixel center and the centers of the four diagonally adjacent pixels is equal to the square root of two times the pixel resolution.

Runoff is assumed to flow in the direction of the steepest downhill slope. “Ties” are allowed, that is, runoff can flow in more than one direction. Result pixel values indicate flow direction.

For the purpose of hydrological analysis, one should first run the Fill Depressions operator on the DEM Raster to create a depression-less surface. This depression-less surface when used as the input DEM Raster to the Calculate Flow operator will produce a Flow Raster with no ambiguous flow. This new Flow Raster can then be used as input to the Accumulation Flow operator.

Fill Depressions

Fill Depressions operator is part of a collection of raster operators for hydrological analysis. It can be used as part of a sequence of raster operators to identify drainage networks and watersheds.

Fill Depressions operates on a Raster of continuous surface elevation data, such as a Digital Elevation Model (DEM). It generates a Filled Raster where minor depressions in the surface have been removed.

Find Watersheds

In hydrological analysis, a watershed, or drainage basin, is defined as an area of land where all water (rainfall, streams, rivers, etc.) drains to a common outlet. Watersheds can be small, as in the area of land that drains
into a single reservoir or into a single stream segment, or large, as in the area of land that drains into the mouth of a major river. The Find Watersheds operator is part of a collection of raster operators used for hydrological analysis. It uses a FlowRaster to find the watershed areas where water drains to common flow outlets identified by the OutletRaster.

FlowRaster must contain data that indicates the downhill drainage flow direction for each cell.

OutletRaster contains data that uniquely identifies the common flow outlets for which watershed areas are to be found. The pixels that define a common flow outlet for a watershed should be assigned the same integer value. OutletRaster can define common flow outlets for multiple watersheds and each should be assigned a unique integer value. All pixels that do not define watershed flow outlets must be assigned to NoData. OutletRaster can define common flow outlets as a single or small set of pixels at the mouth of a stream or river, as a linear set of pixels defining a stream network or stream segments, or as clumps of pixels defining ambiguous flow zones.

WatershedRaster produced by the Find Watersheds operator contains data showing the watershed areas found for each uniquely identified common flow outlet defined in the OutletRaster. The pixels that define a watershed area are assigned the same integer value as its associated common flow outlet pixels. All pixels that are not assigned to a watershed are set to NoData.

Interpolate Using IDW

Interpolate Using IDW performs an interpolation function that uses an Inverse Distance Weighting (IDW) algorithm to attempt to create a continuous raster data set from data that is incomplete. It computes values for NoData locations based on neighboring pixels with values.

The operation works best with semi-continuous data such as contours or remote sensing imagery with gaps. For very sparse point data such as spot heights, geological surveys, clustered data, and random points, apply a kriging process to interpolate a continuous data set. Interpolate Using IDW should be used when processing the following scenarios:

- For height density and/or regular spaced data points, such as elevation data, temperature data, rainfall data, or data from any continuously varying surface.
- To fill in small gaps in satellite data, airphoto mosaics, or Digital Elevation Model (DEM) mosaics.
- When there is a low degree of confidence in the exactness of the original data.
- To create a DEM from contour or ridge-and-channel data.

Format Support

Cloud Optimized GeoTIFF

ERDAS IMAGINE 2020 enables access to public and private Amazon S3 cloud storage services via the Retriever pane. One of the most effective formats to use via these services is the Cloud Optimized GeoTIFF (COG) format.

Data accessed in this manner can be used in Spatial Model Editor or displayed via Image Chain.
MIE4NITF

Time-series datasets are now being stored and delivered in the MIE4NITF standard. This can consist of hundreds, even thousands, of individual image frames stored in a NITF.

ERDAS IMAGINE 2020 has been enhanced to enable opening multiple MIE4NITF frames into tools such as the Flicker tool in order to “play” the time-series, as well as being able to open individual frames for further exploitation.
GeoPackage

Spatial Modeler and the Image Chain are capable of reading raster data stored in the popular GeoPackage format. Vector features can also be accessed through the Spatial Modeler.

![GeoPackage Connection Manager](image-url)
Luciad Terrain Service

Luciad Terrain Services from LuciadFusion can be consumed in ERDAS IMAGINE as standard raster data sources, enabling their use for orthocorrection and other purposes.

NetCDF

Spatial Modeler and the Image Chain are capable of reading raster data in the NetCDF format.

WMS display optimizations

ERDAS IMAGINE’s 2D View works largely on the basis of pulling tiles from the source data for display. These tile requests (which cover an extent larger than the extent of the 2D View) appear to be causing WMS servers problems when they are expecting to return just one tile covering the entire desired extent.

Consequently, for ERDAS IMAGINE 2020 we have introduced a second display mode/option for use with all WMS data layer types. This option is presented as a checkbox button in the Ribbon interface called “Continuous Roaming” and defaults to Off (that is, the new behavior).

Turning this checkbox on will result in requests to the WMS server being for tiles rather than for the View extent. The benefit of turning the mode on is that tile requests can be sent and data rendered to screen while the extent is being panned or zoomed (for example, while the middle mouse button is still held down and the data being dragged). The downside is that the overall time to fill a View extent may be longer.

Conversely if the mode is off (that is, the new behavior), the data request is only for the extent of the current View. This can be returned and rendered faster than with tiles. However the downside is that the request can only be sent when the roaming / zooming action stops (for example, when the middle-mouse button is released when panning, or the Auto Roam mode is stopped or paused). So while the data is being actively “moved”, you will see black around the prior data extent until you release the mouse. But for WMS layers the impression is generally that of increased performance.
General ERDAS IMAGINE

Image Chain Printing
Imagery that has been displayed using the Image Chain can now be included into Map Compositions, sent to print devices and included in Send To… operations (Send to PowerPoint, Send to JPEG, Send to Geospatial PDF, etc).

Optimal Seamline Generation
Seamline generation is a crucial step in the mosaicing workflow to create seamless image mosaics. Images to be mosaiced usually have radiometric inconsistencies and/or unresolved geometric misalignments. Seamlines are generated with a goal of avoiding such areas of radiometric inconsistency and large misalignments so that the resulting mosaic look seamless.

A new seamline generation option that uses graph cut energy minimization framework to achieve the above stated goal is added in MosaicPro. Pixel values and gradients are employed as cost functions and graph cuts used to find the optional seamlines between/among images.

3Dconnexion SpaceMouse Pro
Support for the 3Dconnexion SpaceMouse Pro as a digitizing device is added for Viewplex based stereo viewers (Stereo Point Measurement tool, Terrain Editor, ORIMA, and PRO600) providing you with an additional input device choice.
Copy Selected Breaklines
A new breakline editing capability that lets you copy an existing Breakline and place the copy at a specified offset from the selected Breakline is introduced in Terrain Editor. The capability can be accessed from the Terrain Editor Operators drop down menu, which is available in the Terrain Editing Panel.

Editing Breakline Vertices
Breakline vertex editing capability is enhanced. Breakline vertices can now be edited in the same way as editing mass points. Selecting the breakline that the vertex is part of is no longer necessary.
Dynamic update of Contours during Breakline editing

Contours are now dynamically updated as breaklines are being edited, giving users an immediate feedback of the effects of the edits that is being made. Prior to ERDAS IMAGINE 2020, contours get dynamically edited while points are being edited, but were not updated when editing a breakline until the editing until the breakline is completed. With this update, contours are dynamically updated when either points and/or breakline are being edited.

Consistent Style Library locations

ERDAS IMAGINE 2020 now looks for style libraries only in the associated subdirectories of the etc directory in each of our “hives” ($PERSONAL, C:/ProgramData/ERDAS/ERDAS IMAGINE 2020, $IMAGINE_HOME). The software no longer looks directly in $PERSONAL or etc or in the sub-directories outside of etc (e.g. $IMAGINE_HOME/Colors or $PERSONAL/LineStyles).

- Arrow styles: etc/Arrows
- Colors: etc/Colors
- Fill styles: etc/FillStyles
- Line styles: etc/LineStyles
- Symbols: etc/symbols
- Text styles: etc/TextStyles

If you have customized style libraries stored in any of the old locations you need to move them to the new locations in order to use them in ERDAS IMAGINE 2020 or later.
# System Requirements

## ERDAS IMAGINE

<table>
<thead>
<tr>
<th>Computer/ Processor</th>
<th>64-bit: Intel 64 (EM64T), AMD 64, or equivalent (Multi-core processors are strongly recommended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory (RAM)</td>
<td>16 GB or more strongly recommended</td>
</tr>
<tr>
<td>Disk Space</td>
<td>• 6 GB for software&lt;br&gt; • 7 GB for example data&lt;br&gt; • Data storage requirements vary by mapping project¹</td>
</tr>
<tr>
<td>Operating Systems ², ³, ⁴</td>
<td>• Windows 10 Pro (64-bit)&lt;br&gt; • Windows 10 Enterprise (64-bit)&lt;br&gt; • Windows Server 2016 (64-bit)&lt;br&gt; • Windows Server 2019 (64-bit)</td>
</tr>
<tr>
<td>Software</td>
<td>• OpenGL 2.1 or higher (this typically comes with supported graphics cards⁵)&lt;br&gt; • Java Runtime 1.7.0.80 or higher - IMAGINE Objective requires JRE and can utilize any installed and configured JRE of version 1.7.0.80 or higher.&lt;br&gt; • Python 3.6.x or 3.7.x (Python is optionally usable with Spatial Modeler).&lt;br&gt; • Microsoft DirectX® 9c or higher&lt;br&gt; • .NET Framework 4.0&lt;br&gt; • OpenCL 1.2 with a device that supports double precision (cl_khr_fp64) if wanting to GPU accelerate NNDiffuse and other Operators&lt;br&gt; • An NVIDIA card with CUDA capabilities is recommended for use with Deep Learning</td>
</tr>
<tr>
<td>Recommended Graphics Cards for Stereo Display ⁶</td>
<td>• NVIDIA® Quadro® P6000, P5000, P4000, P2000&lt;br&gt; • NVIDIA® Quadro® M6000, M5000, M4000, M2000&lt;br&gt; • NVIDIA® Quadro® K5200, K5000, K4200, K4000, K2200, K600, K420</td>
</tr>
<tr>
<td>Recommended Stereo Display Monitors ⁷</td>
<td>• 120 Hz (or above) LCD Monitors with NVIDIA 3D Vision™ Kit, or&lt;br&gt; • 3D PluraView system from Schneider Digital ⁷</td>
</tr>
<tr>
<td>Peripherals</td>
<td>All software installations require:&lt;br&gt; • One Windows-compatible mouse with scroll wheel or equivalent input device&lt;br&gt; • Printing requires Windows-supported hardcopy devices ⁸&lt;br&gt; Software security (Hexagon Geospatial Licensing 2020) requires one of the following:&lt;br&gt; • Ethernet card, or&lt;br&gt; • One USB port for hardware key&lt;br&gt; Advanced data collection requires one of the following hand controllers: ⁹&lt;br&gt; • TopoMouse™ or TopoMouse USB™&lt;br&gt; • Immersion 3D Mouse&lt;br&gt; • MOUSE-TRAK&lt;br&gt; • Stealth 3D (Immersion), S3D-E type, Serial Port&lt;br&gt; • Stealth Z, S2-Z model, USB version&lt;br&gt; • Stealth V, S3-V type (add as a serial device)&lt;br&gt; • 3Dconnexion SpaceMouse Pro ¹⁰&lt;br&gt; • 3Dconnexion SpaceExplorer mouse ¹⁰</td>
</tr>
</tbody>
</table>

¹ Data storage requirements vary by mapping project.
² Windows 10 Pro is recommended.
³ Windows 10 Enterprise is recommended.
⁴ Windows Server 2016 is recommended.
⁵ NVIDIA® Quadro® cards are recommended.
⁶ NVIDIA® Quadro® cards are recommended.
⁷ Schneider Digital 3D PluraView system is recommended.
⁸ Windows-supported hardcopy devices are recommended.
⁹ Advanced data collection requires one of the following hand controllers.
¹⁰ 3Dconnexion SpaceMouse Pro and 3Dconnexion SpaceExplorer mouse are recommended.
ERDAS IMAGINE can be safely installed on a computer that has GeoMedia 2018 or GeoMedia 2020 installed. However, for greatest compatibility, it is highly recommended to install matching versions (including Updates).

ERDAS IMAGINE 2020 requires GeoMedia 2020 for live linking. Order of installation does not matter.

ERDAS IMAGINE can interact with both types of personal Geodatabases (*.mdb and *.gdb).

ERDAS IMAGINE can be safely installed on a computer that has ArcGIS® versions 10.6 through 10.7.0.

ERDAS IMAGINE and IMAGINE Photogrammetry (32-bit) can interact with ArcGIS Server 10.6 – 10.7.0 Geodatabase servers (ArcSDE). To read or interact with an Enterprise Geodatabase, you must either:

- Install and license the appropriate version of ArcGIS for Desktop versions 10.6 through 10.7.0, OR
- Install the IMAGINE Geodatabase Support (based on ArcEngine 10.7) - requires no license

ERDAS IMAGINE can interact with handheld wheels and mouse.

**ArcGIS and GeoMedia Interoperability**

- PKK Hand Wheels
- EK2000 Hand Wheels
- EMSEN Hand Wheels
- Z/I Mouse

**Database Engines**

- PostgreSQL 9.6 with PostGIS 2.3: PostGIS can be used to store GeoMedia Features (.ofp)
- Oracle Server 12c 12.2 64-bit: Oracle Server 12c can be used to store Oracle GeoRaster (.ogr) (requires Oracle Spatial), SDE Raster (.sdi) (requires ArcGIS for Server) and Oracle Spatial Features (.ogv) (requires Oracle Spatial), as well as GeoMedia Features (.ofp).
- Microsoft SQL Server 2017 64-bit: Microsoft SQL Server 2017 can be used to store GeoMedia Features (.ofp)

**ERDAS IMAGINE System Requirements Notes**

1. Disk I/O is usually the slowest task in geospatial data processing. Faster hard disks improve productivity. Reading data from one disk, writing temporary data to a second disk, and writing data to a third disk improves performance. Disk arrays improve productivity, but some RAID options slow performance. Network disk drives are subject to network limitations.

2. Server Operating Systems are not supported for IMAGINE Photogrammetry, ORIMA or ERDAS ER Mapper.

3. The 3D stereo viewing and peripheral requirements of IMAGINE Photogrammetry limit its operating system options.

4. ERDAS ER Mapper is not supported on Windows 8. It is considered Viable on Windows 8.1.

5. Windows provides a generic OpenGL driver for all supported graphics cards. However, an OpenGL-optimized graphics card and driver are recommended for these applications.

6. Graphics cards certified with previous versions of IMAGINE Photogrammetry and ORIMA may also be compatible, but are not certified in the current version. Drivers must not be newer than R418. NVidia dropped 3D Vision support for drivers released after R418 U4 (425.31), which was released on April 11 2019.

7. Stereo Monitors certified with previous versions of IMAGINE Photogrammetry and ORIMA may also be compatible, but are not certified in the current version.

8. HP-RTL drivers are recommended. Windows 64-bit print servers require 64-bit print drivers.
9 Stealth S-Mouse (S2-S model) and MOUSE-TRAK are the only supported hand controllers in Stereo Analyst for ERDAS IMAGINE.

10 3Dconnexion mice are supported in IMAGINE Photogrammetry.
## Issues Resolved – ERDAS IMAGINE 2020 Update 1

### Various Product Tiers

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
</table>
| IM-51400 | ERDAS IMAGINE 2020 Crashes on 3D Line Measurement for Geographic Projected Point Cloud data | ERDAS IMAGINE 2020 b1339 crashes on 3D Line measurement for Point Cloud data that have Geographic Projection.  
Steps to Reproduce  
1. Launch ERDAS IMAGINE and open specific Geographic point cloud data  
2. Click Show 3D, a new 3D display will open and wait for the data to load  
3. Select "Measure Line" and try to measure distance. Select the first point, then the second point.  
4. After selection of the second point wait for few seconds, ERDAS IMAGINE will crash.  

The same data set reprojected to a Projected coordinate system works fine in 3D Line measurement. |
| IM-51275 | RSETs not used when built for a J2K NITF image that has subimage(s) | Input Image - NITF image using JPEG2000 compression and containing at least one subimage. Typically the subimage is a cloud layer.  
Problem:  
- generate RSETs using Create Image Pyramids operator (or ImageInfo) (ok)  
- the performance preference is ignored and the RSETs always begin at R1  
- the processing takes a 2nd long pass.  
- the generated RSETs are not used by the 2D View.  
- ImageInfo > Pyramid Layer Algorithm still shows "JPEG2000 Wavelet Transform".  
If use the same dataset, but go out to .pyrx things are generally good. The .pyrx does not start at R1 and the .pyrx is being used by the 2D View. |
| IM-51276 | Failed creating RRDs for NITF image | Replicated using a WorldView NITF image  
Make sure the "Pyramid Layer Generator" Preference is set to "Always use RRD..."  
Start ERDAS IMAGINE 2020  
Home tab > Information group > Metadata pulldown > Edit Image Metadata  
Select the NITF image as input  
Click the Compute Pyramid Layers checkbox  
Click Options...  
Error: args  
Error: Unable to create unique proxy file.  
Image Command Tool exits. |
| IM-51348 | New pyramids labeled "incorrect" when dropping NITF into 2DView with Preferences set to "all segments" | * Copy a NITF file locally.  
* Set the NITF "Drag/Drop Behavior" preference to "Open all segments in a single view."  
* Using imageinfo or imagecommand tool create pyramids for the NITF image. Set the Generator to PYRX (or RRD once IM-51276 has been fixed). Leave/set the Downsampling Method to Auto.  
* Drag and drop the NITF into a 2DView. There's a red "x" badge in the TOC, indicating that "Pyramid information is incorrect" and "Pyramids needs to be rebuilt for best performance."  
The .aux file for the NITF has RRDInfoList and RRDNamesList for the layers, but drag and drop with the NITF "Drag/Drop Behavior" preference set to "Open all segments in a single view." creates an .sbi file, and it doesn't seem to recognize that the pyramids are optimized. |
Creating RSETs for NITF that's J2K compressed appears to "lose" its pyramids

* Copy NITF file locally.
* Open the NITF in a 2DView. There's no warning/error badge on the layer in the TOC, so it appears to have optimized pyramids.
* Close the image.
* Open the image in imageinfo. It says the pyramid layer algorithm is JPEG 2000 Wavelet Transform.
* Click on the sigma button to create RSETs for the NITF image. Turn on Compute Pyramid Layers. Set the Generator to any of the RSET options. Leave/set the Downsampling Method to Auto. Click OK.
* Click "Yes" to the warning about existing pyramids (it's not really going to do anything, since they're internal J2K).
* The pyramid layer algorithm now says Unknown Downsampling, which a little disconcerting.
* Open the NITF in a 2DView. Now there's a red "x" badge in the Contents pane, indicating that "Pyramid information is incorrect" and "Pyramids needs to be rebuilt for best performance."
* If you Correct the Alert, the badge goes away, but if you close ERDAS IMAGINE and restart it and open the NITF again, the red "x" badge is back.

Auto pyramid downsampling looks bad for RGB/LUT NITF

Using a NITF file that has an IREP of RGB/LUT:

# Using either imageinfo or imagecommand tool create pyramids for the specified image
# Set the Generator to any of the RSET options. Leave/set the Downsampling Method to Auto.
# Display the image in a 2DView. It looks great.
# Now fit to frame. It doesn't look the same--lots of black (transparent pixels)

The same thing happens using Manage Data | Image | Pyramids & Statistics | Process Footprints and RSETs in 16.5.2 and 16.6.0. Same thing happens using the Create RSETs operator in 16.5.2.

Unable to create RSET for NITF that has negative ILOC values

Unable to create RSET for NITF that has negative ILOC values in ERDAS IMAGINE 2020.

In 2018 the Create RSETs operator fails with error "Unknown error code - 0"
When running a Spatial Model that generates pyramid files for a multi-image TIFF the following errors occur:

22/10/19 17:31:30 SessionMgr(1476): ERROR: #909 from erdas::raster::PyramidManager::ValidatedRRDsWrite
22/10/19 17:31:30 SessionMgr(1476): ERROR: #897 from erdas::raster::PyramidManager::ValidatedRRDsWrite

When running a Spatial Model that generates pyramid files for a multi-image TIFF the following errors occur:

22/10/19 17:31:30 SessionMgr(1476): ERROR: #909 from erdas::raster::PyramidManager::ValidatedRRDsWrite
22/10/19 17:31:30 SessionMgr(1476): ERROR: #897 from erdas::raster::PyramidManager::ValidatedRRDsWrite

It doesn't seem to matter whether PYRX, RRD, or RSETs is selected for the Generator—it always fails—but if left as Auto, it works.

SICD images are large single blocked NITF files. Using the SIPS downsampling technique to make RSETs is stressing the memory constraints of the system.

ERRAS IMAGINE 2020 64-bit b1339
Make a local copy of a DTED Level 2 file (no ancillary files, just the .dt2) Bring up ImageInfo and generate pyramids on the DTED using Auto / Auto (which should currently apply RRD / SIPS) Display Fit to Frame The upper left of the data looks odd - it appears a flat grey expanse with no variation
| IM-51446 | Can't auto-generate pyramids for a CADRG image | ERDAS IMAGINE 2020 64-bit b1339 Default Preferences Open a CADRG A.TOC image into a 2D View You are prompted that

“This Image does not have pyramid layers. Click 'Yes' for the pyramid layers to be computed. Click 'No' to not compute the pyramid layers.”

Click Yes Ignore for a second that the message pops up again (there's a separate bug on that) Another Error message pops up saying

"Did not find metadata" ...

...and no pyramids are generated.

Can't generate them in ImageInfo either. Works fine in ERDAS IMAGINE 2018 Update 2. If I use ImageInfo and manually select to create RRDs (rather than leaving it as Auto) I can generate RRDs successfully. |
| IM-51426 | Crash creating RSETs for TIFF image | ERDAS IMAGINE 2020 exits when creating RSETs for a TIFF image. This worked fine using the Create RSETs operator in ERDAS IMAGINE 2018 Update 2. |
| IM-51282 | ResampleProcess run failed in rrd generation | ERDAS IMAGINE 2020: Outputs from Orthorectification, Reprojection, etc were failing to generate RRD format pyramid files. The output images are okay but their rrd files are not created successfully. In the output folder, I can only see their partial rrd files (such as controlpoints_ikonosrpc_default.partial.rrd). |
| IM-50901 | Resample process is producing rrd rather than pyrx (for u16 output) | Steps to reproduce:

In ERDAS IMAGINE 2020 32bit or 64bit go to Raster Tab > Geometric Calibration > Orthorectify Without GCP > select a NITF and click OK.
In Set Geometric Model > select NITF RPC and Click OK.
In NITF RPC Model Properties dialog, click Apply.
In Resample dialog, specify output file and click OK.
Output file is created.
Check output files and note that a .rrd was produced rather than the expected .pyrx |
| IM-51456 | Can't create pyramids for certain HDF datasets | Create Image Pyramid operator fails with certain HDF datasets that have multiple images stored in the file. |
| IM-51455 | CADRG pyramid generation should default to PYRX / erdasbino3 | ERDAS IMAGINE 2020 64-bit b1339 Current Auto behavior for generating pyramids would be PYRX, but ECW compression doesn't work well with this RGB data that has very limited colors.

Perhaps the format should be RSETs (since it is a variant of NITF), but what downsampler should it default to? SIPS might be a safe choice. But would MPD be appropriate since it is a "pseudo thematic" type of dataset? Probably needs testing.

Results of tests shown below.
PYRX / SIPS came out all black and RRD / MPD has missing blocks.
RSET fails with "Spatial Model failed in CreateImagePyramidimpl. The error was "anonymous-namespace'::produceLevel failed No images in this file":"

Of the "successful" tests, PYRX / erdasbino3 looks best. But I'm not sure if we can trust that for "all" CADRG? |
<table>
<thead>
<tr>
<th>IM-50882</th>
<th>Abandoned lock file when creating hyperspectral pyramids</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERDAS IMAGINE 2020 64-bit b1292</td>
<td>See (33GB) hyperspectral .img file</td>
</tr>
<tr>
<td>If you add this image to ImageInfo, click the Sigma icon, select to create pyramids Auto/Auto and stats with ignore 0 and OK. Eventually you get the message:</td>
<td></td>
</tr>
<tr>
<td>Spatial Model failed in CreateImagePyramidImpl. The error was &quot;g:/temp/resample.img.lock has been determined to be abandoned due to time since last modification&quot;.</td>
<td></td>
</tr>
<tr>
<td>OK the dialog and you are returned to ImageInfo with no pyramids or stats.</td>
<td></td>
</tr>
<tr>
<td>Session Log:</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:29:16 imageinfo;</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:29:16 C:\Program Files\Hexagon\ERDAS IMAGINE 2020\bin\x64URelease\imageinfo.exe</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: #13610 from eimg_LayerStackClose</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: CreateImagePyramid failed</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: #13117 from &quot;anonymous-namespace&quot;::CreateImagePyramid</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: RunWithMeter failed</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: #189 from RunWithMeter</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: c:\work\jenkins-home\workspace\v16.6-smsdk-x64release\sources_modeler\smprocesslib\getmangledprocaddress.cpp failed</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: #142 from c:\work\jenkins-home\workspace\v16.6-smsdk-x64release\sources_modeler\smprocesslib\getmangledprocaddress.cpp</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: HexGeo::SpatialModeler::Operator::Execute failed</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: #1739 from HexGeo::SpatialModeler::Operator::Execute</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: HexGeo::SpatialModeler::Operator::Execute failed</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: #1739 from HexGeo::SpatialModeler::Operator::Execute</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: HexGeo::SpatialModeler::Operator::Execute failed</td>
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<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: HexGeo::SpatialModeler::Operator::Execute failed</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: #1739 from HexGeo::SpatialModeler::Operator::Execute</td>
<td></td>
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<tr>
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<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: HexGeo::SpatialModeler::Operator::SetErrorMessage failed</td>
<td></td>
</tr>
<tr>
<td>19/09/19 11:52:14 SessionMgr(19788): ERROR: HexGeo::SpatialModeler::Operator::SetErrorMessage failed</td>
<td></td>
</tr>
</tbody>
</table>
| The error was "g:\temp/resample.img.lock has been determined to be abandoned due to time since last modification".
**IM-51452** Questionable behavior creating pyramids for NITF SNIP image

* Make a local copy of Unclassified NITF SNIP data  
  ** The image is 256 x 3352 with 172 layers  
* Generate PYRX pyramids  
  ** Takes (for me) about 4.5 minutes  
* No .pyrx is created  
* When you then open the NITF in the 2DView, it thinks pyramids are broken  
* Generate RSETs  
  ** Takes (for me) over 3 minutes  
  ** No RSETs are created  
* When you then open the NITF in the 2DView, it thinks pyramids are (still) missing  
* Generate RRDs  
  ** Takes (for me) over 15 minutes  
  ** .rrd is created and has two levels: 128 x 1676 & 64 x 838  
* When you then open the NITF in the 2DView, it thinks pyramids are there and optimized (no badge)

**IM-51535** Inconsistent pyramid generation for a JPEG 2000 encoded Sentinel-2

 ERDAS IMAGINE 2020 64-bit b1339  
Make a local copy of Sentinel-2 (S2*.SAFE) image (no ancillary files)  
Start ImageInfo  
Load the Sentinel-2 (S2*.SAFE) image (the directory one)  
Click the Sigma button  
Turn on Pyramid Generation and leave it at Auto  
Click OK  
You get an Attention dialog IMAGEINFO: Every layer in the file already has pyramid layers.  
If you retain existing pyramid layers, only pyramid levels that are missing or no longer meet the current performance threshold will be created.  
Would you like to remove the existing layers first?  
Click No  
You get a progress meter of "Executing Pyramid Layer Generation" (or similar) and it completes within a couple of seconds.  
Stats have been calculated with a Skip of 16 x 16.  
A .pyrx has been created of size 760KB and a similarly size .aux.  
The .pyrx seems to contain ECW data starting at 343 x 343 rows/columns  
HFA View of the .aux seems to indicate the recognition of the external .pyrx levels  
Quit ERDAS IMAGINE  
Delete the .aux and .pyrx files  
Start ERDAS IMAGINE  
Start ImageInfo  
Load the Sentinel-2 (S2*.SAFE) image (the directory one)  
Click the Sigma button  
Turn on Pyramid Generation and leave it at Auto  
Click OK  
You get an Attention dialog IMAGEINFO: Every layer in the file already has pyramid layers.  
If you retain existing pyramid layers, only pyramid levels that are missing or no longer meet the current performance threshold will be created.  
Would you like to remove the existing layers first?  
Click Yes  
You get a progress meter of "Deleting ReducedLayers"  
"Executing Create Image Pyramid " (or something) and it slowly goes through a progress meter taking a minute or so.  
Stats have been calculated with a Skip of 1 x 1.  
A .pyrx has been created of size 760KB and a similarly size .aux.  
The .pyrx seems to contain ECW data starting at 343 x 343 rows/columns  
HFA View of the .aux DOES NOT indicate the recognition of the external .pyrx levels  
Should there really be a difference in behavior?
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
<th>ERDAS IMAGINE 2020 64-bit b1347</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-51602</td>
<td>Pyramids needs to be rebuilt for best performance alert after building pyramids for SPOT7</td>
<td>Make a local copy of the SPOT7 DIMAP image directory (no ancillary files created by ERDAS IMAGINE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Start ERDAS IMAGINE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Load the DIMAP _xml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click the Sigma button</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turn on Compute Pyramid Layers (if not already on)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Once complete display the DIMAP _xml in a 2D View</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note the Alert badge which has correction &quot;Pyramids needs to be rebuilt for best performance&quot;</td>
</tr>
<tr>
<td>IM-51257</td>
<td>Error of failed to delete temp file on removing the model containing Grow Features operator</td>
<td>Run/Preview a spatial model designed to use the Grow Features operator and then try to remove the model from the viewer. Generates an Error</td>
</tr>
<tr>
<td>IM-51278</td>
<td>Preview of all 3D Features is Broken</td>
<td>ERDAS IMAGINE 2020:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Run a Spatial Model Editor Preview for either Filter By Geometries or Intersect Features operators. Notice that the preview fails with an error message &quot;Spatial Model failed in Coordinate Transformation. The error was &quot;Input Features not set properly.&quot;.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instead of Preview, if we try to create an output then it works fine and the output can be displayed properly in the viewer. See the attached screenshot of the error.</td>
</tr>
<tr>
<td>IM-51033</td>
<td>Images calibrated with small DEM display data outside DEM extent</td>
<td>Open a DigitalGlobe NITF image that is associated to a DEM that has a smaller spatial extent than the image in a 2D View, oriented to map:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fit to Frame and then zoom out a little and you will start to see imagery that is beyond the extent of the DEM used to calibrate the image show up. They should not.</td>
</tr>
<tr>
<td>IM-51207</td>
<td>Subpixel - Signature Evaluation / Refinement completely fails in 64-bit, while 32-bit gives an Error message but Output is created</td>
<td>ERDAS IMAGINE 2020 Description - In ERDAS IMAGINE 2020 64-bit, the Signature Evaluation process fails. However, in ERDAS IMAGINE 2020 32-bit, the process gets completed and an output file gets created, but an error message is displayed at the end of processing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Steps to reproduce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Launch 64-bit/32-bit ERDAS IMAGINE 2020 and click Raster tab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Click Subpixel and select Signature Evaluation/Refinement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Provide input and output data path and click OK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. For 64-bit error message will be displayed, refer the attached image and Session log in the comment section. For 32-bit the process will complete but an error message will be displayed at the end of processing</td>
</tr>
<tr>
<td>IM-51305</td>
<td>Performing triangulation under Classic Point Measurement crashes</td>
<td>This is reproducible only on 32bit ERDAS IMAGINE 2020</td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>1) Launch ERDAS IMAGINE &gt; File &gt; Open &gt; Photogrammetric Project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) Open laguna.blk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Under Photogrammetry tab &gt; Point Measurement &gt; launch Classic Point Measurement tool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) Run APM &gt; Now try to perform Triangulation (refer the attached Image)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observe that ERDAS IMAGINE crashes while trying to perform triangulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM-51206</td>
<td>Subpixel - Automatic Signature Derivation fails and gives an Error message</td>
<td>ERDAS IMAGINE 2020 64-bit</td>
</tr>
<tr>
<td>Description - Automatic Signature Derivation process fails and gives an error message.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steps to reproduce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Launch 64-bit ERDAS IMAGINE 2020 and click Raster tab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Click Subpixel and select Automatic Signature Derivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Provide input and output data path and click OK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. An error message is displayed, refer the attached image and Session log in comment section.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM-51423</td>
<td>Model containing Add Attributes By Order throwing error related to coordinate transformation.</td>
<td>ERDAS IMAGINE 2020 Spatial Model containing Add Attributes By Order throwing error related to coordinate transformation.</td>
</tr>
<tr>
<td>IM-51372</td>
<td>Publisher Information shown as unknown in ER Mapper Vector Support setup.exe installer</td>
<td>1. Download ER Mapper Vector Support installer from [link][<a href="http://download.hexagongeospatial.com/search?lang=en&amp;product=74ad85a4d14b4836abfc6a">http://download.hexagongeospatial.com/search?lang=en&amp;product=74ad85a4d14b4836abfc6a</a> e2c6f19529&amp;utm_source=pardot.com]</td>
</tr>
<tr>
<td>2. Try to install ER Mapper Vector Support using setup.exe in extracted ZIP folder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Observe Publisher Information shown as Unknown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM-51208</td>
<td>Projection information in Grow Features operator output is incorrect for input SeedLocations of type Polyline/Polygon</td>
<td>ERDAS IMAGINE 2020</td>
</tr>
<tr>
<td>In ERDAS IMAGINE run a Spatial Model that attempts to use the Grow Features operator.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Now display the output file on top of input raster, observe that output shp file doesn't overlap with input raster, as the projection information is incorrect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM-51209</td>
<td>Run/Preview fails for SeedLocations as Multipoint/Single point feature for Grow Features Operator</td>
<td>ERDAS IMAGINE 2020</td>
</tr>
<tr>
<td>Run or Preview a Spatial Model that uses Grow Features where a Multipoint Feature is given for SeedLocations port.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run/Preview displays a warning message on the Feature Output/Preview operator that, No feature available for Output/Preview.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On running the model, Output shp file is created which is invalid, as on displaying, following dialog shows up stating:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error - ‘Nonsense Clip Window’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warning - ‘Reached the Zooming limit, preventing overflow with ‘long’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error - ‘Invalid World Coordinate System’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM-51342</td>
<td>Incorrect json output for CRS and image name strings</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>IM-51311</td>
<td><strong>Viewshed - Clicking on Viewshed fails to open/launch the tool dialog</strong></td>
<td></td>
</tr>
</tbody>
</table>

**ERDAS IMAGINE 2020 64-bit**

**Steps to Reproduce**

1. Launch 64-bit ERDAS IMAGINE 2020
2. Open a DEM in 2D View from the given path
3. Click Terrain > Viewshed - the tool will not launch and there is no error message.

Ideally, Viewshed tool dialog must open, as it does in 32-bit ERDAS IMAGINE 2020.

**IMAGINE Session Log**

```
16/10/19 11:58:54 SessionMgr(26036): Connection success for the external process 'eWkspace_64'
16/10/19 11:59:34 eWkspace_64(18508): Loading GrayScale Layer:
16/10/19 11:59:34 d:/test/viewshed analysis/seattle_dem.img(:Layer_1)
16/10/19 11:59:36 viewer greyscale "d:/test/viewshed analysis/seattle_dem.img" band 1 transbackground 1;
16/10/19 11:59:36 viewer magnification toplayer 1 resample "Nearest Neighbor";
16/10/19 11:59:39 C:/Program Files/Hexagon/ERDAS IMAGINE 2020/bin/x64URelease/viewshed.exe 1
16/10/19 11:59:50 SessionMgr(26036): viewshed.exe exited with status -1073741819.
16/10/19 12:00:11 C:/Program Files/Hexagon/ERDAS IMAGINE 2020/bin/x64URelease/viewshed.exe 1
16/10/19 12:00:21 SessionMgr(26036): viewshed.exe exited with status -1073741819.
```
## Issues Resolved – ERDAS IMAGINE 2020

### IMAGINE Essentials

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Essentials</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-21970</td>
<td>ERDAS IMAGINE is creating gaps between images when zooming out (lost blocks) - caused by 3x3 pyramid algorithm</td>
<td>Customer reported that ERDAS IMAGINE 2014 v14.1 is creating gaps between multiple images in the viewer when zoomed fully out. The customer’s images are 8-bit IMG files. When zooming in, the gap between images disappears. Gaps are not visible when creating pyramid layers by using 2x2 kernel, but are visible when using a 3x3 kernel.</td>
</tr>
<tr>
<td>IM-39368</td>
<td>Viewer ERROR: bad allocation associated with large volume of image color table attributes</td>
<td>Viewer does not handle images associated with a large number of attributes (i.e. color table). Test file displays with color scheme and without error in v10.1 &amp; v11.0.5. Gets the bad allocation error in v13.0.2. Thematic input has 25 million rows and displays initially without error. The attribute table (with no color scheme) is displayed fine (except for scrolling to the very bottom). Get an error when trying to add colors from the view. Successfully added colors and class names using standalone raster attribute editor. Image is redisplayed fine after that. It apparently used the cache; it was still gray. Exited ERDAS IMAGINE, restarted, displayed the file. Colors are seen but now a “bad allocation” error is generated.</td>
</tr>
<tr>
<td>IM-41039</td>
<td>Unable to load Chinese or Arabic named data from Recent button</td>
<td>1. Launch ERDAS IMAGINE 2018, 64-bit (bld:491) 2. Load the data using Chinese characters in the filename 3. Clear the viewer and try to reload the data from Recent button on the File chooser, from quick access tool bar. 4. Observe that a warning thrown saying Data could not be found or invalid.</td>
</tr>
<tr>
<td>IM-48233</td>
<td>New ribbonized Inquire Cursor is not recognized by applications such as Region Growing Properties tool</td>
<td>The “At Inquire” button in the Region Growing Properties tool only works with the legacy Inquire Cursor. If the new ribbonized Inquire Cursor is active in a 2D View and the user clicks the “At Inquire” button in the Region Growing Properties tool a warning message is displayed that states “No Inquire Cursor in Window”. Steps to reproduce the problem:  # Display the attached image in a 2D View  # Activate the Inquire Cursor (Home tab &gt; Information group &gt; Inquire)  # Open the Region Growing Properties tool (Drawing tab &gt; Insert Geometry group &gt; Grow menu &gt; Growing Properties)  # Click the “At Inquire” button in the Region Growing Properties tool.  # A message pops up warning “No Inquire Cursor in Window”.</td>
</tr>
<tr>
<td>IM-46524</td>
<td>Elevation values messed up when Basemap removed from 2DView</td>
<td>Steps to reproduce:  # Display lanier.img in a 2DView.  # Left-click in the Elevation Part of the status bar and select Use Elevation Library.  # Move the cursor around in the 2DView and notice that the elevation is around 350 meters.  # Open the OpenStreetMap basemap in the 2DView containing lanier.img.  # Move the cursor around in the 2DView and notice that the elevation is still around 350 meters.  # Right-click on Basemap in the TOC and Remove Layer.  # Move the cursor around in the 2Dview and notice that the elevation is now WAY below sea level (negative).</td>
</tr>
<tr>
<td>Case</td>
<td>Description</td>
<td>Steps to reproduce</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>--------------------</td>
</tr>
</tbody>
</table>
| IM-46446 | Elevation units are wrong in measure tool if target units are changed | 1. Display and image in the 2DView.  
2. Set the view's elevation source to "Use Elevation Library" and set the units to "feet".  
3. Move your cursor around over the image and verify that the status bar is showing you the elevation in feet.  
4. Start the measure tool.  
5. Measure a Point.  
6. See that the elevation is shown in the Point Measurement Description, but, although the value is in feet, the units say "meters." |
| IM-46523 | Elevation part of status bar does not remember or use the proper vertical units for saved elevation sources | 1. Open lanier.img in a 2DView.  
2. Click in the Elevation Part of the status bar and select Use Elevation Library.  
3. Click in the Elevation Part of the status bar and select "Show in Feet".  
4. Move the cursor around in the 2DView and notice that the elevation is around 1200 feet.  
5. Open Indem.img in Image Metadata and verify that it has Elevation Info and the Elevation Units are "feet".  
6. Click in the Elevation Part of the status bar and select Choose Elevation Source.  
7. Select Indem.img as the Source File.  
8. Change the input vertical units to "feet".  
9. Click OK.  
10. Move the cursor around in the 2DView and notice that the elevation still shows around 1200 feet.  
11. Click in the Elevation Part of the status bar and select Use Elevation Library again.  
12. Move the cursor around in the 2Dview and notice that the elevation now shows around 350 feet. |
| IM-46522 | Elevation Source Selector for 2D View should initialize input vertical units from Elevation Info | 1. Open Indem.img in imageinfo and verify that it has Elevation Info and the Elevation Units are "feet".  
2. Open lanier.img in a 2DView.  
3. Click in the Elevation Part of the status bar and select Choose Elevation Source.  
4. Select Indem.img as the Source File.  
5. Notice that the input vertical units remains "meters". It should be "feet". |
| IM-34455 | Save as NITF is not responding (nothing happens) to an image that has been opened as Image Chain | 1. Open any image as Image Chain.  
2. File > Save as > All layers as NITF, give proper location to save the output.  
3. Click yes for the dialog “save all the layers”. Observe that nothing happens. |
| IM-44349 | Cloud Cover segment not displaying correctly as Image Chain (looks fine as Raster) | Using a NITF with multiple image segments, including a cloud cover (CC) segment:  
# Start a 2D View, click the File Open icon (i.e. as Raster) and select the above NITF file.  
# In the Sub-Image tab turn on both the MONO and NODISPLY checkboxes.  
# Raster Options tab select Fit to Frame and click OK  
# The cloud layer has correctly displayed as solid 255s (cloud) and transparent 0s (no cloud)  
# Clear the View  
# File / Open / Raster as Image Chain and select the same NITF file.  
# Sub-Image tab turn on both the MONO and NODISPLY checkboxes.  
# Raster Options tab select Fit to Frame and click OK  
# This time the cloud layer has incorrectly displayed as solid grey across the entire extent. |
| IM-37916 | ImageChain 1:1 display with Lagrange resampling is slower in ERDAS IMAGINE 2018 when compared to ERDAS IMAGINE 2016 Update 1. | This is observed in the following 3 scenarios.  
* if the multispectral image is opened in map space.  
* if both the pan and multispectral images are opened in image space.  
* if both the pan and multispectral images are opened in map space.  
Steps to reproduce, by taking the above 2nd scenario as example  
- Make sure that both the Pan and Multispectral images are copied into the same folder.  
- Select File --> Open --> Raster as Image Chain  
- In the file chooser that launches, select both the Pan and Multispectral images.  
- Go to the Raster Options tab and make sure that the Fit to Frame option is ON.  
- Click OK in the file chooser.  
- Once the images are displayed, go to Multispectral and Panchromatic tabs and change the resampling method for both the images as Lagrange.  
- From the Home tab click on the Reset option.  
Note the time it takes for the Reset. This time is slower in the above 3 cases when compared to ERDAS IMAGINE 2016 Update 1. |
| IM-37917 | ImageChain w/Lagrange resampling, jump to one end of an image using Inquire Cursor is slower in ERDAS IMAGINE 2018 | - Select File --> Open --> Raster as Image Chain  
- In the file chooser that launches, select the Multispectral image.  
- Go to the Raster Options tab and make sure that the Fit to Frame option is ON.  
- Click OK in the file chooser.  
- Once the images are displayed, go to Multispectral tab change the resampling method as Lagrange.  
- From the Home tab click on the Reset option.  
- Launch the Inquire Cursor and feed in the coordinates of bottom right side corner and hit enter.  
Note the time it takes for the Inquire Cursor to move and display the image. This time is slower compared to ERDAS IMAGINE 2016 Update 1 |
| IM-29894 | ERDAS IMAGINE is ignoring the overviews for grayscale (and RGB) TIFF image with JPEG compression | Overviews are not considered by Image Chain for grayscale image with JPEG compression.  
Due to this it is taking a long time to load the image even though the image has a full set of overviews.  
For the same image if we use another compressions like LZW then overviews are considered and displays the image in seconds.  
Also, RGB (also w/JPEG compression) version of same image displays very quickly, indicating the overviews are being seen and used. Pyramid info for gray scale image is showing as no pyramid layers present in ERDAS IMAGINE 2016 software. |
| IM-47229 | Problem of opening as image chain for image calibrated with DEM with NoData | An image was geometrically calibrated using a DEM that was of smaller extent than the image (or which otherwise contained NoData locations)  
When opening as Image Chain in the Viewer, the Low Right quadrant is not correct. It should be no data area (background color), but showing partial raster. |
| IM-46335 | Selecting vector symbol from "Other" group throws errors and sometimes crashes | To recreate:  
# Display a polygon shapefile  
# Vector tab > Style > Styles group > Properties button (to open Fill Style Chooser)  
# Custom Tab > Use Pattern checked on > open Symbol menu > Other > Pick any Menu, any Symbol. Errors are thrown.  
# Repeat steps above, then no errors!  
Behavior is inconsistent. Sometime crashes occur. Sometimes errors don't occur. |

| 02/10/18 12:26:26 viewer vector "shapefile.shp";  
02/10/18 12:28:26 SessionMgr(17748): ERROR: #1 from eant_CoordSysConversionConvertAndTransformYScale  
02/10/18 12:28:26 SessionMgr(17748): ERROR: Error returned from eant_CoordSysConversionScaleAndTransformY  
02/10/18 12:28:26 SessionMgr(17748): ERROR: #2 from eant_CoordSysConversionScaleAndTransformY  
02/10/18 12:28:26 SessionMgr(17748): ERROR: Error returned from eant_CoordSysConversionScaleAndTransformY  
02/10/18 12:28:26 SessionMgr(17748): ERROR: #3 from eant_CoordSysConversionScaleAndTransformY |
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<th>Issue ID</th>
<th>Description</th>
<th>Details</th>
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<tr>
<td>IM-47264</td>
<td>&quot;Choose Sensor&quot; doesn't use its .SAF settings correctly still</td>
<td>Open a three-band RGB image into a 2D View as raster. Go to the Multispectral tab. In the Bands group note that it has defaulted to Choose Sensor and a RGB order of Layer_1, Layer_2, Layer_3 (it should be based on default Preferences). Now, not a lot of people realize, but &quot;Choose Sensor&quot; is just a standard .SAF file, with wavelengths set in it. So you should be able to pull down the Common Band Combinations list. &quot;False Color Infrared&quot; shouldn't show up on the list - it shouldn't be present based on the wavelengths defined in 3BandDefault.saf.</td>
</tr>
<tr>
<td>IM-46915</td>
<td>&quot;Choose Sensor&quot; doesn't use its .SAF settings correctly</td>
<td>Open a three-band RGB image into a 2D View as raster. Go to the Multispectral tab. In the Bands group note that it has defaulted to Choose Sensor and a RGB order of Layer_1, Layer_2, Layer_3 (it should be based on default Preferences). Now, Choose Sensor is just a standard .SAF file, with wavelengths set in it. So you should be able to open the Common Band Combinations list and select True Color. But when you do, the RGB display order changes to Layer_1, Layer_1, Layer_1, which is incorrect. False Color Infrared should not be present based on the wavelengths defined in 3BandDefault.saf. Choose Sensor option has similar problems for other numbers of bands too.</td>
</tr>
<tr>
<td>IM-46880</td>
<td>Clearing View with Subset's Inquire Box up crashes ERDAS IMAGINE</td>
<td>Display an image in a 2D View (e.g. lanier.img) On the Multispectral tab start Subset and Chip With the Subset and Chip dialog (and its associated Inquire Box) still active, click the Clear View icon on the Quick Access Toolbar. ERDAS IMAGINE crashes Doesn't happen in ERDAS IMAGINE 2016 v16.1</td>
</tr>
<tr>
<td>IM-41174</td>
<td>ERDAS IMAGINE crashes with Measurement tool operation</td>
<td>1. Launch ERDAS IMAGINE 2018 2. Load a WorldView-2 GeoTIFF image. 3. Now Click Measure button from Home tab &gt; Information group 4. Select Shadow height from Layover from Measurement tab &gt; Measure 5. Observe Cursor changes to cross 6. Keep the cursor as cross and clear the viewer from quick access tool bar 7. Now with cross Cursor click on the viewer and observe ERDAS IMAGINE crashes</td>
</tr>
<tr>
<td>IM-48070</td>
<td>Viewer Banner (Title Bar) is Erased</td>
<td>When a 2D View is resized smaller and then expanded to original size, parts or all of the View Title Bar Text is erased.</td>
</tr>
<tr>
<td>IM-47497</td>
<td>Problem with HxIP basemap not reprojecting</td>
<td>Failure Scenario 1. Display orthorectified IMG image (projected to UTM) 2. Fit Layer to Window (note that View projection is UTM) 3. Click the Basemap button and select HxIP 4. Provide login credentials, Test and (if successful) click Add and then OK 5. Note that the background of the first image displays as red x’s Success Scenario 1. Click the Basemap button and select HxIP 2. Provide login credentials, Test and (if successful) click Add and then OK 3. Note that the basemap displays fine. View projection is Lat/Lon 4. Display orthorectified IMG image (projected to UTM) 5. In the Contents pan, right click on the IMG image and select Fit Layer to Window 6. Note that both images display fine There’s an issue with the projection the data is being requested in.</td>
</tr>
</tbody>
</table>
### IM-48186

**Variables option cannot be changed in Batch Command Editor for Map Model to World File process**

When trying to use the Map Model to World File image metadata command in a batch process, the Variables menu in the Batch Command Editor is greyed out and stuck at “Original commands”. You cannot choose the option “One input, one or more outputs”. The command was only half auto-variabilized, i.e., a variable is created for the input file, but a variable is not created for the output world file.

The original command in ERDAS IMAGINE 2016 is: `*imagecommand c:/input/input1.tif -exportworld c:/output/input1.tfw -meter imagecommand`*  
The “original” command in ERDAS IMAGINE 2018 is: `*imagecommand "$\{$\{\text{Input}\}\}$" -exportworld c:/output/input1.tfw -meter imagecommand`*  
You can work around this by creating an output variable and inserting it into the command but it is not straightforward to the user.

### IM-45559

**Multi-point Geometric correction dialog crashes while trying to mark a GCP**

1) Launch ERDAS IMAGINE and open a WorldView-2 GeoTIFF image into a 2D View  
2) Go to Multispectral tab >> Control Points  
3) Select Worldview RPC under the Set Geometric model dialog and Hit OK  
4) Close the dialogs that come up [by clicking Cancel repeatedly] and now click on the Create GCP icon on Multipoint Geometric correction window and click on the main viewer to collect the point, note that it throws an error message, Click OK on it  

Observe that the warptool.exe crashes after clicking OK on the error message

### IM-44393

**64-bit exporttif outputting "E" for “Software” TIFF tag**

# Make sure exporttif is configured to run 64-bit.  
# Manage Data tab | Conversion group | Export Data.  
# Set the Format to “TIFF” (not “TIFF Direct Write”).  
# Select any input image.  
# Enter an output filename.  
# Click OK.  
# Take all defaults and click OK on the Export TIFF Data dialog.  
# Open the resultant TIFF in Image Info.  
# Click on the TIFF Info tab.  
# Expand the Image folder and click on the TIFF Tags folder.  
# The value of the Software tag is "E".  
# If you do this workflow again with exporttif configured to run 32-bit, the value of the Software tag is “ERDAS IMAGINE”.

### IM-19706

**Area Fill tool corrupts TIFF images**

After using the Area Fill tool on a TIFF image and saving the image, it becomes corrupted and does not appear correct when you clear it from the 2D View and display it again. This problem does not occur in ERDAS IMAGINE 2014 v14.1

How to reproduce:  
1. Open the TIFF image in a 2D View with the No Stretch raster option enabled.  
2. Draw an AOI polygon in any area of the image. Make sure that the AOI is selected.  
3. Select TIFF image in the Contents panel.  
4. Open the Area Fill tool by clicking on the Fill button in found in the Edit group under the Multispectral tab.  
5. In the Area Fill tool, make sure that the Function option is set to Constant and leave the Fill With values is set to 0.0.  
6. Click the Apply button to convert the pixel values within the AOI polygon to the new pixel value. An Attention message opens “This layer is using a data stretch lookup table. When editing pixel values you may want to remove the data stretch lookup table. Do you want to do this now? Click Yes.  
7. Another warning message displays “Since this function modifies the pixel values of the image, you may wish to recalculate the statistics and histogram for the layer before doing any other operation that depends on this data.” Click OK.  
8. Close the Area Fill tool.  
9. Save your image.  
10. Remove your image from the 2D View and redisplay it. Notice that the image has changed, but not like it should have.  
11. This problem does not happen when using an IMG format image instead of a TIFF image.
| IM-10616 | ERDAS IMAGINE JFIF (JPEG) cannot read Progressive JPEG profile | Customer reported that they cannot import JPEG with JGW file into IMG or TIFF formats. They are also not able to open the JPEG file in ERDAS IMAGINE. However they can open/ import the JPEG file in ER Mapper 2013. The importer gives error message while importing: "Unsupported SOF Marker type 0xc2" While opening the file in the 2D View ERDAS IMAGINE gives: "File open error (0-Unknown error)"

| IM-44688 | Artifacts in Sentinel-2 images when directly viewing the *.safe file in 2D View as well as after importing | Customer reported that they can find artefacts in Sentinel-2 images when directly viewing the *.safe file in a 2D View as well as after importing the *.safe file into *.img by means of the Sentinel-2 Direct Read and Sentinel-2 manifest importers. The artifacts seems to be due to the granule tile borders. Seems to affect only imagery from before December 2016 when the data structure of Sentinel-2 was re-organized.

Steps to Reproduce:
1. Open the Sentinel2 *.safe file in IMAGINE Viewer. Zoom to a granule edge. You see the broken straight lines artifacts in between granule tiles.
2. Import the Sentinel 2 *.safe file by means of the Sentinel 2 Direct Read and Sentinel-2 manifest importer. Then open the imported output file in IMAGINE Viewer. Zoom to a granule edge. You see the broken straight lines artifacts in between granule tiles.

| IM-39173 | Opening a hyperspectral image in ImageInfo takes long time | To reproduce the problem open a hyperspectral image in a 2D Viewer. Go to IMAGINE Home tab and click Metadata button. Notice that it takes quite long time before the image info is shown on ImageInfo dialog box. On one test machine, it takes more than 10 seconds to open an AVIRIS scene in ImageInfo. It has 224 bands and whose width and height are 530 pixels and 301 pixels.

| IM-12677 | Request to add missing ground control point gcc files in ERDAS IMAGINE example data | Request to add missing ground control point gcc files in the ERDAS IMAGINE example data in the download page.

In the ERDAS IMAGINE 2014 Online Help documentation, in the "Refine the DEM Extraction Workflow exercise", it has been mentioned about using two Ground Control Points files (gcc files): "uluru_reference-gcp.gcc" and the "uluru_input-gcp.gcc" file. However the customer couldn’t find those two gcc files in the ERDAS IMAGINE example data.

These are now downloadable as part of the ERDAS IMAGINE Radar Example Data download.

| IM-43563 | Tiff files with Thai characters in their names fail | An ERDAS APOLLO customer is seeing failures due to ERDAS IMAGINE not being able to handle tiff files with Thai characters in them, for example:

เชียงราย.tif

The issue is not restricted to TIFF. If you rename an IMG file, create pyramids (rrds) and then attempt to open the IMG file, you get errors referring to the pyramids not being found.

| IM-44567 | 64-bit ImageInfo displaying TIFF GTCitationGeoKey incorrectly | # Open a TIFF file in "64-bit" ImageInfo.
# Click on the TIFF Info tab.
# Expand the Image folder and the GeoTIFFKeys folder.
# The GT CITATION GeoKey is displayed in what looks like Chinese characters, although the values of the other tags look fine.

| IM-46884 | Pleiades DIMAP v2 image stats reversed for red and blue bands | If you calculate statistics (for example in Image Info) for a Pleiades DIMAP v2 image the resulting stats are correct. Whereas if you look at the "raw" DIM*.XML file (with all .aux files, etc., deleted first) ERDAS IMAGINE is trying to use the statistics it finds in the .XML header, but is associating the stats in the wrong order.

<p>| IM-44990 | Socet GRID file opens in 32 bit but not 64 bit | Open a specific type of Socet GRID *.dth file in a 32-bit 2D View. Image appears. Open the same file in 64 bit view. Get error: &quot;Header identifier did not match&quot; |
| IM-37447  | Additional empty &quot;Image&quot; segments shouldn't be saved to IMG header | Open a multi-segment NITF image in a 2D View (using default settings so only one image segment is opened). File / Save As / Top Layer As., to an IMG format output. Open the resulting IMG file in ImageInfo and click on the NITF tab. Note that despite the fact that there is only a single image segment physically present in the IMG, all the original Image segments have been copied across even though they do not have the associated data to go with them. Not only is not removing them confusing, it also causes ERDAS IMAGINE problems - e.g. if you try to Save All Layers as NITF, the NITF Exporter crashes. |
| IM-46218  | TIFF pyramids not recognized (APM fails with .tiff) | APM fails with customer's .tiff images. All is correct with customer's block setup. Image Info does not recognize pyramid layer algorithm. Images do not display correctly if you &quot;fit to frame&quot; in IMAGINE Viewer. And in IMAGINE Photogrammetry, image is displayed only on a small section of image footprint. Re-generating pyramids in IMAGINE Photogrammetry does not solve the problem. Only workaround is to convert the imagery to another format. So, I imported these files to .img format and re-attached them to the block file and then tested APM. APM run successfully collected 90+ points using default pattern. |
| IM-47024  | JPEG2000 exporter in ERDAS IMAGINE gives error message with ArcGIS created *.img file | Customer reported that JPEG2000 exporter (Manage Data &gt; Export Data &gt; JPEG 2000) in ERDAS IMAGINE gives error message with ArcGIS created *.img file. The JPEG 2000 export process runs all the way through, and nearly at the end ERDAS IMAGINE gives an error, saying: &quot;Layer_1INode already exist for file *.aux&quot;. The customer's *.img file was created by ArcGIS HillShade Tool from a DEM file created by ERDAS IMAGINE's MosaicPro. Even if the ERDAS IMAGINE JPEG 2000 exporter gives the following error message, it creates a valid output JPEG 2000 file. *The file *.jp2 cannot be deleted because it is in use by another application. Close the file and then press 'Retry' to continue, or press 'Cancel'. |
| IM-35331  | Errors when trying to display features from Oracle Features Proxy (.ofp) and Spatial Feature (.ogv) | Customer reported that ERDAS IMAGINE gives errors when they tried to display features from both Oracle Spatial Feature (.ogv) and Oracle Features Proxy (.ofp). The customer has been able to create a connection using both Oracle Spatial Feature (.ogv) and Oracle Features Proxy (.ofp), When trying to load .ogv, he gets the error: &quot;Invalid input ProProjection structure&quot;, then &quot;Invalid input units name&quot;. The feature shows up in the legend, but is not visible in the display (but the bounding box can be seen if turned on). When trying the .ofp, he gets the error: &quot;Could not open layer. Invalid connection parameters&quot;. He gets nothing in the legend or display window. |
| IM-35332  | ERDAS IMAGINE is unable to display features from Oracle Spatial Feature (.ogv) and Oracle Features Proxy | Customer reported that ERDAS IMAGINE is unable to display features from both Oracle Spatial Feature (.ogv) and Oracle Features Proxy (.ofp), when connected to the database using credentials of a user who is non-owner of the database. If the customer uses the credentials of the owner or the credentials of the System DBA, he can display the feature in ERDAS IMAGINE. However, customer is not seeing any problem with the same data in GeoMedia. It's only in ERDAS IMAGINE, which is not displaying the vector. Recreated the problem in ERDAS IMAGINE and in another popular GIS software. |
| IM-42876  | Unable to open point features from an Oracle database | Using specific Oracle database connection, try to display any points features available in it. Notice that there are couple of error messages and the display fails. |</p>
<table>
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<tr>
<th>Issue Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>IM-48922</td>
<td>Proxy gdb file access, without connecting to geodatabase throws error, which is not clear. ERDAS IMAGINE 2018 Update 2 could not use an existing .gdb Geodatabase proxy file to access the Geodatabase.</td>
</tr>
<tr>
<td>IM-48919</td>
<td>Trying to display a Point Feature class in gdb (having single point) fails in ERDAS IMAGINE. ERDAS IMAGINE 2018 Update 2 could not use an existing .gdb Geodatabase proxy file to access the Geodatabase. Whereas Point Feature Class with &gt;1 point displays fine.</td>
</tr>
<tr>
<td>IM-48918</td>
<td>Supported version of Geodatabase logged in session log needs to be updated. In ERDAS IMAGINE &gt; File &gt; Open &gt; Vector layer &gt; ArcGIS Geodatabase (*.gdb) &gt; Click Connect. Session log reports: 17/05/19 15:24:52 SessionMgr(5324): Detected geodb version 10.7 17/05/19 15:24:52 SessionMgr(5324): Unsupported version of GeoDatabase support located. Please note that IMAGINE is only supported for version up to 10.2.</td>
</tr>
<tr>
<td>IM-47243</td>
<td>Fail to launch Texel Mapper 1. Launch ERDAS IMAGINE 2018 (64-bit) 2. Launch Texel Mapper from Toolbox tab &gt; Common group &gt; Stereo Analyst drop down. 3. It fails.</td>
</tr>
<tr>
<td>IM-45530</td>
<td>Unable to load ers file associated with TIFF file in ERDAS IMAGINE 2018. 1. Launch ERDAS IMAGINE 2018 (64-bit) 2. Try to load a specific .ers file and observe Message thrown saying image has no layers. 3. Session log saying ERS Raster error: Filetype unknown.</td>
</tr>
<tr>
<td>IM-44887</td>
<td>Output created using LaGrange resampling differs from the output generated using other resampling methods. Giving the image and the DEM provided as input to &quot;Orthorectify without GCP&quot; option, generate 2 outputs one with LaGrange resampling method and the other with any other resampling method from the rest available. Open the 2 outputs in 2 different viewers and notice that in one portion of the image the outputs differ.</td>
</tr>
<tr>
<td>IM-39311</td>
<td>Generating pyramids takes an unexpectedly long time because of the binary &quot;use multithreading&quot; hyperspectral preference. Pyramid layers are taking an unexpectedly long time to be generated for hyperspectral images.</td>
</tr>
<tr>
<td>IM-41083</td>
<td>Unit test failure when locale is set to German (bug in etxt::toString). The locale on my development machine is set to German (Control Panel</td>
</tr>
<tr>
<td>IM-48813</td>
<td>DEM Tools Revalue function does not allow DEM recode values to be specified. DEM Tools Revalue application does not add recode values from Range(s) window to the Range list. The program does not run unless recode values are added to the Range list. Does not work with any data type (i.e 1, 2, 4, 8, 16 and 32 bit signed/unsigned integers, 32 and 64 bit float). Worked correctly in ERDAS IMAGINE 2016. To recreate: Open Terrain tab &gt; DEM Tools &gt; Revalue Input DEM: Indem.img Add 1300 to Range(s) window New Value: 0+ Select Add Range to List. There is no response to this request.</td>
</tr>
<tr>
<td>IM-43195</td>
<td>64-bit VersionTool reporting garbage for Date/Time Stamp</td>
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<td></td>
<td>64-bit VersionTool reporting garbage for Date/Time Stamp</td>
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<td></td>
<td>64-bit VersionTool reporting garbage for Date/Time Stamp</td>
</tr>
<tr>
<td></td>
<td>Description shows Date/Time Stamp:</td>
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<tr>
<th>IM-43666</th>
<th>Coordinate system option in Measurements panel automatically flips if zoom is performed in the viewer</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• Launch the Preference Editor and change the preference for the following option to Lat/Lon (WGS 84).</td>
</tr>
<tr>
<td></td>
<td>• Viewing category &gt; Viewer &gt; Show Coordinates As</td>
</tr>
<tr>
<td></td>
<td>• Open an image in the viewer and select the Measure option from the Information group of Home tab.</td>
</tr>
<tr>
<td></td>
<td>• In the Measurement tab under the Setup group notice that the Coordinate Type is Lat/Lon.</td>
</tr>
<tr>
<td></td>
<td>• Measure a few points and notice that the measurements are displayed as Lat/Long.</td>
</tr>
<tr>
<td></td>
<td>• Perform some zoom in the viewer.</td>
</tr>
<tr>
<td></td>
<td>• Notice that the coordinate type in the measurements panel flips to Map.</td>
</tr>
</tbody>
</table>

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<th>IM-40172</th>
<th>Image Command does not print statistics when using 'Compute Statistics' and 'Print To File' together</th>
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<tbody>
<tr>
<td></td>
<td>Using the 'Compute Statistics' and 'Print To File' options together does not print image statistics to file when the .aux does not exist prior to running Image Command.</td>
</tr>
<tr>
<td></td>
<td>If you run Image Command only using 'Compute Statistics' first and then run Image Command using 'Print To File', the image statistics are printed to file.</td>
</tr>
<tr>
<td></td>
<td>To recreate:</td>
</tr>
<tr>
<td></td>
<td># Be sure doub1_float.aux does not exist</td>
</tr>
<tr>
<td></td>
<td># Run Image Command, open doub1_float.tif</td>
</tr>
<tr>
<td></td>
<td># Check 'Compute Statistics' and 'Print To File', specify .txt</td>
</tr>
<tr>
<td></td>
<td># OK</td>
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<tr>
<td></td>
<td>Open the .txt with WordPad. Image statistics are not present.</td>
</tr>
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<th>IM-46755</th>
<th>SARVI index fails with &quot;Empty data on port&quot; error</th>
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<tbody>
<tr>
<td></td>
<td>On the Raster tab, open the Indices dialog</td>
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<tr>
<td></td>
<td>Specify Input as lanier.img</td>
</tr>
<tr>
<td></td>
<td>Set Category to All</td>
</tr>
<tr>
<td></td>
<td>Select Index: SARVI</td>
</tr>
<tr>
<td></td>
<td>Click Preview (or OK after providing an output filename)</td>
</tr>
<tr>
<td></td>
<td>Error: Spatial Model failed in Multiply. The error was &quot;Empty data on port&quot;.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM-44665</th>
<th>If you try to save the session, ERDAS IMAGINE crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Go to File &gt; Save &gt; General Save Options &gt; Session</td>
</tr>
<tr>
<td></td>
<td>ERDAS IMAGINE crashes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM-49543</th>
<th>Choosing this .TIL file in the file chooser caused IMAGINE crash</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clicking on a specific DigitalGlobe .TIL file in the file chooser causes ERDAS IMAGINE to crash.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM-49605</th>
<th>Generate System Report showing wrong operating system information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Launch ERDAS IMAGINE</td>
</tr>
<tr>
<td></td>
<td>2. Generate System report from File &gt; Session</td>
</tr>
<tr>
<td></td>
<td>3. Click OK (make sure all check boxes checked on)</td>
</tr>
<tr>
<td></td>
<td>4. Provide the path for report</td>
</tr>
<tr>
<td></td>
<td>5. Open the report generated and observe operating system information shown as Microsoft Windows 8 64-bit (Build 9200) for Windows 10 machine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM-47470</th>
<th>Opening individual Algorithm file crashes ERDAS IMAGINE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Launch ERDAS IMAGINE</td>
</tr>
<tr>
<td></td>
<td>2. Copy Algorithm file RGB.alg to local folder</td>
</tr>
<tr>
<td></td>
<td>C:\Program Files\Hexagon\ERDAS IMAGINE 2018\examples\ermapper\data_types\airphoto</td>
</tr>
<tr>
<td></td>
<td>3. Try to open the RGB.alg from File &gt; Open &gt; Algorithm</td>
</tr>
<tr>
<td></td>
<td>4. Observe ERDAS IMAGINE crashes.</td>
</tr>
<tr>
<td>IM-48520</td>
<td>Chart to Chart change detection throwing fault message in session log &quot;Client Failed to connect to server&quot;</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>1. Launch ERDAS IMAGINE</td>
<td></td>
</tr>
<tr>
<td>2. Launch Chart to Chart change detection from Raster &gt; Change Detection &gt; Change Detection Tools &gt; Chart to chart</td>
<td></td>
</tr>
<tr>
<td>3. Provide the inputs as chart1.geo.tif, chart2.geo.tif</td>
<td></td>
</tr>
<tr>
<td>4. Provide the output name and click run</td>
<td></td>
</tr>
<tr>
<td>5. Observe Process run and output got generated but session log showing - Client Failed to connect to server</td>
<td></td>
</tr>
</tbody>
</table>

+Session log:+
17/04/19 14:47:17 SessionMgr(9640); Connection success for the external process 'eWkspace_64'
17/04/19 14:47:31 C:/Program Files/Hexagon/ERDAS IMAGINE 2019/bin/x64URelease/smguiprocess.exe $IMAGINE_HOME/etc/ZonalChange/ChartToChartChangeDetection.gmdx Chart To Chart Change Detection.Chart 1=d:\2019\data_delete\chart\chart1-geo.tif Chart To Chart Change Detection.Change Image=d:\2019\16-04-2019\charttochartchange.img Chart To Chart Change Detection.Threshold=0.5  
17/04/19 15:01:30 SessionMgr(9640): smguiprocess.exe exited with status 1.  
17/04/19 15:01:31 SessionMgr(9640): Running spatial model ($IMAGINE_HOME/etc/ZonalChange/ChartToChartChangeDetection.gmdx) with port values (Chart To Chart Change Detection,Chart 1=d:\2019\data_delete\chart\chart1-geo.tif,Chart To Chart Change Detection .Chart 2=d:\2019\data_delete\chart\chart2-geo.tif,Chart To Chart Change Detection.Change Image=d:\2019\16-04-2019\charttochartchange.img,Chart To Chart Change Detection.Threshold=0.5).  
17/04/19 15:01:31 SessionMgr(9640): Running command line: C:/Program Files/Hexagon/ERDAS IMAGINE 2019/bin/x64URelease/imagesserialization_fls.exe -maxpixels "2000000" "C:\Users\agangumo\AppData\Local\Temp\SM-da28-05b1-b5f9-1e10-010952d963f69d-9911-4a3e-9aef69d1381d12" "C:\Users\agangumo\AppData\Local\Temp\SM-da28-05b1-b5f9-1e10-010952d1b12244-1cdf-493f-ae92-3d7412a907b7" -scale "100" -scalemin "10" -scalemax "2000" -spectral "1" -texture "0" -shape "0.29999999999999999" -size "0.300000000000000000004" -min "10" -max "100000" -randomcolor "1" -meter  
17/04/19 15:01:34 SessionMgr(9640): Connection success for the external process 'FLS Segmentation'  
17/04/19 15:01:35 SessionMgr(9640): Client Failed to connect to server :No connection could be made because the target machine actively refused it  
17/04/19 15:01:36 SessionMgr(9640): Client Failed to connect to server :No connection could be made because the target machine actively refused it  
17/04/19 15:01:37 SessionMgr(9640): Client Failed to connect to server :No connection could be made because the target machine actively refused it  
17/04/19 15:01:38 FLS Segmentation(6664): Performing FLS Segmentation  
17/04/19 15:01:38 FLS Segmentation(6664): Input File: C:/Users/agangumo/AppData\Local\Temp\SM-da28-05b1-b5f9-1e10-010952d963f69d-9911-4a3e-9aef69d1381d12  
17/04/19 15:01:38 FLS Segmentation(6664): Pixel:Segment Ratio: 100  
17/04/19 15:01:38 FLS Segmentation(6664): Spectral Weight: 1.00  
17/04/19 15:01:38 FLS Segmentation(6664): Texture Weight: 0.00  
17/04/19 15:01:38 FLS Segmentation(6664): Size Weight: 0.50  
17/04/19 15:01:38 FLS Segmentation(6664): Shape Weight: 0.30  
17/04/19 15:01:39 FLS Segmentation(6664): Segmenting Tile 1  
17/04/19 15:01:48 FLS Segmentation(6664): Segmenting Tile 2  
17/04/19 15:01:50 SessionMgr(9640): external process exited normally.  
17/04/19 15:01:52 SessionMgr(9640): Spatial model ran successfully.  
17/04/19 15:01:52  
17/04/19 15:01:53 SessionMgr(9640): smprocess.exe exited normally.
Opening map composition file having "(" in the file path of referenced images, crashes ERDAS IMAGINE 2018

Launch ERDAS IMAGINE 2018.
Open map composition file "withparentheses.map"
Observe user is prompted to substitute raster file path. specifying to use the Original file through substitute crashes ERDAS IMAGINE.

Whereas in ERDAS IMAGINE 2016 Update1, throws error.
26/10/18 14:57:39 SessionMgr(7020): ERROR: #774 from efnp_FileNodeListGet
26/10/18 14:57:39 SessionMgr(7020): ERROR: #1457 from FileNodeListParse
26/10/18 14:57:39 SessionMgr(7020): ERROR: Parse error; <FileNodeListItemSpec> at position 62 is preceded by a <DirectoryName>
26/10/18 14:57:39 SessionMgr(7020): ERROR: #1148 from edis_TrueColorCreateLayerByName
26/10/18 14:57:39 SessionMgr(7020): ERROR: erdas::raster::GridCoverageIdentifierEFNP::FromFileNode failed
26/10/18 14:57:39 SessionMgr(7020): ERROR: Parse error; <FileNodeListItemSpec> at position 62 is preceded by a <DirectoryName>
26/10/18 14:57:39 SessionMgr(7020): ERROR: #507 from erdas::raster::GridCoverageIdentifierEFNP::FromFileNode
26/10/18 14:57:39 SessionMgr(7020): ERROR: #774 from efnp_FileNodeListGet
26/10/18 14:57:39 SessionMgr(7020): ERROR: #1457 from FileNodeListParse
26/10/18 14:57:39 SessionMgr(7020): ERROR: Parse error; <FileNodeListItemSpec> at position 62 is preceded by a <DirectoryName>
26/10/18 14:57:39 SessionMgr(7020): ERROR: #595 from erdas::mapComposerApp::MapComposerControl::Open
26/10/18 14:57:39 SessionMgr(7020): ERROR: erdas::mapComposerApp::MapComposerControl::Open failed
26/10/18 14:57:39 SessionMgr(7020): ERROR: #549 from erdas::mapComposerApp::MapComposerControl::Open
26/10/18 14:57:39 SessionMgr(7020): ERROR: edis_MapComposerBuildFrames failed
26/10/18 14:57:39 SessionMgr(7020): WARNING: #1 from edis_MapComposerBuildFrames
26/10/18 14:57:39 SessionMgr(7020): WARNING: Error filling in frames
26/10/18 14:57:40
26/10/18 14:57:40 SessionMgr(7020): WARNING: #1 from edis_MapComposerPopulateFrame
26/10/18 14:57:40 SessionMgr(7020): WARNING: Couldn't open truecolor layers:
26/10/18 14:57:40
//ingernet.com/in/sgi/geospatial/gs2/imaginedata/pixeldata/del/(copy)/limerick_2007_subset.img(cop y)/limerick_2007_subset.img(:Layer_1)
26/10/18 14:57:40
//ingernet.com/in/sgi/geospatial/gs2/imaginedata/pixeldata/del/(copy)/limerick_2007_subset.img(cop y)/limerick_2007_subset.img(:Layer_2)
26/10/18 14:57:40
//ingernet.com/in/sgi/geospatial/gs2/imaginedata/pixeldata/del/(copy)/limerick_2007_subset.img(cop y)/limerick_2007_subset.img(:Layer_3)

Reprojecting MrSID image much slower in ERDAS IMAGINE 2018 vs ERDAS IMAGINE 2015

It was reported that ERDAS IMAGINE 2018 takes over two hours to reproject a 17 MB MrSID image, but the same image can be reprojected in ERDAS IMAGINE 2014 in 20-30 seconds. The same pattern can be observed with other larger MrSID files. Reprojecting similar images in other formats such as IMG or TIFF only takes 20-40 seconds in ERDAS IMAGINE 2018.

Double && in Preferences

File > Preferences
Under User Interface folder you will see the entry "User Interface && Session"

After using Add/Change Projection in Edit Image Metadata, the Unit disappears in the metadata

Reported that after editing or adding Projection in a file, using Edit Image Metadata, the Unit disappears in the metadata.

To recreate the problem, use the customer's data in Edit Image Metadata or ImageInfo
1. Set the Map Model as "Transverse Mercator" and Meters.
2. Set the projection as EPSG:25835
Note that the unit vanished from the metadata. When you set the Map Model again, the unit shows again.
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-49222</td>
<td>Reprojecting ECW image to GDA2020 Conformal (NTv2) datum fails</td>
</tr>
<tr>
<td>IM-37584</td>
<td>Raster attributes lost after reprojection</td>
</tr>
<tr>
<td>IM-41736</td>
<td>Image Chain / Sensor Look Angle is Disabled</td>
</tr>
<tr>
<td>IM-48811</td>
<td>Login to Smart M.App link in ERDAS IMAGINE ribbon is no longer functional</td>
</tr>
<tr>
<td>IM-40404</td>
<td>Bubble help for Launch Command Window button is outdated</td>
</tr>
<tr>
<td>IM-49188</td>
<td>Ribbon tabs not being hidden when switching to Spatial Modeler through title bar</td>
</tr>
</tbody>
</table>

**IM-49222**

Reprojecting an ECW image from EPSG:23855 (GDA94 datum) to the GDA2020 Conformal (NTv2) datum takes a very long time (~12 hours) and eventually the process fails. There is no EPSG code for the same projection as EPSG:23855 instead using the GDA2020 Conformal (NTv2) datum, so it has to be set manually. The projection parameters are outlined below. Reprojecting to the EPSG:7855, which is essentially the same projection but using the GDA2020 datum instead of GDA2020 Conformal (NTv2), works and only takes a couple of hours.

Steps to reproduce the problem:

- Start the Reproject Images tool and select the image “input_image.ecw” as the input file.
- Enter a name for the output file and make sure the file format is ECW.
- Set the Processing Option to “Resample to Output File”.
- Set the Resampling Method to “Nearest Neighbor”.
- Choose “Rigorous Transformation”.
- Use the Projection Chooser to set the output map projection using these parameters:
  - **Projection Type**: UTM
  - **Spheroid Name**: GRS1980
  - **Datum Name**: GDA2020 Conformal (NTv2)
  - **UTM Zone**: 55
  - **North or South**: South
  - **Axis Order**: E,N
- Click OK and wait while it processes and eventually stops.

**IM-37584**

When reprojecting a thematic raster image, the output image does not retain the same raster attributes that were included in the input image.

Steps to reproduce the problem:

- Start the Reproject Images tool (Raster tab > Geometry group > Reproject)
- Select the thematic image (with attribute field called “CLC Land Cover”) as the input file.
- Enter a name for the output file.
- Use the default settings in the Reproject tool and click OK to begin reprojecting the data.
- Display the input image in one 2D View and the reprojected image in a separate 2D View.
- Display the raster attribute tables for both images (Table tab > View group > Show Attributes).
- Notice that the column titled “CLC Land Cover” with the class names is missing from the reprojected image.

**IM-41736**

When displaying an image as an Image Chain, the “Sensor Look Angle” option in the lower right corner is grayed out. However the Up_is_Up in the Smart Control works. The “Sensor Look Angle” option is not grayed out if the image is displayed not using image chains.

**IM-48811**

Login to Smart M.App link used in the ERDAS IMAGINE ribbon is no longer functional. The broken link opens a page error.

This is due to a change in the address of the Smart M.App marketplace.

**IM-40404**

Click the Help tab to search for the Session Command History window. It states that that the path is Application Menu > Session Options menu, but it is actually File tab > Session > Launch Command Window.

The Application menu is from an older version of ERDAS IMAGINE and is no longer used.

**IM-49188**

# Open ERDAS IMAGINE 64-bit
# Open a raster image in 2D View
# Open Spatial Modeler
# switch to the 2D View layer
# switch to the Spatial Modeler layer by clicking on its title bar (not in the table of contents or inside of the layer itself)

Note that the ribbon tabs for the raster image have not been hidden.
| IM-41512 | Confusing error message in zonal change project when regions shapefile is locked | Use two ERDAS IMAGINE sessions in parallel.  
|          |                          | ERDAS IMAGINE Session1:  
|          |                          | 1) Open regions.shp  
|          |                          | 2) On Drawing tab click Enable Editing  
|          |                          | ERDAS IMAGINE Session2:  
|          |                          | 1) Switch to the Zonal Change Layout and create a new project  
|          |                          | 2) Specify Before and After images  
|          |                          | 3) Go to Process tab and click Edit Project.  
|          |                          | 3) Click Add New Regions > One Per File. Select regions.shp  
|          |                          | Get an error message "The new region is empty. It will not be created". But it is not empty.  
|          |                          | When loading regions.shp via Add New Regions > One Per Polygon the error message is more appropriate:  
|          |                          | Spatial Model failed in Features Input. The error was "erdas::sb_CGP::VectorSource_X::OnExecute failed  
|          |                          | Cannot open specified Vector source". |
| IM-39921 | Formula does not apply to first row of vector attribute table | Open an image.  
|          |                          | Open a vector layer over the top.  
|          |                          | On the Drawing tab select Enable Editing.  
|          |                          | On the Table tab, select Show Attributes.  
|          |                          | In the attributes CellArray select a numeric attribute column  
|          |                          | Select, for example, rows 5 to 10.  
|          |                          | Right click on the column titles and select Formula.  
|          |                          | In the Formula dialog type the value 2 and click Apply.  
|          |                          | First problem is that you lose the row selection – it should not remove your selection.  
|          |                          | Second problem is that row 5 is still a 1, not a 2. The edit was not applied to the first selected row. |
| IM-46339 | Large Shapefile causes problems with viewing vector attribute table | A Shapefile with a lot of records (~1.8 million arcs) causes a problem when scrolling down through the vector attribute table. When scrolling to the bottom of the table it bounces back up to the first record. The workaround is to right-click in the Record column and select Goto to open the Row Position dialog and then click the Last button or enter the desired row number and click Goto. |
| IM-46430 | Shapefile with a lot of arcs (~1.8 million) causes Features Input operator error | A Shapefile with a lot of records (~1.8 million arcs) causes a problem when processing it through the Features Input operator. When running the spatial model, it fails at the Features Input operator with the message “Read fewer bytes than expected.”  
|          |                          | The customer also reports that the Convert To Raster operator fails using the same input Shapefile with the error message “The object reference was not set to an object entity”. They claim that it does work sometimes, but not reliably and if it works, not all of the records are converted to the output raster image.  
|          |                          | Session log:  
|          |                          | SessionMgr(5768): Executing spatial model: c:/steve/convert_to_raster.gmdx  
|          |                          | SessionMgr(5768): Read fewer bytes than expected.  
|          |                          | SessionMgr(5768): Read fewer bytes than expected.  
|          |                          | SessionMgr(5768): ERROR: #2348 from HexGeo::SpatialModeler::Operator::InternalApply  
|          |                          | SessionMgr(5768): ERROR: HexGeo::SpatialModeler::Operator::SetErrorMessage failed  
|          |                          | SessionMgr(5768): ERROR: #1985 from HexGeo::SpatialModeler::Operator::SetErrorMessage  
|          |                          | SessionMgr(5768): ERROR: Spatial Model failed in FeaturesInputCGP. The error was "Read fewer bytes than expected."  
|          |                          | SessionMgr(5768): ERROR: #2348 from HexGeo::SpatialModeler::Operator::InternalApply  
|          |                          | SessionMgr(5768): ERROR: HexGeo::SpatialModeler::Operator::SetErrorMessage failed  
|          |                          | SessionMgr(5768): ERROR: #1985 from HexGeo::SpatialModeler::Operator::SetErrorMessage  
|          |                          | SessionMgr(5768): ERROR: Spatial Model failed in FeaturesInputCGP. The error was "Read fewer bytes than expected."  
<p>|          |                          | SessionMgr(5768): Spatial model execution failed. |</p>
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-43624</td>
<td>Vector features stored in ArcGIS Geodatabase with units set to degrees causes &quot;Units are not of same type&quot; errors</td>
<td>A long stream of error messages are displayed when opening vector feature data that has its projection units set to decimal degrees and is stored in an ArcGIS Geodatabase. It appears that ERDAS IMAGINE does not recognize the map units. The projection is Geographic (Lat/Lon), WGS 84, decimal degrees. The same data exported to a Shapefile does not cause any problems when opening it. Displaying the Geodatabase features in ArcGIS does not cause any issues.</td>
</tr>
<tr>
<td>IM-46621</td>
<td>File Chooser does not show shapefiles for Copy Vector Layer, Rename Vector Layer, and Delete Vector layer</td>
<td>This was only reproducible in 64-bit ERDAS IMAGINE 1) Launch ERDAS IMAGINE &gt; Vector tab &gt; Copy Vector Layer 2) Observe that both input and output has default *.arcinfo as formats 3) Now launch input file chooser by clicking open button &gt; go to any location where Shapefiles are present 4) Observe that until the file format is re-selected as Shapefile, the Shapefiles are not visible in the file chooser 5) Next open the output File chooser by clicking open button of Output (note that default output format is Shapefile) 6) Now give an output name and click OK, observe that the output format is *.arcinfo 7) Unless the output format is re-selected in the file chooser, the output is not produced</td>
</tr>
<tr>
<td>IM-45038</td>
<td>ERDAS IMAGINE crashes while deleting ID attribute from vector data</td>
<td>1. Launch ERDAS IMAGINE 2. Load a specific Shapefile and display attribute table. 3. Select the Drawing tab and Enable editing. 4. Select table tab and click on Column Properties 5. ID got selected itself on Column Attributes dialog 6. Click delete and then Ok. Observe ERDAS IMAGINE crashes.</td>
</tr>
</tbody>
</table>
| IM-44889  | Zonal Change Process failing with Image difference algorithm                                                                                                                                                  | 1. Launch IMAGINE 2018 v 16.5, Launch Zonal Change Layout. 2. Create a New Project, load input images and Zone files Data location:
\alpha\JIRA_data\IM-44889
* TheVillagesSubset2007.ecw
* TheVillagesSubset2008.ecw
* TheVillagesParcelsSubset.shp 3. After Loading inputs, Select Algorithm as Image Difference and Click Run Region 4. Let Image Difference Value Parameter Threshold as default Zero and Click ok observe that process failing. >> Session log attached for reference. NOTE: * The same workflow is not giving an indication of process failing in IMAGINE 32 bit. * The same workflow if tried with same raster input for both Before image and After image (EX: TheVillagesSubset2007.ecw) to make input image difference as zero, again also process failing, which should be theoretically wrong for end user. * Not giving user friendly pop-up message that Image difference threshold should not be Zero |
<p>| IM-17921  | Not replacing an not-existent Before image or After image caused IMAGINE crash                                                                                                                             | Take any projects from here \alpha\teamspace\Pixel\Temp\ZCim14diff Open the project It tells you files are missing and to correct the path. If you do not select the right img file (by clicking Cancel, for instance), IMAGINE would crash. If you select the right img file and press substitute, error is thrown that shapefile link is incorrect and the project does not open. |
| IM-37622  | Zonal Mean produces incorrect result (1.#QNAN) with float class raster (and NoData set to 0)                                                                                                               | See model copied to \alpha\Siebel_Bug_Data\1-KZ8EUF. It's basically takes a shapefile as raster as the Zones, a floating point image as the Class Raster and feeds them into Zonal Mean. Run the model once and note that the mean is stated as 1.#QNAN |</p>
<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-49444</td>
<td>With only Before or After Image in the Zonal Change Layout, closing it with/without saving crashes ERDAS IMAGINE.</td>
</tr>
<tr>
<td>IM-36621</td>
<td>Selecting Help tab &gt; ERDAS IMAGINE Release Guide &amp; HexGeoWiki, throws ewinopen crash dialog</td>
</tr>
<tr>
<td>IM-33825</td>
<td>Image recode is not working from Raster tab &gt; Thematic &gt; Recode</td>
</tr>
<tr>
<td>IM-22019</td>
<td>BigTIFF gives error messages when displaying in ERDAS IMAGINE</td>
</tr>
</tbody>
</table>

**IM-49444**

1. Launch IMAGINE > File > Layout > Zonal Change Layout
2. Process tab > New > create a new project C:\temp\example.zcp
3. Add only Before or After Image in the 2D Viewer, click Close in the Process tab, click Yes/No

Observe that it crashes ERDAS IMAGINE while trying to close the Zonal Change layout with only Before or After Image in the layout

**Note:**
1) If both Before and After images are loaded in the Zonal Change Layout and the Zonal Change layout is closed no crash is observed.
2) This is not reproducible in ERDAS IMAGINE 2016

**IM-36621**

Goto Help tab > select ERDAS IMAGINE Release Guide. Dialog opens stating, ewinopen has stopped working.
Goto Help tab > select Reference Book > HexGeoWiki. Dialog opens stating, ewinopen has stopped working.

**IM-33825**

1. Launch ERDAS IMAGINE. Load the image landcover_cherokee.img
2. Select Recode from Raster tab > Thematic > Recode.
3. Recode dialog opens, click Setup Recode
4. Change the value of water -1, Coniferous Forest -2, Mixed Forest -2, Deciduous Forest -2 and remaining all -0 and click Ok
5. Provide the output File name and click OK and observe process failing with an error out of the Range LUT

**Note:** The same work flow from Thematic tab > Recode producing output without any issues.

**IM-22019**

BigTIFF created by Intergraph ISIS does not display in ERDAS IMAGINE, but does in other GIS products. While the file extension is .btf, the TIFF DLL searches the file, determines it is a BigTIFF, and then gives multiple errors.
IM-43993  Error when creating RSETs for large Float IMG file

<table>
<thead>
<tr>
<th>Make a local copy of the large (&gt;2GB) .img and .ige files (only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Spatial Model Editor</td>
</tr>
<tr>
<td>Start the Session Log</td>
</tr>
<tr>
<td>Add a Generate RSETs operator</td>
</tr>
<tr>
<td>Set the copy of the .img file as the input filename.</td>
</tr>
<tr>
<td>Click Run</td>
</tr>
</tbody>
</table>

...r1 seems to generate OK, but then you start seeing these messages in the Session Log:

28/03/18 12:18:37 SessionMgr(816): Connection success for the external process 'eWkspace_64'
28/03/18 12:19:14 SessionMgr(816): Executing spatial model
28/03/18 12:20:28 SessionMgr(816): ERROR: #22879 from eimg::details::SSLayerGetNames
28/03/18 12:20:28 SessionMgr(816): ERROR: <NULL> failed
28/03/18 12:20:28 SessionMgr(816): ERROR: #67 from <NULL>
28/03/18 12:20:28 SessionMgr(816): ERROR: #14930 from eimg_FileImageNamesGet
28/03/18 12:20:28 SessionMgr(816): ERROR: eimg_FileOpen failed
28/03/18 12:20:28 SessionMgr(816): ERROR: #5968 from eimg_FileOpen
28/03/18 12:20:28 SessionMgr(816): ERROR: h:/temp/super-stack_4-dates.img.r2: eimg_FileOpen failed (33:Unsupported Raster format or non-Raster format)
28/03/18 12:20:52 SessionMgr(816): ERROR: #22879 from eimg::details::SSLayerGetNames
28/03/18 12:20:52 SessionMgr(816): ERROR: <NULL> failed
28/03/18 12:20:52 SessionMgr(816): ERROR: #67 from <NULL>
28/03/18 12:20:52 SessionMgr(816): ERROR: eimg_FileImageNamesGet failed
28/03/18 12:20:52 SessionMgr(816): ERROR: #14930 from eimg_FileImageNamesGet
28/03/18 12:20:52 SessionMgr(816): ERROR: eimg_FileOpen failed
28/03/18 12:20:52 SessionMgr(816): ERROR: #5968 from eimg_FileOpen
28/03/18 12:20:52 SessionMgr(816): ERROR: h:/temp/super-stack_4-dates.img.r3: eimg_FileOpen failed (33:Unsupported Raster format or non-Raster format)
28/03/18 12:20:59 SessionMgr(816): ERROR: #22879 from eimg::details::SSLayerGetNames
28/03/18 12:20:59 SessionMgr(816): ERROR: <NULL> failed
28/03/18 12:20:59 SessionMgr(816): ERROR: #67 from <NULL>
28/03/18 12:20:59 SessionMgr(816): ERROR: #14930 from eimg_FileImageNamesGet
28/03/18 12:20:59 SessionMgr(816): ERROR: eimg_FileOpen failed
28/03/18 12:20:59 SessionMgr(816): ERROR: #5968 from eimg_FileOpen
28/03/18 12:20:59 SessionMgr(816): ERROR: h:/temp/super-stack_4-dates.img.r4: eimg_FileOpen failed (33:Unsupported Raster format or non-Raster format)
28/03/18 12:21:03 SessionMgr(816): Spatial model execution complete.

The RSETs do seem to be created (and used) correctly.

IM-36660  Image Chain stretch panel enhancement not correctly responding by entering values from keyboard

| 1. Open Raster image (16-bit Multispectral) as Image chain data |
| 2. Launch Stretch panel, change the type to Two Point Linear. |
| 3. Change the Gray Max to 400 by entering from Keyboard and click enter. |

Observe that image changes to white. But when the same value is adjusted through moving the slider the colour changes as expected.

IM-36198  CGCF-ECW and CCGF-JP2 Not Persisting GeoTIFF Tag Correctly

<table>
<thead>
<tr>
<th>Creatable Grid Coverage Fromat (CGCF) ECW and CCGF JP2 Not Persisting GeoTIFF Tag Correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeoTIFF tags are not persisted as &quot;2240&quot; as is found in the source TIFF. Rather, they are persisted as &quot;Unknown-2240&quot;.</td>
</tr>
<tr>
<td>This test was done using the &quot;Save As&quot; Viewer capability in ERDAS IMAGINE 2016 v16.1</td>
</tr>
<tr>
<td>Issue ID</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>IM-22018</td>
</tr>
<tr>
<td>IM-11221</td>
</tr>
<tr>
<td>IM-20577</td>
</tr>
<tr>
<td>IM-35798</td>
</tr>
<tr>
<td>IM-20588</td>
</tr>
<tr>
<td>IM-19745</td>
</tr>
<tr>
<td>IM-21166</td>
</tr>
</tbody>
</table>

**IM-22018**

CellArray with large number of rows is wrong when scrolled to bottom. Start Raster Attribute Editor on Segmentation or Clump output with upwards of 400,000 classes. Scroll to bottom - you see the first few rows instead of the last few rows. Resize the dialog to make it taller (or enlarge docked panel within the ribbon). Try again - it now works OK. Shrink the dialog back - the problem reappears.

For larger CellArrays (a million rows) the resizing trick does not work. This makes it virtually impossible to see the last rows of the table.

Use RasterToVector to create arc coverage with same amount of records. View coverage and view vector attributes - has similar problems.

This affects all CellArrays in ERDAS IMAGINE when dealing with a long list.

**IM-11221**

ERDAS IMAGINE 2013 and 2014 are not recognizing any files in the folder when the folder name is written in Hebrew character.

**IM-20577**

When reading the GTRasterTypeGeoKey tag from a GeoEye TIFF image, the session log posts the following message 13 times:

```
eWkspace(1724): ***WARNING NUMBER 1758 IN FUNCTION GeoTIFFGeoreferencingGet***

eWkspace(1724): >>>Cannot locate GTRasterTypeGeoKey; assuming RasterPixelsArea<<<
```

**IM-35798**

Launch ERDAS IMAGINE
Select File > New
Click on the White space below 2D View #1 New Options
Press Enter Key
Observe that ERDAS IMAGINE crashes.

**IM-20588**

Observe while performing tests to validate a M.App X geoprocessing service.

Display a DEM
Fit to Frame.
On the Panchromatic tab select Spatial Profile.
Say OK to the warning that no vector layers are displayed.
Draw a line corner to corner of the DEM.
Observe that a profile is drawn.
In the Spatial Profile tool click the Edit menu and select Overlay Sight.
Specify the height off the ground as 6 feet and click Apply.
Observe that line of sight is calculated and overlaid onto the profile.
Leave the Line of Sight overlaid.
Select the digitise polyline tool and draw a new profile line (shorter than the original if you want). Observe that memory usage gradually goes up to 4GB and the profile tool eventually crashes (after several minutes).

```
16/03/15 09:58:56 SessionMgr(7376): advprofile.exe exited with status -1073741819.
```

Instead, if Sight overlay was turned off before creating the new line, it would have worked fine.

**IM-19745**

ERDAS IMAGINE 2013 correctly handled multi-page TIFFs.

In ERDAS IMAGINE 2014, a regression crept in where only the first page of the TIFF can be displayed. All the pages in the TIFF can be seen in the Multi-Image tab, and all of the pages can be selected as sub-images, but the selected TIFF page is not displayed. Rather, the first page is displayed.

**IM-21166**

Sequence to Reproduce:
1. Install ERDAS IMAGINE 2015, but do not include ER Mapper
2. Copy <IMAGINE_HOME>/examples/ermapper/miscellaneous/test_patterns/HSI_Wheel.alg to a folder on the local disk. (Do not copy the Demo_wheel.* files).
3. Open / Algorithm on the copy of the ALG file ERDAS IMAGINE terminates abnormally.
   It does not terminate if you copy the Demo_wheel files.
<table>
<thead>
<tr>
<th>IM-13358</th>
<th>ERS DLL does not use ECW file referenced in ERS Header correctly.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Add the two ERS header files referencing ECW files to MosaicPro</td>
</tr>
<tr>
<td></td>
<td>Run the mosaic to a .ecw file</td>
</tr>
<tr>
<td></td>
<td>A message appears once the process begins: ERS Raster error: Filetype Unknown error message when mosaicking .ers files. Mosaic slowly completes.</td>
</tr>
<tr>
<td></td>
<td>Session Log:</td>
</tr>
<tr>
<td></td>
<td>02/12/13 10:01:47 C:/Program Files/Intergraph/ERDAS IMAGINE</td>
</tr>
<tr>
<td></td>
<td>2014/bin/x64URelease/mosaicprocesspro.exe -m c:/temp/mosaic_tmp_mos_008780 -temporary -background 0 -ignore 0 -excludeempty 0 -meter mosaic</td>
</tr>
<tr>
<td></td>
<td>02/12/13 10:01:56 SessionMgr(6056): ERROR: #46 from ersFileTitleIdentifyAndOpen</td>
</tr>
<tr>
<td></td>
<td>02/12/13 10:01:56 SessionMgr(6056): ERROR: erdas::ers::FileHandle::DoOpen failed</td>
</tr>
<tr>
<td></td>
<td>02/12/13 10:01:56 SessionMgr(6056): ERROR: #95 from erdas::ers::FileHandle::DoOpen</td>
</tr>
<tr>
<td></td>
<td>02/12/13 10:01:56 SessionMgr(6056): ERROR: ERS Raster error: Filetype unknown</td>
</tr>
<tr>
<td></td>
<td>02/12/13 10:01:58 mosaicprocesspro(4312): One or more input files or output files cannot be opened by 64 bit MosaicProcessPro. Starting in 32 bit.</td>
</tr>
<tr>
<td></td>
<td>02/12/13 10:01:58 C:/Program Files/Intergraph/ERDAS IMAGINE</td>
</tr>
<tr>
<td></td>
<td>2014/bin/Win32Release/mosaicprocesspro.exe -m c:/temp/mosaic_tmp_mos_008780 -temporary -background 0 -ignore 0 -excludeempty 0 -meter mosaic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM-18862</th>
<th>Opening ERS file gives incorrect NODATA message in Session Log</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Launch ERDAS IMAGINE. In 2D View, open an ERDAS ER Mapper (*.ers) file.</td>
</tr>
<tr>
<td></td>
<td>In Session log, see &quot;16/12/14 08:33:25 eWkspace(14248): The input NullCell Value is out of range for the current pixel type 16/12/14 08:33:25 eWkspace(14248): The input NullCell Value is out of range for the current pixel type...&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM-20601</th>
<th>Computing pyramids on a Virtual Mosaic (VMCX) pointing to 15k by 5k PNG throws a series of errors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Computing RRDs on a VMCX pointing to 15k by 5k PNG throws a series of errors.</td>
</tr>
<tr>
<td></td>
<td>In Image Metadata, open the VMCS file and compute Pyramids. ERDAS IMAGINE throws a series of errors.</td>
</tr>
<tr>
<td></td>
<td>After some time, Image Metadata crashes.</td>
</tr>
</tbody>
</table>
# IMAGINE Advantage

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Advantage</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-22547</td>
<td>Incorrect and inconsistent output parameters for orthorectification in both ERDAS IMAGINE and IMAGINE Photogrammetry</td>
<td>In trying to create Operators for Spatial Model for orthorectification we needed to look at the default behavior for orthorectification of calibrated images. Generally, when rectifying or reprojecting an image you want the default settings to never result in a loss of pixel information. Obviously this cannot be eradicated entirely (except by gross oversampling), but you want to generally produce an output image where few pixels have been dropped out from the input image. A rough measure of this is that no matter how rotated or warped the model is, the output would generally have to have more pixels than the input in order to preserve every input pixel. Unfortunately not only do the ERDAS IMAGINE output defaults often not meet this requirement, they are also frequently inconsistent between the numerous approaches you can take to producing a transformed output image. We need to be both consistent and correct. See specific NITF sample image. Open the image in a 2D View. Click Image Metadata and note that the image is 8820 columns x 4696 rows. Scenario1: Multispectral tab / Transform &amp; Ortho tab / Transform &amp; Ortho menu, select Ortho Using Existing Model. Note in the dialog that the output image defaults to having only 6599 columns x 6278 rows. Given the nature of this image’s geometric model, which is a “shear” into a parallelogram shape, the reduction in columns means that 1/3rd of the original image pixels will be missing from the output. Go ahead and produce the output and take a look at it – it has a degraded appearance. Scenario2: Multispectral tab / Transform &amp; Ortho tab / Transform &amp; Ortho menu, select Reproject. Set to Geographic / WGS84, which is the same as Scenario1. Note strange default pixel dimensions. Produce the output – note that this one is 8820 columns x 4696 rows – same as the input.</td>
</tr>
<tr>
<td>IM-33588</td>
<td>Horrendous edge artifacts introduced with Bicubic resampling</td>
<td>See data geometrically calibrated using RPCs. On the Multispectral tab / Transform &amp; Ortho / Ortho Using Existing Model. In the Resample dialog, specify square pixels, ignore 0 in stats, use Elevation Library and set resampling to Bilinear. Specify output filename and OK. Display results in a 2D View with background set to red. Observe perfectly crisp left-hand edge of the image. Now repeat, but this time select Bicubic resampling. Observe nasty edge artifacts of near-black introduced around the edges of the data.</td>
</tr>
<tr>
<td>IM-41647</td>
<td>Condor processes using 32-bit Batch process for the jobs submitted from 64-bit ERDAS IMAGINE</td>
<td>From Submitting node, Distributed processing is started using Batch Command Editor of ERDAS IMAGINE 64-bit. On the Processing node, the job is processed using 32-bit Batch process instead of 64-bit Batch process.</td>
</tr>
<tr>
<td>IM-22790</td>
<td>MosaicPro should default to Bilinear when resampling must occur</td>
<td>MosaicPro should default to Bilinear when resampling must occur to ensure the best quality image by default. By default Nearest Neighbor is used and creates blocky and lower quality data than MosaicPro can deliver. Several other tools default to Bilinear when resampling is needed. MosaicPro should follow the move to better default data output.</td>
</tr>
<tr>
<td>IM-46606</td>
<td>Adding images with “Active Areas by Corners” is generating very bad output, whereas the “Active Area by Edges” is giving good output.</td>
<td>Customer reported that in MosaicPro by adding images with “Active Areas by Corners” is generating very bad output, whereas the “Active Area by Edges” is giving good output. “Active Areas by Corners” was occasionally mis-identifying corners thereby clipping too much from the input data.</td>
</tr>
<tr>
<td>IM-25246</td>
<td>MosaicPro: sometimes leaves holes when creating specific dataset.</td>
<td>Occasionally Seamlines in MosaicPro would result in small (1 pixel) gaps in the output mosaic.</td>
</tr>
<tr>
<td>IM-45744</td>
<td>Reset button not working as expected in MosaicPro &gt; Adjust individual image radiometry.</td>
<td>1. Launch ERDAS IMAGINE, Launch MosaicPro from Raster tab &gt; Geometry. 2. Add images, make them visible and select from table. 3. Click Adjust individual image radiometry. Change the brightness by dragging brightness bar. 4. Click Reset Button and observe Brightness bar reverting to original state but image still persist with brightness change. NOTE: Instead of reset button at the bottom if we click the reset brightness beside the brightness bar image reverting to original state.</td>
</tr>
<tr>
<td>IM-43093</td>
<td>Mosaic Express does not include Lagrange resampling method.</td>
<td>Mosaic Express does not include Lagrange resampling method.</td>
</tr>
<tr>
<td>IM-44279</td>
<td>MosaicPro Workstation crashed when opening a specific project.</td>
<td>In some instances, where input images overlap each other almost 100%, crashes could occur.</td>
</tr>
<tr>
<td>IM-44912</td>
<td>Some input image is missing in mosaicking output.</td>
<td>There are only two input images, the left and the right. They look good in MosaicPro workstation. However, the left is missing in the output file.</td>
</tr>
<tr>
<td>IM-48504</td>
<td>Toggling raster display after editing seam polygon crashes MosaicPro.</td>
<td>Launch ERDAS IMAGINE 2018. Open MosaicPro, load two overlapping airphotos. Make the images visible and display the rasters. Click ‘Automatically generate seamlines for intersections’ button and in ‘Seamline generation options’ dialog, click ok. Click ‘Edit seam polygons’ and draw a polygon at the intersection. Observe seam polygon is edited. Now click ‘Display raster images’ and observe MosaicPro crashes.</td>
</tr>
<tr>
<td>IM-46883</td>
<td>Running mosaicprocesspro.exe from Command window ignores TIFF compression parameter.</td>
<td>When running mosaicprocesspro.exe from the Command window, the TIFF compression argument is ignored. The compression setting from the TIFF preferences is used instead. The help documentation for mosaicprocesspro states that “If you do not specify this option when the output is a TIFF image, the compression type specified in the TIFF preferences is used.”</td>
</tr>
</tbody>
</table>
### IMAGINE Objective

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Objective</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-39533</td>
<td>Running FLS Segmentation crashed fe_process</td>
<td>Specific data would cause FLS Segmentation to run out of memory and crash.</td>
</tr>
</tbody>
</table>

### IMAGINE Photogrammetry

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Photogrammetry</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-47032</td>
<td>IMAGINE Photogrammetry ATE Report cannot be loaded using the Ribbon function</td>
<td>After a successful ATE run it is actually not possible to load the ATE Report by activating the Photogrammetry ribbon function “Reports/Automatic Terrain Extraction (ATE) Report”. It seems that the blockfile name and the blockfile path are not saved properly when executing ATE (see line 8 and 9 of the ATE reportfile). Error messages and warnings reported in the session log: 18/12/18 14:16:30 SessionMgr(7256): ERROR: #2277 from StartATEReport 18/12/18 14:16:30 SessionMgr(7256): ERROR: eatm_DTMExtractionReport Failed 18/12/18 14:16:30 SessionMgr(7256): WARNING: #598 from eatm_DTMExtractionReport 18/12/18 14:16:30 SessionMgr(7256): WARNING: No valid report file exists 18/12/18 14:16:40 SessionMgr(7256): ERROR: #2277 from StartATEReport 18/12/18 14:16:40 SessionMgr(7256): ERROR: eatm_DTMExtractionReport Failed 18/12/18 14:16:40 SessionMgr(7256): WARNING: #598 from eatm_DTMExtractionReport 18/12/18 14:16:40 SessionMgr(7256): WARNING: No valid report file exists</td>
</tr>
</tbody>
</table>
| IM-46924 | 3D ASCII output from Create Mean Terrain has characters for space making the output not useful | * Launch ERDAS IMAGINE 2018 64-bit.  
* Open a blockfile in the viewer.  
* From the Photogrammetry tab, under Generate drop down menu, click Create Mean Terrain.  
* In the Create Mean Terrain dialog, select 3D ASCII as Output DTM Type.  
* Give the name of the output and click OK in the dialog.  
Open the output in a text editor and notice that there are characters for spaces in the file. This makes the file not useable in any other tools like Surfacing tool. |
| IM-44828 | Unable to import a project into IMAGINE Photogrammetry | 1.Launch ERDAS IMAGINE 2018  
2.Load any block file  
3.Launch Import Inpho project from Photogrammetry Tab > Conversion group  
4.Try to import InphoProject file of Type .prj , observe that you are not able to import as block file loaded in the input file field and trying to load .prj from file chooser is not showing the file in the respective folder |
<table>
<thead>
<tr>
<th>ticket</th>
<th>Issue Description</th>
<th>Error Message</th>
<th>Suggested Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-48674</td>
<td>Unable to open SPOT-7 DIMAP V2 (DIM_SPOT.xml) projected (PRJ) raster data</td>
<td>SPOT-7 DiMAP V2 projected (PRJ) PMS data fails to open in ERDAS IMAGINE 2018</td>
<td>Launch ERDAS IMAGINE 2018 Right-click &gt; Open Raster from the file chooser &gt; Files of type select &gt; SPOT DiMAP V2 choose DIM file DIM_SPOT7_PMS_<em><em>PRJ</em></em>_.XML Error message appears. &quot;Unknown DiMAP format&quot;</td>
</tr>
<tr>
<td>IM-47013</td>
<td>No footprints when loading a block file with offline terrain file</td>
<td>A specific .blk adjusted in ERDAS IMAGINE 2016 can be open as expected in the LPS Project Manager, with footprints, etc. displayed. But if opened as a photogrammetric project, in ERDAS IMAGINE 2016 or 2018, only the CellArray displays, the footprints do not. And when you fit to frame or zoom out an error message displays. This is caused by an offline LTF file under the Terrains folder. Once you remove it, the error message is gone.</td>
<td></td>
</tr>
<tr>
<td>IM-48409</td>
<td>Block files created with an older version (ERDAS IMAGINE 2016 and earlier) are not compatible with IMAGINE Photogrammetry 2018</td>
<td>Block files created with an older version (2016 and earlier) are not compatible with IMAGINE Photogrammetry 2018 for the purpose of making orthophotos. Orthorectification with 2018 fails, generates corrupted image. Data is TIFF aerial RCD30 data.</td>
<td></td>
</tr>
<tr>
<td>IM-47866</td>
<td>IMAGINE Photogrammetry Orthoresample error with ADS L1 blk project</td>
<td>Orthoresample function with ADS L1 blk project fails with ERDAS IMAGINE 2018 Update 2. If you attempt to orthorectify L1 imagery you get a “Failed to recognize Authority Code” error.</td>
<td></td>
</tr>
<tr>
<td>IM-46599</td>
<td>Under Photogrammetry tab, Import ISAT, Inpho, PATB and SS project is not showing up the input files unless the format in the Import window is re-selected</td>
<td>1) Launch ERDAS IMAGINE -&gt; Open any block file 2) Under Photogrammetry tab -&gt; Import ISAT Project 3) In the Import window click open for Input File and browse to a location with ISAT Project files Observe that the ISAT project icon is not shown. Also for other 3 formats Inpho project, SS project and PATB project also the case is same, that is, the respective format files do not show. But if Format is re-selected in the Import window, then the input files do show.</td>
<td></td>
</tr>
<tr>
<td>IM-41918</td>
<td>Deleted points in .las are still there after exporting to HPC file</td>
<td>Several point clouds in LAS format were edited in IMAGINE Professional to remove incorrect elevation points. The resulting LAS were now used in GeoMedia 3D using the HPC Point Clouds workflow to Construct a HPC and then insert the resulting HPC into an access warehouse, The two processes ran with no error. The HPC is now displayed in GeoMedia 3D. The points previously edited in ERDAS IMAGINE are still there.</td>
<td></td>
</tr>
<tr>
<td>IM-45013</td>
<td>Height Above Ground tool does not preview and throws error message</td>
<td>ERDAS IMAGINE 2018 1) Launch ERDAS IMAGINE &gt; Terrain tab &gt; Height Above Ground 2) Provide a classified LAS file as input 3) Give input raster elevation file 4) Give output name 5) Click Preview button Observe that it throws this error saying: No PreviewOperators in model.</td>
<td></td>
</tr>
<tr>
<td>Issue</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
| IM-46256 | Errors pop up if a file from recent list is opened on top of a point cloud preview. Data: GMDX, LAS, SHP and IMG files of the same project area. Steps to reproduce:  
* Open the LAS, SHP and IMG files in the 2D View.  
* Clear the View and launch Spatial Modeler Editor.  
* Open a gmdx file and give the LAS file from the project as input to the Point Cloud Input operator.  
* Click on Preview.  
* Once the preview is up and the Preview View selected, from the Point Cloud tab select Classification in the Color by drop down menu.  
* From File > Recent select either the SHP or IMG file that were previously opened in the 2D View. Notice that error pop up.  
Session log:  
26/09/18 14:38:44 SessionMgr(26760): ERROR: #124 from ArrangeLayersCB  
26/09/18 14:38:44 SessionMgr(26760): ERROR: erdas::EmlFramework::ShellMeter::Create failed  
26/09/18 14:38:44 SessionMgr(26760): ERROR: #56 from erdas::EmlFramework::ShellMeter::Create  
26/09/18 14:38:44 SessionMgr(26760): ERROR: Trying to change a running meter from modal to non-modal is not supported! |
| IM-40464 | Loading a specific LAZ file as Raster crashes ERDAS IMAGINE.  
1. Launch ERDAS IMAGINE 2018  
2. Load the file specific .laz, by selecting files of type as LAZ as Raster (.laz) (not LAZ as Point Cloud (*.las))  
3. Observe ERDAS IMAGINE crashes.  
When the same file is opened as LAZ as PointCloud(.las), ERDAS IMAGINE does not crash. |
| IM-49425 | ERDAS IMAGINE 2018 Update 2 is unable to open customer’s *.las file. Customer reported that ERDAS IMAGINE is unable to open their las and laz files. According to the customer the same las file opens in a popular GIS application. In ERDAS IMAGINE the following error messages show in the session log, while opening the customer’s las in a 2D View  
24/06/19 00:30:42 SessionMgr(12944): Connection success for the external process ‘eWkspace_64’  
24/06/19 00:31:27 SessionMgr(12944): ERROR: #192 from vr_lidarvlLayerOpen  
24/06/19 00:31:27 SessionMgr(12944): ERROR: erdas::laslib::GenericVlr::Read failed  
24/06/19 00:31:27 SessionMgr(12944): ERROR: #228 from erdas::laslib::GenericVlr::Read  
24/06/19 00:31:27 SessionMgr(12944): ERROR: emif_ConvertToMIF failed  
24/06/19 00:31:27 SessionMgr(12944): ERROR: #6148 from emif_ConvertToMIF  
24/06/19 00:31:27 SessionMgr(12944): ERROR: emif_MIFtoObject failed  
24/06/19 00:31:27 SessionMgr(12944): ERROR: #6207 from emif_MIFtoObject  
24/06/19 00:31:27 SessionMgr(12944): ERROR: Invalid object or design! |
| IM-47189 | ERDAS IMAGINE crashes with point cloud polyline profile.  
1. Launch ERDAS IMAGINE  
2. Load a point cloud image, Select point cloud Tab  
3. From Profile group, select Polyline Profile  
4. Draw a polyline and end it by single mouse click and double click Left Mouse button at the exact same point  
5. Observe ERDAS IMAGINE crashes. |
**IM-45910**  
ERDAS IMAGINE 32-bit crashes while trying to pan in the HPC file's profile views after zoom is performed

* Launch ERDAS IMAGINE 2018 32-bit and load a HPC file.
* From the Profile group of Point Cloud tab, click the Rectangle Profile option and draw a rectangle in the viewer.
* In either the Sideview Profile viewer or the Frontview Profile viewer, zoom in and then pan using either the middle mouse button or the pan tool from the Home tab.

Notice that ERDAS IMAGINE crashes.

ERDAS IMAGINE 2018 64-bit doesn’t crash but only shows up error while panning.

Session log:

```
31/08/18 15:16:56 SessionMgr(3096): ERROR: #4 from EFGA_DERIVEPOLYCOEFS_
31/08/18 15:16:56 SessionMgr(3096): ERROR: EFGA_SOLVELINEAREQS failed_
31/08/18 15:16:56 SessionMgr(3096): ERROR: #4 from EFGA_SOLVELINEAREQS_
31/08/18 15:16:56 SessionMgr(3096): ERROR: egda_MatrixDivide failed_
31/08/18 15:16:56 SessionMgr(3096): ERROR: #6 from egda_MatrixDivide_
31/08/18 15:16:56 SessionMgr(3096): ERROR: egda_MatrixDivideF64 failed_
31/08/18 15:16:56 SessionMgr(3096): ERROR: #2 from egda_MatrixDivideF64_
31/08/18 15:16:56 SessionMgr(3096): ERROR: egda_MatrixLU Decomposition failed_
31/08/18 15:16:56 SessionMgr(3096): ERROR: #7 from egda_MatrixLU Decomposition_
31/08/18 15:16:56 SessionMgr(3096): ERROR: egda_MatrixLU DecompositionF64 failed_
31/08/18 15:16:56 SessionMgr(3096): ERROR: #1 from egda_MatrixLU DecompositionF64_
```

**IM-45741**  
While Exporting to ISAT project for which sensor models are Unsupported, the exportisat.exe process crashes

# Launch ERDAS IMAGINE  
# File > New > Photogrammetric Project and give the path of the Block file to be saved  
# Select “Rational Functions” for Geometric Model Category and “Quickbird” “RPC” for Geometric Model on Model Setup dialog and Click OK  
# Leave the default settings on Block Property Setup dialog and Click OK  
# Now add NITF format QuickBird images to the block file  
# Save the Block file and go to Conversion group > *Export to ISAT Project*  
# Provide output project name and Hit OK  
# Observe that the exportisat.exe crashes while exporting to ISAT project

Note: Similar is the observation for Formosat2 orbital pushbroom model, Triplesat RPC

**IM-43782**  
Failure at the end of the process due to tridicon intermediate files limitation

To produce a DSM with 6 granules of satellite images, customer uses the Semi-Global Matching (SGM) tool. The first step of SGM is to calculate Tridicon Intermediate files for each pair of images. If a Tridicon intermediate file generated is bigger than 4GB, ERDAS IMAGINE returns an error and stop the process (since the Tridicon software does not support BigTIFF).

If possible please compute output intermediate image size in advance, for example displaying a warning to prevent having to wait until at the end of the process before it fails.

**IM-48126**  
ERDAS IMAGINE crashes while trying to get the report after changing the Remove Points over n Standard Deviations value multiple times

ERDAS IMAGINE 2018 Update 2 64-bit

1) Launch ERDAS IMAGINE > Load a specific Block File > Launch Stereo Point Measurement (SPM)  
2) Under SPM > Tools > launch Tie Point Uncertainty Analysis  
3) Change the value of Remove Points over n Standard Deviations to 0 and Apply > Click Report > Observe that Report launches  
4) Now again Change the value of Remove Points over n Standard Deviations to 0 and Apply > Click Report and again repeat the same step

Observe that ERDAS IMAGINE crashes while trying to get the report after changing the value of Remove Points over n Standard Deviations multiple times.
### IMAGINE Professional

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Professional</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-20641</td>
<td>Every so often an ECW in a batch list fails to calculate stats</td>
<td>Running a batch statistics/histogram calculation (32-bit application) with a total of more than 5000 ECWs; running 3 jobs in parallel. Each image is 4000 x 4000 x 3bands x ECW v2. Every so often, an ECW fails to calculate stats. Locate the ECW, open it in the Viewer, it displays fine and is visually fine. Open the ECW in Image Metadata, it looks fine. Calculate stats, and the process completes fine. Failure in Session log states: imagecommand.exe exited with status -1073741819.</td>
</tr>
<tr>
<td>IM-45743</td>
<td>Number of output files produced is not the same as number of inputs provided in Batch, Start Processing Later At</td>
<td>1. Launch Unsupervised Classification from Raster tab &gt; Classification &gt; Unsupervised 2. Provide the input file, specify output file, provide required number of classes and click on Batch 3. Now select variables as one input, one or more outputs 4. Add three more files, click on submit, select Start Processing Later At 5. Provide Simultaneous Processes as 4 and click OK 6. Provide the proper credentials and click Ok 7. Scheduled batch process listed and process become active at start time and done after a while. 8. Observe the output folder. The outputs produced are one or two files, rather than the expected four. This is not the case with Batch &gt; Start Processing Now</td>
</tr>
<tr>
<td>IM-36818</td>
<td>Spatial Modeler batch command file (.bcf) is not saved from the Batch Command Editor</td>
<td>Spatial Modeler batch command file (.bcf) is not saved from the Batch Command Editor when accepting the default batch command name after clicking OK To recreate:  - Open Spatial Model  - select Run in Batch (opens the Batch Command Editor)  - select Save. The Batch Command file chooser opens with the temp batch filename.  - select OK. The batch command file is not saved in the default temp location If you manually add the .bcf extension, the batch command file is saved. If you change the name, the batch command file is saved. If you redirect to a different folder, the batch command file is saved. If you click &lt;Enter&gt; instead of OK, the file is saved.</td>
</tr>
</tbody>
</table>
| IM-8447 | Spectral Euclidean Distance value continues to change when clicking other areas than the nudgers | In the Region Growing Properties tool, the Spectral Euclidean Distance nudger is "sticking" when changing the value and then proceeding to grow regions in the 2D View. The Spectral Euclidean Distance value continues to be adjusted even though the mouse clicks are elsewhere in the ERDAS IMAGINE interface. This problem does not occur in ERDAS IMAGINE 2011. The Region Growing Properties dialog did not have a thumbwheel for adjusting the Spectral Euclidean Distance in 2011, so maybe that is contributing to the problem.  
Steps to reproduce:  
Display the raster file lanier.img in a 2D View.  
Open the Region Growing Properties tool (Drawing tab > Insert Geometry group > Grow menu > Growing Properties).  
Click the Grow icon (Drawing tab > Insert Geometry group > Grow) to place a seed pixel in an area of water.  
Click on the up nudger a couple of times to increase the Spectral Euclidean Distance value.  
Now click on an empty area in the Region Growing Properties tool and notice that the Spectral Euclidean Distance value continues to change and the polygon region in the 2D View continues to grow to reflect the change of the Spectral Euclidean Distance value.  
Even if you click elsewhere in the ERDAS IMAGINE interface, the Region Growing Properties tool remains active and the Spectral Euclidean Distance value continues to change. |
| IM-45028 | Image Alarm crashes 64-bit version of ERDAS IMAGINE 2018 | Image Alarm tool crashes ERDAS IMAGINE 2018 64-bit. Session log reports "Unusual file mapping size 264248". The 32-bit versions of ERDAS IMAGINE 2018 and ERDAS IMAGINE 2016 Update 1 do not crash when using this tool.  
Steps to reproduce:  
# Display Multispectral image in a 2D View  
# Start the Signature Editor. (Raster tab > Classification group > Supervised menu > Signature Editor).  
# Open a signature file derived from the Multispectral image.  
# Re-associate the signature file and the image. (Signature Editor > Edit menu > Image Association)  
# Select one of the rows in the Signature Editor.  
# Start the Signature Alarm tool. (Signature Editor > View menu > Image Alarm) and click OK.  
# Click inside the 2D View.  
# ERDAS IMAGINE 2018 crashes. |
| IM-47545 | Unsupervised classification generates output with a missing block of data | Unsupervised classification generates output with a missing block of data. Failure appears be related to the number of classes to be created and to the output file type (i.e., TIFF). A specific lower and upper range fails when writing TIFF output. Using this same range works when writing IMG output. Specifying a different number of output classes works when writing TIFF output.  
If the input TIFF file is converted to IMG and used as input, the problem is not seen.  
These errors are seen when the failure occurs  
06/02/19 11:37:39 SessionMgr(14936): etif_HandleBlockRead failed  
06/02/19 11:37:39 SessionMgr(14936): etif_HandleBlockRead failed  
06/02/19 11:37:39 classifyisodata(2656): Creating signature file: C:/Temp/imagine/name  
06/02/19 11:37:39 SessionMgr(14936): etif_HandleBlockRead failed  
06/02/19 11:37:40 SessionMgr(14936): etif_HandleBlockRead failed |
| IM-46109 | classifyisodata.exe crashes for running Unsupervised classification operator to an ECW output | In ERDAS IMAGINE, open Spatial Model Editor.  
Drag and Drop Unsupervised classification operator.  
Double click the operator and specify 'Input Raster Layer’ and ‘Output cluster layer’.  
Input raster can be any format e.g. img.  
Output format should be ECW.  
Click ok and run the model.  
Observe run fails and session log info is as below: external process exited with status -1073741819. |
2. Launch Geophysical Processing from Raster > Classification > Unsupervised.  
3. Provide the input as lanier.img, provide the output and click ok.  
4. Observe Process failing and session log showing errors.  
  
Session log:  
18/01/19 18:25:40 SessionMgr(11576): Connection success for the external process 'eWkspace'  
18/01/19 18:26:08 eWkspace(6800): Loading [geophysical.eml]...  
18/01/19 18:26:37 eWkspace(6800): Unloading [geophysicalalgorithms.eml]...  
18/01/19 18:26:39 smprocess:  
18/01/19 18:26:39 SessionMgr(11576): HexGeo::SpatialModeler::Operator::Execute failed  
18/01/19 18:26:39 HexGeo::SpatialModeler::Operator::Execute failed  
18/01/19 18:26:39 HexGeo::SpatialModeler::Operator::Execute failed  
18/01/19 18:26:39 HexGeo::SpatialModeler::Operator::Execute failed  
18/01/19 18:26:39 HexGeo::SpatialModeler::Operator::Execute failed  
18/01/19 18:26:39 HexGeo::SpatialModeler::Operator::Execute failed  
18/01/19 18:26:39 HexGeo::SpatialModeler::Operator::SetErrorMessage failed  
18/01/19 18:26:39 Spatial Model failed in Raster Input. The error was "No valid input Filename available".  
18/01/19 18:26:39 SessionMgr(11576): Spatial model failed.  
18/01/19 18:26:39  
18/01/19 18:26:39  
18/01/19 18:26:39 SessionMgr(11576): smprocess.exe exited with status 1.  
  
| IM-47261 | Loading JP2 output from Unsupervised classification crashes ERDAS IMAGINE | 1. Launch ERDAS IMAGINE.  
2. Launch Unsupervised classification from Raster > Classification > Unsupervised.  
3. Provide the input as lanier.img.  
4. Provide the output as unsuper.jp2 (File of type: JPEG2000)  
5. Provide the number of classes as 3 and click OK.  
6. Process fails, ignore it and try to load output from File open > Recent button.  
7. Observe ERDAS IMAGINE crashes.  
  
| IM-47533 | LaGrange resampling method not present in Geophysical Processing dialog | 1. Launch ERDAS IMAGINE.  
2. Select Geophysical Processing from Raster > Classification > Unsupervised > Geophysical.  
3. Observe LaGrange resampling method not present but help page contain LaGrange also.  
  
| IM-46046 | Opening this Hyperspectral Image is slow through Image Chain | Open a specific .hdr hyperspectral image through Image Chain. Takes way too long. |
## IMAGINE SAR Interferometry

<table>
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<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE SAR Interferometry</th>
<th>Description / How to Reproduce</th>
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<tbody>
<tr>
<td>IM-45591</td>
<td>Coherence image produced by sentinel Swath CCD (mosaic) crashes 2D View</td>
<td>Coherence image produced by sentinel Swath CCD (mosaic) crashes viewer. Simply open the image after mosaic.</td>
</tr>
</tbody>
</table>

## Spatial Modeler

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – Spatial Modeler</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-49746</td>
<td>Preview operator: Is not automatically re-projecting feature data when a Basemap is displayed</td>
<td>This problem occurs in ERDAS IMAGINE as well as in the Spatial Model Editor. A feature layer can be added to a 2D View window. When this occurs, the window recognizes and displays the data using the appropriate coordinate system. If a Basemap is displayed in the window, the feature data is automatically re-projected to register to the Basemap - in this case OpenStreetMap, which uses EPSG 3857. Following a similar workflow using the Preview command to display the feature data, the data is not automatically re-projected (correctly) when a Basemap is displayed in the Preview window.</td>
</tr>
<tr>
<td>IM-46647</td>
<td>OLH-Description of one port missing in help for Machine Intellect Information operator</td>
<td>1. Launch ERDAS IMAGINE 2018, and then launch Spatial Model Editor 2. Drag the Machine Intellect Information operator to Spatial Model Editor. 3. Observe MethodInformation port exists. 4. Launch help page and observe no description MethodInformation port and the screenshot also needs to be updated.</td>
</tr>
<tr>
<td>IM-46629</td>
<td>OLH-Description of one port missing in help for Image Segmentation FLS operator</td>
<td>1. Launch ERDAS IMAGINE 2018, and then launch Spatial Model Editor 2. Drag the Image Segmentation FLS operator to Spatial Model Editor. 3. Check ON the Show All Ports option and observe Max Tile Size port exists. 4. Launch Help page and observe no description for Max Tile Size port</td>
</tr>
<tr>
<td>IM-46028</td>
<td>Proximity (and Cost) Spread operator's Help references a deprecated capability</td>
<td>Start Spatial Model Editor 1. Drag the Proximity Spread (or Cost Spread) operator onto the canvas 2. Display the AutoStudyArea port 3. Right-click on the Operator and select Help In the Help, look at the section for the AutoStudyArea port. It states: &quot;If set to True, the StudyArea will be set to the same extent as the extent of OriginPointsRasterIn file. If set to False, the StudyArea is determined by the settings of Processing Properties dialog for the particular Spatial Model. Default setting is True.&quot; But there is no longer have a &quot;Processing Properties dialog&quot; Seems like the port has no purpose any more.</td>
</tr>
<tr>
<td>IM-46624</td>
<td>OLH-Description of two ports missing in help for Raster Attribute Output operator</td>
<td>1. Launch ERDAS IMAGINE 2018, and then launch Spatial Model Editor 2. Drag the Raster Attribute Output operator to Spatial Model Editor. 3. Check ON the Show All Ports option and observe Low Fill, High Fill exist. 4. Launch Help page and observe no description for Low Fill, High Fill ports and also show all ports figure missing.</td>
</tr>
<tr>
<td>IM-46623</td>
<td>OLH- No help for Sort Method in ICA operator.</td>
<td>1. Launch ERDAS IMAGINE 2018, and then launch Spatial Model Editor 2. Drag the ICA operator to S Spatial Model M Editor. 3. Click on Sort Method port and launch help from Sort Method dialog pop-up 4. Observe Help page navigating to errors page</td>
</tr>
<tr>
<td>IM-46735</td>
<td>OLH for Machine Intellect Information operator needs to be updated</td>
<td>A new output port, MethodInformation, was added to the operator in v16.5.2. But the OLH does not describe that port.</td>
</tr>
</tbody>
</table>
| IM-46543 | OLH-Create Centroid operator figure to be updated in help page. | 1. Launch ERDAS IMAGINE 2018 Update 2  
2. Launch Spatial Model Editor and drag Create Centroid operator to Spatial Model editor  
3. Launch online help and observe figure in help page and figure in UI are not same. |
| IM-46564 | OLH- Multi Filename input operator should be updated with Default and show all ports figures. | 1. Launch ERDAS IMAGINE 2018 Update 2  
2. Launch Spatial Model Editor, drag Multi Filename input operator to Spatial Model editor and launch help  
3. Observe operator in UI having only three ports but help shows four ports. Shown in UI by checking ON Show all ports |
| IM-45008 | Some operators to be updated with show all ports in the Help | 1. Launch IMAGINE 2016. Spatial modeler, check on show all ports.  
2. Drag these operators from the Surface category:  
* Aspect  
* Degreeslope  
* Insolation  
* LeastCostPath  
* Percent Slope  
* Relief  
3. Click on each operator help and observe that help needs to be updated with figures corresponding to show all ports. |
| IM-46027 | Proximity Spread operator’s Elevation Restriction dialog has no Help | Start Spatial Model Editor  
Drag the Proximity Spread (or Cost Spread) onto the canvas  
Display the Elevation Restriction port  
Double-click the Elevation Restriction port to bring up the Elevation Restriction dialog.  
Click Help  
Help goes to the generic Help Error page |
| IM-47761 | Screenshot in the Generate Functional Attributes operator OLH should be updated | The screenshot of the Generate Functional Attributes operator in its OLH mentions it as Functional Attributes. So the screenshot should be updated. Please see the attached screenshot. |
| IM-46597 | OLH- Create Buffer Ring operator help showing Inner Distance default value as Nearest Neighbor. | 1. Launch ERDAS IMAGINE 2018 Update 2  
2. Launch Spatial Model Editor from File > New  
3. Drag Create Buffer Ring operator to Spatial Model Editor and launch help  
4. Observe Inner Distance port showing default value as Nearest Neighbor, which was incorrect. |
| IM-46596 | OLH-Create Buffer Ring figures are placed instead of Create Buffer Zone in help page. | 1. Launch ERDAS IMAGINE 2018 Update 2, Launch Spatial Model Editor.  
2. Drag Create Buffer Zone operator and launch Help.  
3. Observe Create Buffer ring operator figures are placed instead of Create Buffer Zone figures. |
| IM-46213 | Join Features operator when Previewed for 2 features with different Projection types, Preview is not correct even after Fit to Frame | ERDAS IMAGINE 2018 Update 2  
1) Launch ERDAS IMAGINE > Toolbox Tab > Spatial Model Editor  
2) Open specific Spatial Model and then Preview  
3) Observe that the preview is blank initially, now Do Fit to Frame for the 2D Viewer  
Observe that the Features are not visible properly until its zoomed in  
Note:  
1) Here the FeaturesInLeft is having an input with State Plane projection and FeaturesIn Right is having UTM projection  
2) Even the other way around i.e., FeaturesInLeft with UTM projection and FeaturesIn Right with State Plane also has the same problem  
3) If both the Features of same projection, it shows the features properly after Fit to Frame |
| IM-46714 | Summarize Related Features to Preview or Feature Output fails for specific geometry-based expression | ERDAS IMAGINE 2018 Update 2  
Spatial Model contains two Features Input, Summarize Related Features, Preview and Features Output operators:  
-> on preview, displays blank Preview.  
-> running the model, errors out at Features output and creates a 1kb shp and shx file; 0kb dbf file.  
(02/11/18 15:20:32 SessionMgr(8900): Executing spatial model  
02/11/18 15:20:32 SessionMgr(8900): erdas::sb::FeaturesOutput::OnExecute failed  
02/11/18 15:20:32 Unable to cast object of type 'Intergraph.Geometry.GDOBlob' to type 'System.Byte[]'.  
02/11/18 15:20:32 SessionMgr(8900): Spatial model execution failed.) |
|---|---|---|
| IM-46560 | Default Values are not set in the ports of Create Buffer Ring and Create Buffer Zone operator | ERDAS IMAGINE 2018 Update 2  
Default values of the Distance Units, Linear End Caps and Geometry Field Name are not set in the Operator UI as per the documentation of Create Buffer Ring and Create Buffer Zones operators  
Also if the Geometry Filed name is set it doesn't seem to add the field name in the output |
| IM-47759 | Expression allowed in the Generate Functional Attributes operator errors out when executed | ERDAS IMAGINE 2018 Update 2  
Open a specific Spatial Model containing a Generate Functional Attributes operator and click Preview  
20/02/19 11:16:45 SessionMgr(57492): ERROR: #125 from featuresvlLayerCreate  
| IM-48952 | The datatype in the user interface (UI) for a port of some operators isn’t in sync with OLH. | The datatype for a port of the following operators in the UI is HexagonGeospatial.FeaturesAnalysis.FunctionalAttribute. Whereas in the OLH it is IMAGINE.FunctionalAttribute.  
* SummaryAttribute1 port of Summarize Related Features operator  
* Functional Attribute1 port of Generate Functional Attributes operator  
* Functional Attribute port of Define Functional Attribute operator  
* SummaryAttribute1 port of Merge Features operator  
UI and OLH for these operators should be in sync. |
| IM-48349 | Running “Raster Statistics per Feature” operator is hanging and eventually crashing ERDAS IMAGINE | Customer reported that they tried to run the “Raster Statistics per Feature” operator to get the mean value of a polygon. When they run the process, ERDAS IMAGINE is hanging and eventually crashing. |
| IM-48363 | Input calibrated files are incorrectly placed in output PDF by Create Geospatial PDF operator | Run specific Spatial Model.  
Open the output pdf file.  
Observe output of ERDAS IMAGINE 2018 Update 2 are incorrectly placed.  
Valid output is created in ERDAS IMAGINE 2016 only. |
<p>| IM-41134 | Progress bar stays at 0% when running Machine Learning operators | All Python-based Machine Learning operators have this problem. |</p>
<table>
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<tr>
<th>IM-46592</th>
<th>Executing Machine Learning (ML) Process - session log pointing to unknown classification server</th>
</tr>
</thead>
</table>
| 1. Launch ERDAS IMAGINE 2018 Update 2 and change to Machine Learning Layout.  
2. Select ML Train and train a model by collecting image chips for a few classes.  
3. Now select ML Process tab, create a Project and try to execute the ML Process by selecting the model created in step 2.  
4. Observe that session log showing classification server pointing to C:/if_jenkins/workspace/rel-win/M/…etc. This does not exist in the system.  |

**NOTE:** In this workflow execution was success and classification done.

Session log:

```
22/10/18 15:15:51 C:/Program Files/Hexagon/ERDAS IMAGINE 2018/bin/x64URelease/MachineLearningProcessChain.exe d:/2018/19-10-2018/lauoutproject2.mlp 1 Run 1
22/10/18 15:15:57 SessionMgr(3436): Starting classification server process...
22/10/18 15:16:27 SessionMgr(3436): Classifying C:/Users/agangumo/AppData/Local/Temp/SPATIAL_MODELER-5ec4-774c-9a62-155a-009920/cc4ac0f0-17a9-492c-ba2c-92a297e6885fimg
22/10/18 15:16:27 SessionMgr(3436): classification server: 2018-10-22 15:16:27.207485: I C:\tf_jenkins\workspace\rel-win\M\windows-gpu\PY\35\tensorflow\core\platform\cpu_feature_guard.cc:140] Your CPU supports instructions that this TensorFlow binary was not compiled to use: AVX2
22/10/18 15:16:27 SessionMgr(3436): classification server: 2018-10-22 15:16:27.539761: I C:\tf_jenkins\workspace\rel-win\M\windows-gpu\PY\35\tensorflow\core\common_runtime\gpu\gpu_device.cc:1212] Found device 0 with properties:
22/10/18 15:16:27 SessionMgr(3436): classification server: name: Quadro M1200 major: 5 minor: 0 memoryClockRate(GHz): 1.148
22/10/18 15:16:27 SessionMgr(3436): classification server: pciBusID: 0000:01:00.0
22/10/18 15:16:27 SessionMgr(3436): classification server: totalMemory: 4.00GiB freeMemory: 3.35GiB
```

<table>
<thead>
<tr>
<th>IM-47764</th>
<th>Doc: Classify using machine learning has a limitation on raster data type that needs to be documented</th>
</tr>
</thead>
</table>
| Raster Classification using Machine Learning fails if the data has No Data set or if the data type is Double. Here is the error message from the session log.  
12:16:13 SessionMgr(9000): Input contains NaN, infinity or a value too large for dtype('float32'). |

<table>
<thead>
<tr>
<th>IM-47505</th>
<th>Initialize Inception operator performs validation test even when no data is set aside for validation</th>
</tr>
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</table>
| It seems Initialize Inception always performs validation even when no data is set aside for validation. With Validation percentage set to zero, I still get some percentage values.  
In the session log, I see this  
Step 99: Validation accuracy = 84.0(N=100)  
This should not be the case if I have not reserved any data for validation. |

<table>
<thead>
<tr>
<th>IM-43613</th>
<th>Criteria Selection on the Probability field in Machine Learning Layout crashes ERDAS IMAGINE</th>
</tr>
</thead>
</table>
| On the File tab, change to the Machine Learning Layout Load a project that you've already trained and classified.  
Load the results.  
In the Change Likelihood Rank panel right click in the Row column and select Criteria…  
Use the Selection Criteria dialog to specify "$Probability" > .5  
Click Select.  
ERDAS IMAGINE crashes |

<table>
<thead>
<tr>
<th>IM-42556</th>
<th>Session log records a warning message when running a model consisting of Machine Learning operators</th>
</tr>
</thead>
</table>
| Steps To Reproduce:  
(1) Create a valid model with any of the Machine Learning operators.  
(2) Run the model  
Observation:  
Session log records a warning message as below:  
{color:#d04437}11/12/17 13:54:21 eWkspace_64(17412): WARN com.hexgeo.smsgdk.spatialmodeler.core.Data - SizeInBytes must be implemented for data type: IMAGINE.FeatureSubset{color} |

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<table>
<thead>
<tr>
<th>Issue Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-42504</td>
<td>Zonal Max operator does not support float data. Zonal Max operator only outputs integer data. This causes a problem if the input is data type is float - the output values lose precision. It really causes a problem if the input data type is float and the values are negative - the Zonal Max always outputs a value of 0 instead of the true negative zonal max value. Whereas the Zonal Attributes tool (Save Zonal Statistics To Polygon Attributes) outputs correct zonal max floating point values.</td>
</tr>
<tr>
<td>IM-42614</td>
<td>Select Attributes is throwing an error dialog on removing all the attributes from the included list. Steps to reproduce: (1) Create a spatial model as follows: Feature Input &gt; Select Attributes &gt; Initialize Naive Bayes ... (2) In 'Feature Input' select any shapefile that has some attributes defined. (3) On 'Select Attributes' operator double-click on the 'AttributeNames' port to bring up Select Attributes dialog. (4) From the 'Available Attributes' list add couple of attributes to the 'Included Attributes' list. (5) Once the attributes are listed in the 'Included Attributes' list, remove both the listed attributes by clicking &quot;&lt;&quot; tool bar icon. Observation: (6) An error dialog is thrown when the last attribute from the list is removed.</td>
</tr>
<tr>
<td>IM-48617</td>
<td>Convert to Surface operator fails if it is used in combination with other point cloud operators. Convert to Surface fails if it is used in combination with other point cloud operators. But if the intermediate result is saved to a file and the file is then used as an input to convert to surface operator, it works fine.</td>
</tr>
<tr>
<td>IM-48885</td>
<td>Stack Max operator always returns a value of 2.22507e-308 if the input value is negative and the data is 64-bit floating point. It returns a value of 1.17549e-038 if the input is 32-bit floating point data. These are not the correct values. 2.22507e-308 is the maximum value for the floating point 64-bit data and 1.17549e-038 is the maximum value for the floating point 32-bit data. Stack Max operator provides the correct output value if the input is a negative 8-bit or 16-bit value. This problem does not occur with ERDAS IMAGINE 2016 Update 1.</td>
</tr>
<tr>
<td>IM-46535</td>
<td>Measure Area is affecting the geometries (some large holes are being filled). ERDAS IMAGINE 2018 Update 2 A Spatial Model was built which takes an input shapefile, merges features and then measures the Area of each feature. The result of the merge appears to be correct, but the result of the subsequent Measure Area are wrong - large holes in the original geometries have been filled (i.e. removed). Measure Area should not affect the geometries at all! Measure Perimeter has the same effect on the geometries. Also tried Measure Length and Measure Center and they all modified the output geometries. As a workaround, use Generate Functional Attributes again.</td>
</tr>
<tr>
<td>Issue</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>IM-49761</td>
<td>Spatial Model changes datum of input feature data</td>
</tr>
<tr>
<td>IM-44602</td>
<td>Producing ER Mapper (*.ers) file from vector file throwing error in ERDAS IMAGINE 2018</td>
</tr>
<tr>
<td>IM-46625</td>
<td>One extra port (Expression) shown for the operator Point Cloud Build Selection Criteria operator in UI</td>
</tr>
<tr>
<td>IM-46381</td>
<td>OLH Default values disagree with Filter By Geometries operator</td>
</tr>
</tbody>
</table>
| IM-39578 | Convolve a F32 DEM using non-normalised Kernel, fails with Unable to allocate OpenCL Image message | Open specific spatial model in the Editor. Click Run  
See these messages in the Message panel and the model fails to run:  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
Unable to allocate OpenCL Image  
If you change the Input Raster from Native Type to Float (which should be the same) the model runs successfully.  
Or, you can leave it as Native Type, but change Normalize to True on the input kernel. That works as well.  
Note – if you close ERDAS IMAGINE after attempting (and failing) to run this model, you get a Runtime Error. |
| IM-45023 | Initial input values in Spatial Model Editor causes errors | Spatial Modeler reports an error on initial inputs.  
Test Model is in: \alpha\JIRA_data\IM-45023  
Open Spatial Modeler  
Scenario 1:  
# Load model from above folder  
# Run model  
# When the dialog opens, press "OK" without changing any values.  
# Output should report an error. |
<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| IM-45259 | Slope to NTF give errors in the session log | Run a specific Spatial Model which generates slope from a DEM and outputs to NITF format. Notice the errors in the session log:  
09/07/18 11:14:43 SessionMgr(18828): ERROR: #22935 from eimg::details::SSLayerGetNames  
09/07/18 11:14:43 SessionMgr(18828): ERROR: <NULL> failed  
09/07/18 11:14:43 SessionMgr(18828): ERROR: #67 from <NULL>  
09/07/18 11:14:43 SessionMgr(18828): ERROR: #14930 from eimg_FileImageNamesGet  
09/07/18 11:14:43 SessionMgr(18828): ERROR: <NULL> failed  
09/07/18 11:14:43 SessionMgr(18828): ERROR: eimg_FileOpen failed  
09/07/18 11:14:43 SessionMgr(18828): ERROR: #5968 from eimg_FileOpen  
09/07/18 11:14:43 SessionMgr(18828): ERROR: c:/work/output.ntf.r2: eimg_FileOpen failed (33:Unsupported Raster format or non-Raster format)  
It looks like when outputting NITF in this case, we try to compute stats while generating RSETs, which tries to open the RSET as it's being generated (and fails). It doesn't seem to negatively affect the process though. |
| IM-46858 | Rename Attributes does not work | Open a specific Spatial Model designed to take an input shapefile, attempts to rename one of the attribute fields and write out a new shapefile. However, if you click Preview (or Run), you'll get this error:  
Spatial Model failed in Rename Attributes. The error was "HexGeo::SpatialModelerFeatures::Feature::TransferFieldValue failed Unsupported field type". |
| IM-46567 | OLH Default values disagree with Compute Affine Coefficients operator | 1. Launch ERDAS IMAGINE 2018 Update 2  
2. Launch Spatial Model Editor from File > New  
3. Drag Compute Affine Coefficients operator to Spatial Model Editor  
4. Observe default value set for Scale X, Scale Y ports are 0 but OLH says default values are 1  
| IM-46565 | OLH Default values disagree with APM Parameters operator | 1. Launch ERDAS IMAGINE 2018 Update 2  
2. Launch Spatial Model Editor from File > New  
3. Drag APM Parameters operator to Spatial Model Editor  
4. Observe default value set for PointsPerImage port is 25 but OLH says default value is 9  
| IM-46762 | Some LAS inputs cause the Classify Ground Operator to crash ERDAS IMAGINE | Classify Ground operator causes ERDAS IMAGINE to crash with some point cloud input files. The cause of the problem has been identified with using point cloud files small enough not to need tiling.  
After a crash you may see a session log error that looks like:  
14/11/18 09:25:45 SessionMgr(4972): external process exited with status -1073741819. |
| IM-46705 | Spatial Model failed in Add Attribute By Order | Customer submitted a model where errors are reported at the Add Attribute By Order operator. Tests indicate the source of the errors may be coming from how the Filter By Geometries Operator is sending the temporary output to the next operator.  
31/10/18 13:47:05 SessionMgr(3336): ERROR: #2348 from HexGeo::SpatialModeler::Operator::InternalApply  
31/10/18 13:47:05 SessionMgr(3336): ERROR: HexGeo::SpatialModeler::Operator::SetErrorMessage failed  
31/10/18 13:47:05 SessionMgr(3336): ERROR: Spatial Model failed in Add Attribute By Order. The error was "Table count 209 does not match FeaturesIn count 14.".  
31/10/18 13:47:06 SessionMgr(3336): Table count 209 does not match FeaturesIn count 46. |
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-48093</td>
<td>Add Attributes by Location does not accept just DN values</td>
</tr>
<tr>
<td>IM-48392</td>
<td>Add Attributes By Location operator fails with float values</td>
</tr>
<tr>
<td>IM-18871</td>
<td>ERDAS IMAGINE crashes while saving read-only Spatial Model</td>
</tr>
<tr>
<td>IM-46622</td>
<td>ERDAS IMAGINE crashes with ICA operator if Count exceeds number of bands</td>
</tr>
<tr>
<td>IM-46536</td>
<td>ERDAS IMAGINE crashes while creating Geometry using Create Bounding Box operator</td>
</tr>
<tr>
<td>IM-34996</td>
<td>Convert to Features output does not carry the attributes of the input if &quot;IsClumped&quot; option is OFF</td>
</tr>
<tr>
<td>IM-49241</td>
<td>Add Attributes By Location takes wrong values if no related data found</td>
</tr>
<tr>
<td>IM-49459</td>
<td>Update Statistics operator not properly setting skip factors, exclude values, etc.</td>
</tr>
</tbody>
</table>

Add Attributes by Location seems to rely on there being an attribute table present on the raster stream. Whereas, frequently there will not be if the raster stream has been generated as part of the model.

Open specific Spatial Model in a Spatial Model Editor
Click Run.
Note that the second Add Attributes by Location fails with a message "can't find attribute table"
The only difference between the two Add Attributes by Location operators is that in the second one, the input raster stream has been multiplied by 2, thereby invalidating its attribute tables (but still having DN values).
If instead you attach the output of Attach Attributes to the Related Data port of Add Attributes by Location 2, it runs successfully.

Help states that DN values should be supported. It needs to be.

Add Attributes By Location operator fails when the input raster is of float data type.

Open a read-only Spatial Model file
Add a new operator to the Spatial Model
Click on the Close button of Spatial Model Editor
Click Yes button of "Verify Save on Close" Dialog
Observe that ERDAS IMAGINE crashes.

ERDAS IMAGINE crashes while executing a model.

1. Launch ERDAS IMAGINE 2018, launch Spatial Model Editor
2. Connect a Model as Raster Input > ICA
3. Provide inputs:
   - Raster Input: sub4road1.img (a 3 band image) from examples > Objective
   - Count: 16
   - Sort Method: ICASORT_SKEWNESS
4. Click Run to execute model, observe ERDAS IMAGINE crashes.

ERDAS IMAGINE crashes while creating Geometry using Create Bounding Box operator

1. Launch ERDAS IMAGINE 2018 Update 2
2. Launch Spatial Model Editor and open specific Spatial
3. Click on preview and observe ERDAS IMAGINE crashes.

ERDAS IMAGINE 2016 Update 1
- Give Lnsoils.img from the example data as an input to "Convert to Features" operator and generate an output using the default options.
- Open the output shapefile in the viewer and check the Attribute table.
Notice that the attributes from the input thematic image are missing.

Repeat the same with the "IsClumped" option ON and notice that the attributes are carried to the output.

If the operator Add Attributes By Location cannot find a suitable object to fill attributes, the attributes of the object with previous Primary Key value are taken to fill the attribute table. This is wrong. The entry should stay empty instead.

Update Statistics operator is not writing the correct Statistics Parameters and Histogram Parameters (skip factors, exclude values, bin function, and AOI) to the image layers.
It's writing out the default values, not what was actually used for the stats.
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-49456</td>
<td>Add Attributes by Location operator causes ERDAS IMAGINE to exit</td>
<td>ERDAS IMAGINE 2018 Update 2&lt;br&gt;See specific Spatial Model&lt;br&gt;Open the model in Spatial Model Editor&lt;br&gt;Double-click the «StringList» port on the Add Attributes by Location operator. This should open a dialog enabling you to select attribute names ERDAS IMAGINE exits.</td>
</tr>
<tr>
<td>IM-48930</td>
<td>Least Cost Path model hangs</td>
<td>See the data and model available here:&lt;br&gt;<a href="https://community.hexagongeospatial.com/t5/Spatial-Modeler-Tutorials/Calculating-a-Least-Cost-Path-using-a-DEM/ta-p/6115">https://community.hexagongeospatial.com/t5/Spatial-Modeler-Tutorials/Calculating-a-Least-Cost-Path-using-a-DEM/ta-p/6115</a>&lt;br&gt;In ERDAS IMAGINE 2016 v16.1 you can open this model in the Spatial Model Editor and run it to completion in about 4 minutes. If you try to do the same in ERDAS IMAGINE 2018 it just hangs in the Least Cost Path operator.</td>
</tr>
<tr>
<td>IM-46540</td>
<td>Density Interpolation operator throwing error in combination with Create Center Point operator</td>
<td>The problem is with the way the Density Interpolation operator interprets the primary geometry field of the input features. Output features from the Create Centerpoint operator contain 2 geometry fields, the original input areas and the newly created centerpoints. The operator also correctly sets the primary geometry to GC_Centerpoint, which can be proven by passing features into the Features Information operator and observing the PrimaryGeometryFieldName port.&lt;br&gt;When passing features directly from Create Centerpoint to Density Interpolation, the Density Interpolation operator incorrectly attempts to use the original area geometry field &quot;Geometry&quot; presumably because it appears first in the list.</td>
</tr>
<tr>
<td>IM-44641</td>
<td>Rapid Atmospheric Correction tool does not pass calibration file to Spatial Model</td>
<td>The calibration file is not getting passed from the Rapid Atmospheric Correction tool to the Rapid Atmospheric operator in the Spatial Model. When you try to run the tool, the process fails. Session log reports the error &quot;No input file available&quot;.&lt;br&gt;To work around this problem, click the View button in the Rapid Atmospheric Correction tool and it opens the spatial model. Double-click on the CalibrationFilename input port for the Rapid Atmospheric operator and select the calibration file, then run the spatial model.</td>
</tr>
<tr>
<td>IM-47466</td>
<td>Performing a sort on a Features Table column in Connection Manager dialog crashes Spatial Model Editor</td>
<td>A crash of the Spatial Model Editor application occurs when the Connections Manager dialog is used to make a proxy file connection (for Oracle, PostGIS, or SQL Server) if the Feature Tables list is then sorted (by selecting the ‘Name’ column and choosing the ‘Sort A..Z’ or ‘Sort Z..A’ option).</td>
</tr>
<tr>
<td>IM-46722</td>
<td>Previewing a raster with 0 rows and 0 columns crashes ERDAS IMAGINE</td>
<td>After analyzing why a customer's Spatial Model was crashing, in the end tracked it down to an error defining the output pixel dimensions that resulted in an output raster with no rows or columns. Previewing this crashes ERDAS IMAGINE.</td>
</tr>
<tr>
<td>IM-35174</td>
<td>Raster (Color) Attribute Output wipes Color Table with u8 output</td>
<td>See model attached. You can use Bands 4 and 3 from a Landsat dataset such as this one:&lt;br&gt;\alpha\beta\gamma\delta\epsilon\zeta\eta\theta\iota\kappa\lambda\mu\nu\xi\omicron\pi\rho\sigma\tau\upsilon\phi\chi\psi\omega\varpi\varphi\chi\psi\omega&lt;br&gt;Open the model in Spatial Model Editor.&lt;br&gt;Click Run.&lt;br&gt;Leave Stretch flag set to False (so you'll get floating point NDVI results), fill in the input images, click OK.&lt;br&gt;Open the resulting image file as PseudoColor.&lt;br&gt;Results look good (dark to light green color ramp is applied – let's ignore the fact that it seems to have created a valid color for NoData).&lt;br&gt;Click Run again and give a different output file name.&lt;br&gt;Change Stretch flag to True (to give u8 output).&lt;br&gt;Open the resulting image file as PseudoColor.&lt;br&gt;The image is displayed all black because the colors applied to each class are all black.</td>
</tr>
<tr>
<td>Issue</td>
<td>Description</td>
<td>Solution/Note</td>
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<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IM-35173</td>
<td>Attach (Color) Attributes does not work with Floating Point output</td>
<td>Open a specific Spatial Model in Spatial Model Editor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click Preview.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leave Stretch flag set to False (so you’ll get floating point NDVI results), fill in the input images, click OK.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Results look good (dark to light green color ramp is applied).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click Run.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Open the resulting image file as PseudoColor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No color ramp was saved to the output file (so it does not look the same as the Preview)</td>
</tr>
<tr>
<td>IM-47534</td>
<td>Preview of DirectLookup not behaving well when Table is a color table</td>
<td>* Build a Model like this with a Thematic input image:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Click Preview.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* On the Multispectral tab, try changing the band combination. Notice that nothing happens.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Select the Panchromatic Image Chain. You’ll get red Xs.</td>
</tr>
<tr>
<td>IM-46904</td>
<td>NDVI model from the Ribbon GUI ignores the ‘stretch to Unsigned 8 bit’ option</td>
<td>Running NDVI from the ribbon gui does not produce a properly rescaled image when using ‘Stretch to Unsigned 8 bit’. The output value range is 0 – 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After selecting the “Stretch to Unsigned 8 bit” option from the I/O options tab, the default spatial model opened from the NDVI dialogue’s View button has the StretchFlag value in the Properties dialogue set to Integer (0) and produces the same unexpected result. If you change the StretchFlag value to Integer (1), the model rescales the output image to a 8 bit value range that appears to be correct.</td>
</tr>
<tr>
<td>IM-48405</td>
<td>Remove Item fails when DataIn is a Table</td>
<td>Remove Item operator says that it supports “Dictionary, List (of Data), and Data” for DataIn. There’s a TableToList conversion, so you’d think that you could remove items from a Table. But it fails, even though the connection is not shown in red.</td>
</tr>
<tr>
<td>IM-48058</td>
<td>Example 2 missing from Spatial Modeler Guide</td>
<td>Apparently this got lost. All the current Guide says is “Example 2: Load/Save/Edit a Spatial Model”.</td>
</tr>
<tr>
<td>IM-49513</td>
<td>Feeding an AOI to Features Input causes ERDAS IMAGINE to exit</td>
<td>ERDAS IMAGINE 2018 Update 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Start Spatial Model Editor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Add a Features Input operator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Double-click the input port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the File Chooser select the All Files (<em>.</em>) filter option</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Select an .AOI file and OK the file Chooser</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click Run.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ERDAS IMAGINE exits.</td>
</tr>
<tr>
<td>IM-49575</td>
<td>ERDAS IMAGINE crashes with model containing Update Attribute operator</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
|          | 1. Launch ERDAS IMAGINE  
            2. Launch Spatial Model Editor and Load the model and click on Preview.  
            ![Diagram](image)  
            3. Observe ERDAS IMAGINE crashes. |

<table>
<thead>
<tr>
<th>IM-47233</th>
<th>Set Primary Geometry operator UI does not present all available geometry fields with IFC format</th>
</tr>
</thead>
</table>
|          | Attempted to use Set Primary Geometry to select a geometry field in a model but was unable to select the field via the dialog, entering it manually worked fine. The model uses Generate Functional Attributes to create a new geometry field. This new field becomes primary after GFA executes.  
          | Wanted to use Set Primary Geometry to set the original geometry field back to primary. However, it was not in the drop down list on the UI. |

<table>
<thead>
<tr>
<th>IM-49844</th>
<th>Convert to Features operator fails in execution</th>
</tr>
</thead>
</table>
|          | Click Preview  
          | Model fails in the Convert to Features operator |

<table>
<thead>
<tr>
<th>IM-40485</th>
<th>Alert messages in Python while running Spatial Model containing the Generate Surface operator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Customer reported that when running a python script that is using a Spatial Model containing the Generate Surface operator, they get alert messages about starting processing pyramid levels. The user had to manually click OK in order the Python script to process to the next pyramid levels. This continues until all the pyramids levels are processed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IM-46859</th>
<th>Previewing a Model containing Rename Attributes has scale-dependent problems</th>
</tr>
</thead>
</table>
|          | Open specific Spatial Model in the Spatial Model Editor.  
            Click Preview  
            The model successfully previews the buffer "donuts" in a View  
            Now zoom in in the Preview.  
            At some stage the geometries stop drawing.  
            Zoom back out and they re-appear. |

<table>
<thead>
<tr>
<th>IM-47572</th>
<th>Operators do not warn if an inappropriate object type is connected to them</th>
</tr>
</thead>
</table>
|          | The following two operators do not warn (red color connection) if an inappropriate object type is connected to them.  
            # Initialize Deep Intellect – AddLayer1 port is expecting a Dictionary object type. But it does not warn if any other object type is connected to it.  
            # Detect Objects Using Deep Learning – MachineIntellect port expects a MachineIntellect object type. But it does not warn if any other object type is connected to it. |
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-46526</td>
<td>Preview results from Convert to Surface operator are incorrect. A Spatial Model was built which takes vectors with a height attribute and runs them through Convert to Surface and sends to a Preview. Click Preview At first the results may appear correct. But if you zoom in to the area that has been interpolated, the results chop and change - sometimes large gaps appear, sometimes almost all the interpolated values disappear, etc. Also, when you open the Inquire Cursor, it reports NoData for the interpolated areas. However, when you click Run and output a file of the interpolation, the results look fine.</td>
</tr>
<tr>
<td>IM-49558</td>
<td>Point Cloud &gt; Convert To Surface output is too small Both 32- and 64-bit versions of the operator are generating output files that are much too small, only several pixels large.</td>
</tr>
<tr>
<td>IM-43943</td>
<td>Spatial Model Editor &quot;hangs&quot; ERDAS IMAGINE 2018 Update 1: Open specific Spatial Model in Spatial Model Editor. Scroll over until you can see the Zonal Summary Max operator. Right click on it and select Run Just This. Once it has completed left-click on the Summary operator. The Spatial Model Editor may immediately go &quot;busy&quot;. If not, try to pan the model using the middle mouse button. At some stage the Editor decides to go &quot;busy&quot; for a minute or so. Eventually you might get control back, but left-clicking on the Zonal Summary Max operator sets it off again and you have to wait, again.</td>
</tr>
<tr>
<td>IM-34174</td>
<td>Spatial Model operator Bitwise Not is giving output Binary(1) even if the input is Binary(1) Customer reported that when using the Bitwise operator Not, if false is input, it returns a true, if true is input, it returns a true. Steps to reproduce: 1. Create new spatial model, drag Bitwise Not in 2. Use true as input, change to Binary(1) 3. Run model, output is Binary(1) However, using false, the result is the same.</td>
</tr>
<tr>
<td>IM-20602</td>
<td>Raster Input operator is failing while displaying VMCX file pointing to PNG in Spatial Model Editor Display a VMCX file pointing to PNG using a Spatial Model (Port Input &gt; Raster Input &gt; Preview). Randomly Raster Input Operator is failing (cross mark).</td>
</tr>
</tbody>
</table>
**IMAGINE Terrain Editor**

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Terrain Editor</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-42325</td>
<td>Recalculate Elevation for Images no longer offers millimeters as an elevation unit</td>
<td>Users need the ability to change elevation height units to millimeters. This cannot be done with the Recalculate Elevation for Images tool found under the Terrain tab (Manage group) or within the Image Metadata tool (or the Image Commands tool).</td>
</tr>
<tr>
<td>IM-41348</td>
<td>Geomorphic Edits not saved</td>
<td>In some cases when applying geomorphic edits, they are not being saved. This seems to happen randomly but more often when one closes the Terrain Editor dialog and clicking the save button from the popup dialog when prompted to save the changes.</td>
</tr>
<tr>
<td>IM-31142</td>
<td>Move AOI Home icon is changed in Terrain Editor</td>
<td>Launch ERDAS IMAGINE. Load a block file having DEM. Launch Terrain Editor. Go to Terrain Files and Display tab &gt; Area of Interest section &gt; Navigation &gt; Center icon i.e 'Move AOI Home' icon is changed from house symbol to dot.</td>
</tr>
<tr>
<td>IM-46872</td>
<td>Unknown characters shown on Button Mapping Window Title</td>
<td>1. Launch ERDAS IMAGINE 2018 2. Load any photogrammetric project 3. Launch Terrain Editor window. 4. Launch Button Mappings from Edit &gt; Devices &gt; System Mouse 5. Observe that unknown characters shown on Button Mapping Window Title.</td>
</tr>
<tr>
<td>IM-46903</td>
<td>Terrain Editor produces errors when editing geographic LTFX DTMs</td>
<td>When points of a geographic LTFX DTM are edited with the Terrain Editor in a geographic projection blockfile, the changes are very often not saved. The effect could not be observed using UTM LTFX DTMs generated within a UTM blockfile.</td>
</tr>
<tr>
<td>IM-47462</td>
<td>Terrain Prep Tool cannot merge two overlapping LAS files using both Thin and Filter preprocessing options</td>
<td>If you try to create a DEM from two overlapping LAS files using either the Surface process (Rasterization) or the Merge process, it fails at the merge step if both the Thin and Filter preprocessing options are enabled. If you only use one of the preprocess settings (Thin or Filter) it works as it should.</td>
</tr>
</tbody>
</table>

**IMAGINE Expansion Pack – 3D**

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Expansion Pack 3D</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-45759</td>
<td>Unable to Start Movie Recording of type Microsoft AVI in 3D view, as file was defaulting to a .mpg extension</td>
<td>1. Launch ERDAS IMAGINE 2018 Update 2 2. Close 2D View and launch 3D View from Add views &gt; Create New 3D View 3. Load data 4. Click on Start button from Scene tab &gt; Recording 5. Provide the output movie file as test.avi. 6. Click OK and observe a dialog opens. Unable to start Movie recording. This is not the case with File of type IMAGINE Movie (*.mov)</td>
</tr>
</tbody>
</table>
## IMAGINE Expansion Pack – AutoSync

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Expansion Pack AutoSync</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM-47057</td>
<td>AutoSync not displaying coordinates legibly</td>
<td>Start AutoSync workstation and load a specific project. Points have already been generated. Try to read the coordinates - you cannot because the significant digits have been displaced off the left side of the columns.</td>
</tr>
</tbody>
</table>
| IM-47056   | AutoSync not recognising RPC model as being valid                                                          | See the Community thread here: [http://community.hexagongeospatial.com/t5/Spatial-Modeler/autosync-automatically-m-p/29178/highlight/false#M518](http://community.hexagongeospatial.com/t5/Spatial-Modeler/autosync-automatically-m-p/29178/highlight/false#M518)  
Start AutoSync workstation and load a specific project. Points have already been generated so click the Sigma button to try to solve the RPC models the input images are calibrated with. Error: Invalid output geometric model |
| IM-45119   | AutoSync workstation crashes while creating GCP with single input image                                   | 1. Launch ERDAS IMAGINE and launch AutoSync Workstation  
2. Create a Project as Georeference workflow  
3. Provide input image as residential.image from Examples > Objective  
4. Click on Create GCP button and Click on input image and observe AutoSync crashes.                                                                                                                                                                                                                                                                          |
| IM-46612   | AutoSync CellArray displays values with incorrect formatting                                              | ERDAS IMAGINE2018: AutoSync CellArray format displays coordinate values in the cell array that are not right justified and contain an excessive number of decimal places. Autosync 2016 displays the cell array values as expected. Coordinate values are represented 8 decimal places. Residual values are represented with 16 decimal places. Compare with Autosync 2016. The numerical values are right-centered with the coordinate values represented with 3 decimal places and the Residual values represented with 6 decimal places. |
| IM-47855   | Run APM does not do anything in AutoSync 2018 with data in custom datum and projection                     | Customer is using a custom datum and projection in AutoSync for georeferencing ZY3 sensor data. According to the customer in ERDAS IMAGINE 2018 with Update 1 or 2, Autosync is unable to start the “Run APM”. The session log gives the following error message:  
28/02/19 16:09:47 SessionMgr(13104): WARNING! The two images do not overlap with each other, output may not be generated.  
The problem does not occur if ERDAS IMAGINE 2018 without Updates is used. |
## IMAGINE Expansion Pack – NITF

<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary – IMAGINE Expansion Pack NITF</th>
<th>Description / How to Reproduce</th>
</tr>
</thead>
</table>
| IM-45772 | SNIP NITF: 1.5 minutes to display image | ERDAS IMAGINE 2018 Update 2  
Start ERDAS IMAGINE  
Click the File icon on the Quick Access Toolbar.  
Select a SNIP RIP .ntf file  
Go to the Sub-images tab.  
Click on the Multi checkbox.  
On my computer it took 2 minutes before I regained control of the File Chooser.  
Once you can, click OK to display the image.  
On my computer it took 1.5 minutes until the image displayed (at 1:1) |
| IM-45773 | SNIP NITF: 26s to change a band | ERDAS IMAGINE 2018 Update 2  
Start ERDAS IMAGINE  
Click the File icon on the Quick Access Toolbar.  
Select the SNIP RIP .ntf file  
Go to the Sub-images tab.  
Click on the Multi checkbox.  
Once the image is displayed go to the Multispectral tab and select a different band for the Green color gun.  
On my system it took 26s for the new band to display. |
| IM-45771 | SNIP NITF: 2 minutes for File Chooser Sub-image tab to respond | ERDAS IMAGINE 2018 Update 2  
Start ERDAS IMAGINE  
Click the File icon on the Quick Access Toolbar.  
Select the SNIP RIP .ntf file  
Go to the Sub-images tab.  
Click on the Multi checkbox.  
On my computer it took 2 minutes before I regained control of the File Chooser.  
On my computer it took 1.5 minutes until the image displayed (at 1:1) |
| IM-45777 | SNIP NITF: 5 minutes to open ImageInfo | ERDAS IMAGINE 2018 Update 2  
Start ERDAS IMAGINE  
Click the File icon on the Quick Access Toolbar.  
Select the SNIP RIP .ntf file  
Go to the Sub-images tab.  
Click on the Multi checkbox.  
On my computer it took 2 minutes before I regained control of the File Chooser.  
On my computer it took 1.5 minutes until the image displayed (at 1:1)  
Once the image is displayed click the ImageInfo button.  
On my system it took 5 minutes and 30s for ImageInfo to come up and populate with information (for one band).  
Each time you change band it takes another 5 minutes. |
| IM-49812 | Chipping errors likely caused by delayed TRE/DES parsing | In ERDAS IMAGINE 2018 Update 2 it was discovered that NITF chipping of various classified data was erroring out. This same behavior did not occur with earlier versions. It also did not occur when the DPM was uninstalled. [t-shelley] traced this down in the debugger to the presence of TRE/DES in the data that had delayed parsing implemented in the DPM for Update. |
### ERDAS IMAGINE Installation

<table>
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<tbody>
<tr>
<td>IM-48920</td>
<td>ArcGIS Geodatabase Compatibility Table in OLH should be updated with 10.6 and 10.6.1 (supported versions)</td>
<td>ArcGIS Geodatabase Compatibility Table in OLH should be updated with 10.6 and 10.6.1 (supported versions) The table shows support till 10.5.1</td>
</tr>
<tr>
<td>IM-46782</td>
<td>Borrowing XML does not include IMAGINE SAR Feature</td>
<td>The XML file that controls the dependencies for Borrowing does not seem to include the IMAGINE SAR Feature module: “C:\ProgramData\Intergraph\Licensing\Borrowing\IMAGINE2018.xml”</td>
</tr>
<tr>
<td>IM-43159</td>
<td>Undesirable auto CSM configuration behavior</td>
<td>Observed in ERDAS IMAGINE 2018. The utility configure_all.exe now also automatically configures several CSMs delivered with the software (for 32 bit SICD.SIDD.VM sensor models, for 64 bit SICD.SIDD sensor models). This behavior is undesirable for the following reasons: (1) If CSMs were already configured by the user, most likely they are in a different location than the “Imagine native” CSMs. When both are in place, get a Warning window complaining that the &quot;Data directory for CSMs&quot; cannot be set to two locations. (2) ERDAS IMAGINE 2018 displays a Message window recommending that 32 and 64 bit CSM configurations be the same. But this auto CSM configuration does not do this (the VM sensor model is only configured in 32 bit). (3) If the user had already configured SICD and SIDD sensor models, their configuration is overwritten by the &quot;native CSMs&quot;.</td>
</tr>
<tr>
<td>IM-43327</td>
<td>Unnecessary install directories</td>
<td>For some reason there are several new directories included with ERDAS IMAGINE 2018 that weren't there before (and aren't necessary for the software to run)</td>
</tr>
<tr>
<td>IM-48028</td>
<td>The following files don't have a valid signature</td>
<td>The following files that don't have a valid signature, * hdf.dll * mfhdf.dll</td>
</tr>
<tr>
<td>IM-37464</td>
<td>SIX CSM is not automatically configured on startup</td>
<td>SIX CSM is not automatically configured on installation.</td>
</tr>
<tr>
<td>IM-49536</td>
<td>Setup-Manager GUI is messed up on my Virtual Box with German OS</td>
<td>With erDAS IMAGINE 2018 onwards the Setup Manager (installer) the GUI is messed up on machine with a German OS. It seems to have some (unexpected, undesired) links to the right of the tree view where you select the product that are not there on a system with English OS.</td>
</tr>
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### ERDAS ER Mapper

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<tr>
<td>IM-40262</td>
<td>When Big ERS files are compressed in ER Mapper into ECW v3, it outputs into a completely different and bad looking image</td>
<td>Problem replicated with big ERS files, including that of the customer. ER Mapper is actually compressing the big ERS file with an extremely high compression ratio. Actual Compression ratio more than 500, even if the target compression ratio was just 2 or 3. When compressing the ERS file into JPEG 2000 format, the problem does not happen. Also, when using ERDAS IMAGINE ECW Exporter, that problem does not happen for ECW v3. Therefore, the problem seems to be only in ER Mapper ECWv3 exporter.</td>
</tr>
</tbody>
</table>
### ERDAS IMAGINE 2020 Update 1

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</thead>
<tbody>
<tr>
<td>IM-45954</td>
<td>Execution of creating rotated tiff file is terminated. ERDAS ER Mapper 2018 Go to Toolbars &gt; Common Functions &gt; Ortho and Geocoding Wizard. Input file: -Copy file to a new location:.\examples\ermapper\applications\airphoto\1\geocoding\San_Diego_Airphoto_34_rectified.ers and San_Diego_Airphoto_34_rectified. Geocoding type: Rotation Go to Rotation Setup tab, Rotation angle: 45 Go to Rectify Tab specify output file and write to tif. and select Save file and Start Rectification. Observe process is terminated, whereas execution is successful for .ers, ECW</td>
</tr>
<tr>
<td>IM-48647</td>
<td>Regions to Vectors and Vectors to Regions Conversion commands Help are pointing to Raster to Vector conversion Help page 1) Launch ER Mapper &gt; Toolbars &gt; Classification Toolbar 2) Launch Regions to Vector conversion / Vector to Regions conversion command 3) Click on Help button Observe that it navigates to Raster to Vector conversion help page</td>
</tr>
</tbody>
</table>

### PRO600

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</tr>
</thead>
<tbody>
<tr>
<td>IM-46078</td>
<td>CALSPOT not working on PRO600 2018 Installation</td>
<td>The collect calspot command does not seem to work, and the PRO600 Library settings seem to match the help file for calspot.</td>
</tr>
<tr>
<td>IM-46058</td>
<td>PRO600 viewplex fails to load JPG images</td>
<td>* Open a specific blockfile and attach the JPG images associated with it. * Launch Terrain Editor and load the image pair in it. * Notice that the image pair is displayed fine. * Close Terrain Editor and launch PRO600. * After the viewplex is launched, try to load the image pair in the viewplex. Notice that an error pops up and the image pair fails to load. The same images work fine if converted to img. JPG images were able to load in the PRO600 viewplex fine with ERDAS IMAGINE 2013.</td>
</tr>
<tr>
<td>IM-45842</td>
<td>PRODTM hangs for a very long time while trying to measure masspoint manually</td>
<td>In PRO600, while trying to measure the points (mass points) in a grid in PRODTM, using measure tool, PRO600 / PRODTM hangs for a very long time. While working with the customer data, discovered: If import more than 20,000 points (grid 20X20 meter) from the DEM file (IMG format), the PRO600 hangs. For the same data, created a less dense grid (100X100 meter) where less than 5000 points are imported, now the PRO600 / PRODTM works fine.</td>
</tr>
</tbody>
</table>
### Stereo Analyst for ERDAS IMAGINE

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</table>
| Various  | Various issues for Stereo Analyst for ERDAS IMAGINE | Numerous issues have been addressed for the Stereo Analyst for ERDAS IMAGINE product (part of the IMAGINE Expansion Pack module) including the following problems/fixes:  
- Added a new escape event so that parallel lines get stopped (when you press escape)  
- Added escape to save/close buttons (This gets rid of the empty place holders - infinity points)  
- Add a new check for parts (faces) that are elements attached to other elements, check if these are empty  
- Stops crash when using parallel line then quitting.  
- Clicking quickly on the start button should not cause two errors to pop-up  
- After save as, if failure, the user can repair errors  
- Spelling in warning dialogue for large memory use fixed.  
- Add Element should no longer create zero points  
- Changed precision in vertices editor (to 6 decimal points)  
- Export features fixed  
- Added extra verification checks on save to make sure points have at least 1 point, lines have at least 2 and polygons have 3 or more points.  
- Restart application when closing all layers to ensure all memory is reset.  
- Label Added for version number  
- Set read only flag when reading TIL files  
- When escaping the second point of a parallel line, remove all vestiges of the line and set the measured width to 0  
- After escaping or changing feature after using parallel tool, remove the entry in the table  
- If a user deletes the same face (attached element) twice, the software would crash  
- Fixed drop to ground (check for NULL pointer failing)  
- Check parts (tiles) of the file are not only there but can be opened  
- Auto-clean for projects  
- Remove “Infinity Point” generation when user selects to add element, but then does NOT add an element - i.e. escapes or chooses another feature  
- Add new controls for the feature attributes (add standard attributes if preference “Add standard attributes if missing” is turned on)  
- If attributes are added by the system, the user is informed  
- Cleaned up feature import dialogue  
- Cut is properly added to the undo stack  
- Moved the check for existing to the first thing done (can’t check earlier)  
- Reversed the order of deletion so that multiple errors within the same feature can be autocleaned  
- Always clean empty faces (elements) that cannot be deleted from the interface  
- Autoclean added better messages for when an error occurs on save  
- Autoclean working consistently  
- Extra parallel line no longer created when 3D snap is on and parallel lines are being drawn. 3D snap is tested on the first point (not the measured point) if no snap, then behave like normal  
- Redo multiple deletes, no longer crashes  
- Added flags to allow reads while reading (image format inside another format)  
- Changing a vertex enables the save button  
- Enabled delete from table (Right click in ID column delete is enabled)  
- Header drawn correctly when no shapefile available  
- Modified error message for missing vertices  
- Added check for Duplicate Attributes (It was just adding 1 to the last in the list)  
- Select does not cancel current edits |
<p>| | |</p>
<table>
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</table>
|   | • Spelling mistake  
|   | • Added check for calculated box. If out of bounds don't use  
|   | • Fix Undo if no undo to undo  
|   | • Removed Error message when final shape check is done (and fails), only the warning message is now returned, telling the user how to correct.  
|   | • Fix vertex removal issue  
|   | • Fix selection of faces  
|   | • Fix undo selected face  
|   | • Notify user of deletion to the face / element (automated)  
|   | • Update error messages when checking for errors in digitizing  
|   | • Update (and create) function to remove orphan parts of elements  
|   | • Fix issue when the first part of a segment is removed  
|   | • Slight modification to write/check function so that the check is completed on all appropriate layers before any writing  
|   | • Cone fix  
|   | • New preference for Minimum number of vertices (PolyLines and Polygon)  
|   | • Implementation of delay (configurable) before saving  
|   | • Secondary save on save error. (If an error occur when a tempv file is encountered, attempt the save again)  
|   | • Crash on Save fixed (if tempv file error created and user continues)  
|   | • Surface layer feature hang error (again when tempv file has been encountered)  
|   | • Bug when selecting a feature, then dropping the feature to ground and splitting an element group and adding a part/face all at the same time.  
|   | • Parrallel Line fix  
|   | • New Preference to save all layers or just changed layers  
|   | • Only save feature layers that have changed  
|   | • If a rename fails (tempv, temp) when saving shapefile retry up to 3 times with a delay (300ms) between
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