RELEASE GUIDE
ERDAS IMAGINE

May 26, 2016

Contents

ABOUT THIS RELEASE

This document describes the enhancements for ERDAS IMAGINE, 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.

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

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

ERDAS IMAGINE PRODUCT TIERS

ERDAS IMAGINE® performs advanced remote sensing analysis and spatial modeling to create new information. In addition, with ERDAS IMAGINE, you can visualize your 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 also 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, and radar processing, and spatial modeling. Includes ERDAS ER Mapper.

NEW PLATFORMS

WINDOWS 10

ERDAS IMAGINE 2016 has been tested and declared Supported on the Windows 10 Pro (64-bit) operating system.

VIRTUALIZATION

ERDAS IMAGINE has been tested against several such technologies: Microsoft® Application Virtualization 5.0.1104.0 and Citrix XenApp® 6.5 and 7.6. While ERDAS IMAGINE 2016 is supported with Microsoft Application Virtualization, it is considered Viable with XenApp Session Virtualization.

JAVA

In light of many concerns regarding the security implications of installing a Java Runtime, Java (v 1.7.0.80) is now an optional (and turned off by default) feature in the ERDAS IMAGINE install wizard. Java is only required for the workflow of publishing Spatial Models as Web Processing Services (WPS) to an APOLLO Professional server.

NEW TECHNOLOGY

SPATIAL MODELER

One of the key development areas targeted for this release of ERDAS IMAGINE was to continue the development of Spatial Modeler in order to provide ever increasing levels of flexibility for users to implement new geoprocessing algorithms, to customize ERDAS IMAGINE, and to publish new products via Hexagon Geospatial's new cloud-based Smart M.Apps. To this end, over a hundred new or improved operators have been added to Spatial Modeler, along with other improvements aimed at producing a more flexible and fully featured geoprocessing capability that covers not only raster-based functionality, but also point cloud and vector-feature functionality.

FORWARD AND BACKWARD COMPATIBILITY

The standard approach with new versions of a software application is for files to be backward compatible (i.e. the new version of software works with files produced by older versions). Hexagon Geospatial also attempts to make our software products forward compatible if possible (i.e. files produced in new versions of software work in old versions of software). But forward compatibility can never be guaranteed because new software has new capabilities. If you create a model that uses an operator that is not present in older versions of the software - that model will not work in the older software.

With the release of ERDAS IMAGINE 2016 there is so much new functionality in Spatial Modeler (e.g. over a hundred new operators) that models created in ERDAS IMAGINE 2016 cannot work in prior versions. But old models will work in ERDAS IMAGINE 2016 (until you save any edits in 2016 at which point they become v2016 files).

NEW OPERATORS FOR SPATIAL MODELER

Hexagon Geospatial has added over a hundred new operators to Spatial Modeler. This section is an alphabetical listing of the new (or modified) operators with a brief description of their capabilities. Please refer to the ERDAS IMAGINE 2016 Help for full details of each operator, as well as to the Hexagon Geospatial Community / Spatial Recipes page for examples of Spatial Models which use many of these capabilities.

ADD ATTRIBUTE BY ORDER
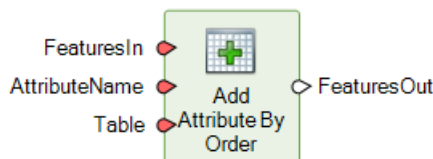
Adds a new attribute field name to the input Features object and populates the new attribute with values from an input table.

ADJUST STATS

If a raster is being stretched through a lookup table (LUT) this operator provides a means to efficiently approximate new statistics for the output raster without having to actually calculate statistics.
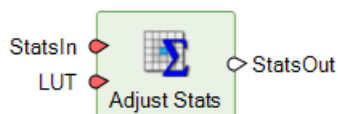
The Adjust Stats operator adjusts the input RasterStats using the input lookup table. The output StatsOut contains the RasterStats after the adjustment. If StatsIn contains the statistics for a Raster, StatsOut will contain approximate statistics for that Raster as mapped through the lookup table using the Direct Lookup operator. Adjusting statistics in this manner is likely more efficient than recomputing statistics with the Statistics operator on the output Raster.

ANOMALY DETECTION
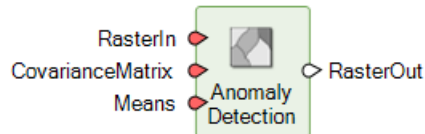
Anomaly Detection is the process of searching an input image to identify pixels that have spectral signatures that deviate markedly from most other pixel spectra in the image (the background spectra). This operator applies Anomaly Detection to RasterIn, which must be multispectral (that is, its band count is larger than 1), and generates a single-band continuous raster where pixels with higher values are considered more anomalous.

AOI INPUT

Enables an AOI (area of interest) to be input to a Spatial Model. This would most frequently be used in conjunction with the Apply AOI operator to mask a raster stream.
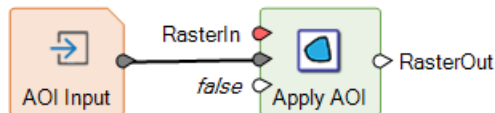
APM PARAMETERS

This operator sets up the parameters needed for Automatic Point Matching (APM). The output from this operator is used as one of the inputs to the Automatic Point Match operator.

APPLY AOI

The Apply AOI operator applies an AOI, or area of interest, to the input Raster. This either includes or excludes the pixels within the AOI, determined by whether the Invert port is set to true or false. Inputs for this operator include a Raster through RasterIn, an AOI through AOI, and a Boolean through Invert. The output is the modified Raster through RasterOut.

APPLY INDEX
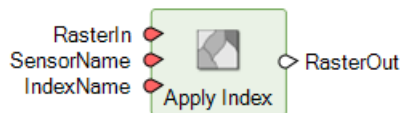
Apply an index (band ratio, or image algebra, operation) to the pixels of a raster. This operator provides easy access to all the standard indices built into ERDAS IMAGINE which are applicable to a given sensor type (based on the wavelengths covered by that sensor).

APPLY MASK
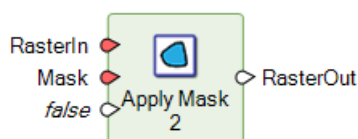
The Apply Mask operator applies a mask Mask to the input raster RasterIn. Based on the pixel values of Mask, and the boolean Invert, output pixels of RasterOut are either the same as RasterIn, or are set to NoData.

ARE DICTIONARIES EQUAL
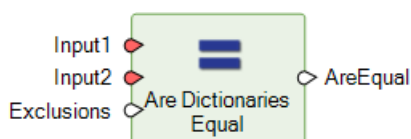
Use the Are Dictionaries Equal operator to compare two Dictionary objects' elements. If all of the elements have the same names and values, true is set on the AreEqual port. If they do not, then false is set on the port.

Dictionaries are a new concept introduced with this version of ERDAS IMAGINE to store and use Name / Value pairs. For example, image metadata is often stored as such Name / Value pairs, such as SPACECRAFT_ID = LANDSAT_8 and SENSOR_ID = OLI_TIRS. Dictionaries can therefore be used to store, use and modify such pairings.

ARE EQUAL
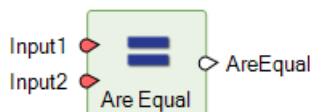
Use the Are Equal operator to determine if two inputs are equivalent, that is, that they share the same value but do not necessarily have the same datatype. The inputs for this operator can be of any datatype except Raster, Vector, Features, Point Cloud, Attribute Table, or Metadata.

ASSOCIATE ELEVATION

The Associate Elevation operator allows you to specify the elevation source for a CoordinateOperation that considers elevation. The output, GeoreferencingOut, is a CoordinateOperation object that includes either a constant elevation or a reference to an elevation (DEM) filename. Associating a DEM with a CoordinateOperation that has a 3D component may improve the accuracy of orthorectification when that CoordinateOperation is used with operators such as Warp and Orthorectify.

ATTACH METADATA
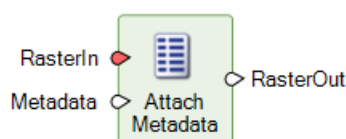
Attaches Metadata to RasterIn. Any existing metadata is replaced. If no Metadata is supplied, RasterOut will have no attached metadata.

Metadata is the details of the data of a Raster. In ERDAS IMAGINE, general metadata can be viewed using the Metadata tool. The metadata in IMAGINE is stored as Metadata data type, which is a specialized Dictionary which handles only metadata.

Spatial Modeler handles all the non-general metadata. When you want to access the general metadata of a Raster in Spatial Modeler, use the Raster Information operator.

ATTACH VERTICAL CRS
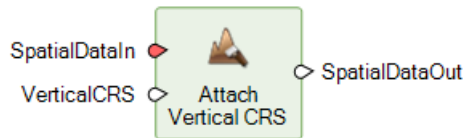
Attaches a Vertical coordinate reference system (CRS) to the input SpatialDataIn. Currently this can be applied to raster or features data types.

VerticalCRS may be a single CoordinateReferenceSystemID, in which case it is attached to the default elevation band (in the case of raster) or the primary geometry field type (in the case of features). It may also be a List containing multiple CoordinateReferenceSystemIDs, in which case the number of elements in the list must be the same as the number of bands, or geometry field types, of SpatialDataIn.

AUTOMATIC POINT MATCH
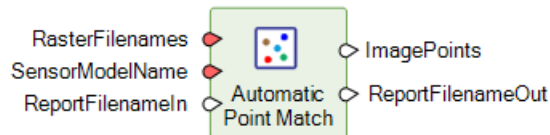
Generates tie points from a list of images that have associated RPC model information. Commonly used to generate tie points to be used in the Data Triangulation operator.

BOOL INPUT
Creates a Bool which can be set to True or False.

BOUNDARY INPUT
Create a boundary consisting of an upper-left x,y, lower-right x,y and a coordinate reference system (CRS). Data passing downstream of this operator will be constrained to the spatial extent and CRS specified (unless acted upon by another operator which manipulates extent and CRS).

CHANGE FROM COHERENCE
This operator detects changes between the images in a SAR image pair by identifying anomalous pixels in a coherence image derived from the pair.
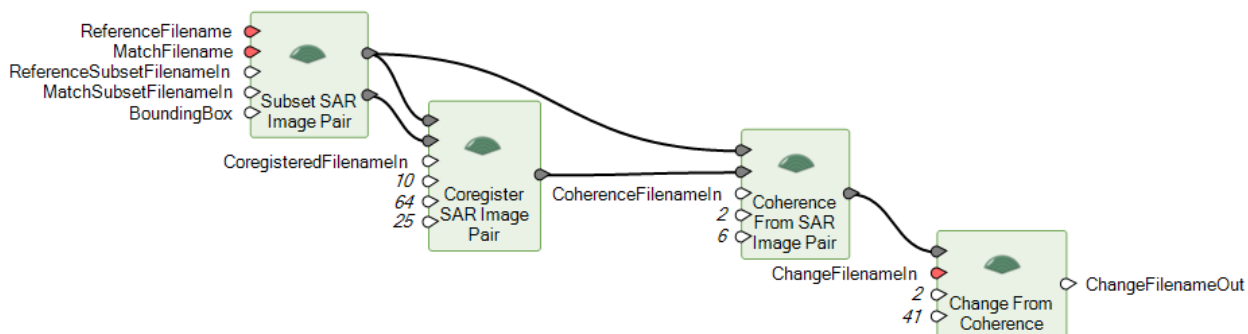
CHIP TO NITF
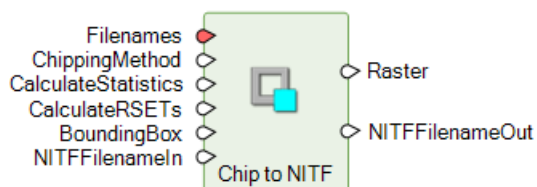
Chips and cores input imagery and graphic overlays into a NITF file.

CLASS NAME TO PIXEL VALUES
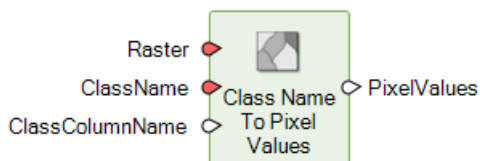
Given a known Class Name, this operator returns the pixel value (DN) of that class name in a given thematic raster image.

COHERENCE FROM SAR IMAGE PAIR

This operator generates a coherence image from a co-registered SAR image pair (see Change from Coherence above)

COLOR RAMP INPUT
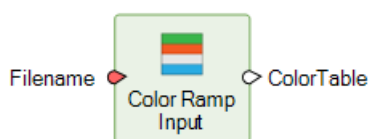
Reads a color ramp from a LUT file and outputs a Color Table.

COMPUTE AFFINE APPROXIMATION

This operator computes an affine approximation between ground space and image space.
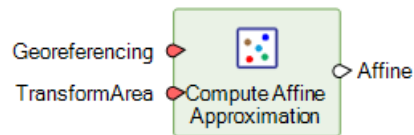
The affine transformation will be based on all the vertices of the features or four corners of the boundary specified in TransformArea. The TransformArea can be either in ground space or in image space. if a point is in image space, then a ground space point will be computed using the specified Georeferencing; if a point is in ground space, then an image space point will be computed using the specified Georeferencing. With all the vertices having both image space points and their corresponding ground space points, a 6 parameter affine approximation will be calculated for converting ground space coordinates to image space coordinates.

COMPUTE TRANSFORM
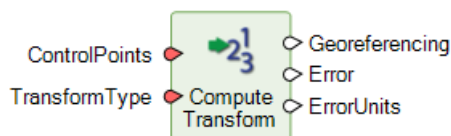
This operator takes control points and their measurements in an image and creates a transform from the image coordinate system to the control point coordinate system.

CONVERT

Converts the data on the **Input** port to the specified **DataType.**
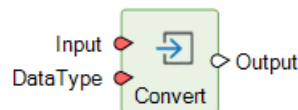
CONVERT RASTER TYPE
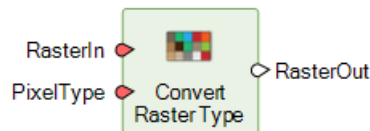
Converts a raster to the specified pixel type. The pixel type of **RasterOut** will be set to **PixelType.** Any pixel values of the input raster that fall outside of the valid range of the specified output **PixelType** will be clipped to the valid range.

CONVERT TO FEATURES
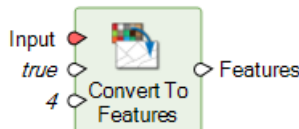
The modern equivalent of "Raster to Vector". Takes as **Input** a thematic raster and converts contiguous groupings of classes (pixels with the same thematic value) to create geometry based **Features.** The **isClumped** flag determines if the operator needs to clump the **Input** thematic raster prior to converting to **Features.** Attribute fields are copied from the input raster to the output features.

CONVERT TO RASTER
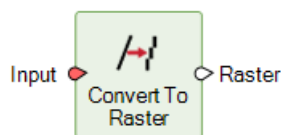
The modern equivalent of "Vector to Raster". Reads input features or an AOI, converts to raster, and returns raster data. If the input is features, an attribute of the features can be selected to be used for the output raster value.

COORDINATE TRANSFORMATION
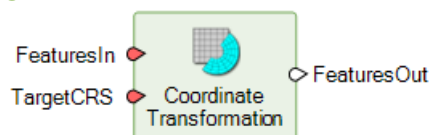
Transforms the specified geometry field(s) of the input features to the specified target coordinate system. It supports 3D coordinate transformation.

COORDINATEREFERENCESYSTEMID INPUT
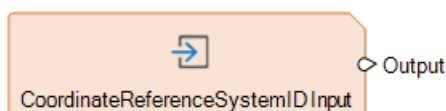
Creates a CoordinateReferenceSystemID. Double-click the operator to open its configuration dialog.

COPY FILE TO DIRECTORY
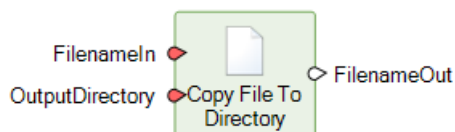
The **Copy File To Directory** operator copies the input file and all its subfolders to the specified **Directory.** All of the input **File's** attributes are copied and remain the same on the copied version of the file. However, associated auxiliary files are not copied. If the specified **Directory** on the **OuputDirectory** port does not exist, the operator will create the **Directory.**

COREGISTER SAR IMAGE PAIR
This operator co-registers an interferometric image pair. See Change from Coherence above.

CREATE COLOR RAMP
This operator generates a color ramp with **NumLevels** colors for a particular raster dataset. The output is a color **Table** whose size is determined by **NumBins** or by a **Histogram** (or **RasterStats**).
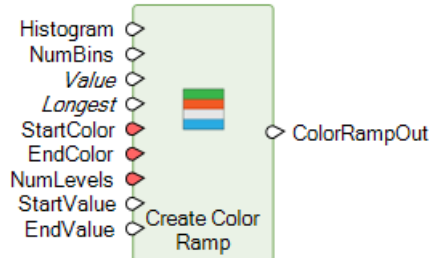
The operator also supports the use of absolute data start and end values to be associated with the start and end colors, thereby providing a means to create color ramped raster data which is standardised across different datasets.

CREATE GEOSPATIAL PDF
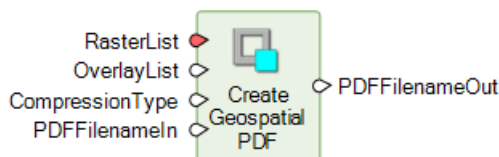
Creates a Geospatial PDF file from input imagery and vector overlays. The resulting Geospatial PDF will retain the inputs as separate layers in the PDF file, enabling control over whether they are displayed or hidden when displayed in a PDF Reader.

CREATE MAP COMPOSITION
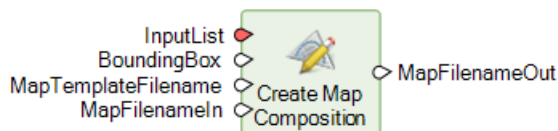
Creates a map composition for multiple raster inputs and graphic overlay files. Optionally a Map Template can be used to control the size and layout of the map composition that is created.

CREATE RSETS
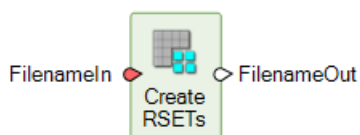
The **Create RSETs** operator computes **NITF RSETs**, or NITF-style reduced resolution set, for any image type. The input for this operator is an image type through **FilenameIn.** The output are **RSETs,** R1, R2, R3, and so forth, depending on the size of the input.

CREATE TEMP FILENAME
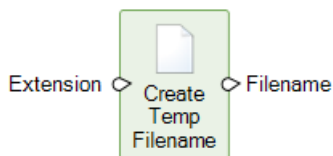
The **Create Temp Filename** operator creates a name for a temporary file in the containing Model's temporary directory. The output **Filename** can be used as a **File** throughout the Model. Once the Model is finished running, or is destroyed, the temporary file is automatically deleted.

DATA INPUT
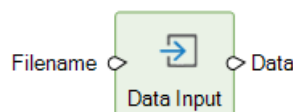
Use the **Data Input** operator to take in any JSON (JavaScript Object Notation) text file of a single element and output that element for use in the Spatial Model Editor. This operator can take in one element of a persistable data type at a time.

DATA OUTPUT
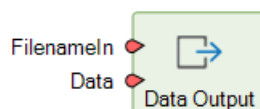
Use the **Data Output** operator to save data from the Spatial Modeler to a text file in JSON (JavaScript Object Notation) format. The **FilenameIn** port takes in the location and filename to use for the output. By default, this operator saves the output as a *.json* file.

DATA TRIANGULATION
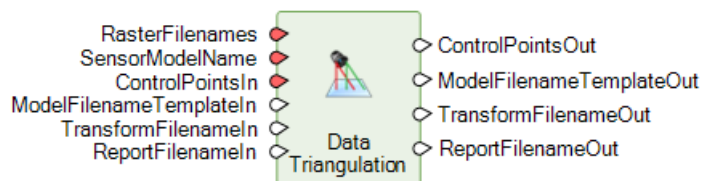
Performs triangulation of RPC models using a polynomial-based refinement method based on the input control points. The output includes the adjusted model parameters, model transforms and triangulated points whose ground coordinates are defined in the Geographic (Lat/Lon) coordinate system using WGS 84 as the horizontal and vertical datum, degrees as the horizontal units, and meters as the vertical units. This operator supports only those RPC models with the coordinate reference system defined in Geographic (Lat/Lon) using WGS 84 as the horizontal and vertical datum, degrees as the horizontal units, and meters as the vertical units.

DATETIME INPUT
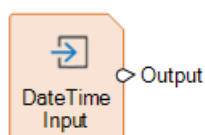
Creates a DateTime. Double-click the operator to open its configuration dialog. The Enter Date, Time and Time Zone dialog opens.
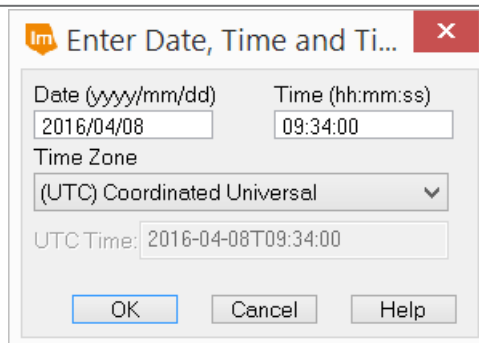
DEFINE PROCESSING AREA
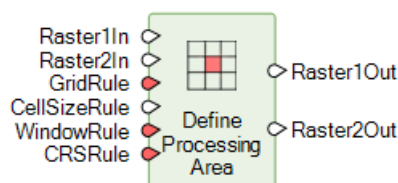
Defines the Processing Area for raster processing, including the characteristics of the area such as extent, projected coordinate system, pixel size, etc.

Double-click the operator to bring up the Define Processing Area dialog to set options. Input port visibility and requirements are highly interdependent, so it is much easier to use the dialog to set options rather than setting options from the Properties pane. Clicking **OK** from the dialog will set values on input ports, and show or hide ports depending on the options selected. Input ports may be connected afterward if necessary.

This operator replaces much of the functionality of the Processing Properties dialog, which has been deprecated. Any model created in earlier version of Spatial Modeler or Legacy Spatial Modeler that has Processing Properties defined will use the options set there until they are cleared. Options set in the **Define Processing Area** operator will not be used until the existing options defined in Processing Properties are deactivated by clicking the **Clear** button in the **Processing Properties** dialog.

Replacing the global Processing Properties dialog with an operator provides far greater flexibility in controlling the behaviour of a Spatial Model. A simple example would be a model with three input rasters where you wish to initially process the Union extent of two of the inputs and then use the Intersection of the results and the third input for the remainder of the model. This would have been impossible previously.

DELETE DIRECTORY
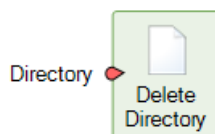
The **Delete Directory** operator deletes the input **Directory** and all of its contents.

DENSITY INTERPOLATION
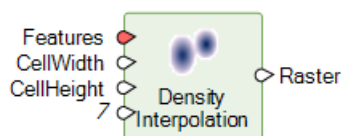
Kernel density estimation is used to identify the probability of density using seemingly random locations. Specifically, this operator can be used to extract areas where the concentration of locations/events/incidents are particularly high and thereby delineate clusters or hot areas. Input into this operator could include, for example, Epidemiological events (pandemic locations), Law Enforcement events (crime locations), Utility events (outage locations), or Transportation events (accident locations). The output of this operator is a single layer raster containing a statistical surface that represents density values. This output is a visually attractive surface and helps to invoke further investigation and exploration of the reasons behind why incidents are concentrated in some areas. The resulting values of the density map are expressed as units of density.

DICTIONARY
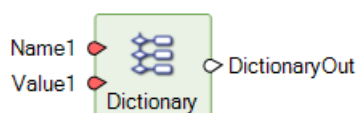
The **Dictionary** operator creates a **Dictionary** using the inputted names and data. The **Name**N port takes in a String, and the **Value**N port takes in data of any kind.

DICTIONARY ITEM
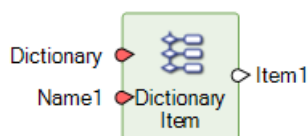
The **Dictionary Item** operator references the item or items with the specified name or names from a **Dictionary**. The **Dictionary** port takes in a Dictionary item, and the **Name1** port takes in a String, which is used to search for the item with the matching name in the **Dictionary**.

DIRECTORY INPUT
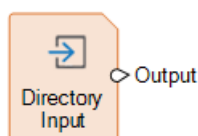
Creates an instance of the Directory data type. This does not create a directory in a file system, but rather it creates an object containing a directory path which can be passed to another operator which expects a Directory as input, such as **Multi Filename Input**.

DOUBLE INPUT
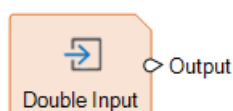
Creates a Double (64-bit floating point number).

DRA STRETCH

One of several new operators added in order to support Softcopy Image Processing Standard (SIPS) image processing chains. Use the **DRA Stretch** operator to apply a Dynamic Range Adjustment (DRA) stretch to the input **Raster**. A DRA is a linear remapping of the pixel data of a **Raster** that results in a change in the image's contrast and brightness. The **DRA Stretch** operator uses a scale (the input from the **Multiplier** port) and an offset (the input from the **Subtractor** port) to remap the pixel data. This adjustment is done for each band of the **Raster** independently of each other.

ELEVATION TRANSFORM

This operator transforms the height (z) values of a raster elevation band from one vertical coordinate system to another.

ENUMERATE CLASS NAMES
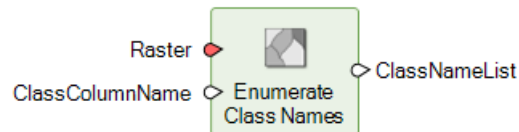
Gets the non-empty thematic class names from a thematic raster image. This operator looks for an attribute field with the name specified on the **ClassColumnName** port to get the names. If the named attribute field does not exist, the operator returns class names in the format Class_<N> for each histogram value. Any classes / pixel values with zeroes in the histogram are omitted.

ENUMERATE SIGNATURES
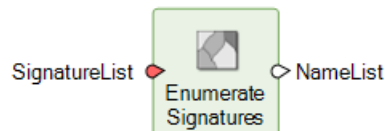
Generates a list of the names of the signatures stored in a **SignatureList** that is generated by a Signature Input operator.

EXAMINE CRS ID
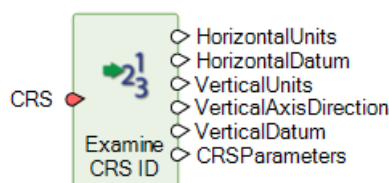
This operator exposes a useful subset of the parameters that define the coordinate reference system that is identified by the CoordinateReferenceSystemID on the CRS input port. A few of the most commonly accessed parameters are exposed as directly-accessible, string-valued output ports. The full set of CRS defining parameters are placed into a Dictionary-valued output port (CRSParameters).

EXPAND ENV VARS
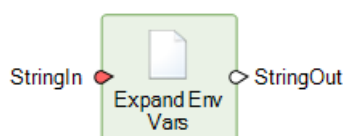
The **Expand Env Vars** (Expand Environment Variables) operator returns the full string, or list of strings, of the designated environment variable. The variable can be from the System, User, or ERDAS IMAGINE environments.

FEATURES DATABASE OUTPUT
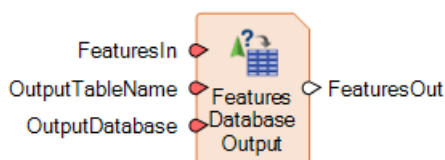
Writes features data to a database. **OutputTableName** is the name of the new Feature in the database.

FILE INPUT
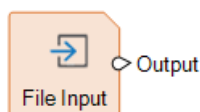
Creates an instance of the File data type, which holds a filename. Double-click the operator to open a File Input File Selector

FROM STRING
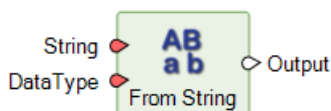
The **From String** operator converts the input **String** to a specified data type, designated by the **DataType** port. For exmple, this can be very useful if reading a string value from a Dictionary and needing to convert that to an Integer, or other numeric value, to use elsewhere in a model.

GENERATE CONTOURS
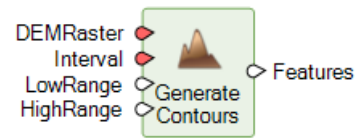
Generates a set of contour features from a digital elevation model raster.
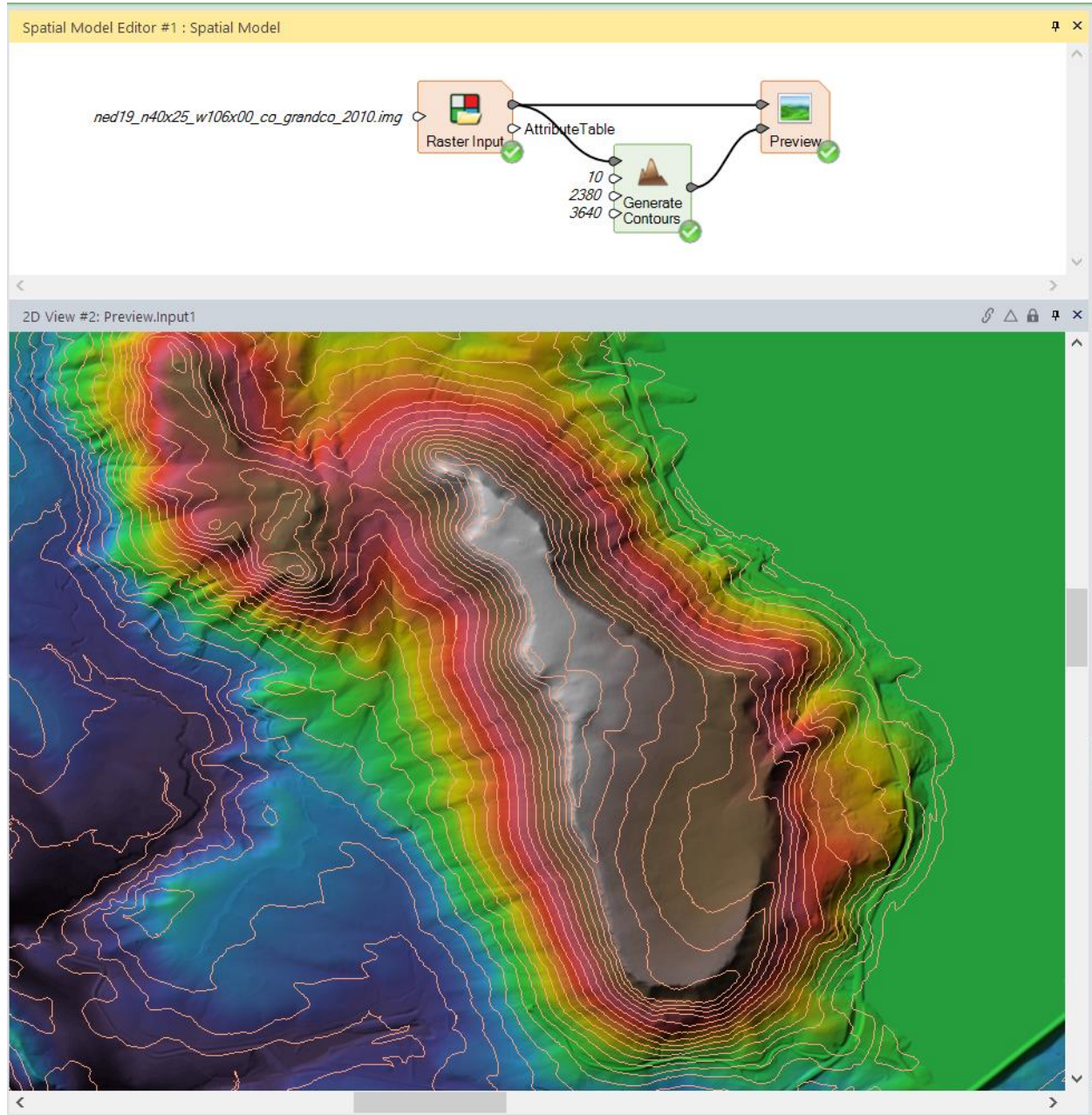
GENERATE EPIPOLAR PAIR
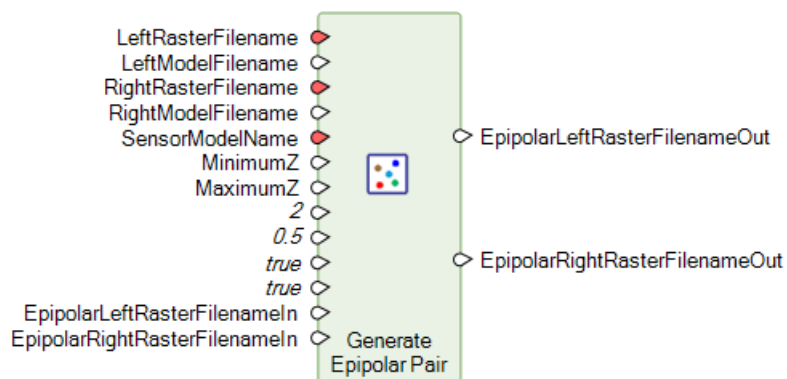
This operator generates an epipolar resampled image pair from a stereo pair of images. The operation will fail if the computation exceeds either YParallaxThreshold or RPCResidualThreshold.

GENERATE SHADING
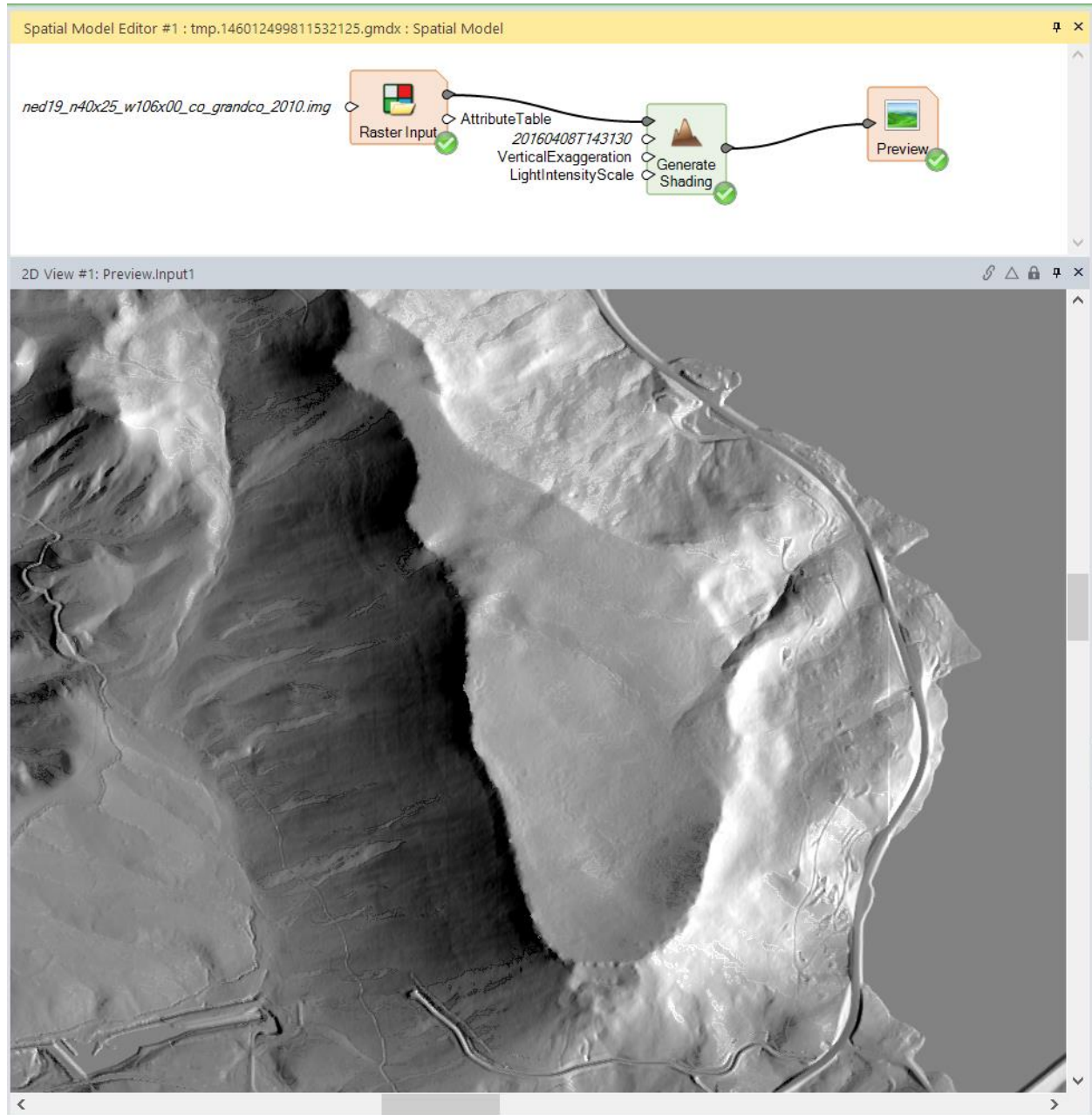
Generate Shading operator provides the capability to create shaded relief given a specified date/time and an input digital elevation model raster. Illumination can be from the Sun or Moon. It also has the option to include shadows in the processing.

Unlike the simple Relief operator, the output raster from Generate Shading is in units of irradiance (Watts per square meter) at the specified point in time for the given time zone.

GENERATE SURFACE
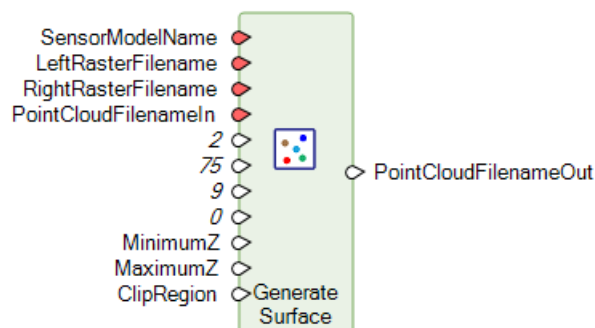
This operator extracts terrain from a stereo image pair. The operation will raise an error if no points can be generated for the output given the input parameters.

GET ACTUAL BITS PER PIXEL
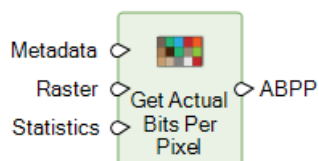
Use the **Get Actual Bits Per Pixel** operator to determine the ABPP (Actual Bits Per Pixel) required to hold the range of data of the pixels in the **Raster**. ABPP is distinct from the Number of Bits Per Pixel (NBPP), the bits used to store the data.

For example, most commercial satellite imagery is delivered in a 16-bit integer image data type (NBPP = 16), but the actual dynamic range of the sensor is constrained to a range of 0 to 2047, an 11-bit range (ABPP = 11). This distinction can be very useful when determining how to stretch data as part of a model.

GET BASENAME
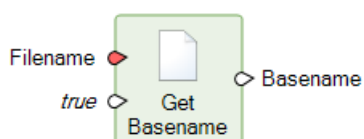
Use the **Get Basename** operator to get the basename, or root filename. This operator can be used with just the filename or with the entire path. You can choose to include or exclude the extension of the file with the **RemoveExtension** port.

As part of a model you can use this operator to, for example, identify other ancillary metadata files which share the root filename of an input raster.

GET CONTAINING DIRECTORY
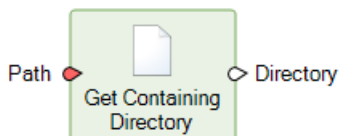
Gets the containing directory of a file or directory. This can have similar utility as Get Basename above.

GET DEFAULT BAND SELECTION
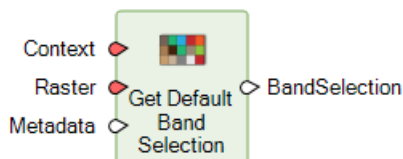
Use the **Get Default Band Selection** operator to find the default band combination to use for visualization of the input **Raster**. The default band combination is derived either from the **Metadata** provided or from preferences. The input for the **Context** port indicates what type of visualization the output is needed for. For the **Context** port, you can choose from **Multispectral, Panchromatic, Thematic**, or **Relief**. If the **Context** is **Multispectral,** the output will have 3 bands in the order Red, Green, Blue. If the **Context** is **Panchromatic, Thematic**, or **Relief**, the output will have 1 band.

GET DRA PARAMS
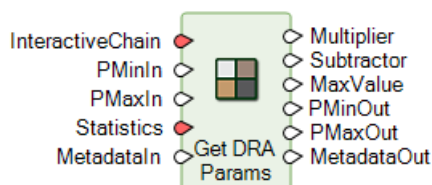
Dynamic Range Adjustment (DRA) is a technique used to perform tonal processing of raw image data, mapping it from the dynamic range of the sensor to that of a well-defined metric. Once mapped, standardized enhancement processing can then be applied. The DRA algorithm permits the adjustment and optimization of an image's dynamic range so that the maximum amount of information can be obtained from all portions of the tonal range. The algorithm will clip information beyond the desired range. DRA is usually applied to only a single band of data, but can also be applied to multispectral data on a band by band basis, although it is recommended to use a band-dependent (color preserving) technique, such as is provided by the Multispectral DRA Stretch operator, for multispectral data. Use the Get DRA Params operator to acquire the necessary inputs to use with the DRA Stretch operator.

GET GEOMETRIC MODEL INFO
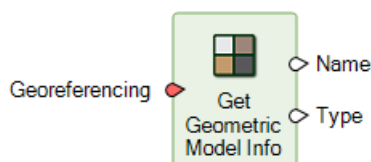
Returns information about the geometric model associated with an image or a coordinate referencing operation.

GET INDEX FOR CLASS NAME
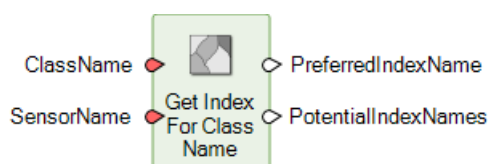
Determines the index (band ratio) appropriate for identifying pixels of a specified class (such as vegetation or water).

GET INTERACTIVE CHAIN
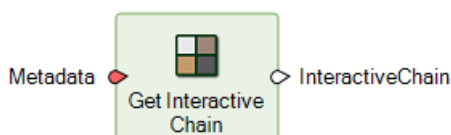
Use the **Get Interactive Chain** operator to determine the required input for the operators: **Get TTC, Get MTFC,** and **DRA Selector**.

The output SIPS **InteractiveChain** string provides an indicator of what default parameters (usually based on a determination of what sensor captured the image) should be used for further processing of the image in association with use of the operators listed above. The output for the **Get Interactive Chain** operator is based on the Metadata of the input Raster.

GET MTFC
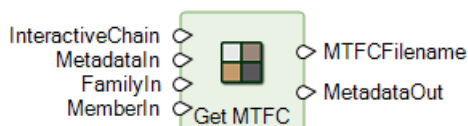
The **Get MTFC** operator identifies a default MTFC (Modulation Transfer Function Compensation) convolution kernel file (.ker) from a database of possible such kernel files, based on input values. The MTFC kernel files are formatted in the NGA Softcopy Image Processing Standard (SIPS) kernel format and a database of such files is provided in <IMAGINE_HOME>\etc\ sips\mtfc. You can configure alternative databases of kernel files using a Preference. Convolution kernels are used to calculate a weighted average of the value of each pixel with the values of the surrounding pixels and the MTFC kernels are specifically used to sharpen image detail in this manner.

GET SIGNATURE
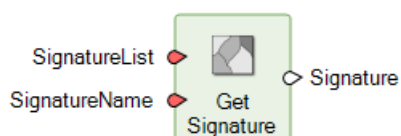
Gets a signature from a signature list by its name. A signature is a set of data that defines a training sample, feature space object, or cluster. The signature is used in the classification process. Each classification decision rule (algorithm) requires some signature attributes as input. These are stored in the signature file.

GET TTC
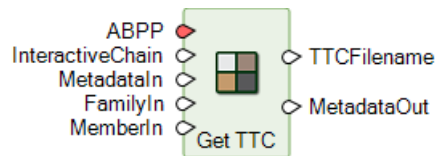
The **Get TTC** operator identifies the correct default TTC (Tonal Transfer Curve) lookup table (LUT) from a database of possible such lookup table files, based on the input values. The TTC lookup files are formatted in the NGA Softcopy Image Processing Standard (SIPS) LUT format and a database of such files is provided in <IMAGINE_HOME>\etc\sips\ttc. Configure alternative databases of LUT files using a Preference. The purpose of these TTC LUTs is to enable the mapping of input raster values to new values based on the LUT curve shape you want.

GROUND TO IMAGE
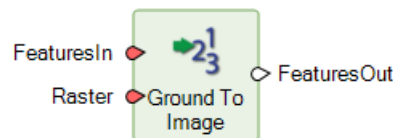
Applies Ground / Map Space to Image Space transformation on a list of coordinates specified in port FeaturesIn using the Geometric Model of the raster image specified in port Raster. If the geometric model is 3D (that is, the elevation value is used in the model), you can provide an elevation file (using port ElevationFilename) or constant elevation value (using port ConstantElevation) and elevation units (using port ElevationUnits) to the operator to replace the model's original elevation file or constant elevation value.

IMAGE PAIR
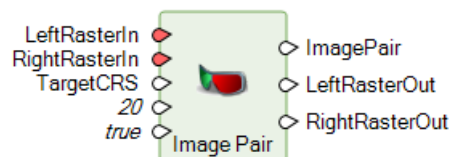
This operator creates an image pair from two overlapping rasters that have embedded 3D sensor models. It compares two rasters. If the overlap between them is greater than the minimum specified, computes key image pair information such as the initial ground point, left and right map footprints, overlap boundary and overlap percentage. This operator requires both raster inputs to have been calibrated with 3D sensor models.

IMAGE PAIR INFORMATION
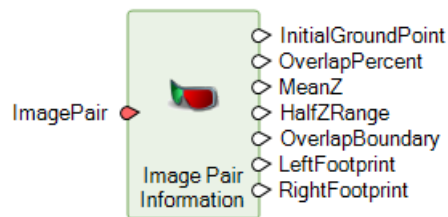
This operator provides access to the properties of an ImagePair object.

IMAGE PAIR TO GROUND
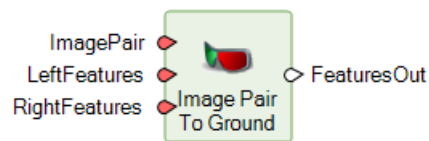
This operator applies Image Space to 3D Ground/Map Space transformation on a pair of Features representing coordinates specified in left and right image space using the geometric models of the image pair specified in port ImagePair. The results are the 3D ground coordinates. Note that attributes belonging to the Features connected to port LeftFeatures are transferred to output FeaturesOut.

IMAGE TITLE

Uses the **Metadata** from a dataset to construct a title string that can be used to properly label a view of a dataset. If the required metadata is not present, the resulting **Title** is just the base dataset reference.

IMAGE TO GROUND
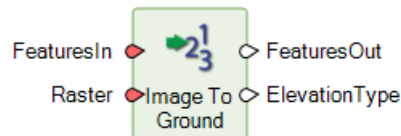
Applies an Image Space to Ground / Map Space transformation on a list of coordinates specified in port **FeaturesIn** using the Geometric Model of the raster image specified in port **Raster**. If the geometric model is 3D (that is, elevation value is used in the model), you can provide an elevation file (using port **ElevationFilename**) or constant elevation value (using port **ConstantElevation**) and elevation units (using port **ElevationUnits**) to the operator to replace the model's original elevation file or constant elevation value.

IMAGINE SIGNATURE INFORMATION
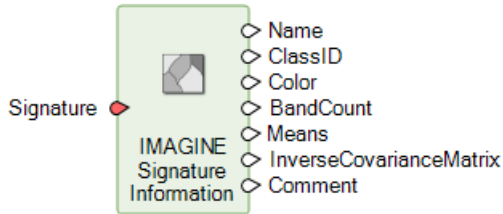
Extracts the signature parameters from a signature. These include items describing the signature as well as how the signature was created. A signature is a set of data that defines a training sample, feature space object, or cluster. The signature is used in the classification process. Each classification decision rule (algorithm) requires some signature attributes as input. These are stored in the signature file.

INT INPUT
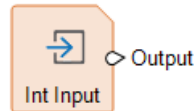
Creates an Int (signed integer). Double-click the operator to open its configuration dialog. The Int Input dialog opens.

ITERATOR
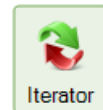
The **Iterator** operator takes the items off of a **List** and puts each one through a sub-model the user builds inside the operator. This is done for each item in the **List** once.

For example, in this spatial model
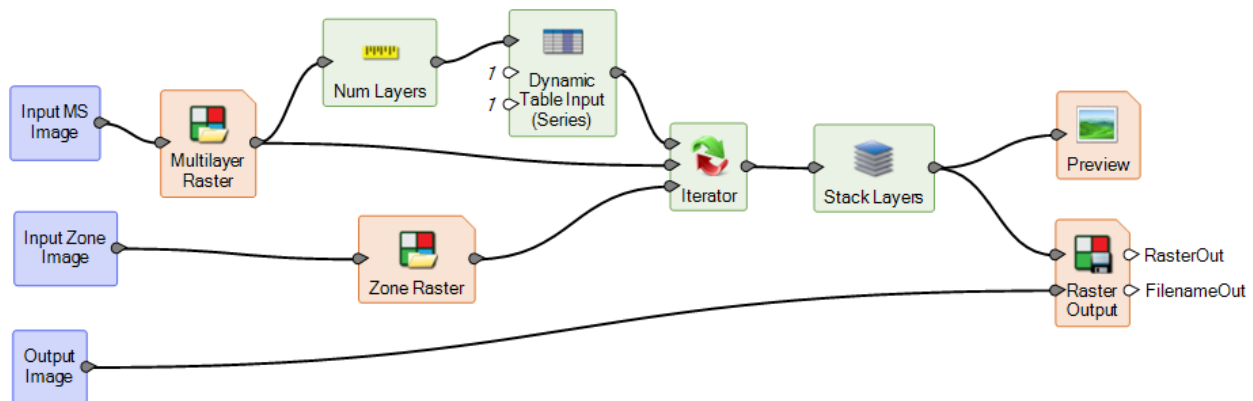
...the Iterator applies the following sub-model
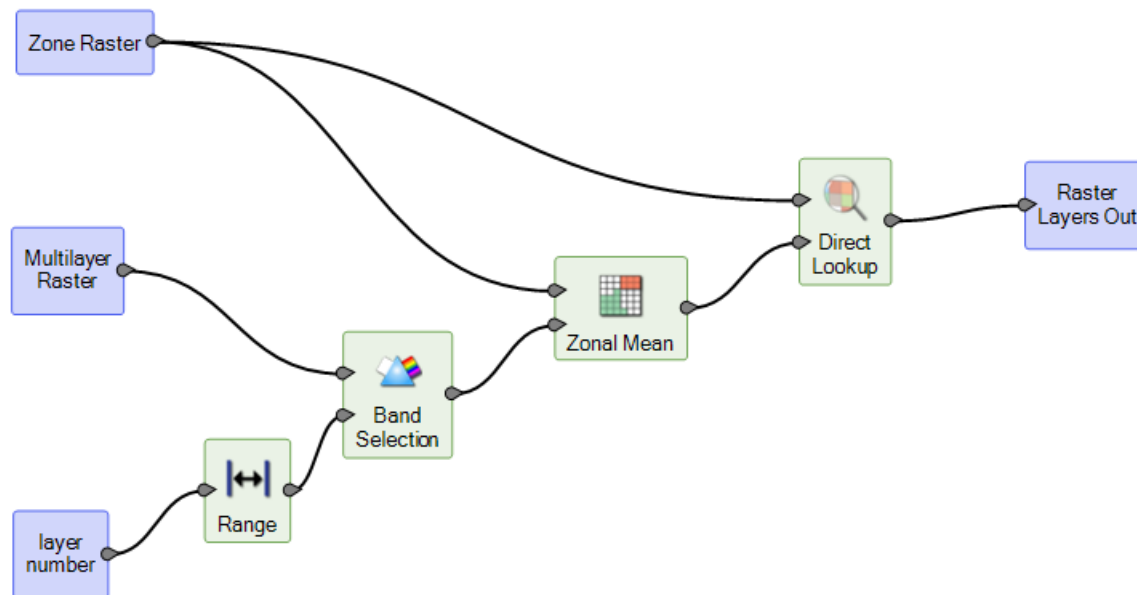
…so that, no matter how many bands the Input MS Image has, the Zonal Mean operation (which only accepts a single band input) is applied to each band.

LINE OF SIGHT
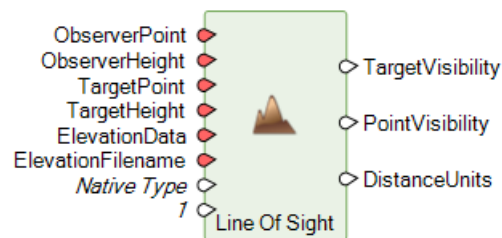
Calculates the visibility along a line between an observer point and a target point with associated elevations above ground level using elevation data. It will also return a flag indicating whether or not the target point is visible from the observer point.

LIST
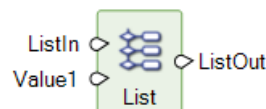
The List operator takes in *n* items and either adds them onto an existing List or creates a new List of those items. The Value ports can be added or removed down to one Value port.

MEASURE ANGLE
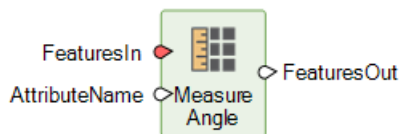
Computes the angle between two line segments from a feature. The input FeatureIn can be of any type but the operator will only produce a non-NULL result for a polyline with at least three vertices. The coordinates of the first three vertices are used to define two line segments with a common coordinate and the angle between the segments is computed and written to the attribute provided by the AttributeName port.

MEASURE AREA
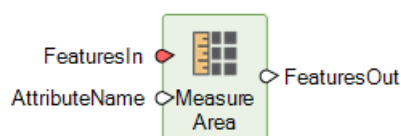
This operator computes the area for each polygon in the input Features. The area of each applicable feature of the input Features is calculated and stored in a column of the output Features. The value placed into each field will be the calculated value of the area in the horizontal units of the input Features CRS unless it is geographic in which case it will be in meters.

MEASURE AZIMUTH
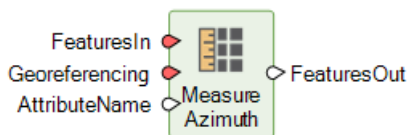
Computes the Azimuth (in degrees) of a line segment defined by two points.

Azimuth is computed from first to second point and written to the attribute specified by **AttributeName** port. Azimuth ranges from 0 to 360 degrees and starts from North as 0 increasing clockwise (East - 90^0, South - 180^0, West - 270^0).

Use the **FeaturesIn** port to specify the feature for which Azimuth will be computed for. The **FeaturesIn** port accepts any type of feature either in an image coordinate system or ground coordinate system.

The operator will return NULL if the input feature is not a polyline. For a polyline feature, the first two points of the polyline are used to calculate the azimuth.

MEASURE CENTER
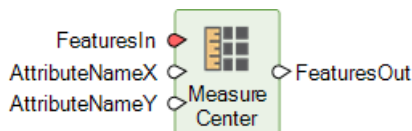
This operator computes the center of each of the features and stores it in an attribute column.

MEASURE FITTED ELLIPSE
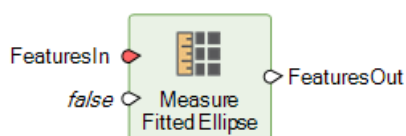
Computes the parameters of an ellipse for each of the input features and stores them as attributes. This capability is frequently used to generalize and highlight features which have been automatically extracted from imagery.

Parameters of an ellipse are calculated and stored in attribute columns of the output Features. Parameters include the ellipse's center point, major and minor axis lengths, major axis orientation in the form of bearing (0 degrees aligned with +Y (or North) axis with +rotation = clockwise), perimeter, and area in the horizontal units of the input Features CRS. If the CRS is geographic, meters will be used for the major axis, minor axis, and perimeter; and square meters for the area. The computation can be constrained to fit a circle (a special case of an ellipse where the major and minor axis are equal and the orientation = 0) via setting an input flag

MEASURE FITTED RECTANGLE
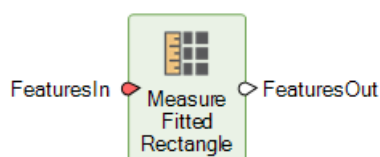
Computes the parameters (center, size, orientation, and area) of the best fit rectangle for the geometry interpretation of each input feature, saving the results in attribute columns of the output features.

Parameters of the best fit bounding rectangle of each input feature are calculated and stored in attribute columns of the output Features. Input should be 2 or more points nominally located on the sides of the desired rectangle. The computed parameters, center point, length (long side), width, axis orientation in the form of bearing of the long side (0 degrees aligned with +Y (or North) axis with +rotation = clockwise), perimeter, and area in the horizontal units of the input Features CRS are added as attributes to the output Features.

MEASURE GRID NORTH ANGLE
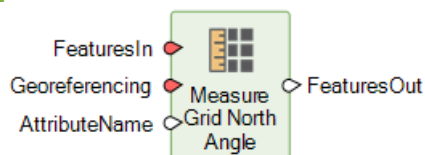
This operator computes the angle to the grid North direction at a point in an image.

MEASURE HEIGHT FROM RELIEF
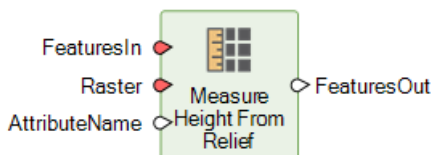
This operator computes the height of a point based on image displacement.

The first two points of each feature in the given Features are taken to be a point on the ground in the image and a point directly above that. For example, the lower and upper corner along the edge of a building. Using the assumption of common ground X and Y the sensor model associated with the given raster is used to compute the height needed to cause the measured displacement.

MEASURE LAYOVER ANGLE
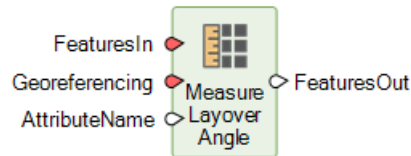
This operator computes the angle to the direction of the height displacement at a point in an image.

MEASURE LENGTH
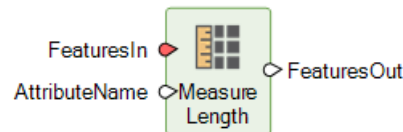
This operator computes the length of each of the features and stores it in an attribute column.

MEASURE PERIMETER
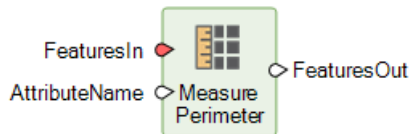
This operator computes the perimeter of each of the features and stores it in an attribute column.

MEASURE POLYGON
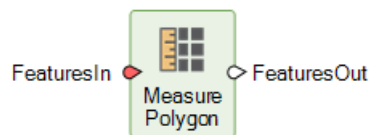
Computes the parameters of a polygon for each of the features and stores them as attributes. Parameters include the polygon's centroid, perimeter, and area in the horizontal units of the input Features CRS.

MEASURE TRUE NORTH ANGLE
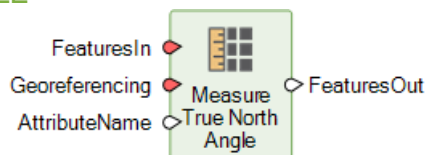
This operator computes the angle to the true North direction at a point in an image.

MERGE FEATURES
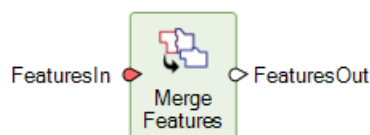
Merges the touching geometries of input features (i.e. dissolves any shared boundaries). There is a logical "and" between the attribute fields on which the merging is to occur. In other words, for two features to be merged, they must "match" on all fields. The Spatial Relation "touch" is used for merging the geometries.

MODIFY DICTIONARY ITEM
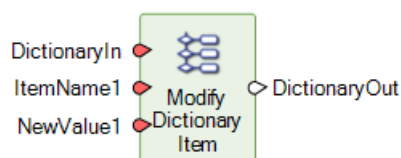
The Modify Dictionary Item operator modifies value(s) of requested dictionary item(s) from the specified Dictionary object. The original DictionaryIn is not modified. Instead, this operator creates a clone of the original DictionaryIn and the modification is made to the clone. The output DictionaryOut is the modified Dictionary clone.

MULTI FILENAME INPUT
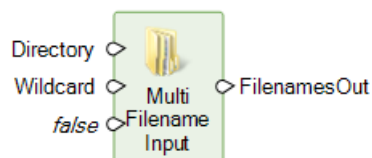
The Multi Filename Input operator outputs a List of file names specified either by a single Directory and a Wildcard (a String), an input List of filenames, or both. Supported wildcard characters are the standard Windows wildcards "*" and "?". For example, the wildcard string "w*.img" would put all the files that start with a "w" and have the extension "img" into the output list.

MULTISPECTRAL DRA STRETCH
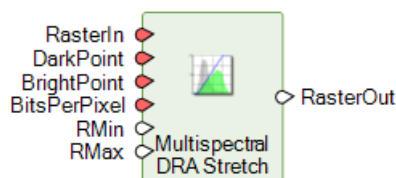
Use the **Multispectral DRA Stretch** operator to apply a band-dependent Dynamic Range Adjustment (DRA) stretch for a multispectral **Raster** based on the inputs from the **DarkPoint** and **BrightPoint** ports. A DRA is a linear remapping of the pixel data of a **Raster** that results in a change in the image's contrast and brightness. The band-dependent nature of this algorithm means that it is a color-preserving technique (the relative positions of the band histograms remain similar). For non-multispectral images, use the DRA Stretch operator.

NTH ITEM
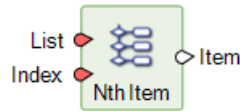
The Nth Item operator references a single item from a list, by index number.

NUM ITEMS
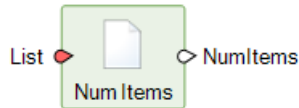
Use the Num Items operator to find how many items you have in the input List.

ORTHO ERROR
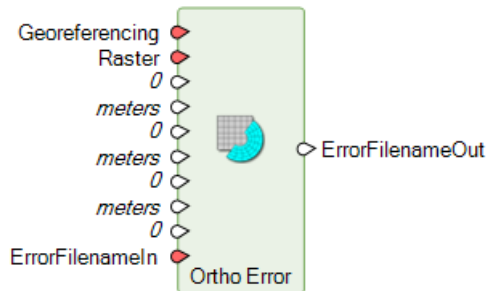
The Ortho Error operator computes how accurate the orthorectification of the input Raster will be based on the input coordinate operation, information used to transform points from one CRS (Coordinate Reference System) to another. The results are placed in the file named on the ErrorFilenameIn port. This operator uses CE90 (Circular Error at 90% confidence) and RMSE (Root Mean Square Error) to determine how accurate the orthorectifcation is in comparison to how accurate it was expected to be.

ORTHORECTIFY
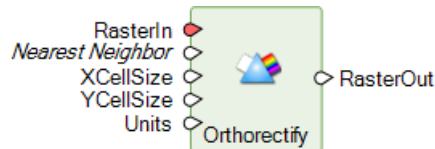
The Orthorectify operator maintains an image's cardinal orientation while aligning the pixels based on the coordinated reference system (CRS) of the input Raster. The ports XCellSize and YCellSize determine the size of the output grid of the image. If left blank, the output grid will be the same size as the input grid.

PATH EXISTS
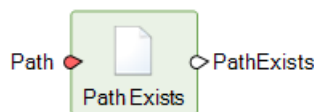
The Path Exists operator determines if the input filename or directory exists or not. If it does, then a Boolean of true is set on the PathExists port. If not, then false is set on the port instead.

PROFILE
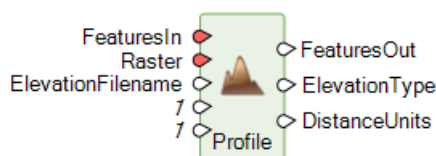
Creates a set of points that represent a terrain profile along a feature such as a line or polygon for a given DEM. Each point has attributes representing the slope, distance in 2D, and distance in 3D, calculated from the previous point (ordered by the "ID" attribute).

REGULAR EXPRESSION SEARCH
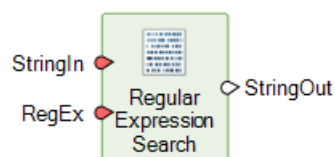
The Regular Expression Search operator searches using a String for a regular expression match. It uses the Boost regex Library's Perl regular expression syntax for the regular expressions in StringIn.

REMOVE ELEVATION SPIKES

This operator detects and removes spikes/sinks in a raster terrain dataset. Spike/sink removal is performed by computing neighborhood statistics and detecting large deviations of the center pixel from the neighborhood robust value span. Pixel values that are detected as a spike/sink are replaced with values that are computed from the surrounding pixels by using a DCT (discrete cosine transform) based algorithm.

REMOVE EMPTY ITEMS
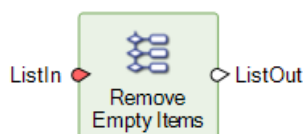
The Remove Empty Items operator removes all NULL, or empty, items from the input List. The resulting List is set on the ListOut port. If the operator does remove any items, the size of the output List will be different than the input List.

RENDER MAP COMPOSITION
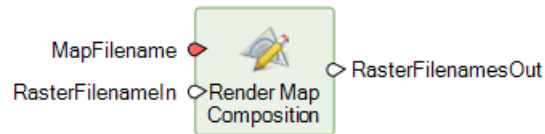
Creates a raster dataset from a map composition (.map) file.

REQUIRE CONDITION
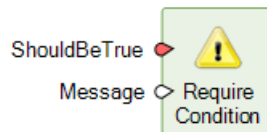
The Require Condition operator determines if a set condition is met. If the condition is not met, the execution fails and a failure message is given.

RPC GENERATOR
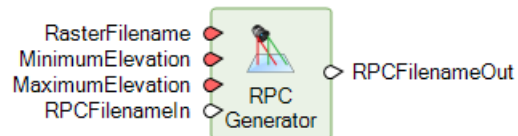
Use the RPC Generator operator to generate the parameters for a Rational Polynomial Coefficient (RPC) model based on the input Raster file. An RPC model is a ground-to-image model which is used during photogrammetry processing.

SET TERRAIN HEIGHT
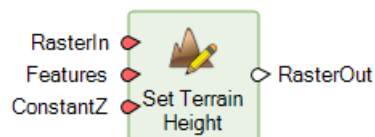
This operator applies a constant Z value to selected areas of a raster terrain. The areas to be affected are selected by supplying features.

SIGNATURE INPUT
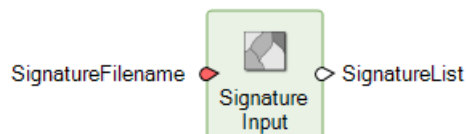
Reads all of the signatures from an ERDAS IMAGINE Signature file. Often used in combination with Get Signature to retrieve a specific named signature from the signature list.

SIPS KERNEL INPUT
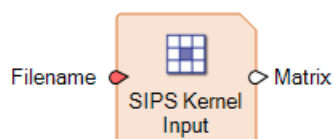
The SIPS Kernel Input operator is intended to take an input Kernel file formatted in the NGA Softcopy Image Processing Standard (SIPS) kernel format and convert it to a Matrix object usable in Spatial Modeler. The resulting matrix is generally intended for use as a convolution kernel. Convolution kernels are used to calculate a weighted average of the value of each pixel with the values of the surrounding pixels.

SIPS LUT INPUT
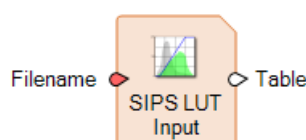
The **SIPS LUT Input** operator is intended to take an input SIPS LUT file formatted in the NGA Softcopy Image Processing Standard (SIPS) LUT (*.lut) format and convert it to a **Table** object usable in Spatial Modeler. You can use the resulting **Table** object as a lookup table for imagery, including use with the DirectLookup operator.

SMOOTH ELEVATION

Performs an edge preserving smoothing by using bi-lateral recursive IIR (infinite-impulse-response) filters. Bi-lateral weighting of the neighborhood values is based on 3D location proximity (proximity in grid space and value proximity in elevation range) such that elevation values closer to an input pixel exert higher influence on the output value.

SPLIT STRING
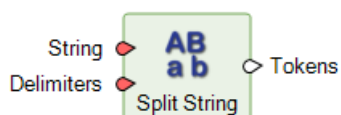
The Split String operator splits a given String based on the input delimiters. Delimiters are a String of characters, each of which is used to determine where to separate a String into smaller Strings. In this operator, all the characters in the Delimiter port are a delimiter. The Split String operator removes the delimiters and separates the String into smaller Strings, on either side of each delimiter.

STEREO VIEW GEOMETRY
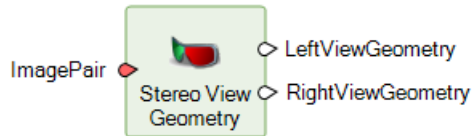
Provides the basic information needed for a stereo client to project the left and right images into a stereo view.

STRING INPUT
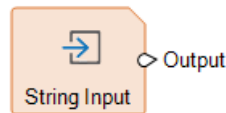
Creates a String.

SUBSET SAR IMAGE PAIR
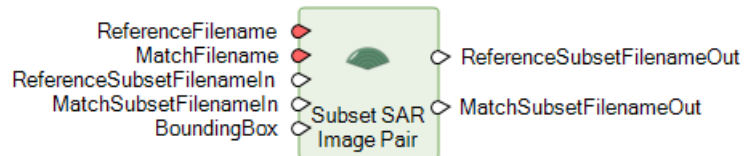
This operator subsets a SAR image pair to a common bounding box extent.

SUBSTRING
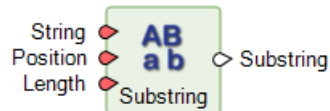
The **Substring** operator takes in a **String** and outputs a substring based on a starting location and the length of the desired substring.

TERRAIN BIAS

Applies bias (a constant Z) to selected areas of a raster terrain. Selection areas are specified as polygon features via the **Features** port. If there are multiple polygon features, the bias will be applied to each polygon feature.

TERRAIN BULLDOZER
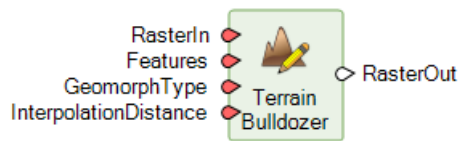
Automatically bulldozes a raster terrain based on a breakline, interpolation distance and geomorphic edit type. The **Features** port specifies the path to be bulldozed, while the **GeomorphType** and **InterpolationDistance** determine the type of the Bulldoze type and the extent to be bulldozed on either side of the path respectively.

TERRAIN THIN

This operator thins a terrain file by removing redundant elevation points, or those deemed not important to the underlying surface. One of two optional algorithms can be chosen: thin points based upon an error threshold distance or reduce the overall number of points based on a percentage value.

TEXT FILE INPUT
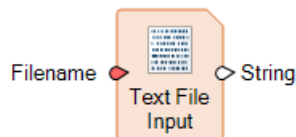
The Text File Input operator reads text from a text file and outputs the text as a String. This operator also has the option to limit the number of characters that are read into the String, as well as to skip a number of characters from the start of the file.

TO STRING
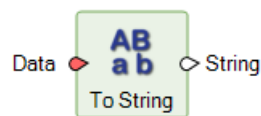
Creates a data type-specific string representation of data.

TRIDICON SGM
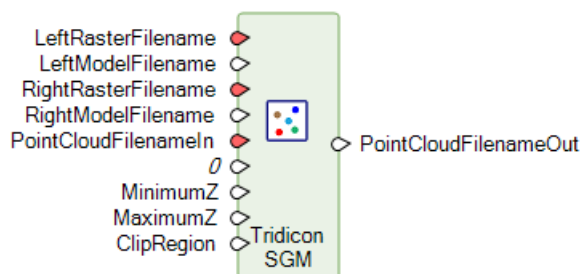
This operator extracts a point cloud from a stereo image pair through the Tridicon Semi Global Matching (SGM) algorithm. The operation uses a pair of stereo images which are already epipolar resampled and in uncompressed 8-bit TIF raster format to generate a point cloud output.

UNSIGNED INPUT
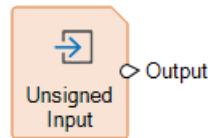
Creates an Unsigned (non-negative integer).

WARP TO VIEWPORT
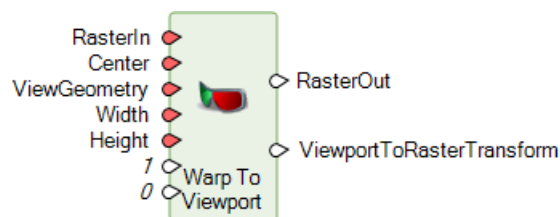
Warps a portion of a raster to fit a given viewport geometry. The raster has to be an oriented image (image with 3D sensor model). The operator will clip, scale, rotate and resample the raster to fit a stereo viewport.

REPLACED OPERATORS IN SPATIAL MODELER

The following table represents operators which existed in ERDAS IMAGNE 2015 (the left column) but which have been updated with new capabilities and renamed in ERDAS IMAGINE 2016 (the center column).

Spatial models created in ERDAS IMAGINE 2015 (or prior) using the old, deprecated operators will generally still work in ERDAS IMAGINE 2016 (i.e. they are considered viable), but it is highly recommended that the models be re-worked to use the newer, supported operators.

Operator in 2015	Operator in 2016	Category in 2016
Buffer	Buffer Zones	Features
Vector Input	Features Input	Features, Input
Shapefile Output	Features Output	Features, Output
Attribute Filter	Filter By Attributes	Features
Warehouse Attribute Update	Update Attribute	Features
Spatial Query	Filter By Geometries	Features
Warehouse Attribute Table	Select Attribute	Features
Rasterize	Convert To Raster	Features
Warehouse Output	Features Database Output	Features, Output
Add Bias	Point Cloud Bias Elevation	Point Cloud
Classifier	Point Cloud Classify	Point Cloud

Delete Points	Point Cloud Delete Points	Point Cloud
Merger	Point Cloud Merge	Point Cloud
Point Cloud Volume	Point Cloud Measure Volume	Point Cloud
ReClass	Point Cloud Reclassify	Point Cloud
RGB Encode	Point Cloud Encode	Point Cloud
Set Constant Z	Point Cloud Set Constant Elevation	Point Cloud
Subset	Point Cloud Subset	Point Cloud
Select By	Point Cloud Build Selection Criteria	Point Cloud

GENERAL SPATIAL MODELER

PORT INPUT (AND OUTPUT)

In prior versions of Spatial Modeler it was generally not clear which ports would be treated as variables when the Spatial Model was executed in Batch, or which would appear as prompts when added to the ribbon interface.

In order to make this clear, it is now necessary to use the Port Input operator (and occasionally the Port Output), connected to any port which is expected to be filled in by the user when the model is executed. These Port Inputs may still have default values defined for them (so that the user does not necessarily need to provide a value every time), but only if a Port Input is connected will the value be prompted for.

For example, when the following model is run.
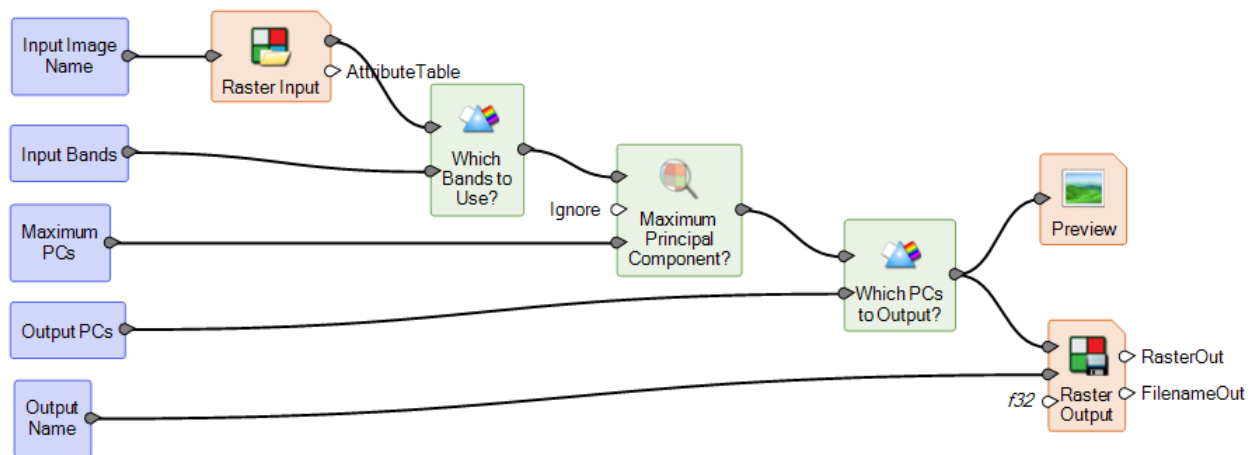
…a dialog will be automatically generated which looks like this
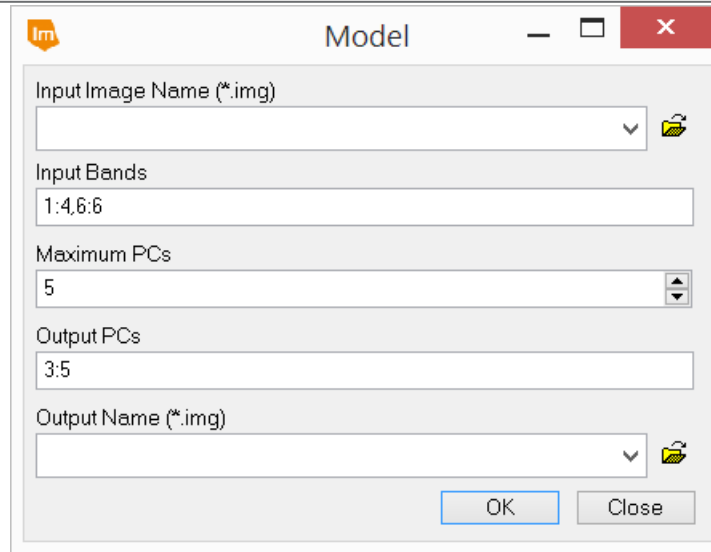
…because there are five Input Ports (which have been renamed to reflect what they are expecting to be input) defined in the model and *only* those five values are prompted in order for the model to be successfully executed.

Empty ports such as the Ignore port on the Principal Components operator, or the (f32) data type port on Raster Output, are *not* prompted for because they have no Port Input operator connected to them.

PORT INPUT ORDERING

Another aspect of the auto-generated Run dialog which has been clarified in this release is the order in which the ports are listed in the dialog. Previously they were simply presented in the order they were added to the model, which could result in some confusing arrangements of parameters.

A capability is now provided to reorganise the ordering (without needing to delete and re-add the ports). With no operators selected in the Spatial Model Editor canvas go to the Properties panel (usually situated at the lower right of the Spatial Modeler interface). If no operators are selected the Properties panel shows the properties of the entire model and shows any Port Inputs in the order in which they will be presented in the auto-generated Run dialog. If this is not the desired order, simply right-click over a row in the Properties CellArray and select one of the Move options. Repeat until the entries are in the desired order.
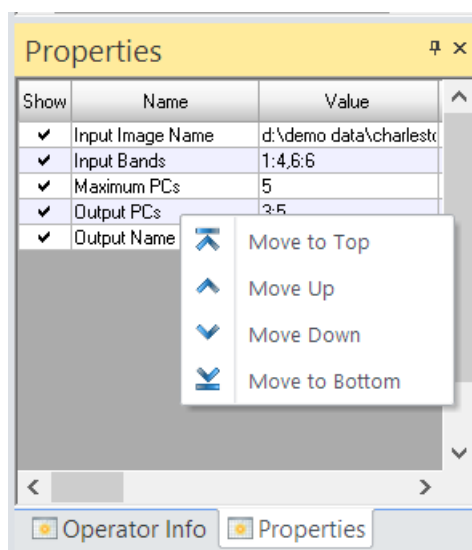
ANNOTATING SPATIAL MODELS

As well as the ability to rename Operators and to add Descriptions to Port Inputs to assist in understanding what a model is doing, the ability has been added to include text annotation onto models.
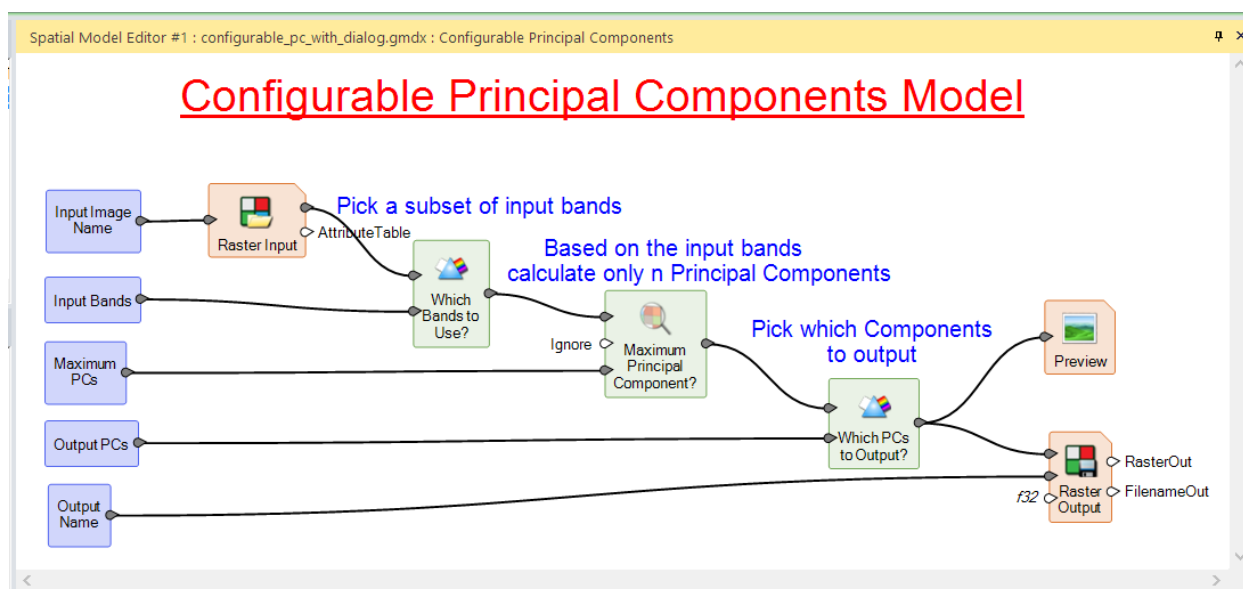
OBFUSCATION

In order to assist in protecting the Intellectual Property inherent in a Spatial Model which might be created by a particular company, Spatial Models can now be "encrypted" into a form which can still be executed (or embedded into a larger Spatial Model as a sub-model) but which cannot be displayed in their original form in the Spatial Model Editor. Consequently, the precise algorithm being applied by the model is hidden from other users.
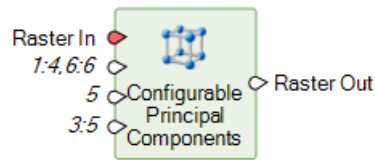
SHARE SPATIAL MODELS WITH SMART M.APP
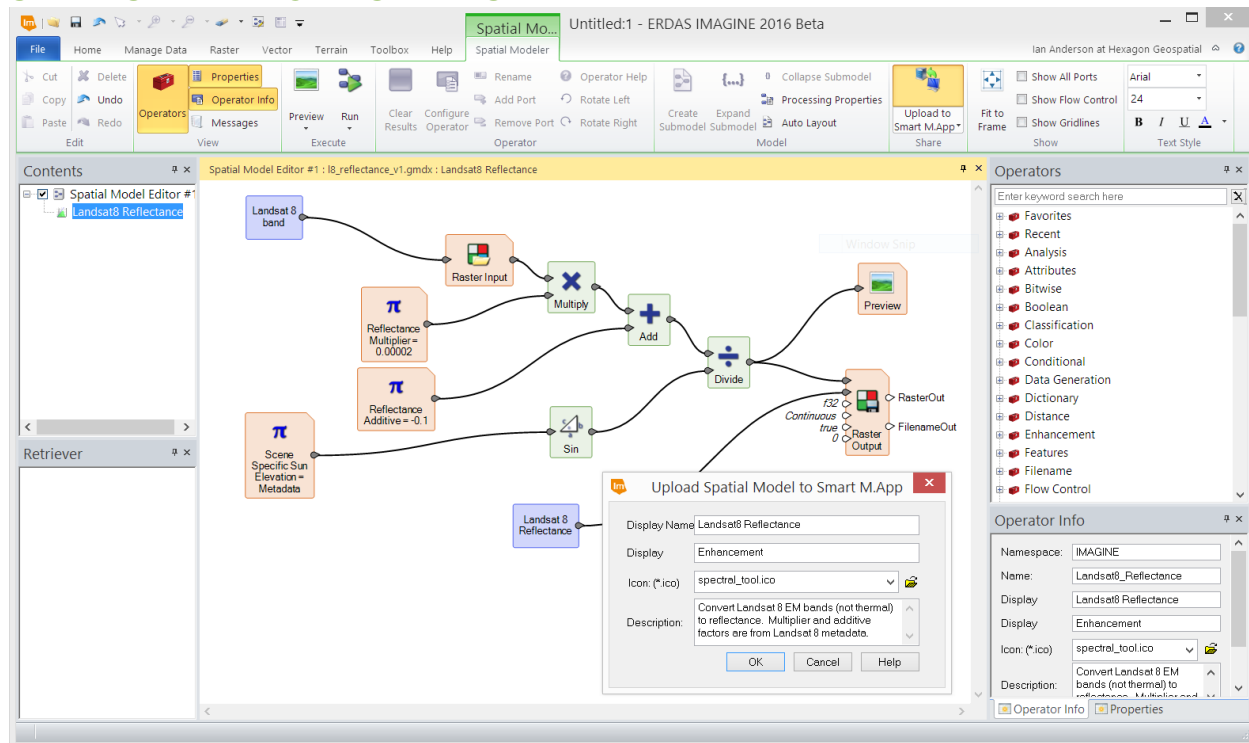
Smart M.Apps are targeted, lightweight map applications that solve real business problems. Hexagon Smart M.Apps are created using a modern, cloud-based framework called the M.App Studio. M.App Studio is for Hexagon Geospatial development partners and geospatial entrepreneurs who wish to develop Hexagon Smart M.Apps. With or without programming skills, M.App Studio can be used to fuse dynamic content with purpose-built analytics, to provide insightful information services.

The M.App Studio is an interactive, web-based spatial workshop for designing, building and publishing your Hexagon Smart M.App to the M.App Exchange. The M.App Exchange is the cloud-based store and central repository for the Hexagon Smart M.App.

Spatial Modeler provides a tool to directly upload Spatial Models from the Spatial Model Editor into your M.App Studio, from where they can be further edited using the Spatial Workshop or used immediately to create analytics within a new Smart M.App.

SAVE AS IMAGE FROM IMAGE CHAINS
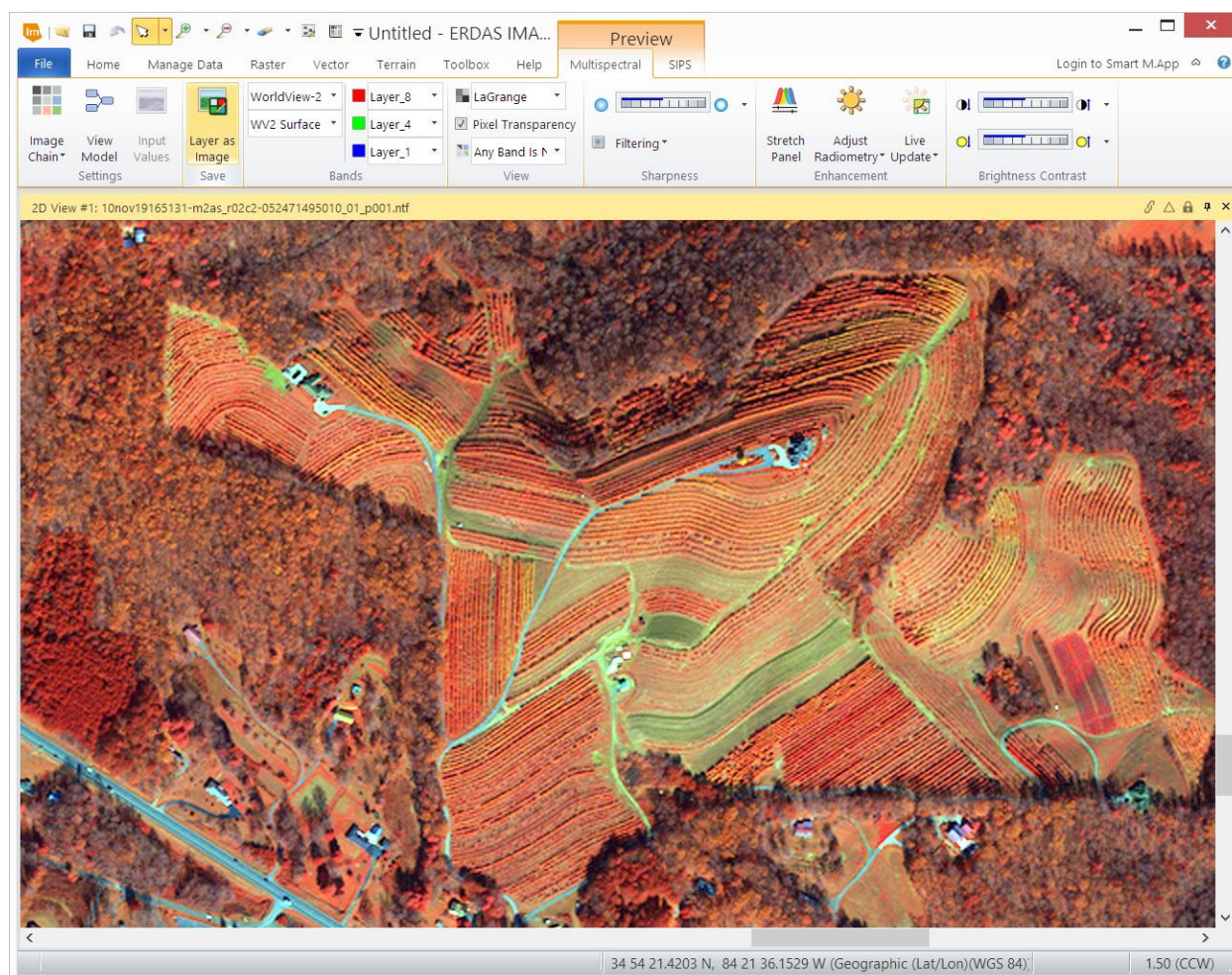
After an image has been displayed and styled using the File / Open / Raster as Image Chain… option it can now be saved to an output image which preserves this styling.

SOFTCOPY IMAGE PROCESSING STANDARD (SIPS) IMAGE CHAINS

As mentioned in the section of this document dealing with new Spatial Modeler operators, several capabilities have been added to the Image Chain display modes which enable display of image data following the Softcopy Image Processing Standard (SIPS). SIPS specifies processes necessary for standardised, consistent image processing and exploitation.

As well as non-interactive processes, such as RSET generation, SIPS defines interactive processes which should be applied to input data prior to its display to the screen. These include sensor-specific defaults as well as specific options which can be subsequently manipulated to fine tune the image display.
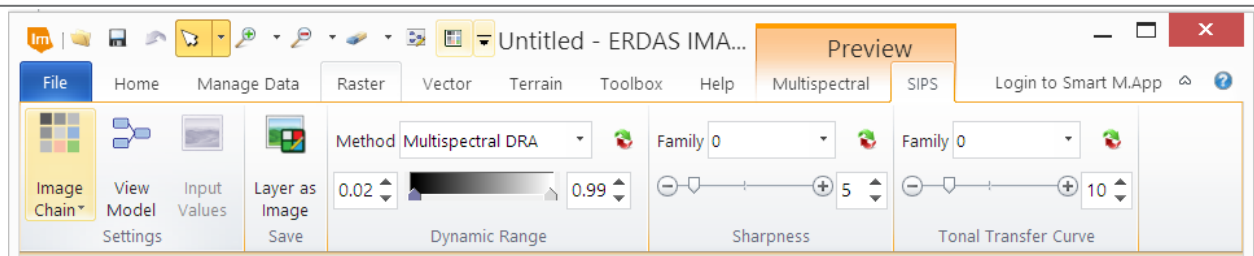
Such options include Dynamic Range Adjustment, Sharpness filters and Tonal Transfer Curves.

In addition to the necessary tables and definitions for displaying commercial satellite imagery in the general distribution of ERDAS IMAGINE, the IMAGINE Defence Productivity Module (DPM) adds support for other sensors.

LAGRANGE RESAMPLING

One option added for SIPS support is a new resampling technique called LaGrange resampling. This technique applies a four-point interpolation using LaGrange coefficients in order to preserve a high degree of positional fidelity while also minimising execution time and preserving the modulation transfer function of the image when downsampling.

This technique can not only be applied the 2D View for interactive display, it can also be used when ortho resampling imagery and when applying other processes that require image resampling, such as when pan sharpening imagery in the Spatial Modeler.

NEW SENSORS AND FORMATS

SENTINEL-1
Sentinel-1A SAR imagery can be directly read in both standard and burst forms.
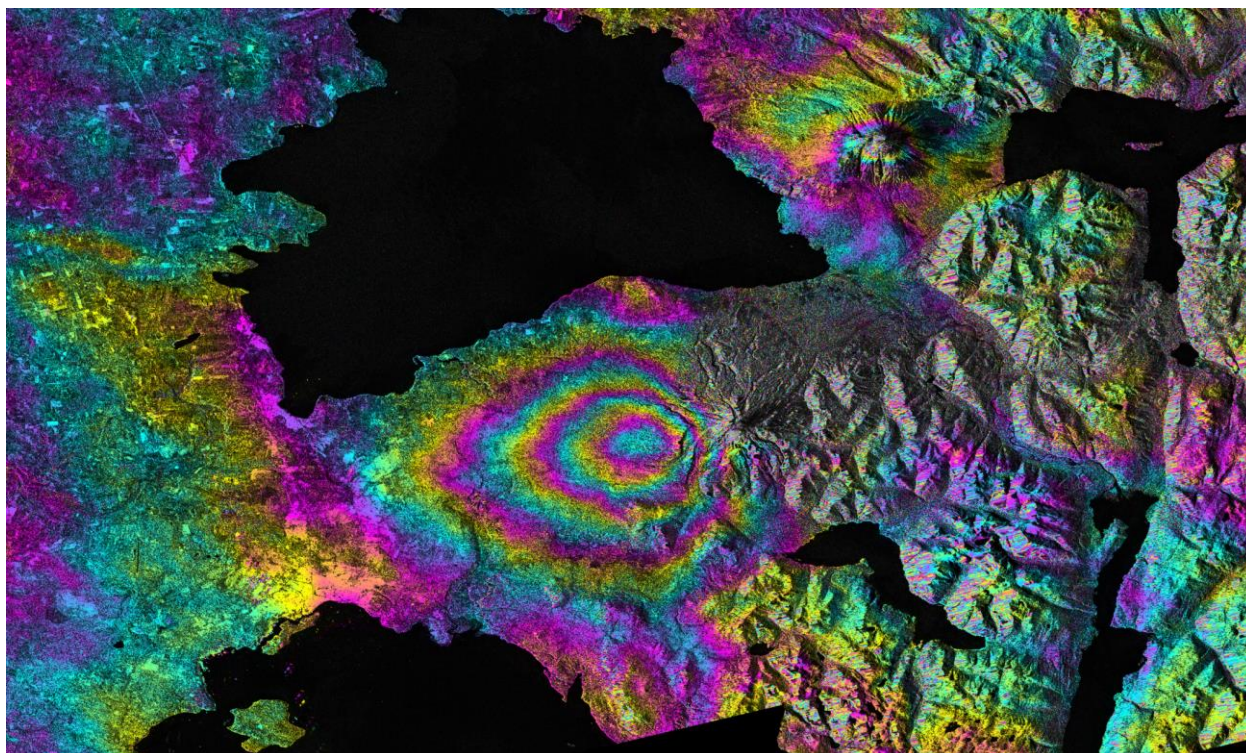
SENTINEL-2

The capability has been added to read Sentinel-2 raster format data. Like Sentinel-1, Sentinel-2 is part of the European Space Agencies (ESA's) Copernicus program aimed at providing "accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure civil security". Sentinel-2, launched on 23 June 2015, is designed to deliver high-resolution optical images for land services such as land management, emergency response, security and climate change.

Partnership between ESA and the USGS provides for the public access and redistribution of global acquisitions of the European Union's Sentinel-2 data at no cost through secondary US-based portals (such as EarthExplorer), in addition to direct user access from ESA's Scientific Hub.

The Sentinel-2 Multispectral Instrument (MSI) samples 13 spectral bands at three different spatial resolutions: The four main visible and near-infrared Sentinel-2A bands have a spatial resolution of 10 meters, while its "red-edge" (red and near-infrared bands) and two shortwave infrared bands have a 20-meter spatial resolution. The coastal/aerosol, water vapor, and cirrus bands have a spatial resolution of 60 meters.

ERDAS IMAGINE provides a direct-read capability for the SAFE format that Sentinel-2 data is distributed in. This capability will, by default, treat all 13 bands as a single image at a 10m resolution. However the Sub-Images tab of the File Chooser also provides access to the data at differing resolutions and in differing groupings.
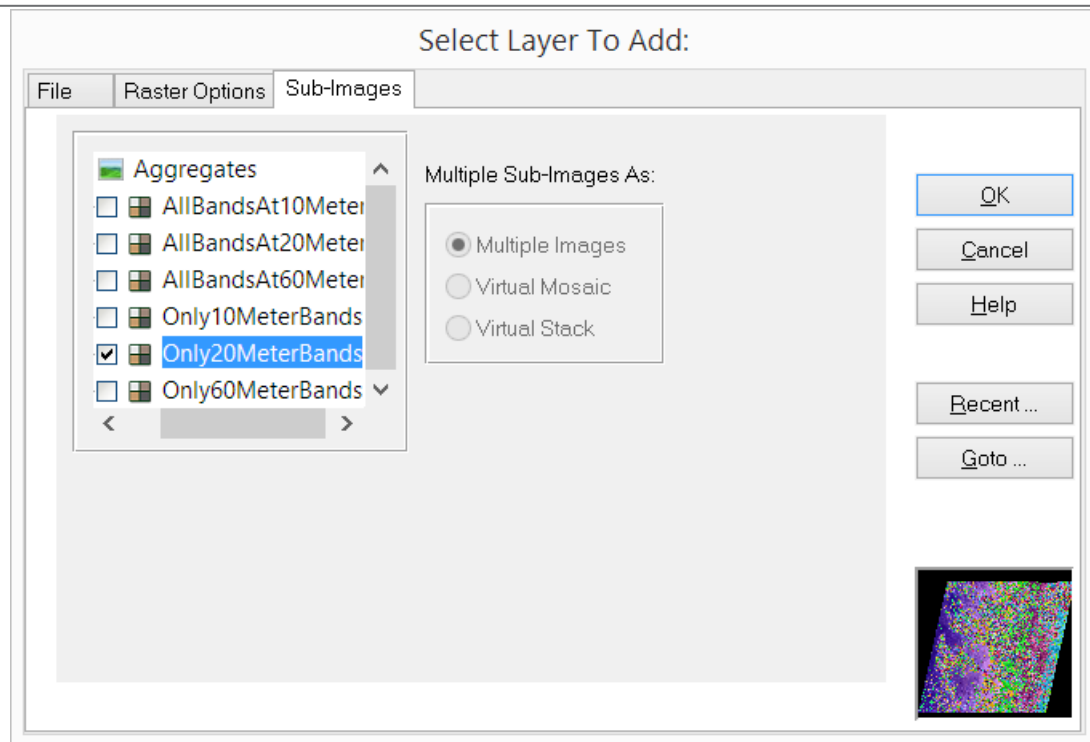
GÖKTÜRK-1

Göktürk-1 is a high resolution earth observation satellite designed and developed for the Turkish government.

For orthorectification, both RPC and Rigorous sensor models are provided.

KAZEOSAT-1 & -2

KazEOSat-1 and -2 are satellites developed for Kazakhstan's space program.

KazEOSat-1 is a High Resolution Earth Observation Satellite System similar to the SPOT-6 / -7 platform providing 1m Panchromatic data and 4m, 4-band Multispectral (Red, Green, Blue, NIR) data in DIMAP v1 format.

KazEOSat-2 is a Medium Resolution Earth Observation Satellite System similar to the Disaster Monitoring Constellation (DMC) platforms providing 6.5m, 5-band Multispectral (Blue, Green, Red, Red Edge & NIR) data in DIMAP v1 format.

For orthorectification, an RPC sensor model is provided for KazEOSat-1. For KazEOSat-2 both RPC and Rigorous Orbital sensor models are provided.

DMC-3

The DMC-3 constellation of satellites (also referred to as TripleSat Constellation-2) are High Resolution Earth Observation Satellite Systems with 1m Panchromatic data and 4m, 4-band Multispectral (Blue, Green, Red, NIR) data in GeoTIFF format. The imagery can be read using the GeoTIFF raster format reader.

WCS / WMS RE-WRITE AND DIRECT ACCESS

Rather than forcing customers to utilize the GeoSpatial Explorer (GSX) dialog to identify WMS or WCS services for display in ERDAS IMAGINE, access is now provided through direct selection of the relevant URL by choosing File / Open / Web Service.

This display of WMS is provided through a custom layer and consequently is faster to pan and zoom than in previous versions, as well as providing access in the Table of Contents to all layers provided by the URL.
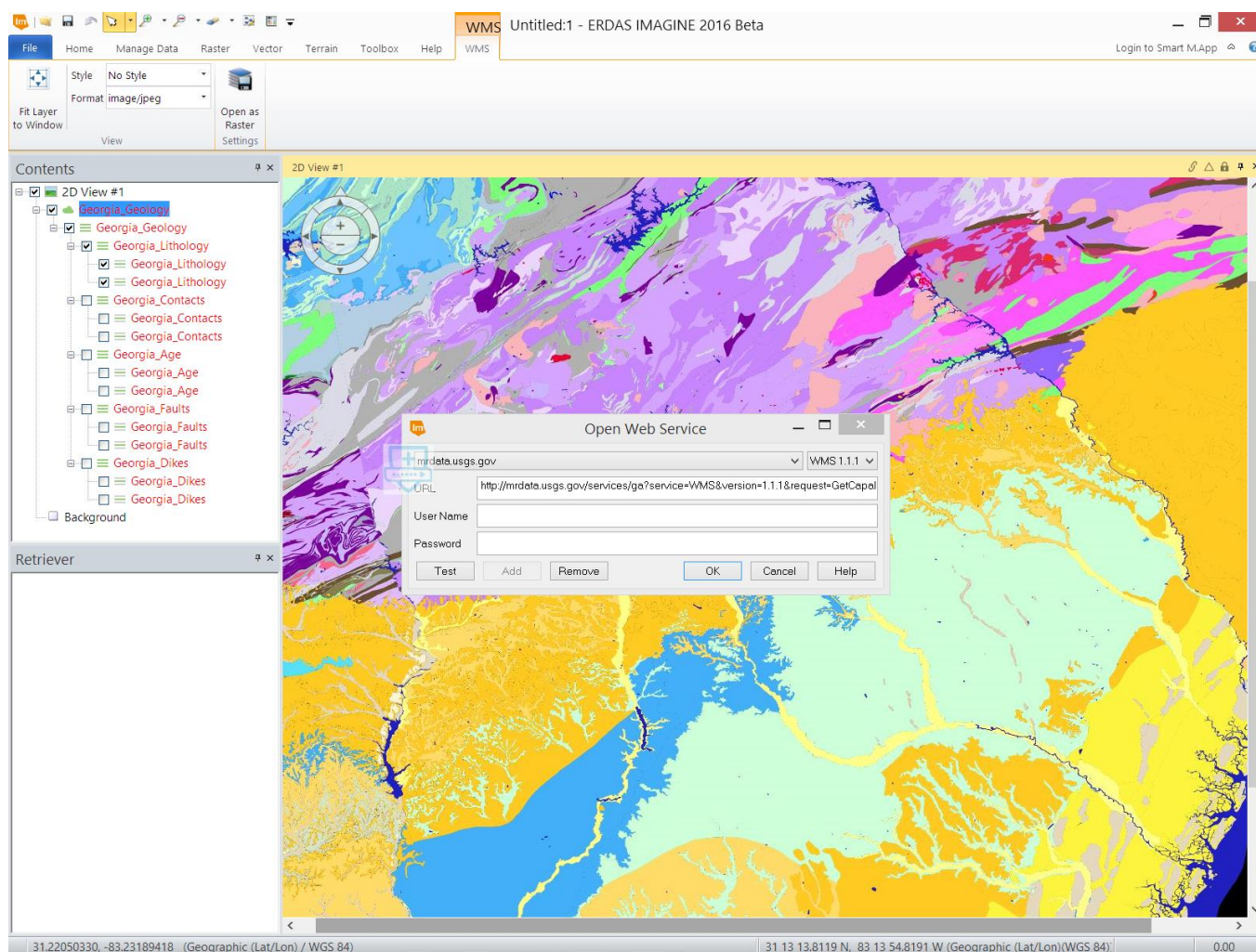
NITF FORMAT
The NITF format has evolved recently to cover new capabilities such as multi-segment data. Efforts have been made in ERDAS IMAGINE 2016 to support these changes to the format.

The Shapefile Extraction tool has also been expanded to support additional vector feature layers which may be stored in these newer NITFs.
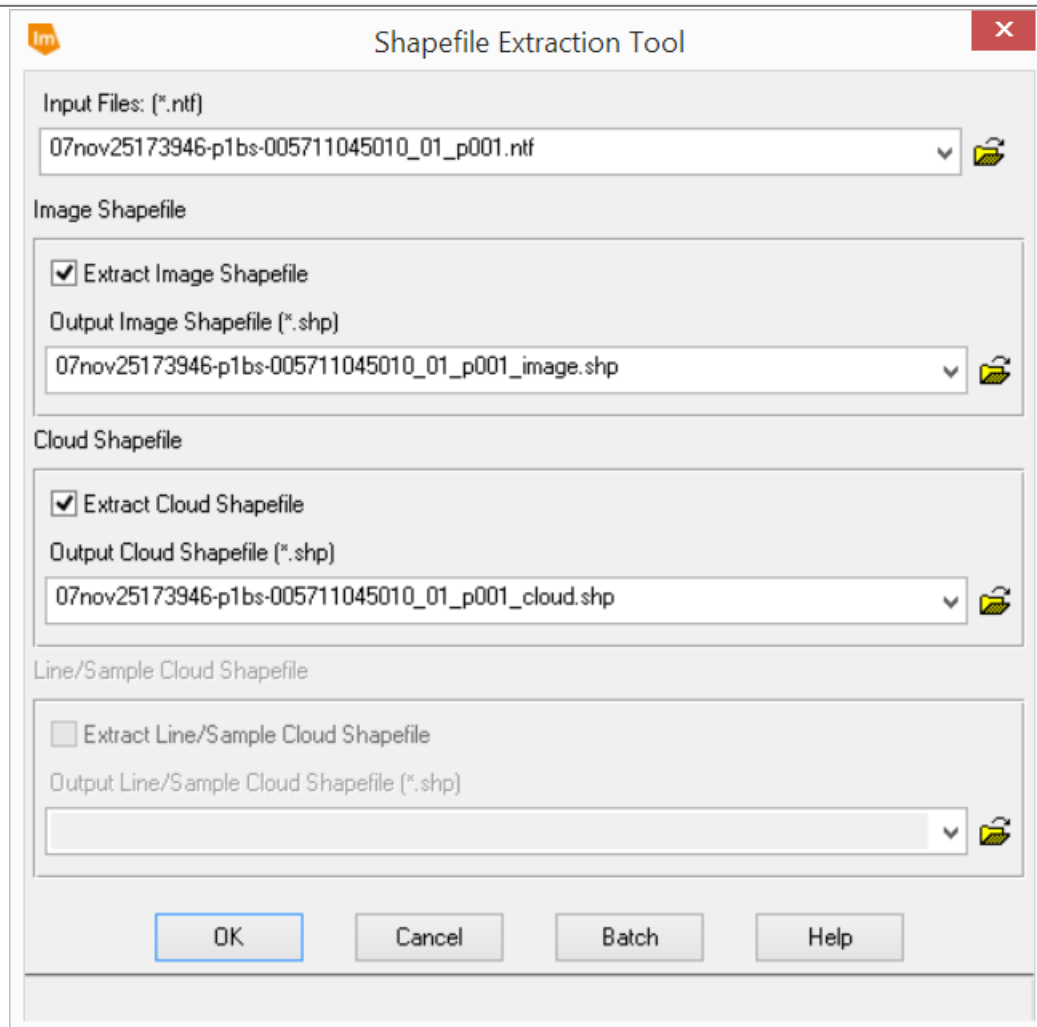
FLOAT DATA DEFAULTS TO 32K BINS

To assist in better default display quality of some Floating Point imagery (specifically, data with heavily skewed histograms), the number of bins used to calculate linearly binned statistics (which is what is used for Float data types) has been increased from 256 to 32,768. This can be controlled through a Preference if more (or less) fidelity is required.

DIRECT-WRITE TO ERS BIL FORMAT

To improve interoperability between ERDAS IMAGINE and ERDAS ER Mapper the capability has been added to directly write data in the ER Mapper.ERS BIL format. Applications which support this are Spatial Modeler, the 2D View, and MosaicPro.

PROJECTED COORDINATE SYSTEMS

Added support for 800+ Coordinate Reference Systems including, among others:

- NAD 1983 (2011) StatePlane California III FIPS 0403 (US Feet)

- Israeli Projected CRS EPSG:6991

- Five EPSG projections in Pulkovo 1942(58)

- Minnesota County Projection

- Iowa Regional Coordinate System

- ESPG 8.8 & 8.9

POINT CLOUD

LAS 1.4
The LAS format, owned by ASPRS, is a standard for LIDAR or other point cloud data records. ERDAS IMAGINE 2016 adds support for LAS 1.4.

STYLING PERSISTENCE
Displays styling of LAS data such as point size, display type and display color can now be persisted to a symbology file. The point cloud data will be rendered based on the style saved in the symbology file.

RESERVED AND USER DEFINED CLASSES
Reserved and user-defined classes are distinctly identified in point cloud data.

Z SCALING IN 3D VIEWER
A Z exaggeration can be applied to the data loaded in the 3D point cloud viewer using the Z Scale in display group of the point cloud tab.

3D MEASUREMENT
Measurements can now be done in the 3D point cloud viewer. Measurements include point measurement to get XYZ coordinate of the point, length measurement and height of point above a specified terrain model.

MOSAICPRO IMPROVEMENTS

ADDED NEW OUTPUT FORMATS
MosaicPro output formats are expanded to include NITF, PNG, and ERS formats.

MASKED BASED NODATA LAYER SUPPORT FOR JPEG 2000 OUTPUT
Mask based Nodata layer support is added to JPEG 2000 output.

RADAR

SENTINEL-1 SUPPORT IN RADAR ANALYST WORKSTATION
Sentinel-1 SAR imagery can be directly displayed and automatically geocoded into the 2D View.

It can also be processed using the Radar Analyst Workstation.

SENTINEL-1 SUPPORT IN INTERFEROMETRY
Sentinel-1 imagery is supported via full scene Interferometric CCD workflow, as well as providing burst sub-scene InSAR and DInSAR processing.

POLARIMETRY UTILITY
Several new multi-polarimetric color-composite displays can now be selected

- Pauli Basis produces an image wherein R(ed) is calculated as HH-VV, G(reen) is calculated as HV+VH and B(lue) is calculated as HH+VV

- Polar Ratio produces an image wherein R(ed) is calculated as HH/(VV+HH), G(reen) is calculated as VH/(VV+VH) and B(lue) is calculated as VV/(HH+VV). A Polar Ratio image is frequently used for vegetation mapping purposes.

- Polar RGB produces an image wherein R(ed) is HH, , G(reen) is calculated as HV+VH and B(lue) is VV

AUTOENHANCE UTILITY
Radar AutoEnhance creates an RGB image from a grey-scale radar (Magnitude) image by applying three different enhancements to the input image and using each as a layer in the product image. This functionality also exists as a Real-Time Display enhancement in the Radar Analyst Workstation.

MOSAIC SERIES CCD WORKFLOW
The Mosaic Series CCD workflow is designed to automate generating Coherence Change Detection images over larger regions. This is done by automatically mosaicking contiguous two-image CCD layers. The InSAR-pair images are entered and automatically geographically referenced. The analyst can then define the desired processing regimen (Template) and output products. After processing, the various products can be automatically mosaicked. The entire process is stored as a CCD Project file and can be accessed or updated in future as more images become available. This functionality is specifically designed to support Sentinel-1 data, but data from any sensor can be used equally well.

TIME-SERIES CCD REDESIGN
The Time Series CCD dialog is designed to automate Coherence Change analysis. The InSAR-pair images are entered and automatically date sequenced. The analyst can then define the desired processing regimen (Template) and output products. After processing, the products can be automatically displayed in the 2D View for analysis. The entire process is stored as a CCD Project file and can be accessed or updated in future as more images become available.

With this release the workflow has been redesigned to co-register all images to common Reference image.

ZONAL CHANGE DETECTION

the Zonal Change Detection workstation provided with IMAGINE Advantage has undergone several improvements based on customer feedback, including

IMAGES WITH DIFFERENT BANDS
Images that have different number of bands (layers) can be used as Before (older) and After Images (newer) Images.

FILTERING

Changes that are not relevant to a project can be excluded. Filtering is currently supported for Vegetation-only changes and Non-Vegetation only changes.

SHAPEFILE OUTPUT REPORT

A shape file report for each region that has been processed and reviewed is generated and saved in the project folder. The status for each zone in the region is reported as attributes of the shape file.

ORIMA

SIZE OF CORRECTION GRID EXTENDED TO HANDLE LARGER FRAME SENSORS

The maximum number of grid points is extended from 625 to 2500. This change is geared for large sensors (such as DMCII and DMCIII) that need more grid points to get better accuracy.

DISPLAY FUNCTION ENHANCED TO HANDLE MORE THAN 250,000 OBJECT POINTS

The maximum number of points that can be displayed on object windows (East-North, East-Height and North-Height) is enhanced to more than 250,000 object points. This is beneficial in large blocks with multihead sensors, such as the Leica RCD30 Oblique Camera System.

SIMPLIFIED ALGORITHM FOR BLUNDER DETECTION IN CAP-A

CAP-A offers a new simplified algorithm for blunder detection. When this option is selected CAP-A will use a parallel algorithm and utilize all available cores of the processor and therefore will run much faster. In most cases the fast simplified algorithm will deliver satisfying results. In cases where the statistical values are needed use the fast algorithm to first remove blunders and make a final adjustment with all statistical values.

SYSTEM REQUIREMENTS

ERDAS IMAGINE (INCLUDING ERDAS ER MAPPER, IMAGINE PHOTOGRAMMETRY AND ORIMA)

Computer/ Processor	64-bit: Intel 64 (EM64T), AMD 64, or equivalent (Multi-core processors are strongly recommended)
Memory (RAM)	8 GB minimum, 16 GB strongly recommended, especially for 64-bit systems
Disk Space	• 4 GB for software • 7 GB for example data Data storage requirements vary by mapping project[1]
Operating Systems [2, 3]	• Windows® 7 SP1 or higher, Professional and Ultimate (64-bit) • Windows® 8 (Standard), Professional and Enterprise (64-bit) [4] • Windows® 8.1 (Standard), Professional and Enterprise (64-bit) [4] • Windows 10 Pro (64-bit) [4] • Windows Server® 2008 R2 SP1 (64-bit) • Windows Server 2012 R2 (64-bit)
Software	• OpenGL 2.1 or higher (this typically comes with supported graphics cards[5]) • Adobe® Reader® 7 or higher • Internet Explorer® 7 and higher with JavaScript enabled, or Firefox® 3 and higher with JavaScript enabled • Java Runtime 1.7.0.80 (optional install, required for Web Process Service (WPS) publishing to APOLLO Professional. IMAGINE Objective requires JRE, but can utilize any installed and configured JRE of version 1.7.0.80 or higher) • Python 3.4 (optional install if Python is to be used in Spatial Modeler. 32-bit is required for Spatial Model Editor, and 64-bit is required for background processing) • Microsoft DirectX® 9c or higher • .NET Framework 4.0 • MSXML 6.0 • Oracle Instant Client and Oracle Data Provider for .NET (Required for Oracle Feature Proxy access)

Recommended Graphics Cards	- NVIDIA® Quadro® K5200, K4200, K2200, K420 [6] - NVIDIA Quadro K5000, K4000, K600 [6]
Recommended Stereo Display Monitors	- 120 Hz (or above) LCD Monitors with NVIDIA 3D Vision™ Kit [7]
Peripherals	All software installations require: - One Windows-compatible mouse with scroll wheel or equivalent input device - Printing requires Windows-supported hardcopy devices [8] Software security (Intergraph Licensing 11.13.2) requires one of the following: - Ethernet card, or - One USB port for hardware key Advanced data collection requires one of the following hand controllers: [9] - TopoMouse™ or TopoMouse USB™ - Immersion 3D Mouse - MOUSE-TRAK - Stealth 3D (Immersion), S3D-E type, Serial Port - Stealth Z, S2-Z model, USB version - Stealth V, S3-V type (add as a serial device) - 3Dconnexion SpaceExplorer mouse [10] - EK2000 Hand Wheels - EMSEN Hand Wheels - Z/I Mouse
ArcGIS and GeoMedia Interoperability	- ERDAS IMAGINE 2016 can be safely installed on a computer that has GeoMedia 2016 installed. - ERDAS IMAGINE 2016 requires GeoMedia 2016 for live linking. - 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 through 10.3. - ERDAS IMAGINE and IMAGINE Photogrammetry can interact with ArcGIS Server 10 Geodatabase servers (ArcSDE). To read or interact with an Enterprise Geodatabase, you

must either:

- o Install and license the appropriate version of ArcGIS for Desktop versions 10 through 10.3, OR

- o Install the IMAGINE Geodatabase Support (based on ArcEngine 10.1), which requires no license

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 or 10. 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.

[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 SpaceExplorer mouse is supported in IMAGINE Photogrammetry.

PRO600

Computer/ Processor	64-bit: Intel 64 (EM64T), AMD 64, or equivalent (Multi-core processors are strongly recommended)
Memory (RAM)	4 GB minimum, 8 GB strongly recommended
Disk Space	• 1 GB for software Data storage requirements vary by mapping project[11]

Operating Systems	- Windows® 7 SP1 or higher, Professional and Ultimate (64-bit) - Windows® 8 (Standard), Professional and Enterprise (64-bit)
Software	- IMAGINE Photogrammetry 2016 [12] - One of the following products from Bentley Systems, Inc [12] ○ MicroStation V8i (SS1- SS3 Update 1) ○ Bentley Map V8i (SS1 - SS3 standalone or for MicroStation) ○ Bentley Map Enterprise V8i (SS1 - SS3)
Recommended Graphics Cards	- NVIDIA® Quadro® K5200, K4200, K2200, K420 [13] - NVIDIA Quadro K5000, K4000, K600 [13]
Recommended Stereo Display Monitors	120 Hz (or above) LCD Monitors with NVIDIA 3D Vision™ Kit [14]
Peripherals	All software installations require: - One Windows-compatible mouse with scroll wheel or equivalent input device - Printing requires Windows-supported hardcopy devices [15] Software security (Intergraph Licensing 11.11.1) requires one of the following: - Ethernet card, or - One USB port for hardware key Advanced data collection requires one of the following hand controllers:[16] - TopoMouse™ or TopoMouse USB™ - Immersion 3D Mouse - MOUSE-TRAK - Stealth 3D (Immersion), S3D-E type, Serial Port - Stealth Z, S2-Z model, USB version - Stealth V, S3-V type (add as a serial device) 3Dconnexion SpaceExplorer mouse - EK2000 Hand Wheels - EMSEN Hand Wheels

- Z/I Mouse

PRO600 SYSTEM REQUIREMENTS NOTES

[11] 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.

[12] Any further requirements defined by any of the listed apply implicitly to PRO600.

[13] Graphics cards certified with previous versions of PRO600 may also be compatible, but are not certified in the current version.

[14] Stereo Monitors certified with previous versions of PRO600 may also be compatible, but are not certified in the current version.

[15] HP-RTL drivers are recommended. Windows 64-bit print servers require 64-bit print drivers.

[16] Stealth S-Mouse (S2-S model) and MOUSE-TRAK are only supported in Stereo Analyst® for ERDAS IMAGINE.

ISSUES RESOLVED

IMAGINE ESSENTIALS

CR #	Summary – IMAGINE Essentials	Description / How to Reproduce
1-BH5A5N	Buffer doesn't work with this Shapefile	On the Vector tab start the Buffer Analysis dialog. Load the shapefile provided as input. Receive error message stating: Invalid file, check Connection parameters. The dialog does accept other shapefiles.
1-KI9IVO	ERDAS IMAGINE doesn't read State Plane US Survey Feet CRS from ESRI shapefile	Customer reported that when an ESRI shapefile, having coordinate reference system in US State Plane US Survey feet, is used in ERDAS IMAGINE for creating an AOI, they get an error message about incompatible CRS with raster image, even if both the raster and shapefile have the same coordinate reference system. After investigation it was found that even if the shapefile has correct CRS in "US Survey feet", the Vector Metadata doesn't recognize the CRS of the shapefile. If the CRS State Plane is changed to "Feet", ERDAS IMAGINE recognizes the CRS of the shapefile and creates a correct AOI.
1-7P6FXB	Zonal Attributes tool does not calculate MEAN correctly for some polygons	The Zonal Attributes tool is not calculating the correct MEAN value for some polygons. It appears to happen to polygons that are completely within other polygons. The input raster image is unsigned 1-bit with pixel values of either 0 or 1. The MEAN value calculated for some polygons is 0, but when you inspect the data you can clearly see that there are pixels with value of 0 and 1 located within these polygons. Steps to reproduce the problem. 1. Open the Zonal Attributes tool (Vector tab > Manage group > Zonal Attributes). 2. Select Shapefile as the input vector layer. 3. Select an input raster layer. 4. Enable the Mean option for the Zonal Functions and name the attribute "MEAN_TEST" 5. Click OK to begin the process. 6. Open the raster image in a 2D View. 7. Open the Shapefile in the same 2D View on top of the raster layer. 8. View the attributes (Table tab > View group > Show Attributes). You will notice that some polygons have a MEAN_TEST value of 0.000. 9. Select the row in the attribute table for one of these polygons to highlight it in the 2D View. 10. Observe that there are pixels with value of both 0 and 1 within the polygon.
1-7T38GB	Round trip projection is incorrect for certain projections	The Jenkins test Statepalone gawest-roundtrip produces outputs but the comparison data and the output data do not match. When you look at ImageInfo of both images the map info is different for both images. The new data is slightly to the northwest of the original data. When you have them in different viewers it is off by 1.67 m north- south and 2.73 M east-west.

1-7V75CJ	Projection: Reproject StatePlaneGAWest RoundTrip is not correct	Projection-Reproject-StatePlaneGAWest-RoundTrip output is different than the input
1-8H3TEF	GeoMedia connections take too long for the feature table to show up in the connection manager	FBDG, sql and oracle take to long for the feature table to appear in the connection manger because imagine does something different than GeoMedia does when searching for valid tables.
1-A0O8X1	ERDAS IMAGINE Hangs on autoroaming in 2D View after selecting 'Sync GeoMedia Map Window to View'	To replicate: 1. Install GeoMedia 2014 and ERDAS IMAGINE 2014 2. In ERDAS IMAGINE, open the desired data in a 2D View. 3. In GeoMedia, open a connection to a geographically-similar warehouse as the data loaded in ERDAS IMAGINE. 4. In ERDAS IMAGINE, click Home tab > Link Views > Connect and Link to GeoMedia. 5. Click Home tab > Link Views> Sync GeoMedia Map Window to View 6. Select Home tab > Pan 7. Double click in the 2D View of ERDAS IMAGINE 8. Observe that ERDAS IMAGINE hangs
1-A5DS91	Shapefiles created using ERDAS IMAGINE native support cannot be opened as Vector Input	Create a shapefile either using subset tool or new vector layer. Open the layer for editing. Try using it in spatial modeler as new Vector Input- preview and it crashes ERDAS IMAGINE. Close the session of ERDAS IMAGINE and resue the file and it works. I marked this as regression since we do have a test case in AT that has this work flow and it passed. I found this issue in IDK 208 on algotron that has GMo 2014
1-AII3KV	ERDAS IMAGINE 2014 created ECW file with EPSG:3044 fails to open in ERDAS IMAGINE 2014 v14.00.01	Customer reported that ERDAS IMAGINE 2014 created ECW file failed to open in ERDAS IMAGINE 2014 v14.00.01 and 2015 because we no longer handle the EPSG:3044 projection correctly. While opening the customer's ECW file in ERDAS IMAGINE 2014 v14.00.01 and 2015, you will see the following error message: " Layer MapInfoRead fail". ERDAS IMAGINE 2014 v14.00.01 never completes opening the file, but 2015 does open the file without projection and gives all the error messages. ERDAS IMAGINE 2014 can open the customer's ECW file without any error message.
1-BJ2EHQ	Displaying specific, large shapefiles crashes ERDAS IMAGINE	Start ERDAS IMAGINE and maximise it to your screen. Use the File Chooser to select and display gadm2.shp. It may take several minutes for it to finish drawing. Once displayed clear the View. Use the File Chooser to select and display WorldBoundaries.shp. Should be much faster. Once displayed clear the View. Use the File Chooser to select and display gadm2.shp. Part way through drawing the layer ERDAS IMAGINE will crash If it doesn't crash, keep going through the cycle until it does crash.
1-DUT6Z4	ECW batch export with 4 or more parallel processes in the Batch Tool, results in some encoding of images failing.	Report that when running 4 or more parallel Export ECW processes of a long list of images in the Batch Tool, some encoding of images fail. When the encoding fails for one batch process, sometimes the batch process locks up, cannot close out the failed process, and does not move to another image. At the end of the batch process it can be noted that more processes have failed.

1-B8H02Y	Shift observed in MosaicPro with blk file and the shapefile in South Dakota State Plane projection	Steps to reproduce: 1. Load image and shapefile in 2D View and in a third-aprty GIS application. 2. In the IMAGINE viewer the Shapefile appears shifted 3. Load the Shapefile file on its own in a 2D View and record the coordinate of the vertices 4. Load the image alone into a 2D View and check the coordinate of the pixel corresponding to the shifted location 5. They seem to be not coincident.
1-CEZNAG	ERDAS IMAGINE crashes while opening new SPOT6 DIMAP v2 xml file in 2D View	Report that ERDAS IMAGINE 2015 v15.1 crashes while opening new multispectral SPOT6 DIMAP v2 xml file in 2D View. Not all SPOT6 images exhibit this behaviour.
1-CWBAZI	MosaicPro and ECW DirectWrite are unable to write projection from MrSID + aux file	Customer reported that ECWDirectWrite Export tool and MosaicPro both are NOT writing the projection information to the output ECW if the projection of MrSID file is in the aux file. Tested with customer's data where the projection information, EPSG:2868 is stored in the aux file, not in the MrSID tag.
1-1HU8-36900	Last line and last column (last row and last sample) are lost when exporting small IMG format image to JFIF (JPEG) or TIFF	Problem encountered in ERDAS IMAGINE 2015 v15.1. The input image is 512 by 512 pixels, but the exported data is only 511 x 511
1-62QHXJ	Cannot reshape AOI when zoomed	The editing of an AOI when you zoom in using the mouse wheel is difficult and sometimes impossible. Problem is most repeatable when you set the line width thicker and use line colors. The customer is getting a failure to move the vertex in Reshape mode. To replicate: 1. Load image in viewer. 2. Select Drawing tab and draw polygon aoi (creating new aoi). 3. Select aoi and Reshape tool. 4. Vertices are highlighted. 5. Zoom in on one vertex. That vertex cannot be moved. 6. In zoomed view, aoi is locked and cannot be deselected, and reshape tool cannot be exited. One must go back to full-res view to do either.
1-83017K	Changing style for a class in Feature Counter Tool crashes ERDAS IMAGINE	ERDAS IMAGINE consistently crashes if you try to change the 'Menu' Style Feature Counter Tool Class editor to other. Steps to reproduce: 1. Open any raster dataset 2. Go to File / New / 2D View / Count Features 3. Right-mouse-click on any of the classes. Select 'Edit Category…'

4. The Edit Category window pops up. In the lower right you can select the symbol

5. Click on the arrow down button, and the list of symbols from the Menu Class shows up. You can select any of these symbols

6. In the same list, now click on 'Other' to select a different style.

7. **ERDAS IMAGINE will exit.**

1-8EP7XT	Add ability for ERDAS IMAGINE to direct-write to ERS BIL format	Customers wish to supply raster datasets in .ers format. They specifically require a BIL + Header format.
1-8LRTKV	Always Wait for Data Viewer Preference Doesn't Work	1. In your preferences (Viewing, Viewer) set "Always wait for data" to true (checked). 2. Save and restart IMAGINE. 3. Load a large image (preferably something compressed) and start roaming around. 4. With the preference set you should never be able to see an empty block, the viewer should lock up waiting to render the block. But since ERDAS IMAGINE 2013 was released it seems it's back to showing empty blocks.
1-8N6PHR	ECW v3 Direct Write has major compression artifacts from some applications	1. Set ECW preference to v3. 2. Run Subset (using either map or file coordinates) on a calibrated input image, to ECW output. 3. Output file has major compression artefacts. Did not see problem when running Export ECW or Import NITF to ECW.
1-8ZC99D	With Map View opened, NITF Metadata Viewer will be not responding	1. Start IMAGINE; 2. Add a new Map Viewer; 3. Go to Manage Data tab, NITF > View NITF Metadata. 4. The NITF Metadata Viewer is not responding.
1-91BCTT	Unsupervised classification on an ndvi image created from 16 bit imagery crashes	1. Open a 16-bit multi-spectral image 2. Create an NDVI image from it. 3. From the NDVI, try to run an unsupervised classification. 4. The process doesn't complete, it crashes This seems to work starting off with 8-bit imagery and performing the same process, but not with 16-bit imagery.
1-93Z7UX	Measurement Tool reports conflicting height measurement with Top Shadow Measurement	Measurement height utility reports unexpected height values using Top Shadow Height with customer GeoEye data. Height measurements with other two options (Height from Layover, Base Shadow Height) return comparable measurement values for the same location. Height from Layover 9.29 m Base Shadow Height 9.37 m Top Shadow Height 5.58 m. Testing indicates a dependency on the data being measured. Similar tests with in-house WV1 data

show comparable measurement values using all methods.

1-9BZEIZ	Photoshop is unable to open the file if ERDAS IMAGINE 2014 v14.1 writes projection to a GeoTIFF file	Customer reported that Photoshop is unable to open the file if ERDAS IMAGINE 2014 v14.1 writes projection to a GeoTIFF file, if that GeoTIFF was an output from Photoshop. Photoshop gives the error message: "Could not complete your request because it was not the right kind of document". Please note, the TIFF file that Photoshop cannot read can be read in ERDAS IMAGINE, ER Mapper, ArcGIS 10.1, Microsoft Products. This is a problem with Photoshop.
1-9XZA4F	Export NITF 2.1/NSIF 1.0 does not accept some TRE metadata values	Export NITF2.1/NSIS 1.0 will not accept TRE ACCPOB values. After entering metadata value, error "Transform not found!" opens, after dismissing error message, Export NITF dialog closes. The error is seen in the TRE ACCPOB but not in other extensions (e.g. ACCHZB).
1-A9U68D	EPSG.plb has incomplete entries for CRS that were converted from GK to TM	Some of the changes made to epsg.plb in ERDAS IMAGINE 2015 to output Gauss Kruger as Transverse Mercator were missing Scale Factor. This could cause issues in the projection chooser, especially if trying to find CRS based on EPSG code.
1-ABABZ8	Customer reported that PointcloudInfo crashes while trying to add EPSG 5514 to their LAS file.	Pointcloudmetadata and the "Point Cloud Commands tool" crashes while trying to add EPSG 5514 to LAS file. The following error message occurs before the crash happens: "Invalid INICODE Map Projection Structure" This projection doesn't comply with the EPSG Standard. Select Another projection that is EPSG compatible".
1-AC7V3Z	Spatial Modeler can't handle TIFF data with "#" in the path	A TIFF file whose path includes a "#" character can be opened in a 2D View. But opening it in Image Chain, or using it in other Spatial Models, will crash ERDAS IMAGINE.
1-AGYBK0	For multi-layer WMS servers ERDAS IMAGINE does not turn on the correct "level" and so nothing is displayed	ERDAS IMAGINE 2015 added new WMS support which includes support for having multiple layers in the service. When there are multiple layers ERDAS IMAGINE turns on by default only the layer that has the largest spatial extent. To do so it has to look at all the layers, reproject to a common map projection and compare the extents. Unfortunately, for the National Map NLCD web mapping service, which contains layers cascaded into multiple sub-trees, ERDAS IMAGINE selects and turns on a "directory" name, but not all the layers contained in that directory and so nothing displays by default. WMS used for testing: http://raster.nationalmap.gov/arcgis/services/LandCover/USGS_EROS_LandCover_NLCD/MapServer/WMSServer?request=GetCapabilities&service=WMS
1-ARBYGC	$HOME and $PERSONAL not defined in Help	$HOME and $PERSONAL variables are used by ERDAS IMAGINE to deposit log files and some other artifacts (default layout, elevation library, proxies, file and session histories, V8preferences, etc.). Issues arise if the user's homespaces are on a server that is unreliable, read-only, non-existent, etc. The ERDAS IMAGINE artifacts can't be correctly created and the software experiences difficulties. The customer then requests a way to have all of these things going somewhere else. There are preferences for some of these items, but not all of them. So where are they set? • If not set in the environment, ERDAS IMAGINE creates its own local value for HOME by concatenating HOMEDRIVE and HOMEPATH • If not set in the environment, ERDAS IMAGINE constructs PERSONAL, by concatenating .imagineNNNN to the HOME environment variable, where NNNN reflects the version number of IMAGINE. It is rare for a Windows machine to not have something for HOMEDRIVE and HOMEPATH. But there are many cases where customers had poorly-chosen values for HOMEDRIVE and HOMEPATH. The most common is a read-only location, a root drive (e.g. C: or H:), or an unreliable network location. Complaints arise when the customer is unable to override the

		settings pushed down via group policy from their network administrators. In general administration of Microsoft Windows, the Network Administrator is supposed to decide where user-specific settings should be stored, and ERDAS IMAGINE is respecting that decision. The most effective workaround is to set a good value for HOME on the machine. It is rare for that variable to be restricted.
1-ATLT63	IMAGINE File menu a lot slower now due to the Recent Thumbnails	Open multiple datasets in imagine, after a while when selecting the File Menu, the screen freezes up for several seconds. Looks like the thumbnails from the recent documents tab is taking too long to load
1-AUNY8Y	Height from Layover and Up is Up not working on DG WorldView-2 imagery	Specific NITF image does not appear to behave correctly when using Up is Up or measuring Height from Layover in a 2D View. To replicate: 1. Open the image into a 2D View. 2. Roam to a location with a tall feature 3. Home tab / View group / Align to up is up 4. The feature is not rotated to point up the screen
1-AUP231	Compression is incorrect for Sub-Image of NITF file in Metadata>General tab from read only folder	Open a Sub-Image of NITF file in metadata. Observe that general tab > Layer info > compression value reported is incorrect, compared with NITF Info tab > Image (related to particular sub-image) in tree, Field: IC; LongName: Image compression.
1-AYNGWH	ERDAS IMAGINE states unsupported compression type for Tiff file created in ArcGIS with LZW compression	When opening a specific TIFF file with LZW compression created in a third-party application, into a 2D View, ERDAS IMAGINE throws error that, 'Unsupported compression type' but displays the file in viewer.
1-B12DIG	Can't Chip a TIFF file	To replicate: 1. Display a BGRN TIFF in a View. 2. On the Raster tab, Subset & Chip menu, select NITF Chip. 3. Provide an output NITF file name. 4. You will be asked to save all layers - click Yes. 5. Receive error message along the lines of "Error opening file d:\temp\po_391401_bgrn_0000001__GeoEye__0_MULTI.sbi Error 123" ...and you can't proceed.
1-B12MDI	IMAGINE Metadata window is displaying wrong file size for large LAS 1.2 file	Customer reported that ERDAS IMAGINE's Metadata window is displaying the wrong file size for a large LAS 1.2 file. The customer is using a 59 GB LAS 1.2 file. The metadata window shows the file size as 606 MB only.
1-B2DVMZ	NAD_1983_StatePlane_Louisiana_South_FIPS_1702 Standard Parallel parameters different from EPSG definition	ERDAS IMAGINE uses Standard Parallel projection parameters that are reversed from EPSG parameters. 1. This will result in defining the projection incorrectly when adding it with ERDAS IMAGINE.

		2. This will result in not recognizing the State Plane CRS when the Standard Parallel projection parameters are defined correctly in a shapefile prj file generated by GeoMedia.
1-B2YLK6	Batch Export NSIF/NITF does not retain TRE values	Export NITF/NSIF using batch will not retain user defined TRE (Tagged Record Extension) values, even when batching one file in and one file out. These same TRE values are retained when exporting interactively without using batch, but are lost when running in batch. To replicate: 1. Export NSIF 1.0 from an Imagery Input File 2. Segment = MAIN_HEADER 3. Section = Extended Data 4. TRE: = "GEOPSB" (use default values) 5. TRE: = "PRJPSB" 6. Select PRJPSB, Edit the "NUM_PRJ" field to 3. 7. Set the 3 PRJ fields to, respectively, "31", "0.996" and "0". 8. Edit the XOR field to "500000". 9. Select 'Batch' Select 'Run Now' 10. Using the exported .nsf as input, open Metadata > NITF Info tab PRJPSB does not contain any of the modified values. Other default fields are missing. Compare using the same procedure above but using OK instead of Batch. All of the modified TRE values are retained.
1-B71Q8F	Rapid Atmospheric Correction bubble help refers to Image Calibrator Environmental Correction.	When you hover the mouse cursor over the Batch button in the Rapid Atmospheric Correction tool the bubble help and status bar refer to Image Calibrator Environmental Correction. It incorrectly says "Put the Image Calibrator Environmental Correction in the Batch Queue".
1-B726WI	ERDAS IMAGINE 2015 ECW reprojection from Israel projection EPSG:2039 to EPSG:4326 fails	ERDAS IMAGINE 2015: ECW reprojection from Israel projection EPSG:2039 to WGS84/ Geographic EPSG:4326 fails. ERDAS IMAGINE gives error message: "Unable to update Map Information to ECW file. The Update will be saved in the aux file.
1-B9UJ5Q	ERDAS IMAGINE 2015 crashes while adding ECWP layer from APOLLO Essentials	Customer reported that ERDAS IMAGINE 2015 crashes while adding ECWP layer from APOLLO Essentials. The same ECWP URL works well in Internet Explorer 11 and Firefox with ECW Browser Plugin.
1-BAF41Z	Add support for Deflate compression in TIFF DirectRead and Import TIFF	Customer request support for Deflate compression option added to TIFF 6 in Supplement 2. Support is requested in DirectRead and Import TIFF. Deflate is a combination of LZ77 and Huffman encoding. It is similar to LZW. The Deflate compression is used in PNG, zip, gzip and other areas.
1-BAXNDB	Difference in behaviour in ERDAS IMAGINE 2014 and 2015 - Crash observed on	To replicate: 1. Open a specific Shapefile in 2D Viewer.

	dismissing error messages	2. Dismiss all the error dialogs 3. Click in 2D View 4. Observe that ERDAS IMAGINE 2015 crashes
1-BETNMA	Compute pyramid layers message displays when IMG/IGE file WITH pyramid layers is opened in 2D View	When opening a large IMG/IGE file WITH pyramid layers in a 2D View an attention message pops up claiming that the image does not have pyramid layers. If you open the same image in ERDAS IMAGINE 2014 it displays without any problems. The Viewer preference "Compute pyramid layers upon image open (if needed)" is set to "query" for both ERDAS IMAGINE 2014 and 2015.
1-BEWINN	License Expiration Information dialog states '[null]'	When a temporary license of ERDAS IMAGINE is close to its expiration date, License Expiration Information dialog pops-up, which states 'License for [null] will expire in 7 days.'. Here it is not clear what [null] stands for. It would be good if [null] is replaced by component name for which the expiration date is specified.
1-BFC5UO	NDVI is not honouring the boundary of AOI, even if the "Subset using bounding box of AOI" is uncheck	Customer reported that NDVI is not honouring the boundary of AOI, even if the "Subset using bounding box of AOI" is unchecked in the Preference. Customer is trying to use an AOI to constrain an NDVI calculation. After adding the input file, naming the output file and adding the AOI in the NDVI dialog, once the NDVI process in run, the output file's extent shows as large as the input file and not constrained by the AOI outline (as selected in preferences).
1-BFLR8V	NDVI dialog is not honouring AOI from the viewer, giving error message that AOI not found.	Customer reported that NDVI dialog is not honouring AOI from the viewer, giving error message: "File C:/Users/xxxx/AppData/Local/Temp/2/Aoi005032(:Aoi) does not exist. In order to recreate the problem, please do the following: 1. Open Image in viewer. 2. Create AOI 3. Save AOI to file 4. Open NDVI dialog 5. At this point the above error pops up. However you can see that the AOI is in fact there in the directory. 6. Click OK and select input and output files. 7. Select the option AOI from viewer and run process. 8. The process doesn't complete and gives error message: "Spatial Model Failed in Raster Input . Error: eaoi::AOI::Impl::LoadHandle failed eaoi_ReadAoiFromNamedHfaFile failed eaoi_ReadAoiFromHfaFile failed The specified AOI is empty"
1-BFLRFE	NDVI dialog is not loading raster automatically from the Viewer if AOI is present in the viewer	Customer reported that NDVI dialog is not loading raster automatically from the Viewer if an AOI is present in the viewer. If there is no AOI in the viewer, then the NDVI dialog loads the raster in the viewer automatically as an input file.
1-BGSM9P	Print to HTML from 2D View does not work.	If you attempt to print an image from a 2D View and output to HTML it will not work. An HTML file is created, but it does not contain the contents of the 2D View, it is essentially empty. The print to HTML process does not create the JPEG image that is to be included in the HTML file. After you click OK in the Print dialog you will get two error messages. The first one says "Invalid arguments for option setdpu", and the second one says

		"FileProxiedIdentifyAndOpen failed (2:The specified file does not appear to exist) for d:/print_test.img".
1-BI1SY9	If "Save File History" is checked in the Preference, IMAGINE crashes while doing Layerstack / subset	Customer reported that if the "Save File History" is checked in the Preference (Preference > File format > Image Files (General) > Save File History), ERDAS IMAGINE crashes while performing "Layer Stack", or "Decorrelation Stretch" or doing " Subset" with any data.
1-BNTEUK	IMAGINE Standard Layout File pulling IMAGINE Advantage level license	Customer has several IMAGINE Essential level licenses and only 2 IMAGINE Professional level licenses. They are constantly running into licensing issues where users are pulling IMAGINE Advantage level license (from their 2 IMAGINE Professional licenses) when they shouldn't be. This occurs when selecting File | Layout | Standard Layout. When selecting this option the Zonal Change Layout flashes open before changing to standard layout and appears to consume the IMAGINE Advantage license.
1-BNYQTD	Help - Customer support icon is not functional in Help page	To replicate: 1. Launch ERDAS IMAGINE 2. Launch Help from Help>Help from IMAGINE 3. Click on the customer support icon which is on the top right corner in the page 4. No action was seen on clicking the Customer support icon
1-BS8NND	Confusion caused by multiple projection name entries in Projection Chooser	This has been reported by multiple customers. Old "Deprecated" projections were still being displayed and causing the confusion.
1-BY8JZJ	Customers have asked for ECW v3 to fully use GeoTIFF tags	Customers have asked for ECW v3 to fully use GeoTIFF tags, not be limited to EPSG codes. Many counties in the US are developing their own projections so that they can improve the accuracy of their data within their area of responsibility. These new Projected Coordinate Systems are not defined in EPSG, but can be defined by GeoTIFF tags.
1-CVV2RW	Direct Save As method creates unusual pixels in 16bit output	1. Open a specific multispectral 16bit IMG image. 2. Right-Click in contents panel > Save As and also File > Save Top Layer As 3. The output image in both cases has very strange visual pixel artefacts that essentially leaves the output image unusable unless you select a new stretch and apply it.
1-D3ZI07	Five EPSG projections in Pulkovo 1942(58) datum having two different definitions for the same EPSGs	Customer reported that in the ERDAS APOLLO Essentials they could not serve imagery in EPSG:3333 and EPSG:3334 CRS. Then customer himself found that there are two definitions for each of these CRSs in epsg.plb. Since ERDAS APOLLO Essentials uses ERDAS IMAGINE's projection engine, I have also checked in ERDAS IMAGINE 2015 v15.1. and found that there are five projections in Pulkovo 1942(58) datum which have two different definitions for the same EPSG code. The EPSG codes are: 3333, 3334, 3335, 3336, 3337 Following are the definitions in the epsg.plb file: } "Pulkovo 1942(58) / Gauss-Kruger zone 3 (3333)" { INTERNAL 9 "Krasovsky" "Pulkovo 1942(58) [To WGS 84 19]" 0 4:2.6179938779914941E-001 5:0.0000000000000000E+000 6:3.5000000000000000E+006 7:0.0000000000000000E+000 "meters" } "~Pulkovo 1942(58) / Gauss-Kruger zone 3 (3333)" { INTERNAL 36 "Krasovsky" "Pulkovo 1942 Adj 1958" 0 4:2.6179938779914941E-001 5:0.0000000000000000E+000 6:3.5000000000000000E+006 7:0.0000000000000000E+000 "meters" } "Pulkovo 1942(58) /

		Gauss-Kruger zone 4 (3334)" { INTERNAL 9 "Krasovsky" "Pulkovo 1942(58) [To WGS 84 19]" 0 2:1.0000000000000000E+000 4:3.6651914291880922E-001 5:0.0000000000000000E+000 6:4.5000000000000000E+006 7:0.0000000000000000E+000 "meters" } "~Pulkovo 1942(58) / Gauss-Kruger zone 4 (3334)" { INTERNAL 36 "Krasovsky" "Pulkovo 1942 Adj 1958" 0 4:3.6651914291880922E-001 5:0.0000000000000000E+000 6:4.5000000000000000E+006 7:0.0000000000000000E+000 "meters" } "Pulkovo 1942(58) / Gauss-Kruger zone 5 (3335)" { INTERNAL 9 "Krasovsky" "Pulkovo 1942(58) [To WGS 84 19]" 0 2:1.0000000000000000E+000 4:4.7123889803846897E-001 5:0.0000000000000000E+000 6:5.5000000000000000E+006 7:0.0000000000000000E+000 "meters" } / "~Pulkovo 1942(58) / Gauss-Kruger zone 5 (3335)" { INTERNAL 36 "Krasovsky" "Pulkovo 1942 Adj 1958" 0 4:4.7123889803846897E-001 5:0.0000000000000000E+000 6:5.5000000000000000E+006 7:0.0000000000000000
1-DF9GML	ERDAS IMAGINE crashes While clicking on Draw line left to right button on Transform dialog from Algorithm	1. Launch ERDAS IMAGINE 2. Select Algorithm from File > New 3. Click on Algorithm tab 4. Select Transform from Layer group, Transform dialog opens. 5. Click on Draw line left to right or Draw line right to left from Histogram Edit Tools observe ERDAS IMAGINE crashes
1-DF9U9O	ERDAS IMAGINE Crashes on resizing In-View Magnifier	To replicate: 1. Launch ERDAS IMAGINE, 2. Load any Raster image in the 2D View 3. Click on In-View Magnifier button from Home tab | View Group 4. Resize the Magnifier in the 2D View 5. ERDAS IMAGINE Crashes
1-DK9FHH	"Bad allocation" error pops up if stretch panel is launched with Spatial Model panels hidden & clicked in 2D View.	Please follow these steps to reproduce 1. Launch ERDAS IMAGINE and open Spatial Model Editor 2. Click on the Auto Hide options for both Operators and Properties panels 3. In the 2D View open a raster as image chain 4. Once the image is displayed, click on the Stretch Panel option. 5. Notice that Stretch Panel does launch, but is hidden to the right of ERDAS IMAGINE 6. Click anywhere on ERDAS IMAGINE 7. Notice that "bad allocation" error shows up
1-DK9FJ1	ERDAS IMAGINE crashes if 3D View with a DEM displayed in it is switched off	Please follow these steps to reproduce this issue 1. Launch ERDAS IMAGINE and create a new 3D View

		2. Open a DEM in the 3D View
		3. From the Contents panel click on the check box of the 3D View to turn off the display of the 3D View.
		4. Notice that ERDAS IMAGINE crashes
1-EXBIFY	Paragraph format correction needed to 'importascii' command line OLH	'importascii' command line OLH documentation needs indentation of "ignorezero" argument for clarity. OLH document is accessed through Appendices > Application Commands > Alphabetical Index > importascii 'ignorezero' argument should be indented to left for consistency with other command arguments
1-F2EJZ5	ERDAS IMAGINE 2015 v15.1 crashes while opening some ECWP streams from ERDAS APOLLO	Customer reported that ERDAS IMAGINE 2015 v15.1 crashes while opening ECWP URLs from ERDAS APOLLO 2015 v15.1. The same ECWP URLs can be successfully opened in ER Viewer and ArcGIS Plug-in.
1-G27I1H	ERDAS IMAGINE is crashing after removing .ixw file from Default Layout in preferences.	To replicate: 1. Launch ERDAS IMAGINE 2. Navigate to File > Preferences > User Interface > Ribbon Interface 3. Remove the .ixw file from Default Layout - Make it empty 4. Click 'Save' button. 5. Make sure there is nothing in Default Layout. 6. Exit ERDAS IMAGINE 7. Launch ERDAS IMAGINE 8. Observed that ERDAS IMAGINE is crashing while opening and unable to launch
1-JJKGAS	Opening IMG files with long path names crashes ERDAS IMAGINE	Opening IMG files with very large path name crashes ERDAS IMAGINE. For example, the following path causes a problem: \\alpha\ARRAY4\DataLibrary\Sentinel-2\S2A_OPER_PRD_MSIL1C_PDMC_20150820T085706_R051_V20150815T110427_20150815T110427\GRANULE\S2A_OPER_MSI_L1C_TL_MTI__20150819T171650_A000763_T30SVD_N01.03\IMG_DATA
1-JJKGHG	Error messages coming from rf_srp when opening JP2 images with long path names	The error messages are actually coming from rf_srp. This is a side-effect of the fact that the JP2 RasterFormat DLL wasn't able to open the file, so it got passed to the SRP RasterFormat DLL to see if it could open it.
1-JKIS2B	Projection/map model info doesn't stick JPEG2000	Unable to set the projection or map model and projection info for JPEG 2000 file. ERDAS IMAGINE clears entered info once you close the metadata window. Problematic JP2 is a NAIP CIR image downloaded from the USGS's Earth Explorer (http://earthexplorer.usgs.gov/).

1-JPEJIW	JP2 format zooming and panning slowness in ERDAS IMAGINE 2D View	Customer reported that ERDAS IMAGINE 2015 v15.1 takes longer time refreshing JPEG 2000 images in the 2D View than a third parties v10.3 Viewer. The customer is using JPEG 2000 file created in ERDAS IMAGINE 2015 v15.1
1-JUE54T	ERDAS IMAGINE crashes on changing format to GIF under WMS tab of Hexagon Content/Imagery BaseMap	To replicate: 1. Launch ERDAS IMAGINE 2. Select Home > BaseMap > Hexagon Content 3. Enter user name and password 4. Add the connection and click OK button 5. Select WMS tab 6. Change Format to Image/gif 7. Observe that ERDAS IMAGINE crashes
1-JW0ATU	(incorrect) NITF 2.1 files created by Kakadu software and Gdal Library display badly in ERDAS IMAGINE 2015 v15.1	Customer reported that NITF 2.1 files created by Kakadu software and Gdal Library display poorly in ERDAS IMAGINE. However the same NITF2.1 file displays correctly in third-party GIS application. This issue was caused by the ABPP being incorrectly defined in the NITF header.
1-JZY219	IMAGINE populate errors when opening NTF with RPC00B, and RPC00A+RPC00B	NITF images containing both RPC00A and RPC00B generating error messages.
1-KJLT9M	pixeltotable function causes errors when run from ERDAS IMAGINE command line	When you run the pixeltotable function from the ERDAS IMAGINE Command Window using the "-criteriatype" and "-criteriafile" options it causes a lot of pop-up error messages.

IMAGINE ADVANTAGE

IMAGINE Advantage CR #	Summary – IMAGINE Advantage	Description / How to Reproduce
1-9B6E6B	F1 OLH points to MosaicPro Page for Image Area Options and File Name Matching tabs.	1. Launch Mosaic Pro 2. Select Edit Menu > Add Images 3. Select 'Image Area Options' tab 4. Press F1 and observe that Help points to MosaicPro 5. Select Individual AOI Radio button under Image Area Options tab 6. Select Single Aggregate Shapefile 7. Click Set Button

		8. Select File Name
		9. Matching tab Press F1
		10. Observe that F1 points to MosaicPro Help page
1-C23GQA	"Adjust individual image radiometry" crashes MosaicPro if a Thematic image is used	Enhancement request for disabling the "Adjust individual image radiometry" button, if Thematic images are used as input. Customer reported that MosaicPro crashes when they used Thematic images as input and tried to use the Contrast / Brightness control tool. Since the fact that Contrast / Brightness control cannot be performed with thematic images, the customer suggested to disable the "Adjust individual image radiometry" button in the tool row (or the control itself) for Thematic images.
1-AXAW83	Mosaic Express crashes while creating output from blk file created in IMAGINE Photogrammetry	Customer reported that blk file created in IMAGINE Photogrammetry doesn't work in Mosaic Express. 1. The customer had created blk files from GeoEye RPC , Rapid Eye RPC….. . 2. Then they opened the blk file in Mosaic Express, and leaving default options and clicking on the 'Finish' button to run the mosaic. 3. Mosaic Express crashes by giving the error message: "You need to have IMAGINE Photogrammetry installed to use this functionality"
1-K0TPEX	NDVI fails with calibrated input and Map-based Subset Definition	Replicated using a geometrically calibrated NITF image. To replicate: 1. On the Raster tab / Unsupervised pull down, select NDVI. 2. Start an Inquire Box in the 2D View and leave it as Map coordinates. 3. Move the box somewhere you will recognise. 4. In the NDVI dialog specify the Sensor as QuickBird-2. 5. Go to the I/O Options tab and click the From Inquire Box button (which populates the dialog as expected). 6. Click OK to run the NDVI. 7. Progress meter comes up but goes red almost immediately. 8. If you do the same, but change to File coordinates the process succeeds.
1-EMTYI1	Terrain Prep Tool: merge, Points+Breaklines > Output to LTFX or IMG does not work; only LAS output is OK.	The dtmmerge within Terrain Prep Tool fails always using a specific Terramodel TIN (.pro). TIN contains points and breaklines. dtmmergeprocess.exe exited with status -1073741819
1-1II8-40800	Batch Processing of "Orthorectify without GCP" Tool Failed	Customer trying to batch process "orthorectify without GCP". When the batch file is run, each process returns an error, "no input file and no output file".
1-9CFE3X	OLH for MosaicPro Color Corrections dialog points to the Welcome page.	From MosiacPro launch the Color Corrections dialog and click on the Help button. Notice that the welcome page is shown instead of the Color Corrections dialog help.

1-9O36PH	Adding a blockfile with one image offline will fail to load rest online images in MosaicPro	This issue did not exist in ERDAS IMAGINE 2013 v13.0.2 and is seen only from 2014. Please follow these steps to reproduce... 1. Launch MosiacPro. 2. Select a blockfile such that it has at least one image online and at least one offline. Open this blockfile in MosaicPro. 3. Use the default options for Elevation Source and Image Area Options. 4. While adding the images, a Locate File dialog shows up asking for replacing the offline image. 5. Click on the Skip button. 6. Notice that an error shows up – when dismissed no images are shown in the cell array of MosiacPro. The behavior in ERDAS IMAGINE 2013 v13.0.2 was, when we Skip the offline images, it would honour the selection and add the remaining online images into MosaicPro. But seems like from 2014 we are leaving a blockfile with offline images unusable within MosaicPro unless and until a user either removes the offline image from the blockfile or makes it online.
1-9V4DDB	MosaicExpress is not creating output if user uses a blk file in the project file	Regression from ERDAS IMAGINE 2013 v13.0.2. Customer reported that while running MosaicExpress, with block files, it kicks back an error message saying that they need IMAGINE Photogrammetry. The customer said that they were running a fully licensed version of IMAGINE Photogrammetry in their system.
1-AQFGGN	Surfacing tool under Terrain Tab Not showing ERDAS IMAGINE Version	Steps to be followed: 1. Launch ERDAS IMAGINE 2. Go to Terrain tab 3. Select surfacing Tool Under terrain Preparation tool. 4. Click on Show Version in the Help Tab on 3D surfacing Dialog Box 5. Observe Blank Dialog Box is Found. This is latent from ERDAS IMAGINE 14.0000
1-AS1SN9	ECW v3 16-bit MosaicPro output unusable due to bad over compression	Original Summary: Improve ECW v3 16-bit output quality using stat information. ECW v3 requires the application to define if the output ECW to be created is 8bit or 16bit. When the output ECW is 16bit, the application must send the min and max values of the input image(s). This is the min and max of every band of the input data This allows the ECW SDK to scale the compression to the data range for the highest quality output file. MosaicPro does not feed the min and max values into the ECW v3 encoding.
1-ASCO4X	MosaicPro fails intermittently when generating large ECW files	Using MosaicPro on Window 8.1, MosaicPro does not create ECW v3 files in some cases. Most frequently found a failure in MosaicPro with the following circumstances: 1. Set ECW Preference to ECW v3 Default 2. Load 306 images 3. Do not save MOP 4. Select ECW as output

		5. Do not enter an ignore value 6. Launch mosaic process Also found this occurs when you enter a 1 or 255 in the ignore value fields.
1-B4M3UX	Mosaicking large number of ECW v2 images in MosaicPro creates empty IMG output file	Mosaicking large number of ECW v2 images in MosaicPro sometimes creates empty IMG output file Customer reported that MosaicPro 2015 is creating a completely black image in the output when mosaicking a large number of ECW v2 images. The input files are 6000 ECW v2 images, 18 GB compressed (326 GB uncompressed) and the output file created is 334 IMG file. Mosaicing a smaller number of ECWv2 files works correctly.
1-B72E2P	Help > Search Commands for "Recode" does not return a result for Recode tool found under Raster tab.	When you use the Search Commands function under the Help tab and search for "Recode" it does not return a result for the Recode tool found under Raster tab (Raster tab > Raster GIS group > Thematic menu > Recode). Instead, it returns two results, one for Fuzzy Recode (Raster tab > Classification group > Unsupervised menu > Fuzzy Recode), and one for Recode (Thematic tab > Edit group).
1-BC0WRT	Help Content missing for streamed mode from Point cloud tab> 3DView> Point Mode and 3D Measure group	To replicate: 1. Launch ERDAS IMAGINE 2. Load any LiDAR Data (.Las File i.e Point cloud data) 3. Select the Point Cloud tab 4. Now select Show 3D from 3D View group 5. Now Point Mode is Highlighted, 3D Measure Group also Highlighted 6. Now Press F1 on Point cloud Tab Observe that in Help page with name Point cloud >3D view> Point Mode> Streamed Mode, description missing and there is no description about 3D Measure group
1-BGUS47	Files of type for blockfile should be changed to "Block file" instead of "LPS Block file".	Since the removal of "LPS" term from 14.0 release, all over ERDAS IMAGINE we have changed the files of type name for a blockfile from "LPS Block File" to "Block File". But seems like we missed to change in MosaicPro as it still says "LPS Block File".
1-BWPFKX	TerraSAR-X data is not displaying the images in Zonal Change once the data is processed	1. Open a new zonal change project and name it test.zcp 2. In the before image add:\\alpha\Teamspace\Pixel\Projects\ZonalChange\Defense\Datasets\Radar\dims_op_oc_dfd2_204280199_1\TSX-1.SAR.L1B\TSX1_SAR__SSC_____HS_S_SRA_20090924T232619_20090924T232620\TSX1_SAR__SSC_____HS_S_SRA_20090924T232619_20090924T232620.xml and the after image\\alpha\Teamspace\Pixel\Projects\ZonalChange\Defense\Datasets\Radar\dims_op_oc_dfd2_204280231_1\TSX-
1-C5Z7E3	FLS Segmentation has merging errors with segments that border NoData	Problem identied when looking at lakes in a segmented image. The merging is suppressed near the shoreline (adjacent to NoData).

1-C5ZH0C	FLS Segmentation does not observe Minimum Segment Size caused by NoData	Segment parameter for minimum Size = 10 but NoData in the input has pixels surrounded by NoData with no neighbors to merge with.
1-CEZNDQ	IMAGINE Orthorectification process doesn't complete with RPC with new SPOT6 DIMAP2 xml file	Customer reported that with ERDAS IMAGINE 2015 and v15.1, the Orthorectification process doesn't complete with new multispectral SPOT6 DIMAP2 xml file. The Process List eventually shows red in the progress meter.
1-CTKP4V	Doc error in Zonal Change under Run the Change Detection Process	On the following page, make the following change: http://doc.hexagongeospatial.com/ERDAS%20IMAGINE/ERDAS_IMAGINE_Help/#ZonalChangeWorkflow.htm under the title Run the Change Detection Process Change the review tab to the process tab
1-CUFK70	Can't orthorectify SPOT7 data	Need to be able to orthorectify SPOT7 data (since it is the same as SPOT6). Can't orthorectify it using either the SPOT6 RPC or SPOT6 Orbital Pushbroom models. Complains that it "Failed to get metadata for //alpha/array4/datalibrary/spot7/prod_spot7_001/vol_spot7_001_a/img_spot7_pms_001_a/dim_spot7_pms_201502081701287_sen_1233481101.xml."
1-D1J2AV	Zonal documentation error: Area weighted change metric should be checked	From the following page in help go to: file:///C:/Program%20Files/Hexagon/ERDAS%20IMAGINE%202016/help/html/index.htm#zonalchange.htm or type "zonal" in the help documentation. Under the topic of Use area weighted change metric, it states the default is unchecked. This is incorrect. It should be checked (true/yes/on). Also the following text should be deleted as well because it is not exposed from the zonal page above: Scale parameter for the segmentation operator Specify the average number of pixels that each output segment will contain; set in FLS Image Segmentation dialog. Keep in mind that this is an average and that the variability in the segments sizes will be determined by the other parameters, primarily the Size parameter. The default is 500. Spectral weight for the segmentation operator Specify how much weight to give the spectral component of the segments; set in FLS Image Segmentation dialog. The default is 1.0. Texture weight for the segmentation operator Specify how much weight to give the texture component of the segments; set in FLS Image Segmentation dialog. The default is 0.01. Size weight for the segmentation operator Specify how much weight to give the size component of the segments; set in FLS Image Segmentation dialog. The default is 0.5. Shape weight for the segmentation operator Specify how much weight to give the shape component of the segments; set in FLS Image Segmentation dialog. The default is 0.5. Minimum segment size for the segmentation operator Specify the minimum size of the segments in pixels; set in FLS Image Segmentation dialog. The default is 4.0. Maximum segment size for the segmentation operator Specify the maximum size of the segments in pixels; set in FLS Image Segmentation dialog. The default is 10000.0
1-G9NQQ6	MosaicPro: Images are not toggled OFF and ON using the 'Display raster images' icon	Images should be able to be toggled OFF and ON using 'Display raster images' when the Vis columns in the image rows are selected. To recreate:

		1. Run MosaicPro
		2. Edit > Add 2 Images
		3. Select Visibility columns in both image rows
		4. Turn On 'Display raster images' icon
		5. Turn Off Display 'Display raster images' icon
		6. Turn On 'Display raster images' icon again. Images are not rendered in the MosaicPro Viewer. You must deselect and reselect the Visible columns to return the rendered images. Worked in 13.02 Broken in 14.01, 15.01
1-HTH1O3	MosaicPro fails when mosaicking ADS80 *.sup files.	Customer is trying to process a mosaic with ADS80 sup files. The sup files are L2's which have come out of XPro. MosaicPro runs through the buffering process, then fails early into the Mosaicking process.
1-JPFUYG	HCS Resolution Merge tool does not work with WorldView-3 data in Geo Lat/Lon when using Inquire Box	The HCS Resolution Merge tool does not work if the input is WorldView-3 data in Geographic Lat/Lon WGS84 projection (calibrated) and the Inquire Box option is used to set the user defined process area. No error messages are reported, the tool just closes after you click OK. The session log simply states "modeler.exe exited with status 4". Steps to reproduce the problem: 1. Display Pan image in a 2D View. 2. Open an Inquire Box anywhere over the displayed data. 3. Start the HCS Resolution Merge tool (Raster tab > Resolution group > Pan Sharpen > HCS Resolution Merge). 4. Select Pan image as the High Resolution Input (Pan) File. 5. Select Multispectral image as the Multispectral Input File. 6. Enter a name for the output file. 7. Select the "User Defined" option for the Process Area and click the From Inquire Box button. 8. Leave everything else as the default settings and click OK.
1-K4S2BB	MosaicPro: Changing image visibility state, images display in incorrect order	When you make an image visible, it gets displayed on top all the other images irrespective of its position in the CellArray (if done without seamlines). Zooming in and out or panning doesn't change the arrangement; although the output is in the correct arrangement. However, that is not the case when you use the "preview mosaic" option the image last displayed after changing the visible status to visible will remain on top.

IMAGINE AUTO DTM

CR #	Summary - IMAGINE AutoDTM	Description / How to Reproduce

1-DHBBR8	XPro SGM overlap setting can't be changed	The overlap setting in XPro SGM can't be changed from the default 50% to other values, so we can't limit the stereo models to run SGM on. This is making the software run on too many redundant stereo models, which takes much longer.

IMAGINE AUTOSYNC

CR #	Summary - IMAGINE AutoSync	Description / How to Reproduce
1-8LRW2T	Using the Back / Next button in the wizard results in an error message	Steps to reproduce this issue. 1. From the Toolbox tab, under Autosync Workstation drop down menu select "Open Autosync Project" to launch a file chooser. 2. In the file chooser select an Autosync project file and click OK in the file chooser. The wizard is launched 3. Click on the Next or Back buttons. 4. Notice that an error message shows up.

IMAGINE EXPANSION PACK - ORTHORADAR

CR #	Summary - IMAGINE Expansion Pack - OrthoRadar	Description / How to Reproduce
1-1HV8-41600	OrthoRadar behaves differently depending on DEM projection information	The ortho resampled output one creates using a NAD27 DEM as input in OrthoRadar does not spatially match the output one creates using a WGS84 DEM.
1-BQ2D9K	AutoSync's output image pixel size is not the same size as input or reference image.	Using ERDAS IMAGINE 2015 AutoSync a customer sets the pixel size to be the same as the input image, but the output image has a pixel size that is different than the input image. Input image pixel size in degrees: X = 0.0002981625048, Y = 0.0002981625048 Reference image pixel size in degrees: X = 0.0000904766556, Y = 0.0000904766556 Output image pixel size in degrees: X = 0.0002986489037, Y = 0.0002987437183
1-8ZS6E3	3D View: Correct the "Import a Model Coverage" section of the Model Layers workflow.	There is a mistake in the "Import a Model Coverage" section of the Model Layers workflow in the ERDAS IMAGINE help documentation. 1. Open the IMAGINE Help and from the Contents panel go to 3D Visualization > VirtualGIS User Guide > Model Layers Workflow > Import a Model Coverage. 2. Scroll to the bottom of this page until you get to the Import the Model Coverage section, which says: Now you will use the Import Model Coverage wizard to import a model to cover the area you digitized in

the previous steps.

- o From the 3D View, click File button > Open > Vector Layer. A File Selector opens.

- o Select Files of Type > Shapefile.

- o Browse to the directory in which you saved trees.shp, select it. Click OK.

This is not correct.

1-A1XX0F	Export NITF 2.1/NSIF 1.0 TRE metadata fields do not have a valid default value for CEL	Two NITF/NSIF TRE metadata fields have been identified to use invalid default values for the CEL value. The problem is not persisted in every TRE metadata field but has been positively identified in TRE ACCPOB and TRE SNSPSB. To observe the problem: 1. Run Export NSIF 1.0 Imagery 2. select the IMAGE group to the left 3. Task -> Add TRE 4. Parameters: Segment: IMAGE_1, Section: User Data, TRE: ACCPOB 5. Select ACCPOB in content window 6. Observe that the CEL value is set to 00000 Comparison can be made to valid metadata values for TRE: ACCHZB using the same steps above where the CEL value is set to 00011
1-FU8QXH	KOMPSAT5 is not opening in ERDAS IMAGINE 2015 v15.1	Customer reported that their KOMPSAT5 data doesn't open in ERDAS IMAGINE 2015 v15.1. This appears to be related to data from a specific receiving station.
1-JSFK4V	Sentinel-1 kills Image Info and CCD immediately.	Sentinel-1 kills Image Info and CCD immediately upon trying to open the image file.

IMAGINE MAP2PDF

CR #	Summary - IMAGINE Map2PDF	Description / How to Reproduce
1-1HY8-39900	Export raw image to GeoPDF results in error or crash	Exporting a raw image to GeoPDF results in a crash.

IMAGINE OBJECTIVE

CR #	Summary - IMAGINE Objective	Description / How to Reproduce

1-9B05OH	Objective crashes after adding EDA as a VOP and clicking Accept to training samples	Open the attached model in Objective. In Vector Object Operator, select and add EDA. Once EDA is added, the training samples labelled as both turn Red. Clicking Accept will cause Objective to crash.
1-9PXIQK	IMAGINE Objective crashes while using EDA Operator in the "Vector Object Processor".	Customer reported that while using EDA Operator, IMAGINE Objective crashes. Customer is using the EDA Operator in IMAGINE Objective in the step "Vector Object Processor". Every time he tries to accept the training samples, the program crashes. In order to reproduce please do the following: 1. Open the lfp in Objective 2. Go to Vector Object Processor 3. Select: EDA:image 4. Go to the Training tab 5. Click on accept. The program crashes
1-92UUJ1	Vector Cleanup Operator (VCO) Outlier Clipper generates an error: character 46 is illegal	Using customer project and data. IMAGINE Objective hangs indefinitely at the VCO Outlier Clipper segment of the model. Further tests shows the Vector Cleanup Operator (VCO) Outlier Clipper generates an error: character 46 is illegal in the filename

IMAGINE PHOTOGRAMMETRY

CR #	Summary - IMAGINE Photogrammetry	Description / How to Reproduce
1-9A8MDW	Triangulation cannot handle same ray images from SPOT5 Orbital Push broom model	Several issues are observed when triangulating SPOT5 1A PAN images 1. Some images are from the same orbit, same viewing angle, so the tie points rays do not intersect to yield 3D coordinates. 2. For some images although the Metadata indicates the imaging date/time different, triangulation still fail to compute the 3D coordinates because viewing angle is too close. 3. APM did not collect points where it should be because of small overlaps. When you triangulate just with GCPs RMSEs are good. When you triangulate just with ties RMSEs are good, but when you introduce ties and GCPs triangulation converges, but GCP RMSEs are too large. This doesn't change when I used Topo center.
1-852PLS	Z Scale in 3D view has no effect	To replicate: 1. Display a LAS file as a Point Cloud in a 2D View. 2. Start the 3D View option. 3. Change the 3D View so you can see the height of features. 4. Now change the Z Scale which, according to the Help, should change the vertical exaggeration of the data.

		However nothing appears to happen - the data looks exactly the same no matter what Z Scale you set.
1-9ZGEIT	Pleiades GOP model seems have some problems to handle this data	We can't solve the attached block file to get a good geometry. Large Y parallax still remains after adjustment but the RPC model for the same data seems good.
1-A5C7MF	On-line-help for sensor tab broken	Open a block, click on Interior Orientation icon under Photogrammetry tab and click Help button on Sensor tab. You see that the online help is not available for this dialog.
1-AJIU8N	Redundant messages for inactive images	I start with a block file where some of the images are offline. I made the offline images inactive. When I run SGM, I get messages that say the offline images are not available, one for each offline image. These messages are needless since the offline images are already made inactive.
1-B9LB7E	Unable to generate LAZ from XPro SGM	Online help for XPro SGM mentions that point cloud can be generated in LAZ format but the application does not give you an option to select LAZ as an output format.
1-BDGBL9	XForm transform error message in Image Chain	A specific IMG file does not behave correctly when displayed as Image Chain. To replicate: 1. Launch ERDAS IMAGINE. 2. Open the image as Image Chain. 3. Click 'Image Chain' button. An error occurs stating: "Spatial Model failed in Raster Cache 3. Error: erdas::raster::XFormMathTransform::Impl::transform failed exfr_TransformN failed 'ICSTransformation' XFormTransform failed."
1-BGYTHI	Merging only outputs the first point cloud in the merge list	Merging Point Cloud LAS files from Land Survey of Finland generates output only with the first defined file (topmost on the list). ERDAS IMAGINE displays only the first file in the list in the output file. The output file's statistics show that all points are there, but in ERDAS IMAGINE viewer only the first file is visible.
1-BGZDDD	Terrain Prep Tool creates weird RGB values	Terrain Prep Tool creates weird RGB values in the output LAS file, if a LAS file with RGB values is used as input and the Filter Point option is set in the pre-process settings.
1-BLFG41	"Toggle Automatic Cursor Mode" in SPM doesn't work in Ribbon	"Toggle Automatic Cursor Mode" in SPM doesn't work if project is opened from ribbon interface. SPM works normally when opened from Toolbox > LPS > SPM.
1-BNZ8JF	File Metadata doesn't show individual LAS metadata and always shows metadata of latest file opened.	Steps to reproduce. 1. Launch ERDAS IMAGINE and open two different LAS in separate viewers. 2. Click in the 1st viewer and launch the metadata. 3. Click on the File Metadata tab and make a note of the information.

4. Click in the 2nd viewer and launch the metadata.

5. Click on the File Metadata tab and make a note of the information.

6. In the metadata launched from the 1st viewer browse between tabs i.e., click on any other tab and click back on the File Metadata tab.

Notice that the information shown in the metadata launched from the 1st viewer is that of the metadata launched from the second viewer.

1-BOQQZH	The preference Resampling Method for DEM	Online help says: "The preference Resampling Method for DEM has been moved to the GCP Editor category." This is incorrect. It is moved to the Raster Processing category.
1-BPMWSX	SPOT6 & 7 missing from supported RPC sensors list	SPOT6 (and 7) RPC is missing from the list of supported RPC sensor files.
1-BPQOXY	PATB imported incorrectly as digital image project	When you import a frame camera PATB .ori file to block file, the resulting block is a digital camera project.
1-BPRYG7	Point cloud Offset tool doubles the offset result when saving file.	Use the Offset tool to offset the elevation of selected points, save the LAS file and check the new value. Notice that the offset is doubled.
1-C0WHFP	Align Pixels in Orthoresampling dialog not working as requested	The align pixels button modifies the UL and LR coordinates to be a multiple of the pixel size, but it does this based on the coordinates of the center pixel since IMAGINE coordinates are based on pixel centers. This should be done based on the corner coordinates.
1-C5YX89	Sample posts, Line posts and Z plane columns of RPC Generation tool are not editable	Sample posts, Line posts and Z plane columns of RPC Generation tool are not editable. These entries should be editable to let users change the values.
1-CAS1VP	Ancillary files are preventing Intensity display of Point Cloud LAS	Occurs with specific LAS files only. To replicate: 1. Open the .las into a 2D View as a Point Cloud. 2. Fit to Frame. 3. On the Point Cloud tab change Color By to Intensity. 4. Note that the display (incorrectly) turns entirely black. 5. On the Table tab turn on the attribute table and note that there are valid values stored for intensity. 6. Now clear the data from the View. 7. Delete/rename all ancillary files so you are left with only the .las file.

8. Redisplay the data into a 2D View.

This time when you change to Intensity you will get a correct intensity display. Something in the ancillary files is messing up the display of Intensity.

1-CG965O	Orthorectification creating a white PEG2000 output	Ortho rectification is creating a completely white JPEG2000 output file when the output file projections is a non WGS84 / Geographic projection.
1-DOEV9F	The Stealth E-Mouse Setup OLH references obsolete instructions	The Stealth E-Mouse Setup references a website location and instructions that are obsolete.
1-DTK3LR	Incorrect value reported for GCP RMSE in triangulation report	Total RMSE for GCPs is expected to be calculated as the square root of $(RX^2 + RY^2 + RZ^2)$ but it isn't so.
1-E5WYAV	ERDAS IMAGINE crashes when Vertical reference data is reset with a DEM without Map Info	Steps to reproduce: 1. Launch ERDAS IMAGINE and open an LSR block file: 2. Make sure that all the images are online and then launch CPM 3. Under tools select "Reset Vertical reference" 4. Select DEM under Vertical Reference source dialog 5. Select Find DEM in the dropdown menu and pick a Dem without projection information. 6. An error message will be shown. Click Ok button. ERDAS IMAGINE crashes
1-ELJAAS	Rebuild all pyramids does not work if there is an existing rrd file	Rebuild all pyramids does not work if there is an existing rrd file. In this scenario, the rrd files should be deleted and recreated.
1-FKGU04	Point Cloud Reproject Operator does not run in Batch	Point Cloud Reproject Operator crashes with 'Run in Batch'. Same model runs without error from 'Run' in Spatial Modeler Window.
1-IAWLAZ	Point cloud to Raster operator taking any string even special characters as Pixel type	Pixel Type port in Point cloud to Raster operator should have acceptable values.
1-JS8ALM	Check points on single image are not used in triangulation summary	Check points measured on single image are not used in triangulation summary report or review for orbital push broom model. This happens when the checkbox "Use Image Observations of Check Points in Triangulation" is disabled on Block Triangulation Properties dialog.

1-JSFJTY	GlobalElevationStats doesn't consider vertical datum change	There are three places currently using GlobalElevationStats to get z stats: RPC generation, SGM preprocess and Block file import/export. However, none of them do vertical datum conversion unless the datum is EGM96 or unit is meters.
1-JSFJYO	Speckles in ortho image	Specks are seen in Ortho resampling results when the input images have zero values and the cubic convolution resampling method is used.
1-JSFK2W	The number of point in output file is different after classification with HPC file	Run point cloud classification with a point cloud in HPC format. Compare the number points in the input and output file. The number of points is different. Classification should not remove points.
1-K4TCBB	XPro SGM crashes if disparity difference is set to zero	XPro SGM crashes ERDAS IMAGINE if disparity difference is set to zero.
1-KFLCWP	XPro SGM Image pair list recalculate doesn't update the image list	The Recalculate functionality in SGM Image Pair tab does not update the list unless you go to another tab and return to it.

IMAGINE PROFESSIONAL - CLASSIFICATION

CR #	Summary – IMAGINE Professional	Description / How to Reproduce
1-9704F2	Signature Editor crashes when adding signatures from selected AOIs	Using specific customer data, the Signature Edit will crash randomly when adding signatures after selecting a single AOI. The crash behavior is much more consistent when adding signatures (as the first signatures) using 'Select By Box' to select AOIs. If a signature exists before 'Select By Box' adding signature is used, it crashes less often. Sometimes the same AOI signature that that is added successfully may crashing the same session if you attempt to add that AOI signature next. Adding the first signature when selecting the full extent of AOIs will repeatedly cause the Signature Editor to crash.
1-80L2VN	Unsupervised Classification aborts with NoData value #QNAN	Unsupervised Classification aborts when input image contains NoData values set to #QNAN.
1-8U79Q1	Spatial model with Attribute filter, Spatial query and Preview crashes ERDAS IMAGINE	To replicate: 1. Invoke ERDAS IMAGINE 2013 v13.0.2 2. Go to: File-> New-> Spatial Model Editor 3. Open specific gmdx Spatial Model and Click on Preview from Spatial Modeler Observe that when the attached model is Previewed ERDAS IMAGINE crashes

1-9704F2	Signature Editor crashes when adding signatures from selected AOIs	With some 16 bit data, the Signature Editor will crash randomly when adding grouped signatures using 'Select By Box' to select AOIs. The crash may also be seen when adding signatures from smaller AOI groups or even single AOI signatures. To recreate crash: 1. Open specific 16-bit IMG file in 2D View 2. Run Raster > Classification > Supervised > Signature Editor 3. Open AOI file > AOI Drawing > Select menu > Select By Box Drag the box to select the full extent of the displayed AOIs 4. Select the 'Create New Signature from AOI' icon and the software exits. Workaround: Problem seems to be related to a faulty Default bin function written to the data (CR#1-K19K1R). Recalculating the statistics using Direct binning function will prevent the crash from occurring.
1-9ATH4K	Spatial Modeler will not process Shapefile with hyphen in name.	A spatial model will not run if it contains an input Shapefile that has a hyphen in its name (ex. contours-3.shp). The ERDAS IMAGINE session log will report the messages: "Unspecified function failed", "The expected existing feature metadata was not found." If you rename the Shapefile so that it does not have a hyphen in the filename, the spatial model will run without any problems.
1-9D1Q7N	Discriminant Function OLH references outdated software option labeling	OLH for Classification > Change Detection > Discriminant Function > Output Options references incorrect naming for software options. Output Options as named in the ERDAS IMAGINE 2014 software: Additive Change Image: Subtractive Change Image: Output Options as named in the 2014 OLH (and last used in 2011 software): Positive Change Image: Negative Change Image:
1-A3R385	Cannot process/preview Shapefile in Spatial Modeler when SDI file is in the folder	When an SDI file is in the same folder as a Shapefile, the Spatial Modeler cannot process a Shapefile of a different name.
1-DGB09C	Specific Shapefiles can't be read by the Vector Input operator	Shapefiles in specific Projected Coordinate System can't be read by the Vector Input operator. To replicate: 1. Start Spatial Model Editor. 2. Add a Vector Input operator. 3. Double-lick the input port and select one of the affected shapefiles, 4. Right click on the operator and select Run Just This. 5. Error: Spatial Model failed in Vector Input. 6. Error: erdas::sb_geomedia::VectorSource::OnExecute failed Warehouse connection is not established.. 7. Other Shapefiles associated with other datasets seem to work fine - it's something about the PCS that is rejected.
1-725QZL	Reconfig python failed--support 64-bit python	When executing the "reconfig python" option under the File tab, a "Python cannot be Found insearch path or registry" error is displayed. This occurs with Python 64-bit version.

1-7DCL7L	vector layers are not overlaying on each other after conversion from .shp to .gwp	1) Invoke IMAGINE->Manage data tab->GeoMedia Tools 2) Select Shapefile to Warehouse option 3) Use this data:\\alpha\Teamspace\Gnurf\Data\Vectors\zone88_point.shp and zone88_polygon.shp 4) After conversion display both shapefile and warehouse file in 2-D view "Observe that the vector layers do not overlay on each other" Note: This is particular to these shapefiles. Could not observe this behaviour for shapefiles other than zone88
1-FQ1XWX	Shapefile previewed from spatial model appears zoomed out instead of fit to frame.	When previewing a Shapefile from a spatial model, the preview displays zoomed out instead of fitting to the frame of the View. Three Shapefiles with different map projections and the spatial model "vector_preview_zoom.gmdx" have been copied to \\Alpha\Siebel_Bug_Data\1-FQ1XWX Steps to reproduce the problem: 1. Open the spatial model "vector_preview_zoom.gmdx". 2. Select one of the Shapefiles as the Vector Input. 3. Click the Preview button. 4. Display the same Shapefile in a different 2D View to see how it should be displayed.
1-C9H2D4	DeltaCue - Spectral Filtering - On and Off icons reversed in documentation.	The help documentation for the Spectral Filtering tools in the DeltaCue Change Display viewer has a minor error. The pictures for the "Turn segment selection on" and "Turn segment selection off" buttons are reversed in the workflow to turn off a spectral class (steps 2 and 5). The image "dqadd.png" is used where "dqsubtract.png" should be and vice versa. Start the ERDAS IMAGINE 2015 or 2016 Help and go to Image Interpretation > DeltaCue Contents > Change Display Viewer > Spectral Filtering
1-7X3GQO	Unsupervised Classification should be able to process (ignore) all NoData values	Images that have NoData set to value 1.#QNAN cannot be used with Unsupervised Classification. Unsupervised Classification aborts when using this data as input. There is no way for the Unsupervised Classification application to ignore this NoData. Unsupervised Classification will work when 0 background data is set to NoData Value 0. Other ERDAS IMAGINE applications cannot correctly process NoData set to 1.#QNAN. These applications include other Modeler operators. Median and Stack Median have been cited as not being able to ignore NoData which invalidates their output. To recreate: 1. Run Classification > Unsupervised > NDVI using a Landsat image as input 2. Select the NDVI index and all other defaults 3. Run Classification > Unsupervised > Unsupervised Classification using the data generated from NDVI as input.
1-8A50JT	Problem with Shapefiles that have attribute names larger than 10 characters	The Spatial Modeler has a problem handling attribute column names that are longer than 10 characters. When trying to access the Shapefile attributes in the Query Builder tool it will add extra random characters to the attribute column name. For example, an attribute column name with 11 characters such as "RibbonWidth" will appear as something like "RibbonWidthF_y___G<" in the Query Builder. This "new" attribute column name will be different on different systems and in different sessions on the same system. The resulting query might work on one system, but you cannot transfer this model to another system. How to reproduce: 1. Start a new Spatial Model Editor (File > New > Spatial Model Editor) 2. Open the spatial model "query_shape.gmdx" (Fie > Open > Open Spatial Model)

		3. Double-click on the Filename port for the Vector Input operator and select the Shapefile "VOO_Centerline1.shp".
		4. Double-click on the ShapeFileName port for the Shapefile Output operator and enter a name for the output Shapefile.
		5. Double-click on the Attribute Query port for the Attribute Filter operator to display the Query Builder tool. In the Query Builder click on the Attribute drop-down list and select that attribute that begins with "RibbonWidth".
		You will notice that there are extra characters added to the end of this attribute name. From the Operator list select "Less than <". Enter "3.0" in the Value field and click OK. You can run the model if you want, but the problem is the extra characters added to the end of attribute names that are longer than ten characters.
1-8CK2GD	Opening Processing Properties puts icon file on recent list	From Spatial Model Editor, open and close Processing Properties. The file icons/block.ico is put at the top of the recent file list. The software shouldn't do this.
1-8LWNTN	Count is NOT required for Dynamic Table Input (List) operator	OLH for Dynamic Table Input (List) operator indicates that the Count port is required. It is not. Count will be derived from the number of list entries if it is omitted.
1-8N6FFQ	AOI in Spatial Modeler Processing Properties is ignored	AOIs are used in legacy Model Maker, but not in Spatial Modeler.
1-8UVAZH	Copy failure of full NDVI model.	When using the pre-packaged NDVI spatial model from clicking "view" under the NDVI unsupervised classification in ERDAS IMAGINE you cannot copy the NDVI model. When you highlight the desired operators and click copy you receive the error message "Process has 2 operators with the display name: 'Min-Max Stretch'".
1-8WWC7F	Least Cost Path operator misinterprets the Cell Size Rule	The Least Cost Path operator in my model takes in the Start and End point location rasters at 10m resolution and the Cost and Elevation rasters at 3m resolution i.e. the operator has (at least) 4 "parents" which are providing resolution information. If the Processing Properties / Grid/Cell Size / Cell Size Rule is set to "Minimum of all inputs in model" the least cost path, when previewed, is visibly calculated at 3m resolution. However, if the Processing Properties / Grid/Cell Size / Cell Size Rule is set to "Minimum of parent inputs" the least cost path, when previewed, is visibly calculated at 10m resolution (you may need to zoom in / zoom out to get the Preview to refresh). As far as I can see, both these rules should result in a 3m output since the Least Cost Path operator has parents of both 10 and 3m resolution and so the minimum should be 3m.
1-92JG0P	Batch doesn't work correctly (determine which ports to variablize)	Batch doesn't correctly determine which ports to variablize. It always adds all of the File Input ports even if they are satisfied by incoming links or even if they are hidden. Whereas if you use the run button and you will see that it only shows unhidden unsatisfied inputs in its list of things that need values. This should be made consistent by requiring the use of Port Inputs.
1-9981F9	Using a Spatial Model which combines two calibrated inputs, the output has no map info.	To reproduce: 1. Run a specific .gmdx model. 2. Open Metadata for output file. 3. It has no map information.

		4. Now open Processing Properties -> Window tab. 5. Change from Edges of cell to Centre of cell. 6. Run again. This time the output retains map info. It should retain map info regardless of that property setting.
1-9MYEX9	Spatial Model can't handle "#" in path to WorldView-3 TIFF data	To replicate: 1. Start ERDAS IMAGINE. 2. File > New > Spatial Model Editor. 3. Open a specific spatial model which uses as input a TIFF with "#" in the path. 4. Click Preview - It doesn't work. The TIFF file can be opened in 2D View. **5.** Similarly, opening it in Image Chain will crash ERDAS IMAGINE.
1-9X3YN3	RGB encoding is failing	An issue while performing a work flow on Spatial Model Editor . Work flow steps: 1. Take two images with .las file extension(sub_1_1.las,sub_2_1.las). 2. Give them to RGB encoder as point cloud inputs. 3. Make RGB encoder selection port to be hided. 4. Give image files(sub_1.img,sub_2.img)as inputs to Filename port of RGB Encoder 5. RGB Encoder outputs are given to a point cloud Merger, Final output(sub1+2_2014.las) is taken from point cloud output operator . Issue is the output formed is not encoded with R,G,B colours , sometimes IMAGINE Crashing(while performing this work flow). □This is the same case with IMAGINE 2014. >spatial model and input data are given in ZIP file
1-9ZNTZF	Spatial Modeler Python examples throw errors	Example 3 throws error about disk space, but still runs. Example 4 fails with an error message about converting RangeClass to python and produces no output.
1-ASGP9B	Can't run classification Operators more than once - temporary output is locked	1. Open a spaecifc Spatial Model which uses the Unsupervised Classificaiotn operator. 2. Click Run. 3. Input one image provided and name the output image. Wait for the Model to complete successfully. 4. Click Run again. Input a second image and name the output image (differently). 5. You will receive an error stating that the temporary segmentation (and isodata) images can't be deleted. Only by quitting and restarting ERDAS IMAGINE can you run this Model a second time. The two Classification operators need to be modified so that the output files are optional so that when run a uniquely named temp file is automatically created and cleaned up afterwards.
1-AUS7GF	Cell Y operator returns x	Cell Y returns x cell size. This is incorrect for non-square pixels.

	cell size instead of y	
1-B117PB	OLH for Aspect operator - graphic is wrong	Bring up OLH for Aspect operator - incorrect graphic is shown.
1-B2EOVX	Stack Layer operator does not work with only one input argument	Stack Layers operator only works if the function has more than one argument (easy to work around, but has to be found out). But it means that legacy GMD models with Stacklayer functions that contain only one argument cannot be opened.
1-B424DX	Performance warning message when creating signatures with Signature Editor.	ERDAS IMAGINE gives a performance warning message when creating new signatures with the Signature Editor. The warning message says: "Covariance calculation requires stack processing but input layer stack isn't suitable." If you create the signatures using a full scene of Landsat 8 data (bands 1-9) it works great, no warning messages. But if you create the same signature from the same AOI using a subset image from the same Landsat 8 scene you will get the performance warning. This message will occur for every signature added to the Signature Editor. The signatures have checks in the "I" column of the Signature Editor's CellArray. This problem can also be reproduced with "lanier.img" from the IMAGINE example data set. If you remove band 6 from this image and create a signature from the new image (bands 1-5&7) you will not receive the warning. You can still collect signatures and perform a supervised classification with them and it appears that the classification results are not affected.
1-B5JO1L	Model with Apply Color Table crashes if no color table is supplied	Found while testing the File to File Image Chain models. Models which have no color table passed in to Apply Color Table, and Apply Color Table is the input to a Raster Output, frequently crash in Windows 7. In Windows 8, the model gets an error rather than crashing, which is the expected behavior.
1-B76J3Z	OLH for Color Temp in Stretch Panel is backwards.	"Lower values warm up the image by increasing the warmer hues, whereas higher values cool down the image by increasing the cooler hues." Is incorrect. It should be the other way round.
1-B8GA6Z	Basic Gaussian missing from Stretch Panel Help	The Basic Gaussian option is not mentioned in Stretch Panel OLH
1-B9KSHL	Spatial Modeler Model Input gui will not resize to include multiple model inputs	The auto-generated Spatial Model input gui will not resize or scroll to select multiple inputs that do not fit on the initial dialog display on the monitor. This prevents entering all of the inputs needed to run the model when prompted.
1-B9QT7V	Preview by RGB crashes ERDAS IMAGINE 2015 with customer's spatial model	Customer reported that they detected a preview failure issue in the Spatial Modeler of ERDAS IMAGINE 2015. The customer's spatial model merges four point cloud LAS files and encodes the merged LAS with RGB from IKONOS data. Using the preview as output will display the merged LAS in the preview display colored by "Elevation" (by default). Switching to" Colored by RGB" will cause a crash of ERDAS IMAGINE2015. The real output LAS file can be produced without any error. It can be displayed colored by "Elevation" or "RGB" without causing crashes.
1-B9WRV0	OLH for Create Column(s) operator lists incorrect input port requirements	OLH Operator Help for Create Column(s) operator lists all 5 input Connections as Required. The Create Column(s) Properties Panel lists only two ports (AttributeName1, AttributeValues1) as Required which is correct.

1-B9XRH9	Create Submodel loses flow control	To replicate: 1. Open <IMAGINE_HOME>/etc/models/normalized_difference.gmdx in Spatial Model 2. Editor. 2. Select everything but Raster Input, Raster Output, and Preview. 3. Create Submodel from ribbon. 4. Expand the new Sub-model. Flow Control connections from the If are missing.
1-BB0SIS	Cell Area isn't handling linear units on Lat/Lon images	The Cell Area operator has not been updated. So if I request Cell Area in Hectares, for a Lat/Lon input image, it fails.
1-BE9Q1M	Spatial Modeler OLH uses mislabelled operator icon	Operator Help for Spatial Modeler 'Set To NoData' operator uses mislabelled icon. Operator icon is named 'Set NoData To'. Should be named 'Set To NoData'.
1-BFUCIO	Command line operator not displaying input port	To replicate: 1. Open a new spatial editor 2. Drag and drop in a Command Line Executable 3. Select any .exe in the command drop down list 4. In the ports column, add a new input (Input1) 5. Enter into arguments panel $Input1 click ok The command line operator does not show the input1 port - this used to display in earlier versions
1-BFZ30P	Global Histogram does not always add a row for background (0)	Problem discovered while trying to build a Model that ran Clump and Sieve and attempted to copy attributes (such as colors) from the original image to the output. But what was discovered was that for images that do not contain pixels with value 0 you need to add a Background row to the Sieve table, whereas for images that contain 0s you do not. Sieve works fine in either instance, but trying to sync up attributes does not. It seems like the Global Histogram operator isn't always creating a row for 0.
1-BLDJN7	Insolation operator hangs ERDAS IMAGINE after running once.	To replicate, using a Spatial Model that uses the Insolation operator: 1. Load Model into a Spatial Model Editor window. 2. Click Preview. 3. Results will display in Preview window. 4. Double click the Date input port and alter the time (put it forward an hour). 5. Once you click OK on the Date / Time / Zone dialog there will be a slight pause and then the Busy icon will come up. And never go away. 6. If you output to a raster (rather than Preview) you can only run the Model once as well -

		after running it once and then changing the Time, ERDAS IMAGINE will hang when you try to alter the output raster name.
1-BOSIL9	Dodge Plus preview causes ERDAS IMAGINE to crash	Discovered using a Spatial Model which loads 10 separate images and processes each through the Dodge Plus operator before sending the results to a Preview. Once the data has displayed start roaming using the middle mouse button from the top left toward bottom right of the data extent. After a short period ERDAS IMAGINE will crash.
1-BPOJ7F	Spatial Query operator Help has diagrams which aren't explained	The diagrams shown on this page http://doc.hexagongeospatial.com/ERDAS%20IMAGINE/ERDAS_IMAGINE_Help/#spatial_subset_port_spatialoperatorport.htm …might be very helpful if there was some sort of key telling me what the color coding means.
1-BPSU9S	Condition Editor's "Matches:" drop-down menu is missing until you move cursor over its location.	In the Condition Editor that is accessed from the Criteria dialog the drop-down menu for Matches "ALL rules" or "ANY rules" is missing until you move your mouse pointer over top of where it should be located. How to reproduce the problem: 1. Double-click on the Criteria operator in a spatial model. 2. In the Criteria dialog, click the green icon to add a new row, then click in that new row under the Condition column to display the Condition Editor dialog. 3. In the Condition Editor dialog, notice that there is no menu next to Matches (upper-left corner). 4. Move your mouse pointer to the right of Matches and the menu suddenly appears.
1-BQYP1A	Modeler batch doesn't recognize port without file path (e.g., scalar, date, string...)	A Spatial Model has two input ports: one input port for raster, another input port for scalar. The model add them together. When you run the model, both scalar and input raster can be specified. But if you "Run in Batch" there is no scalar variable at all in the Batch Editor's command line, so no scalar variable can be recognized in the command line, and it is impossible to manually create a variable for the scalar.
1-BT7C3P	Attribute Lookup with incorrect input will crash ERDAS IMAGINE.	1. Launch ERDAS IMAGINE. 2. File > New > Spatial Model Editor. 3. Open a specific Spatial Model which includes Attribute Lookup Operator with incorrect input. 4. Run the model. 5. ERDAS IMAGINE crashes.
1-BT82V7	Changing parameter on a Running model can hang ERDAS IMAGINE	Discovered while creating a simple Spatial Model which runs Relief on an input DEM and produces an output. If you start the Model running, wait until the progress meter is almost (but not) complete and then change a parameter (e.g. change Elevation from 45 to 33 and hit Return), 50% of the time ERDAS IMAGINE will hang. Sometimes it will "complete" with a red X on the output raster, but frequently it hangs instead.
1-BTG43X	FLS Segmentation crashes with a -1073741819 error when using some Pleiadies	Open spatial modeler. Add the fls segmentation operator then add the following data \\alpha\ARRAY4\DataLibrary\PLEIADES\ORTHO_UTM_BUNDLE\IMG_PHR1A_P_001\img_phr1a_p_201202250025599_ort_ipu_20120504_1772-002_r1c1.jp2

	data	
1-BY993P	HistoEq operator outputs only 3 bands for 4 band input data.	Discovered when building a Spatial Model which utilizes the HistoEq operator. The input to the HistoEq is 4 bands but output is only 3 bands. If you change Band Selection to any number of bands other than 4, the output has the same number of bands as the input. This worked correctly in previous versions of ERDAS IMAGINE.
1-BY9RVU	HistoEq operator outputs f64 data, should output s32 as documented.	The HistoEq operator outputs f64 data. The Help states that it outputs INTEGER, so the output should be s32. HistoEq output is always integral values ranging from 0 to BinCount - 1, so there is no need to output float data. The legacy Modeler HistoEq outputs integer data, as it should.
1-C9EL0P	Preview from HistoEq operator looks wrong.	To replicate: 1. Open a specific Spatial Model using HistoEq. 2. Click Preview. 3. Image is not correct. Lacking in red. Previous versions of ERDAS IMAGINE looked correct. 4. Output to file instead of Preview, then view output file, looks correct.
1-CHSGPN	Spatial Modeler Expression Editor has garbage at end of operator syntax	To replicate: 1. Make sure that your system font is set at 100% and not larger (at least < 125%). 2. In Spatial Model Editor create an Expression operator. 3. Double-click the Expression operator to bring up the Expression Editor. 4. Expand the Favorites category in the tree view and click on Raster Input. 5. Notice that the syntax label has garbage at the end of each line (it's actually a repeat of some valid characters at the end of the line). 6. Click on different operators and notice that the garbage is there for most (but not all) operators.
1-CJR4FL	The AOI file chooser doesn't show while running a model with RasterInput operator with AOI port	Customer reported that if an input AOI port is added in InputRaster operator, when running the model it doesn't give a file chose button to locate the AOI file. If the user manually adds the file name, with path, in the box for AOI, the model works.
1-EDUFKU	Previewing thematic image crashes ERDAS IMAGINE when Viewer preference set to "No Stretch".	If you have a thematic image loaded into a Raster Input operator and connect it directly to a Preview operator, ERDAS IMAGINE will crash when you attempt to Preview the image if the Viewer preference for the Default Stretch is set to "Do not apply the default or saved stretch to data values". An error message pops up stating "Tried to set nonexistent property" and then ERDAS IMAGINE crashes.
1-EF5NFT	Relief operator in submodel hangs when "Native Type" is passed	Run a specific model which has the Relief operator embedded in a sub-model and it will hang. If you remove the DEM Units port in the submodel, so that Native Type is set directly on the Relief operator, then it works correctly. Also runs correctly if port is set to Meters instead of Native Type

	in through input port	
1-EGGHWX	Errors and omissions from IMAGINE Segmentation FLS operator OLH	There is inconsistent terminology and omissions in the OLH for the IMAGINE Segmentation FLS operator. - The parameter in the FLS dialog is named "Pixel:Segment Ratio" and named "ScaleFactor" in the Spatial Modeler properties. The Spatial Modeler properties needs to be renamed "Pixel:Segment Ratio". - The "Pixel:Segment Ratio" description needs to be modified to follow the correct description below. "Pixel:Segment Ratio - Specify average number of pixels that each output segment will contain. Keep in mind that this is an average and that the variability in the segments sizes will be determined by the other parameters, primarily the Size parameter." - There is an omission of "Use Zonal Input Image:" from the GUI OLH - There is an omission of "ZonalFile" from the FLS model properties OLH See attached docx
1-EW039F	Opening specific .gmd in Spatial Model Editor crashes ERDAS IMAGINE	Problem discovered when trying to open a legacy .gmd model into Spatial Model Editor. To replicate: 1. From Toolbox tab start the old Model Maker. 2. Open the model to see that it is a valid model. 3. Close Model Maker. 4. Start a Spatial Model Editor. 5. Click the File Open icon on the Quick Access Toolbar. 6. Select the .gmd model and click OK. 7. ERDAS IMAGINE crashes.
1-EYJDNX	Rapid Atmospheric Correction not adequately explained	Numerous customers have asked for additional detail on what the Rapid Atmospheric Correction operator does. The following information should be added to the Help: Rapid Atmospheric correction uses information from companion metadata files (for example, <basename>_metadata.xml for RapidEye and *.IMD for DigitalGlobe images) to perform 1. Absolute calibration: Raw DN counts converted to at-sensor radiance (in units of energy flux); 2. TOA calibration: sensor-received light radiance is recomputed to the top-of-atmosphere (TOA) normalized reflectance (using known season-varying incident sun energy and spectral density distribution, as well as sensor sensitivity (spectral response) to the surface-reflected sun energy spectrum for each band); 3. Atmospheric correction: compensation for light scatter and absorption by the atmosphere, reducing TOA reflectance to ground-level reflectance. This step involves using image statistics. The result is a normalized ground reflectance image scaled by 10000, a common industry practice for atmospherically corrected imagery.
1-FEA04Q	ERDAS IMAGINE 2015 v15.1 crashes while switching from Elevation to RGB when RGB Encode is used with Preview	ERDAS IMAGINE 2015 v15.1 crashes while switching from Elevation to RGB when RGB Encode operator is used with the Preview operator. Customer reported that Spatial Modeler RGB Encode Operator for LAS file is working fine. The output delivers color encoded points. However when using Preview operator to check the proper results, ERDAS IMAGINE 2015 v15.1 crashes while switching from elevation to RGB display in the preview tab.
1-FFGU2X	Global Histogram with USEALL option causes all Model links to be removed (and	To replicate: 1. Open a specific spatial model into the Spatial Model Editor

	subsequently become unstable)	2. Click Run 3. Specify an Input file 4. Leave Ignore Option (an input to the Global Histogram operator) blank. 5. Click OK - model runs fine. 6. Now click Run again. 7. Specify the same Input file 8. Set Ignore Option to "USEALL" (which the Help implies is a valid option). 9. Click OK - model fails and also removes all links between operators. (Typing ANY string into the Ignore port, not just USEALL, seems to cause this behavior)
1-FG6FQD	Volume calculation on point cloud in "Point Cloud Volume" operator and in GUI is not working.	Volume calculation on point cloud in "Point Cloud Volume" operator and in GUI is not working. Customer reported that volume calculation on point cloud not working at all with their data. The customer's las file is in WGS84 / Geographic projection. Their aoi consists of four regions. However after Volume calculation, when looked at the detail of output shapefile it looks as though the tilling has completely ruined the output. Only the top and bottom areas calculate then the middle is ignored.
1-FYLVZZ	Renaming a port in the Expression Editor does not change the reference in the Expression: window	The rename function in the Expression Editor does not change the reference in the 'Expression:' window. The rename function shows ports under both the 'new' and 'original' name in the 'Port:' window. The port using the 'original' name is shown as unconnected in the Expression operator. The new port name reference is not replaced in the 'Expression:' window by the Rename function as implied in the Help, which states "Rename - This button is disabled until a port is selected. When a port is selected, click to display a text entry dialog to enter the new name. NOTE: Port names must be unique. If a non-unique name is entered, a warning message will indicate this and the rename will not happen. When a unique name is entered, the port is renamed and the all the references in the expression will be replaced by the new name." This behavior is not seen in every model. Sometimes the references are changed in the 'Ports:' window, but not in the 'Expression:' window.
1-G036YK	ERDAS IMAGINE crashes when increasing size of Custom Table Input before changing Data Type to String.	ERDAS IMAGINE will crash if you try to create a table with empty rows with the data type set to String. Steps to replicate the problem: 1. Start the Spatial Model Editor. 2. Drag the Custom Table Input operator into the editor 3. Double-click the operator to open its configuration dialog. 4. The Table Source dialog opens. 5. Leave the Data Type set to Float. 6. Increase the size from 0 to 1. 7. Change the Data Type to String. 8. A warning message will pop up stating "Cannot convert existing data to/from String type." 9. Click OK. 10. Do not enter anything in the new row and click OK in the Table Source dialog. ERDAS IMAGINE crashes and the session log reports "external process exited with status -

		1073741819."
1-GHFAOU	New lines are not preserved in Expression Editor.	If you press the Enter key to create a new line in the Expression Editor, the new line(s) will not be preserved if you save the model and reopen it. All of the separate lines are combined into one long run-on expression, which makes it difficult to read. For example, if you enter the following in the Expression Editor… EITHER 1 IF ($Input1 < 5) OR $Input1 OTHERWISE # comment 1 EITHER 2 IF ($Input1 > 5) OR $Input1 OTHERWISE …after you save and reopen the spatial model and then double-click on the Expression operator, the expression becomes this: EITHER 1 IF ($Input1 < 5) OR $Input1 OTHERWISE # comment 1EITHER 2 IF ($Input1 > 5) OR $Input1 OTHERWISE
1-JJK8DF	Unneeded model branches are run with 'Run Just This' in models using Submodels	A preceeding Submodel causes all the model branches to be run when 'Run Just This' is done for a resulting raster placed after the Submodel.
1-JJK8K5	Spatial Modeler hangs using 'Run Just This' from Rasters and other operators placed behind the Submodel	Spatial Modeler will hang if 'Run Just This' is used from a raster and other operators that are placed behind the Submodel. If the Raster operator is the last operator behind the Submodel, the model does not hang. When using 'Run Just This' from the Submodel that is placed in front of the Raster operator or other operators behind, the model will not hang.
1-JJOOG9	Provide a way to Undo Submodel creation	Once a Submodel group is created, the Submodel cannot easily be returned back to ungrouped operators. This limits the editing functionality of the model.
1-JMEBQT	A letter 'r' is not shown in the ApproximationMaxorder dialog corresponding to Warp operator	1. Launch ERDAS IMAGINE and start Spatial Model Editor 2. Drag the Warp operator to the Spatial Model Editor 3. Double click on port corresponding to default value 3 4. ApproximationMaxOrder dialog opens Observe that "ApproximationMaxOrde" shown instead of ApproximationMaxOrder i.e. letter 'r' is missing/not shown beside edit box
1-JPVIKR	Dynamic Matrix Input (List) doesn't generate	Customer Reported that the Dynamic Matrix Input (List) doesn't generate any output when connected to the 'Matrix File Output Operator'
1-KJOD2X	Square Root operator not producing appropriate output for negative values.	To replicate: 1. Launch ERDAS IMAGINE, 2. Launch Spatial Model Editor. 3. Drag the scalar input and square root operators to the editor and connect them. 4. Give scalar input as -3 and run the model and observe output is -1.#IND which is not a

proper output (should be Not a Number – NaN)

IMAGINE SAR INTERFEROMETRY

CR #	Summary – IMAGINE SAR Interferometry	Description / How to Reproduce
1-1HZK-22100	Filtered Interferogram NOT correct	Frequently the Filtered Interferogram shows effects other than filtering; The final result still seems OK, but the intermediate image is incorrect calling the results into question
1-9SQMHP	DEM from InSAR created with COSMO SkyMed data is offset 300 meters from correct location.	A pair of COSMO SCS_B Level 1A Spotlight images are used with InSAR to create a DEM. The height values of the output DEM are good, but it is not in the correct location. There is a shift in the X direction ranging from 300 m to 1000 m. Using OrthoRadar to orthorectify one of the images exhibits a similar shift.
1-BFYQDU	Spectral Shift filter for Radar Interferometry tools does not work with COSMO SkyMed data.	The Spectral Shift step in the Radar Interferometry tools (InSAR, CCD) does not work when using COSMO SkyMed data. This step works fine with TerraSAR-X data. If you turn on the Range option the software states that the Spectral Shift Filtering is available, but if you try to execute the Spectral Shift step it doesn't really do anything. It "reads" the images in a few seconds, but that is about it. No checkmark ever appears beside the Spectral Shift step. Also, if you try to calculate the theoretical quality gain you will get a message saying "Theoretical quality gain of Spectral Shift Filtering cannot be computed (see Session Log for details)", but there are no details in the session log.
1-JSFK5N	InSAR DEM GCP evaluation probably not working	Path differences for all GCPs are the same. This indicates the tool is not working.

IMAGINE STEREO ANALYST

CR #	Summary - IMAGINE Stereo Analyst	Description / How to Reproduce
1-DB31J5, 1-C9KSN9	Stereo Analyst fails to generate proper pyramid layers	Pyramid layers generated in Stereo Analyst can't be read by Stereo Analyst. If pyramids are generated in IMAGINE using Image command tool or some other processes, Stereo Analyst can read it.
1-BR2TMF	JP2 images can't be opened	JP2 images can't be opened in Stereo Analyst. The same images can be opened in IMAGINE viewer and Terrain Editor.

IMAGINE TERRAIN EDITOR

CR #	Summary - IMAGINE Terrain Editor	Description / How to Reproduce
1-AMXV73	OLH for Control Point Display Settings dialog is	Steps to reproduce:

	broken.	1. From Terrain Editor, launch Ground Control Points panel. 2. Within this panel click on the Settings button to launch Control Point Display Settings dialog. 3. Click on the Help button. Notice that no OLH is launched.
1-AMXV7N	OLH for Create New Window dialog is broken.	Launch TE and from the Window menu select New Window. - Click on the Help button of the Create New Window dialog. Notice that the OLH doesn't launch.
1-BRY41V	Geomorphic and Area editing tools give error	Geomorphic and area editing tools give errors and TE crashes. Note that if you Go to "Terrain Files and Display" and select contours or triangles and repeat the geomorphic editing again the error message won't happen.

ERDAS ER MAPPER

CR #	Summary – ER Mapper	Description / How to Reproduce
1-97KRO8	ER Mapper does not calculate RMS Values in GeoCoding Wizard	Attempt to rectify image using GCPs - polymodal model in ER Mapper 2014.01 RMS Value is not calculated. However customer can see RMS values in version 10.0.
1-9QYU1V	ERMapper crashes mosaicking 306 img files	ERMapper crashes mosaicking 306 img files.
1-A0O1HT	Image Compression wizard crashes for input ECW v3 Mosaicked files, ECW compress MFC stops working	To replicate: 1. Launch ER Mapper 2015. 2. Select Image Display and Mosaic wizard. 3. Specify the input data set 4. Choose the options, a. Display image in 2D b. Mosaic all file of this type. c. Contrast stretch image(s) upon loading 5. Click Next and then once Mosaicking is done click Finish button. 6. Now save the Mosaicked image as compressed image (ECW v2,ECW v3 or JPEG 2000)(Use all default options in Compression Wizard). a. File->Save as Compressed Image The process crashes after some time.
1-K9Q1JQ	Opening 3D Alg using 'Open Dataset as Algorithm' option crashes ERDAS IMAGINE	To replicate: 1. File > Open > Dataset as Algorithm 2. Open our example data: C:\Program Files\Hexagon\ERDAS IMAGINE 2016\examples\ermapper\applications\mineral_exploration\3D_clay_and_iron_oxide_over_magnetics.alg

3.   ERDAS IMAGINE crashes

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