

RELEASE GUIDE

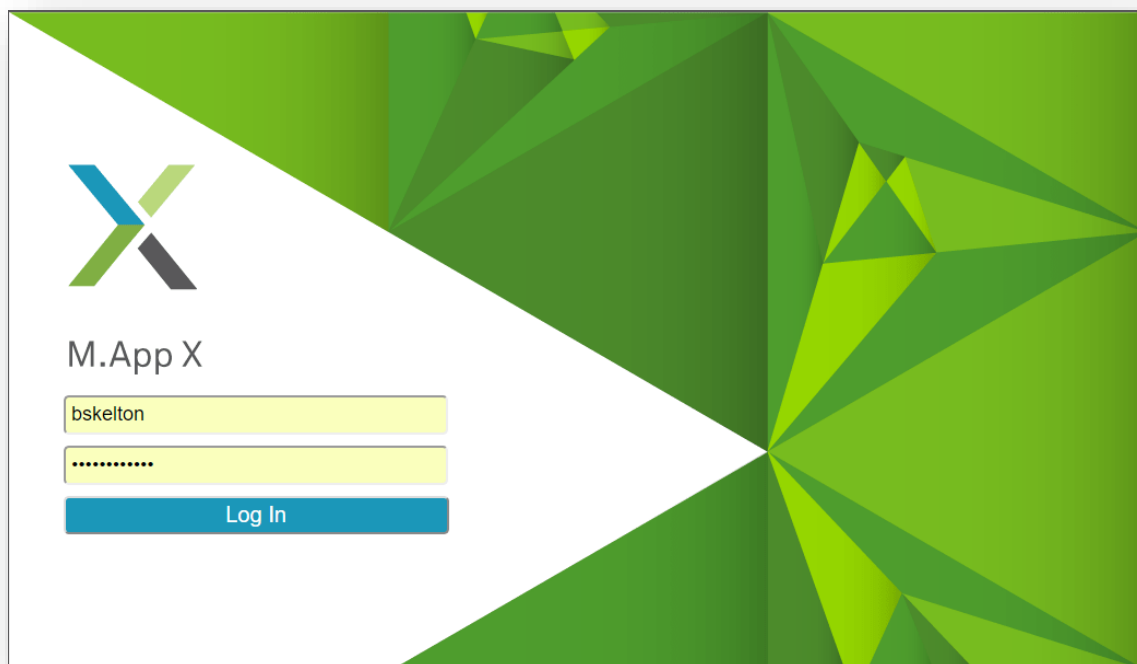
M.APP X

May 30, 2018

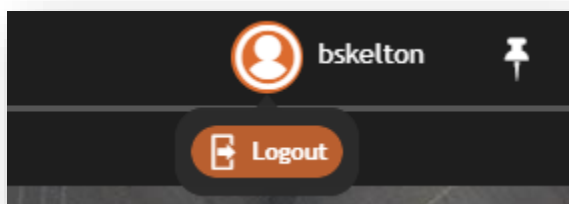
M.App X 2018 Release 2 (V 16.5.2.8825)

New Feature and Improvements

WG-5672 The M.App X client now requires authorization and licensing. When logging in an authentication page is presented.






There is also an associated logout menu item on the Smart Bar.




WG-6696 There is now an Administration Console that provides a means of managing the license, usage and users. Its URL is <mappx-base-url>/admin.




M.App X Admin Console
Licensed to M.App X Test Account



 Welcome Admin
 LOGOUT / HELP



Version: 16.5.2.8816


SUMMARY | HOURS | USERS

Organization: M.App X Test Account
 License Type: **M.App X - Subscription Hours**
 Subscription Period: 07/11/2017 - 07/11/2018
 Purchased Total Annual Hours: 2000
 Estimated Total Annual Hours (based on current usage): 6.75
 Overage: 0 %
 Days Left in Current Subscription: 118

<https://mappx-dev.hexagongeospatial.com/admin/#>






























M.App X Admin Console
Licensed to M.App X Test Account


 Welcome Admin
 LOGOUT / HELP

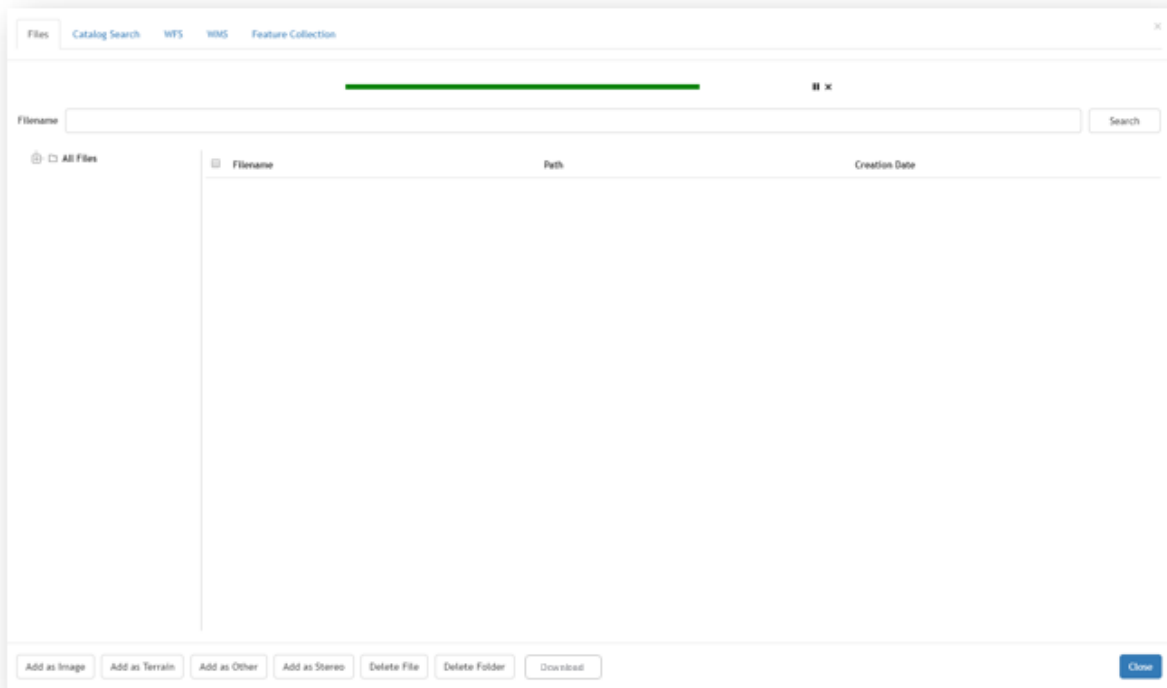
Version: 16.5.2.8816

DELETE | NEW | FILTER

<input type="checkbox"/>	Name	Fullname	Email	Role	Activated	
<input type="checkbox"/>	achrapkowski	Adam Chrapkowski	adam.chrapkowski@hexagongeospatial.com		✓	 
<input type="checkbox"/>	admin	Admin	admin@example.com	Admin	✓	 
<input type="checkbox"/>	auto_test	Auto Test	justin.bridwell@hexagonusfederal.com		✓	 
<input type="checkbox"/>	azusmanis	Andy Zusmanis	andy.zusmanis@hexagonusfederal.com		✓	 
<input type="checkbox"/>	bbrittain	Bryan Brittain	bryan.brittain@hexagonusfederal.com		✓	 
<input type="checkbox"/>	bchaplin	Bruce Chaplin	bruce.chaplin@hexagongeospatial.com		✓	 
<input type="checkbox"/>	bkumar	Bhagavath Kumar	bhagavath.kumar@hexagongeospatial.com		✓	 
<input type="checkbox"/>	bskelton	Brad Skelton	brad.skelton@hexagongeospatial.com		✓	 
<input type="checkbox"/>	ctapley	Chris Tapley	chris.tapley@hexagongeospatial.com		✓	 
<input type="checkbox"/>	ctweedie	Chris Tweedie	chris.tweedie@hexagongeospatial.com		✓	 
<input type="checkbox"/>	eerwin	Elizabeth Erwin	elizabeth.erwin@hexagonusfederal.com		✓	 
<input type="checkbox"/>	landerso	Ian Anderson	ian.anderson@hexagongeospatial.com		✓	 
<input type="checkbox"/>	jboyes	John Boyes	john.boyes@hexagonusfederal.com		✓	 
<input type="checkbox"/>	jbridwell	Justin Bridwell	justin.bridwell@hexagonusfederal.com		✓	 



WG-6727 The ability to download a file was added to the “Add to Shoebox” dialog. This allows the results of Geoprocesses to be downloaded to the desktop. The functionality is restricted to a single file at a time.



Items Fixed

- WG-6699 The parameters for the Dutch Coordinate System EPSG:28992 were corrected.
- WG-6638 Extended grid labels for the Mosaic Geoprocessing Panel extended to the right beyond the extent of the grid itself. This has been corrected.
- WG-6568 Change the Geoprocessing Panels listed so that the Reset button would reset the selected value in the filename dropdown lists to their default value.
- DataTriangulation
 - DetectVerticalObstructions
 - ExtractLinearFeatures
 - ExtractTerrain
 - FeatureToFeatureChangeDetection



- FeatureToFeatureChangeMasks
- GenerateRsets
- GeodeticReprojectRaster
- GeodeticTransformVector
- TerrainThinning
- RecalculateElevationValues
- RemoveElevationSpikes
- TerrainDifference
- LineOfSight
- MapProjectVector
- RadarLevelSlice
- RasterExpurgation
- SimpleMosaic
- StereoPair

WG-6253	Terrain Thinning Default Output Filename now includes "Thinned" in keeping with pattern used for the other geoprocessing panels.
WG-800	The Exaggeration parameter in Terrain Profile has been removed since the terrain profile is automatically scaled to fit the chart.
WG-6368	Recalculate Elevation Values output name was not behaving as expected when the input was changed and when reset was clicked. The output name now operates as expected.
WG-6767	Extract Terrain output name was not behaving as expected when the input was changed and when reset was clicked. The output name now operates as expected.
WG-6367	Remove Elevation Spikes Reset button was not working correctly.
WG-6269	Extract Terrain Reset button was not working for Minimum Z and Maximum Z parameters. This has been corrected.
WG-6519	Create Stereo Pair reset button was not working properly. It now works as expected.
WG-6525	Chip to Non-NITF Reset button was not removing names from input file list on Firefox. This has been corrected.



- WG-6763 When using HTTPS with the client it was not possible to add a WFS layer using HTTP to the map. This has been corrected.
- WG-3803 Adjust 3D was not properly creating the output UAI file. This has now been corrected.
- WG-6713 The Edge Match Geoprocessing panel has been removed.

Installer Changes

- WG-6679 The installer now installs the new components that support the licensing, metering and administration.
- WG-5671 Configuration wizard has been updated in the following ways:
- It now supports deployment of the client at the root of the site.
 - It now supports the creation of the initial admin account for the administration tool.
 - It now configures the administration tool page.
 - It now supports the configuration of the email system to be used for activating users accounts.

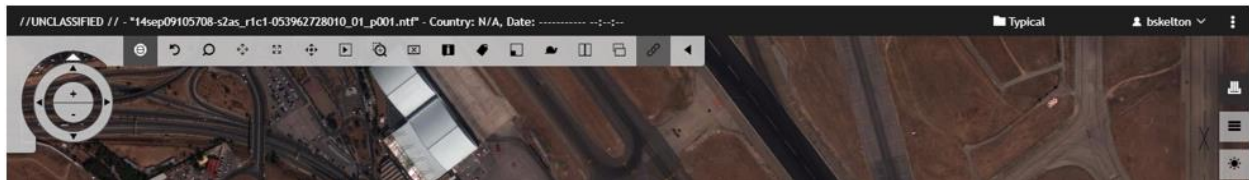


M.App X 2018 (V 16.5.0.8420) (2018-01-11)

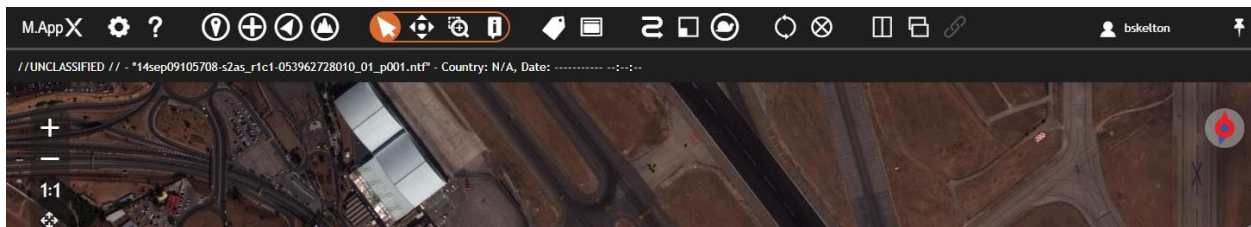
New Features and Improvements

WG-5654 The Smart Control has been replaced by the Smart Bar, a much more flexible toolbar and menu system which greatly improve the consistency and usability of the user interface.

This...

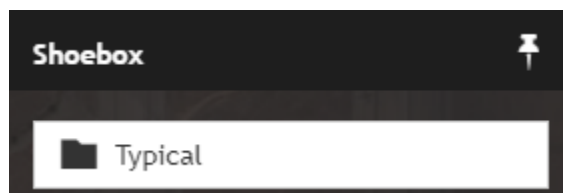


Has been replaced by this...

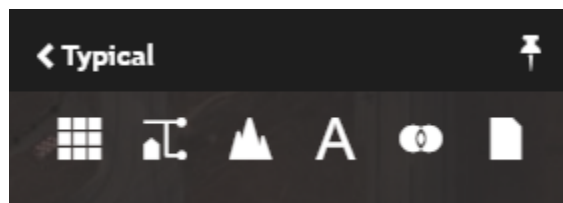


WG-6069 The panel headers were changed so that when a subpanel is entered the panel header title is changed to that of the subpanel. A left arrow indicates that clicking on the sub panel name will return to the main or parent panel. This applies to the shoebox and geoprocessing panels since these were the ones with sub panels.

The panel title looks like this...

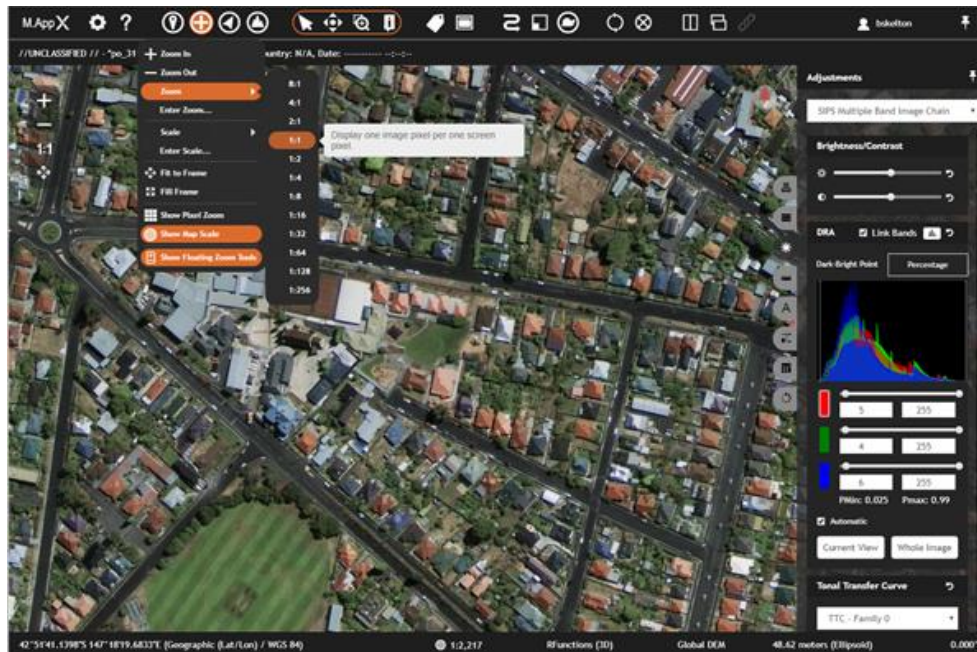


When the subpanel is entered it becomes....

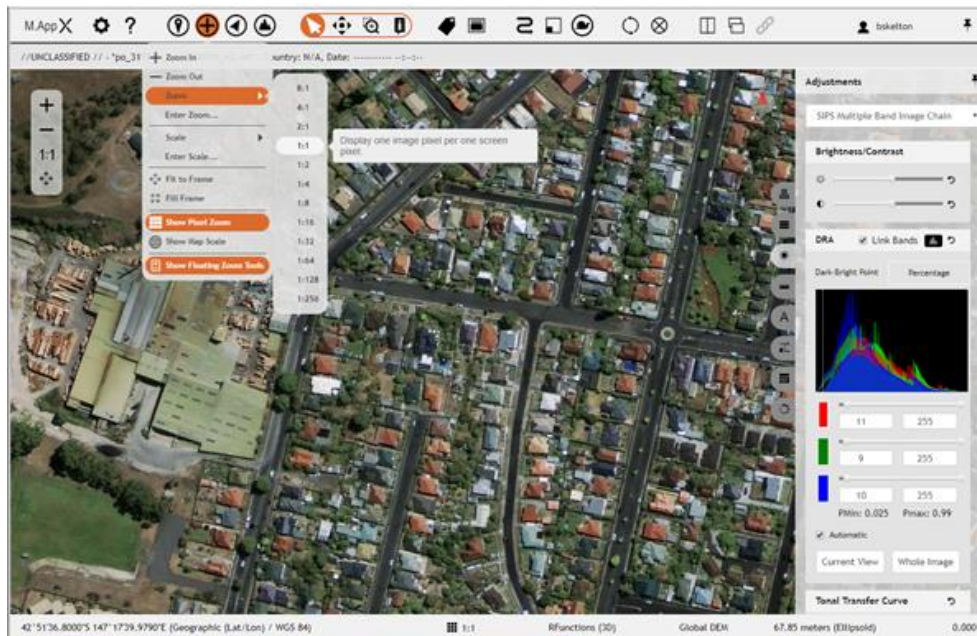


WG-5645 The ability to support color themes was introduced along with a dark and a light theme. This gives the user a choice over the look of the interface. Also, buttons got a rounded corner effect and the high light for selected icons became a round highlight instead of an underline or a color change.

Dark Theme



Light Theme

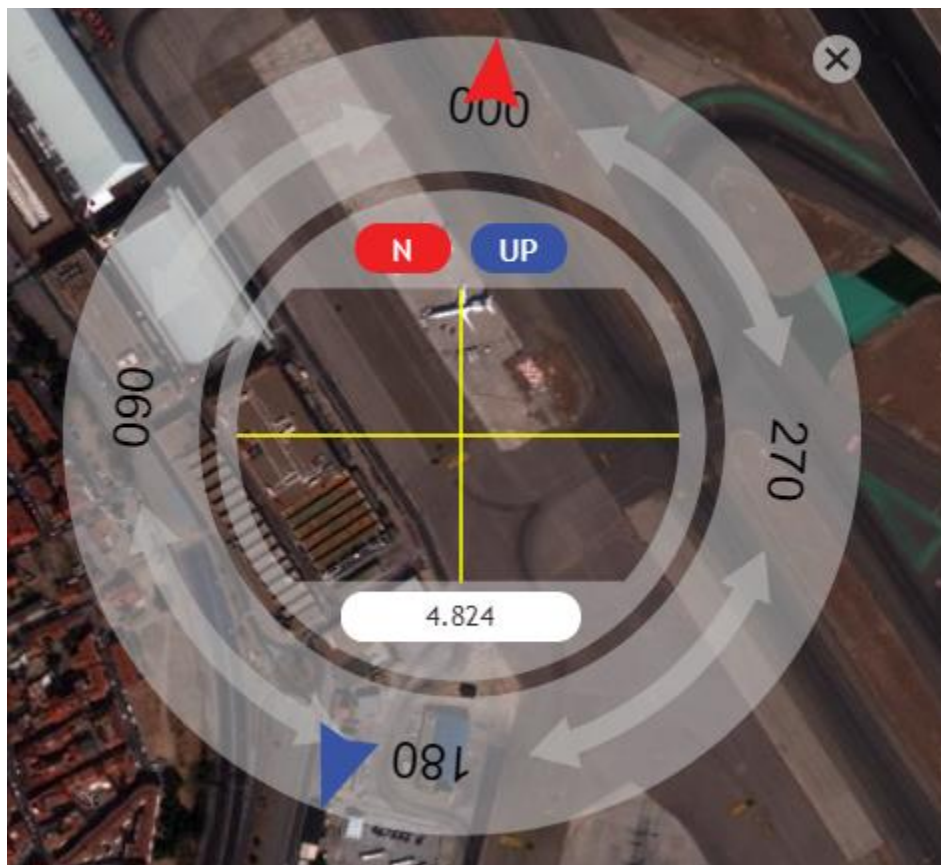


- WG-5658 An onscreen angle indicator and interactive rotation wheel were introduced to make the task to determining and setting image rotations easier and more intuitive.

Onscreen Angle Indicator



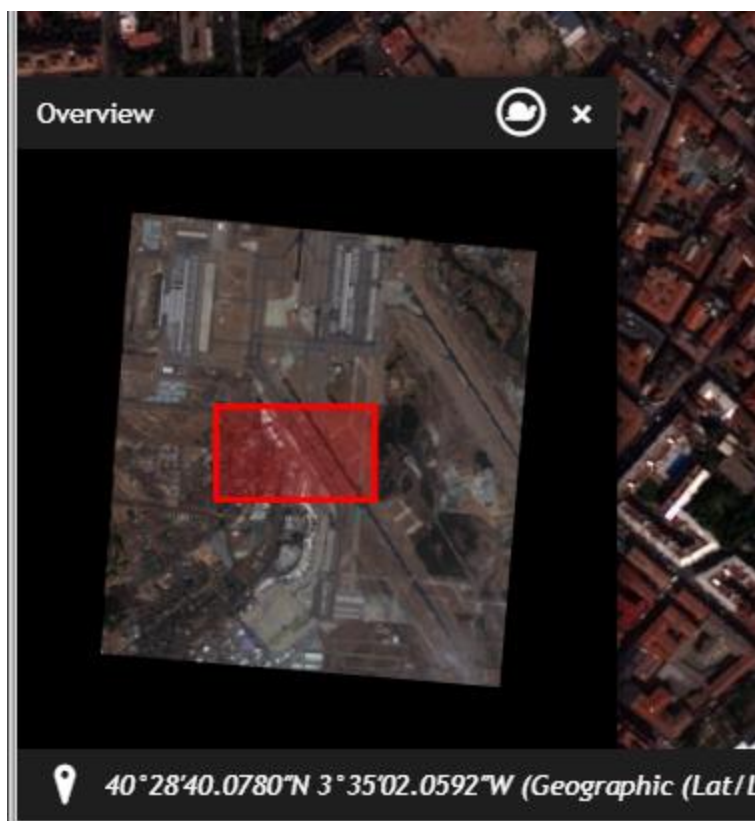
Interactive Rotation Wheel



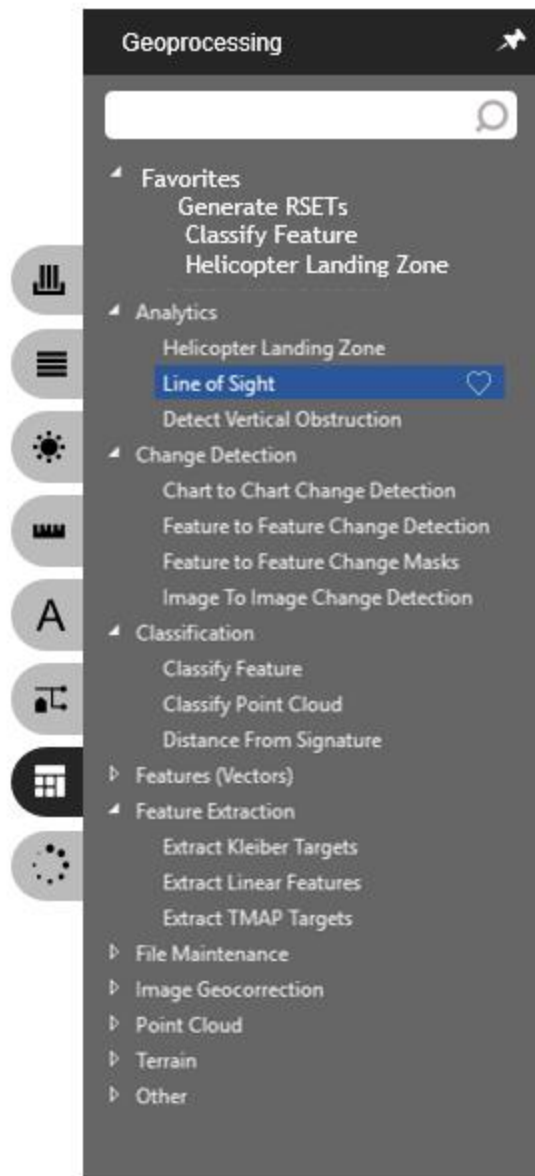
- WG-5670 The overview window now has a title bar which provides access to the snail trail menu and allows for the overview window to be closed. There is also an optional button on the lower left corner of the map area which will display the overview window. In addition, the



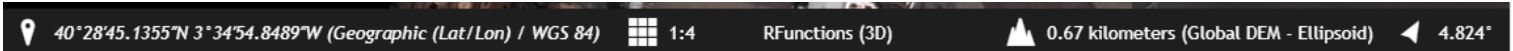
overview window now expands from the lower left corner instead of rising vertically from the lower left edge.



- WG-2129 The Geoprocessing panel has now been reorganized so that Geoprocesses are arranged in categories and can be searched. This helps to work with the ever-growing number of Geoprocesses. In addition, there is a “Favorites” category into which selected Geoprocesses can be placed to make them easier to access.



- WG-6380 The status bar has been reorganized to combine the elevation and height related items into one. Icons have been added to the sections to help demarcated the item and to give an idea of its information. In addition, the appropriate menus are also available by clicking on the status bar.



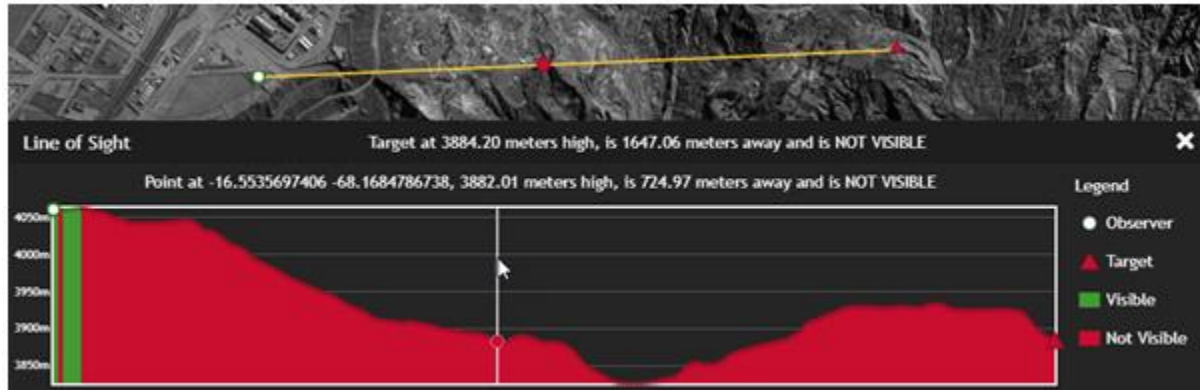
- WG-6271 Scrollbars in the side panels now use a consistent look between the different browsers. Previously the style could be hard to see and interact with.
- WG-6421 There are now several new predefined map scales which are useful with high resolution mapping.
- WG-5657 There is now a floating zoom bar which provides easy access to the four most common zoom operations (zoom in, zoom out, one to one and fit to frame).



- WG-6077 User preferences have been reorganized into 4 categories: Image Display, User Interface, Rendering, and Roaming).



WG-2163 [EX-00842] The distance from the observer has been added to the Line of Sight cross section display.



- WG-5993 The Line of Sight display was not observing the current height units.
- WG-5621 The Helicopter Landing Zone geoprocessing panel now provides the same default values as proposed in the documentation.
- WG-5934 The threshold for Feature Change Detection has been updated to allow two digits past the decimal point.
- WG-6191 The filters for shoeboxes have been changed so that when no filter is selected there is no filtering, meaning that all items in the shoebox are shown. When one or more filters are selected then the items in the shoebox are filtered to show only the selected types of items.

Items Fixed

- WG-5617 When displayed using the URL Launch mechanism tiles were being requested twice. This have been corrected.
- WG-5535 The first image displayed was not appearing as the <current image> in Geoprocessing panels. This has been corrected.
- WG-1072 Correct tooltips on Mosaic Polygon Areas file.
- WG-1186 Outputting Spike Removal into NITF files produced unusable results. This is because NITF is suitable to completely represent the results. NITF format has been removed as a possible output format.
- WG-1310 Orthorectify Imagery was restricting the output pixel size to integer values. Non-integer values are now supported.



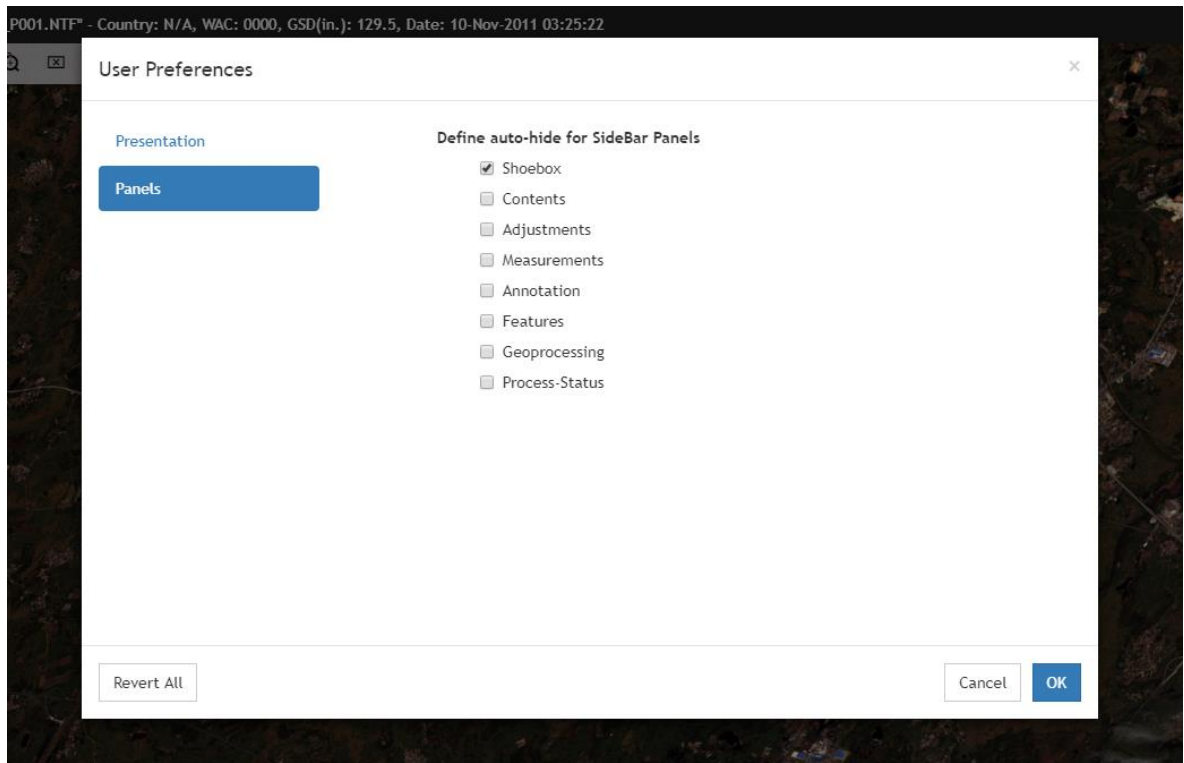
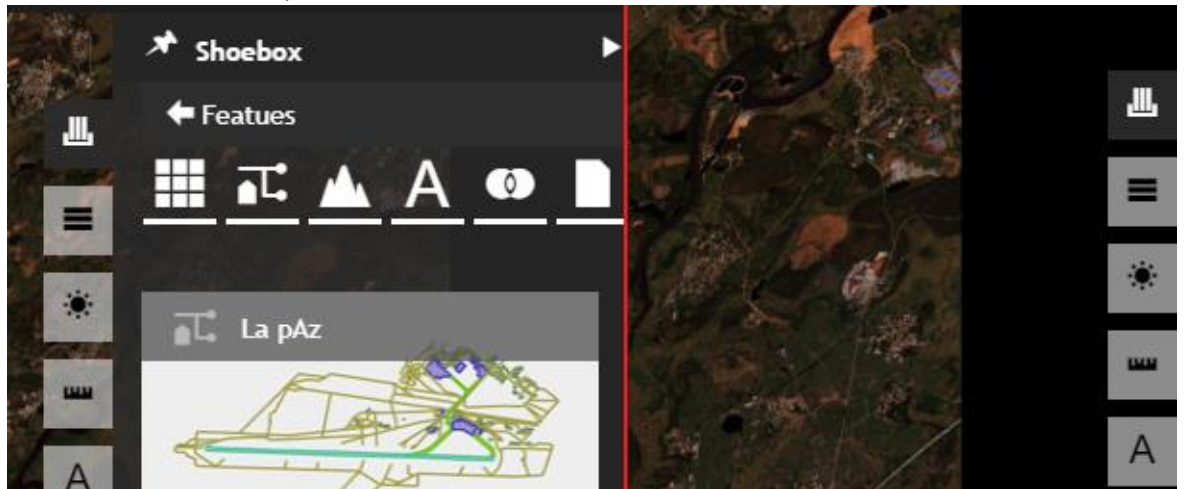
- WG-1737 The Terrain Difference geoprocess was not adding its output to the shoebox. This has been corrected.
- WG-1808 The Smooth Elevation Value output was not being added to the shoebox as a Terrain. This has now been corrected.
- WG-5204 Smooth Elevation Value no longer allows NITF as an output format.
- WG-2296 [EX-03122] The Helicopter Landing Zone was not properly resetting the selected land cover types when “Reset” was pressed. This has been corrected. (WG-5202)
- WG-2617 The target symbol on the Line of Sight indicator was not displaying correctly in Firefox. This has been corrected.
- WG-3749 Corrected the tooltip for Automated Point Matching which the abbreviation AMP instead of APM.
- WG-5238 The output pixel size in Rasterize Point Cloud now supports non-integer values. (WG-6082)
- WG-5240 The default filename for Rasterize Point Cloud now follows the convention for geoprocessing panels.
- WG-5631 Corrected the tooltip for Geodetic Reproject Raster.
- WG-5995 Line of Sight can no longer be until all required inputs are provided.
- WG-6083 The default output filename for Rasterize Point Cloud had “diff” in the filename. This has been corrected to use the general convention.
- WG-5365 Up is Up is disabled for images which do not have a 3D sensor model.
- WG-5633 The Angle to North computation is now computed corrected when images are displayed as map.



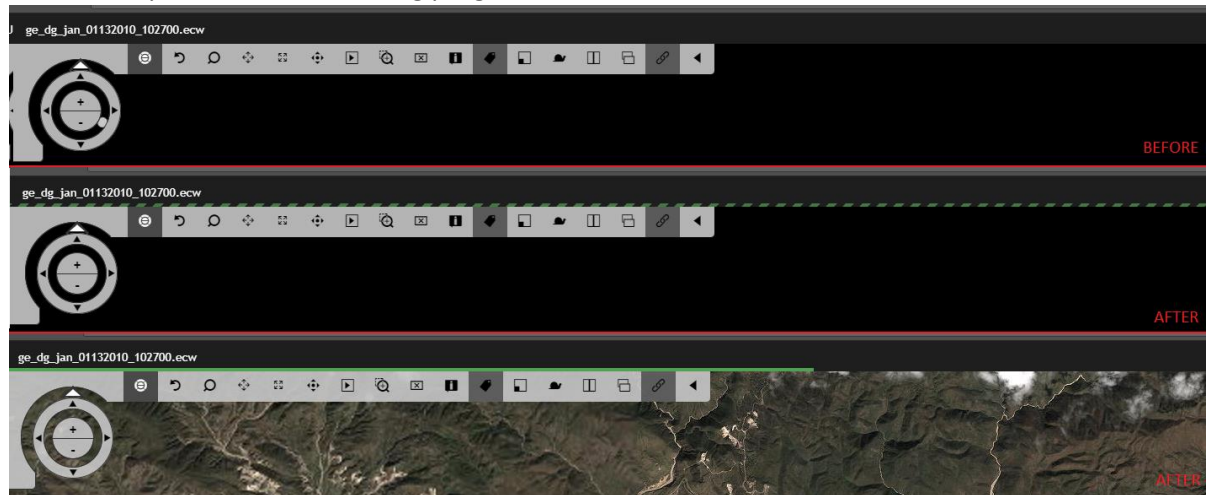
Version 16.4.0.7943

New Features and Improvements

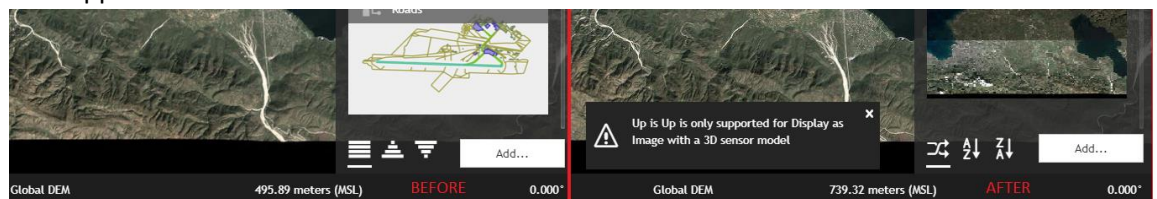
- WG-5151 Introduced auto collapse functionality to the Side Bar. It is possible to define for which panels the side bar should collapse and for which should not using newly introduce Pin button available at the top of each panel. Alternative way of changing behavior of panels is to use User Preference dialog. Additionally, if side bar is collapsed and user keeps mouse over one of the panels buttons, the sidebar rises back.



- WG-5254 Sometimes before this release there had been added ability to hide the Navigation Cluster. Users who decided to use this option had lost ability to see tiles/image loading progress. To solve this problem in this version the spinning ball in the Navigation Cluster has been replaced with tile loading progress bar located at the bottom of the tile bar.



- WG-5305 Displaying images at the application start using Launch URL parameters does not add entries to the Recent shoebox any longer. In result the application starts up time in the described scenario has been reduced.
- WG-819 For images with 2D sensor model there is no Up is Up option is not applicable. Now user is notified that the loaded image is does not have 3D sensor model and Up is Up option is not supported.



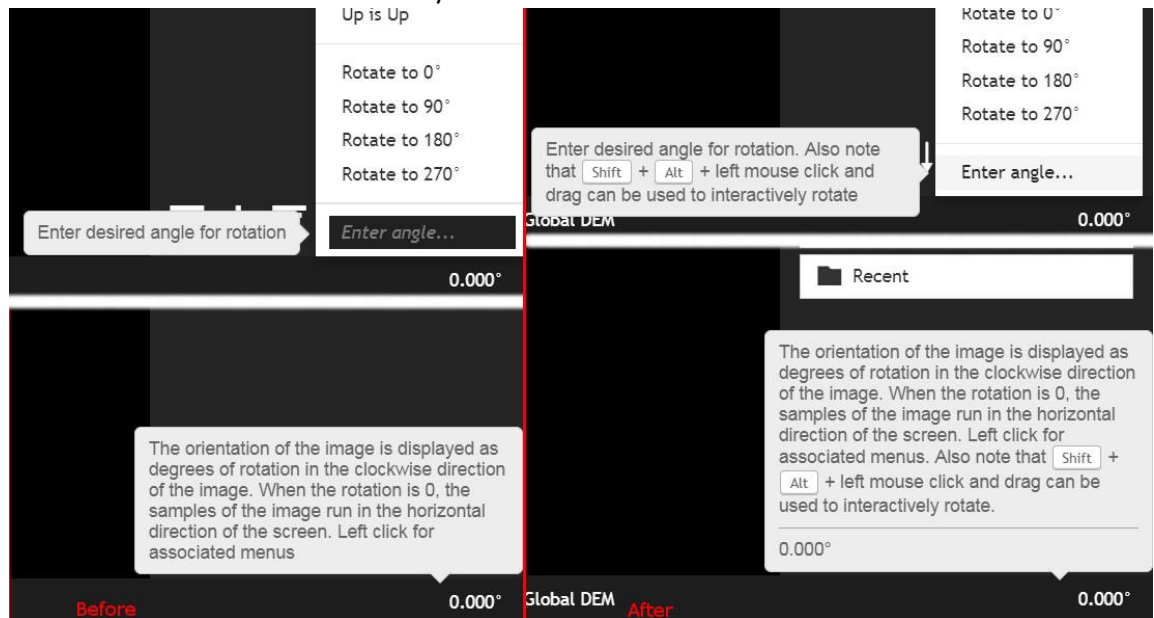
- WG-5358 Icons for sorting shoeboxes / shoebox entries have been replaced with a new more readable set of icons.



- WG-5384 Improved tooltips for "Enter angle..." and rotation indicator which are located at the right bottom of the screen. The updated tooltips contain information about keyboard/mouse



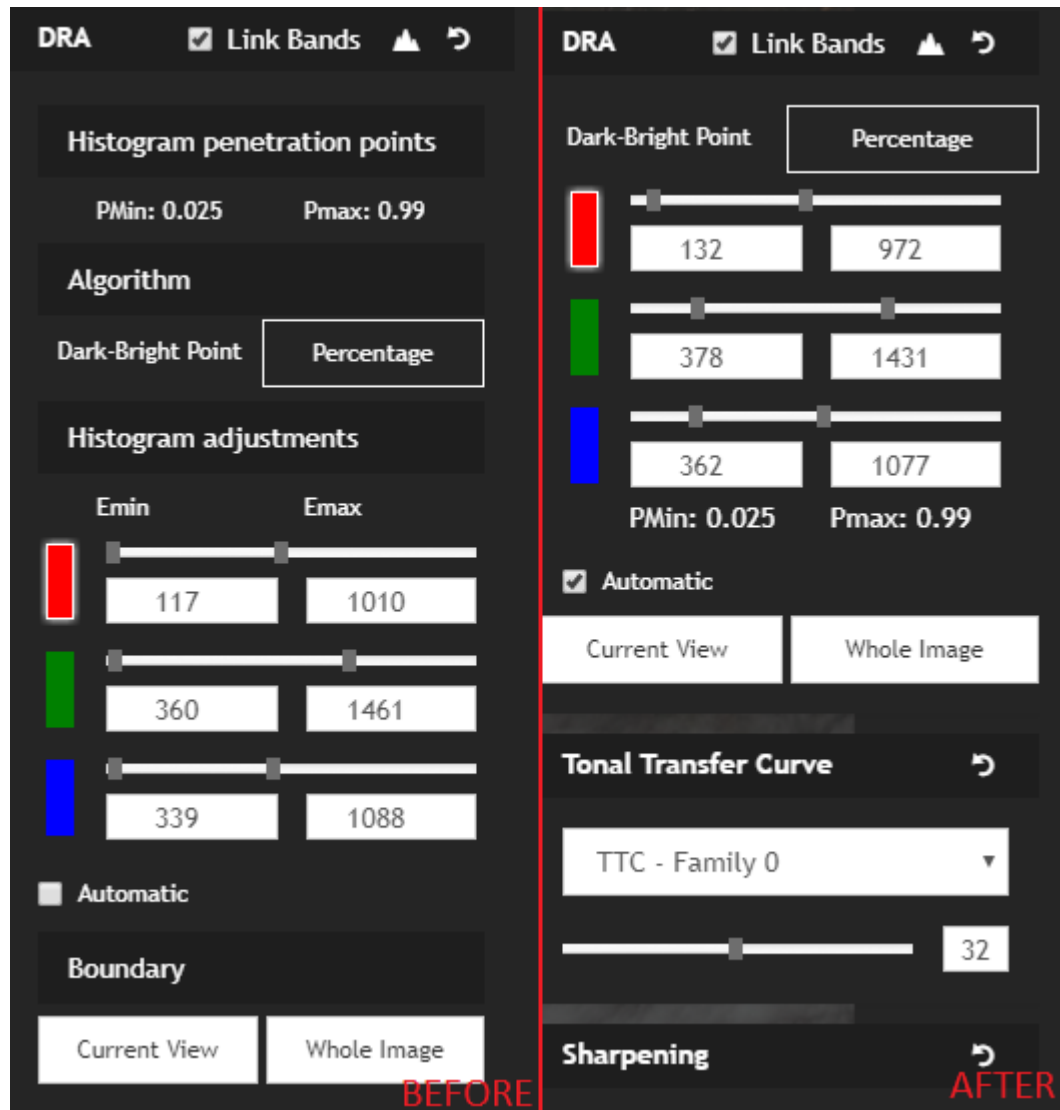
shortcuts how to rotate interactively.



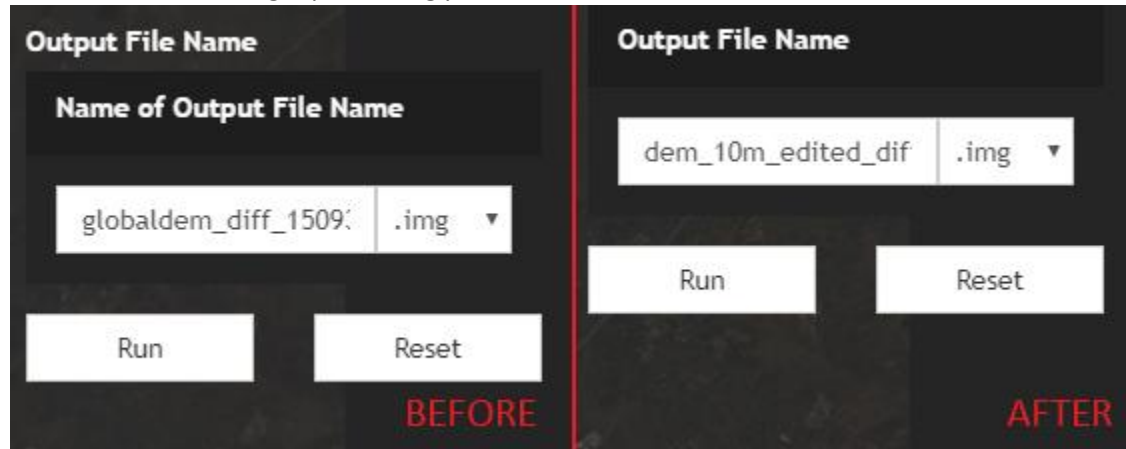
- WG-5385 Adjusted settings for tile caching and preloading. Additionally, reduced animation time and added inertia for panning interaction.
- WG-5445 Once user logs in to the system, it's user directory is created automatically. There is no need to do it manually for each user.



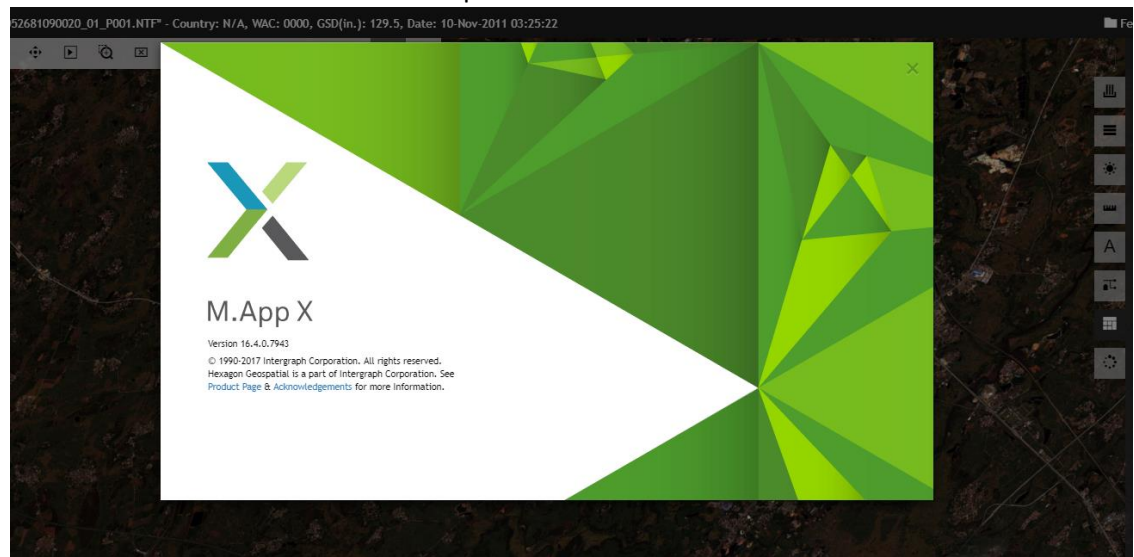
WG-5445 Reduced amount of space used by DRA part of Image Adjustments panel for SISP image chains.



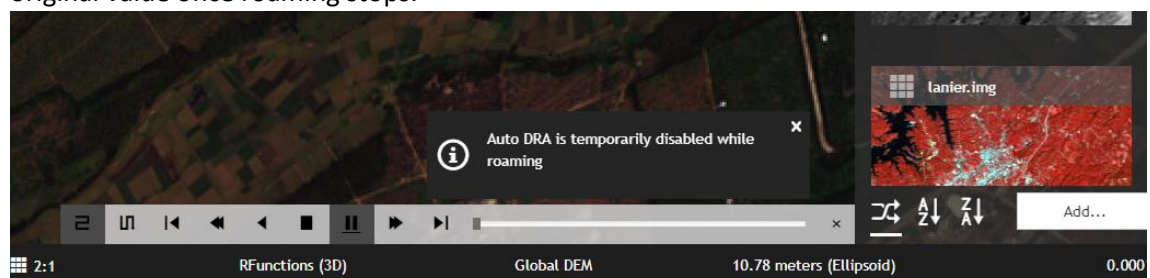
- WG-5452 Removed “Name of Output File Name” headers duplication from Terrain Difference and Rasterize Point cloud geoprocessing panels.



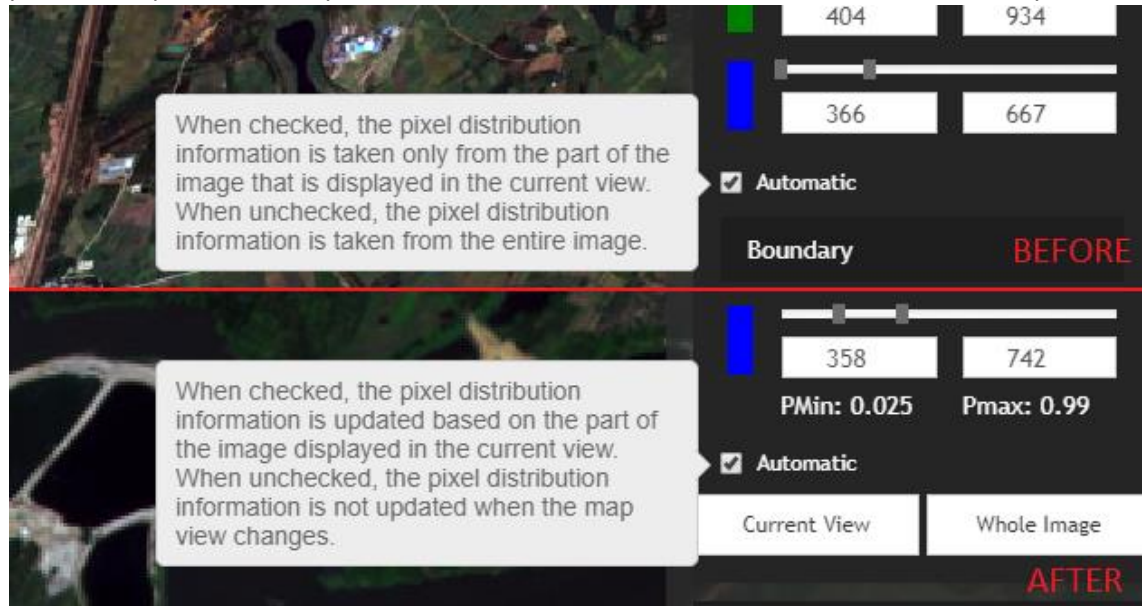
- WG-5458 Made About Box consistent with the splash screen and added there the same content.



- WG-5482 Updating viewport boundary for Automatic DRA updates more often and more reliably than before this version. During roaming the view port changes more frequently and to avoid poor performance due to frequent redraws, the Automatic DRA automatically switches off once Roaming starts. User is notified about it and the setting reverts to its original value once roaming stops.



WG-5441 Improved tooltip for Automatic checkbox in the DRA section of the SIPS image adjustment panels. The previous tooltip was inconsistent with current behavior of the functionality.



Items Fixed

WG-5220 Fixed: Once zooming and panning over the map with Auto DRA enabled for SIPS images, new tiles appearing on the screen were initially loaded with style for previous boundary



and then after a while refreshed with style for new boundary.



WG-5486 Adding a stereo pair item to a shoebox was opens a little dialog with names of the selected files. The names were containing visible to a user HTML tags. This has been



corrected.

Configure Stereo Pair Shoebox Entry:
×

Left Image:	ortho_<wbr>stereo_<wbr>right.img
Right Image:	ortho_<wbr>stereo_<wbr>left.img
Shoebox Entry Name:	

Swap Left and Right
BEFORE
Create

Configure Stereo Pair Shoebox Entry:
×

Left Image:	ortho_stereo_right.img
Right Image:	ortho_stereo_left.img
Shoebox Entry Name:	

Swap Left and Right
AFTER
Create

WG-5504 Improved consistency of labels for file lists in Data Triangulation geoprocessing panel.

WG-2550 [EX-5848] Nothing had been happening when a new image was displayed but elevation source was inappropriate for the image, even if a correct elevation source was selected from appearing dialog. This has been fixed.

Known Issues

The following is a list of known issues at the time of the release.

- Image with large numbers of segments still take longer to add because of the multiple segments (WG-5623)
- Image Launch with URL can sometimes display a second time using Elevation Source (WG-5617)
- In rare cases, when an image is displayed, the adjustment panel may not show the correct TTC and MFTC Settings. N.B. The image does display correctly. (WG-5613)
- Occasionally, after RSETs are generated when the image is added back to the shoebox, the RSETs are not recognized. The RSETs have been generated and this seems to be a timing problem. Deleting and adding the image back to the shoebox rectifies the problem. (WG-5545)
- There are display issues with some XSI SICD data (WG-5590)
- Legend image segments in NITF files will not display. The rest of the dataset will display correctly (WG-5591)
- There is a coordinate registration issue between M.App X and MSP for non-asymmetric images. The registration difference is half a pixel (WG-5503)



- On large TFRD MCG datasets the Affine Transformation is failing when you are Fit to Frame. The dynamic coordinates do not display as the cursor is moved. The correct coordinates do display when the cursor stops. Coordinate display is normal when the image is zoomed in. (WG-5568)
- The Line of Sight target Point in Firefox does not display as a triangle. The process still works correctly. (WG-2617)
- Some geoprocessing panels are not returning correct results (Edge Match WG-4540)
- Color Table Selection in Thematic Image Chain and PsuedoColor Image Chain has to be selected twice to get the dropdown to update. (WG-5604)
- A few particular images (map scans) have issues displaying a thumbnail and zoomed out past 1:1. (WG-5573)
- Asymmetric image display is slower than non-asymmetric (WG-5571)
- Create Report is not disabled when no image is displayed (WG-3957)
- Scale breaks in Create Report with geographically large images (e.g., global images). (WG-5272)
- Feature Editing does not behave well, if selected feature class is changed while adding/editing a feature. (WG-5468)
- In some datasets with a simple, small graphic, the graphic will not display. The rest of the dataset will display correctly (WG-5591)

Included Geoprocessing Panels

- Classify Feature
- Edge Matching
- Extract Linear Features
- Extract Terrain
- Feature to Feature Change Detection
- Feature to Feature Change Masks
- Geodetic Reproject Points
- Geodetic Reproject Raster
- Geodetic Reproject Vector
- Map Project Vector
- Rasterize Point Cloud
- Recalculate Elevation Values
- Terrain Difference
- Terrain Shading
- Terrain Thinning



Installer Changes

.NET 4.6

.Net 4.6 is now required by both the ConfigurationWizard and the backend. More information is provided in section 2.35 of the installation manual.

Global Elevation File

The global elevation file that is distributed in the installation folder can be used in place and there is no need to copy it to the data folder. Section 1.7.12 of the Version 70 Installation manual advised copying the elevation file from the install location “C:\Program Files\Hexagon\ERDAS APOLLO\lib\etc\globalterrainsources\globaldem2.jp2” to a location like “D:\MAppX\Data”. This is no longer needed for a single node installation. HOWEVER, in a multimode installation it is still advised to move the distributed global terrain file to a single common location and provide that during the configuration.

GeoMedia Models

The GeoMedia Models will now be properly discovered in their installation location and they no longer need to be copied. Section 1.6.3 of the previous installation manual detailed these steps. This section no longer exists in the manual because the Pixel Server now uses a search path that includes the GeoMedia installation location “C:\Program Files\Common Files\Hexagon\SpatialModeler\16.4”. This is the same location as in version 70.

User Directories

In Version 70 User Directories were configured on the M.App X Frontend Configuration panel as the “Upload Path” which had a value like “D:/WebGLT/upload/\${username}”. In this version this has changed in two ways. First the configuration of the user directories is now part of the backend configuration. The backend has a configuration for the “User Directories Root” which typically has a value like: “D:/MAppX/upload”. The difference is that the backend now automatically will create the user folder if it does not exist. Also the User Directory (not the root) and the Common Search Path are now both search when the user issues a search request to the backend. This change enables a clear separation in the user’s private data and the common data in the Search tab of the Add dialog.

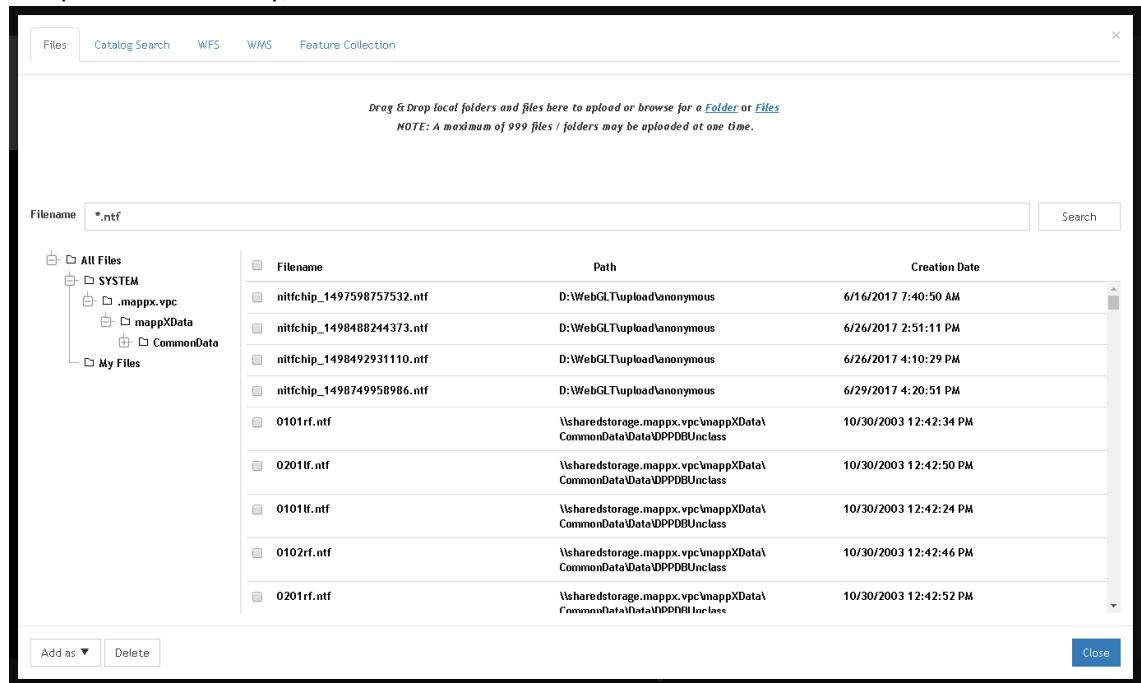
The configuration details are documented in the tables at the end of this document.



Version 16.4.0.7813

New Features and Improvements

WG-4740 There has been added possibility to upload images and other files directly from a user's computer. Additionally, the user is able to delete files from their folder on the server.



WG-5249 Once user zooms in/out using either mouse wheel or navigation cluster predefined zooms reached using this method are predefined. Prior to this version, the zooms didn't contain the 1:1 zoom. This has been improved and this important zoom level can be reached without necessity of using the smart bar zoom menu.

WG-5169 Number of favicon files has been reduced and once the application loads for the first time less resources is loaded by the browser.

WG-5171 The favicon.ico file size has been optimized and it is smaller now.

WG-5173 Number of web request to retrieve list of shoeboxes of the logged in user has been decreased, the same slightly improving the application start up.



- WG-5168 New splash screen has been introduced and it's size has been optimized to reduce amount of data loaded by the application at the start.



- WG-5167 WG-5170, WG-5170 Size of JavaScript files loaded during the application start-up has been decreased.

Items Fixed

- WG-5129 [EX-7975] Big number of search results was resulting in a crash of the application. Now the number search results may be much bigger and scrolling through them does not hang the application.
- WG-5222 Loading indicator “spinning ball” was resetting (“jumping back” to its starting position at the top of the navigation cluster) before all tiles are loaded. This has been improved and the ball more smoothly arounds the navigation cluster.

Included Geoprocessing Panels

No new geoprocessing panels have been added in this release.

Installer Changes

The installation process has not changed from the previous release.



Version 16.4.0.7705

New Features and Improvements

- WG-5109 Formatting of coordinates in Lat/Lon (DD) has changed and direction suffixes have been dropped in favor of a sign (negative values mean S and W direction). Additionally, the degree character has been removed.

21.3929468314°N 110.2121551066°E (Geographic (Lat/Lon) / WGS 84)

before

21.3929608505 110.2121617647 (Geographic (Lat/Lon) / WGS 84)

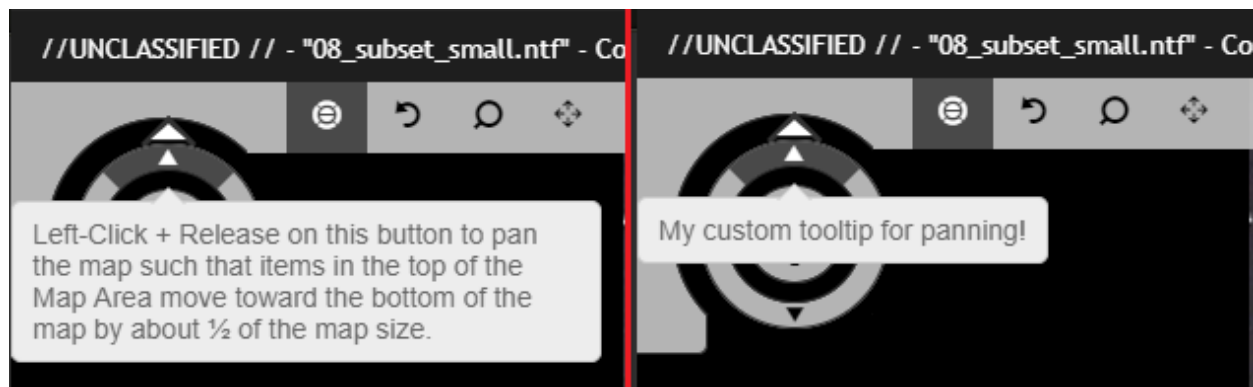
after

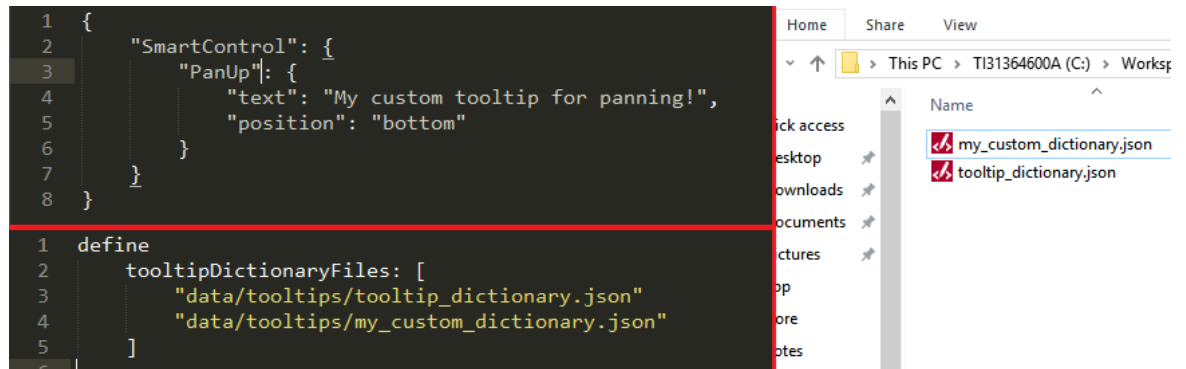
Items Fixed

- WG-5141 Clicking for the second time "move" tool in the Features Panel was causing error in a browser console. This has been corrected and second click does not cause any problems any longer.
- WG-5151 Clicking "Save..." in Adjust Georeferencing 3D geoprocess was causing an error instead of saving the collected points. This has been corrected and point are properly saved in a file.

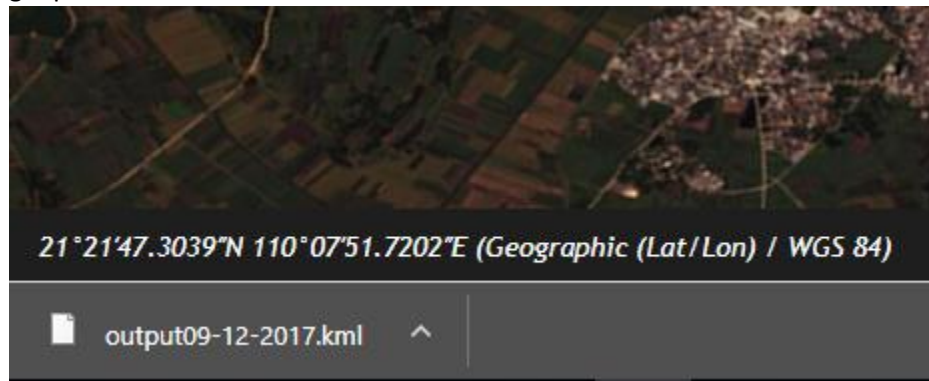
API Changes

- WG-5120 Sometimes extension developers need to add their own AMD modules which they want to use in their extensions. This possibility has been exposed by the Extension API.
- WG-5068 Possibility of adding and customizing tooltip messages without affecting original tooltip definitions file has been added.





WG-5128 Added ability to download from the application level KML files which are output of a geoprocess run.



Included Geoprocessing Panels

No new geoprocessing panels have been added in this release.

Installer Changes

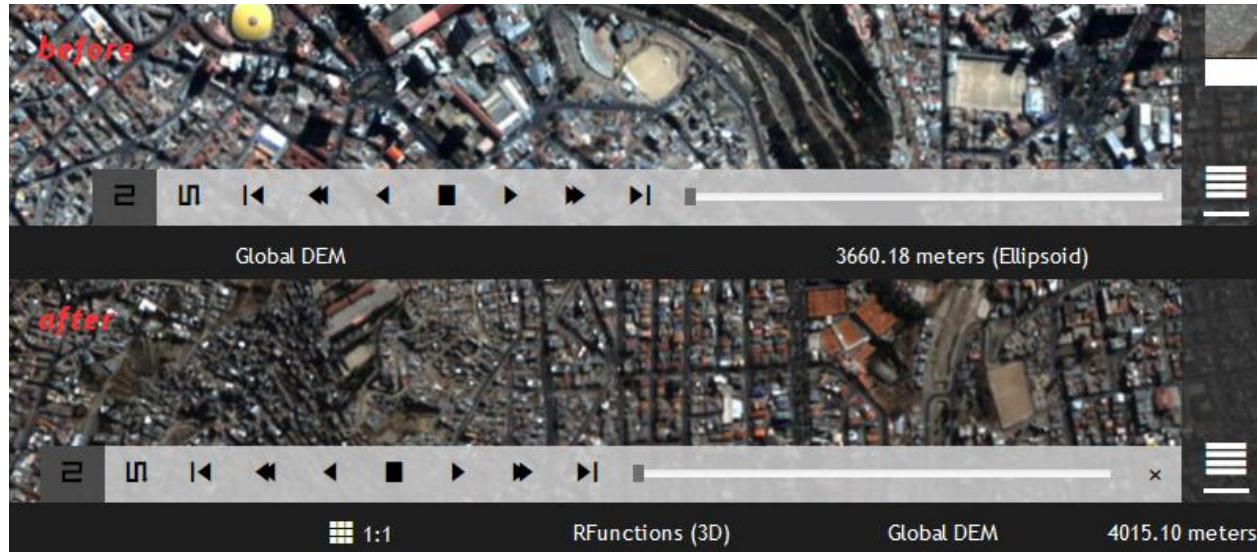
The installation process has not changed from the previous release.



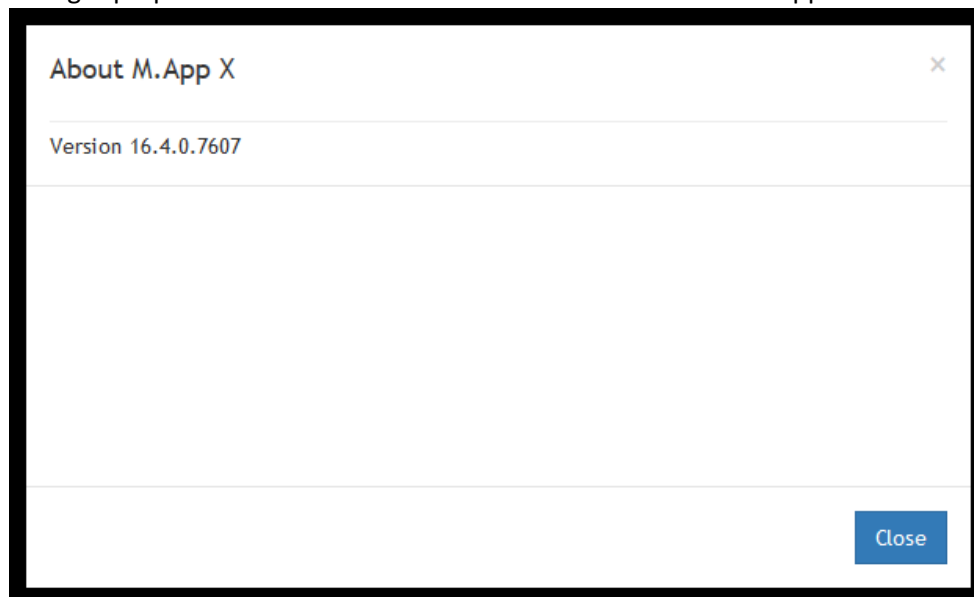
Version 16.4.0.7608 (2017-08-31)

New Features and Improvements

WG-4960 Auto Roam is activated from the Smart Bar which is located at the top of the window while its control bar is located at the bottom of the screen. To let user more easily close the bar a dismiss button has been added to the right hand side of the bar.



WG-5080 Version number of the application is no longer displayed in the Extras Menu but in a separate dialog which is displayed by choosing the "About..." item in the Extras Menu. The dialog is prepared to contain more useful information about the application.



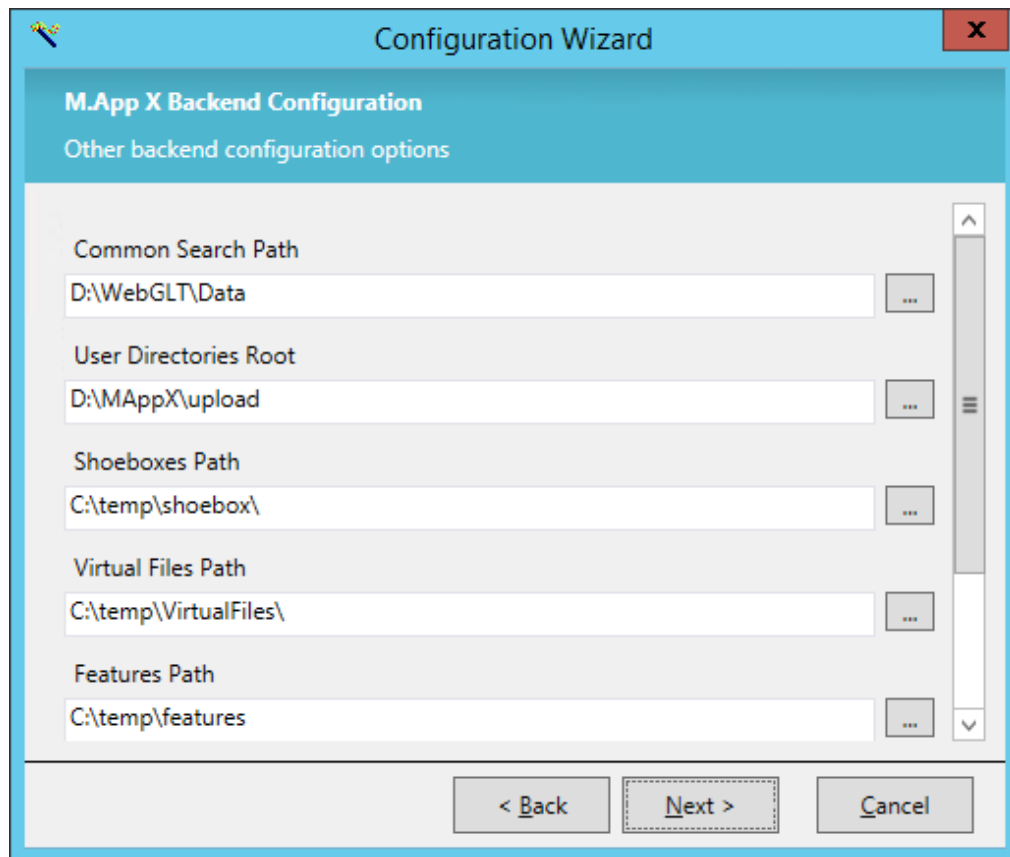
WG-4909 Previously the configuration of the output directory for each geoprocesses was defined in the client_config file. Each of the geoprocesses had separate configuration entry and additionally username parameter was used to specify a user directory. This has changed and user directories are stored in one common location called "userDirectoriesRoot" inside which there are directories based on the logged in user name. The root directory is defined in the backend configuration.

```
"process.featureToFeatureChangeDetection.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.removeElevationSpikes.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.helicopterLandingZone.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.rasterExpurgation.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.imageToImageChangeDetection.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.orthorectifyImagery.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.simpleMosaic.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.slopeMap.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.stereoPair.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.aspectMap.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.automaticPointMeasurement.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.computeTransform.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.georeference.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.dataTriangulation.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.shadingProcess.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.smoothElevationValues.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.radarLevelSlice.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.chartToChartChangeDetection.uploadPath": "D:/WebGLT/upload/${username}/",  
"process.classifyFeature.uploadPath": "D:/WebGLT/upload/${username}/",
```

```
<add key="global.userDirectoriesRootPath" value="D:\WebGLT\upload" />
```

This change has been reflected in the Configuration Wizard which no longer asks about user upload path but instead for the user directories root



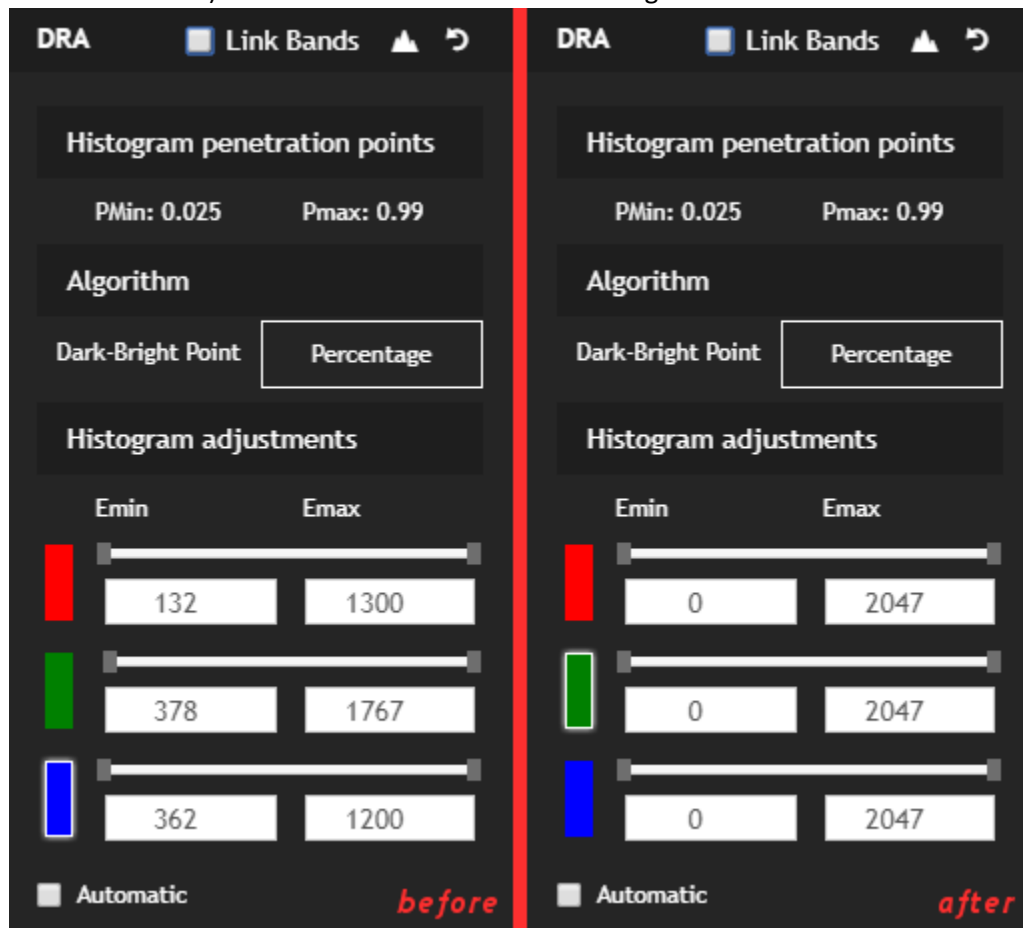


Items Fixed

WG-4985 Prior to this version sliders and histogram in DRA control for SIPS image chains were limiting the possible values to range between the minimum value of a pixel from a particular band the maximum value of a pixel from the particular band. The same logic used to apply to the histogram control. Starting from this version minimum and maximum values of ranges are common for all the bands. Other words, values on the sliders must not exceed maximum value of the pixel from the band which has the highest pixel value. Additionally, if pixel data type of an image is unsigned integer then the limits are driven by minimum number of bits necessary to represent pixel values of the image. In the case of datasets with a well-defined property which defines the actual bit depth of the data (like



the ABPP in NITF) this values is used to define the range.



WG-4751 Prior to this version the Dark Bright Point algorithm for computing DRA ranges for SIPS image chains was not working well for some image. This has been improved and images are adjusted better now.



WG-5004 For some images pieces of their corners where missing if an image was being displayed as Map. This has been corrected and now the whole image can be seen on the screen.



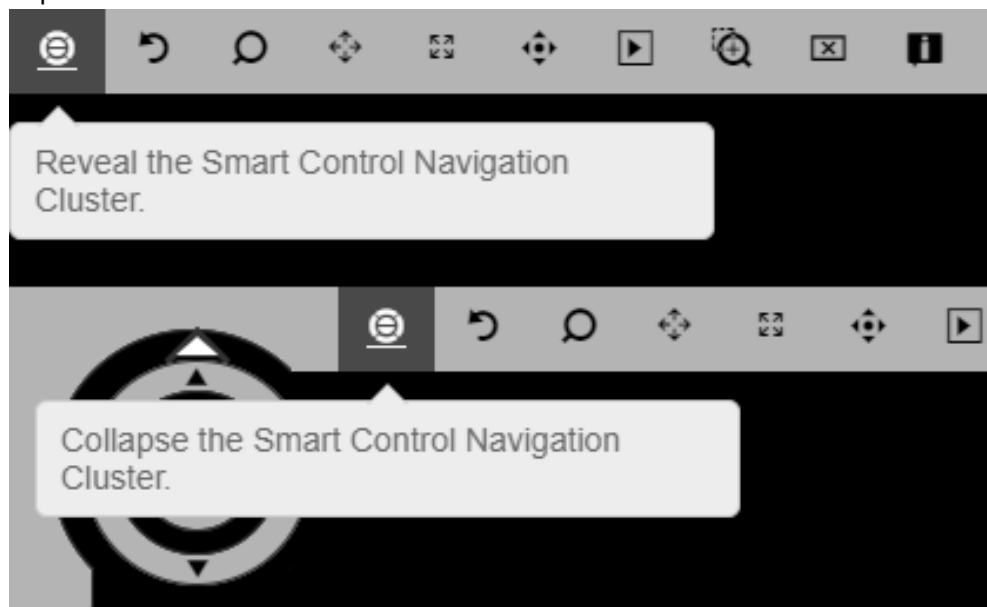
Version 16.4.0.7511 (2017-08-17)

New Features and Improvements

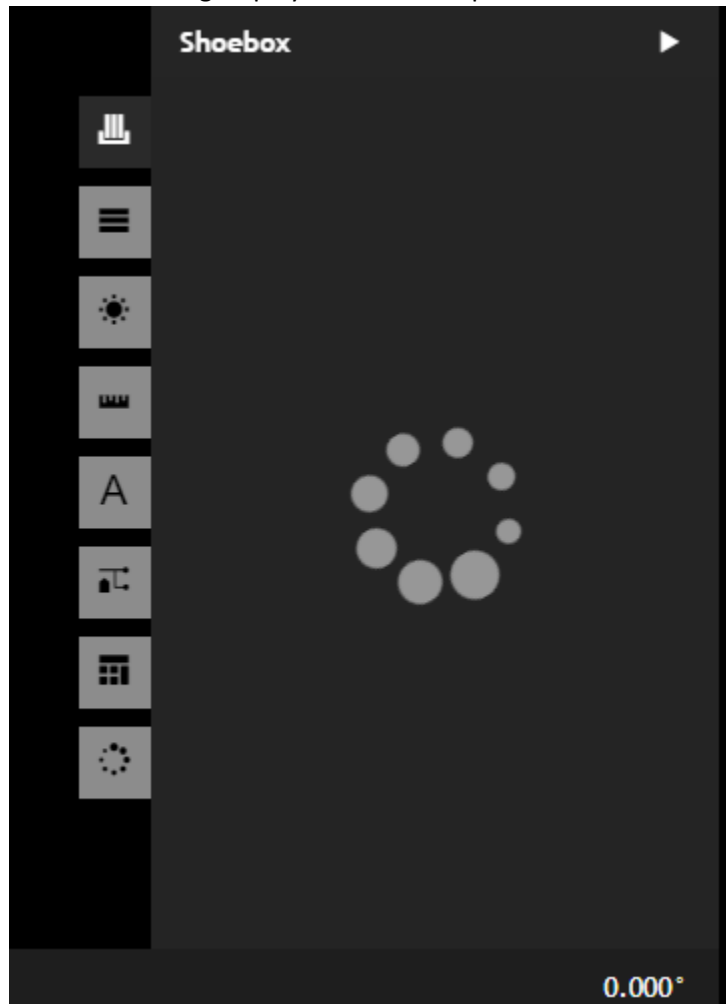
WG-5006 Status bar used to change its height when a browser window was too narrow to display all the content of the status bar. In result, the height of the map view was changing as well providing poor user experience similar situation used to happen when the size of content to display on the status bar was changing (for example switching between File Coordinates and Geographic coordinates). This has been improved in this version and the height the status bar stays same regardless of its content and the window height. User can notice that not all the content is visible thank to ellipsis being display next to truncated text. It is still possible to see the whole value because it is display in tooltips of elements.



WG-5040 In the previous version was introduced functionality to show and hide the Control Cluster. This has been achieved by adding a new button to the smart bar which let user to collapse or reveal the Control Cluster. Tooltips for this new button were confusing and have been improved in this version.



- WG-5057 In one of the previous version had been introduced mechanism of displaying error messages to a user in case of failures during synchronization of a shoebox with the backend service. There were still some cases under which the user was left without any feedback, for example in case of lack of connectivity with the backend service. This been improved and user is notified once the synchronization fails.
- WG-5060 Contents of a side panel is being loaded for the first time when user accesses the panel. This may take a while and in order to provide user with feedback information a loading indicator is being displayed before the panel content is ready.

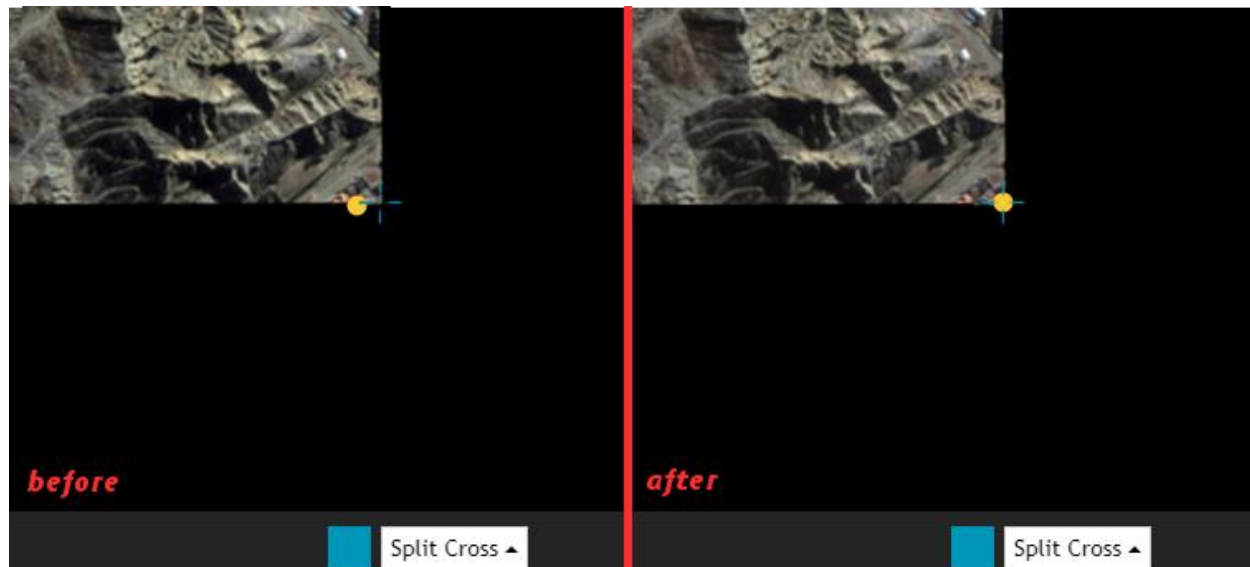


Items Fixed

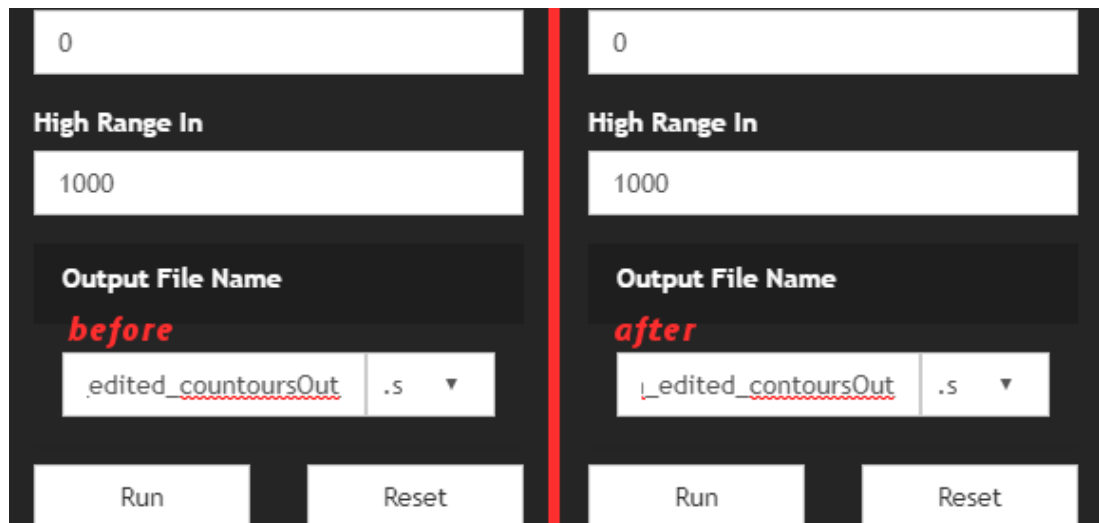
- WG-3124 Blue "Split Cross" cursor used to mark points on the map view was broken and actual point was positioned on the right hand-side of the cursor instead of the center. This has



been corrected.



WG-4995 Many geoprocesses as their output create new files. The names of the files are pre-populated automatically by particular geoprocessing panels, each of these adds specific suffix values to the filenames. In case of Contour Process this piece used to be misspelled and this has been corrected in this version.



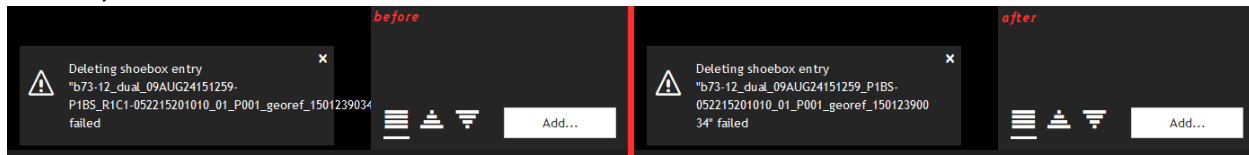
WG-5003 Image display in the image space used to be clipped by half of an image pixel in the top right corner of the image, the same losing information. This has been corrected and



whole pixels are being displayed regardless of the position.



WG-5052 On screen notifications may contain very long words, especially file names, which exceed width of a notification box. On Firefox if that was the case the text displayed outside of the box instead of were wrapped. This has been corrected in this version and text wraps correctly.

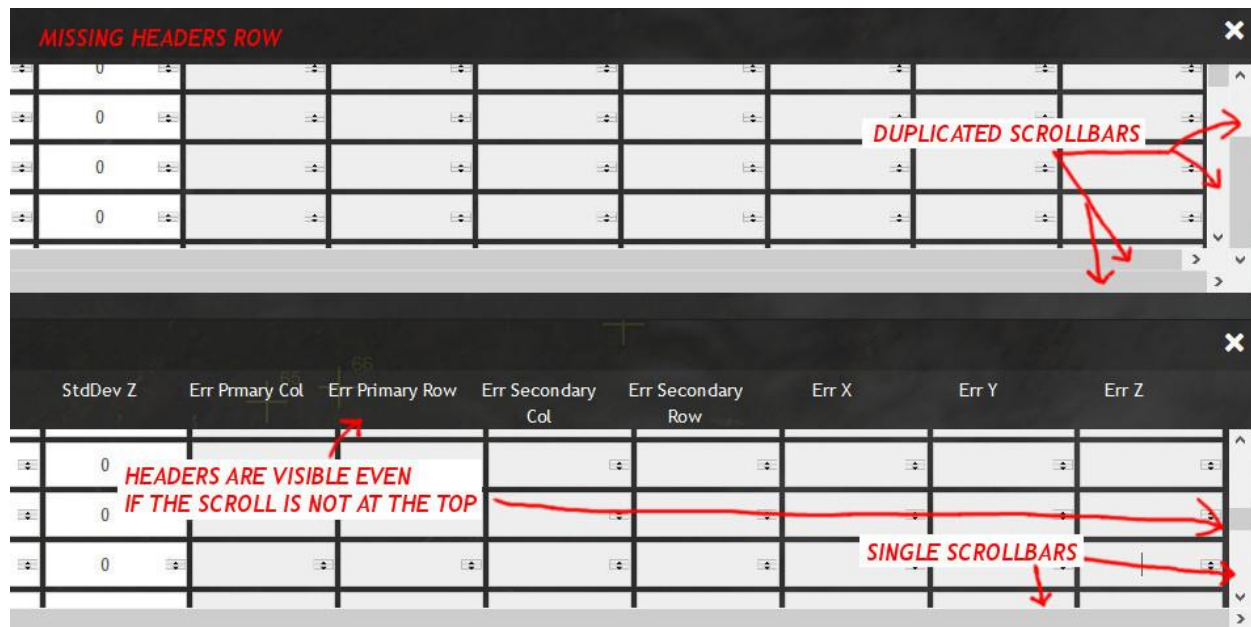




- WG-4963 Playback option in the 3-dots menu has been removed. This functionality has been unstable and not well defined.
- WG-4880 Panels on the side bar load once fist accessed by a user. This change has slightly reduced the overall application startup time.

Items Fixed

- WG-4972 In older version there was a problem with scroll bars in the Grid of Adjust Georeferencing geoprocesses. The scrollbars where duplicated and the row with headers was not visible on the screen.



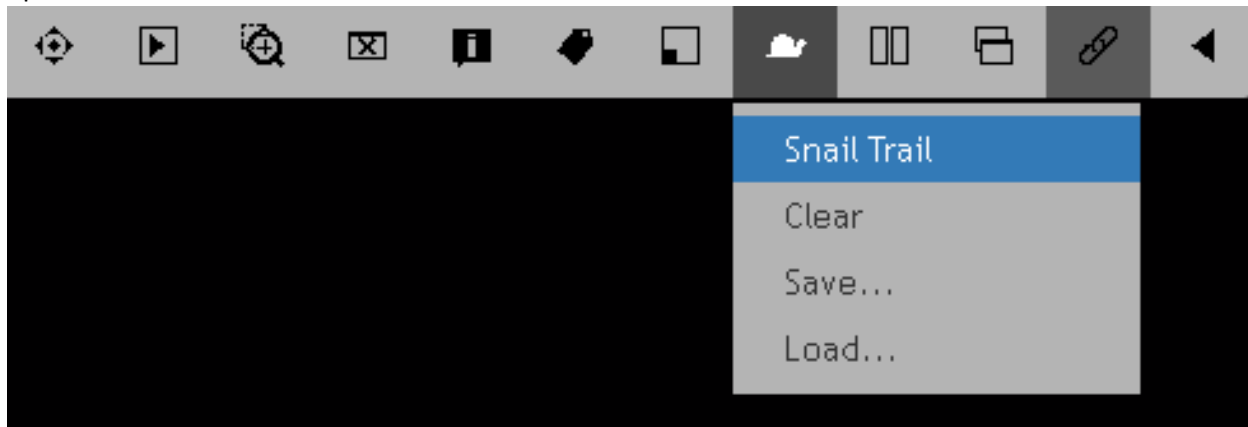
- WG-5011 [EX-9775] Extended Grid of Adjust Georeferencing process did not accept certain values for Lat/Long as correct. This was due to incorrect validation of the coordinates. This has been corrected and works properly.



Version 16.4.0.7312 (2017-07-27)

New Features and Improvements

WG-4816 [EX-8768] Snail Trail used to work in such a way that a user had to press and hold the left mouse button over a Snail Trail tool on the Smart Control for the drop-down options menu to appear. Simple click on the Snail Trail tool used to switch the Snail Trail functionality on and off. Starting this version simple click on the Snail Trail tool opens the drop-down options and Snail Trail functionality can be switched on and off by selecting option "Snail Trail" which is shown below.



WG-4822 [EX-9338] Metadata Browser for NITF files used to have arrows on the left hand-side of a Records View to expand / collapse records rows to switch between full record view and truncated record view. Due this functionality had confused users it has been changed. Starting from this version rows can be expanded by clicking a record and collapsed by clicking the collapse button visible below.

Field	Long Name	Value
FHDR	File Profile Name	NITF
FVER	File Version	02.10
CLEVEL	Complexity Level	06
SType	Standard Type	BF01
OSTAID	Originating Station ID	DG
FDT	File Date and Time	20120302211448
FTITLE	File Title	11NOV10032522-M1BS-052681090020_01_P001.NTF
FSCLAS	File Security Classification	U
		collapse
FSCLSY	File Security Classific...	US



WG-4750 Prior to this version it was possible to configure just one search path to query server file system and paths displayed in a Search Dialog were relative to this directory. This has changed and now it is possible to configure multiple search paths on the backend service.

```
<search>
  <datasets>
    <dataset name="Dataset" id="fss" />
  </datasets>
  <searchers>
    <fileSystemSearcher name="fss1" type="FileSystemSearcher" rootDirectory="D:\MAppX\Data" dataset="fss" />
    <fileSystemSearcher name="fss2" type="FileSystemSearcher" rootDirectory="D:\MAppX\upload\${username}" dataset="fss" />
  </searchers>
</search>
```

Additionally it is possible to use a username parameter of the search path which lets having personalized search results. As there is no longer one root search path, the paths displayed in the search dialog have become absolute.

Search
Catalog Search
WFS
WMS
Feature Collection
✕

Filename

Search

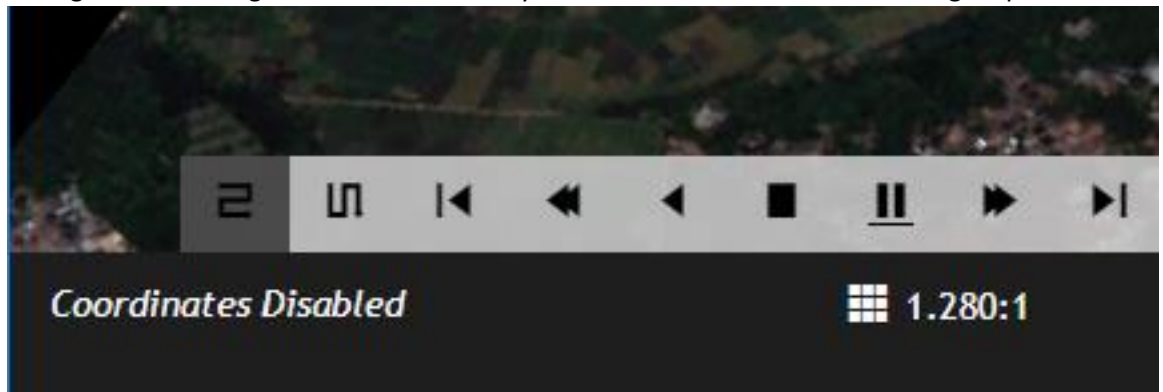
<input type="checkbox"/>	nitfchip_1487320575627.ntf	D:\WebGLT\upload\anonymous	2/17/2017 3:37:01 AM
<input type="checkbox"/>	test_0001.ntf	D:\WebGLT\upload\anonymous	1/19/2017 12:16:28 PM
<input type="checkbox"/>	7seg_igeolo.ntf	D:\WebGLT\Data\7seg	12/8/2016 12:37:44 PM
<input type="checkbox"/>	11NOV10032522-P1BS-052681090020_01_P001.NTF	D:\WebGLT\Data\andyz_rset_test	4/6/2017 6:55:24 PM
<input type="checkbox"/>	08_subset_small.ntf	D:\WebGLT\Data\ChangeDetection	11/1/2016 10:21:03 AM
<input type="checkbox"/>	09_subset_small.ntf	D:\WebGLT\Data\ChangeDetection	11/1/2016 10:21:03 AM
<input type="checkbox"/>	14oct14083351-m2as-054127053010_01_p001.ntf	D:\WebGLT\Data\Crimea	10/24/2016 8:30:18 PM
<input type="checkbox"/>	11NOV10032522-P1BS-052681090020_01_P001.NTF	D:\WebGLT\Data\ctapley	7/13/2017 2:16:15 AM
<input type="checkbox"/>	11NOV10032522-M1BS-052681090020_01_P001.NTF	D:\WebGLT\Data\DG_Oblique\052681090020_01\052681090020_01_P001_MU L	10/24/2016 6:13:57 PM

Add as Image
Add as Terrain
Add as Other
Add as Stereo
Close

WG-4843 During Auto-Roaming approximating coordinates displayed in the bottom left corner of the screen had been reducing the roaming performance. Displaying those coordinates



during Auto-Roaming disables automatically and enables back once the roaming stops.



WG-4497 Auto-Roaming has received performance improvements and works visibly smoother than before.

WG-4863 Once RSET generation is run and image for which they are generated is removed from the display, if it is currently loaded to the display, and removed from a shoebox before the process starts. This change made RSET generation much more reliable than before. Additionally, appropriate message is being displayed to the user.

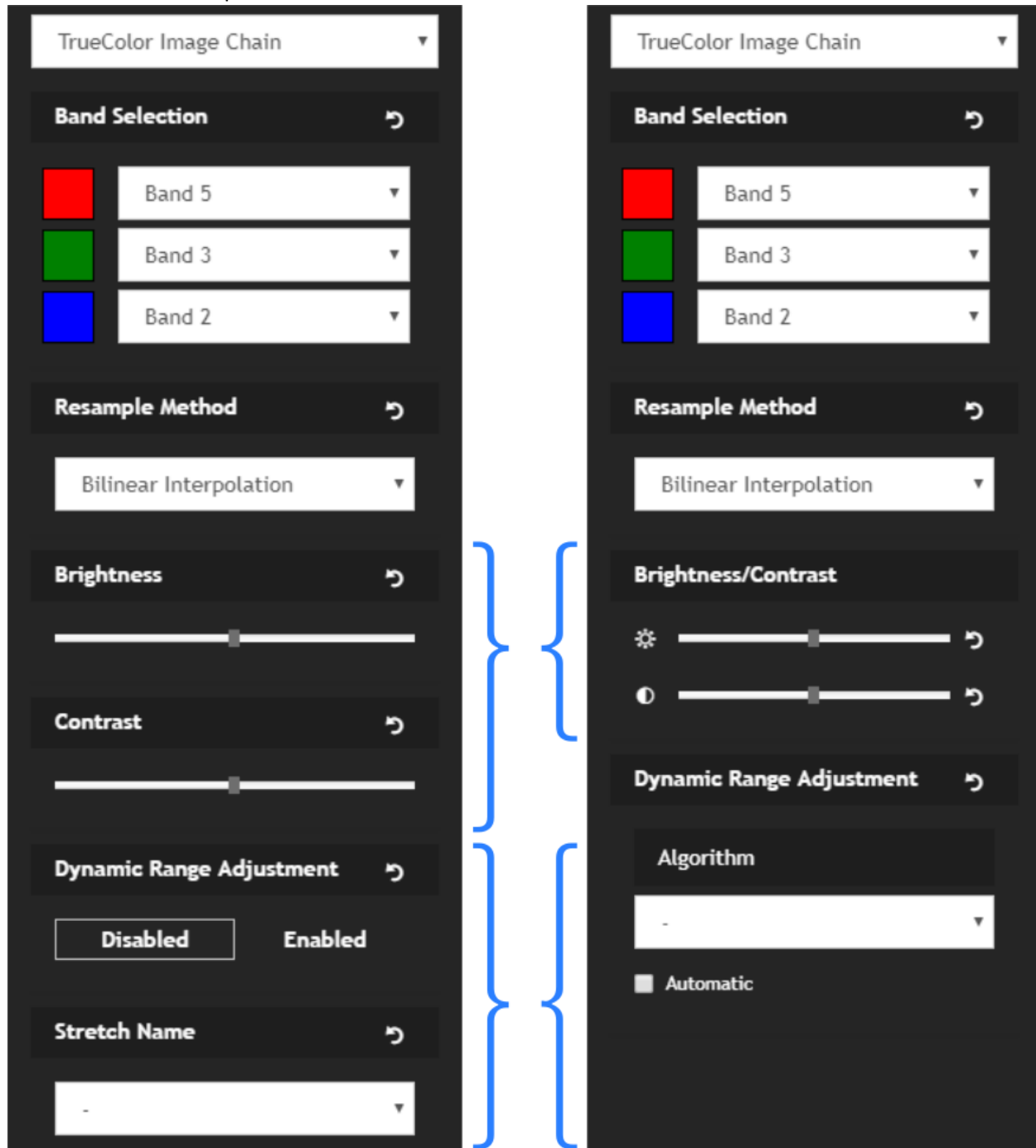
RSET generation is about to start ×

The image will be removed from the display and it will be removed from the shoebox during RSET generation. When RSET generation is complete it will be added back to the shoebox.

WG-4834 Consistency across Image Chain panels has been improved. True Color and Panchromatic Image Chains got combined Brightness and Contrast sliders like it had been in case of SIPS panels. In case of Dynamic Range Adjustment toggle button Disabled / Enabled got replaced with a checkbox and Stretch Name become Algorithm. Additionally, Azimuth and Elevation in the Shaded Relief Image Chain got combined the same way like Brightness



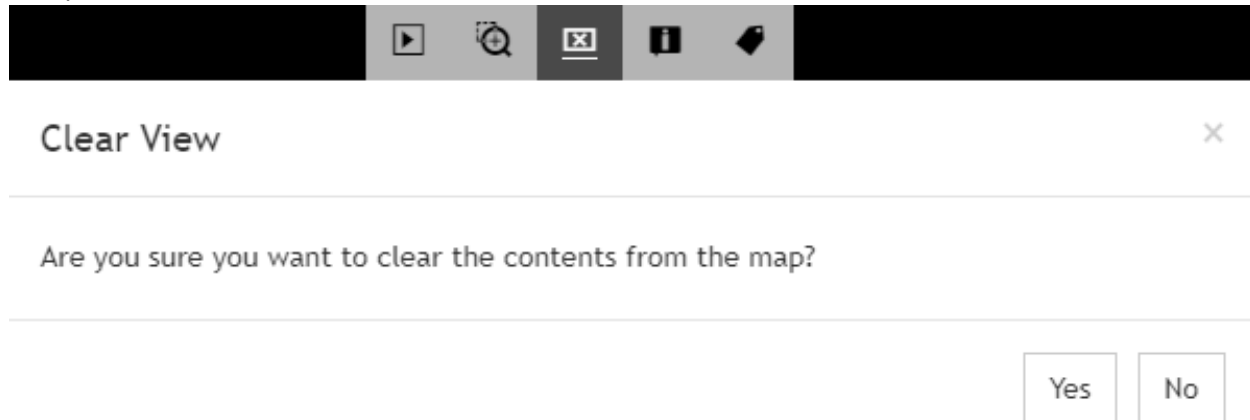
and Contrast in other panels.



WG-4852 Created User and Extras menu for the Title Bar. Changed the way how information about the logged in user and Active Shoebox are presented to the user as show on before/after image below.

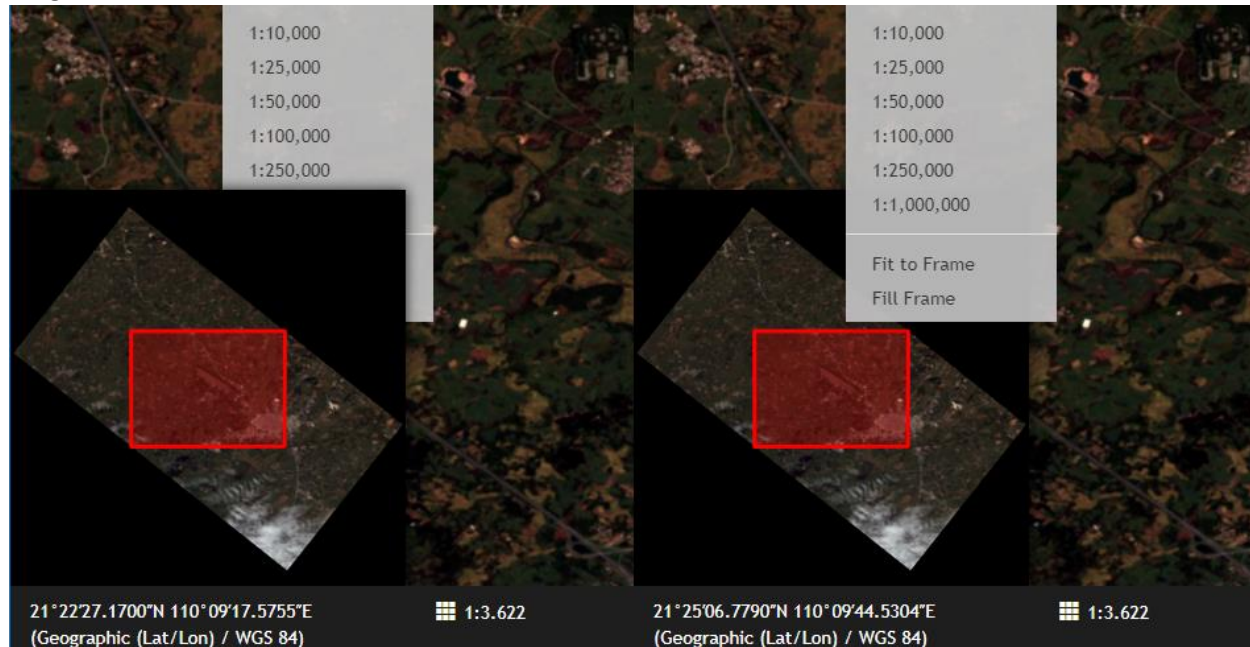


WG-4773 [EX-10790] Clear Contents Smart Bar tool asks user for confirmation before clearing the viewport.



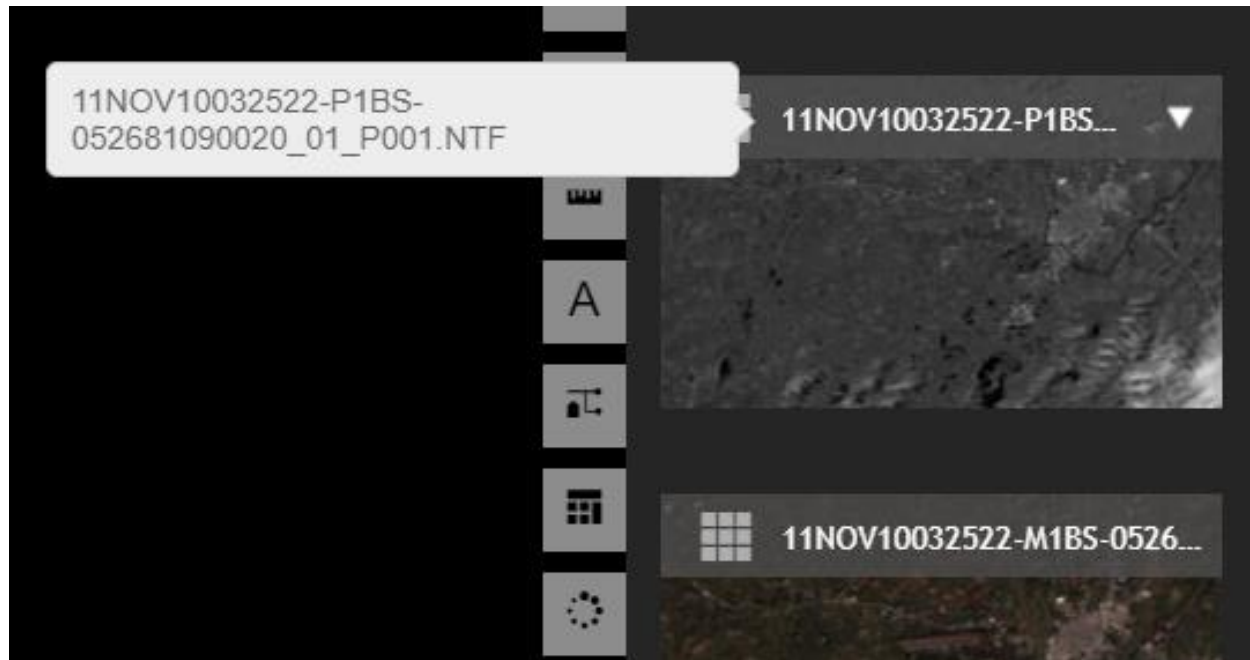
Items Fixed

WG-4931 Magnification menu used to hide under the Overview window. This has been corrected.



WG-4821 [EX-9337] Long image filenames had been truncated but the full name displayed in a tooltip was missing.





Included Geoprocessing Panels

- Detect Vertical Obstruction

Installer Changes

The installation process has not changed from the previous release.



Version 16.4.0.7206 (2017-07-05)

New Features and Improvements

WG-3485 Because the automatic display of cursor position requires a service call, it can produce a lot of traffic. A preference has been added to control the delay between time the cursor stops and the request is made.

Automatic Update for Cursor
Position

Whenever cursor stops ▼

The options are:

Option	Description
Whenever cursor stops	When the cursor stops, the request will be made. (50ms)
After a short pause	After a short delay, the request will be made. (300ms)
After a long pause	After a longer delay, the request will be made. (1500ms)
Next	The update of coordinate information is turned off.

WG-3619 The geoprocessing status panel has been updated so that long running geoprocesses can now be cancelled. Left-clicking on the “X” on the right hand side of the process tile will cancel it:



Items Fixed

WG-1574 Datasets without a defined CRS would generate a console error. These now result in a visible error notification to the user.

WG-2618 An invisible element was masking the lower half of a geoprocessing tile, which was at the bottom of the panel. This has been corrected so that all of the items on the geoprocessing panel are accessible.



- WG-2695 Terrain Datasets were being made available to many geoprocesses and the option to use <Current Elevation Source> was presented, often as the default. In general Terrains should not be presented as inputs to geoprocesses that require images so this has been corrected. Also, the option for <Current Elevation Source> would more often than not result in the selection of the Global DEM which was almost never intended. So this option has been removed entirely.
- WG-3645 The Reset button the Create Slope Map geoprocess did not reset the Output Slope Name to its initial value. This has been corrected.
- WG-3833 The Geodetic Reproject Raster UI was not properly handling the case of an input with no defined coordinate system. This is now being detected and handled.

Included Geoprocessing Panels

- Chart to Chart Change Detection
- Classify Point Cloud
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- Radar Level Slice
- Smooth Elevation Values
- Terrain Difference
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

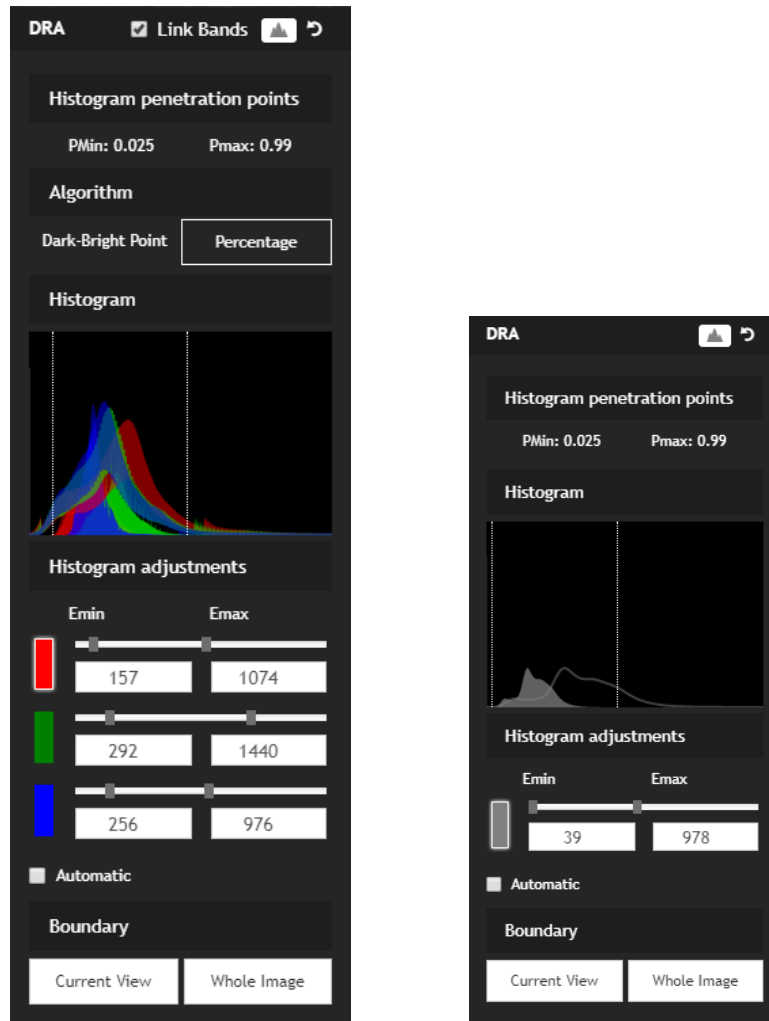
The installation process has not changed from the previous release.



Version 16.4.0.7114 (2017-06-26)

New Features and Improvements

WG-3484 The DRA panel in both Single and Multiple Band SIPS Image Chains now has more user control. Two new buttons have been added “Current View” and “Whole Image”.



“Current View” will use the statistics for the current view to update the DRA and if Automatic is on it will be turned off. This allows the current setting to be locked in. Clicking on “Whole Image” In addition to these additions the panel has been rearranged for ease of use. The Pmin/Pmax labels have been moved to the top and the Algorithm choice has been changed so that the current choice should be much clearer.



Items Fixed

- WG-2274 [EX-2496] [EX-8800] Geoprocessing panels require clicking the Run button twice to start after there was an input error in the panel (ESCAPING button issue). The problem is that the error was not detected until the run button was clicked which would move the button and require a second click. This has been fixed by causing the input validation to happen as the user types.
- WG-4108 The Smart Control Zoom Menu had a misspelling in one of the Zoom options. Specifically the option for “1:50,000” was presented as “1,50:000”. This has been corrected.
- WG-4404 The MTFC Pulldown provided choices 0 to 10, but on only 0 to 6 are actually delivered. The menu has been changed to reflect the actual values available.
- WG-4414 It was possible to inject JavaScript code into the interface via modified data files. These locations have located and changed so that all text that goes into the interface is escaped, preventing JavaScript injection.
- WG-4501 Following the display of a single band NITF image with color tables displayed as Multispectral, subsequent Panchromatic image displays would be black. This has been corrected.
- WG-4506 The Automatic DRA application would not take effect unless the Image Adjustments panel was displayed. This has been corrected.

Included Geoprocessing Panels

- Chart to Chart Change Detection
- Classify Point Cloud
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- Radar Level Slice
- Smooth Elevation Values
- Terrain Difference
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

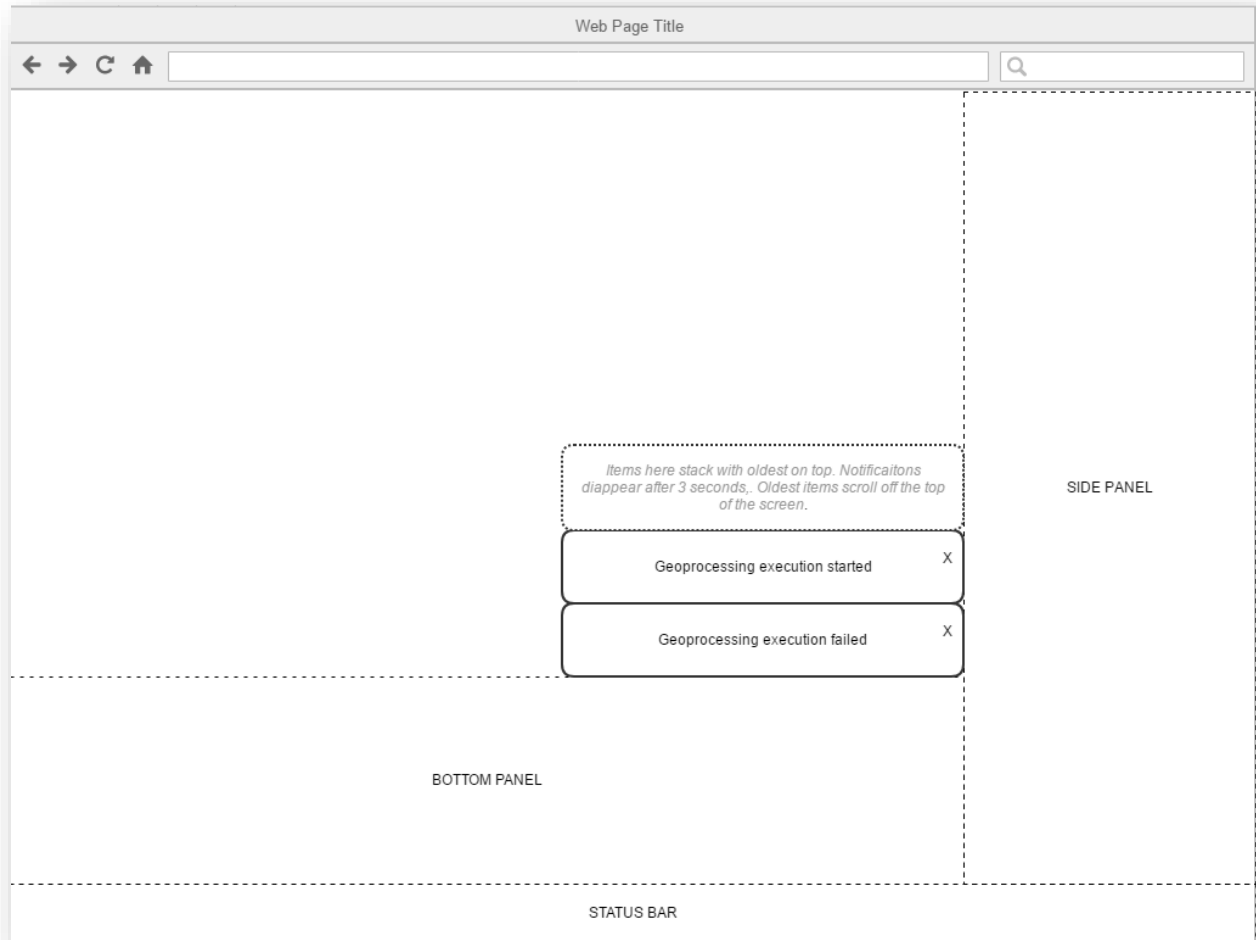
The installation process has not changed from the previous release.



Version 16.4.0.7025 (2017-06-15)

New Features or Improvements

WG-3741 A common notification system has been added to provide a consistent means of displaying errors and notification messages.




The notifications are displayed as tiles which stack from the lower right corner of the view. There is an "X" in the upper right corner of each to dismiss it.

WG-3613 [EX-8795] Shoebox entry add/copy/move now all report their actions using the notification system. This gives the user immediate feedback about the operation.

WG-3615 [EX-8803] Shoebox delete + shoebox entry delete both now use the notification system to give the user immediate feedback about those operations.



- WG-3617 [EX-8799] Asynchronous Geoprocessing: Notification that the process has started is now displayed using the notification system giving immediate and visible feedback that a geoprocess has been started.
- WG-3622 [EX-8798] When there is an error loading a tile a special white tile with the message “Tile Failed to Load” is displayed where the tile would have been placed. There is now a refresh button  on the Smart Control, which can be used if there are error tiles to try again.
- WG-4155 M.App X can now be launched with the path name to an image given a query parameter in the URI. This allows M.App X to be launched from a catalog application, without having to add items to a shoebox. However, the items are added automatically to a “Recent” shoebox, which can be visited later.
- WG-4167 There is now a “Clear Items” menu item on Shoeboxes to allow easy removal of all the items. This was needed to easily clear items from the Recent shoebox.
- WG-4188 Shoebox used to store the full URL for the thumbnail image. This would prevent the protocol from being switch (i.e. http vs https). This has now been changed so that the Pixel Server address and protocol are dynamically added.
- WG-3221 Allow multiple host:port combinations in the mongo connection configuration. The configuration options “mongoClientDBHost” and “mongoClientDBPort” have been replaced with “mongoClientDBHostAndPort” which expects a comma separated list of hosts and ports in this format: “server1:27017,server2:27017”

Items Fixed

- WG-3968 [EX-9327] It was reported that shared shoeboxes were unusable just after being added. This was no longer reproducible, like due to various fixes, which have been done.
- WG-3978 [EX-9507] It was possible to create a shared shoebox which either named a non-existent user or a non-existent shoebox. These are now both checked and this can no longer be created.
- WG-4138 The help button was not working. This has been corrected.

Included Geoprocessing Panels

- Chart to Chart Change Detection
- Classify Point Cloud
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster



- Radar Level Slice
- Smooth Elevation Values
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

The installer has the final product branding which includes the change of WebGLT to M.App X, new graphics and new colors.



The installer includes the correction for operating in the chef environment.

The installer no longer includes the License Administration Tools as they are no longer needed.



Version 16.00.0200 Build 69-17 (2017-05-23)

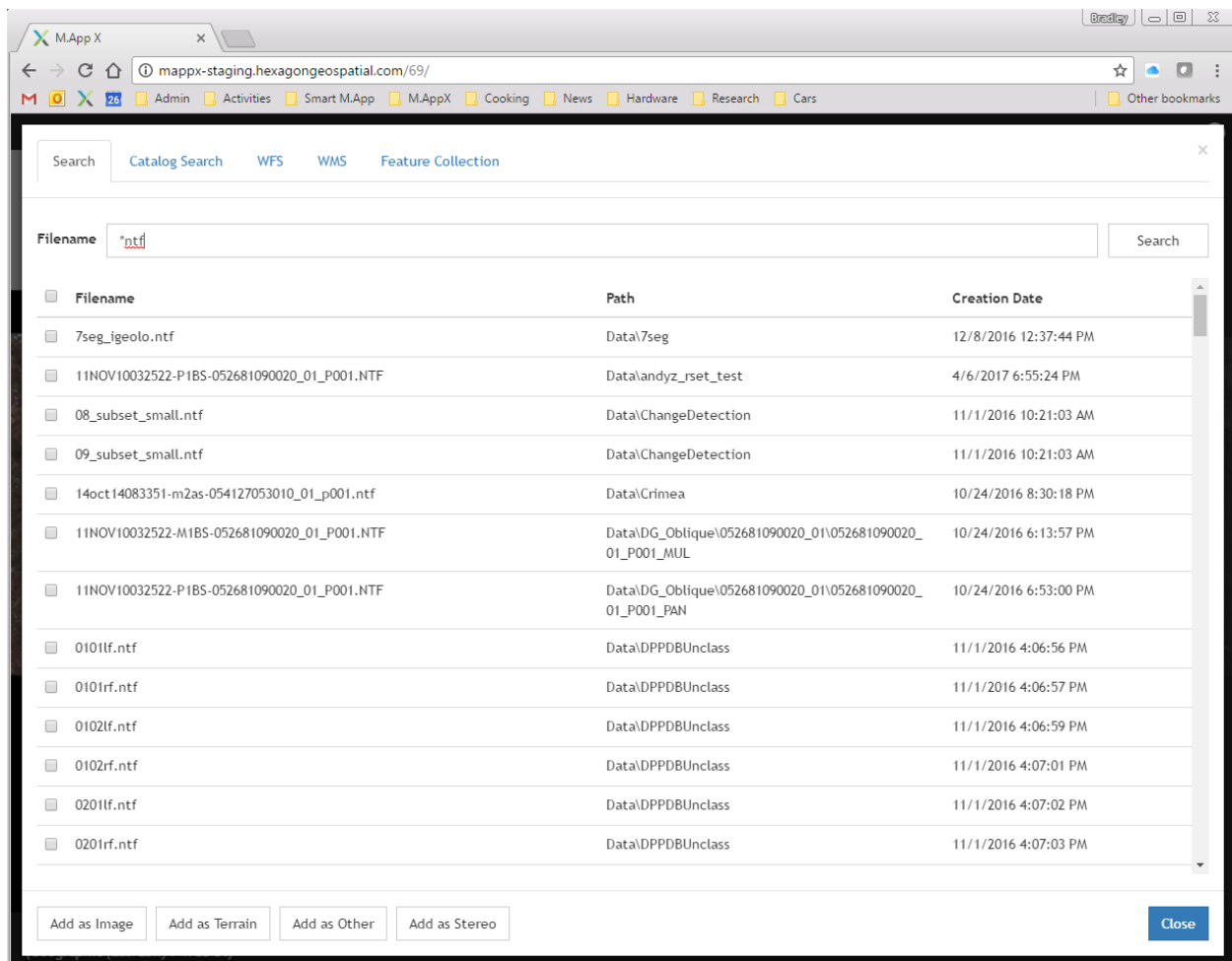
New Features or Improvements

WG-3907 There is a now a preference to control the amount of overlap between the auto roam passes.

Image Roaming Overlap

30%

WG-3823 The tooltips for the filenames in the Add dialog were not properly wrapping. This has been fixed. In addition, the filenames and paths now wrap in the list so there is no more filename truncation. Lastly, the whole Add dialog has been made to fill the M.App X space to give more space for long filenames.



- WG-3616 [EX-8800] Errors from Asynchronous Geoprocesses were hard to read. The errors are now reported in a full window dialog that shows the call parameters and the full error message.
- WG-3614 [EX-8796] When there are errors adding an item to the shoebox, a list of the errors is now displayed in the Add dialog. Each error has a “Details...” link which will display the full content of the error as in WG-3616.

Items Fixed

- WG-4001 [EX-8836] Geometric Model tooltip needs updating. The tooltip referred to the incorrect position of the tool in the status bar. However, since you have to point to the tool to get the tooltip it makes no sense to put a reference to the position in the tooltip, so it was removed.
- WG-3921 Autoroam could stop at a turning point in the path. This was due to a miscalculation of the remaining path length at the turns. This has been corrected.
- This was also the cause of WG-3906, WG-2720
- WG-3912 There was an error during Fit to frame and fill frame when Feature Collection is displayed. This has been corrected.
- WG-3986 Searching with empty query in the add to shoebox dialog would create errors in the console. This has been corrected.

Included Geoprocessing Panels

- Chart to Chart Change Detection
- Classify Point Cloud
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- Radar Level Slice
- Smooth Elevation Values
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

The installer has the final product branding which includes the change of WebGLT to M.App X, new graphics and new colors.





The installer includes the correction for operating in the chef environment.

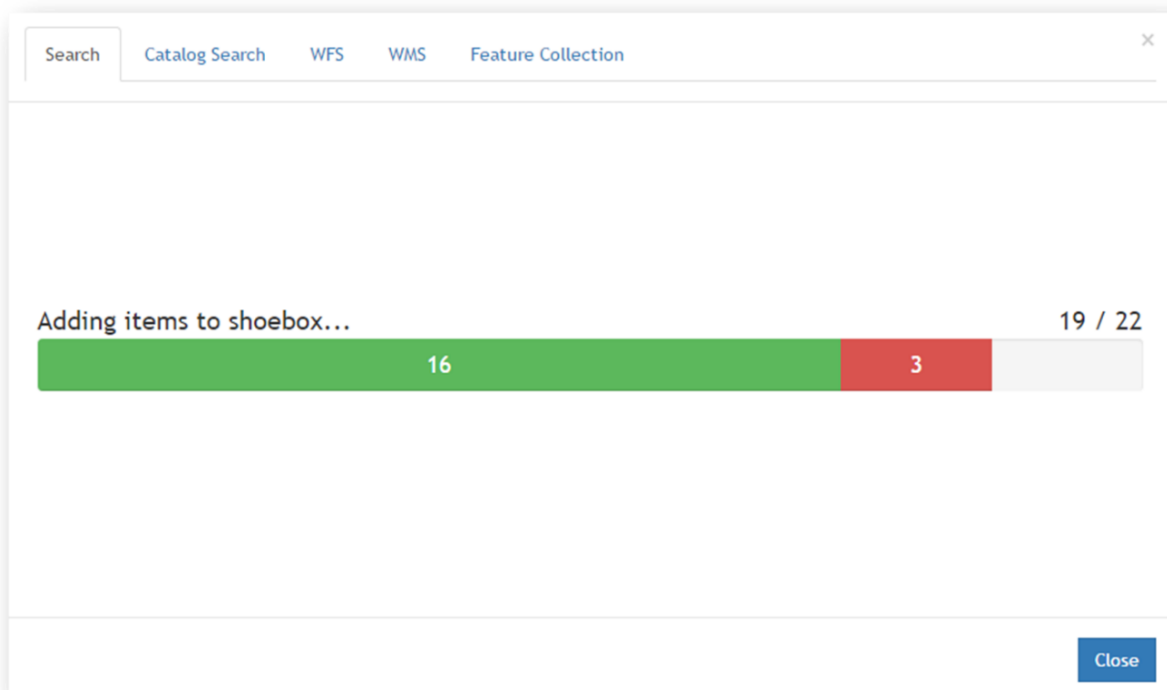
The installer no longer includes the License Administration Tools as they are no longer needed.



Version 16.00.0200 Build 68-25 (2017-05-08)

New Features or Improvements

- WG-3352 Adding items to the shoebox from the Add dialog did not provide the user with any feedback. The add dialog has now been changed so that while items are being added a progress meter is presented in the dialog. The meter shows the number of successes and failures during the process. When the addition is finished if there were any failures, a warning message is displayed. Then the user closes the warning the items which had problems will still be checked in the file list. (NOTE: In the next delivery the list of errors will be displayed).

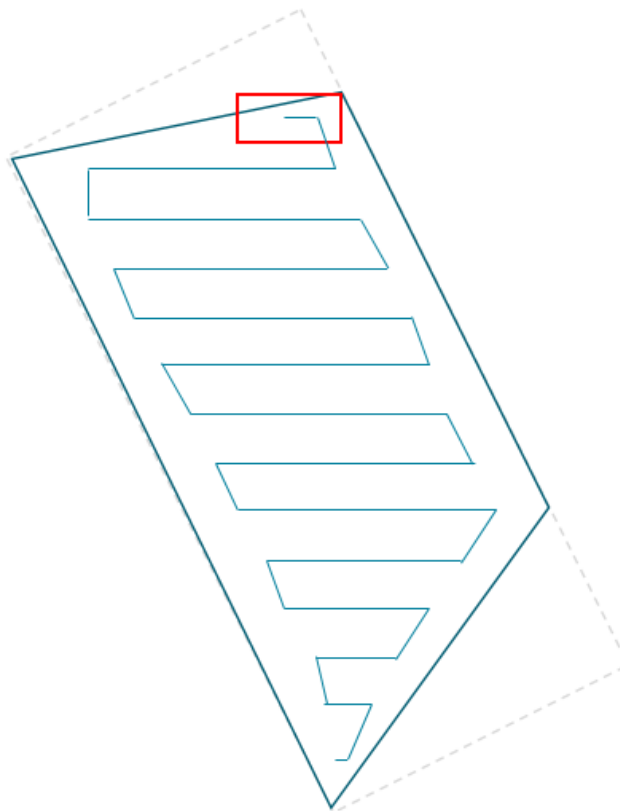


- [WG-3867] The "Print" dialog has been renamed to the "Report" dialog because it can be used to either print or create a PowerPoint. The term "Print" in the "..." menu on the status bar has been changed to "Create report..." and the dialog title has been changed from "Print" to "Report". There have been recurrent problems with invoking the browser print from within JavaScript so the "Print" button has been removed from the dialog and replaced by an instruction which says "Use the browser print to save as PDF or send to a local printer". The "PowerPoint" button has also been renamed "Export to PowerPoint" and moved to the left of the panel.



Items Fixed

WG-2498 The path for auto roam was not taking into account the case when the image is displayed in map space. In this case, the four corners of the original image no longer form a rectangle but instead forms a tetragon. The computation of the path has been modified to compute the tetragonal shape and take this into account as shown in the following illustration.



There were many issues, which had been logged because of this, and they have all been addressed by this correction.

- WG-1859 [EX-3537] Service 173 - Auto roam function assumes in "0.00" rotation is set [DUPLICATE]
- WG-3582 [EX-3537] Auto-roam assumes 0.00 rotation is set [DUPLICATE]
- WG-2109 [EX-3537] Service 173 - Auto roam function assumes in "0.00" rotation is set
- WG-1879 [EX-2676] (build 50) Auto Roam includes background pixels in initial pass [Duplicate]
- WG-2101 [EX-5796] Autoroam does not start within rotated bounding box of orthorectified image [DUPLICATE]



- WG-3191 [EX-7589] [64.9] Autoroam snaking exhibits odd behavior.
- WG-2036 Autoroam is Missing Some Areas of Image
- WG-2037 Autoroam duplicates First row on Map Scan

- WG-3348 The tile requests for images displayed in Map Space were passing the name of the elevation source in the URL. Because that name could sometimes contain a driver letter followed by a colon, this could confuse the URL (since a colon is a delimiter). To avoid this the driver letter was being converted into “[\\localhost\d\...](#)”, i.e. It was being converted into a UNC. This added the complication that the drive be shared. The elevation source name is now being into URL encoding which corrects the problem and the directory holding the elevation source no longer has to be a shared drive.
- WG-3591 [EX-8770] The text number boxes for TTC and MTFC member numbers were too small on Firefox and it was making it difficult to read. This has been corrected.
- [WG-3855] When the overview was hidden it was casting a slight shadow along the top left hand side of the status bar. This has been corrected.
- [WG-3868] When hovering the mouse over the top of tools in the Smart Control the browser was displaying a URL on top of the status bar. This has been corrected.

Included Geoprocessing Panels

- Chart to Chart Change Detection
- Classify Point Cloud
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- Radar Level Slice
- Smooth Elevation Values
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

The installer has the final product branding which includes the change of WebGLT to M.App X, new graphics and new colors.





The installer includes the correction for operating in the chef environment.

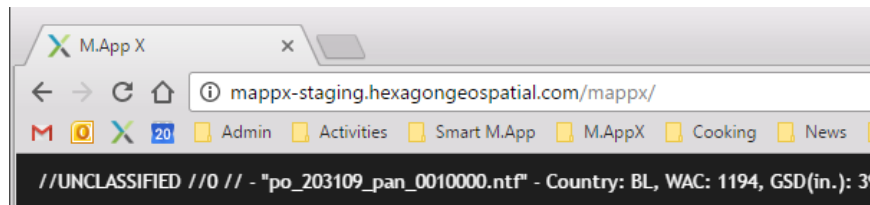
The installer no longer includes the License Administration Tools as they are no longer needed.



Version 16.00.0200 Build 67-31 (2017-04-12)

New Features or Improvements

- [WG-3065] The final product branding of “M.App X” has been implemented. Notable changes are that the application icon has changed, the name of the application on the tab is now “M.App X” and the occurrences of WebGLT in the online help have been changed to M.App X.



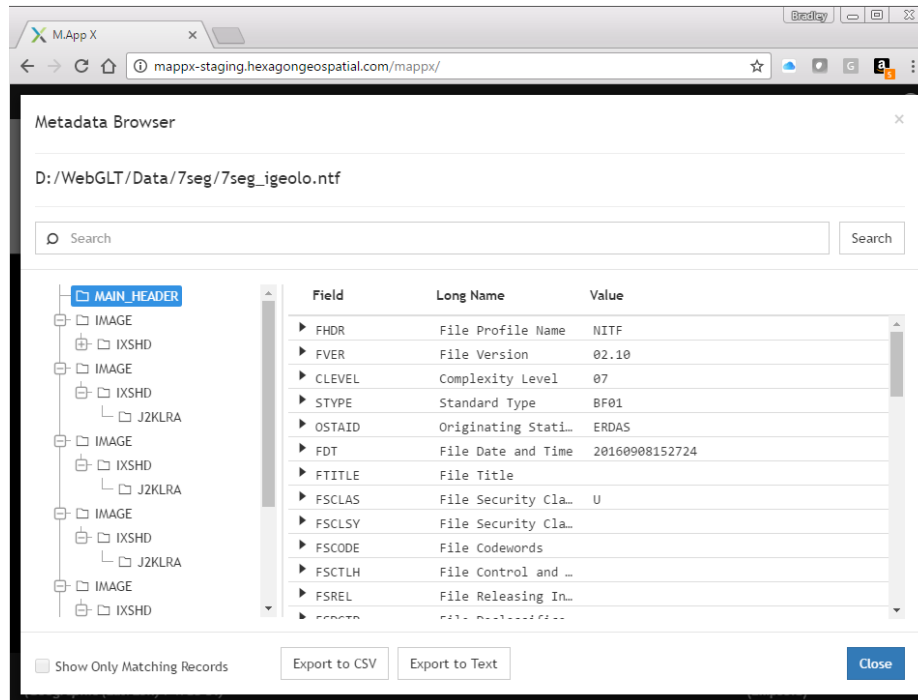
- [WG-2717] The initial image display time has been greatly improved (i.e. shortened). Several different metadata services were being called to obtain information needed to display the image. A new backend service has been created (“image/description”) whose purpose is to collect and return this information. The backend now has a cache for this information so that if the information has already been gathered once it will not need to be gathered again and the combined metadata can all be returned at once with very low overhead. When an image is added to the shoebox this description API is called to assure that the information is available for display. Now when the image is displayed this information is returned immediately and there is little or no latency until tiles begin to be returned. There was also a second related part that was causing a refresh of the tiles on the initial display. This code has also been refactored to take advantage of the cached description so that initial image display requests tiles only once.
- [WG-3160] Tiles for the overview window were being requested even if the overview was not displayed. This was adding additional overhead to the initial image display. The overview has now been modified so that no tiles are requested until the overview window is displayed. In addition the overview was using the same tile size as the main view, which was almost always too big causing bigger payloads than needed. The overview now requests a single tile which is the size of the overview. This helps to improve the initial image display performance and overview performance.

Items Fixed

- [WG-3340] [EX-8133] The Metadata Browser was not presenting a scrollbar for the treeview list on the left hand side when the list grew longer than the height of the window. This was



preventing those items beyond the end of the window from being examined. This has been correct and scrollbar now appears when the content of the treeview list exceeds the height of the window.



- [WG-3172] [EX-6206] Display as Map was not working properly if the default Image Display Scale was set to 1:1. In this case the image was displaying as blank. This has been corrected and the default zoom is now properly observed for Display as Map.
- [WG-3433] [EX-2222, EX-2385, EX-3540] Image using the RSM Sensor model were not able to be properly rotated to "Up is Up". This was due to improper use of the elevation source in the sensor model. The RSM sensor model has been corrected.
- [WG-3364] [EX-8071] If the user's shoebox contained a reference to a shared shoebox which had been deleted the application would not start properly. This has been corrected and the user is notified that the shared shoebox no longer exists via a tool tip on the shoebox which points to the missing shared shoebox.
- [WG-7645] [EX-7645] "Give the shoebox a name" tool tip remained active even after the shoebox was created. This has been corrected.
- [WG-7564] [EX-7564] The option to view all metadata was unavailable for ".r0" images in existing shoeboxes prior to the 7.2.0 upgrade. This has been corrected.
- [WG-2826] [EX-7125] Snail trails saved to the shoebox could not be reloaded from the shoebox. This is no longer reproducible having been fixed in a previous build.



- [WG-3185] [EX-7495] When the output of geoprocessing, such as “Create NITF Chip” was placed in the metadata browser could not be used. This has been corrected and all NITF items added to the shoebox can now be viewed in the metadata browser.
- [WG-2676] [EX-6302] The Mosaic geoprocess was failing when the output file type was NTF (NITF). This has been corrected.
- [WG-3387] [EX-6244] The MSP Panel now has a Save button. Clearing results is accomplished using the existing mechanisms.
- [WG-2294] [EX-2919] “Image to Image Change Detection” was issuing an error message when the result was an empty shapefile. This has now been corrected.
- [WG-3492] There was a script execution vulnerability in annotations. The annotation text needed to be quoted (or escaped) to prevent it from being interpreted by the browser when inserted into a DIV for display. This has been corrected.
- [WG-3509] The snail trail filename did not include a “.” Before the STL extension. This has been added.
- [WG-3258] The preference for the initial rotation did not include the option for 270 degrees. This has been added to the list.
- [WG-3330] Sometimes the zoom and scale numbers in that status bar did not exactly match the user selected zoom or scale. This has now been corrected.
- [WG-3291] Non georeferenced images were causing console errors and some issues in the coordinate display in the status bar. The code has been corrected to properly handle images which have no georeferencing.
- [WG-3478] The “Display As Stack” command would display NODISPLAY segments from a multiple segment NITF file which would often hide the underlying image. This has been corrected so that NODISPLAY segments are not displayed by the “Display As Stack” command. They can be displayed by explicating display that segment.
- [WG-3188,3601] [EX-7555] Fixed an issue with RSET generation on NITF files with a NODISPLAY segment that was causing misplaced tiles when zooming out.
- [WG-3592] [EX-8771] Grid North Up is now working. This was likely caused by the same issue as WG-3433.
- [WG-3208] [EX-8069] The displayed list of related images under the Show Related Images option from a shoebox entry is now properly cleared out.
- [WG-NA] [EX-8067] FIRELA TRE should now be fully parsed for metadata display. We do not have all possible data variants for testing so this should be tested thoroughly at the factory.



- [WG-NA] [EX-7871] Tooltips have been improved for selecting multiple MSP Output Functions and added for the Multipoint type.
- [WG-NA] [EX-7872] The button to optionally include ISD information in the MSP output report has been restored.
- [WG-NA] [EX-7873] The length of the MSP Output Function selection dialog has been increased for better usability.
- [WG-3173,2326,3578] [EX-6240] This item was kept open to track a related issue but has been fully implemented and should be closed.
- [WG-NA] [EX-3776] The place point function has had a small formula correction so that NITF Full Image coordinates drive to the proper place. The NITF Full Image coordinate formula has been modified slightly to get correct coordinates at pixel boundaries for certain asymmetric imagery. The offset computation has been modified to provide correct NITF Full Image coordinates for points taken from image chips.
- [WG-NA] [EX-7944] The initial image orientation user preference is now working correctly
- [WG-1990] [EX-5242] Full filename metadata is not available for items added as type Other in the shoebox.
- [WG-3472] The tooltips were missing for some elements of the DRA group on the ImageAdjustments panel. These have been added.
- [WG-3067] While using AutoDRA the system would sometimes crash if the image was scrolled completely off the screen. This was due to the return of an empty histogram. The DRA code now handles empty histograms properly.
- [WG-4394] There was an error in console when image as hidden in the contents panel. This has been corrected.
- [WG-3503] There were instances when changing the values of Emin and Emax using the slider controls in the DRA panel would not update the image. This has been corrected.
- [WG-3428] The Emin and Emax values in the DRA panel would sometimes display decimal values (i.e. digits to the right of the decimal point). This was a result of the fact that Emin and Emax are computed and sometimes the computation returns non-integer values. Emin and Emax represent pixel values which are integers, the display of the non-integer value was disconcerting for some so the display is always rounded to the nearest integer.

Included Geoprocessing Panels

- Chipper



- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- NITF Chipper
- Radar Level Slice
- Smooth Elevation Values
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

The installer has the final product branding which includes the change of WebGLT to M.App X, new graphics and new colors.



The installer includes the correction for operating in the chef environment.

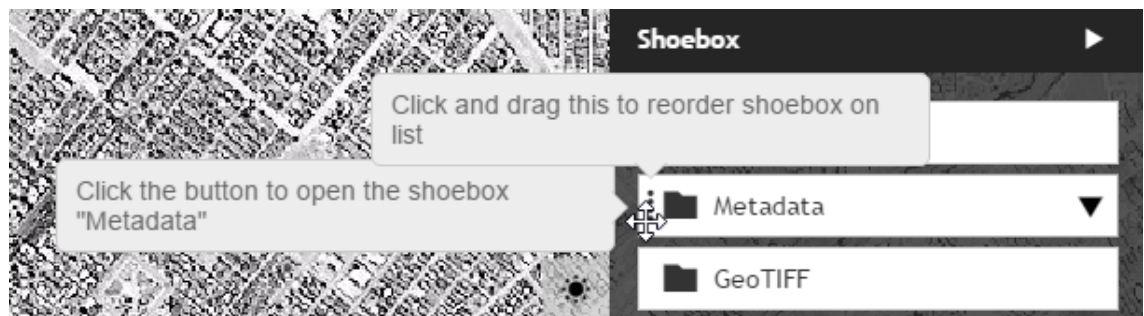
The installer no longer includes the License Administration Tools as they are no longer needed.



Version 16.00.0200 Build 65-19 (2017-02-22)

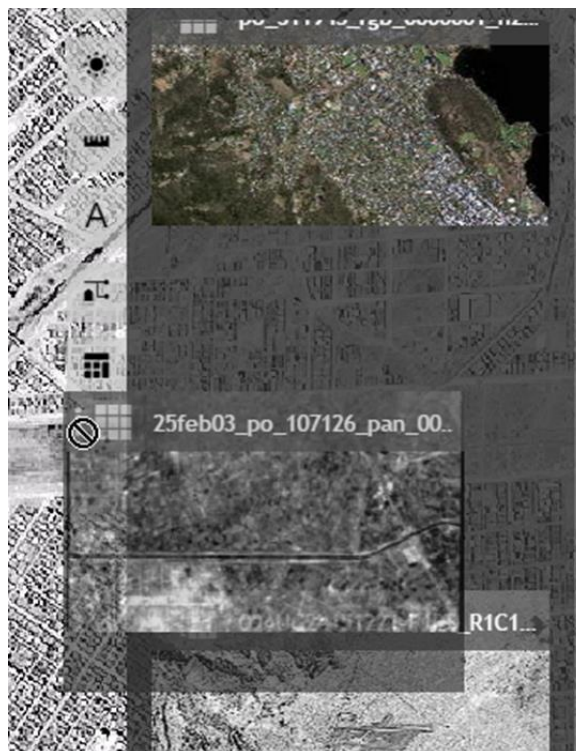
New Features or Improvements

- [WG-2119] **EX-3507** Added support for Drag & Drop to rearrange Shoeboxes (folders and items). The arrangement of items in the shoebox has been in the order of creation. The previous version added the ability to view items in the unsorted order, A-Z sort by name and Z-A sort by name. In this release the ability to grab and item drag it to a new position in the unsorted order was added. This allows the user to arrange the shoeboxes and the data in the shoeboxes in the order they desire. The order is saved and will remain from session to session until they change it. The A-Z and Z-A views still provide a name sorted view, but selecting the unsorted view will return to the user's custom arrangement.

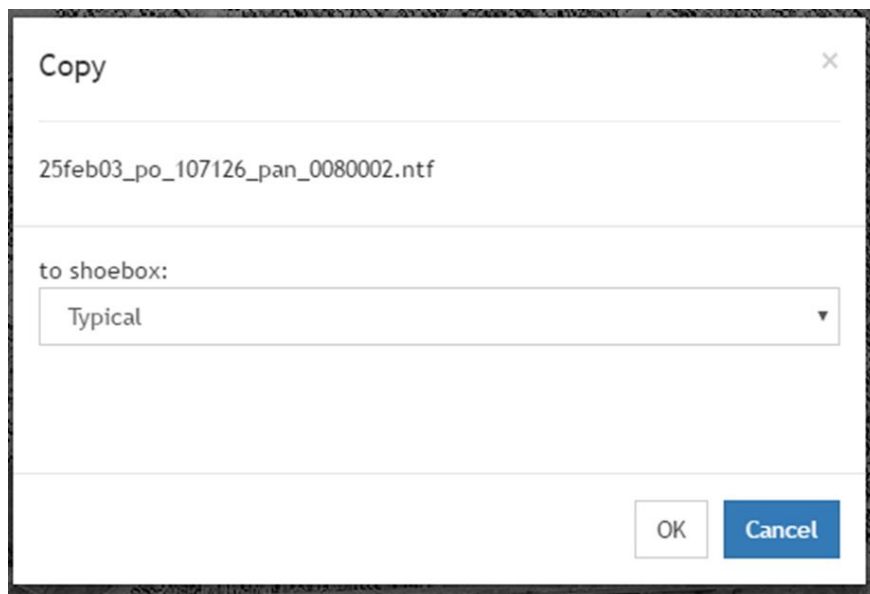


Hovering over a shoebox or a shoebox item will display a grab handle on the left hand side of the title of the item. By clicking on the grab handle the user can drag the shoebox (or item) up and down and drop it into a new location.





[WG-2749] **EX-3507** Added Copy and Move for shoebox items. There are now two new menu items in the shoebox item pulldown menu on the right of each shoebox item. These are the “Copy...” and “Move...” items. Each displays a dialog like the following:



The dialog presents a pulldown list from which the destination shoebox is selected. The Copy dialog presents all the shoeboxes and when a OK is clicked, the item is then copied to the destination. It can make a duplicate of an item, because items are not stored by name, but instead by an internal GUID. The Move dialog presents all but the current dialog because an item cannot be moved from a folder back to the same folder (it just makes no sense). When a destination is selected and OK is clicked the item is moved to the destination folder, removing it from the current folder.

[WG-2783] **EX-3020** Respect AutoDRA Flag. The SIPS XML database now contains information that indicates when AutoDRA should be used. There is now a preference which is used to control how the SIPS Image Chains interact with this setting. There is also a similar setting for the NON-SIPS Image Chains.

SIPS Default Auto DRA Behavior	Follow Auto DRA SIPS Setting ▼
Non-SIPS Default Auto DRA Behavior	Off ▼

For SIPS Image Chains the settings are:

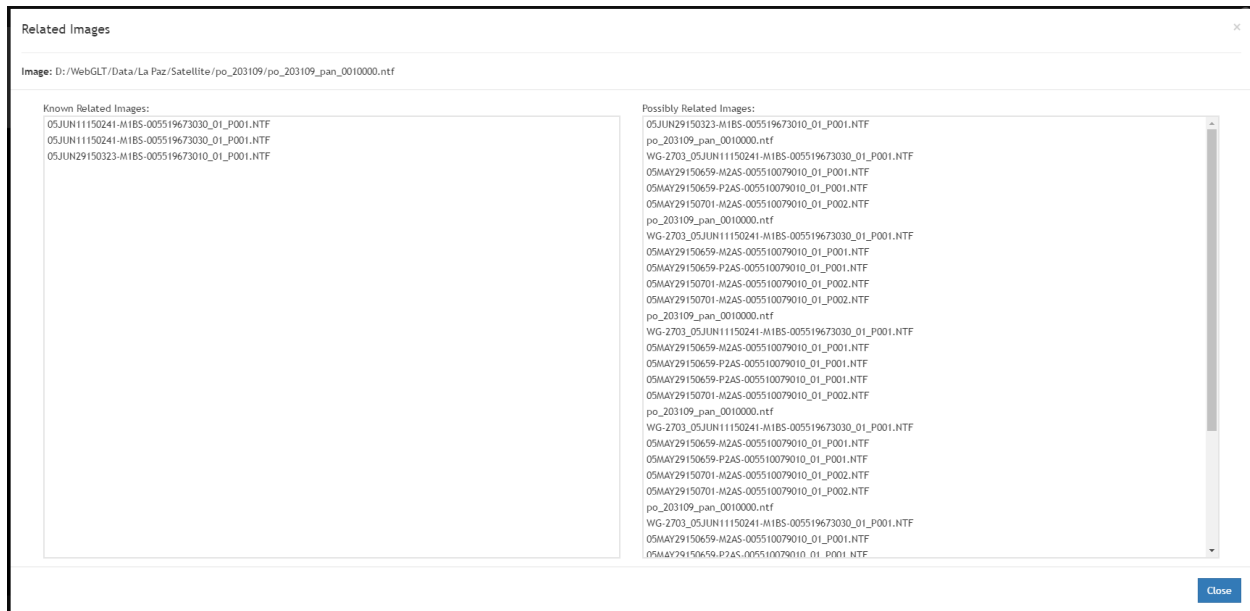
Setting	Description
Off	AutoDRA is off at image display.
On	AutoDRA is on at image display.
Follow Auto DRA Sips Setting	AutoDRA is controlled by the information returned from the SIPS XML database. (This is the default setting)

For NON-SIPS Image Chains the settings are:



Setting	Description
Off	AutoDRA is off at image display. (This is the default)
On	AutoDRA is on at image display.

[WG-2995] **WB-63, EX-5823** NITF files have metadata that indicates the names of other images that are associated with this file or may be associated with this file. There is a new menu item on NITF shoebox entry labeled “Shoe Related Images”. When this selected the NITF metadata is examined to determine the list of images and display them in the “Related Images” dialog.





The left-hand list is the list of images which are known to be related and the right-hand list is a list of images which may possibly be related. If desired items in the list can be highlighted and copied into Notepad or another editor for later reference. This is done just using the browsers select and copy tools. Clicking on “Close” will dismiss the dialog.

[WG-2297] **EX-3511** Display Image Magnification. The pixel zoom level or the map scale is now displayed in the status bar, just to the right of the coordinate display area. Left clicking on the area will display a menu allows selection of either pixel zoom or map scale. The  icon indicates pixel zoom and the  icon represents map scale. Left clicking on either icon in the status bar will display a menu that can used to select the mode.



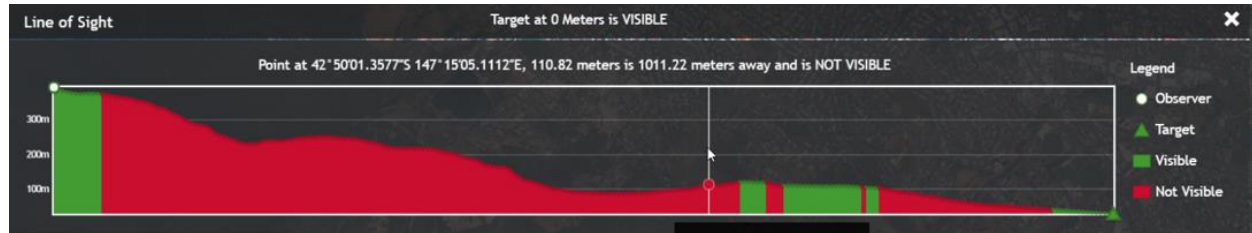
1: Pixel Zoom



2: Map Scale



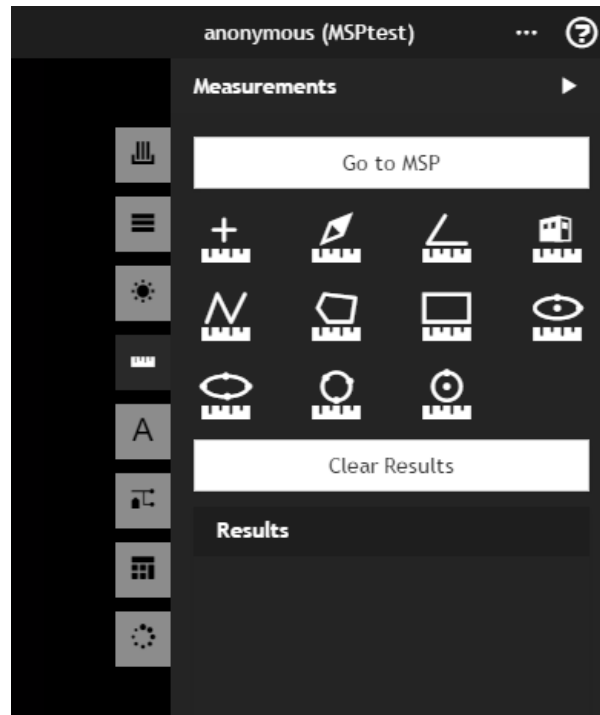
- [WG-2139] **EX-2874** Legend for Line of Sight. The Line of Sight and Terrain Profile tools have been improved to provide interactive feedback while the mouse is within the chart area. In addition, the Line of Sight has an added legend on the right-hand side of the chart to help with interpretation of the information on the chart. Because Line of Sight is directional the observer point and target point are now indicated both on the chart and on the map with a green outlined circle for the observer and a green or red triangle for the target (depending on visibility).



When the mouse is within the chart a vertical bar tracks the horizontal motion of the mouse. A ball on this bar tracks the cursor along the terrain. For the Line of sight the cursor is red for not visible and green for visible. In addition, more information is presented just above the chart that corresponds with the current location of the tracking bar. This information includes the ground coordinate displayed in the current coordinate system using in the status bar, the elevation value at that point. In addition, the Line of Sight chart includes the 3D Euclidean distance from the observer to the target and the indication if a point at that location is visible or not visible from the observer.

- [WG-2989] **EX-3529** Provide Ability to launch geoprocessing Panel (used to add MSP to measure panel). A button has been added to the Measurement panel.

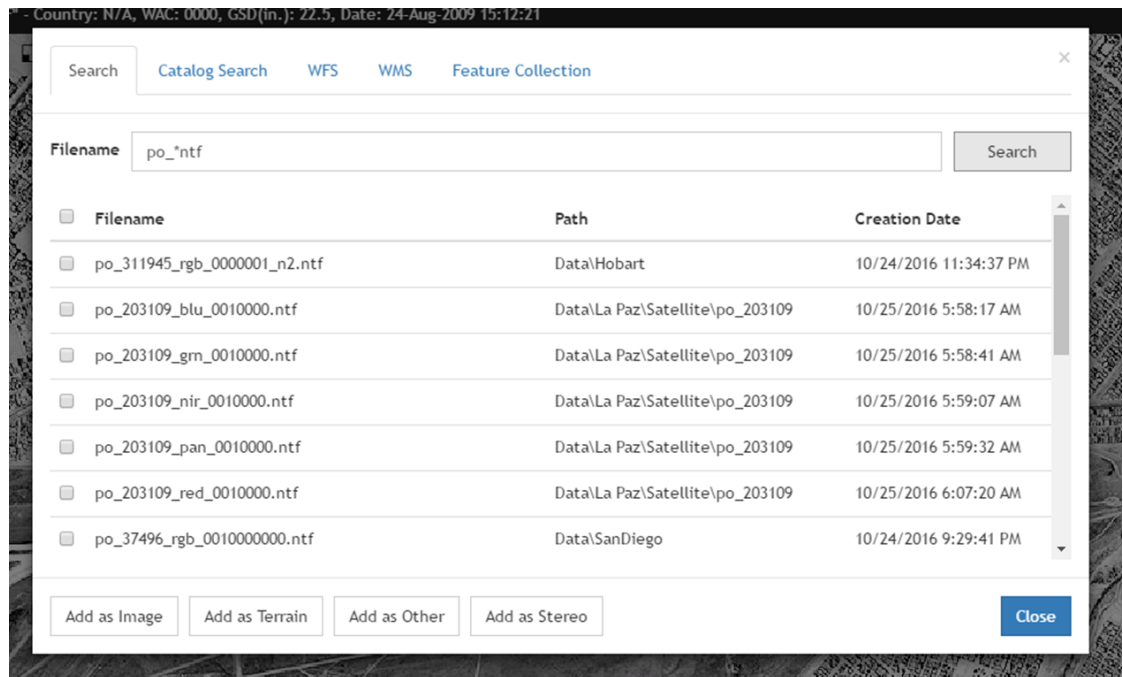




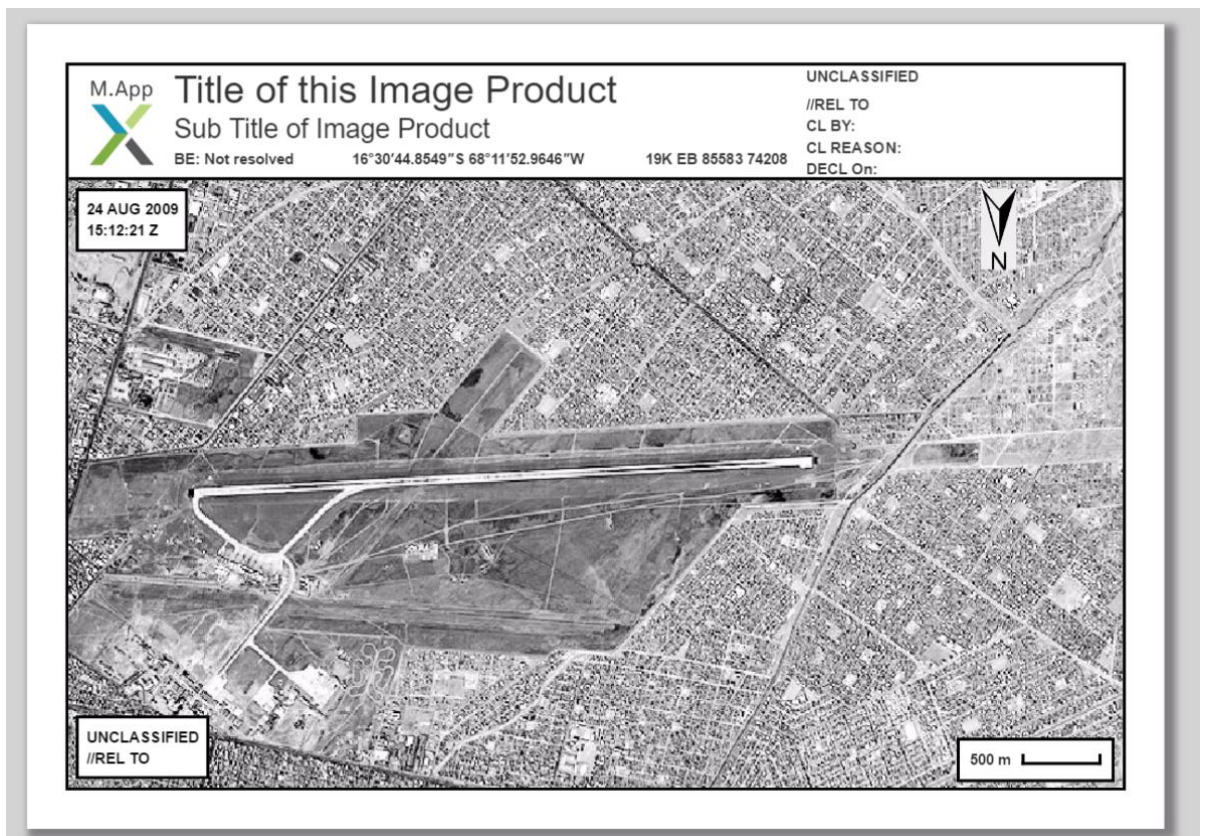
The button is off by default and is enabled by setting "includeMSPGeoprocessingPanel": true in the WebGLTClient\Client\Data\Client_config.json file

- [WG-2745] Added file path to displayed results of search in "Add..." dialog. Previously the "Search" panel of the "Add" dialog had a column that showed the extension of the discovered files. That column has been replaced by a "Path" column which shows the relative path of the folder in which the image was discovered. This helps to distinguish versions of the file in different folders which have the same name.





[WG-2852] Added proper M.App X Logo to map template. The default map template had the old product logo which has now been replaced the final product logo.



- [WG-1349, WG-2723] Improved performance of scroll for large amounts of data for text and xml views in Metadata Browser. When the amount of text or XML data was presented in the text and XML panels they would scroll slowly. The implementation has been changed so that the scrolling is now fast and smooth even with very large content.
- [WG-3005] The M.App X Client had been displaying only the build number in the “...” menu and it did not have the correct product version in the splash screen. The complete version is M.App X Version 16.00.0200 Build 65-9.

Items Fixed

- [WG-1856] **EX-4039** Elevation Source Options Mismatched (This was actually fixed and documented in delivery 62)
- [WG-1991] **EX-4539** eXploit 4.3.2 IV&V NIQU: Adjustment panel non-responsive to change in image chain. This appears to have been corrected by previous fixes.
- [WG-2851] **EX-7138** DRA Histogram hangs with invalid min/max. The DRA section of the Single and Multiple Band SIPS Adjustment panels would allow the min and max values to be the same which is an invalid setting. This is now prevented in the User Interface.
- [WG-2833] **EX-7161** Deleting and re-adding image messes up shoebox. The shoebox entry was not being properly deleted and when it was re-added the entries were confused. This has been corrected.
- [WG-2795] Investigate shoebox activities
- [WG-2832] Generating RSETS messes up Shoebox
- [WG-2846] 2D Adjustment is Not Returning RMS Error Values
- [WG-2859] Adjust Georeferencing 3D - GetJSONFromFile returns Error

Included Geoprocessing Panels

The following Leidos Geoprocessing Developed panels are included in this build.

- Chipper
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- NITF Chipper
- Radar Level Slice
- Smooth Elevation Values





- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

The Installation is the same as 63.

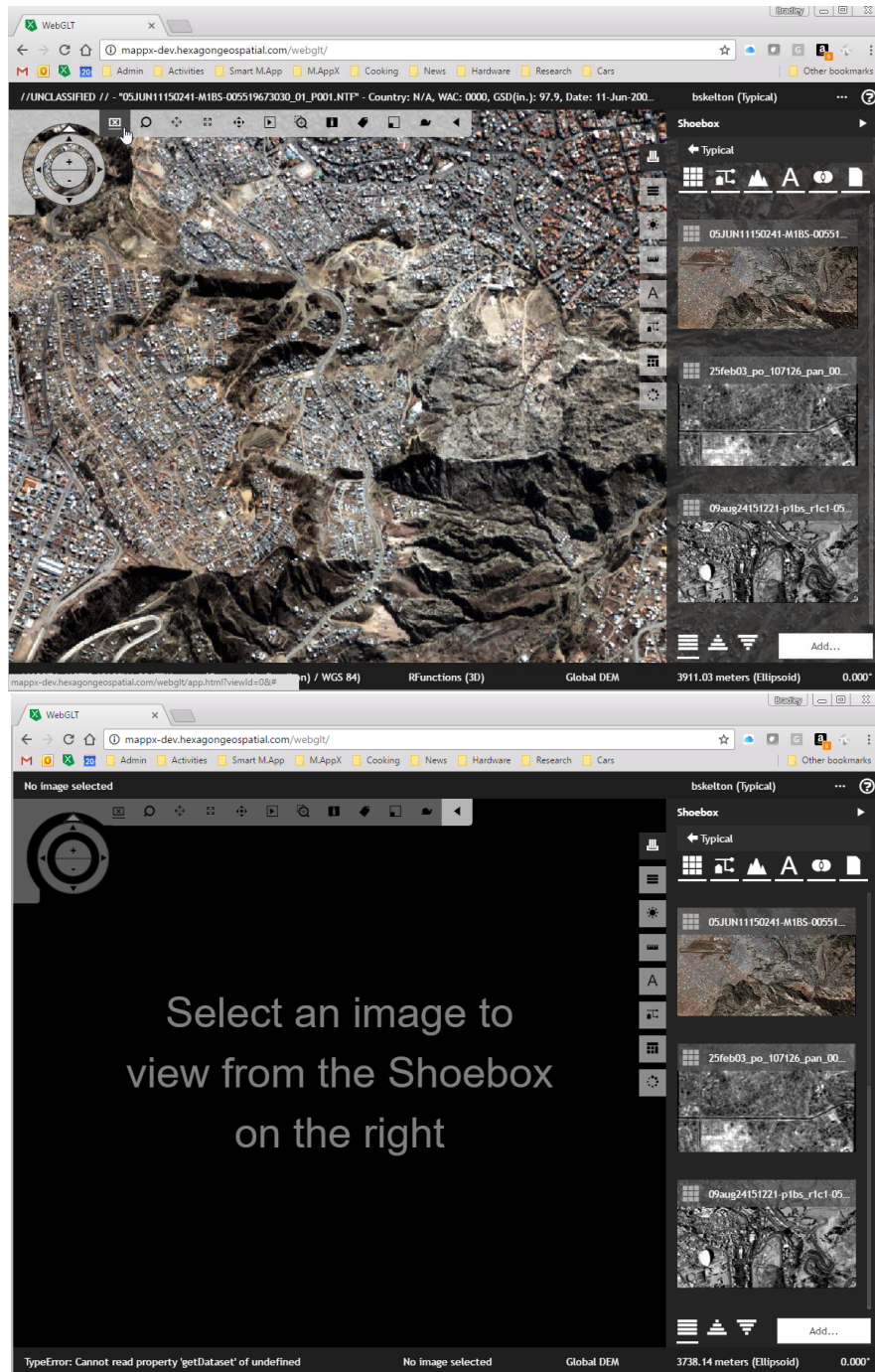


Build 64-5 (2017-02-22)

New Features or Improvements

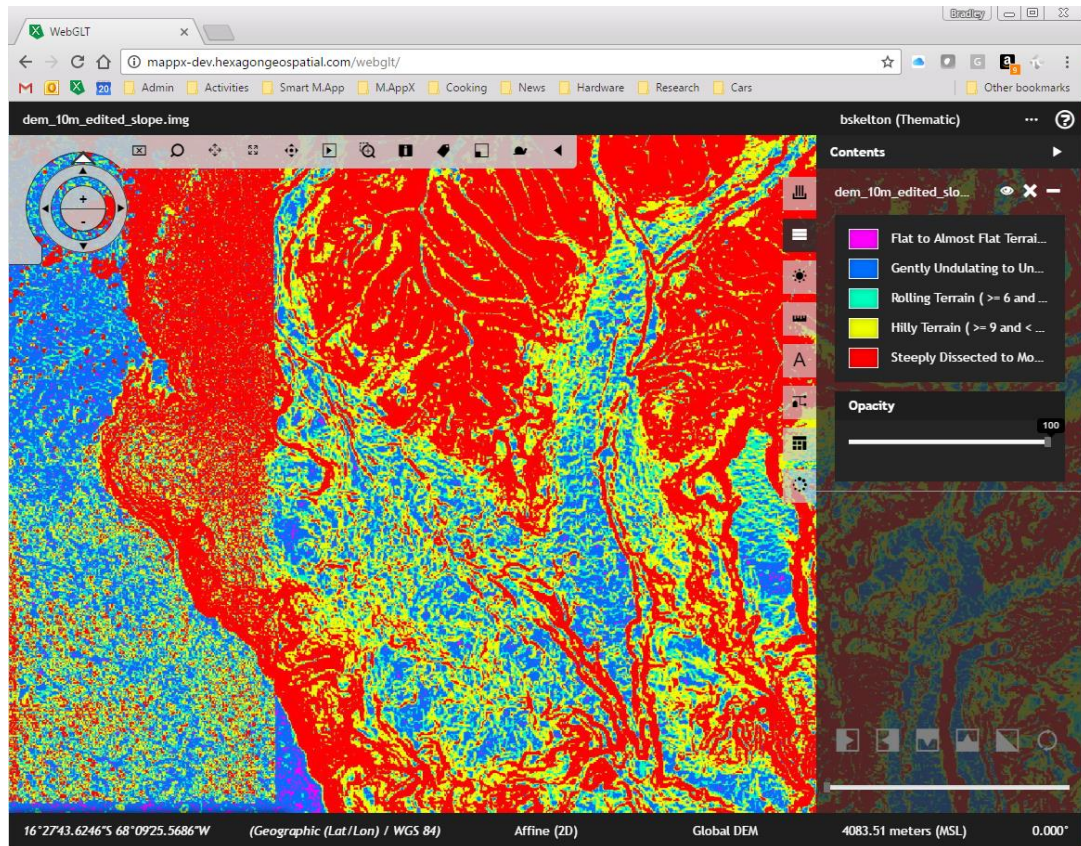
[WG-2220] A new button has been added to the Smartbar (see below) to clear the view. This removes all layers and resets the view to the initial empty state.



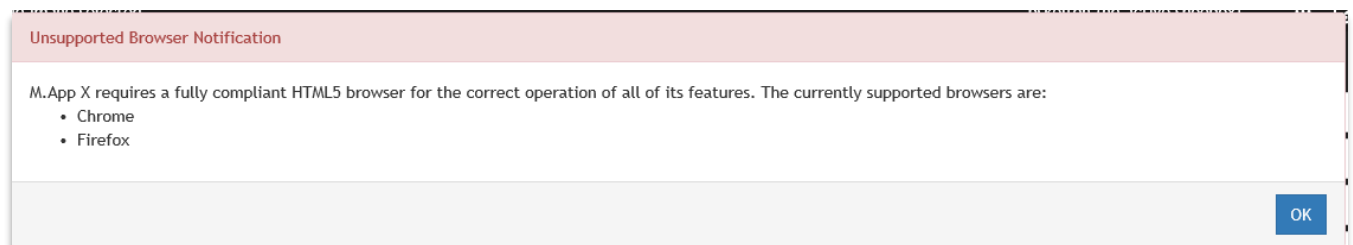


- [WG-2641] **EX-2229** A class list has been added to the legend in the table of contents for thematic raster layers. It is useful in interpreting the color for thematic images such as those that are created by Slope, Aspect and Helicopter Landing Zone. It will also be useful for supporting Pixel Quality Segments.





[WG-2711] IE11 is being deprecated as it is not fully HTML 5 compliant. An alert has been added to the client at startup to detect the browser and inform the user if it unsupported. The client will continue to start and run, however, the user must click okay on the notification to dismiss it.



[WG-2671] **EX-6286** The Backend can now be configured to use a different URL than the client. This is done by adding a new optional key in `<appSettings>...</appSettings>` as follows:

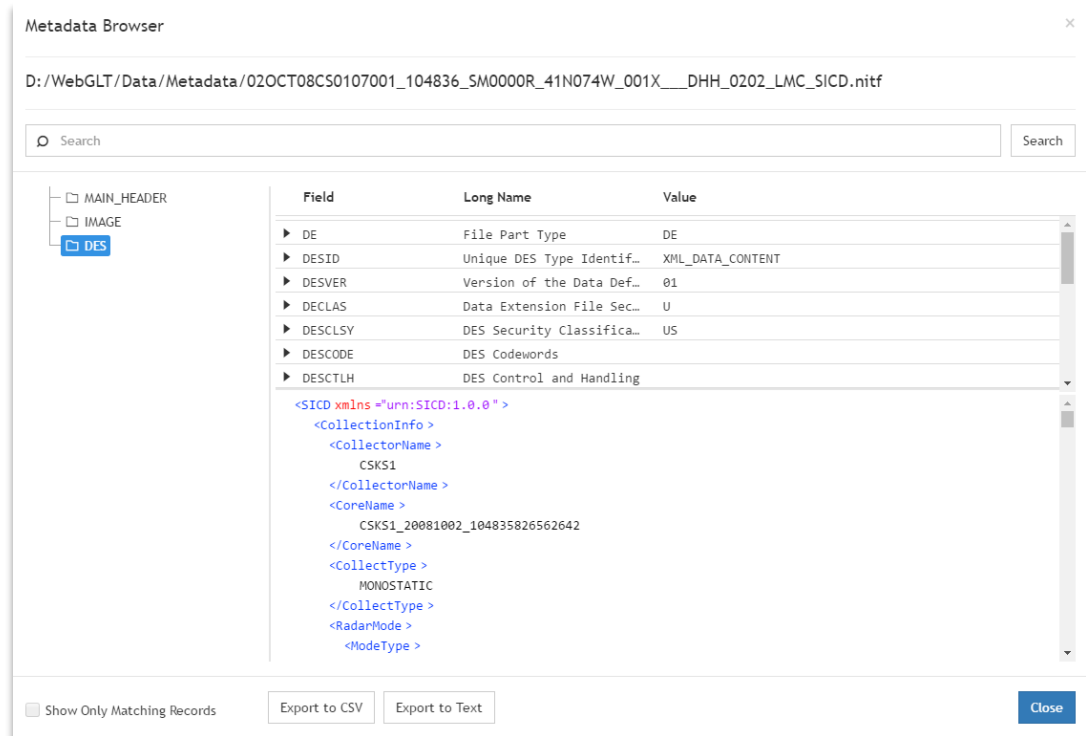
```
<appSettings>
  <add key="global.apolloBaseUrl" value="Apollo URL" />
</appSettings>
```

[WG-1349] **WB-59** Provide the ability to browse all the Metadata in an NITF File. This was delivered in 63 however several improvements and corrections have been made for this release.



[WG-1349: WG-2565] A busy indicator was added to the center of the browser to indicate that it is busy loading the metadata. For some images this can be quite large.

[WG-1349: WG-2636] Updated the metadata parsing to work with the SMSDK which now includes more information, such as the long names for fields and XML segment content.



[WG-1349: WG-2581] The data panel can now display XML content as well as XML content

[WG-1349: WG-2683] The display of information for segments with very large numbers of records could be slow. This has been corrected.

[WG-1349: WG-2683] The display of very large XML content for XML segments could be very slow. This has been corrected.

[WG-1349: WG-2582] The XML view now supports highlighting of matching search strings.

[WG-1349: WG-2594] Browser styles were improved for the metadata browser.

[WG-1349: WG-2564, WG-2596] The initial configuration of the splits in the Metadata browser were improved to be proportional

[WG-2569] If an error should occur while retrieving the metadata the user is given a change to try again.



Items Fixed

[WG-2291] **EX-5955** The file search API passed the wildcard as a part of the URL which could cause problems with the WebServer if the pattern matched on of patterns on the WebServer which would result in unexpected results. The API has been changed so that the pattern is a “query” parameters.

`http://mappx-dev.hexagongeospatial.com/webgl-backend/search/fss/freetext/?query=*.xml`

[WG-2682] **EX-6421** Corrected the tooltip for “Create KML Track”.

[[WG-2680] **EX-6418** Corrected the tooltip for “Remove Elevation Spikes” Reset button.

[WG-2675] **EX-6295** Corrected the tooltip for the “Adjust Georeferencing 2D” Compute button.

[WG-2674] **EX-6292** Corrected the tooltip for the “Adjust Georeferencing 2D Model” button.

[WG-2673] **EX-6288** Corrected the tooltip for the “Show in Feet” option in the “Elevation” menu.

[WG-2670] **EX-6256** Corrected the tooltip for the “New Browser” button on the SmartBar.

[WG-2643: WG-2682] Added a tooltip to Annotation “Point Coordinates” tool.

[WG-2643: WG-2707] Corrected the tooltip for “Mosaic” Reset button.

[WG-2643: WG-2707] Added a tooltip to the “Helicopter Landig Zone” Reset button.

[WG-2643: WG-2680] Added a tooltip to the “Remove Elevation Spikes” Reset button.

Included Geoprocessing Panels

The following Leidos Geoprocessing Developed panels are included in this build.

- Chipper
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- NITF Chipper
- Radar Level Slice
- Smooth Elevation Values
- Extract TMAP Targets
- Extract Klieber Targets





Installer Changes

The Installation is the same as 63.





Excel spreadsheet showing the MAIN_HEADER data for a satellite image. The data is organized into columns A through L, with rows 1 through 29. The data includes various parameters such as FHDR, FVER, CLEVEL, STYPE, OSTAID, FDT, FTITLE, FSCLAS, FSCLSY, FSCODE, FSCTLH, FSREL, FSDCTP, FSDCDT, FSDCKM, FSDG, FSDGDT, FSCLT, FSCATP, FSCAUT, FSCRSN, FSSRD, FSCTLN, FSCOP, FSCPY, ENCRYP, FBKGC, ONAME, and OPHONE.

Row	Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H	Column I	Column J	Column K	Column L
1	MAIN_HEADER	FHDR		NITF								
2	MAIN_HEADER	FVER			2.1							
3	MAIN_HEADER	CLEVEL			5							
4	MAIN_HEADER	STYPE		BF01								
5	MAIN_HEADER	OSTAID		ERDAS								
6	MAIN_HEADER	FDT			2.01502E+13							
7	MAIN_HEADER	FTITLE		CHIP_180250_OF_WV01_SENSOR:2009-08-24T15:12:21.701312Z								
8	MAIN_HEADER	FSCLAS		U								
9	MAIN_HEADER	FSCLSY										
10	MAIN_HEADER	FSCODE										
11	MAIN_HEADER	FSCTLH										
12	MAIN_HEADER	FSREL										
13	MAIN_HEADER	FSDCTP										
14	MAIN_HEADER	FSDCDT										
15	MAIN_HEADER	FSDCKM										
16	MAIN_HEADER	FSDG										
17	MAIN_HEADER	FSDGDT										
18	MAIN_HEADER	FSCLT										
19	MAIN_HEADER	FSCATP										
20	MAIN_HEADER	FSCAUT										
21	MAIN_HEADER	FSCRSN										
22	MAIN_HEADER	FSSRD										
23	MAIN_HEADER	FSCTLN										
24	MAIN_HEADER	FSCOP			0							
25	MAIN_HEADER	FSCPY			0							
26	MAIN_HEADER	ENCRYP			0							
27	MAIN_HEADER	FBKGC		Non-displayable field								
28	MAIN_HEADER	ONAME										
29	MAIN_HEADER	OPHONE										

This is the TXT Example.

Metadatabrowser.txt - Notepad

```

IXSHD

CSCRNA
CETAG          CSCRNA
CEL            00109
PREDICT_CORNERS Y
ULCNR_LAT      -16.60456
ULCNR_LONG     -068.07555
ULCNR_HT       +03230.4
URCNR_LAT      -16.58500
URCNR_LONG     -068.26804
URCNR_HT       +03955.4
LRCNR_LAT      -16.44773
LRCNR_LONG     -068.26759
LRCNR_HT       +04102.5
LLCNR_LAT      -16.46199
LLCNR_LONG     -068.08003
LLCNR_HT       +04235.7

CSEXRA
CETAG          CSEXRA
CEL            00132
SENSOR         PAN
TIME_FIRST_LINE_IMAGE 54741.701312
TIME_IMAGE_DURATION 00001.144792
MAX_GSD        022.5
ALONG_SCAN_GSD 022.2
CROSS_SCAN_GSD 022.9
GEO_MEAN_GSD   022.5
A_S_VERT_GSD   N/A
C_S_VERT_GSD   N/A
GEO_MEAN_VERT_GSD N/A
GSD_BETA_ANGLE 001.5
DYNAMIC_RANGE  02047
NUM_LINES      0027476
NUM_SAMPLES    35180
ANGLE_TO_NORTH 090.000
OBLIQUITY_ANGLE 22.193
AZ_OF_OBLIQUITY 309.358
  
```

Items Fixed

- [WG-2528] Previously it was possible to set the Emax value smaller than the Emin value which would lead to erroneous results. This has been corrected so that Emin cannot be bigger than Emax and Emax cannot be smaller than Emin.



- [WG-2500] Previously it was possible to select only two points to measure perimeter and error which was incorrect. At least three points are now required to complete the area and perimeter measurements.
- [WG-2493] Leading and trailing spaces were allowed in the creation of a shoebox name, which could lead to confusing results. This has now been corrected by stripping off leading and trailing spaces from shoebox names.
- [WG-2053] Tooltips were added to reset buttons on the Image Adjustment panel.
- [WG-2532] The Non-SIPS DRA ceased working if the map was moved. This has been corrected.

Included Geoprocessing Panels

The following Leidos Geoprocessing Developed panels are included in this build.

- Chipper
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- NITF Chipper
- Radar Level Slice
- Smooth Elevation Values
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

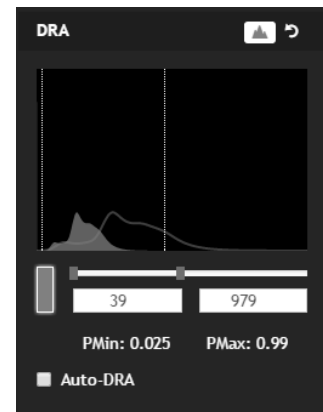
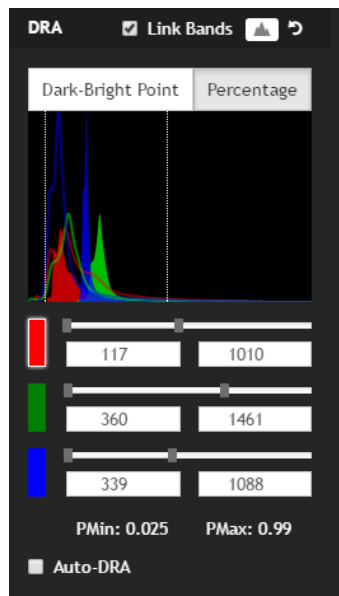
The Installation is the same as 62.



Build 62-10 (2016-12-21)

New Features or Improvements

[WG-1295] **EX-3025** The DRA computations for the single and multiple band SIPS image adjustment have been completed to use the NIQU suggested IDEX algorithm.



The Dynamic Range Adjustment (DRA) is a linear stretch between a minimum and a maximum pixel value (emin and emax) which are computed as follows

For single band

$$emin = \max(E_{first}, Emin - A * (Emax - Emin))$$

$$emax = \min(E_{last}, Emax + B * (Emax - Emin))$$

where Emin and EMax are computed using Pmin and Pmax. Pmin, Pmax, A and B are returned from the SIPS XML.

For multiple bands

There are two techniques to compute the initial values of emin/emax for each of the color bands. One is percentage, which is the same as the single band case (above). The second is called the “Dark-Point/Bright-Point” algorithm which computes a band dependent set of minimums for the three bands and a band independent set of maximums for the three bands. These are then used as the initial values for the emin/emax for each color band.

Linked Bands



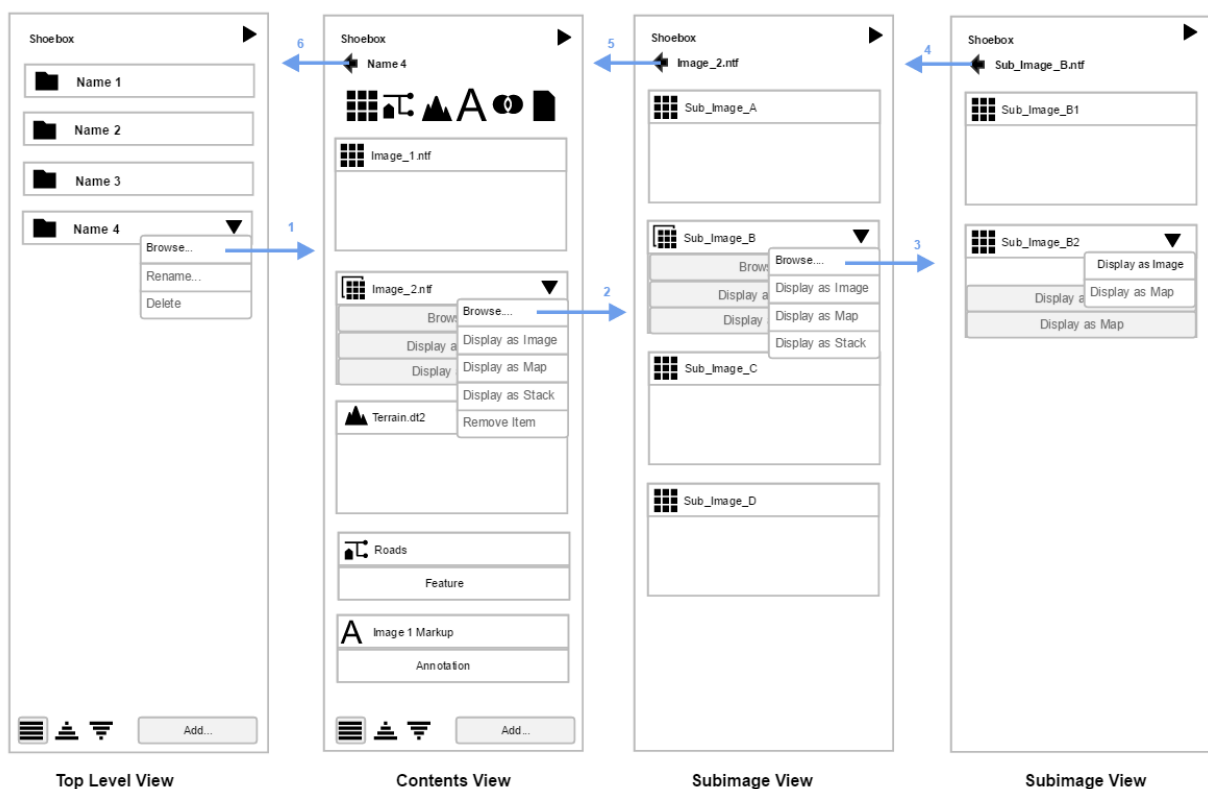
In the case of multiple bands there is a checkbox called “Link Bands” which is used to control what happens to the other band emin/emax values if one of the bands is changed. When linked changing the limit on one band will also change the same limit on the other two bands using an algorithm that attempts to maintain color.

There is now a preference to control which technique is used by default:

Default Multispectral DRA
Algorithm

Percentage ▼

[WG-1348] **WB-61** Display all images in an NITF file. A single NITF file can contain multiple images which can be different types of images that represent different views of the same area, or they can represent multiple images which constitute a single composite image. The shoebox has been modified to be aware of this and to provide the user with tools to discover and exploit these images in a variety of different ways.










The new organization begins with some style changes to make the experience more consistent. At the top level the shoebox tiles have an icon to show that they are a shoebox (the folder icon) and the names are all left justified to make reading them easier. Also there is now a pulldown menu on each folder that allows Browse..., Rename..., and Delete



(the browse can still be done by just clicking on the tile). Rename allows a shoebox name to be changed (NOTE: A duplicate name will be detected and prevented).

Also, creating a new shoebox is now done with a dialog that is shown when “Add...” is clicked. This gives more space in the panel for shoebox tiles. There are also now 3 buttons to the left of the “Add...” button which allow the view to appear: Unsorted (the order in which the shoeboxes were created), Sorted A-Z (sorted by name from A to Z), Sorted Z-A (sorted by name from Z to A). These two changes apply to the Top Level View and to the Contents View. They do not apply to the Subimage View because the subimage view is a view of the way the data exists in the file.

Also, notice that the tiles in the Contents View have some appearance changes. The first is that the “Show Info” button in the upper left corner of each tile now has a type specific icon as shown in the following table. Clicking on the button still displays the metadata.

Icon	Datatype
	The dataset is a raster image. The tile contains a preview of the image.
	The dataset contains multiple raster images. This dataset can be opened like a shoebox and the individual images can be viewed.
	The dataset contains features.
	The dataset is a terrain source.
	The dataset contains graphical annotations.
	The dataset contains a stereo pair of images.
	The dataset is a view which cannot be viewed but which can be used in various geoprocesses.



For purpose of explanation let's say that we have a single NITF file called image_2.ntf which contains multiple image segments. While the physical layout of image segments is flat, the contained metadata shows that they have a hierarchal relationship as follows:

```
Image_2.ntf
|
+ Sub_Image_A
|
+ Sub_Image_B
| |
| + Sub_Image_B1
| |
| + Sub_Image_B2
|
+ Sub_Image_C
|
+ Sub_Image_D
```

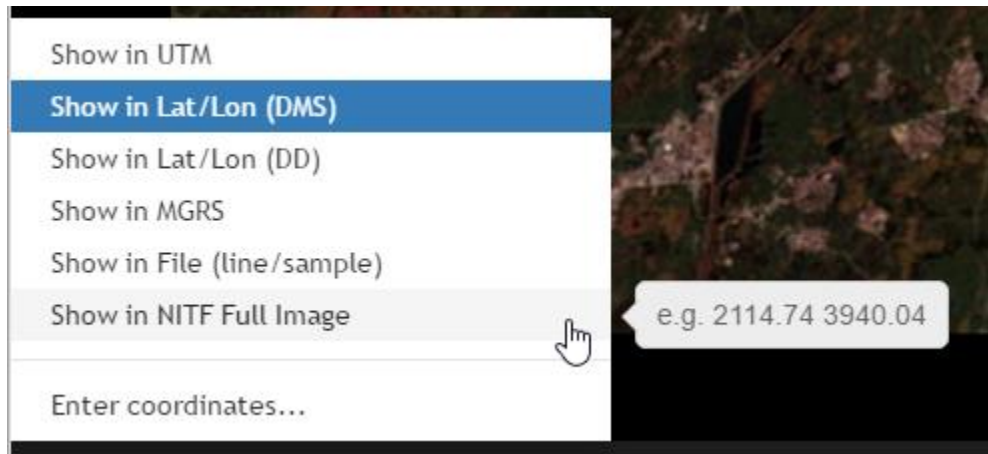
When Image_2.ntf is added to the shoebox it displays with the multiple image icon because it contains multiple images. If it is opened, then Sub_Image_A, Sub_Image_B, Sub_Image_C and Sub_Image_D would be shown as items at this first level. Sub_Image_B would be shown with the Multiple Image icon because it is composed of two "linked" sub images of the NITF Continuous type (B1 and B2). If Sub_Image_B is displayed, then a virtual mosaic is created on the fly and displayed. If Sub_Image_B is opened and either B1 or B2 are displayed, then they can be viewed independently.

[WG-xxxx] **WB-1** Integrate the new XML SIPS definition files. There is no visible user facing change in the UI for this, but the files that drive the SIPS defaults are now the new XML format ones supplied by the government.

KNOWN ISSUE: All classified data will display with the unclassified XML default setting as the Secret level XML file has not been provided. It is possible that the TS level XML file can be dropped in after installation by Leidos, but the file must match the "intermediate" version of the XML schema that the core software expects. And since the Secret and TS level XML add additional metadata use fields, problems could arise as this capability could not be tested with just the unclassified XML.

[WG-2326] The term "NITF Full Image" has been selected for the pixel upper left origin coordinate system that is used by MSP and internally in NITF images and CSM sensor models (formerly called MSP coordinates). This is as opposed to the pixel centered origin coordinate system used by M.App X otherwise. This change has the following components: Naming has been changed, the internal computation has been updated, the new computation is used in the MSP measurements, and a preference has been created to control the access to these coordinates.





When NITF Full Image is selected, the coordinates are reported in the status bar as follows:



The presentation is now done with “R” (for row instead of L for line) and “C” (for column instead of S for sample).

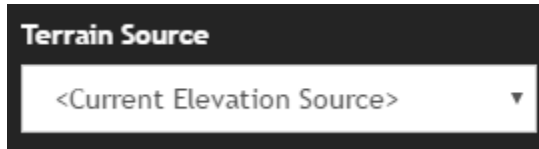
The presence of the “Show in File (line/sample)” and the “Show in NITF Full Image” are now controlled in preferences:

- ☒ Include Show in File Option in the Coordinates Menu
- ☒ Include Show in NITF Full Image Option in the Coordinates Menu

Either or both can be excluded or included in the coordinate popup menu. And hence a site wide configuration can be made to control what the user sees with respect to image coordinates.

- [WG-2217] Add “Current Elevation Source” as an option to select if expected entries are terrains. The geoprocessing panel provides a pulldown list of the images in the current shoebox that can be used as input to the process. The top of that list contains “<Current Image>” to allow better integration with the XVF system. There was no way to do the same thing for elevation source. So now there is a “<Current Elevation Source>” option in the pulldown for elevation sources in the current shoebox.



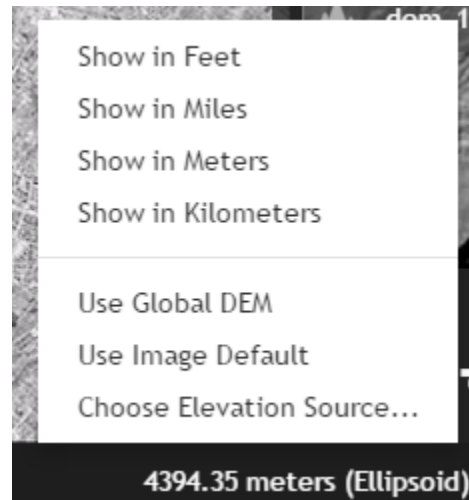


- [WG-2458] Default tab for “Add...” dialog should be “Search”. The default tab for the “Add...” dialog was the “Catalog” tab which forced most users to have to switch tabs before searching. This has been changed to the “Search” tab to make the out of the box experience better. The default can be changed by configuration.
- [WG-2462] The Generate RSETs service now has a new parameter called “Force Recompute” which can be used to force the removal and regeneration of RSETs for an image. Currently this is not exposed to the user and is set to false. So if RSETS already exist they will not be recomputed, but if they do not exist they will be computed. This is a part of the work to make RSET generation multiuser safe.
- [WG-1504] Integrate Extract Klieber Targets Geoprocessing Panel. The Panel originally developed by Leidos was integrated into the baseline. The code still exists in the custom folder and there is a flag to enable the panel in the client_config.json file
- [WG-1506] Integrate Extract TMAP Targets Geoprocessing Panel. The Panel originally developed by Leidos was integrated into the baseline. The code still exists in the custom folder and there is a flag to enable the panel in the client_config.json file

Items Fixed

- [WG-2323] (**PBI3141926**) There was a ½ pixel shift in the MSP coordinates. This has been corrected in the work done for WG-2326 (see WG-2326 above).
- [WG-1856] **EX-4039** When performing 3D computations with image coordinates and sensor models there needs to be an Elevation source. There are three ways in the system to provide the elevation source: Use a Global DEM which is a low-resolution model of the elevation of the surface of the earth; use a more localized higher resolution DEM file; or use whatever default elevation model (typically a constant) that is built into the image. The terminology and menu have been modified as below:





Source	Description
Global DEM	The world wide elevation model is used. By default this is the file globaldem.jp2.
Image Default	This causes the system to use whatever elevation source is specified in the image.
Elevation Source	This allows the user to select a localized elevation source from the current shoebox.

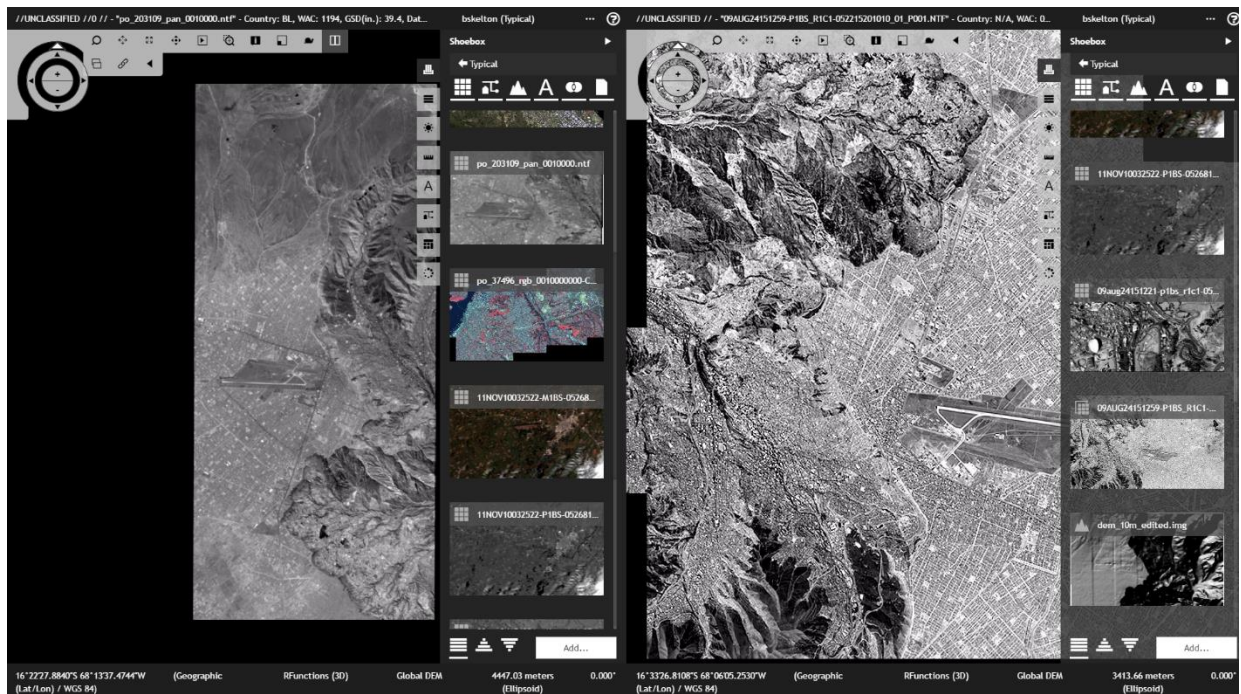
The status bar has now been updated to properly reflect these choices.



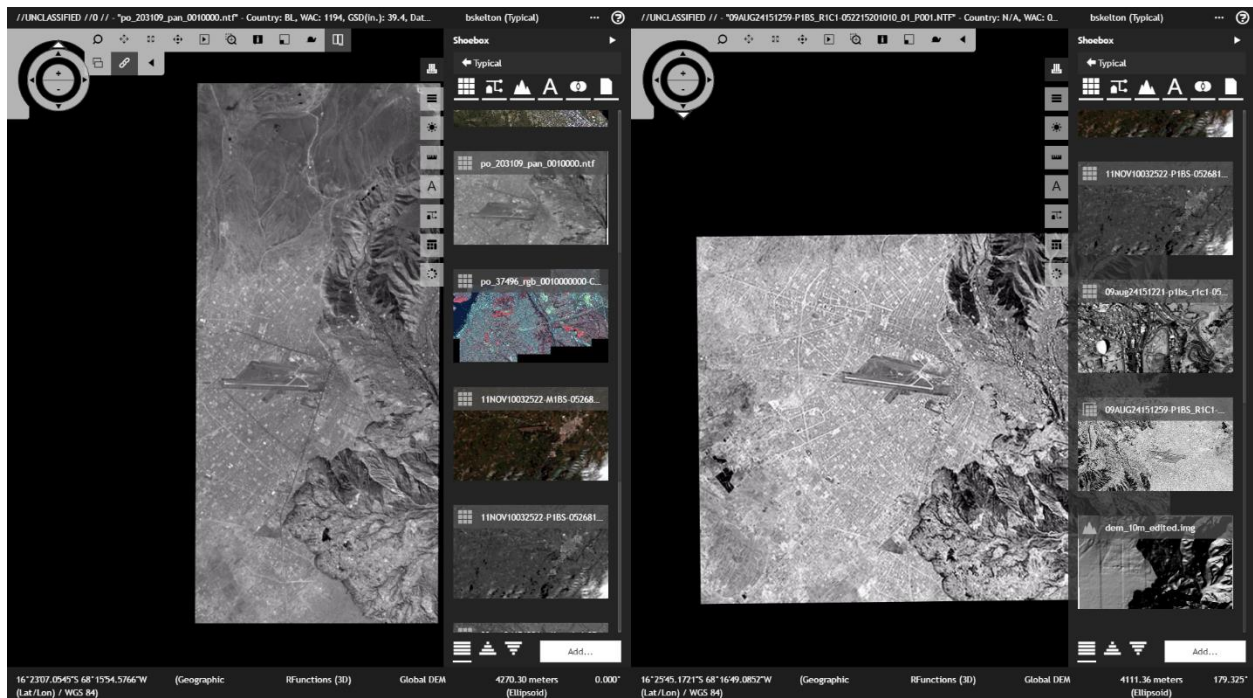
[WG-1891] **EX-3499** In the dual screen mode two images can be linked by three attributes: location, scale and rotation. Originally the location and scale were map coordinates and the rotation was relative to image coordinates. This has been changed so that location, scale and rotation are related to map coordinates. This means that the angle to north will be the same in both views once they are linked. The following pictures illustrate the new behavior.



Before Link



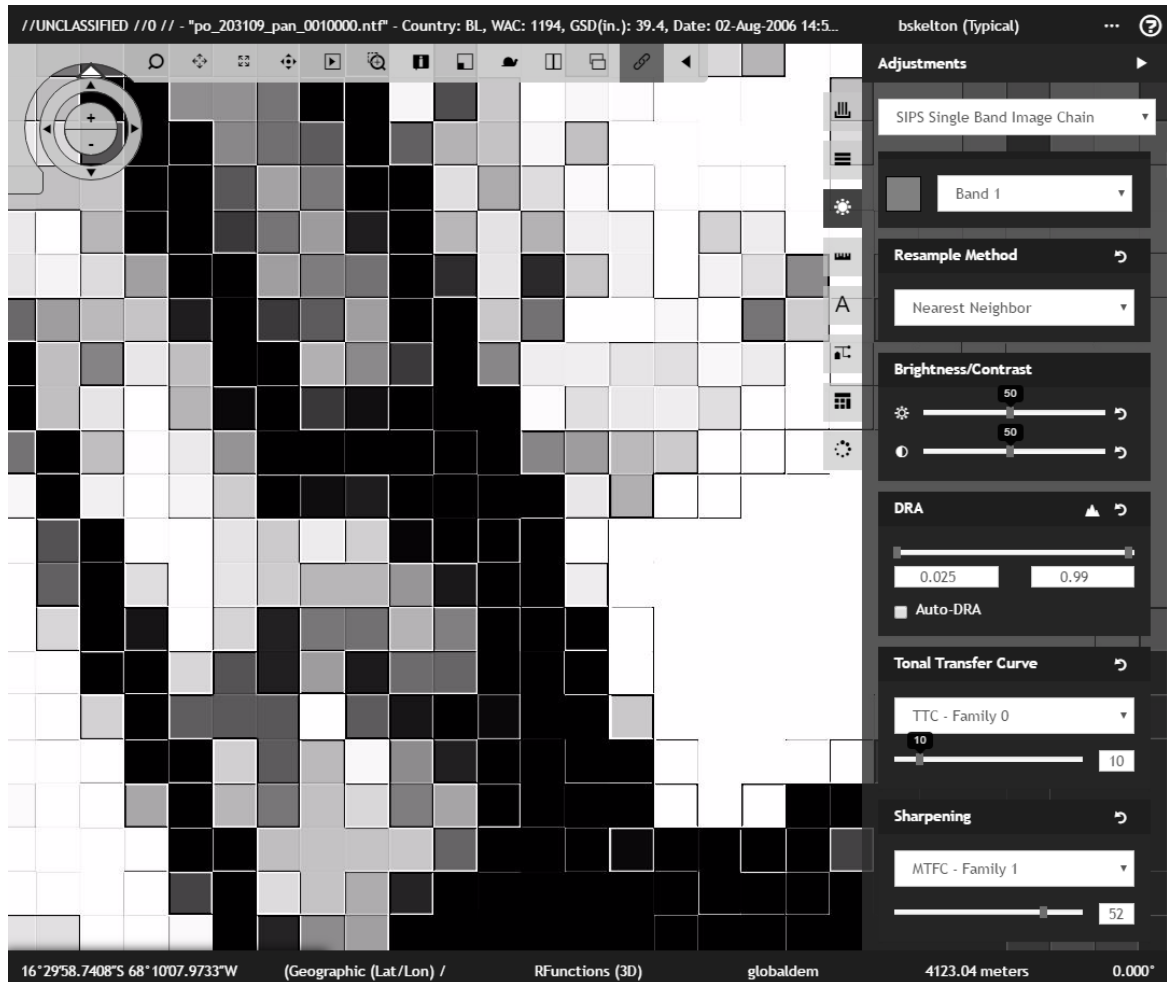
After Link



Note that the airport in the two images is now oriented in the same direction.

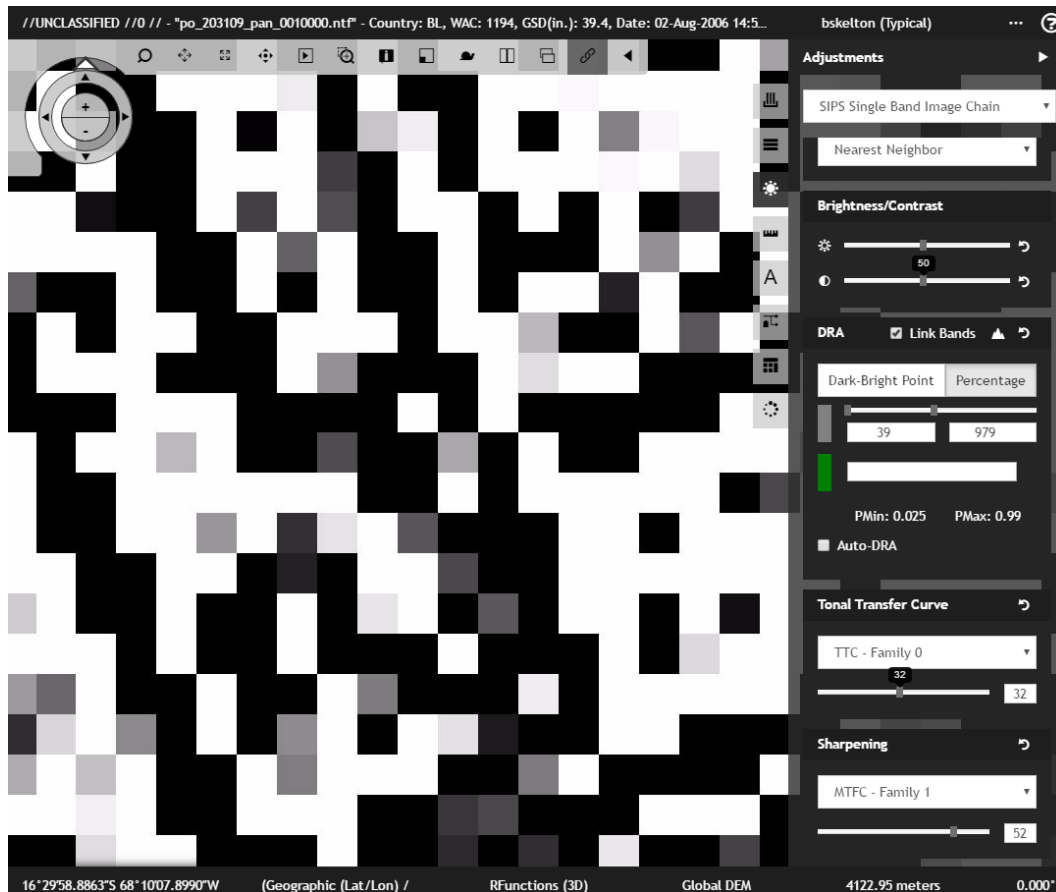


[WG-xxxx] **EX-5817** Incorrect Image Chain Implementation for sharpening (MTFC) enhancement. The sharpening operation was happening after the zoom operation which was resulting in artifacts that appear as outlines around the magnified pixels as shown below:



The order of operations in the image chain has now been changed so that the sharpening operations (MTFC) happen before the image zoom. The result is that the sharpened pixel values are magnified and there are no longer boxes outlining the areas.





- [WG-2324] Update MSP Panel so the extended grid can be hidden. The MSP panel has an associated horizontal grid at the bottom of the view which was previously always present. This has been changed so the grid can be dismissed as is also done on the Adjust 2D and 3D panels.
- [WG-2219] Removed GetStatistics from the list of asynchronous processes. The GeStatistics service was being treated as an asynchronous service. There was no real negative impact from this other than the fact that it was making entries in the geoprocessing status panel for each call, which resulted in clutter in the panel. The call is now properly made as a synchronous call.
- [WG-2422] SOM Extension Example Readme is missing a step to create subfolder. There was a missing step in the ReadMe document that comes with the SOM extension example. This has been updated.
- [WG-2422] SOM Example needs a different icon. The SOM Extension Example adds a button the Smart Control toolbar which was the same icon as the identify button. This was confusing so this was changed to an unused icon which looks like a wrench.
- [WG-2520] Fix default histogram parameters and histogram range updates. The histogram service that is used to get the histograms that are drawn on the SIPS ImageAdjustment panels



does not always begin at zero. Instead the starting value is returned in the service. This was not being taken into account when the histogram was drawn so there was a misleading shift in the histograms at times. This has been corrected.

[WG-2418] The TTC Family drop down in the SIPS panels had a list of available families but Family 0 is the only one which is available. Selecting anything but zero would result in a black image. The list has been shortened to include only Family 0.

Could Not Reproduce, Duplicate or Previously Fixed

[WG-1884] **EX-2492** This is a duplicate of an item addressed in the last release. This dealt with the auto roaming of the black filled areas of the screen that resulted when the image was rotated. This has been corrected.

[WG-1892, 3241] **EX-3494** The Fill Frame issue was addressed on the last release but it was found that sometimes if the rotation was between 270 and 360 degrees the results could be off. This has now been corrected.

[WG-1858] **EX-3552** Image auto zooms in/out when changing orientation. It was reported that on some data sets the image would auto zoom to 1:1 when rotating after having done a Fill Frame operation. This behavior is surprising as the Fill Frame is not a mode but a onetime operation so there should be no link between it rotation operations. It has not been possible to reproduce this behavior with any of the datasets that have been provided.

[WG-1860] **EX-2502, EX-3516** No status for rasterizePointCloud. It was found that the processing time on the sample dataset was so short that there was no time to report progress. On larger datasets progress is reported as expected.

[WG-1875] **EX-2975** MSP Panel clears input if you leave panel (Duplicate). This was previously corrected.

Performance Improvements

This build has a new SMSDK and APOLLO with all the previous performance patches built in, plus it has a new patch which addresses two more performance issues. It greatly improves the speed of the “Display as Map” operation and it improves time to access RSETs by caching some of the metadata.

Included Geoprocessing Panels

The following Leidos Geoprocessing Developed panels are included in this build.

- Chipper
- Data Triangulation





- Distance From Signature
- Geodetic Reproject Raster
- NITF Chipper
- Radar Level Slice
- Smooth Elevation Values
- Extract TMAP Targets
- Extract Klieber Targets

Installer Changes

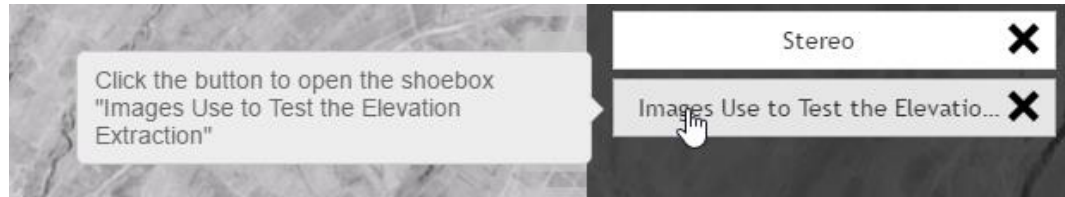
The Installation now has an extended Configuration Wizard which eliminates the need to access or modify the configuration files by hand. This is now described in section 7. The previous configuration information is retained as reference in section 10. Also, note that the installer has notes about proper use of the component checkboxes in section 5.3. Please read this section follow the guidance given there.



Build 61-4 (2016-11-18)

New Features or Improvements

- [WG-1967] The tooltip for shoeboxes has now been improved so that it includes the name of the shoebox in the tooltip. This helps when the title of the shoebox has to be truncated due to length. It gives the user a way to see the full name.

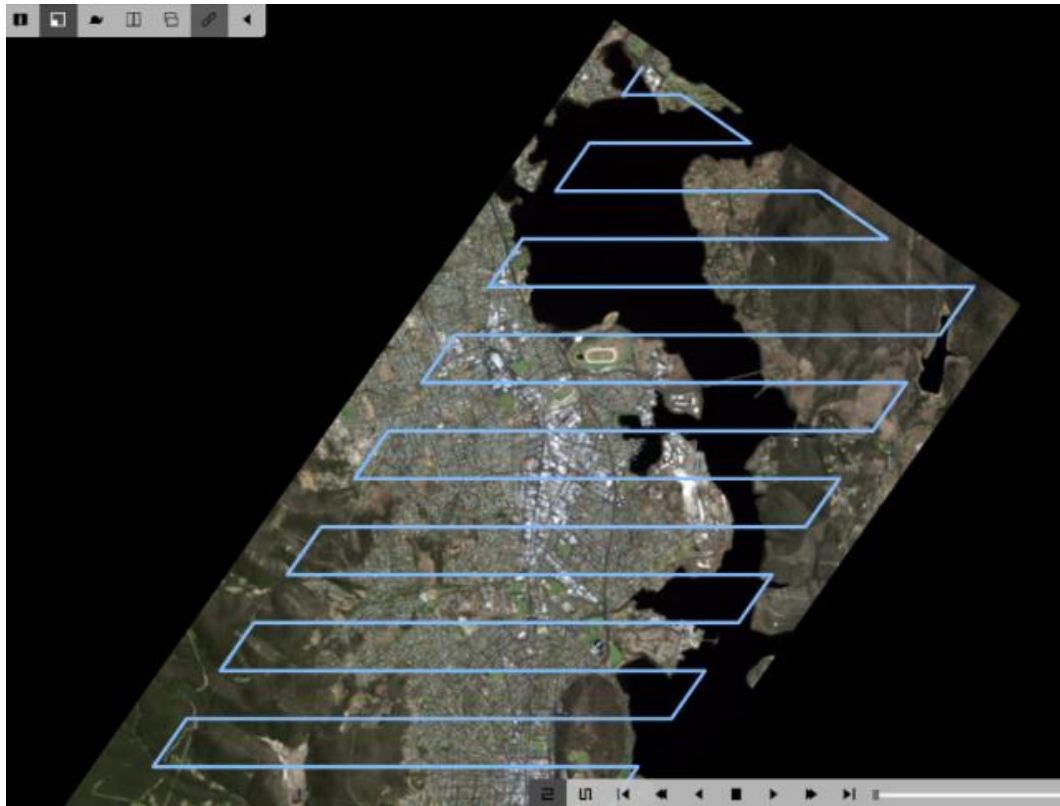


- [WG-1859] **EX-3537** The auto roam feature would travel along lines parallel to the axis of the image instead of traveling parallel to the screen. This has now been changed so that the lines always run parallel to the screen and not to the image.

- [WG-1885] **EX-2490** The auto roam feature would travel along lines parallel to the axis of the image instead of traveling parallel to the screen. This has now been changed so that the lines always run parallel to the screen and not to the image.

Auto-roam now generates a path which is parallel to the view, regardless of the image orientation as shown below.



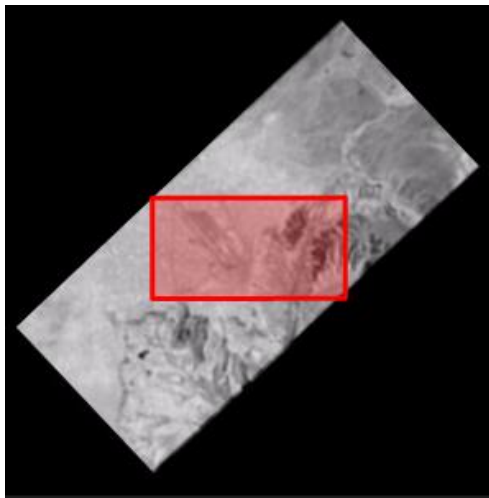


[WG-1861] **EX-3510** The “1:1” button had a pulldown menu that was hard to access, so it has been changed to a typical pulldown menu and all scale changing options are now in this menu. In addition, the number of zoom level options has been extended. It now looks like:





[WG-1892] **EX-3494** When images were rotated the fill frame was often showing black areas. The algorithm has now been changed so that the screen is filled with the maximum amount of imagery as below:



[WG-1967] It was possible to create shoebox folder names which were wider than the shoebox panel itself. These names were causing the panel to display a horizontal scrollbar. This has now been corrected so that the folder name is truncated to fit the width available and an ellipsis "..." is added to the end to indicate that the name has been truncated. The full shoebox name is displayed in the tooltip.

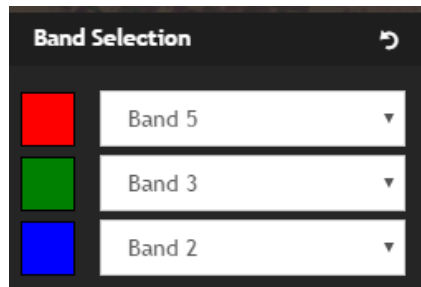


- [WG-1063] The Helicopter Landing Zone Geoservice was allowing output to an NITF (NTF) file. This was a problem because the output needs to be thematic and NITF does not hand thematic data well. So the panel now limits the output formats to GeoTIFF (TIF) and ERDAS IMAGINE (IMG) because both can properly handle thematic data.
- [WG-1857] **EX-3555** The label for displaying the coordinate in file space has been changed to “Show in File (Line/Sample)” to improve clarity.
- [WG-1864] Added the ability to deselect features by clicking in the view (not on a feature) using the selection tool. When this is done all currently selected features will be deselected.
- [WG-1876] Any of the other side panels can be selected and used without clearing the state of the current geoprocessing panel. This allows the user to do things like adjust contrast, or look at the state of a running process, etc., and then return to the current geoprocessing panel and continue working. Closing the current geoprocessing panel, however, will still clear its contents.
- [WG-1890] The system is now much more flexible with coordinate input. It is case and white space insensitive and the user may enter the X, Y or Lat,Lon in either order as long as they use the N/S or E/W suffixes.
- [WG-1880] When producing a PowerPoint from the layout view it will now create a filename which is created using the title given to the product.
- [WG-1042] The labels in the DRA section of the SIPS Multiband Adjustment panel have been changed to “Preserve Color” and “Band Independent” to better represent what they do. The tooltip also contains more information about each option.

Items Fixed

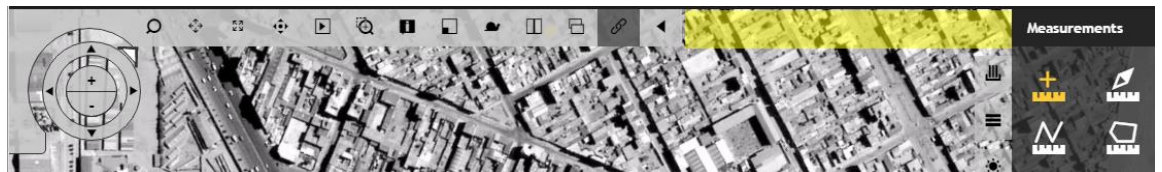
- [WG-2030] There was a problem with changing band combinations in the SIPS multicolor that would cause the image to go blank. This has been corrected.
- [WG-1950] There was a problem when changing band combinations in the TrueColor image chain that would cause the image to not display or to display as gray. This has been corrected.
- [WG-1957] The text in annotation layers was always being drawn opaque even if the layer was made transparent using the transparency tools. The text now displays transparently as it should.
- [WG-1975] In some conditions some annotation elements were not being persevered when saved. This has now been corrected and all elements are properly saved.
- [WG-1869] **EX-3456** The Image Adjustment panels did not have a reset button, so if the band combination was changed it could not be returned to its original default state. A reset button has now been added to all of the Image Adjustment panels Band Selection areas.





[WG-1952] There some unhandled errors being displayed in the browser console if the snail trail was displayed and the image was changed. These have now been corrected.

[WG-1994] The region to the right of the smart bar shown below in yellow was covered with an invisible extension of the smart bar. This prevented any sort of feature collection from happening in this area without moving the image. This has been corrected and the area in yellow is no longer blocked.



[WG-1884] EX-2492 Auto-Room searching blank/black map space

[WG-1950] ImageAdjustments bands for TrueColor display correctly

[WG-1869] **EX-3456 (U)** Some of the Image Adjustment panel items did not have reset buttons. Now each of the items (with the exception of the band order) have a reset button.

[WG-1868] **EX-3459 (U)** The label for "Current View" in the DRA section of the Image Adjustment panels panels has been changed to "Auto-DRA" for clarity.

[WG-1873] **EX-3123** On the Mosaic geoprocessing panel Active Area Method, Crop By Area, Seamline Method, Feathering Distance, Feathering Distance Units, Output Area Method, and Output Cell Size Units are all dropdown menus that did not return to default values when the reset button is pressed in the Mosaic panel. This has been correct so that these all reset when the "Reset" button is pressed.

[WG-1881] **EX-2653** The geoprocessing panel had a blank space at the bottom. This has not been corrected and the panel now uses its entire height for displaying geoprocessing items.

[WG-1877] **EX-2741** The tooltip for the Mosaic panel was missing an escape character. This has been corrected.

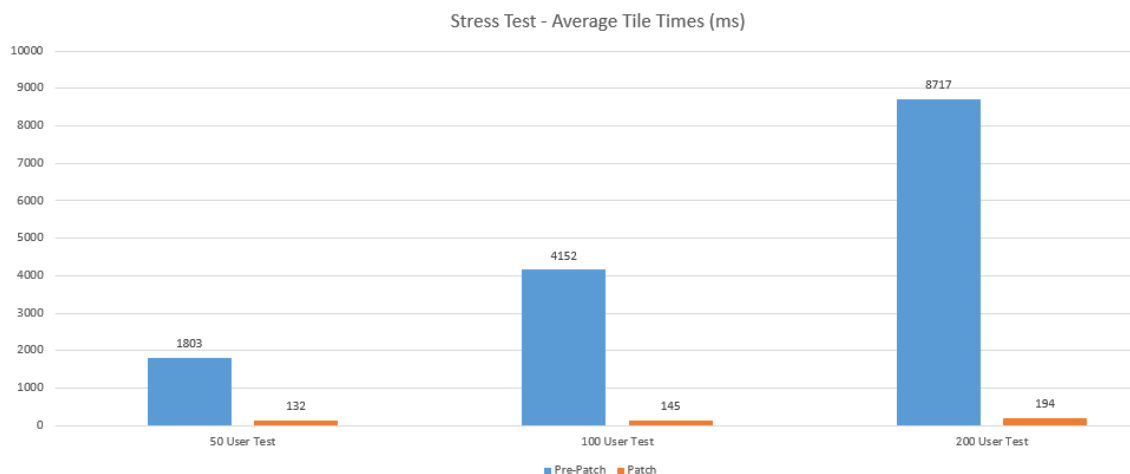
[WG-1844] When "Adding as Stereo" the left and right images where swapped. This has been corrected.



- [WG-1852] The Print To Powerpoint option was clipping the output when used on systems with small screens. This has been corrected.
- [WG-1963] When the Feature Panel was deactivated its current tool was staying active, which it should not. This has been corrected.
- [WG-1225] The Snail Trail button was putting errors into the error console when activated. This has now been corrected.
- [WG-1619] The Secondary Filename field was not being updated the second time the 3D Adjustment panel was active. This is now corrected.
- [WG-1652] The CRS Field in the 3D Adjustment panel was editable by the user and it should not be. It is set by the Secondary Image (or by the Primary Image if there is no Secondary). This has been corrected by making the field readonly.
- [WG-1957] Some of the Annotation geometries where not becoming transparent when the layer transparency was changed. This has now been corrected. NOTE: Text elements are not drawn as geometries, they are actually browser DIVs to support editing, so they do not become transparent.

Improvements on the Server Side:

- [No Number] The many issues which were hindering the scalability of the tile delivery has now be corrected with the results shown below:



The patches are in files: “APOLLOEssentials_981_Patch_7a.zip” and “GeoprocessingWorker_b548_Patch_7a.zip”. NOTE: We have now adopted the numeric suffix for the patch files. Also each patch file contains a text file in its root which describes the contained fixes.



Fixes on the Server Side:

[No Number] The hang that was discovered with some NITF and TFRD files which contained asymmetric data has been corrected. This is contained in the patch files :

“APOLLOEssentials_981_Patch_5.zip” and “GeoprocessingWorker_b548_Patch_5.zip”.

NOTE: We have now adopted the numeric suffix for the patch files. Also each patch file contains a text file in its root which describes the contained fixes.

Included Geoprocessing Panels

The following Leidos Geoprocessing Developed panels are included in this build.

- Chipper
- Data Triangulation
- Distance From Signature
- Geodetic Reproject Raster
- NITF Chipper
- Radar Level Slice
- Smooth Elevation Values



Build 60-8 (2016-10-31)

Items Fixed or New Features:

- WG-1822 When using the measurement tools, if the user changes the elevation source to “Default” the measurement services return an error. Default means to use the elevation source built into the image which is almost always a constant Z. The default is to use the “Elevation Library” which has the worldwide elevation file (which is typically better than the default). This has been corrected in 60-8
- WG-1809 If two images are displayed, then the top one is made transparent, then it is switched off and then the order of the layers is rearranged and then it is turned back on, it will not reappear. In that case the layer has to be removed and redisplayed. I think is a rather detailed and unlikely set of steps, but it is a regression none the less. This has been corrected in 60-8
- [WG-1342] Application extension API (**WB 68, 69, 70, 71**). Extended the M.App X framework to support the addition of custom feature editing layers without the need to change the sources to the client or to rebuild it (**WB 70**). The extension can be added to the client with new files added to the app folder plus a configuration. This includes the ability to add and control a new side panel (**WB 68**), a new bottom panel (**WB 69**) and a new button in the Smart Bar (**WB 71**). There is a separately delivered example, with documentation that illustrates the use of these extension points.
- [WG-1339] Definition based user preference system. The backend API provides definitions of the preference values and their current settings. The new UI provides an interactive dialog for the viewing and editing of the current preference values, organized by category. Preferences are stored on a per user basis, but can have system level overrides.

Preference values include:

- Initial Orientation (**None**, Up Is Up, North is Up, etc...)
- Default Zoom Level (1:1, 2:1, 1:10,000, 1:250,000, etc..)
- SIPS Image Display Interpolation (Nearest Neighbor, Bilinear, etc...)
- Non-SIPS Image Display Interpolation (Nearest Neighbor, Bilinear, etc...)
- Image Roaming Interpolation (Nearest Neighbor, Bilinear, etc...)
- Use Transparency for Map (Yes, No)
- Show Tool Tips (Yes, No)
- Tile Size (256, 512, 1024)



- [WG-1363] Predefined Zoom Levels (**WB 8**). The predefined zoom levels provide a list of immediate zooms either by pixel zoom or by map scales. The zoom levels are: (1:1, 4x, 2x, 2:1, 4:1, 8:1, 16:1, 32:1, 64:1, 128:1, 256:1, 1:10,000, 1:25,000, 1:50,000, 1:100,000, 1:250,000, 1:1,000,000.
- [WG-1695] CRS selection widget and dialog. The new widget provides a common means of displaying and editing coordinate reference system (CRS) for a processing function. The widget can display a dialog that supports the discovery and browsing of the hundreds of available coordinate systems.
- [WG-1493] Integrate more of the Geoprocessing Panels that were created by Leidos. Previously integrated panels that were found to not be working have been omitted.
- Chip to NITF
 - Chip to NITF
 - Data Triangulation
 - Distance from Signature
 - Geodetic Reproject Raster
 - Radar Level Slice
 - Smooth Elevation Values
- [WG-1654] 'Use Current View' DRA checkbox doesn't issue new tile requests in Map Space. This was causing failure to refresh the image when a change was made. This is now corrected.
- [WG-1667] In Map Space, the histogram did not work for 'Use current view'. The histogram was not being computed for just the current view. This is now corrected.
- [WG-1668] 'Use Current View' DRA checkbox is not reset on Legend change. When a new layer was added to the view the "Use Current View" DRA checkbox was remaining set when it should have been cleared. This is now corrected.
- [WG-0] Fix for registering Shoebox Items with invalid names.
- [WG-1612] Added permanent 'Elevation Source' style parameter to Map Space tile requests. Map Space tile requests were sometimes being made without the Elevation Source parameter which would result in incorrect results.
- [WG-1653] Fix progress bar on splash screen on non-localhost. The splash screen progress bar was not advancing properly. Now it moves appropriately as the application is loaded.
- [WG-1487] Support "MSP Coordinates" (**EX-4183**): drive to functionality, Mensuration panel. The drive to function was not taking MSP into account. Also the Mensuration panel now supports MSP coordinates.



- [WG-1755] Fixed the stereo cursor being off on a HiDPI screen
- [WG-1766] Fixed an error during AutoRoam step forward/backward
- [WG-1775] Fixed reading band selection dropdown value (non-SIPS image chain adjustments panel) in IE
- [WG-1756] Fixed an error that caused the stereo pair shoebox entry could have an empty name
- [WG-1773] Fixed the "1:1" button staying highlighted, even if zoom changed
- [WG-1822] Measure a Circle command stops working after change of units for elevation and finally falling back to defaults



Build 59 (2016-09-30)

Items Fixed or New Features:

- [WG-1301] Customizable File Search Dialog
- [WG-1422] Fix for Adjustments Panel controls not displaying.
- [WG-1263] Add Recording & Playback functions (**LMCO changes**)
- [WG-1272] Create possibility to add additional plugins to sidebar elements (**LMCO changes**)
- [WG-1262] Add custom Icon Managers to Annotations (**LMCO changes**)
- [WG-1267] Make AnnotationRemover emit 'removedAnnotation' event (**LMCO changes**)
- [WG-1271] Sort geoprocessing panels (**LMCO changes**)
- [WG-1488] Add possibility to provide/change image in noimagenotification screen (**LMCO changes**)
- [WG-1463] Added loading indicator (**LMCO changes**)
- [WG-1281] Merge dataset registering code from ShoeboxDataRegistrator and ShoeboxHelper classes
- [WG-1390] Fix for missing 'Elevation Source' style parameter in tile requests
- [WG-1114] User preferences system
- [WG-1325] Don't let issues with unregistering images prevent shoebox removal
- [WG-1323] WebGLTSearch - added 'Check All' checkbox input
- [WG-1290] Make Security Grid FSDCXM field wider
- [WG-1287] Change separator for FSREL and FSCODE to single space
- [WG-1251] Mosaic Security Data Grid fully clear after reset
- [WG-1269] Implement missing Reset buttons in all Geoprocessing panels
- [WG-1215] Fix for enabling and disabling communication between linked views and windows.
- [WG-0] Features can be moved multiple times
- [WG-1327] Switch to use new async as default service
- [WG-1464] Smartbar width will adapt to number of icons.
- [MSP] Display 6 decimals for col, row and default elevation
- [WG-1274] Shoebox Thumbnail images reordering (requesting from the server)



- [WG-1535] Create generic mechanism to define order of the elements in UI
- [WG-1329] APOLLO Catalog Search
- [WG-1487] Support “MSP Coordinates” **(EX-4183)**
- [WG-1493] Integrate the Geoprocessing Panels that were created by Leidos: Chipper, NITF Chipper, Chart to Chart Change Detection, Classify Feature, Classify Point Cloud, Contour Process, Terrain Thinning, Data Triangulation, Distance from Signature
- [WG-1538] Image unavailable thumbnail
- [WG-1532] Mosaic Process Does Not Work (Regression)
- [WG-1533] IMAGINE.File in lists do not have "Input" qualifier
- [WG-1571] New async service: Process Status is not set as failed, even if there is error
- [WG-1363] Predefined Zoom Levels
- [WG-1584] Add Feature in Feature Panel is Not Working (Regression)
- [WG-1585] Make the feature selection rectangle aligned to the display
- [WG-0] Removed some unnecessary warnings appearing in the browser console
- [WG-1616] Coordinate Entry in 2D/3D Grids should be case insensitive
- [WG-1610] Allow User Override of CRS in Adjust 2D Panel
- [WG-1608] Fixed model selection in Stereo Pair
- [WG-1607] Don't send the null elevation source arg if no such file given

Backend:

- [WG-0] Add EPSG:4979



Build 58 (2016-07-31)

Items Fixed or New Features:

- [WG-1086] **(EX-2601)** Create the Metadata Grid for Mosaic so that the user can review the security metadata for all of the input images and create a composite set of security metadata for the output file. This is only available for NITF outputs.
- [WG-1085] Add Elevation Source and Resample Method to the Mosaic UI so that the user can control which elevation source is being used when the mosaic does ortho correction and allows control of the resampling method to be used.
- [WG-963] Fixed a problem which was interfering with the operation of the Georeference 3D panel for repeat operations. It was fixed by disabling caching of responses from the server.
- [WG-1176, WG-1020] Fixed some problems with the SnailTrail that occurred when hiding and not working after image load
- [WG-593] Fixed a problem that was causing the visible area polygon in the Overview to disappear below newly added layers
- [WG-1053] Fixed a problem which was causing the print area to be smaller than the displayed area. This was happening when creating a report and printing it to PDF or to PPT
- [WG-853] Remove underline in tools menu, this was a minor cosmetic issue.
- [WG-992] Fixed a wording problem for one of the parameters in the Automatic Point Measurement panel. The old wording was "Image to Add" and has been changed to "RPC File to Add".
- [WG-1041] Changed the DRA minimum and maximum values for the SIPS Multiband Image Chain Adjustment Panel to have a range of 0.0 to 1.0 in both the Percentage and Multispectral modes.
- [WG-1032] **(EX-3223)** Added Interactive Histogram adjustment capability to SIPS Singleband and Multiband Image Chain Panels
- [WG-1088] **(EX-3223)** Created the GetStatistics geoprocessing service to support the new interactive histogram adjustment capability [WG-1032].
- [WG-1163] Fixed a problem where some image adjustment controls had no effect
- [WG-1070] Fixed a problem that was occurring when using some of the geoprocessing panels to setup multiple consecutive runs. Some of the output filenames were not being adjusted so the same file was being used for concurrent runs and causing problems. This has now been fixed to have different names by default.
- [WG-1026] **(EX-2220)** Fixed a problem in which the image would blank after the first adjustment after it was displayed.



- [WG-1151, WG-1152] Fixed a problem that prevented proper image redraw after the elevation source had been changed.
- [WG-1123] (EX-2978, EX-EX-3496) Fixed a problem that was preventing the generation of RSETS for img and tiff files. This was corrected by removing them from the shoebox before the generation and automatically adding them back to the shoebox afterwards.
- [WG-1062] Improved the user experience by adding a “Clear List” button to Geoprocess Process Status Panel
- [WG-1100] Fix a problem that was preventing some points generated from APM, to be loaded into the Adjust Georeferencing 3D Grid
- [WG-1125] Fixed checking if image extents intersect before there's any image displayed in the map. This was preventing some images from being loaded even though they did interest the area of the elevation source.
- [WG-962] Added a new feature to Georeferencing 3D that allows the user to save the collected points to a file. This is workflow improvement that saves time.
- [WG-1218] Fixed a problem which was preventing changes in some numeric fields in the Image Adjustment panels from being applied
- [WG-1217] Fixed a problem with image not updating when the Histogram is manipulated in Single Band mode.
- [WG-1054] Fixed a problem that was preventing annotation arrows from being properly rendered for pptx.
- [WG-1206] Fixed problem that was causing improper results after the manipulation of layer order in the contents (layers) panel.
- [WG-1234] Fixed a problem that was preventing DRA on the non-SIPS Image Adjustment panels from working.
- [WG-1224] Fixed a problem that was causing the Image Adjustment panels to stop working if a SIPS adjustment was applied to a non-NITF image.
- [WG-1226] Fixed a problem that was happening when adding a subfeature to recently edited feature. This happened, for example, when a polygon was moved, then a subpolygon was added. At that point the main polygon would revert to its original position
- [WG-1240] Fix a problem which was preventing transparency from working on thematic images when toggling it off and on.
- [WG-1223] Fixed a problem that was causing the file search to return incomplete results if there were errors in the underlying set of filenames. In this case some files with invalid filenames had



been generated as a test and were still present. They were preventing the search from being able to discover the whole content of the folder.

[WG-982] **(EX-3132)** Fixed a problem which was causing the chipper (non-NITF) from working on many images. This was due to the lack of statistics, which the service now generates if they are not present.

The Online Help has been updated to reflect current changes and additions.

MSP Changes here

TFRD Changes here



Build 57 (2016-07-11)

Items Fixed or New Features:

- [WG-0] Fixed isRequired flag handling
- [WG-0] Feature change committing is not possible if a field validation has failed
- [WG-0] Fixed updating chunks which does not have a geometry
- [WG-0] Removed caching FeatureValidationProxy which did not work if the same layer had been removed and added again
- [WG-0] Fixed misspelling in the featuresValidationControllerProxy
- [WG-0] Fix hiding smart bar
- [WG-0] Fixed height extraction for features being inserted
- [WG-0] Removed duplicated points in the drawing scenario builder
- [WG-599] Prepare WebGLT to new drawing style mechanism
- [WG-599] Prepare annotation to new drawing style mechanism
- [WG-599] Prepare measurements to new drawing style mechanism
- [WG-599] Prepare Geoprocessing to new drawing mechanism
- [WG-599] Introduce setting feature styles in drawingScenerioBuilder
- [WG-599] Fixing measurements bugs
- [WG-599] Use a new drawing mechanism from the core framework
- [WG-599] Add CustomPrimaryStyleModel as default model for drawing
- [WG-907] Force a tile grid with the image extent when displaying images in both map and image space
- [WG-907] Fix setting OpenLayers' projection's extent
- [WG-133] Introduce "update" legend modification action
- [WG-133] Replace the old legend entry with the updated one in the cluster
- [WG-133] Upgrade OpenLayers to 3.15.1
- [WG-888] Update vector style
- [WG-915] Handle stereo images when updating a layer



- [WG-979] Set crossorigin to "anonymous" for images downloaded as WFS symbology icons
- [WG-977] Rectangle, ellipse measurement takes care of Null CRS
- [WG-380] Removed ComputeLength process executor from ImageSpaceCRSRetriever wiring arguments
- [WG-380] Removed ComputeLength process execution from ImageSpaceCRSRetriever
- [WG-380] Removed unused ComputeLengthProcessExecutor reference from DisplayCrsBuilder
- [WG-380] Reduced number of ComputeLength service requests from Printing controllers's Scale feature
- [WG-380] Separated NewImagePositionStrategy.setPosition from the regular flow
- [WG-380] Removed unused ComputeLengthProcessExecutor reference from webgisCore module wiring.
- [WG-0] Fixed ImageName length error in SaveJSONToFile service payload
- [WG-0] ImageToGroundAffineApproximator - corrected misspelled method's name
- [WG-978] Only allow overlay, if the base image is in map space
- [WG-0] Added dimension property to the WfsFeatureTypeFsdModel
- [WG-0] Fixed coordinates handing in the HeightExtractor for basic geometries
- [WG-933] Prevent the legend transition panel from overlapping the layer list
- [WG-859] Dimension of features is not modified by the WfsFeatureStoreClient any longer
- [WG-559] Display async process progress
- [WG-559] Expose async process progress events
- [WG-0] Added default values and properties and newly created geometries respect the dimension
- [WG-0] Deactivate tool on mode change, move template creation to loadash and not displaying undefined or null values of feature property
- [WG-0] Reverted adding extra floating point values to integers in ComputeTransformClientHelper
- [WG-943] Added 'Pathname' parameter to ShoeboxFileItem template
- [WG-929] Error message about a commit disappears if current feature class has changed
- [WG-946] Select tools are not being disabled if are clicked when they are active



- [WG-929] Adding feature class or editing an existing one does not affects items added to the map. The only difference if we edit a feature class which is added to the map in such a case it is removed from the map
- [WG-896] Geometry of features is updated correctly when it is moved or mutated
- [WG-0] Fixed misspelling in the FeaturePersistenceController - featureId
- [WG-948] Openlayers file is no longer added to app.js (fixes 64-bit Chrome)
- [WG-1007] Fix the line style used when inserting line features
- [WG-1006] Implemented unsetting the active feature class
- [WG-1008] OpenLayersOverviewMapController - fixed visible area polygon rotation
- [WG-1009] Re-enabled SnailTrail drawing
- [WG-599] Do not draw rectangle in rectangle measurement
- [WG-380] Upgraded Overview's viewport polygon drawing to reflect OpenLayers 3.15.1 changes
- [WG-380] Initial modifications to improve image tiles loading time
- [WG-380] SIPSImageChain - Added value change verification to all KnockoutJS 'subscribe' method executions
- [WG-380] Reduced DropInMenuImageAdjustments legend entries refreshing frequency
- [WG-380] Deferred 'legendChanged' event emission from ActiveLegendHandle
- [WG-380] Reduced number of 'cameraPositionChanged' events
- [WG-0] ShoeboxImageItem error handler fix
- [WG-0] Local caching of CRS for CRSManager.getCRS method execution
- [WG-0] Fix a reference exception when clicking the image in Firefox
- [WG-599] Fix issue with measurements playback
- [WG-599] Introduce FeatureDrawer
- [WG-599] After changing color, polygon annotation is drawing with old version
- [WG-599] Use originalEvent.ctrlKey instead of self implementation
- [WG-599] Introduce firstClick and secondClick in OpenLayersMapAdapter
- FirstClick add points in drawing, second/dblClick only close the drawing mode
- [WG-0] Prevent loading feature classes from blocking loading the app



- [WG-0] Fix ordering feature classes in a feature collection (FeatureClassPanel)
- [WG-952] Feature class added to properties info
- [WG-950] Switching the modes is working back fine
- [WG-950] Button behaviour fix on switching the modes
- [WG-0] OpenLayers custom build to reduce app size and reduce startup time
- [WG-599] Implement RectangleDrawingMode
- [WG-599] Fix PolygonSelectionController
- [WG-599] Change AdjustGeoreferencing to use TextStyle in drawing points
- [WG-599] Add TextStyle to StaticVectorStyleModel, adding text to features
- [WG-599] Add cross icons to Adjust Georeferencing 2D and 3D
- [WG-599] Introduce labelledPoint
- [WG-991] Panels will close correctly with no image displayed on map
- [WG-985] Stereo pair will display both full images
- [WG-986] Disabled dropdown with filter if there is no filter
- [WG-983] Default values visible
- [WG-599] Fix disposing in drawing mechanism
- [WG-1012] [WG-1013] Avoid closing drawing after dblClick if there are steps
- [WG-1011] (v57-1) Measurement End Feature Button Not Always Appearing
- [WG-1010] (v57) Measurement line and polygon artifact
- [WG-1008] Fix for wrong rotation angle in Overview Window
- [WG-845] Auto roam smoothness increase
- [WG-1001] Restore the terrain profile exaggeration slider
- [WG-845] No additional setCameraPosition calls if no overview window is visible during roaming
- [WG-845] No loading tiles indicator while roaming
- [WG-845] Overview window visibility matters during autoroom
- [WG-673] Download tooltip dictionary only once
- [WG-973] Geoprocessing Mosaic - Output Area Filename, refactor



- [WG-1019] Set mosaic default output filename to mosaic_currentTime
- [WG-987] Replace Stereo Pair Input's for Filename Box Control
- [WG-975] Replace Geoprocessings Inputs for Filename Box Control
- [WG-975] Adding Filename Box Control
- [WG-0] Fix disabling the keyboard interaction when editing annotation on OL 3.15
- [WG-875] Don't use the CSS resize method for annotation resizing. Fixes the inability to make the box smaller than initial height in Chrome due to a bug in Chrome CSS resize support.
- [WG-876] Don't change the annotation box size when editing
- [WG-1045] Add a new favicon
- [WG-1036] Add a new splash screen
- [WG-987] Adding extensions to configuration, refactor spec, add css element 'extension' for Filename Box Control
- [WG-1026] Fixed map blinking on first operation after loading an image
- [WG-1061] Fix the payload for expurgation result registration
- [WG-973][WG-1058] Fix simple mosaic's output are filename.
- [WG-1051] (IE) Drawing Annotation Polygons Has Problems
- [WG-468] Request fix
- [WG-468] Files input flag is brought back
- [WG-1046] Ability to define the size of the image being the vector icon source. Required for SVG images in IE. Fixes collecting points for adjustments in IE
- [WG-968] Applied report formatting to MatDialog
- [WG-964] Adjust Georeferencing 3D - Implemented Ground Control Value Type classification for control points JSON output



Build 56 (2016-06-08)

Items Fixed or New Features:

[WG-878] CRS code should be got only from secondary image

[WG-903] Up is up on start disabled for stereo pairs

[WG-904] Added catching nongeoreferenced images

[WG-0] Tooltip hide fix

[WG-0] Tooltip disable fix

MSP Code Support Integrated

[WG-0] Removed the 3rd coordinate from 2D geometries

[WG-805]-LineOfSight profile visibility issue fix

[WG-895] Improved different dimension support in the EditingFeatureGeometryController

[WG-0] srsDimension attribute is respected correctly

[WG-893] Tooltips added for Feature data tab

MSP: Update the release version of client config

MSP: Move noTabModal definition to main-spec

Added missing tooltip descriptions to the tooltip_dictionary.json file

[WG-0] Nearest Neighbor Resample Fallback on autoroam

[WG-0] Removed obsolete HTML modal containers

[WG-925] Replaced MessageBox with MessageDialog

[WG-866][WG-867] Additional tooltips updated

[WG-893] Additional tooltips added/modified for status bar items

[WG-893] Updated additional tooltips

[WG-893] Tooltips for feature data tab have been added and StatusBar.Coordinates has been corrected

[MSP] Update for Row values, due to Tom's change of direction

[WG-0] Corrected style that broke autoroam slider - again



- [WG-914] no image to ground during roams
- [WG-916] Introduced 'closeActivePluginStream' to SlideInMenu class
- [WG-916] Implemented 'doNotAutoCollapse' plugin setting
- [WG-0] Removed MessageBox feature files
- [WG-925] WebGLTSearch & LegendSettableProxy - replaced MessageBox with MessageDialog
- [WG-925] Introduced MessageDialog class for basic UI modal
- [WG-0] LegendSettableProxy - fix for 'Invalid imageData argument' error
- [WG-924] SimpleMosaic - added support for inches
- [WG-908] Added proper namespace handling to the WfsTransactionResponseHandler
- [WG-923] Reduce roaming sensitivity
- [WG-920] Close drawing with CTRL + LMB
- [WG-885] Corrected sending points to stereo point measurement process
- [WG-921] Corrected stereo pair order
- [WG-935] Display only Filename part of elevation filename
- [WG-0] Snail Trail tooltip fix

Set IncludeMSPProcessingPanel back to false in the client_config.json file

MSP updates for workspace_config

Updated tooltips for MSP and Image to Image Change detection

- [WG-922] Update the display CRS on elevation source change
- [WG-931] FeatureSetChangeHandle is destroyed when layer is removed from the map
- [WG-930] When features are moved the change is added to the FeatureSetChangeHandle on the drag end event

Updated tooltips for orthorectified imagery

- [WG-925] Implemented CompositeBooleanPromiseCreator function to 'canSetImageInActiveLegend'
- [WG-925] Implemented 'canSetImageInActiveLegend' function and some refactoring
- [WG-925] Introduced confirmationDialogModal object
- [WG-925] GeoprocessingSlideInMenu - updated confirmation dialog message
- [WG-925] Adjust Georeferencing 2D - implemented 'isDataCollected' method



- [WG-925] ConfirmationDialog - updated CSS
- [WG-925] Introduced ConfirmationDialog class
- [WG-925] Adjust Georeferencing 3D - implemented 'isDataCollected' method
- [WG-932] Updated entriesRefreshOrchestrator to rely on a originalId of a legendEntry
- [WG-932] Identify legendEntry by originalId
- [WG-936] Fix reading the elevation file from the list entry
- [WG-906] Added decimal values to integers in Point data payloads
- [WG-901] Revert taking bands from imagemetadata
- [WG-885] logging clean up
- [WG-885] Corrected stereo point measurement
- [WG-885] Cursor separation now in both screen and map pixels
- [WG-0] Adjust Georeferencing 2D - updated documentation
- [WG-0] Allow removing feature classes which have same layers as other added feature classes
- [WG-926] Fixed ID assignment for newly generated features
- [WG-0] Added retrieving information about elevation when storing geometry
- Updating MSP Terrain options to remove 'As Is'
- Updating MSP Terrain options to remove space
- [WG-0] Identify feature - basic version
- Help updated - AndyZ - includes feature collection
- [WG-929] Error message about a commit disappears if current feature class has changed
- [WG-946] Select tools are not being disabled if are clicked when they are active
- [WG-929] Adding feature class or editing an exiting one does not affects items added to the map.
The only difference if we edit a feature class which is added to the map in such a case it is removed from the map
- [WG-896] Geometry of features is updated correctly when it is moved or mutated
- [WG-0] Fixed misspelling in the FeaturePersistenceController - featureId
- [WG-0] Fixed isRequired flag handling
- [WG-0] Feature change committing is not possible if a field validation has failed



- [WG-0] Fixed updating chunks which does not have a geometry
- [WG-0] Removed caching FeatureValidationProxy which dint't work if the same layer had been removed and added again
- [WG-0] Fixed misspelling in the featuresValidationControllerProxy



Build 55 (2016-05-16)

Items Fixed or New Features:

- [WG-880] Caching GetMetadata workaround
- [WG-880] cachesync flag improvements
- [WG-880] Add getMetaDataInit
- [WG-664] Autoroam covers all for rotated pictures
- [WG-0] Adjust Georeferencing 2D - replaced 'Error' label with 'RMS'
- [WG-884] Adjust Georeferencing 2D - fixed coordinates for georegistration
- [WG-0] Adjust Georeferencing - fixed Extended Grid width for FF/IE
- [WG-881] Adjust Georeferencing 3D - fixed APM points loading
- [WG-892] Adjust Georeferencing 3D - Populating data from DataTriangulation
- [WG-0] Added description of the FeatureCollection panel tab
- [WG-901] Take bands from imagemetadata

Backend Changes

- [WG-0] Fixed Origin building procedure
- [WG-0] ProvidesAccessControlHeaders is True if a client and the WFS server have the same origin



Build 54 (2016-05-11)

Items Fixed or New Features:

- [WG-713] Stereo pair offset stored in shoebox
- [WG-855] The coordinates of the cursor should be as default "Show in file" for images with sensor model Identity(2D)
- [WG-836] Add Tooltips to add to shoebox pop-up
- [WG-848] alwaysDisplayInImageSpace flag set to true
- [WG-831]: Switched coordinate field in Extended grid for Adjust 2D and 3D to show X/Lon Y/Lat
- [WG-857] Tooltip don't go away
- [WG-820] Create sub meter mosaics
- [WG-843] Adjust Georeferencing. Swap geographic coordinates before calling service
- [WG-833] Use shoebox's user name in IWS map URL
- [WG-833] Use shoebox's user name as service parameter for getiwsinfo
- [WG-848] Remove canDisplayAsImage variable
- [WG-826] Fixed the problem that IsRequired property used to be always considered as True
- [WG-871] Fix a deadlock when adding APOLLO images to the shoebox
- [WG-859] Fixed escaping query in the WfsRequests
- [WF-859] Fixed WfsQueryProviders tests
- [WG-845] Some optimization in auto roam
- [WG-857] Tooltip don't go away
- [WG-864] Ground points coordinates should not be taken from primary view
- [WG-0] Add "one item selected" functionality to Dropdown menu
- [WG-834] Adjust 3D not collecting ground points
- [WG-856] ImageToGroundAffineApproximator does not work correctly for some images
- [WG-858] Variable Label for Map Coordinate in GRID (2D and 3D)
- [WG-747] Feature Class Symbology Interface not updating / working



- [WG-839] EditingFeatureGeometryController reads the current feature geometry from featuresetchangehandle
- [WG-827] A new guid is generated for primary key of newly created features
- Online help changes - includes browser differences
- [WG-835] Adjust Georeferencing 3D. Implemented proper Georeference process execution
- [WG-873] Change Default Image Chain Logic
- [WG-744] Fixed "jumping" the tree view list when clicked on a scroll bar buttons in the FeatureCollectionPanel
- [WG-863] Applied Lat/Lon coordinates swapping to 3D
- [WG-863] Swapping Lat/Lon coordinates for 2D
- [WG-835] Adjust Georeferencing 3D. Fix for Georeference process execution
- [WG-0] Only ImageToGroundClient caches results of Geoprocessing requests
- [WG-0] Changed add as stereo UI
- [WG-827] Updated AddingFeatureController to use the GUID generated by a FeatureSetChangeHandle for a primary key field value
- [WG-842] Fixed Power Point North arrow problem, working in all browsers
- [WG-852] Problems changing opacity annotation text. Tested in IE, FF, and Chrome. Opacity now is available for all 3 text annotation options.
- [WG-847] Hide tooltip on disabled UI elements optimisation.
- [WG-849] Added move selected features tool
- [WG-713] Fixed stereo point measurement
- [WG-835] Adjust Georeferencing 3D. Update for NITF RPC files.
- [WG-0] Add input flag to GeoprocessingClientHelper
- [WG-851][WG-850] Text annotations are now not opaque. Text annotations are now draggable and resizable. Annotations don't change in size if dragged anywhere.
- [WG-848] Affine Images are displayed as Map even when Image is selected
- [WG-880] Revert Caching GetMetadata change
- [WG-874] Error when coordinates in Extended Grid are typed
- [WG-830] Updated unit tests for LegendBoundingBoxHelper



- [WG-830] LegendBoundingBoxHelper - Fixed footprint errors handling
- [WG-830] LegendBoundingBoxHelper - updated error handling
- [WG-0] AdvancedCameraPositionUtils - added jsnlog reference
- [WG-713] Proper axis order in stereo point measurement
- [WG-0] Corrected style that broke autoroom slider



Build 53 (2016-05-02)

Items Fixed or New Features:

- [WG-1000] Change in Georeference service
- [WG-1000] Style fix
- [WG-803] Major refactoring of LegendBoundingBoxHelper
- [WG-797] Adding tooltips to Autoroom
- [WG-796] KnockoutDatepicker replaced by jQueryDatepicker
- [WG-796] Select a Date Picker for use with Date Fields
- [WG-799] Snail trail menu is not accessible
- [WG-779] Avoid displaying as map and as image together
- [WG-817] Example coordinates popover content should be changed after changing coordinates system
- [WG-645] When creating a new linked view, check if linking is enabled
- [WG-802] Download KML using msSaveOrOpenBlob if present (IE)
- [WG-819] "North is Up" instead of "Up is Up" for 2D Images
- [WG-807] Fix URLs of the linked views frames
- [WG-0] Support whitespace characters in WGS84DD parser
- [WG-816] Avoid getting default zone if zone is provided
- [WG-808] X / Lat Y / Lon instead of X / Lon Y / Lat
- [WG-782] fixed height units (WG-727) peak clipping fix
- [WG-634] Send the position when inserting a shoebox entry
- [WG-0] Added unit tests for FilePathHelper class
- [WG-804] Updated Adjust Georeferencing 3D Compute process execution (DataTriangulation)
- [WG-804] Updated DataTriangulation client
- [WG-694] Add possibility to move map when FreeHandLineMode is on
- [WG-785] Entering the Measurements Results at the top of the queue



- [WG-832] Save JSON and GET JSON changed
- [WG-0] Tooltip unhandled rejection fix on Firefox
- [WG-825] Rounding corrected
- [WG-800] Removed Exaggeration Slidebar from Terrain Profile tool in the Geoprocessing panel
- [WG-0] Tooltip dictionary update



Build 52 (2016-04-25)

Items Fixed or New Features:

- [WG-92] Some auto roam optimization
- [WG-781] Removed hardcoded globaldem file path
- [WG-0] Fix for client_config.json support in Overview
- [WG-568] Elevation Source error initial fix
- [WG-559] Job panel moved outside
- [WG-513] Updated LegendBoundingBoxHelper
- [WG-513] Minor fix for LegendBoundingBoxHelper.
- [WG-513] Display as Image BoundingBox issue partial fix
- [WG-513] Implemented LegendBoundingBoxHelper in AdvancedCameraPositionController class
- [WG-0] Fix for incorrect scaling of overlay in Overview window
- [WG-743] Reset SIPS chain parameter values
- [WG-635] Code refactoring
- [WG-635] Clicking the Link Button should cause the Non-primary view to adjust
- [WG-488] Coordinate Entry Field Issues
- [WG-559] Static icon
- [WG-1000] Change of jsonSchema version
- [WG-781] Removed hardcoded globaldem file path
- [WG-568] Elevation Source error initial fix
- [WG-559] Job panel moved outside
- [WG-513] Implemented LegendBoundingBoxHelper in AdvancedCameraPositionController class
- [WG-775] Only rotate images with 3d sensor
- [WG-775] Different strategies for setting the camera position for new images. SIPS images are rotated to sensor look angle if displayed in image space
- [WG-499] Outpu of Spike Removal can now be displayed as Overlay



- [WG-730] DRA Current view broken - DRA Boundary outside image extents
- [WG-568] Added Global DEM to elevation sources picklist in LegendSettableProxy
- [WG-568] Updated PicklistDialog class
- [WG-568] Implemented PicklistDialog control in LegendSettableProxy
- [WG-568] Introduced PicklistDialog control
- [WG-0] Optimisation of LegendBoundingBoxHelper's isImageIntersectedByOther method
- [WG-568] Fix for ShoeboxEntriesFilter class
- [WG-568] Updated ShoeboxEntriesFilter class
- [WG-568] Introduced ShoeboxEntriesFilter class
- [WG-568] ChooseElevationSource class refactoring
- [WG-788] Collecting point returns imagespace row and col in extended grid
- [WG-0] Set getElevationFileUri and getImageFileUri as public methods
- [WG-524] Add filtering events option to DrawingScenarioBuilder
- [WG-524] Avoid sending click event and dblclick together
- [WG-0] Always Show mechanism for selected tooltips
- [WG-0] Add and modify missing tooltips
- [WG-793] Disable openlayers keyboard interaction when editing an annotation. Allows using arrow keys to move the cursor
- [WG-568] Introduced PicklistDialog control
- [WG-788] Collecting point return imagespace row and col in extended grid
- [WG-775] Rotate to sensor look angle, when a SIPS image is displayed in image space
- [WG-559] Static icon
- [WG-0] Online Help missing files 4/19
- [WG-646] Fix throttling camera position events for linked views. Fixes the issue of "lost" camera position changes, for example when rotating the view
- [WG-690] Fixed DRA number input step. Removed irrelevant attributes. Fixed ko extend usages
- [WG-0] Changed the definition of the dev coffeelint task to compact form. It will now work properly with the 'newer' task



- [WG-671] Last row included
- [WG-641,WG-662,WG-663,WG-664] Corrected auto roam navigation issues
- [WG-795] Always allow display as Image for all images
- [WG-0] Updated release version of config_client.json
- [WG-796] DateTime fix
- [WG-796] DateTime added
- [WG-796] datetime -> dateTime
- [WG-796] DateTime register
- [WG-1000] Smart bar icons order
- [WG-1000] Spinner is spinning as it should
- [WG-0] Updated ChooseElevationSource unit tests
- [WG-0] Updated CameraPositionModel unit tests
- [WG-806] Updated reference to default elevation source in ChooseElevationSource class
- [WG-780] Updated Current View DRA feature
- [WG-644] Added the possibility to force an exact height of camera
- [WG-798] Execute recreateLayer and clearTrail when image is loaded



Build 51 (2016-04-15)

Items Fixed or New Features:

- [WG-723] Make editing annotations possible in IE
- [WG-0] Pushed wrong file in 947d955cd9c3
- [WG-712] Updated fix for IE's window.postMessage DataCloneError
- [WG-0] Tooltip added to Geoprocessing
- [WG-0] Tooltip added to Geoprocessings
- [WG-765] Problem with changing display format form "Show in File" to other
- [WG-763] Updated transform filenames generation.
- [WG-732] Adjust georeferencing. Georeference parameters update.
- [WG-0] Adjust Georeferencing. Updated CRS handling in the ComputeTransform process.
- [WG-678] Fixed odd behavior of Annotation Painting tool (freehand drawing mode).
- [WG-0] Updated CSS for Wfs Color Picker.
- [WG-717] Offset controls behaviour fix
- [WG-749] Add name of image file to output filename
- [WG-0] Support filepaths with backslashes and forwardslashes in ImageListBox
- [WG-760] Add popover with example coordinates
- [WG-760] Validation of coordinates input by extended grid
- [WG-0] OLH deleted files 4/6/2016
- [WG-0] OLH created 4/5/2016
- [WG-769] Clarify SIPS Names
- [WG-0] Removes duplicates of "SIPS Panchromatic Image Chain" and "SIPS True Color Image Chain"
- [WG-760] Add popover with example coordinates
- [WG-0] Fixed coordinates transformations for no CRS data



- [WG-732] Adjust georeferencing 2d. Updated file paths generation
- [WG-0] Fix for CrsCodeNormalizer error
- [WG-0] LegendBoundingBoxHelper. Fix for CRS1 error
- [WG-768] Fix for Feature Data Attributes display
- [WG-766] Added modal window
- [WG-717] Added extension filters
- [WG-0] Refactoring
- [Wg-0] Tooltips added to status bar, title bar and menu
- [WG-723] Enable annotation resizing in browsers not supporting CSS resize
- [WG-764] Added filtering mechanism to annotations
- [WG-0] Added ability to pass custom annotation icon managers
- [WG-0] Added plugin mechanism for annotation icons
- [WG-0] Adding tooltip to status bar
- [WG-0] Added functionality of enable/disable tooltips. Add missing tooltips. Modifying KnockoutTooltip for manual position declaration
- [WG-0] Adding tooltip to status bar
- [WG-0] Adding tooltip to ImageAdjustment and Geoprocessings
- [WG-732] Adjust georeferencing. Updated file paths generation
- [WG-0] LegendBoundingBoxHelper - fix for CRS1 requests
- [WG-0] Fix for error handling for coordinates conversion
- [WG-766] Added modal window
- [WG-723] Enable annotation resizing in browsers not supporting CSS resize
- [WG-0] Tooltip dictionary update, added tooltips to status bar, title bar and menu
- [WG-0] Adding tooltip to status bar
- [WG-0] Update tooltip dictionary
- [WG-0] Tooltip dictionary modification and adding tooltips to geoprocessings
- [WG-0] LegendBoundingBoxHelper - fix for CRS1 requests
- [WG-770] Improve visibility fo SmartBar Angle Arrow



- [WG-743] Reset image adjustment parameters values
- [WG-573] Added error notification after failed image display
- [WG-772] Allow changing the autoroom speed during playback
- [WG-722] Fix reading image chain dropdowns' values in IE. IE does not support selectedOptions
- [WG-774] Fix displaying the default image adjustment parameters values
- [WG-771] Dropdowns in Adjustment panel should be reset to default after changing Image Chain
- [WG-573] Added error notification after failed image display



Build 45 (2016-02-08)

Items Fixed or New Features:

- [WG-0] Enabled custom geoprocesses to create entries in Processes List for async tasks
- [WG-0] Don't show smart bar tool's activity state, when disabled
- [WG-92] Autoroam icons
- [WG-411] Geoprocessing Panel restrictions - Updated Line of Sight UI
- [WG-411] Geoprocessing Panel restrictions - Updated Create KML Track UI
- [WG-414] Changed shoebox to use separate models than the legend
- [WG-414] Removed unused parameters from the ShoeboxEntryModel
- [WG-437] Add shoeboxName to new shoebox Update stream, when model-changed event is emitted
- [WG-446] Coordinate Entry Field - Decimal Degrees (DD) issu
- [WG-461] Ability to enable/disable each smart bar item individually
- [WG-447] Elevation Source drop menu - Adjusted Elevation Source drop menu
- [WG-447] Elevation Source drop menu - Modified "Set as Elevation Source" in Shoebox to work identical as setting Elevation Source from drop menu in StatusBar
- [WG-447] Fixed Choose Elevation Source bug
- [WG-447] Disabled zooming and temporarily replaced Elevation Library with globaldem
- [WG-461] Linked views - notify the view, if the linked window was closed manually
- [WG-489] Don't activate the link by default
- [WG-490][WG-412] Added geoprocessing command in executors
- [WG-491] Convert camera position to WGS84, if linked views are different image spaces
- [WG-492] Update Tooltips to better text
- [WG-495] Adjustments panel operating on the top image layer, filtered out Annotation layers
- [WG-495] Adjustments panel operating on the top image layer, fix for Annotation layers
- [WG-495] Adjustments panel operating on the top image layer, fixed for adjustments, but there is stil ImageChains issue left



- [WG-0] Made WebGLT search source injectable
- [WG-0] Renamed ShoeBoxContent into ShoeboxContent
- [WG-490] ViewModels are handled now
- [WG-493] Pixel Transparency set to "true"
- [WG-504] Add Affine (2D) for Map Space
- [WG-431] Fixed Dynamic Range Adjustment image bounds issue
- [WG-512] Fixed KML Geoprocessing after HightExtractor changes.





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