Release Guide

M.App X 2020

19 December 2019

Contents

About This Release

This document describes the enhancements, fixes, and system requirements for M.App X. Although the information in this document is current as of the product release, see the Hexagon Geospatial Support website for the most current version.

This release includes both enhancements and fixes. For information on new features, see the New Technology section. For information on fixes that were made for this release, see the Issues Resolved section. For information on hardware and software requirements, see the System Requirements section.

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

M.App X

M.App X provides tools to exploit imagery and create imagery-derived information products and reports, deployed in an enterprise platform for System Integrators. All M.App X users can create and share information across the enterprise using the rich web-based client application.
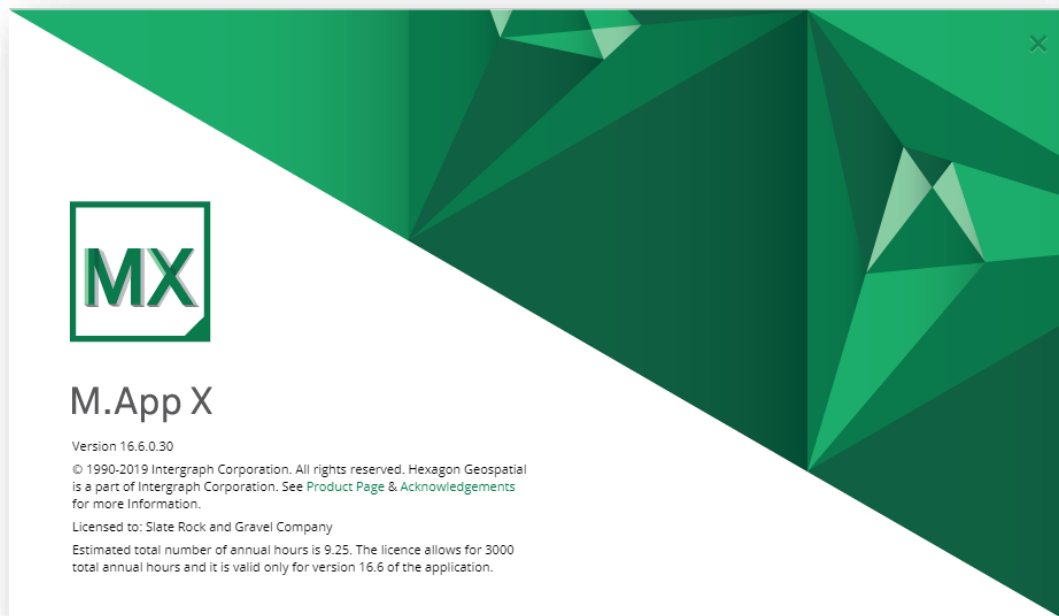
New Platforms

M.App X 2020 now support Microsoft Windows Server 2016 and 2019.

New Technology

M.App X 2020 is built on the LuciadRIA map engine.

One Hexagon Branding

The product Icon, Splash Screen and About Box have been changed to reflect One Hexagon branding.

Replace OpenLayers with LuciadRIA

The core OpenLayers mapping technology used in M.App X has been replaced and enhanced with the LuciadRIA engine. LuciadRIA is a JavaScript mapping engine that supports both 2D and 3D display modes and it takes advantage of the GPU via WebGL. This technology change brings about performance improvements as well as enabling M.App X to extend to 3D.

3D Display Mode

M.App X is an Image Analyst oriented system focused on image exploitation, however the ability to view features and maps in 3D mode is useful. Using LuciadRIA technology, 3D display mode capabilities have been added. M.App X can now display imagery in 3D, optionally using terrain served from the Fusion Server (if present). Features, such as interactive image adjustments are also available in 3D Mode.
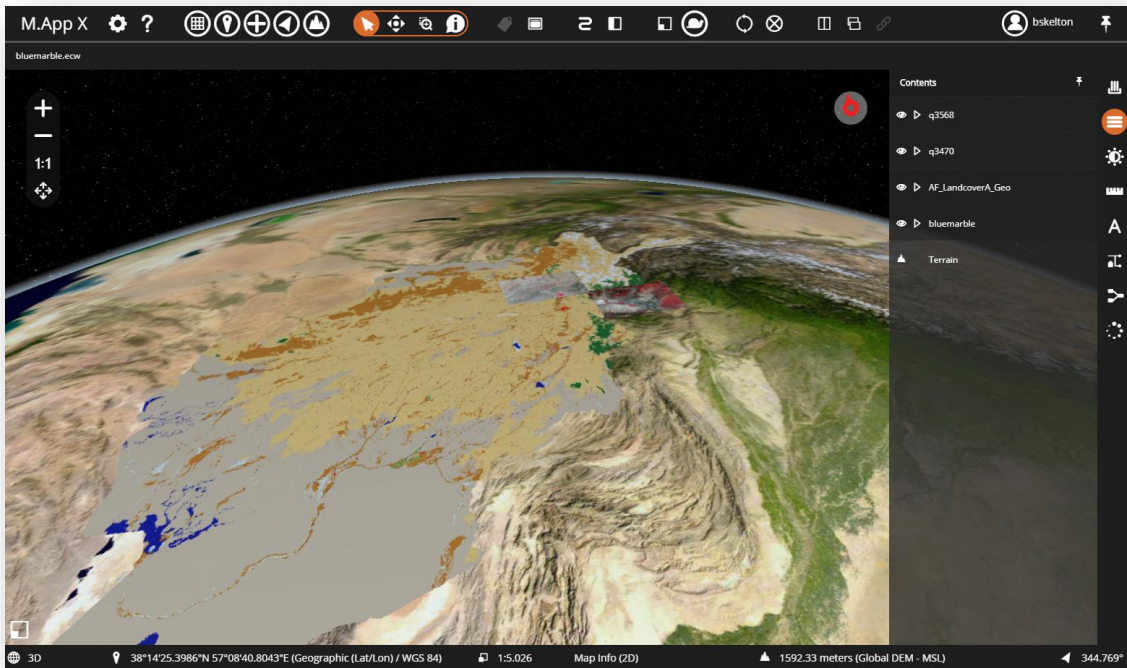
Switch Between Display Modes

In the M.App X 2020 release, additional support includes the ability to switch between display modes. Previously an image could be displayed "as image" or "display as map", and a stereo pair could be displayed "as stereo". However, there was no on-screen indicator of which mode was active and no means of easily switching between modes (when appropriate). A "View" menu has been added to the Smart Bar for better control and there is also a View Mode area on the left side of the status dialog that displays this information.
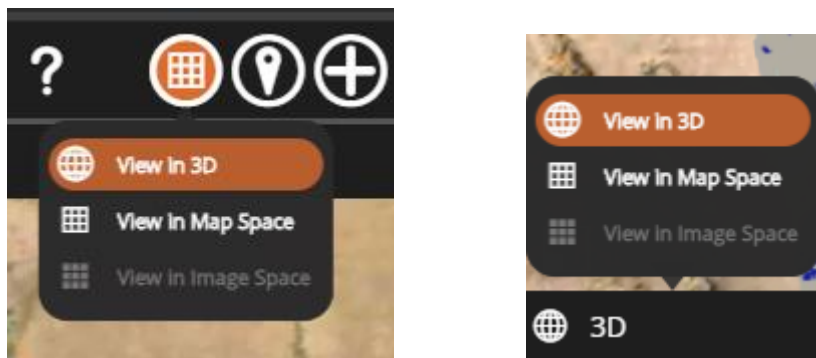
The left side of the status bar now also includes indication of the current display mode as follows:

Icon	Label	Description

	Image Space	Current display is operating in Image Space. It is possible to switch to Map Space or 3D if the image is georeferenced.
	Map Space	Current display is operating in Map Space. It is possible to switch to image space if there is only one image displayed. It is also possible to switch to 3D.
	3D	Current display is operating in 3D. It is possible to switch to image space if there is only one image displayed. It is also possible to switch to Map Space.
	Stereo	Current display is operating in stereo. It is not possible to switch out of stereo mode into Image Space, Map Space, or 3D.

Updated Zoom and Scale Icons

Icons depicting Map Scale and Pixel Zoom have been updated to avoid confusion with the similar icons used for the display mode indications. New icons are as follows:

Icon	Label	Description
	Map Scale	Scaling is shown in terms of units on the ground to the same units as measured on the screen.
	Pixel Scale	Scaling is shown in term of pixels in the image related to pixels on the screen.

New Auto Roam Floating Toolbar

The style of the Auto Roam toolbar has been updated to a floating toolbar. Clicking on the right or left roam arrows starts roaming and enables the stop button. The slider controls the roaming speed and the resulting value equals the roaming pixels per second. Finally, a button has been added to return to previous position, useful if the view has deviated from the roam path.

New Transitions Floating Toolbar

Transitions capability has been removed from the Contents panel and placed onto the dedicated floating toolbar, accessed by a new button on the Smart Bar. This is only available when two or more layers are currently displayed.
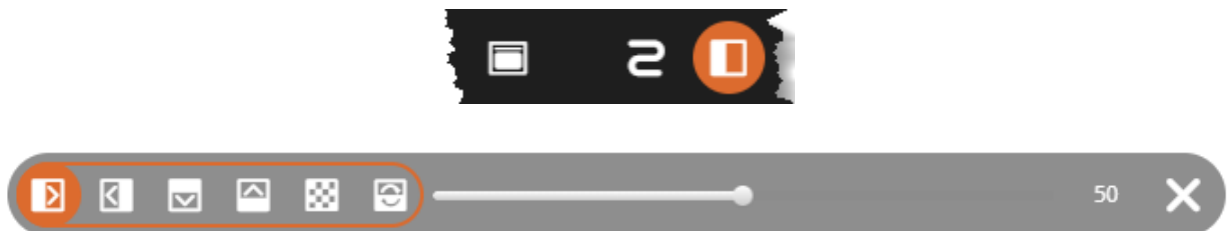
NavBar Replaces Tabs on Side Bar

The NavBar (navigation bar) helps users easily navigate their workflows. It is always present with a solid, opaque background. Different panels are selected using the appropriate icon, and it is now possible to hide and show a panel without moving the cursor. The currently selected panel is indicated by highlighting the appropriate icon.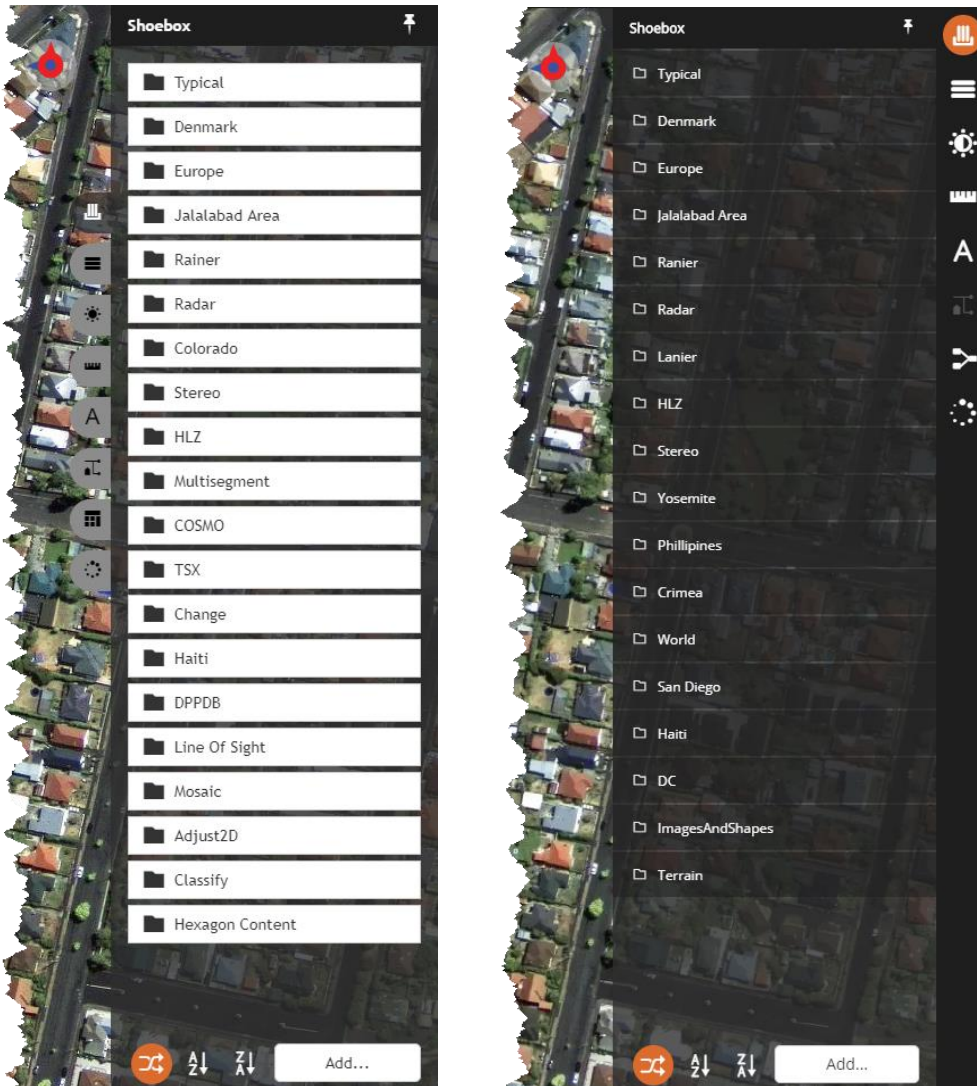 The previous tabs used to control the Side Bar have been removed and replaced by the NavBar as the tabs were difficult to see, depending upon the background image (see below).


Shoebox Style Enhancement

The style of the shoebox folder panel has been enhanced with a dark background with white text (in dark mode) that is more consistent with the style. Font size has been reduced to allow longer titles to be displayed. (See the previous graphic).

Contents Panel Improvements

The style of the Contents panel entries has been improved to use the space more efficiently and reduce clutter. The layer control buttons have been moved to the left of the layer name. The hide/show button is on the left, the expand/collapse button has been updated to a triangle, located to the right of the hide/show button, and the close button appears only when hovering over the entry. This allows for more room for the layer name. Additionally, the transitions function has been removed from the Contents panel and added to a floating toolbar accessed with a new button on the Smart Bar.
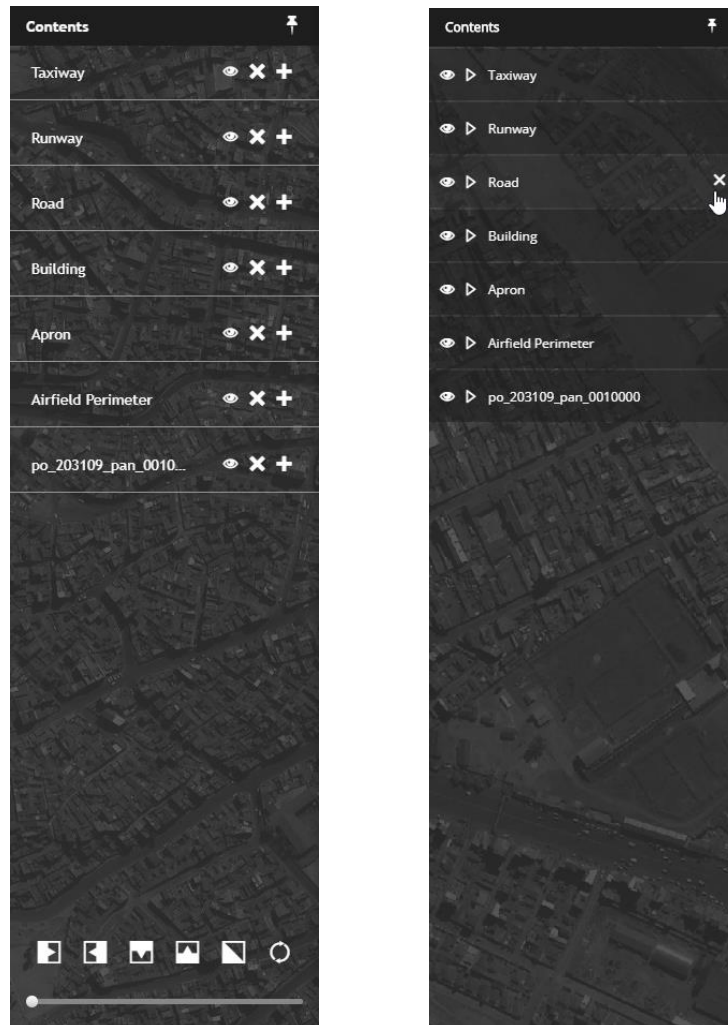
## Image Adjustments Panel Enhancements

The Image Adjustments panels have a consistent style and they are more functional. The presentation is compact and uniform, making it possible for even the longest panels to be visible without scrolling. New features include:

- Smaller font for labels and text
- Tighter spacing
- Reset button on each group
- All sliders have a numeric value for precise adjustment
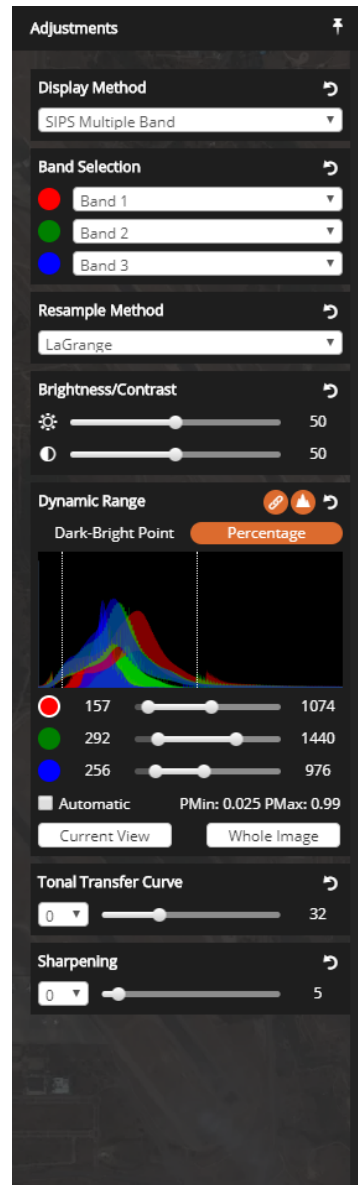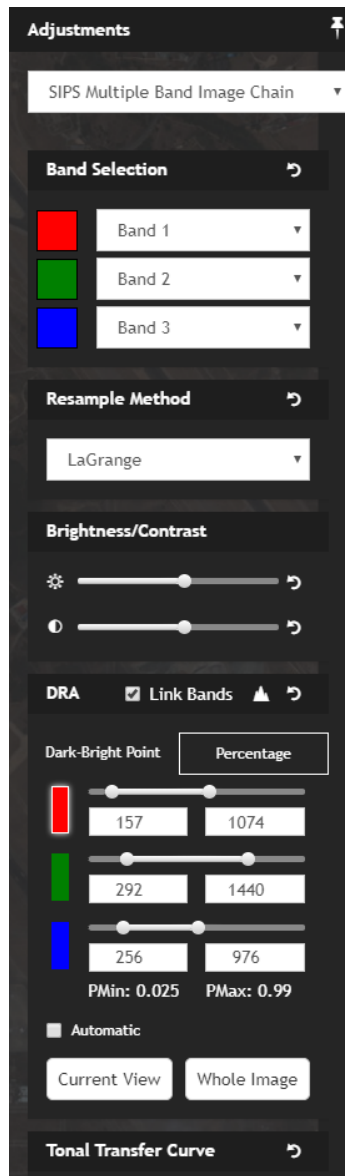
Measurements Panel Improvements

The icons in the Measurements Panel tool palette have been simplified and a pointer tool has been added. Previously, a tool had to be clicked on again to be deselected, which was not intuitive. Now, clicking on the pointer tool will deselect the current tool and set the cursor back to default .

Annotation Panel Enhancements

The icons in the Annotation Panel tool palette have been simplified icons and a pointer tool has been added. Previously to deselect a tool it had to be clicked on again, which was not intuitive. Now clicking on the pointer tool will deselect the current tool and set the cursor back to default. In addition, a label indicates if the current annotation has been saved.
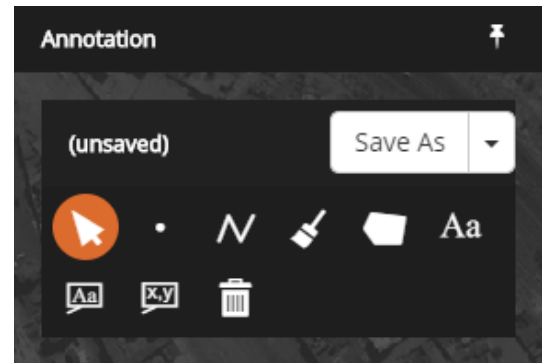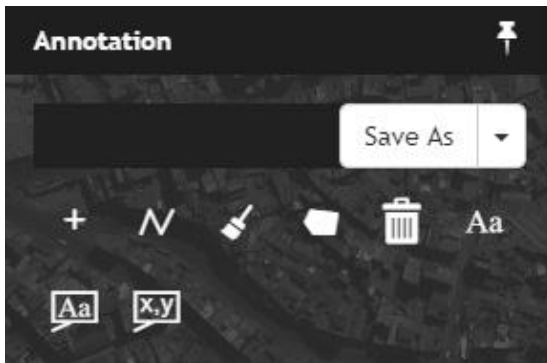
New Annotation Text Rendering and Editing

Annotation text rendering now renders text as a part of the annotation layer. This means that the text stays with the layer in the stacking order and is no longer always on top. In addition, the text element now has grab handles, which makes moving, resizing, and editing text simple.
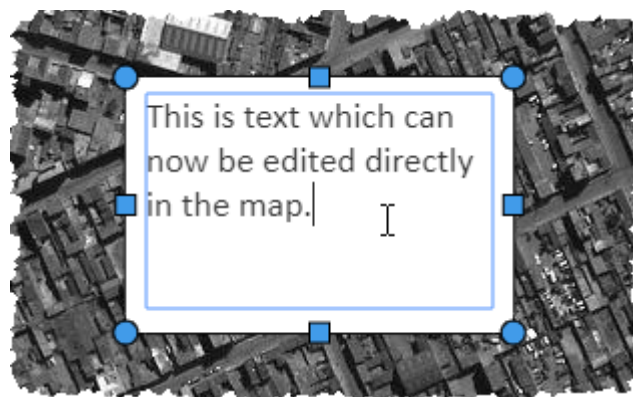
Removed Geoprocesses

The following Geoprocesses have been removed in the M.App X 2020 version, pending future replacement and/or improvement.

- Map Project Vector
- Geodetic Reproject Points

System Requirements

Server

Computer Processor	Xeon 2.9GHZ 4 core (or better)
Memory (RAM)	16GB (or better)

Operating Systems	• Microsoft Windows Server 2016
	• Microsoft Windows Server 2019
Software	• Internet Information Services (IIS)
	• JSON MIME Type Support
	• Java Runtime Environment Version 8
	• Microsoft .NET Framework 4.7

Client

Computer CPU	• Any Intel or AMD x64 CPU running at 1.9GZ or greater.
Graphics Card	• Any modern graphics card with full 32-bit support. A GPU is required to use the 3D features of the client.
Network Connectivity	• An ethernet or Wifi connection of at least 10MBs is required for good performance.
Operating Systems	• Windows 10
	• Other operating systems such as MacOS or Linux are viable as the M.App X client runs entirely in the browser with no plug-ins.
Browser	• Chrome (current versions)
	• Mozilla (current versions)
	• Other browsers such as Safari, Opera or Edge are viable as long as they are not mobile versions.

Issues Resolved

CR #	Summary	Description / How to Reproduce
WG-7948	M.App X does not respect supported formats information from WMS capabilities	GetCapabilities request of WMS returns information about supported formats by the server. Some servers do not support all the formats which browsers do. This seems to be an issue especially in case of WebP format which is relatively new and is not supported by some servers. M.App X tires to use WebP by force if the browser supports it. Capabilities of WMS are being read by M.App X but the information about supported formats is not used and even lost at some point.

		Once a new legend entry is being created additional information should be requested. It is important not to store information about supported formats in a shoebox entry. Otherwise even if the configuration changes, M.App X will not respect new settings/capabilities.
WG-7848	Configuration Wizard does not allow to enter '.' or '-' (typing on a keyboard)	The issue is such that during E-mail account configuration and typing a hostname it is impossible to enter a dot or a dash using a keyboard. It is possible to paste such a hostname from a clipboard, but it is impossible to do so by typing.
WG-7821	Identify feature option should be enabled only when features layer is displayed.	Identify feature option should be enabled only when features layer is displayed. It should be disabled if there is no features layer.
WG-7672	Reset for band combination of TrueColor Image Chain doesn't work and errors pop up in the console.	1. Display any multispectral non-NITF image (ex: ge_dg_jan_01132010_102700.ecw) in the map. 2. Go to the Adjustments panel and change the band combinations. 3. Click the Reset option for the band combinations. Notice that the band combinations don't reset and errors appear in the console.
WG-7620	Changing SIPS Multiband Auto DRA throw console errors for non-NITF TrueColor images	If you display a non-sips True Color image and start manipulating SIPS DRA settings, you will see errors in the console. **Steps to reproduce:** 1. Set SIPS Default Auto DRA Behavior to Off in User Preferences 2. DIsplay ge_dg_jan_01132010_102700.ecw as Image 3. Go to Adjustments panel 4. Select SIPS Multiple Band Image Chain 5. Now do either of following things: 6. check "Automatic" checkbox in "DRA" section 7. click "Current View" 8. click "Whole Image" button 9. try to adjust specific band using slider
WG-7619	Single click doesn't check the box for Automatic option in the image chain panels.	1. Display a raster as image in the map. 2. Go to the Adjustments panel. 3. Select any one of the following image chains... 4. Panchromatic Image Chain 5. PseudoColor Image Chain 6. TrueColor Image Chain 7. Scroll down to the bottom of the panel and try to check the box for Automatic option by clicking on it. Notice that with the first click the box isn't checked but this option is applied to the image in the map. It is only on the second click that the box is checked.
WG-7595	Deleted annotation would show up again after the layer is saved.	1. Display a raster as image. 2. Get into the Annotation panel. 3. Select any annotation tool available and place the annotation in the map view. 4. Select the delete option in the Annotation panel and click on the annotation drawn in the map view to delete it. 5. Select again any annotation tool and place the annotation in the map view. 6. Save As the annotation layer. Notice that as the layer is saved the deleted annotation shows up again and is saved in the layer.
WG-7559	An arrow connector is added to the text with box annotation if it is moved and the annotation layer reloaded.	1. Add a raster as an image in the map. 2. Get into the Annotation panel. 3. Select the Text Placement tool and after giving an appropriate text in the Annotation panel, click in the map to place the text within a box. 4. Click again on the Text Placement tool to switch it OFF. 5. Double click in the text box and move the text box to a different location in the map. 6. Save the annotation layer and remove it from the map. 7. From the shoebox reload the annotation into the map and notice that there is a pointer added to the text box.
WG-7411	Metadata browser does not trim search text	If any leading or trailing white characters are in the Metadata Browser search box they are not ignored while filtering metadata. It is annoying becasuse when copy pasting field names we often paste addition space at the end. Additionally the space is not visible so a user may think that there are no results containing the expected text.

| WG-7409 | Aspect Map default output file name is wrong | The pattern for the default value of Output Aspect Name field is the following: <elevation_source_name>slope<timestamp>

It contains the slope keyword which was obviously copied from the Create Slope Map panel. The pattern needs to be fixed to include aspect keyword. <elevation_source_name>aspect<timestamp> |
|---|---|---|
| WG-7350 | Configuration Wizard not setting Pixel Server URL second time | The configuration wizard does not change the Pixel Server URL if it has already been set, i.e. if a value already exists in the registry. It should always update the URL if it is changed.

Need to make sure that all the values for which there is a registry setting can be overridden by the configuration wizard. |
| WG-7312 | Printing text annotations is broken in Firefox | PDF report created with Microsoft Print to PDF virtual printer does not look the same when it comes to text annotations. If the text annotation area has dark-colored background and light-colored font, the colors are removed in PDF result. The background becomes white and the font becomes black.

Steps to reproduce:

1. Display globaldem.jp2 as Image
2. Switch to Annotations panel
3. Pick one of Text Annotation modes
4. Edit Color field in Text style section to make the color of the font light (i.e. white)
5. Edit Fill field in Box section to make the background dark (i.e. dark grey)
6. Put some text in Text field
7. Place at least annotation with this style on the map
8. Open Printing/Report dialog
9. Use Ctrl+P keyboard shortcut to display browser's native printing dialog
10. Use Microsoft Print to PDF as the printer
11. Select a location for the output file.
12. Open the created PDF file and observe that the colors of text annotations are different from what they are supposed to be |
| WG-7297 | PixelServer drops connection during GetMetadata request | This issue has been noticed in context of a specific dataset.

PixelServer drops the connection during GetMetadata request. |
| WG-7293 | Subscription license expires too early | If the license is issued to a specific day, this day is excluded from the period and the license is not valid the last day. This is wrong if licenses is valid till: 06/27/2018 it should expire midnight 06/28/2018 |
| WG-7291 | While entering text in a text box of an annotation layer, typing hyphen would zoom out. | These steps reproduce this issue..

1. Display an image in the map area.
2. Get into the Annotation panel and click on the Text Box with a Pointer tool to activate it.
3. Make sure that the Text style color and the Outline color are black.
4. Change the Box Fill color to white.
5. Click in the map area to place the text box.
6. Click again on the Text Box with a Pointer tool to deactivate it.
7. Double click on the text box placed in the map area and hold the outline of the box and drag it such that it is resized.
8. Click inside the text box and try to type in "A1-A3".

Notice that while typing in "-" the image zooms in and cannot place the hyphen in the text box. |
| WG-7264 | Band selection for SIPS Multiple Band Image Chain reset to 1,1,1 | Display an image which defaults to SIPS Multiple Band Image ex. 11NOV10032522-M1BS-052681090020_01_P001.NTF.

Open image adjustments panel the band selection is correct 5,3,2. Click reset button next to the band selection label and all the bands will become 1,1,1. This is not correct. |
| WG-7212 | For expired subscription Admin Panel's Summary shows negative estimate | If subscription license is used and it expires, negative estimate is reported on the summary tab. |
| WG-7207 | Changing Admin account password changes the account role to User | If a user logs in as administrator (here it seems the issue manifests when the page is loaded reloaded instead of simple logout). Go to the user's tab and edit their own account. |

		Note that the field Role is disabled and is locked to User instead of Admin. This is wrong. Now if the admin checks Change password for this account, provide a new password and click Update. Everything looks to behave correctly but in reality the role of the admin has changed into User. Here is another issue because it shows the backend does not have any logic preventing client to change a role of the logged in admin. If the user clicks logout and try to log-in with the new password it is going to be welcomed with the message "Only Admins can view Admin Console" And this the admin lost access to the panel for good.
WG-7205	There is no logo and no background in PDF once a report is printed in Firefox	Creating a report in Firefox produces a different result than in Chrome. Report in Firefox does not seem to have a correct background and is poorly styled. Steps to reproduce: 1. Open M.App X in Firefox 2. Display an image 3. Zoom out so te image does not fill whole screen 4. Open reporting dialog 5. Click CTRL + P to create pdf report file
WG-7202	Stereo point measurement does not work	Steps to reproduce: 1. Display stereo pair image 2. Open measurements panel 3. Select point measurement tool 4. Click anywhere on the image
WG-7182	Chart to Chart Detection for NTF output type fails to display in the Viewer (if both Chart1 and Chart2 images are the same.)	Steps To Reproduce: (1) Select the Chart To Chart Change Detection Process Geoprocessing Panel (2) Chart 1 Filename: chart1-geo.img (3) Chart 2 Filename: chart1-geo.img (4) Threshold: 0.5 (default) (5) Run the Chart to Chart detection command for output file type NTF (6) An NTF output file is created (7) Try to display the image in the viewer. Observation: (8) Display of the image fails with the following warning dialog. And also you cannot dismiss this dialog. The only way is to reload the app once again. NOTE: Since both Chart1 and Chart2 are one and the same, the command should produce a blank image with zero detections. For the same set of steps above, Chart to Chart Detection works fine if the output type is defined as either IMG or TIF. The problem is only with NTF file format.
WG-7050	Terrain Shading Panel Has Duplicate Parameter Names	The new Terrain Shading geoprocessing panel has three parameters labelled Vertical Exaggeration. The first two should be: Ground Reflectance and Air Visibility. The tool tips and content in the JSON payload are correct.
WG-7035	Negative progress when running Image to Image Change Detection model	When running Image to Image change detection model in IMAGINE 16.0.1, the progress meter goes all the way to zero and restarts when writing the output file. This is causing a problem in MappX since negative progress meter is interpreted as if the service has failed. The negative progress meter does not occur when you run the model in IMAGINE 16.5 We need to investigate the change between 16.0.1 and 16.5. And provide a hotfix for MappX
WG-7033	"Use Model File" checkbox does not reset in Orthorectify Imagery process	"Use Model File" checkbox stays checked when reset button is clicked
WG-7008	Mosaic: Output Seam Polygon Filename Not Resetting	Output Seam Polygon Filename does not get reset to the default/initial value whenever the Reset button is clicked.

WG-6989	True Color Image Chain Fails after SIPS	1. Display 11NOV10032522-M1BS-052681090020_01_P001.NTF as image
		2. Open the Adjustments panel
		3. Select the True Color Image change
		   a. The image does not display
		   b. the Image chain still says SIPS Multi band
		This appears at least partially to be because DRA information is being sent to the server and Trus Color has no DRA information.

WG-6776	Extract terrain Reset does not reset MinZ or MaxZ	The MInZ and MaxZ fields in the Extract Terrain panel do not reset when the "Reset" button is used.
WG-6367	Remove Elevation Spikes has no reset method	The remove elevation spikes geoprocessing panel does not have a reset method so when a user selects reset on the panel the output file name is set to null
WG-6253	Terrain Thinning Default Output Filename Should include "Thinned"	The default output filename generated for the Terrain Thinning geoprocess does not follow the convention of including a processing related element in the name.
WG-6129	Emin/Emax and Histogram sticking	Steps to recreate: (1) Have the user preferences set so auto DRA is on (Either "Follow Auto DRA SIPS Setting" or "On"). (2) Display as Image any NITF file. (3) Bring up the Adjustments panel. Observe the emin/emax values. (4) Display 1:1. Note that the displayed emin/emax values are unchanged. Manually roam the image. Note that the values do not change though Automatic is checked. (5) In the Adjustments panel, show the histogram. Continue to manually roam the image. Note that the histogram is not changing, though Automatic is checked. (6) Now uncheck and recheck Automatic. Continue to manually roam the image. Note that the emin/emax values now change and the histogram changes. This is the correct behavior.
WG-6126	Extract Terrain should allow model files other than txt files.	Currently the Extract Terrain geoprocessing panel allows only txt as input formats for model filenames. There is no option to give rpb files. IM-42281 has been submitted to correct the model. Once the model has been fixed the UI in M.App X should also be fixed.
WG-6114	Measurement tool results reporting is inconsistent	For rectangle, it shows all of the measurements with labels, and ends with a line that says "Rectangle:" Circle seems to do the same. Items that report a single measurement (Point, line) have a label before the result that says "point:" or "line:". One of the measurements (perhaps circle) seems to put out a "dividing bar" that looks something like ::===========::. And there is no separation at all between the measurements in most cases, so it can be difficult to tell where one measurement stops and the next begins. The resolution to this is to make all multi-part results report consistently, and all single part results report consistently. And provide some sort of separator between each measurement result.
WG-5066	Use Transparency for Map default setting	When the default value is set to false in the user preferences file the resulting overlay image is surrounded by black pixels.

Deprecated

The Windows® Server 2012 R2 is no longer supported.

Contact Us

🌐 https://go.hexagongeospatial.com/contact-us-today

About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Geospatial division creates solutions that deliver a 5D smart digital reality with insight into what was, what is, what could be, what should be, and ultimately, what will be.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 4.3bn USD. Learn more at hexagon.com and follow us @HexagonAB.

Copyright

Product Documentation Terms of Use

Use Of This Document

Disclaimers

Limitation Of Liability

Indemnification

Use Of Software

Use of software described in this Document is subject to the terms of the end user license agreement that accompanies the software, if any. You may not download or install any software that is accompanied by or includes an end user license agreement unless you have read and accepted the terms of such license agreement. Any such software is the copyrighted work of Hexagon Geospatial, Intergraph or its licensors.

Links To Third Party Websites

This Document may provide links to third party websites for your convenience and information. Third party websites will be governed by their own terms and conditions. Hexagon Geospatial does not endorse companies or products to which it links.

Third party websites are owned and operated by independent parties over which Hexagon Geospatial has no control. Hexagon Geospatial shall not have any liability resulting from your use of the third party website. Any link you make to or from the third party website will be at your own risk and any information you share with the third party website will be subject to the terms of the third party website, including those relating to confidentiality, data privacy, and security.

Trademarks

The trademarks, logos and service marks ("Marks") displayed in this Document are the property of Hexagon Geospatial, Intergraph or other third parties. Users are not permitted to use Marks without the prior written consent of Hexagon Geospatial, Intergraph or the third party that owns the Mark. "Intergraph" is a registered trademark of Intergraph Corporation in the United States and in other countries. Other brands and product names are trademarks of their respective owners.

Find additional trademark information.

Procedure For Making Claims Of Copyright Infringement

Notifications of claimed copyright infringement should be sent to Hexagon Geospatial by mail at the following address: Intergraph Corporation, Attn: Intergraph Legal Department, P.O. Box 240000, Huntsville, Alabama 35824.

US Government Restricted Right

Materials are provided with "RESTRICTED RIGHTS." Use, duplication, or disclosure of Materials by the U.S. Government is subject to restrictions as set forth in FAR 52.227-14 and DFARS 252.227-7013 et seq. or successor provisions thereto. Use of Materials by the Government constitutes acknowledgement of Hexagon Geospatial or Intergraph's proprietary rights therein.

International Use

You may not use or export Materials in violation of U.S. export laws and regulations. Hexagon Geospatial makes no representation that Materials are appropriate or available for use in every country, and access to them from territories where their content is illegal is prohibited.

Hexagon Geospatial provides access to Hexagon Geospatial international data and, therefore, may contain references or cross references to Hexagon Geospatial products, programs and services that are not announced in your country. These references do not imply that Hexagon Geospatial intends to announce such products, programs or services in your country.

The Materials are subject to U.S. export control and economic sanctions laws and regulations and you agree to comply strictly with all such laws and regulations. In addition, you represent and warrant that you are not a national of, or otherwise located within, a country subject to U.S. economic sanctions (including without limitation Iran, Syria, Sudan, Cuba, and North Korea) and that you are not otherwise prohibited from receiving or accessing the Materials under U.S. export control and economic sanctions laws and regulations. Hexagon Geospatial makes no representation that the Materials are appropriate or available for use in every

country, and access to them from territories where their content is illegal is prohibited. All rights to use the Materials are granted on condition that such rights are forfeited if you fail to comply with the terms of this agreement.

Revisions

Hexagon Geospatial reserves the right to revise these Terms at any time. You are responsible for regularly reviewing these Terms. Your continued use of this Document after the effective date of such changes constitutes your acceptance of and agreement to such changes.

Applicable Law

This Document is created and controlled by Hexagon Geospatial in the State of Alabama. As such, the laws of the State of Alabama will govern these Terms, without giving effect to any principles of conflicts of law. You hereby irrevocably and unconditionally consent to submit to the exclusive jurisdiction of the United States District Court for the Northern District of Alabama, Northeastern Division, or the Circuit Court for Madison County, Alabama for any litigation arising out of or relating to use of this Document (and agree not to commence any litigation relating thereto except in such courts), waive any objection to the laying of venue of any such litigation in such Courts and agree not to plead or claim in any such Courts that such litigation brought therein has been brought in an inconvenient forum. Some jurisdictions do not allow the exclusions or limitations set forth in these Terms. Such exclusions or limitations shall apply in all jurisdictions to the maximum extent allowed by applicable law.

Questions

Contact us with any questions regarding these Terms.