Release Guide

GeoMedia Desktop 2020 Update 4

Version 16.6 Update 4
6 January 2022

Contents

About This Release

This document describes the enhancements, fixes, and system requirements for GeoMedia. 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 the details about the product's capabilities. See the online help and other documents provided with GeoMedia for more information.

GeoMedia Product Tiers

GeoMedia® is a flexible and dynamic GIS package for creating, updating, managing and analyzing your valuable geospatial information. Generate and update vector layers. Perform dynamic spatial analysis and generate reports. Automatically create and update maps. Manage data and map production more efficiently. GeoMedia is available in three product tiers, Essentials, Advantage, and Professional.

GeoMedia Essentials enables you to query and analyse a wide variety of geospatial data sources. It also includes ERDAS IMAGINE Essentials, giving you the ability to do simple image preparation.

GeoMedia Advantage has all the functionality of GeoMedia Essentials and is excellent for data collection and editing, processing and analyzing elevation and terrain data including LiDAR. It also includes data validation and sophisticated raster analysis tools.

GeoMedia Professional includes all of the features of the previous tiers and provides enterprise-wide, multi-user data management and analysis. Manage linear networks, produce professional cartographic maps, conduct advanced feature editing, manage parcel holdings, conduct utility network analysis, monitor and control changes, integrate data from multiple sources, and assure overall data quality with GeoMedia Professional.

New Platforms (16.6)

Oracle
Oracle 18c is now supported.

SQL Server
SQL Server 2017 is now supported.

PostGIS
PostGIS 2.5 / PostgreSQL 11 is now supported.

New Platforms (16.6 Update 1)

Oracle

Oracle 19c is now supported.

PostGIS

PostGIS 3.0 / PostgreSQL 12.1 is now supported.

New Platforms (16.6 Update 2)

SQL Server

SQL Server 2019 is now supported.

New Platforms (16.6 Update 3)

G/Technology

The unified auditing capability of Oracle is now supported by the G/Technology data server.

Impacts (16.5 Update 1)

Data Access

Oracle Data Server

As indicated in the New Technology section for 16.5 Update 1, this data server now supports the Unified Auditing capability when enabled with Oracle 12c. This is an impact only for the following cases:

1. Customers using Oracle 12c or later with existing modification log triggers and wish to enable Unified Auditing.

2. Customers who have custom triggers installed that populate the SESSIONID field of the ModificationLog using the Oracle value USERENV('SESSIONID') and want to enable Unified Auditing.

If either of the above is true, then existing triggers must be dropped and recreated. The normal ModificationLog triggers can be created in the regular manner using Database Utilities, available from the Start menu.

Customers who have secured features with existing modification log triggers can be updated using the new PL/SQL procedure UpdateLTTModLogTriggers added to the GTM Package. Secured feature triggers can also be updated by using Transaction Administrator to unsecure the feature, recreate triggers using Database Utilities, then re-securing the feature with Transaction Administrator. However, the latter method will delete any existing LTT history information. See the GeoMedia Help topic on Triggers, under Using Oracle Connections, for additional information.

Map Display

Bing Maps Command

As indicated in the New Technology section for 16.5 Update 1, this command has been upgraded for compatibility with Bing Maps V8. The V8 version of the Bing Maps API no longer informs the embedding application (GeoMedia) when the Bing Maps credentials are invalid or expired, so GeoMedia is unaware.

Instead the end user is directly informed through a banner displayed across the middle of the map display which interferes with the usability of the map and offers instructions for how to get a valid key.

In order to allow the user to submit a new valid key and eliminate the banner, a new button is provided in the Bing Maps window that invokes the Bing Maps Credentials dialog.

Impacts (16.5 Update 2)

Data Access

WFS-T Data Server

The previous WFS Read-Write data server has been deprecated and replaced. Existing warehouse connections to that prior data server continue to function within a GeoWorkspace, but it is not possible to create new connections using that data server. Also, the Warehouse Connections command indicates that the "Type" of this data server is now "WFS Read-Write (deprecated)" in order to differentiate between it and the new data server replacing it.

Through API, this previous data server will continue to function using its previous ProgID. The new data server has a new ProgID of WFS2RW.GDatabase.

The previous WFS Read-Write data server that supports the WFS-T specification is unchanged.

Impacts (16.6)

Visual Studio 2017

GeoMedia has been upgraded to Visual Studio 2017. Application software based on GeoMedia objects must be rebuilt for compatibility with GeoMedia Desktop.

- The managed components of GeoMedia are built against the 4.7.2 .NET Framework. As a result, the components that are built on top of them are required to update their C#, VB.net and managed VC++ components to target the .NET Framework 4.7.2 or higher and then be rebuilt. If this is not completed, managed content will not be found due to incompatible frameworks.
- The VC++ components of GeoMedia are built against the Microsoft VC++ 141 runtime components. As a result, the components built on top of them may be required to be updated to the same runtimes and then be rebuilt.

Warehouse Connection Renaming

The Properties dialog of the Warehouse Connections command now allows the connection name to be changed. Although an important new capability, it can have significant consequences to other parts of the GeoMedia system:

- GeoMedia users should be aware that there may be existing references to the prior connection name in locations outside the GeoWorkspace. Examples are XML configuration files and libraries. The change in the connection name must be reflected in these external locations as well.
- GeoMedia application developers note that any storage of a connection name should be corrected when it is renamed. Examples are extended properties in GeoWorkspace objects, and tables in warehouses. A new Change event on the Connection object can be used to listen and react to a connection name change.

The Connection object now allows the connection name to be changed without first closing the connection. Any application, depending on a close/reopen sequence to detect a name change, should listen to the new Change event on the Connection object.

Impacts (Future)

Feature Caching

PublishIFC Utility

Since the introduction of PublishIFC.exe utility and its companion DataSourceMonikerCreator.exe, IFC publishing has been supported through two avenues – data servers and feature accessors. In the future, the feature accessor mechanism will be deprecated, and only data servers supported. It is recommended even with GeoMedia 16.5 that all publishing of IFC files be done via data servers.

Data Access

Export to SQL Server Command

SQL Server 2008 is no longer supported by Microsoft or GeoMedia. In the future, the option on the Export to SQL Server command to export to SQL Server 2008 will be deprecated. Likewise, the corresponding capability in the ExportToSQLServerService object will no longer be supported.

Application Development

Command Wizard

The current command wizard, which is implemented as an add-in compatible with older versions of Visual Studio, will be deprecated in a future major release. A new command wizard, which is implemented as an extension compatible with Visual Studio 2017 and higher, is now provided.

New Technology (16.5 Update 1)

Coordinate Systems

Geodetic Datums

Support for the Earth Gravitational Model (EGM2008) vertical datum is now provided. Use of this datum requires the presence of the *egm2008ww1mgh.bin* grid shift file in the ..\Config\NGSbin folder. This file is used to transform between coordinate systems when one system is defined using the Earth Gravitational Model (EGM2008) vertical datum and the other is defined using the Ellipsoid (geometric) vertical datum. Check for the availability of this file on the Hexagon Geospatial download site.
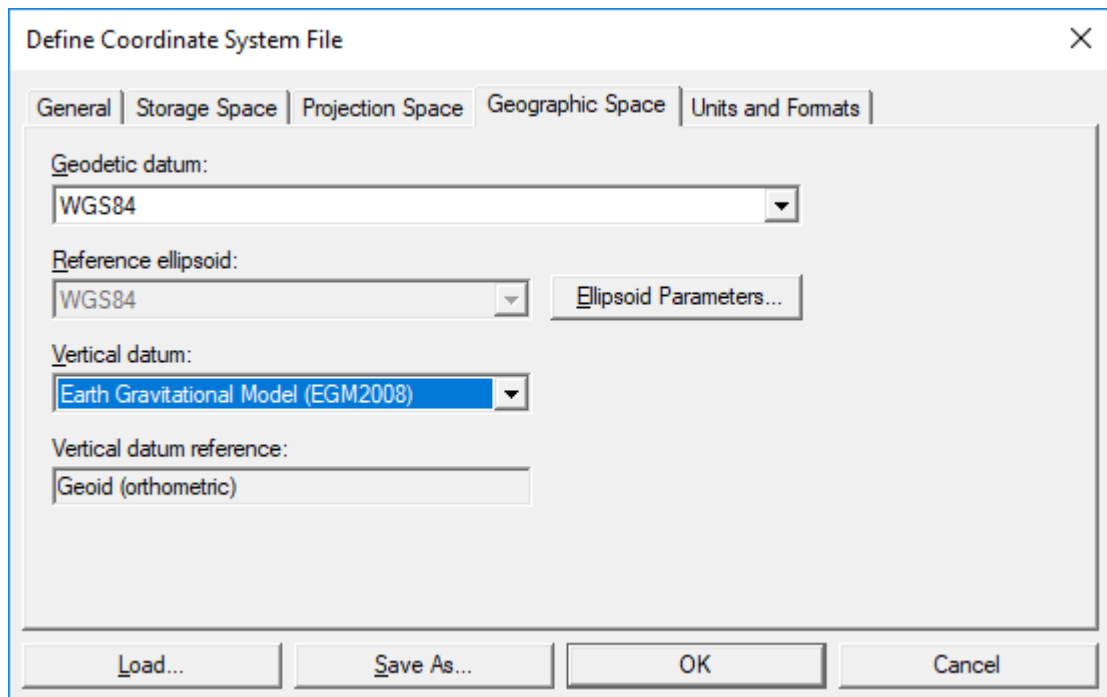
Data Access

Oracle Data Server

This data server now supports the Unified Auditing capability when enabled with Oracle 12c. When in this configuration, different logic is used to generate the "SESSIONID" values used in modification logging.

Customers with existing modification log triggers in their Oracle databases who turn on Unified Auditing in Oracle may need to take additional steps to enable this for GeoMedia. For more information see the Impacts section for version 16.5 Update 1.

GeoPackage Data Server

This data server can now be used with the following parts of the GeoMedia Desktop:

- Grid
- Labeling (for output of static labels)
- Libraries

The data server now supports optional creation of point and compound geometry fields without the GeoMedia-specific companion fields used to store GDO geometries that retain point orientation. This configuration improves the sharing of data between GeoMedia and other software (such as Mobile

MapWorks) that also operate on GeoPackage databases. However, in this scenario the orientation of points is lost because GeoPackage does not have a way to retain this value in its geometry. The option is enabled by the addition of an entry in the GParameters table – a parameter with the name "NATIVE", of type String, with the value "True". A new GeoPackage template warehouse "GeoPackageNativeGeometryFieldsTemplate.gpkg" is preconfigured with this setting and is provided for use with the New Warehouse command. Note that area and line geometry fields never have this companion field, and graphic text and coverage geometry fields always have this companion field since there is no provision for such data types in GeoPackage.

Feature Caching

Improved Performance

A variety of performance-related enhancements have been made for the feature caching system including:

- Capture of index statistics while publishing cache files and use of those statistics to optimize queries against a cache by selecting the proper means to filter the data. IFC files must be re-published in order to gain this benefit, but the time required to publish is not increased.
- Avoidance of redundant scans through the data when responding to attribute filters.
- Smarter decisions about when to traverse the entire cache sequentially versus traversing it page by page (especially important for network-resident cache files).
- Automatic rebalancing of indexes when bulk updates cause them to become unbalanced and therefore slower to traverse.

Advanced Feature Model

New Rule Classes

Two new expression-based rule classes are now provided. The "Feature Expression" rule class can be applied to a Feature Class:
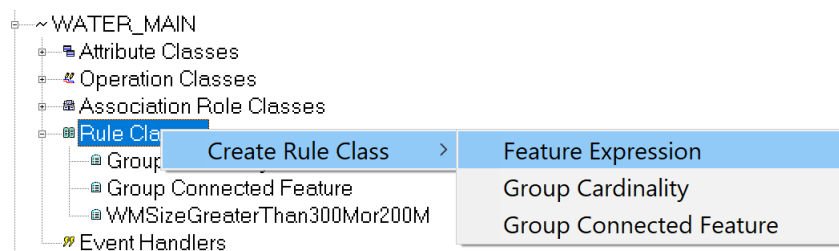
The "Association Expression" rule class can be applied to an Association Role Class:
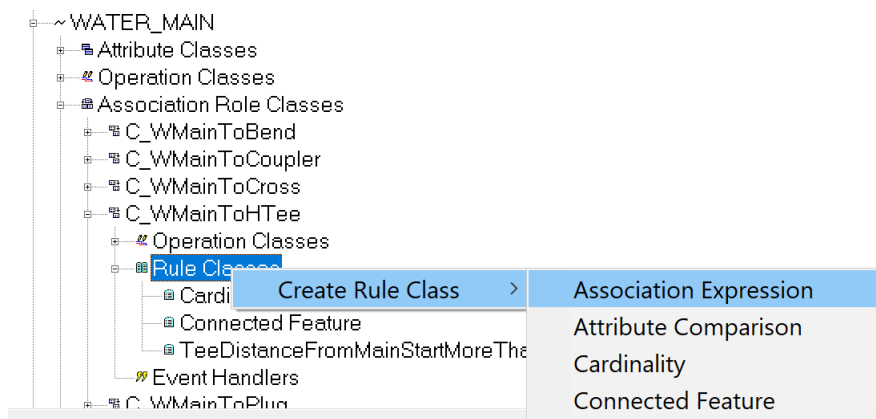
Any expression of the type used with functional attributes, functional styles, and functional tooltips may be used now to generate functional rules for these two rule classes. The expression for any such rule must evaluate to a Boolean (true or false) value, with true indicating that the feature or association is valid, and false indicating that it is invalid.
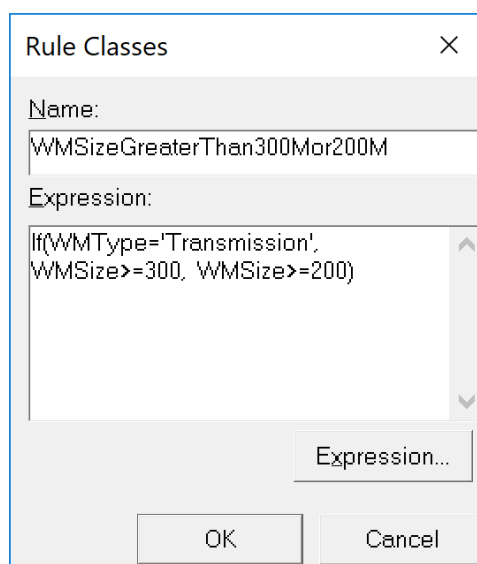
Any number of such rules may be applied, for validating features and their associations.

Framework

Open GeoWorkspace

When an attempt is made to open a GeoWorkspace that is already open, an improved message is provided for the case of a GeoWorkspace being accessed over the network.

Data Capture

Merge Features

This command now merges secondary geometry fields (of type other than graphic text) rather than choosing the "first" value from such fields.
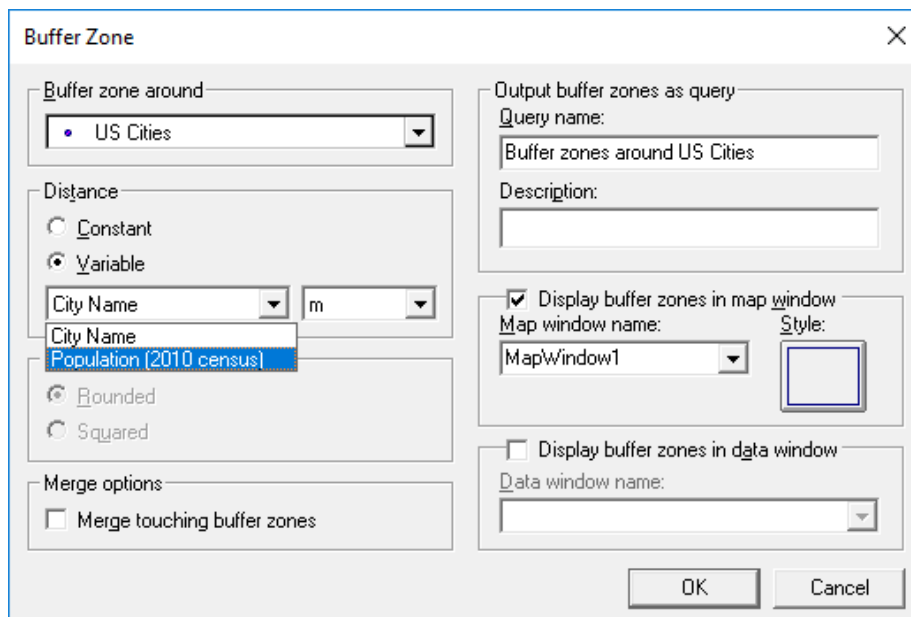
Customization of Data Capture

Most data capture commands in the GeoMedia Professional tier invoke an operation that permits customization by an application developer. When working with an AFM warehouse, event handlers assigned to each operation are fired when the command does its processing. With version 16.5, this was true only for commands that operate on a single originating recordset. Beginning with version 16.5 Update 1, commands such as Merge Features, that can operate on multiple originating recordsets, also fire the event handlers associated with their operations for the feature class that contributes the identity of the recordset. This permits customization of these types of operations.

Analysis

Buffer Zone

This command now supports attribute aliases when selecting attributes for variable-distance buffering.

Libraries

New Library Connection Command

This command now supports connection to GeoPackage libraries.
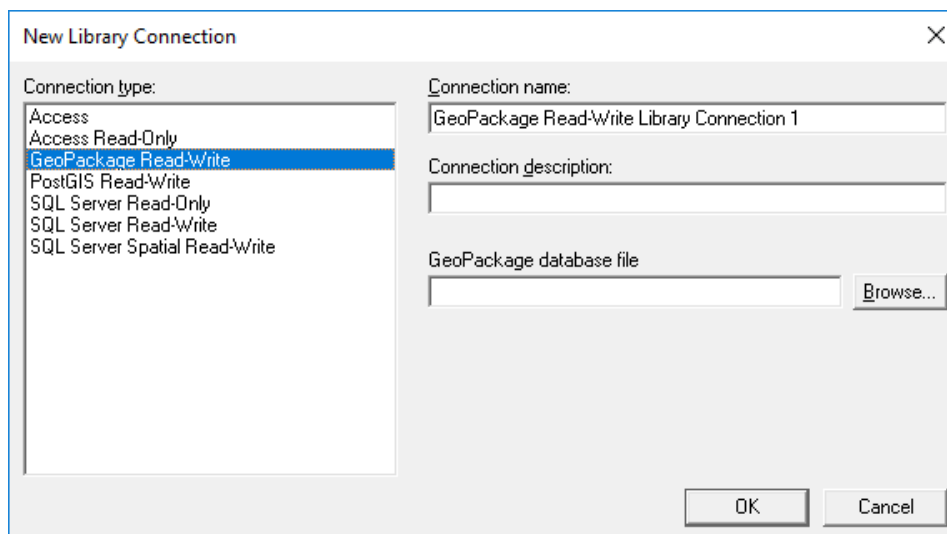
New Library Command

This command now supports creation of GeoPackage libraries. An empty template library is included.
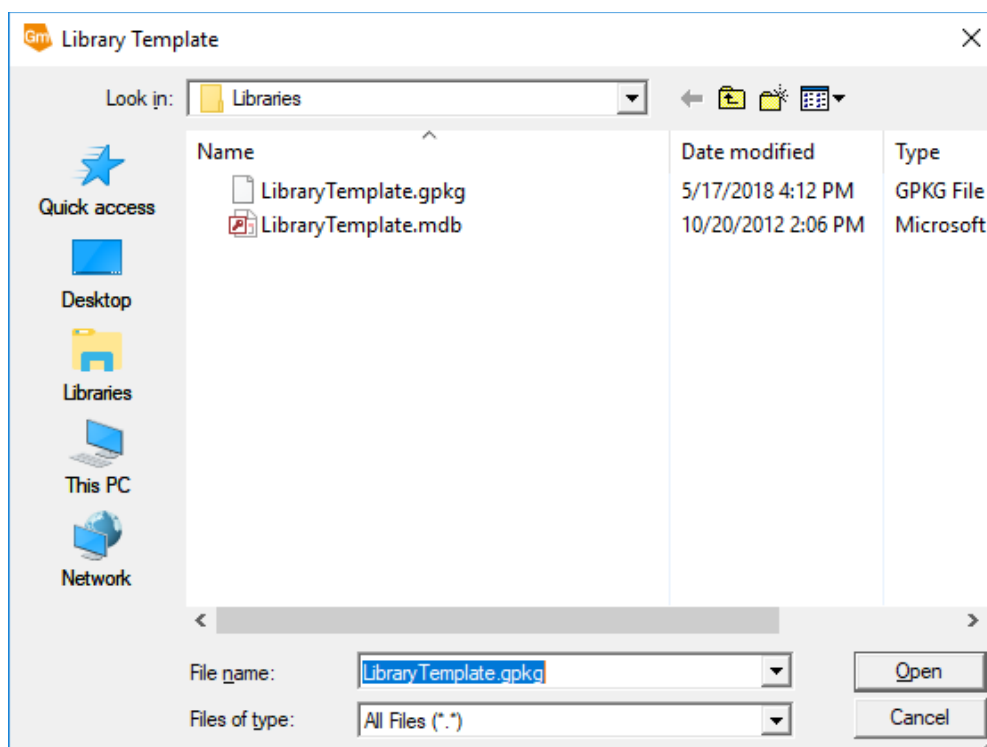
Library Organizer Command

This command now supports the copy of GeoWorkspace objects in and out of GeoPackage libraries.

Map Display

Raster Display

Raster files with a tile size up to 2048 are now supported.

Bing Maps Command

This command has been upgraded for compatibility with Bing Maps V8.

There is also a new button in the window that permits direct opening of the Bing Maps Credentials dialog, so that a new key can be provided at any time.

For information on a behavioral change in Bing Maps display, see Impacts section for version 16.5 Update 1.

New Technology (16.5 Update 2)

General

Installation and Configuration

On the Configuration Wizard, the software no longer displays messages about installation of ERDAS IMAGINE help, and no longer requires that the user wait for that help installation to complete before the product can be used. Instead, help for Spatial Modeler is installed silently through a background process. The Configuration Wizard is completed smoothly and quickly, so the product can be used immediately.

About Command

This command can now be directly accessed from the ribbon. A new "i" icon can be found to the left of the existing "?" icon at the rightmost edge of the ribbon tab bar. This command opens the About dialog for the GeoMedia Desktop and GeoMedia Viewer only. About commands for add-on products must still be accessed through the Application ribbon bar.

In addition, the About command now presents the name of the licensee, as well as the version number, in larger text. Use of a non-production license is also clearly communicated.

Coordinate Systems

Vertical Transformations

Transformation of height values between ellipsoid-based height and height referencing the Australian Height Datum using the AusGeoid2020 geoid model is now supported, using the NTv2 binary grid published by Geoscience Australia and available for download from their website.

Data Access

GeoPackage Data Server

This data server now optimizes output of collections to employ more precisely-typed WKB collections. Instead of producing GeometryCollection in all cases, it now produces:

- MultiPoint in case of geometry collections for point fields and graphic text fields
- MultiCurve in case of geometry collections for line fields
- MultiSurface in case of geometry collections for area fields
- MultiPolygon in case of geometry collections for coverage fields
- GeometryCollection in case of geometry collections for compound fields

This improvement also addresses an interoperability limitation of QGIS, which does not support the WKB GeometryCollection.

PostGIS Data Server

This data server now optimizes output of collections to employ more precisely-typed WKB collections. Instead of producing GeometryCollection in all cases, it now produces:

- MultiPoint in case of geometry collections for point fields and graphic text fields
- MultiCurve in case of geometry collections for line fields
- MultiSurface in case of geometry collections for area fields
- MultiPolygon in case of geometry collections for coverage fields
- GeometryCollection in case of geometry collections for compound fields

This improvement also addresses an interoperability limitation of QGIS, which does not support the WKB GeometryCollection.

This data server now supports full read and write operations on PostGIS native geometry fields that have no companion GDO geometry field as established through Database Utilities. This is true for area and line geometry fields by default and is an option for point and compound fields. If you choose this option, point orientation is lost because native PostGIS geometry does not support orientation for points. This choice is not available for graphic text or coverage fields as there is not native PostGIS geometry support for these.

This data server also now supports use of schemas other than "public". Special treatment of the "public" schema continues to be provided because it is the default and most common configuration.

Database Utilities

When inserting or editing feature class metadata for a PostGIS warehouse, the user interface has been altered to reflect the ability of the PostGIS data server to not require a companion GDO geometry field for point and compound fields, and not allow a companion GDO geometry field for area and line fields. If you choose not to designate such a field for point and compound, then point orientation will be lost since native PostGIS geometry does not support orientation for points.

Support for PostGIS in this utility now includes presentation of materialized views as valid feature classes.

WFS-T Data Server

A new read-write WFS-T data server has been introduced with GeoMedia version 16.5, replacing the previous WFS Read-Write data server. It supports data conforming to the transactional OGC Web Feature Service (WFS-T) specification.
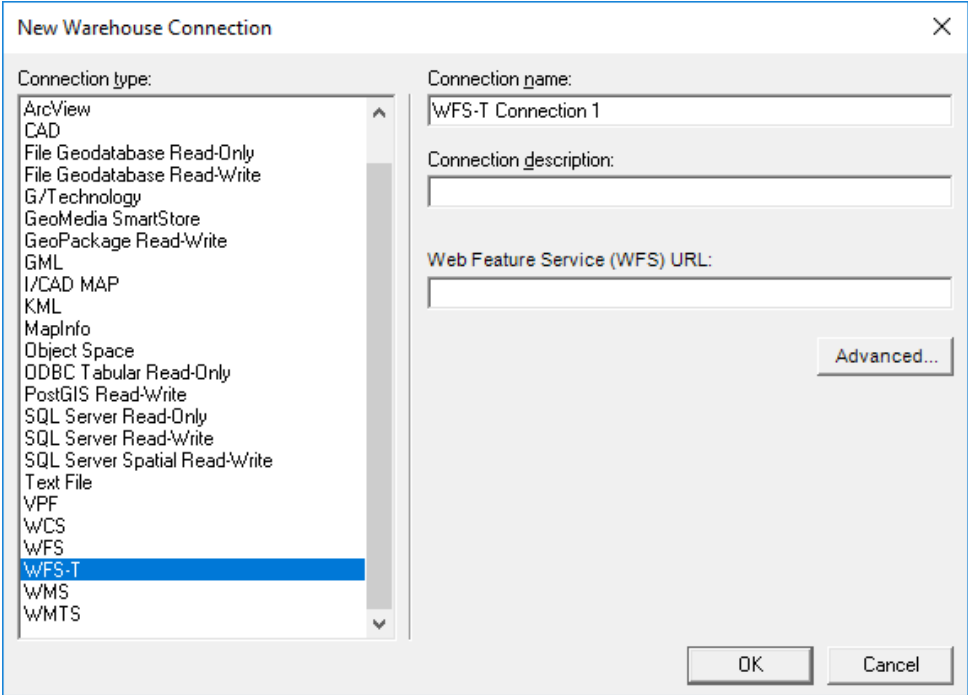
Several new connection options are provided on the Advanced button.
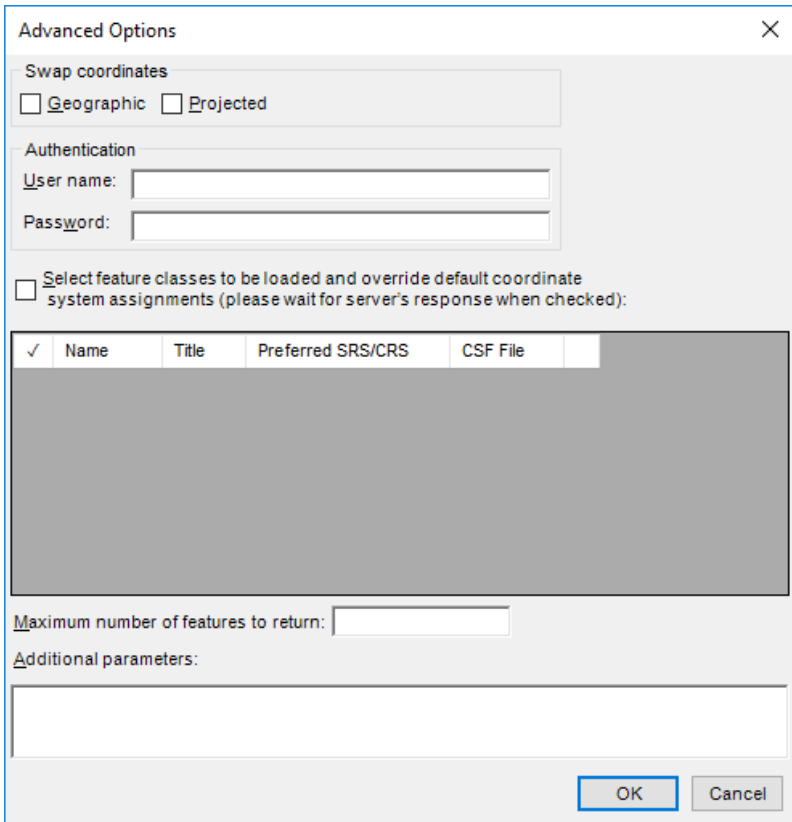
Key features of this new WFS-T data server:

- It provides the same advanced GML parsing and translation logic as the GML and WFS data servers, for extensive compatibility with different WFS services.
- It includes a new connection dialog for setting the coordinate systems associated with feature classes, so INI files and the NOCSFFOUND connection option of the previous WFS Read-Write data server (corresponding to the "If no matching coordinate system is found for a feature class" group of the "Advanced Options" dialog) are no longer necessary.
- The user can select which feature classes are visible in GeoMedia. This is useful when only certain classes are needed from a WFS-T service, and it results in shorter connection times. This also can be used to filter incorrectly defined feature classes that could cause errors in operation.
- HTTP request timeout can be increased for slower internet connections or for older WFS-T services not supporting paging operations for transferring data.
- A feature locking strategy was implemented for WFS-T servers that do not allow editing and deleting features without prior locking. If a normal update or delete transaction fails for a particular feature class, the data server will attempt first to lock the feature using the LockFeature operation or the GetFeatureWithLock operation. If one of the locking operations succeeds for that feature class, it is memorized during the session so that all following transactions can employ the same strategy.

Define Warehouse Configuration File Utility

This utility no longer allows users to define or edit INI files for the WFS Read-Write data server. The new WFS-T data server offers the convenience of connection parameters provided exclusively within the connection syntax, with no external file required.

Layout

Layout Legend

When working with a dynamic map in the layout window, additional kinds of changes in the map window legend are now reflected in the layout window legend:

- Hiding a map window legend entry now causes the layout window legend entry to be removed and repositions the legend entries below.
- Editing of the map window legend entry title now causes the title to be changed in the layout window. No adjustments are made in the positioning of the legend entries.

Spatial Modeling

New Operators

New operators have been introduced for performing geoprocessing on feature data, that are equivalent to certain GeoMedia capabilities. These are found in the Feature Analysis and Geometry Creation operator categories, and include:

- Summarize Related Features operator, analogous to the Aggregation command and corresponding pipe.
- Join Features operator, analogous to the Join command and corresponding pipe.
- Union Features operator, analogous to the Union command and corresponding pipe.
- Create Buffer Zone and Create Buffer Ring operators, providing efficient access to these capabilities also provided through the Generate Functional Attributes operator. Create Buffer Zone will eventually replace the prior Buffer Zones operator.

New Technology (16.5 Update 4)

Data Access

Oracle Data Server

The log file output by this component now includes a timestamp for each log entry.

Layout

Insert Cartographic Grid

The "Relative to tick" advanced option for placement of edge labels is now available when the edge label orientation is set to "Rotated with ticks."

Similarly, the "Relative to grid line" advanced option for placement of edge labels is now available when the edge label orientation is set to "Rotated with grid lines."

New Technology (16.5 Update 5)

Labeling

Insert Label command

When using the "Orient to geometry" placement technique, this command now orients the output label to the geometry in the context of the display CRS rather than the storage CRS. This means that for query output, a change in the CRS of the GeoWorkspace, with consequent transformation of the feature being labeled, causes a change in the orientation of the label to match the transformed feature. For feature class output, the CRS of the labels remains fixed. To alter an existing label query to have this behaviour, invoke the Queries command, invoke the Properties dialog for the Label query, and click OK.

New Technology (16.6)

General

Licensing

A new product license is required for the 2020 release. The latest Geospatial License Administration tool should be downloaded and used for this release.

Start Menu

The prefix "Hexagon" has been removed from the product name on the Start menu as well as the Windows product uninstall facilities available from Settings and the Control Panel. This provides consistency with other Hexagon Geospatial products, as well as improved ease in finding the product by its familiar name in these product lists.

Ribbon

The tooltip for commands on the ribbon bar now remains visible for up to 30 seconds, in order to allow ample time to read sometimes-lengthy tooltips. The tooltip still disappears when the mouse is moved off of the command.

Explorer Window

The treeview now reflects any GeoWorkspace changes and is updated dynamically with added, removed, and renamed categories, categorized items, and queries, including retention of proper sort order. It also reflects all Connection changes and is updated dynamically with any change in warehouse connection name.

Refresh All no longer collapses the tree, now it refreshes tree contents while remaining expanded, and retaining selected items.

An "Attached Data" branch is now introduced. Raster files that are dropped into the GeoWorkspace are presented here (for more information see the Drag-and-drop section below). The groups of images represented there may be added to a map window, or displayed in a data window, via the right-click context menu. More functionality for attached data will be provided in future releases.

Queryfolder Events

Within the GeoMedia object model, the Document object is parent to a QueryFolder object that in turn is parent to a large hierarchy of query folders and queries within the GeoWorkspace. This top-level QueryFolder object now fires events that allow a listener to be kept aware of additions, removals, and changes occurring in query folders and queries. Both "before" and "after" events are fired for each addition, removal, or change, which allows the application to intercept and deny any such activity if needed.

Categories Command

This command now allows for categorization of spatial model results, by displaying them on the Add Features dialog. Apart from its general value, this may specifically be useful if you want to use spatial model results in commands that do not yet support them directly but do support categories.
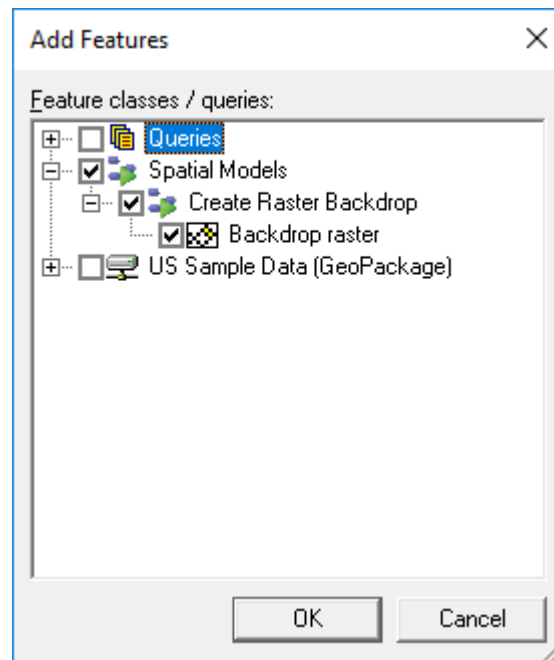
Drag-and-drop

Drag-and-drop capability within GeoMedia has now been extended to dragging raster files and warehouse files from File Explorer and dropping them into either a map window or the Explorer window.

Raster files are attached to the GeoWorkspace and appear under "Attached Data" in the Explorer window. They do not require a read-write warehouse connection. All raster file types supported by the Insert Georeferenced Images command are supported for drag-and-drop, and they are automatically georeferenced.

Warehouse files are made into warehouse connections and appear under "Warehouse Connections" in the Explorer window. The following file-based warehouse types are supported for drag-and-drop: GeoPackage, Access, File Geodatabase, Shapefile, GeoMedia SmartStore, KML, and Excel.

If dropped into the Explorer window, only the attachments/connections are made. If dropped into a map window, the data is additionally displayed.

Coordinate Systems
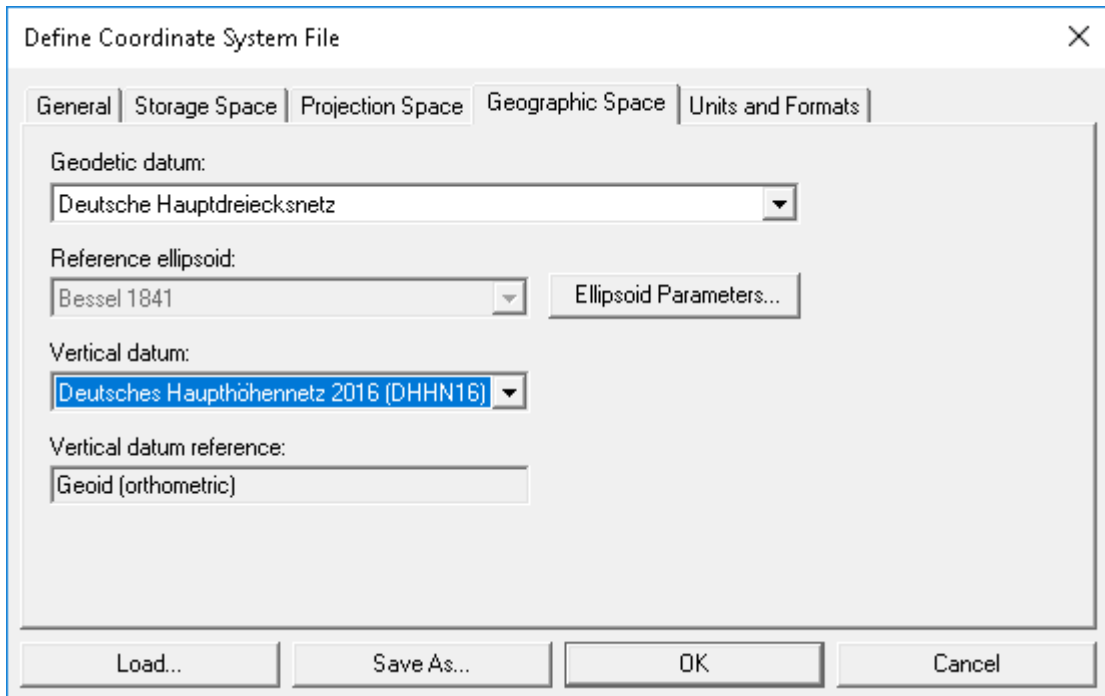
EPSG Codes

Coordinate Reference System (CRS) code support has now been updated from version 9.0 to version 9.7 of the EPSG Geodesy Dataset. Support has been added for 373 new EPSG codes.

Vertical Datums and Transformations

The NGSGEOID and NGSUSGG folders have had the *area.ini* files updated to reflect the more recent 2012B geoid transformation grid files. The binary grid files that they refer to must be obtained from the NGS website.

Support for a new vertical datum, DHHN2016 (Deutsches Haupthöhennetz), has been added.

Data Access

Excel data server

This new data server provides access to tabular, nongraphic data stored in Excel spreadsheets (XLSX, XLS) and structured text files (CSV, TXT). Each text file is served as a warehouse connection with a single feature class, while each spreadsheet is served with feature classes for each sheet and each named range. The feature classes are read-only and have no primary key.

SQL Server Spatial data server

This data server now supports SQL Server databases configured with only TLS 1.2 through use of the new Microsoft MSOLEDBSQL provider when installed on the system by the customer. If not installed, the data server continues to use the previous-generation Microsoft SQLOLEDB provider present on the operating system automatically.

This data server also now supports full read _and_ write operations on SQL Server Spatial native geometry fields that have no companion GDO geometry field as established through Database Utilities. This is true for area and line geometry fields by default and is an option for point and compound fields. If you choose this option, then point orientation will be lost because native SQL Server geometry does not support orientation for points. This choice is not available for graphic text or coverage fields because there is no native SQL Server geometry support for these.

This data server also now supports basic operations on SQL Server Spatial warehouses that lack GeoMedia metadata. As with Oracle, PostGIS, and GeoPackage, such connections are read-only, lack coordinate reference system definitions for geometry fields, and lack GeoMedia metadata that influences presentation of data.

SQL Server data server

This data server now supports SQL Server databases configured with only TLS 1.2 through use of the new Microsoft MSOLEDBSQL provider, when installed on the system by the customer. If not installed, the data server continues to use the previous-generation Microsoft SQLOLEDB provider present automatically on the operating system.

Warehouse Connections command

The Properties dialog of this command now allows the connection name to be changed.

When either the name is changed (new capability) or the description is changed (previous capability), the connection is not closed and reopened.

Connection object

The Connection object now allows the connection name to be changed without first closing the connection.

The Connection object now fires before and after Change events that allow application software to introduce custom behavior when a warehouse connection undergoes a change in its name or description.

Database Utilities

When inserting or editing feature class metadata for a SQL Server Spatial warehouse, the user interface has been enhanced to reflect the ability of the SQL Server Spatial data server to no longer require a companion GDO geometry field for point and compound fields; and to not allow a companion GDO geometry field for area and line fields. Not designating a field for point and compound will result in the loss of point orientation because native SQL Server geometry does not support orientation for points.

When inserting or editing feature class metadata for an Oracle warehouse, the default geometry type for each geometry field is automatically populated; manual intervention to set the geometry type is no longer required in most cases. In addition, some MDSYS metadata is populated for each feature class, if missing.

When inserting or editing feature class metadata for a SQL Server warehouse, the default geometry type for each geometry field is automatically populated; manual intervention to set the geometry type is no longer required in most cases. In addition, the SRID for each feature class is populated, if missing.

When inserting or editing feature class metadata for a PostGIS warehouse, the default geometry type for each geometry field is automatically populated; manual intervention to set the geometry type is no longer required in most cases.

When inserting or editing feature class metadata for a GeoPackage warehouse, the default geometry type for each geometry field is automatically populated; manual intervention to set the geometry type is no longer required in most cases.

Map Display

Legend View Control

The "Display Data Window" action is now available on the right-click context menu for top-level thematic legend entries, in addition to the per-class legend entries.
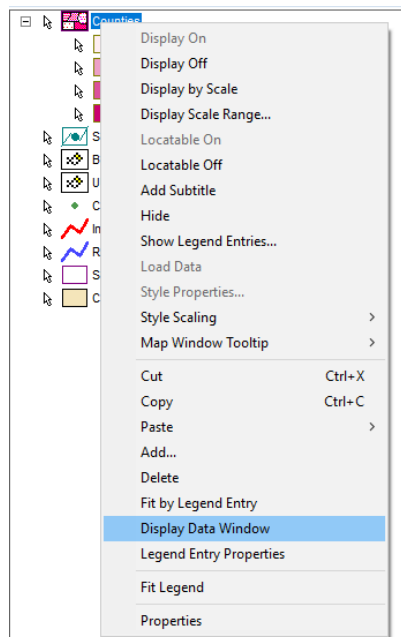
Legend Entry Properties Dialog

For an Area Style, the Boundary frame on the dialog now contains a checkbox for directly turning on/off the entire boundary itself, similar to the checkboxes for the Fill frame and the Point frame.
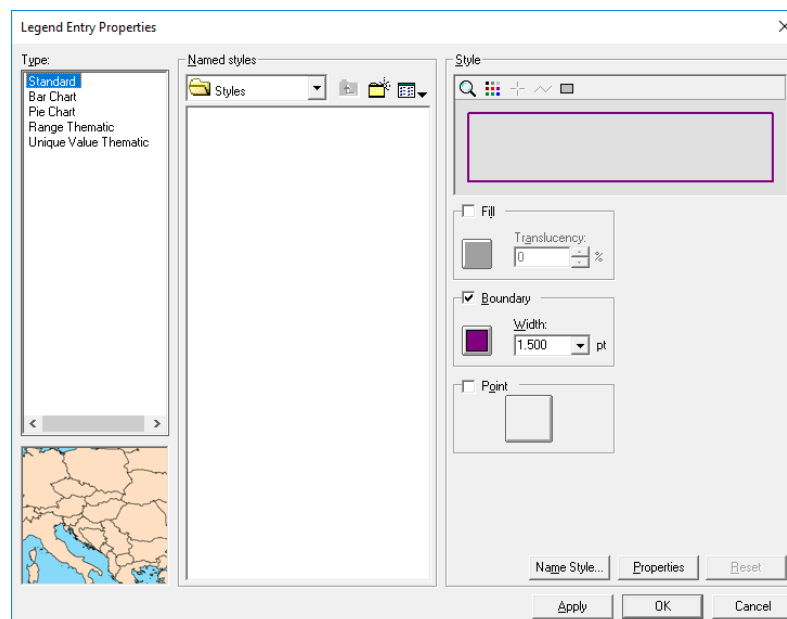
For a Compound Style, the Boundary/Line frame and Point frame on the dialog now contain checkboxes for directly turning on/off the linear and point styles themselves, similar to the checkbox for Fill frame.
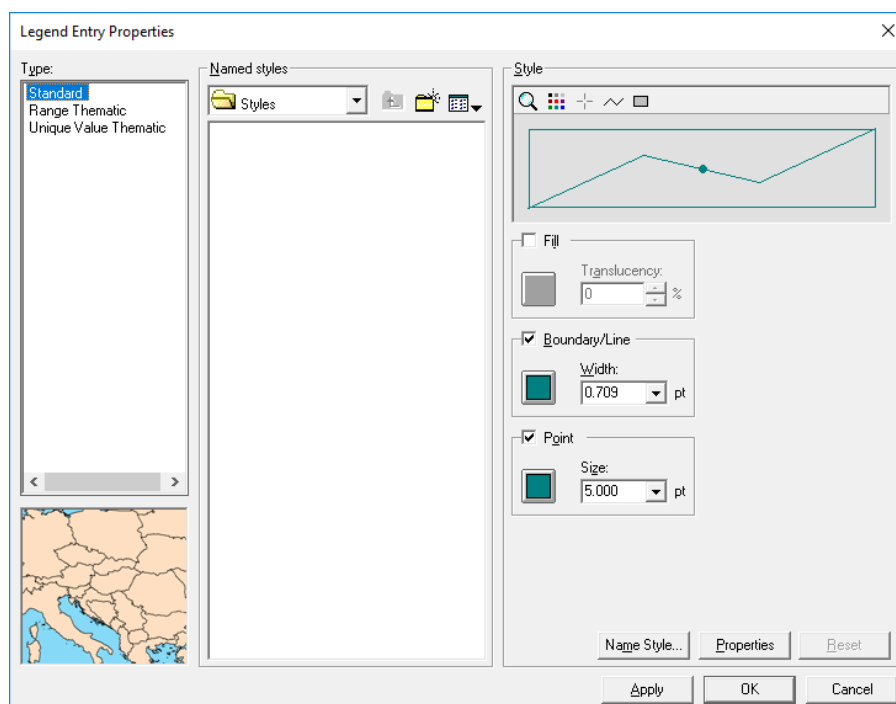
For an Image Style, a set of controls for color band assignment has been implemented, allowing selection of which bands from a multi-band image should be assigned to red, green, and blue display.
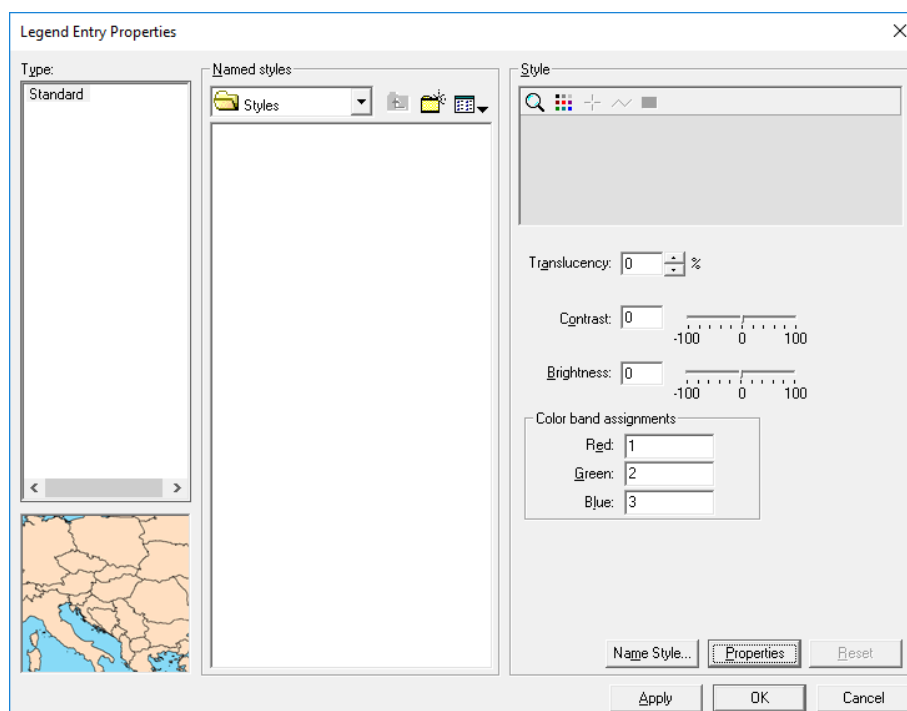
Style Properties Dialog

For an Image Style, a set of controls for color band assignment has been implemented, allowing selection of which bands from a multi-band image are to be assigned to red, green, and blue display.
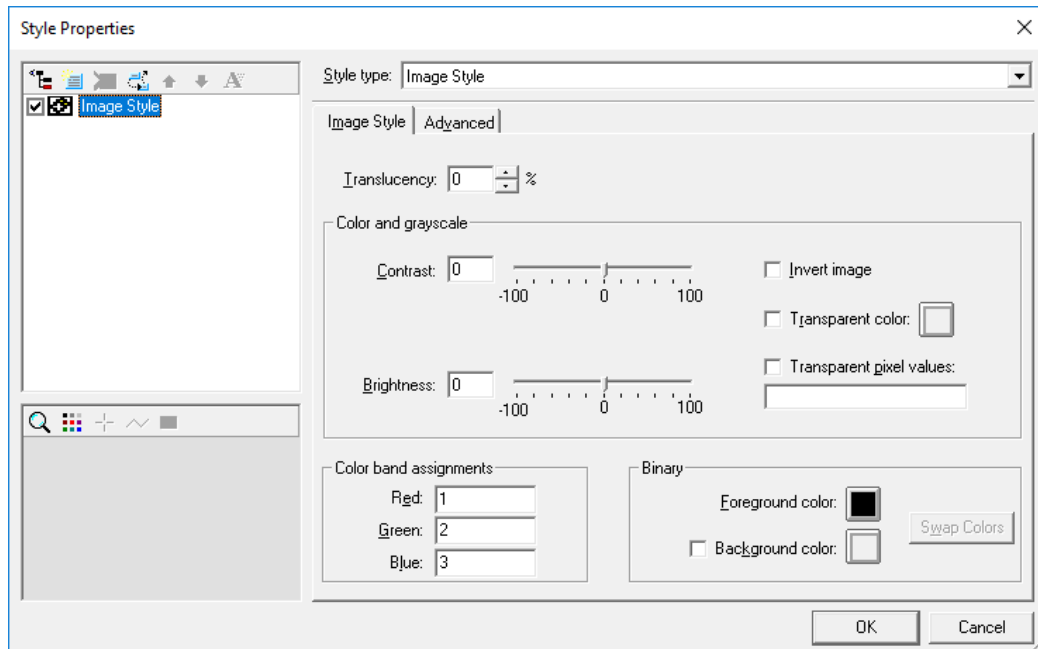
On the Advanced tab, the new style property BandAssignments is available, taking as input a comma-delimited string indicating band numbers to be assigned to Red, Green, and Blue in that order. This style property may be assigned an expression for attribute-based symbology.
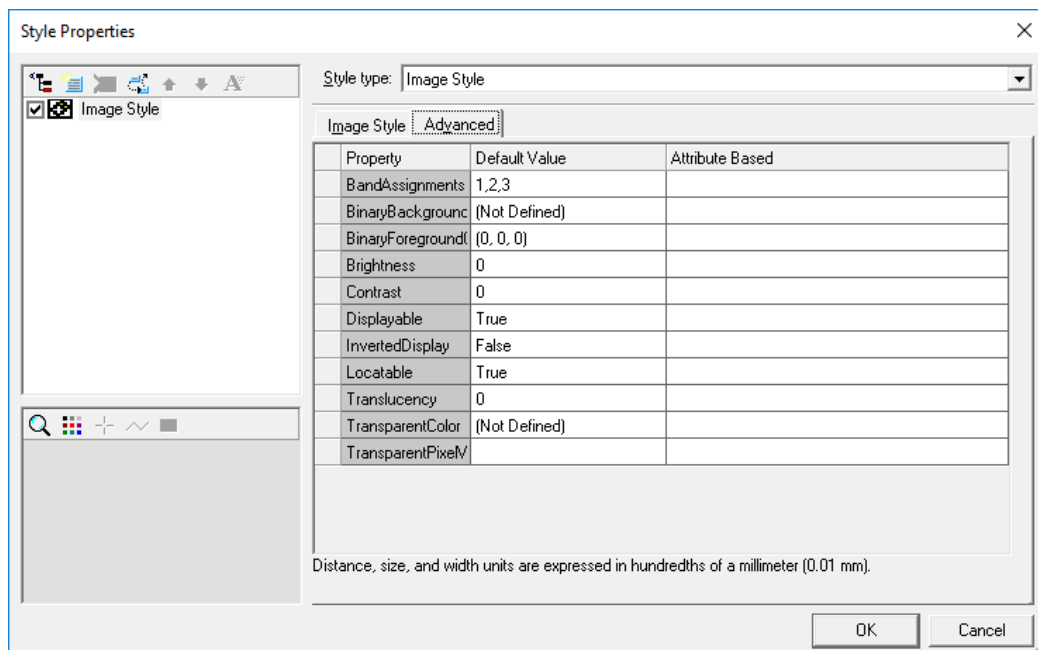
Image Style

A new style property called BandAssignments is available at the API level for the StyleProperties of a StyleDefinition of type Image Style. It takes as input a comma-delimited string indicating band numbers to be assigned to Red, Green, and Blue in that order. This style property may be assigned an expression for attribute-based symbology.

The opacity band for ECW images is now recognized and honored in the display of ECW files, eliminating the speckling that could occur around edges. The style properties for ECW images that have an opacity band should have **Transparent color** checked, and the color set to black (0, 0, 0) for opaque pixels to be displayed as transparent. Non-opaque pixels that are black are automatically incremented by 1 so they are not displayed as transparent.

Dash Line Style

A new type of style definition for linear geometries is now provided, as an alternative to the current Simple Line Style and Pattern Line Style. It allows for the definition of any number of dashes, and any number of symbols, each with their own position/length, styling, and offset from the geometry, and renders them in such a way as to keep them synchronized with one another. This overcomes a historic limitation with combining dashes (via Simple Line Style) and symbols (via Pattern Line Style) within a style collection, which allows the dashes and symbols to get out of synchronization with one another as they are rendered independently.

The new style type is presented on the Style Properties dialog as the Dash Line Style tab.
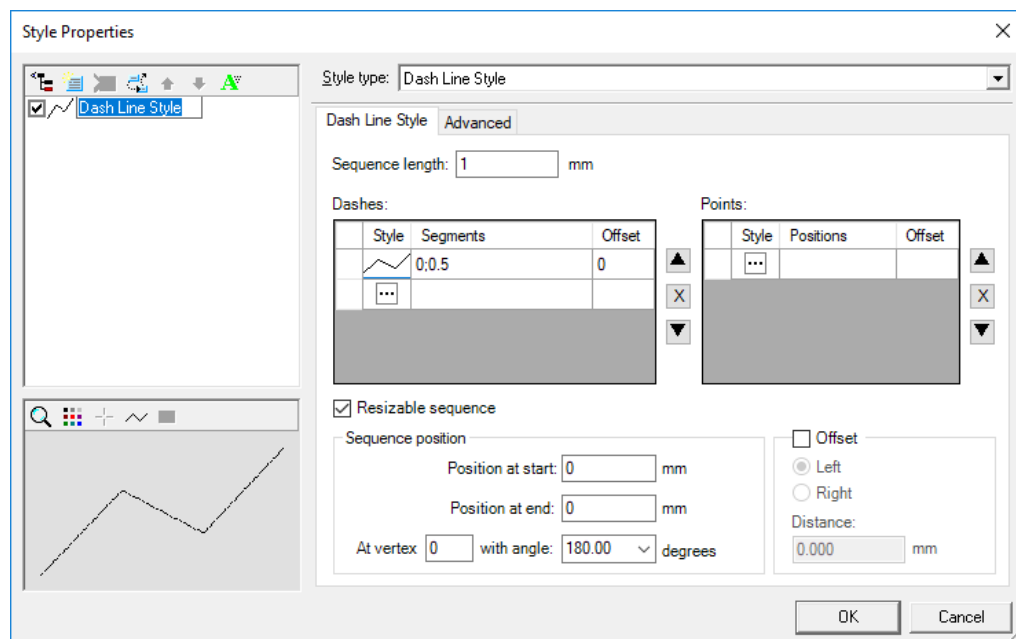
The new style type also can be given attribute-based symbology or animation via its style properties located in the Advanced tab.
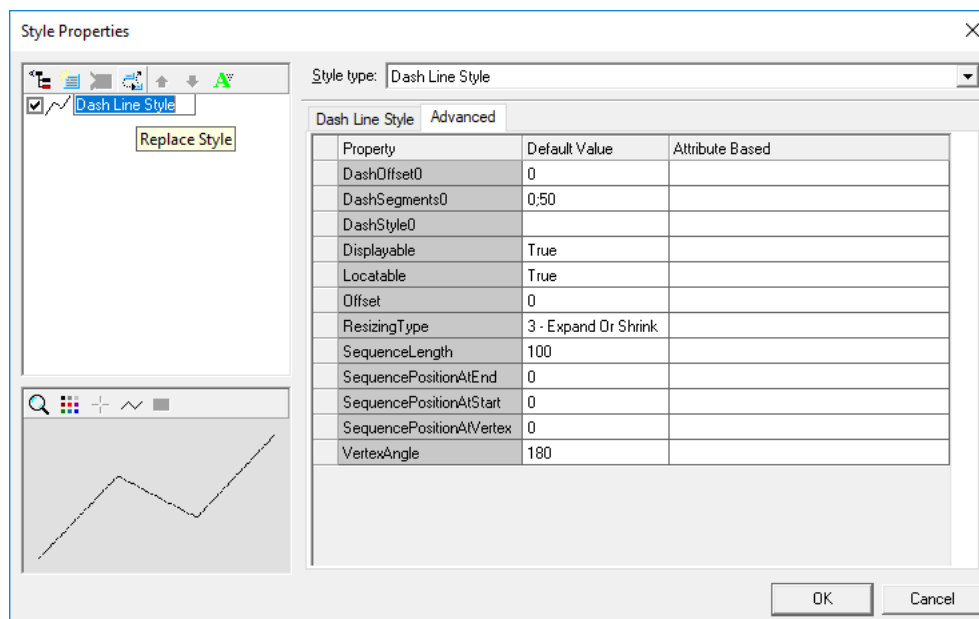
Dash Line Style definitions may be imported and exported via the Styles command like any other style, may be copied between GeoWorkspaces and libraries, and behaves like any other style type in the GeoMedia environment.

Raster

Insert Georeferenced Images command

This command now offers the ability to set the style for the output image display, when the checkbox is checked for adding a new legend entry for the output feature class. The style button opens the Select Style dialog, as is common for many commands that output legend entries.
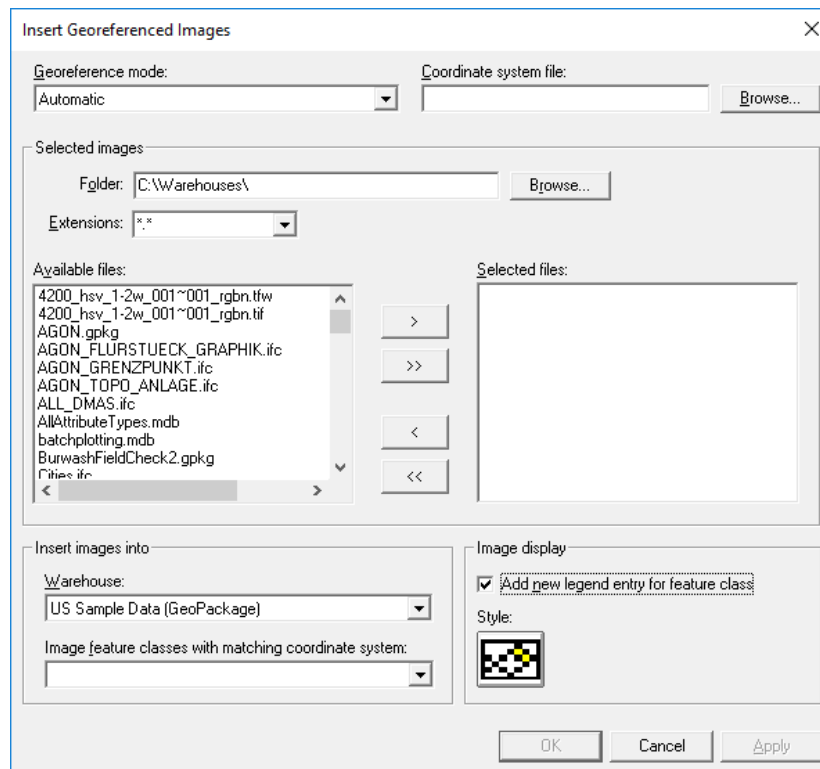
Insert Interactive Image Command

This command now offers the ability to set the style for the output image display, when a new feature class is to be output. The style button opens the Select Style dialog, as is common for many commands that output legend entries.
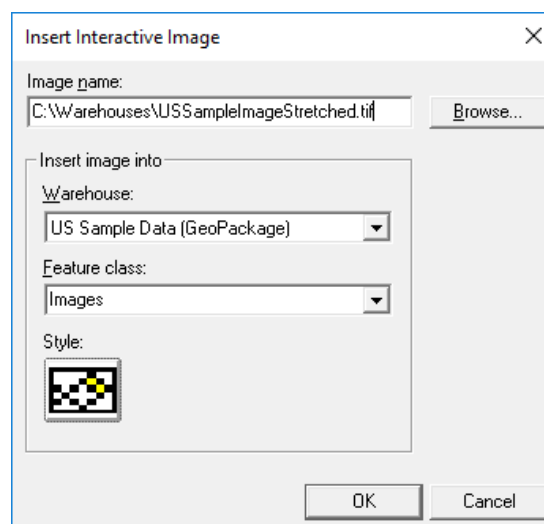
Insert Geotagged Images command

This new command inserts geotagged images (images with embedded EXIF geotags) into a warehouse as point feature classes with attributes capturing both the hyperlinked path to the image, and other characteristics from the geotags.
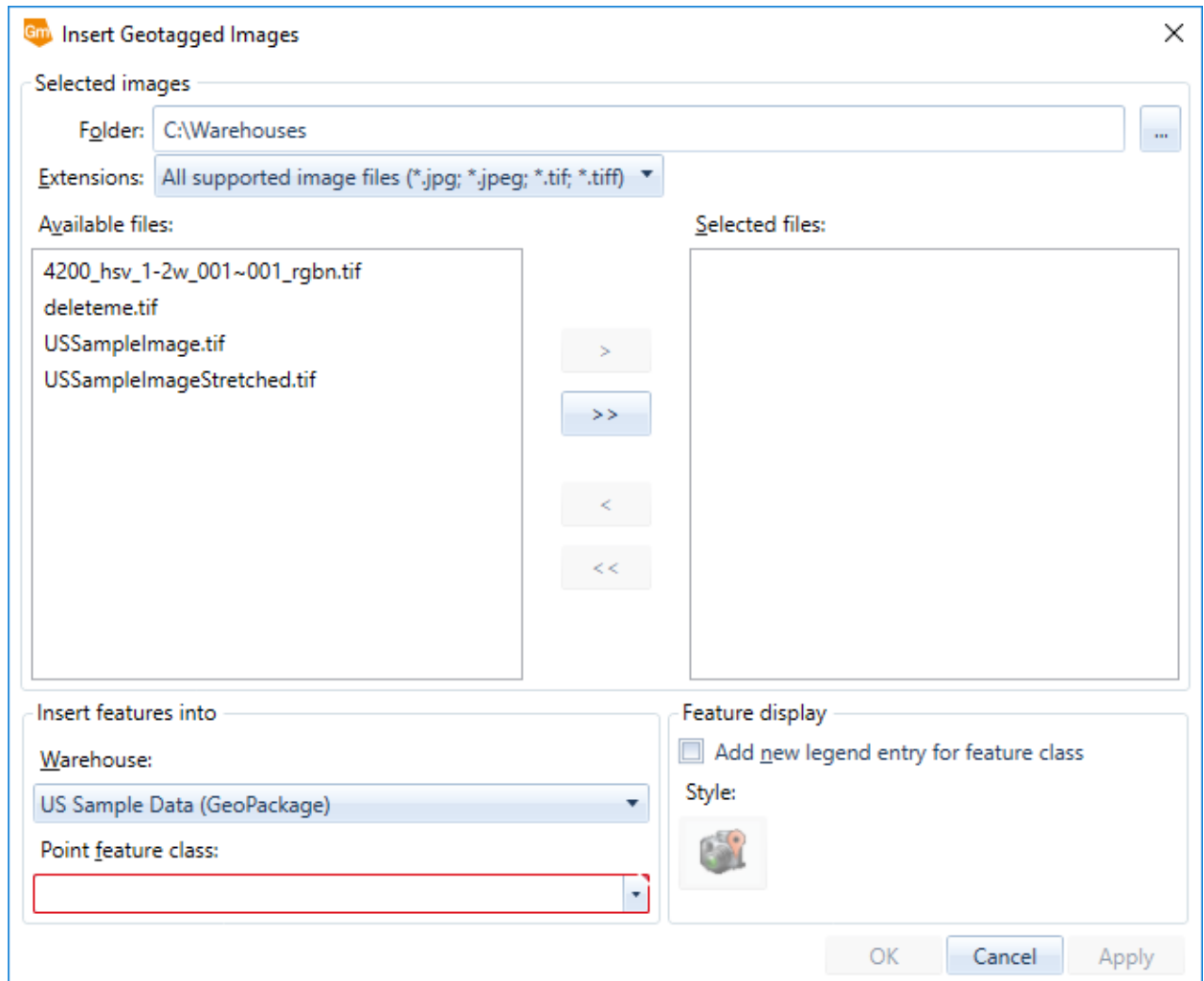
Review Geotagged Images command

This new command displays geotagged photos and corresponding attributes by moving the cursor over a point feature that represents a geotagged point feature.
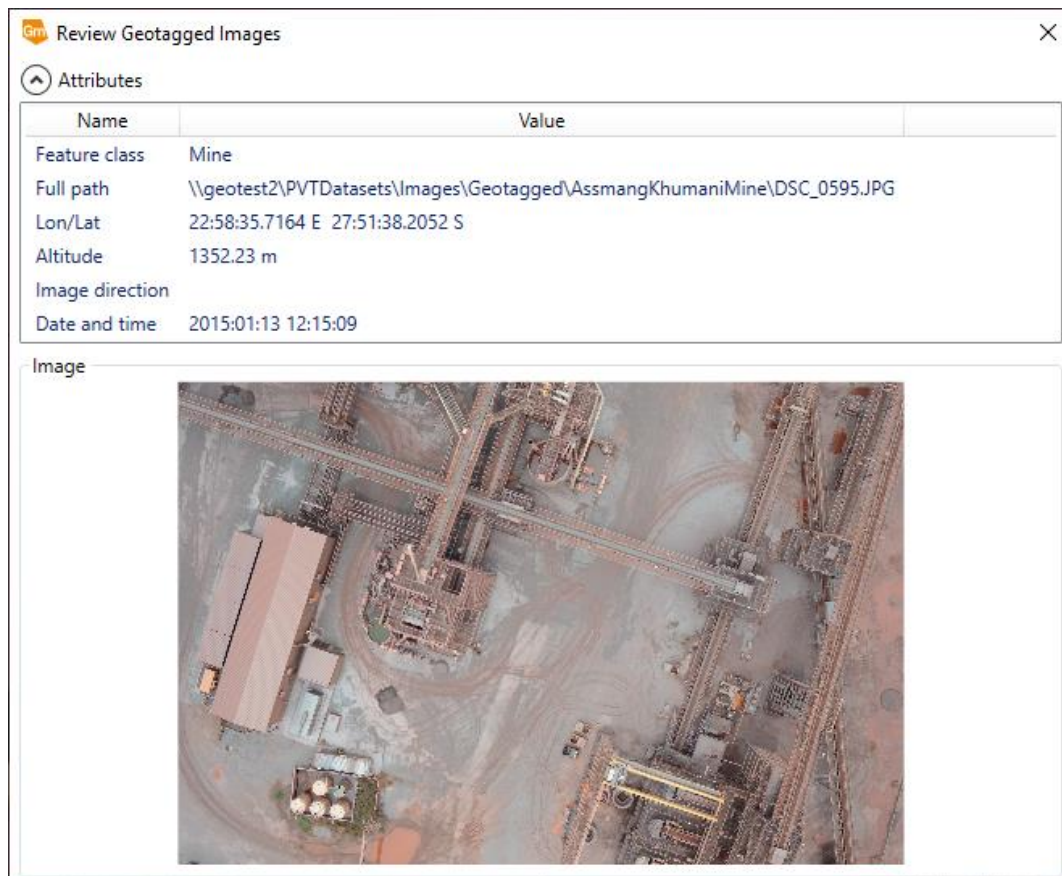
Data Capture

Dimensioning

The dimensioning system now creates graphic text in Unicode rather than multi-byte format.

Application Development

.NET Command Base Classes

Base classes to aid in the development of modal and modeless commands are now provided for .net development.

Command Wizard

A newly introduced command wizard runs as an extension in Visual Studio 2017 or 2019. In comparison to the previous command wizard, it has a reorganized and updated user interface, it offers a choice of WPF or WinForms output, and the C# or VB.NET code that it produces provides improved COM object releasing and use of new .NET command base classes.

Layout

Insert Cartographic Grid command
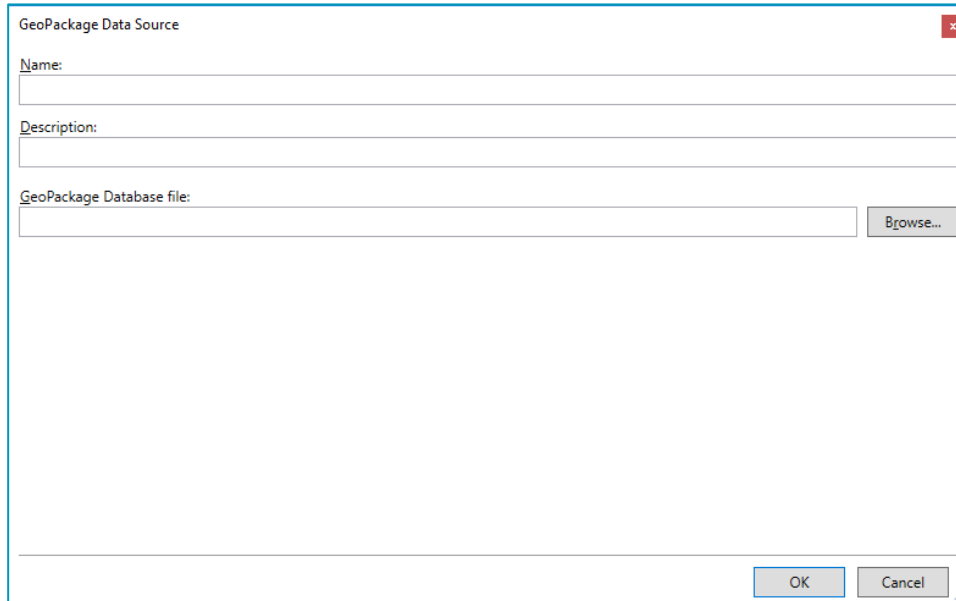
This command now provides the ability to rotate edge labels so that they align with the grids and ticks as they intersect the neat line.

Spatial Modeling

Features Input operator

This operator now supports GeoPackage databases. It creates and uses a GeoPackage Proxy File (*.gfp) analogous to the proxy files for other databases in Spatial Modeler.

When accessing feature data from a PostGIS data source, this operator now supports schemas other than "public", serving tables from any schemas as long as access has been granted for such tables. Because table names may be duplicated across schemas, tables served from schemas other than the default schema are presented in the form "schemaname.tablename". The PostGIS Features Proxy file (.pfp) also stores such tablenames in this manner.

When accessing feature data from a PostGIS or SQL Server database, this operator now supports native SQL Server geometry fields that lack the GeoMedia companion GDO field. This allows for greater flexibility in interoperability of the database with other Hexagon Geospatial and third-party products.

When accessing feature data from a GeoMedia warehouse (whether Oracle, SQL Server, PostGIS, or GeoPackage), this operator now honors the primary geometry field designation from the GeoMedia metadata.

Features Database Output operator

This operator now supports GeoPackage databases. It creates and uses a GeoPackage Proxy File (*.gfp) analogous to the proxy files for other databases in Spatial Modeler. See the Features Input operator section for more information.

When producing feature data in a PostGIS database, this operator now supports schemas other than "public", permitting output of a table to any schema as long as access has been granted. In order to indicate output to a schema other than the default schema, prefix the output table name with the output schema name in the form "schemaname.tablename". The PostGIS Features Proxy file (.pfp) also stores such tablenames in this manner.

When producing feature data in a PostGIS database, this operator now creates geometry collections strongly typed for point, line, and areas collections, rather than the general purpose "geometry collection" type, to overcome a QGIS limitation with geometry collection support that affects product interoperability.

When producing feature data in a PostGIS or SQL Server database, this operator now supports output of native geometry fields without the GeoMedia companion GDO field. This permits greater flexibility in interoperability of the database with other Hexagon Geospatial and third-party products.

Additional Feature Operators

A new Smooth Geometry operator provides the same capabilities as the SMOOTH expression function of the Generate Functional Attributes operator, but in a more discoverable and easy-to-use form.

A new Densify Geometry operator provides the same capabilities as the DENSIFY expression function of the Generate Functional Attributes operator, but in a more discoverable and easy-to-use form.

Additional Grid Operators

A new Accumulate Flow operator creates a Raster from an input FlowRaster where each pixel is the accumulated number of pixels that flow into it.

A new Calculate Flow operator creates a Raster identifying the watersheds that drain into the OutletRaster zones.

A new Fill Depressions operator smooths a Raster surface by filling in depressions (which could interfere with the modeling of surface run-off).

A new Find Watersheds operator creates a Raster identifying the watersheds that drain to the OutletRaster zones.

A new Interpolate Using IDW (Inverse Distance Weighting) operator uses a two-pass interpolation to estimate missing data values in a given Raster of sparse or non-continuous data.

New Technology (16.6 Update 1)

General

Drag-and-drop

Data that has been attached to a GeoWorkspace via drag-and-drop can now be accessed and used in scores of commands throughout the GeoMedia product line. In most places where a treeview of feature classes and queries is presented for selection, look for a new Attached Data branch.

Online Support command

This command now goes to a GeoMedia-specific landing page for all kinds of online support activities such as discussions, training, support, and documentation.

Data Access

Oracle Object Model data server

This data server now supports long identifiers (names of tables, columns, indexes, etc.) when working with Oracle database versions 12.2 and higher. For more information see the help topics "GeoMedia's GDOSYS Metadata Schema" and "Using Database Utilities with the Oracle Spatial Object Model".

Oracle Object LTT data server

This data server now supports long identifiers (names of tables, columns, indexes, etc.) when working with Oracle database versions 12.2 and higher. For more information see the help topics "GeoMedia's GDOSYS Metadata Schema", "Using Database Utilities with the Oracle Spatial Object Model", and "Overview of the Transaction Administrator Utility".

PostGIS data server

This data server has improved interpretation of the "numeric" field type, ensuring more precise mapping to GeoMedia data types including integer types.

This data server now supports connection via a PostgreSQL service name. The connection syntax for the data server has been extended, and the user interface has an additional text field for entering the service name. Depending on how the service is defined, the service name may be used alone or in conjunction with other connection parameters.

Database Utilities

This utility now supports connection to a PostGIS database via a PostgreSQL service name. The user interface has an additional text field for entering the service name. Depending on how the service is defined, the service name may be used alone or in conjunction with other connection parameters.

This utility now supports the various Oracle TIMESTAMP data types (TIMESTAMP, TIMESTAMP WITH TIME ZONE, TIMESTAMP WITH LOCAL TIME ZONE), permitting them to be mapped to a Date attribute and subsequently to be served to GeoMedia.[1]

Export to Oracle Object Model

This command and service now support long identifiers (names of tables, columns, indexes, etc.) when working with Oracle database versions 12.2 and higher. For more information see the help topics "GeoMedia's GDOSYS Metadata Schema" and "Using Database Utilities with the Oracle Spatial Object Model".

Map Display

SVG symbols

Support for SVG symbols within style definitions has been extended to include additional characteristics in the 'd' attribute of a path element including: 'v', 'V', 'c', 'C', 's', 'S', 'h', 'H', 'q', 'Q', 't', 'T' 'l', 'L', 'm', 'M', 'a', 'A', 'z',

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[1] It is important to note that Oracle TIMESTAMP columns may contain fractional second information. GeoMedia Date fields do not contain fractional second information. When TIMESTAMP columns are brought into GeoMedia these fractional seconds are not served. The values are displayed according to the format specified for that field without any fractional second information, and they participate in analytical operations without the fractional second information. If GeoMedia writes a Date value to a TIMESTAMP column it does not write any fractional second information, whether editing an existing value or performing output of that data value to another table or export format. If no edits are made to the Date column via GeoMedia then the original source TIMESTAMP value with any fractional second information will be unchanged.

'Z'. This provides new capabilities for move to coordinate, straight line to coordinate, horizontal line, vertical line, return to start of path, cubic and quadratic Bezier curve, and oval.

Additional improvements have also been made in support of rendering SVG files as symbols, including broader support for transformation including nested transformations, and broader support for styles including SVG styles, limited support of CSS styles, and style inheritance.

SVG files may now be served in their entirety as symbols, rather than strictly treating them as symbol libraries containing named symbols. When an SVG file is chosen for a Symbol style on the Style Properties dialog, if it has no embedded symbols then no symbols are listed for selection and the SVG file is treated as a symbol itself.

Raster

Images command

This command now supports the ability to validate, delete, update, and display image features not only from feature classes, but also from queries and attached data.

Framework

Command enabling conditions

A variety of commands now have their enabling conditions relaxed. The following commands no longer require a warehouse connection to be present or open, so that they can be invoked using attached data as well as warehouse-resident data:

- Select Set Properties
- Geometry Information
- Fit Selected
- Display Selected Images
- Select Text
- Locate Feature
- Run Spatial Model

Data Window

Sort Columns command

A new command Sort Columns is provided on the Table ribbon tab. This command can be used in conjunction with the existing Sort Ascending and Sort Descending commands, to sort the data window using multiple columns simultaneously. It presents the current sort criteria for the data window and allows it to be altered using an ordered set of one or more columns, each of which can be sorted ascending or sorted descending.

Explorer Window

Attached data and queries may now be renamed. Click on a selected node in the treeview to rename it.

Attached data and queries may now be deleted. Right-click on a node in the treeview and choose Delete.

Spatial Modeling

Features Input operator

When accessing feature data from a PostGIS data source, this operator now supports the serving of attributes with the data type "numeric".

When accessing feature data from an Oracle data source, this operator now supports the serving of attributes with any of the TIMESTAMP data types (TIMESTAMP, TIMESTAMP WITH TIME ZONE, TIMESTAMP WITH LOCAL TIME ZONE).

Union Features operator

The various "FeatureIn" ports on this operator now accept a List of Features as input, in addition to the singular Features data type that is already supported.

New Technology (16.6 Update 2)

Coordinate Systems

Datum transformations

New datum transformations have been added to autodt.ini that are pertinent to the region of Germany.

Data Access

SQL Server Spatial data server

This data server now supports read-write data operations (insert, update, delete) on feature classes even in the absence of GeoMedia metadata. In such a configuration the Refresh with Warehouse Changes command on the Manage Data tab of the ribbon is not able to refresh with the changes of other users due to the lack of GeoMedia modification logging tables in the database. Other users' changes may only be seen if a warehouse connection is reopened. In this configuration the schema of the database remains read-only for GeoMedia.

WFS data server

This data server now offers a connection parameter that can be entered through the "Additional parameters" control on the Advanced Options dialog, that allows the user to designate that the geometry data returned by the service is to be treated as 3D rather than the default of 2D, even when the service fails to designate the SRSDimension attribute.

This data server now offers two optional behaviors controlled through checkboxes on the Advanced Options dialog, that can offer aid in case of issues with the WFS implementation. These options are "Download feature classes and process locally", and "Ignore schemas defined in GML".

This data server now serves only those attributes that were explicitly defined by the user, no longer serving system-level attributes defined as part of the GML infrastructure.

New Technology (16.6 Update 4)

Layout Window

The Export Layout command now allows entry of a custom resolution for output raster data, rather than restricting the resolution to one of several predefined values.

The Export Layout command now provides options to output binary TIFF files using CCITT Group 4 compression.

Batch Plotting

The Batch Plotting utility now allows entry of a custom resolution for output raster data, rather than restricting the resolution to one of several predefined values.

The Batch Plotting utility now provides options to output binary TIFF files using CCITT Group 4 compression.

System Requirements

Computer/ Processor	● 64-bit: Intel 64 (EM64T), AMD 64, or equivalent
Memory (RAM)	● 4 GB minimum, 8 GB recommended
Disk Space	● 10 GB for software ● Data storage requirements vary by mapping project[1]
Peripherals	Software licensing (Hexagon Geospatial Licensing 2020) requires the following:

	• Ethernet card
Operating Systems[2]	• Windows® 10 Professional (64-bit)
	• Windows Server® 2016 (64-bit)[2]
	• Windows Server® 2019 (64-bit)[2]
Virtual Server and Virtual App Technology	• VMware ESX 5.1
	• Oracle VM Virtual Box
	• XenApp 7.6
Database Server Engines	• Oracle® Server 11g, 32-bit and 64-bit, at least version 11.2.0.4
	• Oracle Express 11g, at least version 11.2.0.4
	• Oracle® Server 12.1
	• Oracle® Server 12.2
	• Oracle® Server 18c
	• Oracle® Server 19c
	• SQL Server® 2012, 64-bit
	• SQL Server® Express 2012
	• SQL Server® 2014, 64-bit
	• SQL Server® 2014 Express
	• SQL Server® 2016, 64-bit
	• SQL Server® 2016 Express
	• SQL Server® 2017, 64-bit
	• SQL Server® 2017 Express
	• Azure SQL Database (compatible with SQL Server® 2017 or SQL Server® 2014)
	• PostgreSQL 9.3 with PostGIS 2.1
	• PostgreSQL 9.4 with PostGIS 2.2
	• PostgreSQL 9.6 with PostGIS 2.3
	• PostgreSQL 11 with PostGIS 2.5
	• PostgreSQL 12.1 with PostGIS 3.0
Database Client Engines	• Oracle Client 11g, 32-bit[3]
	• Oracle Client 12.1, 32-bit[3]

	●	Oracle Client 12.2, 32-bit[3]
	●	Oracle Client 18c, 32-bit[3]
	●	Oracle Client 19c, 32-bit[3]
	●	SQL Server Native Client 10.0 or higher[4]

System Requirements Notes

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

[2] GeoMedia runs on 64-bit systems in 32-bit emulation mode.

[3] Oracle Data Access Components (ODAC) is required if using the Feature Accessor option for Oracle in the PublishIFC utility, or if using the Database Utilities utility to manage an Oracle warehouse. ODAC is normally delivered by the Oracle Client Administrator installer, but not by the Oracle InstantClient installer. ODAC contains many components, of which PublishIFC requires the Oracle Data Provider for .NET, and Database Utilities requires the Oracle Provider for OLEDB.

[4] SQL Server Native Client 10.0 or higher is needed in order for the Database Utilities utility to automatically create the correct GeoMedia metadata for date, time, and datetime2 data types when using a SQL Server or SQL Server Spatial warehouse. You may get SQL Server Native Client 10.0 or higher from the corresponding Microsoft websites. If the SQL Server Native Client is not installed on the system, you need to manually choose Date as the data type from the dropdown combo box for these data types in the Feature Class Properties dialog and set the format properly.

Issues Resolved (16.5 Update 1)

CR #	Summary	Description / How to Reproduce
00024578	ExportToMstnV8Service does not write the correct linkage type	The mentioned export service writes all linkage types as ODBC, regardless what is set to LinkageTypes property. The only exception is DMRS type, which seems to be written correctly. Attached is a sample VB.NET application, the sample contains generated dgn files for each linkage type. The actual linkage type exported has been verified in Microstation.
00010671	Spatial Model Editor failed running model that uses SQL Server Proxy (.sfp) as features input	When attempting to run a Spatial Model where the 'Features Input' operator used a 'SQL Server Features Proxy (.sfp)' the model failed to run with the following error message displayed: Spatial Model failed in Features Input. The error was "Could not load file or assembly 'Microsoft.SqlServer.Types, Version=12.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91' or one of its dependencies. The system cannot find the file specified.". This error seems to be occurring because there is a dependency on the 'Microsoft SQL Server System CLR Types' software, that seems to be undocumented. [Resolved by documenting this dependency in the Installation Guide.]

00019691	Features Input operator fails to correctly serve data if any geometry is null	Displayed "Stream was not readable" error in the Model Editor delivered by GeoMedia 2016. Problem occurs when any record of the input feature class contains a null geometry. NULL is considered a valid value for Geometry; it is expected that the Features Input operator should not fail.
00026152	Data server incorrectly serving Unicode (UTF-8) text, wrong characters are displayed	The GeoPackage Data Server is not serving UTF-8 or UTF-16 characters correctly and that only ANSI characters appeared to be served as expected. Confirmed that this is the case for UTF-8 characters stored as Text attributes and confirmed that the same UTF-8 Text attributes are served correctly from an Access warehouse.
00021908 00022500 00024777 00025997	Bing Maps command does not display map using key	Bing Maps command does not display map using customer's attached key. The Bing Maps window opens but is blank.
00023235	Publishing to SmartStore with 'Publish 3D coordinates' option results in incorrect Z values	When the 'Publish to GeoMedia SmartStore Warehouse' utility is used with the 'Publish 3D coordinates' option checked, Z values in the resulting .ddc file do not match the original Z values in the source warehouse. This may be specific to the customer's workflow where the source warehouse is an Access warehouse with a linear feature with the EPSG:25832 coordinate system assigned with a vertical datum set to User Defined.
00024616	Display Properties command – keyboard focus is not in display scale field, forces user to tab before key-in of Display scale value	User has noticed an undesirable change to the tab sequence of the Display Properties dialog when compared to version 6.1 and 2014. In version 6.1 and 2014, the default focus was the Display scale value, thus allowing the user to simply key-in and apply the desired Display scale value. In versions 2015 and 2016, the user must use the <tab> key to place focus to the Display scale value field prior to key-in of a new display scale value.
00010250	Attribute Query results in the execution of 'auto-generated' invalid query for the customer WFS	A SR was filed by a customer noting that when the Attribute Query command is run while connected to their WFS an invalid query is being created and executed. Note that the filter parameters result in a query of the 'geom' column where the value =0. Since the 'geom' column contains the geometry for the 'perceels' feature class the resulting filter expression results in a data type mismatch. This can be seen using Fiddler by reviewing the POST request that was submitted after the GET request failed where an Exception is returned stating: "IllegalArgumentException: Binary geometry filter, but second expression is not a geometry literal?"
00002999	Bing Maps Key File Credential error when zooming in deep in map	HSI Support reports receiving an "Invalid key provided" error when zooming into a Bing Maps window. They are able to reproduce the error at will on 2 different VMs, one with 2015 and one with 2016. Map Pan/Zoom work fine until they zoom-in too much. As soon as the map is zoomed in too deeply, the error "Invalid key provided" appears. Then the credential dialog opens to re-enter the Bing Map Key file. After the key is re-entered, the Bing Maps window returns to a full view of the map.
00022458	Queries dialog takes too long to display with Validate Geometry query	Queries list dialog display takes too long to display. Using the customer's 2016 QueryIssue_Library.mdb library to load queries into a GeoWorkspace it took 35-40 minutes for the queries dialog to display the list of queries.

00022620	Select Set Properties poor performance accessing large picklists	User has large picklist table consisting of 3000 to 5000 records. In version 6.1, the descriptions for these large picklist tables were listed exceptionally fast on the Properties (attribute properties) dialog. 2016 however the same picklists take anywhere from 2 to 4 seconds to populate and list. This delay causes users to click multiple times on the picklist enabled field and results in user frustration. Problem occurs for both GPicklist and AFM enabled picklist.
00023511	No labels are displayed for area features if the label expression uses the NEWLINE operator and 'Label with Symbol' is selected	No labels display for areas if the expression for the label contains NEWLINE (i.e. \n) and the 'Label with Symbol' option is selected as well. If the 'Label with Symbol' option is not used, or the Expression does not include the NEWLINE entry (\n) then the labels are displayed as expected. Likewise, if the type of feature being labeled is a point or area, the labels are displayed regardless of the options selected.
00024324 00024317	Cannot create more than one open GeoWorkSpace document using the same template	User noted they can no longer create 2 GeoWorkspaces using the same GeoWorkSpace (.gwt) Template file. For example, the user double-clicks on a .gwt file to create GeoWorkSpace1, then double-clicks on the same .gwt file to create GeoWorkSpace2 but the document is not created and instead, the following error occurs: GeoMedia Desktop Unable to create new GeoWorkspace
00020048	Problem launching Label Manager without bringing up existing unshared rule	Problem launching Label Manager without bringing up existing unshared rule Open GWS provided in zip Change label properties path to the unzipped shared folder Click label manager
00026800	Crash occurs when Cancel button is selected on 'Software License Notification' dialog	Steps to reproduce the crash when the 'Cancel' button is selected on the 'Software License Notification' dialog. 1. Run the 'GeoMedia Desktop Configuration Wizard' to configure an internal, evaluation or other license type that will result in the display of the 'Software License Notification' (a.k.a. nag) dialog. 2. Upon completion of the 'GeoMedia Desktop Configuration Wizard' click the Finish button (with the 'Launch the GeoMedia Desktop application' option enabled.) 3. When GeoMedia initializes the 'Software License Notification' dialog is displayed. 4. While the countdown is occurring to enable the Agree button, click the Cancel button. 5. The GeoMedia application window disappears and after a couple of seconds an error message is displayed with the title 'GeoMedia application' with the message: "GeoMedia application has stopped working Windows is collecting more information about the problem. This might take several minutes..." It appears that the crash messages are only displayed to the user when Cancel is selected on the 'Software License Notification' dialog the first time after the Configuration Wizard is run to configure the internal (eval, training, etc) license. If GeoMedia started again and the Cancel button is selected on the 'Software License Notification' dialog the crash messages are not displayed. However, the Event Viewer still has a Windows Error Reporting event that indicates a crash has occurred.
00027138	Connection fails with 'Type SByte is not mapped to GDO' error	The new WFS data server in GeoMedia 16.5.0.1109 fails to connect to the WFS service at http://192.168.20.96/WFS_LV/wfs?request=getcapabilities&service=wfs with the error message 'Type SByte is not mapped to GDO'.
00020663	Fence selection with null geometry field produces error with Merge Features	The problem occurs when one or more features chosen for Merge Features have null values in any geometry field(s), but only if they are chosen through fence selection not geometry selection. It is unknown if this occurs when selecting by legend entry, data window, etc. It is unclear why it is checking for null geometries. The message is "At least one selected feature contains no geometry data."

1-YICWPZ	WFS Read-Only connection fails with 'Access denied' message (other clients can connect successfully)	When making a connection to the customer provided WFS via the WFS Read-Only data server the connection fails with the standard "Unable to connect to the database. Please verify that your warehouse-connection parameters are correct and try again." When the More button is selected the message "Access denied." is displayed.
1-LU748B	Warehouse Connections, unable to delete connection after Select Set Properties	As part of AGON requirements, we need to delete the connection programmatically in our workflow, but we are unable to delete the connection. Attempting to delete the connection in pure GeoMedia, it was observed that the connection it is closed but not deleted. Below are the steps to reproduce: 1) Load a feature class from the connection (Connection1). 2) Select a feature and open properties dialog for that feature and clicked OK. 3) Navigate to Warehouse dialog, attempted to delete that connection (Connection1) and observed that the connection gets closed but not deleted.
1-WWYN7M	GM crashes with WFS connection when spatial filter is applied, and attributes fail to display for WFS (GM / GWM)	GM crashes with WFS connection when spatial filter is applied, and attributes fail to display for WFS version= 2.0.0
1-Z2RS3B	WFS data server fails when using username and password credentials in authorization header	WFS data server fails to correctly request data using username and password information as part of an Authorization Header. This causes the data server not to serve data for restricted regions.
1-SSU3F7	WFS connection fails with 'Schema declaration for namespace … not found' error	GeoMedia is unable to establish a connection to the WFS at http://vmgeoserver.vd.dk/geoserver/VD/ows. The workflow and additional details are provided below.
1-GNP9L7	Incorrect results returned from attribute query against WFS site	1. Do a WFS read-only connection to http://sthlm-app.astando.se:8080/geoserver/lv_gis/wfs 2. Make an attribute query against Brunn. Use the Filter-GUI to specify the where clause "Typ = 'Nedstigningsbrunn'". If you use the "show values"-button on Typ the form will not populate with the valid values in the database. If you type in the text Nedstigningsbrunn (without apostrophes) in the Value field and press the down-button to append it to the Expression field, you get the error message "Unable to validate field value according to type. Please input new value." However - if you type in the correct where clause in the Expression field and press OK you will get a working query and some output. Furthermore - the non-working steps above are NOT able to be reproduced if you categorize Brunn and do an Attribute query against this category.
1-9X1IY3	GeoMedia hangs when connecting to specific WFS, must kill the GeoMedia process to regain control	When attempting to make a WFS data server connection to the provided http://www.geoservicos.ibge.gov.br:80/geoserver/wfs service GeoMedia hangs. The only way to exit the application once it hangs is to stop the GeoMedia.exe process (via Task Manager or using the X on the application). The Geospatial Portal application can connect to the same WFS successfully (and display features from the WFS successfully.)
00023093	Transformation using .gsb for Geocentric Datum of Australia failing	GeoMedia 16.2 now supplies a parameter-based Bursa Wolf transformation for transformations from Geocentric Datum of Australia 1994 to Geocentric Datum of Australia 2020. The Australian geodetic authority has now published grid (.gsb) files but attempting to configure and use the .gsb files in GeoMedia does not result in any transformation. It is as if the transformation is being skipped. If we then change the datum of the GeoWorkSpace Coordinate System to Geodetic Datum of Australia 2020, the coordinates are not transformed at all.

1-AXAM6E	GeoMedia adds WFS 2.0.0 feature class to legend with no geometry, the same layer displays from 1.0.0	Use GeoMedia 2014 or 2015 and connect to the wsf data source at http://sthlm-app.astando.se:8082/geoserver-2.4/lv_gis/ows and add either dispens (less data) or brunn (more data) to the legend. • Using version 1.0.0 should work • Using version 1.1.0 raises the same error at connect as in the closed worksheet (but we can forget about this problem for now) • Using version 2.0.0 will add the legend entry (plus an extra legend entry named 'gml_location of xxx', where xxx is the feature class name) but no data will be loaded • Using no specified version will work the same as for version 2.0.0
00028348	PostGIS feature classes with user-defined spatial indexes cannot be displayed in GeoMedia if AFM is enabled	When spatial indexes are created on tables, GeoMedia cannot display the tables when the 'Enable AFM' option is enabled on the connection (the data are visible when the option is off). After creating a spatial index on an existing AFM enabled PostGIS feature the following error occurs when attempting to display the feature in GeoMedia. The problem does NOT occur if the AFM connection property is disabled (unchecked). GeoMedia Desktop Error creating a legend entry for power_poles Source: GeoMedia Description: The input recordset is invalid. Continue with operation?
00026202	Editing line geometry results in Z values being changed to "0" or other values	After editing/moving a vertex of a line geometry the Z value height of the moved point is set to "0" or some other number. Reproduced with English/German configuration of GM 16.5 on WIN10 German operating system and GM 16.2 English/German configuration on WIN7 English system.
00028900	Operators that reference coordinate system operations fail if using EPSG:2193 data	Attempting to use EPSG:2193 data with Spatial Model Editor fails with errors. EPSG:2193 is N,E (Y,X) referenced axes for NZGD2000 / New Zealand Transverse Mercator 2000 and is supported by GeoMedia. No problems are observed when working with the same data / coordinate system in GeoMedia GeoWorkSpace sessions; the errors only occur in Spatial Model Editor (Spatial Modeler).
00022766	Spatial Model with Measure Area operator fails using certain supported coordinate systems	A Spatial Model that uses the Measure Area operator fails when the input features are defined with the coordinate system EPSG:3008 via a .csf file. When the Spatial Model is run in GeoMedia using the 'Run Spatial Model' command an error dialog is displayed with the messages shown below: GeoMedia Desktop Input parameters may not be valid. More information below : HexGeo::SpatialModeler::Operator::Execute failed HexGeo::SpatialModeler::Operator::SetErrorMessage failed Spatial Model failed in Measure Area. The error was "HexGeo::SpatialModelerGeospatial::CoordinateReferenceSystemID::CreateCoordinateReferenceSystem failed Failed to recognize Authority Code with Authority "GeoKey Moniker" and Authority Code "1,1,0,6/1024,1/2048,32767/2050,6619/3072,32767/3074,17322/4096,5773"". When the same Spatial Model is run using the Preview button in Spatial Model Editor the following errors are shown as displayed from the 'Accumulated Messages dialog' Unrecognized ProjectionGeoKey 17322 Unsupported moniker
00029055	Editing or moving vertices changes Z values to Default height value	If the user edits/moves the position of a node using smartsnap on a linear or area feature (or moves a point feature) the node is assigned a new Z value equal to the Default Height value set in Options. Problem appears when smartsnap is used. If using the Move command with smartsnap this also changes the Z value of the geometry , but not if smartsnap is not used(click out away from geometry). Problem appears when smartsnap is used. Any dataset can be used. Same problem on GM 16.2.

00029046	AFM associations are not complete when using certain symbology	If the user turns OFF the 'Automatically add legend entries' on the Placement and Editing tab under Options, they experience issues when inserting data, using GPW. When the user inserts a WATER_MAIN, they are prompted with a start node. When they select WATER_PLUG, they are then prompted to continue digitizing the WATER_MAIN (which they do). The problem arises after they place the next node. Regardless of what they pick, once the feature is inserted, they are prompted again to place another node feature. It is not recognizing an association between the WATER_MAIN and the node. If the user turns ON the 'Automatically add legend entries' on the Placement and Editing tab under Options, they DO NOT experience issues when inserting data, using GPW. The associations for the water tee is also not correct as there is only one water main being associated when there should be two water main associated with the tee.

Issues Resolved (16.5 Update 2)

CR #	Summary	Description / How to Reproduce
1-QJD6GP	Adding FieldProperty metadata for a second Boolean field after a first call was made for a Boolean	Customer Description of Problem along with sample C++ Code. If the following method is called twice on two different tables with fieldtype being gdbBoolean on both calls, the second call crashes on metadataservice->AddFieldMetadata(&dispfieldproperty);
00022649	All subtitles for thematic legend entries are lost if a class is 'omitted' via Legend Entry Properties	If the Legend Entry Properties dialog is used to modify the displayed classes for a thematic legend entry where subtitles have been defined, all the previously defined subtitles are missing after clicking OK on the Legend Entry Properties dialog.
00023767	Edit Feature Class Metadata for PostGIS feature class fails to update geometrytype column for gdo.geometryproperties	A PostGIS database was created and populated with features outside of GeoMedia. They then used Database Utilities to create the necessary metadata to connect to the database and display the feature classes from the database within GeoMedia. However, when inserting the feature class metadata, the wrong geometry type was mistakenly assigned to a feature class. To correct the problem, 'Edit Feature Class Metadata' command was used to reassign the correct geometry type to the feature class, but the metadata was not updated correctly in all the required metadata tables. Specifically, the geometrytype column in the gdo.geometryproperties table retained the previous geometrytype value instead of being updated with the new geometrytype as assigned via Edit Feature Class Metadata. Note: the geometrytype column in the gdo.gfeaturesbase table was updated correctly, but the corresponding gdo.geometryproperties table was not.
00023877	Edit Feature Class Metadata shows empty rows for new attributes created via database	If a table representing a feature class in a PostGIS database is edited at the database level to add new attributes, and then Database Utilities 'Edit Feature Class Metadata' command is used on that feature class, then the 'Feature Class Properties' dialog shows extra rows on the Attributes tab for each of the attribute columns that was added via the database. The extra rows (one for each attribute column added via the database) will have no attribute name shown (i.e. the 'Field Name' column is blank) and the 'DataType' field is shown with the value 'Autonumber' with the 'Displayable' field value set to 'No'.
00027262	Insert Feature Class Metadata creates incorrect metadata for PostGIS table names with diacritics resulting in Insert Feature failure	When the Database Utilities > Insert Feature Class Metadata command is used to create metadata for table name containing the Swedish diacritic characters (i.e. å ä ö) the resulting metadata is incorrect. The presence of this incorrect metadata causes the Insert Feature command to return an error when attempting to insert an instance of the feature class.

00027498	Edit or Insert Metadata for viewname with diacritics creates invalid PostGIS metadata for primary keys	User has views that are named using diacritic characters (i.e. å ä ö). Per 00027262, the user corrected the 'f_table_name' value in the gdo.gfieldmapping table manually. Even with this fix however, the user noticed that errors such as the following were encountered when feature caching was enabled An error was encountered loading data for read.funktionell_vägklass legend entry. "Invalid operation Do you want to continue loading remaining legend entries?" Selection of More button shows the following message: "Member not found" Further investigation revealed that the view as seen in GeoMedia's Feature Class Definition did not have a primary key defined. Using Database Utilities to Edit the metadata and declare a primary key did not resolve the issue as Database Utilities failed to correctly populate the gdo.gindexcolumns table. The object_name field values no longer contains the correct diacritic characters; thus GeoMedia feature caching is unable to correctly determine the primary key field.
00030984	Edit Metadata makes incomplete updates for geometry type for PostGIS features not stored in public schema	If features are stored in a schema other than public, then Database Utilities, Edit Metadata command fails to properly update changes to the geometry. Specifically, the subtype field of the gdo.gfieldmapping table is not properly updated by the Edit Metadata command. In contrast, the Insert Metadata command works fine.
00017423	Spatial Intersection returning incorrect results for query between two area feature classes	The customer said that some occurrences of the topology error are solved, but also some are not solved. The (sample issue) data provided by the customer is attached. I also verify the behaviour on my test GeoMedia prerelease 16.5 by spatial intersection - it is in the attached GWS as query. The data and GWS is for two pairs of data layers. The issue occurs only when all polygons are used in the analysis. In the case, when only selected polygons are input to the analysis (possible also as GM query) the output is correct for the same polygons.
00023964	Enabling Index Feature Caching (IFC) for vanilla PostGIS data results in application crash	The GeoMedia application may crash without the opportunity to save changes if Index Feature Caching is enabled for PostGIS. The problem occurs when there is no GeoMedia GDO metadata. After using GeoMedia to connect to PostGIS database where: a) The schema for user data is stored in the default public schema b) The GDO metadata schema is not present c) There are no GDO bytea geometry fields present d) There are spatial geometry fields present: point, line and area (1 record each) The data can be successfully served and displayed in GeoMedia as read-only features, but if the connection is edited to enable the IFC Caching option on the connection then GeoMedia immediately crashes without any opportunity to save.
00030199	WFS data server failure "WFS2.GDatabase is not registered"	Open 'Publish to GeoMedia SmartStore' utility Click 'New Connection' Choose WFS (not WFS Read-Write) Enter a URL to a valid WFS Service (e.g. http://demo.hexagongeospatial.com/WFS_LondonReligion/service.svc/get) Result: Error message 'The GDO object WFS2.GDatabase is not registered correctly. Please reinstall the application to assure proper registration'
00029967	Applying spatial filter creates errors in postgresql .log files	When a spatial filter is applied to PostGIS data in GeoMedia, errors appear in the PostgreSQL .log files found in C:\Program Files\PostgreSQL\9.5\data\pg_log folder. Example errors: 2018-07-06 09:11:22 CDT ERROR: prepared statement "teststmt" does not exist 2018-07-06 09:11:22 CDT STATEMENT: deallocate teststmt Every time a spatial filter is called, the errors are logged, and there can be thousands of them for WebMap users since WMTS tiling process sending out thousands of spatial filtered WMS map requests.

00032009	GeoMedia is unable to display any features (geometry) for feature classes from a vanilla PostGIS database	When a PostGIS data server connection is made to the customer-provided PostGIS database (that has no GDO schema, thus no GeoMedia metadata tables), the Add Legend Entries command can be used to add the feature classes from that database to the legend. However, there are no geometries displayed for the feature classes. In other words, the legend statistics show a value of 0 and there are no features visible in the map window.
00031674	'Failed to open document' error occurs when opening any GeoWorkspace (including new .gws) after installing GeoMedia Desktop 2018 Update 1	Multiple reports have been received (via support tickets and the support forum) that installing GeoMedia Desktop 2018 Update 1 results in a 'Failed to open document' error when opening any .gws file. This includes a new gws via the 'New GeoWorkspace' command. In all reported cases (except one) the customer also has GeoMedia WebMap 2018 installed on the machine when the error occurs. In my testing I was only able to reproduce the problem by first installing GeoMedia WebMap 2018.
00030280	Loading ECW files cause GM to crash	On the 'Insert Georeferenced Images' dialog when you select a .ecw raster file for display a crash occurs if the folder also contains a .eww world file. This problem does not occur when using GeoMedia 16.00.0000.201114.
00029970	GeoMedia 2018 does not read ECW / EWW image format	GeoMedia 2018 fails to read/display ECW / EWW image format Unable to display in GM using the 417_3_25_1.ecw file with the 417_3_25_1.EWW and EPSG_3763.csf files. Customer is able to open 417_3_25_1.ecw in ERDAS but not in GeoMedia 2018. Customer in ERDAS then exported to 417_3_25_1_erdas.ecw, Able to insert the 417_3_25_1.ecw using interactive mode successfully. It is also possible to open in GeoMedia 2018 using "other with external coordinate system" mode but not in "world file" mode.
00009852	DBU posts success for PostGIS metadata even when no metadata tables are created	Selecting the Create Metadata Tables button in Database Utilities may post a successful message that the metadata tables were created when in fact, the metadata was not created.. When creating metadata for PostGIS, if the database Privilege properties for the Postgres role/user used for the connection does not have CREATE privilege then the following message is posted: --------------------------- Database Utilities Processing of Create Metadata Tables is completed. GeoMedia metadata system is modified. OK --------------------------- In fact, the GDO schema is not created at all thus there are no metadata tables created. If the user does not have proper privileges then we'd expect a message from Database Utilities to indicate there was a problem creating the metadata.
00026588 00015958	Insert Feature Class Metadata fails to show materialized view from PostGIS	When a materialized view is present in a PostgreSQL/PostGIS database and a connection to that database is made from Database Utilities using the PostGIS connect the Insert Feature Class Metadata dialog does not show the materialized view in the list of 'Available tables/views'.
00030572	PDF attributes do not display in Adobe Reader on German system	Checking the PDF attributes on the machine; it is not exporting the chosen attributes using the PDF Attributes command and Export to PDF on German system - the attributes can't be seen in Adobe Reader on German system. This is NOT a problem only for German system. Problem exists on ALL systems. Seeing this with ussample.gws and with the .gws delivered with the PDF tutorial on the web.

00023254	Image data fails to transform or display as expected from GDA94 datum to GDA2020 datum when using Advance image processing option	User-provided GeoTiff raster files fail to transform as expected when transforming from Geocentric Datum of Australia 1994 (GDA94) to Geocentric Datum of Australia 2020 (GDA2020). GeoTiff image data, referenced and stored using GDA94 is correctly displayed in GeoWorkSpace with Coordinate system set to GDA94 datum. If the GeoWorkSpace coordinate system is changed to GDA2020, the image data does not display / transform correctly if the Advanced Image Processing option is enabled (checked). However, if the Advanced Image Processing option is disabled (forcing affine transformation) the image seems to transform as expected. When File > Options, Map Display tab, Advanced Image Processing option is enabled, then a transformation of the image data from GDA94 to GDA2020 results in a correctly transformed image polygon, but some of the image pixel data are unexpectedly shifted / (displayed off by 1 pixel). When transforming from GDA94 to GDA2020 it is expected that data should shift by small amounts (usually less than 1 m) to the west and to the north. It is believed that GeoMedia is correctly transforming the vector data and the image polygon. However, the logic for Advanced Image Processing seems incorrectly "back fill" using white pixels along the top and left borders of the image. Interestingly the lower right corner seems to be correct.
1-U66Z0O	Static labels output to warehouse are not transformed correctly when converting Coordinate System	This behavior is consistent with the GeoMedia 06.01.11 / GeoLabel configuration and is most evident when changing between geographic and projected or visa-versa. Workflow: 1) Create a new GeoWorkspace and connect to World.mdb warehouse. 2) Add the Country legend entry 3) Open GeoWorkspace Coordinate System and ensure coordinate system is set to Geographic 4) Set the Nominal Map Scale and Display Scale to 1:75,000,000 5) Open Label Manager and define the label properties (Text = CNTRY_NAME, Size = 8) 6) Open Generate Static Labels and output to warehouse. Set the options to full map extent, and the nominal map scale. 7) Open GeoWorkspace Coordinate System and ensure coordinate system is set to Projected - set the system to Robinson. 8) The labels are not correctly transformed.
00022013	Insert fails to map PostgreSQL binary types to gdbLongBinary	The following supported PostgreSQL data types are not displayed in GeoMedia's Database Utilities: bit [n] bit varying [n] bytea According to GeoMedia Help topic "[PostGIS to GeoMedia Data Type Matching|http://example.com]", these PostgreSQL data types are supported and can be mapped to GeoMedia data type of gdbLongBinary. The bit, bit varying and bytea attributes are not listed as available attributes in Database Utilities, Attributes tab. The bytea attribute is of specific concern to the end user reporting this issue. The user has bytea user defined information (not geometry). Database Utilities however does not allow the user to insert metadata for non-geometry mapped (via the Geometry tab in Database Utilities) bytea attribute fields. Database Utilities is incorrectly expecting that all bytea fields should be mapped to a geometry type. Customer is specifically interested in using bytea which does not show in Attributes and also is forced to a geometry mapping.
00017807	Generate Static Label command does not create proper GeoMedia metadata	FieldLookup and AttributeProperties tables are NOT populated with field name entries for the static label generated feature classes. Thus, the metadata in Database Utilities does not show a Geometry tab and the attributes tab does not show any attribute field listings. Problem reproduced for both Access and Oracle.

00004513	Static Label text geometry fails to transform with coordinate system changes	Static label text added to the map legend fails to transform if the GeoWorkspace Coordinate System is changed. However, if the same label text is added to the map using Legend > Add Legend Entries command, the text geometry transforms as expected with changes to the GeoWorkSpace Coordinate System.
00024754	Attribute based style for linear pattern inset properties producing undesirable results	User notes that 2015 and 2016 produce undesirable results for a linear pattern that uses an attribute-based style (ABS) setting for starting and ending inset properties. The user considers the results seen in 2015 and 2016 to be incorrect and a regression from 6.1 and 2014. Specifically, when the ABS for the EndingInset property evaluates to a negative value, the result is that the pattern point is not displayed. The user expects that the points should be displayed as "outsets" when a negative value is used (as seen in versions 6.1 and 2014).
00032134	PostGIS producer fails in Features Database Output operator with incomplete output when using PostGIS as the Output Connection	When running the provided 'my_salidaclaseentidad1.gmdx' model where the 'Features Database Output' operator is used to output features from an input shapefile with 226,232 area features to a new table in a PostGIS connection the process fails within the 'Features Database Output' operator after 105,366 records have been output to the PostGIS table. After the error occurs, if you double-click the 'Features Output Operator' to open the 'Output Connection' dialog, this results in the display of an error dialog with the message "Timeout while getting a connection from pool.". After this error message dialog is dismissed the 'Output Connection' dialog will be displayed. Note: if the 'Feature Output Operator' is modified to use a new table from a SQL Server Spatial connection and the same model is run, the process completes without error with all input records are successfully output to the SQL Server Spatial table. Therefore, this issue seems to be related to the use of the PostGIS connection for the output table.
00033664	Spatial Intersection results incorrect for certain data	User provided example data and workflow where the results of Spatial Intersection of two area feature classes using the Overlap operator produces incorrect results (unexpected and invalid geometries). The incorrect results of this specific data are obvious, but it is assumed that more often such invalid results may be difficult to identify. The issue is a regression from version 2014 where the results of the spatial intersection are correct; Incorrect results from spatial intersection is first observed in version 15.00.0000.10258.
00005214 00016206	Legend entry title editing: Copy & Paste using keyboard shortcuts is not working	Legend entry title editing: Copy & Paste using keyboard shortcuts is not working anymore. In GeoMedia 6.1 it was possible to use Ctrl+C and Ctrl+V to copy and paste texts from and into legend entry titles. In GeoMedia 2016 this doesn't work anymore. The only way to use the clipboard is using the context menu when editing the legend title/subtitle.
00034139	Update Attributes fails to update Boolean values after selecting Boolean value	When working with Boolean fields, the Update Attributes dialog allows users to select a Boolean value from a drop-down list similar to a picklist that is populated with only True or False. In version 2015 (15.00.0000.10258) the user could simply pick a Boolean value to be used for the update. In versions since 16.0 (16.0.0000.01415+), an error occurs after attempting to update by simply selecting a Boolean value. Version 2016+ users can no longer simply select the Boolean value to be used. To work-around this problem, the Expression button can be used to build a custom expression such as one of the following examples: True() False() It seems that prior to 2016, when updating Boolean fields, the dialog was able to interpret Long Integer values of 1 and 0 as TRUE() and FALSE(). It does seem strange that one could use a Long Integer output type to update a Boolean field therefore when selecting True or False from a list, we might expect the expression to be populated as TRUE() or FALSE() which equate to Boolean types.

1-955OHB	Unable to make edits to features from ESRI 1.1.0 WFS-T service which uses GetFeatureWithLock	Attempts to edit features from WFS-T 1.1.0 service from ESRI results in errors in the client and a response from the server stating "Updates in a WFS Transaction request require a lockId. Use GetFeatureWithLock to acquire a lock before attempting to update it". The server response was reported by the customer in the SR, but I have not actually observed this response myself. However, when connected to the service with the WFS Read-Write data server any attempts to edit geometry or attributes will result in an error message which is often blank. A GDOWFSRW.log file was created and is included in the attachments tab. I was unable to find another WFS client that could make edits to the WFS and a Google search turned up some discussion of this issue indicating that most clients don't support the ESRI 1.1.0 WFS-T service that uses the GetFeatureWithLock element (as per the link below)… http://forums.arcgis.com/threads/51417-Arcgis-server-WFS-T-and-interoperability The customer reported this issue with 14.00.0001.00064, but I have reproduced it with 14.00.0002.92 patch version as well.
1-8811AN	Unable to insert features with GMPro into WFS-T connection	Unable to insert features with GMPro into WFS-T connection. When trying to insert a feature, a warning dialog box was displayed: "Features cannot be inserted into a read-only feature class" Problem also observed in GeoMedia Pro 06.01.11.13. The same features can be edited / inserted using open source Udig software.
1-B70WYQ	WFS-T Data Server Does Not Properly Read and Use InputFormat Parameter	The WFS-T Data server does not read and honor the inputFormat parameter prescribed for Transactions. This issue was noted by development research on issues and problems with GeoMedia reading and writing to GeoServer WFS-T service. "We do not read and honor the inputFormat parameter prescribed for Transactions. Bug on WFS-T Dataserver <ows:Parameter name="inputFormat"><ows:AllowedValues><ows:Value>text/xml; subtype=gml/3.2</ows:Value></ows:AllowedValues></ows:Parameter> The request for WFS is always constructed in gml 3.1.1 since we do not honor the inputFormat parameter. This is a problem since the initial development of the WFS – RW dataserver and has never been upgraded."
00020521	Using default value for text field in PostGIS incorrectly shows value enclosed by quotes on properties dialog	If using a Default Value for a text field, the value is enclosed by quotes on the Properties dialog when inserting features. These quotes will be stored as part of the text string attribute if the text field is large enough to accept the additional quote characters. The problem was first identified for AFM defined default value fields, but the issue also occurs for Non-AFM PostGIS warehouses using a simple feature model where the default value has been set via Warehouse > Feature Class Definition. The problem occurs on Inserts but does not occur when editing the properties of existing features (updates).
00031898 00020517	Disabling AFM Property for PostGIS connection may result in application failure	User reported that sometimes when disabling the AFM property for PostGIS connections that GeoMedia crashes without an opportunity to save. A specific workflow and data were not provided other than the following statement: Most of the time, this arrive after using several editing vector commands with AFM activated (new feature, editing geometry, merge feature, split features ...). After that go to Warehouse connections and disable AFM in PostGIS properties connection. GeoMedia crash after that.

Issues Resolved (16.5 Update 3)

CR #	Summary	Description / How to Reproduce
00021254	Selecting another printer for another job after the previous print job does not change the printer	Selecting another printer for another job after the previous print job does not change the printer. Story can be reproduced in few steps: 1. Run Batch Plotting 2. Select layout 3. Do some print 4. Do another print but using another printer > printer does not change (see: screenshot-1.png) > click OK and the job will print on the previous printer.
00017858	Crash when using two GeoMedia sessions with connection to same Oracle database	A SR was filed reporting a crash when there are two sessions of GeoMedia Desktop with connections to the same Oracle database if specific workflows are performed.
00012066	Select set created with fence selection becomes invalid after using Spin or Rotate command	Features in a select set created using a fence (i.e. with the Select Tool by drawing a rectangle using click and drag or with the 'Select By Polygonal Fence' option or command) can no longer be manipulated after the Spin or Rotate command is selected and exited even though the select set is still active. Specifically, if you try to Spin, Rotate, or Move the features in the select set, an error will occur.
00020664	'Select Source Attributes' changes are retained even if Cancel button is selected	Using the Output to Features Classes dialog, any changes made to the output attributes using the 'Select Source Attributes' dialog are retained even if the Cancel button is selected (if the Rename button was selected after a change to an attribute). Note: it is not necessary to actually change an attribute with the 'Rename' button to have it 'save' the attribute changes so that they are not cancelled later. Instead you simply have to open the Rename button and click the Cancel button to retain the changes.
00035635	Copy Features command producing a "Selected feature cannot be copied." error message	As part of AGON project, we have a functionality setting read only / read write to a feature instance based on its attribute value (like OWNER). Due to this, a user who is the owner of this feature instance can perform edit operations on this feature instance. Other users cannot edit this feature instance. For standard edit commands, it is working fine. However, we observed that the behavior in "COPY command" is not as expected. From debugging in the COPY command workflow, we discovered that GeoMedia is calling GField get_DataUpdatable method on GEOMETRY field, if it finds GEOMETRY field is not updatable then it is raising a standard message "Selected feature cannot be copied." as shown below. COPY parallel and Insert interactive area by face commands are working fine. As a workaround, currently we are maintaining a flag to set data updatable to true if active command is "COPY".
00037050	GeoPackage - Cannot create a table if default name is changed with GPKG AFM connection	Cannot create a table if the default name is changed with a GPKG AFM connection. User cannot create tables with non-default names with the Geopackage connection set as AFM,
00037251	Output To Feature Classes fails for an area feature class from Access when target connection is PostGIS	When running GeoMedia version 16.5.0.3138, when the 'Output to Feature Classes' command is used to output the 'Edifici' area feature class from the provided 'prova.mdb' Access warehouse to a new feature class in a PostGIS database, the process fails with this GeoMedia Professional error message:"Unable to create table or output all features for one or more feature classes. Refer to log file C:\Warehouses GMOTTS.log for details."

00036252	GeoMedia crashes in AFM edit workflow when Undo is enabled	User is experiencing application crashes with AFM editing workflows. The following is an example workflow that results in Event viewer application error that seems to point to some issues with undo. Open an empty GWS Create an AFM connection to the ACCESS db provided Insert 10 water_valves (whatever attribute values) Insert 5 water_main between valves insert the 6th water main between two valves. Discard the attribute property to discard this feature Double-click on a water_main to see its properties -> GM crashes If the "Undo" GM option is not checked. No crash with this workflow. AFM option has to be checked for the connection to make GM crash. If this is not an AFM connection, no crash, even with the Undo option checked. Sometimes it doesn't crash with the open property window after a discard, but after inserting a water_main after having discarded a feature just before.
00037262 00036706	Unable to edit layout legend entry titles in the layout	In Layout Window, if you select a layout legend and right-click for Properties, the Layout Legend Properties dialog appears. The Layout Legend Properties dialog provides 2 methods to rename layout legend entries: Method 1: On Layout Legend Properties dialog select a legend entry and click on the Properties button. The Legend Entry Properties dialog appears providing a "Name" field that you can edit to change the legend entry text. Method 2: On Layout Legend Properties dialog, right-click on a legend entry and select "Rename Entry". Unfortunately, neither of these methods to rename a layout legend entry are working. After making a change and selecting OK to save the Layout Legend Properties, the changes are ignored, and the entry(s) is NOT renamed. The only way to change the text value is to is to make changes to the legend entries in the map window legend. This can be done either in the map window, or in layout by selecting the map frame, then use the Layout tab, Legend Properties command where you can rename the map window legend entries. A change in the map window legend entry title will be automatically updated in the layout view as soon as the layout view is refreshed.
00039662	Legend symbology fails to display after using the "Convert to graphics" command on Windows 10	In Layout window legend symbology fails to display after using the "Convert to graphics" cmd. 1. On WIN10 machine open ussample.gws. 2. Open Layout window and insert "Layout frames" for Map and Legend. 3. Choose "Insert graphics into Layout Frames..." taking the default settings. 4. Select the Legend, right mouse click and select the "Convert to Graphics" command. 5. Select the Zoom In command and in the center of the legend click one time. 6. See resulting display does not display the legend feature symbology graphics, they disappear. Could only reproduce this on WIN10 not WIN7.
00040481	Export to PDF vector/image data results in most of image being cut off	Customer gets an error; however it could not be reproduced. But did notice an issue with most of the image being cut off - only the upper left-most portion of the image is present. This story is to resolve that issue. Vectors and gws coordinate system are State Plane, image is UTM, so image is being reprojected. If gws coordinate system is changed to UTM, then image does not get cut off.
00040519	GeoMedia crashes when making a WMTS connection	GeoMedia crashes when a WMTS data server connection is made to the URL… https://opencache.statkart.no/gatekeeper/gk/gk.open_wmts?Version=1.0.0&service=wmts&request=getcapabilities
00039613	Changing the coordinate system horizontal storage units strokes small Oracle stored arcs to 3 point lines	Have small linear arcs (approximately 1m radius) stored in Oracle. Then set the Geoworkspace Coordinate System, Storage Space, Horizontal storage unit values to small values such as 0.0001 m, the user noticed that the small arcs are stroked in the display to a 3 point line. Larger arcs are not stroked. The problem occurs for both small stand-along arcs as well as small arcs that are part of composite polyline geometries. If then the user outputs or exports these, they are indeed exported as 3 point polylines (stroked). If you set the horizontal storage space back to 1.0, the small arc geometry reappears.

00037043	Selection of join record in data window may result in failure to select / highlight correct records in related tables		User has set of Join queries in the pipeline such that the result of one join is used as input to a second join. In such situations where there are multiple joins in the query pipeline, selection of a join record in the data view may or may not highlight the correct record(s) in related data tables and map view(s). Note: Such highlights should never have occurred, and this has now been eliminated. The query correctly creates new identities for the joined rows in all cases.
00029750	Join query workflow can result in 'Unable to initialize left list of available attributes' message		Customer has discovered a Join workflow that results in the error message ""Unable to initialize left list of available attributes".
00011324	Join function is incorrectly linking features that do not have the selected matching attributes		Customer has provided Shapefile data where ID value of type DOUBLE does not work properly for Joins. Support has also noted that the ID values do not return records from valid attribute queries such as: ID = 458400001794352.
00042367	Export to PDF results in WidthAndHeightCannotBe Negative error		Export to PDF results in error below: One or more errors occurred. System.ArgumentException: WidthAndHeightCannotBeNegative Using customer's .gws/dataset when Export to PDF is run the above error results for any Layout sheets selected that the customer has inserted. If a new layout sheet is inserted, then Export to PDF is successful.
00020664	'Select Source Attributes' changes are retained even if Cancel button is selected		On the Output to Features Classes dialog any changes made to the output attributes using the 'Select Source Attributes' dialog are retained even if the Cancel button is selected (if the Rename button was selected after a change to an attribute). Note that it is not necessary to actually change an attribute with the 'Rename' button to have it 'save' the attribute changes so that they are not cancelled later. Instead you simply have to open the Rename button and click the Cancel button.

Issues Resolved (16.5 Update 4)

CR #	Description / How To Reproduce
00045196	Grid Import fails with certain TIFF files from IMAGINE
00045612	AFM Associate by Proximity uses 3x more memory
00045420	Spatially filtering an AFM-enabled connection has poor performance
00002851 00020169 00043608	An area pattern (hatch) overlays the feature when the Object Data Tool is used in GeoMedia PDF
00051142	Legend entries are not updated correctly for an AFM-enabled connection after the Queries command is used to modify the associated query
00045197	Customized (renamed) layout legend entries are not preserved after opening in versions 16.5.0.2164+
00051180 00042616 00040424 00036741	In the Select Tool, the selected thematic legend entry features lose their select color and a pDGMHighlightset error is displayed when zooming with the mouse wheel
00049410	Insert Cartographic Grid edge labels do not display properly with orientation of parallel
00046823 00010369	Insert Feature command displays "Unable to fetch current record from the cursor" message for a SQL Server join view with an Instead of Insert Trigger defined
00048540	The FormatPointString method of the IUnitAndFormatSpec object does not properly handle locale

00052517	The locale-specific decimal separator for coordinate display and entry is lost after display of raster data
00048616	Update Attributes performance is slower with Oracle after upgrade from the 2014 release
00051983	Export to PDF doesn't honor attribute-based text symbology which references a font title rather than font name
00052087 00045315 00054294 00053806 00020681	The WMTS data server now supports WMTS service implementations that are configured with TLS 1.2 (only)
00055292	Define Coordinate System dialog displays a period "." instead of a comma "," even with the system configured to German regional settings
00055470 00056882	Join query attribute values do not refresh under certain conditions when attributes are updated in the base feature class
00053242	The WMTS data server can display a feature class initially, but after a Zoom In the data disappears from the map window.

Issues Resolved (16.5 Update 5)

CR #	Description / How to Reproduce
00059184 00057025	The WFS data server presents no feature classes when accessing a WFS implementation through a client proxy.
00028748 00028546 00022271	The Dynamic Segmentation command does not properly handle the case of begin/end measures that fall within a single arc geometry.
00060394 00037743	The Batch Plotting utility does not permit changes to the Attribute name on the Base Map tab of the Sheet Composition dialog.
00021875	The Batch Plotting utility does not permit use of warehouse connections having names beginning with numbers.
00041121 00045221	The Batch Plotting utility always prints custom-sized layout sheets to 8.5 x 11 when submitting plots through Sheet Selection.
00064073	Display of raster features from Oracle results in error if AFM is enabled.
00063826	GeoMedia / GeoMedia 3D crashes with an Oracle AFM connection.

Issues Resolved (16.6)

CR #	Summary	Description / How to Reproduce

00024578	ExportToMstnV8Service does not write the correct linkage type	The export service writes all linkage types as ODBC, regardless what is set to LinkageTypes property. The only exception is DMRS type, which seems to be written correctly. Attached is a sample VB.NET application, the sample contains generated dgn files for each linkage type. The actual linkage type exported has been verified in MicroStation.
00007539	GM crashes when either tooltip or description of installed custom command xml tag is blank	When an installed custom command xml file has blank values for either the Description element tag or the Tooltip element tag, the GM GUI will crash upon opening. A crash should not occur. There should be a graceful exit or no exit with an appropriate error message specifying the problematic custom command.
00021351	Transaction Administrator, when error occurs during secure table the 'Restoring to original state' process does not clean-up FSEQ sequence	When Transaction Administrator is used to a secure a table "…if there is an error, rollback does not clean up FSEQ sequence that is created during securing process."
00020047	'Post from Offline' fails to update Oracle features when a SRID is defined for the feature class	The 'Post from Offline' command fails to update features that were updated offline in the Enterprise connection (Oracle Object Model Read-Write) when the feature class in the Oracle database has a SRID value defined. When the 'Post from Offline' command is used to update an Oracle feature class with a SRID define errors will be output to the PostFeatures.log file entries like the following… "PostRecords() exception executing SQLStatement: Error executing SQL extension statement" ' This error text will be repeated for each record that the command attempts to update.
00019263	Copy Attributes Definition fails when source attribute has a default value assigned	Copy Attributes Definition fails when attempting to copy an attribute with a default value from a source feature class in an Access warehouse to a target feature class in the same Access warehouse. The error message has a 'GeoMedia Desktop' title with the text "An error occurred while creating attribute Status in the target feature. No attributes are added to target feature." 'Status' is the name of the attribute being copied.
00022586	Name Location and Locations dialogs hang application on Windows 10 when interact with other applications outside GeoWorkspace	Using dialogs for Name Location and Location commands can result in hanging the GeoMedia application after reviewing Help by pressing F1 key or interacting with other applications outside of the GeoWorkSpace container. This is believed to be the same type of issue as reported in -IG-3568- concerning the Attribute Properties dialog where windows is unable to properly pass control back to the dialog due to failure in the GeoMedia application to declare the active item/dialog to which control should be passed.
00022927	Database Utilities: Assign Coordinate System option fails to list features alphabetically	The Assign Coordinate System option in Database Utilities does not list feature class names in alphabetical order. The features appear to be listed in the order of creation in the database. All other options that list feature class names in Database Utilities (i.e. edit or delete feature class metadata options) list features in alphabetical order.
00035811	Database Utilities / Oracle LTT: Application crash when attempt to display data window for certain Oracle LTT Temporal Query results	Customer has identified and provided an example workflow where the GeoMedia GeoWorkSpace session will abruptly terminate without an opportunity to save changes. The crash occurs when attempting to display Oracle LTT Temporal Query results to a data window for tables where the GDOSYS metadata was inserted using Database Utilities after the table was secured using the Transaction Administrator. The user is encountering the problem for secured tables that were altered using dbms_wm.beginddl to add or remove a column; Afterwards, the GeoMedia metadata was re-inserted for the altered table and for these tables the crash occurs when attempting to display to the data window.

00036327	Switching focus from the 'Location Properties' dialog on a Windows 10 machine to another application and back to GeoMedia causes a hang and forces the user to kill the GeoMedia process	On a Windows 10 machine start GeoMedia and open USSampleData.gws. Select the Home > Display Locations > Name Location command and enter a location name. You can just accept the default 'Location1' name by clicking the OK button. Next select the Locations command and when the Locations dialog appears select the named location from step 2 (e.g. Location1), then click the Properties button. Once the 'Location Properties' dialog is displayed, press the F1 key to open the GeoMedia Help. *Exit the GeoMedia Help dialog by clicking the X button on the right of the title bar for GeoMedia Help. Note: when the GeoMedia Help dialog is dismissed, the Location Properties dialog is no longer visible. At this point, GeoMedia is in a locked / hung state and you cannot provide any input within the application. Therefore, you are unable to save or exit GeoMedia normally and you must end the GeoMedia application using Task Manager.
00011264	UPPER function from functional attribute on Arabic data returns question mark	We have a feature class with an attribute column containing English and Arabic data. If we apply UPPER function from functional attribute on this column, the Arabic data becomes question marks.
00008266	If locations.xml cannot be found the Display Location command dialogs fail to display	If the last locations xml file accessed has been removed or moved from its location, the command does not allow the selection of a new xml file. The browser form does not display.
00015589 00020160	Location Properties - Scaling values not locale-aware	Location Properties > Display Scale misinterpreted when scale is defined with German regional settings. Scale displayed as 1:2,000,000 when it should be 1:2.000.000. Behavior of form is broken if proper delimiter is used.
00012166	Functional Attributes fails to support HyperText format for MEMO data type	GeoMedia supports hypertext formatted memo fields. For example, MEMO type fields can be defined as hypertext in Feature Class Definition for use in data window and attribute properties operations. However, Functional Attributes does not seem to account for this support thus forcing users to constrain hypertext fields to TEXT of 255 maximum length.
00022171	TRIM of concatenated null can result in crashing application	User has built several functional expressions (let's call A, B, and C) that evaluate to TEXT data type. In the same Functional Attributes query, the user also creates another expression that CONCATENATES the output of those expressions [A, B, C] and TRIMS the results. For example TRIM(CONCATENATE(' ', Output.A, Output.B, Output.C)). For any record in the input record set, if A and B and C all evaluate to NULL text then GeoMedia can no longer display the query and attempting to work with the query properties or editing of the record set can result in a hang and/or crash of the application. This means that in the normal course of data collection, if the data changes such that A, B and C all become NULL then existing query legend entries will not load and/or become unstable enough to crash.
00022884	Concatenate expression may return incorrect or unexpected null value result for certain expressions	Concatenate expression may return incorrect or unexpected null value result for certain expressions where the user is using a concatenation of a concatenation result. Example: CONCATENATE("","'",CONCATENATE(",",Input.STATE_NAME),"'") The unexpected value returned from the expression is a blank or null value. The expected result is a list of comma-separated values which are enclosed by quotes.
00024753 00006450 00011335 00037854 00036753	Pan via mouse wheel removes selection	If you manually select one or more features and then use the mouse wheel to pan the map, the features become unselected. No other view manipulations, including pan hand, reset the selected features. Only the middle mouse wheel pan. Holding the 'Ctrl' control key while panning with the wheel maintains the select set.
00025176	GeoMedia locks up/freezes when functional attribute expression is edited	GeoMedia freezes when functional attribute expression is edited. Use USsample dataset to reproduce. Open Functional Attribute creation window Put TEXT("1,'') as expression Move cursor between first two ''. Press delete - GeoMedia freezes Note: these are not double quotes, they are consecutive single quotes in each case.

00005201	Problem with caching when creating new feature class with same name as previous	When caching is activated there is no correct actualizing of the cache when deleting a feature class and after that creating the feature class again (with exactly the same name, attributes...). Procedure: 1. Define a feature class and digitize some objects. 2. Delete the feature class and remove it from the map window legend. 3. Define the same feature class again (with exactly the same properties). 4. Insert the new feature class into the map window legend: the old objects are still there, although they don't longer exist in the database. Only after using the command "Refresh cache" the cache gets really refreshed.
00013962	Text Functions Upper and Lower Do Not Work With Unicode Characters	When working with Unicode character strings, the functions UPPER and LOWER produce invalid results. When using UPPER or LOWER functions in the given data (ref. attachments) we see a 94% failure rate. This is to say that the result of UPPER and/or LOWER was incorrect for 94% of the given 129 Unicode sample characters. Note: Similar problems can be observed when using PROPER function also.
00018032	DISTANCE function returns NULL value when distance should be a value of 0.000	Customer has reasonable expectation that the DISTANCE expression should return a value of 0.000 when the 2 geometries compared are spatially touching. For example, customer is using DISTANCE expression to compare the distance between points and lines. If the points do not touch the line, a distance value (type double) is correctly returned. However, if the point touches the line, the value returned is NULL. The user expects that when the items are touching that the distance returned should be a value of 0.000, not a NULL. NULL is not the same as 0.000 distance.
00035745 00012778	Area Pattern fill is missing in Map, Layout Window display and GeoPDF output file	Area fill (Hatch and pattern fill) is missing in Map and Layout Window and output PDF/GeoPDF. (Gradient/solid fill are good) When the user is fill patterning using the GM Map Publisher Fonts (.ttf) and a hatch patterning, the fill is missing in certain (non-square) polygons in Map Window, Layout Window and output PDF/GeoPDF files. This probably relates to the complexity of the boundary. Note: when one of these 'empty' polygons is hovered over, the highlighted polygon contains fill.
00005693	Aggregation may result in Error loading data and possible application crash	User has provided data and reproducible workflow where the use of Aggregation with spatial operators such as Overlap or Touch results in the following error: An error was encountered loading data for Aggregation of OH_WPZW_A and OH_WPZW_A legend entry. Do you want to continue loading remaining legend entries?
00028155	Post from Offline fails if features contain field of type MEMO	Post from Offline does not correctly post updates (possibly inserts also) when the Oracle feature contains a MEMO field. The command posts a successful completion alert dialog, but further review shows that no updates occurred. The resulting error log file contains this message: PostRecords() exception executing SQLStatement: External component has thrown an exception.
00031365	Certain edits to a functional attribute expression result in application hang / crash	Customer has defined a functional attribute IF(Input.ID>20; 'Test'; '') that works fine (Note: this is done on a German Windows system, so the delimiter separating the arguments of a function is the semicolon (). When the last single quote in the expression is deleted ==> IF(Input.ID>20; 'Test'; ') there is the expected error message when hitting OK trying to save the invalid expression. Instead. if one of the single quotes surrounding the word Test is deleted ==> IF(Input.ID>20; 'Test; ''), upon hitting OK, the dialogue freezes, and when trying to close the dialog, GeoMedia crashes.

00033613	Aggregation query crashes GM	Workflow to aggregate the nearest street to an address point, but GM crashes even if spatially filter down to one address point. Filter address points to only get those with valid address. Filter streets to remove any non-named streets. Add address points as summary feature, streets as detail feature. Spatial Aggregation selected is "accumulate nearest". Output is the detail street name. Give the query a name, hit OK, and GM will think a bit, then crash.
00038281	Generate Static Labels does not use the Modification Log to update values	The workflow involves building queries to create straight text from curved text represented by labels. Apparently, the Generate Static label command does not output/update the GM modification log. The only way GeoMedia is aware of the new Static Labels change in the data is by going into the Warehouse Connections dialog and closing/reopening the warehouse connection the labels were created from.
00028702 00021641	Save of unchanged GeoWorkspace essentially doubles the size of the .gws file	A second Save of a GeoWorkspace essentially doubles the size of the .gws file on disk even though there have been no changes to the GeoWorkspace. A subsequent 'Save As' to a different file name results in the .gws file returning to the initial size again. The customer finds this behavior disconcerting and confusing, although they have reported no specific problem caused by the increased .gws file size. Nevertheless, since there is a doubling of the .gws file size upon the second save (after the initial save of the GeoWorkspace) that should not occur there does appear to be a bug in the Save logic.
00012221	Publishing cache with PublishIFC for non-spatial MS SQL geometry using Feature Accessor option may fail	Publishing cache for non-spatial MS SQL geometry using Feature Accessor option fails to publish using PublishIFC.exe at command line User has MS SQL non-spatial geometry and wishes to publish the data to Index Feature Cache using the PublishIFC.exe but finds that for any feature class with an index on the geometry range columns (Geometry_XLO, Geometry_YLO... etc) that the feature with the index will fail to publish. The problem seems to be restricted to when the index is present and only when using PublishIFC.exe for command line processing using a profile. The publish method used is the Feature Accessor option (recommended by Help).
00041352	'SQL Server Features Proxy' connection fails for Features Input operator if SQL Server Spatial database contains a feature class with both a primary and secondary geometry	When running Spatial Model Editor and attempting to connect to a SQL Server Spatial database that has a feature class with a primary and secondary geometry column, the connection fails with the error message: "Subquery returned more than 1 value. This is not permitted when the subquery follows =, !=, <, <= , >, >= or when the subquery is used as an expression." If connecting to the same database via GeoMedia, the connection completes successfully with no errors.
00041448	'SQL Server Features Proxy' connection fails for Features Input operator with "One of the identified items was in an invalid format." message for customer database	When running Spatial Model Editor and attempting to connect to the customer provided 'DW_Planning' SQL Server Spatial database, the connection fails with the error message: "One of the identified items was in an invalid format." If connecting to the same database via GeoMedia, the connection completes successfully with no errors.

00042611	Creation of SQL Server Features Proxy (.sfp) for Features Input operator fails for certain databases	When attempting to create a SQL Server Features Proxy (.sfp) file from the Filename port of the 'Features Input' operator in Spatial Model Editor, the following error may be displayed for certain databases:
		    Sm Error
		    Error - Invalid input data
		The error listed above is displayed after the connection is made to the database, upon selection of the row in the Database Connections grid (that is required to enable population of the Features Table grid so that the user can select the desired feature class). Since it is not possible to move beyond this step, the user cannot select a Feature Class from the Feature Tables grid and prevents the creation of a .sfp file for SQL Server.

00043126	Features Output operator gives error with shapefile output on network due to CSF creation problem	Customer cannot use the Feature Output operator to write shapefile. On a local hard drive everything is fine, but if the user wants to write the data via the network, the spatial model failed. We created a model, with only a feature input and feature output inside and got following error message: "The error occurred in method StgCreateDocfile (erdas::sb_CGP::FeaturesOutput::OnExecute failed)"
00022199	Missing transformation definition (in autodt.ini) for 'EPSG5013: PTRA08' datum	No transformation is provided in the autodt.ini file for the delivered 'EPSG5013: PTRA08' datum. This datum is used in Portugal and a customer discovered that when attempting to transform from the delivered 'Datum Base SE (Porto Santo 1995)' datum to the 'EPSG5013: PTRA08' datum (i.e. from EPSG:3061 to EPSG:5016) that no transformation was taking place.
00043997	Functional Attributes DENSIFY expression function does not appear to work for features with a Geographic coordinate system	While working with feature classes that have a Geographic coordinate system, when using Functional Attributes command with a DENSIFY expression to densify the features in those feature classes, the densification will seemingly fail. For instance if the feature class contains two-point linear features (i.e. a straight line with a start point and end point) that are approximately 635 meters long and you create a Functional Attribute query with the Expression DENSIFY(Input.Geometry, 10) you would expect that the result of the Functional Attribute query would be a geometry with about 65 points. However, this is not the case, instead there are no additional points created meaning the geometry created from the Functional Attribute query is still a two-point line. This issue has to do with the fact that the MaxDistance value is not being interpreted as meters when the coordinate system is Geographic.
00044916	PostgreSQL default value for uuid field fails to correctly populate when inserting records via GeoMedia	PostgreSQL has a function called uuid-ossp that can be used to generate unique identifiers (UUIDs). For a given PostgreSQL database, you can right-click on Extensions in PgAdmin to add-in the uuid-ossp extension if it is not already present. The user has the goal to generate a default uuid value for an attribute field when inserting from GeoMedia; the approach is to set the default value for the field in PostgreSQL such that when inserts performed the field is populated with the default value from the uuid-ossp function. Their approach works fine when inserting records in PostgreSQL / PgAdmin but unfortunately, if the insert occurs from GeoMedia (Insert Feature), the resulting uuid / Guid is garbled, incorrect and duplicated for each insert.
00046282	Insert Label option 'Enable leader lines' fails for a PostGIS feature class from a schema other than 'public'	When connected to a PostGIS warehouse and attempting to label a feature class from a schema other than 'public' with the Insert Label command you will find that it is not possible to use the 'Enable leader lines' option to specify a new feature class in that non-public schema. For instance if the schema is named 'usera' and the value 'usera.statesleaderline' is entered into the 'Enable leader lines' > 'Feature class' field when the OK button is clicked on the Insert Label dialog an error message is displayed with a 'GeoMedia Desktop' title that states: "The selected leader line feature class is not valid for use with this input feature class or query. The number of characters in the feature class name might have exceeded the limit. The chosen leader line feature class must be of linear geometry type, must have an autonumber primary key field, and must have foreign key fields which match the primary key fields of the input feature class or query." Despite the message, if you check the Tables list in the 'usera' schema of the Postgres database, you can see that the 'statesleaderline' table was created. However, GeoMedia does not recognize that the leader line table exists, meaning that if you attempt to use the Insert Leader Line command a message is displayed stating: "Invalid Selection. Leader line placement requires label queries that were placed with the 'Enable leader lines' option selected. Choose a single label that was placed with this option."

00046106	AggregationPipe processing a particular composite polygon geometry causes GM to crash	GM crashing with Aggregation query processing composite polygon geometry. Observations: The failure is caused by some specific features with composite polygon geometry. There was one point of failure found by working down to a single street geometry with some points around it. There are other failure points too but haven't pin pointed or know how many there are. Validate Geometry was run on features successfully which did not identify any problem geometries. It is unknown what about this particular street is causing the issue, but there are several possibilities including the following: 1. It is a composite polygon geometry containing two poly-lines and two arcs representing a street terminating at a cul-de-sac. 2. One of the arcs is very flat. 3. The other arc is (almost) a complete circle. Customer's description workflow: Objective: Finding Street Nearest to Address Point Description: Customer is trying to get the street closest to an address point in order to determine if the address street matches that street name.
00006137	Warehouse Connections dialog selects and highlights wrong cells when many connections are made	Warehouse connection dialog selects and highlights wrong cells when many connections are made. If the Geoworkspace has more connections than the Warehouse connection form, it can show without a scrollbar, clicking in a cell in the form will not hit the cell that one has aimed at. The form will reposition the rows so that another cell is highlighted. This happens when you click in cells (perhaps in order to copy a path), not when you click on the button to the left of the row to highlight the whole row (to make it possible to change properties). There is an exception: Any first (and sometimes second) click without using the scrollbar first will result in a proper hit. But any second click in any cell will result in a hit in a totally different cell.
00014321	Delay in initialization of the Manage Data > commands	Customer reports a problem with loading Manage Data tab > Warehouse functionality at first GeoMedia run. How to reproduce: 1. Start GeoMedia App, new GeoWorkspace. 2. Select the Manage Data Tab - notice that u cannot use 'Warehouse' button 3.* You can use 'Warehouse' button if you wait for the 'GeoMedia Explorer' and 'APOLLO Explorer' buttons to become 'grayed out.
00046334	Generate Static Labels command creates tables in the public schema rather than the specified user schema when using a PostGIS feature class from a schema other than 'public'	When connected to a PostGIS warehouse and attempting to use Generate Static Labels to label a feature class from a schema other than 'public' you will find that tables created by Generate Static Labels are created in the 'public' schema rather than the user schema for the specified feature class.
00013521	Help content fails to document how to setup PostGIS warehouse for Advanced Feature Model - AFM	GeoMedia Help fails to offer information about how to setup and use Advanced Feature Model (AFM) for read-write PostGIS warehouse. While information for Oracle and MS SQL Server can found (look in subsection: Working with Advanced Feature Model), there appears to be no information about how to setup required AFM metadata for PostGIS.
00006496	Microsoft.SqlServer.Types assembly missing when running DataSourceMonikerCreator.exe utility	When trying to create the Data Source Moniker using the DataSourceMonikerCreator.exe utility, the customer gets an error saying that "cannot find Microsoft.SqlServer.Types assembly". This assembly is installed either by Visual Studio or by MS SQL Server but is missing on a plain Windows system. To fix the issue, the "SQL Server Feature Pack 2014", 32bit version must be loaded (as described for example here: http://stackoverflow.com/questions/16906686/could-not-load-file-or-assembly-microsoft-sqlserver-management-sdk-sfc-version-1). The customer requests the documentation to be updated accordingly.

00005364	Summary Wrong error message displayed when remote user attempts to open GeoWorkspace that is already open	If a GeoWorkspace is currently open on a local machine and a user from a remote machine tries to open that same GeoWorkspace the following 'GeoMedia Professional' error message is presented to the user on the remote machine: "Error opening the GeoWorkspace Source:GMCmdSupt Description:Object variable or With block variable not set" By contrast if a GeoWorkspace is currently open on a local machine and the user on the local machine attempts to open another instance of the same GeoWorkspace (with a separate instance of GeoMedia Professional) the following 'GeoMedia Professional' error message is presented to the user on the local machine: "Unable to complete operation. A GeoWorkspace is currently open." The customer that reported this issue asks that the error message received by a user on a remote machine be improved so that it is more explicit.
00004858	Intergraph Setup Manager checks for .Net version, confusion reigns	2015 GeoMedia 'setup.vbs' checks .Net version, automatically installing the required version. This is fine, except few customers ever run the 'setup.vbs'. If they run 'setup.exe' or 'geomedia.msi', they get an information dialog saying .Net 4.5.1 is required. If they then go to Control Panel > Programs and Features, they see that their version of .Net is 4.5.50709 (which is really version 4.5). Since 4.5.5XXXX is greater than 4.5.1, they figure that GeoMedia requires them to remove their 'newer' .Net and install the 'older' 4.5.1 (which is really version 4.5.0938). The removal of their existing .Net (4.5) breaks dependent applications. Installing the newer 4.5.1 .Net does not repair these dependent applications. They must then repair or remove/install their other .Net dependent applications to get them working. We need to incorporate the check for .Net version and the associated update to the required .Net version into the setup.exe that the customer initializes to install the products.
00022541	Error with Insert Feature command for AFM feature class in SFM mode	This issue is reported from time to time by customers who turn off AFM on Access connections so they can use Feature Class Definition. There's nothing in GeoMedia Help that offers any guidance on avoiding doing so.
00013474	Spatial Difference may return incorrect results when comparing features containing null geometries	Problem: A spatial difference of two features (A minus B) is calculated. The subtracted feature set (B) is empty. The expected results are all the geometries from feature A. But the result with GeoMedia is about 20% of all geometries. As soon as a dummy line is added to feature B (no geometry, only attributes) the result is as expected. The problem occurs when feature class A contains some null geometries is compared to an empty record set of feature class B. Summary: Feature A with a few null geometries minus an empty record set returns incorrect results. If the null geometry records are excluded then query works as expected.
00033048	Display CAD Files cmd fails to display some DWG elements	The Display CAD Files command fails to display some geometries for DWG elements. Some of the legend entries will contain features without geometries. Layers will be read and added to the legend in GeoMedia, but their geometries will not be recognized. Also tried to set up a manual CAD Schema Definition to include any valid geometries in a DWG file, but GeoMedia still cannot determine any geometries for some specific elements.

00051180 00042616 00040424 00036741	In the Select Tool, the selected thematic legend entry features lose select color and a pDGMHighlightset error is displayed when zooming with mouse wheel	When using the provided test data if a feature is selected from the thematic legend entry and the mouse wheel is used to zoom the selected feature will sometimes lose the highlight color. When this occurs and the mouse is moved over the set of features in the map window an error like the following sometimes occurs. PCICmd1 Error from pDGMHighlightset->Add() It is not clear the precise action that causes the error, but it seems to occur when the mouse moves across other features from the same feature class as the selected feature in the map window or perhaps only when the mouse moves over the feature in the select set that is no longer highlighted. This error does not occur when performing the same workflow for the 'standard' feature class (i.e. when the feature class is not included in the thematic legend). Likewise, it does not appear to occur if using the 'Zoom In' and 'Zoom Out' commands from the ribbon bar. Additionally, the problem could not be reproduced using feature classes from USSampleData.mdb (such as 'Rivers').
00038130	Length of text attribute field in GeoPackage changes once table is created	If you create an attribute text-field for a feature, there seems to be no limitation of the text field length. But if you give a text field length of 1000, the length is displayed as 2147483647 when you edit or review the feature attributes. 1. Create a GeoPackage warehouse. 2. Create a new feature class, point or line. 3. Add an attribute field to the feature class, Text, length 1000. 4. Click OK and confirm on the question to create a primary key field. 5. The feature class is created and seems OK. 6. Review the feature class, and check the length given on the text field, it is now 2147483647. It creates the feature table OK, but when you insert the new feature in a .gws you get two information fields listed below. "The field size is too small to hold all the input characters." "Exiting flxgAttributes_AfterEdit(Error)Invalid procedure call or argument" Clicking OK on both information fields results in the feature being created in the .gws. If you look at the feature record with select set properties the value keyed in is not displayed, the value field is blank.
00040148	Data server serves features from an AutoCAD DWG file with zingers	When the CAD Data Server is used to serve the AutoCAD DWG file named 'Hexagon-SF_23_Y_C_VI_1_NO_A.dwg' the resulting features from the 'C_02_02_02_indice_Normal' feature class are displayed with zingers in the geometry. When the 'Hexagon-SF_23_Y_C_VI_1_NO_A.dwg' is opened with the Autodesk DWG TrueView 2016 application there are no zingers present for the 'C_02_02_02_indice_Normal' layer. https://en.wikipedia.org/wiki/.dwg the AC1024 entry specifies that the files is a DWG 2010 format file.
00045197	User's customized (renamed) layout legend entries are not preserved after opening in versions 16.5.0.2164+	User has version 2015 GeoWorkspaces with layout legends where the layout entries have been renamed / customized. Opening these GeoWorkSpaces in version 2018 results in all legend entries being renamed to match the originating map legend entry. The users customized renaming of the layout legend is lost.
00046442	Features Output operator fails with message "Read fewer bytes than expected" with specific input shapefile	Spatial Model 'Features Output' operator fails with the message "Read fewer bytes than expected." when using the customer provided input shapefile. This is a small shapefile containing 37 area features (of type PolygonZ) that can be opened and displayed successfully in all tested applications.
00048616	Update Attributes performance degradation after upgrade from 2014	Customer upgrading from 2014 to 2016 has noted that Update Attributes workflows using specific Oracle data are 2 to 3.5 times slower. Problem has been tested and reproduced by both regional office as well as Hexagon Geospatial support and confirmed to be a regression that appears to have started in version 2015 and persist to the current versions of 2018.

00049753	Reposition command for labelling fails with message that the label's associated feature could not be found	The Reposition command in labeling can be used to adjust the text geometry for static labels. To be used with the Reposition label command, the static labels must be stored as a feature class (as opposed to a static label query). It has been noted that if the source feature class (features such as Street segments that were labeled) does not have a primary key defined (visible or hidden); then attempting to use the Reposition command on the static labels of said feature class (that has no PK) will result in the following error: GeoMedia Desktop The label's associated feature could not be found. The error is because the feature class that was labeled does not have a primary key. Presumably the primary key serves as a link value for some of the Labeling metadata tables. The message should be expanded to include this information.
00051142	Legend entries are not updated correctly for an AFM Enabled connection after the Queries command is used to modify the associated query	When using an AFM Enabled warehouse connection if you create an Attribute Query and add the query to the legend, then use the Queries command to change the filter for that Attribute Query the legend entry will not be updated correctly. Specifically the legend statistics will be set to 0 and for the query legend entry and if you use the Connections command to 'Reopen' the connection all of the features in the map window will disappear and all legend entries will be set to 0 statistics.
00046823	'Insert Feature' displays "Unable to fetch current record from the cursor" message for a SQL Server join view with an Instead of Insert Trigger defined	A customer has a SQL Server Spatial database where a Join View is defined on two tables. The view has an 'Instead Of Insert' trigger defined, and the view is exposed in GeoMedia. When the Insert Feature command is used to insert a point feature for the view the second insert and all subsequent inserts results in the error message "Unable to fetch current record from the cursor".
00049410	Insert Cartographic Grid edge labels do not display properly with orientation parallel setting	Layout window Insert Cartographic grid edge labels do not display properly with orientation set to parallel. This issue is with the GM 16.5.0.4108 Update 3 release. The resulting edge labels which should be parallel are parallel to begin with but then towards the right side of the map change to perpendicular part way across.
00039822	2018 Schema Remodeler produces errors, but no problem with 2015 version	Customer upgrading from GeoMedia Professional 2015 to GeoMedia Professional 2018 update. Able to Load/process attached Test01.dwt in 2015 Schema Remodeler resulting in no errors. Same workflow using GM 2018 update 3 results in errors.
00035692	Validate Connectivity error and crash using 'Non-coincident Intersecting Geometry' anomaly type with 'Auto correct' set to 'Yes'	When running Validate Connectivity on certain feature classes (or a select set of certain feature instances from those feature classes) within the customer provided Access warehouse an error dialog will be displayed with a GeoMedia Desktop title that contains the message: "Automation error. The object invoked has disconnected from its clients."
00042663	PostGIS data server fails to display feature classes from vanilla PostGIS database	User has goal to allow GeoMedia read-only connections to his PostGIS database. The PostGIS database contains no GeoMedia metadata. The database is fairly large with 11 schemas including a public schema containing a populated Geometry_Columns view. The geometries are defined as 2d, but the user does not expect to be making any edits to the data (view as read-only). After connecting to the database, no features are available in GeoMedia for adding to map or data windows and the cause is not clear.
00021921 00023040 00043098	Command Wizard needs to be upgraded to a VSPackage rather than an add-in (deprecated by Microsoft)	Customer reports the Command Wizard does not work in VS 2015. This is due to: Visual Studio add-ins are removed in Visual Studio 2015.

00002204	GeoMedia application crash if use database generated UUID value as primary key	User has defined as a primary key a PostgreSQL field of type UUID. When attempting to insert or update records in this table, the GeoMedia application terminates without opportunity to save.
00059126	Attribute Query for a value that contains diacritic characters fails to return the expected results for GeoPackage	Use the 'New Warehouse Connection' command and make a 'GeoPackage Read-Write' connection to the provided 'deu_utm32_2020.gpkg' file (from the attached GeoPackageUmlaut.zip file). Select the 'Attribute Query' command. On the 'Attribute Query' dialog choose 'Bundesland' from the 'Select features in' drop-down list. Click the Filter button and from the Attributes list select NAME, and from Operators frame choose the '=' button, then click the Show Values button and choose the top most item which is 'Baden-Württemberg'. The Filter field should now contain a filter where NAME = 'Baden-Württemberg'. Click the OK button to exit the filter dialog, then click the OK button on the main Attribute Query dialog to execute the query. When the Data Window is displayed for the 'Attribute Query of Bundesland' query note that the data window is blank (meaning no records were returned for the query).
00058391	Attribute (column) names with diacritic characters are displayed incorrectly	Use the 'New Warehouse Connection' command and make a 'GeoPackage Read-Write' connection to the provided 'deu_utm32_2020.gpkg' file (from the attached GeoPackageDiacritics.zip file). Use the 'New Data Window' command to open a data window for the feature class 'Bundesland'. Note that when the Data Window is displayed that the last three attribute (column) names that contain diacritic characters are displayed incorrectly. This issue is apparent in the other commands where attribute names are displayed as well including 'Feature Class Definition', 'Select Set Properties', and 'Attribute Query'.
00059126	Attribute Query for a value that contains diacritic characters fails to return the expected results for GeoPackage	Using GeoMedia 2018 Update 4 (16.5.0.5107), create a new blank GeoWorkspace. Use the 'New Warehouse Connection' command and make a 'GeoPackage Read-Write' connection to the provided 'deu_utm32_2020.gpkg' file (from the attached GeoPackageUmlaut.zip file). Select the 'Attribute Query' command. On the 'Attribute Query' dialog choose 'Bundesland' from the 'Select features in' drop-down list. Click the Filter button and from the Attributes list select NAME, and from Operators frame choose the '=' button, then click the Show Values button and choose the top most item which is 'Baden-Württemberg'. The Filter field should now contain a filter where NAME = 'Baden-Württemberg'. Click the OK button to exit the filter dialog, then click the OK button on the main Attribute Query dialog to execute the query. When the Data Window is displayed for the 'Attribute Query of Bundesland' query note that the data window is blank (meaning no records were returned for the query). If you perform this same workflow but choose an attribute value for 'NAME' that does not contain a diacritic character (i.e. NAME = 'Bayern'), the query will return the expected result as seen in the Data Window.
00058391	Attribute (column) names with diacritic characters are displayed incorrectly for GeoPackage	Using GeoMedia 2018 Update 4 (16.5.0.5107), create a new blank GeoWorkspace. Use the 'New Warehouse Connection' command and make a 'GeoPackage Read-Write' connection to the provided 'deu_utm32_2020.gpkg' file (from the attached GeoPackageDiacritics.zip file). Use the 'New Data Window' command to open a data window for the feature class 'Bundesland'. Note that when the Data Window is displayed that the last three attribute (column) names that contain diacritic characters are displayed incorrectly. This issue is apparent in the other commands where attribute names are displayed as well including 'Feature Class Definition', 'Select Set Properties', and 'Attribute Query'.
00027865	Edit Geometry becomes extremely slow when two instances of GeoMedia are connected to the same PostGIS AFM database	When there are two instances of GeoMedia on the same machine connected to the same AFM enabled PostGIS database that make use of editing commands (i.e. Edit Geometry), GeoMedia becomes very slow.
00053445	GeoPackage - Output to Feature Classes field names do not use UTF-8	Output to feature class column names do not use UTF-8 so German diacritical (Umlaut) chars [äöüÄÖÜ] as well as German 'sharp s' [ß'] are not displayed correctly when viewed in QGIS.

Issues Resolved (16.6 Update 1)

Support Ticket	Description
00052913	The server name field is truncated in the New Warehouse Connection command for a PostGIS database with an AWS server name.
00012067	A coordinate system definition specified for AFM via the Feature Model command is not saved when GCoordSystem is empty.
00046621 00043393 00040691	The Select Set Properties dialog cannot be accessed on a single-monitor configuration if last positioned on an extended monitor.
00053948	Setting an angle of "0" for the definition of a Dash Line Style results in an error.
00006080	Database Utilities adds a space to the end of an assigned sequence number in Oracle.
00008532 00021310 00023037 00052277	Attribute Query returns incorrect results when there is a very large integer number used in the SQL where clause.
00039428	Tag Attribute values from MicroStation V8 design files are missing on Windows 10.
00054319	After changing the warehouse connection name, the Explorer window changes the order and names of connections.
00002583 00021042 00008419	The ArcView data server does not properly serve 3D shapefile geometries that have a null Z value.
00046065 00038521	Coordinate system transformation from EPSG:6991 (Israel Datum) to EPSG:4326 (WGS84 Datum) produces an incorrect result.
00031817	The PostGIS data server has incorrect logic when parsing a combined spatial filter and attribute filter.
00020089	When setting the coordinate systems projection to Krovak in the Define Coordinate System dialog, GeoMedia uses EPSG:5513 instead of EPSG:5514.
00021095	The Oracle data server generates errors when inserting metadata for Oracle tables containing field or table descriptions or comments that exceed 255 characters.
00056458	Drag-and-Drop of GeoPackage database with no GeoMedia metadata fails to add any feature class to the legend.
00056337	A read-write connection to a SQL Server database with no metadata results in errors from Select Set Properties or Display Data Window.
00024575	An SVG symbol (1.1 version) with a path element fails to display.
00020371 00019594 00002864 00020156 00038373 00049140	The X (close) button of Measure Area dialog disappears if opening it a second time.
00013382	The ArcView data server in some cases does not properly serve non-graphic shape files (those with only a .dbf file and no .shp file).
00018278 00006615	The Review Attributes command does not properly present attributes from categorized features.
00030211	The ArcView data server does not properly serve shapefiles that lack attributes.
00034127	The display of a certain shapefile in GeoMedia results in zingers.
00054652 00053206	Label queries created through the Insert Label command using leader lines do not reposition the label when the leader line is edited or moved.
00053291	Label queries created through the Insert Label command do not update the label when the attribute is edited.
00053495	GeoMedia Help incorrectly references an Intergraph folder in the path "C:\Program Files(x86)\Intergraph\GeoMedia Professional\" in several different help topics.
00054859	The 'Connection Manager' dialog of Spatial Modeler fails to open a PostGIS connection when there is partial GeoMedia metadata that can be used.

00054688	After inserting a new georeferenced image on a machine configured with German regional settings, the Width style property for an area legend entry is displayed with a period instead of comma for the decimal separator.
00020946 00021243	No tiles are displayed for a WMTS cite configured with TLS 1.2 only.
00015212	The Define Symbol File utility crashes while adding symbols from a MicroStation v8 design file.
00024330	Keyboard arrow keys on the PostGIS connection properties dialog act as if using the tab key.
00024492	The Report Warehouse Schema command does not present PostGIS feature classes in alphabetical order.
00024493	The Manage Attribute Validation Rules command does not present PostGIS feature classes in alphabetical order when building rules.
00026043	The WMTS data server is unable to display data from an authenticated WMTS service.
00040532	The Change Feature Class command with 'Copy values from matching attributes' selected sometimes copies the wrong value to the target attribute.
00043682	The WMTS data server fails to honor the 'Image format' setting from the Advanced Options dialog.
00051595	The Union Features operator fails to preserve Z values from source features in output features if the source CRS is not recognized.
00053240	The WMTS data server submits the URL with all lower-case characters, causing an authorization failure when an access token is required for authentication.
00046851 00037350	The Feature Class Definition command allows definition of an Oracle feature class name with more than 24 characters for an Oracle 12.2 database, but afterwards GeoMedia can no longer connect to the database.
00020786	The Select Set Properties command presents an incorrect picklist value for an attribute when the actual attribute value is not in the picklist (due to workflow with the Change Feature Class command).
00053951	The WMTS data server does not properly read CRS from Supported CRS elements.
00041031 00002844	Buttons disappears when the Database Utilities form is resized.
00015731	Database Utilities allows insertion of feature class table names that are considered invalid by GDO.
00059289	Validate Feature Classes queries for the Advanced Feature Model (AFM) are not correctly updated when a spatial filter is defined.
00058135	Use of an AutoCAD symbol file in a style definition yields an error.
00059242	The "Attributes" button on the Query Properties dialog of the Queries command fails to display the Attributes dialog for a Union query.
00034325	Any change to a picklist value on the Select Set Properties dialog is not saved if the attribute name has a space in it through use of the Categories command.
00060327 00046851 00037350	The Feature Class Definition command allows definition of an Oracle 12.2 feature class name with more than 24 characters, after which GeoMedia can no longer connect to the database.
00059184 00057025	The WFS data server presents no feature classes when accessing a WFS implementation through a client proxy.

Issues Resolved (16.6 Update 2)

Support Ticket	Description
00056415	GeoMedia PDF export ignores settings for interior boundary tint styles.
00058202 00056416	GeoMedia PDF export ignores dash caps option when custom line type is selected.
00061856	The Default Height command does not permit the default height to be set on Windows 10 with a German operating system having regional settings using a decimal separator of comma.
00060839	The GeoPackage data server is unable to create a feature class with a name having special Norwegian characters.
00062778	The GeoPackage data server does not properly report the case of non-GDO-compliant database identifiers (table and field names).
00060934	The WMS data server does not properly handle the case of a WMS implementation requiring authentication within layer requests.
00063704	The SQL Server capability of Database Utilities throws the error 'Cannot resolve the collation conflict' when adding a view-based feature class involving aggregation.
00012265	The SQL Server data server GDO) presents the error message "Unable to fetch current record from cursor" when deleting.

00015658 00005727	The SQL Server data server displays a message box stating "fetching data and the cursor" in a workflow involved a delete.
00064084	The Oracle Object Model and Oracle LTT data servers crash in GeoMedia 2020 Update 1 when accessing tables without GeoMedia metadata via OriginatingPipe.
00017788	Output to Feature Classes command fails after use Feature Class Definition to rename a SQL Server Spatial feature class.
00065088	The Edit Feature Class Metadata capability fails in Database Utilities for the GeoMedia-format SQL Server warehouse.
00065230 00064420 00064205 00053446 00060435	An edit to a legend entry title results in the refresh of all map windows and a change of the active map window.
00064855 00041246 00052350 00057363 00029067 00057240 00036160	The WFS data server shows no feature classes available from the warehouse connection. [Note: For certain WFS implementations it may be necessary to use the new advanced option "Download feature classes and process locally".
00049171 00043596	The WFS data server shows no feature classes available from the warehouse connection when a proxy server is used.
00066302 00020687 00068199	The Attribute Query command fails with an 'mscorlib' error under certain circumstances (e.g. when a spatial filter is defined).
00058415	The WFS data server fails to load feature classes after a spatial filter is applied.
00058852	The WFS data server connection fails a certain CRS configuration/syntax.
00064269	The delivery of GeoMedia Objects is missing PipeNetwork_tlb.dll and its associated files,
00065246 00065261	The CAD data server has a runtime error when listing available Tags in a CAD Server Schema file for MicroStation v8.
00066344 00065248	The GeoMedia Desktop Configuration Wizard is not triggered after installation of GeoMedia Desktop 2020 Update 1 for any of GeoMedia Viewer, GeoMedia Essentials, or GeoMedia Advantage.
00066277	The GeoPackage data server does not honor certain native GeoPackage metadata indicating that a feature class should be served without geometry fields.
00066259	The SQL Server Spatial data server returns information using the wrong spatial operator, when using a snapshot mode recordset.
00056992	The Batch Plotting utility print capability does not set printer page size correctly for A2, A1, A0.
00034554	The WFS data server fails to connect, with the error message 'Cannot find Comparison_Operators element'.
00065585	The Validate Features command for Advanced Feature Model has a performance regression in GeoMedia 2020 Update 1.
00068104	The GeoPackage data server has memory leaks that affect the scalability of bulk table creation.
00068326	The SQL Server data servers fail with Insert Feature for tables containing fields that disallow null values.
00068658	The SQL Server data servers fail when attempting to create text fields with a length greater than 255.
00068501	The WMTS data server hangs when using an authenticated service implementation if the user fails to enter username and password credentials on the Advanced dialog.
00065909	The WFS data server hangs when performing an attribute query with an active spatial filter.
00066994	The WFS data server fails when connected to a WFS Facade service when using an Attribute Query containing more than one OR operator if a spatial filter is defined.
00069947	The Library Organizer command crashes when copying a Search based on a spatial filter reference feature.

Issues Resolved (16.6 Update 3)

Support Ticket	Description

00067628 00064849 00065334	Display of certain arc geometries generates ghost lines in the layout map graphic.
00005295 00005803 00005791	The G/Technology Interoperability Utility errors when processing an area, line, or point feature class when the system is configured with German regional settings.
00009636	The G/Technology data server is unable to connect to a G/Technology database due to an unregistered Oracle DLL.
00065657	The Associations command fails to display Properties in read-only mode for Oracle LTT data when no revision set is defined.
00066986	The Associations command fails with the message "Error accessing features" when a Functional Attributes query result is selected as input.
00068296	The Associate By Selection command displays a "bookmark" error if the selected features are from a category and displayed through a thematic legend entry.
00068985	When placing features using the Advanced Feature Model, the expected feature association is not created if a point feature is inserted first for the customer database.
00071229	The Batch Plotting utility produces an error on the second run of an export, when filtering on a query.
00070354 00073863	In an application running with GeoMedia Objects, setting the SpatialFilter property on OriginatingPipe breaks the functionality.
00074046	The option 'Relative to ticks' for the placement of labels in the Insert Cartographic Grid command is not available with the German language pack.
00071785	On the Style Properties dialog, when the Advanced tab is active, the dropdown menu for certain style properties cannot be opened with the first click when configured with the German language pack.
00071119	Installations of Updates for GeoMedia Desktop and its language packs can fail under certain conditions when installing on top of a prior update.

Issues Resolved (16.6 Update 4)

Support Ticket	Description
00078183	When a spatial filter is applied to a PostGIS database lacking GeoMedia metadata the filtering is performed via the GeoMedia client rather than the database.
00074412	Loading spatially filtered record sets is slower with PostGIS data server when compared to SQL Server Read-Write (GDO) data server.
00077418	PostGIS feature load and display times are twice as long as in version 2020.
00078203	Output To Feature Classes command ignores the OTTSCommitInterval registry setting, so the default of 500 is used regardless of the value specified.
00077907	OutputToTableService uses an unfiltered query to retrieve metadata.
00077271	The Delete Feature command is very slow beginning with GeoMedia 2020 Update 2.
00077088	A specific join query loads and displays 6x slower than version 2018 Update 5 when using PostGIS.
00079060	Insert of JP2 RGBI files crashes GeoMedia Desktop.
00081208 00080130 00079642	Unable to connect to G/Technology using GeoMedia Desktop 2020 Update 3 when logging is disabled.
00079675	Output To Feature Classes command with output to Oracle returns ORA-00972 : identifier is too long.
00080476	Oracle read-write connection crashes when adding long feature names to legend.
00082434	FSM symbols created with a previous version of GeoMedia are displayed incorrectly in GeoMedia 2020.
00010004	The append option for Export to AutoCAD fails with no error when exporting points as block references.
00032521	The Select by Text command throws an assembly error message.
00018287 00031247	A crash occurs under certain circumstances when connecting to a G/Technology database.

Deprecated

Windows 7

After January 14, 2020, Microsoft will no longer provide security updates or support for PCs running Windows 7. Consequently, the Windows 7.0 operating system is no longer supported by GeoMedia Desktop 2020.

SQL Server 2014

Support for SQL Server 2014 is considered to be viable in this release, which means it is expected to work but is no longer tested, and problems that are unique to it are not guaranteed to be fixed.

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

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

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