RELEASE NOTES

Trimble Positions Desktop add-in

These release notes provide important information about the Trimble® Positions™ Desktop add-in version 10.2.2.1. Please read these release notes carefully.

Introduction

Welcome to version 10.2.2.1 of the Trimble® Positions™ Desktop add-in. The Trimble Positions software suite adds support for Trimble high-accuracy GNSS receivers using Esri ArcGIS for Windows Mobile and ArcPad technology.

An add-in for the Esri ArcGIS for Desktop 10.1 or 10.2 application, the Trimble Positions Desktop add-in is used to set up the required projects, devices, and sessions, and for the day-to-day management of data collected by the Trimble Positions Mobile extension, a custom field application built using the Trimble Positions toolkit, or by the Trimble Positions ArcPad extension, including postprocessing of collected GNSS data.

For detailed information on installing, configuring, and using the Trimble Positions Desktop add-in, see the *Trimble Positions Desktop Add-in Administrator's Guide* and the *Trimble Positions Desktop Add-in User Guide*.

New in this release

This section describes what's new in the Trimble Positions Desktop add-in version 10.2.2.1

- **Esri ArcGIS 10.2.x support.** The Trimble Positions Desktop add-in now properly supports Esri ArcGIS for Desktop 10.2.x in addition to 10.1 and 10.2.

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- **Support for precise feature heights**. This version adds support for antenna height and type for ArcGIS for Windows Mobile workflows (real-time and postprocessed) and antenna height for ArcPad workflows (postprocessed) for the purpose of collecting high-accuracy feature heights. Desktop users can specify how Height Above Ellipsoid values are converted to Mean Sea Level elevations (or not) using a fixed geoid separation or calculated from a GGF file downloaded from the Trimble website. Accordingly, the metadata value formerly known as *Height Above Ellipsoid* is now named *Feature Height*.
- **Additional hardware support.** The Trimble Positions Desktop add-in can now postprocess data from additional field devices in ArcGIS for Windows Mobile workflows: Trimble Juno® 5 Enhanced GPS, Trimble Juno T41™, and Trimble Juno T41 Enhanced GPS.
- **Improved usability.** This version includes various enhancements designed to improve the usability of the software. Such enhancements include control over session outline display and defaulting new Internet-based real-time correction sources to NTRIP.

Issues addressed

This section describes issues that have been addressed in the Trimble Positions Desktop add-in version 10.2.2.1.

- **Failure to register with ArcMap 10.2.x**. The previous version of the add-in would fail to register with ArcMap when installed on ArcMap 10.2.1 or 10.2.2. This has been resolved in this version.
- **NTRIP source table retrieval problems**. In some network configurations, the Trimble Positions Desktop add-in would fail to retrieve the NTRIP source table in the field configuration wizard. This has been fixed for some configurations and if problems still occur, refer to the fix described here: http://positionsblog.trimble.com/?p=229
- **Projects could include multipoint and multipatch geometry types**. If you included layers of geometry type multipoint or multipatch in an ArcPad or Trimble Positions Toolkit project, errors would occur. Layers of this geometry type are now excluded from the list of available layers.
- **Metadata units**. When using projected coordinate systems with a non-metric unit of length, metadata values in the field would be populated appropriately, but desktop processing would overwrite them with metric values. This has been fixed. The unit labeling in the metadata configuration user interface has also been removed to avoid confusion.
- **Postprocessing with folder/file profiles**. There were several problems that could arise when trying to create (and use) a profile for previously downloaded base station files. These have been resolved.
- **Custom spatial references and datum transformations not supported**. The Trimble Positions Desktop add-in did not properly recognize custom spatial references and datum transformations. This has been resolved for common workflows.
- **Database configuration problems would crash ArcMap**. Previously, configuration problems with the Trimble Positions desktop database would cause ArcMap to crash. A relevant error message will now be displayed and the add-in functionality will be disabled.
- **TrimbleSessions.Note field would get null value preventing the session from being available.** In Oracle geodatabases, empty string values in the *TrimbleSessions.Note* field would be converted to null values after synchronization and this caused problems when checking for new sessions. This has been resolved.

New in previous releases

This section describes what was new in earlier versions of the Trimble Positions Desktop add-in.

Version 10.2.0.1

- **Trimble GeoExplorer® Geo 7 series and the Geo 7 rangefinder module support.**
  - The Geo 7 series' orientation sensors are used to rotate the Skyplot, and to show the current heading in the Navigation section, even when stationary.
  - The Geo 7 rangefinder module, together with the orientation sensors, can be used to collect position offsets and record attribute information for distance and angle measurements.
- **Legacy workflow support.** This version adds basic support for a few legacy workflows that have been requested: create data dictionary (DDF) from the layers in the current map document (for the TerraSync™ software), and create a projection file (PRJ) from the coordinate system used in the current map document (for the GPS Pathfinder® Office software). These are both available from the **Create...** button in the projects administration area. The projection file export feature is the same as that provided in the separate add-in referenced in the GPS Pathfinder Office support note PRJ File Extraction Add-In for ArcMap.
- **Field-to-office session notes.** Mobile users can now enter descriptive text about the session and this text will be visible to the Positions Desktop add-in user. The columns visible in the sessions grid of the dockable window have been adjusted to display start time, end time, and these notes.
- **Populating device names from the field.** For large organizations that have named their devices using the standard Windows Mobile registry key, this data can be used to populate the device name visible in the Trimble Positions Desktop add-in. Please contact your Trimble reseller or consult the Trimble Positions Development Team Blog for more information.
- **Improved usability.** This version includes various enhancements designed to improve the usability of the software. Such enhancements include better labeling for functionality that applies to ArcPad versus ArcGIS for Windows Mobile workflows, clearer messaging in the integrated mobile cache synchronization tools, integrated check for proper modifications to the ArcMap.exe.config file prior to postprocessing, session grid groupable by day portion of start date/time (to group sessions by the day they were collected), and directly editable QuickProject check-in path.
- **Improved diagnostics**. Additional information is now included in the log file to assist in troubleshooting.

Version 10.1.1

- **ArcPad workflow support.** Version 10.1.1 of the Trimble Positions Desktop add-in supports data collected using ArcPad with the Trimble Positions ArcPad extension version 10.0.1. This includes support for AXF check-in/-out and the handling of QuickProjects created in ArcPad.
- **Juno® 5 series support**. Version 10.1.1 of the Trimble Positions Desktop add-in supports GNSS measurements from a Juno 5B or 5D receiver.

Version 10.1.0.3

- **Localization**. The Trimble Positions Desktop add-in is now available in the Japanese language, in addition to French, German, Spanish (South American), and Portuguese (Brazilian) languages.

Version 10.1.0.2

- **Trimble Positions Mobile extension offset support**. The Trimble Positions Desktop add-in now supports feature geometry data collected using offsets with the Trimble Positions Mobile extension version 10.1.1.1. This includes support for simple left-/right- offsets alongside a path or perimeter and complex distance-bearing offsets for point features or polyline and polygon vertices.
- **Development Team Blog.** The Trimble Positions Software Suite Development Team Blog is now available at http://positionsblog.trimble.com. Be sure to visit and sign-up to this blog. It was started by the Trimble Positions product development team as a way to better communicate directly with dealers and customers. Please check back frequently for new content.
- **Support for ArcGIS for Desktop Basic edition**. The Trimble Positions Desktop add-in now supports the ArcGIS for Desktop Basic edition, with the following limitations:
  - For ArcPad workflow with Trimble Positions ArcPad extension: Limited or no support for enterprise geodatabases and ArcSDE services; refer to Esri documentation.
  - For ArcGIS for Windows Mobile workflow with Trimble Positions Mobile extension:
    - Cannot enable or synchronize attachments.
    - Cannot add GlobalID fields through the User Interface to allow synchronization.
    - Degraded performance when collecting session data in the field.
- **Polyline geometry extension support**. The Trimble Positions Desktop add-in now supports the geometry created with the Trimble Positions Mobile extension version 10.1.1.1 after extending an existing polyline feature in the field.
- **Built-in Mobile Cache creation and synchronization**. The Trimble Positions Desktop add-in now has integrated support for creating and synchronizing the Mobile Cache without needing to use the Esri Mobile toolbox. This streamlines workflow within the Trimble Positions solution.
- **Map extent used to sort base stations when creating a profile**. The Trimble Positions Desktop add-in now allows you to sort the base station list by proximity to the current map extent when creating a postprocessing profile.
- **Deletion of previously downloaded base station data**. The Trimble Positions Desktop add-in now allows the user to delete and re-download base station data. This is sometimes necessary when a previously downloaded base station file is corrupted or incomplete.
- **Virtual PC installations support**. The Trimble Positions Desktop Configuration tool now supports activation on virtual PCs. Virtual PC installations are useful when the user wishes to install more than one otherwise conflicting application software versions on a single physical PC.
- **Citrix and roaming profiles support**. The Trimble Positions Software Suite now supports the concepts of roaming profiles and per-user configurations on the desktop. This is useful in larger enterprise organizations where software applications and user configurations are centrally managed. Per-machine configurations are also still supported.

The Trimble Positions system configuration is stored in one of the following folders, dependent on profile type and operating system:

Profile type	Windows 7	Windows XP
Per-user (roaming)	C:\Users\<username>\AppData\Roaming\ Trimble\Positions\10.1	C:\Documents and Settings\<username>\Application Data\Trimble\Positions\10.1
System (local)	C:\ProgramData\Trimble\Positions\10.1	C:\Documents and Settings\All Users\Application Data\Trimble\Positions\10.1

- **Base station management support**. The Trimble Positions Desktop Configuration tool now supports base station management, including updating the CBS List from the Trimble FTP server, loading of user-defined base stations defined and used in GPS Pathfinder Office and Trimble GPS Analyst™ extension, and saving of user-defined base stations defined in Trimble Positions Desktop add-in.
- **Localization.** The Trimble Positions Desktop add-in is now available in French, German, Spanish (South American), and Portuguese (Brazilian) languages.
- **Educator license program**. The Trimble Positions Desktop add-in is now available within the educator license program.

Installation and configuration

- **In the previous release (10.2.0.1), the schema for the Trimble Positions Desktop database changed**. To upgrade your schema, run the Trimble Positions Desktop Configuration application and click *Test current configuration*. All existing data and settings will be preserved. This must be done prior to running the Trimble Positions Desktop add-in version **10.2.0.1 and later** and cannot be undone without support from Trimble.
- This version of the Trimble Positions Desktop add-in supports Esri ArcGIS for Desktop 10.1, 10.2, and 10.2.x. You must install the Esri software before installing the Trimble software.
- If you have installed an earlier version of the Trimble Positions Desktop add-in on your system, uninstall it completely before installing the new version.
- The settings folders where the configuration files and Jet databases are stored have not changed in this release. They continue to use the *10.1* name in the folder tree.

Known issues

This section describes known issues with the Trimble Positions Desktop add-in version 10.2.2.1.

Installation and configuration

- If you uninstall the Trimble Positions Desktop add-in when the Esri ArcGIS for Desktop software is running, the add-in successfully uninstalls, but some files that are used during operation may be left in the file system. Trimble recommends that you exit the Esri ArcGIS for Desktop software before you uninstall the Trimble Positions Desktop add-in.

- During the installation process, the Trimble Positions Desktop add-in installer attempts to modify the ArcMap.exe.config file in the C:\Program Files (x86)\ArcGIS\Desktop 10.1\bin folder. Depending on permissions, this can sometimes silently fail. If the Trimble Positions Desktop add- in controls are disabled (grayed out) when you start ArcGIS for Desktop and you have confirmed that the extension is properly enabled otherwise, close ArcGIS for Desktop and manually edit the ArcMap.exe.config file (using a suitable text editor, for example, Microsoft® Notepad) to make the <startup> tag, located at the start of the XML file, appear as follows (this is also necessary after installing service packs or performing in-place upgrades):

```
<startup useLegacyV2RuntimeActivationPolicy="true">
  <supportedRuntime version="v4.0" />
  <!--<supportedRuntime version="v4.0.30319"/>-->
  <supportedRuntime version="v2.0.50727" />
</startup>
```

- If you disable and re-enable the Trimble Positions Desktop add-in, Trimble recommends exiting and restarting the Esri ArcGIS for Desktop software.
- If the Trimble Positions Desktop add-in is not accessible on your computer after installation and activation/licensing, make sure the Trimble Positions Desktop add-in is allowed to be loaded:
  a. Start Esri ArcGIS for Desktop, click *Customize / Add-In Manager...*, click the *Options* tab, and then select *Require Add-Ins to be digitally signed by a trusted publisher.* Click **Close**.
  b. Click *Customize / Add-In Manager...*, and then click the *Add-Ins* tab. The Trimble Positions Desktop add-in should now appear in the list. Click **Close**.
  c. Click *Customize / Extensions...,* and select *Trimble Positions Desktop* to enable it for use. Click **Close**.

Floating License Manager

- Requirement for Microsoft Chart Controls for Microsoft .NET: The Trimble Positions License Manager requires both Microsoft .NET Framework 3.5 and Microsoft Chart Controls for Microsoft .NET Framework 3.5 to be available on the target computer.

  The Microsoft Chart Controls for Microsoft .NET Framework 3.5 can be downloaded from http://www.microsoft.com/download/en/details.aspx?id=14422
- Occasionally, the Floating License Manager appears to not be available. This can be caused by the Trimble Positions License Service failing to start on the server due to lack of resources. If you encounter this problem often, do the following:
  1. Click Start, right-click *Computer* and then click *Manage*.
  2. In the *Computer Management* utility, select *Services and Applications* / *Services*.
  3. Locate the *Trimble Positions License Service* entry, right click and then select *Properties*.
  4. On the *General* tab, if *Startup type* is not already set to Automatic, select Automatic and then click **Apply**.
  5. Select the *Recovery* tab, and make sure that *First failure*, *Second failure*, and *Subsequent failures* are set to Restart the Service. Click **Apply** and then click **OK**.

Configuring a Jet database on Windows XP

- When you have selected the 'automatic' setting, the Trimble Positions Desktop Configuration utility creates a Trimble Positions office database in the appropriate roaming or local Trimble Positions system configuration folder. The Trimble Positions system configuration is stored in one of the following folders, dependent on profile type and operating system:

Profile type	Windows 7	Windows XP
Per-user (roaming)	C:\Users\<username>\AppData\Roaming\ Trimble\Positions\10.1	C:\Documents and Settings\<username>\Application Data\Trimble\Positions\10.1
System (local)	C:\ProgramData\Trimble\Positions\10.1	C:\Documents and Settings\All Users\Application Data\Trimble\Positions\10.1

In some cases, when the Trimble Positions Desktop add-in is installed on a computer running the Windows XP operating system, the Trimble Positions system folder will be initially set as read-only. This prevents the Microsoft Access ODBC driver from opening the Trimble Positions office database MDB file as it cannot create an LDB file, and the error message Failed to connect to the office database is displayed when ArcGIS for Desktop running the Trimble Positions Desktop add-in is started.

To resolve this problem, open the properties dialog for the Trimble Positions system folder, deselect the Read-only control, and select to apply this change to subfolders and files. Restart ArcGIS for Desktop for these changes to be applied.

Note – *The Trimble Positions system folder and the Jet database mdb file should not have read-only permissions set. If the Trimble Positions system folder is read-only, the ODBC connection will fail: if the Trimble Positions office database MDB file is read-only, connection to the database will succeed, but the first insert or update operation will fail.*

Trimble Positions Desktop add-in database

- Transient database connection problems may affect the Trimble Positions Desktop add-in. If you experience such a problem, close and re-open Esri ArcGIS for Desktop. Avoid leaving Esri ArcGIS for Desktop inactive for long periods of time

Differential correction

- When setting up the Trimble Positions Desktop add-in for the first time, populating the Community Base Station list (CBS list) of base stations may take some time, during which the software appears to not be responding and the dialog may flicker.
- When using base stations that require a separate GLONASS navigation file to be downloaded, you must first make a copy of the base station and add the GLONASS navigation file as an additional navigation file address. If GLONASS navigation files are not available, the GLONASS ephemeris data from the receiver is used instead (if available).
- Trimble Positions Desktop add-in does not support multiple base station groups for sessions collected using Trimble H-Star™ receivers.
- If the differential correction process is cancelled during a lengthy base station data download, it is best to close and restart the application before reattempting differential correction.

Map and layer projections

- For proper spatial integration of feature layers and Trimble Positions GNSS positions, all editable feature layers in a specific coordinate system in a map should have the same datum transformation method defined.

Real-time spatial reference

- The Esri ArcGIS for Windows Mobile application ships with a reduced set of spatial references. Make sure that any spatial reference defined in a field configuration exists in Esri ArcGIS for Windows Mobile before deployment. See the relevant Esri documentation for further information.

Checking-in ArcPad files from network drives

- Trimble Positions Desktop add-in may fail to make a backup copy of an AXF file if the backup folder is located on a network drive. If this situation occurs, a record is added to the log file but the user is not notified.

Counter-clockwise polygon features

- Polygon features collected in a counter-clockwise direction will not properly import to an enterprise geodatabase. You must import directly into a file geodatabase and then import the file geodatabase into the enterprise geodatabase.

Technical assistance and documentation

If you have problems using the Trimble Positions Desktop add-in, the following documentation should be your first point of reference:

- The Trimble Positions Desktop Add-in Administrator's Guide.
- The Trimble Positions Desktop Add-in User Guide.

If you still cannot find a solution to the problem, contact your Trimble reseller.

Legal notices

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Release Notice

This is the August 2014 release (Revision A) of the *Release Notes*. It applies to the Trimble Positions Desktop add-in version 10.2.2.1. For a complete list of all relevant legal notices regarding this product, refer to the Trimble Positions Desktop add-in End User License Agreement.