

Value Description

Building Construction Field Solutions

March 2023

Trimble FieldLink v6.6

Guess what!! Trimble just released FieldLink v6.6 and the best part is that because you're on a subscription agreement, you can download it and take advantage of the new features as soon as you're ready. If you're not on a subscription that's ok too, because you can access these great features if your support is up to date. If not, it might be time to get on board with a subscription.

As always, the Trimble Building Construction Field Solutions division has taken the feedback from field users like yourself and implemented them in this latest release. The main objective of this release was to simplify workflows, increase productivity, and improve your project outcomes. Let's talk a bit about the release and how it will help you out.

April Tag Support for Trimble Ri

(APRIL TAGS): An entirely unique capability introduced by Trimble in layout setup in the industry today is to use April Tags with the new Trimble Ri instrument. An April Tag is like a QR code and each tag can be uniquely identified by the Trimble Ri instrument and FieldLink software. When these tags are strategically placed around your work area they can act like a control point that you would normally go to with your prism pole and measure. The beauty of the April Tag is that the instrument can automatically detect these April Tags, understand their location in the work area and allow FieldLink to perform a resection without ever having to move away from the instrument. This means that you will be assured of collecting the proper control positions as accurately as possible and much quicker than you normally would, so you'll improve your productivity and get to work quicker.

Why you need it

Support for April Tags in the instrument setup process is an important feature for our users, whether you are a seasoned professional or a new field engineer just getting started because this feature will improve the setup process for advanced users or new field engineers as it will save a lot of time trying to find and accurately measure control points on the jobsite deck.

Value for the jobsite layout process

Normally our users will need to measure at least 2 known control points and sometimes more using either the prism/pole configuration or by using the reflectorless measurement modes. This process can be time consuming and prone to errors if the user is not careful and using precise operating procedures.

With the April Tag support for Trimble Ri in FieldLink v6.6 the user can now install and measure a series of April Tags (similar to QR Codes) throughout the jobsite work area in accessible locations that can be seen by the Trimble Ri instrument. Once these tags are in place, they can be seen by the Ri cameras, interpreted by FieldLink v6.6 and the associated metadata can be used to perform the instrument resection without taking manual measurements. This new technique means that field engineers can speed up the setup process and get the important production work more quickly.

Value it provides to the field layout personnel

Quality

FieldLink v6.6 support for April Tags with the Trimble Ri allows the user to take advantage of automatic setup operations that reduce the possibility for human error while doing a resection and virtually guaranteeing an accurate setup which means less rework and higher project quality.

Productivity

FieldLink v6.6 support for April Tags with the Trimble Ri makes the setup process quicker by letting the instrument find the targets, calculate the resection values and complete the setup without requiring the user to take the time to walk to the control points which means that the field engineer spends more time laying out points and less time doing setup saving time and money.

Process Improvement

As the project expands in scope, adding additional April Tags to expand the work area is simple and offers immediate control locations which can be identified by the Trimble Ri and FieldLink v6.6 to perform a new resection and continue working from a new location meaning that the job tasks are performed faster. Additionally, April Tags are an important part of other innovative Trimble solutions and may have the added benefit of being a site reference network in the future.

Known Station Setup for Trimble Ri

(KNOWN STATION SUPPORT FOR TRIMBLE Ri): Trimble understands that not everyone that uses layout equipment will perform their duties in the same way. Everyone has been taught somewhat differently and has a high confidence level in the way they have been taught. With that in mind, Trimble took the advice of users and implemented the ability to set up the Trimble Ri instrument over a known station. This might seem insignificant but if that is your preferred method of instrument setup it's critical to a high confidence level in your work tasks. By offering the known station setup with the Trimble Ri, our users will now be able to perform a setup in any way they'd like, improving confidence, shortening learning time and providing a higher quality result.

Why you need it

Known station setup is important because some robotic total station users would prefer, or are sometimes required, to set up over a known coordinate position and backsight to another coordinate position. This capability did not exist previously and it presents a challenge to our end users who insist on this process.

Value for the jobsite layout process

Adding this setup option to our Trimble Ri with FieldLink will open up a new technique for instrument setup. In many instances, field engineers who have traditional survey training are used to this method and demand it be available. Setting up over a known point and backsighting to a second known position can shorten setup time and increase the time a crew is doing productive layout work.

Value it provides to the field layout personnel

Quality

While not directly contributing to a more accurate or higher quality layout process, having this option will elevate the confidence of the user by allowing them to use a technique that is familiar to them and confidence in your tools produces better results.

Productivity

Known station setup can be done with as little as two control points versus 3,4, or sometimes 5 control points with a resection, resulting in time savings on the setup process and more critical layout work being completed.

Process Improvement

Known station setup offers yet another capability for the end user on the jobsite, meaning that the layout crews will always be comfortable with the instrument setup options and be more confident in the work product and quality.

Coordinate Support for GNSS

(Coordinate support for GNSS): As GNSS technology becomes more commonplace on construction sites, the capabilities, knowledge level, and requirements of the field engineers has continued to grow and expand. Trimble recognized this and the Coordinate System Manager gives you access to a geodetic database. The significance of this is that it not only simplifies the setup process but also minimizes the need to for a site calibration. In the end, you'll lower your investment by nearly 40% and ensure an accurate setup for the best layout and data collection.

Why you need it

GNSS Coordinate Support gives our user base a complete toolkit to complete any job more efficiently. With this new addition, field engineers can kick off any job with the confidence to know that they will be able to work within the parameters that they are given, not try to fit a square peg into a round hole.

Value for the jobsite layout process

Using GNSS coordinate support to define your site position eliminates the need for a site calibration which can be time consuming and prone to errors.

Value it provides to the field layout personnel

Quality

Using a global coordinate system for setup before the layout or data collection process eliminates the errors that often happen when having to perform a 3 or 4 point site calibration due to problems with the prism pole, control points, or coordinate assignments on those points, resulting in a better project result.

Productivity

It's pretty simple. Quicker setup, means quicker to work, which means more production.

Process Improvement

There's no value in using a sledgehammer with a finish nail for baseboard installation. The same is true for GNSS setup, use the right tool for the job and the process will be more effective, more efficient, and higher quality.

Area Scan - FieldLink Scan Module

In any reality capture process there is a delicate balance between what you capture and what you need. Capture too much and the files become too big, unmanageable, and hard to share. Capture too little and you don't get the proper context, aren't able to define surfaces or detail, and in the end you will likely need to go back to get what you need. The new area scan feature in FieldLink Scan module gives you the best of both worlds. Capture the background areas in a quick low density scan for context and speed then use the high density slower scans in only those areas that are necessary for your workflow. In the end, your process will be quicker and you'll experience less rework and a higher quality deliverable.

Why you need it

In many scanning applications, detail, speed, and resolution needs can vary depending on the project requirements. Having the ability to specify a selected area within a larger project scope and highlight that area with a different scan parameter improves the capability of the end user to collect the proper detail in all areas without having to do it everywhere. This will offer significantly better deliverables in a shorter time frame.

Value for the reality capture process

Faster data acquisition, larger projects and more frequent laser scanning on projects has resulted in larger, more cumbersome scan files. Area scan in FieldLink Scan Module will allow the reality capture teams to isolate areas of importance and capture highly detailed scan data in that area only, reducing file size, and improving deliverables for faster work and better quality.

Value it provides to the reality capture personnel

Quality

Area scan in FieldLink scan module will give the user the ability to do a very fast, low resolution scan of the entire work scope and add highly detailed resolution to areas that require a denser point cloud, resulting in a more effective use of time and resources.

Productivity

Rework is costly and inefficient on any jobsite. Using a high density area scan along with fast, low density context scans will speed up the reality capture process and ensure that you will never have to pack up and go back out to the site to get the one little area that you just can't see with enough detail, saving money and time.

Process Improvement

Along with the field deliverables available in FieldLink Scan Module, the freedom to define your reality capture process in a way that will shorten the time to an actionable deliverable and produce immediate field decisions will improve the overall project health and profitability.

Automatic Points and Scans Job Creation

To simplify the job management capabilities in FieldLink v6.6 and to more closely align with Trimble Connect, Trimble has adjusted the method that projects and job folders are configured in FieldLink. This new workflow automatically creates jobs for points and jobs for scans inside a higher level Projects folder. This eliminates the challenge of trying to perform layout or scanning without having created a points or scan job.

Why you need it

As our solutions become more interoperable with each other it is important to continue to have a common user interface and user experience. This enhancement will offer more simplicity to the user by creating and storing data in the proper folder but also, more closely resemble the folder structure in Trimble Connect for greater connectivity between office and field.

Value for the field process

This new capability lessens the need for the user to focus on Project or Job management and spend more time on production work, meaning that project tasks finish faster and data is more functional for all stakeholders.

Value it provides to the layout personnel

Quality

Offering a higher level of continuity between solutions and the same Project and Jobs folder structure will minimize the loss of data during field tasks and during the movement of data from the office to the field.

Productivity

Field engineers are tasked with many things simultaneously and shouldn't be burdened with the need to constantly remember when and how to create a new folder to store data in FieldLink. Automated the Project creation process will allow field engineers to focus more time on production and less time on routine tasks that don't provide value.

Process Improvement

Connected construction solutions need to be in alignment with each other for the users to be able to take advantage of the connections, otherwise it can cause more challenges than separate point solutions. Having an automatic process for Project creation that mirror Trimble Connect gives the project teams peace of mind to know that there will be no loss of data as information is moved from the office to the field and back.