2023

## **Trimble Layout Basics**

**Building Construction Field Solution Group** 

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## Agenda

1 Overview

- 2 Layout Hardware
- **3** Field Software
- 4 Office Software



#### **Getting Started - Why Layout First?**

Layout is the product line that comes to mind when most customers think about Trimble and the legacy solution for our building construction channel. Helping customers answer the "how they figure out where things go" question with Trimble hardware has significant efficiency improvements over traditional layout methods.

Layout products still represent 75% of our global BCFS sales today and understanding these products and customers that use them is key to getting started in a new role or sales territory.



#### Business Problem - What does Trimble Layout help with?

- Translating design intent in the field
- Complex building designs
- Conventional methods are time consuming and open to error
- No proof / record of execution
- BIM requirement for digital data in the field
- Outsourcing to third party
- Data flow issues from design to site



## "5x productivity gains & accuracy compared to manual layout"

**Overview** 

ROI seen by customers - Real Customer Quotes





"The results were eye-opening. In terms of productivity, the manual team was able to mark 156 points in about 48 hours. The Trimble FieldLink team marked 210 points in four hours."

> Chris Milford, BIM/CAD Manager, Trans Gulf Electro Mechanical





5.5 times more points on the RTS than two-person total station

"Last summer, even when the superintendents were busy with other aspects of the project, they weren't ready to give up the RTS because they knew how useful it was."



Jamie Spartz, Director of Virtual Design & Construction



## **Right Tool - How these** work and Current Portfolio

Hardware

Total Station and GPS differences, use Interchangably.



## **Quick Refresh.. How Layout Tools Work**



#### **Prism Layout**

#### **Laser Layout**



#### **Advantages**

•One setup •Tilt compensation •No LOS required •Time

Disadvantages

Initial setup
Accuracy
OpenSky needed



#### **GPS Layout**



## **Layout Portfolio**

Model		Angular Accuracy	Telescope	Vision	Laser Layout	Tracklight	Active Tracking	Auto Calibration	Auto Laser plummet	Laser Measure Range
RTS573		3"	Y	N	NO	Y	Y	Ν	N	465 ft
Ri		3"	Ν	Y (plus)	RED focusing	Y	N smart passive	Y	Y	492 ft
RTS773	J	3"	Y	Y	RED	N	Y	Ν	Ν	492 ft
Ri <sub>(plus)</sub>		2"	Ν	Y (plus)	RED focusing	Y	N smart passive	Y	Y	1230 ft
RTS873		3"	Ν	Y	Green	N	Y	Ν	Ν	492 ft
R780		0.8-2cm ()	⁄4"-¾") accura	acy corre	ction depend	lent, no Line	of Sight nee	eded, OpenS	ky needed	

## **Field System Components**

Total Station-Instrument and Pole/Prism with Tablet



## GNSS- Rover/Pole, base optional



# **G** FieldLink

#### **FieldLink - Field Software**

FieldLink is the field (or PC) software that supports all BCFS hardware. Designed specifically for building construction, workflows have been streamlined with contractor use case in mind



## **FieldLink Value Proposition**

- For contractors who need to easily translate design intent in the field with a fully digital 3D process.
- Best-in-class setting out systems increase productivity.
- Setting out solutions increase accuracy and speed, reduce errors, avoid clash issues, and provide peace of mind by providing a smooth workflow from design intent through field set out.



## **Trimble FieldLink**

- **FieldLink**: One software, multiple field hardware applications
- 3D Tekla engine utilized to display and manipulate background files
- Multiple model file management
  - PDF, TRB, IFC, DWG, DXF, RVT, NWD, etc
- Point Creation
- True BIM data
- Multiple reports
  - Field report, surface, daily summary
- Trimble Connect workflow
- Section boxes, user defined view
- Point creation / line work





### **Data Continued...**

Layout efficiency regardless of data used. Use what your customers use already for field drawings!









#### **Manage Data**

#### Models

- Import from CAD
- Manage multiple models
- Control layer visualization
- Create new layers
- Create views
- Query elements within model
- Create points from model in the field
- Transform models

#### Enter from plan

#### Import digital PDF's

#### Import points



# Supporting all workflows

**Office Software** 

Point Creation for layout prep & As-Building



# **C** FieldLink Office

- Ease of use
- No CAD/BIM needed
  - The perfect solution for
    - "we don't have a BIM team"
- Add points to PDF, DWG or model
- Manual or offset points
- Automatically place points
- QA before sending to field





#### Field Points Plugin for Revit & CAD

\*\* Ideal for customers already working in AutoCad or Revit\*\*

- Point Placements
- Field Data Imports
- Custom Report Creation
- Flexible Point Creation
- Direct Integration

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# **Tekla**.

- For customers already using Tekla, there are several workflows that streamline layout prep from design work already done
  - Examples Include:
    - LayoutPoint Placements
    - Field Data Imports
    - Custom Report Creation
    - Flexible Point Creation



# Connect'ed Construction

**Connecting Data to everyone** 

Point Creation & As-Building



Trimble Connect



#### Field to Office & back

- Connect Field to Office
- Send 2D/3D Point Creation
- As-builts brought back
- Progress, status of update
- Access to anyone



### **Integrated, Connected Workflows**



Field Points - AutoCAD & Revit

**Point Creator in Tekla** 

## **Building Construction Field Systems**

