Trimble 2010 DIMENSIONS

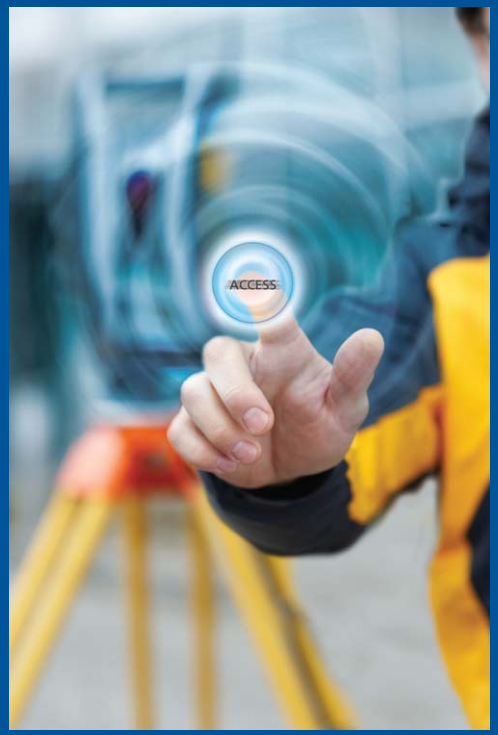
CONVERGE. CONNECT. COLLABORATE.

Introduction to Trimble Access

The Next Generation of Survey Controller

S-0102

Questions we will answer



- What is Trimble Access?

  A suite of software applications

- How do they all fit together?

- How does it compare to Trimble Survey Controller?
  - What is different
  - Why is it different?
  - What makes it better?

Trimble Access

- **Trimble Access is a suite of software applications**
  - **Field**
    - **General Survey (pka Trimble Survey Controller)**
    - **+ new functionality**
    - **+ new applications**
  - **Server**
    - **Provides connection between Field and Office**
  - **Office**
    - **Trimble Connected Community**
    - **TCCE – a file and folder data manager**

SERVER

- Trimble Connected Community
- Trimble Survey Web Services

Internet Connection

Internet Connection

FIELD

Trimble Access
- General Survey
- Roads
- Tunnels
- Mines
- Monitoring
- Internet Setup
- AccessSync
- GNSS Planning

Cabled Connection

OFFICE

- Trimble Access Installation Manager
- TCC Explorer
- Office Software

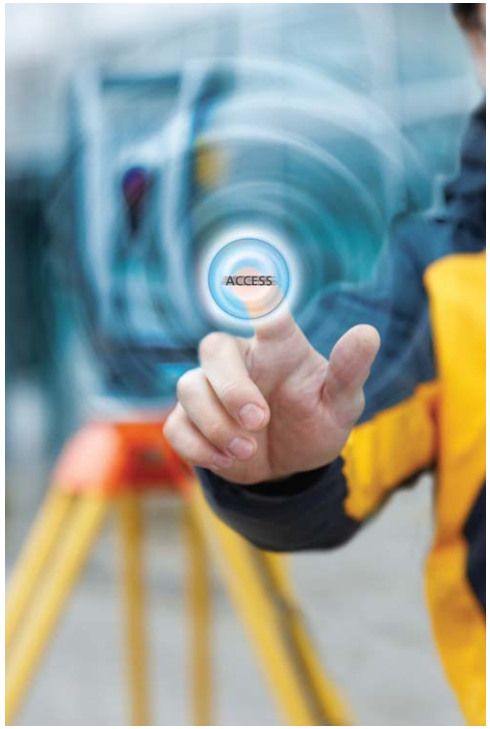
Trimble Access compared with Trimble Survey Controller

Trimble Access	Survey Controller
General Survey, Settings, Internet Setup	Survey Controller Includes Settings and Roads
Roads (optional)	
High Accuracy GIS included in General Survey	High Accuracy GIS Option
Tunnels (optional)	Engineering Option – Tunnels and Monitoring
Monitoring (optional)	
Mines (optional)	*Mines (not available)*
Services (optional)	*Services (not available)*

General Survey

- **What is General Survey?**

  A revamped version of Survey Controller



Segmented applications
What are they? Why do they exist?

Roads, Tunnels, Monitoring, Mines

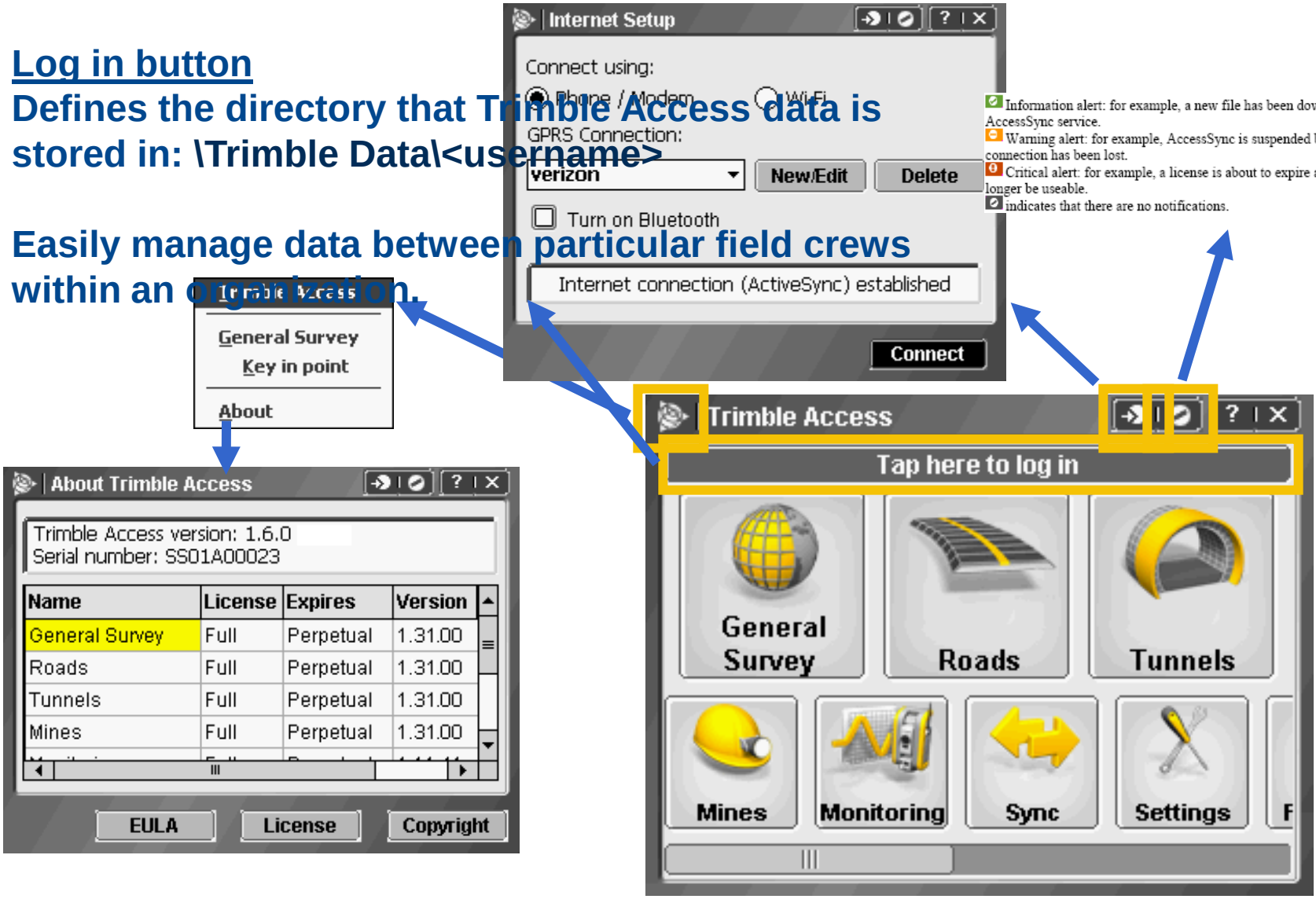
- Provide customized workflows
  - Easier to learn and use
  - Less clutter
  - Easy access to all the other functionality in General Survey
- Only pay for what you need, when you need it
  - Licenses can be downloaded in the field

Trimble Access – Main window

Log in button

Defines the directory that Trimble Access data is stored in: \Trimble Data\<username>

Easily manage data between particular field crews within an organization.



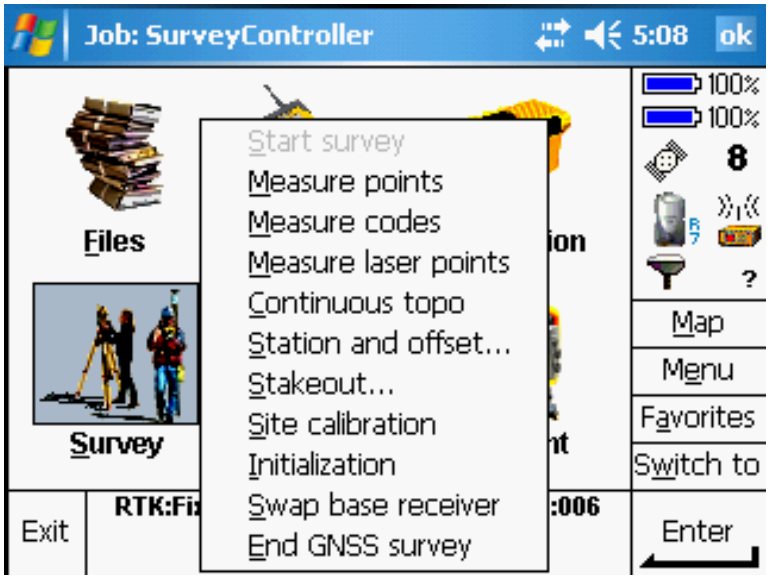
What is different

Why is it different?

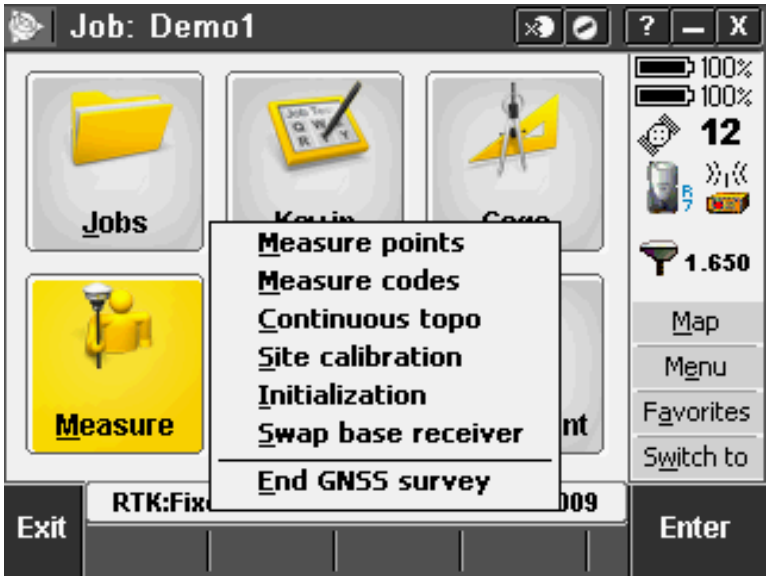
What makes it better?

Survey button has been replaced… Stakeout and Measure are new

- General Survey now has Measure and Stakeout menus
  - Measure and Stakeout - typically, the two most used functions
  - Now easier to access
    - less steps to get started
  - More intuitive to use


Job: SurveyController
5:08
ok
Files
Survey
Start survey
Measure points
Measure codes
Measure laser points
Continuous topo
Station and offset...
Stakeout...
Site calibration
Initialization
Swap base receiver
End GNSS survey
100%
100%
8
?
Map
Menu
Favorites
Switch to
Exit
Enter

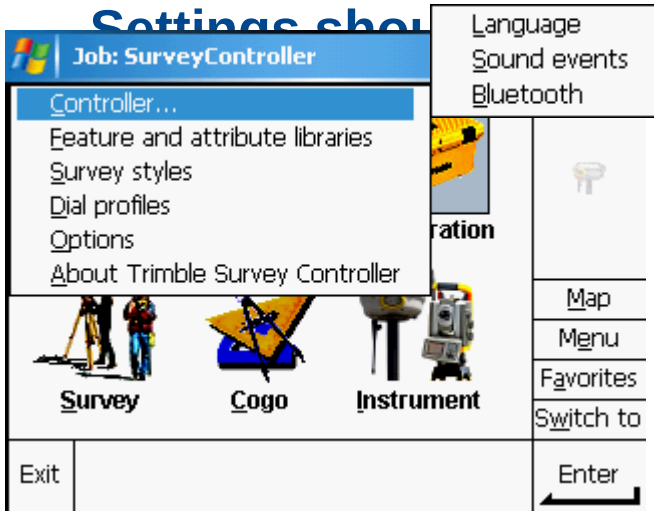

Job: Demo1
Jobs
Key in
Cogo
Measure
Stakeout
Instrument
100%
100%
12
1.650
Map
Menu
Favorites
Switch to
Exit
RTK:Fixed H:0.002m V:0.004m RMS:005
Enter

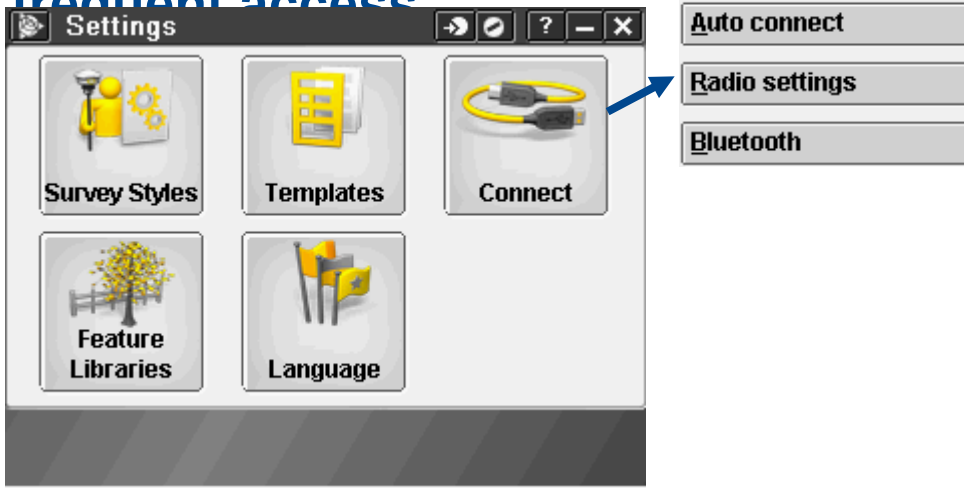

Job: Demo1
Jobs
Measure
Measure points
Measure codes
Continuous topo
Site calibration
Initialization
Swap base receiver
End GNSS survey
100%
100%
12
1.650
Map
Menu
Favorites
Switch to
Exit
Enter


Job: Demo1
Jobs
Key in
Cogo
Measure
Stakeout
Points
Lines
Arcs
Alignments
DTMs
End GNSS survey
100%
100%
12
Exit
RTK:Fixed H:0.004m V:0.007m RMS:009
Enter

Settings is new… formerly known as Configuration

- Configuration was removed from General Survey, and Settings was added to the Trimble Access main menu
  - Settings is for use across multiple applications; Roads, Tunnels, Mines etc
  - Settings sho… quire frequent access
  - …, tell us



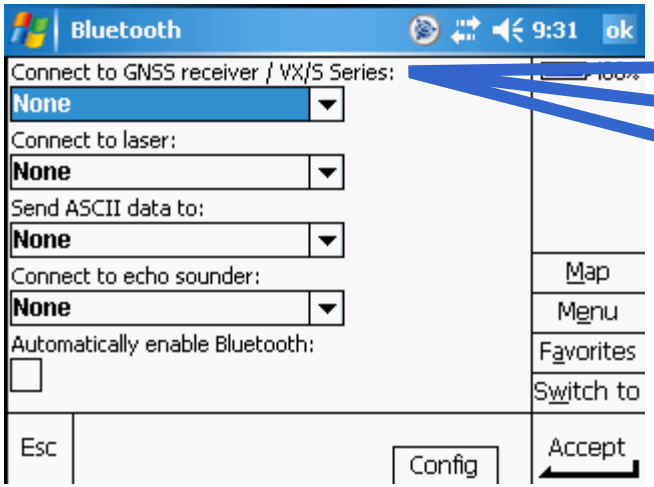


We've renamed a few things

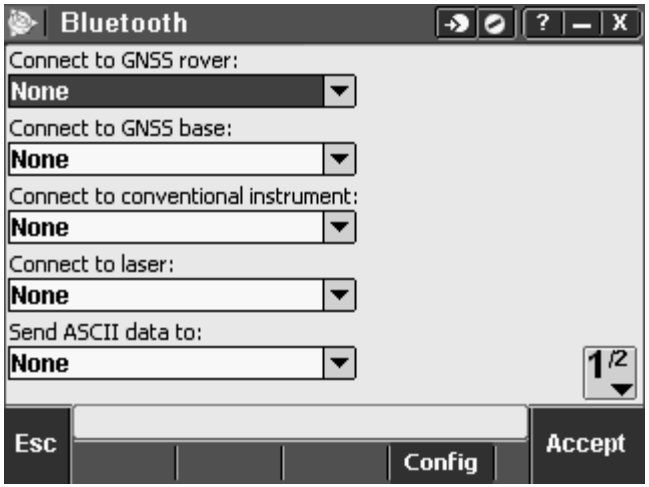
Survey Controller	Trimble Access
Files	Jobs
Dial profile	GNSS contact
Trimble functions	Instrument functions
Review current job	Review job
Map of current job	Map
Groups	Roads (GENIO roads feature)
Trimble data	System files, or your data folder
Direct Reflex settings	EDM settings

Bluetooth Settings

Survey Controller



General Survey

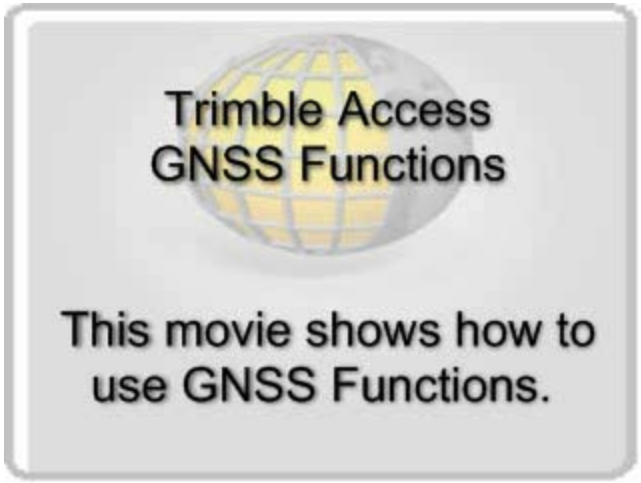


- Allows configuration of multiple Bluetooth devices

General Survey

- **GNSS Functions**
  - **Separate configuration of BT Base and BT Rover**
    - **Faster auto-connection**
      - **Note: no connection using Serial if BT configured!!**
  - **Simple configuration, connection and survey using GNSS functions**
    1. **Press and hold Trimble button, or tap receiver icon**
    2. **Set mode; Easily switch between Base & Rover**
    3. **Check satellites, change radio settings, navigate to point, etc**
    4. **Start the survey / End the survey**

GNSS Functions demo



General Survey

- **Trimble key – long press vs short press**
  - **Short press:**
    - **Menu of available applications currently running**

    It's like the SC "Switch to" – only more powerful
  - **Long press:**
    - **Instrument functions when connected to a conventional instrument**
    - **GNSS functions when not connected to anything, and when connected to a GNSS receiver**

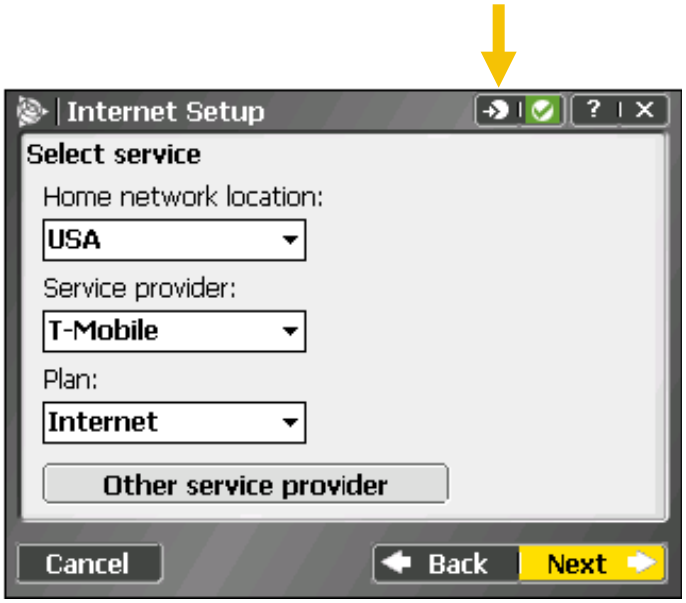
Templates

- Job templates (.jot) contain all the job specific settings, such as coordinate system settings, units, and linked CSV and DXF files
- Templates are used when a new job is created with the information in the template ‘seeding' the defaults in new job
- Job Templates allow consistent creation of new jobs for individual projects, and across multiple crews
- You can create new templates, copy existing templates, or create a template from a job
- Templates are upgraded automatically

Templates demo

Easier internet set-up

- Simple wizard to take care of dial information
- Service provider information integrated to help get connected



- If your service provider is not in the list, tap **Other Service Provider** and add their details
- To use a Wi-Fi connection to a camera and an Internet connection at the same time, you must first create the Internet connection and then create the connection to the camera

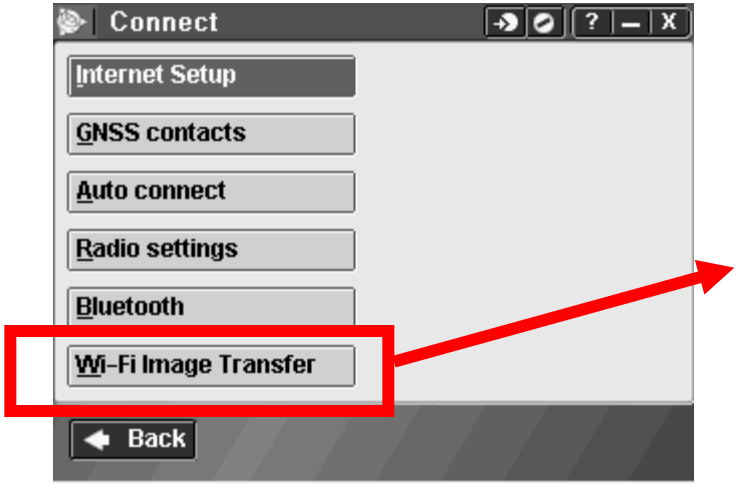
General Survey

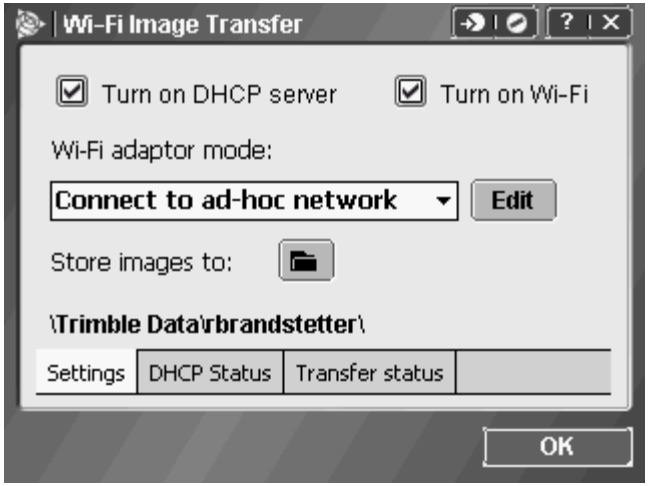
New features

Wi-Fi Image Transfer

- Automatically transfer images to the TSC2 from an SDHC compatible digital camera that is fitted with an Eye-Fi wireless memory card.
- Must buy the card and software from the Trimble Store
  - Installation and Configuration of card software happens when the controller software is updated with the Trimble Access Installation Manager

Wi-Fi Image Transfer

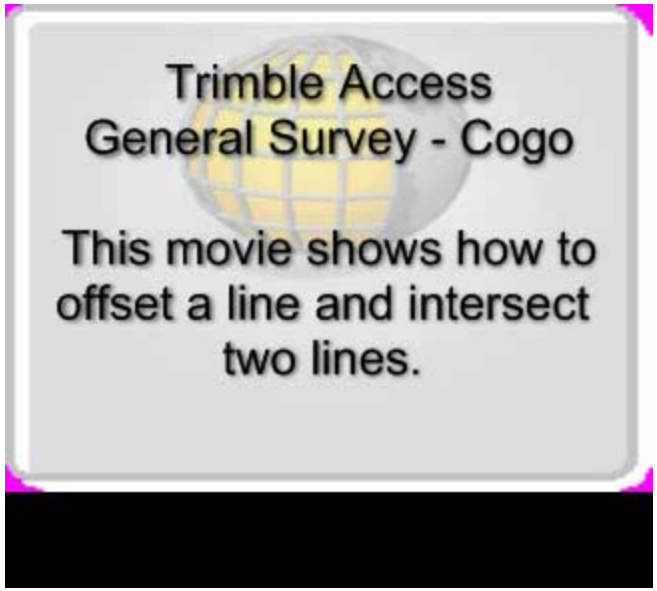




General Survey – new features

- **Files can now be linked from other folders**
  - **jobs, csv/txt, dxf, shp and dtm files**
- **Template pickup using Measure codes now allows for up to 27 elements in a cross-section**
- **Compute intersection from the Map**
  - **two lines (demo)**
  - **an arc and a line**
  - **two arcs is now supported**
- **Offset line from the Map** (demo)

Compute Offset and Intersection from the Map



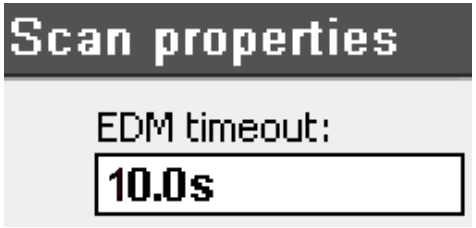
General Survey – new features

- Triangle solutions
- Arc solutions

Triangle Solutions

General Survey – new features

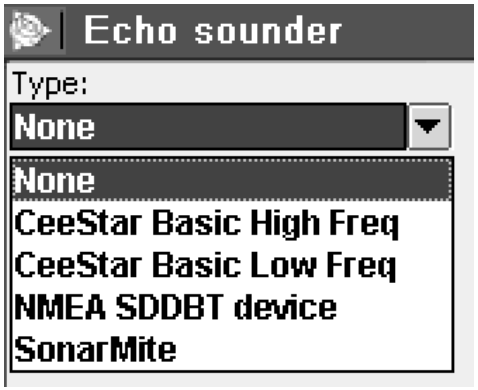
- **The EDM timeout when scanning with a Trimble VX Spatial Station can now be configured.**
  - **Really useful if there is a lot of blank space around the object being scanned**
  - **Be careful not too set it too low, or you wont get any measurements**



- **Trimble S8 total station TRK measurement data rate can now be set to 10 Hz.**
  The standard rate is 2.5 Hz.
- **Bluetooth connectivity to a Trimble M3 total station**
- **CTRL + K 'check backsight' shortcut**

Echo sounders

- You can now use an echo sounder with a Trimble VX Spatial station and S Series total station – it is no longer just GNSS feature
- Now supports CeeStar echo sounders
- XML files now used to configure the format of the data format received from the echo sounder – this now gives 'anyone' the ability to add support for additional models of echo sounder



General Survey

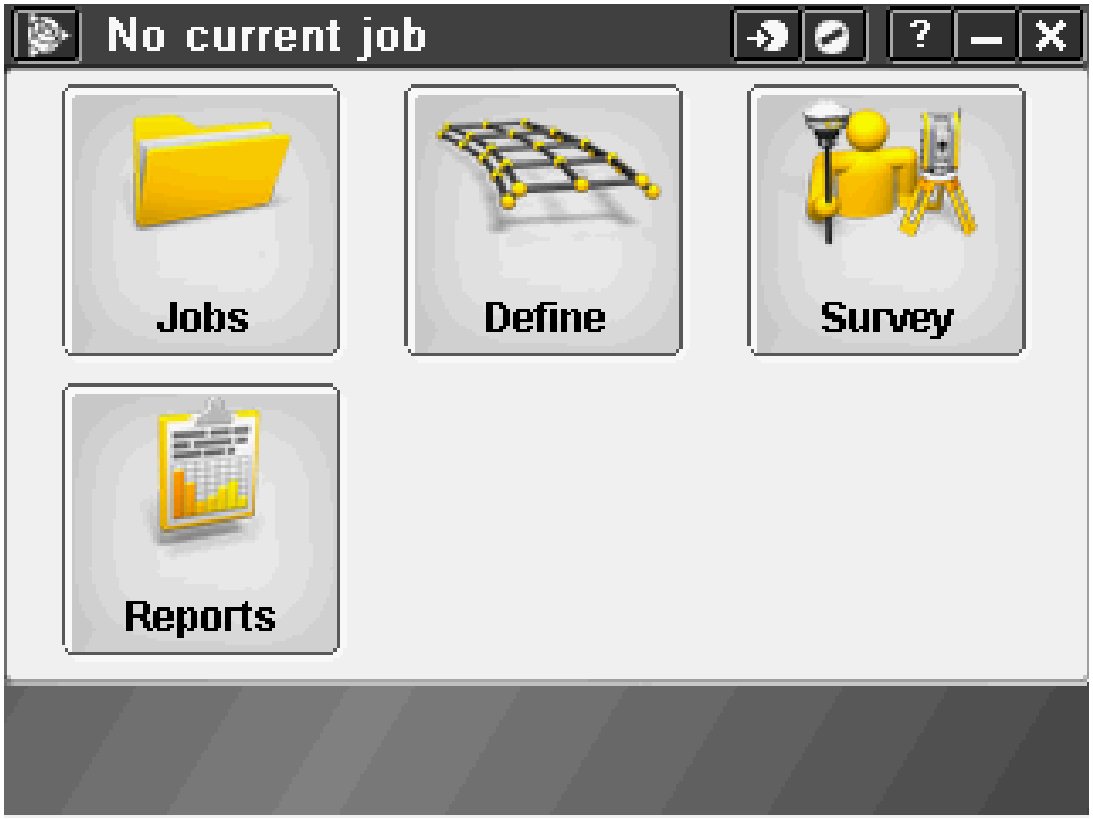
- Supports 4700 and 4800 base receivers
- RTDiff surveys

- Earlier versions did not support these – but we were asked to re-implement this support, and so we did!

Specialized Applications

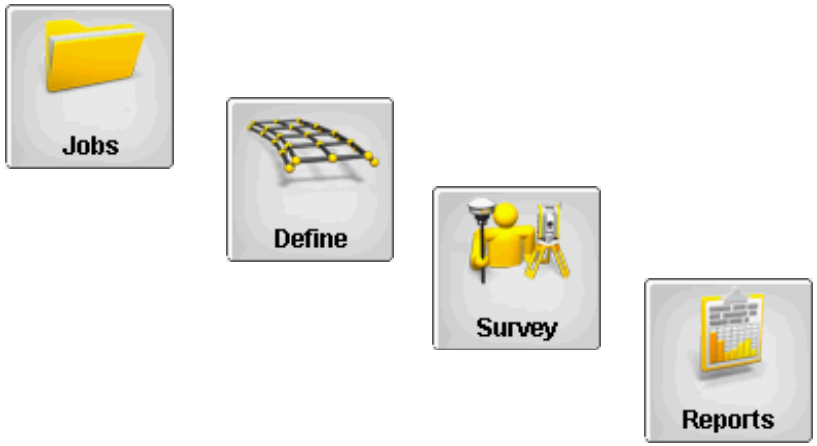
- Optional
  - Choose which modules to add to your basic Trimble Access system
  - Add more applications when you need them
  - Flexible purchasing options
    - Perpetual license or Subscription

Roads



Roads

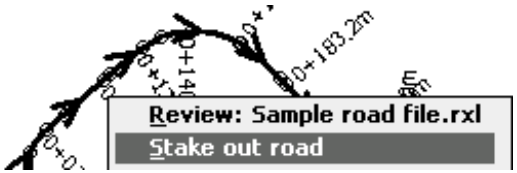
- **Workflows**
  - Jobs
  - Define
  - Survey
  - Reports



  - Roads is no longer buried in “Key in” and “Stakeout”
  - Less confusing for new users, BUT still offers all the power to switch to General Survey to carry out non roading functions

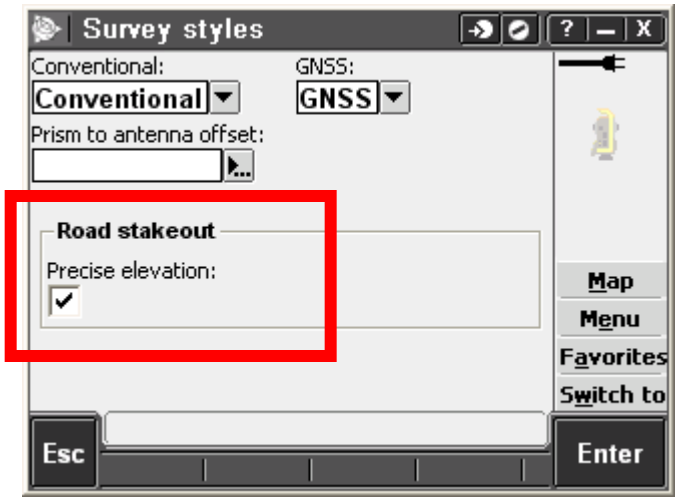
Roads – new features

- Review of Trimble Roads now shows all plan view line work
- Stakeout Trimble Roads from the ‘Roads’ map is now supported



- Roads can now be selected from other project folders
- Define the station interval during a survey

Road stakeout – Precise elevations



During an integrated survey, we combine the

- **elevation from a robotic total station, with the**
- **horizontal position from the GNSS receiver**

for Navigation, and then Measure simultaneously with both sensors

Requires less control. Survey only once!

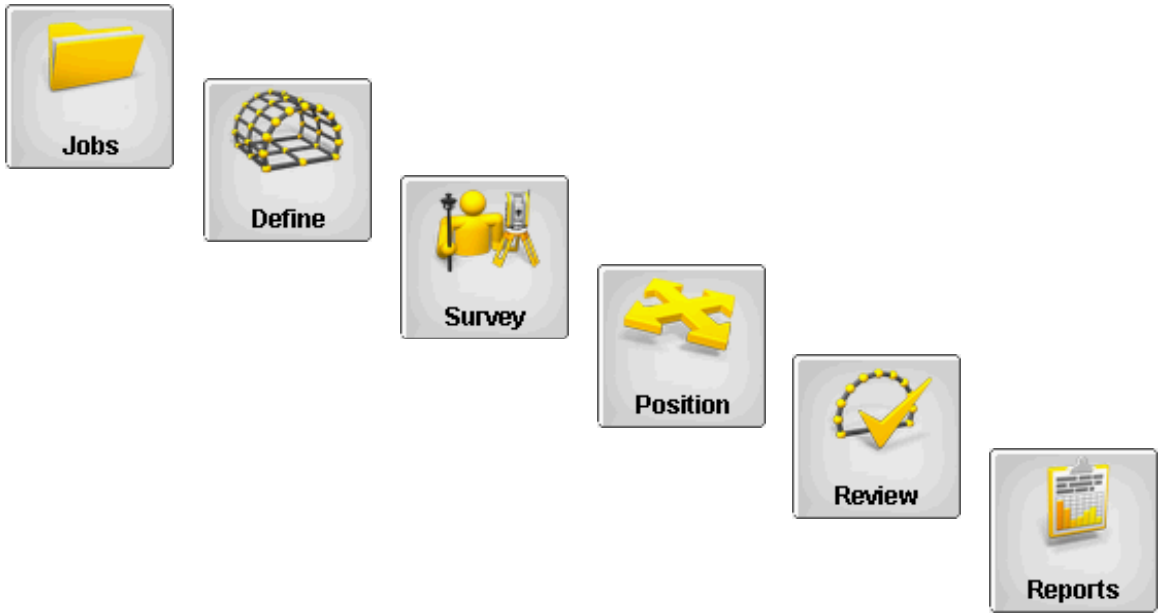
Tunnels


Tunnels


No current job
Jobs
Define
Survey
Position
Review
Reports

Tunnels

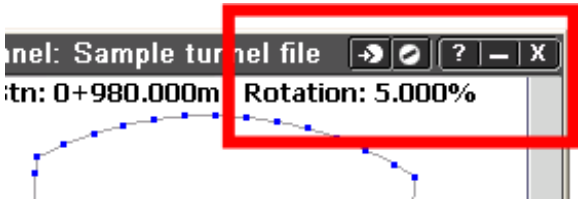
- Workflows
  - Jobs
  - Define
  - Survey
  - Position
  - Review
  - Reports

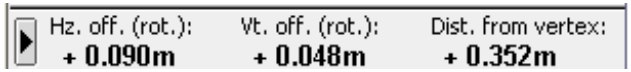


  - Tunnels is no longer buried in “Key in” and “Stakeout”

Tunnels – new features

- Define horizontal align by PI
- Rotation of tunnel template
- Position in Tunnel
- Scan zones
- Additional deltas reported for
  - Position in tunnel
  - Setout positions
  - Review survey tunnel
- Define the station interval during a survey
- Spirals – Korean cubic parabola supported





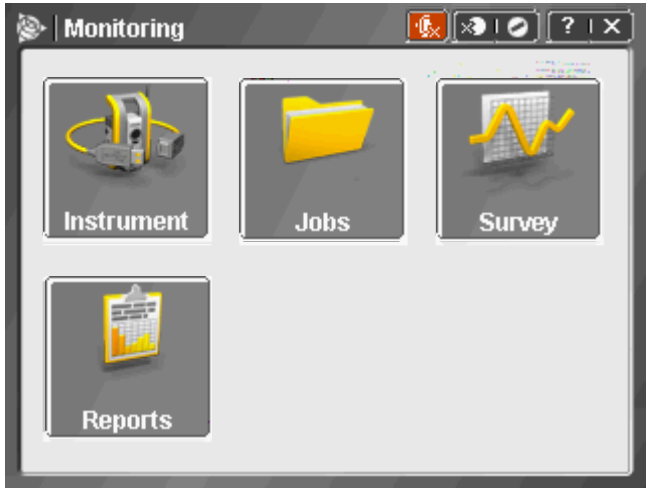
Mines - new application

- New Specialized application for underground mines

- Supports automatic stakeout of
  - Center line
  - Grade lines
  - Laser lines
  - Pivot points
  - Blast holes

These features are used to position drilling rigs to ensure blast holes are drilled in the correct position

Trimble Access Monitoring
Understanding the workflow



Four steps to finish the job

1. **Connect to instrument**
2. **Open/create job**
3. **Survey the project**
4. **Analyse the data**

Monitoring

- New look and feel - easy job/site setup & scheduling, simpler station setups
- A monitoring job stores all job specific information, including station details and details on the points to monitor
  - The same job (*.mjob) is used for subsequent surveys – no need to LOAD a CSV (like SC)
- Monitoring survey observations are stored in a separate file (*.mobs)
  - Data stored by epoch
    - No averaging of coordinates
    - Temperature, pressure and level records are recorded for every epoch, so if you change the temperature on the fly the corrections are used in the next epoch

Monitoring

- Reporting designed for monitoring workflows
  - Alerts are generated for out of tolerance movement with the first (reference) point, or the previous observation
  - Alerts are displayed immediately after each epoch
  - View the tolerance reports while surveying
  - New dedicated monitoring reports and formats
    - Customizable reporting, including scatter plots and trend charts
  - See biggest movement for each epoch, drill down to see more detail on the movement for each point
  - Coordinates are not averaged allowing for better, more reliable reporting and alerts to identify movement over time
- Monitoring Jobs can be processed in Trimble 4D Control for further processing, if required

Trimble Access Services

- **Services for the Office**
  Trimble Connected Community

- **Services for the Field**
  GNSS Forecast
  - **Provides a comprehensive view of on-site conditions that saves time and eliminates unnecessary downtime, with up-to-the minute updates on satellite signal quality for the areas you plan to work, before you get on site.**

- **Services for connecting the Field and Office**
  AccessSync with Trimble Connected Community

Trimble AccessSync Service

- ***Real time***
  - Compares selected folders on the controller with TCC every 30 seconds and differences are identified and synchronized
- ***Flexible***
  - Uses any internet connection: ActiveSync (office), Wi-Fi (internet café), or cellular (real-time in the field)
- ***Intelligent***
  - Only some file types are uploaded to increase the efficiency of transfer
  - Automatically converts old jobs to the appropriate format
  - GPS corrections take priority over file upload
- ***Seamless***
  - Changes sent automatically in the background while you work
- ***Secure***
  - To send or receive a file requires secure log-in
  - You can choose which TCC project site to synchronize, and who has access to that site
- ***Safe***
  - Files are not overwritten but renamed if there are duplicates

Four new services in version 1.7.0

1. **File Conversions** is a free service that can convert old Trimble Survey Controller or General Survey job files to the latest version
   - Save them locally on your office computer
   - Directly onto Trimble Connected Community for transfer to the field
2. **Registered Devices** lists all controllers linked to your organization, and provides you with the following information:
   - All software options that the controller is licensed for
   - The license type, activation date, and expiry date for each software option
   - The version of software currently installed for each software option that the controller is licensed for
   - The latest version of software available for each particular software option
   - Information about the last login session on the controller
3. **Trimble Access Site creation wizard**
   - Automatically creates sites, configure sites, and sets up user permissions
   - Can now be accessed through Trimble Business Center as well as through the Trimble Connected Community.
4. **Send files via AccessSync wizard**
   - Guides you to save the files in the correct location within the Trimble Connected Community for transfer to the field.
     The main advantage over manual uploads is that it allows for multiple files to be uploaded at one time.

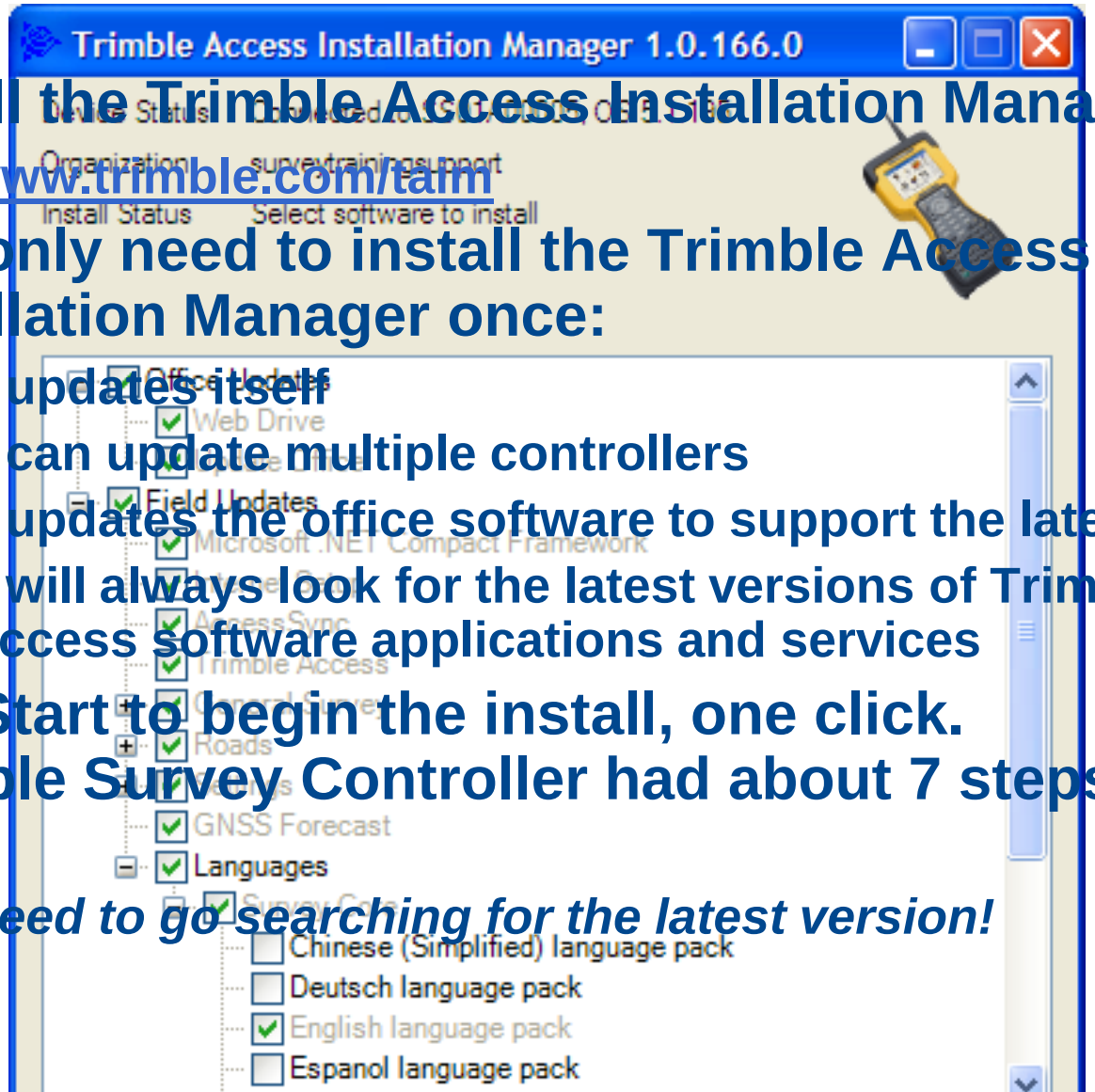
These services can now be accessed either within Trimble Connected Community (by browsing to the Survey Tools site), or within Trimble Business Center (by clicking on TCC in the menu bar and then selecting Trimble Access Services).

Trimble Connected Community

- **Security**
  - Be confident your data is safe with a secure internet login.
  - YOU allocate logins to users, YOU control who has access to your data
  - You control the *level* of access – owner, editor or viewer access

- **Collaboration & Communication**
  - Share files using the filespace.
  - Facilitate project communications via forums
  - Capture & share company knowledge via the wiki
  - Capture progress updates via blogs
  - Schedule and track important events with calendars
  - Use Visual Organizer; a map based visualization tool to display your data in layers.
  - Use Webframes to link to information on the internet - display content from the internet as though it was part of the system
  - And many more… (Quicknote, RSS Viewer, Site Camera, Weather, Geopic)

Streamlined Installation

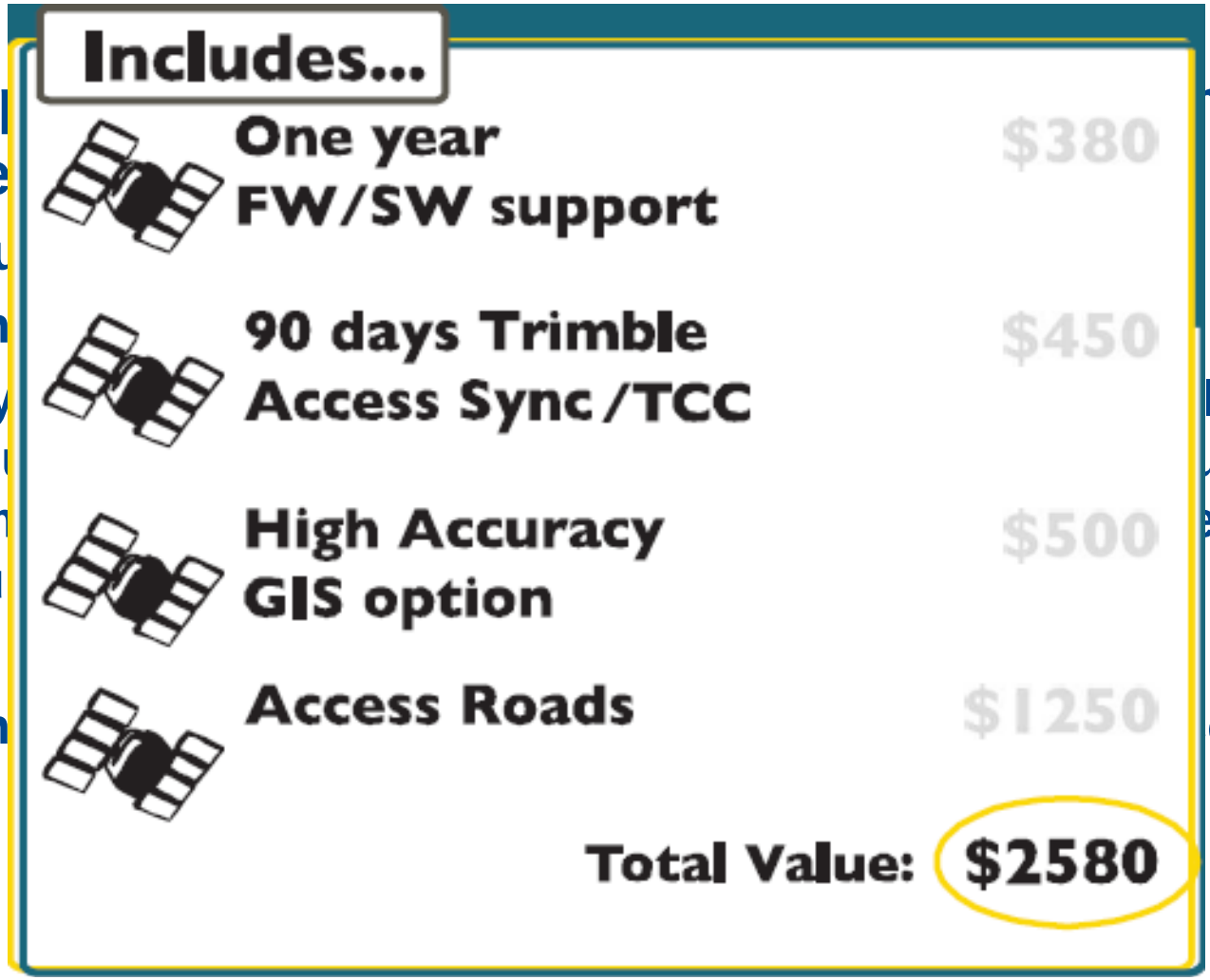


- Install the Trimble Access Installation Manager
  - www.trimble.com/tam
- You only need to install the Trimble Access Installation Manager once:
  - It updates itself
  - It can update multiple controllers
  - It updates the office software to support the latest version
  - It will always look for the latest versions of Trimble Access software applications and services
- Tap Start to begin the install, one click. Trimble Survey Controller had about 7 steps.

No need to go searching for the latest version!

Upgrading is relatively cheap

- An u… much more…
  - Plu…
  - An…
  - If y… ller then you… u have to em… erial nu…
  - An… es



Questions