Tulip Rally Roadbook Creation App

(V1.8.4 - February 2018)

Have you ever wondered how people create awesome navigation rally roadbooks? Days spent with a notepad and pen out on the trail and then days spent putting in into some Excel sheet and hand drawing the tulips and pasting the graphic into the correct cell……no wonder there weren't many roadbooks available to ride, they were treated like the unobtainium they are. Now the open source Tulip app is your answer! This app (in both OSx and Windows) leverages Google imagery and map data to help you make great roadbooks for your use in a fraction of the time. Follow along and you will be able to create a roadbook using Tulip and print it to a pdf file for final digital or paper consumption.

This guide is for using Tulip and not a comprehensive roadbook creation guide.

A few quick notes:

!! Remember to frequently save your work and there is no UNDO function !!

For Tulip to function fully you must have an internet connection. The map portion of the app can not work without an internet connection even though your roadbook files are stored locally (or cloud space of your choice). Obviously the speed of your connection impacts how well the map portion pans and zooms. Steps have been taken to minimize the apps impact on the map speed, depending on your zoom level.

Tulip only creates routes in Kilometers, so join the rest of the world and deal with it. It is easier on the brain to work in base ten anyway.

The name of the roadbook and the saved file name are not linked in any way so you can have different names for what is visible in the final roadbook and what the file is stored as locally.

It can be helpful to have a consistent workflow of building your route first and then start working on the tulip enhancements and symbols.

It can be handy to use Dropbox to save your work to as it will do some limited versioning for you as well depending on subscription level if you really screw the pooch and mess something up horribly.

And remember……..frequently save your work!!!!

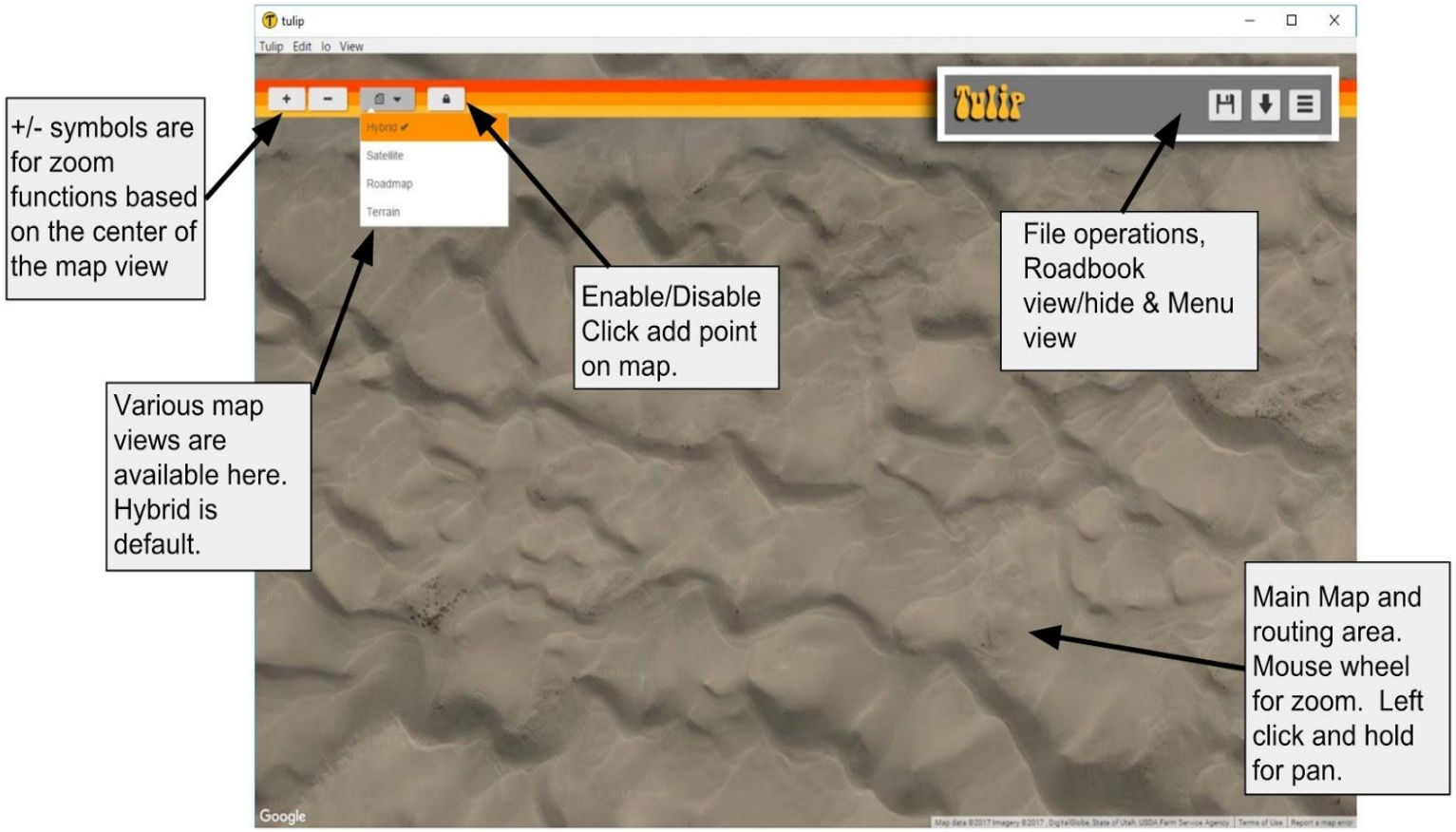
Computer/Mouse Conventions:

The step-by-step instructions for the examples in this guide use these conventions:

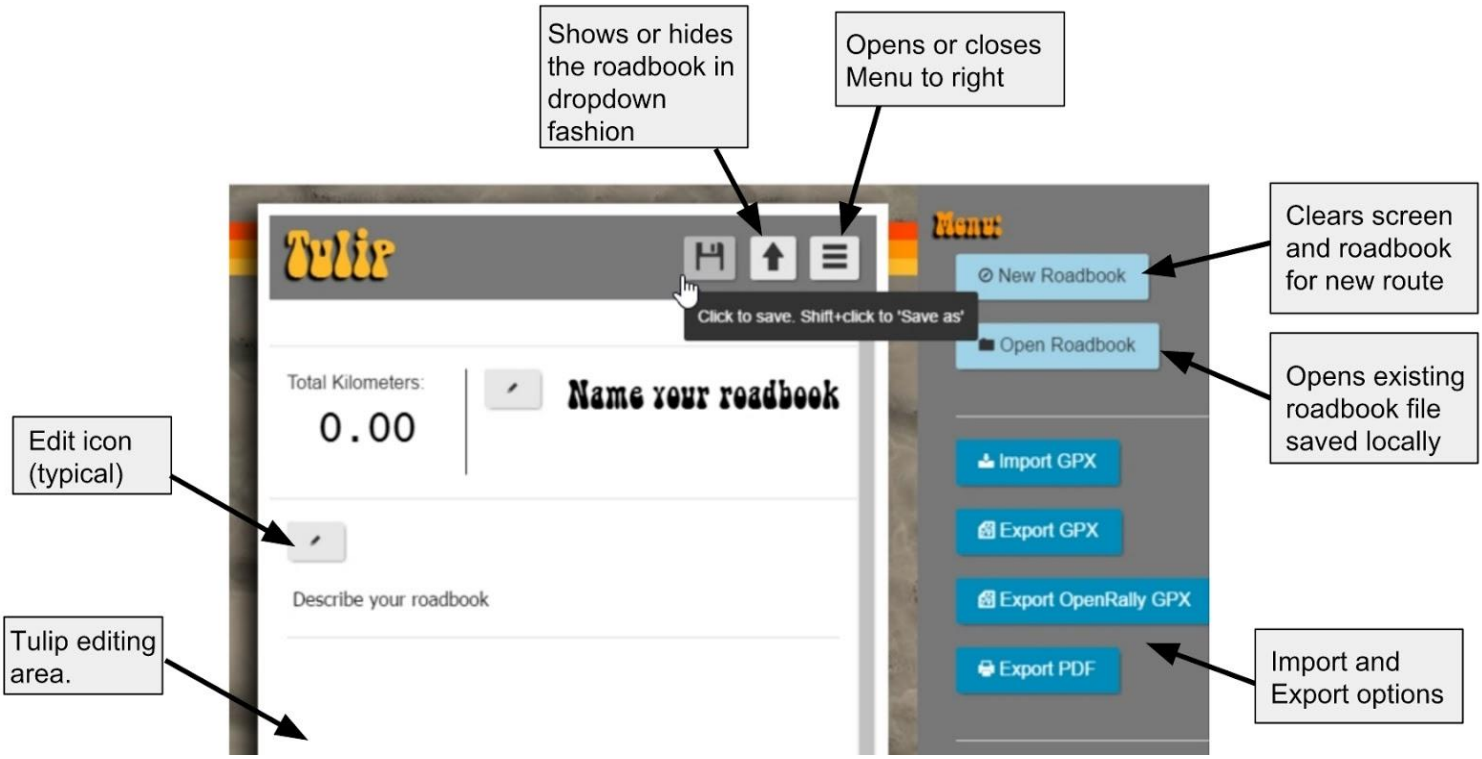
Instruction:	Action:
Click	Click the left mouse button.
Dbl-Click	Click the left mouse button twice in quick succession.
Right-Click	Click the right mouse button.
Click-hold	Click the left mouse button and hold it down.
Ctrl+Click	Press the Ctrl key and then left mouse Click simultaneously.
Ctrl+Right-Click	Press the Ctrl key and then right mouse Click simultaneously.
Ctrl+***Key***	Press the Ctrl key and then the indicated key simultaneously.
Shift-***Key***	Press the Shift key and then the indicated key simultaneously.
Escape	Press the Escape key

The Google Map interface requires users to hold down the CTRL key when zooming now. Minor annoyance but you get used to it pretty quick.

Main Tulip Screen



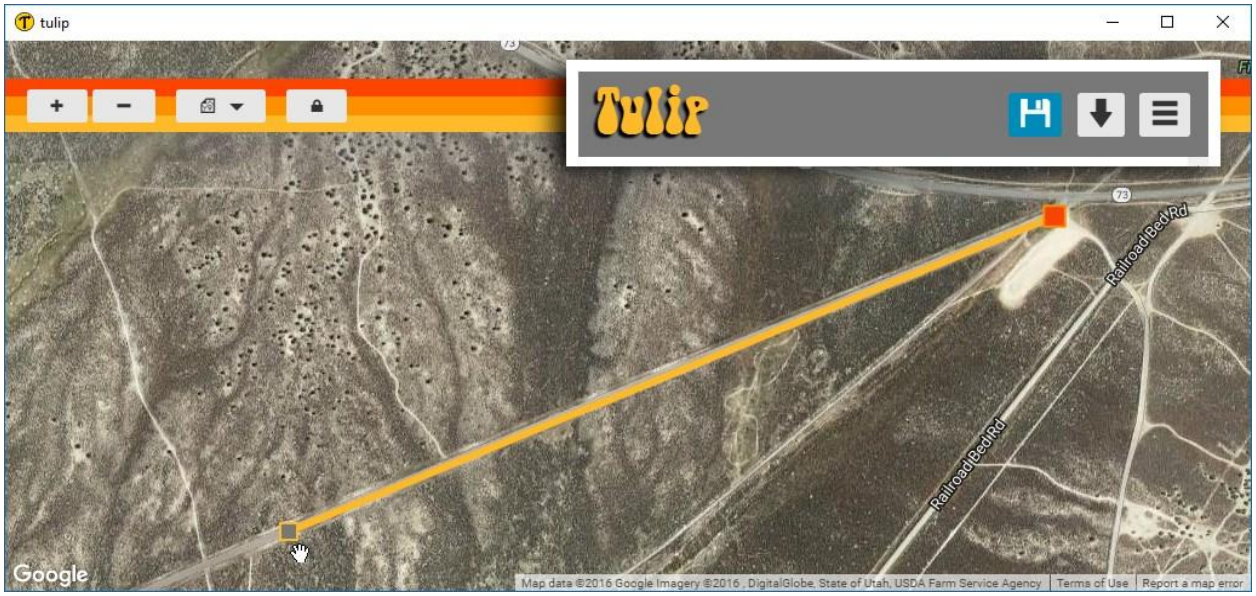
File Operations / Tulip View /Import Options



Basic Route creation:

To create a roadbook you need a route. The simplest way to create a route is by using the mouse and the map screen. The initial route creation is forward along the route, meaning from the Start (DSS) to the Finish (ASS) of the stage. Click-hold allows you to pan the map. The mouse scroll wheel does the zoom in/out function for the map, or the +/- in the upper left corner will too..

When starting the Tulip app it will default to a clear map screen and new un-named route. The mouse pointer and mouse buttons are your connection to the map. There are two types of points you are able to create in a route. There are Instruction points and Route points. Instruction points are orange and create instruction entries (tulips) in the roadbook. Route points are grey and are intermediary points used to calculate the route distance and CAP headings exiting an instruction as well as the initial base graphic in the instruction diagram (tulip). The orange instruction points are visible at all zoom levels but the grey route points are only visible if zoomed in close enough. This helps with the map speed when panning and zooming. The first Click on the map creates an instruction point, being the start point for the route and initial 0.00 km instruction for your roadbook. All subsequent Clicks will create route points with straight segments linking them to represent your route. In the example below you can see the initial instruction point to right and the second route point to the lower left.

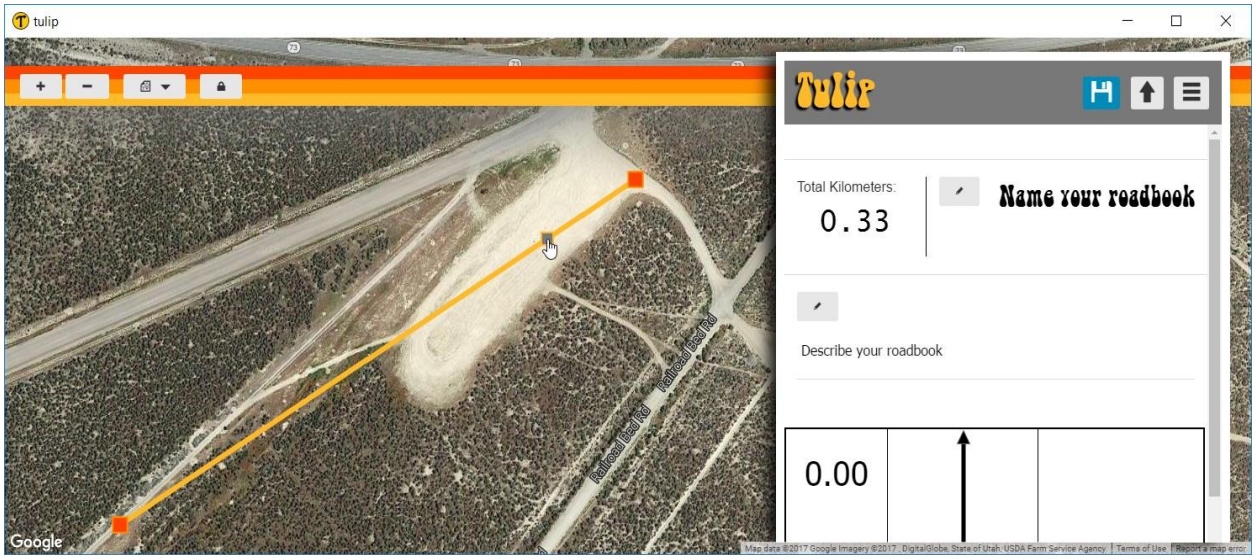


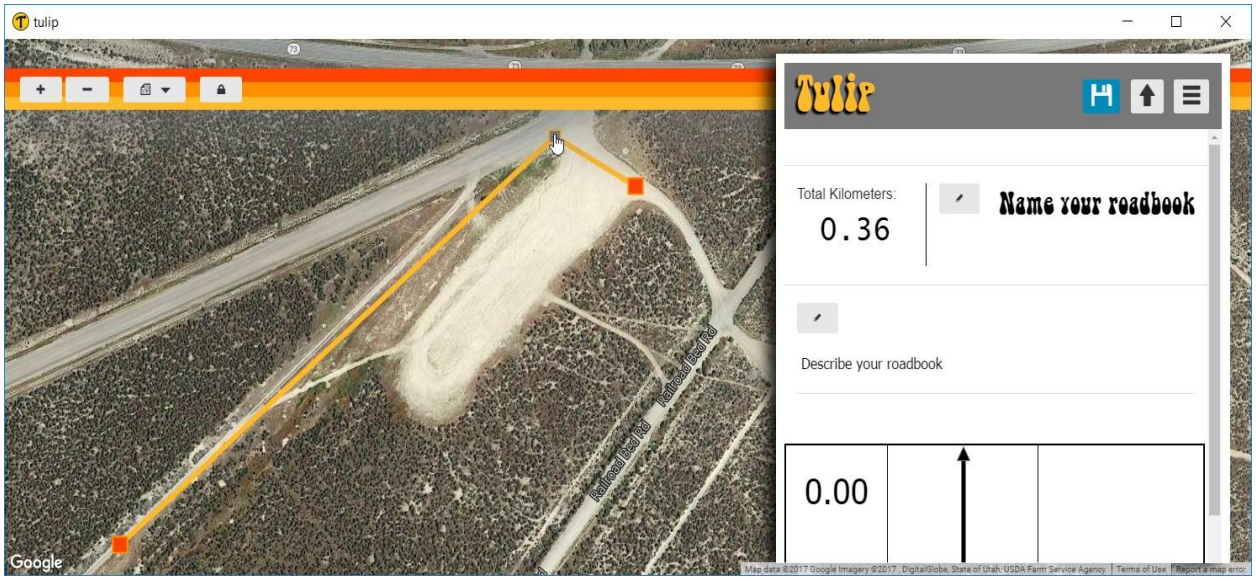
After the initial 0.00km instruction point all points made by a Click on the map will create route points. To make additional instruction points you must change an existing grey route point to an orange instruction point. Simply hover over an existing grey route point and Dbl-Click. The point will change from grey to orange and an entry in the roadbook will be created at that route distance and location. Dbl-Click an orange point and it will *permanently* delete this instruction (and any modifications you have made to the tulip or notes) from the roadbook and turn the point back to a grey route point. You don't have to have all the instruction points set as you build the route. It is recommended that you add them later as you get closer to creating the instructions. Now that you have some portion of a route started you need to save the work so far. The first time you click the disk icon to save the yet un-named roadbook Tulip will prompt you with a standard popup for the file location and name. Good file management here can save you hours of frustration later. Remember to save your work frequently.

Route editing:

Often times you are zoomed out during your initial route creation and the route doesn't follow precisely enough where you wish and the total mileage would be off. It is easy to adjust the route. Zoom in to a closer view using the mouse wheel or the +/- buttons in the top bar. You can adjust any existing points, grey or orange by hovering your mouse pointer over the desired point and Click-hold. Then, by dragging the point to wherever you wish the route to go and then releasing the left mouse button the route is adjusted. The total route length is automatically updated for the entire roadbook. Any corresponding CAP headings, if shown, are adjusted as well.

Sometimes you need to add additional points to a route segment, to better fit the curve of a track for example. This is accomplished by holding the mouse pointer over the route segment you wish to edit. You will notice a grey point appear, but it goes away when you move your cursor away from the yellow route line. Click-hold will allow you to drag and place the new point into that route segment at your desired location.

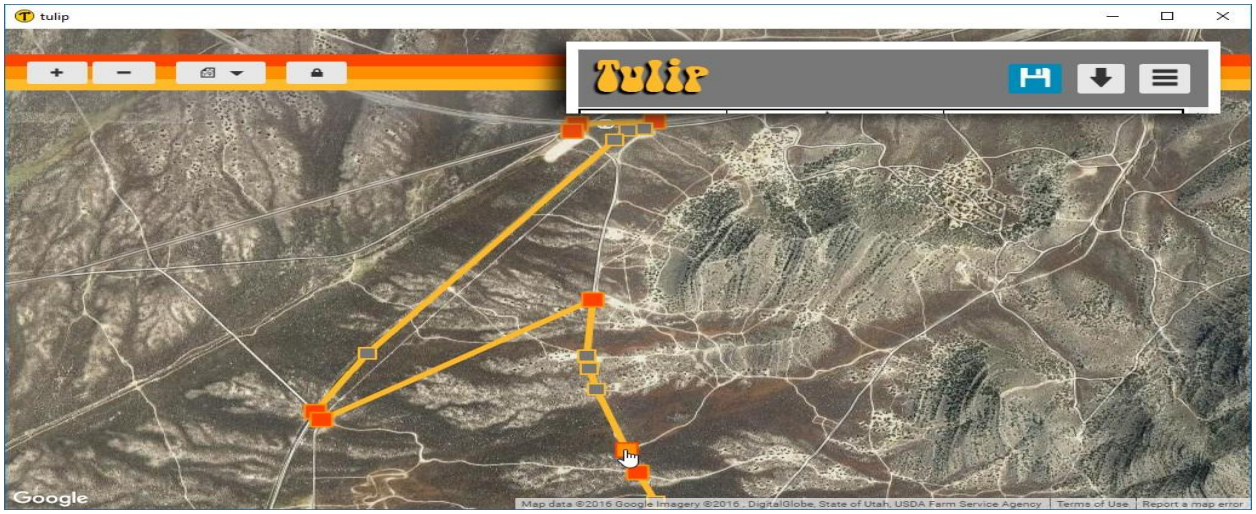




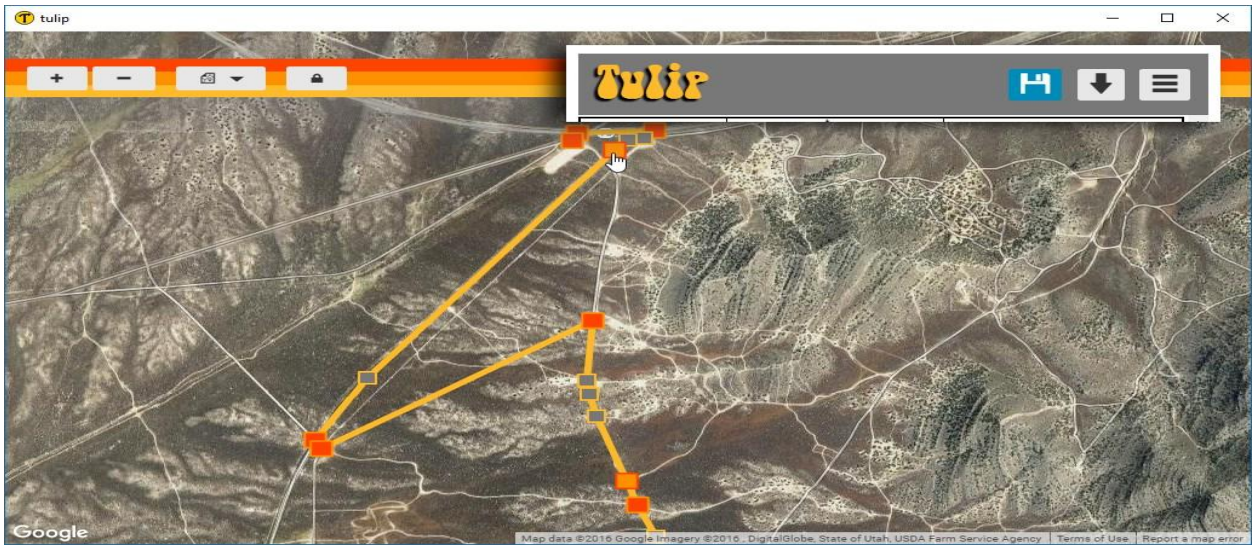
Alternatively, you may wish to remove an existing route or instruction point. Hover your mouse pointer over the point you wish to remove. Right-Click will change that point to yellow inside and orange outline. A second Right-Click will delete that point from the route. If there was an instruction associated with that point it will be *permanently* removed from the roadbook as well so be careful when deleting, especially if you have made changes and enhanced the instruction.

You can remove multiple points (entire sections) quickly from the route as well. Find the first point of the section you wish to delete and Right-Click that point, setting you into Delete Mode. Find the other end of the section you want to delete and Right-Click that point. Everything between and including those two picked points will be deleted. This can be done working in either direction in the route. A single route segment will connect the existing route portions and Delete Mode will be finished. Escape safely exits Delete Mode if you find you have entered Delete Mode in error. Remember to save your work.

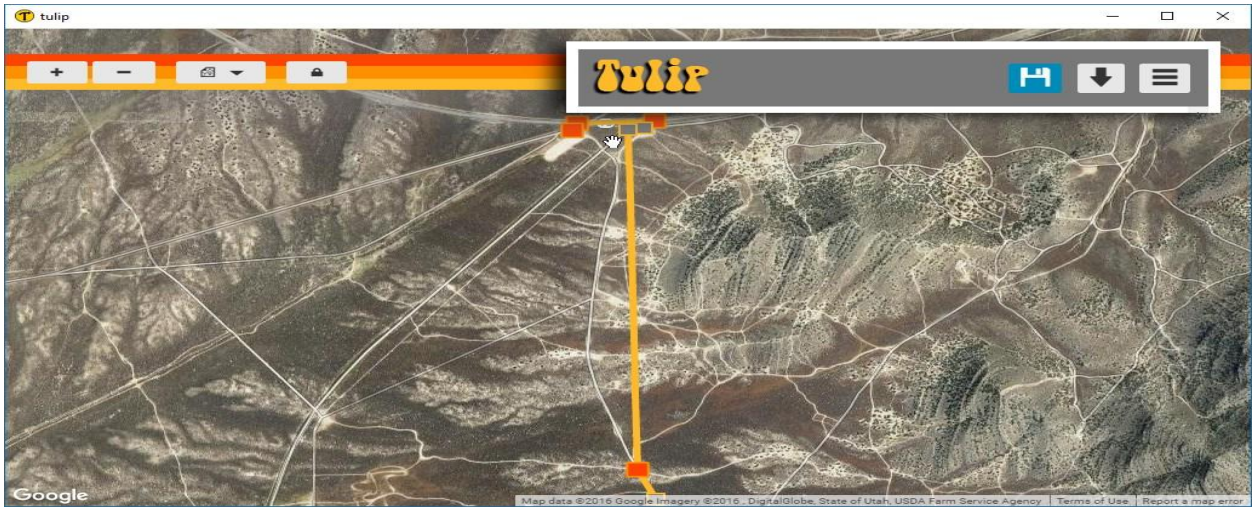
First Point at the bottom Right-clicked Notice yellow center, orange outer.



Hovering over upper point to delete, it turns yellow filled, orange outer.



After Right-Click all intermediate points are deleted.



ADVANCED ROUTE CREATION OPTIONS

GPX File Route creation:

Tulip is able to import GPX files directly to a route. This option is found in the Menu section and 'Import GPX'. It opens a typical popup to select the desired GPX file. Once the file is selected you will see the Tulip logo spin on the screen for a few moments and then map screen will pan and zoom to the extents of your route. This can be done at any point in creating a route and will append the current route with the entire GPX track you have opened. If you have and existing route open Tulip will directly connect the last point of the existing route to the first point of the imported GPX file, no matter how far away it is. GPX files contain a track in a given direction. If the route isn't in your desired direction there are several tools (GPS Track, Garmin Mapsource or Basecamp, etc) to reverse or invert the route and save a new GPX file before importing to Tulip.

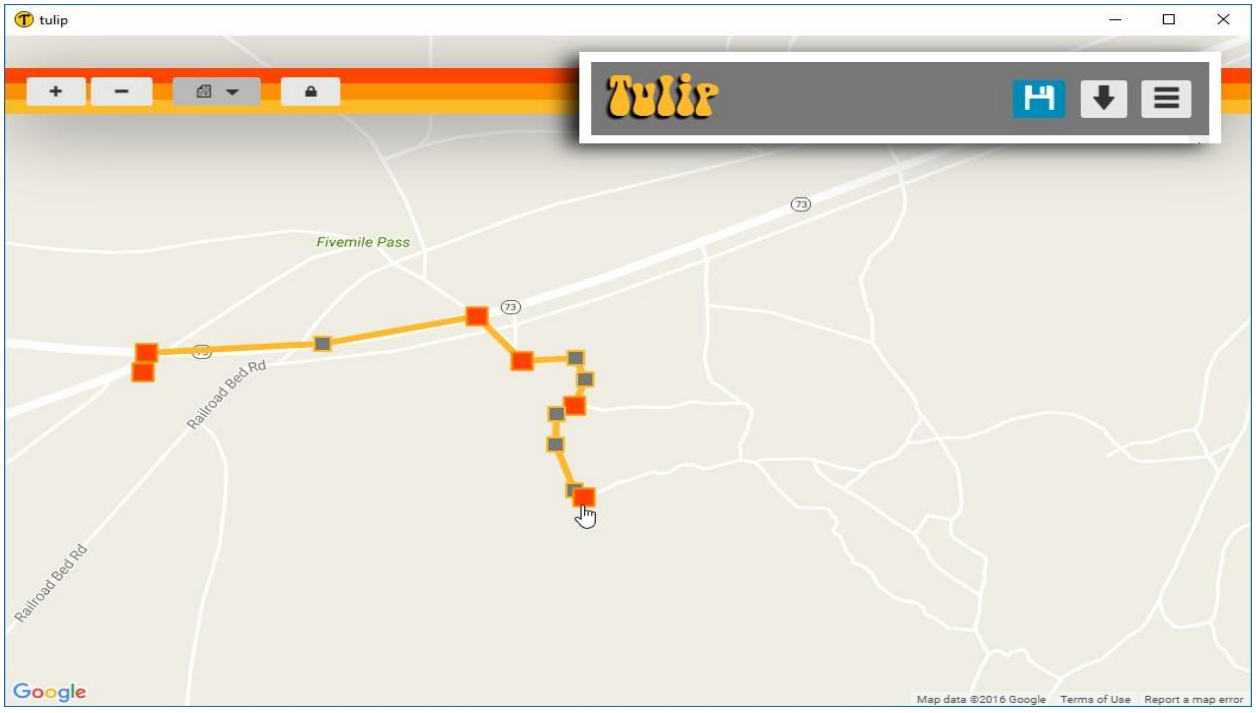
Auto-Trace Roads:

For areas where there is Google map data showing roads/tracks in the Hybrid map view Tulip can quickly create a route by leveraging the map data and without having to make a large number of manual points. After a route point is created on or very near the desired road/track you wish to trace, you can Right-Click on a road/track elsewhere on the desired route. A popup will appear confirming you want to auto-trace roads. Behind the scenes Tulip will trace a route along the available roads/tracks and create your route. It can be helpful to have changed from the default "Hybrid" map view to "Roadmap" to more easily see where Google thinks the roads/tracks go. Sometimes it will follow a route that you weren't intending, so take small bites and work your way along. You can either edit the route by editing or dragging the various points to the route where you want or erase the bogus portion of the route and try picking shorter segments along your desired route. Remember to save your work often.

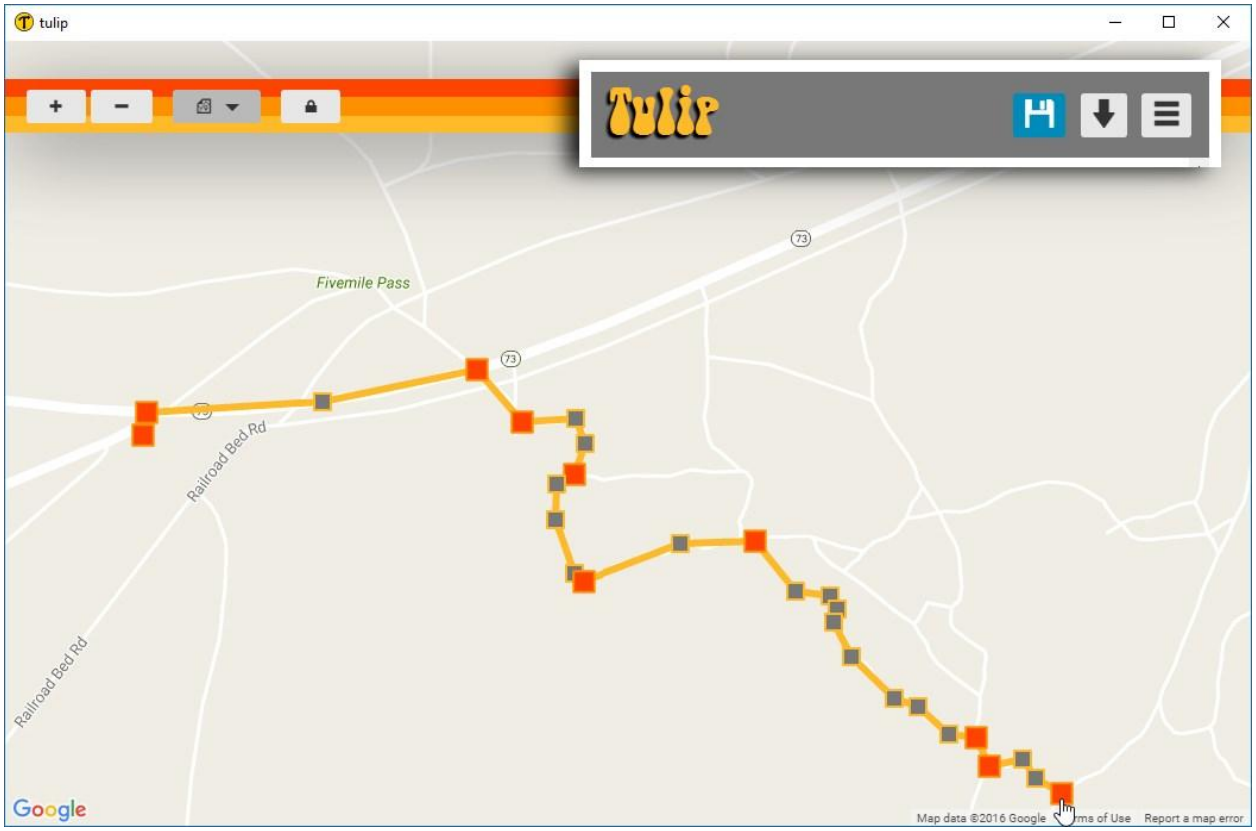
The one large caveat to using this feature is that it can't be done in the middle of a existing route. It has to be done as an extension of the current route as you build it. There are some interesting options we will discuss shortly that greatly expand the usefulness for using this feature but for now see the example images below.

This is the route Google picked between the initial point on the left and where the proposed route would go on the lower right where the hand cursor is . This isn't where it was intended to go.

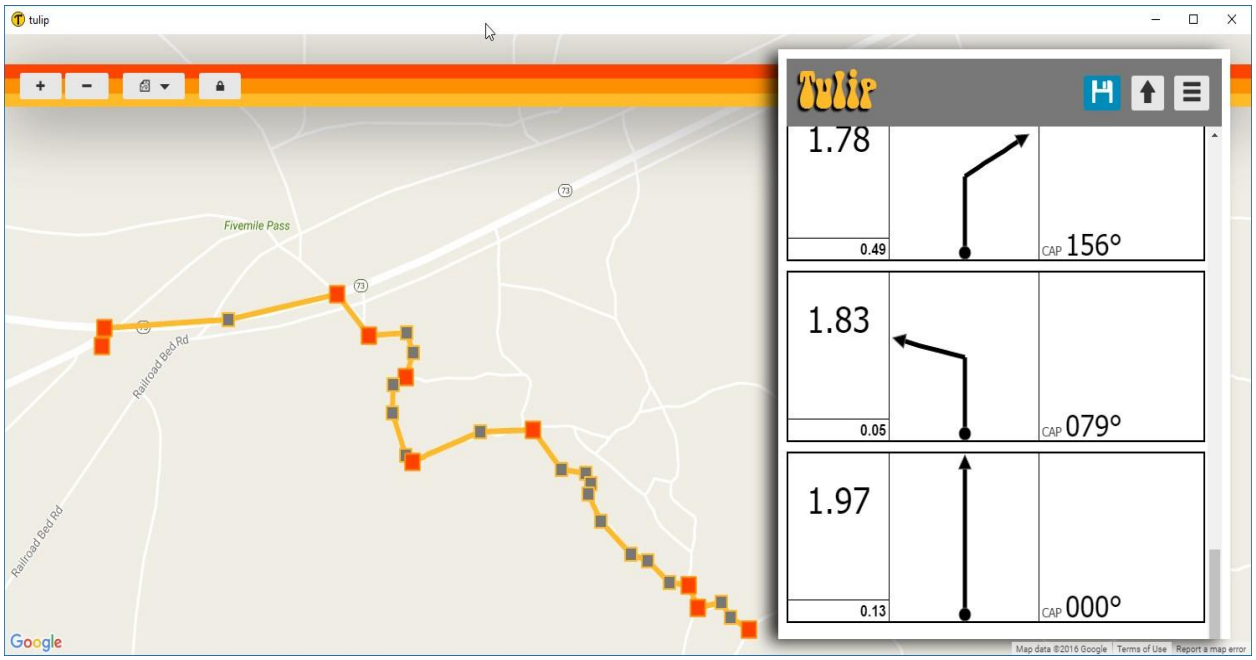
After erasing everything but the first point to the upper left and then picking an intermediate point on the desired route we get the route we were hoping for. It make take a few attempts to get the route where you wish to go, but still quicker than clicking many times to create it by individual route points, especially when doing long sections.



And then the final point where we initially picked to get the desired route.

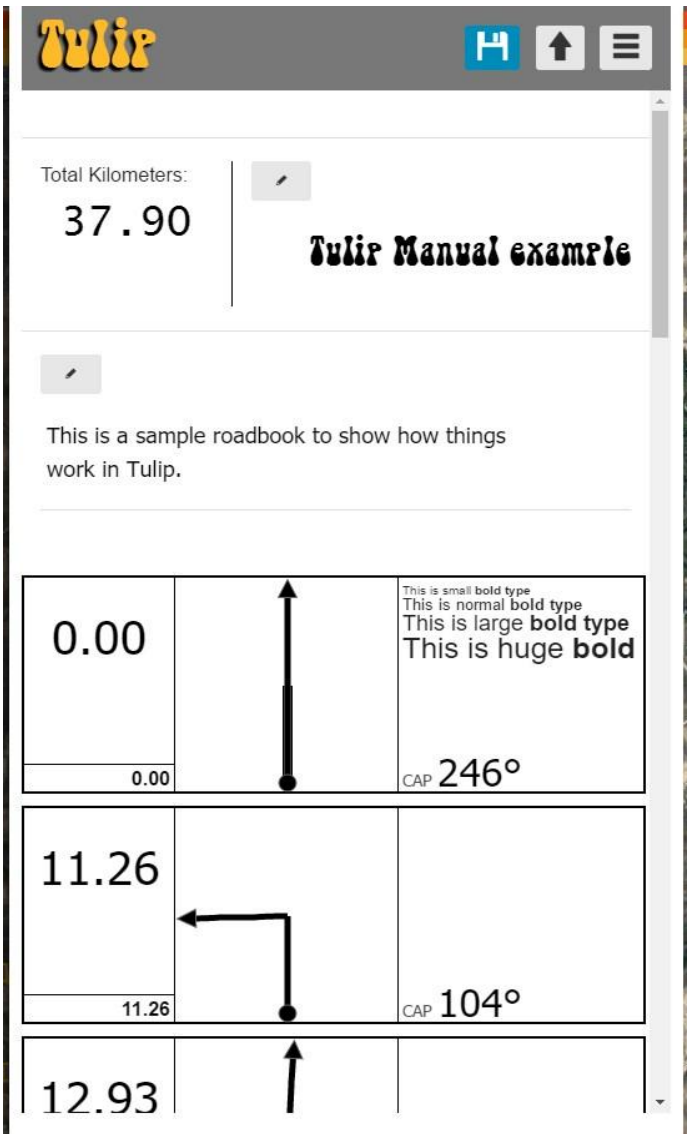


Notice that at “most” of the places where you would need a roadbook instruction there are already Orange navigation points and the corresponding roadbook entries. This was with a total of 3 mouse clicks.



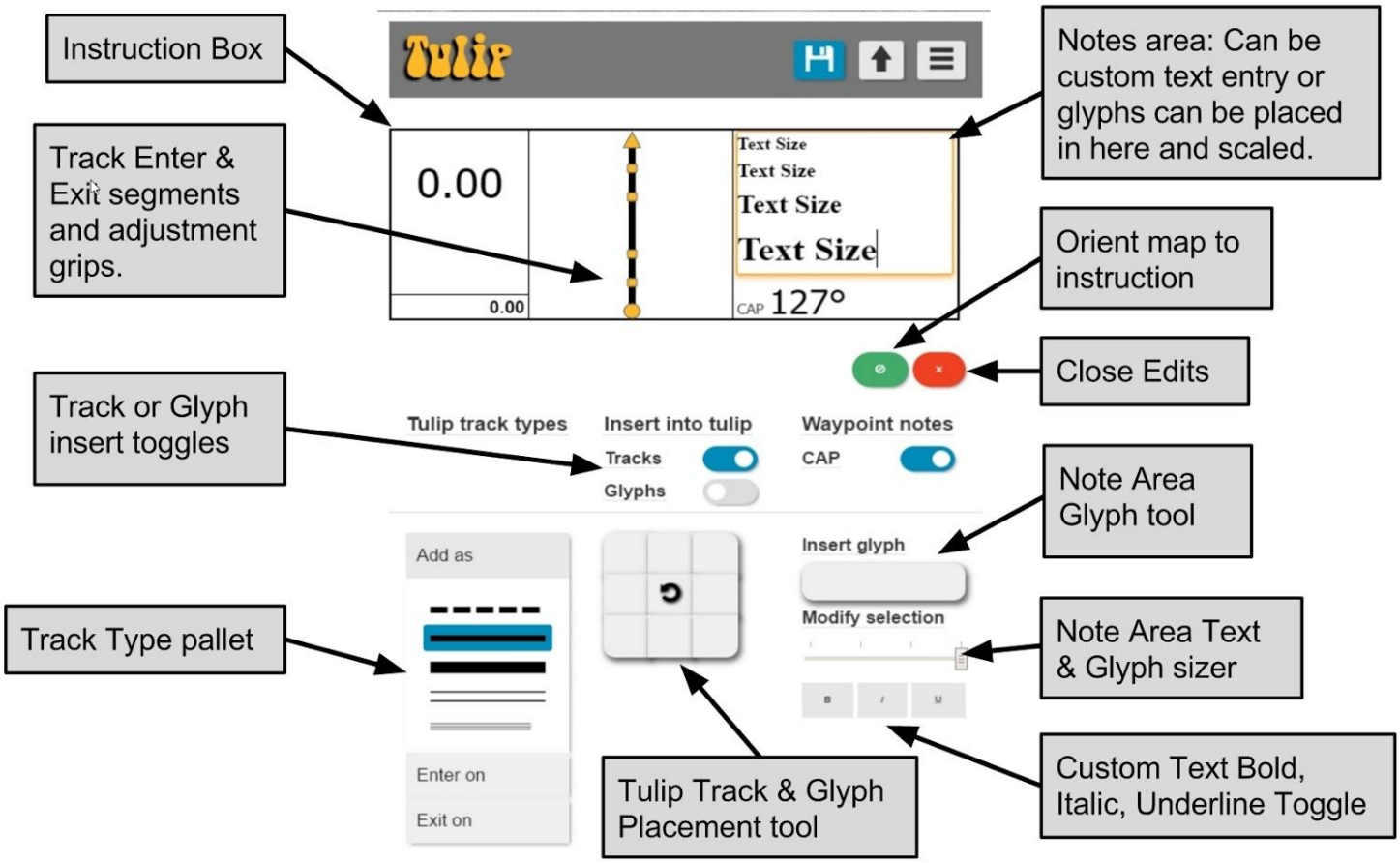
Roadbook Editing:

Now that you have your route on the map portion of the page you will need to build the roadbook itself. If you haven't dropped the roadbook down into view yet you can do so by Clicking the downward arrow on the upper right portion of the Tulip app window. This expands and makes the roadbook visible. Click the upwards arrow to collapse the roadbook from view if you want a larger map view. The initial roadbook view shows the total distance of your route from the map view, editable roadbook name that shows when printed, area for detailed roadbook information that also shows when printed. Below that are your tulip instructions.

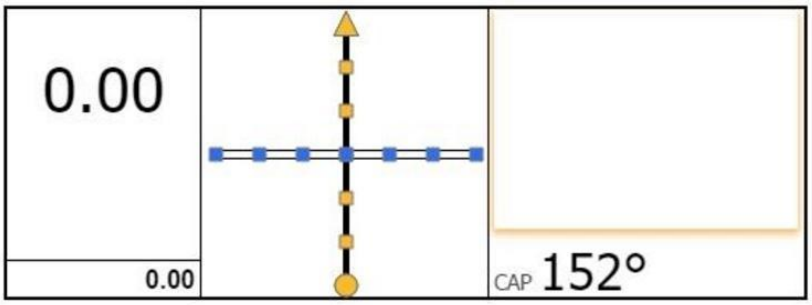


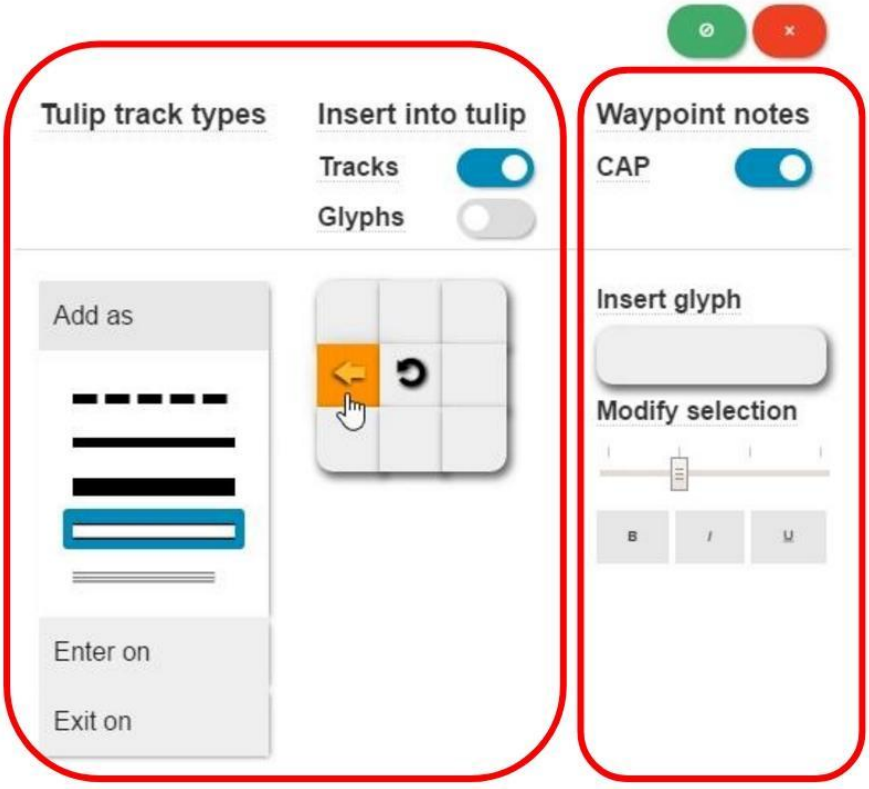
To edit your roadbook you would choose the instruction you wish to edit. You can do this in the map view by clicking on the instruction point within the route causing the roadbook to scroll the corresponding instruction to the top of the view. Alternately you can Click in the instruction in the roadbook itself. The map will zoom to the location of the corresponding instruction entry.

Clicking anywhere within the instruction box will open the editing function as shown below. With the instruction editing tools you are able to completely customize the instruction with various track types, FIM/FIA based glyphs and custom text.



The editing pallet has two basic portions. The left side is related to the actual tulip or drawing creation and the right side is related to notes portions of the instruction. The left side allows for adding road and track types or by toggling the Glyphs slider 'active' it allows you to place glyphs quickly in the tulip.

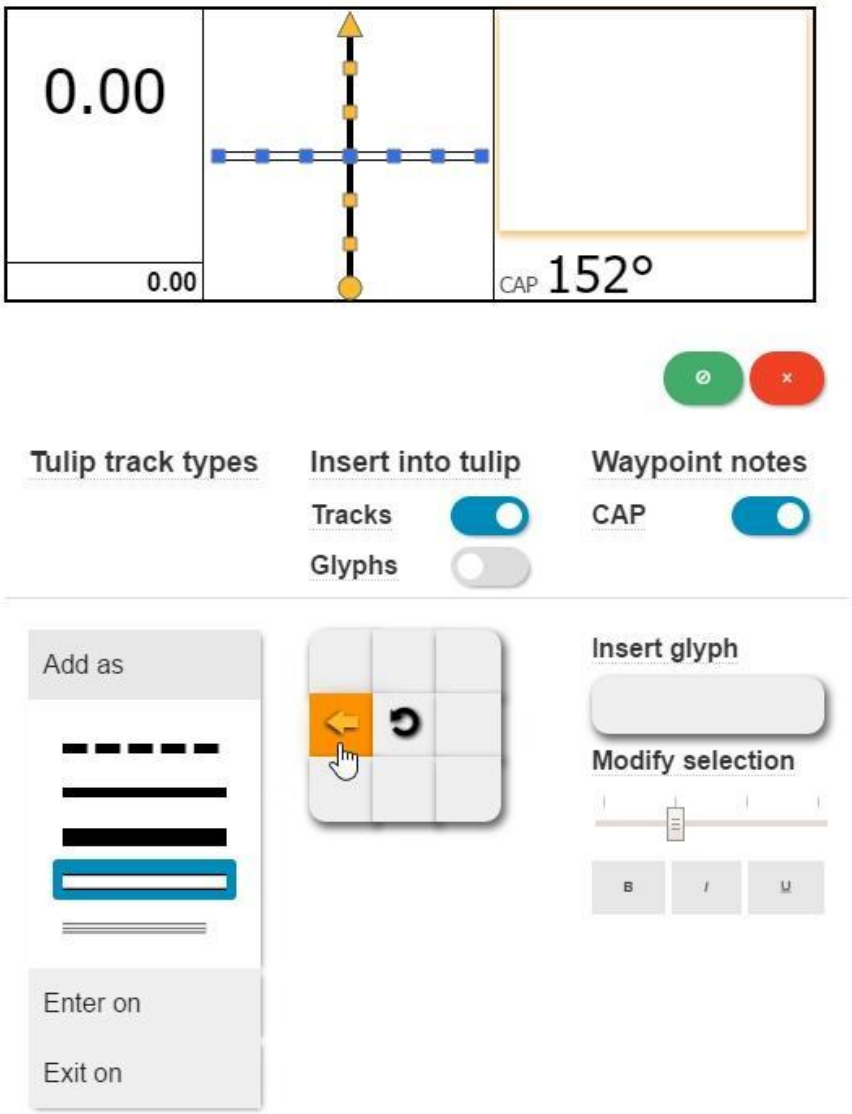




Track Editing:

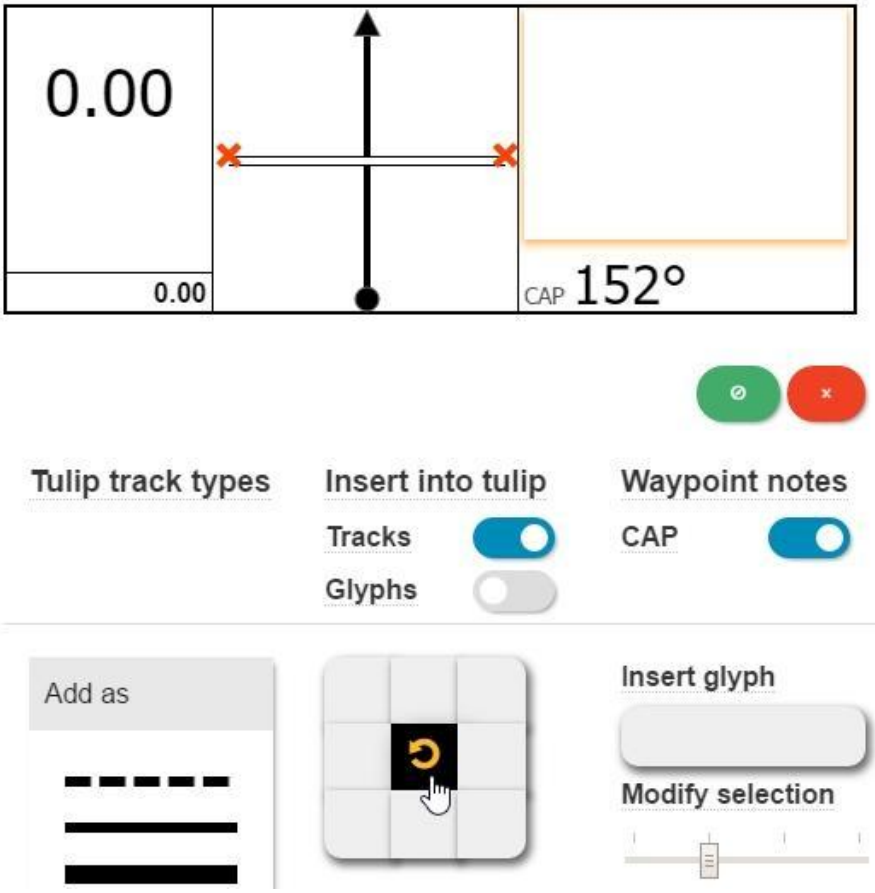
A typical workflow might start with adjusting the track types, entering and/or exiting the instruction. The 'Track type pallet' allows you to select from the five types for the three possible portions of the instruction. The 'Add as:' option is for any additional track segments you wish to add to the tulip, such as intersections or merging tracks. Once the appropriate track type is selected you use the Tulip Track placement tool to quickly insert the 'Add as' track segments in the same orientation as the arrows indicate. If there are multiple types of tracks intersecting in this tulip you would need to go back to 'Track type pallet', select another type of 'Add as' track/road and add with the placement tool as desired.

The image below shows inserting the 'Main' road type in the 9 o'clock position in the tulip (3 o'clock segment was added prior). You will notice the original segments have yellow grips and added sections have blue grips.



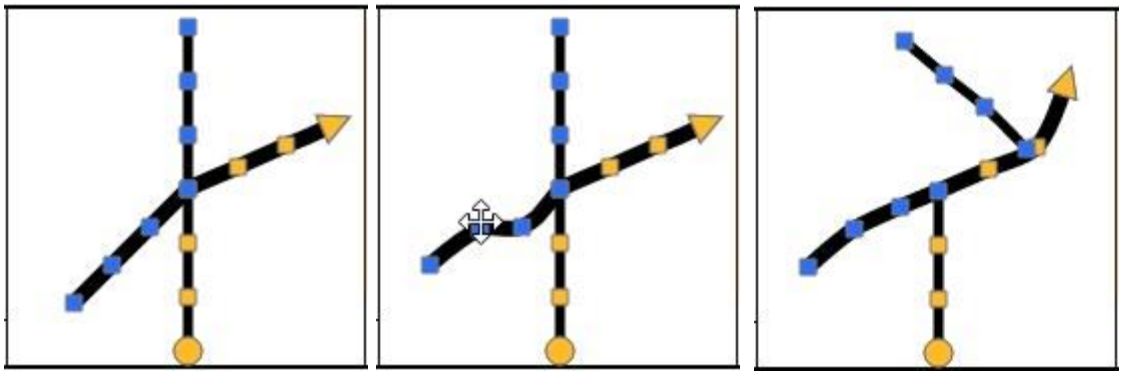
If you need to erase any added segments you can use the 'Undo' button in the middle of the placement tool. Segments will be deleted from most recently added to the oldest. If

you wish to delete a segment that was placed earlier without disrupting any of the more recent ones you can Hold Shift+Click ‘Undo’ to enter a selective delete mode. Click the red X at the end of any segment to delete. If you continue to Hold the Shift key as you Click a red X you will stay in selective delete mode. To quit delete mode release the Shift key before deleting your last desired segment or hit Escape.



Not all tracks/roads are straight or exactly match the inserted angle from the Tulip Track placement tool. All segments in the tulip can be adjusted using the 'grips' that appear when in edit mode. The only portion that is not adjustable is the center of the tulip where the 'Enter As' and 'Exit As' segments join. By placing the cursor over a grip and Click+Hold will allow you to drag that grip to the desired location. Release the Click to release the grip and the segment position will be updated. Any 'Add as' segments, with blue grips, can be adjusted completely without regard to the center point.

An example of adjusting using the grips to get the desired tulip configuration.

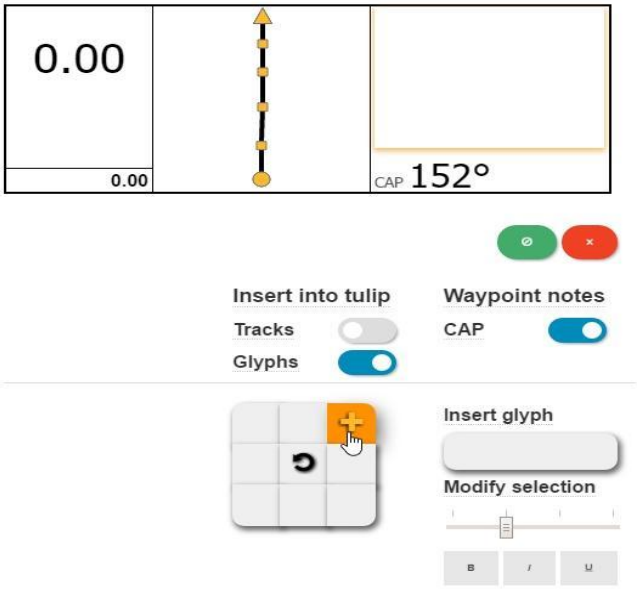


If you totally screw the pooch and wish to reset the tulip to its original information you can close the edit window, remove and add that instruction point back into the route on the map portion. You will quickly have a clean slate to work with again.

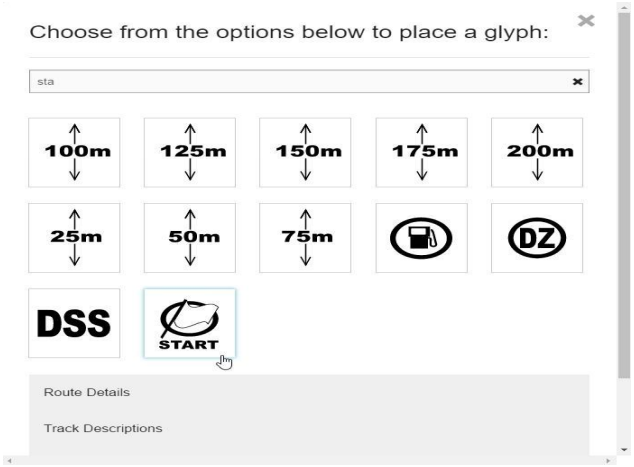
Glyph Editing:

After getting the track portion of the tulip to reflect the actual conditions you may wish to add ancillary information to the tulip as well. These can be in the form of graphical representations of landmarks or features or even abbreviations/shorthand of terrain or conditions . Toggling to the 'Glyphs Placement tool' works in a similar fashion to the track type placement tool.

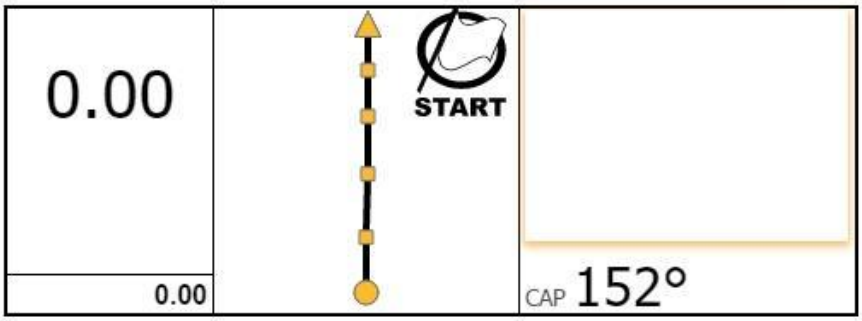
In the example below I want to place a START glyph in the NE quadrant. I start with selecting the location I wish the glyph to be inserted at and Click on the NW corner of the Tulip Glyph Placement tool.



This brings up the glyph chooser popup. You can search by common name and the results are immediate as you type. Or you can open any of the four categories and their various subcategories to preview and select the desired glyph. Here I have started to type 'start' and the start glyph is already being previewed and ready for Click selection.

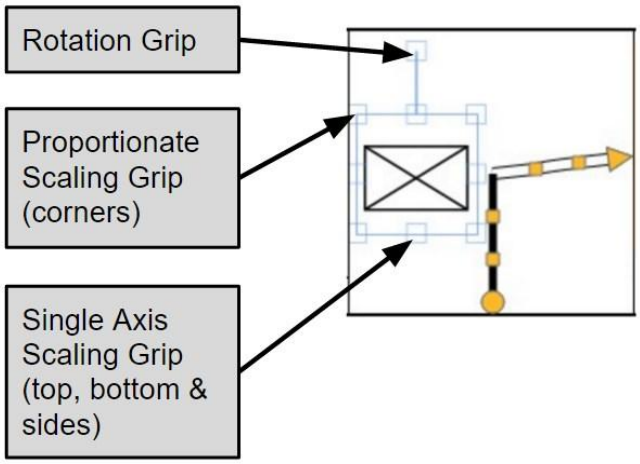


Which results in the Start glyph being placed in the desired spot in the instruction.



(Caveat for the search function is that it needs to be in lower case and it is the glyph file name, not the French abbreviations)

All glyphs, like added track segments, are moveable for final placement using Click+Hold to drag to the desired location and releasing the mouse button. You will also notice several light blue grips appear when you select the glyph. These allow you to rotate and scale the glyph as desired.



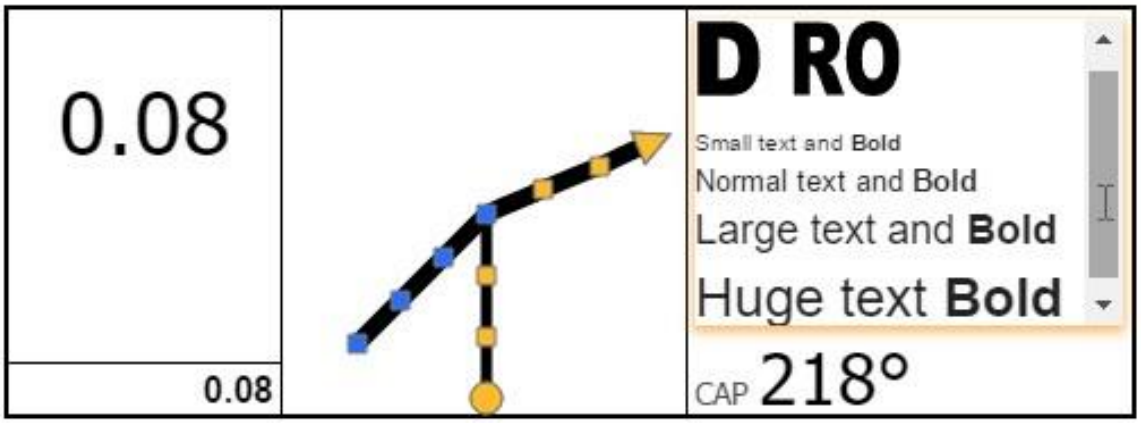
Deleting Glyphs is done in the same manner as tracks. If you need to erase any glyphs you can use the 'Undo' button in the middle of the placement tool. Glyphs will be deleted in order from most recently added to the oldest. If you wish to delete a glyph that was placed earlier without disrupting any of the more recent ones you can Hold Shift+Click 'Undo' to enter a selective delete mode. Click the red X on the glyph you wish to delete. You can continue to Hold the Shift key as you Click a red X to stay in selective delete mode. To quit delete mode release the Shift key before deleting your last desired glyph or hit Escape on your keyboard.

Note Area Editing:

After getting the track portion of the tulip to reflect the actual conditions you may wish to add ancillary information to the tulip as well. These can be in the form of graphical representations of landmarks or features or even abbreviations/shorthand of terrain or

conditions . The ‘Tulip glyphs Placement tool’ works in a similar fashion to the track type placement tool. It allows placement of glyphs, typically a text based shorthand/lexicon for direction or track conditions. Once inserted you can select the glyph and then use the slider below the placement tool to adjust the size of those particular glyphs. You can adjust the spacing by actually inserting a space with the space bar between the glyphs.

You can also add custom text into the note area in various font sizes using the same slider function. It is best to type the text you want, select all the text you wish to change the size of by Hold+Click+dragging over the text until it is highlighted blue and then adjusting the slider. The Bold, Italic and Underline functions are toggles and will turn a darker grey while active and stay active until you deselect them.

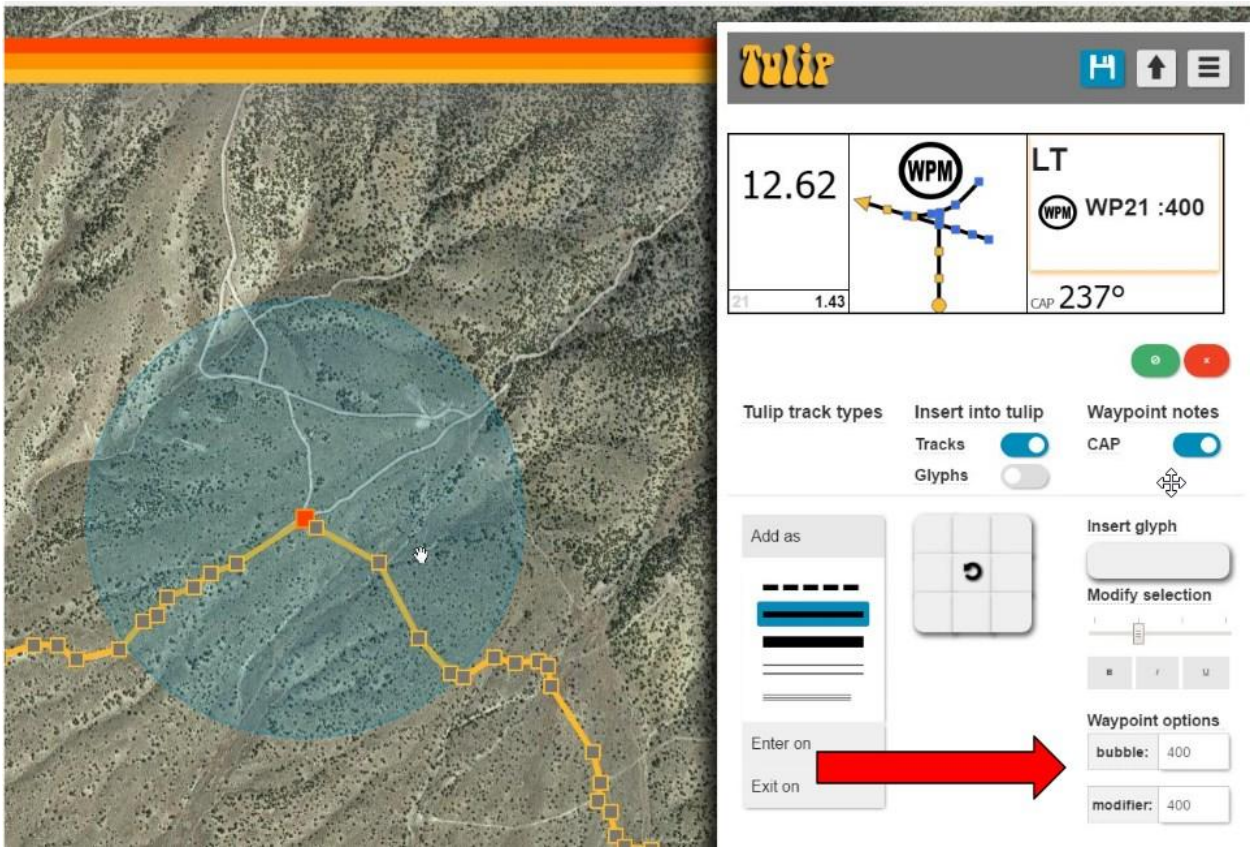


You can have the CAP heading visible or not for each individual tulip by using CAP slider visible below the note portion when editing.

Special Glyphs and notations:

A unique feature of Tulip is it's direct integration with the Rally Blitz family of iPhone and iPad apps. When inserting certain glyphs your exported GPX files will have specific functionality within the apps like speed zones, WPM (masked waypoints) and triple cautions. These glyphs need to be placed in the Notes section of the instruction to create the appropriate entry in your GPX files.

With the latest version of RallyBlitz Nav Pro (v1.2) you are able to set the size of WPM bubbles up to 800m in diameter. This is done in the Waypoint options section that appears in the lower right portion of the tulip editor. The Bubble size default is 400m but can be changed via keypad or up/down arrows and is reflected on map portion with a the blue circle. The Modifier defines the size of the 'Acquired' zone at the center. This is not used by RallyBlitz currently but is used by the Rally Comp device.



The !!! and speed zones are similar in function and are reflected on the map as well, but as orange and yellow circles.

Advanced Feature - Join Multiple Routes/Roadbooks :

With Tulip you are able to combine multiple roadbooks into one. This can be a massive time savings by using portions of already completed roadbooks, complete with custom instructions and updated odometer information. Using the 'Open Roadbook' command

from the menu will open an existing roadbook. If you were to use “Open Roadbook’ a second time Tulip would append the first opened roadbook with the second roadbook, complete with instructions and updated odometer readings. Tulip creates a route segment from the last route point in initial roadbook route to the first route point in subsequent roadbook file. It is highly recommended to make ‘Save as’ copies of files you will be trying to join together before you begin.

Example:

You have built this great route (Roadbook “A”) but when out doing recce on it you realize there is a locked gate and will have to reroute a large/long section along some double track to a quarry that shows as roads/tracks in Google Map data. You could go and delete the offending section in the roadbook with just two clicks and then manually trace the new route, one Click at a time, and build your adjusted route.

Or you could:

Create a new route starting at the offending gate to the quarry, using the Right-Click to Auto-Trace roads/tracks to route, quickly create the rerouted section.

1. ‘Save as’ something intuitive (example A-insert-01).
2. ‘New Roadbook’ to clean the map and roadbook area.
3. Open existing roadbook “A”.
4. Shift+Click to ‘Save as’ a new version with an appropriate section name, example “A-start”.
5. Delete all points after the gate causing the reroute.
6. Save.
7. ‘New Roadbook’ to clean the map and roadbook area.
8. Open roadbook “A” again.
9. Shift+Click to “Save as” a new version with an appropriate section name, example “A-end”.
10. Delete all points from the start of the roadbook to where the reroute ends at the quarry.
11. Save.
12. ‘New Roadbook’ to clean the map and roadbook area.
13. Open roadbook “A-start”.
14. Open roadbook “A-insert-01”. This will be appended to the end of the first roadbook, complete with tulips, glyphs and notes.
15. Open roadbook “A-end”. This will be appended to the end of the existing roadbook, complete with tulips, glyphs and notes.
16. ‘Save as’ new roadbook.

This is a great feature that has many more uses than just this example. You can easily use portions of old roadbooks, have several people working on different sections of a route at the same time, etc.