



5.12 Track/Annotate Tool

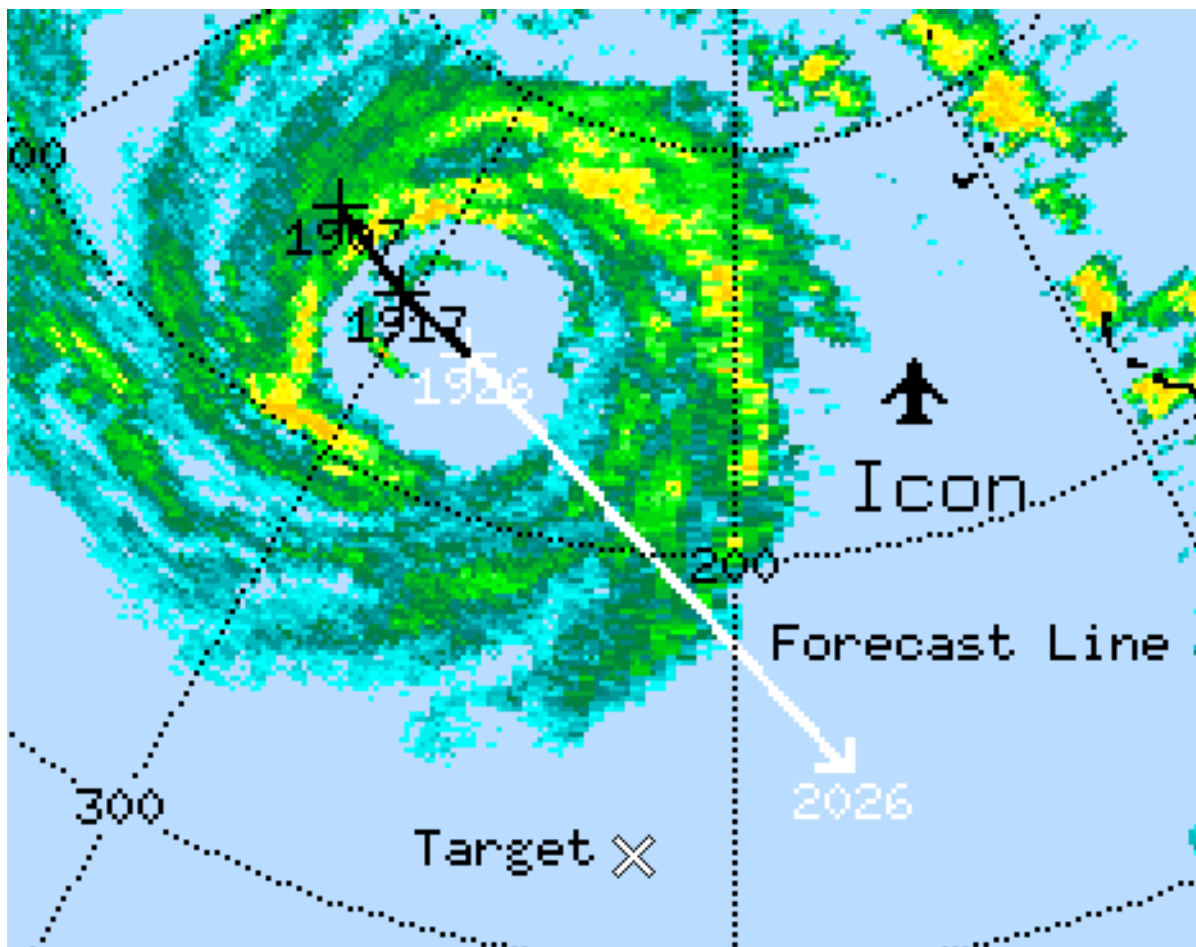
The Track/Annotate tool makes it easy for forecasters to:

- Make and edit interactive storm tracks.
- Determine time of arrival, time to arrival and distance of closest approach to a selectable “target” point (similar to a home point in the cursor mode).
- Add annotation text in various font sizes and colors.
- Add bit-map icons of various types and colors.

The general layout is shown above. The menu is divided into two basic sections:

- The left side contains the control of the “Action” of the cursor (e.g., add track point, text, icon) and what text or icon will be added. The selection of the forecast target point is also made here.
- The right side contains the track and forecast information, such as the position of the most recent track point and the distance, bearing and time of arrival from the most recent track point to the selected target point.

These are described in detail below.



Example of Track Points, Icons and Annotation

The elements of a track are shown in the example above.

- **Track Points** are indicated by the “+” with the time displayed beneath each one. Note that the latest track point at 0948 is highlighted since this corresponds to the frame that is currently displayed.
- **Forecast Line** or arrow shows the expected position of the echo, in this case, in 20 minutes. This line is also displayed in the highlight color to distinguish it from the track line.
- **Icon** in this case is an airport symbol.
- **Annotation** examples are the text “Icon”, “Target” and “Forecast Line”.
- **Target** for the forecast is indicated the the “X” symbol. This is used for forecasting the time of arrival at a position.

Naming a Manual Track

The Track Name field shows the name of a manual TRACK product. The names are always preceded by **MAN_** to indicate that these are manual tracks rather than automatic TRACK products that are created by IRIS.

To select an existing track name, click on the button next to the name field and select from the list of pre-defined names. There will always be a track with the name **MAN_DEFAULT**.

To create a new name replace the text in the name field. It is not necessary to type the “MAN_” – IRIS will add this automatically. The name will also be converted to upper case.

To delete a name, first select the name you want to delete, then click the selection button again and choose “Delete”. The name will be deleted from the list and the **MAN_DEFAULT** will be inserted as the active track.

The screenshot shows a light blue window with the following controls:

- Name:** A text field containing "MAN_DEFAULT" with a small square selection button to its left.
- Action:** A button labeled "Add Point" with a small square selection button to its right.
- Text:** A text field containing "Typhoon" with a small square selection button to its left.
- Font:** A text field containing "20" with a small square selection button to its right.
- Color:** A button with no text, only a small square selection button to its left.
- Icon:** A text field containing "airport" with a small square selection button to its right.
- Set Target:** A section header.
- Target List:** Two items are listed, each with a circular icon and a text field:
 - Icon: A red bullseye. Text field: "Airport".
 - Icon: A blue circle with a red 'X'. Text field: "Plant Target".

Starting a New Track

- Select an existing track Name or type in a new name.
- Use “Action” to “Delete All” to start a fresh track. After you do this, the menu will show “Last Point of 0” to indicate that all points have been removed and the Action will show “Add Point”.

Adding Points to a New Track

- First select a product for tracking. For example, if you want to track the most severe thunderstorms you might choose VIL since it is a good indicator of storm severity and tends to be persistent.
- Browse through the images to select a feature and then click the cursor on the feature. A track point will appear along with text to indicate the time of the point. The color of the track point will be in a special highlight color to indicate that it corresponds to the image that is being displayed.
- If you do not like the position of the track point, just click again and it will be moved to the new cursor position.
- Continue to browse through the images and add track points.



Hint: To avoid crowding the track points, skip a few points. You do not always need a point for every image.



Hint: The left/right arrow keys are very useful for browsing when you are in track mode, since you are using the mouse for adding track points.

Moving Track Points

- If you want to change the position of a track point, browse through the images to select the time of the track point that you want to move (it will be shown in the highlight color when the image time matches the track point time).
- Click on the new track point position.


Deleting an Individual Track Point

- Select **Action→Delete**.
- Click on the track point that you want to remove.



Hint: If you keep the mouse button depressed, the point to be deleted will be highlighted. This is helpful when you want to delete a track point that is very close to other track points.

Track/Forecast Information Fields

Last Point of		4	To Target	
LAT	U	20°48.3'N	Range	148 km
LON		113°56.0'E	Bearing	25 deg
Speed	U	15.0 m/s	Time to	02:44
Direct		22 deg	Time at	16:14
Forecast Time		02:00	Approach	7 km
				

The center column of the Track tool shows information about the track you are constructing. The information in the example above is taken from the track example displayed at the beginning of this section.

- **Last Point of <N>**– N shows the number of track, annotation and icon points that have been defined.
- **LAT/LON**– shows the latitude and longitude of the last track point, i.e., the most recent data time. The “U” button allows you to toggle the units between decimal degrees and degrees and decimal minutes.
- **Speed and Direction**– shows the speed and direction of the weather feature as computed from the two most recent track points. The “U” button for speed allows you to select among various common units.
- **Forecast Time**– allows you to set the time of the forecast. This controls the length of the forecast arrow.



Target Information

The “Target” is a geographical position that you use for forecasting purposes. For example, the target might be positioned at an airport or urban area. The default target position is at the radar site, but you can select the target from a list or plant a target with your cursor, similar to home points in the cursor menu.

The list of Target points is the same as the list of Home points. These can only be saved or deleted by the operator. Please refer to the Cursor tool section for details (Section 5.11).

Once you have set your target, the target information will show:

- **Range and bearing** to target from the most recent track point. In the example, the target bears 118 degrees and 19 km.
- **Time to** (target) is the time to the closest approach of the track to the target.
- **Time at** is the clock time of when the echo will make its closest approach.
- **Approach** is the distance of closest approach as measured from the track line to the target.

Adding and Editing Annotation Text

- Select **Action→Add Text**.
- In the text field, either type-in the text that you want or use the button to select an existing text string that has been saved.
- Select the Font and the Color of the text.
- Position the cursor where you want the text to appear and click. The cursor will show you a few preview characters in the selected font and color so you can decide before you click if the text is OK.
- If you need to delete, edit or move a text string, Use **Action→Delete** and then click on the text string to delete it. Now you can add the edited text.

Adding and Deleting Icons

To add an icon such as an airport symbol, thunderstorm symbol, etc.,

- Select **Action→Add Icon**
- Use the Icon button to select the type of icon. Usually the name will suggest what the icon is.
- Select the icon color using the Color selection button.
- Position the cursor (now shaped like your icon) on the screen and click.

To delete an icon select **Action→Delete** and click on the icon to be removed.

Creating New Icons

Icons are .xbm format bit-mapped icons which are stored in the /usr/sigmet/config/overlay directory. You can create your own icons using programs such as paint (on a PC), xv (on a UNIX system) or the standard icon editor that is typically supplied as part of your desktop software.

To get you started, SIGMET provides several sample icons in the /usr/sigmet/config_template/overlay directory. These can be copied into the /usr/sigmet/config/overlay, as follows:

- Login as operator
- **\$ cd /usr/sigmet/config_template/overlay**
- **\$ cp *.xbm /usr/sigmet/config/overlay**