

Topic: Active Chain Control

The GEOPAK Active Chain Control enables the user to manage plan, profile, and cross section views simultaneously. Active Chain Control can be used in place of the 3 port viewer, to place DP Sta. Offset, to dynamically obtain station/offset or station/elevation information from the 3 views, and to place cells at user defined increments and/or offsets. Active Chain Control must be setup prior to using the new Component Based Vertical Alignment Tool.

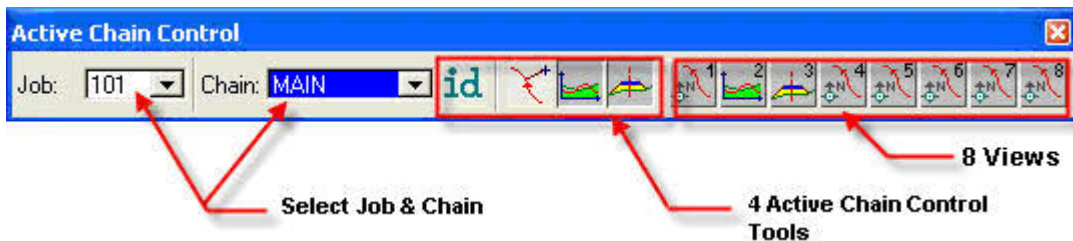
Prior to running Active Chain Control Tool

- o Invoke Project Manager
- o Reference your files (i.e. plan, cross section and profile)

Active Chain Control Tool can be accessed by selecting **Applications > GEOPAK Road > Active Chain Control** or by selecting **Active Chain Control** button from the **Road Tools** Icon.



Selecting the button will invoke the following Active Chain Control dialog box.



In the Active Chain Control dialog box, eight MicroStation view are available to set the graphical data for Plan, Profile and Cross Section.

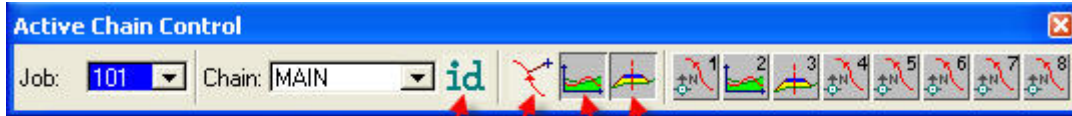
To Set Up the Views:

1. Open the desired MicroStation view(s).
2. Right mouse click an icon to define the status of the view. Set the graphical data for plan, profile and cross section.
3. Click an icon to fit the corresponding view.

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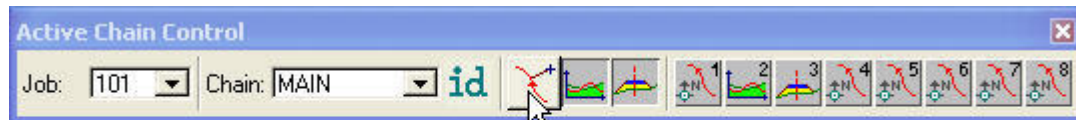
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4. Right click on the cross section view icon to open the Navigate Cross Section tool. Navigate Cross Section tool should be used with Active Chain Control.



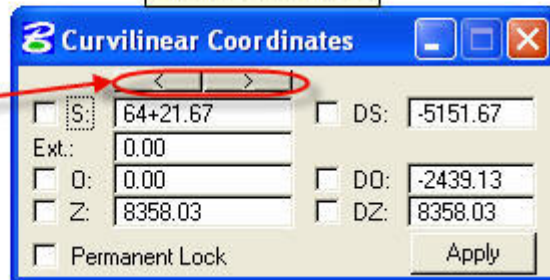
Graphically select Chain from COGO Cross section cell status
 Curvilinear Coordinates Tool Profile cell status

- **ID** icon cannot be used to identify a chain drawn using D& C Manager, chain must be a COGO visualized chain.
- **Cross Section Cell Status Tool** lets you know if the cross section cells exist. If the icon is grayed out then no cross section cells exist.
- **Curvilinear Coordinates Tool** allows entering precise curvilinear coordinates relative to the active chain. Can be used to place cell, line, and any other MicroStation tool requiring DP.



Curvilinear Coordinates

Sets **S** field to beginning or ending station of the chain. Locks **S** value



Use the left toggle to lock any of the values below.

S: Station along active chain

Ext.: Extension to beginning and end of active chain

O: Offset from active chain

Z: Elevation

DS: Delta Station from a data point to data point (perpendicular to the chain in plan view, vertical line in profile view)

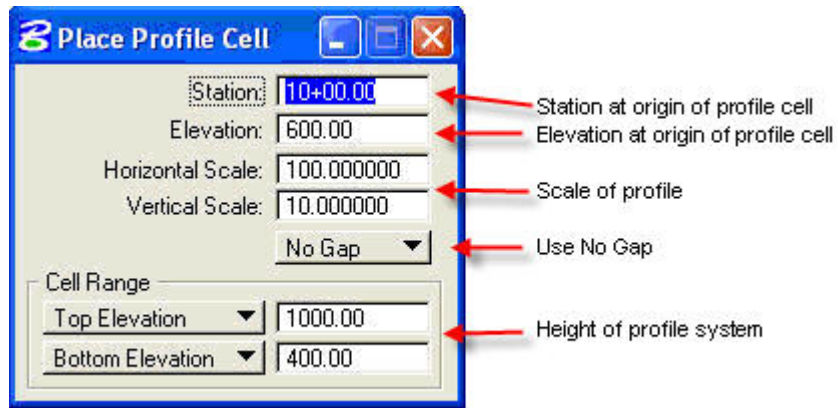
DO: Delta Offset from a data point to data point (parallel to chain in plan view)

DZ: Delta Elevation from a data point to data point (horizontal line in profile view)

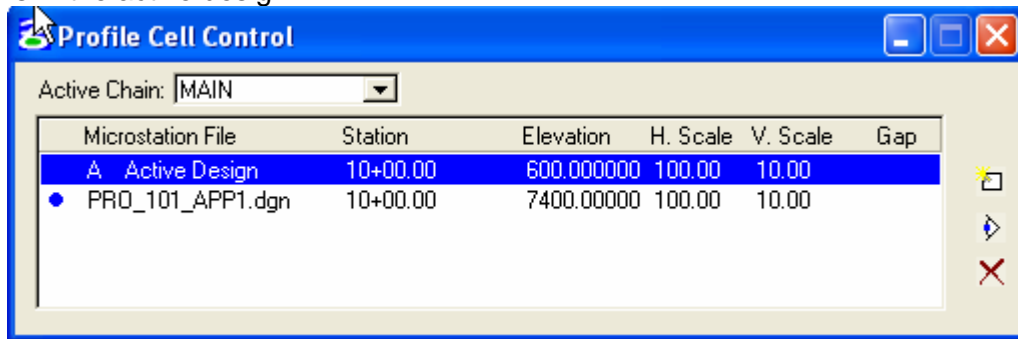
Permanent Lock: Sets active coordinate lock

- By right clicking on the profile cell status icon, you can invoke the **Place Profile Cell** to place a profile. **Top Elevation** should be set greater than the **Elevation** and **Bottom Elevation** should be set less than the **Elevation**.

Note: If you don't know the cell range values, use the DTM tools to read the **Minimum Z** and **Maximum Z** values of the contours in TIN file.



- o By right clicking on the profile cell status icon, you can also invoke **Profile Cell Control** to select active profile if multiple profiles exist. Double click will allow to activate the designated profile cell (large dot will be placed in the dialog). "A" tells that the profile cell is in the active design.



Example: To place a cell

Delta Station: To place a cell at an offset of -5 meters and at 20 meter increments beginning at 19+450.

1. To place the first cell, set and lock the **Station** field to 19+450. Set and lock the **Offset** field to -5. Click on **Apply**.
2. Keep the **Offset** still locked at -5, unlock the **Station** field, set and lock the **Delta Station** to 20. **Also lock the Permanent Lock toggle**. Use Apply over and over to place more cells.

Delta Offset: To place a cell at station 19+450 and at offsets of -10, -20, -30

1. To place the first cell, set and lock the **Station** field to 19+450. Set and lock the **Offset** field to -10. Click on **Apply**.
2. With the **Station** still locked at 19+450, unlock the **Offset**, set and lock in the **Delta Offset** (not Offset) to -10. Use Apply over and over to place more cells.

Delta Elevation: Works the same as the Delta Station and Delta Offset in Profile and Cross Section views.

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Information contained in this handout is taken from Geopak Help Files and Steve Pratt's Knucklehead's Guided Tour of GEOPAK Road 2004 Edition.

Related links: *Using Knucklehead's Guide for GEOPAK Road 2004 Edition.* - [Active Chain Control](#)