



## Workflow 3: Macro - Checking for Kinks in Horizontal Alignment

The Check Bearing Macro checks a GEOPAK COGO "describe chain" output file for kinks in the alignment by comparing AH and BK bearings of consecutive chain elements.

1. *Select Coordinate Geometry from the Project Manager Workflow dialog box as shown below.*

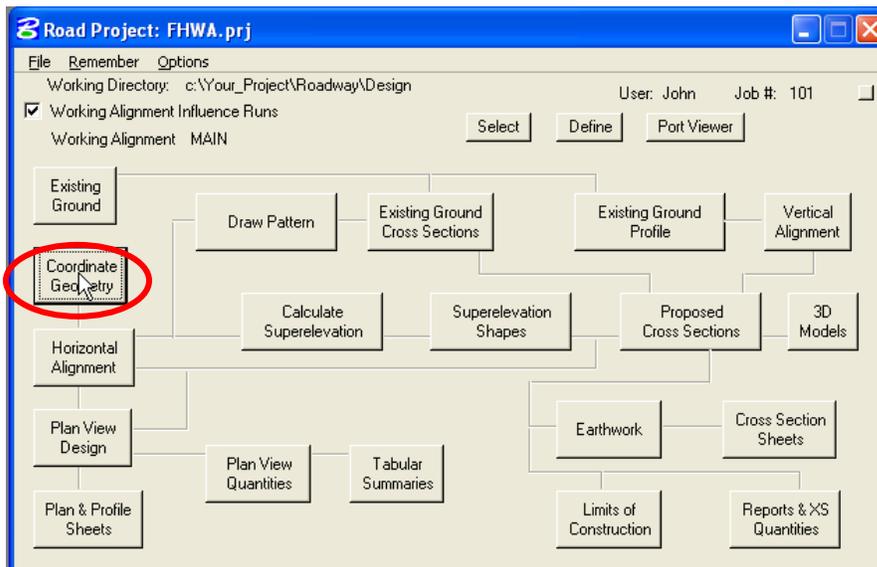


Figure 7-62: Accessing COGO through Project Manager

2. *To describe a chain, Select Element>Chain>Utility from the COGO dialog box.*

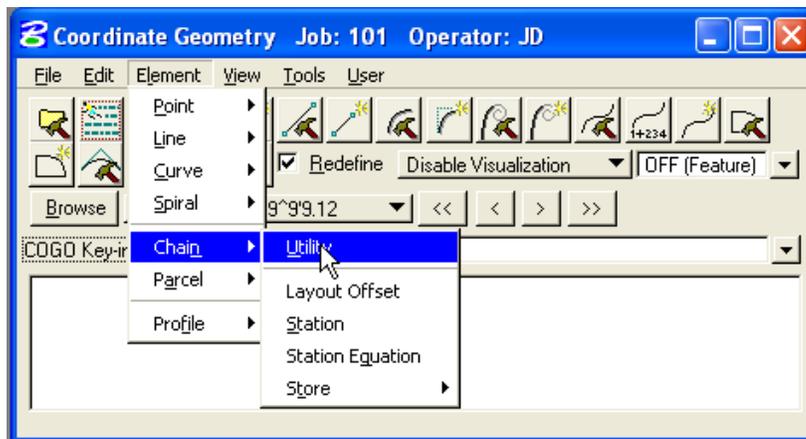


Figure 7-63: Accessing Utility Dialog box



3. In the Chain Utility dialog box, select the chain you want to describe and Click on the Describe Icon shown.

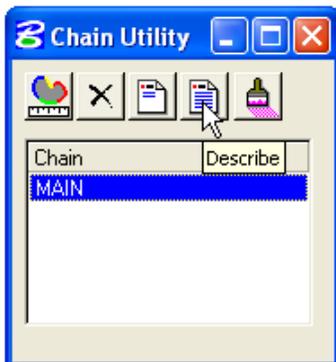


Figure 7-64: Chain Utility Dialog box

4. COGO dialog box will be populated with the chain described as shown below. Create an Output File by selecting File>Input File Utility from the COGO dialog box.

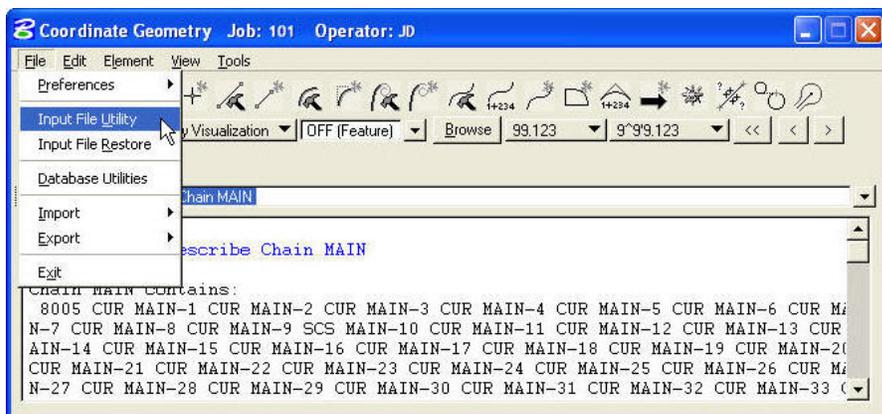


Figure 7-65: Accessing Input File Utility



5. In the File Utility dialog box, Select output from lower left pull down and type in a name for the Output File. Select apply to create an Output File. Output File for the example is named main101.ojd. 101 is the job number, O for output, JD is the operator code.

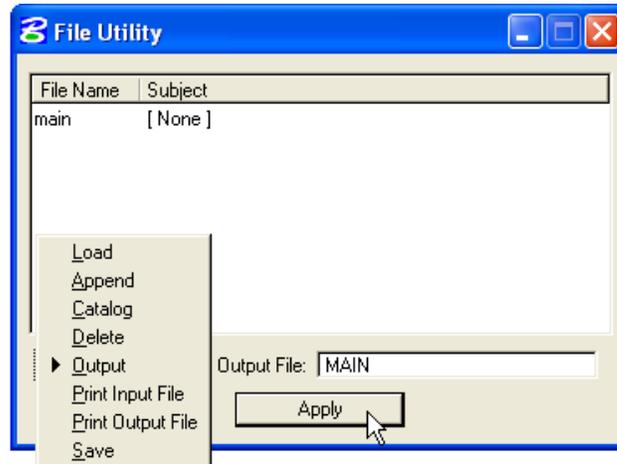


Figure 7-66: File Utility

Once an output file is created describing the chain, the Check Bearing Macro can be used to check for kinks in the alignment.

6. To run Check Bearing Macro, Select Utilities>Macro >MicroStation Basic from the main MicroStation pulldown menu.

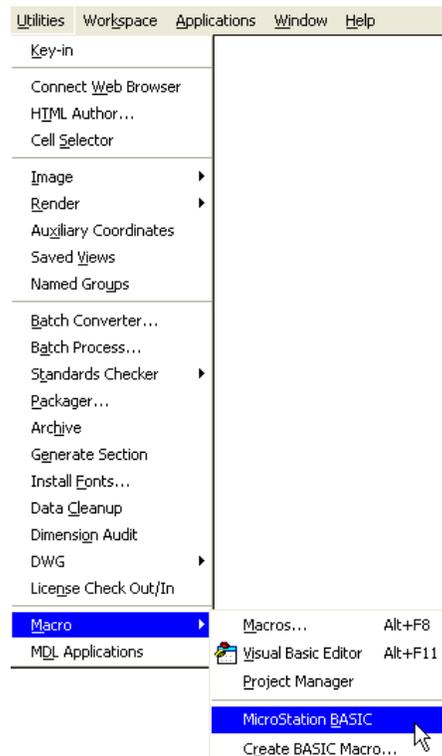


Figure 7-67: Accessing MicroStation Basic



The following dialog will appear:



Figure 7-68: MicroStation Macro

7. Browse to select *chkbear.ba* macro from the list of macros. Select the macro and the *Start Macro* dialog box will appear as shown below. Click on the *Run* button.

Macros are located in `V8_RESOURCEX_30\Standards\Macro\`

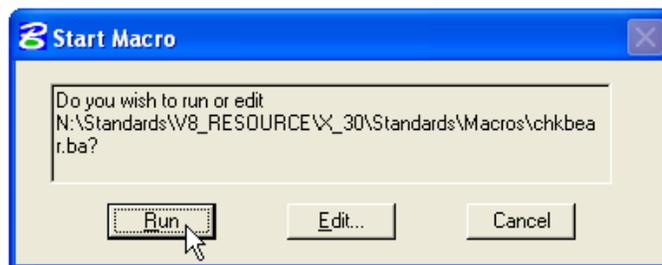


Figure 7-69: Start Macro

8. Running the macro will invoke the following dialog box. Select the *COGO Output File* created for your alignment and select *OK*.

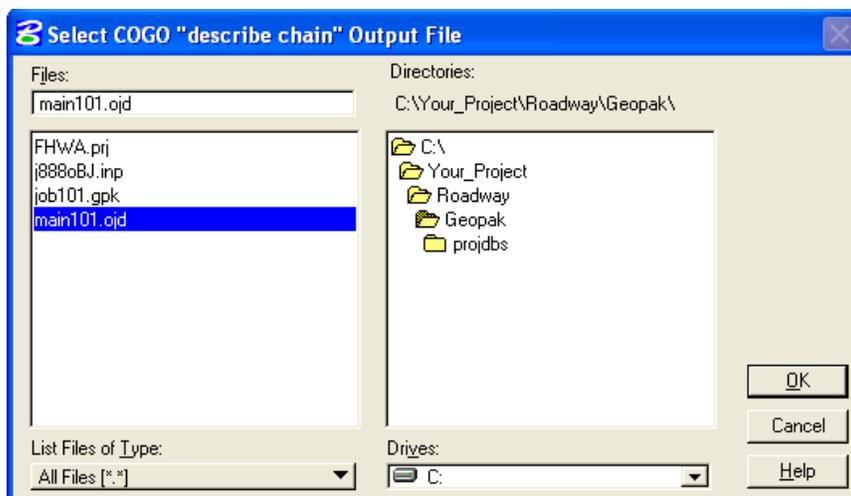


Figure 7-70: Select COGO Output File



9. *Selecting the COGO Output File will invoke the Check Bearings dialog box. In the Check Bearing dialog box toggle 1 second and select OK.*



Figure 7-71: Check Bearings

User sets tolerance for bearing comparison in the check bearing dialog box (i.e., how much do the bearings need to differ before they are flagged as a kink).

10. *Results to the macro run are reported the on screen, as shown below, and in the log files `chkbear.log` and `chkbear.err`.*

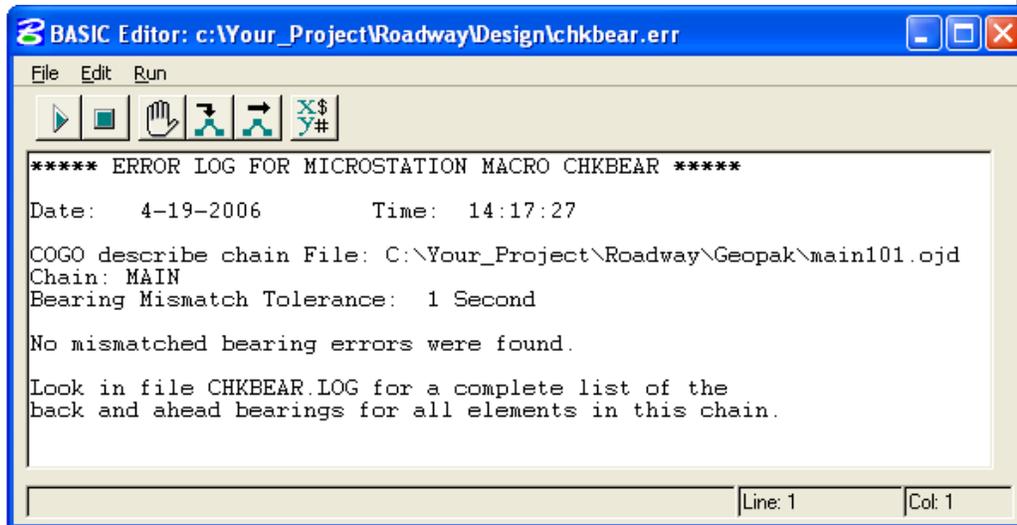


Figure 7-72: Check Bearings Error

If the macro run, reports mismatched bearing errors; user must correct the error and restore the horizontal alignment. Workflow 3 should be repeated till no mismatched bearing errors are found.



**Related links:** Using Knucklehead's Guide for GEOPAK Road 2004 Edition.

[To Create the Horizontal Alignment](#)

[Generate the Existing Ground Profile](#)

[To Create the Vertical Alignment](#)

