

MicroSurvey 12.06 and InCAD 12.5

By Glen W. Cameron, C.E.T., AMS Group, North Bay

Things have been busy since the Association meeting. A lot of questions have been sent my way in hopes that I may be able to assist.

One of the more frequently asked questions has to do with the automatic connection of linework directly from the data collector. In both MicroSurvey and InCAD, this is referred to as "Z" coding. Z coding is a special prefix used in conjunction with the descriptions placed on shots taken in the field. There are 5 different prefixes used to accomplish 5 slightly different operations, "Z", "Y", "X", ".", "-". With these five prefixes we can draw simple lines, curves and points in a complex manner without having to do complex coding.

The "Z" code allows you to have points with identical descriptions to be joined together with a line. The points are connected in order of increasing point number. You can have up to 50 different descriptions being used concurrently, allowing you to draw 50 lines at the same time. An example below will help illustrate,

POINT #	Description
1	ZCL
2	ZCL
3	ZSIB
4	ZSIB
5	ZCL
6	ZSIB
7	CL
8	SIB

Starting with point 1, we are picking up a centerline of a road. We place the Z as the prefix to indicate to put the pen down and start drawing a line. Point 2 has the same description so we join the line to this point. Point 3 starts another new line joining the SIBs together. Point 3 joins to point 4 because they have the same description, this line then connects to point 6 and then to point 8. At point 8 the line ends because the Z has been removed. Point 2 connects to point 5 and then ends at point 7, again because the description has no Z as a prefix.

As you have seen, when the Z is removed from the description, this is the coding to say STOP the line here. This description can now be used somewhere else in the job without having a line joined from the last point to the next point.

Simply put - Z means put your pen down and start drawing a line between like descriptions. Remove the Z and the line stops at that point.

The X, used as a prefix, tells us that we are picking up points on a curve rather than a normal line. Now no curve is actually drawn in MicroSurvey but they will be drawn in AutoCAD when the DXF transfer is completed. It does give the office crew a little more information to allow more accurate diagrams. The X and Z will automatically join together when used in the correct order. In other words you can connect from Z-Z-Z-X-X-X-Z-Z-Z, giving you a line joining the Zs to the Xs and back to the Zs, as long as the main description is identical. The curves will automatically appear in AutoCAD when using InCAD.

Simply put - X tells the office staff that there was a curve between the points and that AutoCAD will draw a curve for the final plan.

The prefix Y is used to show a sideshot from the Z or X lines. With our CL descriptions, if you wanted to show where another road intersected the original road, you would connect the original CL with the Z coding and when you get to the intersection you would then take one shot on the secondary road and code it with a Y. Then continue down the original road with more Zs.

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Simply put - Y lets you show a side route from the original line without disrupting the flow of the original line.

The ".", used as a prefix, allows you to close figures. If you had four corners of a building you would code the shots as follows, ZBLD, ZBLD, ZBLD, .BLD. The first three are normal lines but the last one tells the routine to close back to the first BLD. This gives you a closed figure. The corners of the building may have been collected from several different instrument locations but as long as the description is consistent the routine will work.

The last code, a "-" is used to place a single point in the diagram with no lines drawn to or from the point. A dot is placed in the diagram at the location of the shot taken in the field. If no "-" was used then no dot would be placed in the diagram, the point would still be collected but nothing would appear in the diagram. This is typically used for locating any stand alone objects.

A new feature to make things a little more diverse is the ability to use a comma in the descriptions. Anything after the comma in the descriptions will be ignored by the routine and passed through to the diagram unchanged. ZCL,1+200 and ZCL,1+250 will be considered identical for the Z coding but are different for the plan. You can connect lines together that detail numbered items.

If you have two different lines being drawn by the Z coding and they cross at one point - this point can be coded to show both descriptions concatenated together. ZCL1*ZSIB would join a line coded as ZCL1 and another line coded as ZSIB without ending either line and allowing them to continue. The "*" is the special code used to accomplish this.

I hope this has helped answer any questions about the Z coding available in MicroSurvey and InCAD.

As always - more information or assistance is available from the author by contacting the Editor.

