



Matrix Presentation in the SURVEY Program

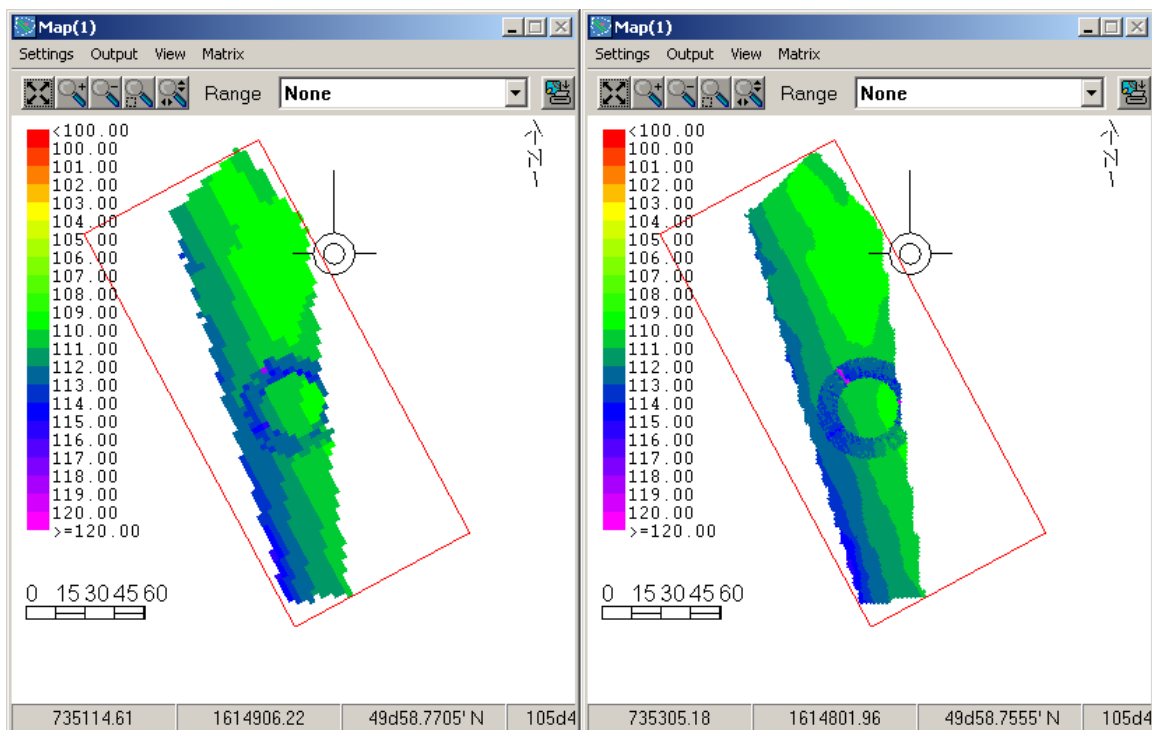
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A Matrix file with a million cells is a very complex, graphical object that takes a lot of CPU time to display.

At one point in the development, we decided to decrease the quality of the matrix display in order to ensure perfect data logging. The matrix display quality was visibly degraded when displayed with a large scale ratio, but it was invisible at a smaller zoom scale typical for detailed viewing. Our theory was that a user is not looking for details on large-scale charts.

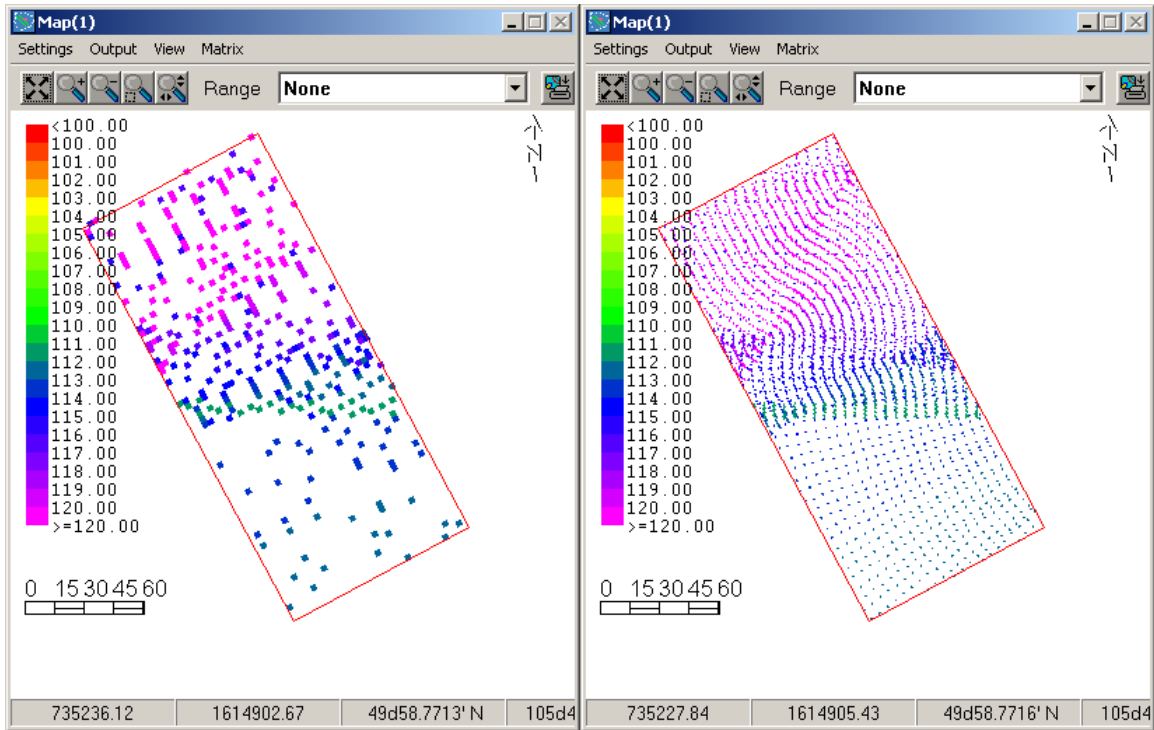
Figure 1 compares a matrix drawn with accelerated versus the regular method. The picture quality difference is apparent, but we lost no significant details. In this case, we accomplished what we intended.

FIGURE 1. Quick Draw (left) vs Regular Drawing (right)



In Figure 2, we again drew the same matrix frame using the two draw methods, but this time the Quick Draw matrix is sparsely populated. In this case, I have to admit that we have failed to display the matrix data successfully. We received a few complaints from multibeam users with similar results, who could not see their coverage properly.

FIGURE 2. Quick Draw (left) vs Regular Drawing (right)

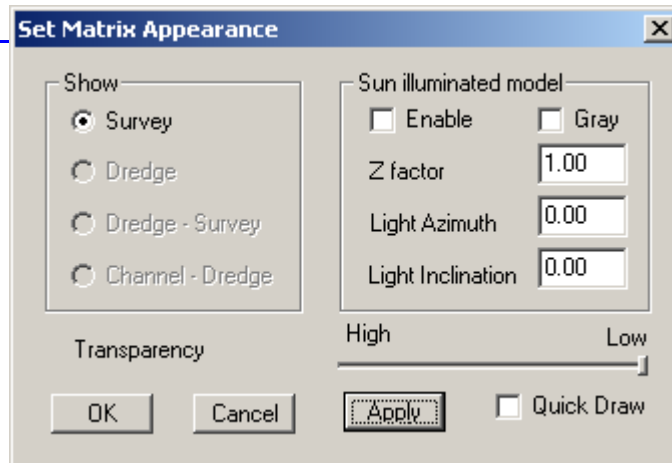


To make everyone happy we decided to add a check box in the matrix setup dialog.

FIGURE 3. Matrix Setup Dialog

When data logging is critical “Quick Draw” should be checked. If you want to see the full data set temporarily, you should uncheck “Quick Draw”, click [Apply]. When you’ve seen the details you needed, check and apply “Quick Draw” again.

If data logging is not critical, the check box can stay unchecked permanently.



It is important to keep in mind that the “Quick Draw” has almost no effect when zoomed in far enough.