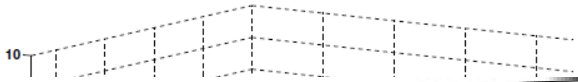
Figure-**6**, Figure-**7** and Figure-**8** show the orthographic view, top-view and side-view of the target respectively after processing with proposed three-dimensional imaging algorithm. The results clearly depict the 3D shape of the target object similar to that of the original target shape, and 53% of the voxels in the final 3D image belong to the original object defined in Figures 1, 2 and 3.



M-sequence

Three-dimensional imaging using M-sequence with 9 shift registers and 511 chips is done and the results are shown in Figures 9, 10 and 11. Out of 100 voxels of the actual target only 7 are recovered in the final 3D image. This indicates that the accuracy of the final 3D image gets worse compared to the impulse based signals. But as explained in section 4.1.2, the hardware implementation of the system is easy compared to the impulse based systems.

Using MB-OFDM with 128 carriers and total bandwidth of 500MHz the results obtained for three dimensional imaging are shown in Figures 12, 13 and 14. The results depicted clearly gives the 3D shape of the object and the number of voxels that of the original target are found to be of 12 %. Even though this is less than that of impulse based systems, the advantage of selecting proper sub band is an additional

Figure 13: Top-View of the target after 3D simulation using MB – OFDM

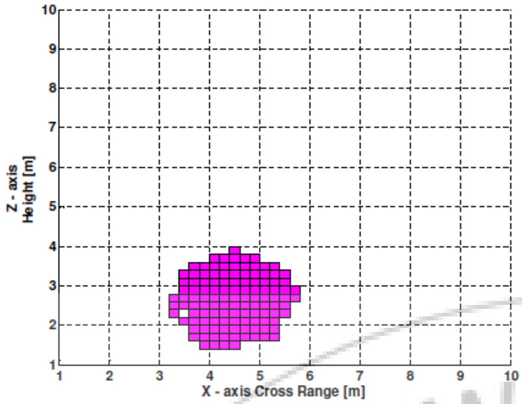


Figure 14: Side View of target after 3D imaging using MB - OFDM

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