

TECHNIQUES FOR IMPROVING LANDMINE DETECTION USING GROUND PENETRATING RADAR

UDAYNAG PISIPATI

Dr. Dominic K. C. HO, Thesis Supervisor

ABSTRACT

Improving the probability of detection of landmines is a challenging task for many scientists all around the world. The goal of this research is to be a part of this challenging work to investigate techniques for landmine detection. Two techniques for detecting the landmines, one in depth domain and the other in frequency domain, have been studied and a few modifications are suggested, along with the results. The data collected from Ground Penetrating Radar (GPR) from various test sites is used to evaluate the performance of these detection techniques. The first technique is proposed for use with Handheld GPR systems, while the second technique is proposed for use with Vehicle mounted GPR systems. The techniques proved to be useful in improving the detection of low metal or plastic mines.