A STUDY OF APPLYING NEURAL NETWORK ON SIGNAL SOURCE RECOGNITION

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ABSTRACT

HOW TO TRACKING THE SOURCES OF SIGNAL EXACTLY FROM DIFFERENT DIRECTIONS IS VERY IMPORTAN -T NOT ONLY IN NATIONAL DEFENSE, NATIONAL DISASTER PREVENTION (LIKE EARTH QUAKE) BUT ALSO IN ROBBER PROTECTION ETC.SIGNAL SOURCES RECOGNITION IS AN VERY IMPORTANT STUDY AREA IN DIG -ITAL SIGNAL PROCESSING,THERE EXIST TWO IMPORTANT ISSUES WHICH ARE CHARACTERISTIC OF PARAM -ETERS OF THE SIGNAL AND HOW TO RECOGNIZE IT EXACTLY. SO, HOW TO GET THE PARAMETERS OF THE SIGNAL AND RECOGNIZE THE SIGNAL EXACTLY AND ACCURACY ARE THE MAIN PURPOSE OF THIS RESEARCH. WE FIRST USING THE PIEZOELECTRIC ELEMENTS TO CONSTRUCT A SOUND SENSOR TO GET DIFFERENT DIR -ECTION SIGNAL OF THE SOUND,THEN,BY DIGITAL SIGNAL PROCESSING ANALYSIS AND NEURAL TRAINING TO GET THE CHARACTERISTIC OF PARAMETERS PATENT.SECONDLY,BY USING BACK PROPAGATION NEURAL NE -TWORK TO CONSTRUCT THE RECOGNITION SYSTEM. FINALLY, WE COMBINE THE FIRST PART AND SECOND PART TO GET THEN IN ORDER TO CONSTRUCT A SOURCES OF SIGNAL RECOGNITION SYSTEM. AFTER THIS DESIGN, WE EXPECT THAT WE CAN RECOGNIZE ALL KINDS OF SIGNAL FROM DIFFERENT DIRECTIONS VERY ACCURACY.

Keywords: SIGNAL TRACE, PIEZOELECTRIC ELEMENT, BACK -PROPAGATION NEURAL NETWORK.

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