

Research on UWB technology

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Abstract: This topic focuses on researching the application of Ultra-Wideband (UWB) technology in practical fields, including positioning and communication. The reason for choosing this topic is the necessity of UWB in applications requiring high accuracy, such as healthcare and industry. The objective of the research is to build a UWB-based positioning system capable of stable operation in multi-layer environments. The research method includes theoretical analysis of UWB combined with experimentation to verify the system's effectiveness. The significance and expected results of the topic are to contribute to the widespread development of UWB technology, improving service quality in related industries.

Keywords: UWB, positioning, communication, accuracy, experiment