Web-based Control System of a Mobile Manipulator over Internet

Abstract:

This paper explores a web-based remote-control system for a mobile manipulator over the internet. The development of internet technology and increased transmission speed has made it cost-effective and convenient for remote control. However, the issue of time delay on the internet poses a challenge to the stability of teleoperation systems. To address this, the paper conducts tests and analysis of time delays, leading to the development of rules and classifications for different types of time delays. The authors propose control strategies and compensation schemes tailored to these time delays and embed three control modes within the system. Additionally, they describe the development of a web-based teleoperation system for a mobile manipulator using J2EE technology.

References: IEEE paper: **Web-based Control System of a Mobile Manipulator over Internet** Qiyuan Sun School of Mechanical Engineering Tianjin University of Technology Tianjin, China sunqiyuan@126.com Xuan Wei School of Mechanical Engineering Tianjin University of Technology Tianjin, China wei.xuan@126.com