## **IJARSCT**



## International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Impact Factor: 7.67

Volume 5, Issue 2, April 2025

## A Comparative Study of DeltaV with other DCS

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**Abstract:** Distributed Control Systems (DCS) play a critical role in the modern control of large-scale, complex systems across a variety of industries, such as manufacturing, power generation, robotics, and smart grids. This review paper provides a comprehensive comparison of different DCS architectures, including decentralized, hierarchical, and multi-agent systems. Key performance parameters, such as control strategy, communication protocols, fault tolerance, real-time performance, scalability, security, and robustness, are discussed and analyzed in the context of their application to various industrial domains.

DOI: 10.48175/IJARSCT-24930

Keywords: Distributed Control Systems





