Sketch for Constant Bandwidth Server Paper

Introduction

    Importance of Real-Time Systems

    Motivation for CBS

    Objectives and Contributions

Background

    Scheduling fundamentals (EDF, RMS)

    Resource reservation techniques

    CBS introduction

Additional References:

    1.Liu and Layland (1973)

    2.Buttazzo (2011)

CBS Theoretical Foundations

    Algorithm definition

    Temporal isolation

    Bandwidth allocation

Additional References:

    Baruah et al. (2004)

4 Implementation

    RTOS: FreeRTOS

    Hardware: ARM Cortex-M4

    Task model and practical challenges

Additional References:

    Barry (2016)

    ARM Cortex-M4 Manual

Experimental Evaluation

    Workloads and scenarios

    Metrics and comparative results (CBS vs EDF)

Additional References:

    Davis and Burns (2011)

Discussion

    CBS advantages and limitations

    Practical recommendations

Additional References:

    Bini and Buttazzo (2005)

Conclusion

    Summary

    Future directions

References

1. Lipari & Baruah (2000)

2. Abeni & Lipari (1998)

3. Liu & Layland (1973)

4. Buttazzo (2011)

5. Baruah et al. (2004)

6. Barry (2016)

7. ARM Cortex-M4 Manual

8. Davis & Burns (2011)

9. Bini & Buttazzo (2005)