Sketch for Constant Bandwidth Server Paper

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1. Introduction

- Importance of Real-Time Systems

- Motivation for CBS

- Objectives and Contributions

2. Background

- Scheduling fundamentals (EDF, RMS)

- Resource reservation techniques

- CBS introduction

Additional References:

- Liu and Layland (1973)

- Buttazzo (2011)

3. 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

5. Experimental Evaluation

- Workloads and scenarios

- Metrics and comparative results (CBS vs EDF)

Additional References:

- Davis and Burns (2011)

6. Discussion

- CBS advantages and limitations

- Practical recommendations

Additional References:

- Bini and Buttazzo (2005)

7. 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)