

requirements document for

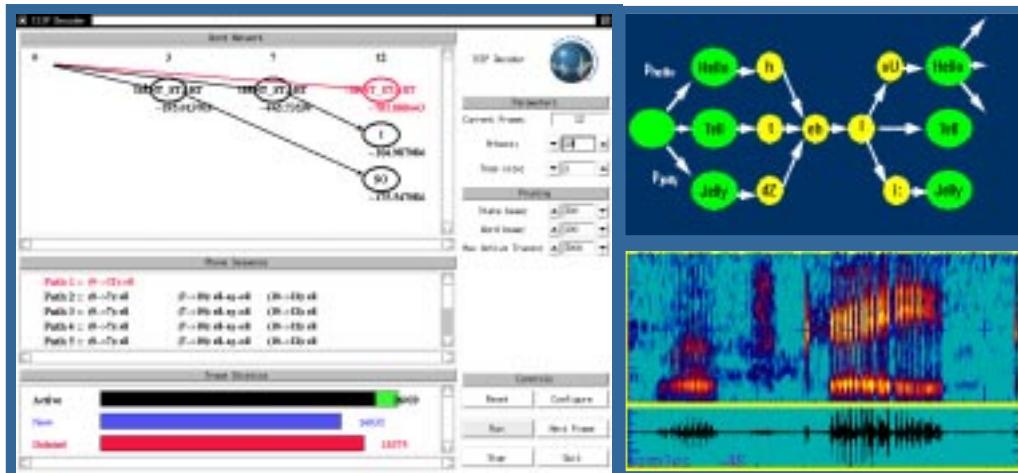
AVGET: An Audio Visual Information Access System

submitted to:

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ECE 4522: Senior Design II
Department of Electrical and Computer Engineering
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Project related picture goes here



submitted by:

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Exactly
one page:
typically
five
paragraphs

EXECUTIVE SUMMARY

This paragraph contains an overview of the problem.

This paragraph contains an overview of the design constraints.

This paragraph contains an overview of the approach.

This paragraph contains an overview of the novelty of your design.

This paragraph describes the future beyond this project. What other things can be done to improve your design; what will be the impact of success, etc.

1. PROBLEM

In this section, you will define the problem you are addressing, explain its significance, and discuss the impact of your solution (not how you are going to solve the problem, but what will happen if you solve the problem). Start with a general overview, background, etc., and then get progressively more detailed. This section should be one page long.

2. OBJECTIVES

In this section, you will list 8 to 10 major design constraints:

1. **Performance:** We will achieve a signal-to-noise ratio of 30 dB or greater, and demonstrate that this exceeds performance of existing technology.
 2. **Performance:** List another performance related specification, or something that impacts the overall project goal.
 3. **Performance:** List another performance related specification, or something that impacts the overall project goal.
 4. **Performance:** List another performance related specification, or something that impacts the overall project goal.
 5. **Performance:** List another performance related specification, or something that impacts the overall project goal.
 6. **Power:** Our system will consume no more than 0.1 Watts during normal operating conditions. The system will operate over input voltages ranging from 100 to 250 VAC.
 7. **Acoustic Noise Emission:** The system will emit acoustic noise no greater than 30 dBA under normal operating conditions.
 8. **Electromagnetic Compatibility:** The system will conform to FCC emission limits for Class B digital devices.
 9. **Physical Packaging:** Our design will be packaged in a molded plastic container measuring 3" high, 4" wide, and 5" deep, and contain one fan (specify) to vent heat.
 10. **Cost:** The component costs for our design will not exceed \$53.25; the expected market price for the unit is \$79.99; the profit margin is 33%.

In subsequent sub-sections of this document, you will explain how these constraints are relevant to the problem described in Section I.

2.1. Improved SNR Through Time-Domain Processing

2.2. Improved SNR Through Frequency-Domain Processing

3. ACKNOWLEDGMENTS

We wish to acknowledge John Doe of ABC Corporation, Dr. John Smith of the National Institute for Cool Things, and Dr. I.M. Smart of XYZ for their continued support and feedback regarding this project. We also acknowledge the National Science Foundation for its funding of this project, which enables many useful on-line documents to be developed. Mr. Doe's interactions have helped us add features to the system, some of which make this system very unique compared to other systems. Say a few more good things.

4. REFERENCES

- [1] A. Ganapathiraju, N. Deshmukh, Y. Wu, and J. Picone, "An Internet-Based Public Domain Speech-to-Text Toolkit," *Quarterly Status Report for the Department of Defense*, Institute for Signal and Information Processing, Mississippi State University, August 1999.
- [2] A. Ganapathiraju, N. Deshmukh, J. Hamaker, and J. Picone, "An Internet-Based Public Domain Speech-to-Text Toolkit," *Quarterly Status Report for the Department of Defense*, Institute for Signal and Information Processing, Mississippi State University, May 1999.
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- [4] J. Picone, et. al., "ISIP Software Documentation," http://www.isip.msstate.edu/projects/speech/education/tutorials/isip_env/index.html, Institute for Signal and Information Processing, Mississippi State University, July 1999.
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- [8] J. Markel and A. H. Gray, Jr., *Linear Prediction of Speech*, Springer-Verlag, New York, New York, USA, 1980.

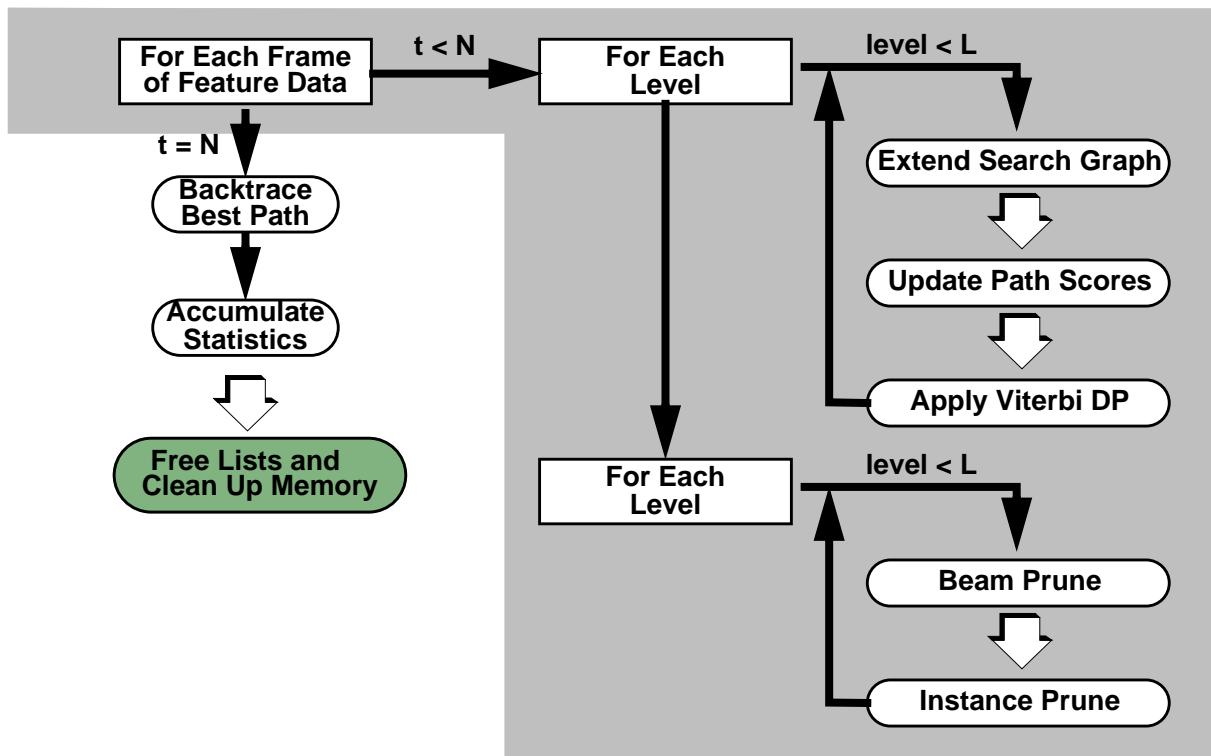


Figure 1. A typical figure.