

## Sample Partial Sections For Thesis Chapters 1-3

This document provides some examples of acceptable work for portions of Chapters 1-3 for a diploma thesis project. The topic for this sample project is Multimedia Database Query Preprocessing. Although no one in the class is performing a similar project, these extracts hopefully will provide inspiration

### Chapter 1: Introduction

#### 1.1. Sample Motivation

News videographers deal with thousands of hours of unedited video that can be useful in future productions. For example an interview may have more importance in the future as a story progresses than it does now. It is, however, difficult for staff to be mindful of all appropriate video content in the electronic news gathering library.

A method for extracting metadata for logging and querying purposes is needed. This process should be automated, so that the same types of metadata is culled from all clips. The metadata should be useful either on disk as a series of flat files or stored in a database with some querying facility.

#### 1.2. Sample Problem Statement

Video is a time ordered medium composed of discrete images. Often there is an accompanying sound track which can contain music, speech, or both. The following metadata attributes can be extracted from video for storage in a relational database:

- File system metadata: bytes, length, video encoder, and so on.
- Discrete still images sampled at uniform intervals.
- Short sound samples, perhaps five seconds, sampled uniformly.
- Text transcripts of speech.

We will focus on the first two attributes for expansion: file system and still image metadata. Our project, however, will allow for the inclusion of the other types at some future time.

### Chapter 2: Research

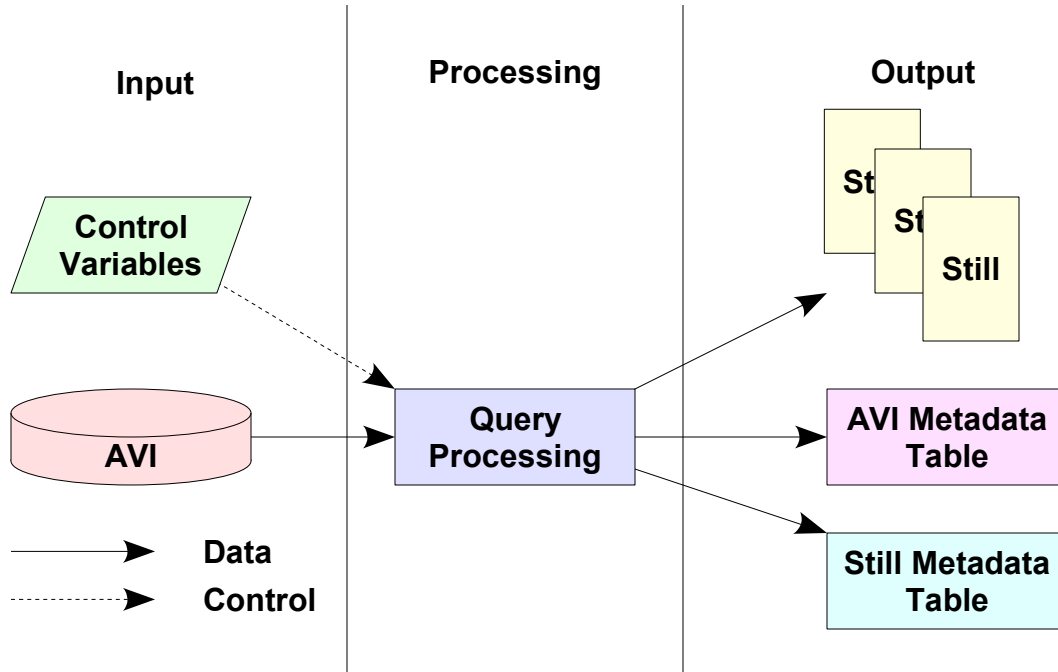
Here are some outline points generated during the research phase. Note none of these points have attributions or citations: we will need these for our theses. ;-} Also, in the actual writing, outline topics must be expanded into sentences.

- Multimedia files needs to be preprocessed for query metadata prior to storage in a database.
- Method for generating metadata: sample a video file and store results in relational tables:
  - Still images every  $\Delta t$  interval.
  - Sound bites every minute.
  - Speech to text transcription.
- It is then possible to query the relational database and get an immediate go/no go decision from the user that the video contains the desired clip.
- Sound samples require too much data and automatic text transcription is too complex for this project, so we will only sample still images.

## Chapter 3: Requirements

### 3.1. Project Definition

Here is a sample functional block diagram that shows the inputs, processing, and outputs for the project. Note your diagram may look completely different or have an entirely different organization:



### 3.2. Sample Input Requirements

The following items need be present before processing can begin:

1. Control variables supplied by the user, such as seconds between stills.
2. An AVI source file.

Note that a) the numbers above are requirement identifiers and b) all of the actual control variables should be fully specified.

### 3.3. Sample Output Requirements

The program will generate the following items after query processing:

1. A series of still images generated per the control variables.
2. A row entry into a database table for file system metadata.
3. A row entry for each still image extracted into another metadata table.

Note: again, these requirements are not fully specified. Exactly what is the metadata?