*SOFTWARE DESIGN SPECIFICATION*

**1.0 Introduction**

This section provides an overview of the entire design document. This document describes all data, architectural, interface and component-level design for the software.

**1.1 Goals and objectives**

Overall goals and software objectives are described.

**1.2 Statement of scope**

A description of the software is presented. Major inputs, processing functionality, and outputs are described without regard to implementation detail. **1.3 Software context**

The software is placed in a business or product line context. Strategic issues relevant to context are discussed. The intent is for the reader to understand the 'big picture'.

**1.4 Major constraints**

Any business or product line constraints that will impact he manner in which the software is to be specified, designed, implemented or tested are noted here.

**2.0 Data design**

A description of all data structures including internal, global, and temporary data structures.

**2.1 Internal software data structure**

Data structures that are passed among components the software are described.

**2.2 Global data structure**

Data structured that are available to major portions of the architecture are described.

**2.3 Temporary data structure**

Files created for interim use are described.

**2.4 Database description**

Database(s) created as part of the application is(are) described.

**3.0 Architectural design**

A description of the program architecture is presented.

**3.1 Program Structure**

A detailed description the program structure chosen for the application is presented.

**3.1.1 Architecture diagram**

A pictorial representation of the architecture is presented.

**4.0 Schedule**

Describe how you will divide the components listed in the architecture into a rapid prototyping sequence of design / development iterations. Define how many cycles you will undertake.

**4.1 Scheduling diagram**

Your report must include a timeline chart, described in the lecture.

**4.2 Definition of milestones**

Also mandatory, define each milestone by date and indicate what is to be completed.

**5.0 Component - level design**

**5.1 Description for components included in the current design and development iteration**

A detailed description of software components contained within the architecture. Section 3.2 is repeated for each of n components. Describe first the components that are to be developed in the current prototype version. Include afterwards the components developed in the earlier iterations of rapid prototyping. As you reach project completion, this section should describe EVERY component from the architecture.

**5.1.1 Processing narrative (PSPEC) for component n**

A processing narrative for component n is presented.

**5.1.2 Component n interface description.**

A detailed description of the input and output interfaces for the component is presented.

**5.1.3 Component n processing detail**

A detailed algorithmic description for each component is presented. Section 3.2.3 is repeated for each of n components.

**5.1.3.1 Interface description**

**5.1.3.2 Algorithmic model (e.g., PDL)**

**5.1.3.3 Restrictions/limitations**

]**5.1.3.4 Local data structures**

**5.1.3.5 Performance issues3.2.3.6 Design constraints**

**6.0 User interface design**

A description of the user interface design of the software is presented.

**6.1 Description of the user interface**

A detailed description of user interface including screen images or prototype is presented.

**6.1.1 Screen images**

Representation of the interface form the user's point of view.

**6.1.2 Objects and actions**

All screen objects and actions are identified.

**6.2 Interface design rules**

Conventions and standards used for designing/implementing the user interface are stated.

**7.0 Restrictions, limitations, and constraints**

Special design issues which impact the design or implementation of the software are noted here.

**8.0 Appendices**

Presents information that supplements the design specification.

**8.1 Packaging and installation issues**

Special considerations for software packaging and installation are presented.

**8.2 Supplementary information (as required)**