PRELIMINARY DESIGN REVIEW

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Washington State University

CODE BLUE, INC.

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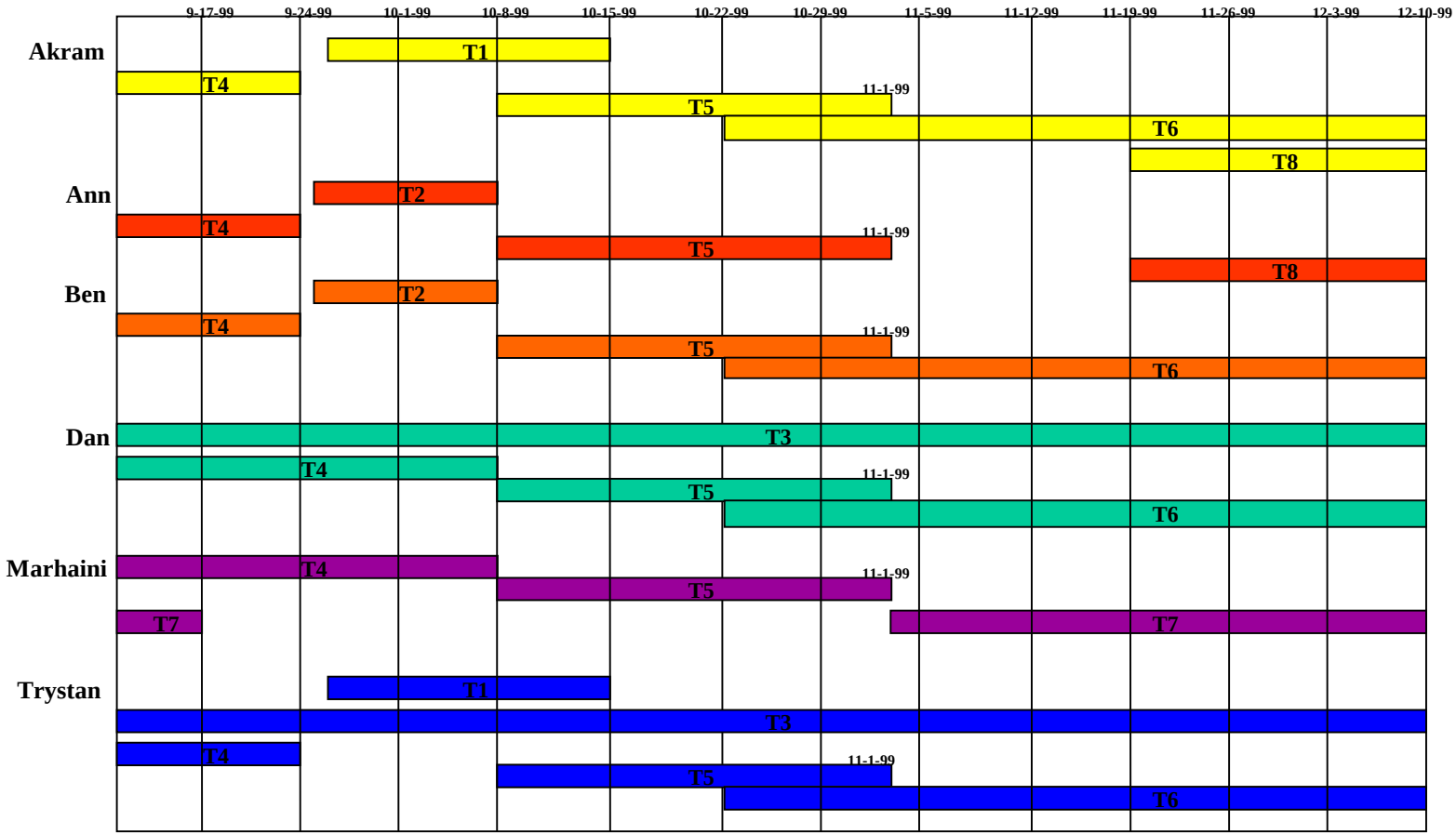
Agenda

1. Team Member Introduction and Responsibilities
2. Requirements
3. Schedule and the tasks needed to accomplish
4. Assumptions
5. Context Diagram
6. High level DFD
7. Enhanced Modules
8. Three Prototype Test Cases
9. Traceability Approach
10. Schedule with Scope/Limitations
11. Open Issues
12. Current Status
13. Action Items

Requirements

1. The CSPN tool shall provide command prompt interface that will be compatible with GUI.
2. Platform dependent system calls shall be identified and corrected for each problem in order to implement similar functionality in both UNIX and Windows 98/NT platforms.
3. The program shall support single local user (not distributed).
4. The CSPN tool shall output a file in either postscript or CompuServe gif format
5. The CSPN tool shall output a CSPL file
6. The CSPN tool shall accept CSP files as input
7. The software development process shall employ object-oriented strategies using C++.

Schedule and Tasks

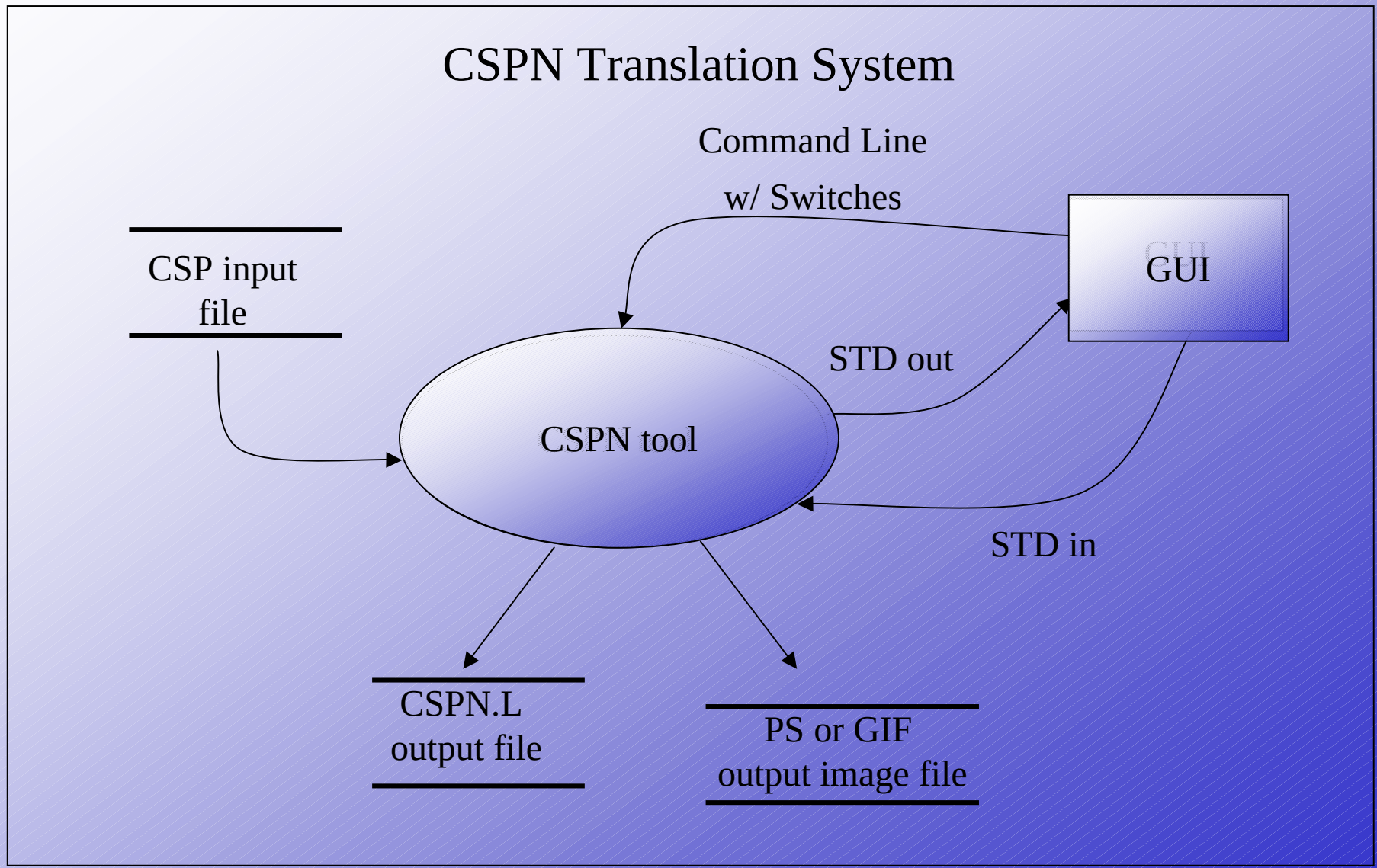


T1: Analyze program for partitioning.
T2: Analyze input/output files for CSPN.
T3: Meet with GUI group and decide on interface.
T4: Create SRS.
T5: Create Design Notebook.
T6: Actually perform port.
T7: Create user manual.
T8: Test (prototypes).

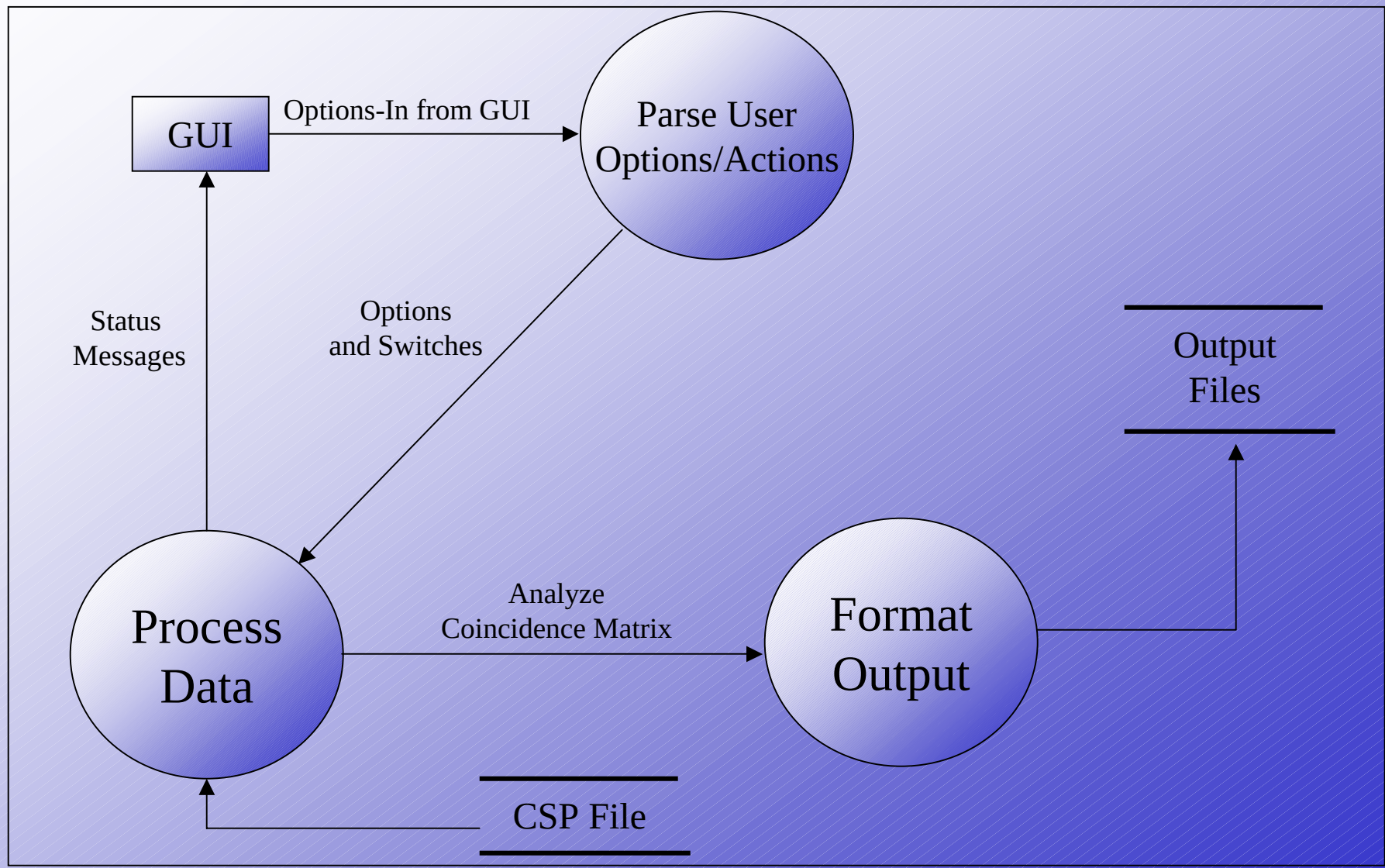
Assumptions

1. The GUI will be written in such a way that the CSPN tool can interface with it.
2. User is responsible for determining if all input files are valid CSP files.
3. Extensive error detection of CSP files will not need to be performed.
4. By using windows API calls the CSPN tool will function under Windows 95/98/NT.
5. The CSPN tool is not a safety critical application and will not require any high level security requirements.

Context Diagram



High Level DFD



Enhanced Modules

1. All modules will be be enhanced by:
   - Implementing them as objects
   - Eliminating global variables
   - Changing system calls to allow execution on multiple platforms

2. The Coincidence Matrix will be implemented as a linked list.

Prototype Test Cases

Prototype Case 1:

Use the bus example, given in the user manual, in verbose mode to test if the results match the specification of the CSPN tool.

Prototype Case 2:

Use an example that has bad syntax in the CSP file to check for exception handling.

Prototype Case 3:

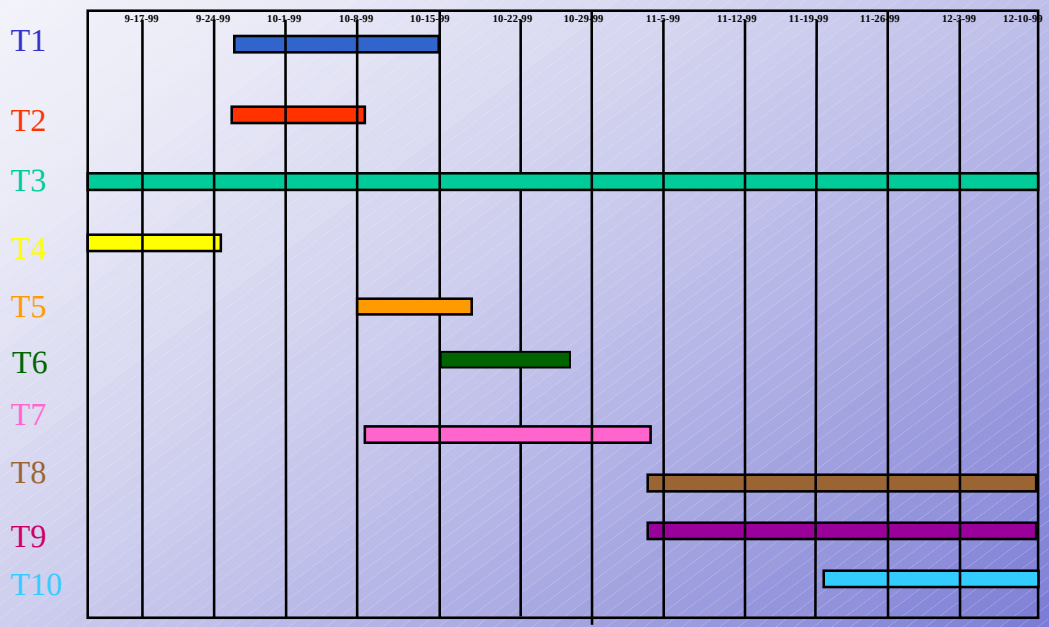
Use the bus example in verbose mode again with the GUI.

Traceability Approach

Requirement	SRS Section	Verification Method
Command prompt compatible with GUI	3.1.1.2	D
Similar functionality across multiple platforms	3.1.2.1	A, D
Single Local User	3.3.1	I
Output file in either postscript or CompuServ GIF format	3.4.4.1	D
Output a CSPL file	3.4.4.2	D
Accept CSP file as input	3.4.4.3	D
Employ object-oriented strategies using C++	3.4.6.1	A

KEY: T = by **T**est, **A =** by Analysis, **I** = by Inspection, **D** =by **D**emonstration and **An** = by Analogy

Schedule with Scope/Limitations



Tasks	*Limitations*
T1: Analyze program for partitioning.	**Full understanding of the data structures currently used**
T2: Analyze input/output files for CSPN.	**Lack of access to a working version of the CSPN tool.**
T3: Meet with GUI group and decide on interface.	**Student schedule conflict.**
T4: Create SRS.	**N/A since it is already completed.**
T5: Prepare PDR	**N/A since it is already completed.**
T6: Prepare CDR	**Time limitation.**
T7: Create Design Notebook.	**Time limitation.**
T8: Actually perform port.	**Lack of Object oriented design mastery.**
T9: Create user manual.	**N/A**
T10: Test (prototypes).	**N/A**

Open Issues

1. Unsure about usage of Visual Source Safe in B26 lab.

2. Decide whether or not it is practical to implement the coincidence matrix as a linked list.

3. Still considering further enhancements to modules.

Current Status

Accomplishments:

- Performed Risk Analysis
- Final Draft of Project Plan
- Final Draft of SRS
- Defined interface with GUI
- Partitioning/top level design

Plans:

- Break down the output files and how they are used
- Start on design notebook
- Start on user manual

Problems:

- Trouble with reliability of hardware in EME B26