EE/CpE 415-423 – 416/424
2002 Fall – 2003 Spring
WEEKLY STATUS REPORT

Group No.: 3	Date: April 7, 2003		Report No:
Project Title:	Source Code Reuse Mechanism		
Group Leader:	Noel Villegas	Advisor:	Professor Kiss
Sponsor/Client:	BAE Systems		
Number of Hours Spent:	50		
Project on Schedule:	YES		

Weekly Status:
Aiyana performed the LUT error analysis for the sin reuse document. She is nearing completion of the sin reuse document, currently developing the code flow chart and inserting feature models.

Juan and Greg worked on the Matlab testbench. They were able to write a working example of a filter, modeling a physical process with associated outputs. For noises, it uses a random number generator which they are adapting to read in from a file for synchronicity with the C++ implementation. Greg worked on more SCDD items. Juan is also working on taxonomic classification and data analysis for the SCDD.

Sandra did the C++ version for piecewise polynomial interpolation, adapting it from a Matlab prototype, but still need to write some of the Matlab built in functions (ex. ones()).

Noel changed “policy” and rewrote the matrix library for senior design purposes. MTL lacked overloaded operators for arithmetic expressions. Blitz lacked matrix inversion. The previous version of Noel’s matrix library leaked memory and was heaped based. The current version represents a matrix as a stack based template class with nontype template parameters dimensioning the matrix. The current version ranges from twice as fast to 100 times faster on the Kalman filter loop. The matrix library was not developed entirely using the source code reuse mechanism (first revision was issued in august), so we will not be documenting it and appending a source code reuse document with that library. Noel also released the first library version of the Kalman filter library, however it is not functioning yet due to important implementation decisions.