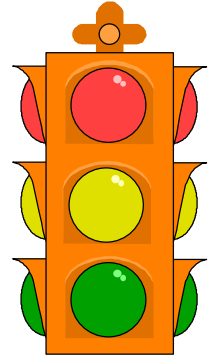


PROJECT X
Status Report #5
(Program Data Through January 1996)



Executive Summary (Assessment Yellow- Caution)

- The overall status of this project is “Yellow Light”.
- So far this is a low to moderate risk situation.
- There is a predicted slippage of 1.7 months. This has a potential impact on cost, schedule, and reliability.
- The predicted Productivity Index is 5.9 vs. the 6.4 of the initial plan.

Major Observations: Upon review of the data covering performance through January 1996 we offer the following observations (graphically portrayed in the “at a Glance” assessment). Detailed observations and comments are found in the body of this report.

1. The estimated code size at completion has grown from 40,270 SLOC initially up to 44,760 in December and has now fallen back to 42,267 at the end of January (increase of 1997 SLOC -- approximately 5% -- from the beginning).
2. All product construction metrics are below the expected values on the planned production curves. New code increased during January; unit testing slowed down and integration of existing code seemed to have stopped.
3. Application of people to this program fluctuates up and down due to shifting of resources; on average the applied headcount is 20-25% lower than was originally planned. Assigned headcount for January was back to 40 people, but resource shifting continues.

Project Assessment at a Glance

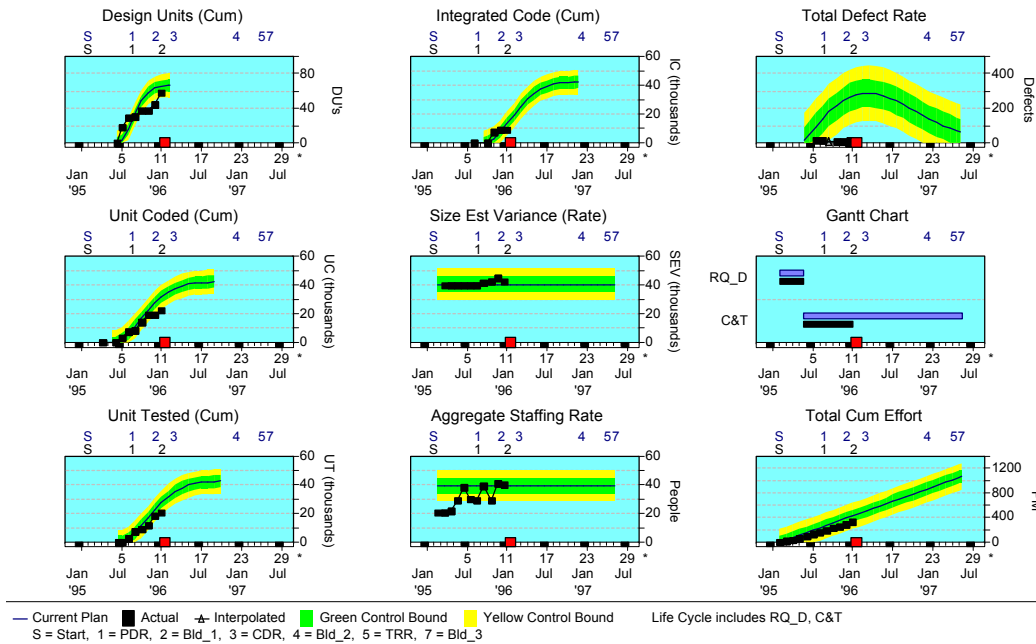


Figure #1. Program metrics compared to plan and statistical control bounds.

Product Size Estimate:

The size estimate decreased from 44,760 last month to 42,267 at end of January. This is approximately 5% larger than the original estimate. It is normal to see some fluctuation as the design and code process progresses; after continued growth for the last three reporting periods, the latest decrease may indicate that the size projection has stabilized. Size needs to be monitored closely.

Current Size Estimate vs. Original Size Estimate

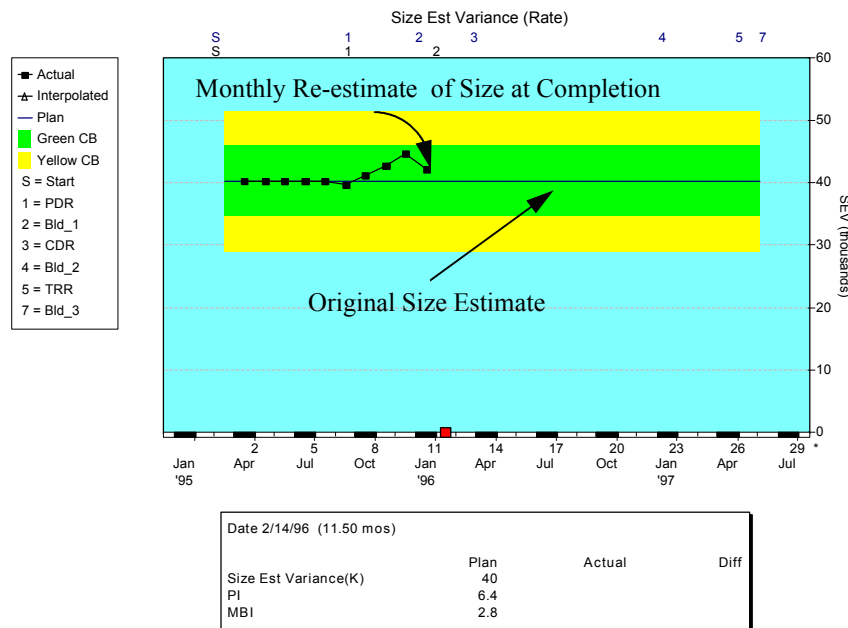


Figure #2. Current code size estimate at completion vs. original code size estimate. Note that estimate at completion has increased for 3 months and has decreased in the last month. The current size estimate is approximately 5% larger than the original size estimate.

Product Construction Performance:

All of the product construction metrics are below the planned completion.

Several factors could be causing this performance. 1) COMPANY A has been understaffed (see report section on staffing & effort). 2) The COMPANY A plan is based on a PI of 6.4. This is aggressive since the best that they have ever accomplished on past efforts was a PI of 5.4. They are currently working at a PI of 5.9.

Product Construction Metrics (Plan vs. Actuals)

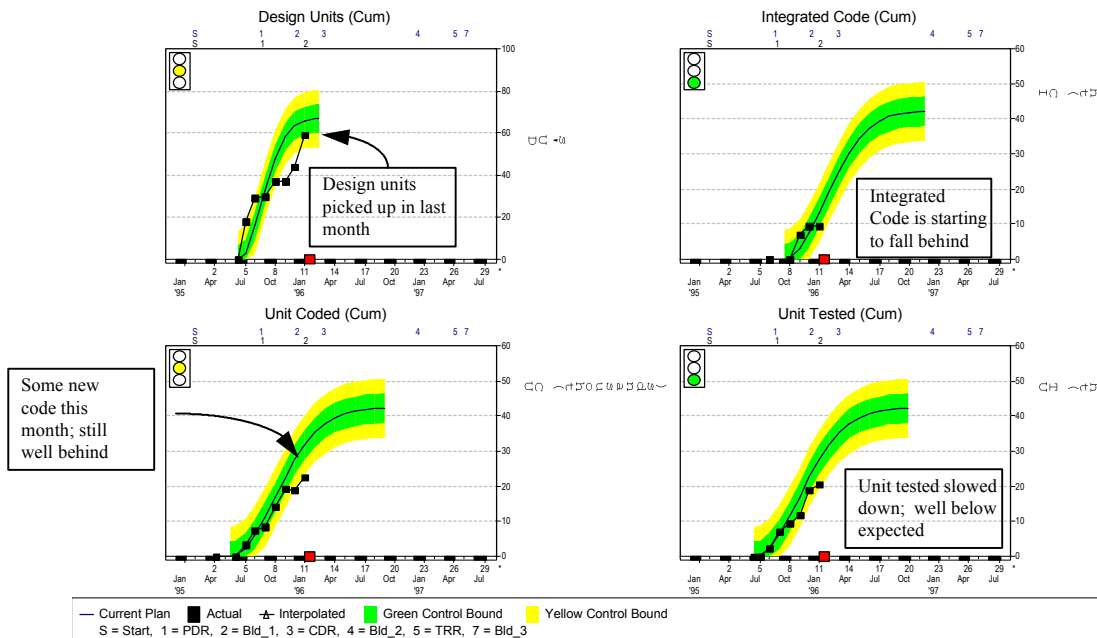


Figure #3. Product construction status vs. plan.

Staffing & Effort Performance:

The contractor had planned to be at a full time equivalent staffing of 39 people from the start of the project. Because of resource sharing between programs at COMPANY A, the contractor has only been able to staff at about 75% on average of what had been planned.

Staffing Metrics (Plan vs. Actuals)

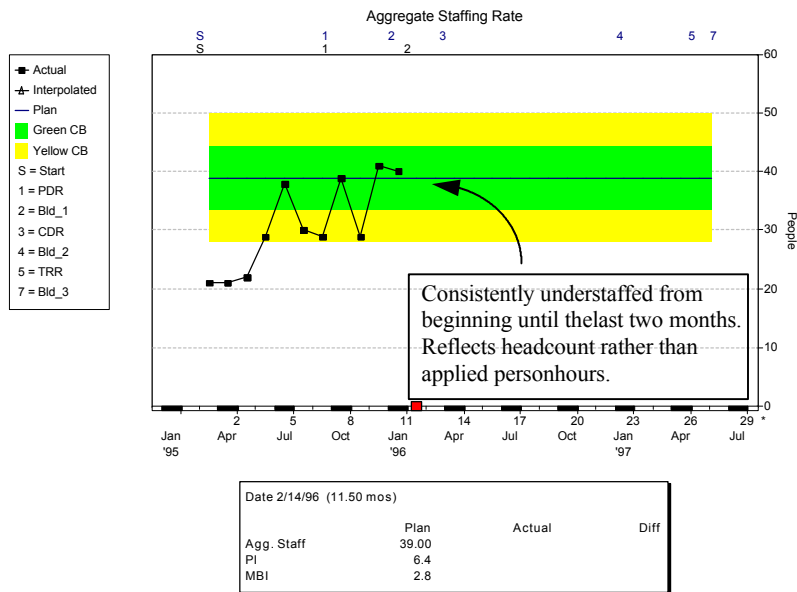


Figure #4. Staffing and effort plan vs. actual headcount. Not all people shown are working full time on the program.

Effort Metrics (Plan vs. Actuals)

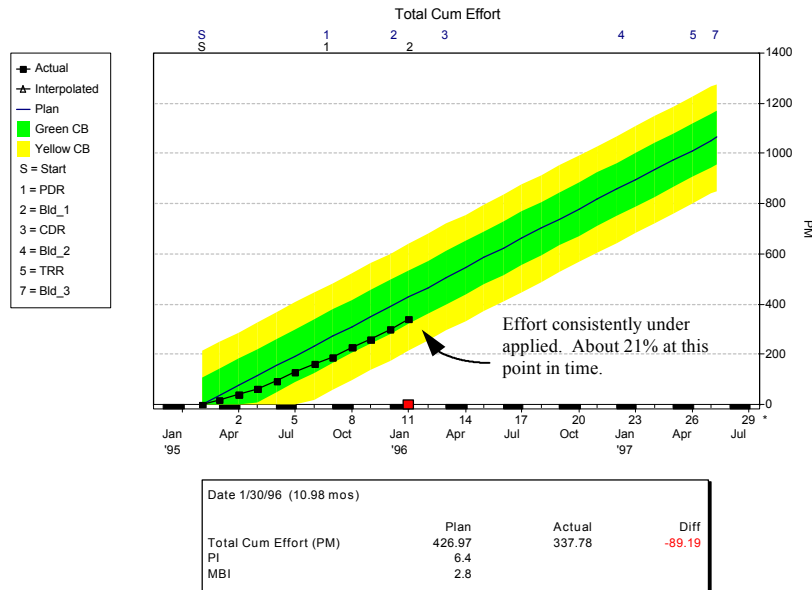


Figure #5. Planned vs. actual effort.

Schedule Status:

Milestone 2 as shown above was completed on 2/3/96. This milestone slipped about 1 month.

Significant Events:

Each month we ask the developer to provide a short narrative on any significant events (positive and negative) that will help us better understand the behavior of the metrics. These are the significant events reported by COMPANY A for January 1996.

1. The entire GN&T and Software Groups have been moved into a new closed area. This will allow desktop execution of classified all-software simulations. Previously this had been done in different parts of the building with manual movement of parts of the program. Full transition to classified processing will be complete end of February.
2. There have been a number of problems associated with executing on target processor with an IBU. All problems have been configuration issues with Company B's hardware and software. Since the configuration is still changing, Company B's software delivered earlier was found to be incompatible with hardware deliveries. Company B was at COMPANY A's in early February to sort out these configuration issues and support COMPANY A's integration goals.
3. There has been some size growth due to MIL STD 1760 requirements. This has pushed final unit testing into early February. Some people have been pulled off the Quantitative Software Management, Inc.

coding effort to work on getting OTF running on the target processor. A significant amount of time has been spent generating updates to all the software CDRs for delivery ahead of CDR.

Forecast Projections:

As of the end of December 1995 sufficient data were available to perform an adaptive update forecast based on what has occurred so far. This allows us to forecast when the project will be done, the associated cost in personmonths, and later, the related reliability (so far the actual reliability data is not sufficiently robust to determine much).

The following charts show the results of that forecast.

Adaptive Forecast vs. Plan Summary View

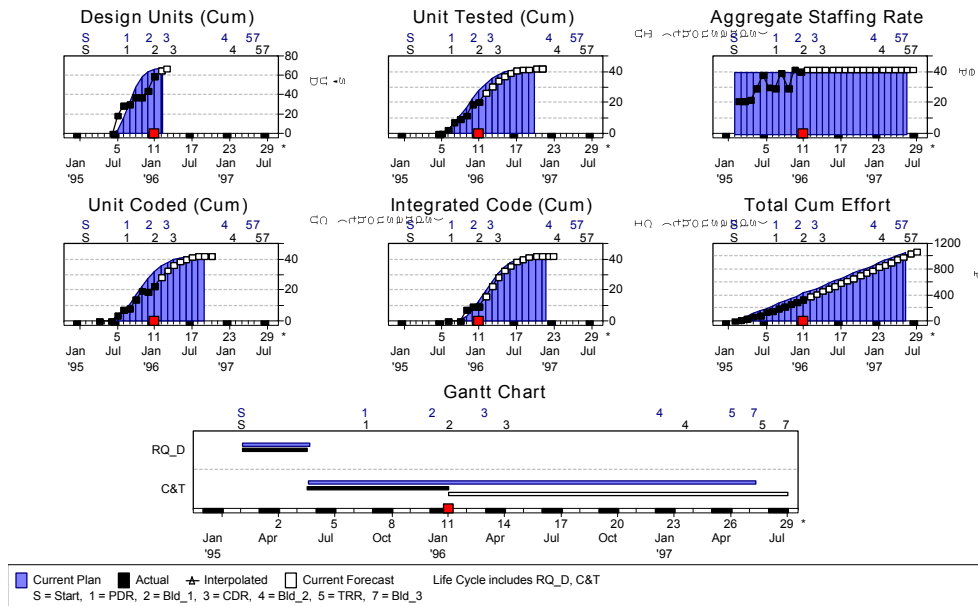


Figure #6. Summary of plan vs actuals for the key metrics.

Planned vs. Actual Effort with Projection to Completion:

Planned vs. Projected Effort

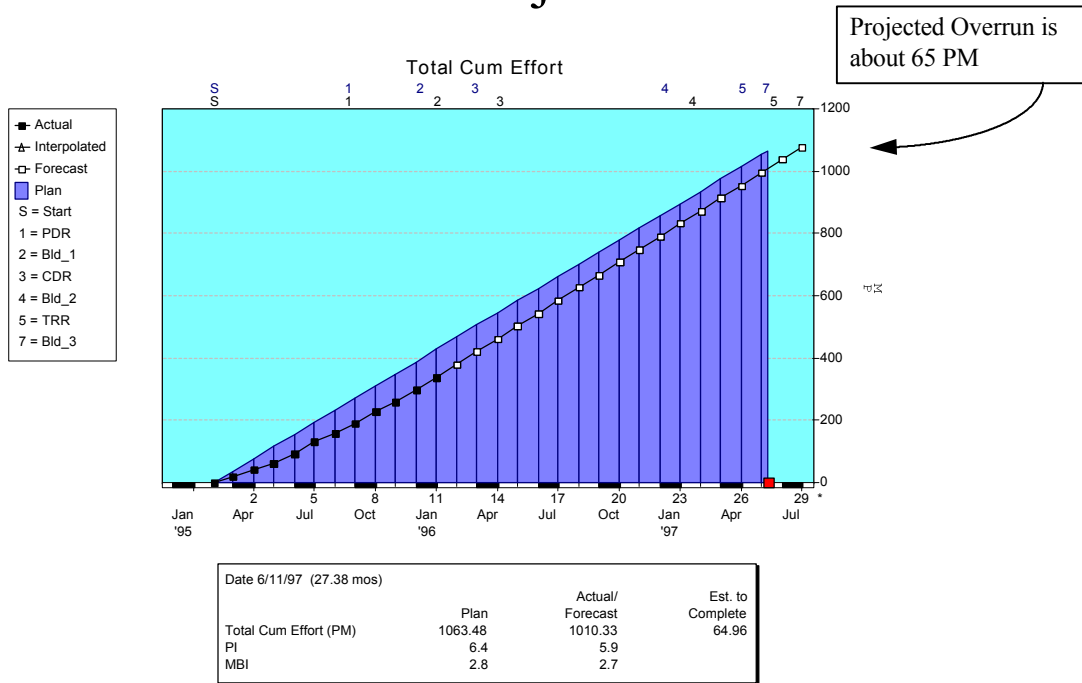


Figure #7. Effort projection to completion.

Planned vs. Actual Code Production with Projection to Completion:

Integrated Code Projection

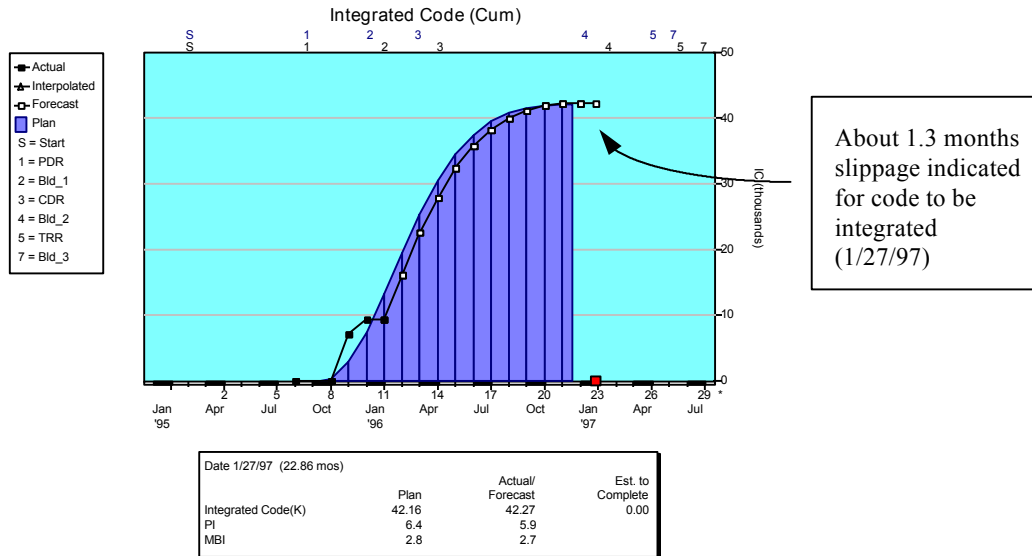


Figure #8. Integrated code production projection to completion.

Planned vs. Actual Schedule with Projection to Completion:

Schedule Projection

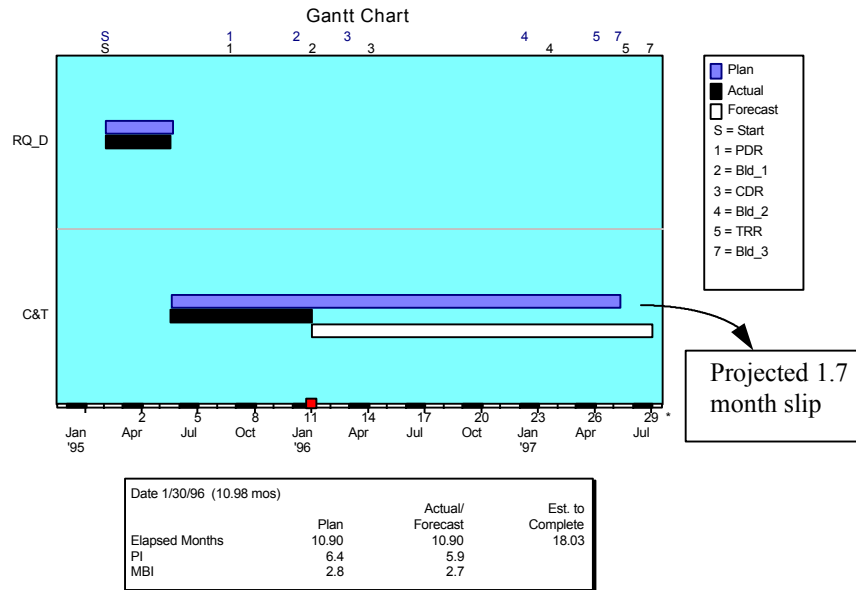


Figure #9. Schedule projection.

SLIM-Control Output:

The SLIM-Control output for the January 1996 analysis is attached.