Title: Test Protocol For New CLASS Application Software

IT Code: 44400

Purpose: To define a testing protocol for new and replacement CLASS application software.

Procedure: Before replacing production CLASS application software (such as the IRIS system) with a new version or switching to a complete replacement, the candidate software must pass through a three step testing protocol.

These steps assure that new software at least maintains compatibility with, and the functionality of, current production software before it is replaced and thus maintains CLASS operational status.

The three steps are defined as:

1) Functional Testing: The new software/application candidate is tested (stand alone) to determine that it replicates the baseline functionality of the production system that it will replace and then tested for any extensions to that baseline set that it offers.

2) Regression Testing: The new software/application candidate is tested using examples of existing input and output data sets from the current production systems to make sure that it produces identical output given a target input. Note that the contents or format of the output may be extended by the new candidate but it must also be able to produce a replicate of the original version. This assures compatibility with other CLASS production software in our application chain.

3) Parallel Testing: The final stage of testing is to run the new software/application candidate in parallel with the existing production system. This test not only it real time compatibility with data streams but also offers an opportunity to isolate time problems and performance data.

When a new software/application candidate has passed all three stages successfully, a copy of the current CLASS production system is committed to an archival CD and replace in production by the new candidate.