***TEST PLAN/CARD CREATION AND APPROVAL***

The test plan is the obvious precursor to creation of the test cards, and there exists as many different methods for creating these plans as there are manufacturers. One European airframe manufacturer offers the following method for developing the test plan and subsequent test cards.

***Test Methods and Procedures***

The test methods are probably not very different from the industry standard but the procedures could vary a lot. The test plan structure consists of a Frame Plan as an umbrella and separate Flight Test Plans for the different systems/test areas. The Flight Test Plans are prepared by the Test Leader based on a Test Specification from the Design Department branch involved. The Test Team, which also contains members from the Design Department and the customer.

Right now a data base is prepared to facilitate the judgements as many safety issues are the same for different Flight Test Plans. An automated flight test planning system will be used in the future.

The Frame Plan describes the mixture of tests from the different Flight Test Plans. From the start of flying a new A/C the Envelope Expansion calls for a rigid mix of flutter, stability and control, engine and systems tests, etc, while later on a lot more freedom exists.

At our company, the Envelope Opening in a broad sense, not only speed/altitude/load factor, is monitored by a special group, the Envelope Opening Group (EG). EG is responsible for the Frame Plan and members participate in the reviewing of the Flight Test Plans together with the Flight Test Engineers involved. EG right now consists of the chairman, who is one of the three Chief Flight Test Engineers, the Chief Test Pilot and a Senior Flight Test Engineer from our company and one Test Pilot and one Flight Test Engineer form the Air Force Flight Test Center.

After an envelope opening flight or any other flight of specific interest from a safety standpoint a special Test Data File (PUP) is produced and brought to EG for reviewing. If satisfied the chairman of EG presents the PUP and the EG recommendation to the Director of Flight Test who gives a go-ahead for the next envelope opening step. Other flights within the already opened envelope are planned and performed without EG involvement unless anything unexpected occurs.