PROCEDURE VERIFICATION AND EXECUTION

WHAT IS IT?

Procedural displays aim to bridge the gap between manual procedures and system displays. A procedural display embeds the telemetry or command button within its own textual instruction. When executing a procedure using a procedural display it is not necessary to navigate a hierarchy of system displays, as all the relevant commands and telemetry fields are displayed to the operator.

Procedure Verification and Validation toolset provide support to procedure developers in the entire lifecycle of operational knowledge development. The system operates as a model based simulator that checks the procedure steps against the state machines of the different components of the target system.

WHY IS IT INNOVATIVE OR SIGNIFICANT?

Manual procedures are inefficient because they require 'display drilling' and 'display scanning'. This is time consuming and error prone. Many of these displays look similar and hence it becomes very easy to misread the procedure and/or telemetry values.

Many instructions in procedures should not require human interaction. These instructions can be executed automatically.

A key step in the development lifecycle of operational procedures is the verification and validation phase. In the current environment procedures can not be tested without their accompanying hardware or hardware simulators. This creates a roadblock in the early development of procedures.

The procedure development environment empowers the procedure developers as well as the system operators by providing them with improved situational awareness and enhanced collaboration capability.

- **Desktop procedure automation & verification**

- **Automatic Procedure Execution**

- **Model-based desktop simulator**

- **Procedures representation - XML**

- **Fills gap between procedures review and large simulators ops**

- **Improves capability to manage operational risks in complex systems**

- **Increased efficiency – saving time**

    A procedure display can be executed many times faster than an ordinary manual procedure. Cheaper than testing using high fidelity test beds.

- **Improved Safety**

    Since display drilling is eliminated, the possibility of opening the wrong display or reading the wrong telemetry is also eliminated.

- **Enable automation**

    Subsets of a procedure can be executed automatically depending on human executor preferences.

- **Provide full lifecycle support**

    This toolset allows the engineers responsible for developing on-board procedures to validate early, continuously, collaboratively, and in real-time. It allows early development of procedure even before or concurrent with Hardware design therefore enabling early detection of Hardware design flaws.