While research into model based testing and verification (MSTV) is almost as old as the field of Computer Science, there has been a recent surge in the application and evaluation of MSTV technologies. MSTV has found takers in the embedded systems such as those found in medical devices, engine controllers, plant controllers, and mobile devices.

A variety of models and techniques have been proposed for test generation and program verification. These include finite state models, statecharts, input domain models, and logic specifications. Many researchers have reported case studies to evaluate MSTV and several companies use MSTV, in one form or another, on a regular basis.

At a recently held workshop at IBM Hursley Laboratories, Paul Gibson of IBM noted that “…however beautiful the theory, it must also work in practice and in particular it must be scalable.” While MSTV is a collection of may promising approaches to obtaining high quality and high reliability software, it has a long way to go before becomes a common practice in software development organizations.

The current panel is organized to focus on the successes of MSTV, its strengths, and its shortcomings. The panel will focus on the following in the context of MSTV:

1. What is “Model based testing and verification?”
2. State-of-the-art and state-of-practice
3. Economic benefits
4. Strengths and weaknesses
5. Research directions