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Time Management Displays for Shuttle Countdown

The Intelligent Launch Decision Support System project at Kennedy Space Center is developing a Time Management System (TMS) for the NASA Test Director (NTD) to use for time management during Shuttle terminal countdown. TMS is being developed in three phases: an information phase, a tool phase, and an advisor phase. The information phase is an integrated display (TMID) of firing room clocks, of graphic timelines with Ground Launch Sequencer events, and of constraints. The tool phase is a what-if spreadsheet (TMWI) for devising plans for resuming from unplanned hold situations. It is tied to information in TMID, propagates constraints forward and backward to complete unspecified values, and checks the plan against constraints. The advisor phase is a situation advisor (TMSA), which proactively suggests actions for resumption from hold situations. A concept prototype for TMSA is under development. The TMID is currently undergoing field testing. Displays for TMID and TMWI will be described. Descriptions will include organization, rationale for organization, implementation choices and constraints, and use by NTD.

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