

650th TEST SYSTEMS SQUADRON

LINEAGE

STATIONS

Arnold AFB, TN

ASSIGNMENTS

COMMANDERS

HONORS

Service Streamers

Campaign Streamers

Armed Forces Expeditionary Streamers

Decorations

EMBLEM

EMBLEM SIGNIFICANCE

MOTTO

NICKNAME

OPERATIONS

650th Test Systems Squadron

The 650th Test Systems Squadron (TESS) is responsible for the planning of restoration, modernization and improvement projects to deliver enhanced AEDC RDT&E capability in support of simulated flight tests of government, commercial and international aircraft, missile and space systems. Additionally, the squadron manages AEDC's systems engineering process.

Fiscal Year 2008 Highlights

Fiscal year 2008 culminated a year-long effort to revitalize and improve System Engineering (SE) processes at AEDC.

During this time, a more uniform and effective center SE approach was implemented resulting in products, services and processes that meet customer requirements throughout their systems life cycles in a cost-effective and efficient manner. This enabled AEDC's investment process to deliver new or increased capabilities to test facilities at AEDC by effectively following Department of Defense acquisition guidance on SE. It also developed an integrated SE approach that is applied throughout a system's life cycle providing AEDC personnel with information that assures consistent, efficient and effective performance of SE and Configuration Management (CM).

The new SE process facilitates each engineer and project manager to translate mission capability changes into a newly configured or modified system by using a systematic, iterative and integrated approach. Furthermore, the new SE process integrates all technical disciplines into a coordinated effort that meets established program, project, or activity cost, schedule and performance objectives.

The 650th TESS also revamped three operating instructions and two standards, which culminated a significant year-long effort involving four groups and nine squadrons. A Systems Engineering Council was established to support the center SE process, ensure consistent SE implementation across the AEDC enterprise and serve as a forum for collection and discussion of AEDC SE process improvements. The squadron also initiated a working group to re-scope the RDT&E Facility Investment Plan to identify capability project choke points-to tie new investment projects to strategic plans and roadmaps.

Another key improvement was the squadron significantly upgraded the AEDC investment planning process, changing the basic culture of how to plan investment projects. This resulted in a more efficient use of AEDC's limited resources and provided a higher degree of investment customer satisfaction.

During fiscal year 2008, 24 planning projects were started and 11 projects were completed through the systems requirement review. Twelve projects will continue to be planned in fiscal year 2009. AEDC saw significant benefits from three planning projects

- the C-1/C-2 Test Cell Cooling, Aerodynamic Propulsion Test Unit (APTU) 6.9 kV Operational Power and APTU Hydrogen Detection
- that would not have occurred under the previous requirements generation process.

Fiscal Year 2009 Forecast

During fiscal year 2009, the 650th TESS will continue to refine the SE process across the investment portfolio. Plans include implementing improvements in risk management, requirements analysis and SE tailoring, as well as implementation of the AF SE assessment tool to identify SE strengths and weaknesses. Additionally, the squadron will continue to plan projects in advance of execution. Approximately 21 fiscal year 2009 projects (including any fiscal year 2008 carry-overs) have been identified.