

Range Reschedule Data Collected as Part of DIF 2014/2015 Analysis Effort

ATEC/Army Response

The data provided below is in response to Issue 2 – the concern over scheduling of test time on DoD ranges, and the cause(s) of test reschedules. From FY12 to FY14, ATEC executed 386 contracts (efforts) for commercial entity (private industry) use of ATEC’s MRTFB test facilities. Of the 386 contracts, 269 had no DoD sponsor and were charged the fully burdened rate (Direct Costs plus Overhead), while 117 had DoD sponsors and were charged the government rate (Direct Costs only).

Table 3-6 summarizes the private industry efforts on ATEC’s MRTFB ranges from FY12 to FY14. Of 386 efforts, 52 were rescheduled (13%). Of the 52 efforts that were rescheduled, 32 were rescheduled multiple times, and the total number of reschedules documented total 187. Reschedules are documented with cause in the ATEC Decision Support System (ADSS); a reschedule does not always result in a delay in the overall schedule agreed upon with the customer, as reschedules sometimes accelerate the efforts. ATEC tracks reschedule causes in 6 categories: Facilities, Test Item (not available or failed in test), Guidance, Scope, Contract, and Funds. Only the Facilities category is within ATEC’s control, and refers to the availability of instrumentation or test facilities in the timeframe requested. The remaining categories are controlled/driven by the customer. Of the 187 total rescheduling events, only 5 (less than 3%) were due to Facilities being unavailable in the timeframe requested by the customer. Two of these 5 reschedules executed testing earlier than planned, and the remaining three delayed testing between 4 and 15 calendar days.

Table 3-6: ATEC Test Rescheduling Summary

Category	Number of Rescheduled Test Events
Total Private Industry Efforts	386
Efforts Rescheduled	52
Efforts that were Rescheduled Multiple Times	32
Reschedule Cause: Customer	182
Reschedule Cause: ATEC	5
Total Reschedules	187

In addition to the causes shown in Table 3-6, the ATEC also tracks schedule slippage due to the following causes in ADSS:

- Instrumentation,

- Personnel,
- Test Scope Revision,
- Technical Problems,
- Transfer/Re-assignment of Test Workload,
- Other.

Utah Test and Training Range (UTTR) Response

The UTTR response to the Issue 4 data call included the following points:

- While testing at UTTR is predominantly operational test, limited developmental testing is feasible.
- UTTR does not maintain a specific database tracking causes of customer reschedules, cancellations, etc.
- Local observations indicate the two primary causes for customer reschedules/changes/cancels. These are customer internal reasons (not ready, maintenance, etc.) and weather.
- UTTR uses published FAD code priorities to deconflict mission schedules.
- Customers are requested to provide appropriate level correspondence in the event of Urgent Operational Need (UON) or similar high-priority missions.

Air Force Response

The Air Force provided two datasets documenting test schedule deviations and the respective categorization of their causes (see Figure 3-4).

Air Force Location 1 Completed (Accumulated) Projects Root Cause Analysis

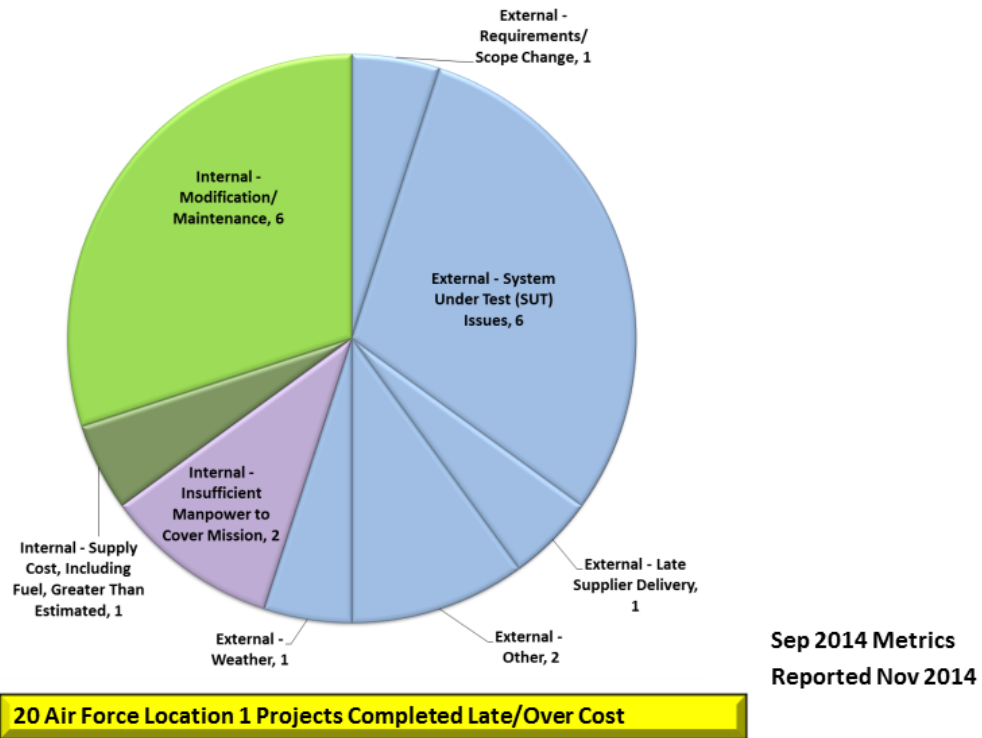


Figure 3-4: Air Force Location 1 Completed Projects Root Cause Analysis

NAVAIR Response

NAVAIR provided the following responses to the data call:

“All Navy ranges (ECR, NTTR, UTTR, and Edwards), have the same support contractor, and they have a tool called Maximo, that records all that. That data is there. Another tool is the scheduling system at least at China Lake and Point Magu. It is a tool named Test Resource Management System (TRMS); that is where you schedule an event or operation, and if it is canceled, it reports a reason why.”

Table 3-7 summarizes the record of test cancellations in the NAVAIR Weapons Division (WD) over the previous three years. As this record shows, no CSA or Cooperative Research and Development Agreement (CRADA) customers have had their tests cancelled by WD ranges.

Table 3-7: Summary of NAVAIR Range Test Cancellations

Sea Range – Weapons Division	FY12	FY13	FY14
Cancellations for all customers	522	456	504
Instances the Range, versus project or aircraft cancelled the test	22	18	4
Instances the Range cancelled a CSA or CRADA Customer	0	0	0
Land Range – Weapons Division	FY12	FY13	FY14
Cancellations for all customers	783	1,057	908
Instances the Range, versus project or aircraft cancelled the test	18	22	31
Instances the Range cancelled a CSA or CRADA Customer	0	0	0

Atlantic Test Range – Aircraft Division

The Atlantic test range provided the following data:

- Over the past four years, there has been one incident where the Atlantic Test Range was not able to provide support to a CSA customer due to equipment malfunction.
- There is also no recent data that indicates that a CSA customer could not get on the schedule in the week requested to execute their test event.
- There was one instance in the past year where a customer had an incrementally funded CSA that had a lapse in funds, and their events were not scheduled/supported until additional funding was received.

NAVAIR Test and Evaluation Execution Metrics

NAVAIR subsequently provided a briefing on its efforts to standardize metrics associated with T&E execution. These metrics including 20 measures associated with test execution and schedule performance, describing the reasons for test. Figure 3-5 depicts an example of NAVAIR T&E execution status reporting using these metrics.

Table 3-8 provides a crosswalk of test evaluation metrics used in each of the Services (NAVAIR, AFTC, ATEC).



Daily Flight Schedule Lost Test Events

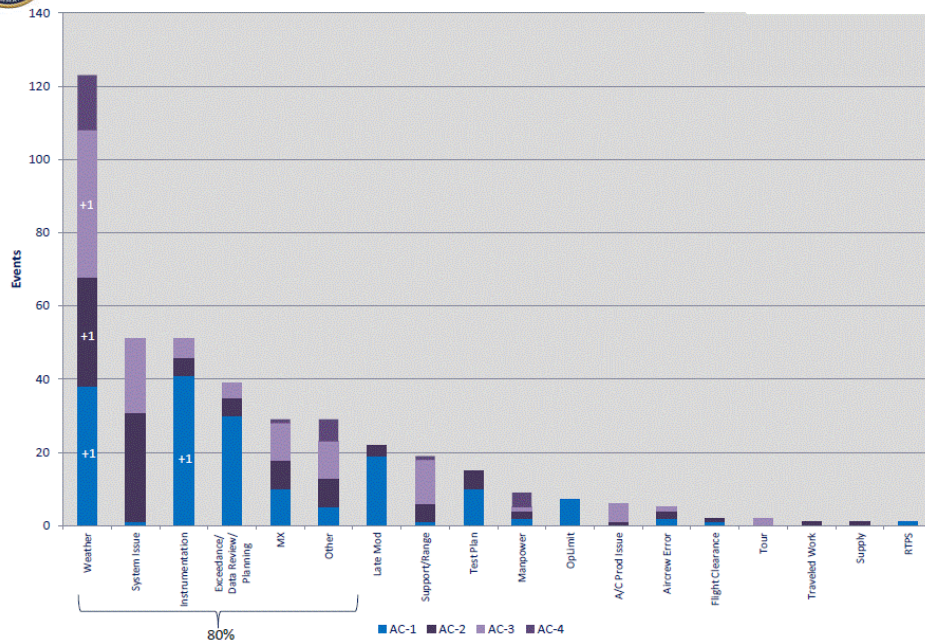


Figure 3-5: Example NAVAIR Test Execution Report Metrics

Table 3-8: Crosswalk of Test Execution Metrics for Each Service

NAVAIR Metric/ Criterion Title	Definition	Air Force Test Center (AFTC) Metric/Criterion Title	ATEC Metric/ Criterion Title	Comments
Data Review	Event cancelled due to Data Review (not for Op Limit Data Review) Modification			
Exceedance	Event cancelled due to an exceedance on a previous flight either requiring data review or maintenance of the aircraft	System Under Test (SUT) (External)	Test Item	
Flight Clearance	Event cancelled due to flight clearance late/delay			
Instrumentation	Event cancelled due to instrumentation failure, work, modification, calibration	Modification/Maintenance (Internal)	Instrumentation Facilities Technical problems	
Lost Test Events	An event (ground or flight) that was on the daily flight schedule which was cancelled			
Manpower	Event cancelled because there were not enough flight test engineers/pilots to support the flight	Insufficient Manpower to Cover Mission (Internal)	Personnel	NAVAIR Manpower and Support categories overlap
MX	Event cancelled due to aircraft maintenance (that doesn't fit into another category)			

Table 3-8: Crosswalk of Test Execution Metrics for Each Service (continued)

NAVAIR Metric/ Criterion Title	Definition	AFTC Metric/ Criterion Title	A TEC Metric/ Criterion Title	Comments
Op Limit	Event cancelled because reached an Op Limit on a previous flight or data still in review to open up Op Limits for future flights			
Other	Any other event cancellation that doesn't fit in the above categories	Other (External)	Funds Guidance	Contract and funding related delays should be broken out separately.
Overrun	Event cancelled due to a modification period that ran past the expected duration		Contract	Contract and funding related delays should be broken out separately.
Personnel Error	Event cancelled due to error made by aircrew, Maintainer, Flight Test Engineer either on previous flight or pre-flight that caused the event to be cancelled			
RTPS	Event cancelled due to RTPS (whether onsite or at a remote site) availability or failure	Modification/Maintenance (Internal)	Instrumentation Facilities Technical problems	RTPS stands for Real-time Telemetry Processing System.
Supply	Event cancelled due to supply of parts	Late Supplier Delivery (External)	Facilities	"Facilities" connotes much broader set of criteria.
Support/range	Event cancelled because either support (personnel/range targets/chase aircraft) not available or range airspace unavailable	Insufficient Manpower to Cover Mission (Internal)	Instrumentation Facilities Personnel	

NAVAIR Metric/ Criterion Title	Definition	Air Force Test Center (AFTC) Metric/Criterion Title	ATEC Metric/ Criterion Title	Comments
System Issue	Event cancelled due to System Under Test malfunction or trouble-shooting	System Under Test (External) Late Supplier Delivery (External)	Test Item	Definitions and terms appear basically consistent.
Test Plan	Event cancelled because test plan was not signed for authorization to fly	Requirements/Scope Change (External)	Test scope revision, Scope	NAVAIR definition is narrower than Air Force or Army definitions.
Test Weather	TBD	Weather (External)		
Tour/Change of Command	Event cancelled to accommodate a tour of the aircraft or a Change of Command			
Traveled work	Event cancelled to accommodate production work done during test phase	Modification/Maintenance (Internal)	Transfer/re-assignment of test workload	Concept of “traveled work” should be clarified to separate work necessary for testing, and transfer of test for other reasons.
Weather	Event cancelled due to weather restrictions (dry aircraft), winds	Weather (External)		No explanation why Army does not have this in tracking data.

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