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Analysis of Current Flight Scheduling Practices and Recommendations to Efficiently Reduce Deviations from Syllabus Time-To-Train

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EMBA PROJECT REPORT

Analysis of Current Flight Scheduling Practices and Recommendations to Efficiently Reduce Deviations from Syllabus Time-To-Train

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7 September 2011

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EXECUTIVE SUMMARY

The objective of our project is to investigate current scheduling requirements, constraints, and procedures to identify problems with scheduling practices and syllabus management for Primary Flight Training in Training Wing 4. We analyzed three alternative scheduling approaches to reduce excess training time in the maximum efficient manner.

Alternative 1: Prioritize students based on deviations from syllabus flow

Changing the prioritization of students does not have a direct impact on reducing Training Timeline, since no additional production capacity is being added. However, changing the prioritization of scheduling students to give the highest priority to students who are the most behind should reduce gaps in training and increase proficiency, thereby reducing failures and required warm up flights for time out of the cockpit. This will reduce time-to-train (TTT) and additional overhead flights. The Training Timeline function of TIMS provides information on deviations from syllabus-designed TTT for use in the prioritization in scheduling.

Alternative 2: Utilize aircraft availability in schedule builds

Like instructors and students, aircraft are required to complete a flight event, and should be managed accordingly. Schedule writers can use current metrics of aircraft availability and make reasonable assumptions on the longevity of the information to predict follow-on production capacity. Events scheduled without considering aircraft availability should be presumed unlikely until availability is confirmed.

Alternative 3: Monitor completer production / TTT deficits to trigger increased production

When necessary, increased production can be gained through very limited means without introducing further scheduling constraints. Schedule writers must monitor when excess capacity is required and consider what can be gained at what cost; options can be prioritized based on a reasonable ordering (based on relative costs, both monetary and follow-on production loss risk) of the available options: Saturday operations, mandatory prepositions, forced cross countries, or recommending a detachment.

We recommend TIMS Training Timeline function permissions be made available to schedule writing personnel for the operational database. Training needs to be provided to all TRAWING 4 schedule writers from the TIMS help desk to ensure utilization and integration of the Training Timeline. Scheduling in this manner will help ensure that extra syllabus flight requirements and time out of the cockpit are minimized.

Scheduling templates based on aircraft availability will ensure events are planned to the maximum capacity of the system. We recommend schedule writers monitor Daily Status Reports and build follow-on schedules based on predicted asset availability. This will help avoid unnecessary use of other variables that could contribute to rippling production limitations.

When it is mandatory to fly other than normal weekday field hours, having the field open for mandatory Saturday operations is the best alternative to gain on the student deficit depicted on the Training Timeline. Simultaneously, squadrons can use prepositions and cross countries to manage their own in house training deficits as they see fit.

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I. INTRODUCTION AND BACKGROUND

A. INTRODUCTION

Student Military Aviators (SMAs) are allocated a Primary Flight Phase time-to-train (TTT) of 127 training days.[1] Every "stage" is given its own hour requirement breakdown. The current breakdown is: administration – 6.0, ground training – 51.5, initial flight support – 101.2, and initial flight training (including cockpit procedural trainers, simulators, and both dual and solo flights) – 129.3. Excluding weekends and other non-fly days, and delays in training for weather and unforeseeable (but not to be unexpected) setbacks, this is further calculated into an overall on-board period – check-in to checkout – of 28.4 total weeks, calculated with a multi-variable formula that warrants its own instruction.[2] At its largest deficit over the past year and a half, TRAWING 4 was averaging 38.5 weeks per student.[3]

[1] MPTS

[2] TIP

[3] NOTE: During the course of this project, data was pulled for all of TRAWING 4, and individually for VT-27 and VT-28. Since both squadrons operate under the same parent command, split student loads, similar instructor manning, and shared device assets, it was assumed for this project and can be assumed that each squadron's production represents approximately half of TRAWING 4 and that averages are also similar across the board. Data was utilized from different areas based on the needed data's availability.

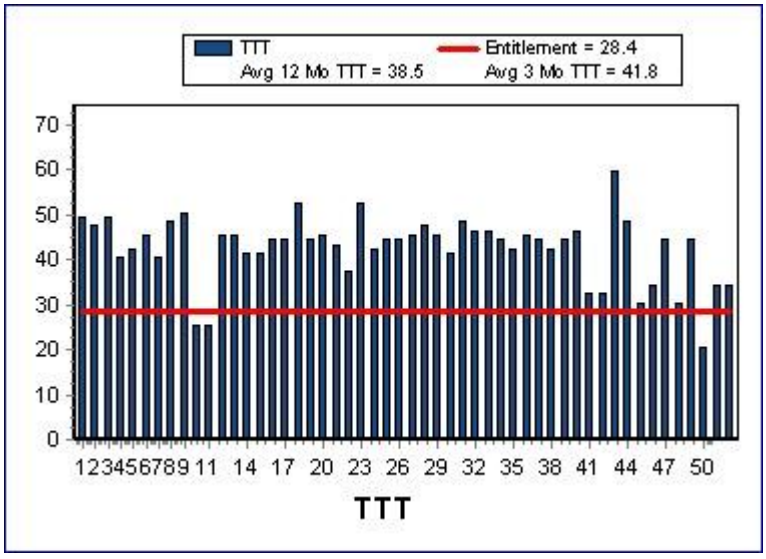

Figure 1: TTT – VT-28, September 2010

B. BACKGROUND

The Training Integrated Management System (TIMS) is the core of CNATRA's training system and manages all aspects of undergraduate ground-based flight training activities to include scheduling, creation of grade sheets and flight records, resource allocation, qualification and currency tracking, academics and computer aided instruction (CAI), long-range planning, and all training reports.[4] However, there is currently very limited, if any, standardization in actual scheduling practices and syllabus management. The schedule-writing process is very technique-driven with loosely written policies and regular personnel turnover.

Furthermore, the process is typically conducted by managing two variables: Instructor Pilots (IPs) and SMAs. A third important variable, the required training device (i.e. classroom, simulator, aircraft), is also necessary for the majority of training and must

[4] CNATRA21 Strategic Vision

be managed as part of the scheduling process. Events requiring T-34C aircraft are relatively the most difficult to schedule, due to the device (although the asset is not always the scheduling constraint). A daily status report (DSR) provides an advertised Ready for Training (RFT) availability and is distributed by Sikorsky Aviation Maintenance (SAM) and reviewed by CNATRA for the current day. Even so, there is minimal projection of future aircraft availability and capability. Therefore, this third variable is typically not used in the scheduling process.

Finally, most squadron operations – while monitored by the parent wing (through applications such as the NAPP Integrated Production Data Repository, NIPDR) – are locally planned and executed. Squadrons are given production goals, either in the form of number of student 'completers' (or selectors) or 'advancing sorties' (or X's) with little to no guidance on how to efficiently meet them.

C. PROJECT OBJECTIVES AND RESEARCH QUESTIONS

It is the intent of this project to investigate current scheduling requirements, constraints, and procedures; identify problems with scheduling practices and syllabus management for Primary Flight Training in Training Wing 4; and analyze three alternative scheduling approaches to reduce excess training time in the maximum efficient manner.

To do so, we focused on the following questions:

1. What are the constraints of primary flight scheduling?

2. What are the barriers to efficiently scheduling student events?

3. What is a best-practice prioritization of students and/or events for optimal syllabus progression? When should they be scheduled -- during the course of a day, over the course of a week/month/season, and throughout a student's TTT? Furthermore, what students and/or events should take priority during the execution of the flight schedule?

4. What difference would consideration of aircraft availability make in the effectiveness of the scheduling process?

5. When should corrective actions (alternative operations) – like creating a detachment, operating on weekends, or flying CCXs – be utilized to increase the production and get the program back on track?

D. MEHTODOLOGY

We first identified scheduling constraints by examining the established rules, regulations, and requirements of Naval Aviation, Naval Air Station Corpus Christi, Training Wing 4, and the agreed-upon standards of VT-27 and VT-28. This included, but was not limited to, crew rest, crew day, allowable number of flights and flight hours per day, and all other applicable limitations in governing instructions and directives. This was done to ensure that the analyzed alternatives are reasonable and possible.

Next, we identified and examined the various scheduling techniques that are used in the current system or culture. We focused on the common practices of schedule writing to determine possible shortfalls, bottlenecks, and inefficiencies in order to determine what barriers exist to effective and efficient scheduling.

Third, we analyzed three alternatives to current scheduling practices:

a) To determine a best-practice prioritization of "advancing events," we utilized the TIMS Training Timeline data (currently not in operation) as a metric for identifying syllabus progress in order to prioritize events in the scheduling-building process, specifically compared to the closest-to-completion scheduling method.

b) To determine the effect of adding aircraft availability to the scheduling process, we used the Daily Service Report (DSR) – specifically, reported Ready for Training (RFT) aircraft – as a determining factor in forecasting follow-on schedule template design. We decided if RFT does not properly translate aircraft availability to the schedule writers, a new term would be defined and/or used.

c) To explore the best use of potential corrective actions (alternative operation methods), we analyzed the NAPP Integrated Production Data Repository production charts to develop "triggers" that would signal the necessity for additional means of production to be enacted including: mid-week CCXs, "prepos", weekend operations, and detachments.

We collected data from multiple sources including in-place student syllabus tracking formulas native to TIMS, maintenance-reported aircraft availability from DSRs, and squadron and wing production reports from NIPDR. All alternatives were compared to understand their relative efficiency, measured using operational hours or available assets-to-advancing-sorties ratio, or some other standardized metrics.

E. PROJECT SCOPE

The intent of this project is to reduce excess training time by providing options to current methods of scheduling. All proposals we offered are bound by the same standards and policies that are currently in place, and no changes to the established student syllabus flow were recommended. We also investigated improved use or additional use of systems already in place to minimize adverse cultural impact and unnecessary cost.

II. RESULTS

There are many 'rules' outlined in governing instructions that limit scheduling options. The limits we considered include but are not limited to:

- 12 hour crew day
- 12 hour crew rest
- Solo constraints (10 hour crew day, increased weather minimums)
- On-wing constraint
- Daylight constraint
- Field constraint (field hours, normally weekday only operations)
- Qualification constraint
- Watch constraint
- Form instructor airborne for solos requirement
- 2 solos per landing pattern
- Weather constraint (event dependent)
- Linear syllabus flow prior to first solo
- One event per day prior to first solo (except for BIs)
- Two student events maximum after first solo (except for CCX)
- Minimum student turn time for multiple events
- Instructor event limitation (3 total / 2 contacts maximum)
- 6 consecutive days scheduled maximum
- SMS students (no more than one training event per day)
- Prerequisites
- Snivels
- I'M SAFE constraint

Production boils down to the effective use of three absolutely necessary assets: a student, an instructor, and a device (simulator or aircraft). In isolation, the aforementioned rules rarely, if ever, come into play. It is the management of multiple events utilizing numerous students, instructors, and devices[5] that bring individuals' constraints together and ultimately constrain the system.

[5] NOTE: Devices have their own limitations; however, those are managed by a maintenance contract and are outside of jurisdiction of the command. The command's concern with these limitations will be explored in alternative B: three-variable scheduling.

Current scheduling practices attempt to manage the system constraints but have shown to be inefficient and inconsistent.

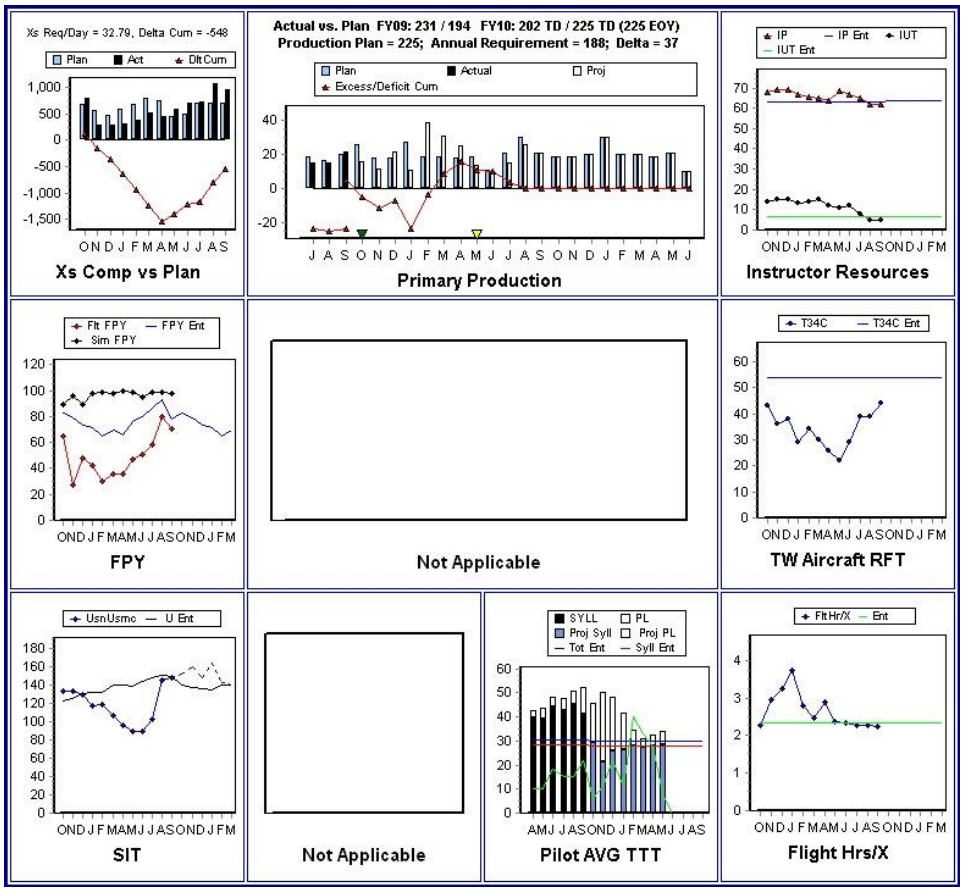

Figure 2: NIPDR – VT-28, September 2010

To begin, production goals are typically defined by the end product rather than operational capacity. For example, an end number of selectors (and the number of events required for those selectors to complete) is divided down by two squadrons and remaining weeks (and then further into days) before the 'deadline,' until the required sorties to be scheduled align with the time allotted. Furthermore, if the incentive is to finish a selector – especially by a certain date (ex. end of FY) – then the priority is placed

on those students who are closest to completion. In both of these situations, overall system management is ignored and inefficiencies are accepted to justify the end product (that is, meeting quota). While this is a workable approach, it yields sub-optimal solutions that are easily derailed.

To better manage the system as a whole, three alternatives were explored that attempt to reduce or to minimize scheduling inefficiencies in order to achieve optimal system throughput.

A. TIMS TRAINING TIMELINE

Training Timeline is an organic TIMS function currently unutilized by the Naval Air Training Commands. It requires no additional data input into the system, and users need locally granted permissions to view the output.

TRAINING TIMELINE

May 1, 2011

UNIT SUMMARY *																				
Unit	Effective Students	Flight Events Remain	Device Events Remain	Academic Days Remain	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr	Baseline Overall Incr.	On-Track Flight Incr.	On-Track Device Incr.	On-Track Academic Inc	On-Track Overall Incr.	Flight Required / Day	Device Required / Day	Academics Required /	Total Required / Day
VT-28	131	5431	3209	10162	-3.79	-0.76	-13.3	-8.89	0.4	0.24	0.79	1.31	0.39	0.23	0.7	1.31	50.69	29.55	91.36	171.6

* Timeline statistics computed using the Linear Method.

Table 1: Training Timeline Summary – VT-28, 1 May 2011

Training Timeline provides the user with a summary of syllabus progression for a selected student or group of students. Information displayed includes last flight and device (i.e. simulator) event and date; current flight time, nighttime, and solo time (all requiring minimums to complete primary flight training); number of completed, extra,

and total syllabus events; and flight, device, and academic events remaining. Most importantly, the alternative means of scheduling we examined, Training Timeline shows where a student's individual syllabus progression lies relative to the syllabus design flow, based on his or her start date.

To run a simulation of a schedule that gives priority to students with the greatest deviations from syllabus flow (i.e. furthest behind), we used the training database that is normally used to train instructors, schedule writers, and TIMS managers. The database is refreshed with data from the operational database every few months. The data used by the team was cloned from the actual database July 23, 2011.

We began by running the Training Timeline for May 01, 2011 to establish a baseline.

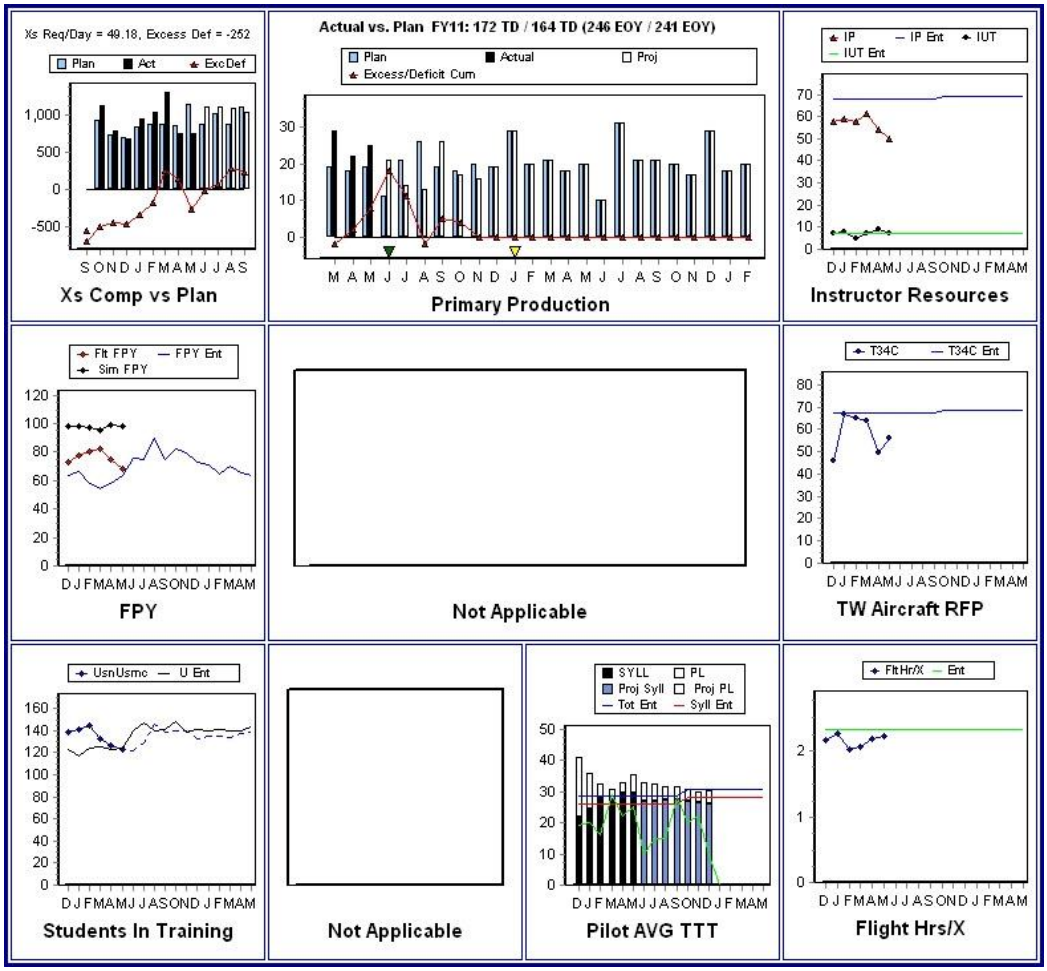

Figure 3: NIPDR – VT-28, May 2011

We then erased all the data for each VT-28 student. We then recreated every student's completed events to the May 01 base in order to delete the flights that took place between May 01 and July 23.

We attempted to recreate the results of the training flights for VT-28 during the first three weeks of May using the Training Timeline as a basis for prioritizing which student training flights were executed. Normally, schedule writers use their personal expertise to create a schedule, often resulting in prioritizing the most senior students.

However, this can lead to additional requirements in the system's capacity, as well as inefficiencies in its use towards production.

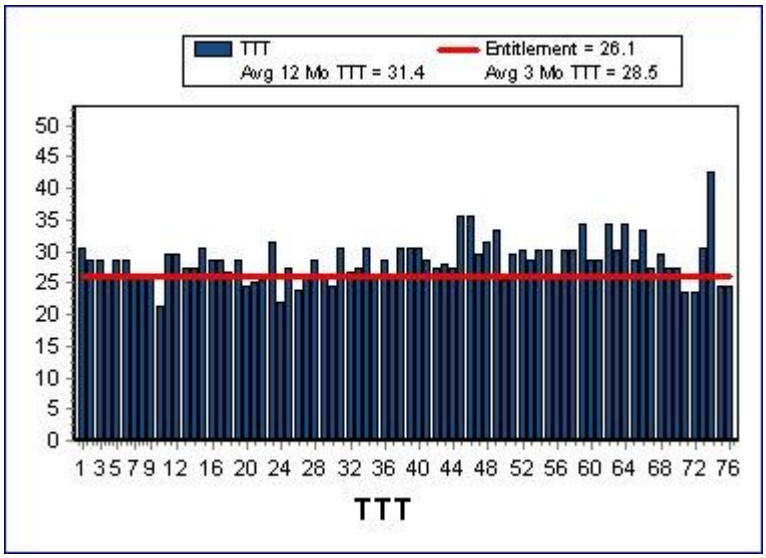

Figure 4: TTT – VT-28, May 2011

In an effort to reduce the TTT for students, and to standardize the procedure, we used the Training Timeline to prioritize how students are scheduled and prioritized; that is, to give highest priority to students with the greatest deviation from the syllabus flow.

We used the Operation Summaries for each day during the month of May to determine how many flights were executed. This list was used as a template and tool to keep track of which flights took place each week for planning. To account for weather we also kept track how many weather cancellations transpired each day as well as what type of flights were completed. We tallied the total number of flights, type of flights, and weather cancellations for the month of May.

To account for weather we split flights into two categories. For simplicity, we only considered two types of flights, VFR and IFR. VFR flights consisted of contact, formation flights, and navigation. IFR flights were instrument training flights. If the flight day had any weather cancellations, we would only schedule VFR flights equal to the number of VFR flights that were completed that day. The remainder of available flights was filled with IFR flights. If there were no weather cancelations, all of the flights could have been VFR flights, and no limitations to the number of VFR flights were imposed.

With the number and types of flights that could have been executed each day we turned to the Training Timeline to determine the student who was the furthest behind. The student with the largest deficit was allocated the first flight opportunity. A grade sheet was generated to account for the execution of the training flight. This process was continued until there were no remaining flights for that day. The Training Timeline was recomputed for the next day. The student who was the most flight days behind was scheduled and flown. This process was continued until the three-week period was completed.

All of the limitations on students and scheduling were respected. No students were scheduled longer than twelve hours each day. Students were given at least one day off every week. On an off day, students did not complete flights, ground school, computer aided instruction, or simulator events.

All flights were considered complete, without any flights ending in incompletes or failures.

TIMS provides a recommended syllabus flow of what the students should accomplish each day. This projected syllabus flow extends Monday to Friday. In our simulation, a student would complete the next projected days events according to the syllabus flow when he/she was given a flight as directed by the TIMS Training Timeline.

When priority is given to students with the greatest deviation from the syllabus, the Overall flight days of the entire squadron were reduced by 3.4 days.

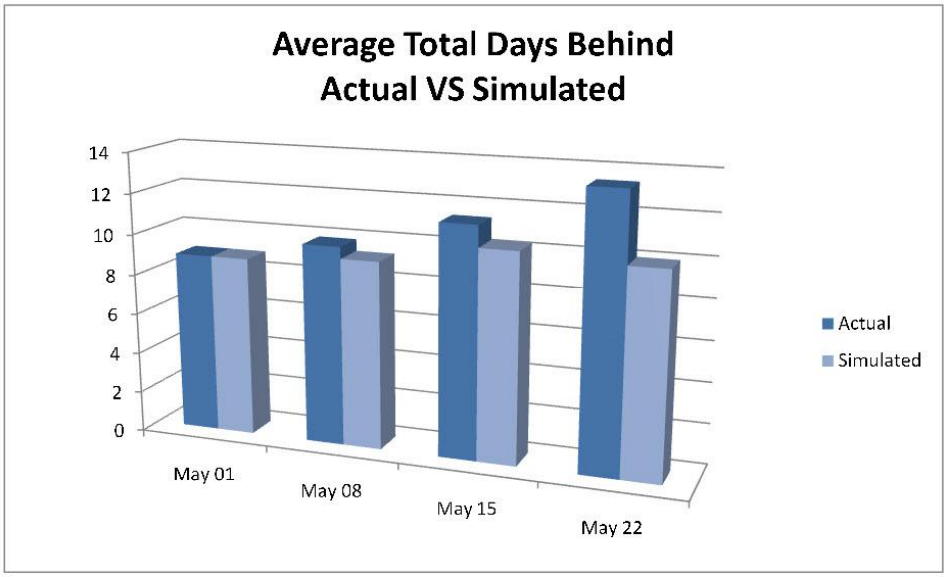

Figure 5: Actual vs. Simulated Results, Average

All classes also saw a reduction in overall flights days. This decrease in the deficit was larger than expected. Lack of failures and student overhead flights can provide some insight to the decrease in total days behind the planned syllabus. However, most of the increased student training can be explained by a limitation in the Training Timeline (detailed in limitations section, below) and the project's attempt to recreate past events.

Despite the dramatic decrease in overall days compared to the projected training itinerary, some expected results did emerge. The students who were furthest behind did fly more often during the simulation. Few of the students who were largely ahead of their peers did see advancement at a slower pace than the control. Seven of the flying students also saw a decrease in total flights compared to the control. This dampening effect on the all of the students will continue until all are within an equilibrium (a natural limit) that is determined by the production capacity of the squadron.

The Training Timeline unit summary is an average of the total production of the squadron. Changing the prioritization of students on the schedule does not by itself reduce the TTT. However, ensuring that the students who are the furthest behind get priority should reduce warm up flights, reducing TTT. In addition, this should also allow students to fly more often with fewer breaks. This increased currency, reduces failures and additional flights, thus lowering TTT.

With sufficient aircraft availability and adequate weather, the entire flight schedule can be executed and priority becomes moot. However, when the less aircraft are available for training, it becomes more important to prioritize to ensure that the limited assets are put to the best use.

B. THREE-VARIABLE SCHEDULING

A previous maintenance contract sought to ensure that 70% of aircraft on board would be issued for flight training. In the absence of this "70% rule," a Daily Status Report is still distributed each morning, communicating the expected aircraft availability

for that day; maintenance is given a minimum requirement of aircraft that must be available for issue.

Similar to the limitations on instructor and student pilots, aircraft have calendar day and flight hour inspections, as well as operational and contractual requirements that must be met to be issued (ready) for flight. These aircraft are categorized as "Ready for Training," or RFT (not to be confused with "Fully Mission Capable," or FMC, which may or may not be used for training). RFT is reported each morning in the Daily Summary Report

Likewise, there was at one time a practice of notating an aircraft 'block' of availability on the flight schedule to track when assets could be reused during the day. The first events were labeled with the letter 'A,' and there could only be as many 'A' events as there were aircraft available that day. Events labeled with the letter 'B' could not be scheduled until an 'A' aircraft was returned and allowed ample time for reissue. These blocks are still recognized, although not in such a formal manner.

When issued, an aircraft is "blocked" for four hours (although not necessarily as formal as mentioned above): it should be issued one hour prior to the scheduled event's takeoff time, allowing for the crew to review the aircraft's discrepancy book (ADB), conduct a preflight, and complete all ground procedures. The longest syllabus event is 2.1 flight hours. After the flight, an hour is allocated to do the turnaround inspection and any minor maintenance that may be required before reissuing the aircraft and starting the cycle over.

Currently, this aircraft availability data is informative only, and is only loosely used in the schedule writing process. The data does not attempt to forecast the following

day's aircraft availability, but is not incredibly fluid unless there are changes in the status of multiple aircraft or an issue affecting the entire aircraft fleet. The 'blocks' are very generally managed with roughly designed templates displaying various divisions of 'lines' per hour based on the assumed availability of aircraft and the operational tempo desired or required.

By including a more detailed consideration for aircraft availability in the schedule writing process, the flight schedule execution can more closely mirror its intentions. Although aircraft not available (ACNA) cancelations do not necessarily "cost" the squadron anything more than wasted man hours and possibly decreased morale, they can be an inefficient use of manpower. Instructors could be scheduled elsewhere; student prioritization could be inaccurate; and both are using crew day, and wasting crew rest. Student pilots cannot be scheduled more than six days in a row, even if a flight is not performed. This could restrict the schedulers' ability to write future training events.

C. DEFICIT CORRECTION STRATEGIES

We understand the overall goal of using the Training Timeline system is for it to be implemented on an everyday basis. Hypothetically, the schedule writer would be able to open up the Training Timeline template and based upon the information it provides, he/she would schedule accordingly based on who is the furthest behind projection. Predicting production in a non-perfect environment is not an easy thing to do. One would never be able to predict or know exactly how the schedule will be executed. There are a myriad of factors leading to the ultimate success of completing an event:

1) Is there an aircraft available for the event?

2) Will the aircraft maintain an operating status so the event can be completed?

3) Will there be adequate weather?

4) Will the student's performance be adequate enough to proceed to the next event?

These scenarios illustrate a few situations where a prediction in the schedule writers mind and process does not come to fruition.

We believe the implementation of the Training Timeline process should allow for some flexibility. If you are too rigid with the implementation of a new process, the process could be doomed before it even has the chance to work. For example, using strictly the Training Timeline model on a Friday will lead to complications.[6] Friday's are the primary day for departures of cross-country (CCX) events in where an instructor takes a student to another location and returns on Sunday. If we schedule simply using the priority model from the Training Timeline, these students may not qualify for a CCX due to a higher priority student taking the spot. Also, Mondays are difficult because there may be a handful of students that are close to completing and because Tuesdays are the deadline for students eligible to select, it probably would be prudent to finish these students off. Again, if we simply schedule based on the Training Timeline model, these students may be forced to wait while other students catch up and the squadron would miss an opportunity to finish a student's training and notch another completer to the overall year end goal.

[6] NOTE: Since CCX flights normally only occur on Fridays, they should take president over the greatest deviation priority on that day only.

However, if a schedule writer used a hybrid of the Training Timeline model accompanied by the flexibility of scheduling to their higher priority events on Mondays and Fridays, we believe some overall improvement would take place. This model allows for data being able to drive some of the decisions along with common sense or preference when appropriate. Thus, on Mondays and Fridays, the schedule writer could schedule the CCXs and completers first and then use the priority system from the Training Timeline model to allocate remaining sorties.

The decision to fly on weekends is another deficit correction strategy. Usually, the decision to fly on the weekends, using either the home field on Saturday or by operating aircraft out of Corpus Christi International Airport, is precipitated by bad weather the week prior or a lack of aircraft to complete the required number of events for students. By using the Training Timeline model, accompanied by the number of aircraft available for weekend flying, "wickets" for determining weekend flying criteria (both how many and which weekends) can be accomplished. Every weekend each squadron has the ability to schedule as many prepositioned aircraft ("prepos") as they wish in order to manage their own in house production problems. For example, the Operations officer can require his schedule writer to ask for volunteers to fly every weekend as he sees fit. These volunteers provide a wonderful service to their squadrons by producing completed events on "free days." What this means is each student's Training Timeline does not include completing events on weekends or holidays. So every event completed on these days allows the squadrons to gain ground on the deficit. To further explain this concept, if a student is one day behind on Friday, he is still one day behind on Monday. The weekend does not count against him. So volunteers on weekends just allow each

squadron to maintain and possibly gain ground on the overall deficit. When volunteers alone do not allow the squadron to maintain an adequate deficit or completers are not finishing at a rate to hit the overall numbers for year-end completers, other measures have to take place.

It is impossible to predict how many planes would be available for use on the weekends. For purposes of our study, let's assume on a normal day 30 aircraft are available for each squadron during the week. Based on this number, let's further assume on a Saturday we would be able to fly half this number, 15. Normal Saturday operating hours for the field is from 9am to 5pm. So we have 8 hours to work with. Within these 8 hours, 2 events with students could be completed with each aircraft. We can roughly expect 30 completed events on any given Saturday (15X2 sorties=30) when the tower is opened for training. From a schedule writing perspective, if we have 30 or more students who are 3 or more days behind the Training Timeline, an open field on Saturday would allow us to use a "free day" to get 30 students one day closer to being caught up. An open field on Saturday allows us to complete any event Operations desires, including contact check rides, solos, and instrument events that require a terminal radar approach.

The next option is to have mandatory weekend operations using "prepos" at Corpus Christi International. Simply for the purposes of our study, let's assume that if Maintenance was going to have 15 planes for each squadron during Saturday only, tower operated day, that they would half this number available for "prepos" (half of 15 is 7.5 available as "prepos"). If each aircraft were available for 2 events on each day of the weekend then the total number of events with the possibility of completion would be 30 (7.5 X 4 = 30). So, if 30 students were 5 days or more behind their Training Timeline, a

mandatory “prepo” weekend would be a good option. By flying on the weekend, we would be keeping these students out of the optional warm-up (having not flown in 7 days or more) window and giving them more consistency in training.

The numbers in the aforementioned scenario are not important. Each operations officer will need to determine X (the number of students) and Y (the numbers of days behind) to drive the decision making process. For example, if he knows that maintenance will only be able to provide 9 aircraft. He can either determine 18 students that are Y days behind need to fly on a Saturday, or X number of students need to fly in order to maintain an manageable number of days behind.

CCXs also provide a good opportunity to make up ground on each students deficit. In the student’s instrument training syllabus, there are 10 events they can complete. Leaving on a Friday and returning on a Sunday, each student has the opportunity to complete 6 events in just one training day (remember weekends do not count against the Training Timeline). So, if a student is 5 days behind, he/she can make up the deficit in one weekend CCX. If he/she is 4 days behind, he can accomplish this same feat in a mid-week CCX (one overnight). However, if a student has a deficit of greater than 7 days and Operations deems it necessary to eliminate the deficit, the student can accomplish this by executing a weekend and mid-week CCX back to back (an alternative to a midweek CCX is an overnight at Corpus Christi International Airport).

The bottom line is any event completed on a weekend, holiday, or more than one flight accomplished in one day, allows the squadron to gain ground on the Training Timeline. The key is for each operations officer to determine when he needs to shift the

situation from volunteers on the weekend to mandatory flyers. We feel the Training Timeline product has the ability to assist in this matter.

The squadrons have been known to go on detachment to Las Cruces, NM every year to take advantage of the good weather in NM while Corpus Christi suffers from seasonal weather that is not conducive to training. In the last several years it has also served the dual purpose of helping the squadrons get out of a huge training deficit. So how do we predict when we need to go to Las Cruces because we are behind our production schedule? Well, this may take some time using the Training Timeline model to predict, but we believe it is possible because of the advantages we will gain from using this model. Hypothetically, if the Training Timeline model is implemented, we expect to see the wide surge of students way ahead of schedule and students way behind schedule, to merge. Also, from week to week, we should see a more steady output of completing students. Over time, the yearly slope of students completing the syllabus should steady along with having a more realistic tool to predict future completers within that year. So for example, we can reference the completers from quarter to quarter. After the second quarter, if we are behind in our numbers, we have a better foundation on which to make the decision about a Las Cruces detachment. Also, using the Training Timeline method, we will have hard data to identify the students who are the farthest behind. These students should lead the list of students picked for the detachment.

We further believe the feasibility of getting all students above the deficit mark on the Training Timeline is not realistic. Since no one has ever used the Training Timeline model, it is not possible at this time to determine how much improvement we will see. We expect, if the system is implemented for a period of 6 months or more, that critical

information needed for these kinds of decisions will be available. The numbers of greater than 3 days or 5 days mentioned earlier might have to be added to a correction factor, but the overall system will still work.

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III. RECOMMENDATIONS AND CONCLUSION

A. RECOMMENDATIONS

1. TTT Prioritization

Using the Training Timeline function in TIMS resulted in a marginal TTT reduction in a training database simulation, both on average (as shown above) and for every class used in the simulation.

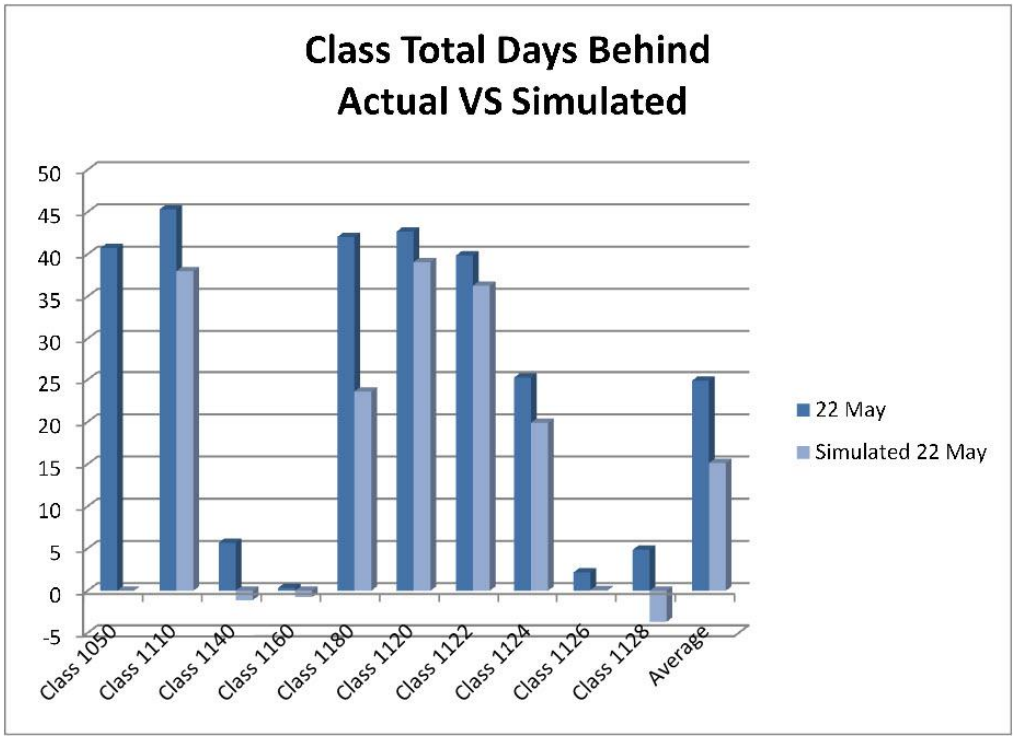

Figure 6: Actual vs. Simulated Results, Total

While only simulated using a small sample of students in an isolated scenario, this overall as well as across-the-board improvement gives us confidence that extra and overhead training flights can be minimized to allow for better use of the production system's capacity for advancing events.

We recommend that the TIMS Training Timeline be made accessible to all personal involved in writing the schedule. In house training should be made available by the TIMS technicians to ensure proper implementation. This will allow for schedule writers to compare students between classes to determine who has the highest priority.

The function is actively part of TIMS. Only allowing access to schedule writers in the form of granting permissions to the report is required to view the data. This report is generated from data in the system; hence there is no risk of data corruption.

2. Aircraft Availability Templates

Utilizing 100% of reported RFT aircraft (vice 70% of all aircraft on board, regardless of status), dividing by 4 hours per aircraft per event and then dividing by 2 (for 2 squadrons), the result represents a reasonable number of events possible per hour on an averaged scale. If a weighted use is desired (i.e. more events earlier in the block), the scheduler must ensure that the squadron's RFT is not exceeded in any 4-hour period.

When the scheduling objective is driven by an end goal – that is, if a set number of events are scheduled despite the number of aircraft available – the number of events that are canceled due to ACNA is directly proportional to the asset shortcoming.

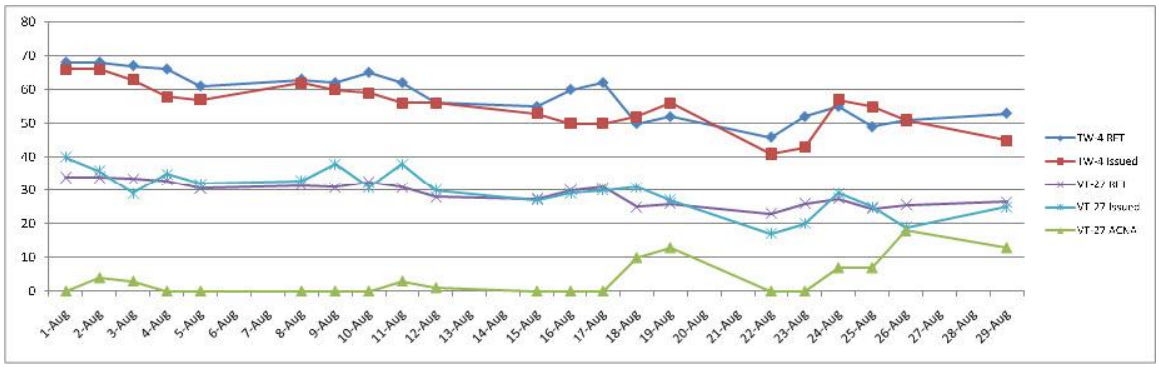

Figure 7: Maintenance Trending – VT-27, August 2011

For example, if there are 50 available 'blocks,' and 50 events are scheduled, there are not events scheduled without the required asset. However, if only 49 'blocks' are available, it should be assumed that one event will not be completed, and so on. This, of course, assumes the best-case scenario for all unforeseen circumstances (which will be discussed later), but is the only case that can be scheduled in future operations planning.

We recommend scheduling for no more than all three major variables allow for. As long as aircraft availability remains the most common constraint, schedule writers should use RFT to the most reasonable and predictable extent possible. This can be accomplished through a more accurate communication of maintenance's ability to support flight operations for the following day, and a flight schedule spread that does not add additional strain.

3. NIPDR Production / TTT Triggers

There are limited options to 'adjust' a student's syllabus flow that will shorten his TTT. Since the curriculum does not ever account for more than one flight to be flown on any given operational calendar day, any opportunity to complete multiple events will advance him or her relative to his projected timeline. Furthermore, removing a required event will obviously reduce his event and therefore time requirement. As stated earlier, we did not explore changing the syllabus; however, there is a process already in place for accelerating students with prior flight experience and/or much higher than normal aptitude. Since this is a unique and rare situation, we did not explore it further, but it warrants mentioning.

'Double-scheduling' students for a limited number of flights is commonly done to 'catch (them) up' to a desired TTT. These flights typically occur during the radio instrument (RI) phase, and sometimes immediately preceding or following a solo flight ("check-solo"). Furthermore, students can be scheduled for three events in a single day under CCX 'rules.' This falls in a possible 11 flight 'block' near the end of the student's primary training, and typically allows 6 events to be completed on one accountable day. These adjustment measures are regularly used with most students across the board, and therefore do not help adjust individuals on the extreme ends of the Training Timeline spectrum.

Detachment operations from another location is another option that will definitely shorten the TTT for affected students due to the typically improved weather, 6-day fly week, and more predictable scheduling and aircraft availably. However, detachment normally shares capacity with the at-home system, and therefore any improvements are at the expense of deficiencies elsewhere.

The best way to bring in the outliers (help lagging production rates move toward the syllabus production rates) is by scheduling on weekends/holidays. This provides extra flight opportunities for those furthest behind Training Timeline and a relatively increased opportunity over those furthest ahead (who would not be scheduled). As mentioned above, this is used regularly on detachment, and typically on a volunteer basis (for instructors) at home. Of the two options yet to be mentioned here, Saturday operations are the less constraining, since they have a lesser effect on scheduling limitations and follow-on aircraft availability. As with three-variable scheduling, if Friday-Saturday Ops combined yields more production than Friday alone, the only noted

losses are with morale and increased man-hours. Therefore, we recommend Saturday operations be used to the maximum extent possible when desiring deficit correction and requesting maximum participation and training availability. Otherwise, schedulers can use "prepos" and CCXs to increase their own production.

B. LIMITATIONS

1. Simulation and Training Timeline Shortfalls

In our simulation, 133 students in VT-28 were individually scheduled, flown, graded, and then filtered the next day to consider their prioritization for the schedule for three weeks.

However, there is a flaw in the Training Timeline that was not recognized until the first three weeks of the simulation had been completed. The Training Timeline is only able to access the student timeline based upon the current students in the system. This will not create any problems with the core operation servers scheduling daily operations, just the training database. However, this created difficulty in trying to replicate past data. Several of the students that were active and flying during the simulation did not post on the Training Timeline. They had finished the syllabus between May and July, when the database information was cloned off of the live servers. This created additional opportunities for flights than should have existed, leading to unrealistic advances for all the students.

Since no failures existed, all flights ended up being advancing events with no re-flies or delays in training. Additionally the prioritization of the schedule according to the

Training Timeline led to no overhead flights in the form of warm-ups. This resulted in an artificial higher number of completed events and a decreased TTT.

There were also some software glitches noted, such as inaccurate primary time and nighttime reports. These are typically tracked manually or through other means by the Student Control department or by the individual, and it would be very useful to be able to also monitor them here, but since this system currently does not get any use and therefore gets no feedback, these shortcomings have most likely simply gone unnoticed. Fixes could require a software push if corrections are desired or required.

2. Constraint Management

A few assumptions must hold true to ensure three-variable scheduling minimizes inefficiencies rather than introducing more. First, the aircraft availability metric must actually represent what the squadron schedulers assume it means. . For example, RFT simply means that that aircraft can be issued for flight, whether that's multiple times for any type of mission, or for one limited hour daytime flight. If the scheduler is to forecast what capacity he or she has for the following day, maintenance must report an accurate outlook of what it actually can support.

One option would be to refine RFT to mean what the scheduler wants it to mean. For example, RFT could represent an aircraft that can operate an unrestricted 2.4 flight hours (2.1 for the longest syllabus flight + 0.3 hours that can be flown without being accounted for as being 'over') multiplied by the number of 4-hour time blocks on that given fly day (i.e. 7.2 hours for 3 'turns'). Another option would be to break the availability down into how many aircraft are available for each block. For example, all aircraft that can be scheduled can be shown as available for block 'A.' Those that are

available for a second flight can also be shown as available for block 'B,' etc. In either case, the number of aircraft uses (and therefore events) that can be schedule is not misrepresented by a vague definition of 'available.'

Second, it is generally assumed that aircraft availability will always be the first reached constraint. However, if this is not the case, then other considerations to the limitations listed earlier must be made in the schedule to ensure the optimum spread occurs. This should not be difficult since it does not require the same level of predictability as aircraft availability does, but must be monitored nonetheless. Just as one should not schedule an event that does not have a device to use, one also cannot schedule an event without an instructor and/or student.

3. Future Research Requirements

Within the programs themselves, two sections can be looked at further to more accurately represent the true syllabus flow and TTT. First, the calendar used by all TIMS functions is very generic. Although it accounts for all weekends, holidays, and quarterly safety stand downs, there are other regularly scheduled events that preclude flight training and syllabus progression. If this calendar could be updated or more easily manipulated, it would paint a more accurate picture of production capacity.

Second, an accurate start date for each student must be used to baseline his or her TTT. This is externally input and not standardized; it could represent the day the student checked in, the first scheduled syllabus event, or first completed one. Furthermore, that event could be ground training, with little to no intent of being immediately scheduled for simulators or flights. This certainly would give a false appearance of being 'behind' in

the Training Timeline and other TIMS functions that monitor syllabus progression. It also needs to be standardized and manageable at the local level.

'Trial and Error,' while most certainly not the most efficient means of testing, is still the most common and in many ways the most useful way to get realistic feedback on an implemented practice. These alternatives should be put into simulated practice side-by-side with current techniques and procedures, to monitor real-time results vice the simulated and assumed ones outlined in this report.

C. CONCLUSIONS

Overall, while these alternatives – either in parts, individually, or combined – may only provide minimal improvements in deviations from syllabus time-to-train, they cost nothing more than implementing the change. The data used in this report is already compiled, available, and accessible (after gaining permissions to view the Training Timeline function in TIMS), and its further use can be simply chosen or ignored in the continued non-standard methods of current schedule writing, or standardized through training, practice, and feedback to adopt better practices. Furthermore, as these alternatives are combined, the benefits can increase exponentially.

As inefficiencies of the system are dampened out, production capacity can be optimized. The circumstances that lead to lost capacity have varying degrees of control; weather and unpredictable maintenance cancelations or incompletes are difficult to manage. Events that are not / cannot be scheduled (due to medical reasons, e.g.) can also lengthen the syllabus and therefore TTT, and are again an unfortunate reality of this business due to its strict requirements. However, greater measures can be exercised to

minimize controllable inefficiencies -- such as time out of the cockpit leading to warm-up flight requirements and possibly failures or requiring additional syllabus events. By minimizing non-advancing event requirements by using the TIMS Training Timeline, efficiently using ‘catch up’ options, and generally striving to reach maximum capacity of the production system, a more accurate capability can be presented and efficient operation can be run.

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APPENDICES

TRAINING TIMELINE

May 1, 2011

UNIT SUMMARY *																													
Unit	Start Date	Graduation Date	Effective Students	Flight Days Remain	Attrition Days Remaini	Flight Events Remain	Device Events Remain	Academic Days Remair	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr	Baseline Overall Incr.	On-Track Flight Incr.	On-Track Device Incr.	On-Track Academic Inc	On-Track Overall Incr.	Healthy By Date	Healthy By Flight Incr.	Healthy By Device Incr.	Healthy By Academic Ir	Healthy By Overall Incr	Flight Required / Day	Device Required / Day	Academics Required / I	Total Required / Day
-20072401	3/12	6/22	0																										
-20090301	10/16	12/18	0																										
-20105001	9/13	4/11	1	-14	0	15	12	1	-54.8	-66.87	-16.33	-36.45	0.38	0.23	0.75	1.31	0	0	0	0	4/11	0.38	0.23	0.75	1.31	0	0	0	0
-20111001	12/6	7/4	4	44	0	105	81	237	-26.18	-44.19	-79.55	-61.08	0.37	0.23	0.74	1.3	0.6	0.46	1.35	2.4	7/4	0.51	0.46	2.09	3.1	2.39	1.84	5.39	9.61
-20111401	1/4	7/19	6	55	0	110	96	115	8.98	-10.55	-11.12	-5.66	0.4	0.24	0.79	1.37	0.33	0.29	0.35	0.97	7/19	0.1	0.29	0.71	0.67	2	1.75	2.09	5.84
-20111601	1/18	8/2	6	65	0	118	104	163	15.23	-6.57	-19.38	-7.88	0.4	0.24	0.78	1.36	0.3	0.27	0.42	0.99	8/2	0.07	0.27	0.65	0.72	1.82	1.6	2.51	5.92
-20111801	1/31	8/15	8	74	0	283	159	522	-15.52	-8.06	-68.04	-45.02	0.4	0.24	0.78	1.36	0.48	0.27	0.88	1.63	8/15	0.45	0.27	1.5	2.19	3.82	2.15	7.05	13
-20112001	2/14	8/30	11	85	0	395	221	755	-6.6	1.4	-61.31	-36.89	0.39	0.24	0.78	1.35	0.42	0.24	0.81	1.47	8/30	0.33	0.03	1.34	1.94	4.65	2.6	8.88	16.1
-20112201	2/28	9/12	10	93	0	395	190	693	-6.96	14.55	-10.99	-5.75	0.4	0.24	0.78	1.36	0.42	0.2	0.75	1.37	9/12	0.39	0	0.88	1.45	4.25	2.04	7.45	13.7
-20112401	3/14	9/26	10	103	0	454	253	709	-11.98	-1.55	-1.86	-4.82	0.39	0.24	0.78	1.36	0.44	0.25	0.69	1.37	9/26	0.44	0.22	0.72	1.29	4.41	2.46	6.88	13.8
-20112401	3/14	6/23	1	38	0	33	5	41	-20.46	4	-11.44	-13.84	0.56	0.15	1.01	1.63	0.87	0.13	1.08	2.08	6/23	0.87	0	1.32	2.22	0.87	0.13	1.08	2.08
-20112601	3/28	10/10	7	112	0	329	181	515	-5.98	6.07	0.04	-0.64	0.4	0.24	0.79	1.37	0.42	0.23	0.66	1.31	10/10	0.42	0	0.23	0.61	2.94	1.62	4.6	9.15
-20112601	3/28	7/7	2	47	0	66	10	74	-10.51	13.5	0.97	-1.83	0.57	0.15	1.03	1.65	0.7	0.11	0.79	1.6	7/7	0.7	0	0.55	0.9	1.4	0.21	1.57	3.19
-20112801	4/11	10/24	10	122	0	490	281	773	-1	6.88	0.38	1.15	0.4	0.24	0.79	1.37	0.4	0.23	0.63	1.27	10/24	0.4	0	0.4	0.42	4.02	2.3	6.34	12.7
-20112801	4/11	7/21	1	57	0	34	5	19	-2.26	23.5	32.69	21.67	0.57	0.15	1.03	1.65	0.6	0.09	0.33	1.02	7/21	0.6	0	0	0	0.6	0.09	0.33	1.02
-20113001	4/25	11/7	10	132	0	490	310	895			10.14	5.83	0.4	0.24	0.79	1.37	0.37	0.23	0.68	1.28	11/7	0	0	0	0	3.71	2.35	6.78	12.8
-20113201	5/9	11/21	10	141	0	490	310	1080					0.4	0.25	0.79	1.33	0.35	0.22	0.77	1.33	11/21	0	0	0	0	3.48	2.2	7.66	13.3
-20113401	5/23	12/5	11	150	0	539	341	1188					0.4	0.25	0.8	1.25	0.33	0.21	0.72	1.25	12/5	0	0	0	0	3.59	2.27	7.92	13.8
-20113601	6/6	12/19	9	160	0	441	279	972					0.4	0.25	0.79	1.18	0.31	0.19	0.68	1.18	12/19	0	0	0	0	2.76	1.74	6.08	10.6
-20113801	6/20	1/16	11	177	0	539	341	1188					0.38	0.23	0.76	1.06	0.28	0.18	0.61	1.06	1/16	0	0	0	0	3.05	1.93	6.71	11.7
-20113801	6/20	9/29	1	106	0	35	10	74					0.47	0.12	0.86	1.12	0.33	0.09	0.7	1.12	9/29	0	0	0	0	0.33	0.09	0.7	1.12
-20113901	6/27	10/6	2	111	0	70	20	148					0.57	0.15	1.03	1.07	0.32	0.09	0.67	1.07	10/6	0	0	0	0	0.63	0.18	1.33	2.14

* Timeline statistics computed using the Linear Method.

Table 2: Training Timeline (by class) – VT-28, 1 May 2011

TRAINING TIMELINE

May 1, 2011

INDIVIDUAL SUMMARY *

Unit (Class): Student	Last Flight Event	Last Flight Event Date	Last Device Event	Last Device Event Date	Complete / Extra / Syllab	Flight Events Remain.	Device Events Remain.	AcademicEvents Remain	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr.	Baseline Overall Incr.	Healthy By Flight Incr.	Healthy By Device Incr.	Healthy By AcademicInc	Healthy By Overall Incr.
VT-28 (20105001)																				
Muysenberg, Ryan R 1264	F4201	4/2	I2302	4/30	34/5/49	15	12	1	-54.8	-66.87	-16.33	-36.45	0.38	0.23	0.75	1.31	0.38	0.23	0.75	1.31
VT-28 (20111001)																				
Inabinet, John P 8769	F4005	4/30	I2103	2/15	29/4/49	20	19	63	-9.47	-38.74	-84.58	-58.18	0.37	0.23	0.74	1.3	0.45	0.43	2.18	3.01
Raper, Aaron D 4400	F4005	4/30	I2103	2/15	29/5/49	20	19	63	-9.47	-38.74	-84.58	-58.18	0.37	0.23	0.74	1.3	0.45	0.43	2.18	3.01
Reno, Samuel H 8342					0/0/49	49	31	108	-87	-91	-145	-124.51	0.37	0.23	0.74	1.3	1.11	0.7	3.2	4.97
WATERS, JoshuaM. 6897	F4201	4/2	I2302	4/30	33/5/49	16	12	3	1.22	-8.26	-4.03	-3.42	0.37	0.23	0.74	1.3		0.27	0.81	1.4
VT-28 (20111401)																				
Carlton, Benjamin J 4455	C4505	4/15	I2204	4/30	33/2/49	16	15	8	14.84	-6.45	3.04	4.91	0.4	0.24	0.79	1.37		0.27		
Ferrell, Howard S 8029	F4203	4/26	I2204	4/30	33/4/49	16	15	11	14.84	-6.45	-0.76	2.72	0.4	0.24	0.79	1.37		0.27	0.8	
Gokey, Christopher G 2187	F4203	4/26	I2204	4/30	35/4/49	14	15	6	19.86	-6.45	5.58	7.82	0.4	0.24	0.79	1.37		0.27		
Kelly, Devin F 6184	C4505	4/26	I2204	4/30	33/0/49	16	15	14	14.84	-6.45	-4.57	0.54	0.4	0.24	0.79	1.37		0.27	0.85	
Reece, JustinL 9137	F4203	4/26	I2202	4/28	33/1/49	16	17	13	14.84	-14.65	-3.3	-0.19	0.4	0.24	0.79	1.37		0.31	0.84	1.38
Stottlemyre, Jerrid K 5172	C4401	4/29	I2103	3/11	17/4/49	32	19	63	-25.33	-22.84	-66.72	-49.75	0.4	0.24	0.79	1.37	0.58	0.35	1.74	2.61
VT-28 (20111601)																				
Close, John J 1028	F4203	4/12	I2203	4/29	33/4/49	16	16	4	24.51	-1.06	10.22	12.79	0.4	0.24	0.78	1.36		0.25		
Flynn, Thomas A 3036	C4505	4/20	I2202	4/29	30/0/49	19	17	12	16.92	-5.19	0	3.98	0.4	0.24	0.78	1.36		0.26		
Polhemus, Christopher A 2460	F4203	4/12	I2202	4/29	33/2/49	16	17	11	24.51	-5.19	1.28	6.92	0.4	0.24	0.78	1.36		0.26		
Schrock, Jamison C 0238	F4101	4/28	I2103	3/12	30/2/49	19	19	59	16.92	-13.45	-60.06	-31.98	0.4	0.24	0.78	1.36		0.29	1.51	2.03
Shields, Keegan G 9082	C4503	4/28	I2103	3/9	20/10/49	29	19	64	-8.39	-13.45	-66.44	-42.99	0.4	0.24	0.78	1.36	0.45	0.29	1.58	2.26
Sparklin, Marianne C 1761	F4101	4/4	I2203	4/29	30/1/49	19	16	13	16.92	-1.06	-1.28	3.98	0.4	0.24	0.78	1.36		0.25	0.8	
VT-28 (20111801)																				
Bowman, Alex T 7386	F4101	4/27	I2103	3/17	32/1/49	17	19	63	30.98	-4.45	-65.17	-29.24	0.4	0.24	0.78	1.36		0.26	1.47	1.9
Jamous, Dean S 8051	C4286	4/28	I2103	3/17	12/5/49	37	19	66	-19.63	-4.45	-69	-46.12	0.4	0.24	0.78	1.36	0.5	0.26	1.51	2.21
Kirchner, Charles F 9425	C4104	4/29	I2103	4/12	11/6/49	38	19	64	-22.16	-4.45	-66.44	-45.39	0.4	0.24	0.78	1.36	0.51	0.26	1.49	2.2
Lawrence, Joshua F 5012	C4201	4/19	I2103	3/19	12/4/49	37	19	63	-19.63	-4.45	-65.17	-43.92	0.4	0.24	0.78	1.36	0.5	0.26	1.47	2.17
Schultz, Aaron J 5535	C4003(2)	3/9	C2085	3/1	3/3/49	46	26	70	-42.41	-33.35	-74.11	-60.81	0.4	0.24	0.78	1.36	0.62	0.35	1.57	2.48
Tackes, Rafe E 6054	C4202	4/28	I2103	3/19	13/6/49	36	19	66	-17.1	-4.45	-69	-45.39	0.4	0.24	0.78	1.36	0.49	0.26	1.51	2.2
Weber, William T 1066	C4203	4/29	I2103	3/28	14/6/49	35	19	65	-14.57	-4.45	-67.72	-43.92	0.4	0.24	0.78	1.36	0.47	0.26	1.5	2.17
Wendel, Daniel M 0323	C4201	4/29	I2103	3/30	12/9/49	37	19	65	-19.63	-4.45	-67.72	-45.39	0.4	0.24	0.78	1.36	0.5	0.26	1.5	2.2
VT-28 (20112001)																				
Cooney, MonicaE. 3272	C4104	4/29	I2103(2)	4/13	11/3/49	38	19	66	-11.94	5.94	-57.92	-35.68	0.39	0.24	0.78	1.35	0.45		1.31	1.92

Table 3a: Training Timeline (by student) – VT-28, 1 May 2011

Culbert, Edward W 1848					0/0/49	49	31	92	-40	-44	-91.38	-71.91	0.39	0.24	0.78	1.35	0.58	0.36	1.61	2.5
Eastman, Eric A 5123	C4186	4/22	I2103	3/24	11/6/49	38	19	65	-11.94	5.94	-56.63	-34.94	0.39	0.24	0.78	1.35	0.45		1.29	1.91
Fick, Michael H 5693	C4202	4/29	I2103	4/4	13/4/49	36	19	65	-6.84	5.94	-56.63	-33.46	0.39	0.24	0.78	1.35	0.42		1.29	1.88
Hollender, Steven J 5446	C4401	4/28	I2103	3/25	17/3/49	32	19	65	3.37	5.94	-56.63	-30.5	0.39	0.24	0.78	1.35			1.29	1.84
Howard, Amanda M 6802	C4201	4/28	I2103	4/6	12/2/49	37	19	69	-9.39	5.94	-61.78	-37.16	0.39	0.24	0.78	1.35	0.44		1.34	1.94
Kesireddy, Nikhil R 2139	C4601	4/28	I2103	3/17	31/3/49	18	19	62	39.08	5.94	-52.77	-17.93	0.39	0.24	0.78	1.35			1.26	1.64
LeMaster, Grant E 1874	C4401	4/28	I2103	3/23	17/4/49	32	19	66	3.37	5.94	-57.92	-31.24	0.39	0.24	0.78	1.35			1.31	1.85
Long, Zachary D 7028	C4104	4/30	I2103	4/12	11/8/49	38	19	70	-11.94	5.94	-63.06	-38.63	0.39	0.24	0.78	1.35	0.45		1.35	1.97
Webster, Brittany L 6912	C4203	4/29	I2103	3/29	14/7/49	35	19	65	-4.29	5.94	-56.63	-32.72	0.39	0.24	0.78	1.35	0.41		1.29	1.87
Zuspan, Chelsea L 9662	I4003	4/29	I2103	4/26	7/4/49	42	19	70	-22.14	5.94	-63.06	-41.59	0.39	0.24	0.78	1.35	0.49		1.35	2.01
VT-28 (20112201)																				
Bartek, William A 2182	I4001	4/22	I2103	4/21	5/4/49	44	19	69	-18.35	14.55	-10.61	-8.83	0.4	0.24	0.78	1.36	0.47		0.87	1.49
Jacobs, Brian E 7278	C4201(2)	4/28	I2103	4/7	12/6/49	37	19	70	-0.63	14.55	-11.88	-4.42	0.4	0.24	0.78	1.36	0.4		0.88	1.43
Kauffman, Bryan J 8841	C4204	4/30	I2103	4/7	15/4/49	34	19	68	6.96	14.55	-9.33	-0.75	0.4	0.24	0.78	1.36			0.86	1.37
McCarthy, ColinP. 2523	C4102	4/28	I2103	4/23	9/5/49	40	19	70	-8.22	14.55	-11.88	-6.63	0.4	0.24	0.78	1.36	0.43		0.88	1.46
McDowell, Patrick R 3731	C4102	4/30	I2103	4/26	9/4/49	40	19	70	-8.22	14.55	-11.88	-6.63	0.4	0.24	0.78	1.36	0.43		0.88	1.46
Miller, Christopher P 6245	C4102	4/28	I2185	4/14	9/2/49	40	19	70	-8.22	14.55	-11.88	-6.63	0.4	0.24	0.78	1.36	0.43		0.88	1.46
Miller, DeniseE. 8428	C4104	4/30	I2103	4/22	11/3/49	38	19	66	-3.16	14.55	-6.77	-2.22	0.4	0.24	0.78	1.36	0.41		0.84	1.39
Parker, Jon D 6226	C4104	4/29	I2185	4/14	11/4/49	38	19	70	-3.16	14.55	-11.88	-5.16	0.4	0.24	0.78	1.36	0.41		0.88	1.44
Ross, Richard W 1185	C4004	4/18	I2103	4/29	4/6/49	45	19	70	-20.88	14.55	-11.88	-10.3	0.4	0.24	0.78	1.36	0.48		0.88	1.51
Whalen, Pamela R 6214	C4103	4/29	I2103	4/12	10/6/49	39	19	70	-5.69	14.55	-11.88	-5.89	0.4	0.24	0.78	1.36	0.42		0.88	1.45
VT-28 (20112401)																				
Adamson, Samuel J 4504	C4101	4/28	I2001	4/29	5/4/49	44	25	70	-8.35	-0.23	-0.64	-2.83	0.4	0.24	0.78	1.36	0.43	0.24	0.79	1.4
Canham, Daniel J 2238	C4003(2)	4/27	C2005	4/5	3/7/49	46	26	72	-13.41	-4.35	-3.19	-6.5	0.4	0.24	0.78	1.36	0.45	0.25	0.81	1.45
Carrasquillo, Matthew 1111	C4003	4/25	C2005	4/2	3/2/49	46	26	72	-13.41	-4.35	-3.19	-6.5	0.4	0.24	0.78	1.36	0.45	0.25	0.81	1.45
Day, Christopher A 6480	C4004	4/24	I2004	4/29	4/2/49	45	22	72	-10.88	12.16	-3.19	-2.83	0.4	0.24	0.78	1.36	0.44		0.81	1.4
Goldsmith, Devon 5376	C7002	4/28	I6002	3/31	2/1/35	33	5	41	-20.46	4	-11.44	-13.84	0.56	0.15	1.01	1.63	0.87		1.32	2.22
Lisowski, KyleJ. 5246	C4004	4/27	I2001	4/29	4/4/49	45	25	72	-10.88	-0.23	-3.19	-5.03	0.4	0.24	0.78	1.36	0.44	0.24	0.81	1.43
Marihugh, Russell J 1813	C4004	4/28	I2001	4/29	4/2/49	45	25	72	-11.8	-1.03	-3.86	-5.82	0.39	0.24	0.78	1.35	0.44	0.24	0.81	1.43
Passini, Zachary J 2762	C4004	4/29	C2005	4/8	4/4/49	45	26	64	-10.88	-4.35	7.03	0.11	0.4	0.24	0.78	1.36	0.44	0.25		
Schafer, BenjaminA. 8063	C4004	4/29	C2005	4/8	4/3/49	45	26	72	-10.88	-4.35	-3.19	-5.76	0.4	0.24	0.78	1.36	0.44	0.25	0.81	1.44
Tryon, MatthewD. 4732	C4002	4/22	C2005	4/6	2/2/49	47	26	71	-15.94	-4.35	-1.92	-6.5	0.4	0.24	0.78	1.36	0.46	0.25	0.8	1.45
Woods, Joshua A 0112	C4003	4/29	C2085	4/27	3/2/49	46	26	72	-13.41	-4.35	-3.19	-6.5	0.4	0.24	0.78	1.36	0.45	0.25	0.81	1.45
VT-28 (20112601)																				
Bond, TravisA. 7947	C4003	4/27	C2005	4/15	3/2/49	46	26	72	-3.47	5.48	2.03	1.13	0.4	0.24	0.79	1.37	0.41			
Cox, Matthew C 4724	C4001	4/29	C2005	4/14	1/2/49	48	26	76	-8.49	5.48	-3.04	-3.24	0.4	0.24	0.79	1.37	0.43		0.81	1.41
Dorsch, Patrick L 4928	C4004	4/28	I2001	4/29	4/3/49	45	25	72	-0.96	9.58	2.03	2.59	0.4	0.24	0.79	1.37	0.4			
Epps, Jamie 5126	C7002(2)	4/27	I6002	4/8	2/1/35	33	5	41	-10.51	13.5	-2.92	-4.25	0.57	0.15	1.03	1.65	0.7		1.09	1.8
Hall, Chad 5073	C7001	4/29	I6002	4/7	2/2/35	33	5	33	-10.51	13.5	4.86	0.59	0.57	0.15	1.03	1.65	0.7			
Herring, Taylor R 9140			C2005	4/14	0/1/49	49	26	73	-11	5.48	0.76	-1.78	0.4	0.24	0.79	1.37	0.44			1.39
Johnson, Kyle M 6289			C2005	4/14	0/5/49	49	26	78	-11	5.48	-5.58	-5.42	0.4	0.24	0.79	1.37	0.44		0.83	1.44
Mayo, Mathew C 3389	C4003	4/28	C2005	4/14	3/2/49	46	26	72	-3.47	5.48	2.03	1.13	0.4	0.24	0.79	1.37	0.41			
Worthington, Kenneth G 3312	C4003	4/28	C2005	4/14	3/1/49	46	26	72	-3.47	5.48	2.03	1.13	0.4	0.24	0.79	1.37	0.41			
VT-28 (20112801)																				
Brenner, Shane P 8697			C2005	4/26	0/0/49	49	26	79	-1	15.48	-1.78	1.44	0.4	0.24	0.79	1.37	0.4		0.8	
Couch, Taylor H 2257			C2003	4/27	0/0/49	49	28	74	-1	7.29	4.57	3.63	0.4	0.24	0.79	1.37	0.4			

Table 3b: Training Timeline (by student) – VT-28, 1 May 2011

Emma, Daniel A 1535			C2004	4/27	0/3/49	49	27	73	-1	11.39	5.84	5.09	0.4	0.24	0.79	1.37	0.4			
Estrada, Daniel 0627			C2003	4/27	0/1/49	49	28	73	-1	7.29	5.84	4.36	0.4	0.24	0.79	1.37	0.4			
Giunipero, Anthony J 2270			C2002	4/27	0/3/49	49	29	77	-1	3.19	0.76	0.71	0.4	0.24	0.79	1.37	0.4			
Hawley, Jacob D 9524			C2002	4/27	0/1/49	49	29	77	-1	3.19	0.76	0.71	0.4	0.24	0.79	1.37	0.4			
Hayden, Jeffrey M 7072			C2003	4/28	0/2/49	49	28	78	-1	7.29	-0.51	0.71	0.4	0.24	0.79	1.37	0.4		0.79	
Hedzic, Ajdin 0220			C2002	4/28	0/0/49	49	29	81	-1	3.19	-4.31	-2.2	0.4	0.24	0.79	1.37	0.4		0.82	1.4
Johnson, Aaron 4703	C7001	4/28	I6002	4/21	1/1/35	34	5	19	-2.26	23.5	32.69	21.67	0.57	0.15	1.03	1.65	0.6			
Lim, Erick A 5207			C2003	4/27	0/1/49	49	28	82	-1	7.29	-5.58	-2.2	0.4	0.24	0.79	1.37	0.4		0.82	1.4
Seymour, Matthew J 0074			C2002	4/26	0/0/49	49	29	79	-1	3.19	-1.78	-0.74	0.4	0.24	0.79	1.37	0.4		0.8	1.38
VT-28 (20113001)																				
Barrett, Matthew P 5404					0/2/49	49	31	91			10.61	6.14	0.4	0.25	0.79	1.37				
Compton, Nicholas I 0714					0/0/49	49	31	91			7.97	4.58	0.4	0.24	0.79	1.37				
Cozby, James A 9893					0/0/49	49	31	81			20.66	11.87	0.4	0.24	0.79	1.37				
Fleming, Taylor M 5623					0/0/49	49	31	88			11.78	6.77	0.4	0.24	0.79	1.37				
Haines, Daniel M 9859					0/0/49	49	31	91			7.97	4.58	0.4	0.24	0.79	1.37				
Hathorn, Jacquelyne S 8113					0/0/49	49	31	89			10.51	6.04	0.4	0.24	0.79	1.37				
Jibilian, Christopher A 6289					0/0/49	49	31	91			7.97	4.58	0.4	0.24	0.79	1.37				
Johnson, Jessica L 1127					0/1/49	49	31	91			7.97	4.58	0.4	0.24	0.79	1.37				
Ohleger, Andrew J 7230					0/0/49	49	31	91			7.97	4.58	0.4	0.24	0.79	1.37				
Schwab, Kurt R 0698					0/2/49	49	31	91			7.97	4.58	0.4	0.24	0.79	1.37				
VT-28 (20113201)																				
Bell, James R 9400					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Cannuscio, Victor W 8889					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Choate, Charlie F 6031					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Kelling, Chad S 9913					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Reed, WilliamS. 1240					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Snell, David H 1106					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Stobie, Michael P 5875					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Troy, Geoffrey J 6488					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Tucker, ChristopherS. 9403					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
Weatherington, Zachary T 8467					0/0/49	49	31	108					0.4	0.25	0.79	1.33				
VT-28 (20113401)																				
Cowell, William F 2052					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Evanoff, RyleL. 2299					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Hebert, PaulG. 2474					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Huber, ElizabethA. 2622					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Huszagh, William P 9755					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Nault, RyanM. 6663					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Nicholson, MatthewC. 9198					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
O Dell, Charlesl. 7728					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Sturzbecher, Jenny 4815					0/1/49	49	31	108					0.4	0.25	0.8	1.25				
Wilharm, NicholasD. 0960					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
Zastoupil, FrankC. 8414					0/0/49	49	31	108					0.4	0.25	0.8	1.25				
VT-28 (20113601)																				
Book, IanR. 6236					0/0/49	49	31	108					0.4	0.25	0.79	1.18				
Brecher, DakotahF. 3055					0/0/49	49	31	108					0.4	0.25	0.79	1.18				

Table 3c: Training Timeline (by student) – VT-28, 1 May 2011

Faville, DavidA. 0604					0/0/49	49	31	108					0.4	0.25	0.79	1.18			
Hartwig, BrianC. 6787					0/0/49	49	31	108					0.4	0.25	0.79	1.18			
Mayfield, ChristineN. 8727					0/0/49	49	31	108					0.4	0.25	0.79	1.18			
Norburg, MatthewR. 8652					0/0/49	49	31	108					0.4	0.25	0.79	1.18			
Reed, BrandenM. 3548					0/0/49	49	31	108					0.4	0.25	0.79	1.18			
Roberts, MichaelZ. 1376					0/0/49	49	31	108					0.4	0.25	0.79	1.18			
Shrewsbury, Donald T 4546					0/0/49	49	31	108					0.4	0.25	0.79	1.18			
VT-28 (20113801)																			
Blanton, MichaelJ. 3438					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Bluhm, LorenA. 5907					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Cacciapuoti, MichaelJ. 1785					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Campbell, ChristopherM. 1230					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Edson, MarkN. 7240					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Gentile, MatthewJ. 2101					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Jeronimus, KeithW. 7794					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Phillips, ScottW. 9818					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Plum, TorreyA. 2667					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
Sargis, JeffreyM. 7070					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
St Aubin, David 0749					0/0/35	35	10	74					0.47	0.12	0.86	1.12			
Welborn, DavidB. 1325					0/0/49	49	31	108					0.38	0.23	0.76	1.06			
VT-28 (20113901)																			
Duchateau, Nolan 6409					0/0/35	35	10	74					0.57	0.15	1.03	1.07			
Jackson, Jason 7801					0/0/35	35	10	74					0.57	0.15	1.03	1.07			

Table 3d: Training Timeline (by student) – VT-28, 1 May 2011

TRAINING TIMELINE

May 1, 2011

UNIT SUMMARY *																			
Unit	Effective Students	Flight Events Remain	Device Events Remain	Academic Days Remain	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr	Baseline Overall Incr.	On-Track Flight Incr.	On-Track Device Incr.	On-Track Academic Inc	On-Track Overall Incr.	Flight Required / Day	Device Required / Day	Academics Required /	Total Required / Day
VT-28	131	5431	3209	10162	-3.79	-0.76	-13.3	-8.89	0.4	0.24	0.79	1.31	0.39	0.23	0.7	1.31	50.69	29.55	91.36	171.6

* Timeline statistics computed using the Linear Method.

Table 4: Training Timeline Summary – VT-28, 1 May 2011

TRAINING TIMELINE

May 22, 2011

UNIT SUMMARY *																													
Unit	Start Date	Graduation Date	Effective Students	Flight Days Remain	Attrition Days Remaini	Flight Events Remain	Device Events Remain	Academic Days Remair	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr	Baseline Overall Incr.	On-Track Flight Incr.	On-Track Device Incr.	On-Track Academic Inc	On-Track Overall Incr.	Healthy By Date	Healthy By Flight Incr.	Healthy By Device Incr	Healthy By Academic I	Healthy By Overall Incr	Flight Required / Day	Device Required / Day	Academics Required /	Total Required / Day
-20072401	3/12	6/22	0																										
-20090301	10/16	12/18	0																										
-20105001	9/13	4/11	1	-29	0	9	4	1	-53.88	-47.29	-31.33	-40.72	0.38	0.23	0.75	1.31	0	0	0	0	4/11	0.38	0.23	0.75	1.31	0	0	0	0
-20111001	12/6	7/4	4	29	0	90	79	136	-31.15	-57.01	-45.65	-45.31	0.37	0.23	0.74	1.3	0.78	0.68	1.17	2.63	7/4	0.69	0.68	1.92	3.32	3.1	2.72	4.69	10.5
-20111401	1/4	7/19	6	40	0	78	45	78	7.37	9.27	-16.49	-5.68	0.4	0.24	0.79	1.37	0.33	0.19	0.33	0.84	7/19	0.1	0.12	1.11	0.78	1.95	1.13	1.95	5.03
-20111601	1/18	8/2	6	50	0	82	63	85	15.41	6.65	-10.44	-0.34	0.4	0.24	0.78	1.36	0.27	0.21	0.28	0.77	8/2	0.07	0.06	0.47	0.45	1.64	1.26	1.7	4.6
-20111801	1/31	8/15	8	59	0	235	155	457	-15.34	-21	-58.94	-42.04	0.4	0.24	0.78	1.36	0.5	0.33	0.97	1.79	8/15	0.42	0.33	1.47	2.18	3.98	2.63	7.75	14.4
-20112001	2/14	8/30	11	70	0	348	217	689	-10.71	-12.09	-65.17	-42.69	0.39	0.24	0.78	1.35	0.45	0.28	0.89	1.63	8/30	0.37	0.26	1.43	2.07	4.97	3.1	9.84	17.9
-20112201	2/28	9/12	10	78	0	345	190	665	-9.31	-0.45	-64.53	-39.85	0.4	0.24	0.78	1.36	0.44	0.24	0.85	1.54	9/12	0.42	0.24	1.43	2.06	4.42	2.44	8.53	15.4
-20112401	3/14	9/26	10	88	0	414	190	688	-16.85	9.49	-38.4	-25.26	0.39	0.24	0.78	1.36	0.47	0.22	0.78	1.47	9/26	0.47	0	1.12	1.75	4.7	2.16	7.82	14.7
-20112401	3/14	6/23	1	23	0	29	0	32	-28.37	23	-23.28	-22.23	0.56	0.15	1.01	1.63	1.26	0	1.39	2.65	6/23	1.26	0	2.04	3.21	1.26	0	1.39	2.65
-20112601	3/28	10/10	7	97	0	296	135	495	-9.15	17.99	-4.71	-2.16	0.4	0.24	0.79	1.37	0.44	0.2	0.73	1.36	10/10	0.44	0	0.83	1.01	3.05	1.39	5.1	9.55
-20112601	3/28	7/7	2	32	0	64	6	55	-23.77	11.9	-4.96	-10.26	0.57	0.15	1.03	1.65	1	0.09	0.86	1.95	7/7	1	0	0.7	2.18	2	0.19	1.72	3.91
-20112801	4/11	10/24	10	107	0	478	254	738	-12.99	2.94	-2.79	-4.85	0.4	0.24	0.79	1.37	0.45	0.24	0.69	1.37	10/24	0.45	0	0.58	1.16	4.47	2.37	6.9	13.7
-20112801	4/11	7/21	1	42	0	32	3	14	-13.77	21.9	20.92	10.21	0.57	0.15	1.03	1.65	0.76	0.07	0.33	1.17	7/21	0.76	0	0	0	0.76	0.07	0.33	1.17
-20113001	4/25	11/7	10	117	0	490	260	765	-5.9	10.57	-1.09	-0.46	0.4	0.24	0.79	1.37	0.42	0.22	0.65	1.29	11/7	0.42	0	0.57	0.97	4.19	2.22	6.54	13
-20113201	5/9	11/21	10	126	0	490	269	825		16.66	5.13	5.91	0.4	0.25	0.79	1.38	0.39	0.21	0.65	1.26	11/21	0	0	0	0	3.89	2.13	6.55	12.6
-20113401	5/23	12/5	11	135	0	539	341	1188					0.4	0.25	0.8	1.39	0.36	0.23	0.8	1.39	12/5	0	0	0	0	3.99	2.53	8.8	15.3
-20113601	6/6	12/19	9	145	0	441	279	972					0.4	0.25	0.79	1.3	0.34	0.21	0.74	1.3	12/19	0	0	0	0	3.04	1.92	6.7	11.7
-20113801	6/20	1/16	11	162	0	539	341	1188					0.38	0.23	0.76	1.16	0.3	0.19	0.67	1.16	1/16	0	0	0	0	3.33	2.1	7.33	12.8
-20113801	6/20	9/29	1	91	0	35	10	74					0.47	0.12	0.86	1.31	0.38	0.11	0.81	1.31	9/29	0	0	0	0	0.38	0.11	0.81	1.31
-20113901	6/27	10/6	2	96	0	70	20	148					0.57	0.15	1.03	1.24	0.36	0.1	0.77	1.24	10/6	0	0	0	0	0.73	0.21	1.54	2.48

* Timeline statistics computed using the Linear Method.

Table 5: Training Timeline (by class) – VT-28, 22 May 2011

TRAINING TIMELINE

May 22, 2011

INDIVIDUAL SUMMARY *

Unit (Class): Student	Last flight Event	Last Flight Event Date	Last Device Event	Last Device Event Date	Complete / Extra / Syllab	Flight Events Remain.	Device Events Remain.	Academic Events Remain	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr.	Basline Overall Incr.	Healthy By Flight Incr.	Healthy By Device Incr.	Healthy By Academic Inc	Healthy By Overall Incr.
VT-28 (20105001)																				
Muysenberg, Ryan R 1264	I4105	5/17	I2406	5/21	40/5/49	9	4	1	-53.88	-47.29	-31.33	-40.72	0.38	0.23	0.75	1.31	0.38	0.23	0.75	1.31
VT-28 (20111001)																				
Inabinet, John P 8769	C4601	5/6	I2103	2/15	34/4/49	15	19	13	-11.1	-53.74	-17.45	-22.75	0.37	0.23	0.74	1.3	0.52	0.66	1.19	2.31
Raper, Aaron D 4400	F4101	5/4	I2103	2/15	33/5/49	16	19	14	-13.78	-53.74	-18.8	-24.29	0.37	0.23	0.74	1.3	0.55	0.66	1.23	2.38
Reno, Samuel H 8342					0/0/49	49	31	108	-102	-106	-145	-131.5	0.37	0.23	0.74	1.3	1.69	1.07	4.47	7.18
WATERS, JoshuaM. 6897	I4105	5/20	I2304	5/2	39/5/49	10	10	1	2.27	-14.55	-1.34	-2.69	0.37	0.23	0.74	1.3		0.34	0.78	1.42
VT-28 (20111401)																				
Carlton, Benjamin J 4455	I4105	5/17	I2501	5/21	38/2/49	11	3	4	12.39	27.71	-5.07	5.61	0.4	0.24	0.79	1.37			0.89	
Ferrell, Howard S 8029	I4105	5/18	I2405	5/21	38/4/49	11	5	2	12.39	19.52	-2.54	5.61	0.4	0.24	0.79	1.37			0.84	
Gokey, Christopher G 2187	I4105	5/16	I2504	5/21	40/4/49	9	0	5	17.41	40	-6.34	8.53	0.4	0.24	0.79	1.37			0.91	
Kelly, Devin F 6184	I4105	5/19	I2304	5/5	38/0/49	11	10	12	12.39	-0.97	-15.22	-5.32	0.4	0.24	0.79	1.37		0.25	1.09	1.55
Reece, JustinL 9137	I4105	5/19	I2402	5/21	38/1/49	11	8	3	12.39	7.23	-3.81	2.7	0.4	0.24	0.79	1.37			0.86	
Stottlemyre, Jerrid K 5172	C4507	5/17	I2103	3/11	24/4/49	25	19	52	-22.76	-37.84	-65.96	-51.23	0.4	0.24	0.79	1.37	0.62	0.47	2.09	3.13
VT-28 (20111601)																				
Close, John J 1028	I4105	5/16	I2304(2)	5/14	38/4/49	11	10	2	22.16	8.71	5.11	10.91	0.4	0.24	0.78	1.36				
Flynn, Thomas A 3036	I4104	5/20	I2304	5/10	37/0/49	12	10	10	19.63	8.71	-5.11	4.31	0.4	0.24	0.78	1.36			0.86	
Polhemus, Christopher A 2460	I4105	5/13	I2501	5/21	38/2/49	11	3	2	22.16	37.61	5.11	16.05	0.4	0.24	0.78	1.36				
Schrock, Jamison C 0238	F4203	5/4	I2302	5/21	33/2/49	16	12	4	9.51	0.45	2.56	4.31	0.4	0.24	0.78	1.36				
Shields, Keegan G 9082	F4004	5/17	I2103	3/9	28/10/49	21	19	64	-3.14	-28.45	-74.11	-48.54	0.4	0.24	0.78	1.36	0.42	0.38	1.94	2.68
Sparklin, Marianne C 1761	I4105	5/20	I2401	5/21	38/1/49	11	9	3	22.16	12.84	3.83	10.91	0.4	0.24	0.78	1.36				
VT-28 (20111801)																				
Bowman, Alex T 7386	F4203	5/3	I2204	5/20	35/1/49	14	15	11	23.57	-2.94	0	6.32	0.4	0.24	0.78	1.36		0.25		
Jamous, Dean S 8051	C4501	5/17	I2103	3/17	18/5/49	31	19	63	-19.45	-19.45	-66.44	-47.27	0.4	0.24	0.78	1.36	0.53	0.32	1.66	2.45
Kirchner, Charles F 9425	C4401	5/17	I2103	4/12	17/6/49	32	19	64	-21.98	-19.45	-67.72	-48.74	0.4	0.24	0.78	1.36	0.54	0.32	1.68	2.49
Lawrence, Joshua F 5012	C4502	5/17	I2103	3/19	19/4/49	30	19	60	-16.92	-19.45	-62.61	-44.33	0.4	0.24	0.78	1.36	0.51	0.32	1.61	2.39
Schultz, Aaron J 5535	C4003(2)	3/9	C2085	3/1	3/3/49	46	26	70	-57.41	-48.35	-75.39	-68.56	0.4	0.24	0.78	1.36	0.78	0.44	1.78	2.95
Tackes, Rafe E 6054	C4505	5/18	I2103	3/19	23/6/49	26	19	63	-6.8	-19.45	-66.44	-43.6	0.4	0.24	0.78	1.36	0.44	0.32	1.66	2.37
Weber, William T 1066	F4203	5/18	I2103	3/28	26/6/49	23	19	63	0.8	-19.45	-66.44	-41.4	0.4	0.24	0.78	1.36		0.32	1.66	2.32
Wendel, Daniel M 0323	C4390	5/16	I2103	3/30	16/9/49	33	19	63	-24.51	-19.45	-66.44	-48.74	0.4	0.24	0.78	1.36	0.56	0.32	1.66	2.49
VT-28 (20112001)																				
Cooney, MonicaE. 3272	C4204(2)	5/17	I2103(2)	4/13	15/3/49	34	19	66	-16.73	-9.06	-69.5	-46.39	0.39	0.24	0.78	1.35	0.49	0.27	1.55	2.25

Table 6a: Training Timeline (by student) – VT-28, 22 May 2011

Culbert, Edward W 1848					0/0/49	49	31	92	-55	-59	-102.96	-85.57	0.39	0.24	0.78	1.35	0.7	0.44	1.92	3.01
Eastman, Eric A 5123	C4204	5/17	I2103	3/24	15/6/49	34	19	63	-16.73	-9.06	-65.64	-44.17	0.39	0.24	0.78	1.35	0.49	0.27	1.51	2.21
Fick, Michael H 5693	C4386	5/17	I2103	4/4	16/4/49	33	19	65	-14.18	-9.06	-68.21	-44.91	0.39	0.24	0.78	1.35	0.47	0.27	1.53	2.22
Hollender, Steven J 5446	C4507	5/17	I2103	3/25	24/3/49	25	19	63	6.22	-9.06	-65.64	-37.51	0.39	0.24	0.78	1.35		0.27	1.51	2.08
Howard, Amanda M 6802	C4401	5/16	I2103	4/6	17/2/49	32	19	63	-11.63	-9.06	-65.64	-42.69	0.39	0.24	0.78	1.35	0.46	0.27	1.51	2.18
Kesireddy, Nikhil R 2139	F4203	5/3	I2204	5/20	34/3/49	15	15	11	31.73	7.58	1.29	11.28	0.39	0.24	0.78	1.35				
LeMaster, Grant E 1874	F4001	5/18	I2103	3/23	25/4/49	24	19	63	8.78	-9.06	-65.64	-36.77	0.39	0.24	0.78	1.35		0.27	1.51	2.06
Long, Zachary D 7028	C4202(2)	5/16	I2103	4/12	13/8/49	36	19	70	-21.84	-9.06	-74.65	-50.82	0.39	0.24	0.78	1.35	0.51	0.27	1.61	2.33
Webster, Brittany L 6912	C4502(2)	5/17	I2103	3/29	19/7/49	30	19	63	-6.53	-9.06	-65.64	-41.21	0.39	0.24	0.78	1.35	0.43	0.27	1.51	2.15
Zuspan, Chelsea L 9662	C4202	5/17	I2103	4/26	13/4/49	36	19	70	-21.84	-9.06	-74.65	-50.82	0.39	0.24	0.78	1.35	0.51	0.27	1.61	2.33
VT-28 (20112201)																				
Bartek, William A 2182	C4086	5/16	I2103	4/21	7/4/49	42	19	88	-28.29	-0.45	-67.72	-47.19	0.4	0.24	0.78	1.36	0.54	0.24	1.46	2.19
Jacobs, Brian E 7278	C4501	5/17	I2103	4/7	18/6/49	31	19	63	-0.45	-0.45	-60.06	-34.71	0.4	0.24	0.78	1.36	0.4	0.24	1.39	1.97
Kauffman, Bryan J 8841	F4001	5/18	I2103	4/7	28/4/49	21	19	63	24.86	-0.45	-60.06	-27.37	0.4	0.24	0.78	1.36		0.24	1.39	1.84
McCarthy, ColinP. 2523	C4286	5/17	I2103	4/23	14/5/49	35	19	66	-10.57	-0.45	-63.89	-39.85	0.4	0.24	0.78	1.36	0.45	0.24	1.42	2.06
McDowell, Patrick R 3731	C4202	5/9	I2103	4/26	13/4/49	36	19	70	-13.1	-0.45	-69	-43.52	0.4	0.24	0.78	1.36	0.46	0.24	1.47	2.12
Miller, Christopher P 6245	C4201	5/5	I2185	4/14	12/2/49	37	19	70	-15.63	-0.45	-69	-44.25	0.4	0.24	0.78	1.36	0.47	0.24	1.47	2.14
Miller, DeniseE. 8428	C4201	5/17	I2103	4/22	12/3/49	37	19	66	-15.63	-0.45	-63.89	-41.32	0.4	0.24	0.78	1.36	0.47	0.24	1.42	2.08
Parker, Jon D 6226	C4202	5/6	I2185	4/14	13/4/49	36	19	70	-13.1	-0.45	-69	-43.52	0.4	0.24	0.78	1.36	0.46	0.24	1.47	2.12
Ross, Richard W 1185	C4104	5/18	I2103	4/29	11/6/49	38	19	65	-18.16	-0.45	-62.61	-41.32	0.4	0.24	0.78	1.36	0.49	0.24	1.41	2.08
Whalen, Pamela R 6214	C4401(2)	5/16	I2103	4/12	17/6/49	32	19	63	-2.98	-0.45	-60.06	-35.44	0.4	0.24	0.78	1.36	0.41	0.24	1.39	1.98
VT-28 (20112401)																				
Adamson, Samuel J 4504	C4186	5/21	I2103	5/7	8/4/49	41	19	68	-15.76	9.55	-36.8	-24.01	0.4	0.24	0.78	1.36	0.47		1.11	1.73
Canham, Daniel J 2238	I4002	5/16	I2103	5/11	8/7/49	41	19	70	-15.76	9.55	-39.36	-25.48	0.4	0.24	0.78	1.36	0.47		1.13	1.76
Carrasquillo, Matthew 1111	C4086	5/18	I2103	5/11	7/2/49	42	19	70	-18.29	9.55	-39.36	-26.22	0.4	0.24	0.78	1.36	0.48		1.13	1.77
Day, Christopher A 6480	C4103	5/17	I2103	5/4	10/2/49	39	19	70	-10.69	9.55	-39.36	-24.01	0.4	0.24	0.78	1.36	0.44		1.13	1.73
Goldsmith, Devon 5376	C7190	5/10	I4201	5/20	6/1/35	29	0	32	-28.37	23	-23.28	-22.23	0.56	0.15	1.01	1.63	1.26		2.04	3.21
Lisowski, Kyle. 5246	C4186	5/21	I2103	5/10	9/4/49	40	19	68	-13.22	9.55	-38.08	-24.01	0.4	0.24	0.78	1.36	0.45		1.12	1.73
Marihugh, Russell J 1813	C4102	5/21	I2103	5/9	9/2/49	40	19	70	-14.04	8.94	-45.18	-28.43	0.39	0.24	0.78	1.35	0.45		1.18	1.79
Passini, Zachary J 2762	I4003	5/19	I2103	5/9	7/4/49	42	19	62	-18.29	9.55	-29.13	-20.34	0.4	0.24	0.78	1.36	0.48		1.04	1.68
Schafer, BenjaminA. 8063	C4086	5/16	I2103	5/10	7/3/49	42	19	70	-18.29	9.55	-39.36	-26.22	0.4	0.24	0.78	1.36	0.48		1.13	1.77
Tryon, MatthewD. 4732	I4002	5/20	I2103	5/16	6/2/49	43	19	68	-20.82	9.55	-38.08	-26.22	0.4	0.24	0.78	1.36	0.49		1.12	1.77
Woods, Joshua A 0112	I4001	5/16	I2103	5/13	5/2/49	44	19	70	-23.35	9.55	-39.36	-27.68	0.4	0.24	0.78	1.36	0.5		1.13	1.79
VT-28 (20112601)																				
Bond, TravisA. 7947	C4086	5/18	I2103	5/12	7/2/49	42	19	70	-8.43	19.16	-3.81	-1.22	0.4	0.24	0.79	1.37	0.43		0.82	1.39
Cox, Matthew C 4724	C4101	5/17	I2103	5/13	7/2/49	42	19	70	-8.43	19.16	-3.81	-1.22	0.4	0.24	0.79	1.37	0.43		0.82	1.39
Dorsch, Patrick L 4928	C4102	5/21	I2103	5/9	9/3/49	40	19	70	-3.41	19.16	-3.81	0.23	0.4	0.24	0.79	1.37	0.41		0.82	
Epps, Jamie 5126	C7003	5/3	I4102	5/20	3/1/35	32	3	34	-23.77	11.9	-11.29	-14.2	0.57	0.15	1.03	1.65	1		1.39	2.39
Hall, Chad 5073	C7002	5/4	I4101	5/16	3/2/35	32	3	21	-23.77	11.9	1.36	-6.33	0.57	0.15	1.03	1.65	1			1.98
Herring, Taylor R 9140	I4001	5/20	I2103	5/20	5/1/49	44	19	72	-13.45	19.16	-6.34	-4.14	0.4	0.24	0.79	1.37	0.45		0.84	1.43
Johnson, Kyle M 6289	C4004	5/16	I2101	5/20	4/5/49	45	21	73	-15.96	10.97	-7.61	-7.05	0.4	0.24	0.79	1.37	0.46		0.85	1.47
Mayo, Mathew C 3389	C4086	5/17	I2103	5/11	6/2/49	43	19	70	-10.94	19.16	-3.81	-1.95	0.4	0.24	0.79	1.37	0.44		0.82	1.4
Worthington, Kenneth G 3312	C4102	5/17	I2103	5/11	9/1/49	40	19	70	-3.41	19.16	-3.81	0.23	0.4	0.24	0.79	1.37	0.41		0.82	
VT-28 (20112801)																				
Brenner, Shane P 8697	C4004	5/16	I2102	5/21	4/0/49	45	20	72	-5.96	25.06	-0.51	2.44	0.4	0.24	0.79	1.37	0.42		0.79	
Couch, Taylor H 2257			C2005	5/5	0/0/49	49	26	88	-16	0.48	3.3	-2.66	0.4	0.24	0.79	1.37	0.46			1.41

Table 6b: Training Timeline (by student) – VT-28, 22 May 2011

Emma, Daniel A 1535	C4003	5/19	C2005	5/4	3/3/49	46	26	68	-8.47	0.48	4.57	0.25	0.4	0.24	0.79	1.37	0.43			
Estrada, Daniel 0627			C2005	5/5	0/1/49	49	26	72	-16	0.48	-0.51	-4.85	0.4	0.24	0.79	1.37	0.46		0.79	1.43
Giunipero, Anthony J 2270	C4002	5/17	C2005	5/6	2/3/49	47	26	76	-10.98	0.48	-5.58	-6.31	0.4	0.24	0.79	1.37	0.44		0.83	1.45
Hawley, Jacob D 9524	C4001	5/20	C2085	5/12	1/1/49	48	26	76	-13.49	0.48	-5.58	-7.04	0.4	0.24	0.79	1.37	0.45		0.83	1.46
Hayden, Jeffrey M 7072	C4001	5/20	C2085	5/12	1/2/49	48	26	71	-13.49	0.48	0.76	-3.39	0.4	0.24	0.79	1.37	0.45			1.42
Hedzic, Ajdin 0220	C4001	5/20	C2085	5/16	1/0/49	48	26	78	-13.49	0.48	-8.12	-8.49	0.4	0.24	0.79	1.37	0.45		0.85	1.48
Johnson, Aaron 4703	C7003	5/16	I4102	5/17	3/1/35	32	3	14	-13.77	21.9	20.92	10.21	0.57	0.15	1.03	1.65	0.76			
Lim, Erick A 5207			C2085	5/12	0/1/49	49	26	78	-16	0.48	-8.12	-9.22	0.4	0.24	0.79	1.37	0.46		0.85	1.49
Seymour, Matthew J 0074			C2085	5/12	0/0/49	49	26	78	-16	0.48	-8.12	-9.22	0.4	0.24	0.79	1.37	0.46		0.85	1.49
VT-28 (20113001)																				
Barrett, Matthew P 5404			C2085	5/18	0/2/49	49	26	77	-5	11.32	-1.26	-0.16	0.4	0.25	0.79	1.37	0.42		0.8	1.37
Compton, Nicholas I 0714			C2005	5/12	0/0/49	49	26	76	-6	10.48	-0.51	-0.17	0.4	0.24	0.79	1.37	0.42		0.79	1.37
Cozby, James A 9893			C2085	5/14	0/0/49	49	26	72	-6	10.48	4.57	2.75	0.4	0.24	0.79	1.37	0.42			
Fleming, Taylor M 5623			C2005	5/16	0/0/49	49	26	74	-6	10.48	2.03	1.29	0.4	0.24	0.79	1.37	0.42			
Haines, Daniel M 9859			C2085	5/19	0/0/49	49	26	77	-6	10.48	-1.78	-0.9	0.4	0.24	0.79	1.37	0.42		0.8	1.38
Hathorn, Jacquelyne S 8113			C2005	5/13	0/0/49	49	26	74	-6	10.48	2.03	1.29	0.4	0.24	0.79	1.37	0.42			
Jibilian, Christopher A 6289			C2085	5/19	0/0/49	49	26	79	-6	10.48	-4.31	-2.35	0.4	0.24	0.79	1.37	0.42		0.82	1.4
Johnson, Jessica L 1127			C2085	5/20	0/1/49	49	26	77	-6	10.48	-1.78	-0.9	0.4	0.24	0.79	1.37	0.42		0.8	1.38
Ohleger, Andrew J 7230			C2005	5/14	0/0/49	49	26	82	-6	10.48	-8.12	-4.54	0.4	0.24	0.79	1.37	0.42		0.84	1.43
Schwab, Kurt R 0698			C2005	5/14	0/2/49	49	26	77	-6	10.48	-1.78	-0.9	0.4	0.24	0.79	1.37	0.42		0.8	1.38
VT-28 (20113201)																				
Bell, James R 9400			C2004	5/20	0/0/49	49	27	85		16.26	1.98	4.03	0.4	0.25	0.79	1.38				
Cannuscio, Victor W 8889			C2004	5/20	0/0/49	49	27	83		16.26	4.5	5.48	0.4	0.25	0.79	1.38				
Choate, Charlie F 6031			C2004	5/20	0/0/49	49	27	84		16.26	3.24	4.75	0.4	0.25	0.79	1.38				
Kelling, Chad S 9913			C2005	5/20	0/0/49	49	26	80		20.32	8.28	8.37	0.4	0.25	0.79	1.38				
Reed, WilliamS. 1240			C2004	5/20	0/0/49	49	27	85		16.26	1.98	4.03	0.4	0.25	0.79	1.38				
Snell, David H 1106			C2004	5/20	0/0/49	49	27	75		16.26	14.57	11.26	0.4	0.25	0.79	1.38				
Stobie, Michael P 5875			C2004	5/20	0/0/49	49	27	85		16.26	1.98	4.03	0.4	0.25	0.79	1.38				
Troy, Geoffrey J 6488			C2004	5/20	0/0/49	49	27	78		16.26	10.79	9.09	0.4	0.25	0.79	1.38				
Tucker, ChristopherS. 9403			C2004	5/20	0/0/49	49	27	85		16.26	1.98	4.03	0.4	0.25	0.79	1.38				
Weatherington, Zachary T 8467			C2004	5/20	0/0/49	49	27	85		16.26	1.98	4.03	0.4	0.25	0.79	1.38				
VT-28 (20113401)																				
Cowell, William F 2052					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Evanoff, RyleL. 2299					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Hebert, PaulG. 2474					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Huber, ElizabethA. 2622					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Huszagh, William P 9755					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Nault, RyanM. 6663					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Nicholson, MatthewC. 9198					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
O Dell, Charlesl. 7728					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Sturzbecher, Jenny 4815					0/1/49	49	31	108					0.4	0.25	0.8	1.39				
Wilharm, NicholasD. 0960					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Zastoupil, FrankC. 8414					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
VT-28 (20113601)																				
Book, IanR. 6236					0/0/49	49	31	108					0.4	0.25	0.79	1.3				
Brecher, DakotahF. 3055					0/0/49	49	31	108					0.4	0.25	0.79	1.3				

Table 6c: Training Timeline (by student) – VT-28, 22 May 2011

Faville, DavidA. 0604					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Hartwig, BrianC. 6787					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Mayfield, ChristineN. 8727					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Norburg, MatthewR. 8652					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Reed, BrandenM. 3548					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Roberts, MichaelZ. 1376					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Shrewsbury, Donald T 4546					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
VT-28 (20113801)																			
Blanton, MichaelJ. 3438					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Bluhm, LorenA. 5907					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Cacciapuoti, MichaelJ. 1785					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Campbell, ChristopherM. 1230					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Edson, MarkN. 7240					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Gentile, MatthewJ. 2101					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Jeronimus, KeithW. 7794					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Phillips, ScottW. 9818					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Plum, TorreyA. 2667					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Sargis, JeffreyM. 7070					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
St Aubin, David 0749					0/0/35	35	10	74					0.47	0.12	0.86	1.31			
Welborn, DavidB. 1325					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
VT-28 (20113901)																			
Duchateau, Nolan 6409					0/0/35	35	10	74					0.47	0.12	0.86	1.31			
Jackson, Jason 7801					0/0/35	35	10	74					0.47	0.12	0.86	1.31			

Table 6d: Training Timeline (by student) – VT-28, 22 May 2011

TRAINING TIMELINE

May 22, 2011

Unit	Effective Students	Flight Events Remain	Device Events Remain	Academic Days Remain	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr	Baseline Overall Incr.	On-Track Flight Incr.	On-Track Device Incr.	On-Track Academic Inc	On-Track Overall Incr.	Flight Required / Day	Device Required / Day	Academics Required /	Total Required / Day
VT-28	131	5104	2861	9293	-6.77	0.81	-20.1	-13.4	0.4	0.24	0.79	1.35	0.43	0.23	0.73	1.39	55.87	30.69	95.99	182.6

* Timeline statistics computed using the Linear Method.

Table 7: Training Timeline Summary – VT-28, 22 May 2011

TRAINING TIMELINE

Simulated 5/22/2011

UNIT SUMMARY *																												
Unit	Start Date	Graduation Date	Effective Students	Flight Days Remain	Attrition Days Remaini	Flight Events Remain	Device Events Remain	Academic Days Remair	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr	Baseline Overall Incr.	On-Track Flight Incr.	On-Track Device Incr.	On-Track Academic Inc	On-Track Overall Incr.	Healthy By Date	Healthy By Flight Incr.	Healthy By Device Incr	Healthy By Academic I	Healthy By Overall Incr	Flight Required / Day	Device Required / Day	Academics Required /	Total Required / Day
-20072401	3/12	6/22	0																										
-20090301	10/16	12/18	0																										
-20105001	9/13	4/11	1	-29	0	0	0	0	0	0	0	0	0.38	0.23	0.75	1.31	0	0	0	0	4/11	0	0	0	0	0	0	0	0
-20111001	12/6	7/4	4	29	0	81	57	129	-25.14	-33.06	-43.3	-37.98	0.37	0.23	0.74	1.3	0.7	0.49	1.11	2.3	7/4	0.66	0.49	1.86	2.78	2.79	1.97	4.45	9.21
-20111401	1/4	7/19	6	40	0	44	6	95	21.59	35.9	-20.08	1.12	0.4	0.24	0.79	1.37	0.18	0.03	0.4	0.6	7/19	0	0	1.18	0.39	1.1	0.15	2.38	3.63
-20111601	1/18	8/2	6	50	0	83	32	106	14.99	27.98	-14.91	0.76	0.4	0.24	0.78	1.36	0.28	0.11	0.35	0.74	8/2	0.08	0.11	0.89	0.68	1.66	0.64	2.12	4.42
-20111801	1/31	8/15	8	59	0	192	144	310	-1.73	-15.32	-35.46	-23.6	0.4	0.24	0.78	1.36	0.41	0.31	0.66	1.37	8/15	0.22	0.28	1.16	1.76	3.25	2.44	5.25	11
-20112001	2/14	8/30	11	70	0	301	213	686	0.19	-10.58	-64.82	-39.06	0.39	0.24	0.78	1.35	0.39	0.28	0.89	1.56	8/30	0.1	0.26	1.43	2.01	4.3	3.04	9.8	17.1
-20112201	2/28	9/12	10	78	0	302	190	659	1.58	-0.45	-63.76	-36.25	0.4	0.24	0.78	1.36	0.39	0.24	0.84	1.48	9/12	0.17	0.24	1.42	2	3.87	2.44	8.45	14.8
-20112401	3/14	9/26	10	88	0	361	190	668	-3.43	9.49	-35.84	-19.9	0.39	0.24	0.78	1.36	0.41	0.22	0.76	1.39	9/26	0.3	0	1.1	1.67	4.1	2.16	7.59	13.9
-20112401	3/14	6/23	1	23	0	29	0	32	-28.37	23	-23.28	-22.23	0.56	0.15	1.01	1.63	1.26	0	1.39	2.65	6/23	1.26	0	2.04	3.21	1.26	0	1.39	2.65
-20112601	3/28	10/10	7	97	0	287	133	486	-5.92	19.16	-3.08	-0.08	0.4	0.24	0.79	1.37	0.42	0.2	0.72	1.33	10/10	0.42	0	0.59	0.8	2.96	1.37	5.01	9.34
-20112601	3/28	7/7	2	32	0	64	6	55	-23.77	11.9	-4.96	-10.26	0.57	0.15	1.03	1.65	1	0.09	0.86	1.95	7/7	1	0	0.7	2.18	2	0.19	1.72	3.91
-20112801	4/11	10/24	10	107	0	450	190	713	-5.96	29.16	0.38	3.68	0.4	0.24	0.79	1.37	0.42	0.18	0.67	1.26	10/24	0.42	0	0.56	0	4.21	1.78	6.66	12.6
-20112801	4/11	7/21	1	42	0	32	3	14	-13.77	21.9	20.92	10.21	0.57	0.15	1.03	1.65	0.76	0.07	0.33	1.17	7/21	0.76	0	0	0	0.76	0.07	0.33	1.17
-20113001	4/25	11/7	10	117	0	490	260	780	-5.9	10.57	-2.99	-1.55	0.4	0.24	0.79	1.37	0.42	0.22	0.67	1.31	11/7	0.42	0	0.81	1.39	4.19	2.22	6.67	13.1
-20113201	5/9	11/21	10	126	0	490	306	841		1.63	3.11	2.08	0.4	0.25	0.79	1.38	0.39	0.24	0.67	1.3	11/21	0	0	0	0	3.89	2.43	6.67	13
-20113401	5/23	12/5	11	135	0	539	341	1188					0.4	0.25	0.8	1.39	0.36	0.23	0.8	1.39	12/5	0	0	0	0	3.99	2.53	8.8	15.3
-20113601	6/6	12/19	9	145	0	441	279	972					0.4	0.25	0.79	1.3	0.34	0.21	0.74	1.3	12/19	0	0	0	0	3.04	1.92	6.7	11.7
-20113801	6/20	1/16	11	162	0	539	341	1188					0.38	0.23	0.76	1.16	0.3	0.19	0.67	1.16	1/16	0	0	0	0	3.33	2.1	7.33	12.8
-20113801	6/20	9/29	1	91	0	35	10	74					0.47	0.12	0.86	1.31	0.38	0.11	0.81	1.31	9/29	0	0	0	0	0.38	0.11	0.81	1.31
-20113901	6/27	10/6	2	96	0	70	20	148					0.57	0.15	1.03	1.24	0.36	0.1	0.77	1.24	10/6	0	0	0	0	0.73	0.21	1.54	2.48

* Timeline statistics computed using the Linear Method.

Table 8: Simulated Training Timeline (by class) – VT-28, 22 May 2011

TRAINING TIMELINE

Simulated 5/22/2011

INDIVIDUAL SUMMARY *

Unit (Class): Student	Last flight Event	Last Flight Event Date	Last Device Event	Last Device Event Date	Complete / Extra / Syllab	Flight Events Remain.	Device Events Remain.	Academic Events Remain	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr.	Baseline Overall Incr.	Healthy By Flight Incr.	Healthy By Device Incr.	Healthy By Academic Inc	Healthy By Overall Incr.
VT-28 (20105001)																				
Muysenberg, Ryan R 1264	N4002	5/20	I2406	5/14	49/5/49	0	0	0	0	0	0	0	0.38	0.23	0.75	1.31				
VT-28 (20111001)																				
Inabinet, John P 8769	C4601	5/6	I2204	5/20	35/4/49	14	13	10	-8.43	-27.61	-13.43	-15.03	0.37	0.23	0.74	1.3	0.48	0.45	1.09	1.97
Raper, Aaron D 4400	F4201	5/6	I2201	5/21	35/5/49	14	13	10	-8.43	-27.61	-13.43	-15.03	0.37	0.23	0.74	1.3	0.48	0.45	1.09	1.97
Reno, Samuel H 8342					0/0/49	49	31	108	-102	-106	-145	-131.5	0.37	0.23	0.74	1.3	1.69	1.07	4.47	7.18
WATERS, JoshuaM. 6897	I4203	5/20	I2404	5/14	45/5/49	4	0	1	18.31	29	-1.34	9.65	0.37	0.23	0.74	1.3			0.78	
VT-28 (20111401)																				
Carlton, Benjamin J 4455	I4105	5/13	I2504	5/20	38/2/49	11	0	8	12.39	40	-10.15	4.88	0.4	0.24	0.79	1.37			0.99	
Ferrell, Howard S 8029	I4203	5/20	I2504	5/20	43/4/49	6	0	10	24.94	40	-12.69	7.07	0.4	0.24	0.79	1.37			1.04	
Gokey, Christopher G 2187	I4202	5/21	I2503	5/20	44/4/49	5	0	6	27.45	40	-7.61	10.71	0.4	0.24	0.79	1.37			0.94	
Kelly, Devin F 6184	I4204	5/20	I2404	5/14	43/0/49	6	0	10	24.94	40	-12.69	7.07	0.4	0.24	0.79	1.37			1.04	
Reece, JustinL 9137	I4202	5/20	I2502	5/20	42/1/49	7	0	12	22.43	40	-15.22	4.88	0.4	0.24	0.79	1.37			1.09	
Stottlemyre, Jerrid K 5172	I4202	5/20	I2504	5/20	40/4/49	9	6	49	17.41	15.42	-62.16	-27.91	0.4	0.24	0.79	1.37			2.01	2.33
VT-28 (20111601)																				
Close, John J 1028	I4101	5/13	I2502	5/20	40/4/49	9	0	4	27.22	50	2.56	18.25	0.4	0.24	0.78	1.36				
Flynn, Thomas A 3036	I4104	5/13	I2504	5/21	35/0/49	14	0	11	14.57	50	-6.39	9.45	0.4	0.24	0.78	1.36			0.88	
Polhemus, Christopher A 2460	I4202	5/20	I2405	5/20	41/2/49	8	0	11	29.76	50	-6.39	13.85	0.4	0.24	0.78	1.36			0.88	
Schrock, Jamison C 0238	F4101	4/29	I2185	3/25	30/2/49	19	19	59	1.92	-28.45	-67.72	-43.41	0.4	0.24	0.78	1.36		0.38	1.84	2.54
Shields, Keegan G 9082	C4505	5/6	I2205	5/20	26/10/49	23	13	11	-8.2	-3.68	-6.39	-6.7	0.4	0.24	0.78	1.36	0.46	0.26	0.88	1.54
Sparklin, Marianne C 1761	I4202	5/20	I2503	5/20	39/1/49	10	0	10	24.69	50	-5.11	13.12	0.4	0.24	0.78	1.36			0.86	
VT-28 (20111801)																				
Bowman, Alex T 7386	F0101	4/28	I2303	5/20	32/1/49	17	11	10	15.98	13.58	1.28	7.78	0.4	0.24	0.78	1.36				
Jamous, Dean S 8051	C4504	5/14	I2102	4/16	24/5/49	25	19	33	-4.27	-19.45	-28.11	-20.84	0.4	0.24	0.78	1.36	0.42	0.32	1.16	1.84
Kirchner, Charles F 9425	C4602	5/13	I2102	4/19	26/6/49	23	19	32	0.8	-19.45	-26.83	-18.64	0.4	0.24	0.78	1.36		0.32	1.14	1.79
Lawrence, Joshua F 5012	C4506	5/20	I2103	4/16	26/4/49	23	19	63	0.8	-19.45	-66.44	-41.4	0.4	0.24	0.78	1.36		0.32	1.66	2.32
Schultz, Aaron J 5535	C4202	5/20	I2001	5/7	18/3/49	31	19	66	-19.45	-19.45	-70.28	-49.47	0.4	0.24	0.78	1.36	0.53	0.32	1.71	2.5
Tackes, Rafe E 6054	C4390	5/6	I2102	4/15	24/6/49	25	19	19	-4.27	-19.45	-10.22	-10.57	0.4	0.24	0.78	1.36	0.42	0.32	0.92	1.61
Weber, William T 1066	C4503	5/6	I2103	4/15	24/6/49	25	19	22	-4.27	-19.45	-14.06	-12.77	0.4	0.24	0.78	1.36	0.42	0.32	0.97	1.66
Wendel, Daniel M 0323	C4506	5/20	I2102	4/16	26/9/49	23	19	65	0.8	-19.45	-69	-42.87	0.4	0.24	0.78	1.36		0.32	1.7	2.35
VT-28 (20112001)																				
Cooney, MonicaE. 3272	C4502	5/20	I2102	4/21	23/3/49	26	19	66	3.67	-9.06	-69.5	-40.47	0.39	0.24	0.78	1.35		0.27	1.55	2.13

Table 9a: Simulated Training Timeline (by student) – VT-28, 22 May 2011

Culbert, Edward W 1848					0/0/49	49	31	92	-55	-59	-102.96	-85.57	0.39	0.24	0.78	1.35	0.7	0.44	1.92	3.01
Eastman, Eric A 5123	C4504	5/21	I2102	4/20	23/6/49	26	19	63	3.67	-9.06	-65.64	-38.25	0.39	0.24	0.78	1.35		0.27	1.51	2.09
Fick, Michael H 5693	C4505	5/20	I2102	4/16	22/4/49	27	19	65	1.12	-9.06	-68.21	-40.47	0.39	0.24	0.78	1.35		0.27	1.53	2.13
Hollender, Steven J 5446	C4503	5/21	I2103	4/10	24/3/49	25	19	65	6.22	-9.06	-68.21	-38.99	0.39	0.24	0.78	1.35		0.27	1.53	2.11
Howard, Amanda M 6802	C4202	5/6	I2103	4/17	22/2/49	27	19	65	1.12	-9.06	-68.21	-40.47	0.39	0.24	0.78	1.35		0.27	1.53	2.13
Kesireddy, Nikhil R 2139	I4101	4/30	I2301	5/20	31/3/49	18	11	11	24.08	24.23	1.29	12.02	0.39	0.24	0.78	1.35				
LeMaster, Grant E 1874	C4505	5/20	I2102	4/9	26/4/49	23	19	65	11.33	-9.06	-68.21	-37.51	0.39	0.24	0.78	1.35		0.27	1.53	2.08
Long, Zachary D 7028	C4503	5/20	I2102	4/20	20/8/49	29	19	63	-3.98	-9.06	-65.64	-40.47	0.39	0.24	0.78	1.35	0.41	0.27	1.51	2.13
Webster, Brittany L 6912	C4506	5/21	I2103	4/15	25/7/49	24	19	65	8.78	-9.06	-68.21	-38.25	0.39	0.24	0.78	1.35		0.27	1.53	2.09
Zuspan, Chelsea L 9662	C4504	5/21	I2102	4/24	22/4/49	27	19	66	1.12	-9.06	-69.5	-41.21	0.39	0.24	0.78	1.35		0.27	1.55	2.15
VT-28 (20112201)																				
Bartek, William A 2182	C4503	5/20	I2103	4/27	22/4/49	27	19	66	9.67	-0.45	-63.89	-33.98	0.4	0.24	0.78	1.36		0.24	1.42	1.96
Jacobs, Brian E 7278	C4504	5/21	I2103	4/19	22/6/49	27	19	66	9.67	-0.45	-63.89	-33.98	0.4	0.24	0.78	1.36		0.24	1.42	1.96
Kauffman, Bryan J 8841	C4204	4/29	I2102	4/14	15/4/49	34	19	65	-8.04	-0.45	-62.61	-38.38	0.4	0.24	0.78	1.36	0.44	0.24	1.41	2.03
McCarthy, ColinP. 2523	C4288	5/21	I2103	4/22	19/5/49	30	19	66	2.08	-0.45	-63.89	-36.18	0.4	0.24	0.78	1.36		0.24	1.42	1.99
McDowell, Patrick R 3731	C4203	5/20	I2102	4/22	19/4/49	30	19	66	2.08	-0.45	-63.89	-36.18	0.4	0.24	0.78	1.36		0.24	1.42	1.99
Miller, Christopher P 6245	C4401	5/21	I2103	4/22	21/2/49	28	19	66	7.14	-0.45	-63.89	-34.71	0.4	0.24	0.78	1.36		0.24	1.42	1.97
Miller, DeniseE. 8428	C4390	5/21	I2103	4/20	18/3/49	31	19	66	-0.45	-0.45	-63.89	-36.91	0.4	0.24	0.78	1.36	0.4	0.24	1.42	2.01
Parker, Jon D 6226	C4401	5/21	I2103	4/20	19/4/49	30	19	66	2.08	-0.45	-63.89	-36.18	0.4	0.24	0.78	1.36		0.24	1.42	1.99
Ross, Richard W 1185	C4204	5/13	I2103	4/30	15/6/49	34	19	66	-8.04	-0.45	-63.89	-39.11	0.4	0.24	0.78	1.36	0.44	0.24	1.42	2.05
Whalen, Pamela R 6214	C4390(2)	5/21	I2102	4/21	18/6/49	31	19	66	-0.45	-0.45	-63.89	-36.91	0.4	0.24	0.78	1.36	0.4	0.24	1.42	2.01
VT-28 (20112401)																				
Adamson, Samuel J 4504	C4201	5/21	I2102	5/6	16/4/49	33	19	66	4.49	9.55	-34.24	-16.67	0.4	0.24	0.78	1.36			1.09	1.62
Canham, Daniel J 2238	C4201	5/20	I2103	5/6	12/7/49	37	19	66	-5.63	9.55	-34.24	-19.61	0.4	0.24	0.78	1.36	0.42		1.09	1.67
Carrasquillo, Matthew 1111	C4103	5/13	I2003	5/6	11/2/49	38	19	67	-8.16	9.55	-35.52	-21.08	0.4	0.24	0.78	1.36	0.43		1.1	1.69
Day, Christopher A 6480	C4201	5/21	I2101	5/7	15/2/49	34	19	66	1.96	9.55	-34.24	-17.41	0.4	0.24	0.78	1.36			1.09	1.63
Goldsmith, Devon 5376	C7190	5/10	I4201	5/20	6/1/35	29	0	32	-28.37	23	-23.28	-22.23	0.56	0.15	1.01	1.63	1.26		2.04	3.21
Lisowski, KyleJ. 5246	C4203	5/20	I2004	5/6	17/4/49	32	19	70	7.02	9.55	-39.36	-18.87	0.4	0.24	0.78	1.36			1.13	1.65
Marihugh, Russell J 1813	C4201	5/20	I2103	5/7	12/2/49	37	19	66	-6.39	8.94	-40.03	-23.26	0.39	0.24	0.78	1.35	0.42		1.13	1.71
Passini, Zachary J 2762	C4201	5/20	I2001	5/7	12/4/49	37	19	64	-5.63	9.55	-31.69	-18.14	0.4	0.24	0.78	1.36	0.42		1.06	1.64
Schafer, BenjaminA. 8063	C4103	5/13	I2003	5/7	11/3/49	38	19	66	-8.16	9.55	-34.24	-20.34	0.4	0.24	0.78	1.36	0.43		1.09	1.68
Tryon, MatthewD. 4732	C4103	5/13	I2002	5/7	11/2/49	38	19	66	-8.16	9.55	-34.24	-20.34	0.4	0.24	0.78	1.36	0.43		1.09	1.68
Woods, Joshua A 0112	C4103	5/13	I2102	5/6	12/2/49	37	19	71	-5.63	9.55	-40.63	-23.28	0.4	0.24	0.78	1.36	0.42		1.14	1.72
VT-28 (20112601)																				
Bond, TravisA. 7947	I4003	5/14	I2102	5/13	8/2/49	41	19	70	-5.92	19.16	-3.81	-0.5	0.4	0.24	0.79	1.37	0.42		0.82	1.38
Cox, Matthew C 4724	I4003	5/13	I2102	5/13	8/2/49	41	19	72	-5.92	19.16	-6.34	-1.95	0.4	0.24	0.79	1.37	0.42		0.84	1.4
Dorsch, Patrick L 4928	C4101	5/20	I2103	5/6	8/3/49	41	19	68	-5.92	19.16	-1.27	0.96	0.4	0.24	0.79	1.37	0.42		0.8	
Epps, Jamie 5126	C7003	5/3	I4102	5/20	3/1/35	32	3	34	-23.77	11.9	-11.29	-14.2	0.57	0.15	1.03	1.65	1		1.39	2.39
Hall, Chad 5073	C7002	5/4	I4101	5/16	3/2/35	32	3	21	-23.77	11.9	1.36	-6.33	0.57	0.15	1.03	1.65	1			1.98
Herring, Taylor R 9140	C4101	5/20	I2004	5/14	8/1/49	41	19	66	-5.92	19.16	1.27	2.42	0.4	0.24	0.79	1.37	0.42			
Johnson, Kyle M 6289	C4101	5/20	I2004	5/14	8/5/49	41	19	72	-5.92	19.16	-6.34	-1.95	0.4	0.24	0.79	1.37	0.42		0.84	1.4
Mayo, Mathew C 3389	I4002	5/13	I2002	5/6	8/2/49	41	19	72	-5.92	19.16	-6.34	-1.95	0.4	0.24	0.79	1.37	0.42		0.84	1.4
Worthington, Kenneth G 3312	I4002	5/13	I2101	5/6	8/1/49	41	19	66	-5.92	19.16	1.27	2.42	0.4	0.24	0.79	1.37	0.42			
VT-28 (20112801)																				
Brenner, Shane P 8697	C4003	5/20	I2102	5/20	4/0/49	45	19	72	-5.96	29.16	-0.51	3.17	0.4	0.24	0.79	1.37	0.42		0.79	
Couch, Taylor H 2257	C4003	5/20	I2002	5/20	4/0/49	45	19	68	-5.96	29.16	4.57	6.08	0.4	0.24	0.79	1.37	0.42			

Table 9b: Simulated Training Timeline (by student) – VT-28, 22 May 2011

Emma, Daniel A 1535	C4086	5/20	I2004	5/21	4/3/49	45	19	72	-5.96	29.16	-0.51	3.17	0.4	0.24	0.79	1.37	0.42		0.79	
Estrada, Daniel 0627	C4004	5/20	I2101	5/20	4/1/49	45	19	72	-5.96	29.16	-0.51	3.17	0.4	0.24	0.79	1.37	0.42		0.79	
Giunipero, Anthony J 2270	C4003	5/20	I2103	5/20	4/3/49	45	19	72	-5.96	29.16	-0.51	3.17	0.4	0.24	0.79	1.37	0.42		0.79	
Hawley, Jacob D 9524	C4003	5/20	I2002	5/20	4/1/49	45	19	72	-5.96	29.16	-0.51	3.17	0.4	0.24	0.79	1.37	0.42		0.79	
Hayden, Jeffrey M 7072	C4004	5/20	I2001	5/20	4/2/49	45	19	69	-5.96	29.16	3.3	5.35	0.4	0.24	0.79	1.37	0.42			
Hedzic, Ajdin 0220	C4004	5/20	I2101	5/20	4/0/49	45	19	74	-5.96	29.16	-3.04	1.71	0.4	0.24	0.79	1.37	0.42		0.81	
Johnson, Aaron 4703	C7003	5/16	I4102	5/17	3/1/35	32	3	14	-13.77	21.9	20.92	10.21	0.57	0.15	1.03	1.65	0.76			
Lim, Erick A 5207	C4004	5/21	I2101	5/21	4/1/49	45	19	72	-5.96	29.16	-0.51	3.17	0.4	0.24	0.79	1.37	0.42		0.79	
Seymour, Matthew J 0074	C4004	5/21	I2101	5/20	4/0/49	45	19	70	-5.96	29.16	2.03	4.62	0.4	0.24	0.79	1.37	0.42			
VT-28 (20113001)																				
Barrett, Matthew P 5404			C2004	5/6	0/2/49	49	26	78	-5	11.32	-2.52	-0.89	0.4	0.25	0.79	1.37	0.42		0.81	1.38
Compton, Nicholas I 0714			C2003	5/6	0/0/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Cozby, James A 9893			C2001	5/6	0/0/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Fleming, Taylor M 5623			C2001	5/6	0/0/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Haines, Daniel M 9859			C2002	5/6	0/0/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Hathorn, Jacquelyne S 8113			C2005	5/6	0/0/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Jibilian, Christopher A 6289			C2005	5/7	0/0/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Johnson, Jessica L 1127			C2005	5/7	0/1/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Ohleger, Andrew J 7230			C2004	5/7	0/0/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
Schwab, Kurt R 0698			C2085	5/7	0/2/49	49	26	78	-6	10.48	-3.04	-1.63	0.4	0.24	0.79	1.37	0.42		0.81	1.39
VT-28 (20113201)																				
Bell, James R 9400					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Cannuscio, Victor W 8889					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Choate, Charlie F 6031					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Kelling, Chad S 9913					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Reed, WilliamS. 1240					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Snell, David H 1106					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Stobie, Michael P 5875			C2004	5/20	0/0/49	49	27	85		16.26	1.98	4.03	0.4	0.25	0.79	1.38				
Troy, Geoffrey J 6488					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Tucker, ChristopherS. 9403					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
Weatherington, Zachary T 8467					0/0/49	49	31	84			3.24	1.86	0.4	0.25	0.79	1.38				
VT-28 (20113401)																				
Cowell, William F 2052					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Evanoff, RyleL. 2299					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Hebert, PaulG. 2474					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Huber, ElizabethA. 2622					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Huszagh, William P 9755					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Nault, RyanM. 6663					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Nicholson, MatthewC. 9198					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
O Dell, Charlesl. 7728					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Sturzbecher, Jenny 4815					0/1/49	49	31	108					0.4	0.25	0.8	1.39				
Wilharm, NicholasD. 0960					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
Zastoupil, FrankC. 8414					0/0/49	49	31	108					0.4	0.25	0.8	1.39				
VT-28 (20113601)																				
Book, IanR. 6236					0/0/49	49	31	108					0.4	0.25	0.79	1.3				
Brecher, DakotahF. 3055					0/0/49	49	31	108					0.4	0.25	0.79	1.3				

Table 9c: Simulated Training Timeline (by student) – VT-28, 22 May 2011

Faville, DavidA. 0604					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Hartwig, BrianC. 6787					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Mayfield, ChristineN. 8727					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Norburg, MatthewR. 8652					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Reed, BrandenM. 3548					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Roberts, MichaelZ. 1376					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
Shrewsbury, Donald T 4546					0/0/49	49	31	108					0.4	0.25	0.79	1.3			
VT-28 (20113801)																			
Blanton, MichaelJ. 3438					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Bluhm, LorenA. 5907					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Cacciapuoti, MichaelJ. 1785					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Campbell, ChristopherM. 1230					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Edson, MarkN. 7240					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Gentile, MatthewJ. 2101					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Jeronimus, KeithW. 7794					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Phillips, ScottW. 9818					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Plum, TorreyA. 2667					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
Sargis, JeffreyM. 7070					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
St Aubin, David 0749					0/0/35	35	10	74					0.47	0.12	0.86	1.31			
Welbom, DavidB. 1325					0/0/49	49	31	108					0.38	0.23	0.76	1.16			
VT-28 (20113901)																			
Duchateau, Nolan 6409					0/0/35	35	10	74					0.57	0.15	1.03	1.24			
Jackson, Jason 7801					0/0/35	35	10	74					0.57	0.15	1.03	1.24			

Table 9d: Simulated Training Timeline (by student) – VT-28, 22 May 2011

TRAINING TIMELINE

Simulated 5/22/2011

Unit	Effective Students	Flight Events Remain	Device Events Remain	Academic Days Remain	Flight Days +/-	Device Days +/-	Academic Days +/-	Overall Days +/-	Baseline Flight Incr.	Baseline Device Incr.	Baseline Academic Incr	Baseline Overall Incr.	On-Track Flight Incr.	On-Track Device Incr.	On-Track Academic Inc	On-Track Overall Incr.	Flight Required / Day	Device Required / Day	Academics Required /	Total Required / Day
VT-28	131	4830	2721	9144	-1.23	5.49	-18.4	-10	0.4	0.24	0.79	1.35	0.4	0.21	0.72	1.32	51.82	27.76	93.69	173.3

* Timeline statistics computed using the Linear Method.

Table 10: Simulated Training Timeline Summary – VT-28, 22 May 2011

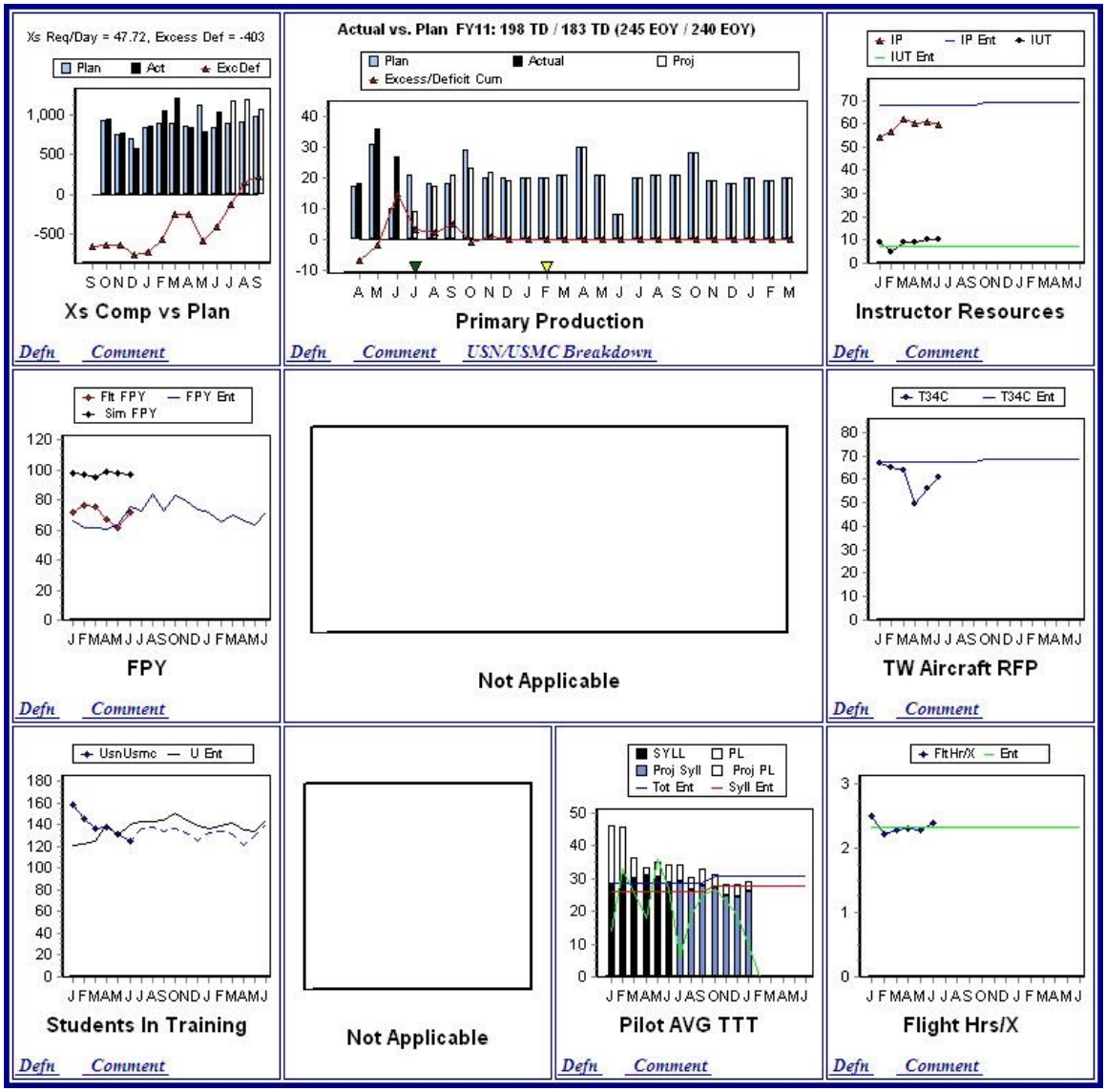

Figure 8a: NIPDR – VT-27, June 2011

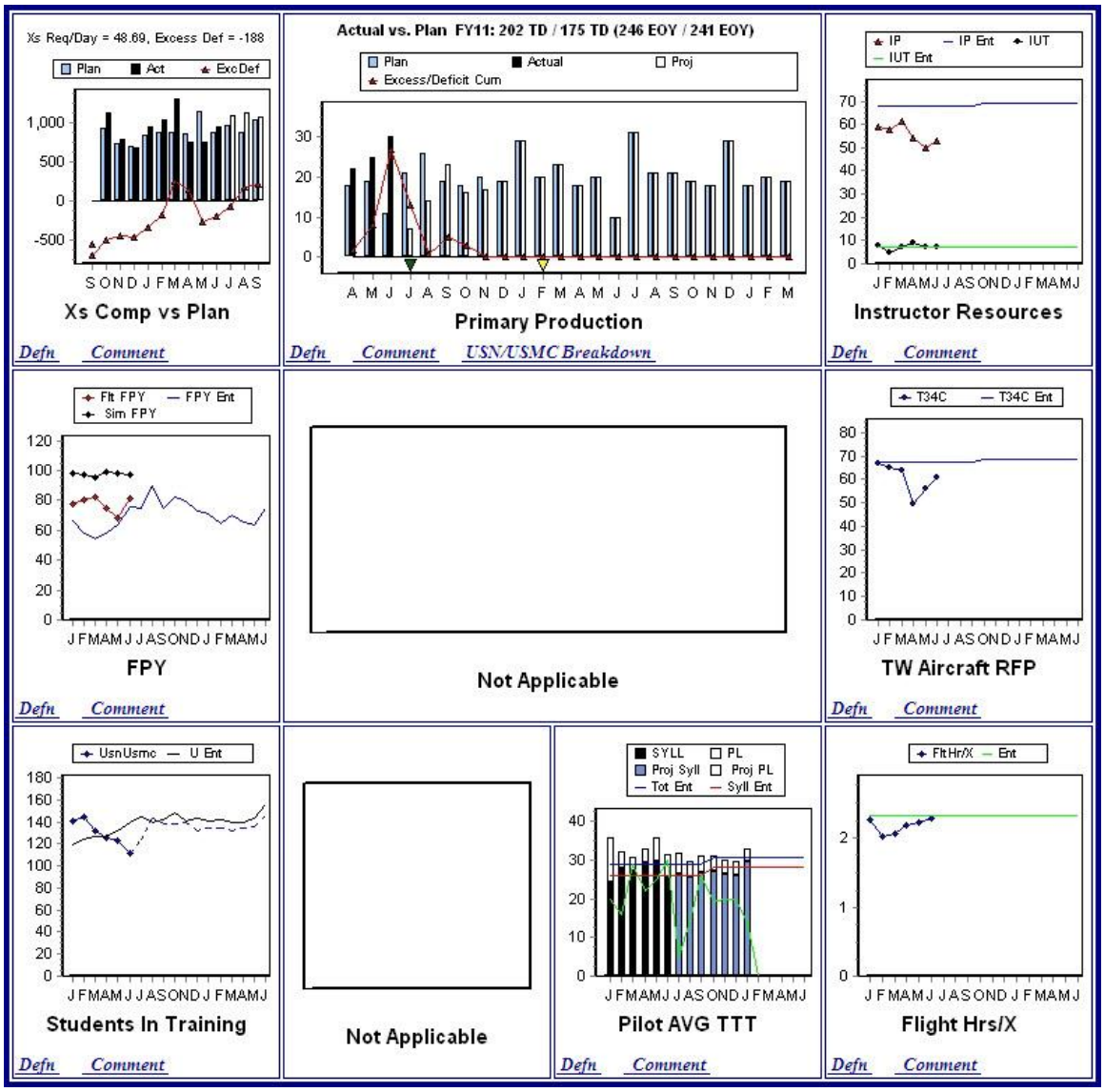

Figure 8b: NIPDR – VT-28, June 2011

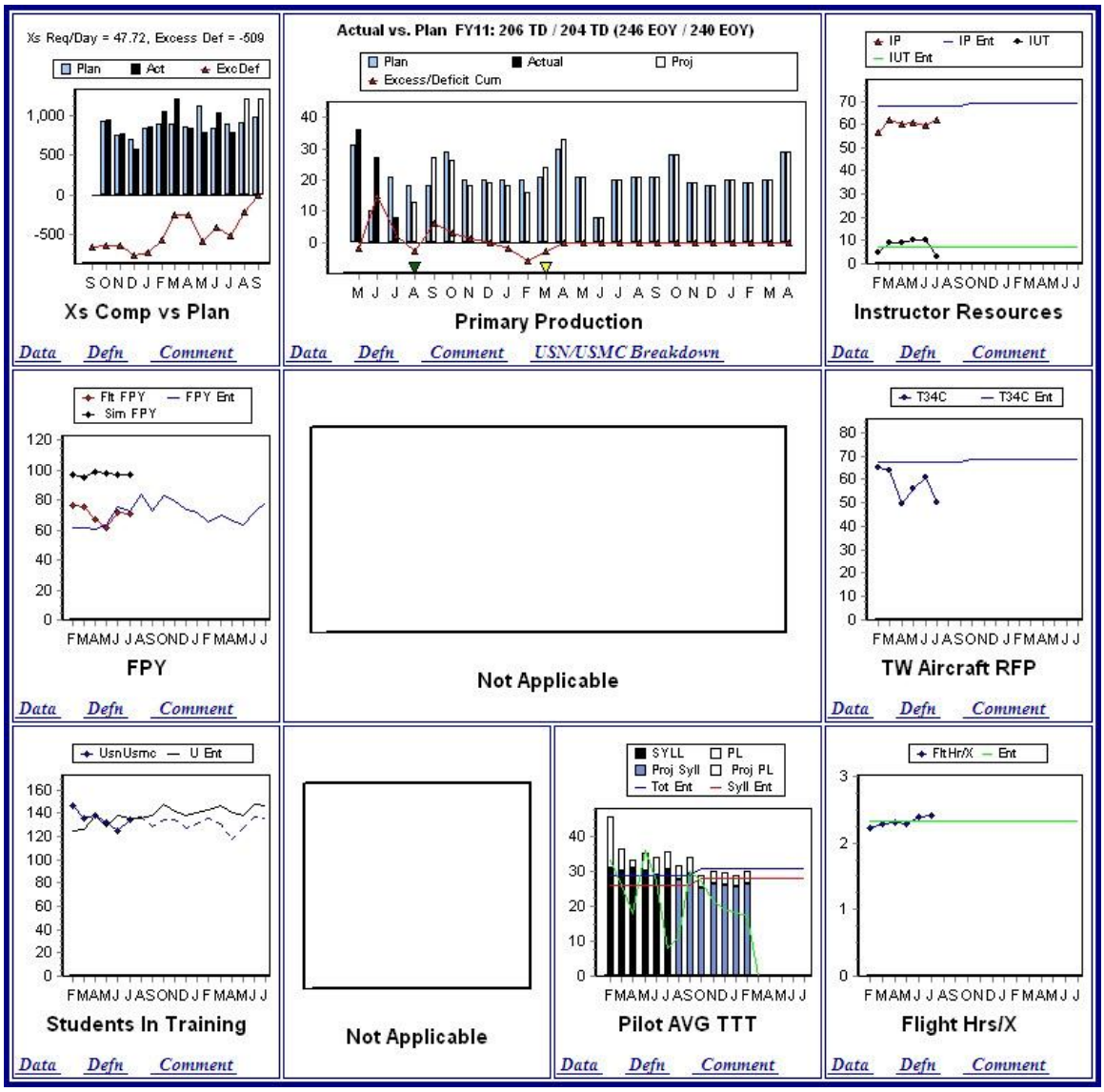

Figure 8c: NIPDR – VT-27, July 2011

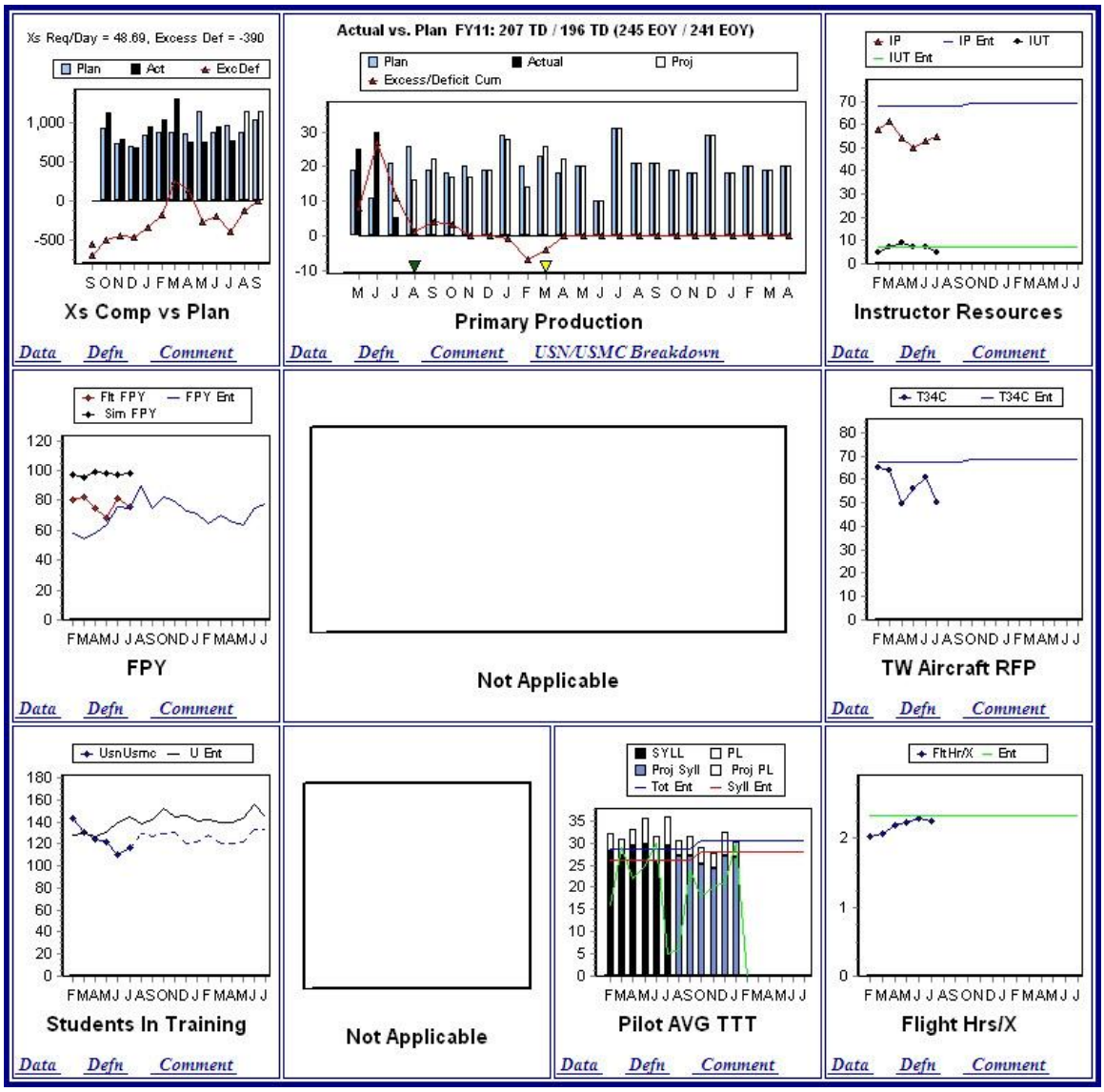

Figure 8d: NIPDR – VT-28, July 2011

Date	Mission Capable Reporting Status (MCRS)	Allowable X's / hour	Recommended (max) X's / hour	Issuable Aircraft	Detachment Aircraft	Homeguard Issuable A/C	# T-34's issued	T-34 X's	Homeguard Issuable (VT-27)	# T-34's issued (VT-27)	ACNA (VT-27)	VT-27 % of T-34's	T-34 X's / Issued
1-Jun	105	9.1875	8.5	68	0	68	66		34	40	0	0.61	
2-Jun	105	9.1875	8.5	68	0	68	66		34	36	4	0.55	
3-Jun	103	9.0125	8.375	67	0	67	63		33.5	29	3	0.46	
6-Jun	103	9.0125	9	72	6	66	58		33	35	0	0.60	
7-Jun	103	9.0125	8.375	67	6	61	57		30.5	32	0	0.56	
8-Jun	103	9.0125	8.625	69	6	63	62		31.5	33	0	0.53	
9-Jun	103	9.0125	8.5	68	6	62	60		31	38	0	0.63	
10-Jun	104	9.1	8.875	71	6	65	59		32.5	31	0	0.53	
13-Jun	104	9.1	8.5	68	6	62	56		31	38	3	0.68	
14-Jun	106	9.275	7.625	61	5	56	56		28	30	1	0.54	
15-Jun	106	9.275	7.5	60	5	55	53		27.5	27	0	0.51	
16-Jun	106	9.275	8.125	65	5	60	50		30	29	0	0.58	
17-Jun	106	9.28	8.38	67	5	62	50		31.0	30	0	0.60	
20-Jun	106	9.28	6.88	55	5	50	52		25.0	31	10	0.60	
21-Jun	108	9.45	7.13	57	5	52	56		26.0	27	13	0.48	
22-Jun	106	9.28	6.38	51	5	46	41		23.0	17	0	0.41	
23-Jun	106	9.28	7.13	57	5	52	48		26.0	20	0	0.47	
24-Jun	104	9.10	7.50	60	5	55	57		27.5	29	7	0.51	
27-Jun	105	9.19	6.75	54	5	49	55		24.5	25	7	0.45	
28-Jun	105	9.19	7.00	56	5	51	51		25.5	19	18	0.37	
29-Jun	105	9.19	7.25	58	5	53	45		26.5	25	13	0.56	
30-Jun	105	9.19	5.63	45	5	40	36		20.0	20	4	0.56	

Table 11a: Maintenance Trending – VT-27, June 2011

Date	Mission Capable Reporting Status (MCRS)	Allowable X's / hour	Recommended (max) X's / hour	Issuable Aircraft	Detachment Aircraft	Homeguard Issuable A/C	# T-34's issued	T-34 X's	Homeguard Issuable (VT-27)	# T-34's issued (VT-27)	ACNA (VT-27)	VT-27 % of T-34's	T-34 X's / Issued
1-Jul	105	9.19	5.25	42	5	37	37		18.5	19	4	0.51	
5-Jul	105	9.19	6.13	49	5	44	47		22.0	21	12	0.45	
6-Jul	105	9.19	5.88	47	5	42	41		21.0	16	21	0.39	
7-Jul	106	9.28	6.00	48	5	43	37		21.5	18	15	0.49	
8-Jul	106	9.28	6.75	54	7	47	43		23.5	16	20	0.37	
11-Jul	106	9.28	6.75	54	5	49	44		24.5	25	11	0.57	
12-Jul	105	9.19	6.13	49	5	44	47		22.0	27	2	0.57	
13-Jul	105	9.19	6.38	51	5	46	40		23.0	19	10	0.48	
14-Jul	105	9.19	6.50	52	5	47	41		23.5	21	8	0.51	
15-Jul	105	9.19	7.38	59	5	54	46		27.0	23	2	0.50	
18-Jul	105	9.19	7.88	63	4	59	57		29.5	30	3	0.53	
19-Jul	104	9.10	7.00	56	4	52	50		26.0	27	1	0.54	
20-Jul	104	9.10	7.13	57	4	53	48		26.5	23	3	0.48	
21-Jul	104	9.10	6.38	51	4	47	40		23.5	23	10	0.58	
22-Jul	104	9.10	6.38	51	4	47	42		23.5	22	21	0.52	
25-Jul	104	9.10	6.25	50	3	47	40		23.5	23	7	0.58	
26-Jul	104	9.10	5.75	46	3	43	41		21.5	22	16	0.54	
27-Jul	105	9.19	6.50	52	3	49	47		24.5	25	11	0.53	
28-Jul	105	9.19	5.38	43	3	40	37		20.0	18	18	0.49	
29-Jul	105	9.19	6.25	50	3	47	13		23.5	6	0	0.46	

Table 11b: Maintenance Trending – VT-27, July 2011

Date	Mission Capable Reporting Status (MCRS)	Allowable X's / hour	Recommended (max) X's / hour	Issuable Aircraft	Detachment Aircraft	Homeguard Issuable A/C	# T-34's issued	T-34 X's	Homeguard Issuable (VT-27)	# T-34's issued (VT-27)	ACNA (VT-27)	VT-27 % of T-34's	T-34 X's / Issued
1-Aug	105	9.19	6.63	53	3	50	44		25.0	25	15	0.57	
2-Aug	105	9.19	5.88	47	3	44	42		22.0	22	27	0.52	
3-Aug	105	9.19	5.63	45	3	42	40		21.0	22	35	0.55	
4-Aug	105	9.19	5.88	47	3	44	39		22.0	19	23	0.49	
5-Aug	105	9.19	5.00	40	3	37	34		18.5	20	26	0.59	
8-Aug	105	9.19	4.88	39	3	36	41		18.0	23	18	0.56	
9-Aug	105	9.19	5.75	46	3	43	28		21.5	25	6	0.89	2.46
10-Aug	106	9.28	5.63	45	3	42	39		21.0	27	2	0.69	1.77
11-Aug	106	9.28	4.63	37	3	34	22		17.0	12	0	0.55	2.36
12-Aug	107	9.36	6.38	51	3	48	20		24.0	10	0	0.50	2.30
15-Aug	107	9.36	8.63	69	2	67	61		33.5	31	10	0.51	2.48
16-Aug	107	9.36	6.13	49	3	46	61	134	23.0	35	6	0.57	2.20
17-Aug	107	9.36	8.00	64	3	61	58	119	30.5	35	8	0.60	2.05
18-Aug	106	9.28	8.25	66	3	63	59	130	31.5	31	4	0.53	2.20
19-Aug	106	9.275	8.00	64	0	64	61	124	32	38	0	0.62	2.03
22-Aug	107	9.3625	8.13	65	0	65	60	126	32.5	36	0	0.60	2.10
23-Aug	105	9.19	7.38	59	0	59	65	131	29.5	36	0	0.55	2.02
24-Aug	107	9.36	8.75	70	0	70	65	122	35.0	37	4	0.57	1.88
25-Aug	106	9.28	9.00	72	0	72	67	99	36.0	47	0	0.70	1.48
26-Aug	106	9.28	8.13	65	0	65	31	41	32.5	20	0	0.65	1.32
29-Aug	106	9.28	7.25	58	0	58	67	142	29.0	37	4	0.55	2.12
30-Aug	107	9.36	8.50	68	0	68			34.0				
31-Aug	107	9.36		73	0	73			36.5				

Table 11c: Maintenance Trending – VT-27, August 2011