



**SUBJ:** General Standard Operating Procedures

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This order prescribes the organization, functions, procedures, and policies of the VATUSA Air Traffic Control System Command Center (vATCSCC). Controllers performing Command Center functions are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations not covered by it.

The order consists of the following parts:

- a. Part 1 contains information regarding the organization and functions of the Command Center.
- b. Parts 2 and 3 contain information regarding the procedures and policies of the Command Center.

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# Part 1. BASIC

## Chapter 1. General

### Section 1. Introduction

#### 1.1.1. PURPOSE OF THIS ORDER

This order provides instructions, standards, and guidance for the operation of the Virtual Air Traffic Control System Command Center.

- a. Part 1 contains general information regarding the Command Center.
- b. Part 2 contains information regarding the organization and functions of the Command Center.
- c. Part 3 contains information regarding the procedures and policies of the Command Center.

#### 1.1.2. AUDIENCE

This order applies to all VATUSA controllers performing traffic management duties under the direction of the Command Center.

#### 1.1.3. WHERE TO FIND THIS ORDER

This order can be found on the VATUSA website at <https://vatusa.net>.

#### 1.1.4. WHAT THIS ORDER CANCELS

This order cancels VATUSA 7210.35B.

#### 1.1.5. RECOMMENDATIONS FOR PROCEDURAL CHANGES

The responsibility associated with processing and coordinating revisions to this order is delegated to the National Operations Manager.

- a. Controllers should submit recommended changes in procedures to facility management.
- b. Proposed changes must be submitted to [vatusa9@vatusa.net](mailto:vatusa9@vatusa.net) and [vatusa14@vatusa.net](mailto:vatusa14@vatusa.net). The submission should include a description of the recommended change, and the proposed language to be used in the order.

#### 1.1.6. DISTRIBUTION

This order is distributed to all VATUSA facilities and controllers.

## Section 2. Policy Use

### 1.2.1. POLICY

This order prescribes information necessary to effectively operate and administer traffic management services to VATUSA air traffic control facilities. When conflicts arise between its provisions and those individual air traffic control facilities, the appropriate Regional Manager (RM) must be contacted to provide guidance. In the event that the RM is unavailable, the Command Center instruction must be abided by.

### 1.2.2. WORD MEANINGS

As used in this order:

- a. "Shall" or "must" means a procedure is mandatory.
- b. "Should" means a procedure is recommended.
- c. "May" and "need not" mean a procedure is optional.
- d. "Will" indicates futurity, not a requirement for application of a procedure.
- e. "Shall not" or "must not" means a procedure is prohibited.
- f. Singular words include the plural, and plural words include the singular.

# **Part 2. TRAFFIC MANAGEMENT SYSTEM**

## **Chapter 2. Traffic Management National, Center, and Terminal**

### **Section 1. Organization Missions**

#### **2.1.1. TRAFFIC MANAGEMENT SYSTEM MISSION**

The Traffic Management System (TMS) mission is to balance air traffic demand with system capacity to ensure the maximum efficient utilization of the National Airspace System (NAS). A safe, orderly, and expeditious flow of traffic while minimizing delays, is fostered through continued analysis, coordination, and dynamic utilization of TM initiatives and programs.

#### **2.1.2. VATUSA AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER**

The Command Center monitors and manages the flow of air traffic throughout the NAS, producing a safe, orderly, and expeditious flow of traffic while minimizing delays.

#### **2.1.3. TRAFFIC MANAGEMENT UNIT (TMU) MISSION**

TMUs monitor and balance traffic flows within their areas of responsibility in accordance with traffic management directives.

## Section 2. Organizational Responsibilities

### 2.2.1. COMMAND CENTER

The Command Center is delegated the authority to direct the operation of the traffic management system. All TMUs must assist the Command Center, as directed, to ensure system efficiency and effectiveness without compromising safety. The Command Center must, in conjunction with local TMUs, users, and weather information, as appropriate:

- a. Implement national traffic management programs (e.g., NRP, HAR).
- b. Monitor and analyze system components and weather patterns for potential system impact.
- c. Be the focal point for regulating the daily traffic management functions.
- d. Determine when NAS capacity is or will likely be reduced to the extent that the implementation of a traffic management initiative (TMI) is required.
- e. Recommend and approve alternatives when national initiatives are not appropriate.

- f. Be the final approving authority regarding all interfacility traffic management initiatives.

**NOTE-**

*TMUs continue to retain the latitude and authority to tactically adjust the flow of traffic within their own facilities. These local actions include sector to sector mile-in-trail (MIT) restrictions, local airport fix balancing, and other such adjustments required to balance flows within their area of responsibility.*

- g. Evaluate proposed traffic management initiatives to ensure appropriateness.
- h. Ensure air traffic facilities are appropriately staffed for potential system impacts. The Command Center has the authority to utilize members of the VATUSA ACE Team to supplement coverage when necessary.

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### 2.2.2. FIELD FACILITIES

All actions initiated by the TMU must be in accordance with standard operating procedures, applicable directives, and approved traffic management position descriptions. The TMU is delegated the authority to direct traffic flows and implement approved traffic management initiatives in conjunction with, or as directed by the Command Center.

Air traffic facilities must ensure that:

- a. A TMU is established at ARTCCs. Terminal TMUs may be established as needed.
- b. Delays are reported as specified in 2.4.4.
- c. The Command Center is provided with all formal agreements and directives that relate to interfacility traffic management programs, initiatives, and procedures.
- d. Actively coordinate and communicate traffic management actions with adjacent TMUs through the Command Center to optimize traffic flows throughout the NAS as timely as practical.
- e. In conjunction with ATCS' and the Command Center, develop, implement, monitor, and analyze traffic management programs, procedures, and initiatives that are specific to the facility's area of responsibility.

### **NOTE-**

*Facility TMU jurisdiction is maximally limited to their designated airspace boundaries, laterally and vertically. Facility TMU personnel are neither expected nor permitted to implement TMs for facilities other than their own. Further, inter-facility TMs only apply as far as the next adjacent downstream or upstream facility. In order to implement TMs over airspace elements larger than these boundaries, they must be passed back (i.e., TMs must not "skip" in-between facilities).*

*Example: ZTL requests 15 MIT from ZDC for traffic on J48. These facilities are neighbors and J48 traverses their common boundary, so this request is permitted.*

*Example: ZAU requests call-for-release (CFR) for traffic departing ZLC destined ORD airport. These facilities do not share a common boundary, so this request is **not allowed**.*

- f. Develop departure and arrival strategies and deliver aircraft to achieve the Airport Arrival Rate (AAR) and Departure Rate (ADR). Airport Arrival Rate is defined as a dynamic parameter specifying the number of arrival aircraft that an airport, in conjunction with terminal airspace, can accept under specific conditions throughout any consecutive sixty (60) minute period.



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- 1.** The Command Center is responsible for managing the VATUSA runway database which is the single source for deterministic AAR and ADR in the NAS.
- g.** Periodically analyze and review procedures to ensure effectiveness and adherence to programs/initiatives, and, when necessary, adjust. Cancel traffic management initiatives promptly when no longer needed.
- h.** Oversee departure fix balancing to ensure sector efficiency into the next facility's airspace.
- i.** Ensure optimum airspace/runway configurations.

## Section 3. Line of Authority

### 2.3.1. COMMAND CENTER

- a. The National Operations Manager (NOM) (USA9) is responsible for managing the Command Center at the operational level.
- b. Each National Traffic Management Officer (NTMO) and National Traffic Management Specialist (NTMS) is under the general supervision of the NOM. NTMOs and NTMS' are delegated regions of responsibility to which they manage the traffic flows in conjunction with local TMUs.
- c. In the absence of the NTMO/NTMS, the Command Center will be designated the appropriate traffic management authority.

### 2.3.2. NTMO/NTMS AREAS OF RESPONSIBILITY

- a. The Command Center manages the traffic management system at the national and regional levels. Five (5) areas are delegated to the NTMO/NTMS to provide a higher level of service to the affected area. The regions correspond with the existing VATUSA ones.
- b. On the network, the callsigns to be used by any TMU personnel must follow this format, joined with underscores ( \_ ) per network convention: **Facility** + **Position** + **TMU** (the callsign must end with **TMU**).
- c. See Table 1 for proper construction of the callsign. Specialties marked (\*) should only be used when there is ambiguity due to identical prefixes for facilities. The "CCC", "AAA", etc. in the Callsign column must be replaced by the appropriate code for the facility (e.g., New York ARTCC, En route coordinator (only) would be **NY\_E\_TMU**; DFW TRACON, Terminal Departure coordinator, Metering specialty would be **REG\_DM\_TMU**).

- d. In instances when multiple people are assigned a single specialty (e.g., three Boston TRACON departure coordinators on the reroute specialty), use of the **X** (Special) and **Y** (Other) specialty codes should be used, in that order. The controller ATIS must include a description of the TMU position and specialty when using the **X** or **Y** specialty code.
1. In the case that this creates additional conflicting callsigns, replace any specialty codes with incrementing numbers, starting with **1** (e.g., the fourth person in this position—after exhausting the **BOS\_DR\_TMU** [first], **BOS\_DX\_TMU** [second], and **BOS\_DY\_TMU** [third]—should use the callsign **BOS\_D1\_TMU**). The controller ATIS must include a description of the TMU position and specialty for all numerical specialty codes.
- e. Due to network limitations, if a facility's only dedicated TMC is also actively working a control position, they are not required to use the TMU callsign in lieu of the normal control callsign.

**NOTE-**

*The usage of the VATUSA staff call sign does not imply a VATUSA staff position. These callsigns operate under the authority of the Command Center and are only allowed during designated Command Center events.*

Table 1 Authorized TMU Callsigns

Facility	Position	Position Description	Specialty	Specialty Description	Callsign
<b>DCC</b>	<b>9</b>	<b>Primary</b> NTMO or NTMS	<b>4</b> <b>5</b> <b>6</b> <b>7</b> <b>8</b>	West Region South Central Region Midwest Region Northeast Region Southeast Region	DCC_94_TMU DCC_95_TMU DCC_96_TMU DCC_97_TMU DCC_98_TMU
					<b>8</b> <b>7...3</b>
	<b>9</b>	National Operations Manager (NOM)			DCC_9_TMU
	<b>14</b>	Operations Planner (OP)			DCC_14_TMU
<b>VATUSA</b>	<b>9</b>	<b>Social Media Team use only</b>	<b>9</b>	Social Media Team	USA_99_TMU
<b>CTR</b>	<b>E</b>	<b>En route</b> coordinator ( <b>only</b> ) or <b>Supervisory</b> Traffic Management Coordinator (STMC) ( <b>only</b> )			CCC_E_TMU
		<b>En route</b> coordinator	<b>A</b> <b>D</b> <b>F</b> <b>M</b> <b>O</b> <b>P</b> <b>R</b> <b>W</b> <b>X</b> <b>Y</b> <b>Z</b>	Arrival specialty Departure specialty TBFM/TBM/TOS specialty Metering specialty Military specialty CFR/EDCT specialty Reroute specialty SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	CCC_EA_TMU CCC_ED_TMU CCC_EF_TMU CCC_EM_TMU CCC_EO_TMU CCC_EP_TMU CCC_ER_TMU CCC_EW_TMU CCC_EX_TMU CCC_EY_TMU CCC_EZ_TMU
<b>APP DEP</b>	<b>A</b>	Terminal <b>Arrival</b> coordinator ( <b>only</b> ) or <b>Consolidated</b> Terminal coordinator			AAA_A_TMU
		Terminal <b>Arrival</b> coordinator or <b>Consolidated</b> Terminal coordinator	<b>A*</b> <b>F</b> <b>M</b> <b>O</b> <b>P</b> <b>R</b> <b>W</b> <b>X</b> <b>Y</b> <b>Z</b>	Arrival specialty* TBFM/TBM/TOS specialty Metering specialty Military specialty CFR/EDCT specialty Reroute specialty SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	AAA_AA_TMU* AAA_AF_TMU AAA_AM_TMU AAA_AO_TMU AAA_AP_TMU AAA_AR_TMU AAA_AW_TMU AAA_AX_TMU AAA_AY_TMU AAA_AZ_TMU
	<b>D</b>	Terminal <b>Departure</b> coordinator ( <b>only</b> )			AAA_D_TMU
		Terminal <b>Departure</b> coordinator	<b>D*</b> <b>F</b> <b>M</b> <b>O</b> <b>P</b> <b>R</b> <b>W</b> <b>X</b> <b>Y</b> <b>Z</b>	Departure specialty* TBFM/TBM/TOS specialty Metering specialty Military specialty CFR/EDCT specialty Reroute specialty SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	AAA_DD_TMU* AAA_DF_TMU AAA_DM_TMU AAA_DO_TMU AAA_DP_TMU AAA_DR_TMU AAA_DW_TMU AAA_DX_TMU AAA_DY_TMU AAA_DZ_TMU
<b>TWR GND DEL</b>	<b>T G C</b>	<b>Tower</b> coordinator ( <b>only</b> ) or <b>Consolidated</b> Local coordinator <b>Ground</b> coordinator ( <b>only</b> ) <b>Delivery</b> coordinator ( <b>only</b> )			TTT_T_TMU TTT_G_TMU TTT_C_TMU

	<b>T</b>	<b>Tower</b> coordinator or <b>Consolidated</b> Local coordinator	<b>A</b> <b>D</b> <b>F</b> <b>M</b> <b>O</b> <b>P</b> <b>R</b> <b>W</b> <b>X</b> <b>Y</b> <b>Z</b>	Arrival specialty Departure specialty TBFM/TBM/TOS specialty Metering specialty Military specialty CFR/EDCT specialty Reroute specialty SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	<a href="#">TTT_TA_TMU</a> <a href="#">TTT_TD_TMU</a> <a href="#">TTT_TF_TMU</a> <a href="#">TTT_TM_TMU</a> <a href="#">TTT_TO_TMU</a> <a href="#">TTT_TP_TMU</a> <a href="#">TTT_TR_TMU</a> <a href="#">TTT_TW_TMU</a> <a href="#">TTT_TX_TMU</a> <a href="#">TTT_TY_TMU</a> <a href="#">TTT_TZ_TMU</a>
	<b>G</b>	<b>Ground</b> coordinator	<b>A</b> <b>D</b> <b>F</b> <b>M</b> <b>O</b> <b>P</b> <b>R</b> <b>W</b> <b>X</b> <b>Y</b> <b>Z</b>	Arrival specialty Departure specialty TBFM/TBM/TOS specialty Metering specialty Military specialty CFR/EDCT specialty Reroute specialty SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	<a href="#">TTT_GA_TMU</a> <a href="#">TTT_GD_TMU</a> <a href="#">TTT_GF_TMU</a> <a href="#">TTT_GM_TMU</a> <a href="#">TTT_GO_TMU</a> <a href="#">TTT_GP_TMU</a> <a href="#">TTT_GR_TMU</a> <a href="#">TTT_GW_TMU</a> <a href="#">TTT_GX_TMU</a> <a href="#">TTT_GY_TMU</a> <a href="#">TTT_GZ_TMU</a>
	<b>C</b>	<b>Delivery</b> coordinator	<b>A</b> <b>D</b> <b>F</b> <b>M</b> <b>O</b> <b>P</b> <b>R</b> <b>W</b> <b>X</b> <b>Y</b> <b>Z</b>	Arrival specialty Departure specialty TBFM/TBM/TOS specialty Metering specialty Military specialty CFR/EDCT specialty Reroute specialty SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	<a href="#">TTT_CA_TMU</a> <a href="#">TTT_CD_TMU</a> <a href="#">TTT_CF_TMU</a> <a href="#">TTT_CM_TMU</a> <a href="#">TTT_CO_TMU</a> <a href="#">TTT_CP_TMU</a> <a href="#">TTT_CR_TMU</a> <a href="#">TTT_CW_TMU</a> <a href="#">TTT_CX_TMU</a> <a href="#">TTT_CY_TMU</a> <a href="#">TTT_CZ_TMU</a>
<b>FSS</b> or <b>Other</b>	<b>F</b> <b>Q</b>	<b>FSS</b> coordinator ( <b>only</b> ) <b>Other</b> coordinator ( <b>only</b> )			<a href="#">FFF_F_TMU</a> <a href="#">QQQ_Q_TMU</a>
	<b>F</b>	<b>FSS</b> coordinator	<b>A</b> <b>D</b> <b>F</b> <b>M</b> <b>N</b> <b>O</b> <b>P</b> <b>R</b> <b>W</b> <b>X</b> <b>Y</b> <b>Z</b>	Arrival specialty Departure specialty TBFM/TBM/TOS specialty Metering specialty Oceanic specialty Military specialty CFR/EDCT specialty Reroute specialty SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	<a href="#">FFF_FA_TMU</a> <a href="#">FFF_FD_TMU</a> <a href="#">FFF_FF_TMU</a> <a href="#">FFF_FM_TMU</a> <a href="#">FFF_FN_TMU</a> <a href="#">FFF_FO_TMU</a> <a href="#">FFF_FP_TMU</a> <a href="#">FFF_FR_TMU</a> <a href="#">FFF_FW_TMU</a> <a href="#">FFF_FX_TMU</a> <a href="#">FFF_FY_TMU</a> <a href="#">FFF_FZ_TMU</a>
	<b>Q</b>	<b>Other</b> coordinator	<b>A</b> <b>C</b> <b>D</b> <b>F</b> <b>I</b> <b>L</b> <b>M</b> <b>N</b> <b>O</b> <b>P</b> <b>R</b> <b>S</b> <b>T</b>	Arrival specialty Communications specialist Departure specialty TBFM/TBM/TOS specialty International specialist Flight data specialist Metering specialty Oceanic specialty Military specialty CFR/EDCT specialty Reroute specialty Supervisor (VATSIM) Training staff	<a href="#">QQQ_QA_TMU</a> <a href="#">QQQ_QC_TMU</a> <a href="#">QQQ_QD_TMU</a> <a href="#">QQQ_QF_TMU</a> <a href="#">QQQ_QI_TMU</a> <a href="#">QQQ_QL_TMU</a> <a href="#">QQQ_QM_TMU</a> <a href="#">QQQ_QN_TMU</a> <a href="#">QQQ_QO_TMU</a> <a href="#">QQQ_QP_TMU</a> <a href="#">QQQ_QR_TMU</a> <a href="#">QQQ_QS_TMU</a> <a href="#">QQQ_QT_TMU</a>

			V W X Y Z	Systems specialist SWAP/Weather specialty Special (specify in ATIS) Other (specify in ATIS) Reserved for VATUSA	QQQ_QV_TMU QQQ_QW_TMU QQQ_QX_TMU QQQ_QY_TMU QQQ_QZ_TMU
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## Section 4. Coordination

### 2.4.1. COORDINATION

Coordinate pertinent information through verbal and automated methods. At times, it may be required to utilize both methods to ensure complete communication and situational awareness. Utilize communication techniques that emphasize collaborative decision making (CDM). Use tools that provide for common situational awareness to the extent possible.

### 2.4.2. RESPONSIBILITIES

**a.** All facilities must:

1. Communicate and coordinate events that may have an impact on the NAS.
2. Use the National Traffic Management Log (NTML) to document events and traffic management initiatives.

**b.** The Command Center must:

1. Communicate directly with facility representatives for a critique of operations and future plans for traffic management.
2. Coordinate directly with facility representatives on plans, procedures, and operations that affect interfacility traffic flows.

3. Utilize weather information forecasts to determine if any significant impact on the NAS will occur.

4. Coordinate with the TMUs in the day-to-day operations of the NAS and resolve operational TM disagreements between facilities.

5. Initiate telcons and hotlines with users and facilities, as necessary, to obtain input and to provide operational information, as well as other significant events affecting the NAS.

**c.** ARTCC TMUs and terminals must:

1. Advise the Command Center of situations and conditions that may require implementation of TMIs.
2. Present unresolved conflicts between adjacent TMUs to the Command Center for resolution.
3. Notify the Command Center if a significant change in capacity is expected or has occurred.

### 2.4.3. COMMUNICATION PLATFORMS

- a. The Command Center Discord server (located [here](#)) is the primary traffic management coordination location for events. Facilities are expected to have at least two (2) representatives available to answer questions and provide feedback in the planning process.
- b. During the timeframe of an event where the Command Center is active, the VATUSA TeamSpeak is the primary voice coordination location. Facilities are expected to have at least one (1) representative available to answer questions and provide real time information about impacts to their respective airspaces.
- c. Each of these platforms is designed for operational use only. Discussions unrelated to traffic management must not take place on these platforms.
- d. All interdivisional coordination of TMLs must occur through the Command Center Discord, particularly those meeting 2.4.4 criteria.
- e. In addition, per [VATUSA DP003](#), Paragraph 5.3.1, “coordination requests [between facilities who share a common border with other divisions] should be made through the Command Center.”

### **NOTE-**

*In some cases, event personnel from other divisions create specific Discord servers to handle the event. When this happens, every effort should be made to move specific TMU/TMI discussions to the relevant Command Center channel. If this cannot be accomplished, or is overridden by other divisions' policies, then VATUSA facility TMUs must provide updates themselves (periodic is sufficient) in the relevant Command Center channel.*

### 2.4.4. NATIONAL TRAFFIC MANAGEMENT LOG (NTML) REPORTING

- a. The NTML is a running timestamped record of all TMLs and events that have taken place. The log automatically closes and reopens each day. Records are kept for quality assurance and future data needs.
- b. NTML entries must include an entry time in UTC, the valid period it is applicable, the requesting and providing facilities for a restriction, and a concise description.
- c. Facilities must report and log the following to the Command Center:
  1. Miles-in-trail (MIT) restrictions of 15 NM or more between facilities
  2. MIT restrictions of 25 NM or more within an ARTCC or CF
  3. Minutes-in-trail (MINIT) restrictions of 7 minutes or longer within or between facilities

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4. IFR delays of at least 15 minutes for departing or arriving aircraft on any movement area and in the air
  5. Initiation and cancellation of airborne holding
  6. Internal Ground Stop (GS, an internal GS is when a facility stops departures from origins within their area of responsibility) lasting 15 minutes or longer
  7. STOP restrictions between facilities
  8. Severe Weather Avoidance Plan (SWAP) and/or Coded Departure Route (CDR) implementation.
- d. Facility TMUs are expected to log their own NTML entries to the maximum extent possible.
  - e. The Command Center is available to assist with entering NTML information on facility's behalf, or to help facilities format and publish them.



## Section 5. TMU Operating Levels

### 2.5.1. DEFINITION

- a. The Command Center will identify VATUSA-sponsored events for which Command Center staffing and services will be provided. Additionally, facilities may request the activation of the Command Center for events that they feel would benefit from traffic management services.
- b. Four (4) TMU Operating Levels exist, determined by the expected impact an event will have on the NAS:
  1. OpLevel 1 – Steady State
  2. OpLevel 2 – Localized Impact
  3. OpLevel 3 – Regional Impact
  4. OpLevel 4 – NAS-wide Impact
- a. The NOM has final determination of the TMU OpLevel if an event falls outside of the predefined requirements.

### 2.5.2. TMU OPLEVEL 1 – STEADY STATE

- a. TMU OpLevel 1 is characterized by no significant events or impacts to the NAS requiring the use of TMU coordination.
- b. Facilities are exempt from data-reporting requirements unless specifically requested by the Command Center.
- c. Facility TMUs may voluntarily continue data-reporting as they wish. In instances when the TMU OpLevel, in the opinion of the facility TMU, is not reflective of the actual NAS-wide situation, consultation with the Command Center is required and additional data-reporting is encouraged.

### 2.5.3. TMU OPLEVEL 2 – LOCALIZED IMPACT

- a. TMU OpLevel 2 is characterized by a NAS state or event that features two (2) or fewer facilities (i.e., a crossfire between ZTL and ZJX)
- b. Facilities are required to notify the Command Center when any of the conditions in 2.4.4 are met.
- a. The Command Center will provide staffing at the regional level.

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#### **2.5.4. TMU OPLEVEL 3 – REGIONAL IMPACT**

- a. TMU OpLevel 3 is characterized by a NAS state or event that features or heavily impacts three (3) or more facilities (e.g., Friday Night Operations, significant weekend events).
- b. Facilities are required to perform the duties specified in TMU OpLevel 2.
- c. Facilities should provide a dedicated Supervisory Traffic Management Coordinator (STMC). This individual is responsible for:
  - 1. Overseeing and leading local TMU operations
  - 2. Assisting the Command Center with strategic and tactical operations and coordination
  - 3. Provide local expertise to determine benefits and downsides to proposed TMs
  - 4. Ensuring the Command Center and local ARTCC/CF personnel are apprised of any relevant information
  - 5. Being the main point of contact for the facility.

- d. The Command Center will provide the following staffing:

- 1. NOM
- 2. NTMO or NTMS

#### **2.5.5. TMU OPLEVEL 4 – NAS-WIDE IMPACT**

- a. TMU OpLevel 4 is characterized by a NAS state or an event that involves a significant number of facilities, has a significant impact on the NAS, involves high-complexity operations, or is of an extended duration (e.g., Cross the Pond, WorldFlight).
- b. All facilities should provide TMU representatives during the planning and execution phases, including, but not limited to route meetings, strategic planning telecons, hotline activations, and other meetings that relate to the event.
- c. To the maximum extent possible, all affected facilities and the Command Center will provide the highest level of staffing appropriate.

# Chapter 3. Command Center Procedures

## Section 1. Traffic Management Initiatives

### 3.1.1. GENERAL

- a. Traffic Management Initiatives (TMIs) are techniques used to manage demand with capacity in the NAS.
  - 1. Properly coordinated and implemented TMIs are an important tool in the air traffic system. These initiatives contribute to the safe and orderly movement of air traffic.
  - 2. Any TMI creates impact on users. It is imperative to consider this impact and implement only those initiatives necessary to support system integrity.
- b. Dynamic TMIs are those imposed on an as-needed basis to manage fluctuations in traffic demands.

### 3.1.2. BACKGROUND

Some TMIs may also be considered “control instructions” or procedures; the difference is determined by the magnitude of the event, the coordination process, and the length of time it is implemented. TMIs may also be referred to as “restrictions”, especially in conjunction with miles-in-trail.

### 3.1.3. POLICY

To maintain the integrity of the air traffic system, facility TMU personnel must employ the least restrictive methods available to minimize delays.

### 3.1.4. TYPES OF TMI

- a. Altitude
  - 1. Utilized to segregate different flows of traffic, or to distribute the number of aircraft requesting access to a specified geographical region.
  - 2. Also known as:
    - (a) Tunneling – indicates traffic will be descended prior to the normal descent point at the arrival airport to remain clear of an impacted airspace.
    - (b) Capping – indicates aircraft will be cleared to an altitude lower than their requested altitude until clear of a particular impacted airspace. Capping may apply to the initial segment or all segments of a flight.

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- b.** Miles-in-trail (MIT) – the number of miles required between aircraft that meet specific criteria. The criteria may be separation, airport, fix, altitude, sector, or route specific. MIT are used to apportion traffic into manageable flows, as well as provide space for additional traffic (merging or departing) to enter the flow of traffic.
- c.** Minutes-in-trail (MINIT) – the number of minutes required between successive aircraft. It is normally used in a non-radar environment, or when transitioning to a non-radar environment, or additional spacing is required due to aircraft deviating around weather.
- d.** Fix balancing. Assign an aircraft a fix other than in the filed flight plan in the arrival or departure phase of flight to equitably distribute demand.
- e.** Sequencing Programs. These programs are designed to achieve a specified interval between aircraft; they may be software generated or determined by TM personnel. Different types of programs accommodate different phases of flight.
  - 1.** Departure Sequencing Program (DSP) – Assigns a departure time to achieve a constant flow of traffic over a common point. Normally, this involves departures from multiple airports.
  - 2.** En route Sequencing Program (ESP) – departure time assigned to aircraft to facilitate integration in the en route stream.
  - 3.** Arrival Sequencing Program (ASP) – fix crossing times assigned to aircraft destined to the same airport.
  - 4.** Time-Based Metering (TBM) – ATC personnel meet a scheduled time at which airborne aircraft should cross a metering point or arc.
- f.** Reroutes:
  - 1.** Reroutes are ATC routings other than filed flight plans. They are issued to:
    - (a)** Ensure aircraft operate with the flow of traffic.
    - (b)** Avoid congested airspace.
    - (c)** Avoid areas of known weather or where aircraft are deviating or refusing to fly.
- g.** Ground Delay Programs (GDP)
- h.** Airspace Flow Programs (AFP)
- i.** Ground Stops (GS)

### 3.1.5. TMI DATA

The efficiency of the NAS is enhanced when all participants have access to the same data. Utilization of shared technology is highly encouraged to enhance the coordination process.

### 3.1.6. PROCESSING TMI

- a. Facilities must identify the need for TMI, explore alternatives, and prepare for a justification.
- b. Requesting facilities must be prepared to discuss proposed TMIs at the request of the Command Center and/or providing facilities prior to implementation.
- c. Facility TMUs must continuously monitor and evaluate TMIs, making adjustments as necessary, including cancellation.
- d. Facilities should prepare for and regularly conduct post-event analysis and review, documenting feedback and lessons learned.

### 3.1.7. TMI APPROVAL AUTHORITY

- a. The Command Center is the approval authority for all en route and designated terminals' interfacility TMIs, except as identified in 2.4.4. TMIs that are expected to result in reportable delays must be coordinated through the Command Center.
- b. Facility TMUs are responsible for managing and approving internal TMIs, including those between underlying TRACONS/RAPCONs/Towers when implementation is not expected to incur reportable delays.

## Section 2. Transgression Reporting

### 3.2.1. FACILITY MISSION

The overall mission of each facility is to provide the best possible service to both users and other facilities. A team effort is needed to have a successful event for all parties.

### 3.2.2. TRANSGRESSION REPORTING

- a. When transgressions are observed, they should be reported to the Command Center using the [Transgression Reporting Form](#).
- b. Transgression reporting can be accomplished by any TMU personnel, but not any controller. Controllers shall forward any transgression occurrences to their TMU to be officially reported.
- c. Generally, transgressions that severely impact event operations should be reported, including but not limited to
  1. Multiple significant occurrences of requested restrictions (e.g., MIT, MINIT) not being met.
  2. Unreasonable and unachievable restrictions requests.
  3. Major Letter of Agreement (LOA) or Standard Operating Procedure (SOP) violations.
- d. Good judgment must be applied when considering whether to officially report transgressions to the facility TMU or Command Center.
- e. Facilities should provide all supporting evidence when reporting a transgression report.
- f. To the extent reasonable, internal transgressions should not be elevated or forwarded to the Command Center.
- g. Only authorized Command Center staff and VATUSA staff can view submitted transgressions.

**3.2.3. COMMAND CENTER ACTIONS**

- a. The Command Center will apply due diligence to all received transgression reports and will be responsible for the protection of the information included in the submissions.
- b. The Command Center will use all available resources when determining if a transgression occurred.
- c. Upon completion of the review, the Command Center shall submit its report to the appropriate Regional Manager, the Air Traffic Managers, and any other applicable staff members.

**3.2.4. TRAINING-RELATED TRANSGRESSIONS**

- a. When VATSIM controller policy or other training-related transgressions are identified by the Command Center, the Command Center will forward relevant information to the VATUSA Training Manager (VATUSA3), the appropriate RM, and the appropriate facility Training Administrators (TA) for review.
- b. Upon receipt of the transgression from the Command Center, VATUSA3 is responsible for any actions taken to resolve the transgression.

**NOTE-**

*The Command Center does not determine any action against any controller or facility - rather, the Command Center merely determines the facts and suggests possible solutions.*

## Section 3. PERTI

### 3.3.1. GENERAL

The Command Center revolves around a collaborative decision making (CDM) process called PERTI (Plan, Execute, Review, Train, Improve). Active participation in this program enables the Command Center to constantly evolve to meet the changing demands of VATSIM.

### 3.3.2. PLAN

- a. The ability of the Command Center to provide traffic management services to facilities is bounded by the extent to which it can predict and strategize to address future impact. Data-driven analysis of traffic data and historical event data is the most rigorous method by which strategic planning is achieved.
- b. The Command Center will utilize all available dataset to construct, implement, and adjust the Strategic Plan. This data includes, but is not limited to, prior event replays, internal reports, and publicly available web pages.
- c. The Command Center will ensure that all participating facilities are included in the planning process and informed of the determined goals. Goals should be specific and verifiable - arbitrary goals are not measures of performance.
- d. The Strategic Plan should be constructed and coordinated as far out in the future of the event as necessary and should be re-evaluated when significant changes or developments occur.
- e. The strategic plan should be finalized no later than twenty-four (24) hours prior to the start of the event. Within 24 hours of the event, the Strategic Plan becomes the Operational Plan.



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**3.3.3. EXECUTE**

- a. The strategic planning portion lays the groundwork for a baseline strategy to execute the operational plan. The operational (day-of) goals must be periodically re-evaluated and tactical (real-time) adjustments should be made due to changes in constraints.
- b. The Command Center is responsible for operationalizing the strategic plan with the participating facilities. Facilities should communicate their concerns and help provide tactical adjustment to recommendations.

**3.3.4. REVIEW**

- a. Self-assessment is undertaken by the Command Center upon completion of the event. This process includes assessing the operational goals, analyzing data, measuring the extent to which anticipated goals and constraints were verified, and consolidating the data into an understandable and actionable format.

- b. A Traffic Management Review (TMR) will be publicly provided by the Command Center for all events requiring an operating level of 3 or 4. TMRs may be requested by facility staff for any other events. TMRs consist of:
  1. A general overview of the event.
  2. The Strategic Plan, the Operational Plan, and factors influencing goals.
  3. A data-informed analysis of the implementation, impact, effectiveness, and other characteristics of TMI used.
  4. A summary of identified achievements and vulnerabilities.

**3.3.5. TRAIN AND IMPROVE**

The Command Center will use available information to provide knowledge for the further advancement of controller ability within VATUSA. Traffic Management training will utilize data taken from previous events in order to continually evolve and improve.

## Section 4. ACE Team Usage

### 3.4.1. GENERAL

The primary usage of ACE team members is during events where staffing is not sufficient or unanticipated shortages occur. A secondary usage exists to supplement facility staffing and allowing additional support positions to open. By utilizing these members, facilities can fill gaps and provide a better level of service for both users and other controllers. The Command Center will be actively involved in the decision making process used when determining whether ACE team members are needed.

### 3.4.2. ACE TEAM UTILIZATION

- a. The NOM is responsible for the operational deployment of ACE team members.
- b. The VATUSA Events Manager (USA15) is responsible for the general management, activity tracking, and membership management of the ACE team. Details on specific responsibilities are outlined in the [VATUSA General Events Policy \(DP003\)](#).
- c. Facility Events Coordinators (ECs) may request ACE team to support their events without specific approval from the Command Center; however, notification of ACE team usage is highly recommended.
- d. During TMU OpLevel 3 or 4 events, the Command Center will normally request or verify facilities' existing ACE team usage and expected need for additional ACE team staffing.