Assessing the Impacts of Airspace Security Measures Employed During the 2008 Democratic and Republican National Conventions

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Airspace security measures are employed during certain high-profile events. This paper discusses the airspace security measures employed during two such events: the 2008 Democratic and Republican National Conventions. An assessment was made of several of the impacts that these measures had on the National Airspace System and its users. A comparison of these impacts with those assessed for two previous events, the United Nations General Assembly meetings held in 2007 and 2008 are also presented.

I. Introduction

The Federal Aviation Administration (FAA) plays an important role in maintaining air domain security within the National Airspace System (NAS). Air domain security has received heightened importance since the events of September 11th, 2001. The FAA works closely with other security partners, particularly the Department of Homeland Security (DHS) and the Department of Defense (DoD), to continuously monitor, detect, and respond to any situation that represents a threat to the NAS. Many other security partners at the federal, state, and local levels may also be involved, as needed, depending on the situation.

Maintaining air domain security is a never-ending process. Air domain security partners must maintain vigilance 24 hours a day, every day of the year. Particular attention to air domain security is given during high-profile events, such a presidential inauguration, the United Nations General Assembly meetings, and the Super Bowl. During such events special airspace security measures are employed. When such measures are used, it is the FAA's unique responsibility to ensure a balance is struck between keeping impacts of the security measures on the users of the NAS to a minimum while ensuring that the measures fulfill their intended purpose related to security.

In order to strike a balance between airspace security and airspace efficiency, the FAA needs to understand the impacts air domain security measures have on NAS users. Gaining such an understanding is important when the FAA considers any adjustments to proposed security measures, where possible, that might result in reducing impacts on the NAS users. Some security measures are employed continuously, such as those for the National Capitol Region, and the impacts can be monitored and measured over long periods of time. Other security measures, such as those employed for special events, are much shorter in duration, and typically employed in different locations. Those factors present a challenge in understanding the impacts those measures employed during special events have on NAS users, particularly when trying to assess any trends in the impacts.

The Democratic National Convention (DNC) was held in Denver, Colorado from August 25th to August 28th, 2008. The Republican National Convention (RNC) was held in Minneapolis-Saint Paul, Minnesota from September 1st to September 4th, 2008. Before and during these events, a number of state and national leaders arrived via air transportation to participate. The importance of these events to our

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nation's democratic process, coupled with the presence of national leaders, necessitated implementing special airspace security measures. These events presented two opportunities to measure the impacts of airspace security measures during a special event. This paper discusses several of the airspace security measures employed during the DNC and the RNC. In addition to discussing the impacts that DNC and RNC airspace measures had on the NAS and its users, this paper also examines some of the airspace security incidents that occurred during these events. These incidents are compared with incidents that were examined during the United Nations General Assembly meetings held in 2007 and 2008[1,2].

II. Background

The DNC and RNC are high-profile events that require special airspace security measures to ensure the safety and security of the participants, as well as the venues hosting these events. Both events were designated by the DHS as National Special Security Events (NSSEs). Because these events were designated as NSSEs, the United States Secret Service (USSS) served as the lead agency in charge of security design, planning, and implementation. Events are designated as NSSEs based on the following factors[3]:

- Attendance by the United States Government and/or foreign dignitaries
- Size of the event
- Significance of the event

The NSSE designation was originally established by Presidential Decision Directive-62 (PDD-62) by President William J. Clinton in May 1998[4]. Further mandates for NSSEs are contained in Homeland Security Presidential Directive 15/National Security Presidential Directive 47 (HSPD-15/NSPD-47)[5] . Although DHS did not exist when NSSEs were first established, declaring an NSSE allows DHS to assume federal control of security measures and release federal funding for support of such events. NSSEs include events such as Super Bowl Games, Inaugural Addresses, the Olympic Games (when held in the United States), State funerals (e.g., for Presidents Ronald W. Reagan and Gerald R. Ford), Democratic and Republican National Conventions, and United Nations General Assembly meetings. Over 25 NSSEs have been designated since 1998.

For high-profile events such as the DNC and RNC, it is desirable to strike a delicate balance between establishing airspace security measures and maintaining the efficiency of the NAS. There is a need to provide air domain security for the DNC and RNC, while maintaining the continuity of air commerce and air travel.

The FAA's System Operations Security organization, together with air domain security mission partners from the DHS and the DoD, planned extensively for months to ensure appropriate airspace security measures were coordinated, implemented, and monitored for the DNC and RNC events. To ensure the airspace around the DNC and RNC was secure, airspace restrictions were implemented for both venues. These restrictions were designed to provide a safe and secure environment, while allowing fair and equitable access to airspace users to the greatest extent possible. These restrictions focused on allowing commercial and General Aviation (GA) flight operations access to the airspace, while minimizing impact on private pilots.

III. Security Measures Employed

Air domain security measures were employed by the FAA and its security partners for both the DNC and the RNC. For both events, Temporary Flight Restrictions (TFRs) were employed in the airspace above the event location[6]. A TFR is the designation of restricted access or rules for operating within certain volumes of airspace. A TFR comprises an airspace volume defined by both lateral boundaries and an altitude ceiling within which these TFRs apply. In some instances, the TFR might be fairly simple—the lateral boundary defined by a basic geometric shape such as a circle, the floor being the earth's surface, and the ceiling being a single altitude. In other cases, the TFR might be more complicated with multiple overlapping circles (the outer boundary containing several arcs) and may include "cutouts" of

airspace not included in the TFR. The TFR may also have multiple altitudes specified. In addition, a TFR has a time period when it is active—defined by an effective date and time and an expiration date and time. Lastly, the TFR has operating instructions that define which, if any, flights may use the airspace during the period the TFR is active and how they must operate within the TFR airspace, and which flights must not operate within the TFR. For example, a flight may be required to use a beacon transponder with Mode C altitude reporting capability and be in radio contact with an air traffic control facility before entering and while operating within the TFR.

For the RNC, several gateway airports were also established for screening of GA flights prior to their arrival at several airports inside the TFR airspace.

During the course of the DNC and RNC events, the FAA and their security partners monitored the airspace for potential violators of the TFRs and coordinated responses to violation as required. The DoD and DHS provided air interdiction assets, in the form of both rotary and fixed wing aircraft, to support rapid response for airspace protection.

Since the DNC and RNC TFRs were temporary and employed during the events only, the FAA's System Operations Security organization and their security partners conducted outreach to the aviation community to educate and inform them about TFRs in general and about those employed during the events in particular. Some of these outreach efforts are described further in this section.

A. Temporary Flight Restrictions for the Democratic National Convention

TFRs were employed daily during the course of the DNC[7]. Fig. 1 shows a graphic of the TFRs – basically three concentric cylinders of airspace (shown in blue) with centers near the event location. All of the TFRs extended from the surface up to 18,000 feet above mean sea level. To operate within any of the TFR airspace, a flight was required to have an instrument flight rules (IFR) or visual flight rules (VFR) flight plan, be in two-way communications with Air Traffic Control (ATC) at all times, and be squawking a discrete beacon code assigned by ATC. Many types of flight operations (including practice instrument approaches, gliders, parachute operations, banner towing, ultra-light, and hang gliding) were not authorized within the TFRs. The FAA published the TFRs at the website tfr.faa.gov[6] and via Notice to Airmen (NOTAMs), which contained details on the TFRs including specific times of application. Fig. 2 shows a graphic of when the various TFRs were active during the days of the DNC—from August 25th through 28th. Note that at some time during each day none of the TFRs were active. At other times, only the 2 Nautical Mile (NM) TFR was active, while during some parts of each day the 10 NM and 30 NM TFRs were active.

1. 2 NM Temporary Flight Restriction

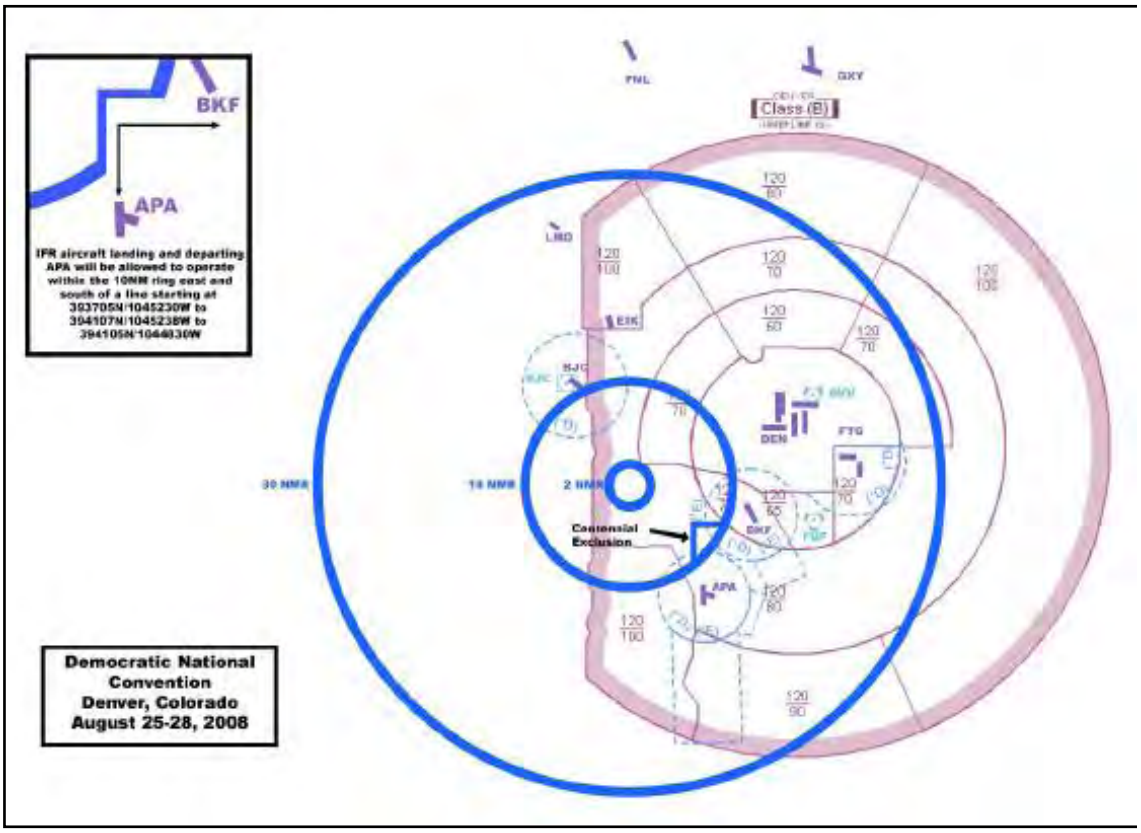
The innermost TFR had a 2 NM radius, centered near the DNC venue. Flight operations including those involving law enforcement, military, and emergency/life saving flights were permitted. Also permitted were regularly scheduled commercial and cargo flights operating under specific Transportation Security Administration (TSA) – approved security programs. No GA flight operations were allowed within this airspace. Other restrictions as discussed above also applied.

2. 10/30 NM Temporary Flight Restrictions

A second TFR was defined that comprised two parts: an Inner Core and an Outer Ring.

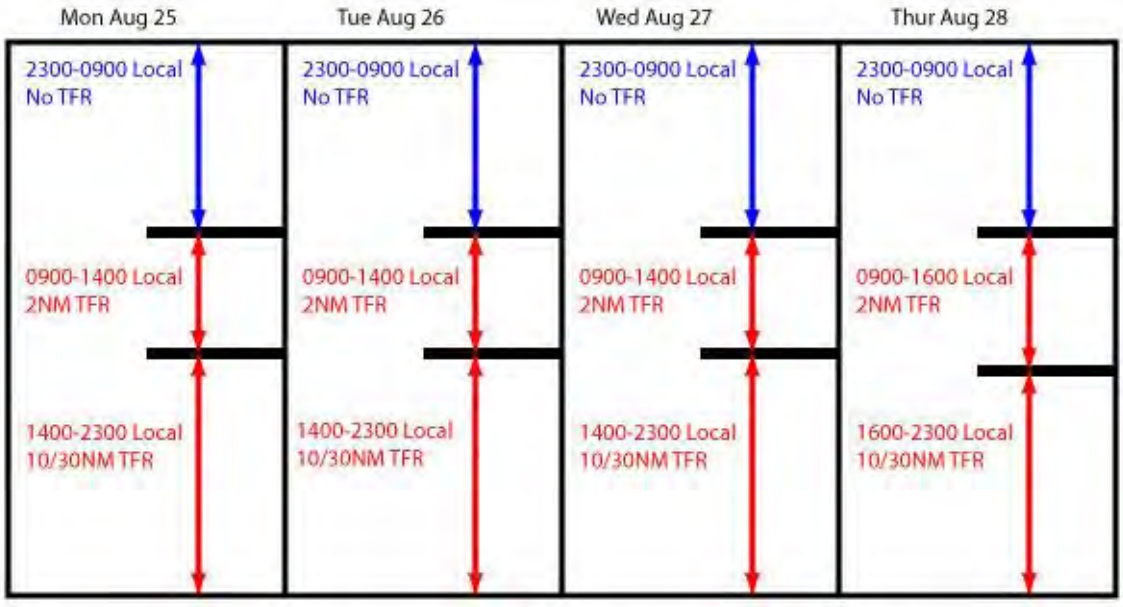
- *Inner Core*

A cylinder was defined with a 10 NM radius, centered near the DNC venue. This airspace was referred to as the Inner Core. An exclusion (cutout) was defined for IFR aircraft landing/departing Centennial Airport (APA) – they could operate only within this small area of airspace shown in the southeast part of the Inner Core in Fig. 1. Regularly scheduled commercial and cargo flights operating under specific TSA-approved security programs could operate within the Inner Core airspace. No GA flight operations were allowed within this airspace. Other restrictions as discussed above also applied.



Graphic courtesy of FAA – Office of System Operations Security.

Figure 1. Graphical Depiction of TFRs Employed during the DNC.



Graphic courtesy of FAA – Office of System Operations Security.

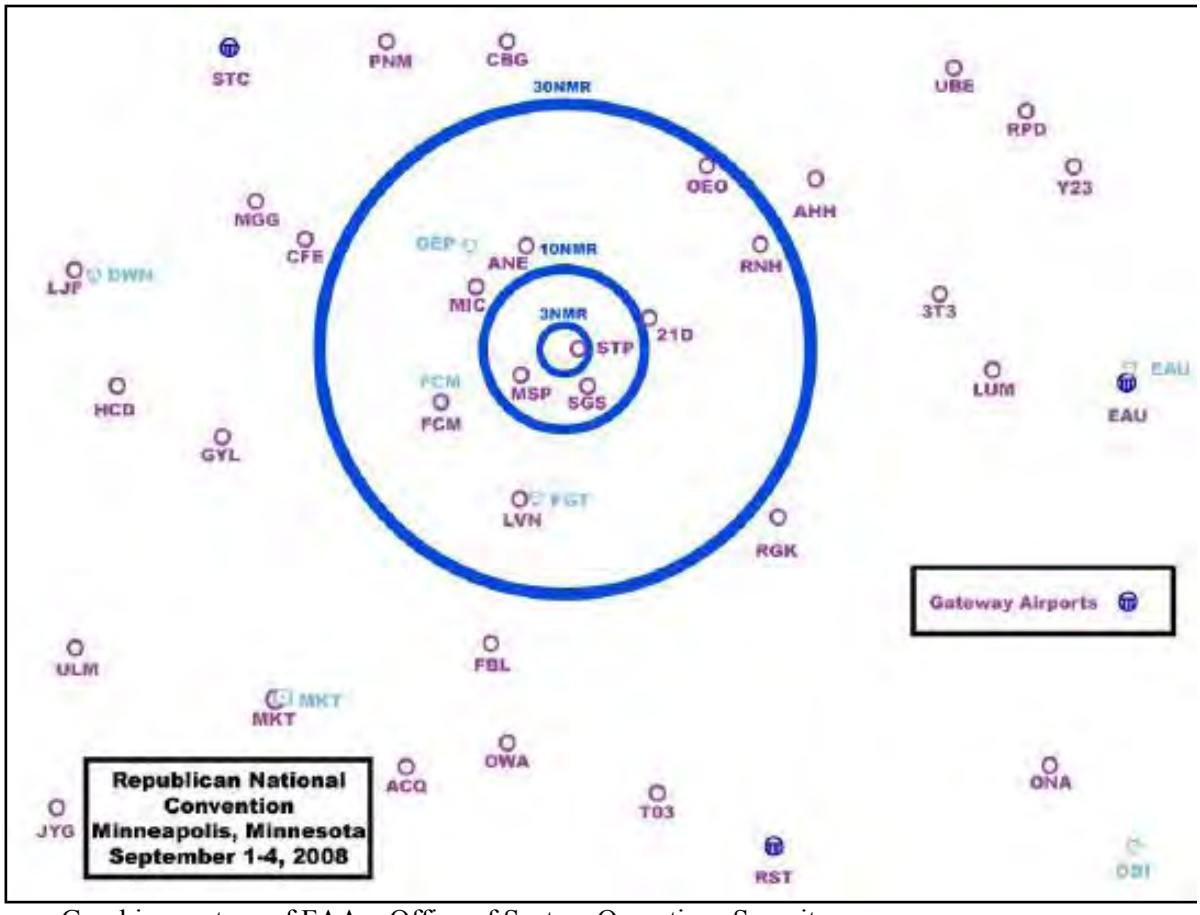
Figure 2. Graphical Depiction of Times the TFRs will be in Effect during the DNC.

- *Outer Ring*

  Outside of the Inner Core was the third volume with a 30 NM radius, centered near the DNC venue. This airspace was referred to as the Outer Ring. Operations within this airspace were permitted to and from local airports only. No VFR overflights were permitted in the outer ring airspace. Several airports are located inside the Outer Ring including Denver International (DEN), APA, Rocky Mountain Metropolitan (BJC), Front Range (FTG), Erie Municipal (EIK), and Buckley Air Force Base (BKF). The Inner Core and the Outer Ring were employed concurrently. GA flight operations were allowed within this airspace provided that they filed a VFR flight plan, were in two-way communications with ATC at all times, and were squawking a discrete beacon code assigned by ATC.

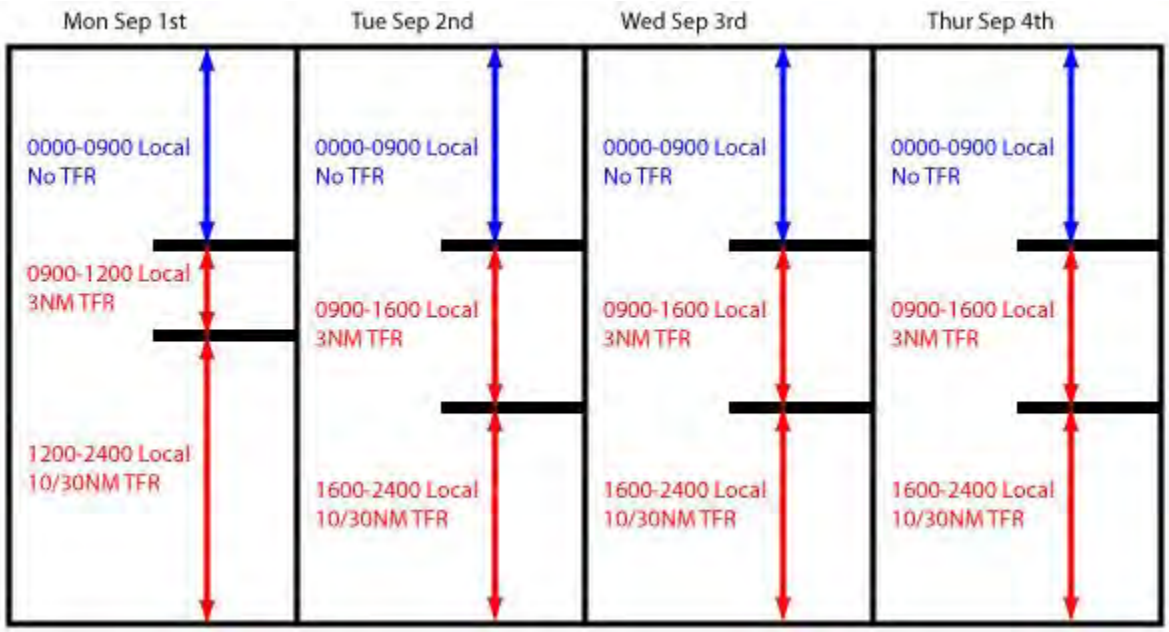
B. 3.2 Temporary Flight Restrictions for the Republican National Convention

Similar to the DNC, TFRs were employed daily during the course of the RNC[8]. Figure 3 shows a graphic of the RNC TFRs. They were also in effect up to 18,000 feet above mean sea level and had similar restrictions to the TFRs employed for the DNC. Fig. 4 shows a graphic of when the various TFRs were active during the days of the RNC—from September 1st through 4th.



Graphic courtesy of FAA – Office of System Operations Security.

Figure 3. Graphical Depiction of TFRs Employed During the RNC.



Graphic courtesy of FAA – Office of System Operations Security.

Figure 4. Graphical Depiction of Times the TFRs Will Be in Effect During the RNC.

1. 3 NM Temporary Flight Restriction

For the RNC, the innermost TFR had a 3 NM radius, centered near the RNC venue. Flight operations including those involving law enforcement, military, and emergency/life saving flights were permitted. Also permitted were regularly scheduled commercial and cargo flights operating under specific TSA-approved security programs. Note: St. Paul Downtown – Holman Field (STP) is inside this TFR. Special procedures that included the use of the gateway airports were required for GA flight operations at STP while the TFR was active.

2. 10/30 NM Temporary Flight Restrictions

A second TFR was defined that comprised two parts: an Inner Core and an Outer Ring.

- *Inner Core*

  An Inner Core was also used for the RNC. Note: Minneapolis-St. Paul International (MSP) and South St. Paul Municipal (SGS) airports, in addition to STP, are inside of this TFR. Special procedures that included the use of the gateway airports were required for GA flight operations at MSP and STP while this TFR was active.

- *Outer Ring*

  An Outer Ring was also used for the RNC. Seven airports are located inside the Outer Ring. Several other airports are in close proximity to the outer ring located just outside. The flight restrictions for the outer ring were similar to the outer ring employed for the DNC.

C. Gateway Airports for Republican National Convention

Three Gateway Airports[8] were established: St. Cloud Regional (STC), Rochester International (RST), and Chippewa Valley Regional (EAU). GA flights destined to STP and MSP were required to register for access at least 72 hours prior to the planned flight and were required to land at one of the gateway airports for screening prior to being authorized to continue on to STP or MSP when the TFRs were in effect.

D. Pilot Outreach Program

A pilot outreach program was also conducted to inform pilots and airport operators about the security measures planned for these events. The FAA has found that proactively informing pilots about security measures has helped reduce the number of inadvertent violations of security airspace. A primary source for information about TFRs is the FAA's TRF website[6]. Fig. 5 shows an outreach poster released by the Continental U. S. NORAD Region (CONR)[9] of the U. S. Air Force as part of the outreach program prior to the DNC.

Photo courtesy of NORAD/CONR.

Figure 5. Outreach Poster Used to Raise Awareness Prior to the DNC.

IV. Analysis of Impacts During the Democratic National Convention and the Republican National Convention

An analysis of some of the impacts of airspace security measures on NAS users was conducted for both the DNC and the RNC. Tracks of Interest (TOIs) were examined for both events. Reportable delays (as contained in the FAAs Operations Network (OPSNET) system) were examined for flight operations in the area of both the DNC and the RNC. Airport operations counts were examined at some airports inside the TFRs and several nearby airports outside the TFRs.

In several cases, findings from the DNC and RNC analysis are compared with findings from similar analyses conducted previously for the United Nations General Assembly meetings.

A. Tracks of Interest

A TOI can be any aircraft that the air domain security partners identify as a potential security threat. For this analysis, those flights that actually violated one of the TFRs without following the defined operating procedures for the TFR were included as a TOI and were further examined. Some flights came close to a violation but did not actually violate the TFR and were not included in this analysis.

Together, DoD, DHS, and FAA monitored the airspace and detected potential TOIs. Detection and response to TOIs required coordination and shared situational awareness among FAA, DHS, and DoD. For example, DoD coordinated with FAA to ensure that FAA was not in radio contact with the TOI. TOIs that were in violation were numbered (sequentially each day, e.g., DNC TOI #1, DNC TOI #2, etc.) to help ensure proper coordination of these TOIs among the security partners. This numbering scheme particularly helped when multiple TOIs occurred simultaneously. The primary method of shared situational awareness was verbal coordination using the Headquarters FAA DEN, an unclassified, restricted teleconference where all airspace security partners participated. Specifically, the security partners announced potential airspace security violations via the DEN and coordinated TOIs as appropriate.

In addition to the initial detection of a TOI, steps are taken to identify the TOI (who and what type of aircraft if possible), assess the threat, and take further action as required. DoD and DHS air interdiction assets were employed under the control of DoD during the NSSEs. These assets were available to identify TOIs, intercept TOIs, or take other actions as needed.

Each TOI was recorded into an FAA logging system called SkyWatch. Each log entry contained a number of information fields, some fields appropriate for a TOI and some that were used with other types of security incidents. SkyWatch also provides a free-text remarks field. This field often provides additional valuable information. For each TOI during the DNC and RNC NSSEs, significant information, including the TOI number, was included in the remarks field. This log was used as the primary source of information for this analysis of TOIs.

Note: Due to the sensitive nature of these security incidents, specific, quantifiable numbers describing the TOIs are not given in this paper. The percentages given are all rounded to the nearest 5%; thus, totals may not equal 100% due to this rounding.

1. *Tracks of Interest During the Democratic National Convention*

The TOIs were examined for the four primary days of the DNC event: August 25th through August 28th, 2008. An increasing number of TOIs was observed on each day: 10% of the total TOIs during the DNC occurred on the 25th, 20% on the 26th, 30% on the 27th, and 40% on the 28th. Positive identification of the aircraft (determining the tail number of the aircraft in most cases) was made for 90% of the total number of TOIs. Further action may be taken in the form of a Pilot Deviation (PD) report or, if it was determined that a controller may have contributed to the violation, a Quality Assurance Review (QAR). A PD was filed or a QAR initiated for all of the violations identified. DoD or DHS assets were involved to help identify or take other action in 70% of these TOIs.

2. *Tracks of Interest During the Republican National Convention*

The TOIs were examined for the four primary days of the RNC event: September 1st through September 4th, 2008. The most TOIs were observed on the first and the last days: 40% of the total TOIs during the RNC occurred on the 1st, 10% on the 2nd, 20% on the 3rd, and 30% on the 4th. Positive identification of the violating aircraft was made for 60% of the total number of TOIs. A PD was filed or a QAR initiated for about 80% of the of the TOIs that were positively identified. DoD or DHS assets were involved (—scrambled") to help identify or take other action for 90% of the total number of TOIs.

The number of TOIs detected for the RNC was about 70% higher than the number detected for the DNC.

3. *Comparison with Tracks of Interest Detected During the United Nations General Assembly Events in 2007 and 2008*

For some of the findings related to TOIs, a comparison was made with analysis of similar items from analyses of the United Nations General Assembly (UNGA) events in 2007 and 2008[1,2]. For the —number of TOIs" and the —mean TOIs per day" the UNGA 2007 data was used as the point of reference. The items for the other events are expressed in terms of a percentage relative to the UNGA 2007 value and were rounded to the nearest 5%. For example, the DNC had 40% of the total number of TOIs that

were detected during the UNGA 2007 and had 30% of the mean TOIs during the UNGA 2007 on a daily basis. The percentages of TOIs Identified (ID'd), PDs or QARs filed, and "scrambles" are the percentage of the total number of TOIs for that event.

Table 1. Comparison of TOIs for DNC, RNC and UNGA NSSEs.

event year	UNGA 2007	UNGA 2008	DNC 2008	RNC 2008
number of days	3	3	4	4
number of TOIs	N	95% of N	40% of N	70% of N
mean TOIs per day	M	95% of M	30% of M	55% of M
%TOIs ID'd	79%	74%	90%	59%
PD or QAR filed	54%	48%	90%	47%
"scrambles"	13%	30%	70%	88%

The number of TOIs detected for the DNC and the RNC were quite a bit lower, than those detected during the UNGAs, both in total and on a per day basis. Several factors might have contributed to these differences: both the DNC and the RNC were very high-profile events and most everyone was aware of them, while the UNGA is not as high-profile and some pilots might not have been aware they were occurring (and that special airspace security measures were being employed); the TFRs for the UNGAs were larger – impacting a large volume of airspace; and the New York area (venue for the UNGA meetings) contains some of the busiest airspace in the world.

The percentage of TOIs identified and those with PD or QARS filed varied across the events. The DNC had the highest percentage identified, while the RNC was the lowest. The analysis provided no reasons as to these differences.

The percentage of time a DHS or DoD asset was involved ("scrambles") was significantly higher for both the DNC and the RNC. The smaller number of TOIs for these events and the smaller volume of airspace covered by the TFRs might have contributed to these larger percentages.

B. Reportable Delays Due to Security Measures

Data from the FAA's OPSNET system[10] was obtained and examined to determine if any reportable delays due to the security measures were reported during the DNC or the RNC. A reportable delay occurs when a delay of 15 minutes or greater occurs during a portion of a flight and is entered into OPSNET. OPSNET delays typically include those due to ground delays prior to departure and to airborne holds. Only those delays that had a cause listed that could be attributed to "security" (e.g., such causes include "Very Important Person (VIP) movement," "security") were counted.

While a handful of delays were reported in the Denver and Minneapolis areas during the DNC and the RNC, none were attributed to any of the security measures employed. Those delays reported were primarily due to weather.

A comparison was made to reportable delays observed due to security measures during the 2007 and 2008 UNGAs [1, 2]. Table 2 presents a summary of this comparison.

Table 2. Comparison of Reportable Delays due to Security Measures for DNC, RNC and UNGA NSSEs.

event year	UNGA 2007	UNGA 2008	DNC 2008	RNC 2008
number of days examined	1 of 3	3	4	4
number of reportable delays	87	93	0	0
total delay	5210	2458	0	0
minutes/flight	59.9	26.4	0	0
diversions	NA	2	0	0

As can be seen from Table 2, a number of reportable delays due to security measures were logged during both UNGA NSSEs while none were logged during the DNC or the RNC. The primary difference was that the President participated in both UNGA meetings and arrived at and departed from John F. Kennedy International Airport (JFK) during both events. Around the time of the President's plane arriving or departing JFK, the airport was closed to all other traffic for a brief period of time. This type of security measure was not employed during the DNC or the RNC. Note: the President was to attend a portion of the RNC but changed his plan due to a hurricane in another part of the country. Thus, it seems reasonable to conclude, at least for these events, that TFRs, themselves, do not result in reportable delays. Other security measures, such as closing of an airport due to VIP movement can result in reportable delays.

C. Airport Operations

Data from the FAA's Enhanced Traffic Management System (ETMS) system[11] were obtained and examined to determine the number of controlled operations at several airports within and near the TFRs for both the DNC and RNC events. Daily traffic counts were obtained for the primary days of the event and for the same days of the week of the event in both the week preceding and the week following the event. This data was examined to see if any changes in the number of airport operations occurred and could be attributed to the airspace security measures employed.

1. *Operations at Denver Area Airports During the Democratic National Convention*

ETMS data for the following airports were examined in this portion of the analysis:

- Airports within the 2 NM TFR: none
- Airports within Inner Core: none
- Airports within Outer Ring: DEN, APA, BJC, FTG, EIK, and BKF
- Airports outside the Outer Ring: none
- Gateway airports: none (not used for DNC)

ETMS data was examined to determine traffic counts for flights arriving at the airports listed above. These were counts of AZ[***] messages in the ETMS data – see the results in Table 3. All of these airports are within the Outer Ring of the TFR. The airports BKF and EIK were not included due to insufficient counts in this data source. Arrival operations at DEN were about the same as the week before the DNC and up about 8% from the week after the DNC. Larger increases were observed at all the other airports. The large increases may be due to the security measures – flights were required to file flight plans and communicate with ATC to operate into and out of these airports while the TFRs were in effect.

[***] An AZ message is one of the message types in ETMS data. It contains several items of information including the aircraft identification, the destination airport, and an approximation of the arrival time.

Table 3. Average Daily Controlled Arrival Operations at Denver Area Airports.

Average Daily Arrival Operations	Week of DNC (average daily count)	Vs week before (% change)	Vs week after (% change)
DEN	920.5	1%	8%
APA	148.25	28%	68%
BJC	46.25	13%	55%
FTG	4.75	46%	111%

2. Operations at Minneapolis Area Airports During the Republican National Convention

ETMS data for the following airports were examined in this portion of the analysis:

- Airports within 3 NM TFR: STP
- Airports within Inner Core: MSP, SGS
- Airports within Outer Ring: LVN, FMC, MIC, ANE, 21D, RNH, OEO
- Airports outside the Outer Ring: FBL, CFE, AHH, RGK
- Gateway airports: STC, RST, EAU

ETMS data was examined to determine traffic counts for flights arriving at the airports listed above. These were counts of AZ messages in the ETMS data—see the results in Table 4. ANE was examined separately—the other airports in the Outer Ring were aggregated. The four airports outside, but proximate to the Outer Ring, were also aggregated. Arrival operations at MSP were down slightly from the week before the RNC and the week after the RNC—the decrease was almost entirely due to Monday, September 1st being down 10% - 12% from the before and after weeks. Even though special procedures were in place for STP (due to it being inside the 3 NM TFR and the Inner Core), it seems many flights did not take advantage of these procedures – operations at STP during the RNC were down about 75% from the weeks before and after. In contrast, operations at ANE were over double during the RNC as compared to weeks before and after. Operations also were increased at the other airports (in aggregate) within the Outer Ring. It appears that due to the security procedures in place for STP – the need to stop at a Gateway Airport prior to arriving at STP – flights elected to use another nearby airport (such as ANE) where they could fly directly and not have to stop at a Gateway Airport. Operations at the three gateway airports were mixed—some up, some down, some about the same.

V. Conclusions

Due to the DNC and RNC events being designated as NSSEs, extensive airspace security measures were employed. These measures included multiple TFRs. The FAA coordinated with other security partners to ensure that these measures maintained the desired levels of security.

Impacts on commercial aviation were found to be quite minimal. The TFRs allowed scheduled air carrier operations to be conducted without restrictions. This was confirmed by the analysis of reportable delays – no reportable delays due to the security measures were logged during either event. By comparison, reportable delays were observed during two NSSEs at the UNGA meetings in New York City. These delays occurred during times when the President arrived or departed and the airport used was briefly closed during the "VIP movement." As the President did not attend either convention, similar delays were not observed.

Table 4. Average Daily Controlled Operations at Minneapolis Area Airports.

Average Daily Arrival Operations	Week of DNC (average daily count)	Vs week before (% change)	Vs week after (% change)
STP	11	-73%	-75%
MSP	614.25	-3%	-3%
SGS	2.25	0%	-25%
ANE	55.25	130%	121%
other Outer Ring airports	31.75	51%	34%
EAU	17.25	-12%	-30%
RST	43	-15%	6%
STC	12.75	13%	0%
Airports outside the TFR	8.25	65%	27%

Changes in operations were observed in other traffic – primarily General Aviation flights. During the DNC, increases in controlled traffic were observed at several nearby, predominantly GA airports. This appears to be due to the security measures – flights were required to file flight plans and communicate with ATC to operate into and out of these airports while the TFRs were in effect. For the RNC, a slightly different situation occurred. STP airport was inside the most restrictive TFR and special security measures were employed – flights were required to stop at a gateway airport prior to arriving at STP. It appears that this measure causes most flight operators at STP to change their operations and use a different airport. Traffic at STP was down about 75% and traffic at another nearby GA airport (ANE – that was not subject to the restriction to use a gateway airport) more than doubled – suggesting many flights used ANE instead of STP during the times the TFRs were employed. Increases in controlled traffic were also observed at other airports in the outer ring during the RNC.

Incidents involving TOIs were also examined. The numbers of TOIs observed were less than those observed two NSSEs during the UNGA meetings in New York City. Only about 1/3 as many TOIs occurred during the DNC and about ½ as many during the RNC as during the UNGA events. Several factors might have contributed to these differences: both the DNC and the RNC were very high-profile events and most everyone was aware of them while the UNGA is not as high-profile and some pilots might not have been aware they were occurring (and that special airspace security measures were being employed); the TFRs for the UNGAs were larger – impacting a large volume of airspace; and the New York area contains some of the busiest airspace in the world.

Overall, the avoidance of more substantial impacts on large numbers of NAS users during the DNC and the RNC was due in large measure to extensive planning, coordination, and outreach by the FAA and its security partners before and during the event. While it is vitally important to protect the conventions and its many participants from air domain threats, it is also important to preserve the continuity of air commerce and air transportation in very busy airspace. The FAA's Air Traffic Organization continues to study impact of airspace security measures on the NAS. Concurrently, they continue to invest in decision support tools aimed at improving situational awareness and detecting potential airspace threats in order to keep confidence high in air commerce and air transportation among all NAS operators.

Acknowledgments

The authors thank John Mack and Greg Nelson of The MITRE Corporation's Center for Advanced Aviation System Development (CAASD) for their continued support for the airspace security measures impact analysis and for their review of this paper. We thank Maurice Howland of MITRE/CAASD for sharing his knowledge of air domain security operations that was helpful to this analysis. We thank Beth Bird for her assistance in formatting this paper. We would like to offer our appreciation to the professionals in the FAA's Air Traffic Organization including System Operations Security, specifically, Timothy Wallace for his contributions to this paper.

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