

Improving Air Traffic Flow Management Together

NEWS *And Current Events*

September 2017

A Message From CDM Leadership: CDM Expands to Include New Entrants — *by Greg Byas*

Collaborative Decision Making (CDM) exists as both a philosophy and a process. As a philosophy, CDM promotes the sharing of information to create a common situational awareness for the stakeholders so that the best decision can be made for the system. This sharing of information allows for the various viewpoints, preferences of all stakeholders to be considered and aids in the transparency of how decisions are made. As a process, we have established CDM data sharing requirements and agreements, organizational guidelines and collaborative subteams to specify how we are going to accomplish the goals of CDM.



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While we make decisions in a variety of forms both in our professional and personal lives, the CDM partnership with the FAA and industry began over 20 years ago as a data sharing agreement to aid us in making traffic flow management decisions in the (NAS) National Airspace System. Things have changed over the years and CDM requires change to stay current and relevant to what is happening in the system today. We have commercial space launch and reentry operations, and unmanned aerial vehicles operating in the same airspace as traditional flights. We have airport operators becoming more connected to the system, as surface issues become more of a concern in new technologies.

Since the inception of CDM, data sharing has been focused on flight operations: Flight Create, Flight Modify and Flight Cancellation. We now have specific surface data elements that flight operators may

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We all have a piece of the puzzle

Spotlight! From the Editor: Improving Communication and Building a Learning Community

Welcome to the CDM News! We at the CDM/International Operations Group Office are dedicating this newly revised issue to all CDM subteam members who may be new to the work orchestrated by the CDM Stakeholders Group (CSG). We are interested in fostering communication between the subteams and “sharing data” (not to over-use that term) between subteam members. Is there a

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To remove your name from our mailing list, please [click here](#).

Questions or comments? Email me at jadyne.m.seitz@faa.gov or call 540-422-4553



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possibility, lessons learned by one subteam, can be introduced to, and discussed by others, affecting the discussions in their subteam? Was there a lesson learned that should be immediately communicated to a broader audience beyond the walls of one subteam? For example, did a pilot SME (Subject Matter Expert) mention something of importance that could affect some other subteam's work? Is the "sharing" part something that is missing? Did an ATCS (Air Traffic Control Specialist) come up with a great point at a meeting? Was there a technical snafu? You get my point. In general, good internal communications makes good business sense. Unless your employees are communicating effectively, it will be difficult to have a highly-committed and well-performing workforce. We believe communication also helps create a can-do culture and leads to a learning organization. Building a learning community is the core strategy for change and can lead to the movement of "immovable walls" which can occur in a system.

So it is our commitment that this quarterly newsletter is your tool to share data and keep attuned to what all of the subteams are working on, and on the discoveries they are making, as well as the rabbit holes they are going down. Any subteam member who feels something should be shared can bring it to their co-leaders' attention and it can be published here.

Feel free to keep notes and help your co-leads with their submissions to your quarterly newsletter.



A **learning culture** is a collection of **organizational** conventions, values, practices and processes. These conventions encourage employees and **organizations to** develop knowledge and competence.

An **organization** with a **learning culture** encourages continuous **learning** and believes that systems influence each other.



Mark Novak explains information about data elements to the CSG



CSG Meeting—July 2017

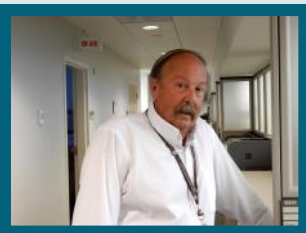
Subteam Updates

CTT (CDM Training Team):

Joe Dotterer (FAA) & Gary Dockan (Industry) co-leads.

The primary goal of the CDM Training Team is to provide the NAS users with training for CDM tools and procedures to enhance common situational awareness and provide the opportunity to participate effectively in the NAS. CTT actively deploys training for tools and procedures to make sure all parties representing Traffic Flow Management and the Aviation Industry are kept current with changes and enhancements in the NAS. Under the "Training" drop down menu, of the [CDM website](#) CTT has links to CDM Spring Training, CDM Update Training, the TFM Learning Center and a link to a list of CDM Acronyms. CTT sends out a CDM Spring Training package every Spring that includes all the new tools, procedures and policies that have been developed by CDM since the previous Spring. Additionally, CTT includes CDM Subgroup updates in the Spring Training package. CTT also

sends out update training that comes out after the CDM Spring Training package has been deployed. In order to receive these valuable CTT products you have to be on the CDM Training Distribution List.



Joe Dotterer explaining where the next CTT team meeting will be held. Can you guess?

You can be added to the list if you send your name and email to Gary Dockan.

Joe and Gary look forward to supporting your CDM training efforts.

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CAT (CDM Automation Team):

Jill Sparrow (FAA) & Charlie Mead (Industry) co-leads.

The CDM Automation Team (CAT) reviews the automation processes of Air Traffic Flow Management (ATFM) systems in the National Airspace System (NAS) and makes recommendations for improvements to these systems. The NAS ATFM tools and software includes, but is not limited to, the Traffic Flow Management System (TFMS), Time Based Flow Management (TBFM), Terminal Flight Data Manager (TFDM) and the Flight Schedule Monitor (FSM). Previous team tasks include work on the Data Quality (DQ) report card, requirements for surface data metrics, review of ground delay program (GDP) and airspace flow program (AFP) algorithms and interaction, and scheduled departure metering times in TBFM and TFMS.

The goals of the CAT are to 1) determine if current and/or future automation, algorithms and processes meet the needs of the NAS and its flight operators; 2) determine desired behavior of data ingested by ATFM tools and software; and 3) provide recommendations for ways in which the ATFM tools and software can be enhanced or improved.

Most recently the CAT team was busy working on Task 74, "Flight Operators: Surface Data Sharing to support TFM and TFDM Strategies". The task is supported by the FAA goal of delivering benefits through technology and infrastructure by enhancing Traffic Flow Management Capabilities as well as Surface Management Capabilities in partnership with aircraft operators and other segments of aviation through the CDM process.

The team last met in June and has come to some conclusions on task 74; the task is continuing to evolve in a manner in which it may be closed and altered.

They have had discussions with the



Surface CDM Team (SCT) and are planning on a joint meeting with them on September 27th to work together on a new tasking if it is assigned by the CSG in early September. The new task would carry on where task 74 has left off.

Look for an update to the goings on of the CAT team in December.

For further information:

jill.sparrow@faa.gov

charlie.mead@aa.com

Subteam Updates *(Continued)*

PET *(PERTI Engagement Team):*

Kevin Bannwolf (FAA) & Mike Sterenchuk (Industry) co-leads.

The PET Team is the latest CDM work group to be added by the CSG. It was decided that some of the questions brought up through the daily use of PERTI (Plan, Execute, Review, Train, & Improve) required a collaborative approach to help formulate some collective answers. The PET team was formed and task 77 was assigned back in May. The tasking states, “as the PERTI process evolves, collaborative stakeholder engagement in all 5 phases of the process is imperative for establishing success on the mission.”

The task will address these related work areas: engaging all stakeholders in the PERTI process, negotiated NAS performance (goals/outcomes), managing operations, and metrics.

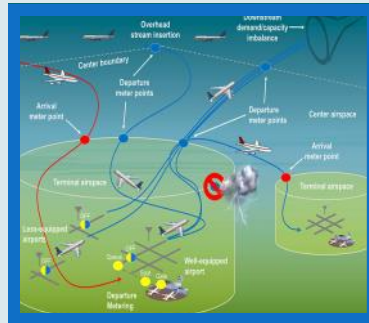
The team began biweekly telcons in June to get started and get introduced. Upcoming telcons will focus on the outcomes expected from the group on the task and to begin the conversation on customer and facility engagement efforts for this work.

You can expect to receive quarterly updates from the PET and they DO welcome your comments and inquiries.

The co-leads would value your correspondence:

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mike.sterenchuk@aa.com



The SCT has been working on ATD-2 capabilities in CLT in 2017



Mike Murphy and Ed Masterson simulating something PERTI

SCT *(Surface CDM Team):*

Maureen Szczygielski (FAA) & Robert Goldman (Industry) co-leads.

First, a little background on the Surface team. This team was formed to leverage the findings of the previous Surface Management Working Group (SMWG) and the Eurocontrol and Eurocae WG69 ‘Airport CDM’ policies. The scope is to be limited to requirements that support a prototype initial ‘Surface CDM’ solution at a selected airport. The success criteria for the SCT are to develop a written description of base requirements and processes that would support a prototype Surface CDM System (SCS). The system will provide pertinent surface CDM data into the Traffic Flow Management System at a single airport. Surface has also been identified as a core NextGen Implementation Working Group focus area. The scope is to ensure work related to surface activity in these various forums is consistent with the agreed-upon surface concept and to report to the CSG on progress made.

In 2016, in response to the NextGen Integration Working Group (NIWG) recommendation, the FAA completed a study to determine the feasibility of deploying an initial airport surface departure metering capability that reflects the FAA’s Surface CDM Concept of Operations to a single airport. The SCT has been working on multiple projects including a DCA to LGA early scheduling trial, a MSP close in airport early scheduling initiative, and a launch of ATD-2 in CLT.

The NASA Airspace Technology Demonstration 2 (ATD-2) project and CLT field site began the Operational Shadow Evaluation 1 (OSE1) in July. The goal of the

(Continued on page 5)

Subteam Updates *(Continued)*

(Continued from page 4)

SCT (cont.)

OSE1 period is to gradually increase the exposure of ATD-2 features in the operational areas for non-operational use. Upon successful completion of OSE1, which is expected in late September, Field Demo Partners will make an Operational Evaluation Readiness (OER) decision clearing the ATD-2 system for daily operational use. FAA ATC and American Airlines ramp personnel have undergone training, and pilot training materials have been provided to chief technical pilots at 13 different carriers that fly at CLT. The ATD-2 system is now deployed and in shadow use in CLT ATCT, CLT TRACON, AA ramp manager position and CLT airport gate manger positions. In addition to local CLT testing, the FAA TBFM program office and second level engineering support at the FAA technical center have been testing the security gateway that enables the NASA ATD-2 system to communicate with the operational FAA TBFM system at ZDC to enable Integrated Departure Arrival Capability (IDAC)-style scheduling into the overhead stream. OSE1 shadowing has targeted key time periods when observational staff is available and new data exchange features are evaluated. Direct input on the system during this focused test and training time period has led to valuable input from the users.

Continue to watch this space for future exciting updates by the SCT in the next edition as they (ATD-2) go live in CLT!

For further information:

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FET (Flow Evaluation Team):

Al Mahilo (FAA) & Ernie Stellings (Industry) co-leads.

The Flow Evaluation Team focuses on new strategies, procedures and tools to increase system safety and throughput, and to provide the flight operators with increased flexibility to manage their business goals and constraints in the NAS. The team's primary goal is to assist, through participation and collaboration,

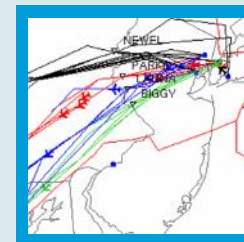


CDM sent the FET team to Memphis. Overnight delivery.

any endeavor that strives to increase throughput or efficiency within the NAS. The team focuses on opportunities to improve enroute areas of the NAS and provide increased efficiencies to Traffic Flow Management (TFM).

Currently, the team is working on a Trajectory Options Set (TOS) tasking. The Traffic Flow Management System (TFMS) has evolved a capability for flight operators to express not only a filed route of flight but a set of flight operator-provided trajectory options to be used by TFM in the event the filed route is unavailable (e.g., due to weather or excess air traffic volume). This concept provides a capability that builds upon the Trajectory Options Set (TOS) function already within the TFMS to enable ATC and TFM to store, retrieve, and process flight opera-

tor-provided trajectories. The ABRR/PDRR capability within TFMS and ERAM provides TFM personnel in ARTCCs with the ability to electronically send aircraft-specific assigned reroutes to ARTCC controllers, so the controllers do not have to type the reroutes into the flight plan. TOS was developed to allow flight operators (e.g., airlines) to submit multiple trajectory options to the ATM systems in addition to the trajectory in an aircraft's filed flight plan. This provides TFM with trajectories that would be acceptable to the flight operator if the primary trajectory in the filed flight plan was unavailable (e.g., due to convective weather activity) or would result in an undesirable amount of delay. A trajectory option includes data that defines the relative preferences (e.g., tolerable delay) and usability of the trajectories. Each trajectory in a TOS has parameters assigned by the flight operator, which provide TFM with information about each trajectory, including: which trajectory is most preferred, how much delay the flight can accept to wait for it, the time period within which the flight can depart on the trajectory, and the minimum amount of notification time for the flight to accept a



change to that trajectory (this may be due to the need for additional fuel at the departure gate or other factors).

FET Acronyms :

ABRR Airborne Reroute

PDRR Pre-departure Reroute

CTOP Collaborative Trajectory Options Program

The FET will be meeting Sept 5-7 2017

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Subteam Updates

(Continued)

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FET (cont.)

The screenshot shows a presentation slide with the following content:

- TOS Opportunities in Addition to CTOP**
- Example #1**
- Escape Routes (i.e. SERMN)**
- Can this flight accept the low altitude route?**

The slide includes a map of the New York area showing flight paths, a screenshot of a flight management system interface with a red arrow pointing to a specific option, and a screenshot of a 'Route Options' dialog box. The dialog box shows 'TOS Options' with a checked box for 'LGA JFK V16 DIXIE V1 LEEAH CHOPS BILIT DCA' and buttons for 'Add to Retrieved Routes', 'Add to Amendment', 'Cancel', and 'Help'. The CDM Collaborative Decision Making logo is visible in the bottom left corner.

TOS example: During SWAP events in the NY area, it is common that a number of departure gates can be impacted due to weather. The FET is working on ways traffic flow specialists could utilize TOS options to route flights to an open departure fix more expeditiously, knowing they have fuel for that route.

For further information about the Flow Evaluation Team contact:

estellings@nbaa.org

al.mahilo@faa.gov

FCT (Future Concepts Team):

Jennifer Ross (FAA) & Phil Santos (Industry) co-leads.

The Future Concepts of Flow Management Team addresses longer term capabilities essential to enhancing efficiency for all stakeholders. The team has no taskings currently. Jennifer Ross has recently joined the team as co-lead. She and Phil are eagerly awaiting future taskings after the SWAP season ends.

From the FCT charter:

The unpredictable nature of far reaching concepts allows this group to be more versatile and diverse through building on existing concepts and extrapolating where technology and the use of that technology will forge into the future. Team member's subject matter expertise assists in developing real world scenarios to strengthen new ideas and technologies concepts of operation.

Watch for future Future Concepts news in December.

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Subteam Updates (Continued)

WET (Weather Evaluation Team):

Kevin Johnston (FAA) & Jeff McLaren (Industry) co-leads.

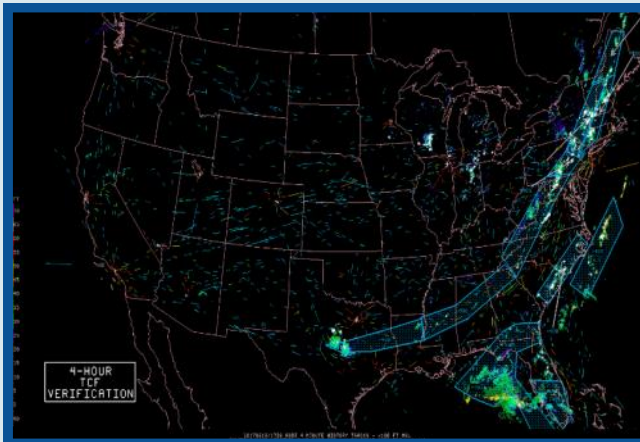
The WET had its summer meeting at the National Weather Service (NWS) Aviation Weather Center in Kansas City, Missouri on August 15-17, 2017.



WET is currently working on Task 72 which extends the TFM Convective Forecast (TCF) from its current 4/6/8 hour forecast out to 30 hours. The additional forecast projections will only be available on the AWC Website.

<http://testbed.aviationweather.gov/tcf/extended>

Like the current TCF, the 30 hour projection will be updated every two hours. (It is important to note the forecast projections beyond 8 hours are automated.) The NWS would like some help in developing their web interface that will display these additional 11 panels of the TCF. They are hosting a meeting in November where a few operational planners will provide feedback.



Reminder!

TFMers: Don't forget, beginning on November 1 and going through February, the entire TCF, 4/6/8 and out to 30 hours, will be automated. The collaborated, meteorologist over the loop 4/6/8 TCF will start back up on March 1, 2018

With the help from NWS, the WET is evaluating TCF performance. We review traditional performance metrics like Probability of Detection, False Alarm Rates and Critical Success Index, but AWC has developed a capability to replay overlays of the TCF with radar imagery and air traffic. This provides an outstanding visual reference to quickly get a feel for TCF performance. (see graphic below)

From CDM Leadership : (Continued from page 1)

provide. We have airport specific information concerning diversions, snow removal, construction, gate availability and flight operation data for non-CDM flights. A better term for the traditional CDM data sharing is information sharing. Information that includes flight operations but also includes a variety of other information from various sources that all aid in making the best decisions possible for the system and all stakeholders. This expansion in focus for CDM is what has driven our CDM reform efforts. We want to make sure the success of the last 20 years of CDM continues moving forward for the next 20 years and beyond. Including airport operators in CDM is our first step in expanding the CDM community. We have four airports we are working with to begin airport specific information exchange and we are including airport operators in our surface and automation subteam activities.

The lessons we learn in bringing these airports onboard will assist us with expanding CDM for all airports, commercial space, UAVs and other new entrants. I'm excited about the future of CDM and how this unique FAA and industry engagement will continue to evolve. As we solidify the CDM reform efforts, we will use this newsletter as a forum for sharing information and making sure everyone involved with CDM knows where we are going and the steps we are taking to get there. Thank you for your commitment and dedication to CDM.

—Greg Byus

Greg is the manager of CDM and International Operations at the Command Center and serves as the FAA co-lead of the CSG (CDM Stakeholders Group) subteams.

Thanks! For further WET information please contact:

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Upcoming Subgroup Meeting Information

CAT September 27-28,2017

FCT

FET October 10-12 2017

WET

PET September 26-29 2017

SCT September 27,2017

CTT

The 2017 NAS Performance Review will be held at MITRE Corporation in McLean Virginia

October 24 and 25th for FAA and Industry

Continues on October 26th for FAA only.

A sample of what to expect:

- National Airspace System Review and Discussion
- Case Study for Discussion
- Planning General Discussion
- DDSO/ATCSCC Briefings
- Regional Breakout Sessions
- Future of CDM



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More From CDM Leadership: CDM Membership and Participation and Reform

— *by John Martin*

I have for some time, been thinking about CDM and how to get new participants to *want* to participate in the CDM process. This is, and has been a long standing issue for both the FAA and the Industry. CDM history shows us that many of the founding members who were there in the “early days” are still the leaders today who are guiding and shaping the future of CDM. This has both a positive and negative impact on what the new organization might be like in the future.

Negative impact: From the Industry side, new people who find it interesting and maybe something they would like to participate in, sometimes find it intimidating. I know I certainly did when I went to my first meeting. The younger people who are just starting their aviation careers, are doing everything in their power to learn about the tools of their business, aircraft equipage, companies (or agencies) and career progression and don’t have the time, or want to put forth the effort to get involved in something as “big” as CDM.

Later, after being involved in their companies’ (or organizations’) activities and their comfort level has increased, people want to take on more responsibilities and this is where CDM Leadership should be directing some efforts to recruit new participants for work groups.

Positive impacts: Knowing that you will make a difference in having a voice for your agency, airline, airport or flight department, and also the knowledge that you, yourself made a difference in how people across the country and the world see the US aviation system progressing along and remaining the safest and best aviation system in the world. Not only is this a motivational push for CDM, but also for the new participant to want to move ahead and become future leaders of CDM. These future leaders believe in the process and believe they can be the catalyst for some change.

As “fresh eyes” look in, new ideas tend to surface. New ideas lead to better tools, and better ways to operate in the NAS. Many of the tools that are utilized today were ideas that the work groups had floated around or “spit-balled” in sub-group meetings. Some examples are the CCFP, and now the Mexican routes (which are in negotiation and development). The ideas of the OIS, and the 2 hour planning telcons had come out of CDM discussions. There are numerous initiatives that CDM had a hand in getting started in some form or another, and its participants were all new at one time.

Attending the annual general meeting to see what is involved can, and should be something that every employee of an aviation entity should be able to do in order to see what this little “grass root” movement has done, and is capable of accomplishing. Meeting the people who had a hand in influencing where CDM is today, could influence the future of the CDM Initiatives, shape the National Airspace System and set an example of how the rest of the world views the safest and most efficient airspace in the world.

John Martin

John is the Manager of Air Traffic Services for JetBlue Airways and serves as the Industry co-lead of the CSG (CDM Stakeholders Group) subteams.

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The CSG Facebook Page

Have you joined?
Care to?

This facebook page is for the sole purpose of creating and sharing info to all CSG subteam members and to your newsletter editor!

AGENDAS, ANNOUNCEMENTS, PHOTOS, MEETING DATES AND CONTACTS CAN BE SHARED HERE.

Joined ▾ ✓ Notifications Share ...

Write Post Add Photo/Video Live Video More ADD

Subteam Members can be added, but must be approved by the CDM office facebook page administrator. This link will take you to the page

<https://www.facebook.com/groups/1351965931517707>



See you in December!