Collaborative Decision Making

Improving Air Traffic Flow Management Together ...For 25 years~!



NEWS And Current Events

June 2018

A Message From CDM Leadership:

Elvis Has Left the Building - by Phil Santos



Phil Santos. Industry CDM Lead, FedEx

A phrase that was often used by public address announcers at the conclusion of Elvis Presley concerts in order to disperse audiences who lingered in hopes of an encore. Based on feedback, this year's Spring CDM at the hometown of Elvis was a success not only because of the cool "Star Wars" auditorium and overall facilities the University of Memphis provided but also the content and spirit of the meeting.

Now that Spring CDM has left the building are you in hopes of an encore? I want to challenge each participant in CDM by saying that

you are the encore. The content and spirit of the work you do is evident by what you do every day not just at the conference. During the conference there was a feeling of mutual support, and togetherness as we exchanged thoughts and ideas on how we can impact the future of Traffic Management in the CDM community. Let's take advantage of the momentum gained at the conference as we go about our everyday routines and continue our efforts in support of one another. We have more work to get done as new tasks are being considered for CDM subteams. Thank you all for what you do.

~Phil

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If you have questions or comments or would like to add or remove your name from our mailing list, please <u>click here</u>.



Spotlight! From the Editor: CDM Guidance Document

To continue my series in highlighting the publication of the new, revised, Collaborative Decision Making Stakeholders Group Guidelines Document, let

me begin by saying the document is now uploaded and available for perusal on the CDM website. This new version replaces the 2014 version and



was created to ease the introduction of new entrants into the CDM process. I encourage all who are involved in a subteam to read the document as it contains valuable information about subteam guidance. In my last article, I explained what the

(Continued on page 2)

Mission Highlight:

We recognize the 25th anniversary of CDM:



From the Editor (Continued from page 1)

CSG is and does. Now, I would like to highlight what happens as a subteam is established and conducts business. At the discretion of the CSG leadership, when it is determined that a certain knowledge base or skill set is required to accomplish further research and/or development of traffic management tools, requirements or concepts, a CSG subteam will be established. When CSG leadership establishes a CSG subteam, based on the team objectives and the skill set requested by the CSG, (1) the FAA CSG leadership will select FAA representatives of the team and will appoint an FAA Lead and an FAA Alternate Lead, and (2) the Industry CSG leadership will select industry participants for the team and will appoint an Industry Lead and Industry Alternate Lead. Subteam participants must be reviewed and validated at the beginning of each fiscal year by the CSG.

Once established, subteam operating principles and logistics should be followed. Subteam leads can refer to guidelines in the back half of Appendix C of the guidance document for more information. Given a task to work on, it is expected that a grassroots philosophy of ideas and suggestions be embraced. Innovation is encouraged. The following factors are examples of questions the CSG look at when submitting a proposal as a task to a subteam:

- Is the proposal consistent with FAA Strategic Planning documents and industry strategic goals?
- Is the operational issue that the proposal seeks to address well understood?
- Are there barriers that must be overcome to pursue the proposal?
- Are resources available to pursue the proposal? Is there funding to implement the idea? If not, are there tradeoffs that may be made?
- What metrics does the idea move? Is there a positive business case for the idea?

Collaborative Decision Making (CDM)
For
Traffic Flow Management

V1.1 Effective Date: April 10, 2018

Collaborative Decision Making Stakeholders Group Guidelines

Leadership, Structure and Process Thanks for reading the CDM News! Join the Facebook page and feel free to submit info for September's issue!



The CSG meets monthly.

Subteam Updates

CTT (CDM Training Team):

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



Gary Dockan from the CTT, presenting the Orange Award to Charlie Mead in Memphis

Every year the CTT puts together an in -depth resource which provides training on new procedures and processes. This information is critical in the successful implementation of new products that originate from the

CDM community. Considered "Annual Spring Training", the CTT's goal is to ensure the community is educat-

ed and proficient on these upcoming tools intended to become a part of a the TFM toolbox and typically implemented in time for the SWAP season. By providing common resources access, this Spring Training supports the CDM common situational awareness philosophy. A detailed description of what is available along with accessibility was provided to General Session attendees in Memphis last month.

The next 50113 class will be in November with another 6 scheduled through next May. Other training that is being prepared includes some short videos on severe weather as well as some PERTI related material.

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

gary.dockan@aa.com

joe.dotterer@faa.gov

CAT (CDM Auto-

mation Team):

Jill Sparrow (FAA) & Clay Whitesell(Industry) coleads.



~and~

SCT (Surface CDM Team):

Brian Gault (FAA) & Robert Goldman (Industry) co-leads.

Editor's note: This update is for both the CAT and SCT team as they have been working in tandem this quarter—IS

The teams met several times this quarter and provided a summary of findings and recommendations for the joint "Surface Data" tasks (task 78 and 79 combined into one overarching task). The leads provided an in-depth description during the CDM General Session. A primary finding from the two teams is that a consensus of industry representatives, including NBAA, do not want an outside entity submitting data to the FAA unless authorized by individual flight operators. Another finding is, because there is a default EOBT, the quality, or accuracy, of the EOBT could be relevant to efficient management of the NAS. The teams recommend the proposed Airport Operator MOA, drafted to gain entrance into the realm of CDM, contain guidance for providing specific data, from



Brian Gault led the joint meeting in Memphis in May 2018 with Clay Whitesell

specific airports, for specific users. These elements may include, (but are not limited to), EOBT, AOBT, aircraft tail number and gate assignment. Moving forward, Ms. Jill Sparrow suggested that the CAT could work with the Program Office to determine those guidelines. Another step for the CSG to consider in the development of the MOA is that it should effectively capture an airport operator's commitment and guidance to sharing data. The teams agreed that data coming from airport operators would be most practical outside of an automated data format for now. Such information, as would fall under "Irregular Operations" (i.e. pavement failures and snow removal impacts,) lies outside of the realm of automation and is more fluid; therefore, requiring a commitment being more dialogue and participatory in nature with the CDM community at large.

For further information contact:

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clay.whitesell@united.com

brian.gault@faa.gov

robert.s.goldman@delta.com

Subteam Updates (Continued)

PET (PERTI Engagement Team):

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

The PET is the newest sub-team stood up by the CSG last year to support the ATO's five-point objective of Plan-Execute-

Review-Train-Improve (PERTI). This sophisticated approach to strategic air traffic management engages collaborative feedback and recommendations. The team has analyzed existing TFM tools to support the P or Plan arena and they expect to continue progress in the other four areas in 2018/19. Recommendations by the PET so

far include the establishment of a Planning Team to provide continuity in the planning process, development of an internet platform to support timely plan distribution and development of a common metrics platform for the review element.

Mike Sterenchuk, American Airlines Industry co-lead, reported the team is moving ahead with their current task (#77 PERTI Engagement). He said the team has established short (12-month) and long (18-month) term goals. They are evaluating several tools and capabilities including metrics, a marine stratus tool as well as a trafficimpact prototype.

For more information contact:

kevin.j.bannwolf@faa.gov

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The 2018 PET Team



The PET and the FET teams working jointly at their meeting prior to the General Session

FET (Flow Evaluation Team):

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

The FET is working on two tasks: Trajectory Options Set (TOS) Development and Integrated Demand Management. The Trajectory Options Set task includes identifying potential benefits for flight operators to develop a capability to submitting trajectories into the Traffic Flow Management System (TFMS). The FET is also identifying shortfalls in current automation and process of TOS for both industry and the FAA.



The FET at the FIT

FedEx Institute of Technology at the University of Memphis

The team travelled to NASA Ames to support the Integrated Demand Management HITLs. Al Mahilo, FAA Team Colead informed the CSG that the data from impact to the system with the use of

(Continued on page 5)

Subteam Updates (Continued)

(Continued from page 4)

FET (cont.)

TOS and CTOP is under evaluation. At the Memphis general session, The FET gave a briefing to the assembly from John Gulding on airline metrics and how the FAA is looking to incorporate the reports and statistics.



Ernie and Al delivered at FedEx!

The FET team plans to meet in late August for information on a new task involving ADS-B implementation as it relates to ATFM. For further information about TOS, CTOP, ABRR, PDRR or the Flow Evaluation Team in general

estellings@nbaa.org

al.mahilo@faa.gov

FCT (Future Concepts Team):

Jennifer Ross (FAA) & Frank Oley (Industry) co-leads.

The FCT is exploring various opportunities for task development. One area being explored is "CDM in the Cockpit" which could expand the level of information exchanged with pilots. The team leads met with Rocky Stone, UAL pilot and member of the RTCA SC- 206, to narrow down the scope of the proposal. Another possible task is supporting the Flight

Data Modernization effort. The team has provided input to developers in past phases of this development. The FCT has not had an active task since closing out the Common Support Ser-



Frank Oley

vices Flight Data (CSS-FD) effort last year. Jennifer Ross will be stepping down as the FAA co-lead. Thank you Jennifer for your involvement and continued commitment to CDM and congratulations on your new position in the operation.

Watch for future "Future Concepts" news in September. For further information contact:

jennifer.a.ross@faa.gov

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WET (Weather Evaluation

Team):

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

The WET held a meeting in Memphis in early May. As described in the meeting agenda, the objectives of the meeting were to continue their work on three tasks. First, was to continue work to develop a convective forecast product with the intent to support an expansion of the ex-



The WET team engaged in a meeting in Memphis

tended strategic TMI planning process to 18 hours or greater. This capability is intended to provide information of the forecasted coverage of convective weather activity and will be shared among applicable stakeholders for the strategic planning of TMIs in the NAS operation. In a separate task, the WET also worked on recommendations on additional capabilities to be developed in the TCF playback tool. And lastly, the team has also been supporting development of the Common Support Services weather products (CSS-Wx) and NextGen Weather Processor (NWP) tools, which will integrate weather prod-

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Subteam Updates (Continued)

(Continued from page 5)

ucts into air traffic decision support tools. Implementation of these capabilities will not only improve

WET (cont.)



The WET team in Memphis. May 2018

forecasting, but will also create a single source for weather interfaces and a reduction in infrastructure costs.

The next WET meeting was originally planned for August, but the new date is for the week of 17 September.

For further WET information please contact:

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25 Years: A Milestone and Just the

Beginning

— by Greg Byas

Now that summer is officially here, I hope everyone is enjoying the great outdoors and time with



friends and family. CDM activities quiet down during the convective weather months but that doesn't mean the work stops. Every day, we are engaged with the operation and collectively managing our national airspace. As we reflect this month on 25 years of CDM, we can take pride in all that we have accomplished and all the hard work that has gone into getting us to where we are today. Thank you for your dedication to CDM. Whether you are a long time contributor or just getting started on your CDM journey, we continue to need your expertise to help address the challenges of traffic flow management. The CDM community is growing with potential new entrants like airport operators, commercial space operators, unmanned aerial system operators and some we probably haven't even thought of vet. It is an exciting time to be involved in CDM and to see what is coming next. The foundation we have established over the history of CDM has prepared us to tackle new advancements in aviation like never before. As Casev Kasem used to say, "Keep your feet on the ground and keep reaching for the stars." Enjoy the summer!

~Greg



The Origins of Collaborative Decision Making ~ 25 Years

~By Jadyne Seitz

A few months ago, I began a quest to expand upon what most of us know about the beginning of CDM revolving around the FAA/ Airline Data Exchange (FADE) experiment in 1993 and the introduction of the Flight Schedule Monitor (FSM). As a young controller in 1993, I was unaware of this little thing called traffic flow management. To put time into prospective, in 1993 the original Jurassic Park movie was released and my first son was born. (I recently commented to him that he is as old as Jurassic Park.) My own background with the use of ATFM tools and software did not begin until 2010 when I first started a job in the Traffic Management Unit at the Potomac Tracon. I continued to learn more about the FSM and all of the CDM-developed tools, and the CDM process in general, as my career progressed to working with the TFMS training class at the FAA Academy and now to working in the CDM office at the ATCSCC. "Systems Thinking," and how that relates so much to current Air Traffic Flow Management has become a topic of professional interest to me, and now through researching this article, the history of collaboration is an interest as well.

I was fortunate to have a rather large response to the feelers I put out looking for input from those who were involved in the CDM process back in those days leading up to the use of the FSM. Thank you to everyone who responded and I do hope the hinted at reunion at the Blue Iguana happens sometime for you this year. The lead up to collaborative decision-making was best summed up in a rather long correspondence from

Norm Fujisaki. Norm had done graduate work in Operations Research (OR) and he, along with others, helped form the nucleus of the original OR group at the FAA. In his correspondence, Norm explains how it began and I will try to summarize it as best I can. I have uploaded his full paper on the CDM website and I encourage you to access it here and read his full history.

During the timeframe of 1987-1989, T. Allen McArtor was the FAA Administrator. Among many other accomplishments leading up to his appointment, McArtor had served on the Senior Executive Team at Fed-Ex. Fred Smith founded FedEx in the early 70's, but had written a college paper on the idea while he was an economics student at Yale in the early 60's. What is interesting is how much of Fred Smith's thinking in the early days of FedEx had a role in the development of the hub and spoke method of airline scheduling, and in the eventual ability of the FAA to examine system delay in the early 1990s and beyond. In the early 1970s, Fred Smith and his struggling new business began relying on Operations Research to improve its planning and decision-making. FedEx developed quantitative origin/destination models. Norm explains how an early OR department was formed at FAA (under Administrator McArtor) and how he was a part of it due to his OR work in graduate school. As the 1990s began, many early planning and analysis tools were developed and utilized by people responsible for air traffic control operations. The head of air traffic operations in the early 1990s was David

Hurley. Also, at that time the FAA, like many other agencies and US companies, was promoting Total Quality Management (TOM); an idea focused on customers and customer needs with a central idea to deliver excellent service by stressing continuous process improvement. Finally, and I am adding this tidbit to Norm's writing, "The Fifth Discipline: The Art and Practice of the Learning Organization" a Systems Thinking book by Peter Senge was first published in 1990. Senge's theory? Focusing on group problem solving, using the systems thinking method in order to convert companies into learning organizations, is the key to business success and longevity.

T. Allen McArtor returned to FedEx after his time at FAA and the rest, as the saying goes, is history.

So that is as short as I can sum it up to keep it on one page, but again, I encourage you all to read Norm's essay <u>here.</u>

Thoughts or comments for the next newsletter? Send them here.





Reflections on 25 Years of Collaboration ~ Contributed by Norm Fujisaki

Several tenets that guided our work in the early days of CDM are worth restating because they continue to be just as relevant as they were in the beginning.

Focus on the problem that needs a solution. Be sure to properly define problems. Be sure you adequately understand them and how they behave. Pick the costliest ones to solve first; those are the ones that will produce the greatest benefits when solved. Then, use a problem-solving approach to develop effective, efficient and early solutions to them. Minimize distractions.

Take the time to gain an understanding of the bigger picture. Problems are large, complex, highly interconnected and span the FAA and customer domains. We collectively –service provider and customers alikemust be willing to invest the time and energy to engage each other and understand the whole problem, and then work together to solve them, end-to-end. Collaboration requires learning about what the whole elephant looks like, not be satisfied to work with the ear or the tail.

Address people and culture as an integral part of the problem. We need to recognize that people, habits and culture usually are the toughest part of solving problems. Solutions require people to change their behaviors. But, people generally don't like change, so we must be creative. Sometimes all that's required is a subtle adjustment, while in other instances it can feel like rewriting the natural laws. Rewarding the new required behaviors is key to unlocking the puzzle to bring about systemic, positive, lasting change.

The Early Days: Images submitted by *Giles O'Keeffe*





The Early Days: Images submitted by *Giles O'Keeffe*



Jim Wetherly (FAA), Teri Fletcher (FAA Program Support) ,and Chris Pear (UAL) enjoying another refreshing intellectual discussion. Jim Weatherly recently recollected that Chris was very knowledgeable and influential – within UAL he led their AOC to be an early supporter of CDM and led them to make necessary changes to implement capabilities.



Giles O'Keeffe, Currently, Principal Subject Matter Expert, Airline Operational Control at Metron Aviation. Pictured with Congressman Jim Oberstar during a tour at the NWA SOC.

"Good times!" stated Giles, "I think this would have been 1991 or '92."

Congressman Oberstar was a big proponent of FAA funding during his political career.

Memorial Tributes



~ by Sue Ashley

We would be remiss if we failed to recognize some of members of the CDM Community whose passion and dedication 25 years ago took CDM from a vision on a cocktail napkin at the Blue Iguana to being a staple in the success of shared situational awareness through collaboration in the flight operations arena today. CDM principals and philosophy have reached all corners of the world in one form or another and it is because of the passion and dedication of many folks including those who have unfortunately left us.



Mike Nadon from TWA served as the Airline Dispatcher's Federation President and was part of the original CDM development team. In a testimony before the National Civil Aviation Review Commission Mike stated "there are only two things you can do with an airplane once it's in the air; keep going where you are going or go somewhere else. The trick is to avoid situations that

make going somewhere else the more attractive option. The only way to do this is communication and information.

Timely and accurate information is better than stale and inaccurate information.

Information that isn't communicated to those who need it serves no purpose".

Those words still stand true today. Mike passed away unexpectedly in 2001 at the age of 53.

The late Honorable James Oberstar, Chairman and Ranking Member of the House Transportation and Infrastructure Committee (1995 – 2007). He was a relentless champion for CDM. Numerous times, Mr. Oberstar defended the need for funding CDM when the political op-



position felt it was a superfluous line item in the Federal budget. Congressman Oberstar passed away in 2014 at the age 79.



Mike Brennan, Chief Scientist at Metron Aviation was known as the "man behind the curtain" in evolving CDM from a technical aspect over the years. Mike was known as a scientist who understood the operational world of Air Traffic Management from both the Airline and FAA operational perspective. His logic and intuitiveness and down to earth demeanor made him very popular for being the "Go To" man within the CDM community. Mike passed away in 2015 after a long battle with cancer.

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Memorial Tributes (continued)

Jeff Tichenor (Tich),
FAA ZDV TMO, was a
well-known and respected contributor to
numerous aspects in
the CDM community.
His time spent on the
CDM Flow Evaluation
Team was critical to the
successful implementation of Air Flow Programs into the CDM
toolbox. Jeff passed
away unexpectedly in 2009.



dustry co-lead. Jim passed away in 2017, following a brief battle with cancer.

oping solutions for Southwest Airlines Dispatch. Mike possessed a vision of how shared situational awareness within the flight operations community would improve efficiency in National Airspace System. Today, "The Baker" is still in use to mitigate disruptions and improve reliability for Southwest operations. Mike passed away in 2013.

Mike Baker - Mike was not only well

known in the original CDM circle, but he

was also possessed an affinity for devel-

Jim Hamilton, UPS Airlines, ATC Manager. Although Jim joined the CDM ranks fairly recently, he jumped in as a member of the Flow Evaluation Team and Surface CDM

Team, he took on the role of the CDM Stakeholders Group Industry co-lead and eventually the CDM In-



Do you have information for additional tributes to be shared. Please contribute to our newsletter.

Thanks, J.S.







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 September!

