National Transportation Safety Board

Office of Aviation Safety
Washington, D.C. 20594-2000
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ATTACHMENT 2 to the METEOROLOGY GROUP FACTUAL REPORT
DCA16LA214

United Airlines' written responses to NTSB weather-related questions.

Submitted by: Mike Richards
NTSB, AS-30

NTSB Information Request

1. Does United Airlines have their own in-house meteorology department (United employees)?
No, UAL does not have an in-house department

2. We understand that United contracts with The Weather Company for meteorological support? Iis this correct? What physical presence, if any, do they maintain at United operations? Is there any other private weather vendor that provides United with meteorological support?
Yes, UAL has a contract with TWC to provide weather support. As part of the agreement, TWC has a satellite office in the UAL NOC which is staffed 24 X 7 X 365. We also have a contract with Panasonic, Inc. for weather support

3. What specific meteorological products (both analyses and forecasts) do the in-house meteorology department or private weather vendor provide to dispatch to support a particular flight (both pre-flight and enroute)?
Products are listed after question 9, forecasts are also listed after question 9

4. We have received a weather briefing from The Weather Company (appended to this request). In addition, we request a copy of all meteorological products that were available to dispatch from the in- house meteorology department or private weather vendor between 1000-1730 UTC on 17 August 2016.
As part of our agreement with TWC, we have a tool called “WSI Fusion” which allows us to do a replay of events along with the forecasts that were available. We can also request this data copies through TWC but it will take a few days to retrieve the products

5. Are there meteorology analyses and forecasts products other than those produced by the in- house meteorology department or private weather vendor that are utilized by dispatch to support their work? If so, what are these products and from where are they retrieved?
UAL Dispatchers are trained and certified to use the Enhanced Weather Information System (EWINS). This allows dispatchers to use data from a broad expanse of sources to supplement data sources that are listed in our Operations Specifications

6. We understand that United flight crews may have access to weather products while enroute via a “WSI app” installed on iPads (EFBs). Is this correct?
En route access is limited to our 15 757-200 aircraft. En route access is a work in progress on other aircraft

7. If “yes” to #6, what specific weather products are accessible to flight crews via the WSI app or other means available in the iPad/EFB?
Pilots are able to to access the full Pilotbrief website via the iPAD

8. Specifically, do United flight crews have access to real-time ground-based weather radar imagery while enroute? If so, how is this accessed and what is the source?
This is available via the WSI app, but only on the aircraft indicated in question 6

9. We would like to request a copy of all meteorological products that were available to the UAL #1945 flight crew from the in-house meteorology department or private weather vendor through the iPad/EFB between 1000-1730 UTC on 17 August 2016.
Prior to departure, access would have been the same as stated in question 7. Once airborne, the flight crew did not have had access via the iPAD.

WSI Products available via Pilotbrief Web-Site

Weather
Radar Summary
Hot Storm Index
Tropical Tracks
WSI SIGMETs
Lightning (5 minute)
TAPS
Airport WX
WSI FPGs
NWS AIRMETs
Government SIGMETS
PIREPS

Navigation Data
TFRs
Ocean Tracks

Radar and Satellite
HD Radar
North America
Europe
HD Vertical Composite
HD Echo Tops
SATrad (global)
Satellite (global)
Color Enhanced IR (global)
HD Satellite
North America
Europe
Water Vapor (global)
HD Vertically Integrated Liquid

Wind Speed (Conus)
Radar (Australia)
Sea Surface Temperature
HailZone
StrikeZone
Radar (Hawaii)
Radar (Alaska)

Terminal Area Forecasts Produced by TWC for UAL

PWAK/AWK
MNMG/MGA
UIBB/BTK
UIII/IKT
ZMUB/ULN
UEEE/YKS
UHMA/DYR
UHSS/UUS
UHHH/KHV
UHMM/GDX
UHPP/PKC
UUEE/SVO
VAAH/AMD
UTSS/SKD
RJCK/KUH
MZBZ/BZE
KEGE/EGE
ENSB/LYR
PTSA/KSA
PTPN/PNI
RJAW/IWO
AGGH/HIR
BGTL/THU
KHDN/HDN
KGUC/GUC
KDEN
KORD
KIAH
KEWR
KSFO
KIAD
MYAT
UOOO
OIMS
OIMT
UTTT

UTAA
UTAM
UTSB

Through what system(s)/websites can United dispatchers monitor enroute weather (namely ground-based weather radar)? Are there requirements for the dispatcher to do so? If so, where are these requirements established?

Sabre Flight Explorer ASD is the dispatcher's primary interface for weather graphics display. Relevant weather products are provided by TWC and include:

- North America 1km HD Radar
- US Premium NOWrad
- US Vertical Composite
- Radar Summary
- US HD Echo Tops
- IR Satellite (GOES East/West)
- Water Vapor Satellite (GOES East/West)
- Visible Satellite (GOES East/West)
- PIREPs
- Lightning
- Turbulence Auto-PIREPs System (TAPS) Reports
- Turbulence Advisories
- Turbulence SIGMETs
- Turbulence Flight Plan Guidance (FPGs)
- High SigWx overlays from Washington WAFC and London WAFC

Dispatchers also have access to the aforementioned radar and satellite products via the **WSI Pilotbrief Optima** web portal (https://www.pilotbrief.com/Optima/).

Dispatchers also have web-based access to government-sourced products such as:

- CCFP
- Corridor Integrated Weather System (CIWS)
- Consolidated Storm Prediction for Aviation (CoSPA)

The Dispatch Operations Manual contains all policy requirements for monitoring en route weather information:

- **DOM 2.20.1**: Joint Responsibility for Operations – Captains & Dispatchers
- **DOM 6.30.1-3**: Flight Monitoring – Enroute
- **DOM 7.30.2-4**: Aviation Weather & NOTAMs – Weather Evaluation Procedures