

Reviews

The Animated Atlas of Air Traffic over North America

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University of Nebraska at Omaha, 2006.

Format: Data DVD designed to work on a computer (Mac or PC) and will not work on a DVD player and television. The data DVD is also accompanied by a booklet, ix, pp.44, 27 printed maps, one photograph. Price of DVD unknown to the reviewer. The booklet is spiral bound.

ISBN: 0-9776676-1-8.

Reviewed by Gregory H. Chu
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The *Animated Atlas of Air Traffic over North America* is primarily a collection of animated maps showing what one presumes is a typical day's flight traffic for that continent, compiled from data collected over several months of monitoring. It is supplied on a DVD format disc. The DVD requires a software program called 'Divx' to work. An installation link for this appears for the PC in the autorun screen and Mac software is downloadable from www.divx.com/divx/mac/download/. The organization of the entire atlas is somewhat atypical; all the animations and links are placed on the DVD while a separate booklet is devoted to five chapters providing explanatory and analytical information on air traffic control, flight mapping, and air traffic patterns. While anyone who has ever used a mouse will be tempted to bypass the booklet and start clicking on the interactive links on the computer screen, it may be helpful to read the booklet first in order to understand the overall picture on how North American air traffic is managed by the FAA and its Canadian counterpart as well as many of the industry's terminologies.

The DVD home page is a lead-in screen organized into 9 interactive linked pages: *All flights*, *Aircrafts*, *Airlines*, *Airports*, *Corridors*, *Regions*, *States*, *Links*, and *About*. Other than the *Links* and *About* pages, all of the linked pages contain animations; over 70 in total, created from more than 100,800 individual maps. Each animation utilizes 1440 frames (the number of minutes in a day) to display all of the flights that took place in a 24-hour period beginning at noon and ending at noon of the next day. The animation screen provides an option of selecting animations speeds at 0.5X, 1X, and 2X.

In addition to the moving planes, an animated analog clock runs on the lower left corner to tie in the traffic pattern with the time of day. The data for these flights were from March 2003 to September 2005 and the animations were created with a 2002 program called FlyteTrax (FlyteTrax.com).

The *All Flights* page presents three animations: one over Canada, one over the continental U.S., and one over the Caribbean. From these animations, one can identify the spatial and temporal patterns of the heavy traffic corridors. It is easy to identify air traffic over northern Canada and distinguish those that are mere commuters between isolated northern Canadian communities from international flights that are taking advantage of the polar routes. The *Aircraft* page breaks down all the flights by the make and model of the aircraft (for example, Boeing 757s) that are in flight in that 24 hour period. It is a little unclear why this page was included; I doubt there are many who are interested in specific patterns based only on the make of aircrafts.

The *Airlines* page classifies all flights by airline and is perhaps the most useful page of the entire atlas. One can visualize the traffic patterns of the top ten passenger airlines plus three other airlines, the top 4 cargo airlines, and all foreign airline traffic in the US. Spatial comparisons can indicate where each airline has its major passenger markets; hubs for each airline can be clearly identified. It is also interesting to note the time frame when some of these airlines have the least amount of traffic, provoking thoughts of whether that airline can be more aggressive in promoting routes at these times (for instance, Southwest Airline does not have a single flight in the air from 2:15 am to 5 am Central Standard Time). Flight patterns generally begin each morning, for each airline, from the east coast first and end with west coast traffic at night. In contrast, the animation for Federal Express airplanes clearly reveals a different work schedule; at 2 pm, which is normally a busy air passenger traffic time, there are only two Fed Ex flights in the air. Beginning at 3 pm, large numbers of flights depart its headquarters at Memphis, TN and from 10 pm through 1:30 am, also large numbers of flights return to Memphis. It then remains quiet until 3:15 am when many Fed Ex planes leave Memphis for the morning delivery nationwide.

The *Airports* page can also provide useful spatial information. Animations are provided for twenty US and eight Canadian airports, basically showing all

air traffic going in and out of each airport. The *Corridors*, *Regions*, and *States* pages are similar organizations of flights based on different spaces. In the *States* page, eight animations are presented for eleven states or pairs of states (states that were combined into one single animation include Colorado and Kansas, Montana and Idaho, Nevada and Utah). Also in the *States* page are two air traffic animations that show two different time frames for Hurricane Katrina along the Gulf Coast. It is interesting to see the pattern of air traffic being affected by the Hurricane.

The technical aspects of animation are very well achieved. The design of the animated maps was thoughtful and effective. Each animation this reviewer saw presented clear visualization of the spatial patterns of the air traffic. Analytical maps from the booklet presented generalized spatial patterns for the red-eye flights, the morning waves, the hub spokes, the hub pulse clusters, the hub commuters, the mail service traffic (and its unique work time schedules), as well as international arrivals. While the animations are effective in showing each spatial scene, it must be remembered that data for each animation were based on flight patterns that were mapped as a one-time (24 hour) instant that may vary from year to year as airline routes are changed by the FAA and/or the airlines themselves. Thus, the contribution of an atlas such as this one should be treated more as an example of good technical production or even a well designed collection of animations that may lead to meaningful visual analytical interpretations rather than the common expectation that an atlas provides complete reference information. Such an expectation may be next to impossible to achieve for an animated atlas. Other than the usefulness that was described above by the pages, there appears to be limited application value. It was also unclear to the reviewer who may be the intended audience. No information was provided to this reviewer regarding any commercial distribution of this atlas, its market price, or how to obtain a copy. Nevertheless, it was a joy to watch the animations, contemplate the spatial patterns that were presented, and learn more about the air traffic industry.

**Wabanaki Homeland and the New State of Maine:
The 1820 Journal and Plans of Survey of Joseph Treat**

Edited with an Introduction by Micah A. Pawling
University of Massachusetts Press

Amherst, Massachusetts, 2007

300 pages, with reproductions of hand drawn maps throughout

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Wabanaki Homeland and the New State of Maine: The 1820 Journal and Plans of Survey of Joseph Treat begins with a detailed Introduction by Micah A. Pawling to the Joseph Treat journal and surveys. Pawling prepared this book while a Ph.D. candidate in history at the University of Maine. His Introduction provides important insight into the driving political and cultural forces that necessitated the Treat expedition in the first place. Pawling also explains the ongoing significance of Treat's documents in historical context.

The Joseph Treat journal itself was created in diary format during the course of a fifty-six-day exploration of northern Maine waterways undertaken in 1820. Treat's detailed surveys of the region are complemented by his journal entries to provide a unique overview of place and time. The original spelling, punctuation, capitalization, and sentence structure used by Treat have been retained in their entirety (as reflected in the passages quoted within this review) and include the Penobscot place names Treat learned along the way from his Wabanaki guide, John Neptune. Helpful footnotes have been added by Pawling as an adjunct to the original text to familiarize readers with the current place names and locations of the areas referenced in the Treat journal and to provide historical commentary or cite related textbooks that further illuminate the journal entries.

As a new state in 1820, Maine was eager to settle northeast boundary disputes with neighboring New Brunswick and other Canadian territories. The Saint Croix River had previously been established as the official boundary between eastern Maine and southwestern New Brunswick, but the northern boundary between Maine and Canada was much less certain. Major Joseph Treat was hired by Maine's Governor King and his executive council to explore and document the lands along the Penobscot and Saint John Rivers, which comprised much of the disputed area. In 1820, this land was largely the province of the Wabanaki people, and little was known about its geography outside the Native American community. (Micah