

New Cartographies of Flow

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Representing the city other than through its figure-ground condition poses a challenge, for architects. This is why Louis Kahn's traffic flow-map of Philadelphia (1952), which dematerialized the physical fabric of the city in favor of speed, is still such an iconic and popular precedent in explaining how dynamic processes, not static form can determine urban space. Given that much of our contemporary culture is premised on flow it is surprising we cannot draw upon more examples that visualize how mobility systems shape the city. In an era when systems of flow not form are the primary organizers of the city, it is critical that architects contemplate how the flow of people, capital, money, goods and data impacts space through new representational techniques that visualize these flows.

A model produced for an exhibition comprising a 12" x 12" x 12" acrylic cube artfully visualizes the patterns of distribution of contemporary modes of exchange by indexing freight flow. Focus is on the sorting and shipping of priority packages in and out of the FedEx Superhub at Memphis International Airport over a 24 hour period (February 11th 2008). The model reveals the following:

NODE: FedEx is the world's largest overnight shipping network and operates a hub and spoke system. This means that every package regardless of drop off passes through one centralized location—Memphis, Tennessee—where it is sorted before being re-distributed to its final destination. (Fed Ex has other large hubs at Indianapolis and in Guangzhou, China but Memphis is its primary global facility). The hub and spoke model reinforces the importance of a single node as a primary gateway by centralizing control in one or a few strategic sites. In an era when decentralized systems are the norm, FedEx stands out as a top down planning model.

RANGE: The sheer number of flights in and out of the hub on a typical night is evidence of the intensity of economic and social relationships across the nation. While the diverse geographic range of package distribution suggests that even insignificant places are part of, what Manuel Castell's calls the space of flows.

TIME: Packages are sorted between 10:30pm and 3:30am each night. During this five-hour timeframe, upwards of 500,000 packages per hour pass through an automated sort system, known as the Matrix, where they are directed by size, type and destination onto outbound planes for delivery across the globe. Even inside the sort center packages are continually moving. Seconds are critical. Every package has a deadline. The sort center is measured according to time.

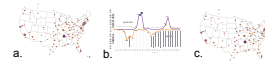
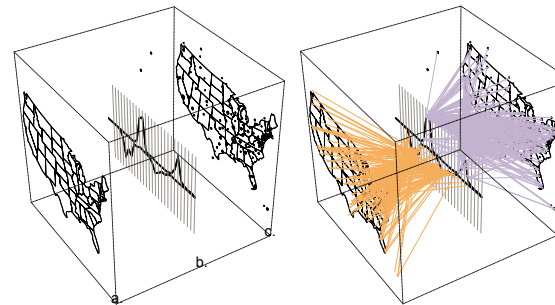
The model was produced as follows:

1. Flight data is downloaded from a flight tracking website and converted to an XL doc.
2. This information is composed as a graphic map in illustrator.
3. A 3d model of the map is produced in Rhino, and sliced 96 times.
4. Route trajectories are laser cut from 96 acrylic tiles, each measuring 12" x 12" x 1/8".
5. The 96 tiles are clamped together and held in place via 4 threaded stainless steel rods in each corner of the cube.
6. The model is mounted on a stand and lit from the underside.

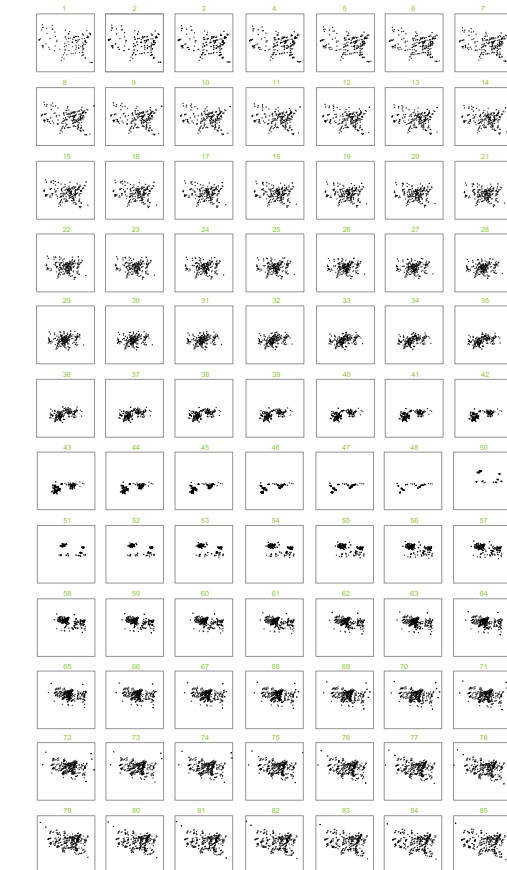


01. Download Data

02. Graphically Compose



03. Export as 3d and Construct Model



04. Laser Cut 96 (12" x 12" x 1/8") Acrylic Tiles

Images courtesy of Clare Lyster

