

THE WALL STREET JOURNAL.

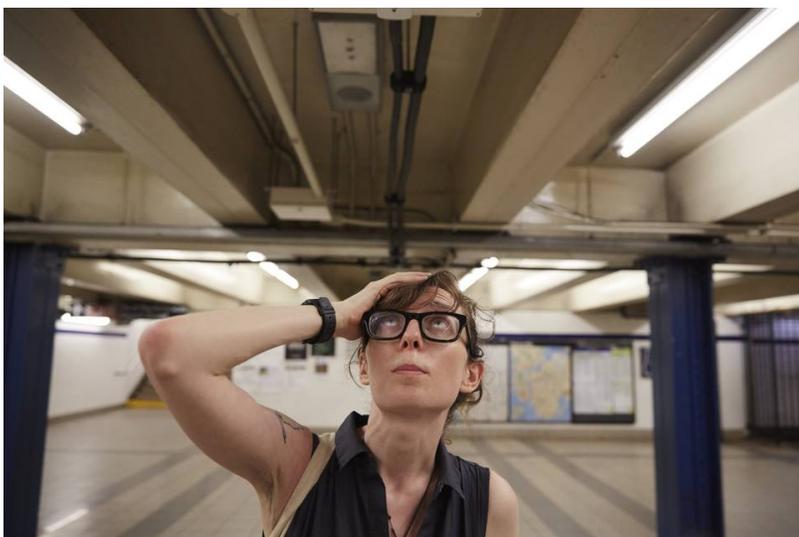
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Cracking the Codes of New York City

New handbook from artist-writer Ingrid Burrington demystifies components of the city's physical internet



Ingrid Burrington, author of 'Networks of New York: An Illustrated Field Guide to Urban Internet Infrastructure. *PHOTO: STEVE REMICH FOR THE WALL STREET JOURNAL*

By **ANDY BATTAGLIA**

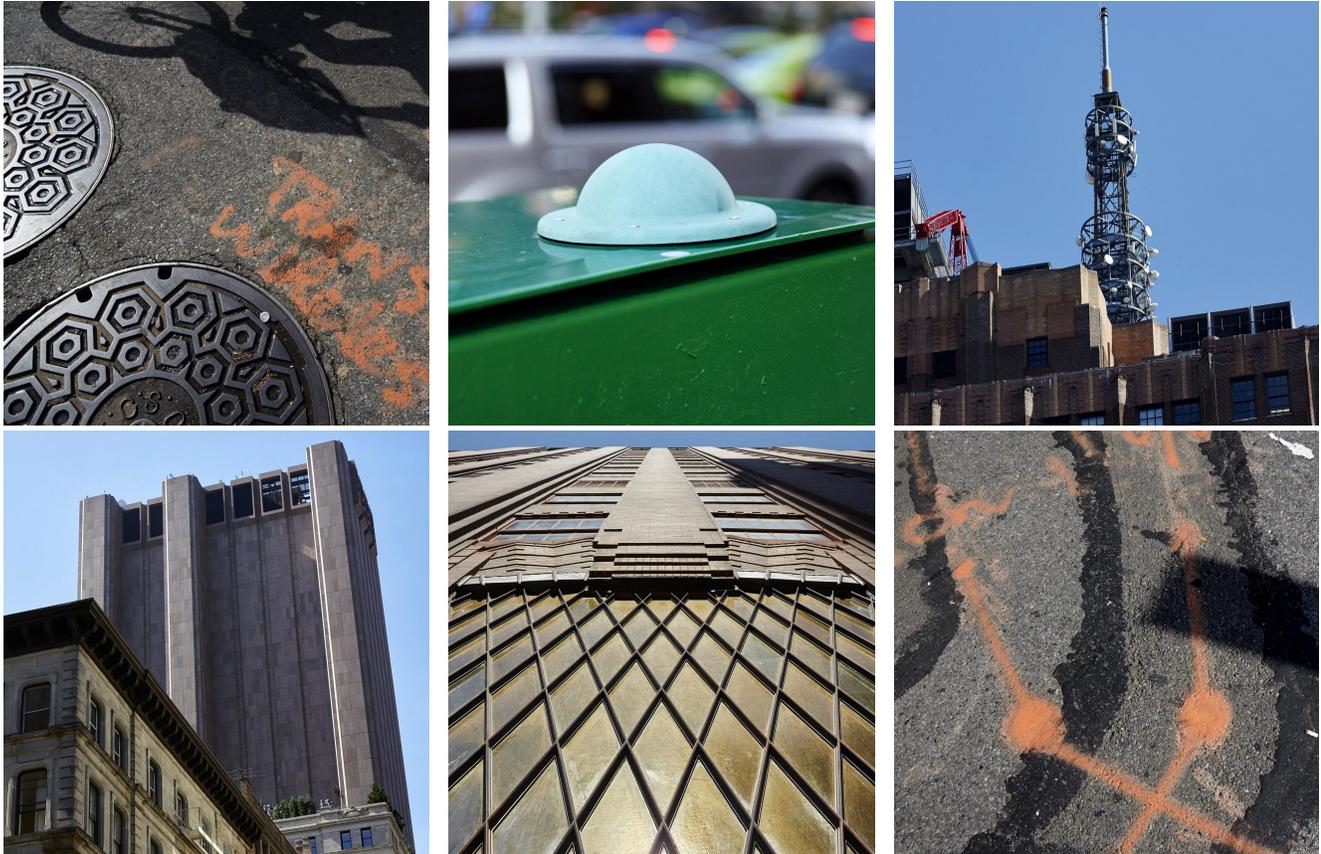
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Whether or not New Yorkers are paying attention, their digital connectivity can sometimes rely on the finer points of a mess of paint on the street.

Some of the markings are orange, others yellow or red. Arrows, lines and letters combine to create a cryptic language of symbols and codes.

“It’s kind of scrawly and intense,” said the artist and writer Ingrid Burrington. “Living in New York, you’re trained not to look down, so it’s funny how rich and dense these markings can get and still be ignored.”

Ms. Burrington is the author of “Networks of New York: An Illustrated Field Guide to Urban Internet Infrastructure,” a playful, approachable handbook that pairs written bits of historical and expositional text with pencil drawings of arcane finds by the author.



Orange spray paint at the intersection of Eighth Avenue and 16th Street indicates underground fiber optic cables for Transit Wireless next to an Empire City Subway manhole cover noted for its hexagonal design. A small, green node on top of a traffic signal control box is a wireless router. A wireless ISP tower on top of a building in Manhattan. The former headquarters of the AT&T Long Lines division. 60 Hudson Street was once the headquarters of the Western Union Telegraph Co. and today is a major hub for internet activity. 'There's a pretty good chance that if you've ever done anything on the internet in New York that your data has passed through this building,' Ms. Burrington said. Orange spray paint at the intersection of Eighth Avenue and 16th Street indicates underground fiber optic cables. *PHOTOS: STEVE REMICH FOR THE WALL STREET JOURNAL(6)*

Due out Aug. 30, its goal is to demystify components of New York City’s physical internet: not only those spray-painted street messages, but also manhole covers, junction boxes, cable routers and entire buildings whose primary purpose is to do the hidden work of making a wired modern city run.

This isn't her first art project to visualize things we take for granted or don't often think about. In 2012, she created a workbook on the everyday evidence of federalism called "Government in Plain Sight!" Another project, the "Center for Missed Connections," is a mock think tank dedicated to loneliness in cities. Among its wonky "research" products: heat maps spun out of data culled from the Missed Connections section of Craigslist.

To get her arms around the guts of New York's digital network, she started by consulting the American Public Works Association, an organization geared toward groups that help make civic society function, and reading ultra-technical manuals and guides.

While spokespeople for many companies she called on were dismissive of the queries of an artist, she said, some workers on the street were receptive to her curiosity.

"In Brooklyn I asked if I could take a picture inside a manhole," Ms. Burrington recalled, "and the guy asked, 'You're not a terrorist, are you?'"

Ms. Burrington, 29 years old, took a reporter on an infrastructure tour last week, beginning outside 111 Eighth Ave., a block-wide building built in 1932 for the Port Authority.

In the late '90s, it was transformed into a so-called carrier hotel, a site where communications systems converge and interconnect. Then in 2010, it was acquired by Google and now serves as a hub for internet traffic and other communications.

Along the tour, she pointed out color-coded symbols painted on the street, meant to alert utilities workers to what lurks beneath the pavement. Symbols like "f/o" signal fiber-optic cables, and scrawls of words like "shallow cover" and "Transit Wireless" indicate notes about location and operator names.

Orange is used for communications cables, while red goes to electric power lines and yellow to gas.

One set of painted symbols was linked to the recent introduction of Wi-Fi service in the 14th Street subway station below, where wireless routers hung in a camouflaged fashion from the ceiling. The innocuous metal boxes, white and emblazoned with a tiny Transit Wireless logo, included the warning "Do Not Paint."

On a park bench in Tribeca, home to many infrastructural treasures, Ms. Burrington talked about her impetus for the book.

"I remember being frustrated with all the stock photos that were being attached to the internet, like a black screen with green text and 'Matrix' fan art," Ms. Burrington said. "The idea that the internet is somewhere else bothered me. The internet is in my

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—Ingrid Burrington

apartment, on my phone and in the street.”

Much of the city’s technological infrastructure is less modern and gleaming than might be expected.

“Towers, cables, switching stations—it’s all built on top of years and years of telecommunications history,” Ms. Burrington said. “It tends to inherit a lot of histories, as infrastructure gets built on top of infrastructure.”

The next tour stop: 32 Avenue of the Americas, a landmarked art deco building that served in the 1930s as an AT&T Long Lines headquarters. Like other depots for early telephone and telegraph operations, it had evolved over time. Now it serves as another carrier hotel where different communications companies’ networks meet and “check in” with each other.

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Inside the lobby is a grand vintage wall mosaic with a map of the globe and a hopeful sentiment spelled out in tiles: “Telephone wires and radio unite to make neighbors of nations.”

“We don’t talk about the internet the way they talked about telephones back then,” Ms. Burrington said. “There was this romantic promise in thinking about what communications systems can do.”

Down the block she paused by a green box suspended on a street pole, which conceals equipment that controls the stoplights and transmits data wirelessly to receiver antennas nearby.

“It’s so innocuous,” Ms. Burrington said. “Just another object to be graffitied.”

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