

Networks - An illustrated field guide to urban internet infrastructure

by Ingrid Burrington

Ingrid Burrington

Proclaims to know nothing about what the internet looks like before writing this book.

“Trying to determine precisely what **Ingrid Burrington** as an artist does usually turns out to be a bit troublesome for newcomers not yet introduced to her concepts”

- Andrey WideWalls.ch

Based on her resume she seems to know a bit about computers though.

<http://lifewinning.com/resume/>

Intentions with book:

“A guide for practising the everyday magic of seeing the internet as part of the city’s landscape and everyday life.” Burrington

Wants to answer the question:

“What does the internet look like?”

A cloud? A bunch of computers doing cyber stuff?



This is usually what you get when searching what the internet looks like.

How to spot urban internet infrastructure

Book split into 3 main chapters:

Below the ground:

Street markings

Manhole Covers

Subway Wireless
Networks

Ground Level

Junction boxes

NYCWIN (NYC Wireless
Network)

LinkNYC

Carrier Hotels and Data Centers

Above ground

Cell towers

DAS (Distributed Antenna Systems)

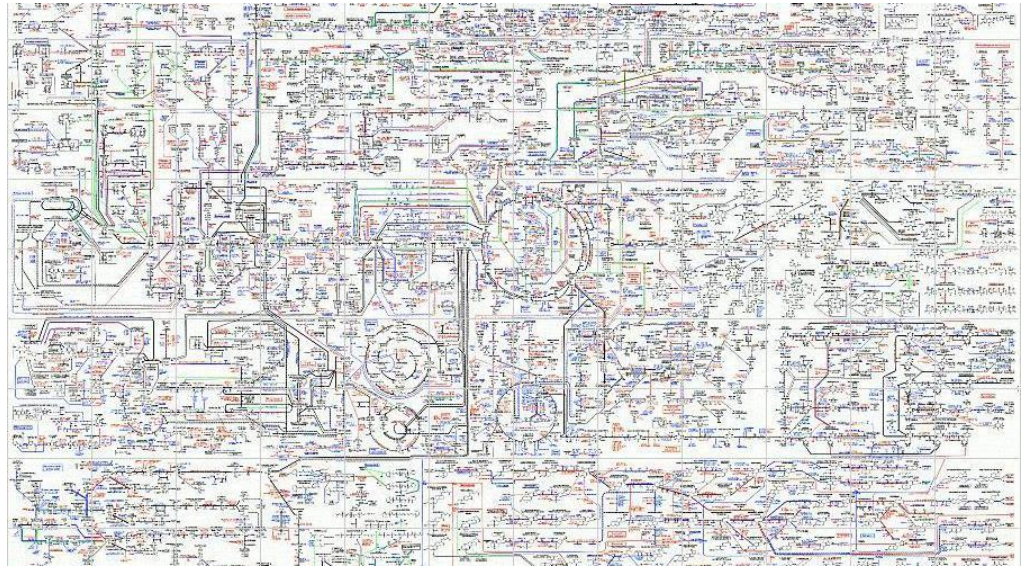
LinkNYC

Surveillance Cameras

Approach to the book - Brief overview of companies, acquisitions and mergings

Knowing the names of the companies mentioned in the book is important to understand the message of the book and what to look for in the streets. However, since the book is short it sometimes explains detailed topics very briefly.

We used the “biochemistry-method” to somewhat get an understanding of how companies have evolved over the years.



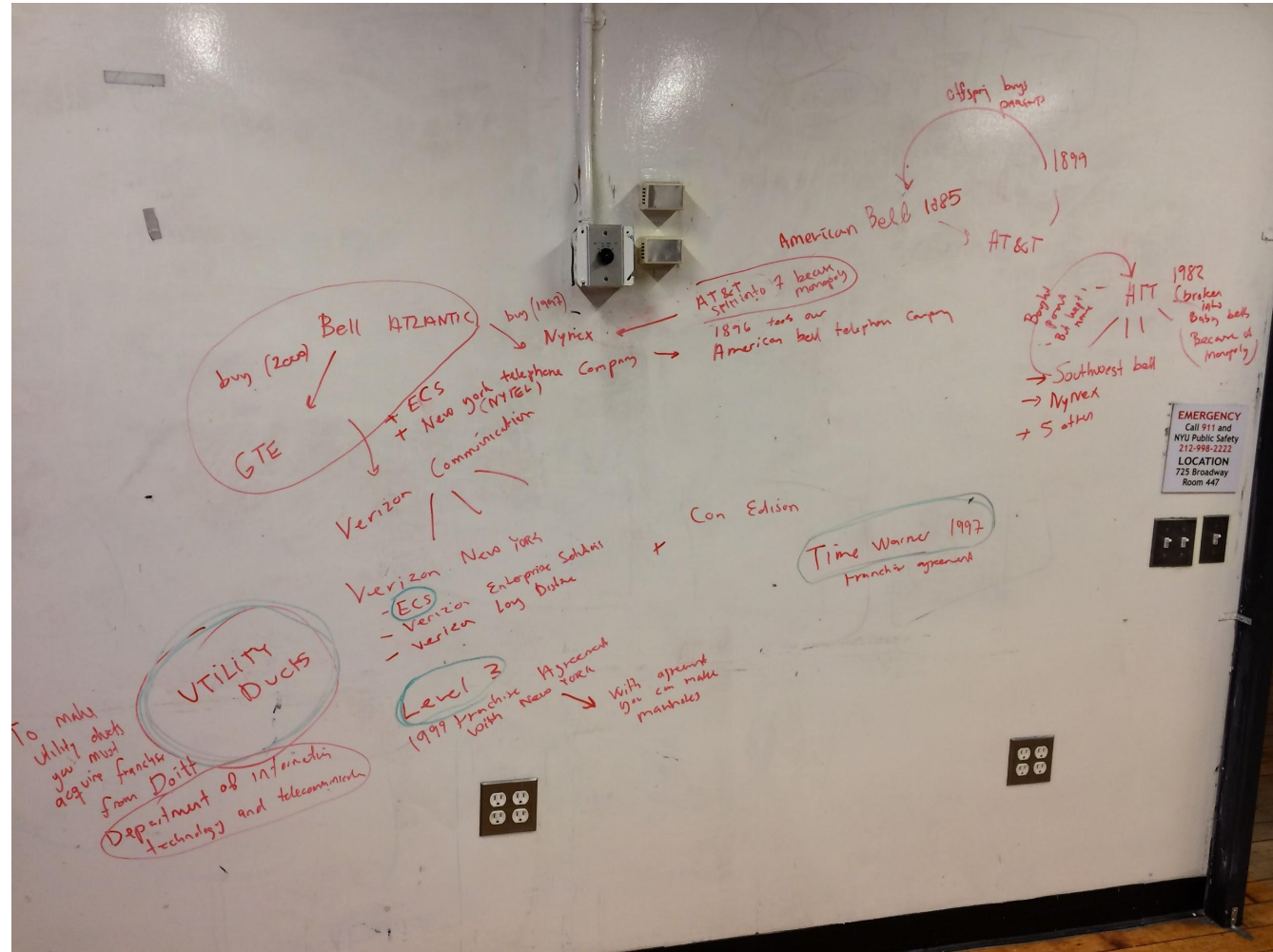
Understanding the origins of ISP's reminds me of biochemistry

(Inaccurate)
Main points:

Bell Atlantic buys GTE in 2000. They inherit Empire city subway (ECS) and New York telephone company (NYTEL) to create Verizon Communication.

Verizon New York is formed as a branch of that, consisting of:

- ECS
- Verizon enterprise Solutions
- Verizon long distance



Important because....

ECS (now under Verizon) was formed to construct and maintain tubes for telegraph and telephone cables (- Instead of poles, due to the great blizzard in 1888).

You will often see ECS references in the city, and rarely Verizon - however Verizon really is “The infrastructural elephant in the room” in NYC.

The duct networks in NYC belongs to 3 companies:

ECS

Verizon New York

Con Edison









If you obtain a Franchise agreement in NY (DoITT) you are entitled to install manholes in certain areas.

(Level 3 - 1999, Time Warner 1997)



Street Markings

Street excavation call 811. 811 calls utility companies. Location of underground cables are marked according to APWA guidelines

| | | | |
|---|---|---|---|
|  | RED Electric Power Lines, Cables, Conduit and Lighting Cables |  | GREEN Sewers and Drain Lines |
|  | YELLOW Gas, Oil, Steam, Petroleum or Gaseous Materials |  | PURPLE Reclaimed Water, Irrigation and Slurry Lines |
|  | ORANGE Communication, Alarm or Signal Lines, Cables or Conduit |  | PINK Temporary Survey Marking |
|  | BLUE Potable Water |  | WHITE Proposed Excavation |



Markings outside 60Hudson

Ground Level - from a trip around lower manhattan

- + Junction boxes
- + Carrier Hotels



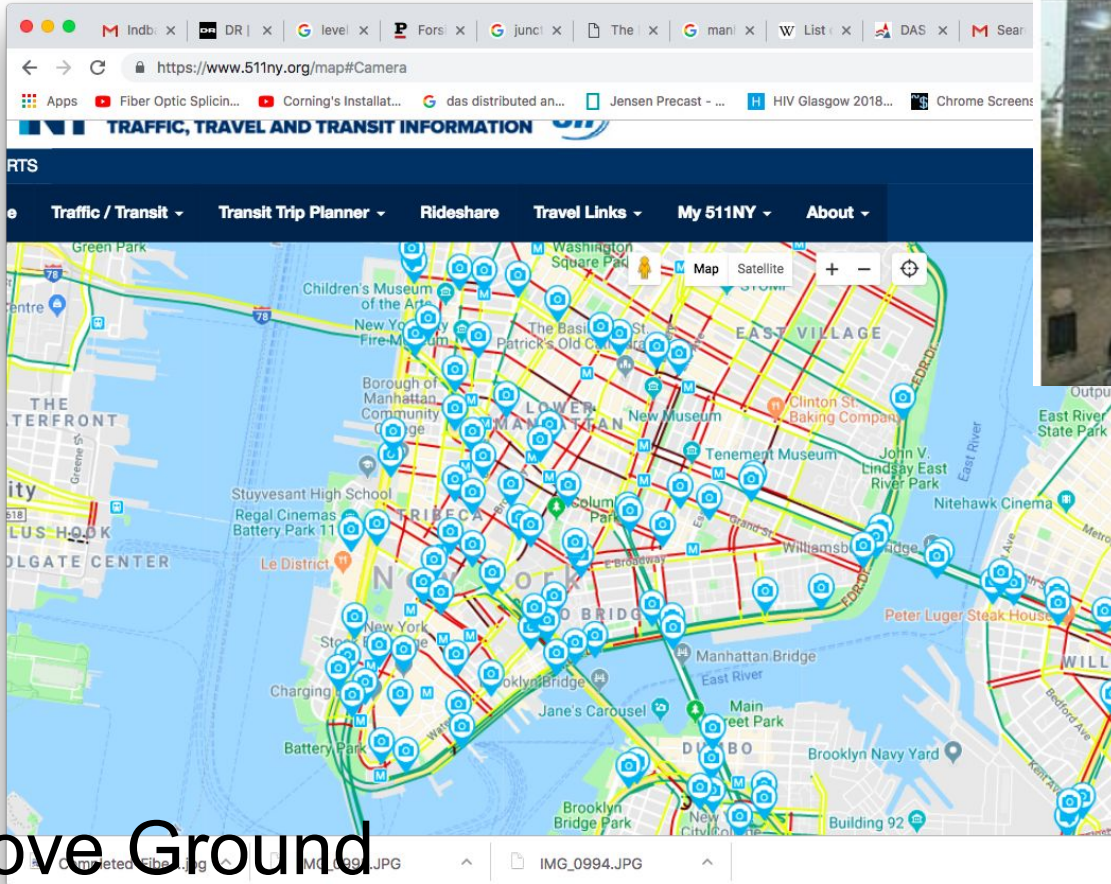
LinkNYC - Reinvented payphones



Traffic Signal Controllers
(Connected to NYCWIN)

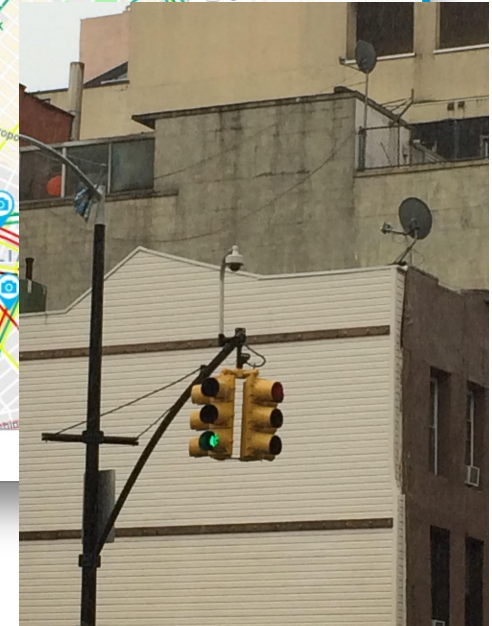


Automated License Plate Readers
(ALPR) - Database



Above Ground

Traffic Cameras : Maintained by MTA and Department of Transportation





Crimeeye Cameras
NYPD Cameras



Distributed Antenna System
(DAS) Network Amplifier



Cell Towers

The book

Interesting read - Once you start looking for urban marks there is no going back.

Although the author remains neutral to surveillance - The theme continuously comes to mind.

I was surprised by the amount of cameras in NYC

Monopoly. It is very clear that a few large companies has a lot of power in the public. Secret agendas?

Do we know exactly where all this data goes?