307401
Big Data and Data Warehouses

Inside Google Data Center

https://www.cnet.com/pictures/peeping-inside-googles-data-centers-pictures/

https://www.youtube.com/watch?v=avP5d16wEp0

Data Center Building Blocks
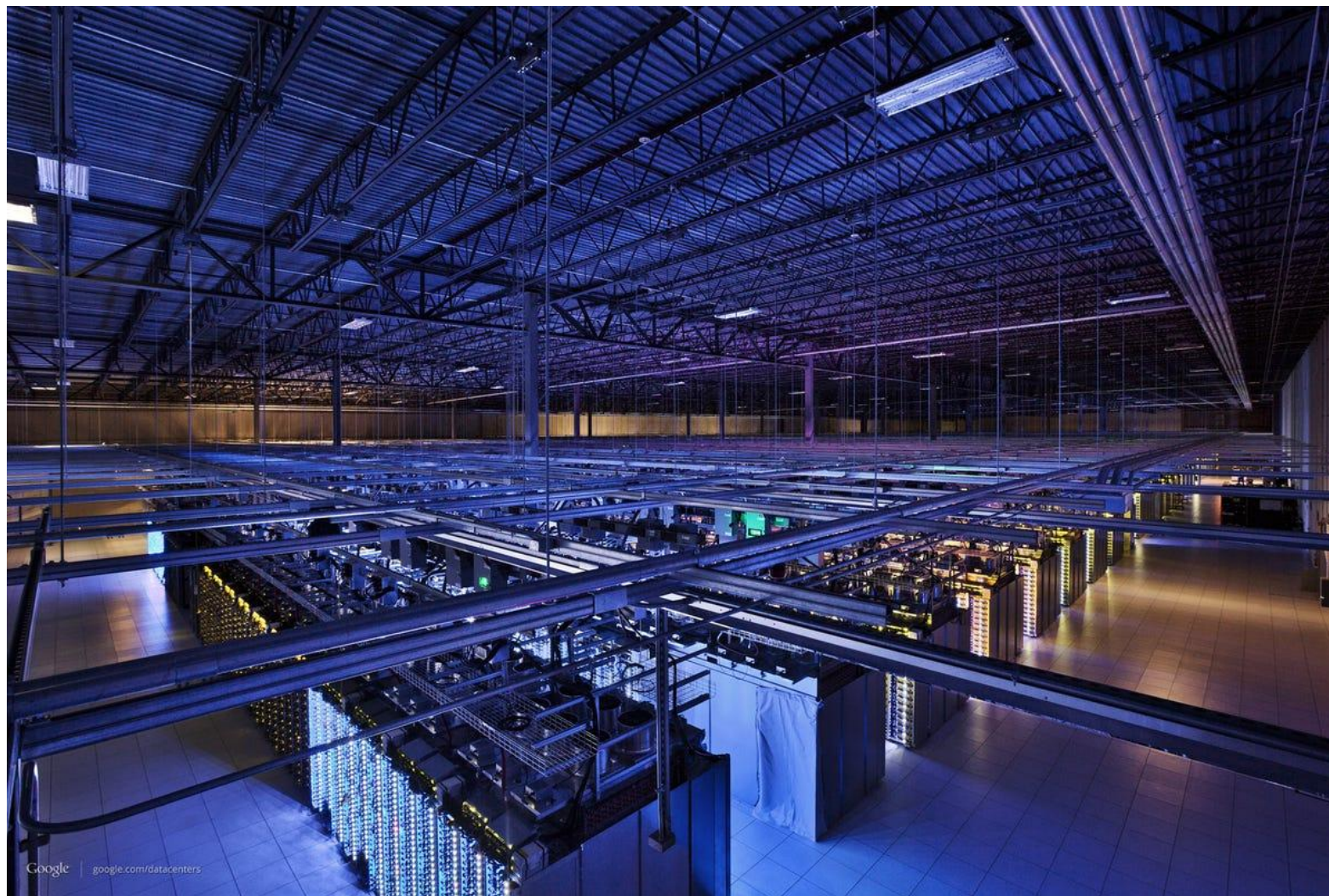

cluster switch

server racks
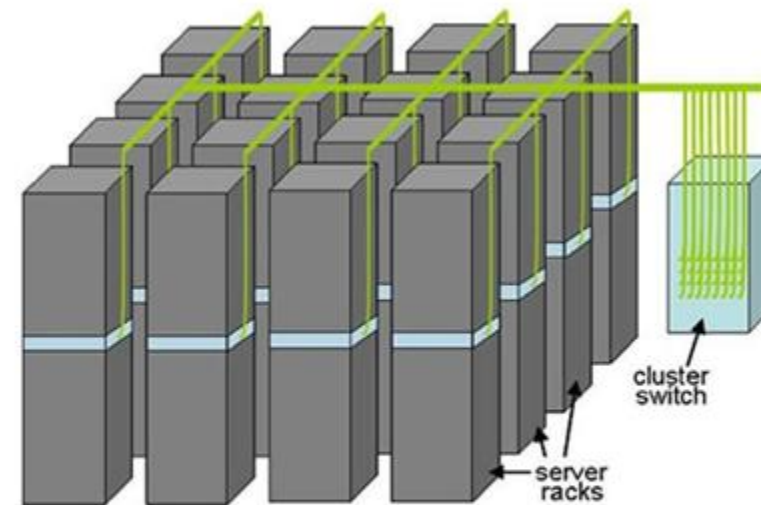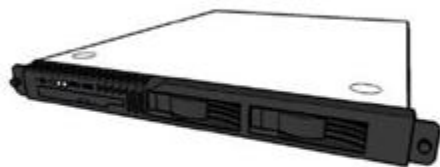
Oklahoma data center from the air
Google's data center in Pryor, Okla

Google's Atlanta data center by night
A Google data center outside Atlanta, Ga.

Google data center in Council Bluffs, Iowa
Google's data centers can be vast. This one in Council Bluffs, Iowa, has more than 115,000 square feet of room.

Colored cables in Google data center
Google uses huge numbers of servers, as evidenced by this long shot down one data center aisle. The colored cables are standardized across the company's data centers worldwide so their function is clearer.

Google's colored pipes

Google's data centers use color-coded pipes to indicate what they're used for. Pink means water headed for outside cooling towers. Google employees use bicycles to get around their data centers.
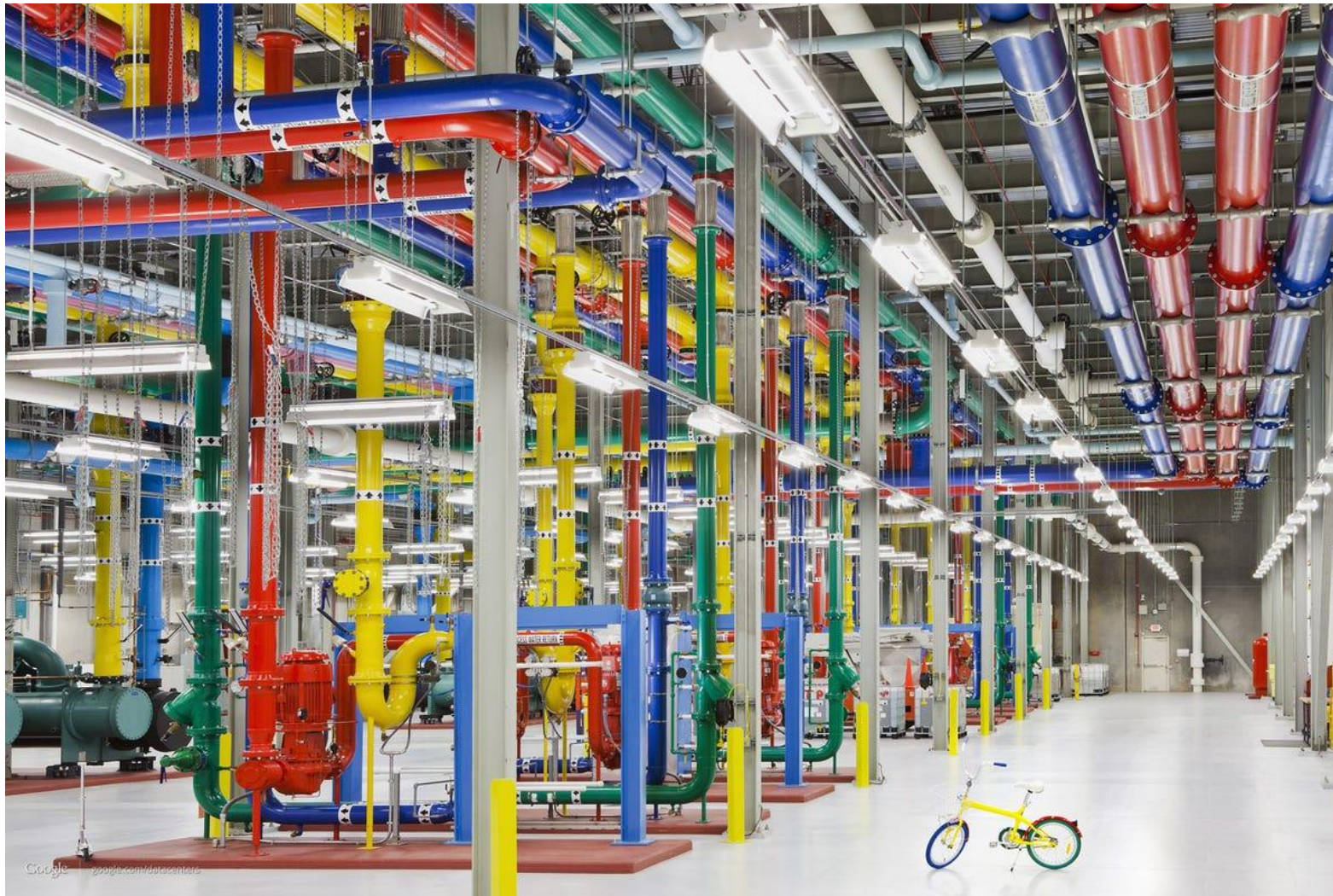
Fixing a Google server
Denise Harwood diagnoses an overheating CPU inside a long aisle between racks of computing gear in a Google data center.
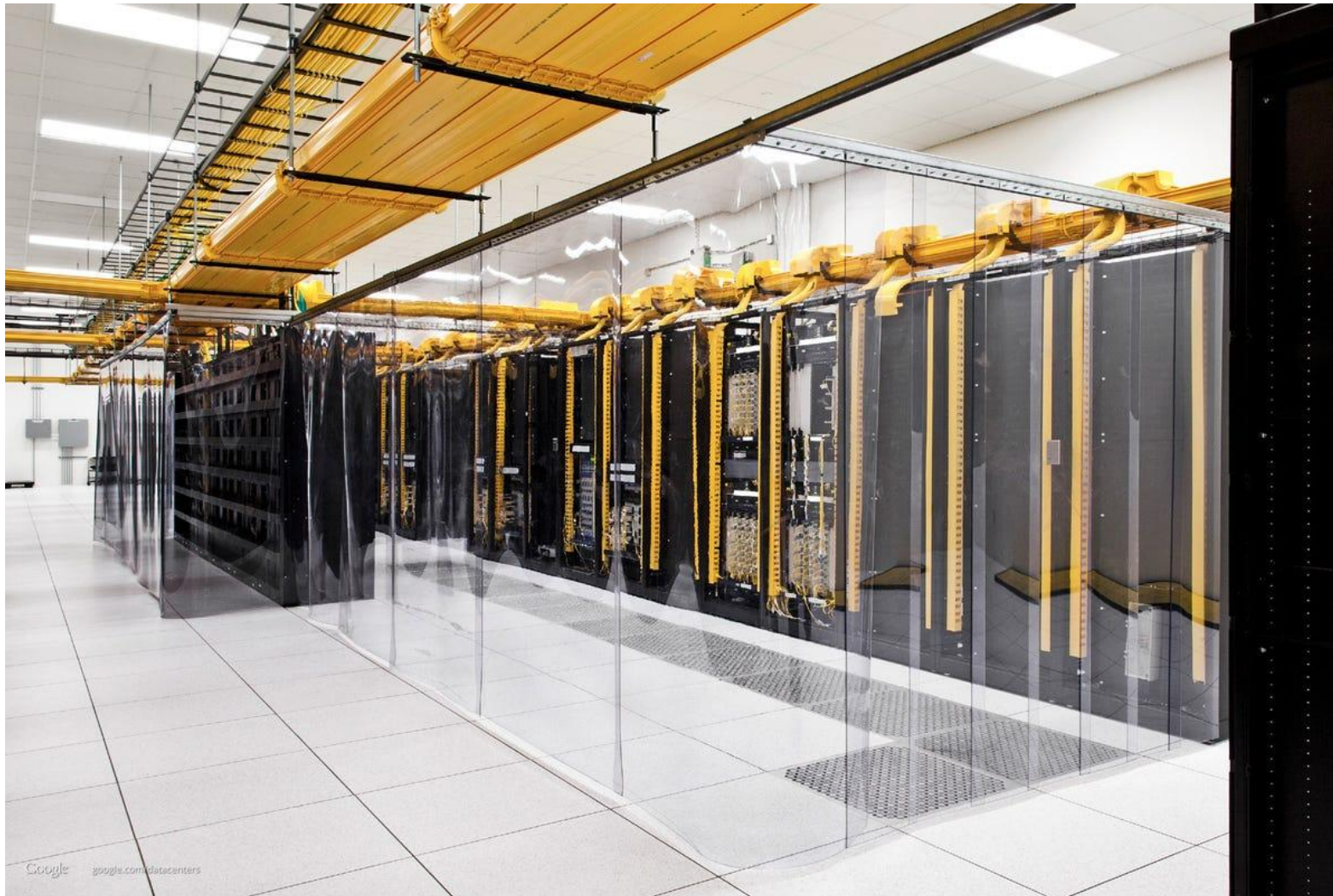
Google cooling towers
These are the water tanks and cooling towers for Google's data center in Saint Ghislain, Belgium.

Cold curtains
Transparent plastic curtains keep the cool air around servers in a Google data center in Council Bluffs, Iowa.

Google Infrastructure – Rough Estimate

- **Data Centers**: Over 70 worldwide

- **Servers per Data Center**: Estimated 50,000 to 200,000

- **Total Servers Globally**: Several million

- **Operating System**: Custom Google Linux distribution

- **Regions**: 34 globally

- **Availability Zones**: Multiple per region

- **Example Regions**:

  - US-Central1 (Iowa)

  - Europe-West1 (Belgium)

  - Asia-East1 (Taiwan)