COLONIAL ECHOES IN INTERNET INFRASTRACTURES

2010

2000

1990

1980

1970

1960

1950

1940

1930

1920

1910

1900

INTERNET ERA

TELEPHONE ERA

GLASS

SUB. FIBER OPTIC CABLES

SUB. TELEPHONE CABLES

COAXIAL CABLES

POLYETHYLENE

CONECTING COLONIES

companies are building private cables and selling off the capacity to users

Alcatel Alsthom
now Alcatel Lucent

ownership changes: both the consortium and private cable models still exist today, but one of the biggest changes is the type of companies involved in building cables

direction générale des télécommunications now france telecom

Compagnie Générale d'Electricité now Alcatel Alsthom

~AMERIGO VESPUCI 1999

~ COLUMBUS III - 1999

1981*
cable & wireless launches mercury communication

~ ALONSO DE OJEDA 1999

glass: lasers on one end fire at extremely rapid rates down thin glass fibers to receptors at the other end of the cable. These glass fibers are wrapped in layers of plastic and steel wire for protection.

~ COLUMBUS II-b - 1994

1988
TAT-8
1. transatlantic fiber optic cable between GB & U.S

2009
1. sub. fiber optic along the coast of the african continent

1966*
Siemens AG

fiber optic cable comprises multiple layers of fibers. Each pair has one fiber in each direction. The filaments that carry light signals are extremly thin - roughly the diameter of a human hair

cold war the logics of the cold war reflected in new geographies dislocating cable stations to remote sites next to urban centers

1956
TAT-1
transatlantic telephone cable

Despite the general shift toward decentralized landing points coaxial cable routes generally followed the same paths as the former telegraphic cables (Starosielski 2015: 40)

submersible repeater a technology that amplifies the cables's signal on the bottom of the seafloor made transoceanic speech transmission possible (Starosielski 2015: 38)

imperial and international communication ltd.
now cable & wireless 1934*

polythene as insulation replaced gutta-percha, which meant that cable companies no longer needed to extract that material from Southeast Asia (Starosielski 2015: 38)

1902
1st. transpacific cable

1929*
imperial and international communication ltd.

all red line a supported and subsidized project linking via undersea cables many of the british colonies

~
1920*
<$>
Compagnie Générale d'Electricité
1492 Columbus
facebook
google
~ COLUMBUS III - 1999

cable founding
purchase
old name

colonial event
owned by
owned by
highlight

1927*
téléphone industrielle et commerciale

1899*
marconi wireless company

1898*
Compagnie Générale d'Electricité

1898 *
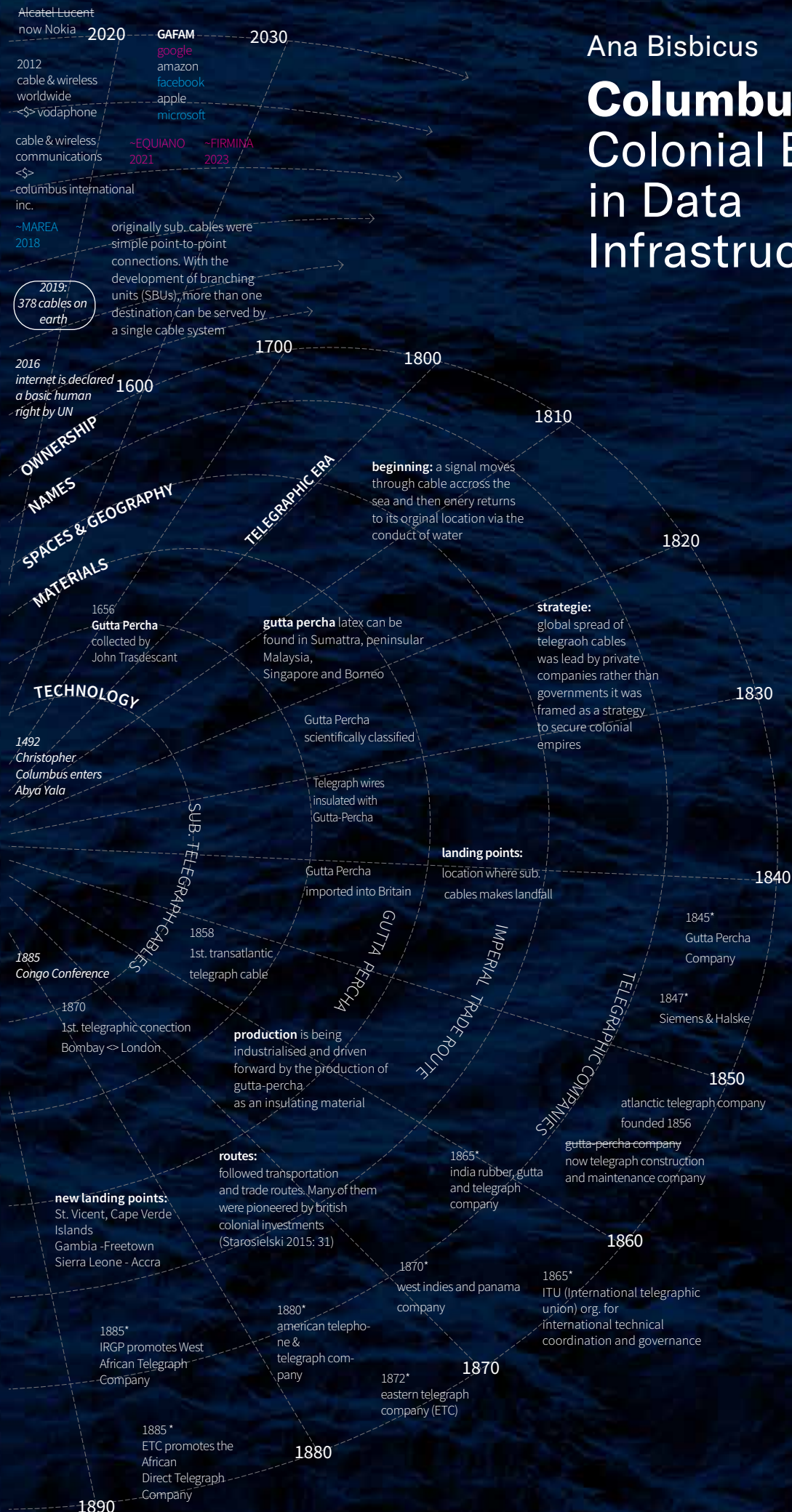Direction Générale des Télécommuni-cations

1900

Sources:
Starosielski, Nicole: The Undersea Network, Duke University Press, 2015

Undersea Internet Cables Are Surprisingly Vulnerable, wired online magazine, 2015

www.submarinecablemap.com

Ana Bisbicus

Columbus III
Colonial Echoes in Data Infrastructures

Alcatel Lucent
now Nokia

2020

GAFAM
google
amazon
facebook
apple
microsoft

2030

2012
cable & wireless
worldwide
<$> vodaphone

cable & wireless
communications
<$>
columbus international
inc.

~EQUIANO
2021

~FIRMINA
2023

~MAREA
2018

originally sub. cables were
simple point-to-point
connections. With the
development of branching
units (SBUs), more than one
destination can be served by
a single cable system

*2019:
378 cables on
earth*

*2016
internet is declared
a basic human
right by UN*

1700

1800

1600

1810

OWNERSHIP

NAMES

SPACES & GEOGRAPHY

MATERIALS

TELEGRAPHIC ERA

beginning: a signal moves
through cable accross the
sea and then enery returns
to its orginal location via the
conduct of water

1820

1656
Gutta Percha
collected by
John Trasdescant

gutta percha latex can be
found in Sumattra, peninsular
Malaysia,
Singapore and Borneo

strategie:
global spread of
telegraoh cables
was lead by private
companies rather than
governments it was
framed as a strategy
to secure colonial
empires

1830

TECHNOLOGY

Gutta Percha
scientifically classified

*1492
Christopher
Columbus enters
Abya Yala*

Telegraph wires
insulated with
Gutta-Percha

SUB. TELEGRAPH CABLES

Gutta Percha
imported into Britain

landing points:
location where sub.
cables makes landfall

1840

1845*
Gutta Percha
Company

*1885
Congo Conference*

1858
1st. transatlantic
telegraph cable

GUTTA PERCHA

IMPERIAL TRADE ROUTE

1847*
Siemens & Halske

1870
1st. telegraphic conection
Bombay <> London

TELEGRAPHIC COMPANIES

production is being
industrialised and driven
forward by the production of
gutta-percha
as an insulating material

1850

atlanctic telegraph company
founded 1856
gutta-percha company
now telegraph construction
and maintenance company

routes:
followed transportation
and trade routes. Many of them
were pioneered by british
colonial investments
(Starosielski 2015: 31)

1865*
india rubber, gutta
and telegraph
company

new landing points:
St. Vicent, Cape Verde
Islands
Gambia -Freetown
Sierra Leone - Accra

1860

1870*
west indies and panama
company

1865*
ITU (International telegraphic
union) org. for
international technical
coordination and governance

1885*
IRGP promotes West
African Telegraph
Company

1880*
american telepho-
ne &
telegraph com-
pany

1870

1872*
eastern telegraph
company (ETC)

1885 *
ETC promotes the
African
Direct Telegraph
Company

1880

1890

Columbus III spans a length of 9,833 km and has been facilitating data transmission since 1999. It carries information from Sicily through Spain to the Caribbean region. Being the first undersea coaxial cable connecting Europe and Latin America, the Colombus cable's origins trace back to 1977, when it was officially launched on October 12th. Through a name and a route, this cable is entwined with my personal history and memories. [1]

This artistic research employs counter-mapping techniques to reveal how data infrastructures are integrated into the continuum of colonial legacies. Colonial imprints extend beyond geographical routes; they appear in names, materials, landing points, and the histories of the corporations managing these connections.

My main focus centers around charting the colonial traces in submarine data infrastructure without being confined to the conventional Western linear representation of time and space. Timelines present a chronological sequence in a spatial arrangement. Yet, this linear approach often fails to capture the intricate interdependencies between events, especially when history is narrated from a single perspective.

This raises a crucial question: can tools like maps and diagrams, historically created as instruments of power, also serve as means for alternative narratives?

Following the work of the duo Black Quantum Futurism and their Quantum Event Map, [2] I encountered a tool that enables people to explore how individual and shared perceptions of time — past, present, and future — are interconnected. [3] This prompts me to consider how I can narrate a cable's story and its connection to my personal narrative. How can we reimagine representations of time and space?

Shifting away from linear diagrams, I enter into the realm of spirals to chart the transition from telegraph to fiber optic cables. The approach highlights parallelisms and connections among events shaping today's data infrastructure. Instead of implying a cause-and-effect relationship between events, it acknowledges that various factors have simultaneously influenced this infrastructure. This narrative is a testament to the complex interplay of colonialism, technology, and power.

As I follow the colonial traces of these cables, I confront my personal history. I find myself unlearning a history I was taught, one that was never truly mine. It was imposed upon me in form of memorised data, names, and facts. Reflecting on my school days and what I learned about Columbus, I realise it might not have seemed strange back in the days that a cable bore his name. Because this is what I have learned. The idea of laying kilometers of cables beneath the sea might have appeared more strange to me. It is important what names are given to the objects, structures, and spaces that carry our stories. It is also important how these stories are told. ⊕

Ana Bisbicus is an architect and researcher based between Berlin and Colombia. They studied Architecture at the University of Arts Berlin and Glasgow School of Arts in Scotland.
Their work situates at the intersection between artistic research, curation, and design of discursive and built spaces. Together with Sarah N. Hachem Herfurth, they founded *Habi Practice* حبي, where they jointly develop educational formats in spatial planning around the relationship of space and colonialism.
From 2019 to 2024, Ana has been a part of the *fem_arc* collective in Berlin, where they collaboratively developed projects that critically examine power structures in space and individual experiences of discrimination.

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1   José M. Romeo, "La unión entre dos mundos: los cables submarinos entre España e Hispanoamérica" *Colegio Oficial de Ingenieros de Telecomunicación* (Madrid, 1993), 115–120.

2   The concept of the Quantum Event Map is associated with Black Quantum Futurism, a movement and philosophy that combines elements of quantum physics, Afrofuturism, and social justice. It was developed by artists and thinkers such as Ashon T. Crawley and Rasheedah Phillips, who explore how time and culture intersect, particularly in the context of Black experiences. Their work seeks to reframe understandings of time and existence, empowering marginalised communities to envision alternative futures.

3   Rasheedah Phillips, "Constructing a Theory and Practice of Black Quantum Futurism", in *Black Quantum Futurism: Theory & Practice*, Vol. I. (Philadelphia: Afrofuturist Affair / House of Future Sciences Books, 2015), 27–29.