5G Americas
3GPP MRP Report

April 2021

Chris Pearson
President
5G Americas

Who We Are

5G Americas facilitates and advocates for the advancement and transformation of LTE, 5G and beyond throughout the Americas.

AT&T
Cable&Wireless Communications
ciena
cisco
CROWN CASTLE
ERICSSON
intel
MAVENIR
NOKIA
Qualcomm
SAMSUNG
Shaw
Telefonica
T-Mobile
vmware
WOM

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5G Americas Contributions

Technical Facilitation & Coordination

Regulatory Policy

Educational Outreach

Market Statistics and Forecasts

Fast Start: 5G Is A Commercial Reality

North America — **10** Deployments

World (all other) — **140** Deployments

Latin America — **13** Deployments

TeleGeography March 2021

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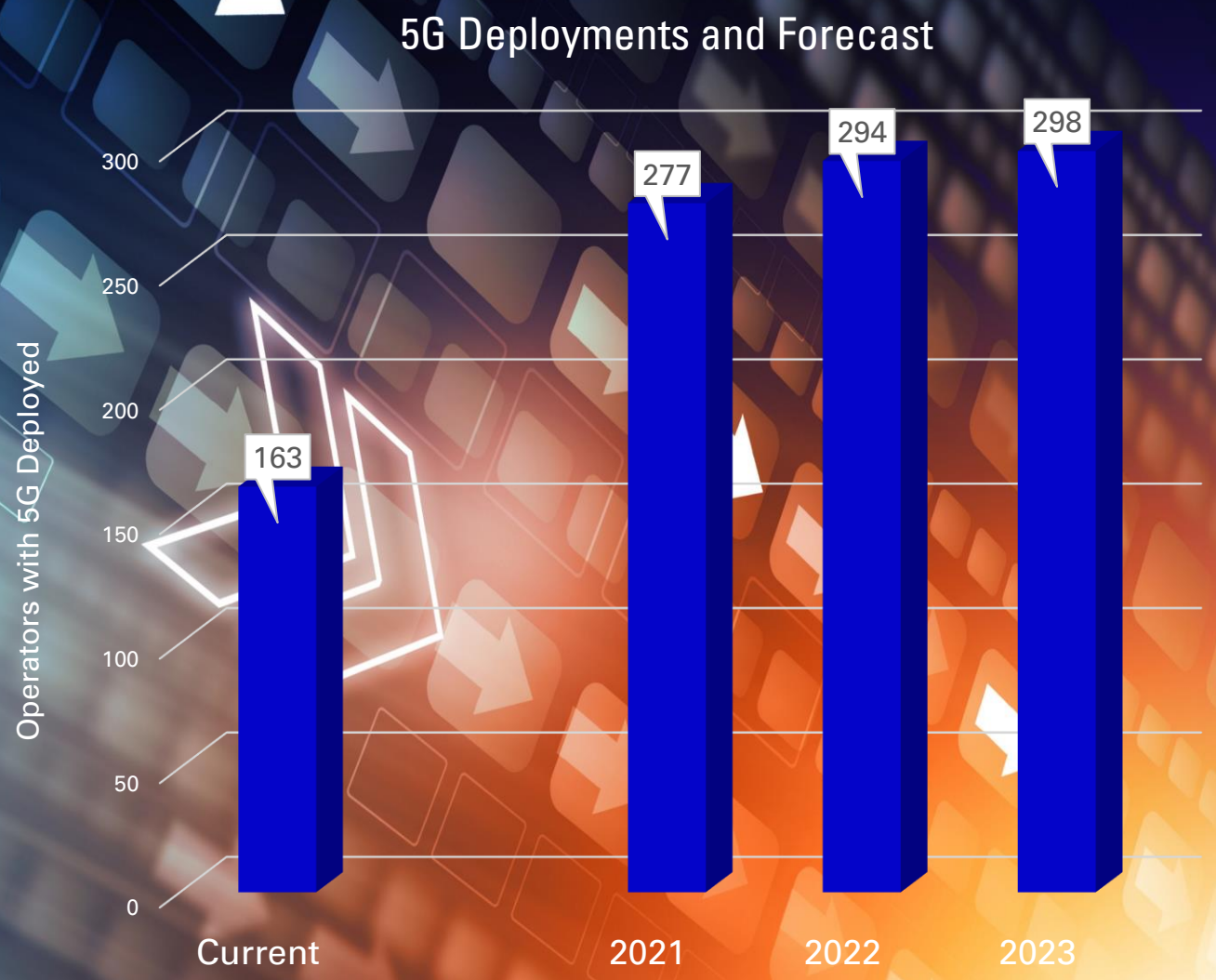
More than 1/2 of 5G Deployments occurred by end of 2020



TeleGeography

Source: TeleGeography
Publication: GlobalComms Database

February 2021

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5G

Deployments (US)
Tier 1 Operators

AT&T

95M wireless subscribers

- 5G network now covers 230M Americans in 14k cities and towns
- 5G+ is now available in parts of 38 cities in the U.S.
- More than doubled the spectrum deployed in its network over last four years, with 70% of its low and mid-band spectrum in service.
- Deploying remaining 30% of low and mid-band spectrum. Expects further enhanced performance in the top 50 urban markets
- FirstNet migrating to 5GC-Band: Netted 80 MHz in 95% of the country. Remainder between 60-100 MHz

T-Mobile

102M wireless subscribers

- 5G Standalone Network
- 5G network covers 287 million people across 1.6 million square miles
- Only US operator with deployed mid-band spectrum (2.5GHz)
- 'Ultra Capacity' 5G uses mid-band (2.5 GHz) covers 125M people with speeds around 300 Mbps with peaks of 1 Gbps
- Avg. of 40 MHz of C-Band in key areas home to nearly 225 million people

verizon

121M wireless subscribers

- 5G Nationwide available in 1,800+ cities.
- 5G 'Ultra Wide Band' currently available in parts of dozens of cities
- Covers 230 Million people in 2700 cities
- 5G MEC to launch in 10 cities in 2020
- Launched standardized 5G mobility service in 30 cities in 2019
- Started with mmWave spectrum in 2018
- By end of 2020 covered 61 cities with mmWave spectrum
- 140 MHz of total spectrum in contiguous United States.
- Avg 161 MHz nationwide. Enough bandwidth in every available market – 406 markets in all.
- C-Band: 60 MHz in initial 46 markets to be cleared in 2021. Represents > 50% of U.S. population.

Sources (March 2021):

CNET, AT&T, LightReading, 3/12/2021
T-Mobile Analyst Day, 3/11/2021
T-Mobile, 3/10/2021
Verizon, 1/27/2021

5G Deployments

Latin America & Caribbean

Argentina – 1
Brazil – 3
British Virgin Islands - 1
Colombia – 1
Puerto Rico – 1
Suriname – 1
Trinidad & Tobago – 1
Uruguay – 1
US Virgin Islands - 2

TeleGeography

Source: TeleGeography
Publication: GlobalComms Database

March 2021

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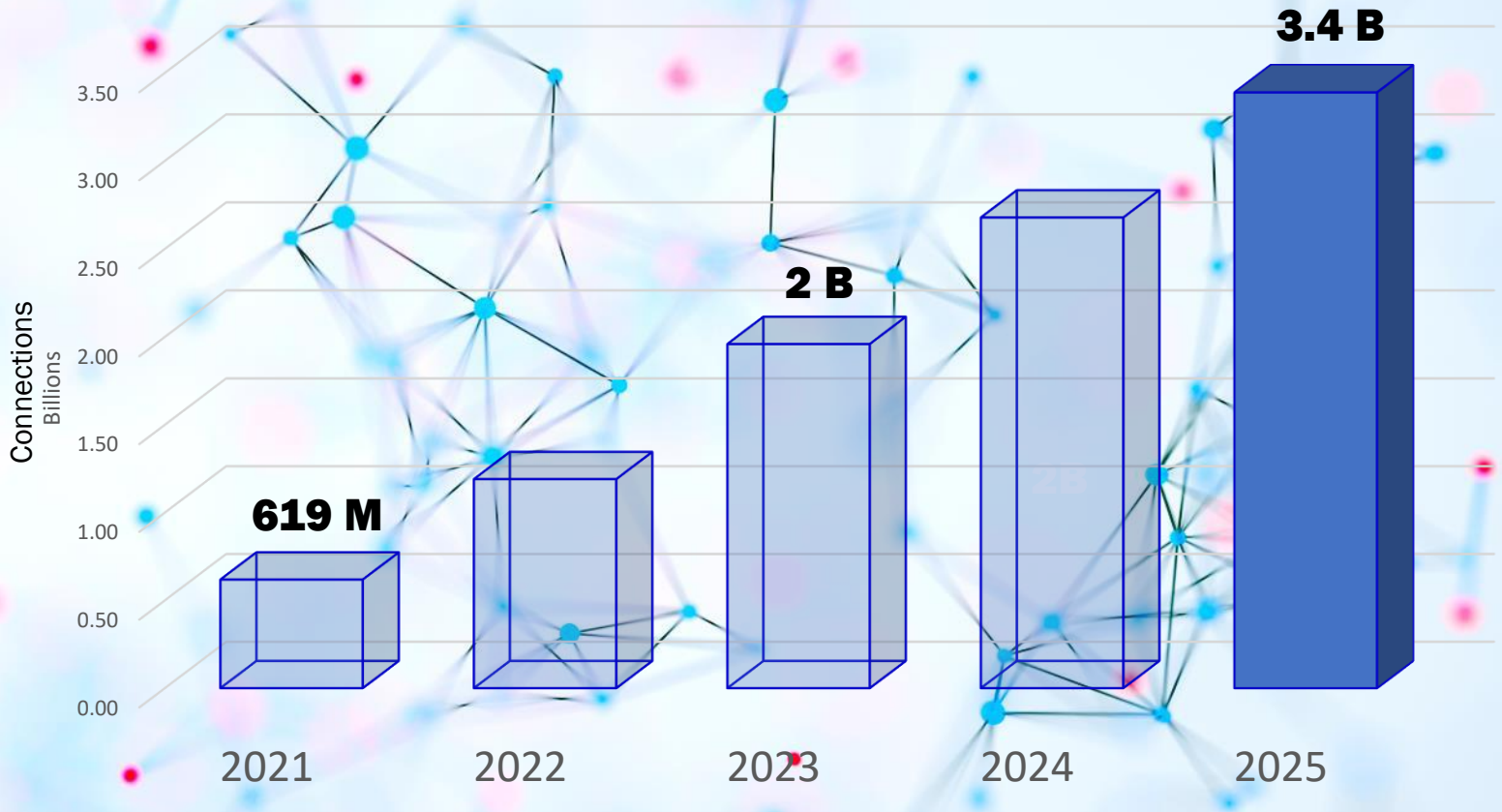
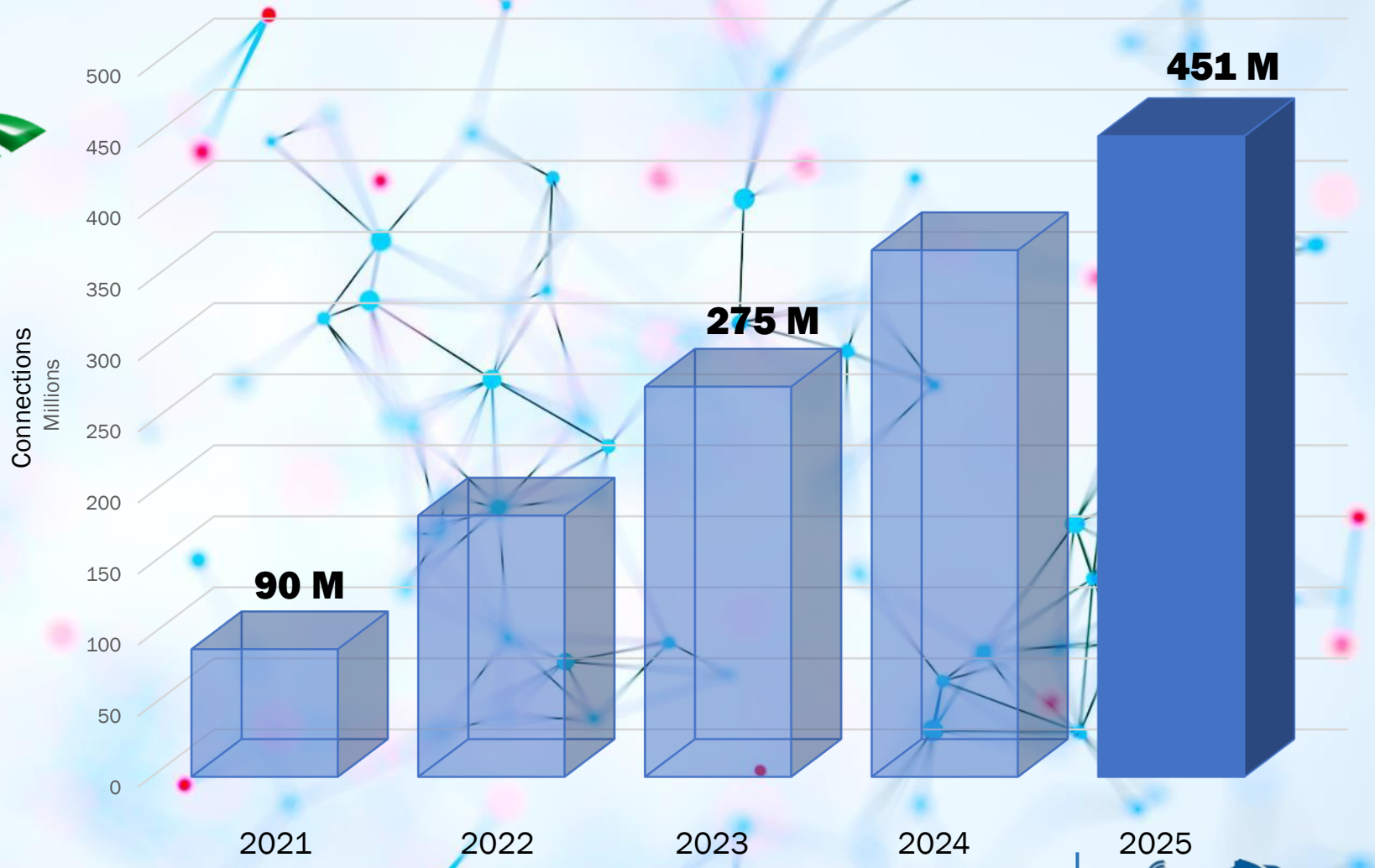
Global 5G Connections Forecast 2021-2025



Source: OMDIA March 2021

North America 5G Connections Forecast 2021-2025

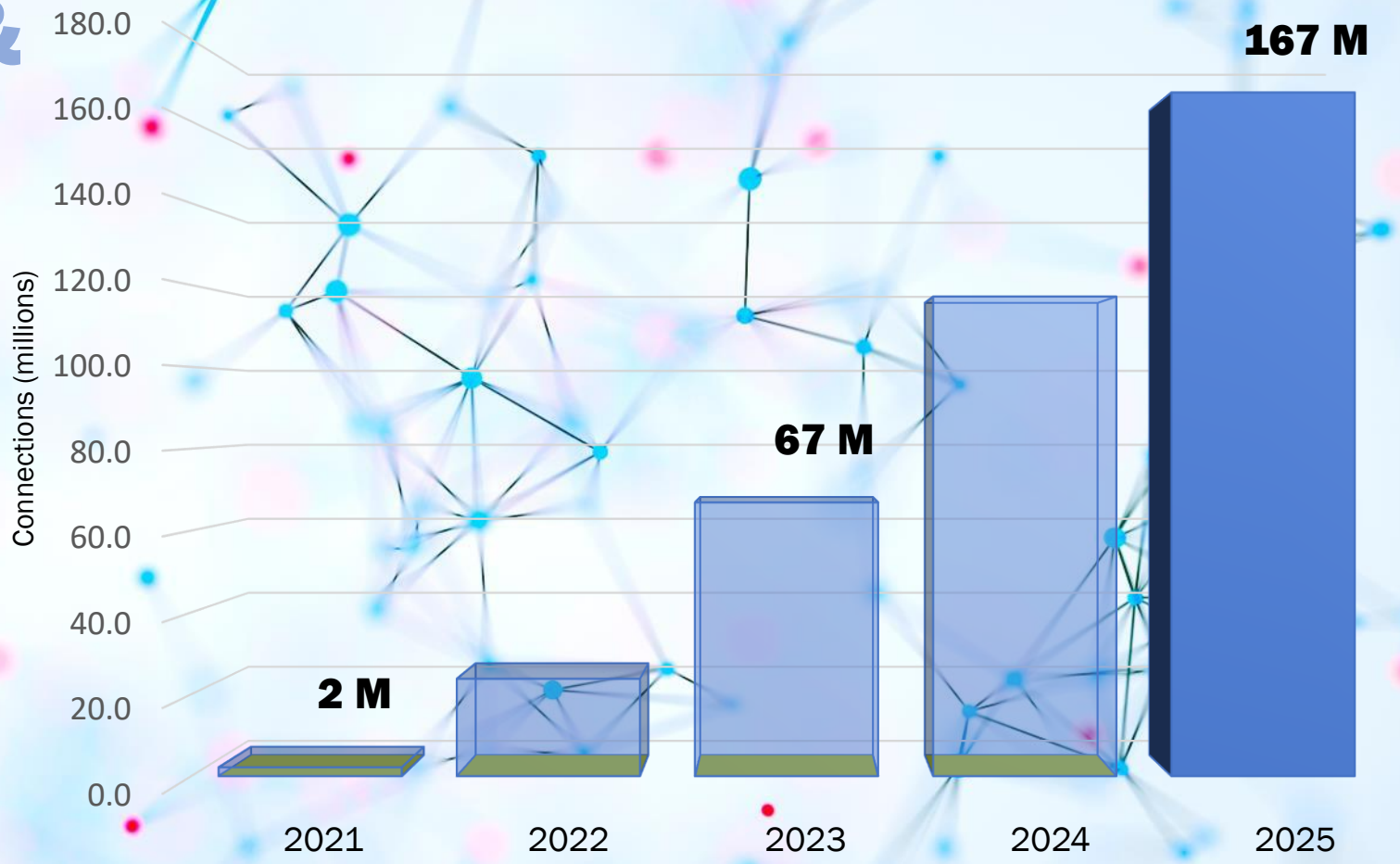


Source: OMDIA March 2021

Latin America & Caribbean

5G

Connections Forecast 2021-2025



Source: OMDIA

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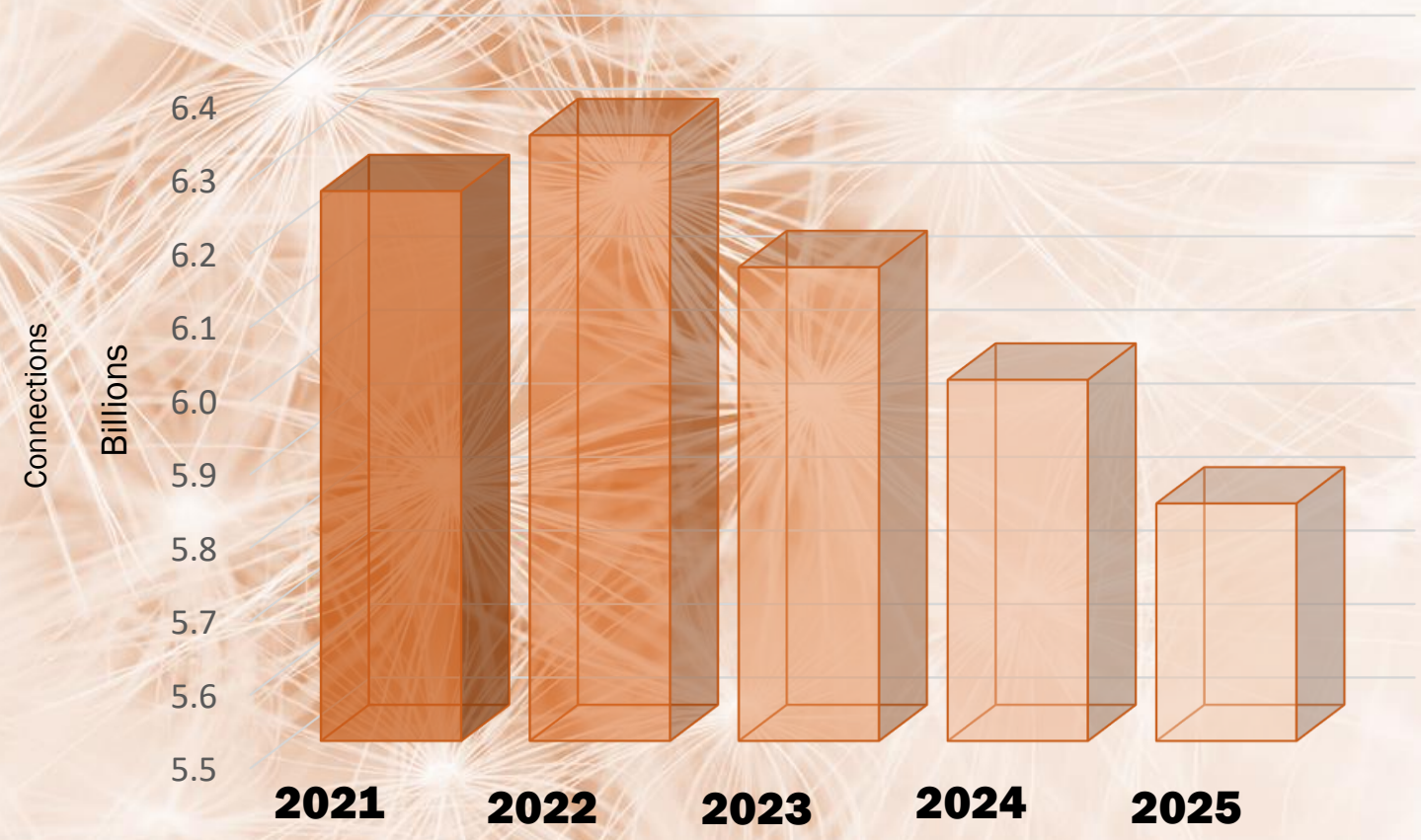
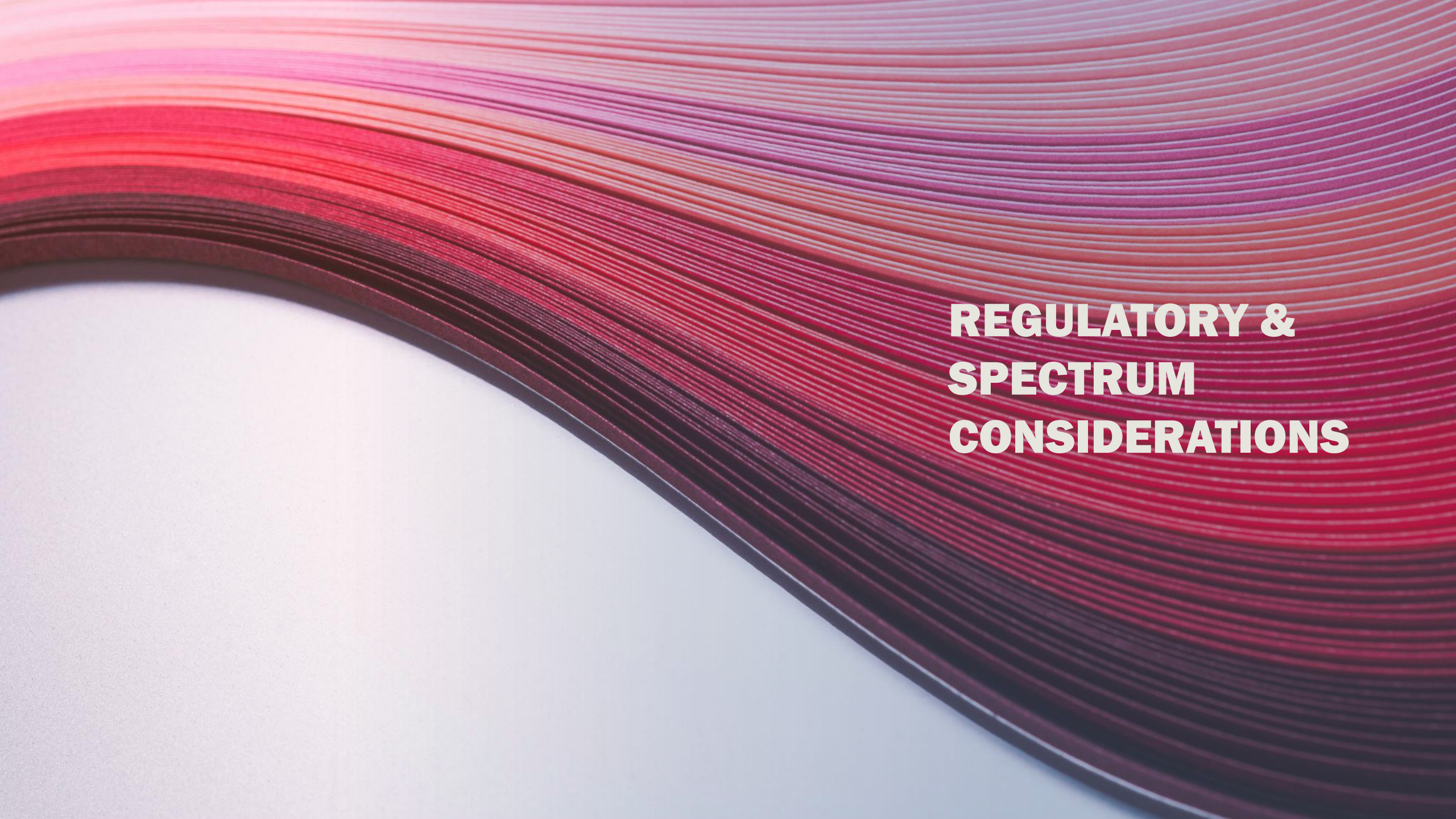
Global LTE Connections Forecast 2021-2025



Source: OMDIA



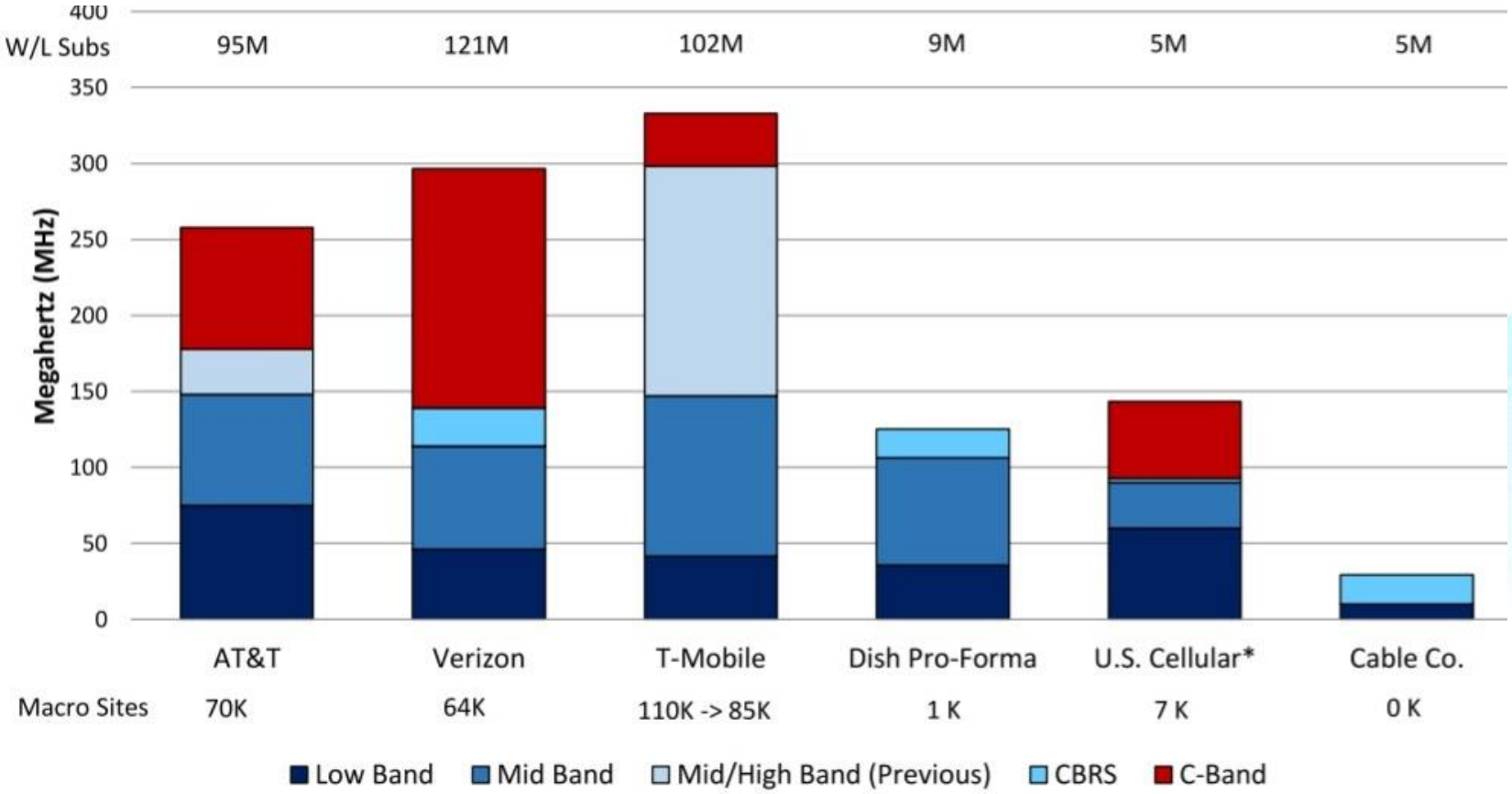
REGULATORY & SPECTRUM CONSIDERATIONS

5G Americas and US Regulatory Processes

- **Successful mid-band spectrum auctions** in CBRS and C-Band
- **FCC Notice of Inquiry and Request for Comments** for Promoting the Deployment of 5G Open Radio Access Networks (Open RAN)
- **FCC notice of plan to auction 3.45 – 3.55 GHz** band
- **FCC order on release of 5.9 GHz band** for C-V2X
- **New FCC Commissioner** roles (acting Chair Rosenworcel), new Commissioner Nathan Simington

sub-6GHz

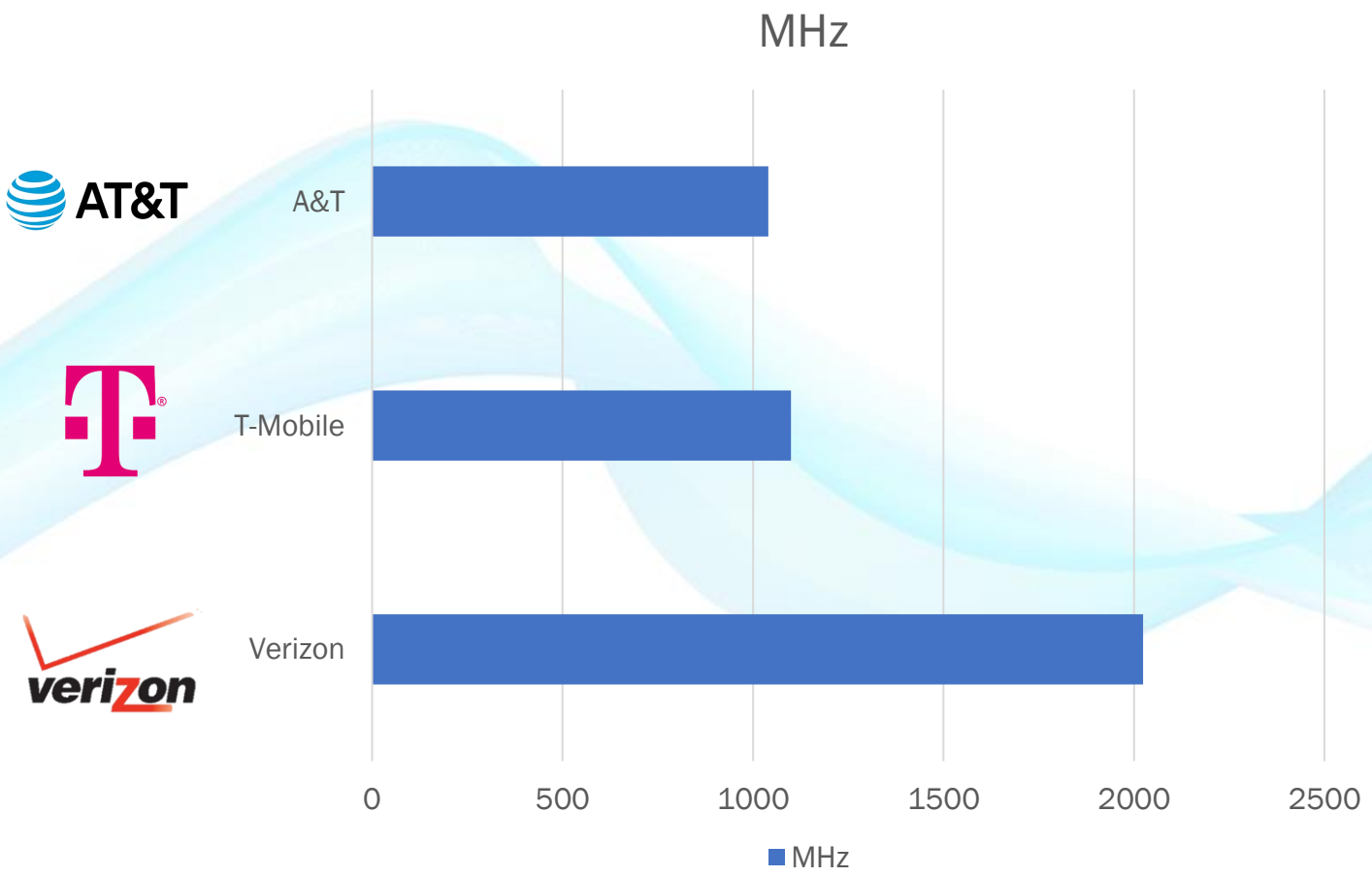
Estimated sub-6GHz spectrum holdings following Auction 107 (C-band)



Source: Raymond James via Light Reading, 2/25/2021

mmWave

Estimated mmWave spectrum holdings



Source: Data reported by FierceWireless

Bidding on FCC C-Band Auction: $81B

Auction 107

AT&T

- Spent $27.4B on C-Band
- Secured 80MHz or 29% share of available licenses

- Purchased around 40MHz of C-Band spectrum for $9.3B

verizon

- Amount spent on C-Band: $45B
- 120% increase in Verizon's spectrum holdings in sub-6 GHz

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FCC CBRS Auction (US) = $4.6 Billion

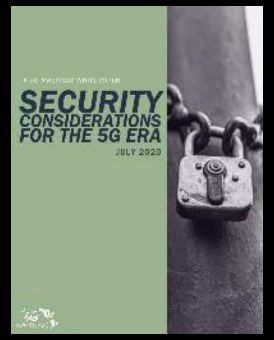
Auction 105

- 3.5 GHz PALs auction offered the first auction of mid-band spectrum for wireless carriers' 5G services
- 70 MHz of spectrum was available at auction
- 105 bidders won 91% of available licenses

TECHNICAL RECOMMENDATIONS & FACILITATION

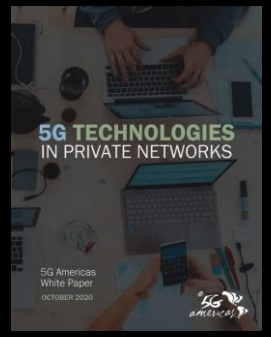
5G Americas Whitepapers

June 30, 2020
Innovations in 5G Backhaul Technologies



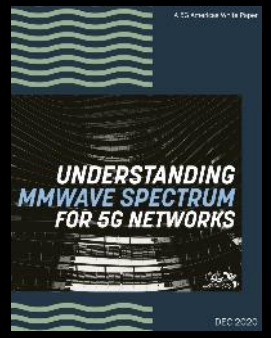
July 21, 2020
Security Considerations for the 5G Era

Sep 10, 2020
Global 5G: Rise of a transformational technology



Oct 28, 2020
5G Technologies in Private Networks

Nov 17, 2020
Transition Toward Open and Interoperable Networks



Dec 2, 2020
Understanding Millimeter Wave Spectrum for 5G Networks

Dec 17, 2020
Mobile Comms Beyond 2020 – The Evolution of 5G Towards Next G

Jan 14, 2021
3GPP Releases 16, 17 and Beyond

Feb 5, 2021
Future of Voice in Mobile Wireless

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