



The C-band Race Is On—Start Your Engines

Written by CommScope's Erik Lilieholm

A dark sky loomed over the luxury residences hugging the hillsides of Monte Carlo, high above the shadow-cast marina where million-dollar yachts tugged uneasily at their moorings. Reflections of bright paint and bold graphics flashed in scattered puddles as the 21 entrants rolled into their starting positions for the 1996 Monaco Grand Prix. Joining others who, like myself, found admission to the course a bit beyond budget, I enjoyed the excitement fee-free from a more distant vantage point. Wisps of mist rising from the rain-soaked pavement swirled into ghosts above the crowd of spectators—portending the ignoble but historical outcome of my first Formula One race experience.

A lesson from that day was that it takes more than driving skills to finish a race; you need reliable equipment and a dependable support team, and you must make the right decisions along the way. A spare car can get you out of trouble in case of a mistake or accident, but will your sponsors approve the expense?

Now that the C-band auction has ended, the qualifiers are gathering at the starting line of the next, great 5G “race,” as it’s often heralded by commentators in the media. The race analogy is partly false, however. C-band spectrum can be put to many uses, and each operator is likely to formulate its own strategy for capitalizing on this precious resource. They decide when to start the clock and where to draw the finish line. Their common goal is to complete the circuit in a timely, successful way while delivering superior service to their customers and maximum return to their investors.

Multiple challenges will present themselves before and during deployment. Can you overlay C-band on existing macro sites and obtain coverage matching legacy networks, and is massive MIMO always the best solution? How will the new radios and antennas be integrated with existing equipment, even where there is little or no additional space available? As you wrestle with these and other questions, you may find guidance in our new [white paper](#) on C-band deployment. Following

a brief overview of beamforming, we discuss the pros and cons of massive MIMO and compare it to other alternatives that may save both CapEx and OpEx in many situations. We present several options certain to inspire your thinking around antenna designs and site architecture.

But there's more: We have also included ideas about delivering power to tower tops and small cells, including our PowerShift® Macro and Metro solutions. We explain how wavelength division multiplexing boosts fiber capacity to accommodate the step up in fronthaul/backhaul transport demand. You will find a snapshot of our expansive and evolving small cell portfolio and a proposed remedy for interference with the Fixed Satellite Service. While the **white paper** is structured as a high-level overview, we have strived to include links to more in-depth information on the various topics. And our experts are ready when you are to discuss the solutions that will take you to your chosen destination.

In the end, only three of the 21 vehicles finished the 1996 race—a grim record for Grand Prix attrition. Drivers and teams were reminded about the importance of reading the road and choosing the right tires, and how minor equipment failures can ruin the day.

Our CommScope teams are committed to applying our years of learning to each product we design and to help you make the best decisions for evolving your network. As your pit crew, we'll support you all the way to the checkered flag.

What goals are you setting for your C-band journey? How can we help you map the course?

PS: If auto racing excites you, we hope you will root for **Daniel Suárez** in CommScope's first sponsored race, the NASCAR Cup Series Race at ISM Raceway in Phoenix on March 14.

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com



COMMSCOPE®

commscope.com

Visit our website or contact your local CommScope representative for more information.

© 2021 CommScope, Inc. All rights reserved.

Unless otherwise noted, all trademarks identified by ® or ™ are registered trademarks, respectively, of CommScope, Inc. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services. CommScope is committed to the highest standards of business integrity and environmental sustainability with a number of CommScope's facilities across the globe certified in accordance with international standards, including ISO 9001, TL 9000, and ISO 14001. Further information regarding CommScope's commitment can be found at www.commscope.com/About-Us/Corporate-Responsibility-and-Sustainability.

CO-115385-EN (02/21)