

## **KEYNOTE REMARKS OF FCC COMMISSIONER BRENDAN CARR**

### **AT THE INDIA MOBILE CONGRESS 2020 (VIRTUAL)**

#### **“BROADCAST INTERNET IN INDIA – HOW ATSC 3.0 SUPPORTS 5G SERVICES”**

**DECEMBER 9, 2020**

Thank you for the kind introduction, Madeleine. It is an honor to join you all, virtually of course, at the India Mobile Congress 2020. I am grateful for the chance to address this session in particular, which focuses on what I call Broadcast Internet services. Along with the speakers that will join for the panel discussion, we’re going to talk about the new broadcast transmission standard, known as ATSC 3.0, and how it can support the delivery of 5G or high-speed Internet services in India and around the world.

I am glad to see that FCC Chairman Ajit Pai is also on the agenda for this conference. As some of you probably know, he recently announced that he will be leaving the FCC in January. So I want to express my thanks and appreciation to him for his remarkable run at the helm of the FCC. He will leave behind a legacy that I think is unmatched in the history of the FCC in terms of his effective and consequential leadership.

Chairman Pai also played a key role in further deepening the strong bond of friendship that exists between the U.S. and India. He worked to further cement that relationship in his first year as FCC Chair in 2017 with the signing of a Letter of Intent between the FCC and the Telecom Regulatory Authority of India. Since then, we have seen an incredible collaboration and information exchange on a wide array of issues, such as spectrum management, broadband deployment, and consumer protection. From bilateral meetings, to video conferences, to written communications, our working relationship has led to no less than twenty engagements. I am honored to join in the deepening of those ties. And while I am pleased to address you remotely, I very much look forward to visiting India and furthering the special relationship that exists between the world’s oldest and largest democracies.

Turning to the topic of today’s session, I think it is safe to say that terrestrial broadcasting in India is at a pivotal point in time. With the ongoing digital transition and historically underutilized broadcast spectrum, India has an opportunity to take a giant leap forward and embrace the cutting edge of broadcast technology, namely ATSC 3.0. This very technical sounding term is the latest—and, indeed, greatest—internationally recognized broadcast transmission standard. And because it is an IP-based standard that is aligned with 3GPP specifications, it is ready made for the evolving wireless marketplace. This new technology presents a terrific opportunity for broadcasters to enhance their traditional over-the-air services, while simultaneously offering next generation wireless services, such as 5G broadcasting.

With India’s “mobile first” society and its growing demand for mobile video, India’s traditional mobile networks must add capacity. Indeed, India is expected to grow to more than 850 million wireless users, which will put an incredible strain on existing capacity as video content is streamed to more and more devices. This is where India’s powerful but underutilized broadcast spectrum—enhanced by ATSC 3.0—can be put to work to meet the exploding demand for high-speed Internet services. While 5G deployment is essential, broadcast spectrum can play a key role in relieving congestion created by the surge in demand for mobile video. It is therefore critical that regulators identify the appropriate regulatory environment to enable this efficient, high-capacity spectrum to come to market quickly. So with your indulgence, I’d like to share with you my perspective on how the broadcast airwaves are ideally suited to help address India’s growing need for wireless capacity and how the FCC has helped support the voluntary transition to ATSC 3.0 in the U.S.

ATSC 3.0 represents the most significant upgrade in the broadcast airwaves since the 1980s. This dynamic new standard will enable a wide-range of NEXTGEN TV applications—everything from

bringing Ultra HD video to the airwaves to ushering in a more interactive, accessible, and personalized experience for the viewing public.

But those exciting TV applications only tell part of the story. For the last couple years, I have been drawing attention to an entirely different set of ATSC 3.0 applications. I suggested that we should think about this technology as a new and competitive broadband pipe. After all, the technology can allow broadcasters to transmit a 25+ Mbps data stream. I've come to refer to these applications as "Broadcast Internet" services, which is a term that I think captures even more of the innovative applications that are on the horizon.

These new services, no matter what you call them, are part of a broader trend we're seeing in communications. From innovative 5G offerings to high-capacity fixed services, providers from previously distinct sectors are competing like never before to offer high-speed Internet services through a mix of different technologies. ATSC 3.0 is the technology that will allow broadcast spectrum to play an even greater role in this converged market for connectivity.

As our networks continue to mature, they won't always rely on the same spectrum bands or even technologies for inbound and outbound data paths. Instead, hybrid networks will look for the most efficient and cost-effective ways to deliver content to users. And this is where broadcast spectrum can leverage its inherent strengths to compete in this market. Those strengths include wide-area coverage over low-band spectrum and an efficient one-to-many architecture. Indeed, this spectrum is particularly well suited to bringing advanced wireless services to typically underserved rural and remote communities.

For 5G, it could help augment coverage or add capacity by shifting data off cellular networks in an efficient and cost-effective manner. While the demand for mobile video is growing throughout the world, this trend is particularly acute in India. So it is no surprise that stakeholders in India are already exploring ways to utilize ATSC 3.0 to enhance capacity and reduce network congestion. In fact, Indian companies, often in collaboration with U.S. partners, are playing a leading role in developing the mobile technology that will seamlessly merge broadcast spectrum into the next-gen wireless ecosystem.

And the vision for ATSC 3.0 doesn't stop there. Take autonomous vehicles. Broadcast spectrum could be used to send out targeted map and traffic data or provide large, fleet-wide software updates—quickly and efficiently.

For IoT, smart ag, and telemedicine applications, broadcast TV's low-band spectrum could provide an efficient means of communicating with devices over wide areas.

And now, as seemingly every part of our lives migrates online as a result of COVID-19, this spectrum could also be used to deliver lessons to children attending school virtually; provide job training materials for those whose livelihoods may have vanished; or, when combined with other spectrum, provide broadband connectivity to those who cannot connect today.

In the U.S., we have been doing our part to facilitate deployment of ATSC 3.0. We authorized broadcasters to transition voluntarily to ATSC 3.0 offerings in 2017 so they could test the market and explore the possibilities of this new technology. Since then, we have worked collaboratively with broadcasters to address many of the technical and licensing issues that have come up. And we are working to resolve a proceeding to expand the use of single frequency networks—architecture that is similar to cellular networks—which will ultimately help ATSC 3.0 reach its full potential.

Most recently, we kicked off our Broadcast Internet proceeding to further unlock the potential of broadcast spectrum, empower innovation, and create significant value for broadcasters and the American public alike. We have taken significant steps to ensure that Broadcast Internet services are not weighed down by legacy media regulations that might otherwise frustrate deployment.

Overall, the Commission's approach in the U.S. has worked. Broadcasters are making great progress in their NEXTGEN TV offerings, and many are already exploring ways to offer advanced datacasting services. We believe that it is critical to identify and remove the overhang of unnecessary government regulations that would otherwise hold back the introduction and growth of new competitive offerings. The time for us to start thinking about those possibilities is now, which is why this session is so important.

Finally, while I have been happy to share our experiences with you, I am also eager to hear about the approach India is taking to help ensure that this important new technology is able to flourish. While the ATSC 3.0 standard is international, the challenges faced by each country will vary. As regulators, we must therefore remain flexible and willing to learn. And, importantly, we must continue to support private sector collaborations between stakeholders in the U.S. and India. These innovations are helping to drive the transition and are critical to unlocking ATSC 3.0's full potential.

So thank you, again, for inviting me to speak today. I look forward to the panel discussion and taking some questions.