



November 17, 2021

Evelyn Remaley
Acting Administrator
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave. NW
Washington, DC 20230

Re: Promoting Open RAN Technology Through the Infrastructure Investment and Jobs Act.

Dear Acting Administrator Remaley:

With the bipartisan Infrastructure Investment and Jobs Act (Act) becoming law, the National Telecommunications and Information Administration (NTIA) will be tasked with administering the \$42.45 billion Broadband, Equity, Access, and Deployment Program (Program). The Program will constitute a historic effort towards closing the digital divide and ensuring that every American has access to reliable, high-speed broadband.

Under the Program, NTIA will be charged with making grants to the fifty States, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands (States). States, in turn, will use these funds to award, on a competitive basis, grants to expand and improve broadband deployment. NTIA will play a critical role in supervising States' distribution of money by, among other things, providing guidance as to how Program funds could be utilized and approving States' proposals for the processes they would use to award grants.

As this Program moves forward, we urge NTIA to make clear to States that Program funds may be used for the deployment of Open Radio Access Networks (Open RAN). To begin with, this is a straightforward interpretation of the Act. For purposes of the Program, the legislation broadly defines the term "broadband" to include both wireline networks, like cable or fiber, and wireless

networks, like mobile connectivity or fixed wireless leveraging Open RAN. Indeed, the eligibility criteria for the Program would not distinguish between wireline and wireless networks or focus on any single technology at all, instead emphasizing such technology-neutral factors as network speed, latency, and reliability.

Moreover, the Act explicitly directs States to emphasize funding for “priority broadband projects” that can meet the evolving needs of consumers and support the deployment of 5G technology. Open RAN technology meets this definition of “priority broadband project.” It facilitates the deployment of 5G networks, and the interoperable, non-proprietary nature of Open RAN hardware means that networks utilizing such equipment can improve performance consistently as technology advances and network elements are replaced or upgraded.

Beyond being consistent with the terms of the Act, the use of Program funds to deploy Open RAN technology would help achieve important national priorities. Historically, wireless networks have relied on proprietary equipment manufactured by a few large vendors. Network equipment from these vendors generally is not interoperable with other vendors’ equipment, leaving many service providers all but locked into one vendor and excluding potential new entrants to the market. This has led to a situation where wireless supply chains are highly dependent on a few foreign companies.

Open RAN technology is poised to rewrite that history and chart a new course for wireless networks in the United States. In an Open RAN system, network equipment is built to open, non-proprietary standards which allow multiple vendors to compete with interoperable equipment. This has the potential to significantly reduce the costs of deploying and operating a wireless network. And it will diversify the supply chain, making it less vulnerable to disruptions. Open RAN technology also uses open-standard software to “virtualize” some network functions so that they can be performed on general purpose servers and data centers, likewise reducing costs. So by employing this open, standards-based platform, we can increase competition among infrastructure suppliers, decrease deployment costs, strengthen the supply chain, and build networks that can easily scale and adapt to evolving demands.

It is also important to note that while 5G and Open RAN are often associated with mobile wireless networks, the technology can achieve the performance of fixed broadband serving homes and businesses, including through fixed wireless networks. For example, the Act requires that networks supported by Program funds provide minimum service speeds of 100 Mbps download/20 Mbps upload and network latency allowing the use of real-time interactive applications, like two-way voice and video calling. 5G networks using Open RAN technology can easily meet and exceed these requirements, and when appropriately scaled, can rival the speed and latency of wireline technologies like cable and fiber. Moreover, as described above, due to the flexibility provided in an Open RAN environment, network equipment can be upgraded and replaced over time to allow for ever-improving performance as the needs of consumers increase in the future.

Finally, when decisions are made on how to maximize the impact of finite Program funds, NTIA and States should take into account the cost-effective nature of Open RAN deployments. The areas of our nation currently lacking adequate broadband networks are disproportionately characterized by very low population density and challenging terrain. This means that it will be

quite expensive, if not cost-prohibitive, to deploy wireline facilities in many of these locations. By contrast, 5G wireless networks built on an Open RAN platform can deliver high-quality broadband connectivity to rural homes and businesses without the need for the costly trenching of cable or fiber to each individual home or business.

U.S. companies are already emerging as global leaders in the development of Open RAN technology. And by using Program funds to deploy Open RAN technology throughout the United States, we can cement our nation's position at the forefront of the next wave of wireless innovation, close the digital divide, and strengthen the wireless supply chain. We therefore hope that, when the time comes for NTIA to implement the Broadband Equity, Access, and Deployment Program, it will provide guidance that Program funds can be used for Open RAN deployments.

Respectfully submitted,

Airspan

Altistar (a Rakuten Symphony company)

Analog Devices

Cisco Systems

Dell Technologies

DISH Network

Hewlett Packard Enterprise

JMA Wireless

Mavenir

NewEdge Signal Solutions

Pivotal Commware

Qualcomm

VMware

World Wide Technology