

June 7, 2021

Via E-Mail

Attn: Diane Steinour
National Telecommunications and Information Administration
1401 Constitution Ave NW
Room 4701
Washington, DC 20230

Re: Satellite Industry Association Comments in Docket No. 210503–0097

Dear Ms. Steinour,

The Satellite Industry Association (SIA)¹ hereby provides its comments in the Telecommunications/ICT Development Activities, Priorities and Policies To Connect the Unconnected Worldwide in Light of the 2021 International Telecommunication Union (ITU) World Telecommunication Development Conference (WTDC–21) proceeding referenced above (hereinafter, RFC).² SIA is a U.S.-based trade association representing the leading satellite operators, manufacturers, launch providers, and ground equipment suppliers who serve commercial, civil, and military markets. The satellite industry has a long history of supporting ICT development activities and providing connectivity to unserved and underserved communities worldwide, and fully supports the efforts of the Administration, the Department of Commerce (DOC) and the National Telecommunications and Information Administration (NTIA) in this area.

1. ICT Development Priorities

- a. Over the next five years, what should the U.S. government priorities be for telecommunications/ICT development?
- b. Are there particular areas of focus for economic development, as well as telecommunications/ICT development that might help the United States align with developing countries' development interests?
- c. What are valuable venues, forums, or methods to focus this work?

¹ SIA Executive Members include: Amazon; AT&T Services, Inc.; The Boeing Company; EchoStar Corporation; Intelsat S.A.; Iridium Communications Inc.; Kratos Defense & Security Solutions; Ligado Networks; Lockheed Martin Corporation; OneWeb; SES Americom, Inc.; Space Exploration Technologies Corp.; Spire Global Inc.; and Viasat Inc. SIA Associate Members include: ABS US Corp.; Amazon Web Services; Artel, LLC; AST & Science; Astranis Space Technologies Corp.; Blue Origin; Eutelsat America Corp.; ExoAnalytic Solutions; HawkEye 360; Hughes; Inmarsat, Inc.; Kymeta Corporation; Leonardo DRS; Lynk; Omnispace; Ovzon; Panasonic Avionics Corporation; Planet; Telesat Canada; ULA; and XTAR, LLC.

² Telecommunications/ICT Development Activities, Priorities and Policies To Connect the Unconnected Worldwide in Light of the 2021 International Telecommunication Union (ITU) World Telecommunication Development Conference (WTDC–21), Docket Number 210503–0097, National Telecommunications and Information Administration (May 6, 2021)

The ITU Development (ITU-D) Sector provides a unique space to convene governments, the private sector, academia and NGOs to tackle some of the greatest connectivity challenges in the world, particularly for those in unserved and underserved areas. SIA and its member companies, as well as the U.S. Government, are fully aligned with the ITU-D's core work and mission to ensure connectivity to everyone. While connectivity problems have only been exacerbated during the Covid-19 pandemic, under the leadership of BDT Director Doreen Bogdan-Martin, the ITU-D has stepped up its efforts to assist countries deal with the global imperative of connectivity for all.

One of the immediate and critical problems of the pandemic was how to connect the 1.6 billion students globally that have been out school and studying at home. The members of the Satellite Industry Association (SIA) applaud Director Bogdan-Martin's efforts to consider new models for multi-stakeholder collaboration between industry, investors, governments, donors and international organizations to connect every school to the Internet by initiatives such as the joint ITU and UNICEF Giga initiative. In fact, the satellite services that SIA's member companies provide globally are sometimes the only means of connectivity that many children and schools have. Achieving the Sustainable Development Goal of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all will not be possible without the connectivity provided by satellite and other information and communication technology (ICT) infrastructure companies.

Another ITU-D initiative implemented under Director Bogdan-Martin called Connect2Recover is particularly timely as it aims to reinforce the digital infrastructure and ecosystems of beneficiary countries and to help them remain robust and resilient in times of crisis. Connect2Recover is an example of an ITU-D multistakeholder initiative which SIA and its member companies have much to contribute to make it successful. One of the key components of Connect2Recover is ensuring digital resilience, including for emergency telecommunications, disaster management and network resilience, all of which are critical functions of the satellite industry. From providing community WiFi to ensuring emergency preparedness of the telecommunications infrastructure before and after natural disasters, SIA members are steeped in experience and expertise that could be integrated into the Connect2Recover context as well.

While the ITU-D might be specifically focused on developing countries, solutions and approaches shared and discussed at the ITU-D to enable connectivity for all apply to the United States as it faces similar challenges due to vast areas of the country that have little or no coverage.

Satellite broadband is readily available today across the globe, and can be installed in days rather than years that it takes to build out fiber; even "shovel-ready" terrestrial projects often take years to provide service to consumers. In many locations, satellite broadband will provide the most broadband bang for the buck in the near and medium-term. Satellite internet has been used to connect numerous rural towns and schools in Brazil, Colombia and Mexico via community hotspots³, provide

³ "Viasat adding 75 free Wi-Fi locations in Mexico", Viasat, 15 May 2019, <https://www.viasat.com/about/newsroom/blog/viasat-adding-75-free-wi-fi-locations-in-mexico/>; see [Hughes and TELECOM to Power Community Wi-Fi Hotspots in Thousands of Mexican Villages | Hughes; Hughes in](#)

connectivity to 3600 African schools as well as up to 100 Mbps service to rural African consumers,⁴ establish uninterrupted mobile connectivity in rural Japan⁵ and Peru,⁶ provide broadband access to the Pikagum First Nation in northwestern Ontario,⁷ provide connectivity in remote villages in Benin⁸ and Nigeria⁹ for e-health and has been the first source of connectivity for areas hit by natural disasters across the globe.¹⁰

2. U.S. Stakeholder Community

a. In General

i. What are the challenges or barriers towards connecting the unconnected?

A top barrier to connecting the unconnected is the cost of connectivity . Other challenges are that many of the most unconnected populations are also the most vulnerable, as in the most remote populations, not only in developing countries but also in countries like the United States. Therefore, the U.S Administration’s current commitment to providing access to broadband networks as basic infrastructure is an idea that could be adopted by other countries so that the more traditional infrastructure policy priorities, such as transportation, energy and water networks, are expanded to include telecommunications. Being identified as a priority sector for infrastructure helps ensure that countries make choices to improve connectivity to their citizens. Technology-neutral policies rather than technology-specific solutions are essential to ensuring a fast rollout of internet service that connects the greatest number of people.

[Partnership with Facebook Launches Wi-Fi Hotspots in Brazil and Mexico | Hughes](#); “INRED and SES Networks Expand Wi-Fi Access Across Colombia, Connect Nearly One Million People in 424 Municipalities,” November 4 2020, <https://www.ses.com/press-release/inred-and-ses-networks-expand-wi-fi-access-across-colombia-connect-nearly-one-million>.

⁴ Jewett, Rachel, “Eutelsat’s Konnect Africa to Provide Internet for 3,600 Schools”, Via Satellite, 23 March 2020, <https://www.satellitetoday.com/broadband/2020/03/23/eutelsats-konnect-africa-to-provide-internet-for-3600-schools/>

⁵ “MNO Broadens 4G Connectivity Landscape to Include Japan’s Remote Regions”, Intelsat, <https://www.intelsat.com/resources/case-studies/mno-broadens-4g-connectivity-landscape-to-include-japans-remote-regions/>

⁶ “MNO Provides Connectivity to Remote and Rural communities in Peru”, Intelsat, <https://www.intelsat.com/resources/case-studies/mno-provides-connectivity-to-remote-and-rural-communities-in-peru-isps-mnos-telcos/>

⁷ Duffy, Kate “How SpaceX Teamed Up with a Small Canadian IT Company to Bring Its Starlink Internet Service to an Indigenous Community”, 19 December 2020, <https://www.businessinsider.com/spacex-starlink-internet-first-canada-customer-indigenous-community-pikangikum-musk-2020-12>

⁸ “Inmarsat brings life-saving connectivity to remote African village”, Inmarsat, <https://www.inmarsat.com/en/news/latest-news/enterprise/2014/inmarsat-brings-life-saving-connectivity-remote-african-village.html>

⁹ “Satellites for SDGs: Can satellite connectivity help nations achieve the United Nations’ Sustainable Development Goals (SDGs)? Three diverse projects in Nigeria, Indonesia and the Philippines put our services to the test”, Inmarsat, <https://www.inmarsat.com/en/sustainability/satellites-for-sdgs.html>

¹⁰ “Emergency Response & Disaster Relief”, Satellite Industry Association, <https://sia.org/satellites-services/emergency-response-disaster-relief/>

Satellite is critical to these efforts. Since broadband satellite service is available globally, unlike traditional services, satellite service can be provided in a matter of days, not months or years as with terrestrial services, to users. For example, during the pandemic broadband satellite operators, including Hughes and Inmarsat¹¹, were able to respond to user requests and have service turned on in approximately 2 days. No other broadband service has this ability today.

One mechanism that has been historically critical in addressing the digital divide is the introduction of calling cards rather than requiring full subscriptions to cell services. This pay-as-you-go scheme is utilized in community wi-fi hotspots, which the satellite industry, through Hughes Network Systems, LLC¹² [add other members] have successfully provided globally and will continue to be critical in ensuring affordable access to internet worldwide. Oftentimes, the ability to start utilizing wi-fi is an important gateway to demonstrating to users the importance of broadband and leads to broadband at the home being adopted to support work, school and e-government, socialization, other areas of day to day requirements.

ii. What types of activities or projects have been most successful in building capacities of developing countries towards increasing telecommunications/ ICT development and inclusion?

Public-private partnerships have been key and need to be paired with capacity building (e.g., job training).

iii. How can virtual platforms increase capacity building, especially since COVID-19 began?

Training by governments, universities and others including civil society on how to run internet-based business, schools, telehealth programs, and other virtual commercial functions.

iv. How best can the U.S. government share its experiences and best practices on telecommunications/ICT deployment overcoming the digital divide, and other telecommunications/ICT developmental topics? In 2021? Longer term?

As mentioned earlier, the U.S. government could share its experience of including telecommunications into its infrastructure planning as a best practice in the area of ICT deployment. This could be developed into a virtual portal accessible worldwide (perhaps on the FCC's website), as well as shared as part of the training and sharing of best practices offered by the FCC and other government agencies including U.S. AID.

¹¹ "TSF supports a world reeling from the effects of COVID-19", Inmarsat, <https://www.inmarsat.com/en/news/latest-news/corporate/2021/tsf-supports-a-world-reeling-from-the-effects-of-covid-19.html>

¹² [Satellite-enabled Community Wi-Fi Solutions | HUGHES](#) (Hughes supports 42,000 wi-fi hotspots worldwide).



SIA appreciates the opportunity to respond in this important proceeding. The satellite industry welcomes the opportunity to work with the United States government to ensure the continued leadership of the United States in ICT development worldwide.

Respectfully submitted,

SATELLITE INDUSTRY ASSOCIATION

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