

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City

Nineteenth Congress
Second Regular Session

HOUSE BILL NO. 640



Introduced by **Representative JOEY SARTE SALCEDA**

AN ACT
DEREGULATING SATELLITE-BASED TECHNOLOGIES,
MANDATING RELEVANT AGENCIES TO PROMOTE THE
DEVELOPMENT OF SATELLITE-BASED TECHNOLOGIES
DEDICATED TO EDUCATION AND OTHER CIVIC CAUSES

EXPLANATORY NOTE

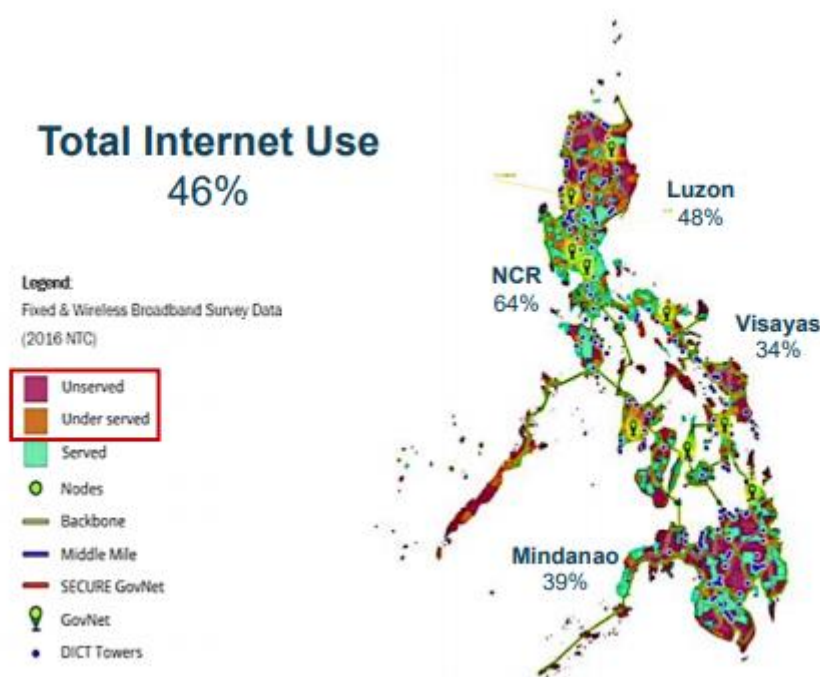
A quarter of a century after the Internet was introduced to the Philippines, 40% of Filipinos, 52% of public schools, and 57% of households still do not have access to the internet. This is an alarming number, as the country relies heavily on internet-heavy industries such as the Business Process Outsourcing (BPO) sector and its affiliate industries for growth and high-quality employment.

Furthermore, the country's average internet speed is one of the slowest in Asia and is the slowest in Southeast Asia. While the average ASEAN internet speed is 12.4 mbps, Philippine average speed is at 3.6 mbps¹.

Problems of developing traditional fiber-optics-based technologies are compounded by the fact that the country's terrain is rugged in many regions, and that the country itself is divided into numerous islands, which makes the financial incentives for building internet facilities, which tend to be expensive and require long periods of use before returns are achieved, markedly less attractive in remote areas.

In fact, much of the country's underserved areas are in regions of Luzon island. In the Visayas, where major island groups may not be large enough to attract investment in internet infrastructure, internet use is at the lowest level in the country, at 34%.

¹ "Monthly Comparisons of Internet Speeds from around the World" (*Speedtest Global Index*)
<<https://www.speedtest.net/global-index>> accessed July 8, 2020



Source: Social Weather Station. 2019. First Quarter 2019 Internet usage steady at 46% of adult Filipinos; DICT. 2017. National Broadband Plan

Clearly, there is a need for alternatives to land-based internet infrastructure, given the country's geographic characteristics.

Satellite as a cheap, viable alternative

Satellite-based broadband as one of the country's modes for making Internet access more inclusive and more diffuse is an alternative that can be quickly and easily deployed. Because they do not rely on wire-based systems, satellite-based internet can service rural areas and even the most far-flung islands of the country.

Satellite-based internet is also becoming more capable of delivering bandwidth similar to that of traditional, fiber-based systems. The specific requirements for connecting to satellite – setting up a hub and a network of so-called very small aperture terminals (VSATs), which could then be used to distribute bandwidth across end-users through cable or Wi-Fi – is ideal for public schools and community centers in remote or rural areas.

In countries with similar geographic and socioeconomic issues around internet access inclusivity, satellite technology is already being used. In Japan, an archipelago like the Philippines, with its own rural areas far from usual metropolitan regions, mobile service provider SoftBank has deployed 460,000 Wi-Fi hotspots nationwide connected via satellite broadband.

In Indonesia, a country with almost exactly the same geographic and socioeconomic concerns as ours, Bank Rakyat Indonesia has a nationwide deployment of 51,000 VSATs to connect its regional bank branches and ATMs. The bank launched its own satellite worth \$200 million in 2016.

In India, GSAT-3, known as EDUSAT, was launched as a satellite meant for distant classroom instruction, and is a dedicated "Educational Satellite" that enables two-way communication between the classroom and the hub that provides differentiated content (in as many as 400 dialects and languages).

The role of satellite technology in developing the digital economy, and satellite-based learning

COVID-19 has made internet connectivity almost an essential part of the country's economic continuity and recovery strategy. Without internet connectivity, the country's work-from-home programs would fall flat.

Even with internet connection, however, the country's slow internet speeds and expensive internet costs are making work-from-home and distant-learning strategies difficult and costly to execute. In a country where enrollment is far from universal in many areas, despite public education being entirely free, the costs associated with connecting to the internet are an added burden to already-struggling families and can further dissuade students from enrolling during COVID-19.

Although a vaccine will probably come before the country is able to develop satellite-based systems that could be rolled-out in schools and homes, COVID-19 has served as something of a stress test for the country's internet connectivity and how the lack of it will impact our economic and developmental outcomes. We urgently need improvements in internet connectivity if we are to compete in a more digital world economy.

Current policy

According to the Department of Information and Communication Technology (DICT), there are 48 satellites ready to deliver bandwidth to the Philippines. However, current policy on the use of satellites, as codified in Executive Order No. 467 (1998), restricts the Access to International Fixed Satellite Systems to "enfranchised telecommunications entities duly authorized by the National Telecommunications Commission (NTC) to provide international telecommunications services," and broadcast service providers.

Although intended to break the monopoly of PHILCOMSAT in the 1990s, it has since become a barrier to other players, like Internet service providers, from accessing alternative connectivity solutions.

Proposed changes

Under this bill, access to satellite-based technology will be made more inclusive, and the regulatory framework will be made clearer.

The Department of Information and Communication Technology (DICT) is more explicitly mandated to be the agency in-charge of regulating the use of satellite-based technologies

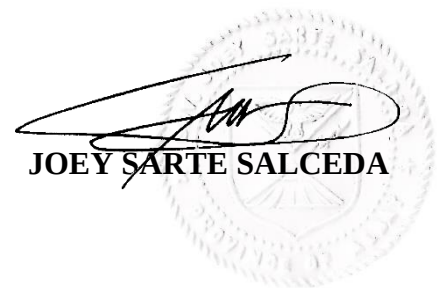
outside commercial telecommunications. This broadened mandate seeks to ensure that satellite-based systems are viewed from a lens broader than the understandably telco-centric view of the National Telecommunications Commission (NTC). It also allows a more developmental perspective to satellite-based systems.

The bill also allows Internet service providers and value-added services (VAS) providers to build and operate their own network using satellite technology. This will broaden competition among ISPs, and eventually lower costs and improve benefits for the consumer.

It also encourages government organizations, public and non-profit private educational institutions, volunteer organizations engaged in education, environmental management, climate change management, disaster preparedness and crisis response to own and operate satellite-based technology in order to aid and augment their activities. This will democratize internet access, and allow it to be used more broadly for civic causes, especially education.

This bill also complements this author's proposals for faster internet (HB 312), Schools of the Future (HB 311), Comprehensive Education Reform (HB 6247), and skills-based education (HB 6287).

In view of the foregoing, the approval of this bill is urgently sought.



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Be it enacted by the Senate and House of Representatives of the Philippines in Congress assembled:

SECTION 1. *Short Title.* – This Act shall be known as the “*Satellite-Based Technologies Promotion Act*”.

SEC. 2. *Declaration of Policy.* – It shall be declared the policy of the State to promote broad and inclusive access to the internet and the availability of high-speed internet services, as well as the accessibility of affordable satellite-based technologies, as crucial for encouraging economic growth, opportunities for decent employment in the countryside, and improvements in educational outcomes.

Towards these ends, the State shall deregulate access to satellite-based services and encourage their use in the countryside and by educational institutions and cause-oriented civic organizations.

SEC. 3. *Definition of Terms.* – As used in this Act;

- a) *Internet service providers (ISPs)* refer to organizations that provide services for accessing, using, or participating in the internet, whether as commercial, community-owned, non-profit, or private-owned organizations;

- b) *Satellite-based technologies* refer to communications technologies that employ infrastructure and mechanisms with the ability to transmit and receive signals from earth and to retransmit those signals back with the use of a transponder which is an integrated receiver and transmitter of radio signals;
- c) *Satellite Global Broadband Network (SGBN)* refers to a global satellite network employing portable terminals such as the broadband global area network (BGAN) which makes available services such as high speed internet, phone, facsimile, short message texting, and streamlining services;
- d) *Value-added service (VAS) providers* refer to providers of non-core communications services, or, in general, all services beyond standard voice calls and facsimile transmissions; and
- e) *Very-small-aperture terminal (VSAT)* refers to a two-way satellite ground station with a dish antenna, typically not more than four (4) meters in diameter, and whose technical specifications the Department of Information and Communication Technology (DICT) may further define.

SEC. 4. *Additional Mandate to the Department of Information and Communications Technology (DICT).* – To expand access to satellite-based technologies as an alternative connectivity solution for making distance-based learning more inclusive, the DICT shall:

- a) Pursue policies to secure necessary orbital slots for prospective Philippine satellites, especially those dedicated to education and missionary internet connectivity in the countryside;
- b) Work with relevant agencies to encourage the commercial development of technologies complementary to satellites-based technologies, especially those dedicated to education;
- c) In coordination with the Philippine Space Agency (PhilSA), issue rules and regulations on the development, use, and maintenance of satellite-based technology;
- d) Perform such other functions as may be relevant to its work as the principal policy and development agency for satellite based technology.

SEC. 5. *Policies on the Use of Satellite Technology.* – The government shall promote the use of satellite services as a means of making education more inclusive and more technologically-ready.

To promote the expansion of satellite-based networks, particularly in rural areas, and in areas with limited fixed or cellular mobile network connectivity, value-added service (VAS) providers and internet service providers (ISPs) shall be allowed to own and operate networks utilizing satellite global broadband network (SGBN) such as very small aperture terminals (VSATs), broadband global area network (BGAN) and other similar technologies without need of a franchise and a provisional authority or Certificate of Public Convenience and Necessity (CPCN) from the National Telecommunications Commission (NTC). VAS providers and ISPs shall, however, comply with existing policies requiring registration of VAS and ISP offerings and submission of their schedule of rates.

The NTC shall comply with international regulations on the allocation and use of frequency for satellite services, and shall not re-allocate them to the detriment of users of VSAT, or other SGBN. It shall likewise ensure the availability of satellite frequencies for the use of VAS providers and ISPs. The NTC shall issue the rules and regulations necessary for the implementation of portions of this paragraph that require administrative and regulatory oversight.

SEC. 6. Promotion of Satellite-based Technologies Among Education and Cause-oriented Civic Organizations. – Government organizations, public and non-profit private educational institutions, volunteer organizations engaged in education, environmental management, climate change management, disaster preparedness and crisis response shall be allowed to own and operate satellite-based technology in order to aid and augment their activities. The NTC shall, within thirty (30) days upon the effectivity of this Act, establish an expeditious administrative process to allow such entities to apply for permits to import and or own such technology. The Anti-Red Tape Authority shall ensure that the procedures set forth by the NTC pursuant to this section, complies with Republic Act No. 9485, or the Anti-Red Tape Act of 2007.

SEC. 7. Implementing Rules and Regulations. Unless otherwise stated, the DICT shall, in coordination with the NTC, PhilSA and in consultation with relevant groups and sectors, issue the rules and regulations to implement this Act within ninety (90) days from the date of its effectivity.

SEC. 8. *Separability Clause.* – If for any reason, any part or provision of this Act is declared invalid or unconstitutional, any part or provision not affected thereby shall remain in full force and effect.

SEC. 9. *Repealing Clause.* – The provisions of Executive Order No. 467 (s. 1998) that are inconsistent with this Act are hereby repealed or modified accordingly. All other laws, decrees, rules and regulations inconsistent with the provisions of this Act are hereby repealed or amended accordingly.

SEC. 10. *Effectivity.* – This Act shall take effect fifteen (15) days after its publication in the Official Gazette or in a newspaper of general circulation.

Approved,