Suggestions for ITU’s Strategic Priorities in 2020-2023

To promote and develop an interconnected and integrated global submarine and land fiber optical communication network

Dear Secretary General ZHAO Houlin and other management members and responsible experts of ITU,

Our salute to you all!

China International Telecommunication Construction Corporation (CITCC) feels very honored and proud that in December 2015, it joined ITU and since then has been participating in the Union’s work as a ITU-D sector member. Being a company with a fairly long history, we have been engaging in backbone fiber optical communication transmission network construction projects in China and some African countries in the past over 30 years.

CITCC has played a major role in the building of the national backbone fiber optical network in China. Before the year of 2000, China completed the construction of its “Eight Verticals and Eight Horizontals” (grid) backbone fiber optical transmission network in a span of 15 years. The total cable length of the above mentioned network is over 40 000 km with an average cable fiber count of about 100 and transmission bandwidth of 400 Gb/s. Up till now, this national backbone optical transmission network has been upgraded several times, hence it has become faster, more reliable with larger bandwidth and greater coverage. China has a much longer land national boundary than its maritime one, therefore we have set up 4 international gateways for submarine optical cables and many international gateways for terrestrial cables interfacing with our neighboring countries bordering by land with China such as China-Russian Federation, China-Mongolia, China-Myanmar, China-India and China-Vietnam etc.. The large scale backbone transmission network in China satisfies our domestic information and communication demands whereas the submarine international optical network addresses the international and intercontinental communication needs. Our terrestrial international optical network allows us to meet bilateral transmission and interworking requirements with our neighboring counties.

With the further development of multi-polarization of the world, economic globalization and the information society, information and communication plays an increasingly bigger role in our life. However, information and communication development is quite different amongst countries and regions in the world, thus the information divide is getting wider. To address this challenge, we suggest that “to promote and develop an interconnected and integrated global submarine and land fiber optical communication network” be considered by ITU as one of the strategic priorities for 2020-2023.

To be more specific, we propose that first of all, to promote and develop the multilateral interconnection and interworking of global land optical networks. Similar to China, many countries in the world have built an adequate national optical network and have realized the bilateral interworking of transmission path with their neighboring countries. We need to leverage these available optical network resources and at the same time, we should construct new land optical transmission systems or networks in regions and areas where these networks are not sufficient yet so as to promote the forming of a global multilateral land optical network that is interconnected and interworking with the support of sound international standards and mechanisms for international interconnection and interworking of optical networks.

Secondly, although submarine optical network is the backbone of the international internet which carries about 90% of the international information traffic, it still cannot meet diversified requirements. As such, we need to join forces to promote, develop and enhance the construction of intercontinental submarine optical networks and realize its interconnection and interworking, in this way we will be able to extend the international and intercontinental information exchange and cooperation.

Thirdly, to work on and improve the standards and mechanisms concerning the interconnection and interworking of international submarine and land optical communication networks which will facilitate the mutual backup or redundancy of international submarine and land optical networks, and ultimately forming an integrated and interconnected global optical communication network of submarine and terrestial cables.

Globally interconnected fibre-optic network with the integration of terrestrial and submarine cable will definitely increase the number and quality of optical transmission channels, resulting in a global optical network of more extensive coverage, higher speed, more reliability and better flow of traffic. This will help to pave the way for the global coverage of the Internet of Things and the elimination of the digital divide, providing a smooth and reliable “ information super-highway” for the Internet services such as international and inter-continental E-commerce, on-line education and cooperative tele-medicine, so as ultimately to bring the vision of information and communication for all into reality.

It is therefore recommended that ITU takes the “promotion and development of a globally interconnected fibre-optic network with the integration of terrestrial and submarine cable” as one of its strategic priorities for 2020-2023.

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ITU questions

1. What does ITU should take as strategic priorities during 2020-2023, taking into account of the sustainable development goals by 2030 of the United Nations?

2. What are the key technological trends that should be considered by ITU in its strategy?

3. What do you think are the three most important changes faced by ITU? What are the three achievements of ITU during 2020-2023 that you expect most?

4. Any other ideas or comments?

Response from CITCC:

1. Strategic priorities: promote and develop a globally interconnected fibre-optic network with the integration of terrestrial and submarine cable. To be specific, Recommendation 1: make full use of the existing terrestrial cable networks and cross-border bilateral fibre-optic cables. Build new terrestrial cable in the underdeveloped areas in order to form interconnected international transmission channels of terrestrial cables for multiple countries; Recommendation 2: plan and carry out inter-continental submarine cable projects so as to improve the international submarine cable network; Recommendation 3: develop and improve the standards and mechanism related to the interconnection of the international terrestrial and submarine cable networks.

2. Key technological trends: attach great importance to the R&D and development of the technologies and standards in the area of information technology.

3. Three challenges: Variance in demands due to huge difference among countries in the level of economy and information technology development; guarantee for information security and balance of interests among countries.

Three achievements: significant development of information security technology; tremendous improvement in the interconnection of the fibre-optic cables among countries; remarkable progress of information technology made by the countries which are lagging behind.

4. Giving more assistance to the countries which are lagging behind in their improvement of interconnection and information technology development.