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| **STUDY GROUP 3** |
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| **CONTRIBUTION** |
| **Source:** | United States of America |
| **Title:** | Views on D.ModelTTC |
| **Purpose:** | Proposal |
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| **Keywords:** | Terrestrial cable; Terrestrial multi-country end-to-end cable network; D.10 |
| **Abstract:** | The United States describes flaws in D.ModelTTC, and presents ways forward to progress the work.  |

**1 Introduction**

During previous Study Group 3 meetings, and as recently during the Q13/3 Rapporteur Group Meeting (22 January 2019, Geneva), the United States expressed strong concerns regarding the proposed model for terrestrial multi-country end-to-end cable network contained in D.ModelTTC (see [TD24/WP1](https://www.itu.int/md/T17-SG03-190423-TD-WP1-0024/en)).

In its current draft text, the framework which is intended to be “based on a proportional allocation model” is simply flawed. The outcome of the current model leads to a disproportionate solution that is clearly not equitable among the Member States or entities along the route.

The United States supports the concept behind a proposal to develop a model for terrestrial cable transit charges that takes into consideration the needs of landlocked countries. The flaws in this document, however, are quite grave, and actually could harm developing countries.

The United States encourages Member States, especially landlocked countries, to review the content of this model before progressing further in this work.

The United States also advises the TSB to examine this proposed draft Recommendation prior to its approval/publication. The flaws contained in the current draft could undermine the credibility of the ITU-T as an international standards setting body.

In this contribution, the United State will:

* Describe scenarios to demonstrate the flaws contained in D.ModelTTC
* Discuss items that were previously requested to progress the work
* Present several ways forward to progress and finalize the work.

**2 Scenarios**

In this section, three (3) examples are provided to demonstrate flaws in the model:

**Example 1**: A terrestrial cable built from Montevideo, Uruguay (on the Atlantic ocean), through Argentina, to Asunción, Paraguay, to La Paz, Bolivia, and then ending at the closest landing point on the Pacific Ocean in Peru, the length of the cable would be about 1,750 km. Of that, over half would run through Paraguay and Bolivia - 500 km each (both are landlocked countries).

Thus, even if the two countries needed only 25 percent of the bits, they would collectively pay for more than 50 percent of the cable construction and operation. How would D.ModelTTC represent a fair outcome for an international Recommendation?

**Example 2**: Assume a terrestrial fiber cable linking China’s border with the capitals of the following countries, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, and Azerbaijan. The least-cost routing of such a cable would travel about:

A) 400 km in Kazakhstan

B) 900 km in Kyrgyzstan (because of branching)

C) 300 km in Tajikistan

D) 1,000 km in Turkmenistan

E) 300 km under the Caspian Sea (Note: the formula in TD-24 does not take this into account. But let’s presume the costs of which would be shared equally by all cable owners).

F) and, 30 km in Azerbaijan

In this example, the total cable length would be about 3,000 km. Turkmenistan and Kyrgyzstan each would pay about one third of the construction and operating costs, when the shared Caspian Sea costs are also included.

With the assumption that 75 percent of the terrestrial cable traffic goes from Kazakhstan to Kyrgyzstan, those who paid, and are paying 40 percent of the costs, are enjoying access to three quarters of the cable’s bandwidth.

Again, the model presents a disproportionate solution that is not equitable among the Member States along the route.

**Example 3:** To provide a similar example in Africa, assume a cable to be built between Port Sudan (in Sudan), through Chad, Niger, Mali, and Côte d’Ivoire, terminating in Abidjan.

The geography of this route is as follows:

A) Sudan 1,100 km

B) Chad 400 km

C) Niger 800 km

D) Mali 1,000 km

E) Côte d’Ivoire 500 km

In this example, the total cable length would be about 3,800 km. Based on the formula in TD-24, Sudan would pay 26 percent of its construction and operation costs, Chad only 11 percent, while Niger (21 percent) and Mali (26 percent) together would pay more than half of those costs. Côte d’Ivoire would pay 17 percent of the construction and operation costs of this cable.

Assume that 48 percent of the traffic is between Chad and Côte d’Ivoire. Yet those two countries together pay only 24 percent of cable construction and management costs. In effect, Sudan, Niger and Mali would be subsidizing the traffic of Chad and Côte d’Ivoire.

Obviously, the problem is not with Côte d’Ivoire or Chad -- it is clearly with the formula in TD-24, which fails to consider factors the industry commonly uses in cable construction and pricing, and which are already provided in an existing ITU-T Recommendation [D.10](https://www.itu.int/itu-t/recommendations/rec.aspx?rec=203).

**3 Way Forward**

Several steps are presented below in order to progress this work:

* During previous meetings of SG3, the United States requested Q13/3 to “coordinate with Q6/3 during the development of this Recommendation.” To date, no such coordination has occurred. Furthermore, the United States remains of the view that Q6/3 is the more relevant and appropriate Question for this work.
* To conduct an analysis of ITU-T Recommendation D.10 Section 2.2.4 which lists relevant factors for rate development that are omitted from TD24-WP/1. Factors such as:
* Optional User Facilities
* Type of switching
* Volume of data/duration of traffic
* Distance
* Time (peak/off peak)
* route

The current draft Recommendation does not even acknowledge D.10 as a reference.

* During previous SG3 meetings, the United States requested that D.ModelTTC be appended with an Annex containing a discussion on different options that subsequently justify “the” proposed model as the output for the Recommendation.

To date, no such different options have been presented, while serious flaws are clearly shown in the single solution contained in the draft Recommendation.

* As a result of the above, STUDY\_TCST should be progressed and completed prior to finalizing the draft Recommendation. Perhaps such study could lead to the analysis of various options that are missing in D.ModelTTC, and could result in a more credible outcome.
* The United States proposes a follow-on RGM to progress the work; perhaps such RGM may be held as a joint RGM with Q6/3.

**4 Conclusion**

The United States reiterates that supports the concept behind the development of an equitable model for transit charges on terrestrial cables, one that considers the needs of landlocked countries.

Essentially, the problem remains with high transit fees imposed by countries with landing stations on landlocked countries (and in particular on developing countries).

In its current format and approach, D.ModelTTC remains not only short-sighted but also critically flawed.

The United States requests that this contribution be made available publicly without restriction.

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