

# ITU-T

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

## D.1041

(05/2021)

### SERIES D: TARIFF AND ACCOUNTING PRINCIPLES AND INTERNATIONAL TELECOMMUNICATION/ICT ECONOMIC AND POLICY ISSUES

Recommendations for international  
telecommunication/ICT economic and policy issues –  
International Internet connectivity; and Tariff, Charging  
Issues of Settlements Agreement of Trans-multi-country  
Terrestrial Telecommunication

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### **Policy and methodological principles for determining co-location and access charges**

Recommendation ITU-T D.1041

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# Recommendation ITU-T D.1041

## Policy and methodological principles for determining co-location and access charges

### Summary

Recommendation ITU-T D.1041 offers policy and methodological principles for Member States interested in establishing transparent co-location access and service rates. Co-location is an important telecommunications wholesale service, essential to a competitive telecommunications landscape and a sustainable environment, as it eliminates the need for operators to buildout new or replicate existing infrastructure. A key component for encouraging co-location is the establishment of reasonable co-location access and service rates on the principles of fairness and equity.

### History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T D.1041	2021-05-28	3	<a href="http://handle.itu.int/11.1002/1000/114426">11.1002/1000/14426</a>

### Keywords

Charges, co-location.

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\* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/114426>.

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

## NOTE

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## **Introduction**

Co-location is an important telecommunications wholesale service used by telecommunication operators.

Co-location can assist in expediting market entry or service coverage expansion by assisting in reducing financial barriers of entry into telecommunication services' markets, especially when it is considered that both national and international players require access to telecommunication facilities for the provision of domestic and international telecommunication services. Due to its effect on faster network rollout and market expansion, it has become an effective tool to stimulate competition in telecommunication markets and to engender other economic-wide benefits to society.

Notwithstanding exorbitant co-location rates, co-location can be a mechanism to delay or avoid market entry by prospective competitors. Consequently, some jurisdictions could consider encouraging co-location and therefore reducing barriers to competitors, by the establishment of reasonable co-location access and service rates, which are charged by the facility owner to the co-location access seeker.

This Recommendation offers policy and methodological principles for the Member States interested in establishing transparent co-location access and service rates.

# Recommendation ITU-T D.1041

## Policy and methodological principles for determining co-location and access charges<sup>1</sup>

### 1 Scope

This Recommendation proposes some policy principles and methodologies for determining telecommunications infrastructure co-location access and service rates.

### 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

None.

### 3 Definitions

#### 3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

**3.1.1 co-location** [b-ITU-T X.1051]: Installation of telecommunications facilities on the premises of other telecommunications carriers.

**3.1.2 telecommunications facilities** [b-ITU-T X.1051]: Machines, equipment, wire and cables, physical buildings or other electrical facilities for the operation of telecommunications.

#### 3.2 Terms defined in this Recommendation

This Recommendation defines the following term:

**3.2.1 attachment:** The connection of approved equipment to relevant infrastructure for the provision of retail telecommunication services.

### 4 Abbreviations and acronyms

None.

### 5 Conventions

In this Recommendation:

- The keyword "may" indicates an optional condition which is permissible, but not absolutely required to claim conformance with this Recommendation.
- The keyword "shall" indicates a condition which must be strictly followed and from which no deviation is permitted if conformance to this Recommendation is to be claimed.

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<sup>1</sup> In accordance with clause 9.5.4 of WTSA Resolution 1, Japan has expressed a reservation with respect to this Recommendation.

## **6 Policy principles for appropriate regulatory actions**

**6.1** In markets with pervasive infrastructure coverage, where there are many different technological telecommunication networks and network access is sufficiently available across the geography of the relevant Member State, co-location rates may be largely determined by market forces. Therefore, in these Member States which have wholesale markets with effectively competitive telecommunication networks, the regulator may allow co-location rates to be commercially negotiated between the telecommunications' infrastructure access provider and the access seeker.

**6.2** Where market solutions do not produce sufficiently competitive co-location access and service rates, Member States may, where appropriate, take an active role towards establishing competitive and affordable telecommunication infrastructure colocation rates and co-location dispute resolution processes.

**6.3** Where appropriate, Member States may empower regulators to introduce proportionate regulatory measures or interventions on telecommunication infrastructure co-location rates for the benefit of telecommunication services end users. These can include, but are not limited to, transparency in public offers and/or the establishment of competitive co-location access rates.

**6.4** Transparency may be implemented through the periodic disclosure of public offers of co-location.

**6.5** Co-location access rates may be estimated through the use of one or a hybrid of pricing techniques. These pricing techniques can include but are not limited to: fully allocated cost distributive models, a suitable percentage of the market rate<sup>2</sup> as determined by the regulator of the Member State, and a suitable price margin as determined by the regulator of the Member State.

**6.6** In Member States with competitive telecommunication networks, market co-location access and services rates may be held in the event of a dispute. Before administering any co-location access rate in a market, the regulator should have purview of co-location access and service rates which are agreed to in their jurisdiction.

**6.7** Member States may also consider establishing a designated access forum, to develop a telecommunication infrastructure co-location access code with model terms and conditions for compliance in the event of co-location price and non-price related disputes. The 'colocation access code' may include, but is not limited to, time frames and procedures for negotiations and the conclusion of access agreements, sharing of technical information, provisioning of facilities, protection of commercial information and intellectual property and relevant rate methodologies.

## **7 Principles for determining telecommunication infrastructure co-location access and service rates**

### **7.1 Non-discriminatory and equitable**

The access provided by the network owner should be of equitable technical standard and quality as the technical standard and quality provided to all access seekers with similar requirements. In this way the service agreements between the access provider and access seeker should be equitable for all access seekers.

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<sup>2</sup> Taking into consideration a method where the market rate is easily and readily known by the regulator.



## 7.2 Cost recovery

Access providers should be permitted to recover the cost of investment and encouraged to invest further in telecommunication infrastructure through a co-location access and service rate<sup>3</sup>. Regulators are encouraged to be informed of the cost of a telecommunication network roll out and upgrades in their jurisdictions. Regulators are encouraged to request and establish separate accounts.

**7.3** These principles may be applied irrespective of the colocation access and service rate formula selected by the regulator of the Member State. The colocation access and service rate formula which may be applied by regulators of Member States may include, but are not limited to, the following:

– **Equation 1:**<sup>4</sup>

$$\frac{\text{Site rental and/or set up cost} + \text{Operational Cost} + \text{Depreciation} + \text{Cost of Capital}}{\text{Number of Shares}} \quad (1)$$

– **Equation 2:**

$$\beta * \text{Market Lowest Rate} \quad (2)$$

Where  $\beta$  refers to the percentage (%) of the lowest co-location rate for a similar telecommunication infrastructure access selected by the regulator.

– **Equation 3:**

$$\frac{\text{Costs}}{\text{Number of Attachments}^5} + \text{Make ready cost} \quad (3)$$

Where costs include, but may not be limited to, the following: site rental, operational costs, depreciation, and the cost of capital recorded annually. 'Costs' may also extend to "make ready cost", which refer to the costs that are incurred specifically to providing co-location access to the access seeker, and which would not have arisen in the absence of the co-location access request.

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<sup>3</sup> Where the infrastructure owner also operates in the retail telecommunications market, these revenues shall be included in the total economic value of telecommunication infrastructure and such rates shall also not be prohibitive to competition in said retail markets.

<sup>4</sup> Shares refer to the tower users, and in some scenarios, can include the owner. Thus, payments based on the number of sharers allow commercial entities to increase their number of attachments at little or no additional cost. Hence, Equation 1 provides a cost savings incentive for entities or sharers to have multiple attachments.

<sup>5</sup> Attachments refer to the connection of approved equipment to relevant infrastructure for the provision of retail telecommunications services. Co-location payments based on attachments require its owner to pay for each attachment co-located on the relevant infrastructure.

## Bibliography

- [b-ITU-T X.1051] Recommendation ITU-T X.1051 (2016) | ISO/IEC 27011:2016, *Information technology – Security techniques – Code of practice for information security controls based on ISO/IEC 27002 for telecommunications organizations*.



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