

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**D.98**

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SERIES D: GENERAL TARIFF PRINCIPLES

General tariff principles – Charging and accounting in the  
mobile services

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**Charging in international mobile roaming  
service**

Recommendation ITU-T D.98



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## **Recommendation ITU-T D.98**

### **Charging in international mobile roaming service**

#### **Summary**

Recommendation ITU-T D.98 proposes measures to empower consumers to benefit from efficient competition and regulation so that they have the information and transparency to take appropriate actions; to identify measures for improving the way the market works; and proposals for regulatory actions, which may include measures to lower rates.

#### **History**

Edition	Recommendation	Approval	Study Group
1.0	ITU-T D.98	2012-09-07	3

## FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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## **Introduction**

With the increased use of mobile devices as a primary means of communications, improved roaming services – including lower international roaming rates, improved quality of service and increased network access – have become key policy priorities for the ITU Member States.

Member States, regulators and consumers continue to express concern about the high level of charges incurred when roaming internationally and especially in the case of 'bill shock' (i.e., a bill which the consumer finds unexpectedly excessive).

International roaming is a multi-country issue by nature. The issues involved and their degree vary from region to region, and also within regions, in terms of economics, market structures and regulatory frameworks. Since there is no guarantee that unilateral action by one national regulatory authority in its country will on its own lead to reciprocal action in other countries benefitting their users, cooperation between regulators and policy makers either bilaterally or within a region is likely to be more effective than unilateral action by one national regulatory authority.

# Recommendation ITU-T D.98

## Charging in international mobile roaming service

### 1 Scope

This Recommendation proposes measures to empower consumers to benefit from efficient competition and regulation so that they have the information and transparency to take appropriate actions; to identify measures for improving the way the market works; and proposals for regulatory actions, which may include measures to lower 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 the 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.

[ITU-T D.93] Recommendation ITU-T D.93 (2003), *Charging and accounting in the international land mobile telephone service (provided via cellular radio systems)*.

[ITU-T D.99] Recommendation ITU-T D.99 (2008), *Indicative rate for international mobile termination*.

[ITU-T D.140] Recommendation ITU-T D.140 (2002), *Accounting rate principles for the international telephone service*.

### 3 Definitions

International mobile roaming (IMR) is a service that a subscriber to postpaid or prepaid mobile services purchases from a mobile operator in their home country, that is, from the 'home operator'. It allows the subscriber to continue to use their mobile phone and phone number to access voice and the short message service (SMS) while visiting another country by accessing a mobile operator's network in the visited country, that is, the network of the 'visited operator'. Furthermore, there are IMR services that allow a subscriber to continue to use their mobile devices, such as mobile phone, to access data services while in another country by accessing a visited operator's network.

IMR wholesale and retail rates are the prices charged for IMR service where:

- a) IMR wholesale rates are the prices that the visited operator charges the home operator for allowing the home operator's subscriber to roam on the visited operator's network, and
- b) IMR retail rates are the prices that the home operator charges their subscribers for IMR services.

### 4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

IMR	International Mobile Roaming
SIM	Subscriber Identification Module
SMS	Short Message Service

## **5 Principles for lowering international mobile roaming rates**

### **5.1 Empowering consumers**

Member States should take an active role in consumer education and protection. Member States should explore ways to protect and empower consumers in determining their best choices among the array of options available to them in the rapidly evolving mobile marketplace. Member States, taking into account specific national or regional conditions, should, among other things, encourage:

**5.1.1** the development of effective ways to provide clearer and more transparent information to users on the details of international mobile services and the structure and billing unit of the IMR retail rates before they roam internationally;

**5.1.2** the usage of alerts delivered via SMS or other electronic means when roaming users arrive in another country, which may include prices or warning that higher prices apply and instructions on how to obtain further information or access to their recorded usage/expense;

**5.1.3** the usage of warning alerts delivered via SMS or other electronic means that indicate when the roaming user has incurred a certain cost level which is prescribed by the service provider to the customers;

**5.1.4** unless otherwise specified by the user, the implementation of automatic roaming cost caps for certain international roaming services: that is, the service is automatically blocked when the user's bill reaches a certain prescribed and/or predetermined level;

**5.1.5** the development of measures to protect users living in, or travelling to, border regions from inadvertent roaming on a network in a country different from the one in which they are located at that time (this might include special tariff plans for users living near borders and warning messages when the handset switches to a new network where higher charges apply). Member States are also encouraged to provide users with practical information for avoiding inadvertent roaming;

**5.1.6** supporting the usage of techniques so that roaming users could easily choose the network with the lowest roaming tariffs and choose another visiting network manually.

### **5.2 Market-based solutions**

Member States should encourage, taking into account specific national or regional conditions, the development of effectively competitive markets for international mobile roaming on a commercial basis by:

**5.2.1** encouraging the provision of roaming pricing plans that allow users to purchase as much international mobile roaming services as they wish in a package that best practically meets their needs and budget;

**5.2.2** supporting the use of services enabling substitutes including different SIM cards, such as in some countries global virtual mobile network operator cards, and dual-SIM handsets, rental of a second handset, and the provision of international mobile roaming services by other means, for example by the take-up of new technologies, so as to increase user choice;

**5.2.3** cultivating regional and multiregional cooperation among operators and regulators to facilitate and encourage regional and interregional mobile roaming;

**5.2.4** encouraging mobile operators which provide international roaming services to cooperate in order to lower their wholesale roaming tariffs for roaming users on a bilateral basis.

### **5.3 Regulatory intervention**

Regulators and policy makers, taking into account specific national or regional conditions, may introduce regulatory interventions on international mobile roaming service tariffs for the benefit of users by encouraging competition. Possible interventions may include a range of regulatory measures such as usage alerts, bill caps, tariff caps and pre-selection.





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