



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

E.154

(03/98)

SERIES E: OVERALL NETWORK OPERATION,
TELEPHONE SERVICE, SERVICE OPERATION AND
HUMAN FACTORS

Operation, numbering, routing and mobile services –
International operation – Operation of international
telephone services

International shared cost service

ITU-T Recommendation E.154

(Previously CCITT Recommendation)

ITU-T E-SERIES RECOMMENDATIONS

OVERALL NETWORK OPERATION, TELEPHONE SERVICE, SERVICE OPERATION AND HUMAN FACTORS

OPERATION, NUMBERING, ROUTING AND MOBILE SERVICES

INTERNATIONAL OPERATION

Definitions	E.100–E.103
General provisions concerning Administrations	E.104–E.119
General provisions concerning users	E.120–E.139

Operation of international telephone services **E.140–E.159**

Numbering plan of the international telephone service	E.160–E.169
International routing plan	E.170–E.179
Tones in national signalling systems	E.180–E.199
Maritime mobile service and public land mobile service	E.200–E.229

OPERATIONAL PROVISIONS RELATING TO CHARGING AND ACCOUNTING IN THE INTERNATIONAL TELEPHONE SERVICE

Charging in the international telephone service	E.230–E.249
Measuring and recording call durations for accounting purposes	E.260–E.269

UTILIZATION OF THE INTERNATIONAL TELEPHONE NETWORK FOR NON-TELEPHONY APPLICATIONS

General	E.300–E.319
Phototelegraphy	E.320–E.329

ISDN PROVISIONS CONCERNING USERS E.330–E.399

QUALITY OF SERVICE, NETWORK MANAGEMENT AND TRAFFIC ENGINEERING

NETWORK MANAGEMENT

International service statistics	E.400–E.409
International network management	E.410–E.419
Checking the quality of the international telephone service	E.420–E.489

TRAFFIC ENGINEERING

Measurement and recording of traffic	E.490–E.505
Forecasting of traffic	E.506–E.509
Determination of the number of circuits in manual operation	E.510–E.519
Determination of the number of circuits in automatic and semi-automatic operation	E.520–E.539
Grade of service	E.540–E.599
Definitions	E.600–E.699
ISDN traffic engineering	E.700–E.749
Mobile network traffic engineering	E.750–E.799

QUALITY OF TELECOMMUNICATION SERVICES: CONCEPTS, MODELS, OBJECTIVES AND DEPENDABILITY PLANNING

Terms and definitions related to the quality of telecommunication services	E.800–E.809
Models for telecommunication services	E.810–E.844
Objectives for quality of service and related concepts of telecommunication services	E.845–E.859
Use of quality of service objectives for planning of telecommunication networks	E.860–E.879
Field data collection and evaluation on the performance of equipment, networks and services	E.880–E.899

For further details, please refer to ITU-T List of Recommendations.

ITU-T RECOMMENDATION E.154

INTERNATIONAL SHARED COST SERVICE

Summary

The *International Shared Cost Service (ISCS)* enables an ISCS customer in one country to be assigned one or more special telephone numbers in other countries which allow ISCS callers in those countries to call the ISCS customer at a rate equivalent to a national call charge in the country of origin. All other service and call-related charges are paid by the ISCS customer.

This Recommendation provides the service description for the International Shared Cost Service (ISCS), along with information on the service ordering process and other service operational aspects.

Source

ITU-T Recommendation E.154 was prepared by ITU-T Study Group 2 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 9th of March 1998.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The 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 Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 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.

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

© ITU 1998

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

CONTENTS

		<i>Page</i>
1	Scope.....	1
2	References.....	1
3	Definition of terms.....	1
4	Service definition.....	2
5	Service management.....	3
5.1	Service ordering – General procedure.....	4
5.2	Procedures for ISCS access in the country of origin via dialling a national shared cost number (Access method No. 1).....	4
5.3	Procedures for ISCS access in the country of origin via international direct dialling of a foreign domestic shared cost number (Access Method No. 2).....	6
5.4	Procedure for ISCS access in the country of origin via dialling a universal international shared cost number (Access Method No. 3).....	6
5.5	Common service management aspects.....	7
5.6	Operational aspects.....	8
5.7	Data collection.....	8
6	Customer’s service features.....	9
6.1	Announcement for caller.....	9
6.2	Geographical zone call routing.....	9
6.3	Variable call routing.....	9
6.4	Additional customer service statistics.....	10
6.5	Directory assistance/listing services.....	11
7	Operational provisions.....	11
7.1	Service operational requirements.....	11
7.2	Network management.....	12
7.3	Quality of service.....	12
	Annex A – Access Method No. 1.....	12
	Annex B – Access Method No. 2.....	17
	Annex C – Access Method No. 3.....	20

INTERNATIONAL SHARED COST SERVICE

(Geneva, 1998)

1 Scope

This Recommendation provides the service description for the International Shared Cost Service (ISCS), along with information on the service ordering process and other service operational aspects.

While this Recommendation only covers shared cost calling services provided using the international telephone service (Recommendation E.105) as the underlying transport mechanism, this does not preclude the same principles being applied or adapted in the future to ISCS using other transport mechanisms, networks or services. In respect of Access Method No. 3, implementation of this service will need to take account of the provisions of supporting D- and E-Series Recommendations.

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; all 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.

- CCITT Recommendation E.105 (1992), *International telephone service*.
- ITU-T Recommendation E.141 (1993), *Instructions for operators on the operator-assisted international telephone service*.

3 Definition of terms

This Recommendation defines the following terms:

3.1 ISCS originating ROA: A Recognised Operating Agency (ROA) in the country of origin of the call which is responsible for ensuring the establishment of access to the international shared cost number in that country. This operator is also responsible for ensuring collection of the portion of the call charge payable by the ISCS caller.

3.2 ISCS terminating ROA: The Recognised Operating Agency (ROA) in the country of call termination which is responsible for ensuring the termination of international shared cost service calls to the ISCS customer and is responsible for relations with the ISCS customer concerning the international shared cost service. This operator is also responsible for ensuring collection of the portion of the call charge payable by the ISCS customer.

3.3 ISCS customer: The individual or entity who (or which) obtains an international shared cost service from an ISCS terminating ROA, and is responsible for payment of all charges due to that ISCS terminating ROA.

3.4 ISCS caller: The person who places a call to an international shared cost number and pays a portion of the call charge.

3.5 routing number: A number format specified by the ISCS terminating ROA which identifies the called ISCS customer and the originating country for routing purposes. The international shared cost number dialled by the ISCS caller is translated in the country of call origination to this special routing number before the call is transferred to the ISCS terminating ROA.

4 Service definition

4.1 The **International Shared Cost Service (ISCS)** enables an ISCS customer in one country to be assigned one or more special telephone numbers in other countries which allow ISCS callers in those countries to call the ISCS customer at a rate equivalent to a national call charge in the country of origin. All other service and call-related charges are paid by the ISCS customer.

4.2 The international shared cost service is provided by bilateral agreement between an ISCS originating ROA and an ISCS terminating ROA.

4.3 The exchange of the following information between the participating ROAs is considered to be essential prior to the service being made available:

- ISCS originating ROA's numbering arrangements;
- ISCS originating ROA's national charge bands;
- ISCS terminating and originating ROA's local service requirements (operating Code of Practice);
- bilateral agreement of the payment by the ISCS terminating ROA to the ISCS originating ROA for provision of access;
- contact points for each of the ROAs in respect of all general matters relating to ISCS as well as specific contacts for exchange of service orders, testing and fault reporting.

4.4 Participating ISCS originating ROAs and ISCS terminating ROAs may choose to adopt any, or all, of the specific access methods indicated below:

- a) Access Method No. 1 – Access in the country of call origination via dialling a national shared cost number.

A number is assigned to the ISCS customer from the available national shared cost numbers in each country from which the ISCS customer wishes to receive ISCS calls. The ISCS caller dials the national shared cost number, which is translated into a routing number and routed to the country of destination. In the country of origin there may exist more than one charge band for shared cost calling.

Due to variations in shared cost number structure among countries, it is likely that the assigned number cannot be the same in each country.

NOTE – Some countries may use within their national numbering scheme differing national prefixes for shared cost numbers which terminate calls within the country and for shared cost numbers which terminate calls in another country. For the purpose of this Recommendation, both are national shared cost numbers.

- b) Access Method No. 2 – Access in the country of call origination via international direct dialling of a foreign domestic shared cost number.

A single domestic shared cost number assigned to the ISCS customer is used to accept shared cost calls from other countries. The ISCS caller dials the international prefix and the country code followed by the called ISCS customer's domestic shared cost number, which is translated into a routing number and routed to the country of destination.

- c) Access Method No. 3 – Access in the country of call origination via dialling a universal international shared cost number.

A unique *Universal International Shared Cost Number (UISCN)* that is the same throughout the world is assigned to the ISCS customer. The ISCS caller dials the international prefix followed by the UISCN, which is translated into a routing number and routed to the country of destination.

A UISCN facilitates uniform global access to the ISCS customer from all ISCS originating ROAs who choose to offer this feature. The UISCN should be portable, giving ISCS customers the ability to retain their UISCN when changing ISCS service providers.

The UISCN access method can only be used where the international shared cost service requested by the ISCS customer is between two or more countries.

Table 1 compares some aspects of each of the access methods.

Table 1/E.154 – Characteristics of access methods

Access method	Country of destination identified in the dialled number	One universally unique number
No. 1	No	No
No. 2	Yes	Yes
No. 3	No	Yes

4.5 Throughout this Recommendation, the terminating ROA is the provider of the international shared cost service to the ISCS customer and is responsible for all relations with the ISCS customer concerning the international shared cost service. The originating ROA is the ROA in the country of origin of the call that is responsible for the establishment of the access to the international shared cost number in that country.

Figure 1 depicts the relationship of terminating and originating ROAs as regards the direction of call flow.

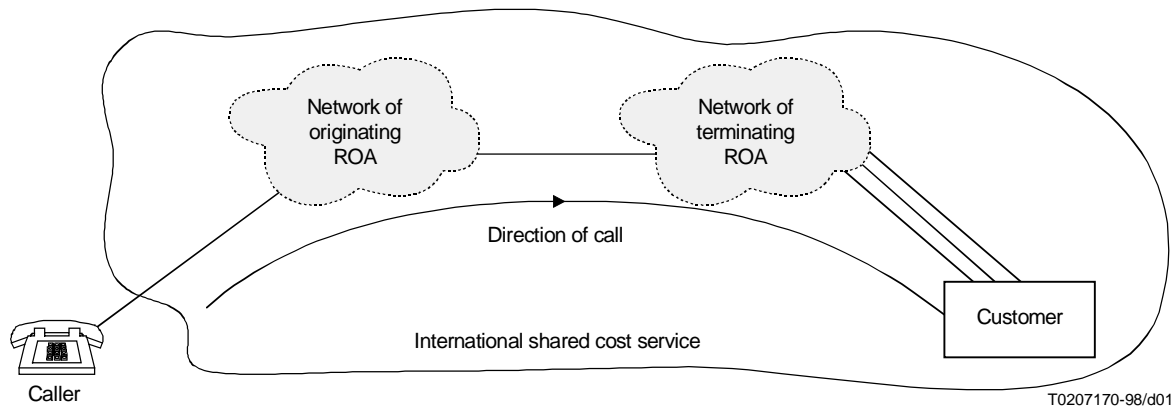


Figure 1/E.154 – General environment of international shared cost service

5 Service management

This clause contains the administrative procedures concerning service ordering, service operation, number assignment, and data collection for each of the three ISCS access methods.

The terminating ROA has the responsibility of processing all applications received on behalf of their ISCS customer and will

- obtain numbers requested by the ISCS customer if available or an acceptable alternative;
- ensure that ISCS customers do not promote their assigned international shared cost number before the customer due date;
- notify the ISCS customer that:
 - a) international shared cost numbers are intended to allow ISCS callers to call the ISCS customer and may not be sold, licensed, or traded. Nor may they be transferred, except in the case of a merger, acquisition, or joint venture. The ISCS customer must inform their ISCS service provider of any such transfer;
 - b) the assignment of a international shared cost number does not create an ownership interest, right or claim to the international shared cost number on the part of the ISCS customer.

As the interface with the ISCS customer, the terminating ROA has overall control responsibilities to ensure the satisfactory completion of the service order for initiation, change, suspension and disconnection of service. Terminating and originating ROAs should each appoint a contact person responsible for all general matters relating to ISCS (a "service manager"), as well as specific contacts for service ordering, testing and fault reporting. Information on these contacts should be exchanged between terminating and originating ROAs.

5.1 Service ordering – General procedure

The terminating ROA will originate the service order on behalf of the ISCS customer. The service order is sent via telefax or other mutually agreed telecommunication to the originating ROA. A separate service order form should be sent to each originating ROA from whom the ISCS customer wishes to receive calls.

The originating ROA will verify the information on the *Service Order Form (SOF)* and, subject to acceptance of the request for service on behalf of the ISCS customer, will programme the work necessary to activate the service on the date requested by the ISCS customer.

The originating ROA may request the terminating ROA to provide additional information to that specified on the service order form.

Terminating and originating ROAs should each indicate one contact point for the exchange of service orders.

The forms as illustrated in Annexes A, B or C, as appropriate, will be used as the SOF by terminating and originating ROAs. (Terminating and originating ROAs may bilaterally agree to specify mandatory components of the SOF, such as "SOF type", and so on.)

5.2 Procedures for ISCS access in the country of origin via dialling a national shared cost number (Access method No. 1)

5.2.1 Service provisioning

Terminating and originating ROAs should endeavour whenever possible to complete all stages of service provisioning within ten working days after the service order form is issued. However, there should be some latitude in the stages of service provision to take account of variations in time of day, workdays, holidays, etc. which exist around the world.

Steps:

- 1) Optional National shared cost number reservation request by the terminating ROA to the originating ROA.
- 2) Optional National shared cost number reservation confirmation by the originating ROA to the terminating ROA.
- 3) Day 1 Service Order Form (SOF) issued by the terminating ROA to the originating ROA.
- 4) Day 2 SOF reviewed and processed by the originating ROA.
- 5) Day 4 Number assigned and customer due date confirmed by the originating ROA and the terminating ROA advised.
- 6) Day 7 Service activation.
- 7) Day 8 Testing.
- 8) Day 10 Testing completed/Customer due date.

The following forms may be used during service provisioning (See Annex A):

- National shared cost number request form;
- National shared cost number access service order form.

5.2.2 Requirements before issuing the service order

The terminating ROA may have reason prior to the issue of a service order to request the originating ROA for a national shared cost number assignment (for an ISCS customer who wants a specific number and/or to verify the period of notice required for service initiation). A list of up to ten customer-preferred shared cost numbers (within the range available) can be submitted.

If the specified number and alternatives are not available, the originating ROA will allocate the next spare number and notify the terminating ROA. The terminating ROA can then request additional numbers if required. If the ISCS customer has no preference for a specific number, any number may be assigned by the originating ROA from the available unassigned numbers.

This process will be accomplished by using the form in Annex A, or a similar one.

The originating ROA will advise the terminating ROA of the national shared cost number allocated within two working days of receiving the request.

This process will be accomplished by using the form in Annex A, or a similar one.

The originating ROA should guarantee the reservation of the allocated national shared cost number for 60 days. After this period, the originating ROA reserves the right to cancel the reservation if another customer has made a request for it.

If no SOF is received after a number has been reserved for more than 60 days, the originating ROA may cancel the reservation. In all cases, the originating ROA should promptly notify the terminating ROA about the cancellation of any reserved numbers.

5.2.3 Preparation of the service order form

The service order form for this service access method can be found in Annex A along with the detailed instructions on the preparation of the form.

5.2.4 Policy for assignment of national shared cost numbers in the country of origin for use in the international shared cost service

The principles for assignment can be summarized as follows:

- The numbers will be those specified by the originating ROA.
- ISCS customer-requested numbers may be assigned if available.
- Reserved and assigned numbers are intended for the ISCS customer's communication service, and are not to be sold, licensed, or traded. Nor may they be transferred, except in the case of a merger, acquisition, or joint venture. Any attempt to do so may result in the originating ROA reclaiming those numbers for reassignment.
- The originating ROA will not charge any additional fee for an ISCS customer-requested number.
- The reservation or assignment of a national shared cost number does not create an ownership interest, right or claim to the national shared cost number on the part of the ISCS customer.
- ISCS customers are not to promote their number(s) before the customer due date.
- When an existing international shared cost service is disconnected, the originating ROA's number re-assignment policy will be followed.
- The originating ROA makes the final decision on any shared cost number used.

5.2.5 Service disconnection

Based on the request of an ISCS customer or for its own purposes, a terminating ROA will originate an SOF to disconnect the international shared cost service. Terminating and originating ROAs must exchange the necessary information with each other, and if based on the request of an ISCS customer, must complete all the necessary procedures for disconnection by the date requested by the ISCS customer.

The procedures for service provisioning should apply to service disconnection as appropriate.

5.3 Procedures for ISCS access in the country of origin via international direct dialling of a foreign domestic shared cost number (Access Method No. 2)

5.3.1 Service provisioning

Terminating and originating ROAs should endeavour whenever possible to complete all stages of service provisioning within ten working days after the service order form is issued. However, there should be some latitude in the stages of service provision to take account of variations in time of day, workdays, holidays, etc. which exist around the world.

Steps:

- 1) Day 1 Service Order Form (SOF) issued by the terminating ROA to the originating ROA.
- 2) Day 2 SOF reviewed and processed by the originating ROA.
- 3) Day 4 Customer due date confirmed by the originating ROA and the terminating ROA advised.
- 4) Day 7 Service activation.
- 5) Day 8 Testing.
- 6) Day 10 Testing completed/Customer due date.

The following form may be used during service provisioning (See Annex B):

- Foreign domestic shared cost number service order form.

5.3.2 Requirements before issuing the service order

There are no specific pre-service order issuing requirements for this service application, apart from a general requirement that callers in the country of the originating ROA be able to dial foreign domestic shared cost numbers. However, if the existing domestic shared cost number assignment is not appropriate for this access method, the terminating ROA may allocate a special number for the implementation of this service feature. In this case, the number assignment is a national matter for the terminating ROA.

5.3.3 Preparation of the service order form

The service order form for this service access method can be found in Annex B along with the detailed instructions on the preparation of the form.

5.3.4 Policy for assignment of numbers used for access to foreign domestic shared cost numbers

Since the number assignment is a national matter for the terminating ROA, no specific policy is indicated.

5.3.5 Service disconnection

Based on the request of an ISCS customer, the terminating ROA will originate an SOF to disconnect the international shared cost service. Terminating and originating ROAs must exchange the necessary information with each other and must complete all the necessary procedures for disconnection by the date requested by the ISCS customer.

The procedures for service provisioning should apply to service disconnection as appropriate.

5.4 Procedure for ISCS access in the country of origin via dialling a universal international shared cost number (Access Method No. 3)

5.4.1 Service provisioning

Terminating and originating ROAs should endeavour whenever possible to complete all stages of service provisioning within ten working days after the service order form is issued. However, there should be some latitude in the stages of service provision to take account of variations in time of day, workdays, holidays, etc. which exist around the world.

For the initial activation of a UISCN, the terminating ROA is required to obtain a number assignment from, and confirm service activation to, the UISCN Registrar.

For the initial activation of a UISCN, the following steps apply. Steps 1), 2), 7) and 9) do not apply for subsequent activations of the UISCN in additional countries.

Steps:

- 1) UISCN request by the terminating ROA to the UISCN Registrar.
- 2) UISCN reservation confirmed by the UISCN Registrar to the terminating ROA.
- 3) Day 1 Service Order Form (SOF) issued by the terminating ROA to the originating ROA.
- 4) Day 2 SOF reviewed and processed by the originating ROA.
- 5) Day 4 Customer due date confirmed by the originating ROA and the terminating ROA advised.
- 6) Day 7 Service activation.
- 7) Day 7 UISCN activation notification by the terminating ROA to the UISCN Registrar.
- 8) Day 8 Testing.
- 9) Day 9 UISCN assignment confirmation by UISCN Registrar to the terminating ROA.
- 10) Day 10 Testing completed/Customer due date.

The following forms may be used during service provisioning:

- Universal international shared cost number request form;
- Universal international shared cost number access service order form (See Annex C);
- Universal international shared cost number status notification form.

5.4.2 Requirements before issuing the service order

The terminating ROA should obtain a UISCN assignment from the UISCN Registrar.

5.4.3 Preparation of the service order form

The service order form for this service access method can be found in Annex C, along with detailed instructions on the preparation of the form.

A copy of the completed UISCN request form received from the UISCN Registrar should be attached by the terminating ROA to the service order form.

5.4.4 Policy for assignment of universal international shared cost numbers

The policy for assignment of universal international shared cost numbers can be found in the appropriate E-Series Recommendation.

5.4.5 Service disconnection

Based on the request of an ISCS customer, the terminating ROA will originate an SOF to disconnect the international shared cost service. Terminating and originating ROAs must exchange the necessary information with each other and must complete all the necessary procedures for disconnection by the date requested by the ISCS customer.

The procedures for service provisioning should apply to service disconnection as appropriate.

5.5 Common service management aspects

5.5.1 Directory assistance/listing

Directory assistance and/or listing in the country of the originating ROA may be provided as an option by the originating ROA and if so can be obtained at the option of the ISCS customer. If ISCS customers wish to have their shared cost number included in the directory assistance system and/or directory listing, this must be specified in the SOF.

5.5.2 Access capabilities/line definition

The terminating ROA will indicate the actual number of access lines at the disposal of its ISCS customer. This may be used for network management purposes.

5.5.3 Service authorisation

Terminating and originating ROAs will activate the service a few days prior to the customer due date. This will allow proper testing and verification of the service before the customer due date.

5.5.4 Pre-service testing

The terminating ROA will verify operation of the ISCS customer's access number and will perform pre-service testing during the days preceding the SOF due date.

The originating ROA will test the service on the day before the SOF due date at the latest.

ISCS customers are not to promote their number(s) before the customer due date.

5.5.5 Service order control

As the interface with the ISCS customer, the terminating ROA should have overall control responsibilities to assure satisfactory completion of the service order and initiation of service.

5.5.6 Service abuse

The originating ROA will notify the terminating ROA of any unusual or abusive use of international shared cost calling. The terminating ROA should attempt to correct the situation as quickly as possible.

Examples of service abuse could be:

- the generation of significant ISCS call volumes which the ISCS customer has no intention of answering; or
- an unscrupulous person using ISCS to access an ISCS customer's PABX for the purpose of making outgoing calls at the ISCS customer's expense.

In extreme cases, the originating ROA may terminate service to an ISCS customer who has shown an inability or lack of desire to control their international shared cost service.

The originating ROA will consult with the terminating ROA prior to taking any action.

5.6 Operational aspects

5.6.1 Operations centres

Terminating and originating ROAs should each specify an operations centre which will be responsible for pre-service testing, trouble investigation and clearance, and service performance tracking.

5.6.2 Pre-service testing

Each new international shared cost number will be tested using the ISCS customer number prior to the customer due date. On the customer due date, a final call will be made from the originating country to verify a caller's ability to call the ISCS customer.

5.6.3 Service faults

Investigation and clearance of service faults shall be done in accordance with the relevant M-Series Recommendations.

5.7 Data collection

5.7.1 Collection of originating country performance data

Statistical data from originating international shared cost exchange(s) will be used to provide traffic statistics for outgoing ISCS calls.

Available data will be specified by bilateral agreement.

5.7.2 Exchange of customer performance data

There will be no charge for the exchange of such information between terminating and originating ROAs. If the reports are supplied to the ISCS customer, the terminating ROA will decide the charge and will not reimburse the originating ROA.

6 Customer's service features

In principle, the basic ISCS is operated as described in clause 5. As a service provider option, ISCS customers may be offered additional service features, as described below.

6.1 Announcement for caller

Announcements for ISCS callers may be network-generated at call origin by the originating ROA (for example, to inform the caller that the call will only be charged at a national rate, an announcement may be given to the caller after dialling a shared cost number), or they may be part of the ISCS customer call handling provided in the destination country by the terminating ROA.

6.2 Geographical zone call routing

In general, a call placed to an international shared cost number from anywhere within a country or service area will route to the specified destination for the ISCS customer. However, a customer may be able to request that the origination of ISCS calls be limited to a restricted geographic area within the country or service area.

This feature may be provided at the option of the originating ROA.

6.3 Variable call routing

A variety of variable call routing applications can be provided in response to specific ISCS customer requirements. It should be noted that certain applications could result in an ISCS call originating and terminating in the same country. The routing of such calls is a national matter.

6.3.1 Point of origin call routing

This feature permits an ISCS customer to specify different ISCS call destinations depending on where the ISCS call originated. These points of origin can be differentiated by national boundaries or sub-divisions within a country, such as linguistic areas, economic or political districts, etc. Independent of the point of origin, the ISCS caller would dial the same international shared cost number.

This feature may be provided at the option of the originating ROA or, if information as to the origin of call is available, by the terminating ROA.

6.3.2 Time-dependent call routing

This feature enables ISCS customers to route their traffic to alternative destinations or to an announcement at specified times of the day or days of the week. The destinations may vary depending on:

- time (hour - minute);
- day of the week (Su - Mo - Tu - We - Th - Fr - Sa).

This feature may be provided at the option of the terminating ROA.

6.3.3 Date-dependent call routing

ISCS customers may require temporary changes in their normal routing or interruptions in their normal service to take account of public holidays, business vacations, seasonal requirements, etc. Date-dependent call routing provides a specified handling that is different from that which would normally be scheduled for the specific date.

The deactivation, reactivation or destinations may vary depending on:

- date (day - month - year).

This feature may be provided at the option of the terminating ROA.

6.3.4 Variable (follow-me) call routing

ISCS customers may also require temporary changes in their specified call routing for special events or campaigns. The traffic will be routed to these alternative destinations when requested by the ISCS customer. The follow-me feature is intended for non-periodic routing changes.

The ISCS customer may either activate the follow-me number by contacting the terminating ROA's customer service centre who will enter the request into the system on behalf of the ISCS customer, or the ISCS customer may interact with the system directly. In both cases, the traffic will then be routed to the alternative destination instead of the normal destination. It should be possible to also schedule the request for activation of the follow-me number in advance.

This feature may be provided at the option of the terminating ROA.

6.3.5 Call completion on busy (traffic-dependent) call routing

The purpose of this feature is to complete calls which encounter a busy. Three sub-features which may be provided at the option of the terminating ROA are possible.

6.3.5.1 Diversion of calls to alternative destinations

This sub-feature provides the capability to have calls that encounter busy to be routed to an alternative destination specified by the ISCS customer. A series of alternative destinations may be specified. If none of these alternative destinations are available, the call will be given a busy indication, or the queuing sub-feature may be applied.

6.3.5.2 Queuing of calls

This sub-feature provides the capability to have call attempts that encounter busy on all available destinations, to be held in a queue until an ISCS customer line becomes available. If a line becomes available, the call will be taken out of the queue on the FIFO principle (first in-first out) and routed to the ISCS customer.

6.3.5.3 Recorded announcements

This sub-feature provides the capability to route a call that cannot be completed to a recorded announcement. Depending on the reason for an unsuccessful call, different announcements can be provided.

If the call is prevented by network congestion, the ISCS caller should receive usual network tones and announcements.

If the call is prevented by congestion at the ISCS destination access, the announcements provided should be according to the optional arrangements subscribed to by the ISCS customer.

6.4 Additional customer service statistics

This feature provides the capability to give more information about the usage and performance of the ISCS customer's service.

This feature may be provided at the option of the terminating ROA. The provision of some of the types of information listed may require the cooperation of the originating ROA.

6.4.1 Real-time information

The following call-specific information could be given to the ISCS customer during the call, e.g. on a terminal. For example:

- shared cost indicator showing if the incoming call is a shared cost call;
- telephone number of the caller, if available;
- origin of the call;
- charging information related to the call.

Other information could be given to the ISCS customer via a terminal, such as:

- usage of the customer lines;
- number of calls in the queue;
- accounting (billing) information of the last accounting period;

- number of seizures/call attempts in a specified period;
- number of successful calls for a specified period.

6.4.2 Data analysis

Traffic data may be processed by the terminating ROA and given to the customer on a periodic (e.g. monthly) basis.

- a) For ISCS calls:
 - date and time of call;
 - number of the caller, if available;
 - origin of the call;
 - call answer time of the customer;
 - duration of the call.
- b) Call attempt profile:
 - counts of call attempts for a specific period (e.g. 5-minute, 15-minute, or 60-minute periods) can be listed according to their origin.

6.5 Directory assistance/listing services

Directory assistance listing of the international shared cost number in the country of call origin may be provided at the option of the originating ROA for the ISCS customer.

Directory listing of the international shared cost number in the country of call origin may also be obtained at the option of the originating ROA for the ISCS customer.

7 Operational provisions

7.1 Service operational requirements

7.1.1 The terminating ROA should:

- a) apply the provisions of the relevant D-Series Recommendation as regards the tariff and accounting principles applicable to the ISCS;
- b) collect call data for ICSC customer billing and international accounting purposes;
- c) take appropriate action to prevent fraud;
- d) carry out traffic observations as may be appropriate;
- e) identify an incoming routing number for special handling, as follows:
 - verify the validity of the received number;
 - translate the received number into the domestic number of the ISCS customer;
 - route the call to the proper destination.

7.1.2 The originating ROA should:

- a) ensure the correct charging of the call for the caller;
- b) take appropriate action to prevent fraud;
- c) monitor the network and take action to prevent congestion resulting from an excessive number of calls in a short period of time;
- d) carry out traffic observations as may be appropriate;
- e) allow ISCS calls to be placed from any public or private telephone terminal;
- f) screen ISCS calls for validity;
- g) translate the dialled ISCS number into the number format as specified by the terminating ROA. This will normally be in the form of a special routing number which will be used by the terminating ROA to identify the called ISCS customer as well as the origin of the call. This routing number should be kept confidential. The structure of the routing number will be bilaterally agreed;

NOTE – When the terminating ROA does not have the necessary capabilities for terminating ISCS call processing and/or the necessary billing capabilities, the translation may be to a regular PSTN number, and the call will be routed as an IDD call. In this case, the originating ROA must provide the capabilities which cannot be provided by the terminating ROA.

- h) route the ISCS call after translation of the dialled ISCS number to an appropriate international exchange. However, in the case of UISCNs, the call may instead be routed to a national exchange when the caller and the ISCS customer are in the same country.

7.2 Network management

Advanced network management facilities may be required as ISCS grows, to ensure that congestion resulting from heavy calling to one number does not adversely affect the international shared cost service or other services. (See the E.410-Series Recommendations.)

7.3 Quality of service

In addition to the provisions in this Recommendation, the quality of service for ISCS should be comparable to that of the international telephone service, as specified in Recommendation E.105.

Annex A

Access Method No. 1

ISCS – National Shared Cost Number Request Form

Notes on preparation of national shared cost number reservation request form

The form, which is detailed below, will be used as the national shared cost number request form by terminating and originating ROAs.

PART A: Filled out by the applicant (Terminating ROA)

- a) Identity of the terminating ROA requesting the service.
- b) Identity of the originating ROA to whom request is being made.
- c) Coordination number: A reference number to identify the request.
- d) Date transmitted.
- e) Request Type:
 - New: A new service involving a new national shared cost number is established.
 - Change: An existing service requires modification (i.e. change from one number to another or change of service provider but retaining the same number).
 - Cancel: The service does not exist yet, and the customer decides not to use this number, the number automatically goes into the pool of available numbers for immediate assignment.
- f) Change: Indicate the type of change.
- g) Indicate either:
 - 1) customer requests one of the numbers listed below (in order of preference); or
 - 2) customer requests any available number with no specific preference.
- h) Customer name: Name of ISCS customer.
- i) Expected due date: Service will be expected to officially commence on this date.

PART B: Filled out by the recipient (Originating ROA)

- a) Date transmitted.
- b) National Shared Cost number: The number reserved for the terminating ROA.
- c) Number denied: Numbers requested by the terminating ROA but not made available.
- d) Remarks: Enter any information pertinent to this reservation.

National Shared Cost Number Request Form

PART A: (filled out by the Applicant)

Coordination No.

Date:
Day Month Year

(Applicant – Terminating ROA)

(Recipient – Originating ROA)

Company name
Contact name
Address
Telephone number
Fax number

Request type New Change Cancel
(Mark with an X)

Reason for change _____

National Shared Cost number requests in order of priority:

- | | |
|----------|-----------|
| 1) _____ | 6) _____ |
| 2) _____ | 7) _____ |
| 3) _____ | 8) _____ |
| 4) _____ | 9) _____ |
| 5) _____ | 10) _____ |

Customer name: _____

Expected customer due date: _____

PART B: (filled out by the Recipient)

Date:
Day Month Year

The following National Shared Cost number _____
is reserved for 60 days.

The National Shared Cost number below was denied reservation, with reason:

- | | |
|----------|-----------|
| 1) _____ | 6) _____ |
| 2) _____ | 7) _____ |
| 3) _____ | 8) _____ |
| 4) _____ | 9) _____ |
| 5) _____ | 10) _____ |

Remarks: _____

ISCS – National Shared Cost Number Access

Service Order Form

The form, which is detailed below, will be used as the SOF by terminating and originating ROAs. (Terminating and originating ROAs may bilaterally agree to specify mandatory components of the SOF, such as "SOF type", and so on.)

- a) Identity of the terminating ROA requesting the service.
- b) Identity of the originating ROA to whom request is being made.
- c) Coordination number: A reference number to identify the order. Should be the same as used for any prior national shared cost number request.
- d) Supplement number: Indicates a supplement to an existing pending SOF:
 - Indicate sequentially, e.g. 001, 002, etc. The coordination number should be the same as that of the original SOF.
- e) SOF type:
 - New: A new service involving a new shared cost number is established.
 - Change: An existing service requires modification.
 - Disconnect: An existing service is completely disconnected.
 - Suspend: the originating ROA will disconnect service, but will hold the shared cost number for 60 days.
- f) Supplement type:
 - Modify: To be used when information on the original SOF needs to be changed. The "Remarks" section should be used to indicate the exact information being modified.
 - Due date change: To be used when the customer of the terminating ROA cannot accept service on the original due date. It is important that the originating ROA does not activate the service when it cannot yet be used, or if it becomes necessary to change the due date.
 - Cancel SOF: This should be received prior to the due date and will cancel the SOF and all supplements pending. The cancel SOF should contain all the information on the original SOF.
- g) National Shared Cost number: This should be filled in when a shared cost number has been pre-assigned. If a customer will accept the next available shared cost number, this area should be left blank.
- h) Routing number: the terminating ROA's number for routing of incoming ISCS calls.
- i) Customer information:
 - Name;
 - Address;
 - Access capabilities: Indicate quantity of terminating lines (Used for network management purposes – see 5.5.2).
- j) Customer due date: Typically up to ten working days may be required by the originating ROA for service initiation. Service will be considered to officially commence at the time and date that the terminating ROA has specified in the SOF and confirmed by the originating ROA.

Activation time: This should only be used where coordination of work is required to maintain an uninterrupted service to the customer (e.g. when a customer changes service provider). Time will be Universal Coordinated Time.

Note that service activation should take place three working days prior to the due date.
- k) Directory assistance: Indicate "yes" if the customer is to be included in the directory assistance system of the originating ROA, if available.

- l) Directory listing: If the originating ROA offers inclusions in the telephone directories for foreign ISCS customers, the desired listing should be indicated by the terminating ROA in accordance with the originating ROA's format requirements, as typically shown below:

Format:

- use digits for number designations;
 - use an ampersand (&) rather than "and";
 - do not use punctuation;
 - up to 50 alphanumeric characters.
- m) Additional directory listings: If the originating ROA offers additional listings in alphabetical and/or classified directories, the terminating ROA should indicate whether its customer is interested in arranging for any additional listings.
- n) Request sent: Date transmitted.
- o) Request received: Originating ROA use only.
- p) Confirmed due date: Originating ROA use only.
- q) Confirmation sent: Originating ROA use only.
- r) Final test: Date final test completed.
- s) Activation confirmed: Date service activated.
- t) Remarks: Enter any information pertinent to this order, e.g. notify immediately of assigned shared cost number.
- u) Contact person: Name and contact number(s) of the terminating ROA's coordinator.

ISCS – National Shared Cost Number Access

Service Order Form

a) Terminating ROA Name: _____ _____ Location: _____ _____ _____	b) Originating ROA Name: _____ _____ Location: _____ _____ _____	c) Coordination number: CC- _____ <hr/> d) Supplement number: SN- _____
--	--	--

e) SOF type (Mark with an X)	New	Change	Disconnect	Suspend
f) Supplement type (Mark with an X)	Modify	Due date change	Cancel SOF	

g) National Shared Cost number: + _____ h) Routing number: _____ i) Customer name: _____ Address: _____ _____ Access capabilities: _____
--

j) Customer due date: _____ Day/Month/Year _____ Activation time	k) Directory assistance: YES/NO Listing: _____ _____ _____	l) Directory listing: YES/NO _____ _____ _____	m) Additional listing(s): YES/NO _____ _____ _____
n) Request sent: _____ Day/Month/Year	o) Request received: _____ Day/Month/Year	p) Confirmed due date: _____ Day/Month/Year	q) Confirmation sent: _____ Day/Month/Year
r) Final test: _____ Day/Month/Year	s) Activation confirmed: _____ Day/Month/Year		

t) Remarks: _____

u) Contact person: _____
Telephone: _____ **Telefax:** _____

Annex B

Access Method No. 2

ISCS – Foreign Domestic Shared Cost Number Access

Service Order Form

The form, which is detailed below, will be used as the SOF by terminating and originating ROAs. (Terminating and originating ROAs may bilaterally agree to specify mandatory components of the SOF, such as "SOF type", and so on.)

- a) Identity of the terminating ROA requesting the service.
- b) Identity of the originating ROA to whom request is being made.
- c) Coordination number: A reference number to identify the order.
- d) Supplement Number: Indicates a supplement to an existing pending SOF:
 - Indicate sequentially, e.g. 001, 002, etc. The coordination number should be the same as that of the original SOF.
- e) SOF type:
 - New: A new service involving a new shared cost number and/or new country is established.
 - Change: An existing service requires modification.
 - Disconnect: An existing service is completely disconnected.
 - Suspend: the originating ROA will disconnect service.
- f) Supplement type:
 - Modify: To be used when information on the original SOF needs to be changed. The "Remarks" section should be used to indicate the exact information being modified.
 - Due date change: To be used when the customer of the terminating ROA cannot accept service on the original due date. It is important that the originating ROA does not activate the service when it cannot yet be used, or if it becomes necessary to change the due date.
 - Cancel SOF: This should be received prior to the due date and will cancel the SOF and all supplements pending. The cancel SOF should contain all the information on the original SOF.
- g) Dialed Shared Cost number: This should be filled in with the country code and domestic shared cost number to be dialed.
- h) Routing number: The terminating ROA's number for routing of incoming ISCS calls.
- i) Customer information:
 - Name;
 - Address;
 - Access capabilities: Indicate quantity of terminating lines (Used for network management purposes – see 5.5.2).
- j) Customer due date: Typically up to ten working days may be required by the originating ROA for service initiation. Service will be considered to officially commence at the time and date that the terminating ROA has specified in the SOF and has been confirmed by the originating ROA.

Activation time: This should only be used where coordination of work is required to maintain an uninterrupted service to the customer (e.g. when a customer changes service provider). Time will be Universal Coordinated Time.

Note that service activation should take place three working days prior to the due date.
- k) Directory assistance: Indicate "yes" if the customer is to be included in the directory assistance system of the originating ROA, if available.

- l) Directory listing: If the originating ROA offers inclusions in the telephone directories for foreign ISCS customers, the desired listing should be indicated by the terminating ROA in accordance with the originating ROA's format requirements, as typically shown below:

Format:

- use digits for number designations;
 - use an ampersand (&) rather than "and";
 - do not use punctuation;
 - up to 50 alphanumeric characters.
- m) Additional directory listings: If the originating ROA offers additional listings in alphabetical and/or classified directories, the terminating ROA should indicate whether its customer is interested in arranging for any additional listings.
- n) Request sent: Date transmitted.
- o) Request received: Originating ROA use only.
- p) Confirmed due date: Originating ROA use only.
- q) Confirmation sent: Originating ROA use only.
- r) Final test: Date final test completed.
- s) Activation confirmed: Date service activated.
- t) Remarks: Enter any information pertinent to this order.
- u) Contact Person: Name and contact number(s) of the terminating ROA's coordinator.

ISCS – Foreign Domestic Shared Cost Number Access

Service Order Form

a) Terminating ROA Name: _____ _____ Location: _____ _____ _____	b) Originating ROA Name: _____ _____ Location: _____ _____ _____	c) Coordination number: CC- _____ <hr/> d) Supplement number: SN- _____
--	--	--

e) SOF type (Mark with an X)	New	Change	Disconnect	Suspend
f) Supplement type (Mark with an X)	Modify	Due date change	Cancel SOF	

g) Dialed Shared Cost number: + _____ h) Routing number: _____ i) Customer name: _____ Address: _____ _____ Access capabilities: _____
--

j) Customer due date: _____ Day/Month/Year _____ Activation time	k) Directory assistance: YES/NO Listing: _____ _____ _____	l) Directory listing: YES/NO	m) Additional listing(s): YES/NO
n) Request sent: _____ Day/Month/Year	o) Request received: _____ Day/Month/Year	p) Confirmed due date: _____ Day/Month/Year	q) Confirmation sent: _____ Day/Month/Year
r) Final test: _____ Day/Month/Year	s) Activation confirmed: _____ Day/Month/Year		

t) Remarks: _____

u) Contact person: _____
Telephone: _____ **Telefax:** _____

Annex C

Access Method No. 3

ISCS – Universal International Shared Cost Number Access

Service Order Form

The form, which is detailed below, will be used as the SOF by terminating and originating ROAs. (Terminating and originating ROAs may bilaterally agree to specify mandatory components of the SOF, such as "SOF type", and so on.)

- a) Identity of the terminating ROA requesting the service.
- b) Identity of the originating ROA to whom request is being made.
- c) Coordination number: A reference number to identify the order.
- d) Supplement number: Indicates a supplement to an existing pending SOF:
 - Indicate sequentially, e.g. 001, 002, etc. The coordination number should be the same as that of the original SOF.
- e) SOF type:
 - New: A new service involving a new shared cost number with the originating ROA is established.
 - Change: An existing service requires modification.
 - Disconnect: An existing service is completely disconnected.
 - Suspend: The originating ROA will disable service for a specified period of time.
- f) Supplement type:
 - Modify: To be used when information on the original SOF needs to be changed. The "Remarks" section should be used to indicate the exact information being modified.
 - Due date change: To be used when the customer of the terminating ROA cannot accept service on the original due date. It is important that the originating ROA does not activate the service when it cannot yet be used, or if it becomes necessary to change the due date.
 - Cancel SOF: This should be received prior to the due date and will cancel the SOF and all supplements pending. The cancel SOF should contain all the information on the original SOF.
- g) Universal International Shared Cost number: This should be filled in with the UISCN which has been reserved or assigned by the UISCN Registrar. For a new service, a copy of the completed UISCN Request Form received from the UISCN Registrar should be attached to the Service Order Form. For expansion of an existing service to include a new country, a copy of the UISCN Status Notification Form, received from the UISCN Registrar, should be attached to the Service Order Form.
- h) Routing number: The terminating ROA's number for routing of incoming ISCS calls.
- i) Customer information:
 - Name;
 - Address;
 - Access capabilities: Indicate quantity of terminating lines (Used for network management purposes – see 5.5.2).
- j) Customer due date: Typically up to ten working days may be required by the originating ROA for service initiation. Service will be considered to officially commence at the time and date that the terminating ROA has specified in the SOF.

Activation time: This should only be used where coordination of work is required to maintain an uninterrupted service to the customer (e.g. when a customer changes service provider). Time will be Universal Coordinated Time.

Note that service activation should take place three working days prior to the due date.

- k) Directory assistance: Indicate "yes" if the customer is to be included in the directory assistance system of the originating ROA, if available.
- l) Directory listing: If the originating ROA offers inclusions in the telephone directories for foreign ISCS customers, the desired listing should be indicated by the terminating ROA in accordance with the originating ROA's format requirements, as typically shown below:
Format:
 - use digits for number designations;
 - use an ampersand (&) rather than "and";
 - do not use punctuation;
 - up to 50 alphanumeric characters.
- m) Additional directory listings: If the originating ROA offers additional listings in alphabetical and/or classified directories, the terminating ROA should indicate whether its customer is interested in arranging for any additional listings.
- n) Request sent: Date transmitted.
- o) Request received: Originating ROA use only.
- p) Confirmed due date: Originating ROA use only.
- q) Confirmation sent: Originating ROA use only.
- r) Final test: Date final test completed.
- s) Activation confirmed: Date service activated.
- t) Remarks: Enter any information pertinent to this order.
- u) Contact person: Name and contact number(s) of terminating ROA's coordinator.

ISCS – Universal International Shared Cost Number Access

Service Order Form

a) Terminating ROA Name: _____ _____ Location: _____ _____ _____	b) Originating ROA Name: _____ _____ Location: _____ _____ _____	c) Coordination number: CC- _____ d) Supplement number: SN- _____
--	--	--

e) SOF type (Mark with an X)	New	Change	Disconnect	Suspend
f) Supplement type (Mark with an X)	Modify	Due date change	Cancel SOF	

g) Universal Shared Cost number: + _____ h) Routing number: _____ i) Customer name: _____ Address: _____ _____ Access capabilities: _____

j) Customer due date: _____ Day/Month/Year _____ Activation time	k) Directory assistance: YES/NO Listing: _____ _____ _____	l) Directory listing: YES/NO _____ _____ _____	m) Additional listing(s): YES/NO _____ _____ _____
n) Request sent: _____ Day/Month/Year	o) Request received: _____ Day/Month/Year	p) Confirmed due date: _____ Day/Month/Year	q) Confirmation sent: _____ Day/Month/Year
r) Final test: _____ Day/Month/Year	s) Activation confirmed: _____ Day/Month/Year		

t) Remarks: _____

u) Contact person: _____
Telephone: _____ **Telefax:** _____

ITU-T RECOMMENDATIONS SERIES

Series A	Organization of the work of the ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communication
Series Y	Global information infrastructure
Series Z	Programming languages