

# METHODOLOGICAL NOTE ON UNIVERSAL SERVICE OBLIGATIONS

*Note by the ITU Secretariat, 9<sup>th</sup> October 1998*

## **Background**

In the Chairman's Working Document Rev. 2 (25<sup>th</sup> August 1998) submitted to the second plenary meeting of the Focus Group, the Chairman proposed some elements of an approach to the issue of Universal Service Obligations (USOs). He indicated that further exchange of views was necessary, and he solicited contributions from Focus Group members so that a revised approach could be elaborated in the next revision of the Chairman's Working Document.

This methodological notes explores the issue of USOs in more detail, taking into account discussions at the plenary meeting and subsequent contributions to the email reflector group. The note reviews the question of whether USOs can be viewed in an international as well as a national context, and illustrates that the terms Universal Service and Universal Access have different acquired meanings in different countries. It goes on to examine two possible approaches to applying USOs to international telecommunications, first through means of a transparent "tax" on incoming calls, and second through the use of asymmetric arrangements. The analysis builds upon an earlier methodological note, issued by the Secretariat on 29th September 1998, on the use of asymmetric arrangements.

## **Universal service and universal access: An historical context**

The term "Universal Service", as applied to telecommunications, is usually attributed to Theodore Vail who in 1907, as President of AT&T, coined the slogan "*One system, one policy, universal service*". It was used at the time to justify AT&T's monopoly. However, the term has acquired a different meaning over time. A thumbnail definition of Universal Service states that it requires telephone service in a particular country to be "*available, accessible and affordable*", though each of these terms requires further elaboration.

A convenient way of measuring universal service is in terms of household penetration of telephones. Countries which have achieved a minimum of 90 per cent penetration of households, backed-up by the plentiful availability of functioning payphones in public places, may be said to have achieved Universal Service. Figure 1 (left chart) summarises those countries which have succeeded in achieving this target. Universal Service can also be measured in terms of elimination of waiting lists for telephone service. Figure 1 (right chart) shows that of the 1.5 billion or so households worldwide, around one-third (500 million) already have residential telephone service, and a further 40 million or so are registered on waiting lists. However, if telephone service were universally available and efficiently priced, a further 250 million households worldwide could probably afford residential service, providing the minimum cost of ownership does not exceed US\$ 125 per year.

The term, "Universal Service *Obligation*" (USO) is of more recent origin. It is applied to the burden, usually carried by an incumbent operator, of providing service to all citizens of a country in a non-discriminatory manner, irrespective of the fact that some customers, by virtue of their wealth, usage characteristics or location, might be easier and more profitable to serve than others. The USO might be defined as the cost of serving those customers whose monthly bills do not cover the cost of providing service. It may also involve making provisions so that service is available to users with a disability.

Within the context of the ITU, Universal Service has been treated as a national issue. Each Member State has the right to define Universal Service, and the manner of its funding, in the way it sees fit. Thus, there is no specific reference to Universal Service in any of the basic instruments of the Union, such as the Constitution and Convention or the International Telecommunication Regulations. However, there is a related concept, which might be termed "*Universal Access*". This is expressed in the purposes of the Union stated in Article 1 of the Constitution, notably Article 1 d:

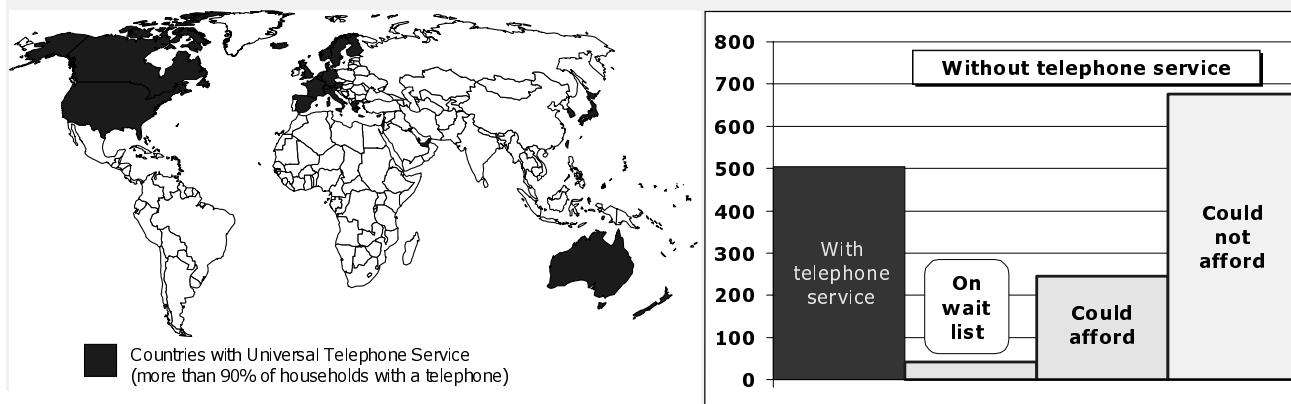
*"to promote the extension of the benefits of the new telecommunication technologies to all the world's inhabitants"*

The clearest expression of this is in the "Maitland Report", published in 1984, which drew attention to the telecommunications development gap between developed countries and developing ones. While the

disparities in access to basic telecommunication services have narrowed over time, disparities in access to advanced telecommunication services are arguably as wide as ever.

### Figure 1: Two views of universal service

Map showing countries which have achieved at least 90 per cent penetration of households with a telephone, and graph showing breakdown of households worldwide in terms of telephone ownership and potential affordability



Source: ITU, adapted from data in "World Telecommunication Development Report, 1998: Universal Access".

Even if telephone service were universally available and efficiently priced, almost 700 million households worldwide could still not be expected to afford service in the foreseeable future. The term *Universal Access* might be defined as ensuring that telephone service is within reasonable reach of everyone. The issue of how "reasonable reach" might be defined varies according to each country's own definition. For instance, in Ghana it is defined as a telephone within each settlement of more than 500 people while in Burkina Faso and South Africa, universal access is defined as a telephone within 20 kilometres or 30 minutes travelling time, respectively.

Analysis carried out as part of the research for the ITU's 1998 World Telecommunication Development Report, which this year was on the theme of Universal Access<sup>1</sup>, shows that there are almost as many definitions of Universal Service/Universal Access as there are regulatory agencies in the world. This is partly because there is such wide variation in household telephone penetration, as shown in Figure 2. Variations in household telephone penetration are closely tied to variations in personal wealth, as measured by an individual's purchasing power. Countries towards the bottom left of the chart may well define Universal Access in terms of distance from a telephone; countries towards the top right of the chart are more likely to think in terms of Universal Service as being affordability of basic service and availability of advanced services, such as Internet, in schools and libraries.

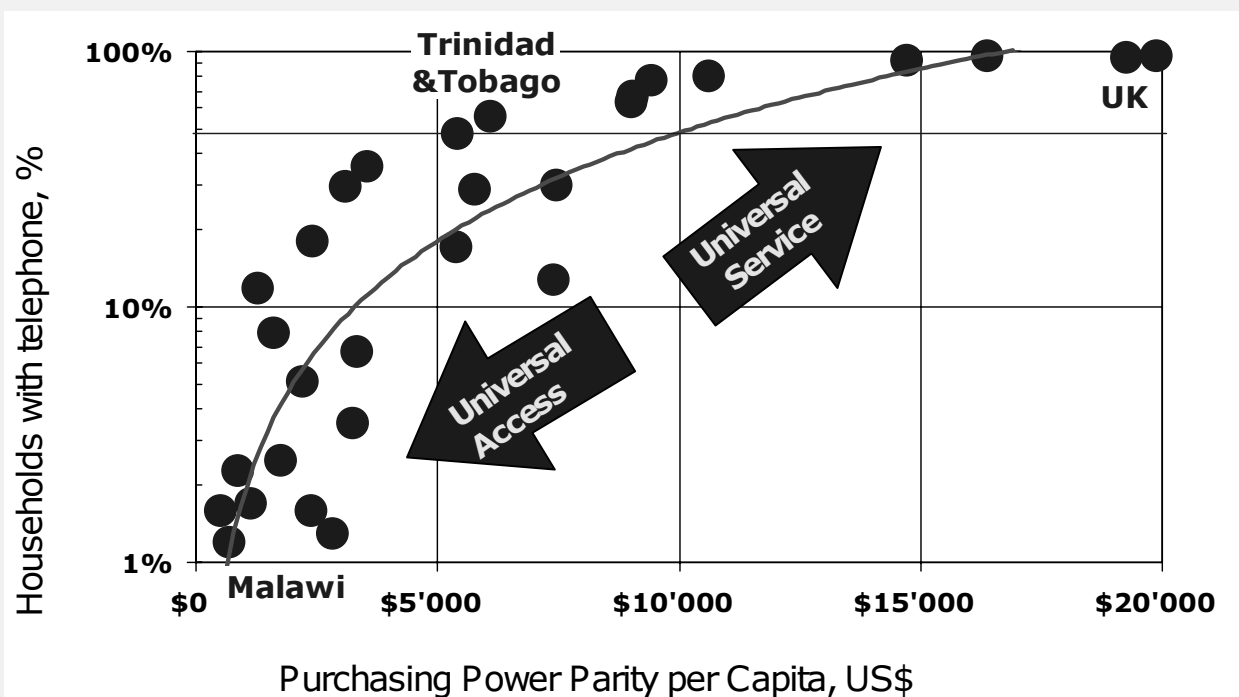
The United States provides an example of how the definition of Universal Service is changing over time. The United States has a long history of funding Universal Service through contributions to a Universal Service Fund. The contributions to the fund come from all operators present in the domestic market. This process is currently under review. The objectives of the future policy are defined as being: "to promote the availability of quality services at just, reasonable, and affordable rates; increase access to advanced telecommunications services throughout the Nation; advance the availability of such services to all consumers, including those in low income, rural, insular, and high cost areas at rates that are reasonably comparable to those charged in urban areas".<sup>2</sup> With its emphasis on advanced telecommunication services, this goes well beyond most other definitions of what is intended by Universal Service. Table 1 illustrates how the definition of Universal Service/Access, and the policies adopted for meeting it, vary according to the stage of network development.

<sup>1</sup> For a summary of the report, see the ITU website at: <http://www.itu.int/ti/publications/#wtldr98>.

<sup>2</sup> For a fuller description of the Universal Service NPRM, see the FCC's website at: [http://www.fcc.gov/ccb/universal\\_service/welcome.html](http://www.fcc.gov/ccb/universal_service/welcome.html)

**Figure 2: Transition between Universal Access and Universal Service**

Household telephone penetration as a function of Purchasing Power parity per capita, 1996, selected economies



Source: ITU.

**Table 1: Five stages of universal access/service**

	<i>Stage 1: network establishment</i>	<i>Stage 2: wide geographic reach</i>	<i>Stage 3: mass market take-up</i>	<i>Stage 4: network completion</i>	<i>Stage 5: service to individuals</i>
Business <u>take-up</u>	0 - 30%	20 - 80%	70 - 100%	100%	100%
Household <u>take-up</u>	0 - 10%	5 - 30%	20 - 85%	75% - 100%	100%
Universal service goal type	Technological (acquire new technology)	Geographic (maintain regional parity)	Economic (stimulate economy)	Social (achieve political cohesion)	Libertarian (individual right to communicate)
Examples of universal service goals	Long-distance service linking all major centres; public telephones where demand warrants	Telephone service available in all population centres; widespread adoption of telephony in business	Widespread residential take-up of telephony; meet all reasonable demands for telecoms	Telephone affordable to all; telephone service adaptable to special needs (e.g. of disabled people)	Everyone can meet basic communication needs; public access to advanced services (esp education, health)
Typical universal service policy measures	Licence conditions on network roll-out	Profitable licences subject to unprofitable obligations	Control speed of price rebalancing	Targeted subsidies	Identify and meet non-market demand

Source: Milne, C. ("Universal Service for Users: Recent Research Results—An International Perspective").

### Who is subsidising who?

As noted above, Universal Service has hitherto been defined as primarily a national issue, in which carriers who are present in a country contribute to the provision of service to disadvantaged customers within that country. However, there is a sense in which carriers in foreign countries also contribute, unwittingly, to

meeting Universal Service objectives. That is because, in low teledensity economies, international service has traditionally been used to cross-subsidise local networks. This has worked in two ways:

- By establishing collection charges for international service which are substantially higher than domestic call charges, even though the underlying cost difference between domestic and international service may be small. On the Internet, for instance, there is no price difference between browsing a website in a foreign country or one which is local. On the Public Switched Telephone Network, however, an international call is priced at a premium of between three and ten times a domestic long-distance call.
- By establishing settlement rates which are above the actual cost of terminating international calls, and ensuring that the volume of outgoing calls never exceeds the volume of incoming calls. The resulting net settlement payments can then be used to cross-subsidise domestic network development.

Generally speaking, these types of cross-subsidies between the international and the domestic network are not disclosed and are not open to measurement. This creates some difficulties when a market is liberalised, or an incumbent operator is exposed to competition. The new market entrants will selectively choose those services where the mark-up of price over costs is greatest and will “cherry-pick” those areas, for instance by offering international call-origination but not call-termination service. Even where a market has not been formally opened to competition, there may be a degree of price competition, for instance from call-back operators or resellers. No provider of international telecommunication service can regard itself as immune to this type of competition, even where call-back is prohibited.

The incumbent operator may argue that the playing field is not level in that it is obliged to provide service to low-usage, uneconomic customers, or to extend the provision of public payphones in rural areas, whereas its competitors have no such obligations placed on them. Nevertheless, the pressure remains on incumbent operators, either to rebalance their tariffs towards costs, or to risk incurring increased loss of market share in those areas where prices are highest relative to cost, and where they are most vulnerable to competition. In an increasingly competitive telecommunications market, it is becoming more difficult to sustain non-transparent cross-subsidies between different types of service.

However, it should be pointed out that, if the international accounting rate system were ever intended to provide a mechanism for transferring funds from high teledensity countries to low teledensity ones, then it is a singularly inefficient mechanism for doing so. Indeed, high cost countries, which usually have a low teledensity, are cross-subsidising low cost countries in that the accounting rate system, as it currently works, is based on revenue-sharing rather than underlying costs. Thus, because the accounting rate is invariably split 50/50, the high cost country (which has a lower mark-up over its real cost base) gains less from the transaction than the lower cost country (which has a higher mark-up). Thus a settlements system which is actually cost-oriented should be more effective in transferring funds between countries to meet differing needs, because the underlying cost differences would be reflected in asymmetric rates for call termination.

### **Transparent, non-discriminatory and competitively-neutral**

One possible response to the problem of tariff rebalancing, that is moving away from a pricing system in which international services cross-subsidise domestic network development, is to make the subsidy transparent; that is visible and measurable. A transparent subsidy can also be more directly targeted to those it is intended to help. This is the approach adopted, for instance, in the WTO Regulatory Reference Paper, which is reflected also in WTPF98 Opinion A. This states that:

*“Any Member has the right to define the kind of universal service obligation it wishes to maintain. Such obligations will not be regarded as anti-competitive per se, provided they are administered in a transparent, non-discriminatory and competitively neutral manner and are not more burdensome than necessary for the kind of universal service defined by the Member.”*

This form of words was also taken up in the second draft of the Chairman’s Working Document. But what do the words “transparent, non-discriminatory and competitively-neutral” actually mean?

- **Transparent** is probably the easiest to define. It means that the rules and regulations that apply to a particular measure should be published and made available to all interested parties. Thus, an incumbent operator might be obliged to publish separate accounts for different parts of its operations, and to show the actual level of cross-subsidy which occurs between a loss-making part and a profitable part.

Unfortunately, this becomes a very politicised process in that the operator may be tempted to load costs onto those parts of its business in which it enjoys a monopoly in order to price more aggressively those services where it faces competition. Also, the operator may argue that disclosure of detailed accounting data makes it more vulnerable to competition and that such data is proprietary and confidential. In Europe, as part of the work initiated by the European Commission on Universal Service Obligations<sup>3</sup>, independent analyses of the cost of the Universal Service Obligation were carried out for EU Member States by the consultancies Analysys Ltd and WIK. The studies show that the cost of meeting USO in these countries is, at most, only a couple of percent of total telecommunication revenues.

- Application of USOs in a **non-discriminatory** manner implies that the same rules should be applied to all operators, domestic or foreign. It could imply, for instance, that the costs of meeting USOs should be shared in an equitable manner by all operators with a national presence, or a significant share of the national market. In the United Kingdom, for instance, the regulator OFTEL defined a set of Access Deficit Contributions (ADCs) payable by new market entrants, once they had reached a certain threshold of market share, to the incumbent, BT, during the period when it was rebalancing its tariffs. The ADCs were meant to cover the fact that BT's monthly subscription charge did not fully recuperate the costs of providing residential service. An alternative approach, which is being used in Colombia<sup>4</sup>, imposes a "tax", equivalent to 5 per cent of revenue, which is payable by all market entrants. The tax is paid to Telecom, the incumbent operator, which bears the USO. It has been suggested that this tax of 5 per cent could also be applied, over and above costs, to operators wishing to send international telephone calls for termination in Colombia. However, this departs from the standard international practice followed in most countries whereby only those operators which are present in the domestic market are taxed by the government of that country.
- **Competitively-neutral** implies that no potential service provider should be unfairly prevented from entering the market, and that no existing service providers should be unduly advantaged or disadvantaged as a result of the application of USOs. For instance, in Australia, the regulator has invited the incumbent operator, Telstra, to declare any geographical areas where the provision of service is uneconomic, and the regulator will then open them up to a bidding process in which the company requesting the lowest subsidy would inherit the customers and the local network. Thus far, Telstra has not taken up the invitation. An alternative approach, as practised in South Africa, is to set up an independent Universal Services Agency, which all market players can contribute to, or seek funds from. This is similar in nature to the Universal Service Funds which have been used for many years in the domestic networks of the United States, to provide, for instance, "lifeline" service to low-income families, and services to rural areas, schools, libraries, and healthcare institutions. The value of the Universal Service Fund amounted to some US\$4.9 billion in 1997.

Virtually all examples of transparent Universal Service funding mechanisms involve some form of obligation placed on service providers which are present in the domestic market. These may take the form of a tax on revenues, a sales tax, a license fee, an ADC, an interconnect payment or whatever. The general trend is away from subsidies which are applied through higher prices (for instance, higher interconnect, access charges or local call charges) towards other forms of targeted subsidy, directed towards, say, low-income users. Could the traditional system of cross-subsidy, inherent in the pricing of national and international telephone calls, be replaced with a more transparent, targeted, Universal Access subsidy?

## Taxing call termination

To date, there are few examples where a universal service obligation has been applied to foreign operators, or to the termination of international calls. This approach has been suggested as one possible way forward in Colombia and elsewhere, but it has been opposed by the European Union which sees it as an unfair tax on European consumers making international telephone calls. Conceptually, it may appear easy to apply a sales

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<sup>3</sup> See, for instance, the documentation available at: [http://www.ispo.cec.be/infosoc/legreg/telecom.html#Universal Service](http://www.ispo.cec.be/infosoc/legreg/telecom.html#Universal%20Service).

<sup>4</sup> See, for instance, the discussion in the Colombia country case study, available at: <http://www.itu.int/wtpf/cases/Colombia/index.htm>

tax or import duty of, say, 5 per cent to all international calls, both incoming and outgoing. However, there are a number of difficulties with this approach:

- Within the accounting rate system, such a tax imposition would have to be set, by bilateral agreement, on 200 or more routes, if it is to be truly non-discriminatory. One can imagine that the foreign correspondents would respond by applying their own 5 per cent tax. The net gain would therefore be zero and the same call may be taxed twice.
- Once a tax is established, it may be difficult to resist the temptation to raise it, rather than to increase efficiency or cut costs.

An alternative would be to take the existing settlement rate and just assume that a certain proportion of the above-cost element of it should go towards Universal Service. Then, as rates are lowered towards cost, the lowest rate would not be allowed to fall below the level of cost plus an element of USO. This is the approach proposed, for instance, by Trinidad & Tobago in their cost model, (see contribution COM3-D40). A formula is proposed for establishing a termination fee which is set as the weighted average of direct and indirect costs, divided by total number of minutes of international traffic (outgoing plus incoming), plus an element of Universal Service subsidy. In the example quoted, the USO amounts to some 5 US cents per minute out of a total cost of 43 US cents per minute, (i.e., a tax of around 12 per cent). This approach, though conceptually attractive, also has problems of implementation in addition to those listed above:

- The most obvious problem is that of double, or even triple-counting of the subsidy, as explained by Canada (contribution 42). The costs charged for call termination may already implicitly cover the provision of universal service (for instance, the component identified as “Other related costs” in ITU-T Recommendation D.140). Thus, to make a separate allowance would mean that the cost of universal service is being double-counted. Furthermore, given that it is widely acknowledged that even the proposed target rates are still much higher than actual costs for terminating traffic in most economies, and that this above-cost element also represents a subsidy, then to introduce an explicit USO element during the transition period to cost-orientation could potentially lead to triple-counting.
- A further difficulty arises because, as noted earlier, each country’s definition of Universal Service is different. Thus, in a call between, say, Kenya and Germany, in which both parties imposed a USO cost subsidy of, say, 5 US cents per minute; whereas Kenya might use those funds to provide a payphone in every village, Germany may use it to provide Internet access to libraries. That raises the moral question of why consumers in one country, with very low access to basic telecommunications, should be required to subsidise access to advanced telecommunication services in a rich country?
- Assuming that any Universal Service subsidy is paid directly to the incumbent service provider, there exists no independent monitoring system that could measure the value of the universal service subsidy, ensure that it is being used for the correct purpose, and guarantee that it is not just being used as a substitute for a different type of subsidy.

## **A multilateral approach**

In the light of the discussion above, it can be seen that the approach of imposing a USO tax on incoming international calls has many problems associated with its implementation and offers little improvement on the existing method of cross-subsidies applied through the pricing mechanism and/or through above-cost settlement rates. Indeed, taxing operators in foreign countries may actually prove more harmful because it encourages a tit-for-tat spiral, whereby one country imposes a USO tax, and all its correspondents do the same, thus that consumers in all countries end up paying more.

For that reason, while the approach of proposing a USO tax to replace existing cross-subsidies was considered in the Chairman’s Working Document, an alternative approach was preferred. This approach is directed not so much towards the Universal Service problem *within* a country, but rather towards addressing disparities of access *between* countries. The following elements could constitute a multilateral approach to enhancing Universal Access, implemented through the mechanism of an international settlements system:

- Any approach adopted must respect each Member State’s sovereign right to define its own domestic Universal Service Obligations, and to finance them in the way in which it sees fit;

- Nevertheless, it is recognised that there is a global dimension to the problem of ensuring Universal Access. Some countries have a teledensity which is low both in absolute and relative terms. Thus any multilateral agreement should be directed to those countries at the very bottom of the teledensity scale. The 42 countries which have a teledensity of below one account for only 2.9 million main lines (0.36 per cent of the global total), but they are home to some 783 million people (13.5 per cent of the global population). Any targeted assistance should be directed, in the first instance, towards the populations of these low-teledensity countries;
- Any multilateral approach to meeting universal access should be asymmetric<sup>5</sup> in nature. In other words, the subsidies made from high teledensity economies to low teledensity ones should be unilateral, and should not carry the expectation of reciprocal treatment;
- Insofar as a multilateral agreement is made within the framework of the International Telecommunication Regulations (ITRs), it will need to be implemented on the basis of a bilateral agreement between Administration/ROAs. In the longer term, it may be possible to envisage a multilateral agreement which is negotiated outside the ITRs, for instance through the auspices of the World Trade Organisation.
- One way to introduce an element of subsidy, payable from an Administration/ROA in a high teledensity economy to an Administration/ROA in a low teledensity economy, is through an asymmetric split of the accounting rate. In other words, the division of the revenue raised from traffic on a particular route could be allowed to vary from 50/50 by a few percentage points, with the difference being payable to a Universal Service Fund overseen by the regulator in the low teledensity economy. The element of subsidy should be transparent, and its application should be targeted at raising household telephone penetration in the low teledensity economy.
- The bilateral agreement should contain incentives for both parties. For instance, it might include an element of growth in traffic and could be applied retrospectively to provide revenue stabilisation guarantees (see contribution 50 from Senegal). Box 1 gives a simple worked example of how asymmetry could be applied in a manner which creates incentives for both parties.
- An Agreement to move away from a 50/50 split in the accounting rate share, and/or to include an explicit universal service obligation, implemented through differential call termination rates, should be undertaken in the context of the transition towards cost-oriented settlement rates, as foreseen in the existing Annex D to ITU-T Recommendation D.140 and in the proposed additions to D.150.

As an example of how such an asymmetric arrangement might work, take the case of Samoa, which is detailed in the country case study<sup>6</sup>. As shown in Figure 3, Samoa's weighted average accounting rate has been declining at a rate of 13 per cent per year since 1994, which is slightly faster than the global average. During that period, Samoa's incoming international traffic has been growing by some 23 per cent per year, while its outgoing international traffic had been growing by only 4 per cent per year. The total net settlement payment in 1996 was some US\$3.2 million. If current trends continue, and a 13 per cent per year reduction in settlement rates was sustained, then Samoa's net settlement payment would amount to some US\$4.9 million in the year 2001. If a slightly faster rate of reduction, say 15 per cent per year, were applied, then in the year 2001, the net settlement would only be US\$4.3 million. On the other hand, if a 55/45 split were applied, then almost the same net settlement (US\$4.8 million) could be achieved while keeping a 15 per cent per year rate of reduction. The results are summarised in Table 2.

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<sup>5</sup> The issue of asymmetric arrangements is treated in more detail in an earlier methodological note, available at: <http://www.itu.int/intset/focus/index.html>.

<sup>6</sup> The country case study of Samoa is available at: <http://www.itu.int/wtpf/cases/Samoa/index.htm>.

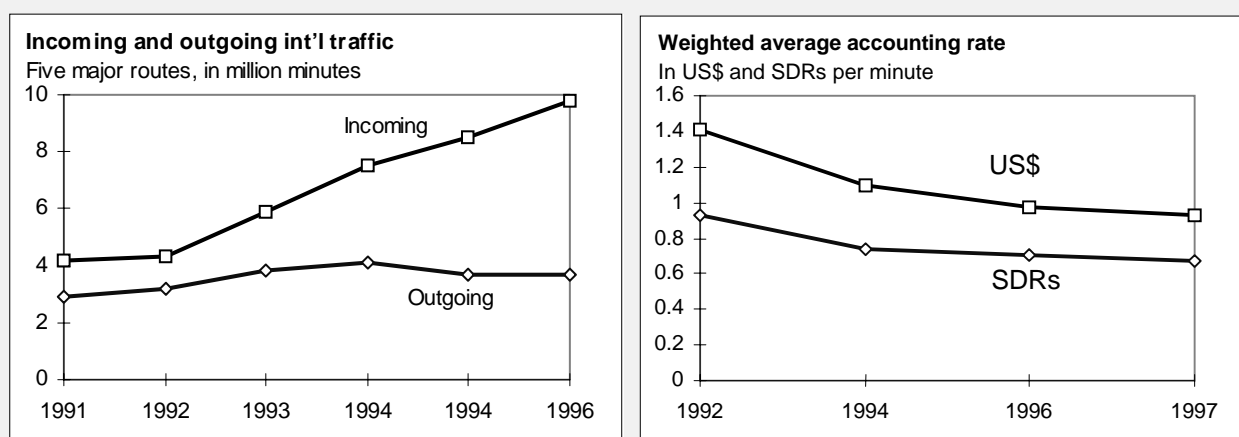
**Table 2: Alternative scenarios for settlement rate reform in Samoa**

*Continuation of current trends, faster rate of reduction, and faster rate of reduction with asymmetric split*

Year	1996	2001	2001	2001
Scenario	Baseline	13% reduction in settlement rate	15% reduction and 50/50 split	15% reduction and 55/45 split
Weighted average settlement rate in SDRs (and US cents) per minute	0.46 (61.5 US cents)	0.20 (26.7 US cents)	0.17 (22.7 US cents)	0.17 (22.7 US cents)
Net settlement in millions of SDRs (and US dollars)	2.4 million (US\$3.2 million)	3.6 million (US\$ 4.9 million)	3.2 million (US\$4.3 million)	3.6 million (US\$ 4.8 million)

Source: ITU, adapted from Samoa country case study.

**Figure 3: Trends in Samoa's international traffic and accounting rates, 1991/92-1996/97**



Source: Samoa Posts and Telecommunications Dept.

### Issues for the Focus Group

This methodological note has explored the issue of Universal Service and Universal Access. It has shown that no two countries define Universal Service/Access in the same way. In particular, countries with low teledensity place emphasis on broadening access to basic telecommunication services, while those with a higher teledensity aim at promoting advanced telecommunication services. Traditionally, most public telecommunication operators have used revenues from international service to cross-subsidise domestic operations. This strategy is difficult to sustain in an increasingly competitive market environment where the same operator is responsible for providing both domestic and international service. Recent trends have moved away from administering subsidies through the pricing mechanism towards the financing of Universal Service Obligations in a manner which is transparent, non-discriminatory and competitively-neutral in application. This methodological note presents a number of examples where this policy approach to the financing of Universal Service is being implemented at the domestic level. In each case, the mechanisms are tailored to the unique situation of the country concerned.

To date, there are no examples where transparent Universal Service financing measures are being applied to the termination of international telephone calls. There are, however, two possible alternatives which may be considered in the context of facilitating the move to cost-oriented settlement rates:

1. By introducing an additional cost component, either as a percentage tax or an absolute amount (e.g., 5 per cent or 5 cents), into the cost of terminating an international call.
2. Through an asymmetric arrangement, for instance, a non 50/50 split of the accounting rate share, or through differential call termination charges.



Either of these two approaches, if framed within a multilateral agreement and negotiated on a bilateral basis, and if targeted at those economies with the very lowest teledensities, could allow settlement rate reductions to proceed at a faster rate.

Members of the Focus Group are encouraged to submit additional contributions on how an element of subsidy to meet Universal Service/Universal Access objectives might be built into the ongoing discussion on settlement rate reform, with specific comments on the two possible approaches outlined above.

### **Box 1: Creating incentives for both parties<sup>7</sup>**

In developing a bilateral agreement which involves an asymmetric split of the accounting rate, it is important to ensure that there are incentives for both parties. For the high teledensity economy, which sends more traffic than it receives, the incentives may be in the form of a faster rate of reduction in the total accounting rate and/or an increase in the total volume of traffic on the route. For the lower teledensity economy, which receives more traffic than it sends, the incentives may be in the form of revenue stabilisation guarantees, as well as an increase in the total volume of traffic on the route. In order to create incentives for both parties – a win/win situation – it is necessary to confront the fears of the lower teledensity economy, namely that it might experience a sudden fall in the net settlement payment.

Framing such an agreement takes a little ingenuity, but it should be possible. For instance, an agreement to reduce the total accounting rate could be tied to the expected growth in traffic while at the same time providing revenue stabilisation guarantees. Take the following example:

- Operator A (high teledensity) sends 100 minutes of traffic to Operator B (low teledensity).
- Operator B sends 50 minutes of traffic to Operator A.
- The accounting rate is 1 SDR per minute, split 50/50, which means that Operator A makes a net settlement of 25 SDRs (0.5 SDR times 50 excess minutes) to Operator B.

A future agreement could be phrased as follows:

1. The total accounting rate for the first 150 minutes of traffic on the route is 0.9 SDR. For every additional minute, a rate of 0.8 SDR is applied.
2. If the net settlement made from A to B falls by more than, say, 20 per cent in any one year, then an asymmetric split of, say, 55/45 could be applied, in favour of B. If the net settlement payment rises, or falls by less than 20 per cent in any one year, then a symmetric split would prevail.
3. Any incremental payments made under an asymmetric arrangement would go to a Universal Service Fund, and earmarked for enhancing network development.

This would thus create an incentive for both parties to generate extra traffic, thereby generating extra collection charge revenue, while at the same time guaranteeing Operator B either a certain minimum payment, or an asymmetric split of the revenue generated. The net transfer resulting from an asymmetric arrangement could be handled, in a transparent manner, through a Universal Service Fund overseen by the regulator of country B.

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<sup>7</sup> Drawn, inter alia, from contributions 21 (OFTA, Hong Kong China) and 50 (Pape Touré, Senegal).