

The 1998 Telecommunications Revolution

**Dr Pekka Tarjanne, Secretary-General
International Telecommunication Union,
Study Group 3 Meeting, 27 May 1997**



Chairman,
Delegates,

I would like to thank you for inviting me to join you at this Plenary meeting of ITU-T Study Group 3. I realize that it is quite exceptional for the Secretary-General of the ITU to make an intervention in the work of the Study Groups, but I feel that we are facing quite exceptional circumstances. In particular, recent events have focussed attention on the changes that will occur in the telecommunications sector in 1998. For the future of the international accounting rate system, those changes will be little short of revolutionary. Indeed they are occurring already.



Agenda

- **The 1998 Telecommunications Revolution**
 - ⇒ **Telecommunications as a traded service**
 - ⇒ **Liberalized market entry**
- **The urgency of settlement rate reform**
 - ⇒ **Implementation of D.140**
 - ⇒ **Cost-oriented settlement rates**
- **The Informal Expert Group Report**
 - ⇒ **Recommendations**
- **Alternatives to accounting rates**
 - ⇒ **Termination charges**

The landmark agreement on basic telecommunications concluded in February at the World Trade Organisation changes everything. The 69 countries which have, so far, signed up to that agreement account for more than 90 per cent of international telephone traffic. The governments of those countries have given a clear signal that they want to liberalize their telecommunication sectors and that they view international telecommunications as a traded service.

In this presentation I want to focus on three issues:

First, I wish to stress the urgency of reform of the settlement rate system to accommodate the new telecommunications environment. There is a clear danger that the existing accounting rate system could collapse, or simply be by-passed, if there is no orderly transition to new systems. If Study Group 3 is unable to agree on a transition path, then this work will be done elsewhere, or not at all.

Second, I want to present the recommendations of an Informal Expert Group which I established to advise the membership of the ITU on a reform path. The report of the Expert Group, which is available as Document No. 20, provides excellent advice on how to implement the provisions of ITU-T Recommendation D.140, in particular, on how to ensure that the existing settlement rate system is non-discriminatory, transparent and cost-oriented, and how to manage the transition to rational economic pricing.

Third, I feel it is necessary, within Study Group 3, to go beyond the working of the existing settlement rate system and to consider what systems for cost and revenue-division will exist after 1998. For that reason, I want to review briefly certain of the input documents to your meeting, some of which were prepared in response to the Consultation Document which I offered to Study Group 3 at your last meeting in November 1996.



The 1998 Telecom Revolution

- **Implementation of WTO agreement on basic telecommunications from 1/1/98**
- **Implementation of full competition in most of Europe from 1/1/98**
- **1998 is projected launch date for Global Mobile Personal Communications by Satellite (e.g., Iridium, ICO, GlobalStar, Odyssey)**
- **1998 will see large-scale implementation of Internet Telephony**

The significance of the WTO agreement is that it shows a willingness on the part of major countries to discuss telecommunications reform in a multilateral forum. The basic telecommunications agreement, which will be implemented on 1st January 1998, is a binding multilateral agreement on the opening of telecommunication markets. Multilateral trade principles -- such as most-favoured nation, national treatment and non-discriminatory market access -- will necessarily displace bilateral agreements. While settlement rates are not specifically covered by the agreement, it is clear that it will no longer be possible, or desirable, for countries to discriminate among their trading partners, by offering more favourable terms to some than to others, as happens under the existing settlement rate system.

The WTO agreement builds upon a widescale reform already agreed within the 15 Member States of the European Union, as well as countries like Switzerland which are following the same timetable. As from 1998, a new regime of facilities-based interconnect payments, will operate among the Member States of the Union in an environment of liberalized market entry. In this region, which accounts for more than a third of total international traffic, the settlement rate system will be progressively phased out.

But the challenges to the settlement rate system go beyond these regulatory changes. In 1998, the first of the new generation of Global Mobile Personal Communications by Satellite is due to be operational. This will bring distance-independent telephony to all parts of the globe. In addition, we will see Internet Telephony service becoming commercially significant in 1998. I need hardly add that Internet Telephony not only offers services which are distance independent, and virtually duration-independent, but which also operate outside the traditional settlement rate system.



What does all this mean for settlement rates?

● The dream:

- ⇒ With unrestricted market entry, and end-to-end service, international interconnection should trend towards national interconnection prices
- ⇒ In a fully competitive market, interconnection charges should trend towards costs.

● The reality:

- ⇒ No clear, published statement on the evolution of settlement rates in asymmetric relations;
- ⇒ Settlement rates specifically excluded from WTO agreement;
- ⇒ US FCC threaten to impose “benchmarks”.

In facing up to these challenges, there is a large gap between the dream and the reality. On the basis of economic theory, we can state that, in a competitive market, the gap between international interconnect prices (i.e., settlement rates) and national interconnect prices (for instance, between mobile and PSTN networks) should progressively diminish. At the moment, settlement rates are typically at least three times the level of national interconnect prices and can be several hundred times higher. The rise of global alliances, or “carriers’ carriers” such as AT&T-UniSource, GlobalOne or Concert, portends the development of end-to-end service which will progressively replace jointly-provided services.

Furthermore, with competitive market entry, national interconnect prices should move rapidly towards costs. It will not be possible to sustain the systematic cross-subsidy of one service by another, except by transparent mechanisms agreed by all market players, such as a Universal Service Fund. To quote from the Expert Group report:

“The historical level of settlement rates is unsustainable in a competitive environment. Economic rationality means that transmission and termination rates of international voice traffic will decline toward a level dictated by effective competition. This movement is accelerating ... and is expected to bring significant reductions in prices of international services for consumers.”

But the simple fact is that we lack any type of roadmap that will help us to make that transition towards a competitive market. There is no published statement at present from the European Union and settlement rates were specifically excluded from the WTO agreement. For the foreseeable future, there will continue to be a large number of asymmetric relations, between competitive and non-competitive markets. While these may only account for a small proportion of global traffic, they will nevertheless become flashpoints and a potential source of conflict. The way is open for Study Group 3 to provide that “roadmap”. But if you are unable to provide guidance on how a multilateral transition can be handled, then certain countries may impose a new system unilaterally.



What's wrong with settlement rates?

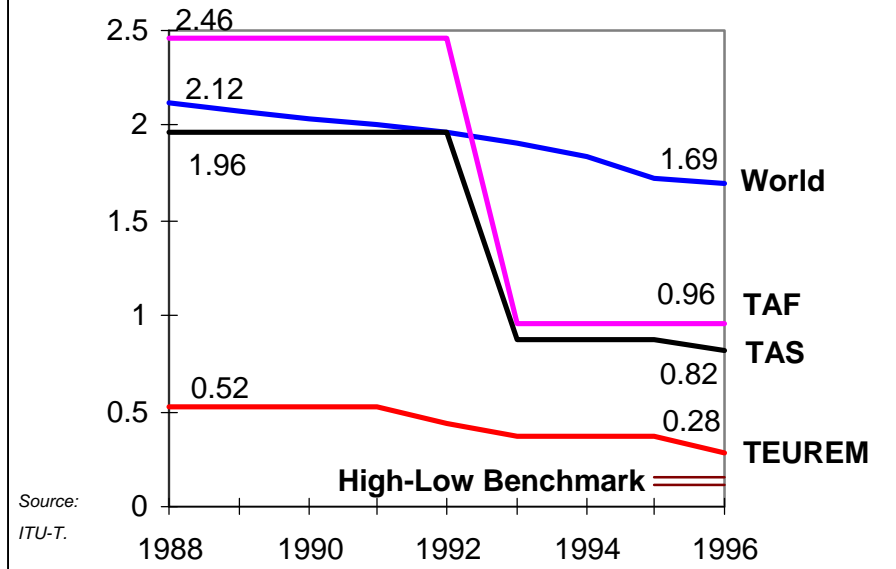
- **Difficult to adapt to a multi-player market**
 - ⇒ **Uniform accounting rates and proportional return are anti-competitive measures**
- **Act as a disincentive to efficiency**
 - ⇒ **Countries which receive net incoming traffic receive significant inpayments**
- **Based on principle of equal costs**
 - ⇒ **In real world, costs are unlikely to be split 50:50**
- **Opportunities for accounting rate by-pass**
 - ⇒ **Voice over the Net, end-to-end service**

The international accounting rate system has served the world well for many years, but in a completely different trading environment than that which we face today. The reality that we now face is of unbalanced and distorted traffic flows, of alternative calling procedures and asymmetric market structures. The single most important requirement is to adapt the settlement rate system to a multi-player market, and to do so within a multilateral framework. The rules imposed by some countries, such as uniform accounting rates or proportionate return of traffic, are not appropriate because they limit the scope for competitive negotiation and they encourage cartelistic behaviour. To quote from the paper submitted by Telecom New Zealand (D 21):

“Proportionate return conventions will disappear. As operators increasingly negotiate commercial terms for terminating traffic on a cost related basis international business will be viewed as two separate one-way businesses (inbound and outbound), as distinct from the current both-way revenue sharing principles.”

Furthermore, because the party which receives net settlement inpayments has no incentive to negotiate a reduction in the settlement rate, the current system acts to distort market prices. A system which splits revenues on a 50:50 basis upholds the fiction that costs are also split 50:50 which, even in a perfect world, is unlikely to be the case. In any event, the settlement rate system will quickly be by-passed by other alternatives, such as Voice over the Net, if rates are not brought quickly into line with costs.

Trends in accounting rates in SDRs



Accounting rates have indeed been falling, as this slide shows, with a notable decrease since Recommendation D.140 which was approved in 1992. However, while accounting rates for the world as a whole have fallen by around 3 per cent per year since 1988, significant cost elements, such as the cost of undersea cable or satellite capacity, have been falling by some 30 per cent per year. The average accounting rate levels reported to the ITU are still well above the Recommendations of the regional tariff groups (TAF, TAS and TEUREM) and even further above the High-Low Benchmarks calculated by the FCC in its Notice of Proposed Rulemaking.

I believe that the methodology used in the FCC study is imperfect, because it is based on tariffed prices rather than real costs, and because it takes insufficient account of fixed charges as a tariff element. Nevertheless it is the most comprehensive study available to date. Given the urgency of the task ahead, I seriously doubt whether you have the time to carry out a study based on real cost data, even if such data were available. In any case, the use of real cost data is likely to produce figures significantly below the FCC benchmarks. Work carried out by the ITU Secretariat, which was also based on a tariffed cost methodology, shows that in very few relations around the world should the settlement rate be any greater than 25 US cents per minute, or .36 SDR. In the majority of cases, the level should be well below this ceiling. Where competition is active on both ends of a route, such as between the United States and the United Kingdom, we are already seeing settlement rates at below 10 US cents per minute.



Origins of Informal Expert Group

- **Group originally proposed by WTAC**
- **Consultation document presented to SG3 in November 1996**
- **Recent events brought issue to a head:**
 - ⇒ **WTO agreement**
 - ⇒ **FCC Benchmark proposals**
- **Concerns about impact of reduced settlement payments on developing countries**
- **Need to sustain multilateral approach**

Recommendation D.140, which was approved in 1992, set out a five year transition towards achieving settlement rates which are non-discriminatory, transparent, and cost-oriented. The implementation of this Recommendation, together with the adaptation of the accounting rate system to a competitive market environment, is one of the major objectives stated in the ITU Strategic Plan. I have also been urged by the World Telecommunication Advisory Council (WTAC) to play an active role in this reform process.

At your November meeting, I presented a consultation document. Since that meeting, two events have brought issues to a head. First, the FCC Notice of Proposed Rulemaking on "Benchmarks" which, because of its threat of unilateral action, has prompted serious concern among ITU membership. I have exchanged correspondence with both the FCC and the US State Department on this topic. The second event is of course the WTO agreement on basic telecommunications which I referred to earlier.

In order to provide a further impetus to the reform process, I invited a group of experts to meet in Geneva in April, under the Chairmanship of Mr Robert Bruce, an internationally-known telecommunications attorney with the firm Debevoise & Plimpton, to advise ITU membership on the way forward. The group recognizes that it is still possible to chart a way forward on a multilateral basis, but that time is running out.



Composition of Informal Expert Group

● **Representatives from:**

- ⇒ **Operators**
- ⇒ **Regulators**
- ⇒ **Alternative service providers**
- ⇒ **Users**
- ⇒ **International & Regional Organisations**
- ⇒ **Academics and independent advisors**

● **Representative of:**

- ⇒ **Developed and developing economies**
- ⇒ **SG3 and non SG3 experts**

In assembling the Group of Experts, I tried to make it as representative as possible, while not creating a group which was too large to do useful work. In particular, I selected experts from both within and outside Study Group 3 so as to avoid duplicating the important work you are already doing here, and also perhaps to get a slightly different perspective on this very important issue.



“Guiding Principles” for ITU recommended by Expert Group

- **Support for market liberalization**
 - ⇒ **Transparent, non-discriminatory and cost-oriented settlement rates**
- **New co-operative relationships**
- **Enhanced data collection and dissemination**
- **Assistance to developing countries**
- **Define a “general range of charges” for future evolution of rates**
- **Mobilize support from other international institutions**

The Group noted the accelerated pace of telecommunication liberalization around the world which is putting relentless pressure on the existing settlements system.

While it did not recommend making any structural changes to the traditional settlements system or, for that matter, replacing it, the Group recognized that in the foreseeable future several systems would exist side by side: the accounting rates system; various forms of call termination and interconnection arrangements; end-to-end provision of services; and sender-keeps-all. What the Group did emphasize, though, was the need to move as quickly as possible towards cost-oriented prices for international services, whichever system prevails.

Specifically, the Group recommended six principles that should guide the action of the ITU membership. In particular, it called upon the ITU to define a general range of charges to which future settlement rates should evolve. In doing this, ITU would not be replacing the normal functions of the market, but rather providing information on general trends and helping regulators to identify instances in which settlement rates or termination fees proposed by operators are significantly above cost. I see this as a major task for Study Group 3.



Urgency of reform on a multilateral basis

- Relationships between competitive markets do not require ITU intervention
- But, regulatory asymmetry
 - ⇒ Competitive and non-competitive markets
 - ⇒ Threat of unilateral action
- Transition to cost-oriented rates
 - ⇒ Immediate reduction of 5-10%, similar reduction in first half of 1998
 - ⇒ Few rates should be > 25 US cents per minute
- Transition period for some developing countries

The report states that:

“The Group is convinced that settlement rates will be reduced towards costs and is persuaded of the urgency of the steps which will be required as countries move ever more rapidly toward more competitive environments. It is likely that, in relationships between competitive markets, settlement rates will quickly be supplemented by alternative financial arrangements. This transition does not require intervention by the ITU. However, there will continue to be a number of relationships between competitive and non-competitive markets. It is desirable that settlement rate reductions, which are already planned by some countries, be coordinated on a multilateral basis, in order that the benefits be shared by the membership as a whole.”

The Group proposed an immediate multilateral reduction of 5-10 per cent followed by a similar cut in the first half of 1998. Furthermore, the Group endorsed the finding of the ITU Secretariat, that few rates should be above 25 US Cents per minute.

However, the Group recognized the necessity of providing a further transition period for some developing countries, in particular those that are likely to be the hardest hit by any possible reduction in net settlement inpayments that might be brought about by reduced settlement rates.



Four compensatory steps to assist with adjustment

- **Financing the transition**
 - ⇒ **Steps taken by ITU, World Bank & Others**
- **Accelerating the work of ITU SG 3**
 - ⇒ **Adapting settlement rates to a competitive environment**
 - ⇒ **Studying likely impact of the Internet**
- **Independent case studies**
- **Data gathering and dissemination**
 - ⇒ **Website at <http://www.itu.int/intset>**

The Group proposed four concrete steps that could be taken to facilitate the transition:

1. Countries should be assisted in making the adjustments needed to offset a reduction in international payments. This could include help in restructuring prices of telecommunication services, developing costing models and methodologies, expanding and increasing the efficiency of their networks, developing new services, implementing the WTO agreement, and dealing with universal services issues.
2. The Group urged the need for you -- ITU-T Study Group 3 -- to accelerate your work on adapting the settlement system to a multi-player environment. Furthermore, the Group suggested that you should consider undertaking an assessment of the impact of voice services provided over various types of data networks including Frame Relay, ATM and the Internet.
3. The Group proposed that ITU should initiate and co-ordinate a series of independent case studies of network operators, primarily in low income countries, to get a more realistic picture of the effect of a reduction in international settlement payments. The Group suggested that this could be financed by voluntary contributions and funds from the ITU's Development Sector.
4. The ITU should gather, organize and make widely available by electronic and other means timely information to assist policy-makers, regulators, and operators involved in the transition process.

Information gathering and dissemination is an important role that ITU can play. To this end, we have created a website which contains the full report of the Group together with related documents. I hope that Study Group 3 will agree to post a summary of its own work, and other relevant studies, on that website. In particular, we hope to make available a wider range of tariff data for international calls, as well as cost studies.



Providing a “soft landing” for the Least Developed Countries

- **Target Group: LDCs plus other low income economies with small population**
- **Guarantee revenue stability**
 - ⇒ **Continue network build-out**
 - ⇒ **Satisfy Universal Service Obligations**
- **Possible reduction in international revenues to be compensated by increased local revenue generation**
- **Transition period of up to 5 years**

One of the most important elements of the Group’s report is its focus on the needs of those countries likely to be hardest hit by the impending changes. The Group defined these countries as follows:

“The Least Developed Countries and other low income small economies with, say, less than one million inhabitants”

The report outlines the basis for providing a “soft landing” for this group of countries. An important element of this could be a guarantee of revenue stability over a transition period of up to five years. This could mean, for example, that the major international carriers from developed countries might undertake to guarantee a certain minimum settlement payment, say at the 1995 level, for a transition period of up to five years during which settlement rates would be progressively reduced to cost-oriented levels. In return, the operators from developing countries would undertake to reduce settlement rates and to promote traffic expansion.

In addition, the report calls upon the ITU, the World Bank and others to assist the LDCs in undertaking the structural reforms that are necessary to enable them to increase the revenues derived from locally-generated sources.



Alternatives to settlement rates

- **Settlement rates will co-exist with other cost- and revenue-division systems**
- **Wide support in SG3 papers for unbundling and use of termination charges:**
 - ⇒ **France, HKTI, St. Vincent, Telia, Russia, Australia, Japan, Korea (Rep)**
- **But, concern that termination charges should be cost-oriented:**
 - ⇒ **Target rate or benchmark (FCC)**
 - ⇒ **Ceiling price (UK, KDD, Informal Expert Group)**
 - ⇒ **Based on national tariff (Telia, Russia)**

The Expert Group recognized that, in relations between competitive markets, settlement rates will quickly be supplemented by alternative revenue-division mechanisms, and it urged Study Group 3 to accelerate its work on defining these alternative mechanisms. It is clear that, for the foreseeable future, these alternative mechanisms will co-exist, but not replace, the settlement rate system. The main objective is to broaden the range of options which are open to carriers in competitive markets.

I am happy to say that, among the papers submitted for your work here this week, there is already a broad consensus emerging on the direction that alternative mechanisms should take. There is general support for the concept of unbundling the settlement rate into its three main components: the international transmission link, the international gateway, and call termination (or national extension). By unbundling these three elements, carriers will be enabled to make economically rational build or buy decisions for each separate component, based on the least cost route.

Secondly, I am happy to say there is support for the principle of call termination charges (or access charges) which I proposed in my Consultation Document. Call termination charges should be non-discriminatory, transparent and cost-oriented and would fit well with the broad trade principles of the WTO agreement. However, there is a legitimate concern that where call termination charges are set unilaterally in markets that are not exposed to competition, they may not be cost-oriented. Furthermore, unilateral call-termination charges might differ markedly from one country to another. For that reason, I feel that it is important that Study Group 3 provides general guidance on ceilings for call termination charges, as proposed by the UK and KDD.



Principles for reform

- **Continued viability of international service**
- **Transparency**
- **Non-discrimination**
- **Cost-oriented tariffing**
- **Competition**
- **Benefits of rate reductions passed on to end-users**
- **Ease of transition for developing countries**

I am also happy to report that, in the responses to my Consultation Document, there is broad support for the seven general principles for the reform process. In particular, it is recognized that competition offers the best route to ensuring that both settlement rates and collection charges are cost-oriented. Ultimately it is competition rather than elaborate pricing methodologies which will bring lower prices to telecommunication consumers.



Tentative transition path

- **April 97: Informal Expert Group report, endorsed by WTAC**
- **May 97: ITU-T Study Group 3 meeting**
- **June 97: Decision by ITU Council on World Telecommunication Policy Forum (WTPF)**
 - ⇒ **Proposed topic: Trade in Telecom Services**
- **Sept 97: 1st draft of SG's paper for WTPF**
- **Nov 97: Input from SG3 to 2nd draft**
- **Jan 98: 3rd draft of SG's paper**
- **March 18-20 1998: Second WTPF**

In conclusion, I wish to propose a tentative transition path that would enable the ITU to participate fully in the 1998 telecommunications revolution. Following the groundbreaking work already carried out by the Informal Expert Group, and endorsed by the WTAC, I will be presenting a document to the ITU Council in June proposing to hold a second World Telecommunication Policy Forum on the topic of Trade in Telecommunication Services. Specifically, that Forum would focus on policy and regulatory issues related to preserving and strengthening the financial foundations of the telecommunications industry in the emerging liberalized environment (namely, issues related to tariffs, accounting and settlement payments, and investment). If my proposal is accepted, then we will be on a fast track path to March next year when the Forum will be held.

The eyes of the telecommunications community worldwide are on the ITU. We have a chance to provide leadership and direction. But it is important that we provide a *clear* message and we must act quickly. I believe this timetable for facilitating the transition is feasible and timely. It provides opportunity for input from Study Group 3 both at this meeting and at your next meeting in November.

I am committed to achieving an orderly transition to a competitive marketplace and to the implementation of the WTO agreement, within the context of a multilateral framework. This will be one of the major tasks the ITU will face between now and the next Plenipotentiary Conference. I rely on you, the membership of the Union, to help us achieve that task.