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CONCERT  
COMMENTS  
ON  
DRAFT REPORT OF THE SECRETARY-GENERAL  
ON  
IP TELEPHONY  
FOR THE WTPF 2001

Concert would like to congratulate the authors of this paper for an excellent first draft on a complex subject. As with all significant changes in our industry, IP Telephony represents both a challenge to some industry participants and an opportunity to others. Rather than divide the ITU's Members into these two camps, the Draft Report wisely seeks to explain IP Telephony, explain how it fits into the broader changes underway in our industry – both technological and market-driven --, and identify the affects it may have on governmental telecommunications objectives that policy and regulations are intended to serve.

It is Concert's view that IP Telephony should be viewed as one of the many applications that employ IP technology. It should, therefore, be treated in government policy and regulation as all other IP applications are treated. It may represent a strong catalyst for driving prices for voice services to incremental costs. The ITU should view this positively, which would help achieve both the ITU's objective of reasonably priced services and the objective set forth in D.140 of cost-orientated settlement rates. Over the longer-run, however, it is actually one of many applications that will be run over IP-based networks, either as a stand-alone service or integrated with other features into new services. These innovations will be driven by software and intelligence devices located at the periphery of the networks, not located in the network core as in switched circuit networks. Applications driven by the innovations in the peripheral devices speaks to an industry that is far more diversified and customer-oriented than the traditional centralized network-oriented industry for which traditional telephony regulation was created. The challenge of this Policy Forum will be to avoid applying the archaic telephony regulatory schemes to the IP industries while at the same time sketching a road-map for achieving legitimate governmental telecom policy objectives in the industry of the future.

There is clearly the potential for the ITU's Membership to be divided over discussions regarding telecommunications policy for IP Telephony. Some may call for the new technologies to be regulated like the old and some may call for the new technologies to remain governed by the disciplines of the marketplace. However, to the extent that the Report and the discussions can be focused on how best to achieve legitimate government telecommunications objectives within the context of changing technologies and industry structures, the Forum will be less divisive and more productive.

The ITU and its Members should recognize that IP technologies represent a natural evolution of telecommunications technology and of the industry. All applications are migrating to IP; for example, customers are accessing information via Web browsers rather than making a call to a toll-free 800 number. All PTOs, both traditional and non-traditional, are facing the challenge of migrating their networks and their applications and services to IP technologies. PTOs are facing customer demand for both voice telephony services and for Internet access. Over time, the technology will allow both sets of demands to be met with one integrated network, thus allowing synergies and cost reductions to take place. At this point in time, however, most network providers are facing the very real challenge of how and when to make the migration to a fully integrated IP-based network.

As a general comment, this Draft Report seems to focus almost exclusively on the impact on traditional PTOs in developing countries. It would serve policy-makers in all countries better if it also focused on the impact to consumers and the economies at large, which broader government policies address. There is no doubt that the traditional PTOs in both developing and developed countries are facing transitional issues. These transitional issues include network technology transition as well as rate rebalancing and new service offering issues. But the determining factors for government policy should be what is best for the more general welfare of all members of the society, not just the PTO. We therefore recommend that the paper be broadened to include all players; governments, consumers, service industries, and old and new communications companies.

Concert's comments on the draft report are intended to help the Secretary-General explain IP Telephony as part and parcel of broader industry changes and to identify the governmental policy objectives which should be the primary focus of discussion. Per the request in the Preamble of the Draft Report, Teresa Evert, International Mobile and Policy Director, International Carrier Services, Concert, will be Concert's primary point of contact for this Third World Telecommunications Policy Forum.

## **PAGE BY PAGE COMMENTS ON THE DRAFT REPORT**

### **1. SUMMARY**

Paragraph 1.1: This paragraph states "Internet Protocol (IP) Telephony is rapidly reaching the top of the agenda for the telecommunications industry worldwide." Concert believes that the "top of the agenda" issue is actually the broader Internet, which is transforming everything from how business is run and to how we manage our personal lives. The fact that its growth has far exceeded that of the PSTN in capacity and traffic and the fact that carrying voice traffic in the margins of this broader Internet traffic puts the "top of the agenda" issue into focus. The Internet is becoming the most effective way to carry voice traffic because it can ride on the broader base of the overall Internet traffic at marginal incremental costs.

Paragraph 1.2: This paragraph notes that regulators and policy-makers are now giving their attention to IP Telephony because IP-based networks are being used as “alternatives to the circuit-switched networks.” Please note the comments above. While these networks may represent “alternatives” in the short-term, IP technology is becoming the replacement technology for networks. Concert would also like to see mention made in this paragraph of the fact that the creation of this ubiquitous data network (known as the Internet) and its rapid growth and diversity of applications has occurred largely as a result of the lack of regulation. It was fueled by providers other than the traditional PTO’s. Any change in status will have an affect on the growth and diversity of the Internet-based industries.

Paragraph 1.7: Concert believes that a sentence needs to precede the current sentence to put the correct perspective on IP Telephony. The growth in the Internet and of IP-based Virtual Private networks has had profound implications for all players. Adding voice traffic to these networks now raises the questions of substitution services for circuit-switched services and of network transition issues.

Paragraphs 1.9 and 1.10: In these two paragraphs, the paper attempts to summarize the effects of IP Telephony on consumers and on PTOs. However, it excluded the effects on government telecom policy objectives, the effects on new industry players, and the effects on the economy as a whole – particularly the increasing reliance of the services sector and e-commerce industries on telecommunications and IP-based applications to run their businesses. We recommend the addition of several new paragraphs to address these players.

Additionally, in paragraph 1.9, it should be pointed out that with telecom competition spreading throughout the world, PTOs often face the choice of joining the transition to IP technology and applications or losing the traffic and the customers off their networks and service offerings. Consumers increasingly have choice everywhere.

## **2. TECHNICAL ASPECTS OF IP TELEPHONY**

Paragraph 2.3: The statement that “IP Telephony developments seek to imitate the more connection-oriented PSTN circuits” is misleading. IP providers and equipment makers are seeking to emulate and add certain characteristics of the circuit-switched network, such as quality standards and intelligent features, onto the IP networks. This would be a more accurate portrayal of the efforts underway.

Paragraph 2.4: Concert believes that the flavor of this paragraph should be that IP Telephony “adds” certain features of the PSTN to IP networks rather than attempting to “replicate.”

New Paragraph: Concert agrees with the USTIA to add a discussion of SIP.

Paragraph 2.5: We disagree with the phrase “immense complexity of transparent interconnection with the PSTN infrastructure.” Better integration with the PSTN, e.g signaling gateways supporting C7 interconnect, needs to be accomplished -- but the same technology as is currently supported in the PSTN can be utilized for this purpose.

### **Quality of Service**

Paragraph 2.9: Concert does not believe that the alternatives of “implementing quality of service support and increasing available bandwidth” are “based on very different philosophies” Concert believes that a complete end-to-end design of IP Telephony with QoS will utilize both methods depending on network topology.

Paragraph 2.12: The statement that “increasing the available bandwidth is far more practical means of speeding up the Internet than enhancing QoS, because it does not require coordinated action across Internet service providers” is only true when a provider is provisioning IP Telephony over a “private IP network”. Only in this case can the provider makes decisions regarding bandwidth without coordinating with other providers. And because this is true, the next sentence in this same paragraph is untrue and misleading. There is no need for “Internet peering, transit and interconnection” when IP Telephony is provisioned over private IP-based networks, as these private IP-based networks are not interconnecting with the public Internet to transmit IP Telephony. Private IP-based networks carry the call end-to-end and then negotiate a terminating arrangement into the PSTN at either or both ends of the call. We suggest that the last sentence in this paragraph be deleted entirely as it does not apply to discussions on QoS for IP Telephony.

Paragraph 2.13: It is noted that IP Telephony has coincided with massive increases in international bandwidth. It might be worth noting that it has also been coincidental with market liberalization and market competition. Both of these factors have resulted in benefits to the consumers and economies at large.

### **3. POLICY AND REGULATORY ISSUES FOR IP TELEPHONY**

While this section seems to focus on displaying the different regulatory schemes for IP Telephony, it does not identify a set of government telecommunications policy objectives that IP Telephony will affect. As we have previously noted, it would be most useful for the discussion to identify such a set of government policy objectives. The WTPF might then focus on how IP Telephony might affect these objectives. As an initial set, we might recommend the following:

- Universal Service/ Universal Access
- Affordable communications services
- Rate rebalancing
- Technology transfer
- Human resource development
- Growth of the economy as a whole, and the services sector in particular.

Paragraph 3.4: In the second bullet, it is stated that “there are countries that prohibit it, either directly or by inference.” Inference is a matter of interpretation and opinion, and this Report should rest on facts. Thus, any “inferences” should be removed and the Tables at the end of the Report should reflect only facts.

#### **Regulatory distinctions**

Paragraph 3.8: An additional regulatory distinction that should be added to this paragraph is the distinction made between those entities that own network facilities and those that lease them for the provision of services. This distinction is made in licensing criteria and many other areas.

#### **Functional equivalence**

Paragraph 3.19: A policy of “technology neutrality” could mean applying traditional telephone regulation to Internet applications **OR** it could mean allowing marketplace competition to discipline all telephony (provided the “major supplier” has pro-competitive regulations applied per the WTO Reference Paper). However, regulation should not be applied with a complete disregard for technology. A blind policy of “technology neutrality” could have dramatic affects on product substitution and product innovation within an economy. Homogenizing all substitutable products and services and giving them all the same regulatory treatment will tend to dampen new service introduction and throttled product innovation.

For example, if the difference between being regulated, and incurring all the regulatory costs, or being unregulated boils down to delay in the transmission, IP Telephony providers can artificially inject delay into their networks. But consumers will suffer and nobody wins. Likewise, in Figure 1, it is becoming increasingly difficult to define an “ordinary telephone”. There are IP phones on the market that look and feel like “ordinary telephones,” but work directly with IP networks. In attempts to define ways in which to apply traditional telephony regulations to new IP applications, this paper is not only attempting to make fine regulatory distinctions that will be difficult to enforce, but it may have lost sight of the policy objectives regulation should be serving. The objective is not to burden new, innovative industries with regulatory costs, nor is the objective to dampen innovation and technology transfer. What is the objective we are seeking to serve?

### **Impact of IP Telephony on Universal Service schemes**

Paragraph 3.23: We suggest adding the following underlined words to the first sentence in recognition of the fact that IP Telephony is typically provided by small enterprises, “A permissive policy towards Internet Telephony may be designed to encourage the development of the Internet and the development of small and medium-sized enterprises in a particular country.”

### **Special Issues for developing countries**

Paragraph 3.27: The conclusion that developing countries do not benefit directly from a permissive IP Telephony policy is based on a short-sighted view and on an incomplete set of facts. Stimulating increased international calling, whether inbound or outbound, can increase settlements revenues and promotes general welfare. Stimulating a market for small and medium sized enterprises also promotes general welfare and GNP growth. It is time to begin considering the larger picture within the economies of the developing countries – in addition to the single enterprise known as the PTO.

Paragraph 3.28: The first sentence assumes that the governments and the PTOs always have the same objectives, which may not be the case. In the second bullet, we recommend the first sentence be changed to read, “On the other hand, IP Telephony could be viewed as undermining the current pricing structure of the PTO that requires internal cross-subsidization. Thus, rate rebalancing may be required and these issues are politically sensitive.”

Paragraph 3.29: When discussion the issue of *terminating* international calls, it should be noted that choice does currently exist in all markets – competitive and noncompetitive. Competitive market pressures in those markets with active competition require call originators and carriers to seek the lowest priced provider of termination. These market pressures are likely to heighten (not lessen). When making decisions regarding choice of termination provider, price, quality, and capacity perimeters come into play. It becomes almost irrelevant what type of technology is used, provided that price, quality, and capacity requirements can be met. This Report should not assume that IP Telephony is always the cheapest form of termination. Rather than recommending that PTOs spend scarce resources inhibiting market competition and retaining the old-world settlement payments, the Report should recommend that PTOs focus on expanding service offers to their own customers. If we may use China as an example, in Spring 1999, the average wholesale termination rate from the U.S. was about \$0.70. Today with IP technology, the rate is about \$0.10 – a seven-fold decrease. Retail prices to Chinese consumers during the same timeframe fell only by half. And, according to the VoIP case study on China done for the ITU Workshop last summer, the traffic increase was XXXX (cannot access website at the moment). PTOs should spend resources on transitioning to the IP world and on building new service offerings rather than plugging the old dike against impending competition.

## **Convergence and IP Telephony**

Paragraph 3.31: When raising the question of *requiring* all operators, both ISPs and telephone, to interconnect with each other, it should be clearly noted that the WTO (as do most WTO countries) place the requirements for interconnection only upon the “major suppliers”. (“Major suppliers” can be defined as network operators who control bottleneck facilities or possess market power.) The reasoning behind this is that only major suppliers have the ability to distort the market for interconnection. Please include this point in this paragraph and elsewhere in the paper where this issue is discussed.

## **Cross-border issues**

Paragraph 3.35: This paragraph is based on the not-yet-reached conclusion that traditional telephony regulation should be applied to IP Telephony. International agreements should be driven by what is commercially viable. In the IP Telephony world, a number of clearinghouses are offering market-based termination prices for IP Telephony. They are also operating “financial clearinghouses” in a competitive environment -- creating financial netting and payments procedures and protocols for traffic between member companies. Routing is performed by individual Gatekeepers, and this distributed architecture allows maximum flexibility and utilization of network resources. These activities are best left to continue in the private, commercial arena. There is no need for governmental intervention. We recommend deleting this paragraph.

## **4. ECONOMIC ASPECTS OF IP TELEPHONY AND ITS IMPACT ON PUBLIC TELECOMMUNICATIONS OPERATORS**

### **The market opportunity**

As a general comment, there should be some discussion of broadband access in this Report. Consumers cannot actually use IP applications without access infrastructure and technologies at reasonable prices.

Paragraph 4.2: As with all other types of IP traffic, one cannot ascertain the actual source or originating point of IP Telephony traffic. Therefore, the last sentence, stating that the U.S. is the main source, should be deleted – or clearly substantiated.

### **Costs and prices**

While it is unclear whether IP technology is, in fact, a less costly way to transport voice traffic in markets *where prices already reflect incremental costs*. The key issue is price and current pricing structures in the traditional telephone markets.

### **Substitutability**

Paragraph 4.9: In the last sentence, we recommend a clear statement of the motivating factors behind the need to avoid making above-cost settlement payments. It is not just a desire to avoid payment – it is a marketplace necessity to match lower-priced services in one’s home market. Without the ability to lower costs and match lower prices, the enterprise loses marketshare and customers, eventually going out of business to enterprises that have found lower-priced means of terminating calls in other countries.

## **Impact on public telecommunications operators**

This draft Report focuses almost exclusively on the impact on traditional PTOs in developing countries. It should also focus on the impact to consumers and the economies at large, which broader government policies address. There is no doubt that the traditional PTOs in both developing and developed countries are facing transitional issues. These transitional issues include network technology transition as well as rate rebalancing and new service offering issues. But the determining factors for government policy should be what is best for the more general welfare of all members of the society, not just the PTO. We therefore recommend that this entire section of the Draft Report be re-written to focus on **“The Impact on the National Telecommunications Industry and on the Economy”**.

Paragraph 4.15: We do not think that routing calls to mobile phones via IP networks will offer “a solution to bypass these high prices” of termination. Because the last leg of the call must still traverse the mobile network, the mobile network operator still has the ability to charge above-cost rates for terminating these calls. Regulation of call termination prices on mobile networks may therefore be required in “calling-party-pays” markets.

## **5. ASSISTANCE TO MEMBER STATES AND SECTOR MEMBERS: AVENUES FOR INTERNATIONAL COOPERATION**

Paragraph 5.2: We recommend deleting the second question in the second bullet because it has not been explained or supported elsewhere. This creates too much confusion and the conference will lose focus.

In the fourth bullet, this proposal fails to take into account very fundamental attributes of today’s telecommunications industry – increasing competitive pressures and the global scope of the industry. It is critical to give due recognition to commercial incentives and commercial pressures. All commercial enterprises seek to lower their costs through lowest-priced inputs, including lowest priced termination services. Add to this the global scope of the industry and the fact that national regulators can only regulate that which is within their jurisdiction, and this proposal clearly sets up unreasonable expectations. Exchange of information, queries and complaints are already taking place between regulatory agencies. Therefore, we recommend deleting this bullet.

We believe that the fifth bullet has enough substantive material for two bullets. The first issue addressed is that of network technology transition. This is one of the core issues for all network providers today and clearly within the ITU purview. More emphasis should be placed on assisting Members with these types of issues through economic/financial analysis and case studies. The second issue encompassed by this bullet is that of the impact of IP Telephony on the overall economy. This is also a core issue worthy of study in its own right, and therefore deserving of its own bullet.

The sixth bullet suggests a “refinement” of the concept of “technology-neutral regulation.” This paragraph should clearly note that a policy of “technology neutrality” could mean applying traditional telephone regulation to Internet applications **OR** it could mean allowing marketplace competition to discipline all telephony (provided the “major supplier” has pro-competitive regulations applied per the WTO Reference Paper). However, regulation should not be applied with a complete disregard for technology. A blind policy of “technology neutrality” could have dramatic effects on product substitution and product innovation within an economy. Homogenizing all substitutable products and services and giving them all the same regulatory treatment will tend to dampen new service introduction and throttled product innovation. These unintended consequences of a policy of “technology neutrality” would prevent countries from gaining full benefit of the Internet revolution. The way in which this bullet is currently written, it seems to be “putting the

cart before the horse” because the policy objective (which this regulatory concept is intended to serve) has not been clearly enunciated. The policy objective could be technical innovation and technology transfer, in which case this might not be the best regulatory concept to recommend. The Report should seek to clarify the policy objectives first.

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