

INTERNATIONAL TELECOMMUNICATION UNION TELECOMMUNICATION DEVELOPMENT BUREAU

WORLD TELECOMMUNICATION DEVELOPMENT CONFERENCE (WTDC-98)

Document 37-E 27 January 1998 Original: Russian

Valletta, Malta, 23 March - 1 April 1998

For information

Agenda item: 2.0

PLENARY MEETING

Kyrgyz Republic

DEVELOPMENT OF MODERN TELECOMMUNICATIONS AND PROBLEMS OF STATE REGULATION OF TELECOMMUNICATIONS IN NEW COUNTRIES

B. Nurmatov, First Deputy Director, National Communication Agency, Kyrgyz Republic (Bishkek), A. Pavlyuk, ITU/BTD Senior Expert (Moscow).

Introduction

The new countries which appeared after the break-up of the former USSR are experiencing a number of common problems. Some of these are also highly relevant for many developing countries, too.

These problems include:

- 1) Establishment of a legal framework for telecommunications.
- 2) Upgrading or building modern new telecommunication networks.
- 3) State regulation of communications in the context of an emerging market economy.

The example of telecommunication development and regulation in Kyrgyzstan may give an insight into the nature of these problems, and also possible ways of resolving them.

1 Establishment of a legal framework for telecommunications

The existing legal framework reflected a rigid planned economy, in which the whole of the telecommunication sector was placed in the hands of a single authority responsible for sectoral policy and regulation, and for deciding how telecommunications should develop, what enterprise to invest in, and how much.

Accordingly, there were no problems of licensing, type-approval, monitoring of compliance with licences, agreements between operators and the resolution of disputes between them, and so on. Naturally, there was also no effective legal system for dealing with such matters.

[•] For reasons of economy, this document is printed in a limited number of copies. Participants are therefore kindly asked • to bring their copies to the meeting since no others can be made available.

With the emergence of market relations and competing operators, the absence of regulatory instruments to govern such matters is a significant hindrance. Firstly, it introduces uncertainty into the actions of the regulatory authority (which has little real experience of operating under market conditions) and provides many opportunities for corruption. Secondly, the absence of a legislative system creates uncertainty about the future in the minds of operators, which strongly inhibits investment in telecommunications.

Kyrgyzstan's Law on Telecommunications was drawn up in 1994. Having no experience of drafting legislative acts geared to market relations, particularly at the stage when they are just being introduced, it called in international organizations and experts. The draft Law which resulted from these joint efforts separates sectoral policy and regulation, and makes operators economically autonomous. We consider that the assistance provided to Kyrgyzstan by the consultants produced a much better draft Law, which is currently going through parliament.

KGZ/37/1

In view of the foregoing, we recommend that international telecommunication organizations and legal and financial bodies operating in the telecommunication field should pool their experience in solving problems of this kind, so as to develop a mechanism or recommendation with a view to providing systematic, practical and financial assistance for setting up a legal framework for telecommunications. This would benefit not only new and developing countries, but also developed countries, as it would speed up the investment process and reduce investment risk.

2 Upgrading or building modern new telecommunication networks

After the break-up of the USSR the state of telecommunications in Kyrgyzstan could be described as follows:

- Teledensity stood at approximately eight telephone lines per 100 inhabitants, and the switching equipment was decades old, and normally of the 10-stage step-by-step exchange type which was no longer being produced.
- In a country whose territory is mainly taken up by the Tyan-Shan mountains, the radio-relay network for trunk communications and TV and radio broadcasting was in a reasonable state of development, but the radio-relay stations used analogue technology which was hopelessly out of date. It consumed a great deal of electricity, which used to and still does lead to significant problems in ensuring a reliable power supply to radio-relay stations high up in the mountains, most of which are located 3 000 m or more above sea level.
- Kyrgyzstan did not have its own direct access to the international telecommunication network, which pushed up tariffs for international telecommunication services and led to delays in setting up international calls.
- Obsolete technology and the absence of direct access to international telecommunication networks has been a feature common to the majority of new countries.

It is well known that the level of development of a country's telecommunications has a direct impact on its economy. For this reason, one of the first loans Kyrgyzstan contracted was for modernizing its telecommunications. A loan of \$US 27 400 000 received from the World Bank and the European Bank for Reconstruction and Development was used to:

- build an earth station (standard A) for satellite communications;
- create a countrywide digital radio-relay network;

- 3 -CMDT98/37-E

- partly replace obsolete analogue switching systems by digital switching equipment in the capital and major cities;
- set up an optical fibre communications system around the capital, and partly replace cable plant in regional centres.

This project has now been completed, and Kyrgyzstan today possesses and operates a modern international and trunk communications network. Further development work is now under way at regional and district level.

Analysis of Kyrgyzstan's experience in modernizing its telecommunications has shown that more problems were caused by technical considerations than by funding. It is fairly easy to obtain credit for modernizing telecommunications, since a reliable return is guaranteed. Moreover, investment in telecommunications can also be attracted by, for example, selling a stake in TELEKOM to a strategic investor. There are thus well-developed methods at hand for funding the modernization of telecommunication networks. This is the experience not only of Kyrgyzstan, but also of other countries.

3 State regulation of communications in the context of an emerging market economy

The following factors are vital to the successful introduction of market relations and competition:

- separation of the regulatory and sectoral policy functions;
- conferring sufficient powers on the telecommunication regulator to carry out tasks such as licensing, type-approval, checking compliance with licences and type-approvals and inspection of the telecommunication network, including spectrum management and monitoring;
- ensuring that the status of the regulatory agency allows it sufficient independence from the government authority in charge of telecommunications and from telecom operators.

This is what a telecommunication regulator requires in order to cope with the rapid increase in the number of independent and competing operators.

In Kyrgyzstan an independent regulator has been set up by presidential decree - the National Telecommunication Agency - which is not directly subordinate to the Ministry of Transport and Communications. This agency has been given sufficient powers to allow it to regulate effectively.

The result of state regulation should be the assurance of unhindered but well-balanced development in all areas of the country's telecommunications, together with the guarantee of high-quality telecommunication services. The importance of these factors for a country's economy and security is widely recognized.

Various types of radiocommunication services are now developing rapidly. A large number of independent operators are emerging in the various radiocommunication and broadcasting services. In what are still unsettled and raw market conditions, they often try to use non-approved, non-standard equipment in a rush to make quick profit. With the increase in satellite systems for various purposes has come an increase in the number of bands used simultaneously by different radio services.

In the new countries this transition period has also seen the appearance of a large number of illegal transmitters. These often use equipment which generates unacceptable electromagnetic interference to radio stations in operation, including stations used for tasks of national importance.

Under such conditions, the regulatory agency can carry out its tasks of controlling the use of the radio-frequency spectrum, checking compliance with licences, and thus ensure the reliability and quality of national radiocommunications, only if it has a modern monitoring system and network. Therefore, the technical task of establishing a monitoring system and network becomes a highly important state regulatory function, which can advance the establishment and strengthening of market relations in the country.

The creation of a modern monitoring system and network is currently a serious and practically insoluble problem for the telecommunication administrations of new and developing countries.

Unlike ordinary telecommunication equipment, which is developed by a large number of firms under keenly competitive conditions and produced by large corporations, and is therefore relatively cheap, monitoring equipment is specific and often requires precision engineering. As a rule, such equipment is produced by small enterprises in response to individual orders from a limited number of companies which specialize in this type of engineering. Consequently, monitoring equipment is relatively expensive. However, national telecommunication operators which have access to foreign capital (a widespread occurrence) may sometimes be in a position to make some form of investment.

On the whole, expenditure on monitoring does not bring direct profit, especially during the initial development stages, which means that neither companies nor banks are interested in funding such projects and credit for these purposes is very hard to come by. Moreover, the State budget in very many new and developing countries generally operates with a large deficit. The government, if it has the opportunity, gives first priority in its funding allocation to agriculture, industry, solving environmental problems, dealing with the consequences of natural disasters, etc. It simply has no money to set up a monitoring system and network, despite its awareness of the importance of such an undertaking.

How can this problem be solved?

At the ITU Radiocommunication Assembly held in Geneva from 20 to 24 October 1997, an important report was submitted entitled ITU-R SM.2012 "Economic aspects of radio spectrum management". The approach discussed in that report can be used for evaluating the cost of a radio-frequency resource. The cost of monitoring, which serves to ensure interference-free access to the spectrum for users, accounts for a certain proportion of the cost of this resource. Using this approach, the regulatory agency which carries out the monitoring can pass on the cost of the establishment and gradual development of a monitoring system and network, together with the amortization of monitoring equipment, etc., in one-time and annual fees levied on licensees for the provision of radiocommunication services, in other words monitoring expenses can be recovered. Other promising mechanisms described in the report include using the proceeds from the auctioning of licences.

KGZ/37/2

It is therefore very important that new legislative instruments relating to telecommunications at least provide that a substantial part of the above-mentioned one-time and annual fees, and also of the proceeds of auctions, etc., should remain at the disposal of the telecom regulator (for example, in the form of a special fund of the constitution of a spectrum management and monitoring infrastructure), and that it does not all become part of the State budget.

If the establishment and development of a monitoring system and network are to be funded from short-term loans, in the same way as telecommunication development, then in order to generate returns for loan repayment, the annual fees levied on licensees would have to be increased

- 5 -СМДТ98/37-Е

significantly, which would place an insuperable burden on telecom operators, and ultimately result in a steep rise in the cost of telecommunication services. That, in turn, would hamper telecommunication development, and ultimately national economic growth, and could also heighten social tension.

In order to prevent this happening, a sizeable period must be allowed for a repayment of credit, which must take the form of soft loans, as it is being granted for activities which do not generate profits.

KGZ/37/3

We should like to recommend that international financing organizations such as the World Bank, the European Bank for Reconstruction and Development, and so on focus their efforts less on funding for telecommunication development as such, and more on funding for the development of monitoring systems and networks, which is one of the key problems to resolve on the way to establishing market relations in a large number of countries.

Conclusion

Experience shows that rapid development of the important telecommunication sector in new and developing countries depends on:

- 1) Effective modernization of telecommunication networks, i.e., terms of loans (if loans are taken out), fair and non-discriminatory tendering for network development projects, a privatized telecommunication sector, potential for attracting strategic investors, etc.
- 2) A legal framework designed to cope with a market economy, competition, and the relationship between all participants in the telecommunication market.
- 3) An optimal communications management structure, and a regulatory agency which is able to check compliance with licence conditions and with the requirements for use of the radio spectrum; this ability depends to a large extent on the availability of a modern monitoring system and network.

International organizations and private companies have extensive experience of the first type of investment, i.e., in telecommunication development, including radiocommunications. Systematic assistance is sometimes given for the establishment of a legal framework. However, it is highly important that systematic assistance of this kind is also extended to the regulatory agency for the establishment of a monitoring system and network, since it needs an effective tool for monitoring the quality of telecommunication services and users' compliance with the rules governing spectrum utilization.

KGZ/37/4

On the basis of the foregoing, we suggest that international telecommunication organizations and international financing organizations should examine the whole range of issues relating to the granting of loans on favourable terms and the provision of assistance in the form of grants, with a view to enabling new or developing countries to establish or extend their own monitoring systems. The importance of this matter at the current stage of development of so many countries is such that we believe the international financing organizations would be well advised to give it high priority. This would meet the concerns of the new and developing countries, as it would allow them to speed up significantly the process of developing and upgrading their telecommunication networks, and would also serve the interests of the developed countries, which are looking for new telecommunication markets.