tele Phare

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Managing scarce resources

The radio spectrum is an increasingly scarce, yet vital, resource. It is the object of competing claims as radio-based fixed and mobile communications services expand and as broadcasting and communications technologies converge. The resulting problems are common to both EU countries and their eastern neighbours. The available spectrum needs to be managed efficiently and monitored carefully to avoid harmful interference. The Phare multi-country telecoms programme has funded several projects to improve management and monitoring in central and eastern Europe where previous management systems have been wasteful and monitoring equipment out-of-date. We look at two recent projects in the present issue of TelePhare. One conclusion that can be drawn from the two articles is that there may be limited common ground for joint solutions to these problems except perhaps in some specialised technical areas like developing a standard interface for management systems. Part of the problem is that while all Phare countries are embarked on reform and liberalisation they are at very different stages in the process. This issue of TelePhare continues its examination begun in the previous issue of promising new business areas for postal administrations in Phare countries. We look at the results of a feasibility study for the creation of a postgiro system in Romania.

The Editor

In this issue

Spectrum management and frequency monito

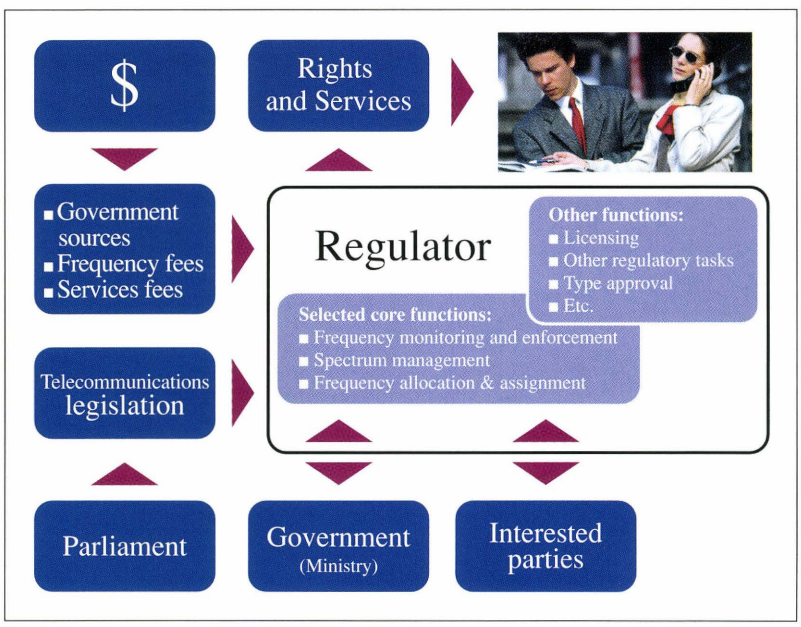
All 13 beneficiary countries took part in a major year-long project under the Phare Multi-country Progran Despite the specialised technical nature of the subject, much of the project was devoted to examining ho rationale for this is to establish the kind of independent national regulatory authority (NRA) as a public Management International, Copenhagen, which ran the project.

The regulatory system for radio-based communications, like the overall national telecoms regulatory regime itself, is perceived as part of a wider political, legal, and business environment.

Promoting regulator independence does not mean, however, that the state has to abandon all influence on political issues affecting telecoms sector development. There is and will remain a political dimension to regulation. What is important is to establish a clear and unambiguous division of responsibilities and tasks between the political level (i.e. the relevant government ministry) and the regulatory level (i.e. the NRA).

On the one hand, the political system must provide the legislation and the parliamentary control under which the regulator works. On the other hand, the practical realisation of day-to-day NRA operational independence – if properly arranged – can provide support for the principles of democracy and good governance:

Financial independence is one effective way for the NRA to achieve operational independence. The necessary income for the National Regulatory Authority can be raised by means of user fees and charges, since the telecommunications sector in central and eastern Europe (as elsewhere) is well able to pay such costs.



The development of modern regulatory administrations in the CEE countries depends on a number of factors which differ from one country to another. Although the modernisation process has started throughout the region, progress by 1998 still varied widely in individual countries.

The project looked at five key issues facing the creation of National Regulatory Authorities and recommended that the priorities be set out as follows:

1. Establishment of the legislative basis
2. Settling the institutional structure
3. Deciding the financial possibilities
4. Developing the human resources
5. Acquiring the necessary technological tools

The way each participant country addresses these priorities sets the stage for its approach to modernisation. The SMFM project has attempted to investigate these approaches. The apparent focus in some countries on priority number five may hide the fact that the entire process could be smoother, if more attention was paid to an early resolution of the problems connected with priorities two and three.

All participants adhere to the international guidelines for regulatory practice issued by the CEPT and the ITU, but actual implementation has gone much further in some countries than in others. No two of the 13 countries seem to have the same regulatory situation today, even if some of them began the process from the same point of departure (e.g. the Baltic countries).

Obviously, the impressions gathered during the project represent a snapshot in time, i.e. the situation at the time of fact finding in the first quarter of 1998.

The main common observations indicate that:

- the professional regulatory staff has generally a good knowledge of new targets
- the process of regulatory change risks getting lost among other change processes
- the transborder dialogue between neighbouring administrations is weak and generally based on personal contacts only

ring in central and eastern Europe

ıe to analyse problems and identify solutions concerning spectrum management and frequency monitoring. to develop regulatory institutions, and to define their tasks, their tools, and their financing options. The rvice body in line with practice in the EU member states. This article is by Ole C. Feddersen of Andersen

- the dialogue between different sectors within national administrations is also weak. The dialogue between the regulatory body and the ministry of finance needs strengthening in many cases.
- the potential (and current) level of collected fees and charges could in most of the CEE countries be sufficient to cover the regulator's expenditures (provided the correct allocation and transfer procedures are put in place).

The observations confirm the feasibility of establishing the regulator as a financially independent body, with the realistic possibility of generating a surplus (i.e. a net income for the State).

While a lot of attention is focused on the respective rights and obligations of ministries, regulators and telecoms operators, the regime whereby the regulator can finance his recurrent costs and investments is underdeveloped in many cases.

The legal status of the regulator is in most cases clearly defined, and, as a general rule, the more autonomy the regulator has, the better positioned he is to take advantage of extra funding sources in the form of direct loans and leases. Such external financing could be obtained from commercial or other sources on the basis of a viable business plan. However, back up by a government guarantee of some kind (typically from the ministry of finance) is needed, when the regulator has no independent legal and financial status.

The project therefore provided an opportunity to focus on the requirements for a convincing business plan and the fundamentals of how to prepare one. The participants actually used as case studies an exercise concerning the establishment of a business plan covering their own national regulatory activities.

The draft plans produced show a modernisation process to be finalised in the different countries between 2000 and 2006. The estimated cost of modernisation totals about USD 100 million when the contributions from 11 of the 13 countries are added together, but the figures reveal large differences in cost level from country to country. The size of a country alone is not enough to justify the differences. They also depend on the scope of the modernisation process, its current status, and the planning approach which was applied by each country.

It's not their problem if they are using a scarce resource

Suggestions made during the project for several countries to cooperate in pooling funds for investments and common purchasing to obtain economies of scale met with little enthusiasm. The practical problems for an approach of this nature seem insurmountable because of the limited dialogue between countries on the one hand and the differences in time schedules and in progress to date of national modernisation programmes.

In general, the regulators of the CEE countries have expressed a preference for national solutions based on self-financing. ■■

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Developing a standard interface for spectrum r

Despite the different national approaches to spectrum management highlighted in the previous article, t radio communications data and frequency management software is one such area. The Phare multi-c common tool to exchange data and software between national spectrum management systems. The pro risk of harmful radio interference. Robert Pastor of Cril Ingénierie, Paris, reports.

The P-Interface software corresponds to a virtual database server which allows its clients access, in a transparent way, to a set of underlying databases. As participants in this 12-month project, 11 countries in central and eastern Europe plan to implement the P-Interface layer to exchange data and software among each other.

One of the major benefits of the P-Interface is to enable the same compatibility calculation programme to be used by different administrations. A compatibility calculation software developed for one administration will be portable to all other administrations. In other words, an administration will be able to apply its own compatibility software to data received from a foreign administration and also to run a compatibility software programme received from the foreign administration in its own environment. One example of this common compatibility software is the harmonised calculation method (HCM).

The P-Interface will present a unique application programming interface, allowing the certification of compatibility software. In this way, the software development burden could be shared among participating administrations.

Computer assistance will ensure that the exchange of radio communications data is complete and consistent. Direct data exchange between administrations will shorten the coordination process with the final objective of facilitating the development of radio-based services and reducing interference risks.

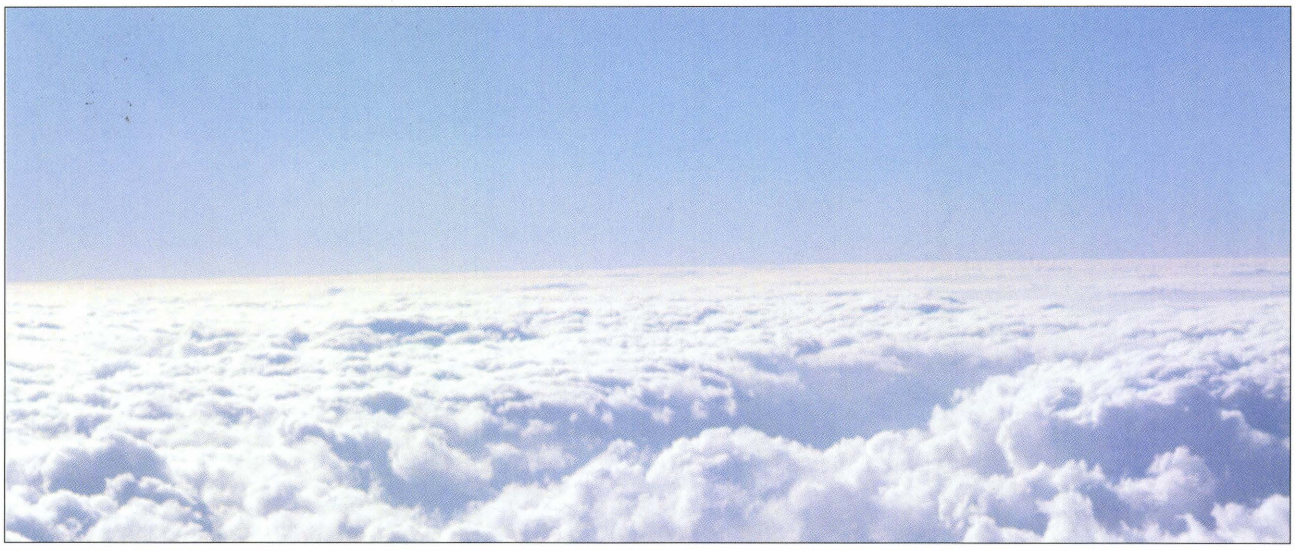
The proposed technology is based on the client/server concept where the relevant data in national spectrum management systems will be accessible via server services. With a standard interface to the server, data can be seen as being placed in a container with a transparent means of accessing it. The internal data structure or the means of data storage therefore become irrelevant and invisible for the client application.

The principles of the P-Interface offer a harmonised approach for the following:

- Utilisation of a unique data dictionary
- Definition of a common radio communications database structure
- Encapsulation of native database
- Utilisation of a common map server
- Data exchange support

Data dictionary: One of the main problems in data exchange is the unique identification of data elements. Data elements used by the P-Interface will be those defined by the ITU's Radio-communications Task Group. Every administration will be able adequately and clearly to identify frequency management information.

Common database structure: Each data element will be allocated as a database attribute to a radio communications entity managed by the P-Interface. The database structure will integrate the latest results of the



The airwaves are more crowded than you think

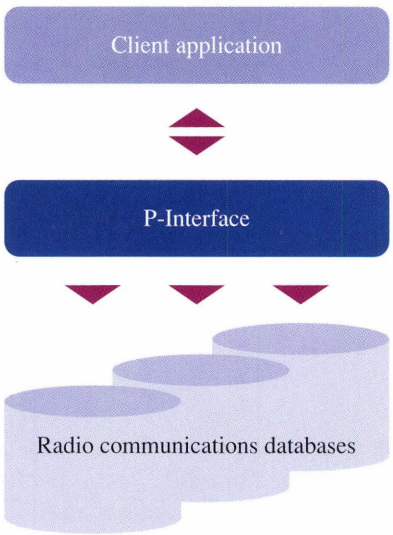
anagement systems

re are practical areas where transborder cooperation is possible and beneficial. The ability to exchange ıntry project described here looked at the development of a standard interface (the P-Interface) as a t is a contribution to the wider goal of facilitating the growth of radio-based services and reducing the

The radio spectrum did not need much management in the early days

ITU task group and could be adapted to take account of the needs of compatibility calculations.

Encapsulation of native database: The P-Interface will encapsulate the user's database in a way that the client sees the "Standard P-Database" which contains relevant information for frequency coordination and compatibility calculations. The P-Interface will be capable of encapsulating a number of data containers in one database session. In doing so, all legacy applications will be preserved.



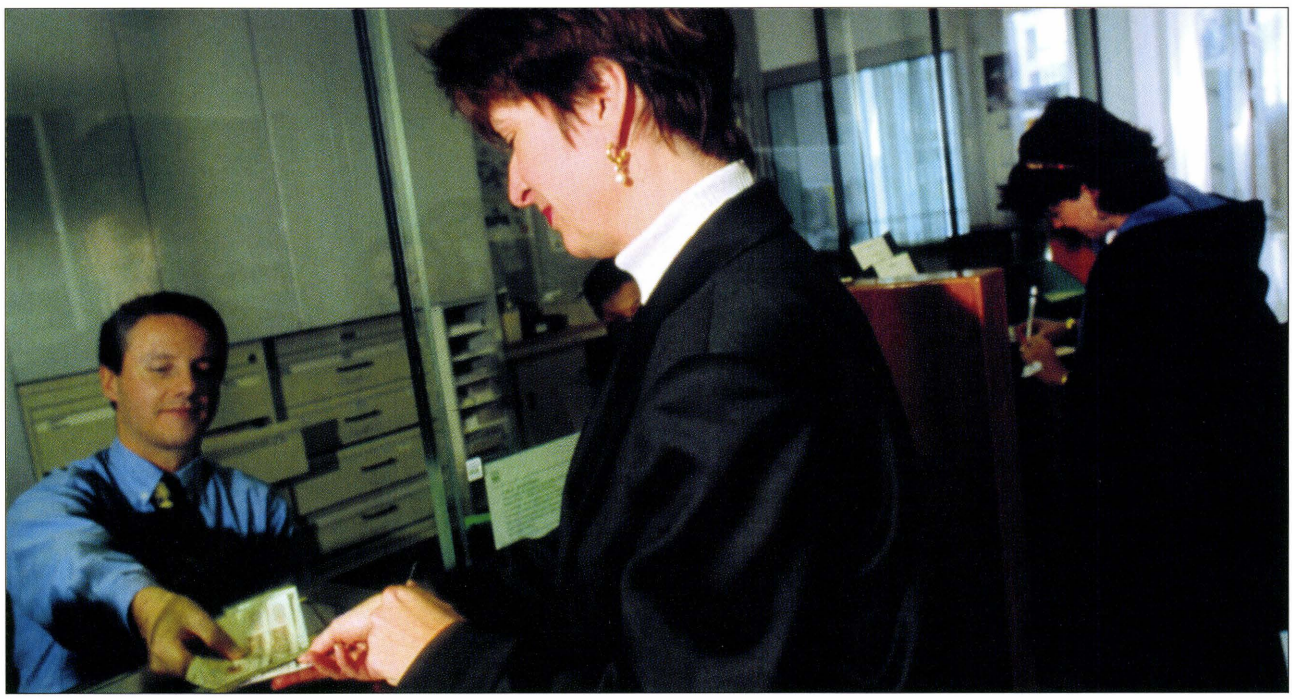
Common map server: Diverging coordinates systems are in use among participating countries. To solve this problem, the P-Interface will expose a common interface to digital terrain data. P-Interface has retained World Geodetic System 1984 (WGS84) as the reference coordinates system. P-Interface will offer conversion services between native coordinates systems and WGS84.

Data exchange support: In the proposed concepts, data exchange becomes a simple act of sending a transport container to a foreign administration. Transportation of the container will be based on the Internet. A typical scenario is that data is forwarded in the transport container. The container is connected to the user's database. On the client side of the P-Interface, no distinction is made as to whether a particular data element is taken from the transport container or from one of the local containers.

In summary, the problems addressed by this project were complex because of the various environments already existing among participating countries. The scope of the project was multi-disciplinary requiring solutions to problems such as frequency management, advanced computing methods, heterogeneous database access and computer system architectures. ■ ■

A Postgiro system for Romania

By Stanley Underwood, Postplan Systems Limited, London



Postgiros are never without customers

Establishing the feasibility of a Postgiro requires on-the-spot in-depth research into a welter of financial, economic and social factors in the country concerned – in this case, Romania. As it prepares to adjust to the requirements of EU membership, Romania is currently characterised by high inflation, low growth, reformist policies, market liberalisation, privatisation, meeting IMF targets and much more. These factors can affect the successful implementation of a postgiro system.

During the course of the project, detailed discussions took place with directors and senior managers of Posta Romana regarding existing post office counter services, mail handling and delivery, and IT infrastructure, and their ability to support a dynamic and demanding new business. Meetings were also held with decision-takers and persons of influence – including the National Bank of Romania – to review existing payments systems and the legal and licensing requirements for a postgiro. Senior representatives of the ministries of finance, communications, labour and social welfare were questioned to assess their attitude towards a new postgiro but also to persuade and influence their thinking as possible users of the system.

The ministry of labour and social welfare is responsible for 85 million pension payments a year, which are delivered to individual addresses where they are paid out by the local postman from a bag of money he carries with him.

Among the biggest potential business users of a postgiro system, capable of generating high volumes of cash transfers, bills, employees pay accounts, and the like, the most important are probably the public utilities: telecoms, electricity, gas and public transport. RomTelecom alone employs 54,000 people and issues about 60 million invoices a year.

Meetings with these organisations served a dual purpose:

- To calculate realistic forecasts of demand and utilisation of a postgiro system
- To create a receptive environment in which postgiro business development managers could lobby for business.

Discussions with computer companies provided an assessment of their capabilities and capacity to analyse the needs of a postgiro system in consultation with a postgiro specialist, and to design software requirements.

Talks were also held with business and employers representative bodies such as the Romanian Chambers of Commerce and Industry and leading exporters and importers. These meetings with senior people in positions of influence covered a variety of purposes: educational, market research, and climate-creation. They were also used to develop an opening for press and media activities in membership publications which

can be crucial in stimulating support and creating a receptive climate with potential postgiro clients.

In order to assess possible sources of capital funding, meetings also took place with the European Bank for Reconstruction and Development (EBRD); ING Barings (owners of the Netherlands Postbank) and other financial institutions.

Comparisons were drawn between the development of the mature postgiro systems of western Europe and the potential Romanian system in order to benefit from the experience of the former and to avoid repeating expensive mistakes. Throughout the three-month study period, close liaison was maintained with the Phare Programme Management Unit (PMU) in Bucharest whose guidance and local knowledge proved invaluable.

The final *Feasibility study for the creation of a postgiro service in Romania and capital funding supplement* contains 20 major recommendations, 15 appendices and numerous other suggestions, which will ensure the best possible launch conditions when the time comes.

Among its main recommendations, the study makes the following proposals:

- Posta Romana formally launch the planning phase for the establishment of a Postgiro
- A postgiro project management team be established
- Posta Romana appoint three business development managers to train in postgiro facilities and services and marketing skills
- A business plan be developed for the postgiro
- Submissions be prepared for presentation to potential funding institutions
- Tenders be prepared for the provision of hardware and software for the system

Since the study was presented to Posta Romana in the spring of 1998, the planning phase has effectively been launched and the framework has been set for the rest for the project to get under way as soon as Posta Romana is ready to take it further. ■ ■

The Phare 1997 multi-country programme

The European Commission is in the process of finalising the contractual arrangements for the 1997 multi-country programme for telecommunications and posts. This is the last annual programme of the current series. A number of contracts have already been awarded. The total value of the 1997 programme exceeds 4.4 million euros, fairly evenly divided between telecoms and postal projects. The list of the principal projects is given below.

Project title	Contractor	Euro value	Duration
A. Telecoms			
Telecommunications tariffs	Under negotiation with contractor	445,271	12 months
Telecoms quality of service	Eurostrategies	249,865	14 months
Spectrum management practices	Intercai	399,452	15 months
Cost allocation: telephony services (Part II)	Eurostrategies	249,975	18 months
Regional telecoms atlas	Pre-qualification launched on Internet January 7th 1999	600,000	12 months
B. Posts			
Training of senior postal staff	Under negotiation	346,071	12 months
Cost allocation: postal services (Part II)	Under negotiation	400,000	20 months
Key account management	British Postal Consultancy Services	349,127	20 months
Quality of service at postal counters	Nepostel	348,098	12 months
Harmonisation of international money tranfers	Under negotiation	400,000	20 months
Hybrid mail services	Under negotiation	350,146	20 months

In Brief

Phare organises fora on EU legislation challenge

The Phare 1997 multi-country programme for telecoms and posts is organising three policy fora on EU legislation for accession countries and the other Phare beneficiaries. The fora provide a platform for a regular dialogue between the Commission and senior officials from the CEECs with an aim of identifying solutions to common problems of restructuring and upgrading the sector as well as accelerating the process of adapting CEE legislation to that of the EU. The first – devoted to telecoms – took place in Brussels on December 14-15th 1998. A second forum on postal legislation will be held in June 1999 with a third and final forum on telecoms scheduled for December 1999.

EU members could do better

The European Commission has published its fourth report on the implementation of EC telecoms legislation by the present Member States. The report, issued in December 1998, examines the situation concerning the creation of national regulatory authorities, licensing regimes, interconnection, universal service provision, tariff and accounting systems, numbering, frequency allocation and rights of way. It concludes that the implementation process, whose final phase began in January 1998, is well underway although corrective action on a number of points is required by several Member States.

Distance learning

The European Training Foundation in Turin has launched a study into the role which information and communications technologies (ICT) will play in supporting the future development of open and distance learning (ODL) in the Phare countries. Participants are the 10 accession countries of central and eastern Europe plus Albania. The project will run from January to December 1999. The aim is to produce a robust planning and implementation platform for decision-makers at national, regional and institutional level concerning the ICT strategies best suited to the medium and long-term development of ODL. ■■

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