

International Co-operation, East - West Exchange of Information: Problems, Pitfalls, Outlines for the Future

T. K. Todorov,

International Centre for Scientific and Technical Information (ICSTI), USSR

1. Introduction

Transborder data flows have taken place through a variety of channels: hardcopy documentation, magnetic tapes, optical discs, telecommunication networks, etc. In each case the importance of these flows lies in the central role of information in decision-making, identifying alternatives, reducing uncertainties and particularly in the process of scientific and technological development.

Out of the totality of transborder data flows two principal categories can be distinguished: publicly and non-publicly available flows. The latter are internal to institutions and thus do not involve market transactions.

The recent advances in the micro-electronic revolution, and the merging of computer and the telecommunication technologies on the one hand, and the growing demands for information supply and processing on the other, have resulted in the rapid development of computerised information systems and computerised information flows, both within and between nations for both categories of flow.

We can consider now that a great number of specialists use personal computers. By these means they have access to printed information from all over the world. We can consider now that there are no serials which are not computerised or at least not abstracted or indexed through the databases. The number of serials which are processed full text by the computerised information systems and ones which are recorded on optical discs continuously grows.

All methods of collection, storage, processing, retrieval and dissemination of documents accelerate the transborder data flows (TDF)

between nations, including West and East European countries.

2. Organisation of STI Services in East European Countries Until 1989

For all East European countries up to 1989 the distinguishing characteristics were the continuous development and improvement of their national STI systems. Every one of these countries, depending on its own specific national structure, had its own state hierarchically structured STI system. The building, implementation and development of these systems was completely based on the limitations imposed by the State budget.

The most complicated infrastructure was that of Soviet State STI system, which has four levels. On the first and top level are 12 All Union Institutes for STI (UNITI, INION, UKP, UCP, UNTI Center etc.), on the second level are 90 central branch information organs; on the third 14 republics and 113 territorial organs; and on the fourth approximately 9000 STI organs at Scientific Research Institutions, enterprises, plants, firms and others. The methodological management body of the Soviet State STI system is the Soviet State Committee of Scientific and Technics. The main construction principle of the Soviet State STI System is centralised processing of STI by the kind of documents and specialisation during their processing in accordance with requirements of the branches and territorial regions. All Union STI Institutes on the first level in general have their own publishing houses, together with computers and appropriate information equipment.

In the East European countries the National STI Systems were built up on three levels: central information organ, branch information organs and,

on the third level, STI organs with the scientific and technical research institutes, enterprises and so on. In all these countries were developed networks of scientific and technical libraries the management organ of which is the Central State Public or Scientific and Technical Library.

The central state information institutions and libraries in relation to all other information organs or libraries played only a methodological role. This role consists of organising training courses and seminars both for users and information specialists, creation of the general conception of STI development and centralised distribution of some information resources (for example: subscriptions, for West European serials; the use of databases accessed from West European information centres such as DATASTAR, STN, QUESTEL, PERGAMON and so on).

3. International System for STI (ISSTI)

The member states of the CMEA (Council for Mutual Economic Aid) created an international system for STI with two main goals:

- a) to improve the satisfaction of the information needs of the participating countries;
- b) to achieve compatibility of all the national systems for STI with a view to continuous enhancement of them all.

ISSTI is built up on the basis of co-operation between the national systems by means of creating the international information branch and specialised sub-systems and the activity of the International Centre for STI (ICSTI) in Moscow as well. The fundamental components of ISSTI are its two sub-systems - the International Specialised Information Systems (MSIS) and the International Branch Information Systems (MOSNTI). The ISSTI structure was set up in 1972 when the first MOSNTI and MSIS were established. Up to now, five MSIS, twenty three MOSNTI and two international information services have been built up in ISSTI. Countries interested in the establishment and the development of the sub-systems and services of the ISSTI participate in them through their authorized national bodies. Usually the authorized national bodies are the national branch or central information organs corresponding to the sub-systems of MSIS or MOSNTI. In fact, more than 200 national

information organisations and one international one, ICSTI, participate in ISSTI.

To be more clear, we simply will mention some of ISSTI sub-systems:

a) MSIS sub-systems

- MSIS-NIR for research project and dissertations
- USPI - patent information
- USIS-PK - industrial catalogues
- UISOD - published documents
- MARSIS - register of CMEA - country's serials

b) MOSNTI sub-systems

- MEDINFORM - medicine
- INFORMCHIM - chemistry and chemical technology
- INFORUOOS - environmental protection
- INFORMASH - mechanical engineering and so on.

The information products and services, provided as a result of the collaboration between the authorized information organs in the sub-systems of ISSTI, are the following:

- processing and distribution of databases;
- information services in SDI and retrospective modes;
- preparation and printing of information publications (bibliographies, abstracts and surveys);
- provision of copies of the original documents.
- The development of each MSIS and MOSNTI is different. Some of them have one or more databases some of which are processing online and others only in batch mode. There are sub-systems which are not computerised at all.

Following developments in electronics, computers and telecommunications some central information institutions built up computerised information centres for processing and running databases. Such centres are UVTEI (Czechoslovakia), CISTI (Bulgaria), VINITI, INION, GPNTB, ICSTI and some others. All these centres are linked within telecommunication networks and the databases are accessible by all member countries of ICSTI including Cuba, Vietnam, Mongolia and North Korea. One of the biggest centres linking them is ICSTI, on which are running more than 20 databases, mostly the

databases of ISSTI (USIS-NIR, MSIS-PK, MOSNTI in the field of chemistry, mechanical engineering, steel industry, energy, coal industry, environmental protection and so on). On the ICSTI computer centre are running databases INIS (IAEA), Standards (ISO) and some others. The external disc memory of the ICSTI computer is 10 GBytes and the used terminal hours for one year are 7-8000.

It's essential to point out that the databases running on the computers in East European countries are placed at the users disposal through a fixed weekly timetable. In other words, databases are not accessible everyday.

4. International Centre for Scientific and Technical Information (ICSTI) Until 1988

Founded in 1969 under the provisions of an inter-governmental agreement, ICSTI pools together efforts of Bulgaria, Cuba, Czechoslovakia, DDR, Hungary, PR of Korea, Mongolia, Poland, Romania, USSR and Vietnam in developing national information industries and information co-operation.

Until 1988 ICSTI was a non profit organisation with the main tasks as follows:

- Scientific and methodological provision of the International System of STI
- Scientific research works and projects in information technologies
- Information services for users of all member countries

The budget of ICSTI was organised only on the base of member countries dues, which from other side were in accordance with the member countries share in trade participation into CMEA.

5. East - West Transborder Data Flows up to 1989

International flows of data services are largely a statistically unidentified category due to the specific nature of the activities involved which, unlike the trade of goods, cannot as a rule be registered at the national borders. The same applies to the CMEA countries, which usually did not collect and consequently did not publish relevant statistics.

It was generally believed that East-West transborder data flows were characterised by a low volume and considerable asymmetry : the Western countries were both the main producers and exporters of the said services, whilst CMEA countries were importers.

Such a situation was a result of three principal factors: First, data infrastructure and data facilities in Eastern Europe were at a relatively low state of development. As pointed out before it was mostly based on old, outmoded technologies which were not suitable for modern means of communications. In recent years, however, the situation started to improve and the relevant infrastructure for online connections is being expanded.

The second factor determining the low volume of East-West data flows was a relatively low volume of trade and capital linkages between the East and West.

The third and most important factor was the strategic export control measures of the USA and of the other NATO member countries and Japan. Originally established to control the export of products of strategic and military importance to the socialist countries, it shifted the focus of its concerns to data and information supply.

6. The Political Changes in East European Countries

With the appearing of M. S. Gorbachev on the political arena, in the USSR and later in other Eastern countries there began the world famous PERESTROIKA. At the end of 1989 all European socialist countries (except Albania) completely refused the socialism as a way of community development. In fact this means a turn of 180° for all of them.

In parallel with the political changes which pass through very difficult polemics and disputes, meetings and demonstrations, the process of reforms and decentralization in economics is directed to the market-oriented economy. Reorganisation in these countries proceeds in different ways and on different time-scales. In my personal view, this period will be slowest and longest in USSR.

Here I would like to concentrate your attention only on the processes regarding STI.

First of all, all national STI systems and ICSTI as well, were depending upon the state-command-administrative apparatus. This apparatus is in process of being dismantled.

All organisations and institutions seek to be self-financing and self-accountable. Staff reductions mainly in Poland, Hungary and Czechoslovakia have impacted most of all on the information organs at the lower levels. It is supposed that the information institutes at the top level are more stable, because these organisations are administratively independent units, but in spite of that the Central Information Institute in Poland is in difficulties and the budget of Czechoslovakian Central Institute is reduced by 50%. Only the organisations and institutions which have the possibility of existing in the conditions imposed by market-oriented economies will continue to develop. That is why new firms have started to appear in Poland, Hungary, USSR and Bulgaria. These new firms offer to users mainly business and social information.

Up to 1989 the marketing of information products and services did not exist at all. Let's take one example - the information services of users in Czechoslovakia, Bulgaria and USSR through databases accessible from West European countries is done only by the government-appointed organisations: in Bulgaria - CISTI, in Czechoslovakia - UVTEI and in USSR - UNIIPAS. These organisations monopolized this information service. Another example is that of publishing houses. Earlier, these houses published only those serials permitted by the various governmental commissions. Now the situation is changing. But the paper deficit, for example, creates a new problem and the prices of published products starts to rise.

The other very big problem which is long-standing, but now arises more readily is the convertability of East European national currencies. Up to 1989 all convertible currency was distributed by the government depending on needs. Now the tendency is for the currency to be with the organisations which earned it. But a lot of organisations including publishing houses and information services cannot earn foreign currency. To find a way out of this situation some organisations in the USSR buy hard currency by

auction. Some others conclude contracts on a compensation basis. The problem now is not the establishing of a firm nor its registration but in the taxes, which this firm is obliged to pay.

Joint venture organisations, are a popular new form, they face much the same problems as in the establishing of firms. The rules make them sometimes unprofitable for participating organisations.

Speaking of pitfalls, we have in mind the instability of East European information markets in relation to production and business, a frequently changing tax system for the producers of information services and products, instability of the system for "community information" due to frequently changing criteria defining the usefulness of information and, at the last, lack of a mechanism of defining the real price of the information product.

The perspective in developing TDF and in establishing contacts between East and West firms must involve the creation of Associations for Business collaboration and Associations of Information organs designed to produce databanks using the intellectual resources of Eastern countries and the technologies and techniques of the West. This could lead to the establishing of networks for the mutual distribution of information.

7. ICSTI AFTER 1988

ICSTI at the beginning of 1988 changed its politics and strategy. Now ICSTI is a completely self-servicing and self-accountability organisation. It is a profit-making institution with the status of an international organisation implying associated immunities and privileges. The membership is open. The fixed tax for membership is \$1500. The trends are towards associated membership of firms and companies. FAXON for example is already an ICSTI member. What are the main tasks of ICSTI now?

1. To produce and distribute information products and services which promote its politics of self-servicing.
2. The politics of membership to be directed to all organisations, firms and companies which have an interest in collaboration and in making profit from information.

3. To develop new forms and methods promoting the increasing international role of ICSTI.

In accordance with these tasks ICSTI have started to create new databases.:

- for research reports and doctoral theses in English
- Data Bank: Soviet modern industrial technologies which is designed to be compatible with the UNIDO Technology Supply Data Base.

ICSTI started to prepare and publish some new analytical studies such as:

- Trends in development of mineral and raw materials in the USSR
- Joint ventures in Soviet economy: outlook for the future
- Supply and demand in the marketing of consumer goods
- R & D management and control in East Europe and so on.

A new form of promotion for increasing the international role of ICSTI is in organising international conferences such as the First Online Conference East-West for business and STI last year. A second one will be in Moscow next year on 8th-13th October.

At the end I would like to mention that there is a list of possible directions for co-operation between ICSTI and Western partners. The main topics of this list are:

- Jointly preparing and publishing analytical publications and reviews
- Jointly creating new databases
- Joint evaluation of information technologies
- Jointly distributing information products produced by both east and western countries
- Joint holding of international conferences, work shops and exhibitions. □

Possibilities of Scientific Co-operation with the Institute of Europe (IE)

V. Mashlykin,

Head of Informatics of the Institute of Europe, Institutes of the Soviet Academy of Sciences

My name is Mashlykin. I am the Head of Informatics of the Institute of Europe, one of the Institutes of the Soviet Academy of Sciences of the USSR.

The Institute of Europe was founded 2 years ago in Moscow. It is one of the so called regional Institutes of the Soviet Academy of Sciences. The other regional academic Institutes were founded earlier. They are: the Inst. of USA and Canada, the Inst. of Latin America, the Inst. of Eastern Researches and some others. Up to 1988 some European problems were investigated in various centres of the USSR, but the work was somewhat dissipated.

Recently new critical problems in Europe have arisen and now they are of extreme importance for the Soviet Union. One of them is the problem of disarmament and arms control; the other is the German problem, connected with the previous

problem. To my mind the new European situation is tightly associated with the well-known new policy of the USSR, that is with the name of our leader - M. Gorbachev and his New policy - not only internal, but also international - the policy in Europe being of major importance.

Both policies, internal and international are two sides of one medal. They are to a certain degree superimposed on each other. Taking into account the New European climate some special additional efforts are now necessary including the creation of the new research Institute, the Institute of Europe as a centre, co-ordinating the investigation of European problems in the USSR.

I'm for the first time at the UKSG conference and that is why it is important to become acclimatised to its atmosphere. I would like to be an active participant here, but probably it will be more convenient to play such a role later. Certainly