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#### CORIS DEVELOPMENT STATUS REPORT

Prepared by

UNIDO secretariat

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#### INTRODUCTION

The experience accumulated so far by technology transfer registries clearly indicates the importance of an effective organization of the information flows related to registry activities. It was found that improving the system of collecting, storing, processing and disseminating information may substantially contribute to the overall registry performance as well as to the increase of its benefits resulting from the exchange of information within UNIDO's Technological Information Exchange System (TIES) and other international systems.

Consequently, this area has been given increased attention within the co-operative framework of TIES. Pollowing the recommendations of the Seventh Meeting of Heads of Technology Transfer Registries held in New Delhi in December 1982, a project was executed for the development of Compatible Computerized Registry Information Systems 1/ the principal objective of which was to harmonize existing computerized information systems through the development of a common information processing model. This project has been successfully completed and a model computerized registry information system (CORIS) prepared with the assistance of the Poreign Trade Data Centre of Poland.

CORIS has been developed to be useful for three main registry functions, namely:

- evaluation of technology transfer agreements;
- generation of information on approved/registered technology transfer agreements;
- monitoring of implementation of technology transfer agreements.

UC/IWT/83/144 - Development of Compatible Computerized Registry Information Systems.

At present the software prepared is applicable on a H24 Personal computer manufactured by Olivetti, Italy using a MS-DOS operating system.

CORIS has also been developed to make participation in TIES possible at the information exchange levels TIES I, TIES IIM, TIES IIA and TIES IIB:

The following are some of the operational characteristics of CORIS:

# (a) Introduction of data

The state of the s

The input format of data is determined by the contract card and has been divided into nine different screens - each screen can be completed with relevant data or left blank before continuing to the next screen. It is possible to correct, delete, add, etc. to the information on the screen.

#### (b) Contract card as an output

The contract card identified by its registration number, can be printed at any time.

# (c) Internal monitoring of office performance

Since basic data is entered during registration of the contract prior to its evaluation, it is possible to print those contracts which are under evaluation at any time. Purthermore, assuming that the evaluation department is divided into sectoral groupings, it is possible to summarize the effect of intervention of that sector for any period of years.

#### (d) Evaluation output formats

The evaluation officer, while reviewing an application for approval of technology transfer agreements, has the possibility of requesting information on approved, rejected and registered contracts in order to quickly find answers to such questions as:

What other contracts does that supplier have?

Are there more contracts of that nature (by product; by industry)?

Has the supplier previously presented a contract which has been rejected?

# (e) Monitoring of the implementation of technology transfer agreements

Although monitoring is not always performed by the technology transfer registries, it has been incorporated in CORIS as it is expected that this function will receive increased attention at the registry level. Since monitoring can be divided into a macro and a micro levels (macro meaning aggregate statistical data and micro individual contracts) and since rot all contracts can be monitored at the micro level, a mechanism has been introduced, which will enable the official in charge of monitoring to select those contracts which did not fulfill its expected implementation targets from the point of view of effective technology transfer.

CORIS has presented and demonstrated at the Ninth Meeting of Heads of Technology Transfer Registries held in Beijing, China, in October 1964. The participants of the meeting concluded that:

(a) CORIS be further developed to become fully operational on IBM and;

- (b) A detailed users' manual be prepared not only dealing with the technical details of CORIS, but also with the managerial and practical aspects of introducing CORIS at the registry level;
- (c) UNIDO, upon request, would prepare specific training courses on various aspects of data base management;
- (d) UNIDO would provide assistance on request to adapt and introduce CORIS at the national level.

#### IBM COMPATIBILITY

In order to reach the objective of IEM compatibility, the CORIS system was prepared on the M24 Olivetti Personal Computer. which is operationally compatible with IBM equipment.

The MS-DOS version available on the M24 corresponds to the Release 2.1 of Microsoft MS-DOS. The MS-DOS operating system has become a standard within the 16-bit personal computer field due to the large distribution and the number of packages available.

All application programs are written in <u>GW-BASIC</u>, which is the <u>most</u> <u>common</u> and the most extensive implementation of BASIC available for personal computers.

In addition, none of special program packages are used by CORIS programs to achieve lower cost of CORIS implementation and meet the objective to be easy adaptable on different types of personal computers.

#### USE OF CORIS IN DIFFERENT HARDWARE/SOFTWARE ENVIRONMENTS

In order to make use of the CORIS system on personal computers other than the M24 Personal Computer, the general review of the situation should be made and that these are operationally compatible with IBM personal computers. They must use 8088/8086 microprocessors, run top IBM PC labeled software, may use IBM peripheral cards, read/write IBM disks and have the same user interface for display, keyboard and sound. At

present there is a large family of personal computers on the market announced as being IBM PC operationally compatible products. For example, Bytec Hyperion, Columbia Data's MPC, Compac, Eagle PC, ITT XTRA, MAD-1, Sanyo MBC-550, Seegua Chameleon, Sperry PC /Mitsubishi/ and so on, but it should be noted that even the two IBM models of Personal Computer PC and PC-XT are not completely inter-compatible. Furthermore, the basic modules of such personal computers are generally different. For example, the video controller is an integral part of the basic module of the M24 Personal Computer while the functionally equivalent "graphic/coloured" controller is offered as an option to the IBM PC. So the reference to the compatibility of the Olivetti Personal Computer M24 with IBM should be considered as referring to the IBM PC-XT equipped with a graphic controller.

The software available for such personal computers is the next crucial element which should be taken into consideration when choosing the hardware. The operating system must be compatible with MS-DOS, and the GW-BASIC should be the version of BASIC available for such computers. When BASIC other than GW-BASIC is operated on these computers, some adjustments may be necessary for CORIS programmes before running them. The range of changes necessary for programme conversions depends on differences between GW-BASIC and available versions of BASIC.

The above mentioned remarks indicate that the choice of hardware should be made very carefully.

The CORIS system is designed to be fully operational when the hardware contains mass storage devices, namely hard disk. The requirements to operate on the hard disk are resulted from the need to have access to the data hase of contracts registered not only in the present year but also in the past. It especially matters when the numbers of contracts registered yearly is exceptionally high. It means that using only diskette drives the data file would be written on for example 30 diskettes and it would be increased year by year. Since CORIS programs and additional working files would be also stored on the diskettes, to process any program the multiple changes of diskettes would be necessary (put in and then take out above 30 diskettes to search the

file from the beginning). Summing up, it means that the overall concept of CORIS would be broken - it would be impossible to process the system not to be familiar with data processing, without knowledge of program names and file names.

# SPANISH VERSION OF CORIS

In consultation with experts from INTI (Argentina) and the Foreign Trade Data centre (Poland), CORIS has to become operational in Spanish. Lingual adjustments have been incorporated on the basis of advice received from UNIDO's translation services and INTI. A Spanish model contract card has been prepared and is attached.

#### CORIS USERS MANUAL

A draft users manual has been prepared by the Foreign Trade Data Centre of Poland. This draft manual includes chapters on:

- Preparation for the effective implementation of CORIS within the Registry
- BASIC description of the CORIS system
- CONTRACT CARD \*s principal input for the CORIS system
- Operators instructions for CORIS database
- Use of CORIS for major registry functions
- Linkage of CORIS with other databases

The instructions for completing the contract card are of course supplementary to those related to the TIES Coding Form instructions as the TIES Coding Form information is copied from the Contract Card.

A final version of the users manual is expected to be completed during the first half of 1986 after review on the basis of experiences with the implementation of CORIS.

CORIS adaptation and introduction at the national level.

#### India

Upon request of the government of india a mission of two UNIDO consultants analyzed the possibility of applying CORIS software on information processing abstracted from technology transfer agreements, within the Ministry of Industry and Company Affairs. After having analyzed the present system on approval of foreign collaboration it has been concluded that CORIS could be applied in India without major modifications of the software concerned and the existing information flows.

On this assumption detailed action plan has been prepared for the duration of seven months (Annex II). As a principal prerequisite for the successful implementation of CORIS the nomination of an officer in charge and the acquisition of a IBM compatible PC is required. Particular attention is as been given to the possible application of CORIS for monitoring implementation of foreign collaboration agreements.

The principal obstacle in implementing CORIS in India appears to be the lack of funds for acquiring a PC for this purpose.

#### Argentina

The mission to Argentina in connection with the preparation of CORIS in Spanish has been used to adapt CORIS for the specific requirements for CORIS.

The information system on technology transfer is processed on the VAX 11/780 computer installed outside the register office via one terminal (VT 100) installed in-site. Data base of that system contains all contracts since September, 1977. Despite that fact the possibility of access to the data base is limited because of the multi-user access to the terminal (different departments in the same time, not only the register), short session of connection with the mainframe, frequency of troubles with teletransmission.

Having analyzed the present system and CORIS, it was agreed that the CORIS system could be a substantial help to improve the capability of the national technology transfer register on registering technology transfer contracts, on evaluation such agreements, on generating statistics on approved contracts, on monitoring the implementation of the agreements, to observe effects of the technology transfer contracts on national economy as well as to increase the benefits resulting from the exchange of information on transfer of technology through TIES an other international systems.

It was agreed that to implement the Argentinian computerized registry information system based on the concept and software of CORIS, the following activities are necessary:

- 1) translation of the CORIS software into Spanish.
- 2) analysis of the present forms to adapt them for the CORIS requirements.
- 3) analysis of the CORIS software to adjust it to the needs of the register.
- 4) conversion of the existing data file into files with CORIS structure.
- 5) changes in legal solutions to introduce a duty of a presentation of annual reports on the implementation of technology transfer agreements to the registry.
- 6) mr ing efforts by the register (INTI) to be in possession of a personal computer equipped with color display, printer and hard disk with capacity of at least 20 M Bytes to reach CORIS being fully operational.
- 7) preparation of a detailed user manual.
- 8) further development of the system to meet all needs of the registry (after implementation of CORIS).

# PINANCIAL SUPPORT FOR CORIS DEVELOPMENT

The software development of CORIS has reached a stage that with little effort CORIS can be adapted for national purposes. The principal constraint however appears to be the financing of either the hardware (e.g. Peru, Argentina) or training of potential users on CORIS. UNIDO is at present in negotiation with a donor country to organize a CORIS training workshop based on the following scenario.

# **Activities**

- 1. Preparation of national information profile TO plus 3 months on technology transfer information indicating information flows in the process of evaluation monitoring and other functions of the registries, formats if documents used for collecting, processing, abstracting data and organization of information handling within the registry and nomination of national information experts responsible for design of computerized registry information systems.
- 2. Training workshop for twelve national information experts for 2 weeks on: design, installation and implementation of computerized registry information system and definition of national requirements on adaptation of CORIS with respect to:

TO plus 8 months

input/output formats
hardware information
flows inside registry

At the workshop it is expected that each participant becomes familiar with the operating characteristics of CORIS and will become fully acquainted with the potential of personal computers in information processing.

ANEXO I

TARJETA DE CONTRATO

MODELO PARA EL SISTEMA DE INFORMACION DE UN REGISTRO DE TECNOLOGIA

ARCHIVO No.	<b></b>
REGISTRO No.	L
CLAVE ID	

1 RECEPTOR 44. CODIGO DE PAIS	3.4. TIPO nuevo renovación prórroga anexo/ tipo
HAZON SOCIAL	32-ESPECIE DE licencia asistencia gestión apporte empresa llave de otra técnica lógico conjunta en mano especie
A.AL DIRECCION DE LA EMPRESA	3.3.OBJETO
DESCRIPCION DE LA ACTIVIDAD ECONOMICA	3.4.PROCESO
PRINCIPAL	35[C6digo36[37.[C6digo
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En el año de la solicitud	3.11.3reembolsables
2 PROVEEDOR 2.1. CODIGO DE PAIS	Director
HACON SOCIAL	Director
PIRECCION DE LA EMPRESA	Observaciones 3.11.4. GASTOS PERSONALES QUE SUFRAGA EL RECEPTOR
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5. DECISION DEFINITIVA APROBADO APROCONDICO  7. VIGILANCIA OBSERVACIONES	8. FUNCIONARIO EVALUADOR  NOMBRE			

ANNEX II

Detailed Action Plan for CORIS Implementation in India

NO	ACTIVITIES DESCRIPTION	TIME	INPUTS	OU <b>TFU</b> TS	REMARKS
3.2.1	Decision on implementation of CORIS system	0	Management of the De- pertment of Industrial Development	Start-up of the Pro-	-
3.2.2	Nomination of officer in charge of the implementation of OURIS mystem within SIA Foreign Collaborations	0	Management of the Sec- returnat for Industrial Accrovals		
3.2.3	•	0·plus 2 geonths	CORIS officer in charge under supervision and	concept of ID Unit	
	- major functions of 10 that - position of the 10 Unit within SIA - physical and human resources which should be allocated to the 10 Unit - internal organization of the		with approval of the Management of the Secretariat for In- dustrial Approvals	organization and activities	
	ID Unit  - terms of reference for the ID Unit				
3.2.4.	The modification and adjustment of the Summary Card /Contract	0 puls 3 months	OCRIS officer in charge with assistance of	Modified and adjusted to the SIA needs and	
ments to the requireds of the SIA of the microcomput.  — Summary Card /C.  — Application For — Application For — Arnual Progress	Card/ and other relevant docu- ments to the requirements and		UNIDO consultant /4 weeks/	requirements. - Sunnery Card	
	needs of the SIA and selection of the microcomputer.			- Application Form FC /Gen/	
	- Application Form FC /Gen/			- Application Form FC /NRI/	
	- Arnual Progress Returns FC - Selection of microcomputer			- Proforma Report Selected type and con- figuration of micro- computer	:
3.2.5.	Quidelines preparation for CORIS software modification and adjust- ments to the SIA needs based on		UNIDO consultant	Prepared detailed guidelines for CORIS software sodification	
	the outputs of point 3.2.4.			and adjustment to the SIA needs	
3.2.6.	Defining standard rules for in- formation on TT agreements flows within the SIA in CORIS mystem environment	0 plus 4 months		Approved standard rules for information /docu- ments/ on TT agreements	ł
3.2.7.		0 plus 4	CORIS officer in char-	Flows within the SIA Microcomputer ordered	
3.2.8.	[a.,	0 plus 5	OORIS officer in charge	Start-up of the ID thit activities	
3.2.9.	/filled in/ based on approved conditionally approved and rejected TT agreements for the period of last five years /1981-1985/	to be es- tablished on possible conditions	with support of consul- ting company if necessa -ry	Set of filled in Sum - mary Cards for the pe- riod of 1981-1985	
3.2.10.	The modification and adjustments of CORIS software to the SIA needs	O plus 6 months	Foreign Trade Data Cen- tre, Warsaw, Poland, on agreed with UNIDO bases	Modified and adjusted to SIA needs OCRIS software	
3.2.11.	Delivery of CORIS software to the SIA	O plus 6,5 months	UNIDO Secretariat	CORIS software ready for use delivered to the SIA	

3.2.12.	Installation of the microcomputer	0 plus 6,5 months	CORIS officer in charge	Microcomputer Installed	
3.2.13.	Implementation of CURIS system including training of operators and users of SIA CURIS SYSTEM	O PLUS 7 scritts	ID Unit stuff with mediature of UMIDO commultant /4 weds/	CORIS system implemented and operators and users of SIA CORIS system trained	