

## **OIC INFORMATION SYSTEMS NETWORK: INFORMATION HIGHWAY FOR OIC MEMBER COUNTRIES**

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The OICIS-NET is a project aimed at setting up a global information network which will eventually interlink the national, regional, and international information systems and services. Inspired by the Makkah Declaration of the Third Islamic Summit Conference of January 1981, the project was entrusted to the Islamic Development Bank for implementation by the Fifth Islamic Summit Conference, gathered in Kuwait, in January 1987. This paper presents the project in terms of its nature, purpose, structure and main features. It also provides an account of the steps taken so far by IDB in implementing the project in accordance with the strategy and guidelines adopted in April 1994 at the Second Co-ordination Meeting of the National Focal Centres and Regional Organisations.

### **1. INTRODUCTION**

The world is witnessing enormous growth in the availability and exchange of global information resources on the one hand, and accelerating developments in information technology on the other hand. Information networks have become basic and essential facilities to cope with these developments. Information Systems and Networks have emerged, in recent years, as super-highways for flow and rapid exchange of information. They interlink and bring continents, countries, institutions and individuals closer to each other. They foster co-operation and co-ordination in the fields of socio-economic development among nations through improved sharing of resources. It is in this context, that the Islamic Development Bank (IDB) has undertaken the implementation of the OIC Information Systems Network (OICIS-NET) project. [*Detailed information about IDB is given in ANNEX I*]

OICIS-NET is a global information network which interlinks the national, regional, and international information systems and services. The Network

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facilitates exchange of messages, transfer of files and access to databases. The IDB has completed a feasibility study and identified focal points and focal centres, in member countries, to participate in the implementation of OICIS-NET Project. An implementation strategy and the plan of action were adopted at the Second Co-ordination Meeting of the National Focal Centres and Regional Organisations in April, 1994. IDB has taken necessary steps for implementing the Project in accordance with the strategy and guidelines provided. [Details of progress on major implementation activities are given in Annex II]

Implementation of the OICIS-NET is a joint endeavour of IDB and all the participating institutions. IDB is the Central Co-ordinating Agency (CCA) for OICIS-NET. Its nodes will include IDB's Governors' offices, the National Focal Centres (NFC), and the National Sectorial Nodes (NSN) of Trade, Industry, and Agriculture among others.

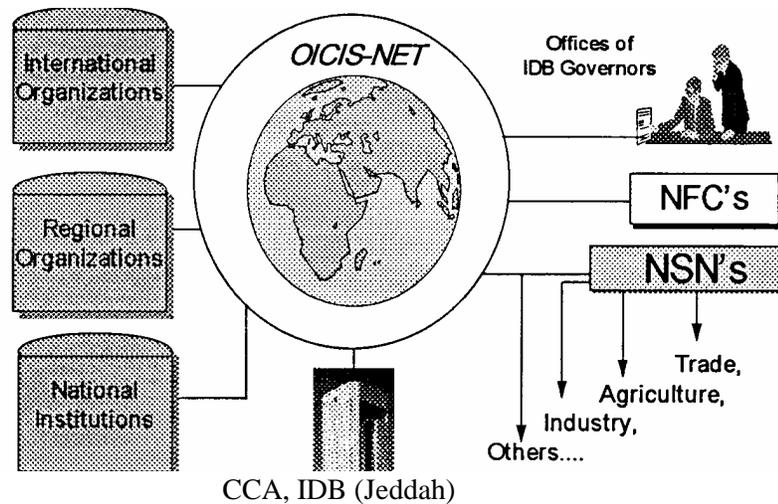


Figure 1. OICIS-NET NODES

## 2. THE OBJECTIVES OF OICIS-NET

The main objective of OICIS-NET is to foster co-operation and co-ordination among the member countries in their socio-economic and technological development. More specifically the network aims:

- To improve the flow and exchange of information and sharing of information resources;
- To improve access to and utilisation of the information services;
- To stimulate development of databases in priority sectors such as trade, industry and agriculture;
- To encourage efficient communication process among the institutions in public and private sectors; and
- To promote the application and utilisation of information systems and services, in general.

### 3. THE COMPONENTS OF OICIS-NET

The components of OIC-NET are the following:

- Support Development of Network Institutions;
- Promote Development of Databases;
- Develop Systems and Standards;
- Develop Information Services;
- Establish Telecommunication Platform for OICIS-NET;
- Promote Human Resource Development.

#### MAJOR COMPONENTS

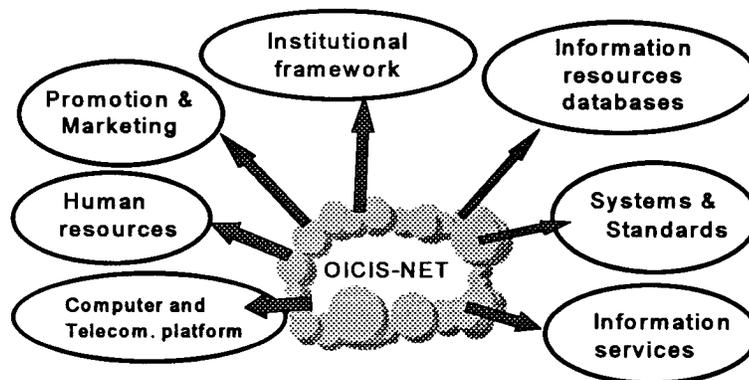


Figure 2. Major Components

#### **4. CO-OPERATIVE ENDEAVOUR FOR MUTUAL BENEFITS**

##### **4.1. Benefits from OICIS-NET**

The impact of OICIS-NET on the member countries will be enormous when its services are fully and properly utilised. The sheer value of its services will accelerate its use. OICIS-NET will play a vital role in supporting the all-round development of the member countries. In particular, it will:

- Stimulate the development process by providing up-to-date information to policy-makers, planners, executives, researchers and scientists in the various ministries, organisations, enterprises and institutes both in public and private sectors.
- Accelerate the exchange of information on trade, industry, agriculture, food and other vital sectors of development.
- Actively promote inter-country trade and raise its level by opening up trade opportunities and automating business transactions.
- Support efforts to develop information systems and networks at national, regional and sub-regional levels.
- Facilitate transfer of technology and know-how among the member countries.
- Improve co-operation, co-ordination and minimise duplication in development efforts.

##### **4.2. Co-operative Endeavour for Mutual Benefits**

The OICIS-NET project is a co-operative endeavour involving all the member countries. Therefore, co-operation and contribution of all the participating countries is crucial for its success. The project can benefit a great deal from efforts already made, as well as the expertise and experience of the member country institutions, particularly, in the field of information

systems and networking. Above all, commitment and support from participating countries are envisaged in the following areas:

- To designate and support National Focal Centres and National Sectorial Nodes;
- To facilitate local regulatory approval for connectivity to the Network;
- To plan and adopt policies for national information systems and services;
- To allocate budget for information systems within the national development plans;
- To improve the information infrastructure and resources in member countries;
- To encourage the establishment and enhancement of a National Information Network;
- To develop databases relating to national information resources;
- To facilitate access to existing databases of interest by hosting them on OICIS-NET;
- To promote institutions both in private and public sectors to subscribe to OICIS-NET services;
- To support manpower training and development in information and networking;
- And more generally to actively support and participate in the implementation of OICIS-NET programs and standards in their respective countries and institutions.

#### **5. OICIS-NET TELECOMMUNICATION PLATFORM**

A simple to use and cost-effective telecommunication platform is crucial for the success of OICIS-NET. After careful study, OICIS-NET has chosen a solution for OICIS-NET telecommunication network using the existing

global network of SCITOR/SITA which has its presence in most of the member countries. SCITOR/SITA, provides network facility to airline and financial business. It has been selected by IDB to provide the OICIS-NET with a Virtual Managed Telecommunication Platform. The strategy for its implementation aims at making it self-sustaining. Each user will pay for the services he utilises through subscription. The subscription rates are low and affordable, compared to savings and benefits to be achieved by each subscriber. [Detailed information about SCITOR/SITA is given in ANNEX III].

### 5.1. Topology of OICIS-NET Telecommunication Platform

In order to ensure development of optimum solution with minimum investment by OICIS-NET subscribers, an initial market analysis was conducted. This resulted in designing a specific platform based on the needs of both the user and the host environment. The design of the OICIS-NET networking solution aims at meeting the following requirements:

#### TYPICAL TOPOLOGY OF OICIS-NET

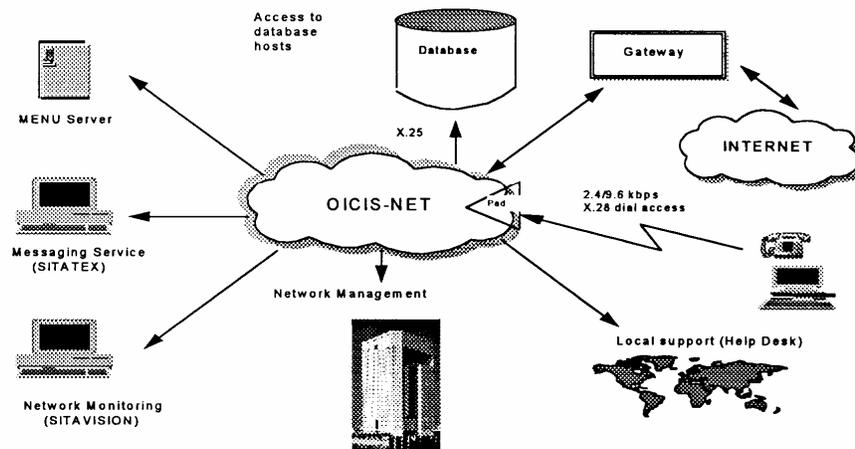


Figure 3. Topology of OICIS-NET

- Global coverage and network support infrastructure in each of the member countries;

- Network management facility;
- Messaging Services (E-mail, Fax, Telex);
- File transfer facility;
- On-line access to databases by any user from any host;
- Menu-driven facility with Graphic User Interface;
- Gateway to INTERNET and other global networks and databases;
- Network management facility.

## 5.2. Wide Range of Information Services

The OICIS-NET information service will be composed of databases hosted at the IDB as well as databases hosted by various National and Regional Focal Centres participating in the network project. These databases will be accessible by the users through their terminals irrespective of their location. A user-friendly menu-driven system will help them to navigate to the databases of their choice, irrespective of where the databases are located.

The CCA will also acquire and host relevant national, international and commercial databases, for access by OICIS-NET user. A brief summary of the various types of services that will be gradually available to OICIS-NET users are summarised below:

- ⇒ **Directory of Institutions and Information Resources:** Provides profiles of institutions, their databases, information services and computer facilities.
- ⇒ **Directory of Experts and Consultants:** Provides information relating to experts and consultants in different fields.
- ⇒ **Bibliographic Database:** Bibliographic database relating to Islamic economics, banking and other topics.
- ⇒ **Country Profile Database:** Provides main socio-economic indicators, natural and mineral resources as well as major economic activities of each member country.
- ⇒ **Trade Information System:** Provides information about commodities, importers, exporters, trade regulations, trade opportunities,

trade promotion organisations, trade financing and related infrastructure and facilities.

⇒ **Industrial Information System:** Provides information on key industry sectors of interest to the member countries, such as Cement, Fertiliser, Petrochemicals, Iron and Steel.

⇒ **Food and Agriculture Information System:** Provides information relating to land, water resources, agricultural commodities, their production and distribution, as well as agricultural development projects.

⇒ **Shari'ah Database:** Provides information relating to the Holy Qur'an, Hadith and Islamic law.

⇒ **Bulletin Board Service:** Provides the latest information on development programs, development financing institutions, trade and investment opportunities, co-operation agreements, joint ventures and other topic of common interest to member countries. It will also provide information on the latest research on Islamic Economics and Banking, resolution of OIC meetings and announcements about forthcoming conferences, meetings organised by IDB and other institutions, etc.

⇒ **OICIS-NET Telecommunication Services:** Several services will become available through the OICIS-NET telecommunication platform. Some of the immediately available services are:

SITATEX Messaging: This service will allow faster, economical and efficient transfer of E-mail, faxes and other messaging services including transfer of files. As attachment, text in any language, including graphics, can be transferred. These services will considerably reduce the cost of the traditional messaging services, as well as of DHL and other courier services.

(X-28): This service will provide users on-line access to databases hosted by IDB and other hosts.

(X-25): This service will allow fast on-line access to databases and high-volume computer-to-computer communication and file transfers.

⇒ **Other Potential Services:** Other potential services primarily concern the access to X-400, EDI and other private messaging environments. Based on open standards for communications, an X-400 Gateway Services will allow users to communicate with other interconnected systems. This service is a world-wide Administration Management Domain Services (ADMD), conforming to 1988 CCITT recommendations.

Additional Gateway Services would also be provided to allow users to connect their private E-Mail systems to the SITA messaging services, without having to invest in numerous additional gateways.

OICIS-NET will also provide gateways to other international databases and networks, such as INTERNET. Access to INTERNET will open to the member countries the flood-gates to the world-wide and ever-growing range of enormous resources of the INTERNET.

Local support for customers through SCITOR/SITA will be provided in all the countries.

### **5.3. Computer & CD-ROM Platforms**

A Request For Proposal (RFP) for the computer platform and CD-ROM facilities for the CCA was finalised. Contacts with outside experts and internal departments of IDB/IRTI (Islamic Research and Training Institute) were made in order to seek their comments and feedback. The proposals received have been analysed by a technical committee and its report sent to the Technical Committee on Information Technology (TCIT) for its recommendations. The committee has made its recommendation and the order for the equipment is being processed.

### **5.4. Telecommunication Platform**

Establishment of a telecommunication network has been considered as an important step in accelerating the process of sharing and exchanging information resources among the member countries. For this purpose, offers were received from international telecommunication network providers based on technical requirements for the OICIS-NET telecommunication network. The offers were evaluated with the help of a Consultant. The

executive summary of the Consultant's report, as well as proposals from four of the vendors offering solution for OICIS-NET telecommunication network were presented to the Second Co-ordination Meeting of the focal centres. Based on the feedback from the participants, further analysis of the solution has been carried out. Based on the evaluation, a practical solution for the OICIS-NET which provides the latest network technology for data, messaging and voice communication among the member countries has been selected. The solution makes use of national PTT facilities and is readily available. It will be implemented among the Pilot Scheme countries within six months from the date of awarding a contract. Implementation among all the member countries will be carried out within two years. There will not be much capital investment since the vendor has already invested in the infrastructure for global network for its own clients. However, it requires marginal additional investment for local connectivity requirements. The quality of service depends on the leased lines provided by local PTTs.

A proposal for implementation of the above solution from SITA/SCITOR has been approved (Figure 4 illustrates this telecommunication solution). SITA/SCITOR will develop a virtual telecommunication network for OICIS-NET interlinking the Central Co-ordinating Agency (CCA), the National Focal Centres (NFC), the OIC organisations, the offices of the IDB Governors and the IDB/IRTI offices. Other authorised users from any part of the world will be able to get access to the network. Gateways to major international networks, particularly INTERNET, will be provided to all users of OICIS-NET. An appropriate subscription system has been developed to facilitate any institution's joining the network. The contract with SCITOR for the actual implementation of the telecommunication platform has been signed at IDB Headquarters on September 26, 1995. It is expected that SITATEX service will be provided within one month to any institution wanting to subscribe to OICIS-NET for that service.

## **6. NETWORK PROMOTION AND MARKETING**

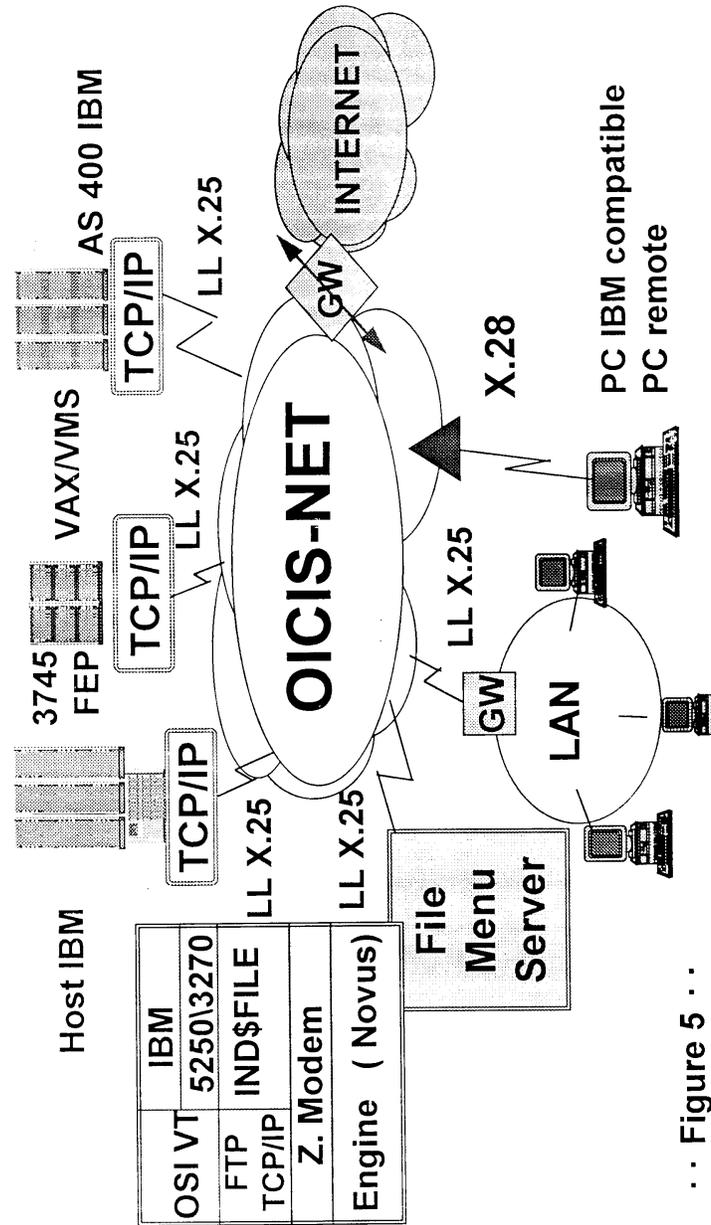
OICIS-NET has become an active member of GULFNET which interlinks academic institutions in Gulf region as well as those in USA and Europe through BITNET. The Service provides access to more than 2000 databases in addition to E-mail services. A FORUM has been opened on GULF-NET to disseminate information on OICIS-NET.

A set of files relating to OICIS-NET project, its participants, progress and recommendations of the various meetings have been transmitted to all subscribers. Their comments and suggestions are also sent through the Forum. At present, the Forum includes 56 members from 13 countries. Other institutions co-operating with OICIS-NET are being invited to subscribe to this Forum.

Similarly, on behalf of IRTI, OICIS-NET has opened a forum on Islamic economics in order to help interested scholars and students communicate with each other for the promotion of this dynamic subject. A training program for all staff of IDB/IRTI to make full use of the above services has been conducted.

Presentations on OICIS-NET to promote its utilisation and participation in it are being made at various meetings and conferences. Among the recent ones is the 2nd regional workshop on the communications and implementation network for the Arab region in Tunis, Tunisia (June 6-8, 1995).

# OICIS-NET, TELECOMMUNICATION SOLUTION "CONNECTIVITY"



.. Figure 5 . . .

Figure 4. OICIS-NET Telecommunication Solution

## **7. CO-OPERATION WITH FOCAL CENTRES AND PARTICIPATING INSTITUTIONS**

### **7.1. Memorandum of Understanding**

In order to promote practical co-operation and co-ordination with different institutions participating in the Pilot Scheme, efforts are being made to establish Memoranda of Understanding (MOU) with them. Standard MOUs have been prepared, cleared by IDB Legal Department and approved by the Management. These MOUs are based on the recommendations of the Second Co-ordination Meeting of Focal Centres held at Jeddah, 3-5 April 1994. The purpose is to cover areas of co-operation and co-ordination and to define the roles and responsibilities of the CCA and the different national, regional and international organisations participating in the Network. MOUs with NFCs in Indonesia, Malaysia, Morocco, Oman, Pakistan, Senegal and Turkey have already been signed. Egypt also agreed to sign the MOU. Nine MOUs with OIC & Regional organisations have been signed i.e., COMSTECH, ICDT, ISESCO, OICC, IRCICA, SESRTCIC, ALDOC, AIDMO, and ARCT. Further, ICCI, and MWL have agreed to sign the MOU. Among the international institutions, the World Bank has signed the MOU, and UNIDO has agreed to sign as well. MOUs with other focal centres, regional and international institutions are in various stages of implementation.

### **7.2. Technical Assistance**

Guidelines for technical assistance that can be provided by IDB to participating institutions in OICIS-NET have been prepared by a Task Force and approved by the Bank. A detailed document on implementation mechanism and procedures has been worked out. A detailed file on related procedures, as per IDB regulations, has been compiled. This file is under study and analysis in order to derive suitable procedures within the framework of the above guidelines. It is planned to start the Technical Assistance program along with the installation of the telecommunication platform. The different agreements that would be required for implementation of the Technical Assistance Program are under discussion with the Legal Department.

### **7.3. Specific Co-operation Activities**

World Bank: During the consultation meeting between the World Bank and the IDB, the World Bank team has agreed to extend co-operation in implementation of the OICIS-NET project. A visit was made by an expert from The World Bank to IDB in June 1994 to discuss OICIS-NET requirements. A follow-up visit has been made from OICIS-NET. Detailed areas of co-operation in the field of information technology, networking and database access have been finalised. An MOU has been approved and signed.

International Telecommunication Union (ITU): Two Experts from ITU visited OICIS-NET. The ITU team has reviewed all the documentation and progress achieved so far. ITU has offered to provide necessary technical assistance to implement the project. A MOU between the two institutions is in process.

The Arab Industrial Development & Mining Organisation (AIDMO): Co-operation between AIDMO and OICIS-NET in the field of Industrial Information was discussed during the visit to IDB of the Director of Information and Documentation Centre of AIDMO. An MOU between the two institutions is in process. Industrial databases developed by AIDMO and UNIDO have been requested.

African Regional Centre for Technology (ARCT): Dakar, Senegal: Possibilities of co-operation between OICIS-NET and ARCT were discussed during the meeting between OICIS-NET team and the Deputy Director of ARCT. ARCT has signed an MOU for co-operation in implementing OICIS-NET.

United Nations Educational Scientific & Cultural Organisation (UNESCO): The OICIS-NET team visited UNESCO in June 1994 and discussed co-operation in the fields of exchange of databases, systems and standards as well as exchange of experience in telecommunication networking. Co-operation in the use of CDS/ISIS. (Bibliographic Information Retrieval System) and IDAMS (Statistical Package) were also discussed. IDB has been requested to distribute IDAMS to OIC member countries. The system with the documentation have been sent to 42 institutions so far.

United Nations Industrial Development Organisation (UNIDO). Vienna: Based on a visit to UNIDO in May, 95 and detailed discussions with the

Chief of Industrial Information, it has been agreed that UNIDO and OICIS-NET will cooperate in the exchange of databases, information systems and services as well as documentation for the benefit of OICIS-NET users. UNIDO has also offered to provide training for OICIS-NET staff in addition to organising joint training workshops.

### **Annex I**

#### **ISLAMIC DEVELOPMENT BANK**

The Islamic Development Bank is an international development institution established in pursuance of a Declaration of Intent issued by a Conference of Finance Ministers of Muslim countries held in Jeddah, in December 1973. The Inaugural Meeting of the Board of Governors took place in July 1975 and the Bank formally opened on 20 October 1975.

The purpose of the Bank is to foster economic development and social progress of member countries and Muslim communities in non-member countries, individually as well as jointly, in accordance with the principles of Shari'ah.

The present membership of the Bank consists of 49 countries. The basic condition for membership is that the prospective member country should be member of the Organisation of the Islamic Conference (OIC) and willing to accept such terms and conditions as may be decided upon by the Board of Governors.

The functions of the Bank are to participate in equity capital, to grant loans for productive projects and enterprises, and to provide other forms of financial assistance to member countries for economic and social development. The Bank is also required to establish and administer special funds for specific purposes in addition to setting up trust funds.

IDB is authorised to accept deposits and to raise funds. It is also charged with the responsibility of assisting in the promotion of trade among member countries, especially in capital goods and providing technical assistance and training facilities for personnel engaged in development activities. It also supports research aimed at facilitating the establishment and operation of economic, financial and banking activities in Muslim countries in conformity with Shari'ah.

The authorised capital of the Bank is Six Billion Islamic Dinars (ID). The value of the Islamic Dinar is equivalent to one SDR (Special Drawing Right) of the International Monetary Fund.

The Bank's headquarters is located in Jeddah, Kingdom of Saudi Arabia. It has two regional offices, one in Rabat and one in Kuala Lumpur.

## **Annex II**

### **PROGRESS ON MAJOR IMPLEMENTATION ACTIVITIES**

The main activities carried out for implementation of OICIS-NET Pilot Scheme can be summarised as follows:

#### **1. Preparatory Activities**

1.1. A feasibility study has been completed. The main outputs of the study are:

- Status report about information situation in member countries
- Perspective Master Plan for OICIS-NET; and
- Plan for a Pilot Scheme Network implementation.

Copies of the Feasibility Study have been sent to all the national focal points, focal centres, OIC organisations, UN and other international organisations requesting their feedback, co-operation, and support.

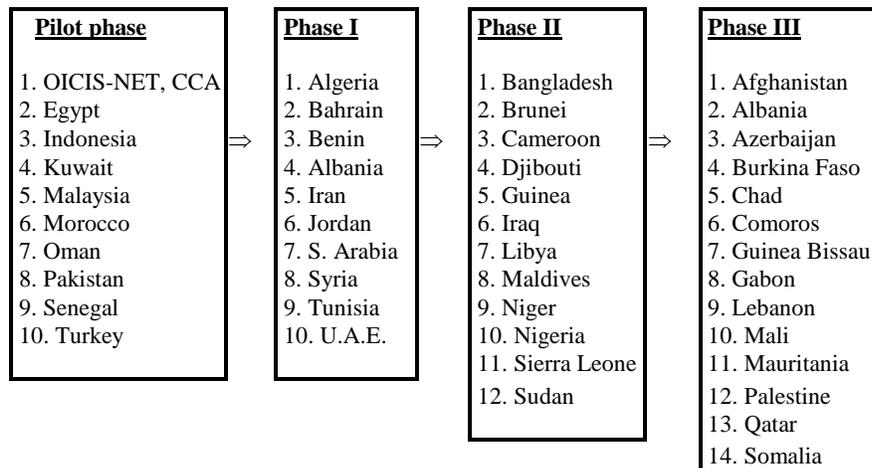
1.2. Thirty-seven member countries have nominated their national focal points for OICIS-NET project.

1.3. A Workshop on OICIS-NET project with representatives from Focal Points and experts was held at IDB Headquarters in Jeddah in Moharram 1412 H (July 1991 G). The meeting clarified concepts and issues of the project and contributed to accomplishing the feasibility study. The proceedings of the meeting were circulated to all concerned.

1.4. Several reports and presentations have been prepared on the concept of OICIS-NET, its feasibility study and work program. These reports were presented to BED, BOG, COMCEC, COMSTECH, Focal Centres and members of various Committees/Working Groups and were widely distributed.

- 1.5. After a presentation on the OICIS-NET Project, the IDB Board of Executive Directors (BED) approved the concept of OICIS-NET Project, and sanctioned the budget to implement the Pilot Scheme of the project with IDB acting as the Central Co-ordinating Agency (CCA).
- 1.6. A Presentation on OICIS-NET Project was made to the Special Meeting of the IDB Board of Governors (BOG) on 04/01/1413 H (04/07/1992 G).
- 1.7. Field visits to the countries and OIC Institutions participating in the Pilot Scheme were carried out. These resulted in the identification and nomination of National Focal Centres (NFCs) and National Sectorial Nodes (NSNs). In this process, OIC and regional organisations likely to actively participate in OICIS-NET have been identified and their approval secured.
- 1.8. Nine countries have agreed to participate in the pilot scheme and have nominated their National Focal Centres (NFCs) and National Sectorial Nodes (NSNs) in the fields of trade, industry and agriculture. Eighteen OIC and regional organisations have also indicated their willingness to participate in the pilot project. After accomplishing the pilot scheme, a master plan will be implemented to cover all remaining member countries of the OIC [Figure 2 in the *main text* illustrates the seven major components of the project, and the *diagram below* shows the countries to be covered during the pilot scheme and the master plan phases].

**Implementation Phases OIC Member Countries**



15. Uganda
16. Yemen
17. Tajikistan
18. Tanzania

Notes: The above phases pertain to the full development of OICIS-NET services. However, OICIS-NET telecommunication services, particularly SITATEX are available to all institutions irrespective of the above phases.

## **2. Advisory Committee and Working Groups**

- 2.1. An Advisory/Consulting Committee has been appointed in order to advise on all matters related to the implementation of the Network. The first meeting of the Committee was held in Jeddah on 21-24 February 1993.
- 2.2. A Working Group on Telecommunication and Networking with experts from national and regional institutions has been established. The first meeting of the Working Group was held in Jeddah in December 1992.
- 2.3. A Working Group on the Trade Information System has been established and the first meeting of the Working Group took place in Jeddah in October 92.

## **3. Co-ordination Meetings of Focal Centres**

- 3.1. The First Co-ordination Meeting of the National Focal Centres took place from 21 to 24 February 1993 in Jeddah. The meeting discussed and approved the plan and strategy for OICIS-NET implementation and provided valuable guidance on database development, systems and procedures, networking and the role of OIC and regional organisations in the OICIS-NET implementation.
- 3.2. The 2nd Co-ordination Meeting of the National Focal Centres was organised from 22-24 Shawwal 1414H (3-5 April, 1994). The meeting was attended by 41 participants, including: 7 representatives from NFCs, 12 from OIC organisations, 6 from regional organisations, 3 experts and 13 IDB/IRTI staff. About 37 documents including 12 Working Documents and 6 questionnaires prepared by

OICIS-NET were circulated for discussion by the participants. Presentations from the invitees and OICIS-NET team were made. The meeting discussed the problems and issues and arrived at a general agreement on making further progress towards the implementation of the project. Four telecommunication companies presented their solutions for the OICIS-NET telecommunication platform. The meeting concluded with a number of practical recommendations to be followed up both by the CCA and the participating institutions covering the following five areas: (1) Telecommunication Platform Solutions for OICIS-NET (2) OICIS-NET Implementation: Plan and Programs (3) Information Systems, Standards and Services (4) Human Resource Development; and (5) MOU with participating institutions.

- 3.3. The First Meeting of the Focal Points of Trade Information Network of Islamic Countries (TINIC) was organised by ICDT, in collaboration with IDB/IRTI from 19 to 21 April 1994, in Casablanca. The meeting was attended by 17 National Focal Points, 3 OIC organisations, and 8 other Regional and Moroccan organisations. This is in addition to two experts from UNCTAD and ITC, Geneva, as well as staff members from IDB and ICDT. The meeting discussed and explained several practical steps towards implementing a Trade Information System within the framework of OICIS-NET. Several far-reaching recommendations were adopted to take time bound action by the participants, as well as IDB and ICDT. The recommendations are related to collecting, organising and disseminating trade information to improve trade among the member countries. The recommendations also took note of the challenges posed by the effects of the new GATT agreement signed at Marakkash in April 1994.
- 3.4. The proceedings of the above three meetings have been circulated to all the participants, focal points and related organisations in the member countries for their feedback and necessary follow-up action.

### **Annex III**

#### **SCITOR/SITA**

SITA/SCITOR is an international co-operative, non-profit organisation representing more than 400 airlines providing a Global Mega Network service. SCITOR is a wholly-owned commercial subsidiary of SITA (Société Internationale de Télécommunications Aéronautiques), a co-operative organisation established in 1949 by eleven of the world's airlines.

Today, SITA is the leading provider of value-added services to the air transport industry, offering an unrivalled breadth of experience and capability in international communications and information processing services to almost all countries.

Through SCITOR, SITA is now applying to other markets such as Financial Services, Trade and Transportation, the Travel Industry and Multinational Industry, the knowledge and experience gained from satisfying the demanding requirements of the world's air transport industry.

SCITOR's services are broadly divided into managed data network services and electronic messaging services:

Managed Data Network Services (MDNS) - SCITOR offers a broad range of international MDNS services including: X-25 Direct Access, SDLC Direct Access, SNA Token Ring Access, Frame Relay Access, CPE Access and X-w28 Dial-up (x-28 also has a new high speed of 28.8Kbps option).

SITAVISION Service Management Tools are available for customers to view their Virtual Private Network in real time.

SCITOR also offers LAN Access and LAN Support services which provide fully managed LAN inter-connection, installation and administration for globally dispersed local area networks.

SCITOR supplies an extensive range of gateways and messaging services based on international standards including X-400 Gateway Service designed to enable organisations to exchange messages across different environments on a global basis. As well as SITAMAIL, messaging services, SCITOR offers a range of EDI services.

#### **Annex IV**

### **COMPLEMENTARITY BETWEEN INTERNET AND OICIS-NET**

#### **Gateway to INTERNET**

OICIS-NET provides a gateway to INTERNET to ensure that the OICIS-NET users have access to the tremendous resources of INTERNET and its world-wide computer hosts. However, the gateway also ensures that the access to OICIS-NET by any of the INTERNET users is controlled. This becomes essential because INTERNET is a public domain network. Its growth is uncontrolled. No one owns the INTERNET. In fact, with unbridled growth and millions of users entering it everyday, INTERNET's development has been called '*a co-operative anarchy*'. On the contrary, OICIS-NET is a Managed Network. It provides 24-hour network management from three supercomputers supported by several regional control centres. It interlinks the hosts from the member countries which provide information to the users of OICIS-NET. Being a managed network, OICIS-NET provides a highly reliable, efficient and trouble-free telecommunication linkage among the various focal centres and nodes of the Network. At the same time, it ensures the integrity and security of the data available through OICIS-NET. However, it has no control over global information resources of INTERNET except to control entry and exit between OICIS-NET and INTERNET through a gateway.

### **Evolution of INTERNET**

The origin, evolution and unprecedented growth of INTERNET as a *Network of Networks* have become a phenomenon much talked about in the network literature as well as in the public domain. What began as a limited information access to scientists and academics in the 1960s in the US Department of Defence has become a pioneer and leader in the field of network systems, standards, and services. INTERNET is now an established common communication system among the various computer hosts world-wide. This was made possible by the development and adoption, by INTERNET, of the standard protocol for communication between network computers, known as TCP/IP [Transmission Control Protocol/INTERNET Protocol]. This protocol, which originally emerged for use by mainframe computers was also brought to the PC domain in the early 80s thus making the use of INTERNET services universally available to anyone with a PC, telephone and a modem, as well as the TCP/IP software.

The services offered by INTERNET include, as in the case of OICIS-NET, Messaging Service, File Transfer and On-line Access to Databases. To make these services valuable and attractive, there has been a world-wide contribution of information services, User Forums, Databases providing access to full texts of information and even product guides, shopper-lists and entertainment services. The INTERNET also has multimedia capability in providing its services, if suitable physical networks to provide high-speed telecommunication links are available.

### **Development of Gopher**

An event which gave impetus to the popularity of INTERNET was the development of a program called Gopher which could put volumes of information on a Central Gopher Server and organise it in a clear directory structure in order to let the user view the whole volume of information with ease and speed. The Gopher allows the users to navigate from one host to another through a menu-driven guide to explore the information resources hosted by computers located in widely scattered geographical locations. To the user of information, it appears to be in one place. He need not know the address of the various computer hosts where the databases or the information are hosted.

### **World-Wide Web**

Yet another development which triggered the growth in the use of INTERNET is the concept of the World-Wide Web called WWW. This technology was created in 1989 in Switzerland. The Web is made of a series of connected documents that help to move from subject to subject with the click of a mouse on a highlighted word or picture or a term for a subject. The Web uses the connection called hyperlinks and links not only hypertexts but also pictures, sound and video, thus enhancing the multi-media capability of INTERNET.

The popularity of the Web increased with the evolution of a graphical program for browsing the Web, called *Mosaic*. The Mosaic, like the Gopher, lets the user hop from server to server with no need to know the addresses or names of hosts that hold information. The main difference between the Web and the Gopher lies in the way the information is linked. The Gopher creates links through menus. The Web links information through hyperlinks built into words, icons or graphics.

NOVUS, a subsidiary of SCITOR. This software will have most of the features of INTERNET search tools. It would be possible for a user to search databases hosted by computers at different locations in the member countries. The user will be guided through the menu and a common Directory of Institutions and Databases to seek the information he needs. The actual location of the databases or information will be transparent to the users.

Thus, several benefits can be reaped from the complementarity between OICIS-NET and INTERNET. At the same time, the OICIS-NET will ensure that its users are protected, to the extent possible, from some of the difficulties that have emerged in INTERNET in the overload of information, lack of security and the tendency to use the network to exchange undesirable information.

Collaboration between OICIS-NET and INTERNET will provide a powerful super-highway to the OIC member countries to access, exchange and use information among themselves on the one hand, and provide access to all the benefits of a global information network on the other hand.

## **Annex V**

### **DATABASES DEVELOPED AT IDB**

#### **Directory of Institutions**

A Directory database on information centres, networks and databases in the member countries has been prepared. Data has been collected through questionnaires. As an output from the database, a directory has been compiled, processed and published. Copies were distributed during the 19th IDB annual meeting. The database is being enhanced using an object-oriented database system with user-friendly, menu-driven features. The 2nd edition of this directory is due to be published before the end of 1995.

#### **Directory of Databases**

Efforts have also been made for identification of databases available at the concerned institutions in OIC member countries with the objective of providing on-line access, using OICIS-NET.

#### **Trade Information System**

A Request for Proposal (RFP) for developing a Trade Information System was developed by OICIS-NET. The RFP was sent, for feedback, to experts and institutions specialising in trade information systems besides the concerned divisions of IDB/IRTI. Based on the feedback, the RFP was further revised. Two technical proposals were received from ITC/UNCTAD, an international organisation and RITSEC, a regional organisation. The proposals were presented by ITC and RITSEC to members of the evaluation committee which included specialists from ICDT, ATFP, and JCCI, besides the staff of IDB. In view of the complementarity of the capabilities of both ITC and RITSEC, the panel has recommended that the two organisations present a common solution as a joint effort, by the end of July 1995. The proposal was received in August 1995 and is under study by the members of the evaluating committee.

**OICIS-NET PUBLICATIONS**

In order to disseminate information relating to OICIS-NET among the member countries, the following documents, prepared by OICIS-NET project, are being processed for publication:

*Directory of Institutions and their databases* (First edition).

*Proceedings of the Working Group Meeting of Trade Information System.*

*Proceedings of the Working Group Meeting on Telecommunications and Networking.*

*Proceedings & Recommendations of the First Co-ordination Meeting of OICIS-NET Focal Centres.*

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