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ESTABLISH A STANDARD INFORMATION AND DOCUMENTATION SYSTEM
AT THE INSTITUTE OF STANDARDS AND INDUSTRIAL RESEARCH
OF IRAN

DP/IRA/87/013

ISLAMIC REPUBLIC OF IRAN

Technical report: First mission of the IIA

The development of a Standards Information Service to
improve the quality of Iranian industry*

Prepared for the Government of the Islamic Republic of Iran
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of John S. Widdowson,
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Vienna

* This document has not been edited.

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EXPLANATORY NOTES

Currency

The Rial has the official value of 74 Rials to the US dollar.

Technical Terms

a) Information Systems Terminology

- 1) Bibliographic Database - a file of machine readable data containing terms describing the document (author, title, etc.) The word 'Database' implies Bibliographic.
- 2) Full text Databank - a machine readable file used for documents without pictures or diagrams (legal texts, religious texts, etc.) where the complete document is presented in machine readable form.
- 3) Factographic Databank - a mechanised file of data, the term originally used in Eastern Europe for a Databank of facts extracted from a document or research activity, etc. In this context it has been used to describe a file with the full text, diagram, charts, pictures and all other data presented in machine readable form.
- 4) ISONET - an Information System devised under the auspices of the International Standards Organisation. It provides a common System for World Standards and Regulations. The technology does not yet exist to conveniently include diagrams and charts so the System is Bibliographic but augmented by related data such as the availability of Certification Systems, etc. but not containing the full text of the document.

Since 1983 the System has been defined by the ISONET Manual.

- 5) CD ROM - stands for Compact Disc Read Only Memory and exploits the substantial market for music discs by re-using the production technique to produce portable systems of machine readable data at low price. PERINORM is a CD ROM containing the ISONET Bibliographic Databases produced by the Standards Bodies of the UK, France and Germany augmented with European and International Standards.
- 6) Host - a central facility with large-scale computer systems able to hold for public access a number of Databases or Databanks, usually as part of a commercial service, e.g. DIALOG, ESA/IRS, etc.

b) Organisations

ISO - International Organisation for Standardisation, the international organisation representing National Standards Bodies.

BSI - British Standards Institution, the National Standards Organisation for the United Kingdom.

Afnor - the French National Standards Body.

DIN - the German National Standards Body.

c) Documentary Terms

1) Technical requirement - a document produced by an authoritative body which stipulates the technical criteria for design, manufacture or use of an item of equipment or service, or system of proof of compliance.

2) Microform - systems for the provision of text which is reduced photographically onto a film or sheet (microfiche) for the more convenient dissemination or storage of documents.

A document "Access to Standards Information", published jointly by ISO and UNESCO in 1986, constitutes an invaluable source of information on the field of Standards Information and its terminology.

ABSTRACT

This Report describes the first part of a proposed 4-month split Mission for the Industrial Information Adviser and subsequent work involving a visit to Czechoslovakia to see the Computer Expert and extended communications with UNIDO leading to a revised Project Document.

The Mission required an assessment of the evolution of the Project, an investigation into the current situation and requirements of ISIRI, and executive briefings and training in accordance with the Job Description.

Concern was expressed at the apparent difference of advice between the IIA and CE, but this proved to be based on misinformation about the existence of factographic Standards data and once this was clarified, full agreement led to the drafting of a Note for the File for a Technical Review Meeting in November 1990 at UNIDO, when a re-formulated Project Document was proposed.

The main objective of providing an Information Service to assist Iranian Industry improve its quality can be achieved as follows:-

- the authorisation for the revised Information Department and staffing with out-of-country study tours and fellowships to prepare the management team for its new functions - training the trainers as well
- a joint Mission of IIA and CE to establish the human and mechanised systems needed for the launch of the new Service
- consideration of subsequent promotion and development to produce the ultimate Consultant Information Service.

The success of the Information Centre is dependent on meeting the actual needs of the End User. This matched by the new technical expertise and enthusiasm which already exists guarantees the effectiveness of the new Standards Information Centre.

INTRODUCTION

This Report was produced by the Industrial Information Adviser as a result of his First Mission on Project DP/IRA/87/013 - the Development of a Standards Information Service to improve the quality of Iranian Industry. The Project evolved from a Fact-finding Report produced in 1986 to a Project Document of July 1988. The role of the IIA was seen as critical, to establish and coordinate the overall project, and a Contract was offered and accepted in May 1989. The political situation in Iran subsequently made this unsafe so the Computer Expert carried out his mission at the end of '89 and the IIA arrived in July 1990 for a 21-day visit.

The original objective was for development of a conventional Information Centre, but the Project Document took a different slant towards a hi-tech computerised system based on a mainframe computer, factographic data and a sophisticated network. The purpose of this activity was viewed as being to improve the quality of Iranian Industry and unfortunately it was assumed that the full content (Text and Graphics) of Standards would be available in machine readable form and this is not the case.

On arrival in Iran, a request by UNDP to produce an assessment of the then situation became the first priority and the "Preliminary Assessment" in Annex 1 was produced and circulated in draft. A comprehensive collection of Appendices explained the misdirection of the project, the state of the art internationally, and a rational human information operation with computer support, exploiting new technology such as CD ROM. An important element was to investigate the Information Industry in Iran and to ascertain the needs of Standards End Users, but this was not feasible during the visit.

The Job Description duties were followed to produce a Work Programme, advise on the selection of books and CD ROM, propose an Enquiry Service to improve contact with Industry, identify the required Information Centre and structure, provide staff on-the-job training as well as produce detailed proposals for out-of-country study tours and fellowships.

Concern was expressed that proposals contained in the IIA Report were different than those in the CE proposal and a discussion between these parties was seen as critical. Fortunately, the IIA had a project in Prague and a meeting confirmed that information on the lack of factographic data had not been provided, but substantial agreement on the required operation was obtained. As a result, comments revising the report were produced and circulated.

The need for a modified Project Document was realised and after deliberation a "Note for File" was produced by UNIDO for discussion at a Technical Review of the Project on 7th November in Vienna. Though full participation was not permitted, the comprehensive document was presented to representatives from Iran and their support for these has been achieved.

The principal objective is to improve the quality of Iranian manufactured products through providing an Information Service for Standards and Quality Data. The original mechanism was inappropriate given the lack of computerised data, but the objectives can be met with a human structure, supported by conventional systems and new technology computer-based Information Services and, with these, the objectives will be met.

RECOMMENDATIONS

Draft recommendations were circulated to Iran, UNIDO and the Computer Expert at the end of the visit to Iran, but progress following the visit to Czechoslovakia and the Technical Review in Vienna has permitted these to be developed and advanced as follows:-

a) To Ministry of Industry

- 1) Accept the modified Project objectives and re-formulated Project Document (as identified in the "Note for the File - Technical Review of the Project DP/IRA/87/013", see Annex 10) with refinements as contained in this Report.
- 2) Support and fund ISIRI to become the required Standards Information Service by the supply of staff, telecommunications infrastructure, budgets for document and information acquisition and management training. Progressively the establishment of a National Host in the Ministry of Industry to provide a Dissemination Service for on-line information will exploit the ISIRI Bibliographic Database.
- 3) Supply information on IRAN's Information Systems and Standards Information End Users (Annex 7) so that the list of information products and documents to be supplied under the UNIDO Project can be completed.

b) To UNIDO

- 4) Following acceptance of the revised operation as explained in Annex 1 "Preliminary Assessment", Annex 2 "Staff Structure" and Annex 5 "Outline Work Programme for Standards Information Centre Development", encourage its support in Iran and particularly advance the critical training package as identified in Annex 3 (with IIA as tutor) to train the management team.

- 5) Confirm the programme for:-

1st activity - establishment of senior staff and their study tour and fellowship training.

2nd operation - CE's investigation into Standards and PS/2 Systems in conjunction with senior staff training if possible.

3rd activity - Joint IIA and CE Mission.

4th activity - linked with the 3rd to put the CD ROM and other systems into operation and prepare the ground for an ISIRI ISONET Bibliographic Database.

5th activity - obtain additional document and information collections (to complete the listing in Annex 4) as required by Iranian Industry.

6th activity - support the launch of the Standards Information Centre to improve its use by Industry, to improve its quality.

- 6) Consider support for the 5-year proposal to develop the Information Centre as a link to Industry, full Information Centre, Database producer and ultimate Consultant Service (a development of Annex 5 - document to be produced as part of the next Mission).

c) To ISIRI

- 7) Adopt the required Information Centre structure of:-
Enquiry Section
Library
Information/Database Section
as indicated in Annex 2, a development of the existing structure shown in Annex 8.2.

- 8) Transfer recommended staff to fill the posts of
Information Manager
Head Enquiry Section
Chief Librarian
Information Scientist
and with the Head Computer Department and National Project Coordinator obtain study tours and fellowships as proposed in Annex 3.

Note: An additional Library staff member and Engineer to support the Information function and the future Consultant role, could be included on the common fellowship if funds permit.

- 9) Complete the development of the new Information Centre area and install staff and equipment. Support the IIA and CE in setting up the operation including CD ROM, microform reader/printer and PD2 computer at ISIRI Karaj and, with existing and new subordinate staff, support training and implementation.
- 10) Obtain the Standards Material and Systems (CD ROM, Microfiche, Documents, etc.) as identified in Annex 4.

Support the Ministry of Industry in the investigation into the needs of Users and the established Information Industry in Iran to complete the listing of required documents and support their acquisition.

Establish an appropriate budget to maintain this collection current and add relevant documents as the industrial demand appears.

- 11) Plan information and marketing activity (with the Enquiry Service the public link) to identify and encourage use of the revised Information Centre and follow up progressive improvements to maintain National interest and complete the required Consultant/Information Service.

I. REPORT

As explained below, much of the body of this report is contained in Annex 1 "Preliminary Assessment - ISIRI Standards Information Service Project" and related appendices, which was circulated in draft in Iran before departure.

These documents and annexes 2 to 8 were produced and/or presented in Iran to explain to Executives from UNDP, Ministry of Industry and ISIRI the background and current situation in Iran, conventional world practice for Standards Information Centres and practical proposals. They also served as training aids to proposed operational staff.

II. ACTIVITIES

A. Situation at Outset

The briefing in UNIDO introduced for the first time the "Fact-Finding Report and Recommendations" prepared by UNIDO consultant R.D. Taneja (SI/IRA/85/802), drafts of project documents resulting from his report and the final version of the project document of the present project. Progressive changes in the project direction have been noted.

These differences were raised in Vienna and with the Ministry of Industry shortly after arrival in Iran where proposals (see Annex 1, Appendix A2) resulted in a request by UNDP to produce a definitive "preliminary assessment" to clarify the project evolution and as the basis for development proposals and action. The major problem identified was that the practical Technical Library and Information Centre proposed in the original "Fact Finding report and recommendations" had been redirected to a system based on a computerised information network, on the assumption that machine readable versions of the full content of Standards were available.

As identified in ISONET Documents and confirmed in the fax (sent by the Assistant Secretary General of ISO to the President of ISIRI on 28th September 1989) this is not and never has been available. The plan for computerised networks and COM document delivery system are therefore not appropriate at this stage for a Standards Information Service intended to improve the quality of Iranian Industrial Products.

The initial mission of the IIA has therefore been to produce the required Assessment, then comply with the Project Document Development Objective and develop the project in the light of world practice on Standards Information Centres for industry while exploiting new technology (CD ROM, Microforms, etc.) and equipment already provided for the project. Subsequent work was based on the Job Description with the identification and initial training of people to manage the operations also given priority.

B. First Mission Activities

Annex 6 contained the proposed mission programme and the actual detail work programme achieved.

1. Workplan

In compliance with activities in the job description, the first aim was to identify the current situation in ISIRI and its Information Department and then to put its function in perspective with regard to the Information Industry in Iran and the users' needs for Standards/quality information.

The first aim was achieved, but it was not found possible to visit established Information Centres providing technical information to Industry or see Computerised Information Services, bibliographic databases or other information services currently offered. Contact with users of Standards Information was limited to people within ISIRI headquarters.

A questionnaire was left with the Ministry of Industry (with letter dated 9th August 90) and the needs of users deduced from previous experience.

Problems experienced with voice lines and the lack of a data network suggested at best a basic Information Industry in Iran and a full investigation should take place during future missions.

2. Preliminary Assessment

This activity became the first priority following Ministry of Industry discussions on 23rd July and briefing with UNDP on 25th.

The activity involved detailed analysis of the Fact finding report, Project Document, Computerised Information Service Report and Tripartite Report Briefing Note. The resulting Report (Annex 1) contained this analysis plus comments on the current situation, particularly the low enquiry load and staffing within the ISIRI Information operation, an assessment of the options and a conclusion for discussion.

3. Executive Briefings

The result of the preliminary assessment showed the need to establish a core information centre of the type used by most Standards Bodies. Detailed discussions took place with senior staff from Ministry of Industry, UNDP and ISIRI to explain the conclusion, the lack of factographic data on Standards and the prospect for a human information network with computer support to improve the current situation in Iran.

Particular use was made of Briefing Documents as identified in Annex 8.

4. IIA Job Description Functions

A core of existing ISIRI staff were made available for briefing and training. During the second week a detailed programme to meet the job description duties was organised, to explain the Information Centre function and operation.

Item 8 dealing with the selection and application of computer and related equipment required the appraisal of equipment already ordered and obtained and identified a need to meet the computer expert in Czechoslovakia, if necessary.

Item 10 concerning training abroad became a major feature of the third week including production of Annex 3 "Training - Proposal for ISIRI Standards Information Centre", covering study tours and fellowships, discussion and the drafting of application forms.

5. Project Document Modification

With the non-availability of factographic Standards data the detail of the project document was seen to require modification.

A breakthrough was the Ministry of Industry proposal which suggested the separation of its public host function, leaving ISIRI the Standards and Quality Information Centre function as its first priority.

Comparison with International practice (Annex 8) explained the revised departmental structure (Annex 2), and the training proposal (Annex 3) outlined how the skills could be made available.

Debriefing in Vienna covered the required modification of outputs in the Project Document to suit the possible and actual situation.

C. Visit to Computer Expert in Czechoslovakia

The CE lacked the information identified above, so the detailed report produced late 1989 required modification with regard to computer systems and equipment and the requirement for the Computer Network Expert. Concern was expressed by the Ministry of Industry about the apparent difference of view between IIA and CE, so a meeting was of critical importance.

No funds were available from UNIDO, but fortuitously the IIA had an independent consultancy project with the Standards Organisation in Czechoslovakia and in October 1990 a visit was made to Prague and a meeting arranged with the CE.

This meeting identified that no information had been given to the CE on the ISO statement confirming the non-availability of factographic data, which significantly affected his proposals and the report.

Agreement was obtained on the reduced role that the computer and networks should play in the light of the above and the lack of established systems available in Iran. The agreement was confirmed in the document "Comments on Mr. Widdowson's draft" which is included under Annex 9.

D. Activities after Mission

Executive discussions in Iran supported by the Preliminary Assessment and related briefing documents were of value to redirect the project, but reservations were expressed by executives from the Ministry of Industry about apparent differences between the CE and IIA proposals.

Action identified in C. confirmed that no problems existed, but to produce a positive Mission Report the IIA felt it necessary that confirmation that information for Quality was what Iran required and not some more esoteric academic data service.

The ideal opportunity was identified by UNIDO concerning a visit from the relevant Deputy Minister during the first week in November.

Substantial effort and expense followed to clarify the situation and meeting, and in the despatch of an Interim Report supplementing the existing circulated Preliminary Assessment. The four-way meeting, supported by UNDP, would then confirm the practical intent and related organisational and training proposals so the Mission Report could amplify these. However, Iranian support for the four-way meeting was not forthcoming.

The Backstopping Officer instituted a compromise by circulating a "Note for the File" for discussion at the Review Meeting, which contained an explanation and draft modifications to correct the Project Document. Comments were faxed so that an improved version (copy in Annex 10) was submitted to the Technical Review on 7th November 1990.

Subsequent communications confirmed that the Technical Review Meeting had been truncated, but that all documents were passed over and were thought to be acceptable, though confirmation has yet to be received.

The final version of the Note for the file (Annex 10) was approved by the national Project Director and the Backstopping Officer in January 1991. After this it became possible to re-work the previous drafts into this more comprehensive First Mission Technical Report with Section III. Outputs updating the Preliminary Assessment, and analysis of the revised Computer Expert's Report and Technical and Recommendations are included, but final Staff Structure (Annex 2) and Work Programme (Annex 5) as well as completed Listing of information documents required (Annex 4) must await confirmation and feedback from Iran.

III. OUTPUTS

A. Documentary Outputs

The initial Project documentation was analysed in Section 2 "Project Evolution" of the Preliminary Assessment Report contained in Annex 1.

These were referenced as follows:-

- A. Fact Finding Report and Recommendations
- B. Project Document
- C. Computerised Information Service (initial report produced by Computer Expert)
- D. Tripartite Report - briefing note

The post-Mission documents are described below using the same analytical system, these being produced subsequent to the circulation of Annexes 1, 2, 3, 4, 5, 6, 7 and 8, plus draft versions of this Report.

- 1. "Comments on Mr. Widdowson's draft" (Annex 1 Reference E)

- a) Investigation

A report was produced by the CE, which amended Document C, based on post-Mission investigations and the Czechoslovak meeting between him and the IIA.

- b) Report

The document dated 4th November 1990 was sent to UNIDO for the Technical Review, but did not reach the IIA until late December/early January. This is a critical document as it confirms the substantial agreement between the IIA and CE with original differences explained by the misinformation on Standards factographic data. It also confirms that the computer system is a means to an end, which supports the redirection of the Project to a practical, human information service supported by computers.

- c) Comment

Comments by section reference are as follows:-

Section 4 - While a physical network based on a central computer does not exist, individual ISONET Bibliographic databases are available. As the first user's problem is one of identification, these are still important to the ISIRI Information Centre - point relevant to Section 5.

Section 6 - ISIS software. The extent of use of the ISIS system relates to it being supplied free of charge rather than the quality of the system. It is of particular note that only one Standards Information Centre uses ISIS (SIRIM Link in Malaysia uses MINISIS) and they are not enthusiastic about it. Also reservations were expressed by UNIDO computer staff.

However, if the format is compatible with ISO 2709 "Documentation - format for bibliographic information interchange on magnetic tape" (? ISO 2907) then transfer to a different system in the future should be feasible.

The suggestion that LIDAS or similar purpose-made system would be expensive and time-consuming to implement is of interest. As they are operational in a Standards organisation for information management purposes the problem would seem rather more the capacity limitation on the PS/2 which would not be rectified by linkage to the discontinued IBM mainframes.

Section 7 and 8

- the management information system benefits the ISIRI Standards and Quality operations more than the Information Centre, except as a source of data for the enquiry service. It should be given priority to improve the image and efficiency of ISIRI. Linkage to the regional sites will depend on major improvements to the national infrastructure.

- CD ROM systems like PERINORM, etc. are the more important information tools, as they incur no on-line costs or problems, and have more than adequate currency through the monthly updating service. Effort can then be concentrated on the specific Standards that use patterns indicate are essential rather than a blanket acquisition activity.

- A Bibliographic database of ISIRI's own Standards has some value as an internal information tool and a system for generating printed publications. However, (subject to further investigation) there is no evidence of end users being actively interested or equipped to search a Bibliographic database. The priority is for sufficient time to be given to training, to ensure that a quality ISONET D/B is produced and that the software has an adequate retrieval capability.

Overall, the revised proposal confirms a common consultant view and a joint mission of the IIA and CE would maximise benefit on the computer installation and its practical operation.

2. Technical Review - Note for File (Annex 1 Reference F)

a) Meeting

Documents supplied, but discussion limited.

b) Report

The basically satisfactory report serves two purposes:-

- 1) To officially recognise the common view of experts and UNIDO;
- 2) To identify required modifications to the Project Document.

Comments on the first category appear below and on the second in Section III B along with other suggestions.

c) Comments

Paragraph 1, preamble to Paragraph 2, Paragraph 3 (IIA recommendations are defined in Annexes 2, 5 and 8) and Paragraph 4 (as described in Annex 3) all constitute an acceptable, simplified Conclusion to the Preliminary Assessment and subsequent work.

B. Project Document - Modifications

Since first sight of the Project Document during the initial briefing, the need for correction and updating of the Project Document has been recognised.

With the production of the Preliminary Assessment, its discussion led to substantial acceptance by UNIDO as indicated in the Project Technical Review - Note for the File and most of the required modifications are under consideration for acceptance in Iran.

This section of the Report can therefore dispense with reference to the intermediate documents (marked up Project Document supplied to UNIDO 19th July 1990, draft report sent 5th October, re-drafted Section III, E. Outputs, modified draft File Note, etc.) and concentrate on the version contained in the Final "Technical Review File Note" to identify any omissions.

In sequence of the original Project Document, comments are as follows:-

PART II THE PROJECT

D. Background and Justification - corrections included in Preliminary Assessment and appropriate sections of the Technical Review.

E. Outputs

All satisfactory, but refinements required as follows:-

2.3 The library should concentrate on Standards, Technical Requirements and related updating, with research and technical documents obtained from external sources through inter-library loan.

Note - this both recognises the unique special skill of the ISIRI Library but also the inadequate numbers of staff. Unless these are doubled, no increase in service can be anticipated.

2.4 It is the Library that will benefit from microfiche collections and services rather than the enquiry service. Enquiry staff need improved communication systems and access to management information and appropriate internal and external experts to enable them to help Industry.

PART II.G Budgets

11-01 Explanation - a longer period in Iran would be of benefit, but with the previously assigned funds redirected to hardware from the training budget this reduction will help and could be allocated to fund the IIA as tutor.

31-00 &
32-00 These Descriptions contain a bias to computerised systems which has been put in perspective by the purpose and detail contained in Annex 3 - Training.

Also with the proposed fellowship package it might be cost effective to increase the numbers of trainees with proposals established for an additional library staff member and an engineer to work in the Information Department pending the development of a Consultancy operation. (Fellowship forms were completed for appropriate members of staff.)

6. Workplan

It would have been valuable to discuss the workplan between the two Consultants, ISIRI and UNIDO during the Review Meeting as the original sequence requires Action before Information.

As the proposed timescale is no longer appropriate, the following constitutes a rational sequence, based on the outline programme in Annex 5.

1st activity - establish senior staff in their official new positions and in the sequence, management study tours, then senior staff fellowships, complete the training as for 6.3.

2nd operation - it is proposed that the CE carries out an investigation into software systems for the PS/2 computer system and management information system required for ISIRI. The latter activity requires knowledge of computer systems as needed by Standards Organisations and access to the experts involved in the training sessions could provide this.

Note - My Consultancy in Czechoslovakia at the Standards Organisation identified a need to substantially modify the current computer operation, so this would not be appropriate as a model for ISIRI.

3rd activity - before detailed computer activities can take place, the revised Information Centre structure and operation must be developed and installed along the lines of the joint mission proposed in 6.4.

4th activity - the detailed introduction of PERINORM and other CD ROM and the development of the ISIRI Database first and foremost requires knowledge of these Standards systems and ISONET as well as computer knowledge. The CE evidently has the latter skills but needs to acquire the former and a combination of the involvement with the training package (1) and as a result of the joint activities (3) this work could be continued after the joint mission.

5th activity - the selection of priority or additional sets of documents, either on paper or microform, is dependent on the user's needs in Iran. Once response to the letter and questionnaire as contained in Annex 7 is obtained, this work could be carried out before the joint mission in Activity 3, supplemented by data acquired during visits to industry and information organisations in Iran during the next mission.

6th activity - the successful exploitation of a Standards Information Centre to improve industrial quality requires promotion and marketing of the service and progressive provision of new services of benefit to the end user, launched to be newsworthy, to ensure the requisite interest. The total plan over the next five years should therefore be considered.

Once the required agreement has been obtained from Iran for the refined project, the work plan and programme can be finished in the light of the situation at that time.

PART II G. Inputs

A. Government Inputs

The number of staff recruited needs clarification. Of the ten staff indicated, only the Computer Manager was involved as a trainee during the Mission.

The required initial staffing of the Information Centre is identified in Annex 2 and rationalisation and recruitment, where appropriate, between these two lists would be advantageous.

With the above evolution of the Project Document it is realistic to expect that an improved operational Information Centre can be effectively launched to industry within twelve months.

IV. CONCLUSIONS

A. Project Purpose

As indicated in Annex 1 "Preliminary Assessment - ISIRI Standards Information Service Project", the first requirement of the Industrial Information Adviser has been to clarify the prime purpose and method of operation of the Information facility. This required substantial work in Iran, with UNIDO, and with the Computer Expert, involving a visit to Czechoslovakia.

The result of this effort has been to identify the misinformation about Standards factographic data resulting in the computer bias both in the Project Report and initial Computer Expert's proposals and return to the original proposal of a Standards Information Service in ISIRI to assist Industry to improve its quality, using computers as aids where appropriate.

This purpose was stated in the "Note for File" presented at the Technical Review Meeting in Vienna (see Annex 10) agreed by UNIDO and Iran.

B. World Practice

The world recognises the importance of Standards and Quality Information as a pre-requisite for improving the operation of its Industry. The data is principally contained in Standards, Technical Regulations, Quality Systems, etc. (collectively known as Technical Requirements) and Industry requires a convenient collection of this data, with appropriate systems and expert advice to identify relevant documents, either for National Quality or Export purposes.

The IIA has had the opportunity of working in over 25 such Information Centres and the conventional practice is to hold paper collections, as National Standards (the core collection) are made available as part of an International Exchange Agreement to International Standards Organisations (ISO) members and constitute the form of data preferred by people in Industry.

Retrieval systems (normally Bibliographic), however, are increasingly available in machine readable form (the best being ISONET Databases) and these can be accessed on-line or on CD ROM, but are principally of use to the Professional Intermediaries in the Information Centre rather than direct to the End User.

Most problems require comparatively few technical requirements to solve them, BUT these must be the complete, relevant collection and the documents must be guaranteed current or serious difficulties may result.

International practice, therefore, supports the revised proposal that recognises the establishment of a professional centre of excellence in ISIRI, which with professional Enquiry, Library and Information/Database Services can do a quality job on behalf of Industry, to extract and supply the information required. In the future, the addition of a Consultant Interpretive Service will provide the ultimate assistance to Iranian Industry to improve their National Quality and open up export markets.

Note: The Project Document implied the free supply of Standards Documents, which would be against accepted ISO practice where the National Standards Body is expected to protect the copyright of other ISO members. A Loan or Sale service is required.

C. Final Conclusion

An interim conclusion was included as Section 5 of Annex 1 "Preliminary Assessment" and needs modification in the light of progress since return from Iran as follows:-

1. Project Document (relate to a, b, and c)

Modifications to the Project Document are required as shown in the "Technical Review - Note for File" as clarified and developed in Section III. Outputs, Section B, item 6 of this Report.

Such acceptance will permit the rapid introduction of improved systems so that an effective source of information can be established within twelve months to improve the quality of Iranian Industry.

The project will concentrate on the Standards Information Centre and this must be the first priority of the exercise.

However, aspects of equipment now available could usefully be considered as the core of an On-line Host and Industrial Information Centre at the Ministry of Industry, which would also in due course have the responsibility of mounting the ISIRI Bibliographic database and possibly other ISONET Bibliographic files where use within Iran justifies such an activity.

2. Project Consultant's work would cover:-

IIA - involvement with the study tours and fellowships to prepare the senior staff for their responsibilities in the new Standards Information Centre. A subsequent return to Iran with the Computer Expert to set up, introduce operation and train to the first stage Centre function.

Advice on document collections, CD ROM, etc. (see Annex 4) will be extended on receipt of End User information.

CE - to prepare to develop the PS/2 computer systems required, involved if feasible with the professional staff training activity to become acquainted with systems required by Standards Organisations.

Once the ISIRI Information staff are trained and in post, he will return to Iran to work with the IIA on the set up task and continue with practical development of relevant computer systems.

The CNS (Computer Network Specialist) is not thought to be a priority at this stage.

3. Systems and Equipment

The first priority is people and the first requirement is the development of the proposed departmental structure (Annex 2) to provide the Enquiry, Library and Information/ Database services to link ISIRI more effectively with Industry and improve quality of data and usage.

They will then need support staff and improved communication systems, both within Iran and outside, a Library budget to acquire and maintain current necessary documents in addition to those provided on the Exchange Agreement, and appropriate microform document systems where paper supply is impractical.

The principal initial retrieval tools will be conventional catalogues, but CD ROM systems, initially PERINORM, will provide a very high quality service with no technical difficulties.

The PS/2 and an ISIRI Management System will improve management and internal communications, and the addition of an ISIRI Database as and when trained staff are available will improve Information and printed products with the possibility of carrying other ISONET files in the future.

4. Programme - to develop the full potential of the Centre a five-year programme is required and consideration should be given to a second phase of UNIDO support to ISIRI as outlined in Annex 5 with staff as indicated in Annex 2.
5. Links - Iran has a tremendous potential with raw materials and intellectual capability to re-establish an Industrial base as significant as any in the region. To do this, however, contact with countries outside Iran is necessary, to take advantage of technological development and industrial and commercial practices needed to be successful in today's world.

Information is the most powerful tool to link problems and their solution and the progressive opening up and active participation in ISO, UN, and appropriate Foreign National activities should be planned.

This is critical to Technical Requirements information and the future of IRAN.

ANNEX 1

ISIRI STANDARDS INFORMATION SERVICE PROJECT
PRELIMINARY ASSESSMENT

1. INTRODUCTION

A. Prior Research

The initial analysis by the Industrial Information Adviser was based on Job Description DP/IRA/87/013/11-01/J 12101; see Annex 1.

The project purpose was to strengthen ISIRI and the Duties described the development of a standards information center similar to those the IIA had helped to establish in many World Standards Bodies.

The type of work to be carried out was indicated by the fact that only 1 task out of 10 related to the computer and even that was for a documentary system.

During briefing in Vienna, analysis of the Project Document and other reports showed signs of re-direction to Computer Systems which appeared of limited advantage to the Standards Center and the development objective to Improve Iranian Industrial Quality. Concern about this change was reported to the Backstopping officer.

B. Developments in Iran

At the first meeting with the Ministry of Industry on Day 2, discussions took place with the Project Director which referred to the above and he proposed a possible solution; see Annex 2.

Following internal discussion, the UNDP Project Officer agreed that the situation needed clarification and the IIA was requested to produce a preliminary assessment, commenting on all stages to identify where problems had occurred, solely to find a practical way to establish the required Standards Information Service and meet the Governments requirements.

This was viewed as being part of the Technical Report and needed to be available as soon as possible.

2. PROJECT EVOLUTION

A. Fact Finding Report and Recommendations

a) Investigation

In 1986 the first IIA from India visited ISIRI to carry out project SI/IRA/85/802 on Strengthening of the ISIRI Technical Information and Documentation Center. (Note Section 4 on the Center's Adequacy and Annexs 3 and 8 were missing).

b) Proposal

Fig 1 "Proposed Plan of ISIRI Technical Library and Information Center.(See Annex 3) shows broadly the functions required to improve the information services to industry as follows: -

	Staffing	
	Proposal	Now
1) Holdings - Main Growth in Standards	10	3
2) Services	8	1
3) EDP for Library and Local D/B use	6	1/3
4) ISONET Bibliographic Data base	2	-
5) Training	3	-
6) GATT	1	-

c) Comment

While the work for ISONET may not have been fully understood, (Despite the 1983 ISO Document "ISONET Manual" published in 1985 and ISO/UNESCO advice Document" Access

to standards information" in 1986) the core design of A. was similar to many Standards/Research information centers now in operation.

A draft project document was produced based on the IIA's report but was changed.

B. Project Document

a) Investigation

No further investigation is documented and many of the senior staff involved or who signed the project document Number DP/IRA/87/013/A/0137 on 18 July 1988 many not have been involved with the 86 investigation.

b) The Report

The document presents a substantial body of work, much from the earlier draft.

- 1) The Development Objective aims to improve the quality of Iranian Manufactural Products through an Information Network
- 2) The Immediate Objectives Identifies two mechanisms:-
Computer Information and Documentation System and,
an improved Library/Information Service with Links to ISONET.
- 3) Users in Industry and Export are stressed, extending the service to Quality Documents, and the Report identified in A is cited as evidence. The PPPD Department main function is as an Information provider.
- 4) Page 5, 6th paragraph contains a misunderstanding by suggesting that the full content of standards be stored in the IS'RI computer. This was and still is NOT feasible, because no standards body yet provides their data in this form (too experience for essential diagrams, charts, etc. and no demand given the alternative of

Microforms). The Main Frame Computer was justified on this Basis.

- 5) As a result the 1st Output objectives are not all useful for ISIRI at this stage (page 6) with aspects of Part II Activities Output/ and related personnel, Experts and Training.

c) Comment

- 1) The Objectives are still sound with the word Network recognized (as in ISONET) as a link between human Information Centers as well as computers.
- 2) ISONET is a Bibliographic Data Base system Not full content of standards (Factorgraphic or Data bank) and was documented as such since 1976 but the computer Orientated people involved did not know that.
- 3) It has already been recognized that some Hardware is not required so the continuation of the project as a Standards Information Center for Industry is fully justified.

NOTE: The IIA. accepted the original contract dated 2.5.89 but political statements made it impossible. Had this not been the case modifications could have been made which would have redirected the project at that stage.

C. Computerized Information Service

a) Investigation

A professional report Ref. DP/ID/SER.A/1282 8 December 1989 was produced by the Computer Expert following a 13 Day Visit.

Prior to that correspondence indicates a continued concentration on computer equipment rather than Standards Information.

b) Report

- 1) The Abstract confirms the continued misunderstanding that ISONET is a Network of Factorgraphic Data. But the other 4 objectives are sound.
- 2) Recommendations
 - 6- Reconsideration of the IIA mission would have been inappropriate.
 - 7- The COM device is not necessary for Standards Information at ISIRI
 - 9,10 & 11- Are Relevant to ISONET, PROVIDED factorgraphic is replaced by Bibliographic (Meaning search finds Document Reference)
 - 13- Meaning of "Public Domain" unclear.

c) Comment

- 1) The report has value but needs modification to recognize that standards are only available as Paper and Microfilm and not on Factorgraphic Data Banks.
- 2) Links to ISONET on other Standards Data bases are sound but CD ROM systems are preferred where available.
- 3) ISIS is used for conventional Bibliographic Data bases but dose NOT work well for Standards which are far more complicated than books, reports, etc.

However systems used by most Standards bodies required modification (Golem in Germany, Mistral in France, etc.) and the best may be that under development by BSI based on BASIS (called LIDAS).

- 4) Reuse of Equipment
As already agreed ISIRI dose NOT need some of the equipment obtained.

However Computer, COM Equipment and related software ARE Needed for a HOST-A National Computer Center to hold and supply data from 100's of Government and Commercial Services- to provide a wider Industrial Information Service. Most countries have Public Hosts

like Dialogue in USA, ESA in Europe, Pergoman in UK, etc. so such a service is essential.

Also ISIRI will require a Host to mount its Bibliographic Data Base and would benefit from other standards files when available.

NOTE: A telex of 28 September 1989 from ISO to ISIRI confirmed the lack of factorgraphic data and ISONET Network but not clearly until Mr. Rimaneks note of 14 May 1990.

D. Tripartite Report - Briefing Note

a) Meeting

The note provided in Vienna describes the situation around May 1990 (Date and attendees not cited).

b) Note

A useful Update which identifies the following: -

- 1) Project Now December 89 to June 1990.
- 2) UNDP Inputs- reduced training budget for more hardware, unfortunate but savings in consultant costs should be considered.
- 3) Government Input- states "Assignment of 7 national staff" which requires clarification.
- 4) Important points- stresses IIA role and explains delay,
- Decision not to install IBM Mainframe but use Micro computers with Min. Industry capacity.
- 5) Training- critical but reduced to 16 m/m, problems experienced with lack of nomination forms,
- IIA to work out.
- 6) Equipment- Major Expenditure on COM device. \$180,000 plus.
- 7) Work Plan- realistic expert for aspects of computer programme.

c) Comments

At this stage the lack of machine readable standards data is being recognized but some ramifications such as COM equipment and use of CD ROM need consideration.

3. CURRENT SITUATION

Initial view as follows:

A. Use of ISIRI

	ISIRI	BSI
Enquiries Received	500/week	2,800/week x5.6
National Documents Sold	700/week	11,000/week x15.7
Revenue From Documents Sold	2,400 Pounds	790,000Pounds x329

The statistics show the urgent need to increase usage of ISIRI Information to upgrade quality in Industry. The lack of staff and poor communications are explained below but more promotion and identification of the existence of the Information Centre, Not PPPD is essential.

B. Staffing

The library only has 4 staff (No secretary) a reduction of 3 stall since 1987, and the computer department only 1 Qualified Staff. International Relations has 2 Experienced Linguist/Documentalists, but has been moved out of the PPPD (to International Affairs) separating valuable skills from the Information Center.

The staffing is totally insufficient for the proposed Information activity and none of the 10 staff identified as Government Input seem to have been provided.

C. Infrastructure

The Library receives its enquiries by Post or Visit as the Telephone system is unreliable. The intention to mount extensive online on other Data systems would not seem possible with this telecommunications limitation. Power Cuts would also present a problem.

D. Document Collection

An additional collection of Reference Books have been Obtained but the standards collection which 80% of enquiries require has not been improved. No Library Budget is currently provided.

E. Progress

In carrying out the duties listed in the Job Description the IIA has been impressed with the enthusiasm and commitment shown by the team of PPPD and other staff made available, despite the problems identified.

With those people in the required new Information Center Structure and provided with training the aspirations for the Standards Information Center can be achieved.

4. ASSESSMENT

A. Standards Information

The project developed on the assumption that Standards Documents were available in machine readable form which is not the case so unnecessary equipment was obtained and less resources put into the Information Center and Training.

The recent creation of CD. ROM Systems provides ISIRI with standards bibliographic data without the need for data/telecommunication lines. Microform systems can supply standards to supplement the hardcopy available. Both developments make substantial use of the remaining equipment.

B. Bibliographic Data Base of ISIRI Standards

Once staff are recruited and trained the production of an ISONET Compatible B. D/B of ISIRI Standards and Technical Requirements can be carried out.

A Host computer will be required to mount it for public access along with other standards files.

C. Industrial Research Information

The project encourages the extension from Standards Information to cover research for Industry but as the current ISIRI introductory booklet states, Research is Limited to "the fulfillment of its first and foremost duty Standardization".

The Ministry of Industry would be better placed to develop this facility as recommended by UNIDO (NFP function within INTIB).

D. Host at Ministry of Industry

It has already been agreed that the MofI Mainframe computer should be used on the project so, operating the Host service from there would be logical and overcome Karaj telecommunications difficulties.

E. Service to Industry for Improved Quality

The capability of the computer to replace people as the system to help Industry improve quality is optimistic. The opportunity to Strengthen ISIRI to provide practical Information Services similar to these in operation in much of the world but using appropriate technology, is advantageous.

5. CONCLUSION

- a) The Current Project should go ahead against the current Project Document to prevent any further delay in establishing the Standards Information Center so badly needed by Iranian Industry to Improve Quality and Exports.

- b) Annex 4 shown diagramatically the Evolution of the project which shows the value of the Ministry of Industry Proposal which gives a rational use of Resources:-
 - 1) Standards Information Center at ISIRI with Enquiry, Library, Data Base and Computer Operations exploiting the new technology of CD. ROM to retrieve Information and Micro File Sets for problem document collections.

 - 2) Online Host and Industrial Information Center at Ministry of Industry to exploit the existing Mainframe Computer(if appropriate) and COM equipment and provide a system to mount the ISIRI Data Base.

- c) The plan is practical, makes best use of purchased equipment and enables improved Standards Service to be available within 6 Months- Annex 5 shows the outline Program.

- d) Consultants Work would cover:

IIA Standards Information Center according to Job Description with General Advise on the Host system from the Users View Point.

CA and CNS Initial Work on establishing Micro Computer, CD ROM and Online Operations at ISIRI with advise on internal computer systems. With Initial Guidance after that on Host and National Network and links to INTIB and other sources for industrial information once demand is proven.

- e) While the technical misunderstanding is unfortunate the new timing allows use of more appropriate CD ROM Systems. With prompt recruitment, training and document, CD ROM Services and Micro File Purchases, a Quality Information

Service from ISIRI to Regions and Industry (Provided adequate telephone links are available) can be established within the remaining period of the UNIDO Project.

- f) To develop the full potential of the Center a 5 year program is required and consideration should be given to a 2nd phase of UNIDO support to ISIRI as outlined in Annex 5 with staff as in Annex 6.

JOB DESCRIPTION
DP/IRA/87/013/11-01/J12101

Post title: Industrial Information Adviser

Duration: 4 months in split missions

Date required: As soon as possible

Duty station: Tehran; with travel within the country

Purpose of project: To strengthen the Institute of Standards and Industrial Research of Iran (ISIRI)

Duties: The expert will be attached to the ISIRI and will work in close cooperation with the National Coordinator and other experts assigned to the project. The expert will specifically be expected to:

- 1- Elaborate a detailed work plan for tasks to be performed in his/her field of specification.
- 2- Assist in the selection of books, periodicals and standards to be purchased.
- 3- Establish a mechanism for regular contacts with industries in order to cope with their needs for standards and other relevant information.
- 4- Organize the information and documentation services as well as issuance of library, collections and publications.
- 5- Identify jointly with other experts, the ways and means for establishing links with international information sources, namely ISONET and INTIB.

6- Select and prepare requisitions for the reprography, microfiche and microfilm equipment and supervise the installation of such.

7- Specify the requirements enabling the design and development of a computerized data base of standards and techno-economic information.

8- Advise with the cooperation of other experts on the selection of the appropriate computer hardware and software required for the establishment of a computerized data bank, computerized information and documentation services and on training equipment to be purchased.

9- Organize on-the-job training for technical and professional staff as well as for users of the PPPD services in information and documentation services.

10- Advise on the topic and length of training abroad as well as on the selection of suitable centers, and assist in the organization of such training.

The expert will also be expected to prepare a terminal report setting out the findings of his mission, together with his recommendations on future action which might be taken by the Government.

ANNEX 2

Preliminary Meeting of Industrial Information Adviser at the
Ministry of Industry - Monday 23.07.1990

Brief Note on Outcome of Meeting

Following an introduction to the attendees at the meeting including the new project staff member Ms. Komfar the situation on the project was discussed.

Dr. Tofigh Project Director suggested that within the objectives of the proposed document a development as follows could advance the project:

1- Establish the "HOST" computer, Network Service required by the Standard Information Center, at the Ministry of Industry as the core of the Industrial Information Service.

2- ISIRI would concentrate on the Standards Information and Documentation System to provide immediate services using CD ROM, Microfilm and other available technology.

A Bibliographic Data base of Iranian Standards and Regulation would also be planned for mounting on the host.

The Industrial Information Adviser agreed that this would be a practical method to provide quickly the required information to improve Industrial Quality with the online service to follow.

Dr. Tofigh requested a further 3 meeting during the 3 week visit.

Fig.1 Proposed Plan of ISIRI Technical Library and Information Center Including Extension Services for Provinces

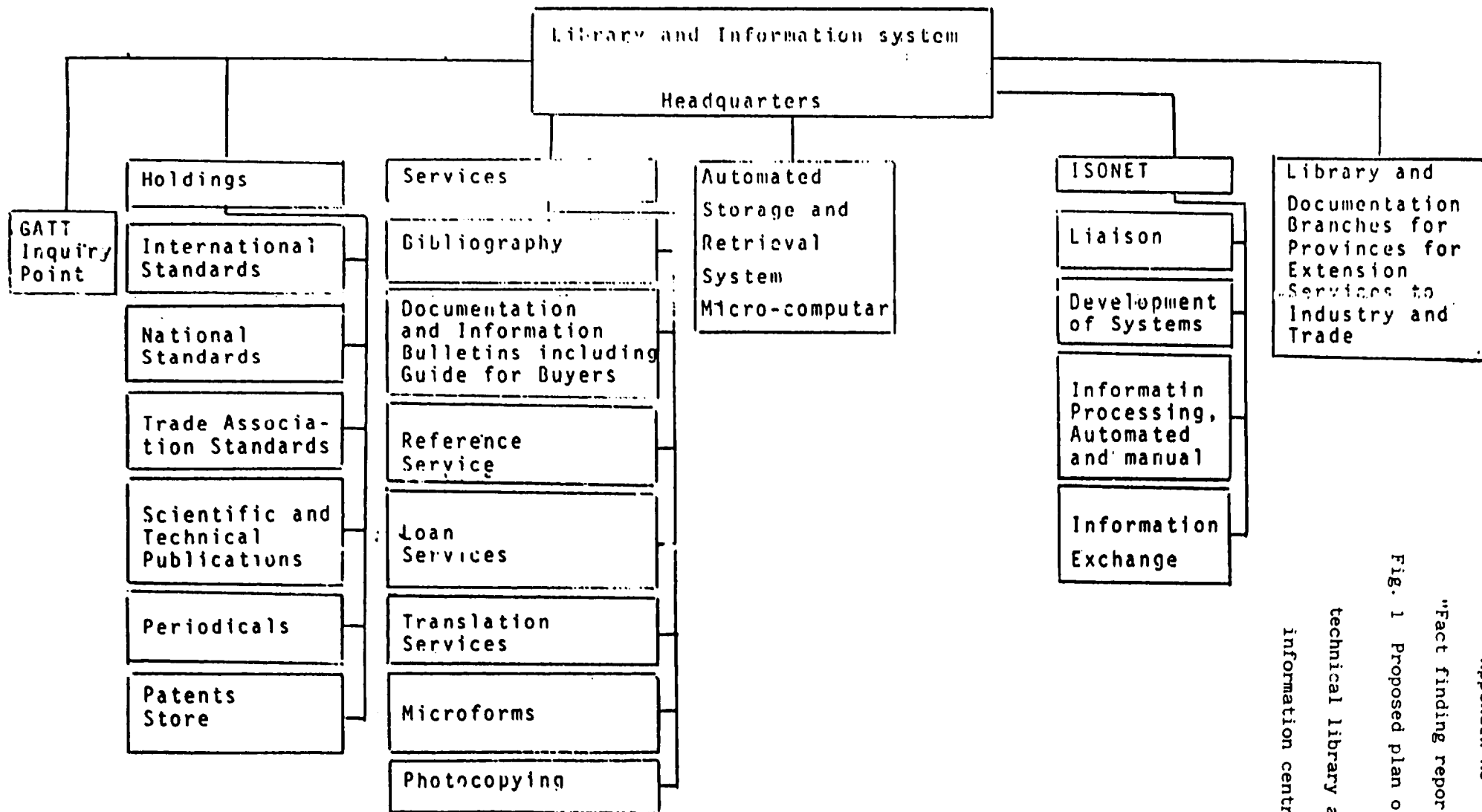
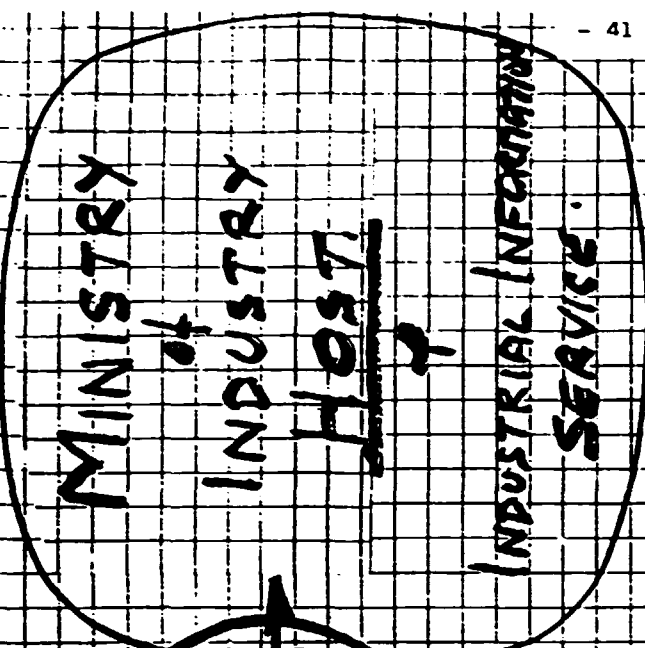


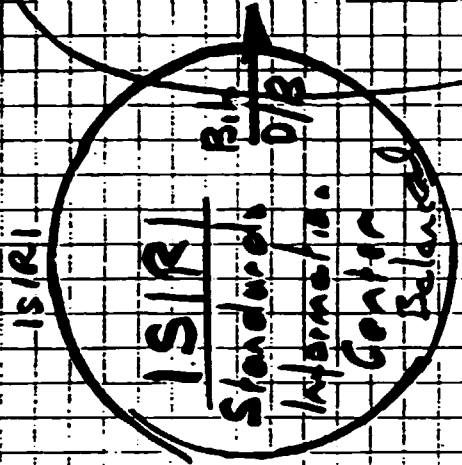
Fig. 1 Proposed plan of ISIRI technical library and information centre
 "Fact finding report"
 Appendix A3
 ANNEX 1

Evolution of ISIRI Standards
Information Centre project
Explanatory diagram

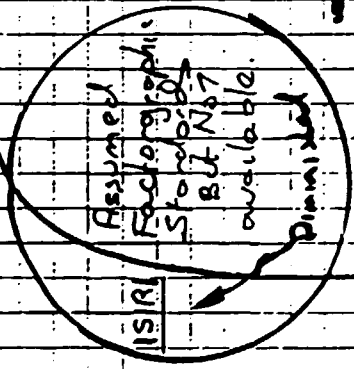
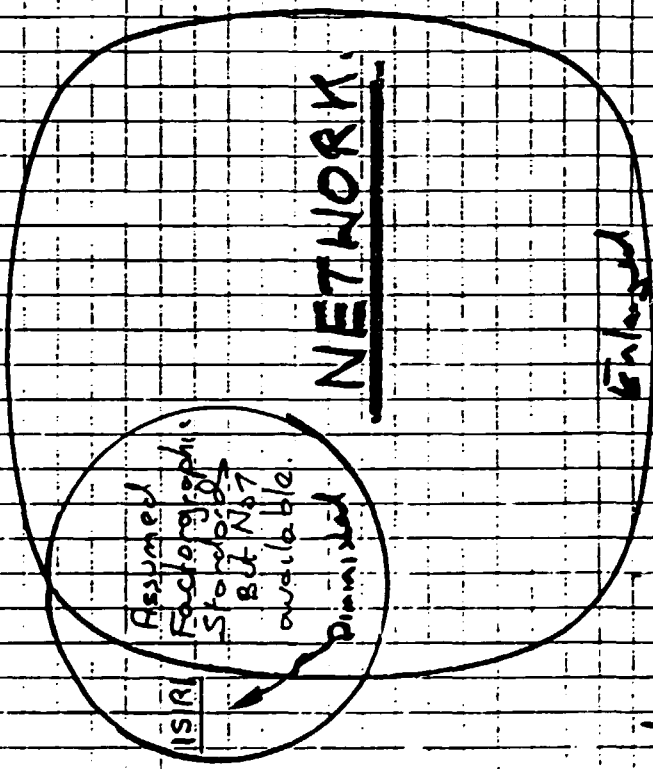
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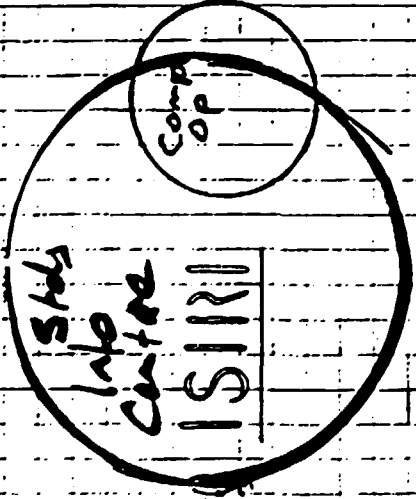
2) Current Suggestion



ISIRI



ISIRI



1) Original Aim

2) Info Center Submerged in Computer Operation

Information/ Data Base	ISIRI Computer Dept.	Ministry of Industry Host/Industry Info Service.
Structure. Provide Space.	Set Up Equipment for SIC (PS2, CDROM, Reader Printer.)	1) M of I Establish Manager and plan Staffing
Establish Information Scientist	Confirm Host Recruit. Preparation Staff.	2) Take Over Host equipment (COM etc)
Fellowship for Management Team as Proposal.	ISIRI MIS and Engng Service	3) Confirm Suitability of Computer Plan Host and Industrial Inf. System.
Job Description	Supervise CG and CNS	Help with O/A Plan.
2) Help Mechanism Data Base and On Line	3) Support Staff with Computer Development	4) Advise on Host SYSTEM.
2) Online to N. 00	3) Plan ISIRI Info Network	4) Advise on Network for Host
		Note Host Export May be Required.
		LINK INTIB
ENTER LAUNCH ISIRI Data Base	ANNEX 5 See Appendix A5 to be developed along the lines of III B6 Work Plan, in the context of the next Mission	Mount ISIRI D/B on Host Support C. S.

ISIRI - Standards Information Center

Ministry of Industry

Outline Program.

Year	Objective	Management	Enquiry	Library
<u>Year 1</u>		1) <u>Introduce Operation</u>	<u>New Information Center</u> <u>Provide Space</u>	
	Objective -			
	1) <u>Complete Current UNIDO Project.</u>	2) <u>Senior Staff</u> Establish Information Manager	Establish Head Enquiry Section	Confirm Chief Librarian
		3) <u>Training</u> Arrange Study Tour	Arrange	Similar
		4) <u>Set Up Initial Operation</u>	Recruit and Establish Service	Train Staff obtain Material
	<u>Consultants.</u>			
	1) <u>IITA</u>	Set Up,	Supervise Training and	
	2) <u>CE (Computer Exp)</u>		Advise on Enquiry System	Help Set Up CO ROM / Micro Equip
	3) <u>SNS</u>		Improve Telephone System	Online to Micro
<u>Year 2</u>	2) <u>Promote to Industry</u>		<u>Launch LINK TO INDUSTRY</u>	
<u>Year 3</u>	3) <u>Information Center</u>		<u>LAUNCH NEW INFORMATION CE</u>	
<u>Year 4</u>	4) <u>ISIRI Data Base</u>			
<u>Year 5</u>	5) <u>Consultant Service</u>	<u>Launch Consultant Service</u>		

Staff Structure - Proposed for
ISIRI Standards Information Centre

30
/ 17 / 90

NEP
Proposed ISIRI Standards Information
STAFF STRUCTURE

Director Information
(Mr. Amiri)

Management Information

Head Management Information
(Mrs M. BASIM)

Planning
Statistic Dept
Evaluation

Computer Department
Systems Equipment
Programmer
Technician

Operator
= New Professional Staff
= New Assistant Staff
= Secretarial/Clerical Staff

Information Manager (Mr. Amiri)

Enginys

Head Enginys
Miss Enginys (Zahara Yari)

Chief Librarian
Mrs. (Malyah SAIEFI)

Librarians
Systems Lib. - Enginys Officer E.O

Standards
Librarian Lib. - Enginys
K. Mervah
Asst Lib. Enginys

Ref
R. Anah
Asst Lib. Z. Khorshid
S. Saadeh
Secretary

Porter
Regional Offices
per Librarians

INFORMATION DATA BASE SECTION

Information Scientist
(Raza TABERIAN)

Lib
Bib. Database
IS
Printed Products

IS
Secretary

Management Professional Assistant Clerk.

ANNEX 1
Appendix A6
See ANNEX 2

ISIRI STANDARDS INFORMATION CENTER TRAINING

I. Study Tour

Proposed for:

- 1) Mr. Hussein Yegane AMIRI
Post: Director Information (PPPD)

1.1) Benefits/Subjects of Interest

Mr. Amiri proposes to act (in addition to Directors Post) as Information Manager to the new center. He has the Core Librarian Knowledge but requires the Skills and Technical Awareness to Manage:

- 1) Professional Enquiry Operation
- 2) Computer/CD ROM Library Systems
- 3) Data Base/Information Service and use of HOST.
- 4) Consultant Engineering Expert Services
- 5) Development of a larger Industrial Community and commercial services.

1.2) Program - 3 weeks - in UK
Training Director - IIA

- 1) BSI- Standards, QA and Testing Operation
 - 1-1) Information-Center-Enquiry, Library, B.B
 - 1-2) Computer Dept.
 - 1-3) Technical Help to Experts Services
- 2) Food R.A. Regulation Information Service
- 3) Loughbrough Universities Information Service Dept.
- 4) HERTIS Industrial Information- Service
- 5) Online host Pergoman Data Services
- 6) INSPCC Major Data Base Producer

- 2) Mr. Hossein Hosseini Alast
Post: National Project Co-ordinator -
Computer Specialist

2.1) Benefits/Subject of Interest

Mr. Alast has supported the project for 12 months providing valuable advise on Computer and

Communication Matters.

The project now requires more Information Service and Practical Information Management Skills. He would also provide English/Pharsi Interpretation for Mr. Amiri.

The Study Tour will provide:

- 1) Practical Insight into the Operational/ Human systems required in a Functional Information Center.
- 2) The needs of Industrial Enquirers (Human advice and computer Data)
- 3) Creation and Operation of Bibliographic Data Base Systems.
- 4) Standards Organization Computer system Requirements and Practice.
- 5) Share Management Information required by Mr. Amiri.
- 6) Introduction to Host/Major Data Base Operator.

2.2) Program as for 2.1

II. Fellowships

1) Proposed for:

- 1.1) Ms. Mahvash SEIFI
Chief Librarian (ex Specialist information and Documentation Dept.)
- 1.2) Ms. Zahra YARI
Head Enquiry Section (ex Int. Relation)
- 1.3) Mr. Reza JABERIAN
Information Scientist (ex Int. Relation)
- 1.4) Mrs. Maryam FASIHI
Head Computer Department

2) Major Duties and Responsibilities:

The above staff have major new Responsibilities to Manage Library, Enquiry Section, Information/Data Base Section and Computer Department respectively, relating to the New

Standards Information Center at ISIRI. Detail Department Function are shown on the attached:

- 1) Function Diagram
- 2) Staff Chart
- 3) Development Program

Each has substantial relevant experience but require additional training.

3) Requested Group Training - See Appendix A for outline Proposal.

A) Information Science

1 month Loughbrough University, Department select of Information Studys

A special Course, Purpose Designed to introduce all 4 staff to Relevant Information Theory, system and services to give a General Grounding.

B) Applied Training in the BS Information Center Milton Meynes

1 month

Course Tutor IIA

Covering Library

D/B

Enquiry

Relevant computer Operation

:
: General to All
:

and specific to training work experience and application to Actual job to be done on Return.

4) Note:

As Reservation have been expressed at lady staff spending time overseen the Group Training is Offered to provide Support to assist.

APPENDIX A

Professional Staff Information Training Courses

For a number of years, BSI and other organisations have helped Information staff, but, with the exception of the Masters course organised through BSI and the original ISONET workshop it has not been possible to get many people together for training.

As a combined operation between Loughborough University and BSI, a course combining the Information Science theoretical requirements and the practical skill used by BSI's Information Centre are coming together, organised by John Widdowson International Information Consultant in a four week training package.

The cost will depend on numbers, but will equip the trainee with the skills required to operate a Standards Information Centre with aspects of enquiry service, library and database/Perinorm use and creation.

Special reference will be made to the operation and use of ISONET centres and GATT enquiry points.

Extensions to cover the consultancy service require for a "Technical Help to Exporters" operation could also be added.

Please advise whether you would be interested in the course and the number of people you think you might send.

Annex 4

Information/Documents Required by Library of ISIRI
Standards Information Center

1) On CD ROM

- 1.1) Standards Infodisk 1,000 Pound
from ILI UK
(Information Retrieval System for some would
standards)

2) On Micro Fiche

- 2.1) European Harmonized 3,655 \$
Standards Micro Fiche
from Technical Indexes
(Full text/Diagrams CEN/CENELEC and relevant
EEC Legislation)

3) Books

- 3.1) From BSI Technical Help to Exporters
Document TH 20344 102 Pound
Bailer and P.V. International Survey
- Document TK 20334 40 Pound
International Certification and Approval Schemes
- Document TH 20348 30 Pound
Electrical Plugs Survey
- Document TH20317 plus TH20323 25 Pound
Fuses Survey
- Document TH20329 and TH20338 20 Pound
World Electricity Supply
Wallchart and Booklet

4) Periodicals

- | | | |
|---|------|------------|
| 4.1) Information World Review | 30 | Pound/Year |
| from Learned Information
(Europe Ltd.) | | + postage |
| 4.2) Information Market | Free | |
| from EEC Luxembury | | |

IIA Proposed and Actual Mission

Work Description

INDUSTRIAL INFORMATION ADVISER
DRAFT WORK PROGRAM

The following has been produced in accordance with the IIA Job Description and specific instructions from UNIDO and UNDP in conjunction with the Project Co-ordinator.

1. OUTLINE PROGRAMM FOR 3 WEEKS

Week 1

- 1) Planed investigation into
 - a) Function of ISIRI and PPP Dept.
 - b) Situation on Iran information systems and services
 - c) Users need for Standards/Quality Information
- 2) Following Meeting with Ministry of Industries, UNDP request for Preliminary Assessment of ISIRI Standards Information Service project.

Week 2

- 1) Training Program as per Job Description
- 2) Produce proposal for Revised Information Center Structure and Development Program and consult ISIRI etc.
- 3) Consider staff for positions and required Training

Week 3

- 1) Obtain agreement to Revised Information Center Structure and 5 year Plan-in principle.
- 2) Complete study Tour/Fellowship Forms as Appropriate
- 3) Discuss IIA Consultancy Program for further 3 month periods,
and function for computer Expert
and Computer Network Specialist

WEEK 1 DETAILED WORK PROGRAMME

<u>Day</u>	<u>Organization/Item</u>	<u>People</u>
Sunday 22nd July	UNDP Briefing ISIRI Introduction Note Library Representative not available all week	Mr. S.Moghaddam Program Officer Director PPPD Representatives of International Relations Computers and Planning
Monday 23rd July	Ministry of Industry Initial Discussions and Proposal Plan External Visits	Deputy Minister and Project Director with staff
Tuesday 24th July	ISIRI Outline Discussion Library Visits Computer Department	As 22 but without Director plus Min./Ind. Representative and Security Guard
Wednesday 25th July	Special UNDP Briefing with Request for Preliminary Assessment ISIRI International Relation and Public Affairs	Project officer Head
Thursday 26th July	UNDP Report start typing Initial MOFI note Dispatched ISIRI Discuss Training Programme ISIRI Priorities communications etc.	As 24 Director part time

NOTE Mr. Alast Project Co-ordinator present
at all events

Friday 27th July

Hotel
Draft Preliminary Assessment
Continued Plan Training for
week 2

WEEK 2 DETAILED WORK PROGRAM

<u>Day</u>	<u>Organization/Item</u>	<u>People</u>
Saturday 28th ISIRI	1) Agree Work Programme	Mr. Amiri Director PPPD Mr. Alast Project Co-ordination
	2) Training/Introduction Program Note Librarian Not Available	
	2.1)JD2/6 Document Collection selection and acquisition, Books CD ROM and Micro Forms	Library and computer staff etc.
	2.2)JD5 Links to ISONET and other services	" " "
Sunday 29th ISIRI	2.3)JD4 Structure of Information Centre	Service staff
	Briefing on ISIRI and International Center	President ISIRI
Monday 30th Ministry of Industry	Discuss Preliminary Assessment and New structure	Project direction and staff
	ISIRI or Organizations not seen, Week 1	
Tuesday 31 ISIRI Preparation for Holiday	2.5)JD7 Bibliographic Standard DB system	Library information computer staff
	2.6)JD3 contacts & Training JD9 for industries and membership Service	All staff

NOTE: A) Daily Visits required to UNDP-Re typing
B) Program modified to accommodate transport problems and staff absence.

Wednesday 1st August (Public Holiday)

UNDP

Work on Technical UNDP staff
Report 5 year plan etc.
Initial Discussion

Thursday 2nd August

(Public Holiday)

Friday 3rd August

work in hotel on Reports/
Training Programme Self
Consultancy Programme etc.

WEEK 3 DETAILED WORK PROGRAM

<u>Day</u>	<u>Organization/Item</u>	<u>People</u>
Saturday 4th August	ISIRI 1) Discuss Development Plan and structures plus staff Recruitment and Training 2) New staff Role Discussion and Drafting of Training Forms 3) Agree documents, Microfiche sets and CD ROM to be Requested 4) Role's of IIA/CE and CNS	Director PPPD and Senior ISIRI Staff as required Senior ISIRI Staff
Sunday 5th August	National Com. for computer- Information- 8.30 Meeting Lecture BSI/ISIRI Information Services	Committee members and ISIRI staff IIA
Monday 6th August	New Library Operation "Enquiry" "Data Base"	Chief Librarian Head Enquiry "D/B and Information
Tuesday 7th August	10 a.m. UNDP Discussion p.m. ISIRI computer operation	Resident Head Computer Department
Wednesday 8th August	ISIRI as 4th August	
Thursday 9th August	ISIRI Final Technical Discussion Formal Terminal Meeting	Dep. Minister Project Document ISIRI president UNIDO
Friday 10th August	Hotel Documentation for UNIDO	

Depart Saturday 11

Check in 8.31
IR717 11.30

Note: Outstanding External
Visit to be fitted in
if possible

Note: Detail Program
Dependent on
Availability of
People

Standards End User -

9 August, 1990

request letter and questionnaires

Dear Dr.Ghaderi,

Information on Iran Information Systems and
Standards End Users

Many thanks for your telephone call concerning the above.

As I am sure you will agree the Standards Information Service must work and be appropriate to those in Industry who need the information.

My previous assistance projects (as proposed in the IIA, work program submitted at our meeting on the 23rd August), start with an investigation in: a) ISIRI and PPPD Function, b) Iran Information Systems and Services, and c) Users need for Standards/Quality Information.

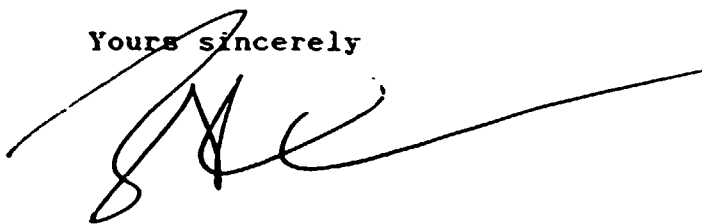
I need this information to know the type of Information systems and services used in Iran as a comparator for ISIRI. Also the category and priority for services to meet the end users real need, and the way the enquirers would prefer to received the information (Voice Answer, Paper, Microform, Floppy Disc, etc), is also important. The difficulty in arranging these visits was therefore most unfortunate not only to find out the above, but also up date references made in Mr. Taneja's Original Fact Finding Report.

You offered to obtain answers to questions and I appreciate this but a visit identifies far more about the Practical Operation and establishes contacts so valuable to help ISIRI carry out their own work and I would hope to see appropriate organizations on my return.

On the attached Annex, I suggest question which would identify the availability of online services in Iran and confirm that practical expertise exists in their creation. Industry Statistics would also help to identify the real end user and his standards problems. Private contacts gave me preliminary insight into the industrial and export needs and human advise and copy of standards on paper seemed to be preferred.

I thank you for your offer of help and look forward to any answers you can provide to help me plan the fellowships and study tours.

Yours sincerely

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the right.

- 60 -

Questions on IRAN Information Systems and
Standards End Users

I : Situation on Information Systems and Services in Iran

Q1) How Many Information Centers provide Technical Information to Industry in Iran?
Government Non Government
Please supply list of names and addresses.

Q2) How many of those in Q1 use Computerized Information Systems?
a) Their own
b) Online to other sources
c) Supplied online to clients-How many clients?

Q3) How many Bibliographic Data Bases have been produced in Iran?
a) Total number
b) In English
c) In Farsi - was a thesaurus used?

Q4) How many Information Services /Libraries currently use online systems?
a) University
b) Government
c) Others

Q5) Is there a course for Information Scientists in Iran?

II: Users of Standards Information an Industry Point of View

Q1) Who Uses Standards Information in Iran?

	<u>National</u>	<u>Foreign</u>
a) Industry		⋮
b) Commerce		⋮
c) Government		⋮

(Approximate Number of Organizations)

Q2) Why do they want it? (Information from named sample users please).

- a) Comply with Purchase Order
- b) Improve Quality/Standardization
- c) Export
- d) Other

Q3) How do they get the information today?

- a) ISIRI at Karaj or Regional Office.
- b) From client/Main contractor/supplier.
- c) Fro other Organization- Please identify.

Q4) Would Industry pay for better information?

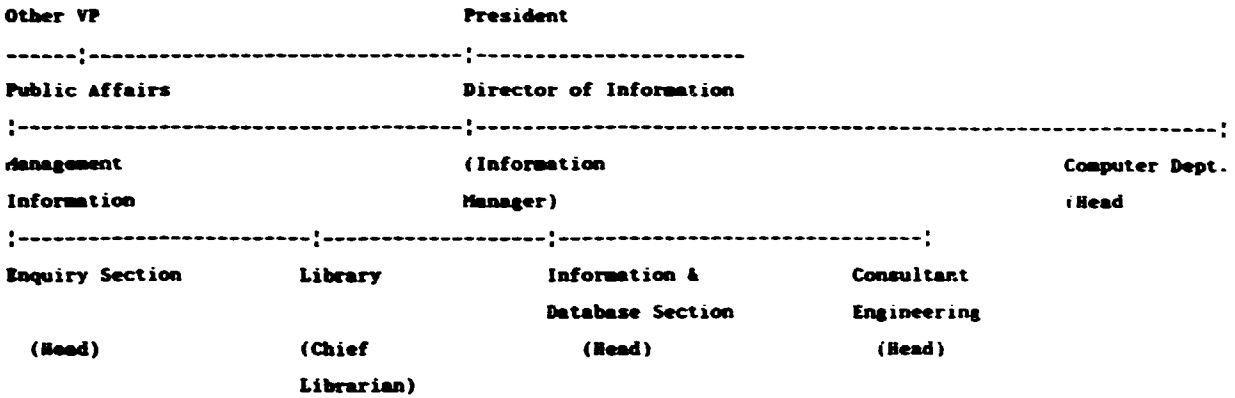
Q5) Would they use:

- a) Online services
- b) Micro Fiche
- c) CD ROM

Information Centre Functions -
outline statement

APPENDIX

Outline of ISIRI Information Centre Functions



ACTION:

- | | | | | |
|--|---|--|---|---|
| 1. Telephone sales. | 1. Management & exploitation of full collection of Iran and overseas standards & regulations. | 1. Information services, subject enquires on Iran & Foreign standards using internal systems or external databases. | 1. Future interpretive services on Iran & Foreign standards leading to Technical Help to Exporters Service. | 1. Operation of management information systems as required by ISIRI. Plus sales and internal information systems for the I.C. |
| 2. Foreign sales-initial identification. | 2. Loan services. | 2. ISIRI D/B creation of appropriate bibliographic database and other information systems and library mechanization proposals. | | 2. Maintenance of Micro computer, CD ROM and other Information Dept. Equipment. |
| 3. Information on ISIRI functions, laboratories, metrology, standards-making and implementation/quality assurance. Answering or redirect to a specific individual. | 3. Current awareness & SDI services. | 3. Documentary information products | | 3. Hold ISIRI Data base for internal use and support creation of data base section systems. |
| 4. Answer or redirect to internal or other sources of information in Iran on standards & regulations. | 4. Use of CD ROM and Microform services | | | |
| 5. Complaints and other requests. | | | | |

6.Link to Regional
Office

ROLE:

INITIAL ENQUIRY
POINT AND
LINK TO
REGIONAL
OFFICES.

SOURCE OF
BIBLIOGRAPHIC
SERVICES

TECHNICAL
ANSWERING
AND SYSTEMS

ENGINEERING
INTERPRETATION

COMPUTER
HARDWARE
SOFTWARE
EXPERTISE

ISIRI CURRENT

STRUCTURE

Management Information

Standards High Council

President

Information

Computers

Legal Affairs

Public Affairs Director (Mr. Olamy)

Planning, Programming and Process Control Director (Mr. Amini)

Publications (2)

Sales (5)

News Paper (2)

International Relations (2)

Ext. Messages (Mr. Hydar)

Head (Mr. Nicholson)

Head (Miss Yari)

Librarian (4) (Ms M. SAFFI)

Computers (3)

Planning, Evaluation, Staffs, Process Control (3)

Design Promote-Lit. (Mr. Melrodi)

Mr. Tabatabaee

Dep. Head (Mr. JABERIAN)

Library Expert (Miss Khaytal KERAVASH)
Library Asst Mrs. KASSEM ZADAH
(Mr. ARAB)

Head (MA M. FASIMI)
H. Oklavat Technicians

Head (Mr. Sanharinasad)

clerk.

Mrs. Davodi

Mrs. Haghghi

Mrs. Miralaei

Testing

Metal Industries

Non Metal

Stds Q.C

Admin. Finance

CE Comments on IIA draft

including CE report modifications

1. The IIA should, in my opinion, have been fielded before or jointly with other international expert(s). The general (system) solution and steps to be taken do largely depend on the IIA's expertise and are determined by his approach. The computerized information services are thus a part of this solution and must fit into the general context. Though this was the intention of the Project Document (see Activities, p.7) it failed to have been materialized. A reverse timing did not enable the CE to benefit from the IIA's proposals.

2. One of the assumptions, the CE's report from Dez. 1989, was based on, was the availability of the "factographic" databases of standards in computer-readable form. When in Tehran, the CE felt, that the most urgent objective of the project was to provide complete texts of the documents (international and national standards) lacked so far by the ISIRI. Without this result, the project would not be successful. The overall expectations at ISIRI and at the Ministry of Industry was that computer services should provide this particular sort of information. This was, first of all, due to the fact mentioned under 1.

During my stay in Denmark earlier this year I investigated the access to computerized factographic databases of standards (see my fax to Mr.Pavlik dated 14/05/1990) and contacted, among others, the US-based Information Handling Services (IHS). The result: the only database of this type operating at present is the IHS's CD-ROM database of US standards on boilers and pressure vessels. Thus, the assumption mentioned above is false and has to be dropped.

When exploring the availability of diverse IHS services for Iran the CE expert did not get any response.

In this connection, I have to mention the telex of 28 Sept, 1989, from ISO to ISRI (a copy of which I was shown by the IIA this October in Prague) confirming the lack of factographic data

and of ISONET physical computer network. Unfortunately, I was not provided by this information in Iran last Fall.

3. In view of the fact established under 2, the recommendations 10 and 11 (p.6) of my report are irrelevant and have to be omitted.

4. The procedure outlined on pp. 10-11 of my report has to be modified, as no factographic standards data (step 5) and no ISONET computer network (step 9) are available.

5. During the meeting with the IIA (Prague, Oct. 5, 1990), the CE and the IIA reached the consensus about the present stage and desirable development of the project. The CE agrees that the emphasis should be moved from the computer systems to the real need of ISIRI: first of all to the completion and regular updating of the standards collection. To reach this target, computer links to international information centres are of limited advantage. Instead, the microfiche of standards from the past (approximately 10 years) represent the relevant form of full text of documents, which jointly with the PS/2 based bibliographic databases would increase the ISIRI's capacities substantially. The acquisition and regular updating of selected international and national standards (BS, DIN, AFNOR, ISO,...) in the microfiche (past) and probably paper (updates) forms are the most urgent needs of ISIRI. This opinion is based inter alia on the CE's experience with the Danish National Standard Inst.

6. The CE agrees with the assessment of the situation and measures proposed, as stated in the IIA's draft report, with the following limitations:

- The ISIS software system is at this stage of the project the best available solution for bibliographic databases to be developed at ISIRI (see p.5, item 3 of the IIA's draft). The ISIS data structure is compatible with the international standard ISO 2907, ISIS is supplied free of charge, there are micro, mini and mainframe versions of ISIS, ISIS with its several thousands of installations is being applied worldwide for bibliographic data.

The suggested implementation of DBMS like LIDAS would be expensive and time-consuming.

- The online connection of ISIRI to the Host at the Ministry of Industry should not be given the highest priority at this stage. Later on, it may be found reasonable to develop a nationwide computerized data network based on this Host provided that

- there will be relevant databases operating on this Host
- the quality of telecommunication lines enable the online access
- end users will be equipped with adequate technical means (terminals and MODEMS).

At this stage, the equipment purchased enables to emulate the IBM 4341 terminal at ISIRI by the PS/2. This can only work provided the dedicated line connecting ISIRI to the Min. of Ind.'s mainframe is operating. The connection to the Min. of Higher Education, operating the mainframe based database of the Iranian libraries, may be of advantage for ISIRI.

7. The installation of the IBM 4341 exclusively for the project purposes is inadequate. The same applies for the COM device that can be made better advantage of at the Min. of Ind. This conclusion is even more obvious taking into consideration the inavailability of the factographic data.

8. The computerized services at ISIRI (based on the IBM PS/2 system) should include

- PERINORM database,
- bibliographic databases of ISIRI's standards, books, periodicals e.t.c.,
- Management Information System for ISIRI, including, among others:
 - the database of the draft standards being developed at ISIRI (incl. the "stage of the life" of the project),
 - the database of clients,
 - text processing (incl. Pro-forma Invoices),
 - budgeting and accounting.

To achieve gradually these targets would require appropriate

software systems and further PCs with accessories. Some of these proposals go beyond the project objectives.

Ostrava, Nov. 4, 1990



Dr. Josef Ř í m á n e k

The Technical University of Ostrava

Osvoboditelů 33

701 00 Ostrava 1

Czechoslovakia

ANNEX 10

Technical Review of Project

DP/IRA/87/013 November 1990

note for file

The above project has been reviewed by the representatives of the national counterpart and UNIDO with aim to assess the results achieved and to decide on future activities required for successful implementation of the project. The review has taken into consideration the recommendations of the Industrial Information Adviser and the Computer Expert. The conclusions of the review are as follows:

1. Due to reasons beyond control of all parties concerned UNDP could not advise in May 1989 the mission of the Industrial Information Adviser (IIA) - the expert with a key role in the project implementation and this resulted in more than a year postponement in fielding of this expert. In order to avoid any undesirable delay in project activities it was agreed between the national project authorities and UNIDO to field a Computer Expert (CE) ahead of the fielding of the IIA. CE thus could not benefit from a guidance of the IIA and this resulted in some conflicting recommendations of both experts, particularly in the scope of application of computerized services. In a meeting held between experts in October 1990, however, a consensus has been reached on proposed future activities in the project execution, i.e. to concentrate on establishing and strengthening of Standard Information Services at ISIRI.
2. The decision to purchase a mainframe computer IBM 4341 was taken prior to the project approval based on an erroneous assumption that full texts and diagrams etc. of international standards would be available in computer readable form and international data bases storing such standards could be accessed on-line. Realizing this it was decided in the course of project implementation, to abandon

the original idea of installing the mainframe computer and rather establish a computerized information system on standards based on a powerful microcomputer and CD-ROM in line with the recommendations of the international experts.

The above mentioned erroneous assumption consequently has been reflected in formulations of project immediate objectives and some outputs.

Since the mainframe computer will not be available and full content of international standards are neither stored on magnetic media nor available on-line, and based on the recommendations of the international experts, it is therefore proposed to revise the project objectives, outputs and some inputs and reformulate the project document as follows:

PART II

B. Immediate objective 1 Establish a computerized information and documentation system for information on standardization and quality control at the Institute of Standards and Industrial Research of Iran (ISIRI) able to provide fast and effective services to industrial entrepreneurs, researchers, universities and government institutions.

E. Outputs

- 1.1. A software package for the PS/2 adjusted to the needs of ISIRI. (both for the bibliographic data base of standards and for the ISIRI's management information system).
- 1.2 One ISIRI computer department manager to be trained abroad on information systems and services for a Standards Information Centre.
- 1.3 One ISIRI information/bibliographic data base manager (Information scientist) trained abroad in ISONET systems.

- 2.1 Established service at ISIRI to collect, assimilate and disseminate up-to-date information on all standards and technical requirements relevant to Iranian Industry.
- 2.2 Established links with major standard information sources for regular updating of national and international standards (paper and/or microfiche forms).
- 2.3 An increased library service (books, standard bulletins, standards, technical periodicals, government publications, etc).
- 2.4 An improved enquiry service including microfiche and microfiche service to improve links with industry and increase usage.
- 2.5 On-the-job training for all professional staff of ISIRI and other appropriate information Centres in Iran in industrial information and documentation techniques.
- 2.6 Two ISIRI managers with responsibility for Library and Enquiry services trained abroad in standards information services and relevant computer/telecommunication systems.

PART II.G

In case of UNDP/UNIDO inputs the following changes are recommended:

Budget

Line

- 11-01 Decrease the duration of the IIA's assignment from 4 m/m to 2 m/m and funds thus saved transfer to the training component and/or the purchase of necessary items for the library.

11-03 The assignment of CNS to be reduced to 3 or 4 weeks and funds saved transfer to the training component, and/or the purchase of necessary items for the library.

31-00 One fellowship (2 months) for training in computerized application and development of information services including software applications.

One fellowship (2 months) for training in the development applications of ISONET system.

Two fellowships (2 months each) for training in computer, telecommunications and information services.

32-00 Two study tours (2 months each) to visit national standard institutions in developed and developing countries, information centres of international organizations to get acquainted with the system of industrial information documentation and networking.

3. Recommendation of the IIA regarding the new structure operation and staffing of the ISIRI's Standard Information Centre have been discussed and it was agreed to follow and implement these recommendations.
4. Considerable attention has been paid to the training programme outlined by international experts. It was agreed on the following study tours and fellowships as outlined in outputs 1.2, 1.3 and 2.6. The nomination forms will be submitted to UNIDO in February 1991.
5. Future fielding of international experts was considered in detail and in this respect the following decision has been taken:
The fielding of international experts will take place after the first four fellowship programmes are completed.

6. It was agreed to field a communication consultant (Ms. Ralston UNIDO s/m) for one week in February 1991 who would install the electronic mail software in order to enable on-line link between UNIDO and ISIRI.
7. Next project review meeting will be held from 13 - 17 March 1991 in Vienna. ISIRI will be represented by Dr. Tofigh the National Project Director.

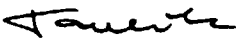
8. Workplan

- 8.1. CE identifies the software systems to be acquired to develop the Management Information System (MIS) of ISIRI based on the PS/2 computer system (and additional AT computers provided by the Government according to future needs of ISIRI). December, 1990.
- 8.2 CE undertakes a 4 week mission in Teheran. The aim: to install the PERINORM database; to train the personnel in using the PS/2 and PERINORM; to design, develop and implement the database of Iranian Standards held at ISIRI; to train the personnel in entering data and using it. March - April, 1991.
- 8.3. Fellowships take place March - July 1991.
- 8.4 The joint one month mission of IIA and CE in Teheran takes place. The purpose to implement the new organizational structure, and procedures for acquiring, processing, retrieving and disseminating the international and national standards (according to the results of the first part of the IIA mission and utilising the results of the CE work). The implementation of the software systems proposed by CE for the MIS of ISIRI. On-the-job staff training.

IIA identifies the standards sets (BS, DIN, AFNOR, LSO,...) to be acquired in microfiche form to complete the ISIRI's collection (along with the sources where the sets can be purchased from).

IIA identifies the sets of standards to be updated regularly. July - August 1991.


Dr. A. Tofigh
National Project Director


J. Pavlik
IDO
IO/IIS/INFR