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Prepared by

Bechtel, Bull ComputerLand, California Energy Commission

Bechtel International, Inc

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Bechtel

Interoffice Memorandum

To Mr Robert Ichord
Mr Gordon Weynand
Mr Howard Menaker
Mr Robert Borgstrom

File No 22934-004-R15HUN

Subject **IMPLEMENTATION PLAN
HEO'S ELECTRICITY LICENSING
DEPARTMENT**

Date July 9, 1997

From Toni Babcock

Of Bechtel Consulting

Copies To

At Mc Lean, VA *Ext* 703-448-3928

Enclosed you will find a copy of the Implementation Plan for the HEO's Electricity Licensing Department This copy is for your review and use

Sincerely yours,

Toni Babcock
Toni Babcock



Implementation Plan

for updating the work and information
procedures of the

**Hungarian Energy Office's
Electricity Licensing Department**

Prepared by

**Bull Hungary
ComputerLand (Computer LAN & WAN Kft)
EuroTrend Informatikai Kft**

for

Bechtel International, Inc

Sponsored by the

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of the Hungarian Energy Office and other parties named above

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FEASIBILITY STUDY

Foreword

Background

On the 29th of August, 1996, after discussion and definition of requirements with the managers and experts of the Energy Supply Division (ELD) of the Hungarian Energy Office, a Tender was issued by Bechtel International. This RFP was aimed at developing an information system to update the information and work procedures used at the Electricity Licensing Department of HEO.

The first phase of the tender - preparation of an Implementation Plan - was awarded to a group of enterprises including Computerland Hungary, Bull Hungary and EuroTrend.

The Implementation Plan is a result of the work and co-operation of

- Bechtel International, initiator, supervisor and fund-provider to the Project (Consignor),
- The Hungarian Energy Office, Project user (User),
- A bidding task force including Computerland Hungary - Bull Hungary - EuroTrend (Vendors)

The authors of the Implementation Plan wish to thank the managers and experts of the Consignor and the User for their support in the preparation of this Implementation Plan.

Note

The Implementation Plan may not be published either in whole or in part without the prior consent of the Parties. Bidders are allowed to make reference to the Project. Any materials about the Project including detailed data may be published only upon the agreement of HEO.

1. Management Summary

The Present: Increasing Challenges

The Electricity Licensing Department (ELD) of Hungarian Energy Office (HEO) *has to perform the increasing tasks with the same internal staff*. This problem cannot be solved only with the extensive involvement of external experts and different subcontractors. The solution is the improved efficiency in daily can be reached by intensive using of computer-aided work- and information management.

The Department (and the Office) needs and has to manage *more and more information*. "The right information, at the right place, in the right form, and at the right time" is not only a theory, but the basic condition for the effective operation.

Together with the manpower and information, the third critical aspect of the improvement is the *organisation and management* which means all

- the rationalisation of the work processes and the internal standardisation of different procedures,
- the management, registration, structuring, store&retrieval of the information in different forms,
- the modernisation of internal (Department-level, Office-level) and external communication and information exchange,
- the improvement of efficiency in individual and workgroup level work and in internal/external co-operation

The expectation of the licensees, partners, consumers, investors is to access the important *published information* (rules, decrees, procedures, statistics) using the features of up-to-date information technologies (like the frequently used Internet services)

The wide-range domestic and international relations of the Office also urge the electronization of information exchange

The Answer for the Challenges: the Information Technology-based Re-engineering of Work- and Information Processes

The Electricity Licensing Department recognised, that they can fulfil the increasing requirements only if they analyse their work- and information processes in details, and use the most advanced information technology (IT) as much as possible. First, in 1996, by the financial support of the USAID/Bechtel, *the basic hardware IT infrastructure* was installed for the ELD. Using this infrastructure, the applications necessary for the individual and departmental efficiency improvement can be built on

But, *only the selection of the most appropriate software without the rationalisation of work- and information processes cannot bring the desired results*. As there was no free capacity for this purpose within the Office, also with the financial support of USAID/Bechtel, a call for proposal was issued at the end of 1996, in order to build a Feasibility Study for the modernisation of the Electricity Licensing Information System

The winning team, led technically by Bull Hungary, has elaborated this Feasibility Study with the contribution of Electricity Licensing Department, Energy Information Department and the California Energy Commission

The Feasibility Study

The Feasibility Study (almost an Implementation Plan) targeted the re-engineering of Electricity Licensing Department's work- and information processes is structured as followings

- The Project Objectives
- Licensing work- and information processes analysis and proposals
- The concept and scope of the computerised licensing management system
- The IT solution, alternatives
 - Functional requirements
 - The scope of proposed application technologies
 - Architecture, topology
 - Standards, recommendations
- The condition of implementation
- Cost estimation

Extendibility to the Office level

One of the main feature of the proposed IT solution is its modularity and extendibility

The *modularity* means, that the system implementation and the extension by new functions and extensions can be done gradually. The *scalability* gives the possibility to involve additional users, departments, providing the basic solution of an Office-level system. The system is modular, scalable but at the same time integrated, because of the open architecture and the system components using standard interfaces

The levels and conditions of the implementation, suggestions

In this Feasibility Study three levels of IT development has been defined

- 1 The *minimum solution*, with some strong technical and feature limitations,
- 2 The *integrated solution*, which fulfils the above mentioned requirements of the

extendibility and scalability, and provides additional functions and services for the users

- 3 The *extension of the* Electricity Licensing Department's *solution* (or pilot system) to Office-level covering additional departments and functions

The Feasibility Study prefers the integrated solution, to be implemented as a 10-user Client/Server system. One of the basic approaches is the integration of the existing equipment and software in the future solution.

It is necessary, partly for the complete implementation of the Second Phase, but mostly for the Third Phase, to have mainly governmental and not own financial resources too, for example funds allocated for the Office by the Governmental IT Committee. Beside the importance of this project, it is also an argument to get this additional fund, that the Office has not yet got any central development resource.

The Feasibility Study defines in details the *internal work- and information (re)organisation and (re)structuring tasks* which are prerequisites for the implementation, introduction, and efficient operation of the planned information system. This need means *more months overload* for the Electricity Licensing Department's and Energy Information Department's staff. Within the present frames, the compensation of this necessary workload cannot be solved. It is very important to find the solution for this compensation through the internal compensation system of the Office, or through the Project Financing.

On the basis of the practical analysis we are convinced that the *organisation and the using of advanced information technologies is strategic and prestige issue* for the Office as well. It is a key target that the organisation and information technology must get its *required by its importance role*, in the Organisational and Operational Regulation, in the organisational structure, and in the management of the Office.

The fulfilment of the targeted objectives requires the commitment and participation of the top-level management in this field as well.

The next phase

The next phase of the implementation is related mostly to the delivery of *software products, mainly applications*, and to the providing of *services* necessary for the implementation. One part of the services covers the consulting, planning, design and installation services, while the other part covers the training of the users and system administrators, and the support of the operation.

The new electricity licensing information system can be at the same time the *pilot system for the whole Hungarian Energy Office IT developments*.

2. The Scope of the Implementation Plan

The Overall Project

This Implementation Plan stands for the first phase of the Project which - according to the RFP issued in 1996 - is aimed at implementing a Licensing Database Management System as well as a Licensing Documentation and Work Procedure Management System

The overall Project includes all the evaluation, assessment, planning, scheduling, implementation and supporting efforts necessary for the successful implementation and operation of an integrated system aimed at supporting the licensing process

Note

The integrated system may be referred to as HEO Electric Energy Licensing Information System

Phase One includes a study which shall analyse and determine the requirements for supplying information to the Electricity Licensing Department and for managing the information and administration procedures, and shall develop an approach for the use of the work procedure and information management system as well as the supporting IT structure

Phase Two shall include the implementation and putting into operation of the IT solution supporting the information system and the administration work procedures. Phase Two could be delivered either as part of a new contract or by extending the existing contract for delivery of the Implementation Plan. After preliminary consultation and analyses, it seems that a third phase would be necessary. *Phase Three* would include the spread-out the organisation and IT methods of energy licensing to the departments co-operating with ELD (horizontally) and - in order to rationalise the administration - to other HEO functions involved in the administration procedures and the management of documents

Phase One, elaboration of the Implementation Plan

The objective of Phase One is to deliver any information, requirements, specifications, alternatives and decision-making criteria required for progressing into Phase Two (plan development and implementation). Feasibility studies generally include a preliminary assessment, as well as the analysis of the feasibility and the local details. The intention is to provide information for making decisions concerning the implementation of new solutions

As opposed to this and according to the "HEO Electric Energy Licensing Information System" - "Request For Proposal" and "Bid" documentation, the Vendors' task force

will provide not only a study and some analyses in Project Phase One but also an analysis of requirements for supporting the daily work, as well as an approach and a specification of requirements of the work and information structure - including the related planning and development criteria

The scope of the Project is limited to licensing electric energy, however the methodology and the IT solutions will be extensible to the licensing of gas energy, as well as the general administration and information structuring processes of HEO

The Implementation Plan

- Focuses specifically the management of the information and procedures of the Electricity Licensing Department (ELD)
- Includes the overall assessment and analysis of the user requirements, as well as the comparison of such requirements with the existing environment
- Pays special attention to the current administrative procedures and the structuring of the information
- Provides an approach and specification of requirements for the Licensing Information System and Work Process Management System
- Determines the functional and architectural requirements of the systems
- Provides an evaluation of all up-to-date information technologies and applications which can be considered for the construction of an IT-based work and information system at ELD
- Considers all the approaches and solutions used by CEC which after customisation could be used at ELD
- Makes suggestions for choosing between alternatives
- Determines the constraints, limiting and forcing factors, rules and criteria which should be taken into account during planning, implementation and putting into operation

Assessment and analysis include providing recommendations for changes in the work procedures and structural co-operation of the departments involved in order to enhance efficiency and take full advantage of the benefits provided by the suggested IT solution

(Note see also *Annex No 1, Deliverables - Scope of works to be done*)

3. Objectives of HEO concerning the Project

3.1. HEO Objectives

Experiences of the Request For Proposal - which launched the Project itself - and the assessment show that HEO - as a national Government agency - and its technical departments face different challenges, mainly from the licensees, consumers and the national agencies supervising and judging the work made by HEO

HEO is enhancing its domestic and international relationships, identifying new forms of co-operation

The major challenge is to face increasing requirements in an environment where (human and financial) resources are insufficient

IT improvements allow HEO to maintain a more efficient (electronic) information exchange with the providers and receivers of information (on the first place, licensees, as well as MVM Rt, the Central Statistics Office, IKIM (Ministry of Industry, Trade and Tourism), etc) This is of key importance, because in delivering its licensing and supervising functions, the Office carries out a heavy exchange of information with licensees and external experts

Using a more global approach, the Office should adapt itself to the IT system of the energy sector (which is developing not according to a central approach but to corporate approaches) in part in order to benefit in its daily practical operation from the information accumulated in the industry and in other part to make possible the enhancement of its licensing and control function according to additional criteria

The best answer to these challenges is implementing an up-to-date IT solution adapted to the requirements of HEO This seems to be very important since - apart from the traditional office program packages and the external information exchange implemented and used at a limited level by the Energy Information Department (Energy Information System, MVM Rt information services, Government mail system) - the level of the IT background used by the relevant departments and available today is very low

Accordingly, the general objective of HEO is to make a substantial step ahead concerning the work efficiency, response times, updated availability of information, work quality as well as costs of administration and information management This expectation of the Office refers equally to the licensing and control of electric energy and gas, protection of consumers, energy management, official administration, as well

as management and supply of documents and information

Accordingly, the developments inherent to the Project shall result in a general increase of efficiency in the technical and administrative work procedures used in licensing of electric energy

The successful implementation of a work and information management system for the electric energy licensing process could serve as a reference for the gas licensing system, which means that the solution could be extended to the other energy sector as well

The implementation at ELD of new organisation methodologies in the administrative work and information would result in the need of providing IT support to these topics at Office level - in order to ensure Office synergy

3.2. ELD Objectives

A basic objective of ELD is to make sure that *proper information is available at the right time and the right place, in proper form* for carrying out its licensing duties, the control and evaluation of licensees and its general functions

For this reason, the core topics of development and ordering required for increased efficiency include

- Establishing a system which includes the *information system and information procedures related to the licensees and the independent topics*,
- *Registration and monitoring of administrative procedures*, issues and tasks at individual and department level,
- Standardisation of *procedures and document formats*, preparation of procedures manuals and project management forms - basically with the involvement of ELD's senior staff and experts,
- *Structured and formatted collection, processing, evaluation and extracting of subject-oriented, macro-level information* required for delivering a work which is in line with standard procedures Organisation of the IT background and its availability through the services rendered by the Energy Information Department
- Assessment of the *information* according to requirements, their *systematisation, registration*, management, enhancement, archiving and scrapping,
- Implementation of modern forms and tools of *internal and external information exchange*,
- Development of a *management information system*

During the redesign of the information and administration system the following

conditions should be considered

- There is need for *a uniform information registration system*, which tells the user
 - the information pieces which are available,
 - their format (hard copy, electronic document, processed electronic document, database table),
 - their location (archive, other departments, electronic archive, data base) and explains the access to them The record-keeping shall be understood firstly at a department level, which should be extensible to the information stored in the information archive of other departments, eventually required by the ELD
- What kind of information should be available for each activity and task - in simple format, eventually in tables Since these information are related to specific administrative tasks, the definition of the requirements and the maintenance (updating) of the information shall be made by the Project responsible
- The department should have an elaborated archive plan and an archiving structure accordingly This should be considered at designing or rationalising the information registration system and the electronic archive At the very first approach, a restructuring is needed to differentiate between documentation belonging to the Project (specific licensees) and referring to a more general subjects
- Analysis and implementation - if possible - of the experiences and IT solutions of CEC
- ELD's external work and information linkages are basically related to the licensees, the main documents to authorise, control and evaluate the licenses, as well as the reports and resolutions made on the basis of such licenses Accordingly, during modernisation of the ELD's information exchange services an important issue is to increase the efficiency of the information exchange with the licensees
- The readiness of the information possessed by any means by ELD is limited by the fact that the availability, storage place, format and access are not known to anyone

Taking into account the high average number of cases per administrative officer a case (document) administering, registration and monitoring service is required at a department level It could seem that the number of affairs to be administered is not very high actually but they refer to procedures and decision-making processes which are quite different in nature and type

In order to make the daily work and the co-operation at department level and between departments more efficient, services supporting individual and group work are required External staff and experts involved incidentally in the department's work should be integrated on a limited fashion

The *background and macro-level tasks* of the ELD include a general supervision over the Hungarian electric energy system, the assessment of daily and monthly production

and consumption, the preparation of the relevant balances, as well as any other relevant tasks and decisions. These tasks are currently covered by MVM Rt and therefore there is a connection between the Energy Information Department and MVM Rt.

Consolidated, macro-level information may be obtained and supplied if the topic managers of ELD define to the Energy Information Department what information, formats and frequency are required. Topic managers would require consolidated data presented in schedules or diagrams which could show trends also and which could be accessed through a menu or catalogue. Taking into account the specific nature of the relationship with MVM Rt, these consolidated data could be generated by the Energy Information Department.

(See also *Annex No 1 Ideas of the Energy Information Department about the Energy Information System and the control of licensees*)

3.3. General requirements concerning the IT solution

The general objective of the overall Project is to *design and implement a work and information structuring system* which could provide services to satisfy the requirements of the Electricity Licensing Department according to the following criteria:

- IT support to routine, administrative and information management tasks should save time and efforts which could be used for administration
- It should make possible the standardised management of information pieces received in different forms and formats (data, electronic documentation, hard copy, etc.)
- Data received in different forms, processed and generated should be integrated into an up-to-date, standardised database management system which could be easily changed, inquired and maintained
- It should provide automatic procedures for registration and monitoring documents, cases and tasks on the basis of the assessment, evaluation and approval of departments' procedures and work cycles
- It should provide a background for the standardisation of licensing and control procedures, as well as for formatting documents and data. Standardisation should be achieved through electronic manuals, standard procedures and sample forms
- It should develop the IT conditions for a new work structure based on Projects and individual topics
- It should allow the quick preparation of managerial and control information, statistics and reports, as well as the operation of an efficient management information system

The IT assignment includes not simply the delivery of different hardware, software and technologies but the supply of an IT *solution* which

- provides complex and integrated work and information management services for users with no IT skills,
- relies on leading international IT and domestic services, therefore these technologies could be used by the Energy Information Department staff as well,
- is easily extendible and modifiable according to the changes to occur in the work and information procedures of HEO,
- is cost-effective, in part by relying on the IT infrastructure enhancements and mainly on the investments made in 1995,
- takes advantage of the international results achieved in similar topics (e.g. CEC)

The *solution* should include

- definition of the current and future information (data) requirements
- definition of the internal and external information supply methodologies
- a proposal on what information pieces should be stored in traditional - paper-based - archives, electronic archives or data bases
- agreements and contracts for information supply
- a proposal for the new system (multi-phased)
- creation of the conditions for the operation of the new system

3.4. Analysis of the requirements

Requirements were defined in two steps

- 1 Assessment of the existing information and work procedures,
- 2 Definition of requirements relevant to a (near) future information system

Issues included in the assessment and analysis

- Analysis of the ELD's functions and scope of activities
 - Project-related tasks,
 - General, independent topics
- Analysis of the functions and activities of the Energy Information Department from the point of view of ELD's information collection and processing

requirements

- Analysis of the electric energy licensing, control and administration work procedures and definitions of the relevant information requirements Selection of the key work procedures Analysis of processes, procedures, cases to handle, work steps and positions
- Information needed at each work step definition of their location and access
- Information generated at each work step, definition of the way they could be generated
- Assessment of the information collected and supplied on a routine basis, routine tasks, standardised forms, reports statistics and documents
- Definition of the objective of data collection and processing
- Assessment of the internal information flow and management procedures at HEO (data, documents)
- Structuring of information about the quantity and frequency of data and documents
- Evaluation of the tasks related to information management collection, evaluation, input, processing, printing, management, storing, retrieving, distribution, supply, publishing and archiving of information
- Arranging information by subjects and topics, record keeping (archive plan)
- Assessing and deciding which pieces of information are worth to be stored in data bases, electronic format or in hard copy
- Assessment and establishing of the structure of incoming, stored, inquired, changed and outgoing data to be stored and processed in data bases Definition of requirements relevant to database management system
- Definition of requirements (transfer methodology, platforms, formats, scheduling, volumes, etc) for the information exchange and transfer carried out currently and to be implemented with external information suppliers (licensees, MVM Rt , Central Statistics Office, Ministry of Industry, Trade and Tourism, etc)
- Analysis of the relationship between data suppliers and data users
- Definition of requirements concerning data protection, security and availability
- Identification of constraints in work and information procedures, bottle necks, overlapping, and suggestions for rationalisation

WORK AND INFORMATION PROCEDURES

4. The Licensing Work and Information procedures: analysis and proposals

4.1. Functions and responsibilities of the Hungarian Energy Office

The following schedule (based on the Act on Electric Energy and its enacting clause, as well as the Organisational Statutes) summarises the main functions and tasks of HEO, the main and supporting structural units assigned to each task, as well as the nature and features of the work procedure based on the practical work. This summary is to position ELD within the horizontal and vertical system of HEO and its distribution of work.

Licensing function

Licensing function	Division or Dept.
Issue of operational licences for supplying and selling gas, as well as for generating, transmitting and supplying electric energy	ESz-GE ESz-VEE
Issue of licenses for establishing and putting into operation energy-plants	ESz-VEE
Taking into account the continuous supply of gas and electric energy withdrawal or modification of the operational licences according to the legal provisions, as well as appointment of new suppliers or sellers of gas and suppliers of electric energy	ESz-GE ESz-VEE
Approval of the business rules and operating rules prepared by the licensee, subject to the opinion of the consumers' representative body	ESz-GE ESz-VEE FVEG-FV
Determination of the limitation order for consumers of natural gas and electric energy	ESz-GE ESz-VEE
Examination of the reports submitted by the gas supplier, gas seller and electric energy supplier relevant to the justification of the implemented consumption limitations	ESz-GE ESz-VEE
Approval of demerger and merger of licensees, the sale of substantial portion of the assets, as well as decrease of the equity capital	ESz-GE ESz-VEE FVEG-AGE
Action to be made for securing the uninterrupted supply and sale of gas, as well as generation, transmission and supply of electric energy if the licensee undergoes a liquidation or final settlement procedure	FVEG-AGE
Enforcement of the principle of lowest cost towards suppliers and sellers of gas, as well as manufacturers, transmitters and suppliers of electric energy	ESz-GE ESz-VEE FVEG-AGE

Control function

Control function	Division or Dept.
Definition of the scope of business data to be disclosed by the licensee	ESz-GE ESz-VEE
Control of the execution of the provisions on gas supply, generation, transmission and supply of electric energy, as well as the observation of the provisions included in the licenses	ESz-VEE ESz-GE FVEG-AGE
Act as court of first instance against anyone violating the provisions of the law relevant to the supply of gas, the generation, transmission and supply of electric energy, as well as against those violating the provisions of the operational licences	ESz-VEE ESz-GE

Pricing function

Pricing function	Division or Dept.
Preparation of the natural gas and electric energy prices (fees), the conditions for the application of such prices, as well as the rules for calculating the contribution for the enhancement of the gas network or the electric energy network	FVEG-ÁGE

Consumer protection function

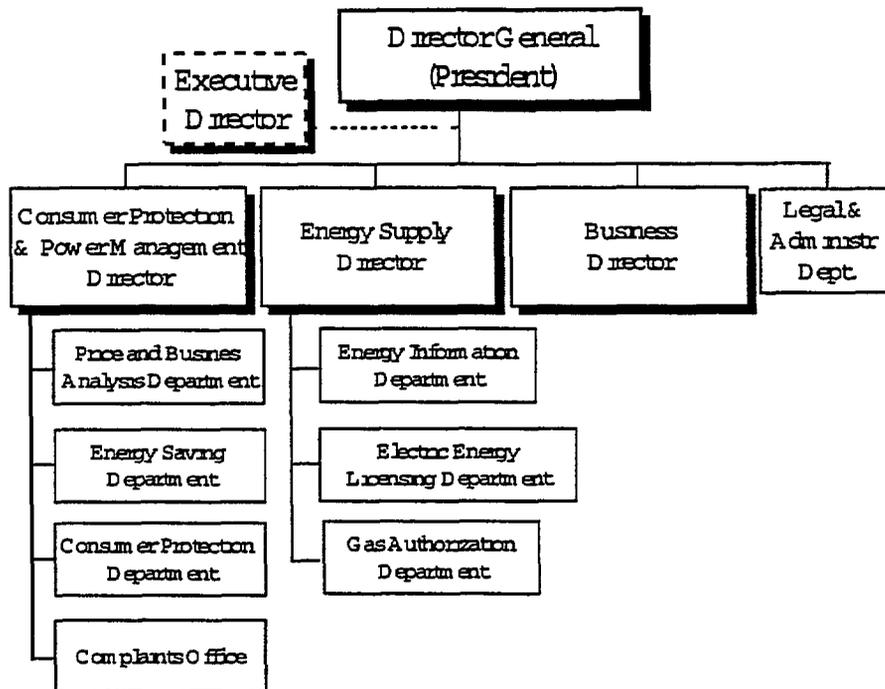
Consumer protection function	Division or Dept.
Elaboration of the provisions relevant to the protection of customers	FVEG-FV
Monitor any issues affecting the interests of the consumers (control of the satisfaction of consumers' requirements and quality of the services)	FVEG-FV
Investigation of consumer complaints	FVEG-FV
Co-operation with the consumers' representation bodies	FVEG-FV
Arrangement of agreements or - should these fail to be achieved - making decisions in disputes concerning consumers, subsisting after conciliation of interests between the consumers' representation bodies and service providers or sellers	FVEG-FV
In cases of refusal of demands for services, investigation of the reason leading to such refusal, should an obligation for supply exist, obligation of the supplier to satisfy the demand for service	FVEG-FV

General functions

General functions	Division or Dept.
Processing and registration of any technical and business information required for HEO to deliver its functions	ESz-EI
Consolidation of the gas and electric energy sales data	ESz-EI
Provision of data on energy statistics resulting from the international relationships of HEO	ESz-EI
Forecasting of the future energy needs of Hungary	ESz-EI
Delivery of the functions assigned to it by Government decrees and ministerial decrees issued to enact Acts XLI and XLVIII of 1994	

4.2. Structural linkages

Broad structural scheme of HEO, presenting the position of ELD and the Energy Information Department



Liaisons of the Electricity Licensing Department within HEO, as seen from the point of view of the Department:

- **Energy Information Department**

Primarily, supply of daily, monthly and annual information concerning the electric energy system and the licensees, mainly on hard copy, presented in processed schedules based on MVM Rt data processing Procurement of ad hoc information on the request of ELD

Integration of HEO into the Energy Information System operated by the Ministry of Industry, Trade and Tourism

Integration of HEO into the restricted inter-ministerial mailing system, operated by HEO

Development, implementation and operation of IT services within HEO

- Price and Business Analysis Department
Provision of expert opinions and technical information supporting the pricing function, as well as the enforcement of the principle of the lowest cost
Consultation in case of change in owner relationships, analysis of the effect of the changes
Evaluation of business reports
- Consumer Protection Department
Provision of expert opinions and technical information supporting the investigation of consumer complaints
- Business Division
General cost request and settlement matters
- Legal and Administrative department
Management of administrative affairs and documents within HEO

In general terms ELD may be interpreted as the information and technical background of HEO in electric energy issues. However, in summary it is to state that the horizontal and vertical linkages and the overall co-operation of ELD within the Office have low level and focus rather on daily issues, not on the strategic division of the work. At the same time it is evident that together with the enhancement of the IT and information support provided to the Department, an increase will be achieved in the role and level of the co-operation with the Energy Information Department. An important feature within this co-operation is that the Energy Information Department shall provide macro-level processed and evaluated statistics, trends and summaries to ELD in the form of schedules and diagrams (performance balance, estimation of consumer requirements, etc.)

Note

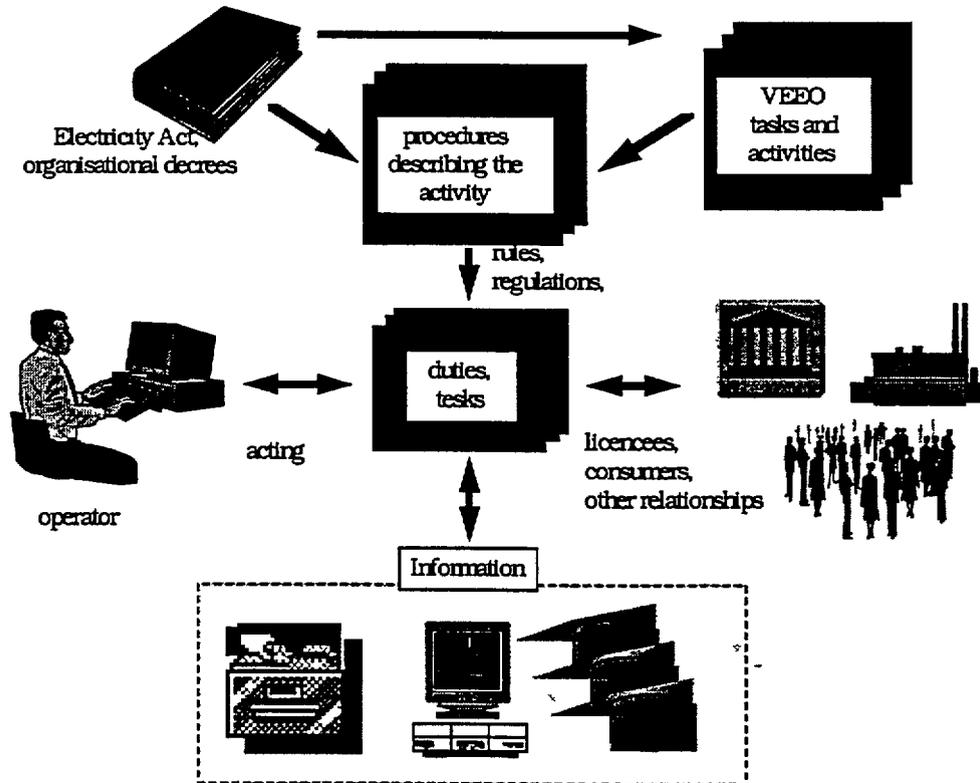
The structural diagram includes the position of „Executive Director”, which currently does not exist. There are several reasons explaining the need for such position:

- 1 Government agencies and other nation-wide entities used to have this kind of function (e.g. Administrative Manager)
- 2 This position is needed for supervising the management of operative issues, organising the horizontal co-operation between the different directorates and the synergy within the Office
- 3 The infrastructure background needed for the efficient operation of HEO and the organisation of administrative procedures currently are not covered

4.3. ELD's work and information processes

4.3.1. Suggested model

In analysing the work and information procedures of the Electricity Licensing Department as well as the resulting requirements, the following model is applied



The *functions, responsibilities and activities* of ELD - that is, the frameworks within which this Department operates - are determined by the Act on Electric Energy, the enacting decrees and orders, the Organisational Statutes of the Office structured on their basis, as well as other rules issued by the Director General for regulating the internal operation of HEO

There are no procedural rules concerning each activity and process, or better said,

there are fragments of such procedural rules This will be explained later on

The practice applied by the operators is determined by years of experience and the technical and business documentation generated during the licensing and control process

The condition of being a „Government office” determines the general procedures applied concerning the internal management of affairs

Generally, the administrative process beginning with incoming applications, demands, complaints or information ends with a resolution or position

The *external relationships* of ELD (“clients”) focus mainly on the licensees Besides the relationships with the licensees, the licensing process is attached external linkages for information and co-operation (MVM Rt, Ministry of Industry, Trade and Tourism, Central Statistics Office, other national entities, local and central authorities, foreign partners)

The central element of this model is the *operator*, who takes active part in the licensing and control process The operator can be an executive, internal or external, local or “remote” officer A key objective of the information system is to improve the efficiency of the operators by providing them with the necessary IT tools and services on their individual computers

Professionals may work on licensee-oriented Projects and/or individual topics or subjects which are aimed at improving the efficiency of the Project management through the elaboration of standard procedures and documentation

Note

External consultant hired by ELD during the administration of affairs, as well as incidental or contractual partners and any staff co-operating within the Office (e g providing information) are handled as part of the Department’s administrative procedure

The operator is the „client” of the computer During the operation, the system provides him/her with information, internal and external communication (information access and transfer), document preparation, case and document monitoring and organisational services Note that these services shall support not only individual but also group work The above functions provide a background for administration

The practical implementation of the principle of „the right information in the right form, at the right time and the right place” is of key importance for the efficiency of the licensing work

By *information* we mean information relevant for the work, available to the operators in a systematised and recorded form (documents)

Information may be presented

- on paper as hard copy
- as an electronically recorded image of paper documents

- as documents processed on the computer
- as structured information stored in a database

The ELD is responsible for determining the structure and system of the information store (archive plan). General rules in this regard are provided by the "Document management regulations and archive plan of HEO" (Instruction No. 1/1994 of the Director General). The storage of generated or received data, the definition of query criteria, the maintenance, archiving and scrapping of the files are also responsibility of the Department.

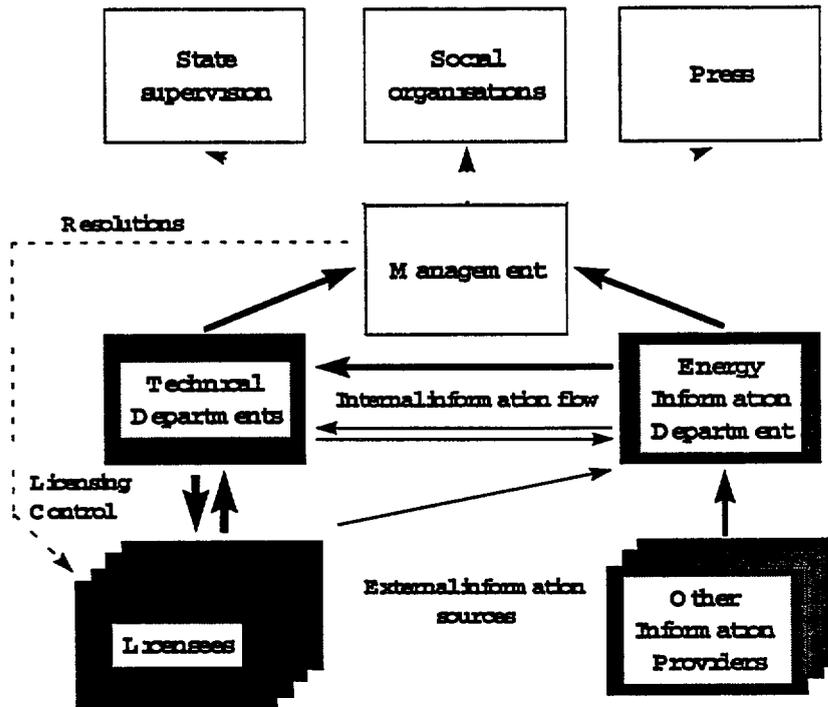
By the course of the management of items and documents, a new methodological approach should be used for integrating the different forms of electronic information exchange into a consistent system.

4.3.2. General information processes of HEO and the Energy Supply Directorate

ELD is extremely information-sensitive, therefore prior to discussing the licensing procedure it is convenient to briefly analyse the general information processes of HEO and the Energy Supply Directorate.

It is to note that this chapter is supported by the RFP issued for the Implementation Plan, the material entitled Ideas of the Energy Information Department about the Energy Information System (Annex No. 1), as well as by the Organisational Statutes of HEO.

The diagram below illustrates the *general internal and external information processes* of HEO



Source Organisational Decrees, Request For Proposal

From the point of view of ELD and based on the analyses and consultation about the practice, two information sub-processes - actually functioning on a parallel fashion - deserve some focus

- 1 The *direct, primary information relationship* of ELD with the licensees (which still complies with the official way),
- 2 The *indirect, secondary information relationships* of ELD through the Energy Information Department or other general or technical units of HEO

Direct information relationships with the licensees

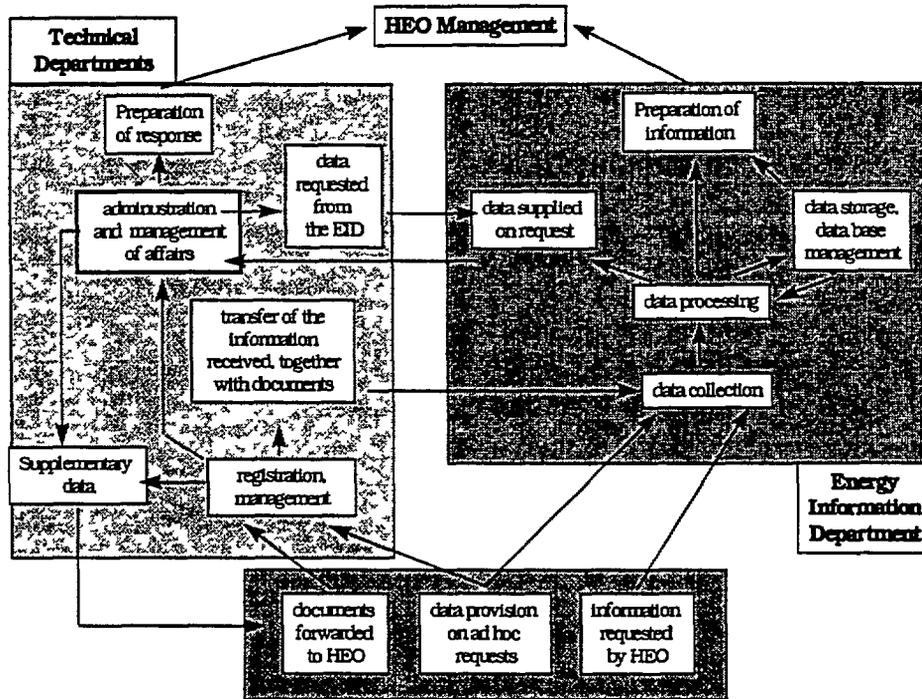
The primary information channel of ELD includes the direct information relationships established to the licensees (and to the authorities and technical bodies involved in the licensing process) The scope of the information is set basically by the licences determined by the ELD and its external consultants, as well as the control and reporting procedures and their (formatted or unformatted) documents

ELD takes charge and controls entirely the transmitting, receiving and storing of the information - due mainly for their close connection with the administration

The direct information relationships are analysed in detail in the section entitled "Work and information processes of licensing"

ELD's indirect information relationships

The main information processes of licensing within the Office and the position of the Energy Information Department in these processes, as well as the *possible* information relationships of ELD as technical department, are presented by the schedule below



Source Request For Proposal

Energy Information Department

According to the principles and requirements of the Organisational Statutes, the Energy Information Department shall be responsible for

- collecting, evaluating and distributing the information concerning production, transmission and supply of energy,
- collecting, organising, maintaining and supplying the majority of the information requested by other departments of HEO,
- delivering the energy-related information to consumers, companies and Government agencies,
- receiving and storing data arriving from licensees and other sources

In terms of linkages between the technical departments the Energy Information Department plays the following roles

- Concerning regularly requested information
 - forwarding of the information within the Office
 - continuous maintenance of the data base
 - redacting and delivering the data according to the format required by technical issues
 - preparing consolidated information (reports, statistics)
- the technical units related affairs
 - providing data form the data base during the process
 - providing ad hoc data
 - data processing

The way the information provided to HEO

- from the licensees
- through MVM Rt

Relationships between HEO and MVM Rt

The relationships with MVM Rt are important for several reasons, from the point of view of MVM Rt

- MVM Rt as licensee (supplier)
- MVM Rt 's "central" position
 - from the point of view of the co-ordination, planning and consolidated evaluation of the electric energy system, the preparation of the energy balance,
 - from the point of view of the „exceptional" position and IT infrastructure in collecting and providing information concerning the above,
 - key information source for HEO, the Ministry of Industry, Trade and Tourism, Statistical Annals of the Electric Energy Sector

MVM Rt provides monthly current information for HEO, generally in a breakdown by licensees (energy plants, MVM Rt , suppliers)

Other relevant relationships of HEO

Other institutions directly or indirectly related to the activities of the Office and the ELD

- Ministry of Industry, trade and Tourism (Energy Information System, OSAP, summary annual report),

- ÁPV Rt (monthly and quarterly data supply)
- International organisations IEA, CDU, EUROSTAT, UCPTE
- Co-operating industry organisations (CEC, USAID, Schrodgers, Sikeman, Elliot)
- Commissions

The Office as information provider

- Evaluation of licensee's activities
- Rules and information concerning pricing
- Consolidated data of manufacturers and suppliers for the Statistical Annals of the Electric Energy Sector
- Data supply to IEA
- Annual report of HEO to the Parliament

Conclusions

Based on the practical operation of the procedures and the analysis of the current situation, the following conclusions can be made

- From a structural point of view, the Energy Information Department belongs to the Energy Supply Directorate, but it should implement and operate the IT services for the entire Office

The Energy Information Department is responsible for the connection of the Office to external systems, as well as for the co-operation with them

Such systems - connected to HEO by any means - shall include

- The Energy Information System operated by the Ministry of Industry, Trade and Tourism
- The restricted electronic (X 400 based) message management system operated under the control of the Office of the Prime Minister
- Nation-wide information collected and processed by MVM Rt concerning the electric energy system

The Energy Information Department collect and provide information not only on electric energy licensing but also on gas licensing, consumer protection and energy management tasks

In summary it is to conclude that currently the information collection, processing and supply task of the Energy Information Department focuses rather on external sources (MVM, Central Statistics Office, Ministry of Industry, Trade and Tourism) since the substance and format of the information required by the topic managers are being just outlined

- By definition, the Energy Information Department is an information collector and

provider Information can be collected in a systematic or ad hoc fashion

Annex No 1 includes the scope of external information collected from MVM Rt by the Energy Information Department for supporting electric energy licensing, supervising and controlling functions and offered for internal supply The same Annex includes theoretical and practical suggestions by the Energy Information Department concerning information to be used over licensing, control and evaluation

ELD is typically an information user and not an information provider Its information requests are presented to the information providers in part regularly and in part on an ad hoc basis ELD maintains direct information and working contact with MVM Rt as licensee (supplier)

From the point of view of ELD information is supplied rather on an "offer basis" and not by the needs The technical topic managers of ELD should determine what information, by what frequency and in which format would be requested as background information (e.g. to be supplied by the Energy Information Department)

- The Energy Information Department receive the majority of information from MVM Rt in IT tables Queries take a long time in this format and the users cannot use electronic information converted from this source For this reason the Energy Information Department started receiving part of these information in electronic format (see Annex No 1), make the necessary conversions and processes it further on for displaying the information in spreadsheet format (e.g. Excel) (Originally these data are collected, processed and stored on the mainframe system of MVM Rt)

According to the assessment, in its daily work ELD can make only a partial use of the information received regularly from MVM Rt through the Energy Information Department either by electronic way or in hard copies for the following reasons

- a substantial part of the information received is not directly related to the current main responsibilities of ELD as topic manager (e.g. daily reports, sales statement),
- the operators would need the information on a simplified format, summarised in tables and consolidated on a quarterly or annual basis (statistics, diagrams)

4.3.3. Work- and Information Processes of Licensing and Control

According to their nature, and from the point of view of work/information organisation, the work- and information processes of the Electricity Licensing Department will be thought to belong - on the first level - to one of two groups

- projects
- independent or general topics

Projects

Licensing and control are characterised by project-orientation, the main features of which are the following

- they refer to a particular licensee,
- they are implemented only once,
- they are bound between deadlines,
- they are based on procedures,
- the classification of information and documents is done on the basis of licensees or, more specifically, according to the different requests,
- they are management-intensive

The projects are overseen by appointed, specialised project managers

The generic procedures, documents and formats necessary for standard project management are worked out by the experts of the independent project

Contacts with licensees are kept on the basis of transactions, and transactions must be terminated. Such "transactions" are requesting a licence - decision, instruction - report. The standardisation and formatting of these transactions has a great impact on the efficiency of evaluation and information exchange.

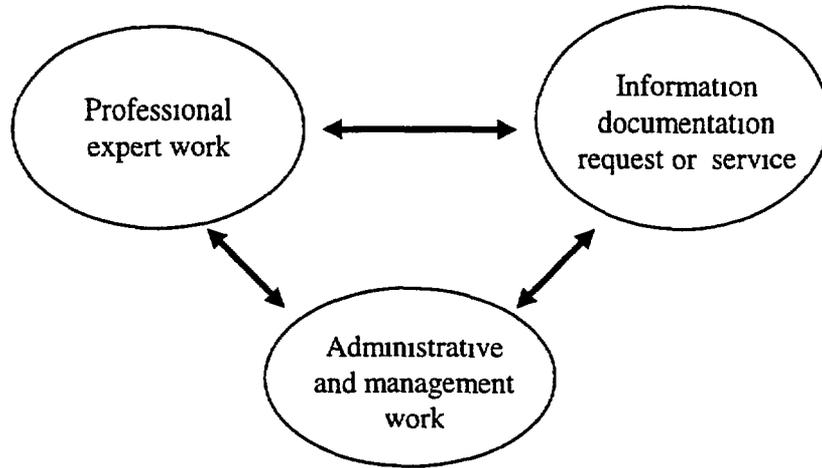
Independent or General Topics

Independent and general topics are characterised by the following

- they are not merely referring to a particular licensee or a group of licensees,
- they provide background information, publications, sample procedures, methods and document formats for licensing and other general jobs that can be used repeatedly at different locations,
- the classification and arrangement of documents and information is done either according to topics or to temporal sequence

Three Sides of Licensing

No matter what the work concerns, a project or an independent function group, licensing always has professional, information and procedural sides



Professional/expert, administrative and management work is always done together, the components influencing one another

The information background of administrative and project management work is provided by legislation (EA, Khr, rules of law on energetic), plus the procedures, tasks and deadlines defined by the licences and contracts and formatted by the experts of ELD

In some cases the documents necessary for, or generated during professional, expert work belong to ad hoc cases, but more frequently one faces documents that, while belonging to the project or an independent topic, is standard (format and structure) or can be standardised

Remark

In the present context, "standard" is to be understood as being defined and disseminated by ELD or according to an office procedure

The primary processes of ELD are naturally professional, management processes, while secondary processes establish the administrative-information management "infrastructure" required for the efficient execution of the primary processes

The analyses made it appear evident that the quality and efficiency of primary processes cannot increase unless the secondary ones receive better organisation and computer support

4 3 3 1 Licensing and Control Processes (Projects)

Project Definition and Structure

ELD licenses and monitors the production, transportation and supply of electricity
The two main project (procedure) areas concerning the licensees are

- procedures in the course of licensing
- processes following licensing (control, evaluation)

Project Definition

- *The licensee(s) (1 -2 -3) can be*
 - *Power plants (electricity producers)*

At present 21

Algyői Power plant (ALE)
Bakonyi Power plant Rt (BAE)
Borsodi Energetics Kft (BOE)
Budapesti Power plant Rt (BUE)
Csepeli Electricity Generator Rt (CSA)
Csepeli Power plant Rt (CSE)
[DUNAFERR Rt (DUF)]
Dunamenti Power plant Rt (DUE)
EMA-POWER Kft (EMA)
IN-ER Power plant Kft (INE)
Mátrai Power plant Rt (MAE)
MVM Rt Litér GT (MVL)
MVM Rt Sajószoged GT (MVS)
Paksi Nuclear Power Station Rt (PAE)
Pécsi Power plant Rt (PEE)
Tatabányai Energetics Kft (TAE)
Tatabányai Heating Power plant (TAF)
Tisza Power plant Rt (TIE)
TISZAVÍZ Water Power plant Kft (TIV)
TITÁSZ Rt Debreceni Power plant(TIE)
Vértesi Power plant Rt (VEE)

- *Electricity supplier*

At present 1

Magyar Villamos Művek Rt (MVM)

- *Electricity distribution companies*

At present 6

DÉDÁSZ Rt (DED)

DÉMÁSZ Rt (DEM)
 ÉDÁSZ Rt (ELM)
 ELMU Rt (EDA)
 ÉMÁSZ Rt (EMA)
 TITÁSZ Rt (TIT)

- *Direct servicing companies*

At present 4

Csepeli Power plant Rt (CSE)
 [DUNAFERR Rt (DUF)]
 EMA-POWER Kft (EMA)
 Pécsi Power plant Rt (PEE)

- The *aim and scope* of the licensing, approval project (4 -5,) can be

Licensing

- *Operational licences* for electricity plants already in production at the time when the EA came into force, for the
 - production (T)
 - public use (K)
 - private use (S)
 - transportation (S)
 - public use (K)
 - supply (Z)
 - public use (K)
 - direct use (D)
- New electricity plant licences prepared by the licensees
 - *preliminary establishment licence* for a power plant (E)
 - *establishment licence* a power plant (L)
 - power plant *commissioning* licences (U)
 - *operational licence* (M)

Approval

- Licensee's *Standard Terms of Business* (JL)
- Licensee's *Standard Terms of Operation* (JM)
- *limiting sequence* for certain customers (JK)

- significant property transfer (*splitting up or merging* of the licensed economic organisation, or sale of a major part of its assets) (JT)
- power plant *development strategy, establishment plan assessment* (JS)

The codes indicated in brackets identify both the projects, the licensing, and the approval documents. The following identifier system is recommended:

* document

1 -2 -3 ⇔ licensee's alphabetical code (see above)

4 -5 ⇔ licence or approval scope and type's alphabetical code (see above)

6 ⇔ document base text/annex identification alphabetical code

7 -8 ⇔ document version number

* project

1 -2 -3 ⇔ licensee's alphabetical code (see above)

4 -5 ⇔ license or approval scope and type's alphabetical code (see above)

6 ⇔ - (perhaps to be used later as alphabetical or numerical code)

7 -8 ⇔ year of project launching

- The type of *procedures* related to licensing can be
 - licence/approval issuing
 - licence/approval revision
 - licence/approval prolongation
 - licence/approval withdrawal
 - licence/approval registration

The above structure (licensee- licence/approval type and procedure) also defines the office fee/charging system, according to the appended table

- The *procedures and (work)order descriptions* applied during licensing-control-approval can be determined by
 - The rules of law set forth in the EA/Vhr and the other relevant pieces of legislation and their annexes. The conditions to apply court ruling in the first instance
 - The preliminary guidelines, instructions and documentation published by the Office for the licensees (e.g. "Power Plant Licensing in Hungary, enforcing

the principle of smallest cost, the types of operational data the licensee is obliged to make public)

- The conditions and instructions found in the licences already issued to the licensee, and their annexes
- The standard terms of business and operation
- Other requirements defined by the project manager for a particular project

This shows that the procedures describe the control and examination *conditions and criteria*, and the *steps* to be followed and the *methods* to be applied during checking, by making reference to the appropriate document

The control and assessment procedure is a very complex task indeed (formal, technical, legal, economical, etc requirements and considerations), therefore its definition must be left to the internal or external experts most experienced in such projects

It proves to be useful to prepare *generic procedures*, permitting repeated use, for the licensing/approval procedures of this type, together with *generic notebooks* (certificates) for compliance assessment against the said procedures. These can be stored in electronic form in a *procedure directory*, or can be issued in print in a *procedure manual*

The different licences and approvals issued by the Office and available in an electronically edited form can also be used to prepare the generic procedures

The typical (internally standardised) procedures could be made public to the licensees upon Office decision, which could make the preparation of licence request more definite

At the same time, the above solution makes it possible to separate the expert work of the licensing project management from that of preparing and further developing the procedures. Then the former can build on the latter in the case of a particular project. (A similar solution in industry is the separation of quality assurance and development from quality control)

It proves to be advantageous to introduce a code system for the *identification and registration of generic procedures*. A possible solution is e.g.

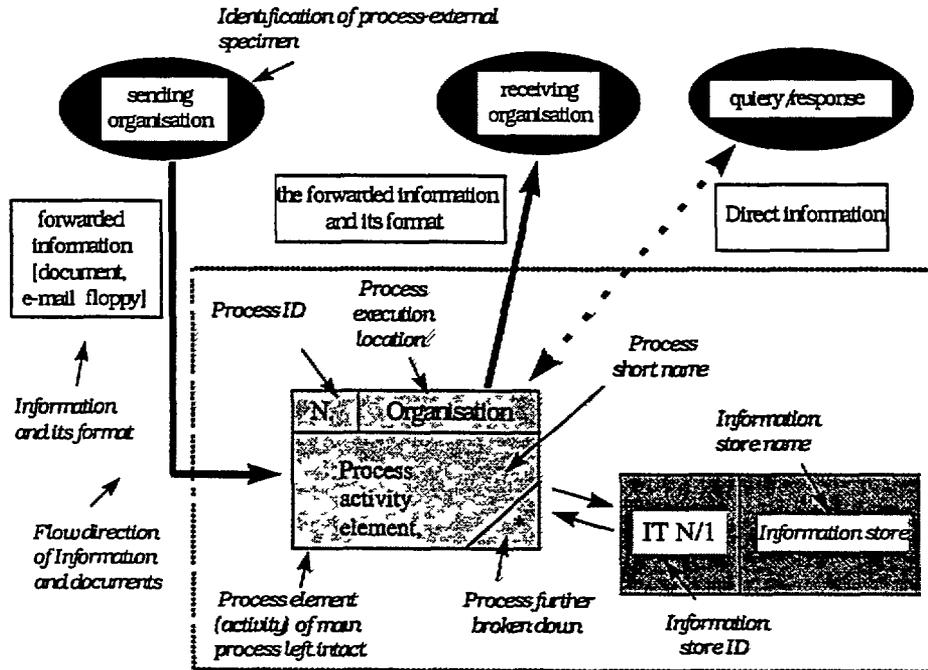
- 1 -2 -3 ⇔ alphabetical code of professional domain (to be specified)
- 4 -5 ⇔ auxiliary code
- 6 ⇔ - (perhaps to be used later as alphabetical or numerical code)
- 7 -8 ⇔ procedure version number

In order to have a quick search in the procedure directory, it is necessary to introduce a search facilitating system operating on the network (key words, use of info summary)

In possession of the predefined generic procedures, the project managers can rapidly set up the control and assessment programme of the received requests, and based on the programme comprising the control steps, the assessment summary

(notebook or minutes) to be completed with the result of the control steps can be generated in advance

We recommend the use of the following *simplified model* for the description of procedures



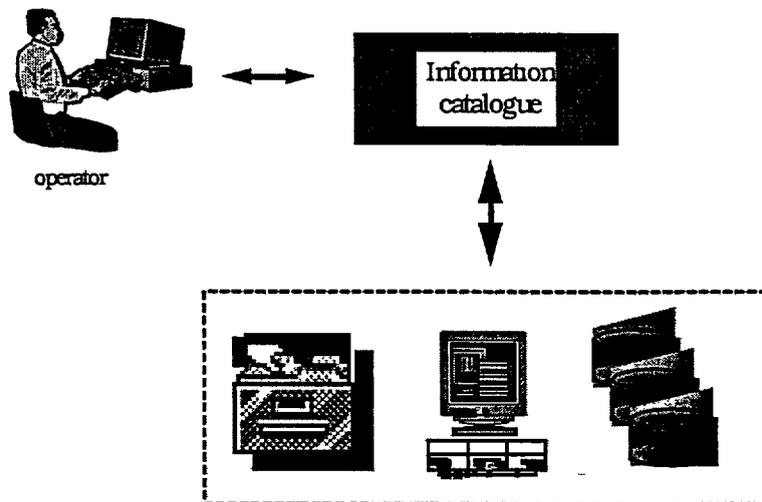
As shown in the figure - and the nature of the particular procedure - the following must be given

- A detailed definition of the information, documents, proposals, instructions received from an external organisation (e.g. a licensee) This starts the procedure, the aim of which is to process the above
- The procedure must be broken down to basic (irreducible) elements, that is, activities and steps - determining their sequence, repetition, bifurcations, etc. this is actually the description of the procedure to be followed
- To each procedure step connected to information utilisation or generation, one has to define the information itself as its form and access/storage location
- Although not shown in the figure, in addition to the information one also has to specify the internal or external expertise and professional competence required for pursuing the activity
- The detailed definition of the documentation, decision or response generated as the output of the procedure. This information has to be forwarded to the (external) addressee(s) subsequent to the completion of the procedure

Definition of an N activity

- identification and description of the procedure (by text, completed by flow diagram, etc)
- definition of the input(s) and output(s) linked to the activity
- identification and description of the utilised or generated documents
- identification of the printed forms used

The operator can locate the information necessary to perform an activity with the aid of an *information catalogue*



All the information necessary for administration is registered, either on paper, or as an edited electronic document, or in the form of electronic document images or database tables

The registration contains the forms, too

Network electronic document and database management techniques are planned to be applied to increase registration, search and access efficiency

Remark

By the end of 1996 the Office has issued the following electricity licences

- = 6 preliminary power plant establishment licences,
- = 4 power plant establishment licences,
- = 11 power plant commissioning licences,
- = 14 producer operational licences
- = 1 operational licence for electricity transportation,
- = 6 operational licences for electricity supply,
- = 4 operational licences for direct electricity supply,

The Annexes to the requests submitted to the Office are determined by the Annexes of the Vhr according to the following scheme

- A 2 to preliminary establishment licence request
- A 3 to establishment licence request
- A 4 to operational licence request
- A 5 to submitted commissioning licence of operating power plant
- A 6 to submitted supplier operational licence request
- A 7 to submitted servicing company operational licence request

Project management

The project management is the complex task of the *project manager*

The project manager (PM) is aided in his/her work by the generic procedures and documentation and predefined forms specified and collected in the project manual according to the description of the preceding chapters

The manuals and generic procedures setting, the basis of control, and analysis are the fundamental documents of the project, therefore they must be written by experts having great experience in the work related to the domain in question. This solution also ensures the standardisation of project management.

The task of the PM is

- 1 To draw up the assessment programme necessary for evaluating the request
To define the formal and professional assessment procedure (steps) according to the following requirement (criterion) to be controlled, basis/method of control, identification of referenced documents
There is an electronic form to generate the control procedure in a unified fashion
- 2 To evaluate the request based on the assessment programme
 - To control the request format according to the steps of the procedure and other requirements or considerations
 - To demand the furnishment of anything missing (electronic or preformatted letter)
 - To collect and analyse the expert reports necessary for the evaluation (electronic or preformatted letter)
 - On-site inspection, if necessary
- 3 To prepare the assessment summary (by filling in the appropriate form) including
 - The result of the control done according to the previously defined steps what the scope and basis of assessment was
 - Whether or not the request met the given requirements and conditions (yes, no, conditionally)
 - The determination of conditions/shortcomings and the deadline for satisfying/eliminating them, plus diverse remarks

- The *proposed decision* pertaining to the request for licence, with the attachment of the summary described above and the justification of the judgement
- 4 To track (follow up) the tasks and check the deadlines (by computerised task tracking system)
- 5 Control of received/collected fees

Licensing Project Types

Judgement of Preliminary Power Plant Establishment Licence Request (E)

- ⇒ Receipt of licence request, registration, PM assignment
- ⇒ Determination of assessment programme and schedule/agenda, performing assessment
- ⇒ Checking the formal requirements imposed on licence requests according to the conditions and considerations included in the procedure
- ⇒ Professional assessment with the involvement of internal and external experts
- ⇒ Preparation of the project summary based on the results of the assessment (Compliance report)

Compliance Report

Project name
Licensee
Project ID
Project manager
Date of submitting licence
Documents of licence request (with identification)

Summary of control/assessment procedure see table

Decision proposed for licensee

Justification

List of attached documents

⇒ Summary report of control/assessment procedure

Procedure ID	Assessment criterion or requirement	Corresponding clause of request	Basis of assessment	Request compliance	Correction deadline

Annexes

⇒ Decision-making for the preliminary licence

- Generation of decision and attached text from the appropriate form
- Issue of licence
- Registration and archiving of licence request/licence
- Entry of conditions and deadlines into project tracking (follow-up) system

⇒ Binding the documents linked to public audition into the project folder

⇒ Acquisition of information related to special licences necessary for establishment

Special *remarks* on guidelines to preliminary establishment licence judgement

- General rules “The Process of Power Plant Licensing” (MEE)
- The licensees must prepare a report after 1 year The project tracking system must issue an advance warning about this
- Control of collecting fees
- Monitoring the max 90 days deadline relevant to preliminary licensing, and the corresponding internal scheduling of the control programme
- Co-ordination with Committee 47

Public Audition

Tasks, checkpoints

- ⇒ There is no direct HEO responsibility, basically organisational tasks
- ⇒ Enforcement of the pertinent legislation
- ⇒ Marking the opinion of Committee 146
- ⇒ Taking into account environmental protection requirements
- ⇒ Considering the standpoint of other competent authorities

Judgement of Power Plant Establishment Licence Request (L)

- ⇒ Receipt of licence request, registration, PM assignment (the logical choice is the person who managed the preliminary establishment licence project)
- ⇒ Retrieval of the documents of the preliminary establishment licence and the public audition, verification of licences issued by special authorities
- Determination of assessment programme and schedule/agenda, performing assessment
- ⇒ Checking the formal requirements imposed on licence requests according to conditions and considerations included in the procedure
- ⇒ Professional assessment with the involvement of internal and external experts
- ⇒ Preparation of the project summary based on the results of the assessment (Compliance report)

Compliance Report
Project name
Licensee
Project ID
Project manager
Date of submitting licence
Documents of licence request (with identification)
Summary of control/assessment procedure see table
Decision proposed for licensee
Justification
List of attached documents

⇒ Summary report of control/assessment procedure

Procedure ID	Assessment criterion or requirement	Corresponding clause of request	Basis of assessment	Request compliance	Correction deadline

Annexes

⇒ If the request is (at least conditionally) granted issuing the establishment (by the physical realisation of a generic electronic licence)

Attachment of supplementary analyses (with the aid of predefined help documents)

⇒ Decision-making for the preliminary licence

- Generation of decision and attached text from the appropriate form
- Issue of licence
- Registration and archiving of licence request/licence
- Entry of conditions and deadlines into project tracking system

- ⇒ Binding the documents linked to public audition into the project folder
- ⇒ Acquisition of information related to special licences necessary for establishment
- ⇒ Preparation of control and reporting plan for the duration of construction (for a period of 2-4 years) To plan at least one annual report
 - The control plan governs tracking what is to be checked, what is to be controlled on-site, how to check it, etc
- ⇒ Entry of construction tracking and reporting dates into the project tracking system

Special *remarks* on establishment licence granting guidelines

- General rules “The Process of Power Plant Licensing” (MEE), Vhr
- Based on the preliminary licence
- Monitoring special licences issued by the competent authorities
- Monitoring the max 90 days deadline relevant to preliminary licensing, and the corresponding internal scheduling of the control programme
- Control of collecting fees

Judgement of Power Plant Commissioning Request (U)

- ⇒ Receipt of licence request, registration, PM assignment (the logical choice is the person who managed the preliminary establishment and the establishment licence projects)
- ⇒ Retrieval of the establishment licence documents, the construction control reports and the related documents, verification of the licences issued by the competent authorities governing commissioning
 - Rapid assessment programme, compiling schedule/agenda, controlling (max 15 days)
- ⇒ Checking licence request formalities
- ⇒ Checking establishment licence compliance
 - Rapid professional control with expert involvement
- ⇒ Project assessment and control summary based on observations (Compliance report)

Compliance Report
Project name
Licensee
Project ID
Project manager
Date of submitting licence
Documents of licence request (with identification)
Summary of control/assessment procedure see table
Decision proposed for licensee
Justification
List of attached documents

⇒ Summary report of control/assessment procedure

Procedure ID	Assessment criterion or requirement	Corresponding clause of request	Basis of assessment	Request compliance	Correction deadline

Annexes

⇒ If the request is (at least conditionally) granted issuing the establishment licence (by the physical realisation of a generic electronic licence)

Extraction and adaptation into the licence of the appropriate parts (conditions) of the licences issued by the competent authorities

⇒ Decision-making for the establishment licence

- Generation of decision and attached text from the appropriate form
- Issue of licence
- Registration and archiving of licence request/licence
- Entry of conditions and deadlines into the project tracking system

⇒ Preparation of control and reporting plan for the commissioning licence what is

to be controlled, how to check it, etc

⇒ Entry of construction tracking and reporting dates into the project tracking system

Special *remarks* on preliminary establishment licence granting guidelines

- General rules “The Process of Power Plant Licensing” (MEE), Vhr
- Based on the preliminary licence
- Monitoring special licences issued by competent authorities
- Monitoring the max 15 days deadline relevant to preliminary licensing, and the corresponding internal scheduling of the control programme
- Control of collecting fees

Judgement of Operational Licence Requests (M)

⇒ Receipt of licence request, registration, PM assignment (the logical choice is the person who managed the preliminary establishment, the establishment and the commissioning licence projects)

⇒ Retrieval of the establishment licence documents, the construction control reports and the related documents

There is no need to draw up an assessment programme and agenda, it suffices to lay down the overall compliance and control/evaluation procedures

⇒ Checking licence request formalities

⇒ Checking establishment licence compliance

Rapid professional control with expert involvement

⇒ Project assessment and control summary based on observations (Compliance report)

Compliance Report
Project name
Licensee
Project ID
Project manager
Date of submitting licence
Documents of licence request (with identification)
Summary of control/assessment procedure see table
Decision proposed for licensee
Justification
List of attached documents

⇒ Summary report of control/assessment procedure

Procedure ID	Assessment criterion or requirement	Corresponding clause of request	Basis of assessment	Request compliance	Correction deadline

Annexes

⇒ If the request is (at least conditionally) granted issuing the establishment licence (by the physical realisation of a generic electronic licence)

The definitive annex versions are best copied and then upgraded from the previous ones

⇒ Decision-making for the establishment licence

- Generation of decision and attached text from the appropriate form
- Issue of licence
- Registration and archiving of licence request/licence
- Entry of conditions and deadlines into the project follow-up system

⇒ Preparation of control and reporting plan for the operational licence what is to be

controlled, how to check it, etc

Entry of follow-up conditions and deadlines into project tracking system

Special *remarks* on preliminary establishment licence granting guidelines

- General rules “The Process of Power Plant Licensing” (MEE), Vhr
- Based on the commissioning licence and other similar published standards
- Monitoring the max 90 days deadline relevant to preliminary licensing, and the corresponding internal scheduling of the control programme
- Control of collecting fees

Companies with a Valid Operational Licence

The licences, and the annexes thereof, of the already operating power plants, suppliers and servicing companies have been archived. These document stores contain the operational and other licences on floppy disks, together with the relevant correspondence.

Two important remarks are in order:

- 1 The detailed generic texts available in an electronic form (updated according to the general modifications made so far) are suitable for preparing new operational licences
- 2 The modification requirements essentially apply to the annexes

This is handled as follows:

- The modification requests and decisions are entered into the project tracking system for follow-up
- The different versions are managed through the document editing and registration solutions

Apart from this, the licensees falling into this group do not belong to the licensing but rather to the control category (see below)

Re-organisation of operational licence folders

The No 18 operational licence folder should be reviewed and the following management issues should be implemented:

- the still valid documents should be moved to the projects' location, while the irrelevant ones should be discarded
- the documents should be used to prepare the generic format
- registration (if justified in retrospective)

Judging on a request for commissioning licence (U) of a power plant

- ⇒ Receiving and registering requests for licence, appointing a project manager (practical to appoint the person who managed the preliminary and establishment licences),
- ⇒ Presenting the documents of the establishment licence, the reports prepared during the control of the construction and any related documents, controlling the competent authorities' commissioning licences
Preparing a program for quick control, as well as a scenario, carrying out control (max 15 days)
- ⇒ Checking the format of requests for licence
- ⇒ Checking if preconditions of establishment licence have been met
Fast professional control with experts involved
- ⇒ A summary on the control and evaluation of the project, compiled during, and based on, the control (Compliance protocol)

Compliance protocol
Name of the project
Licensee
Project identifier
Project manager
Date of filing the licence
Documents of request for licence (incl identifiers)
Summary on the controlling/evaluation procedure See Table attached
Draft resolution on the licence
Reasoning of the draft resolution
List of documents attached

⇒ Summarising report on the controlling/evaluation procedures

Procedure identifier	Aspect of controlling, requirement	Section concerned of the licence	Base of controlling	Compliance of request	Deadline of remedy

Attachments

⇒ In the event of compliance or conditional compliance of a request, preparing establishment licence (based on a specification of the electronic standard licence)

Transferring the necessary parts (conditions) from competent line authorities' licences and incorporating them into the licence

⇒ Making a decision on the establishment licence

- Preparing the resolution and a covering letter, from sample forms
- Granting the licence
- Recording in files and archiving the requests for licence
- Including deadlines and conditions into the tracking system of the project

⇒ Elaborating the controlling and reporting plans for the operational licence (what to be controlled, how to perform control, etc)

⇒ Including the tracking and reporting deadlines into the tracking system of the project

Special *notes* concerning the guidelines of judging on the preliminary establishment licence

- General rules "Process of licensing a power station" (MEE), Vhr
- It is based on the establishment licence
- Watching competent authorities' licences
- Watching the maximum 15 days of deadline of licensing, and accordingly scheduling the controlling program internally
- Controlling arrival of fees

Judging on a request for operational licence (M)

- ⇒ Receiving and registering request for licence, appointing project manager (practical to appoint the person who managed the preliminary, establishment licences as well as the commissioning licence of a power plant),
- ⇒ Presenting the commissioning documents, the reports prepared during the control and any related documents
No program for examination or a scenario is necessary, preparation of compliance and control/evaluation procedure summaries will suffice
- ⇒ Checking the format of requests for licence
- ⇒ Checking if preconditions of establishment licence have been met
Quick professional control with experts involved
- ⇒ A summary on the controlling and evaluation of the project, compiled during, and based on, the controlling (Compliance protocol)

Compliance protocol
Name of the project
Licensee
Project identifier
Project manager
Date of filing the licence
Documents of request for licence (incl identifiers)
Summary on the controlling/evaluation procedure See Table attached
Draft resolution on the licence
Reasoning of the draft resolution
List of documents attached

⇒ Summarising report on the controlling/evaluation procedures

Procedure identifier	Aspect of controlling, requirement	Section concerned of the licence	Base of controlling	Compliance of request	Deadline of remedy

Attachments

⇒ In the event of compliance or conditional compliance of a request, preparing establishment licence (based on a specification of the electronic standard licence)

During the preparation of the final attachments, it is practical to take them over and update from previous ones

⇒ Making a decision on the establishment licence

- Preparing the resolution and a covering letter, from sample forms
- Granting the licence
- Recording in files and archiving the request for licence
- Including deadlines and conditions in the tracking system of the project

⇒ Elaborating the controlling and reporting plans for the operational licence (what to be controlled, how to perform controlling, etc)

⇒ Including the tracking and reporting deadlines in the tracking system of the project

Special *notes* concerning the guidelines of judging on the preliminary establishment licence

- General rules "Process of licensing a power station" (MEE), Vhr
- It is based on a commissioning licence and other issued competent operational licences
- Watching the maximum 90 days of deadline of licensing, and accordingly scheduling the control of activities internally
- Checking receiving of fees

Companies already holding operational licences

Licences of already functioning power plants, transmission and supply companies, as well as the attachments to the licences are archived. Their files include the operational licences, the licences on floppy discs and any correspondence belonging to the licences.

Two important remarks

- 1 Standard texts available in electronic form and elaborated in details (with modifications of general validity, made since then, having been included) are appropriate for preparing new operational licences
- 2 Requests for modification basically apply to attachments

The manner to manage them

- Including requests for modification and resolutions into the project tracking system, and tracking them through that system
- The solution to handle different versions can be found among solutions of editing and registering documents

Apart from the above, licensees outside this circle do not belong to the scope of licensing but to that of controlling (See below)

Restructuring the archive of operational licences

It is practical to review Archive of Operational licences No 18 and to proceed as regards its management in the following manner

- Replace documents still valid to the projects and scrap irrelevant ones
- Use documents to create standard formats
- Register documents (retroactively if applicable)

Other expectations and supplementary remarks concerning the rules of order, and treatment of information, related to licences

Based consultations and the flow charts outlined in *Attachment No 2* the requirements generally arising in connection with licences can be summed up as follows

- Specified conditions (prerequisites) of applying for a licence are set forth in Schedules 2 to 7 to the Government Decree No 34/1995 (IV 5) as well as in Government Decree No 107/1995 (IX 8). During the formal control *the existence of the prerequisites stipulated in the Decrees* will have to be controlled. Those points can be compiled in advance and called in to describe the tasks of controlling the formats of requests for licence
- What shall also be controlled upon examining requests for licence is *whether resolutions of previous licences have been met*. This requirement can be satisfied by including resolutions and conditions in the project tracking system and by automatically or semi-automatically controlling them

- When requests for licence are evaluated and decisions (resolutions) are made, the procedural *deadlines* as in the provisions of the Electricity Act as well as provisions in public administration shall govern To plan them and to track them on the basis of the project tracking software are the responsibilities of the person preparing the examination procedure and of the project manager, respectively To help project managers with their activities, deadlines need to be recorded and warned of
- Applicant is entitled to request for *an extension of the procedural period* Such an extension is permissible if the Office requires the applicant to provide additional data and the applicant is not in the situation to provide such data within the defined period of time Any modification to the deadlines can be handled with the project tracking
- Licensing requires *complex professional knowledge* and, thus, a complex team (e g knowledge on power plants, on networks, on business and finances and legal knowledge) Breaking down (structuring) the licensing process into professional subchapters and writing down such subchapters in the form of classifiable procedures will make overview of the process and, thus, project management easier
- "Certificates" about resolutions being sent and received are important in respect of the expiration of deadlines of appeal as it is followed by resolutions coming in force This *need for "attestation"* shall be taken into account during the implementation of all the electronic registering, document management and mail systems
- During the licensing work such *background information* will also be required as trends, balances preparable based on multi-annual information (e g analysis of the impact of granting a licence on the balance of performance)

The collection, processing, and production in aggregate form, of the information necessary for considerations, in the framework of EID and based on the preliminary demand of ELD, could improve the longer-term reliability of resolutions

Such considerations are for example

- For supply companies they may own a power plant only if
 - efficiency of electricity production may not be less than 70%,
 - the power plant's total electricity performance is less than 15% of the peak loading in the previous 3 years (section 5 2 of the licence)
- For transmission companies they may establish or own power plants for the purpose of secondary energy reserves only (shares of power plants) (section 4 4 of the licence)

(Note this matter is discussed below)

- *Controlling of special requirements or resolution points*, belonging to licence types, will have to be planned while the examination program (aspect of

examination, series of requirements) is compiled

- Establishment licences, commissioning licences, operational licences, Standard Terms of Operations and Standard Terms of Business as basic documentation are voluminous documents (number of pages) with specified structures, available on paper. Their paper form makes it difficult to perform searches in them or carry over any modifications. ELD makes significant efforts to achieve *the widest possible range of formatting*. IT solutions, in an increased degree, rely on the one hand on the registering and tracking system and formatted procedures, textual and table forms on the other.
- Issued licences and resolutions of public interest *shall also be publicised* in what is called Ipari és Kereskedelmi Kozlöny (Industrial and Commercial Bulletin). In relation to that, warning and controlling deadlines have to be incorporated into the project tracking system.
- *The frequency* of otherwise rather complex licensing tasks is low 5 - 6 per year. In addition, 3 - 4 new such licences are granted annually that are mainly related to power plants. Modifications to operational licences generally affect attachments only (boundaries of properties, measuring points to settlements).

Note *Due to extending the obligation to apply for licence to remote heat supply, licensing work may significantly increase (the number of licensees may increase from 50 at present to 200)*

Procedures of approval and requesting opinions

The basic rule is that the procedures belonging to this group also relate to specific licensee(s)

Approval of Standard Terms of Business (JL)

Power supply companies and direct suppliers elaborate, and customer protection and MVM Rt /ELD approve the Standard Terms of Business. Approval of modifications is done similarly to that of new regulations.

Based on the above, the set of conditions of approvals can be standardised and made available on computer in the framework of the Standard Terms of Business as a scope belonging to an assigned person in charge (30)

Based on the table of conditions, positions can be granted on requests, the conciliation necessary for that can take place, a proposed approval can be taken, and a summarising report can be made on thereon, all supported with computers.

Approval of the Standard Terms of Operation (JM)

As there is one Standard Terms of Operation, developed by MVM Rt, in effect for the whole electricity sector, the task should practically not be handled in the framework of a project but of an independent topic (folder 19)

Scope of duties taking positions on different modifications, issuing decisions on

them, keeping record of tasks and following the different versions of the Standard Terms of Operation

Approval of the sequence of electricity restrictions (JM)

The general professional (modelling and procedural) background of managing resolutions on the sequence of restrictions and requests for modifications thereto is based on the independent topic of Energy Saving

The process

- ⇒ MVM Rt summarises, takes position on, and submits to the Office the proposals on restrictions arriving from electricity supply companies
- ⇒ The Office will examine the submission on the sequence and (issue) it in the form of a resolution
- ⇒ The licensee will issue a request for modification either to modify the sequence or to gain exemption from restriction
- ⇒ Granting a position, any conciliation necessary thereto, a draft resolution, taking a resolution and giving an answer can take place in accordance with the mechanisms (documents, procedures) detailed at projects for licensing or with the help of computer-aided support

Approval of changes in ownership (JT)

What serves as the background for judging on requests for approval is the "Manual on Transferring of Shares, Disposition and Bankruptcy-Liquidation" elaborated in the framework of the independent topic of changes in ownership, a manual describes the procedures of transferring of shares applied in the course of changes in ownership, its steps and the used and prepared documents from a request for approval up to a resolution taken

The basics of the procedure are shown in the chart "Transfer, disposition, bankruptcy-liquidation" in Attachment 2

- ⇒ Using that background, the project manager will prepare a summarising report on the procedure conducted and a draft on the resolution in an internal standard format
 - As one point of the process of granting a licence, a statement on operation guarantee (on a standard form) can be requested in
- ⇒ In the event an approval is granted for a request for changes in ownership, he/she enters the change both into the appropriate chapter of the licensee's file and the table following the changes in ownership in chronology, and produces a new pie chart
- ⇒ He/she lets the person in charge of the topic know about the modification to the summarising report and the pie chart of the independent topic, informing such person in charge about the main parameters of the resolution concerned

Requesting a position on Power Plant's development strategy and establishment plans (VS)

Of the independent topics, activities belonging to this task and their correlation are analysed herein and also in the section devoted to independent topics. As the task relates to several licensees and systems, we suggest that the person in charge of the topic and not the project manager should handle it.

Complex position is required that takes into consideration all the long-term contracts (folder 45), annual contracts, estimates on consumers' demands (folder 61), the power plant's development strategy plan (folder 47), on the basis of macro information.

The critical issue concerning this position is the availability of such macro information to which the followings are necessary:

- ⇒ Acceptance of development plans (above HUF 100 million), acknowledgement of suspensions,
- ⇒ Summarised processing of contracts, and extracting the data about contracted capacities and consumption, contained in those contracts,
- ⇒ Producing information, based on comparing a long-term contract and annual contracts,
- ⇒ Elaborating guidelines concerning estimates on consumers' demands and issuing such guidelines in a resolution to electricity supply companies,
- ⇒ Generating macro level information (annual and mid-term) concerning estimates on consumers' demands
- ⇒ Providing, on the basis of the above, such information and analyses to the positions of development strategies and establishment plans as well as to the decision-making on establishment licences, as
 - trend of demands (estimated, covered through contracts, and actual)
 - expected scrapping, issued licences, entries
 - missing and superfluous capacities
 - planned and necessary reserves

Managing financial and accounting reports and registration fees

The current system has failed to contain this scope of task as an independent topic among the tasks of the project, and it can be found among the topics of controlling and evaluation of licensees' activities (See next chapter).

We recommend that management of financial and accounting reports and registration fees should appear as an independent topic. The person in charge of the topic shall write the "manual" of the procedure, and define and standardise in a format all the

documents required and/or produced in the course of the different activities

The manual will have to apply such requirements as

- requirements concerning the contents and format of reports (under Standard Terms of Operation/KGB/HEO provisions)
- what data to keep record of (HEO)
- information defined in licences (ownership stake, assets invested, etc)

For a start, the chart in Attachment 2 provides a good base for managing financial and accounting reports and registration fees

Main activities of the process

- ⇒ Examining the format of the financial-accounting report, acceptance or rejection
- ⇒ Entering data of analyses, controls and evaluations carried out according to different parameters into licensee's database
- ⇒ Controlling the division of activities, acceptance or rejection (separation of production, directly related and secondary activities)
- ⇒ Controlling costs, acceptance or rejection

Note

Cost types are defined by ELD in order to prevent other expenses, unrelated to electricity, from charging these costs

The following elements of **production** costs will have to be examined separately

- Insurance costs Environmental insurance is also included but only a few other insurance types (or to a certain degree) are acceptable here
- Costs of maintenance can be spent only on permitted blocks or units It is essential to differentiate between maintenance and investments The latter cannot be regarded as production costs Costs that are incurred in connection with heat supply cannot be accounted for as costs of electricity generating
- Costs that are not related to production can only in part be built in the total costs (to a pre-defined level)

⇒ Defining net price revenues (net revenues from sale apply to licensed activities only)

⇒ Defining profit margin in %

⇒ Controlling prices, their acceptance or rejection

Note

The profit contained in the initial price may not be more than 8% compared to capital The base of that initial price is the corrected owners' shares as indicated in the audited balance sheet of 1995

⇒ Defining (reviewing) registration fee, correcting it based on net price revenues (0.03%)

⇒ Controlling payment (in 2 instalments and correction) of registration fees

We consider it important to note that, beside ELD, Price and Economic Analysing Department and the Economic Directorate also take part in the above process, and EID also has to participate in it. It means that processes are not finished within ELD, thus the conditions of a kind of horizontal office co-operation need to be created

4 3 3 2 Controlling and evaluating licensees' activities

Basis of controlling (guidelines, obligations to report and to give account)

ELD plans and organises its controlling activities in general based on the following basic principles

- Elaborating and issuing guidelines and regulations on licensees' business practices (under XLVIII VET of 1994 and Vhr)
- Controlling the enforcement of legal rules and regulations, and the compliance with requirements set forth in the licences issued by the Office
- Controlling licensees on the basis of the Standard Terms of Operation and the Standard Terms of Business
- Keeping record of, and tracking, the deadlines of reporting set forth in licences (in or resolutions)
- Identifying such economic and technical data that licensee is obliged to publicise
- Comparing data in resolutions with those in records. Indicating any difference
- Giving force to the principle of least cost against licensees
- Exercising the right of first instance to impose fine against those who violate provisions of legal rules and regulations or the requirements set forth in operational licences

Controlling is primarily carried out on the basis of operational licences. Its form is the reports arriving from licensees. Due to their different natures, reports have in part been standardised by ELD. Such standardisation (formatting) will have to continue to be enhanced.

One of the basic documents (the "H T type table") sums up *the obligations existing in connection with the relationship between the Office and a Licensee* in the following way

Note

G power generating company, T transmission company, S supply company,

DS direct supply company

OL Operational Licence STO Standard Terms of Operation, STB Standard Terms of Business

Office ⇔ Licensees cases with obligatory approvals, licences

Cases with the Office's obligatory preliminary written approval	G	T	S	DS
Request for Office's approval to ensure "cover" (OL)	x		x	x
Office's approval of extending certain production units' expired deadlines (OL)	x			
Granting licence for outsourcing significant part of the activities to a third party (OL)	x			
Granting licence for providing direct electricity supply to consumers (OL)	x			
Granting licence to power generating company to reduce its capacities by 10% for >1 year, or by >10 MW (OL)	x			
Approval of waiving from capacities >20 MW (OL)		x		
Granting preliminary licence to change power generating units' technical features set forth in licences (OL)	x			
Approval of disposition over significant part of capital goods or over capital goods specified in Attachment 2 - 90 days of preliminary notification (in the lack of general approval), 90 days of decision-making (OL)	x			
Approval of disposition over a significant part of assets belonging to the basic grid - 90 days of preliminary notification (in the lack of general approval), 90 days of decision-making (OL)		x		
Approval of disposition over a significant part of Distribution Devices or of the assets specified in the attachment to the Fee (90 + 90 days), (OL)			x	
Obeying limitations of transfer (Office answers preliminary requests within 90 days) (OL)		x	x	
Accountability concerning price elements proposal on digression from the average price range and Office s approval (STO)		x		
Agreement with the Office on capacity reserving different from that in the establishment plan (OL)		x		
Office's licence to cause a third party to operate a significant part of the activity, e g the basic grid (OL)		x	x	x
Office s approval of modifications to the Standard Terms of Business (STB)			x	x

As the following obligations, in terms of their nature and the way of management, belong to this topic, we suggest transferring them hereto from the group "Obligations for data supply and information"

Cases with obligation to obtain Office's approval or to notify the Office	G	T	S	DS
Generating company notifies the Office if bankruptcy-liquidation or full settlement is initiated against generating company (OL)	x	x	x	x
Request concerning limitations of transfer, to be answered within 90 days (OL)	x			
Notification on changes in the attachments of OL within 30 days, concurrently initiating a modification to OL (OL)	x			

Management of the above requests - concerning agreements, approvals and licensing - can fully be solved in the framework detailed in the section on projects, i.e. the management of such requests will have to be done by applying typified procedures and other methods of project management. The documents concerned will have to be stored among documents of a project related to a licensee.

The scope of cases, summed up in the above table, with obligation to obtain the Office's approval may be extended or changed but such extensions or changes can also be handled within the framework of the project. Such cases are, e.g.

permitting a transmission company's price range different from the average,

requests for changes in the contents of attachments to an OL, or for a modification to the OL itself (within 30 days)

The procedures of a project management are practical to be completed with a *procedure of modifications*. As modification transactions in a significant part of the cases involve changes in the documents concerned, the document management system will have to ensure some solution for *managing different versions*.

The aforesaid cases include the following obligations to take remedial steps for deficiencies

Licensees ⇔ Office taking stopgap steps

Obligations to take remedial steps for deficiencies	G	T	S	DS
Obligations as set forth in Attachments "A" of Operational Licences (deadline 1 year) (OL)	x	x	x	
Modification, as defined, to conditionally approved Standard Terms of Operation and Standard Terms of Business and submitting them for approval (late '95, HEO resolutions)	x	x	x	x
Submitting plan/system of quality insurance (on 31.12.97 at the latest)	x	x	x	x

Tracking tasks and deadlines is worth taking into the new project tracking system only if such obligations to take stopgap steps are expected in the future

The following topics basically do not belong to the scope of tasks of licensing but of *controlling and evaluating*

ELD defines guidelines to licensees on the one hand, and stipulates on the other what regular reporting and data providing obligations licensees have to fulfil *Controlling and evaluation can be of several dimensions*

- Comparing the latest information on a given licensee with previous information,
- Comparing the parameters of different licensees with identical function - in the year in question and for previous years,
- Preparing consolidated, sector and energy system level balance sheets, consolidated information, statistics, etc

Office ⇒ Licensees defining and controlling guidelines

Office's guidelines set forth in a resolution of public interest	G	T	S	DS
Such guidelines and requirements set forth in a resolution of public interest by the Office that have binding effect for Licensees (OL)	x	x	x	x
• Generating electricity of such quality that meet the requirements specified in STO (OL)	x			
• Giving force to the principle of least cost (OL)	x	x	x	
• Ensuring electricity supply at an acceptable level influencing consumers, energy saving (OL)		x	x	
• Guiding principles on depreciation policy (STO)		x		
• Applying the detailed theoretical rules of price formation and request (STO)		x		
• Implementing provisions effective in emergencies (Electricity Act)			x	x
• Surveying consumers'/direct consumers' satisfaction level in the area of electricity supply, protection of consumers' interests (OL)			x	x
• Obeying legal rules and regulations on environment protection (OL)			x	x
• Guidelines of the order and contents of periodical information supply		x		

Licensees ⇒ Office obligations to give account and to report in regular intervals

Office's guidelines set forth in a resolution of public interest	G	T	S	DS
Such guidelines and requirements set forth in a resolution of public interest by the Office that have binding effect for Licensees (OL)	x	x	x	x
• Generating electricity of such quality that meet the requirements specified in STO (OL)	x			
• Giving force to the principle of least cost (OL)	x	x	x	
• Ensuring electricity supply at an acceptable level, influencing consumers, energy saving (OL)		x	x	
• Guiding principles on depreciation policy (STO)		x		
• Applying the detailed theoretical rules of price formation and request (STO)		x		
• Implementing provisions effective in emergencies (Electricity Act)			x	x
• Surveying consumers /direct consumers' satisfaction level in the area of electricity supply, protection of consumers' interests (OL)			x	x
• Obeying legal rules and regulations on environment protection (OL)			x	x
• Guidelines of the order and contents of periodical information supply		x		

Licensees ⇒ Office obligations to provide data or information

Obligations to give account and to report in regular intervals	G	T	S	DS
Submitting, under the Accounting Act, an annual economic accounting report, based on the balance, up to 30th June following the year in question (OL)	x	x	x	
Satisfying the accounting record and data supply requirements prescribed by the Office				x
Submitting annual technical report - based on about 40 important data - up to 31st March every year (OL)	x	x	x	
Notification of breakdowns (OL), preparing detailed report on breakdowns up to 31st March every year (OL)	x	x	x	x
Biannual summary on activities of system interest, T up to 31st October, S up to 3rd June (OL)		x	x	
Supply company's notification on any event or circumstance involving the withdrawal of operational licence within 8 days (OL)			x	
Notification on any event causing significant change in the circumstances of a S or a DS, together with a request for the modification to the licence (within 30 days), and if feasible, Office's acceptance of the modification (OL)			x	x
Annual revision of STO - with special emphasis on generating companies price competition -, submitting modifications for approval (OL)		x		
Transferring to the Office such debated matters affecting large group of consumers that transmitters' and consumers interest representation could not come to an agreement on (STB)		x		

The Office (ELD) will control and evaluate reports and statements. The Office will request licensees to inform them in the form of a letter about the individual steps taken to remedy deficiencies noticed in the course of evaluation. In order to make reports clear and to let evaluation be uniform and workable, a kind of 'standardisation' will take place (definition of tables, standardising the points of meanings).

Reports are sent twice a year in the form of economic and technical reports. The technical report is based on about 40 important data. The balance serves as the basis of the economic report. The specific matter of control is the examination of "other (secondary) activities".

Evaluation of licensees' activities

Based on the data in statements and reports defined by ELD and coming from licensees, ELD carries out different analyses and processing.

Main areas of the evaluation

- Indicators, based on economic reports, calculated annually and summarised by the licensee and by the sector
 - Indicators to analyse property status
 - investments (financial assets) in proportion to all assets,
 - tangible assets in proportion to investments (financial assets),
 - current assets in proportion to all assets,
 - indicator of capital endowment (shareholders' funds in proportion to stocks and tangible assets)
 - shareholders' funds in proportion to all liabilities
 - Indicators to analyse profitability status
 - profit against price revenues
 - profit against shareholder's funds
 - profitability against assets
 - profitability against property
 - Indicators to analyse financial status
 - indicators of liquidity
 - Debtors (accounts receivable) against Creditors (accounts payable)
 - Liquid assets against current assets
 - Creditors against all liabilities
 - Rate of indebtedness
 - Value of current assets
- Technical reports provided by licensees in such a format, with such data content and with such frequency that are defined on the basis of the independent topics (their guidelines, principles)
- Control, acceptance, rejection and correction of data
 - Grouping and controlling changes in static data (acknowledgement/consideration of and objection against annual data)
 - Comparing and reviewing the three-year business plan and the business plans related to the year in question (acceptance, complaints)

To control licensees, a scheduled *internal auditing plan* would also be reasonable to be elaborated (In charge of the topic ZI)

It would be accompanied by a control of reports and statements, standardised and aided in the form, on the one hand, of requirements and aspects formulated in the framework of the independent topics, and of manuals describing controlling procedures on the other

By standardising the control and keeping it within the planned framework, we could

gain more energy for analyses, and requesting and inserting external experts' opinions would be more simple and target-oriented

Information system of control

(See also independent topics)

The information system of control is actually *unestablished*

Both ELD and EID carry out collection of information

- **ELD**

- Technical information, reports, balance sheet and profit and loss statement defined in the operational license
- Technical, economic indicators, data on business activities
- Information on price formation
- Information regarding changes in proprietary ratio
- Other data on licensee

These pieces of information can be both completed and replaced in a more structured form by the data that can be transferred from the typical documents produced during the project and from the project tracking system to the information system of control

- **EID**

- Technical data necessary to control operation of the system
- Daily and monthly data related to system operation
- Data on breakdowns
- Data on security fuel stocks
- Databases and statistics of MVM Rt
- Ad hoc reporting of technical problems

Annex 1 known as "EID's ideas on the energy information system and the control of licensees" describes EID's ideas and activities concerning information collection and processing related to electricity licensing and controlling processes

Materials attached

- General ideas on energy information system (concept)
- Briefing on the information connected to the electricity sector
 - * Information data system of licensees
 - * Data to be collected, processed and stored in the future
 - * Processing and storing of data
 - * Data need for demand estimation

- Recommendation on the control over licensees activities
 - * Control over licensees
 - * Comparative evaluation of licensees' activities
 - * Opportunities to provide the information required of licensees of the electricity sector
 - * Information management
- Revision of the information system of the electricity sector (draft on the topic)

During consultations we established the following in relation to EID's material

- The material prepared has not been discussed on a large scale, it has not been examined by a professional jury on the users' side (ELD) (ELD has not received any feedback from the users' side)
- ELD's experts think that
 - 1 the material does not discuss solutions necessary for day to day operational work but solutions for general objectives (at a conceptual level),
 - 2 While collecting and providing information, EID is forced to limit itself to the information originating from MVM Rt 's collection and processing, therefore
 - the received information cannot provide direct help to licensees' work (project management),
 - the information that it provides to control and evaluate persons in charge of independent topics and licensees is hard to evaluate and requires preliminary processing

This explains why ELD has created their ideas and methods for its day-to-day licensing work because, despite its helpfulness and positive attitude, ELD fails to receive such information and in such a form that ELD needs to carry out its activities more effectively. Co-ordination of gathering information and the conversion, by persons in charge of topics/heads, of the collected information into useable form *requires conciliation of several stages between ELD's persons in charge of topics and the IT experts of EID*. It would be important to provide the OFFICE/ELD with such *macro level information* that would give more help forecasting and grounding of decisions. During a specific licensing process, the effects of a given license on the system should also be examined. That would also be essential because only a licensee may initiate any modification to a license, the Office may not do that. Making use of its good relations with MVM Rt, EID could help the most in this area.

Licensees' data

A database created for each licensee can be one of the controlling devices. (In relation thereto, needs at first level are formulated in the process chart in *Attachment 2 "Licensees' data"*)

Extraction of data can be done from project documents in the first place and the independent topics in the second.

Scope of licensees' data

- Master data (on licensees' registration at court)
 - general information name, address, senior officers, foundation (date, founders, nominal capital, division of ownership),
 - scopes of activities
 - technical data

Source of information licenses

- Annual data
 - Economic data (bottom line of balance sheet, subscribed capital and shareholders' funds, liabilities, assets, price revenues, headcount employed, different indicators on solvency)
 - ownership structure
 - technical data (static, dynamic)

Source of information annual economic and technical statements

- Table of resolutions and approvals related to a licensee

Evaluation of licensees' activities

(See also previous chapter)

List of Licenses and Resolutions

A yearly list is made on issued Licenses and Resolutions, such list naming

- the licensee
- type of license/resolution
 - issue of, modification to, or repeal of, power plants' *preliminary establishment, establishment, commissioning licenses*
 - issue of, modification to and repeal of *operational licenses* on the generation (by power plant, private purpose), transmission, direct supply and supply of electricity
 - approval of *Standard Terms of Operation*
 - approval of *Standard Terms of Business*
 - reports on breakdowns
 - establishment of *restriction sequence*
 - approval of significant shares transfer or sale of significant stake,
 - approval of acquisition of majority stake
 - approval of merger or consolidation with another business organisation
 - approval of alienation of production means

approval of scrapping of production means

survey on *consumers' satisfaction*

deadline of dispatch, extension of a period for weighing of requests

supplements to resolutions

cancellation of resolutions

resolution of suspension

- date of mailing (year, month, day)
- date of reception (year, month, day)
- date of coming in effect (year, month, day)
- number of resolution (number/year)

Defining and fixing the information on licensees

- Contents of licenses (documents of licenses)
 - Issue of operational licenses
 - for production
 - for transmission
 - for supply
 - issue of licenses for establishment of power plants
 - issue of licenses for the operation of a power plant
- Duration of licenses
 - date of issue
 - period of validity
- Technical, economic and managerial information
 - Information defined in a license
(Licensees' basic data defined in appendices of licenses)
Data indicated in licenses can be found in the following Appendices
 - in case of power plants Appendices B, C, D, E and F
 - in case of transmission companies Appendices B and C
 - in case of supply companies Appendices B, C, D, E and F
 - Information necessary for continuous control over a licensee's activities
- Approved Standard Terms
 - of Operation
 - of Business

- Approval of significant changes in proprietary ratio
- Taking other decisions, positions

Other professional activities during licensing

- Operating Work Committees
 - Date of the commencement of work
 - Elaboration of work plans
 - Organisation of Work Committees
 - Deadline of carrying out some work
 - Co-ordination of the work performed by a Work Committee
 - Date of finishing the work
 - Utilisation of prepared materials
- Consultations, talks, professional forums
 - time and date
 - subject matter
 - circumstances (place, press materials, etc)
- Documents submitted together with requests for license
 - in accordance with Schedules 2, 3, 4, 5, 6, and 7 of Electricity Act/Vhr , for each licensee
- Supplying legal rules and regulations defining HEO's operations
 - list
 - content

Note

Number of resolutions taken by the Office

1995 >72

1996 >120

Licenses and resolutions on the subject matter of electricity

1995 64

1996 64

Other requirements and supplementary remarks on the work flow and information management of the controlling process

(based on consultations)

- The data defined in issued licenses, documents of approval and positions, and their appendices will have to be summed up in a database Registration of and warning about fixed deadlines and events are needed
- If the task is not to control but to *evaluate* a licensee (to compare it to itself or to another licensee), *expectations of other kind* against the information system may *also arise*

Needs of different aspects arise in relation to data (data groups)

- Grouping of information of technical, financial, organisational nature,
- Certain data with all their changes will have to be stored in chronological order, with an indication of the sources of all such data (data groups),

To assist control, the specified data with all their changes will have to be stored in chronological order, with an indication of the sources of all such data

Compared with the average values of the previous year as well as with previous summaries, even in terms of several years, the latest data have to be capable of being used for the preparation of regular, timely summaries

Statements will often need to be made retroactively

- No event of imposing a fine has ever occurred, thus there is no well-established method for such cases
- Frequently recurring routine tasks or cases may arise in the co-operation with other departments (departments belonging to another directorate) (not within the department but through horizontal relationships)

Such tasks or cases are

customer protection, consumers' satisfaction 50-100 resolutions annually,
price complaints, petitions for revision of prices, preparation of price reviewing examination (IKIM is the pricing authority, HEO only carries out preparation) once quarterly (5-10/quarter?)

This again raises the question of the necessity and manner of horizontal co-operation within the Office

4.3.4. Managing ELD's topic-specific cases

A common feature of topic-specific cases is that they are of general validity and are not related to a specific licensee or project

At the same time, the activities and information belonging to this circle provide the environment and background to the projects

Note In the course of defining topic-specific cases we started from ELD's system already created for organising and archiving work items, primarily to ensure

continuity in arranging and managing work items

The following summary sums up the interviews and consultations as well as the tasks resulting on that basis

4 3 4 1 General work items

Legislative background, standardisation, internal rules

- **Electricity Act (3), Vhr (23), preparation of a piece of legislation (37), legal rules on energetic (7), position (26)**

ELD's core task is to participate in the process of legislation and modification to legal rules and-regulations, and on that basis

- to elaborate and issue guidelines and regulations on licensees' business practices (under Electricity Act No XLVIII of 1994 and Vhr)
- to control the enforcement of the provisions of legal rules and regulations and the compliance with the requirements set forth in licenses issued by the Office

Tasks arising under the Act

- preparation of legislation, managing proposed modifications
- participation in international legal harmonisation
- involvement of assisting experts

The files stored in the folder "Positions" primarily extend to explanations, interpretations and procedural issues requested by licensees. In order for consistency and to simplify responses to questions, the issued positions would need to be registered

Recommendations

- Registration and, in the event of any modification to a piece of legislation, the tracking of tasks related to the presentation of a position, will have to be solved
- A further task is to register, and to make available through a network, the effective pieces of legislation and the explanations thereto (a CD-ROM-based "Store of statutory rules")
- Generating sample contracts under statutory rules. Solving the involvement of external experts into the processes of presentation or of taking of a position
- Registration of issued positions

(Tf SzG, folders 3, 23, 7, 37, 26)

- **Stikeman, Eliot**

Legal advising, in relation to which

- it is practical to track assignments and to circulate the prepared materials

internally,

- to harmonise the work of S-E and the "private" external legal advisor (NE)
(Tf , folder 20)

- **EU legal harmonisation**

Analysing tasks of EU legal harmonisation, statutory rules on energetic and draft pieces of legislation

Representation and participation in the Integration STB, and the Energy Committee No 8 (IKIM management)

(Tf SzG, folder 64)

- **Standards (STD)**

Registration, and availability through network, of standards will need to be solved

(Tf TT, folder 22)

- **HEO's internal regulatory system (HEO)**

- SZMSZ, ISZIT, Chief Director's Directives accessibility
- internal directives possibility for circulation

(Tf SzG, folders 4, 5)

HEO resolutions

A folder containing the resolutions issued by HEO At present an annual registration (list) is made on the issued resolutions (a detailed description of its form can be found in the chapter "List of licenses and resolutions") We suggest the list being realised in a form that it can be updated and accessible through network, and being also built in the Managerial Information System

(Tf FL, folder 58)

Enactment

HEO's resolutions (publishing them in IKIM's Kozlony [Bulletin] within six months at the latest)

We suggest managing the plans for publication and the check thereof within the framework of the project, and including it as a task into the project tracking system and causing it to be tracked therein

(Tf , folder 59)

Public hearing

(See projects)

IKM, IKIM

Documents on keeping of contacts with IKIM as the ministry (and not with the

Energy Division as the line organisation), that should be grouped as follows

- 1 Taking positions on draft legislation, submissions (HEO is not to elaborate but to take position on such materials)
- 2 Preparatory activities related to participation in meetings with the minister/state secretaries/ deputy state secretaries, and in relation with taking positions on submitted documents and proposals Informative materials on the enforcement of resolutions and statutory rules, requested by IKIM, also belong hereto
- 3 Documents that IKIM has sent for positions, opinions, and the replies thereto
- 4 Customers' and other complaints sent to the Ministry, reports on the investigation of such complaints, related opinions and positions

(Tf , folder 43)

External (international, domestic) relations

- **Standard information on the company (M, A)**

Publications and presentation materials (Hungarian electricity system /HEES, HEO/HEO, ELD/ELD)

(Tf SzG, folder -)

- **International relations**

Creation of a sub-folders

- Countries/institutions
- California Energy Commission
- USAID
- Foreign energetical companies (folder 2)

(Tf KE, folder 1)

- **Interest representation, interest reconciliation**

Restructuring based on institution/chronology

Compilation of a list of addresses, and its entry into the address store

(Tf , folder 8)

- **SAEM**

(Scientific Association for Energy Management)

Peripheral matter We suggest that it should be carried along as a more general folder (Social organisations)

(Tf , folder 63)

- **PR (public relations)**

Registration of press materials (chronological)

Examination of possibilities/meaningfulness of regular publications (e.g. a newsletter)

- **Outgoing letters/memos**

distribution of the documents from this folder to the independent topics, scrapping of expired documents, and termination of this folder, as practical

(Tf SzV, folder 10)

Recommendation

- 1 Reorganisation of the folder in the following manner

- Rearranging the outgoing and incoming letters into the system of countries - companies
- Sub-folders as mentioned above

- 2 Preparing registration and table of content as mentioned above

- 3 Preparing letters with company's letterhead in a standard electronic form

- 4 List of addresses and registration accessible from network, and accordingly the creation of 'addresses' directory for the e-mail system

(Tf KE, folders 1, 2, 68)

Reports on business trips

Administrative work related to the preparation of and arrangements for a business trip should not be grouped here. Addresses, telefax and e-mail numbers need to be entered in the store of addresses.

The master copies of reports on business trips will have to be stored in the library, while the important data from them should be entered into the catalogue. After the appearance of a report on a business trip, notification, a kind of circular, about the report should be sent to the persons concerned through the internal electronic mail device.

Library services

- Professional literature
- Statistical year books
- Conference materials
- Chief Director's presentations

Subgroups can be created from different points of view (organisational, international, informative). The purpose of breaking them down and registering them is also to make sure that the materials can repeatedly be used.

The registration can be a "customary" one: identifier, date, subject matter, with additional specificity like place and objective.

Restructuring should be done in harmony with the PR folder (12)

(Tf , folder 44)

Recommendation

- Creating a catalogue system available through network

(Tf KE, folder -)

Materials on translations

Materials related to translations are stored in consideration with two aspects

- 1 To make sure that orders and performance of translations can be checked
- 2 For the storage of master copies of translations (on paper and floppy)

Based on a survey of needs we can decide whether it is justified to register master copies and to ensure their availability from network

(Tf SzV/KE, folder 51)

Management

- **Invitations, memoranda**

Basically a collection of invitations and memoranda related to HEO'S different level managerial meetings

Recommendations

- 1 Apply a scheduler for the planning and recording of meetings
- 2 Scrap invitations that contain no information
- 3 Process memoranda that define tasks, deadlines and the persons in charge, build in duties either into the scheduler or into the project tracking system

(Tf SzG/SzV, folder 27)

HR (Human Resources)

- **Act on Public Officials**

Reviewing the folder, preparing a table of content (11)

(Tf , folder 11)

- **Personal data**

Registration arranged by the person (6)

Limited access

(Tf , folder 6)

- **Trainings, education, conferences**

It would be useful to ensure a format as a background for planning and registering

(Tf , folder 11)

- **Assigned external experts**

Registering and typifying assignments and related contracts

(Tf , folder 34)

Others

Documents managed by the secretariat or those that can not be grouped anywhere else We do not suggest surveying its content, what can be scrapped should be scrapped, or should be archived

(Tf SzV, folder 32)

4.3 4.2. Independent work items

Privatisation

- **Privatisation, regulatory environment**

Dual scope of tasks

- Strategic

To participate in the creation of a general operation model (regulatory environment) In relation to the preparation and presentation of the shift from the "single buyer" model to the "free access" model, a significant amount of work can be expected The primary task is to arrange and register information systematically

- In privatisation technique

Participating in the positions prepared for ÁPV Rt's meetings and government Tracking the necessarily related tasks, registering submissions and resolutions, entering modifications and following versions

(Tf VÁ, folder 21)

- **Schroders**

A financial consulting company, acting on assignments from ÁPV Rt They play an important role in the elaboration of, and positions on, resolutions

(Tf VÁ, folder 33)

Recommendations

- 1 To terminate the Schroders folder Documents related to specific licensees should be re-placed to the license (project) materials The documents of general nature should be re-placed to ÁPV Rt's folder on privatisation techniques Documents that do not belong to this circle should be either scrapped or re-placed to the "International relations"
- 2 The file dealing with the creation of a strategic model is practical to be included into the folder "Energy system, regulation" (13)

Changes in ownership

One of the most sensitive topics which is project related to the licensee (approval of the changing in the ownership (JT)), and it is justified to keep it also as a separate topic

As a separate topic (here), it is necessary to solve these tasks

- To work out a "Manual on transferring shares", which describes the procedure of the share transfer during the changing in the ownership, the measures and it's used or created documents - from the approval request until the resolution issue
- Creating summary tables and pie charts for the fast survey of the ownership structure (ownership chain) for each

Note

- 1 During an economic organisation's separation or unification, there is only a task of registration and the registration does not start any effective administration. The Office issues a resolution - by accepting it - based on the registration
- 2 See also Request for approval of regulation

(Tf NE, folder 53)

Privatisation of Dunafer

After organising the documents in the archive, the topic must be transferred into the permission-approval projects

(Tf , folder 62)

Request for approval of regulation

It is for the case when the licensee and the operator are different (e.g. MVM Rt as the owner and OVIT as the operator)

So far there have been 3-4 such requests

In terms of proceeding and management, the topic is related to the approval resolution of the ownership change

It is useful to attach the regulations and the approval of the ownership change to the operational license - similar to the licensing of the application for the modification of operation. This also means that the changes and the modifications or the approval resolutions of these would be seen together or sorted in the operational licenses

Because the topic is rather related to the licensee and is not generally valid, we recommend to transfer it to the projects (in the group of Approval and evaluation procedures)

Remark See Changing ownership

(Tf , folder 54)

Preliminary establishment license

Proposal regarding the files stored here

- 1 Systematisation and storage of the official directives regarding the preliminary establishment (and the establishment itself) and the preliminary theoretical position
- 2 The transfer (in chronology) of the material and correspondence related to the project into the proper project archive
(Tf , folder 25)

Putting in operation

The project-specific documents have to be transferred into a licensee's project-folder

The documents of general validity (directives, requirements, procedures, etc) must be stored here

The outdated, irrelevant files have to be scraped

(Tf , folder 42)

Direct supply

under 21/3 Trv

Current and the previous licensee-specific information at the direct suppliers

General and the theoretical information are stored in this folder

Its significance can increase according to the elaboration of the regulation conditions regarding the introduction of the Competition Model (shifting from the single-contractor (MVM Rt) - single buyer model to the implementation of the principle of free access)

(Tf BK, folder 40)

Heat supply

The documents in the present folder will have to be rearranged, and then

⇒ The project-orientated documents have to be transferred into the folder of the licensee power plants (The licenses are transferred to the local government) In connection with the project, it is advisable to define a consistent procedure relevant to the Office It is probably worth postponing preparation of the new procedure until the new heat supply law, that is now under interdepartmental reconciliation, comes into effect

⇒ As a separate topic, the general directives, the documents related to the preparation and the execution of the law, and the official tasks derived from these, have to be

stored, filed and tracked

(Tf RJ, folder 41)

Licensees' data supply

This folder contains (unimportant) correspondence with the licensees. We recommend scrapping and filtering the outdated or irrelevant documents, and transferring the required ones into the licensees' folder(s)

We recommend arranging the folders, relevant to the licensee, in accordance with the chapter "Supervision and the taking positions of a licensee's activity"

(Tf FL, folder 46)

General Terms of Business

It is practical to separate the present documentation files into separate general purpose fiELDs and the concrete project (see Approval and evaluation procedures Approval of the business rules (JL))

Here, these should be worked out in a separate topic

- Setting the approval procedures, including the tasks of the MVM Rt, the Consumer protection, the FVO and the ELD in the course of approval

- Summarising the conditions regarding the approval of the business code in a standard form and in a form that can be used and processed by computers during approval and modification projects

(Tf , folder 30)

Standard Terms of Operation

- **Standard Terms of Operation**

There is only one valid set of Standard Terms of Operation for the whole electricity sector

The Standard Terms of Operation were developed by the MVM Rt

Probable task taking positions on the various modifications, issuing regarding resolutions, keeping record of the tasks, tracking the versions of STO

(Tf , folder 19)

- **Committee for the Standard Terms of Operation**

Keeping record of plans of meetings, minutes, resolutions

(Tf , folder 55)

EPUCC

(Electric Public Utility Company Code)

Tasks Carrying over the network access and the modification

Its significance can increase with the introduction of the Competition Model

(Tf , folder 24)

Energy restriction

The restriction of the electric energy affects, primarily, large-scale consumers and local governments The inquiry on the information and reports regarding the justification of the executed consumption restriction usually takes place through a "complaint channel" It is necessary to divide the existing file structure into project (see Approval and evaluation procedures Approval of the order of electric energy restriction (JM)) and separate fiELDs

In the separate topic, the management and the elaboration of the following two things could be included

- The development of a *model*, the use of which can help examine how to balance the deficiency of the power plants with the restrictions of the large-scale consumers
- the development of a standard procedure This and the model can help to make the resolution on the restriction order, or to help to judge the application for the modifications of the restriction order
 - It is worth deciding what kind of division of labour is possible (with the inclusion of informational and organisational conditions) between the proponent MVM Rt and the resolution issuing Office

(Tf TT, folder 29)

Quality assurance

The folder contains two kinds of information

- The general correspondence related to the topic
- The documentation for the quality assurance plan/system from the licensee

Because the control of the latter is part of the above mentioned checking/evaluating procedure, and the relevant system is not formatted yet, we suggest developing a control program similar to the one for the projects It is advisable to develop the control program in the way it is described in the licenses [aspects of checking, conditions (for example in licenses), compliance, the procedure of the checking, deadlines, etc)

(Tf Bgy/FL, folder 29)

- missing and spare capacity
- the planned and the necessary reserve

We recommend to put the separate topic "Secondary Reserve" into the topic "Performance record" and into the folder(for the request of the MVM Rt owned power plant)
(TF Bgy, folder 47, 66)

The main reason of the above mentioned topics and the analyses in them, is to get accumulated macro information, consolidated and reliable data for creating and maintaining short- and longer term "performance record" Guidelines can be obtained in order to influence the licensees or background information can be obtained for the resolutions and controls related to the licenses This is not only information collecting but also processing the gathered information and creation of the records as well For this reason it is advisable to work out this task with the full inclusion of the EID (processing the MVM Rt background information) As an example, the EID can access, on-line, the daily reports about the output reserve made by the dispatcher On the other hand, the employee of the ELD would like to use these reports summarised in diagrams (consumption/peak, available performance, input, reserve), or to use certain parameters chosen by the help of a menu, during the validation of the power plant establishment plans The third diagram of the 2 Enclosure summarises the decision course for the strategy of power plant development and establishment plan

Competition Model

The new model of the future electric power system, which is realised on the basis of free access, free flow of energy The conversion to the new system can be quickened by joining the EU, rationalisation, or expanding consumer lobby It can be slowed down by the interest into maintaining the existing system The conversion will modify the VET, the Vhr, the EPUCC, and other documentation The preparation and the planning of the management of the conversion is a serious task Now the collection and the processing of the materials related to the Model is in progress On the first level, that can be helped by solutions for providing the systematising, the filing and the tracking of the documentation

(Tf SzG, folder 60)

Energy system, regulation

Collection of the background information, international experiences related to the development of the Model (present, future, single buyer, free available) and the evolving of the related concept

The macro information, which can be provided by the strategic analyses described in the previous chapter, would help the preparations,

(Tf Szg, folder 13)

Energy savings, DSM (demand side management)

The primary official task is to *define the guidelines* which influence savings on the consumer side. The Energy Savings Department of Consumer Protection and Energy Supply Industry Management is primarily in charge of this task and the ELD is co-operating (mainly professionally) with them in this topic.

The next information is necessary to be collected and to be analysed by comparison, in order to analyse and measure the realisation of the energy savings.

- Annual reports from the electric power suppliers, preparations of annual summaries based on these reports
- Evaluations of the Supply Companies compared to the previous years, to each others, to the guidelines, or to other countries

(Tf BK, folder 28)

The quality of the service

It is also a complex topic that should be restructured by taking a number of considerations into account.

The standard and the quality of the service must be measured and estimated by each energy power supplier and by the average of the country level.

The component of the quality of the service

- consumer satisfaction
- The quality of the service provide to the consumers
 - competence, professionalism
 - response time, appearing time, time of solution
- breakdowns, elimination of these

Separate archives for the above mentioned topics

- **Consumer Satisfaction**

There was a comprehensive survey and evaluation, based on the resolution and guidance of HEO, financed by electric power suppliers, and an external auditor company was involved as well.

Based on the experiences that the survey provided, the guidance and the procedures for the measurement of the consumer satisfaction and the evaluation of the electric power suppliers is, in this respect, available and can be formatted.

Inside the HEO, the supervision of the consumer satisfaction is the duty of the Consumer protection and the Energy supply industry Management, and inside that the FVO (and the practically non functioning Complaint department)

At the moment, there is only a loose and formal work connection between the FVO and the ELD. The number of the "cases" (reports, complaints) related to the consumer protection and the consumer (dis)satisfaction is fairly big, about 50 - 100 per month.

(Tf TT, folder 49)

- **Reports from residents**

The collection of the consumer complaints arrived (mainly indirectly) to the department. The consumer or other complaints stored in the archive of IKIM at present, redirected from the ministry and sent to the ELD as well, can also be considered here. The administration with these complaints is not among the duty of the ELD, and for this reason the majority of the reports can be scrapped after a rechecking.

(Tf , folder 48)

- **The quality of the services**

In this file the collection of the materials related to the quality of the services and the evaluation of the suppliers are collected, for the definition of the measurement and evaluation system, for the parameters of these, and for the preparation of the guidelines.

(Tf , folder 50)

- **Breakdown report**

There are 5-10 reports per year about breakdown from the power plants and from the electric power suppliers.

A two level system should be worked out inside the ELD.

- 1 For the management of the reports about breakdowns resulted more than 50 MWh drop out. Here the effect of the drop out on the reserve should be examined for example on the basis of the daily aggregated reports about the performance reserve. The permanent conclusions and the tendencies can be drawn from the reports, and should be examined as well (e.g. Inadequate disposition in the power plant).
- 2 The preparation (by the ELD or by someone else) of the annual summaries based on the analysed exclusive reports and the production of the macro information which assist the judgement on the different strategies.

After the adequate preparation a resolution, which includes the above-mentioned topics, can be made about the breakdown reports.

In the 2 Enclosure the diagram "Performance data, operation, breakdown" shows the simplified management of the power plant/supplier breakdown.

(Tf Bgy/BK/TT, folder 52)

Technical Security

The correspondence related to the Technical Security
(Tf , folder 17)

Environment protection

Tasks

- Taking positions on the draft of the decrees (submitted by KHM)
- Collection of the background information
- Management of the correspondence

It would be practical to use a tracking/recording system
(Tf , folder 14)

Price issues

Tasks

- The interpretation and the register of the price regulations (it is practical to keep the original materials with the energy regulation)
- Price analysis, price comparing among the licensees, to other countries

The price issues are handled by the department of Consumer Protection and Energy Supply Industry Management (ÁGEO) There are technical issues in the background of the expense and contribution, so the basis of the "bargain" is the technical documentation (e.g Investment document)

The diagram "Prices, management of price issues" in the Supplement 2 shows the basic process of price control, settlement and management of price matters

(Tf ZI, folder 9)

MVM Rt

In this archive, correspondence can be found which is mainly the type of request-answer and is not related either to the MVM Rt as a licensee, or to a project

A document summary sheet must be prepared about the relevant documents, the irrelevant documents must be archived or scrapped

Nuclear energy

Tasks Taking positions on the drafts of laws, collection of general information about nuclear energy

(Tf , folder 16)

Competent Line Authority

In this archive, the one-page opinions are kept issued by the HEO, as the competent authority, for various companies and organisations No special arrangements are necessary

(Tf , folder 65)

DEDASZ FB, Dunamenti FB

“Personal” files connected to the participation in two licensees’ Supervisory Boards invitations, the record of the meetings, records

(Tf SzG/SzV, folder 56, 57)

Gas licensing

We recommend organising the collected materials in the archive into 3 sub-folder, and preparing the adequate internal record

- The relevant decrees
- Mutual energy (electricity, gas) cases
- Power plant fuels (MOL, MVM Rt information)

(Tf , folder 31)

DEVELOPMENT CONCEPT

5. The fiELDs and concept of the development of the computerised licensing management system

The work- and information organisational functions and services of the management system give the “infrastructure” of the ELD’s work

Definitions

Management. it is a complex actual and technical procedure, dealing with the tasks, businesses of the ELD with the regulation of the permanent rules

It includes

- *Administration (the actual operation of the administration)*
- *Work item management (the actual operation of the work item management)*

The administration is the actual part of the management, the work flow item management is the technical part (mainly documentation management)

Document A group of administrative and managerial activities for the actual procedure supported by written document

Public document: Every documentation, regardless of time or place of store, which were or are related to the material of an archive of an organisation performs public duty

Electronic documentation: a documentation, recorded, transferred or sent in

electronic form by the help of a computer program, which is stored in computer media

The ELD has a fairly multiple function For this reason a number of different factors, internal and external demands must be taken into consideration during the implementation of computerised management system. It can be expected that after the implementation and the establishment of such a complicated system, a second level optimisation and rationalisation is followed based on the practical experiences

The main functions within the management system of ELD

- editing, input
- recording
- tracking
- archive organisation and management
- database organisation and management
- signing
- liability system
- internal co-operation and information exchange
- external communication and information exchange
- information security, information protection

5.1. Administration Management Functions

Editing

The editing and input of documents, publications, templates

The useable tools

- word processor
- spreadsheet
- graphic and presentation tools

- desktop publisher
- E-mail
- telefax
- mutual use of the document and template files, transfer of the files
- scanner

Recording and tracking

During the implementation of the recording and tracking functions, the next considerations and requirements must be met

- The followings must be recorded and tracked
 - businesses, projects, tasks, events (related to the projects or to separate tasks), as well as the persons in charge

The useable tools

- checklist
- calendar, scheduler
- project tracking system
- workflow management system
- Information(base)s which can come in different forms
 - Documentation of file(document)deposit,
Descriptions of standard procedures, handling regular - e g
licensing - procedures in the form of guides,

Inspecting records, reports created in the projects, etc

These document can be

- on paper
- in the form of scanned image
- in the form of telefax
- in the form of E-mail
- in the form of editable electronic document (original or attached)

Tools for recognising and recording (or perhaps the delivery/reception of) the document

- traditional register (record of the incoming/outgoing correspondence)
- document summary sheet (e.g. in case of folder)
- electronic file record system
- Data of the table, database
 - the information of the licensees
 - indicators by licensees and by sectors, calculated on the basis of annual reports
 - annual performance of the power plant
 - the electric energy available to the transmitter/supplier or the electric energy distributed or consumed by the transmitter/supplier (monthly and annual together)
 - information about (project) license
 - the macro data prepared with the data provided by MVM Rt

Useable tools

- spreadsheet
- simple data base management
- SQL data basic management
- reports extracted from project tracking and workflow management
- Other media (voice, video, slide)
- Formats, templates, blank forms which are in already edited form can help the process of work item management and the administration
 - administration sheet (directions, notes regarding file/work item management and administration)
 - forms of endowment (official letter), standard telefax, E-mail
 - document summary sheet
 - account and report formats toward the licensee
 - formats of standard procedures
 - standard reports (appropriate compliance certificate)
 - checking/evaluation report
 - standard chapters in the licenses
- Catalogues, record lists, lists which can be accessed from a network
- The tracking must be able to include the management of the versions and dates

The useable tools

- Document management system, document image management system
- Database management system
- Workflow management or tracking system

Archive organisation and management

Organisational, management guidelines

- Multi-level structuring of the archive cabinet, drawer, folder, file keeper in a hierarchical order

Imaging the planned project- and topic-specific cases into this structure e.g. cabinets/drawers projects, separate cases, general cases and then the breaking down of these taking into account the group cases regulated in the 1/1994 FU and the watching times as well

The preparation of the plan of the ELD's archive

- Reorganising and (re)naming the current folders in the archive on the basis of the above mentioned structure. The first level principle of the naming cabinet, drawer, folder 4-4 character, document 8 character
- The preparation of an internal document summary and a record that can be accessed from a network about the separate folders and their contents in accordance with the structure
- After this, the physical transfer has to be done. It is advisable to scrap - in accordance with regulations regarding scrapping - , archive, or transfer to the archive the document which are probably not required anymore, simultaneously with the reorganising and the recording
- Because part of the documentation is on paper and in electronic form as well, the name can be the same and a note can be made on the document summary about the existence of the electronic form. By storing the electronic document in a (read-only) library accessible from network, the employees can easily use (part of) them for their work
- Similar procedure can be applied when certain documents are scanned and stored in a form of document image files for faster access
- Using the above mentioned procedure is advisable because this shows the tendency toward the electronic file keeping and it is advisable to input the new documentation in electronic form in a system like this

The useable tools

- document summarising sheet (e.g. in case of folder)
- electronic document record system
- mutual file usage
- document management system, document image management system

Data store organisation and management

Organisational and management guidelines

- In accordance to the previous chapters the finalisation and record with each person in charge about what tables are needed for each topic, from these what is ready in electronic form, what has to be done, and what is advisable to put into a database management system, or is easier to be managed as a table
- The planning of the database on the basis of the preparation

The scope of the useable tools

- See above data of table, database

Library type services

Organisational and management guidelines

- Similar to the guidelines described in the data store organisation and management chapter with the difference that here the various publications have to be stored mainly on paper (a catalogue or perhaps a table of contents accessible from network is sufficient)
- Another segment of this task is the extension of the availability of the "Law collection" service which still exists in the Office, so the personnel in charge can use it from their working place

Address book, directories services

The next functions are covered in this topic

- A table accessible from network where addresses of external companies, institutions and within these the persons can be searched (e g in alphabet order)
- a similar register can be used (if necessary) for the internal Office telephone numbers
- The internal and external addresses, users' names which are provided by the E-mail (directory) system

Administration, work item management directives

The order of the administration and the work item management are generally defined besides the regulated special professional procedures in projects and separated cases by the followings

- system of person in charge, standard procedures for professional works prepared by the persons in charge,
- managerial signatory and endowment system which also can satisfy the demand regarding special treatments and official channels,
- The use of a administration sheet (document supporting, document covering page) for the record of the above mentioned

Internal co-operation and data exchange. External communication and information exchange

The internal and external communication and information exchange system should be planned together, consistently, and the official level and other deliberations have to be considered as well

The planned functions

- The services for the help on the individual and group work inside the ELD and the co-operation inside the Office
 - E-mail
 - management of the address lists
 - group and individual schedule
 - Task assignment and tracking
 - news and consultation team work, circulation

- Internet services
- The exchange and the mutual use of the files
- on-line telefax

Note these functions should be available in those "distant" working places where the workers closely related to the ELD are

- Services for the communication and information exchange outside the Office
 - The exchange of the E-mail, attached documents, files
 - inside the ELD
 - With government institutions (through the entering into the TLR)
 - with the licensees
 - with the partners
 - Access to the Internet services
 - The indirect access to the MVM Rt data
 - through the EID
 - in a form regulated by the EID
 - The access of the information of the IKIM EIR

The method of the implementation of the above mentioned functions can be influenced by

- The procedure of the integration between the ELD (or the HEO) and the "private domain" and, accordingly, the interdepartmental mail system
- Decision (direct or/and indirect) related to the Internet connection

Information security, information protection

The organisational-administrational and technical procedures give the protections of the information

- Organisational procedures
- the procedure of the access and the use of the documents, database and the mutual files

- the order of archiving and scrapping
- the system of the person in charge
- managerial appraisals and directions regarding the administration
- Technical means
 - authorisation of entry, access, keeping record of the accesses
 - protection and security services built in the operational system, database management, and the applications
 - saving - restoring functions and procedures
 - firewall service

Adaptation to the central regulations

The administration system must be adapted to the principle of "Electronization of the governmental document management", the regulations of the Government Unified Administration Regulation (KEUSZ) and the directions of the "Document management and archive proposal of the HEO(1/1994)"

The main questions of the adaptation

- Adequateness
- Registering, filing (multi-level expandable registering system department-management-HEO)
- endowment, filing, archive
- Listing the activity of the ELD by topic This list is also the basis of archive proposal and record system

5.2. Templates for the standardisation

Templates have different level of readiness

- being in use, final

- being in use, has to be finalised
- defined, has not been prepared and introduced
- not defined

Information (projects) related to the licensee administration and document management

The information which should be defined recorded

- the issuer of the document
- the time of issue of the document
- the deadline regarded the decision accordingly to the current regulations of the law
- the subject of the application
 - request or modification of the license
 - request of the approval of the document (business codes, operation codes)
 - report on breakdowns, restrictions
 - report on the inquiry of the complaints
 - provision the information defined in the license
 - other
- Taking measures
 - the arranging organisation (department)
 - descriptions of the necessary measures
 - providing the missing information
 - requesting new information
 - defining new deadlines
 - examination on the spot, inspection
 - date
 - topic
 - the management of the received information
 - process

- evaluation
- analysis
- storage place (room)
- transfer to other sections
- the procedure of closure, settlement
- publishing brochures
- decision
- drafting the position taken up
- information analysis
- imposing fine, sending reminder
- the date of the closure, administration
- the registry number of the closure
- documenting, filing

The templates of the project(s) administration

(see "Approval and supervision procedures" chapter)

- Primary data of the licensee
- Annual economic indicators summarised by licensees and by sectors
- Annual technical indicators summarised by licensees and by sectors
- Annual ownership structure indicators summarised by licensees and by sectors
- Internal checking plan

Separate topic

- *Document summary (record) sheet*
 - folder identifier
 - document/case identifier (reference number, record number)
 - form of the document

- reception/sending date
- sender/addressee (institution, person)
- subject, topic
- number of pages
- the title of supplements, number of it's pages
- person in charge
- the procedure of administration
- evaluation
- archive mark (max 8)

Work item management, administration

- **Administration sheet**
 - **Document record fiELD**
 - document/case identifier (reference number, record number)
 - reference number (at the sender)
 - the form of the document
 - date of delivery/receipt
 - sender (institution, person in charge)
 - subject, topic
 - number of pages
 - titles of the supplements, number of it's pages
 - evaluation of the sender
 - former person in charge
 - other document managing notes
 - **Managerial signatures fiELD**
 - date of the signature
 - person(s) in charge
 - the procedure of administration
 - evaluation of the case

- administration deadline(s)
- expert opinion from who, deadlines
- also attention to , and why
- other managerial notes
- **operator notes fiELD**
 - date of receipt
 - topic
 - type of document
 - precedent
 - type of publication
 - retrieval indicators
 - attached document(s)
 - copies
 - redirection (it's reason)
 - deadline suspension
 - other measure taking notes
- **Document management - document archiving fiELD**
 - reference number of the publication
 - date of the publication (resolution)
 - subject and content of the publication
 - requested deadline
 - person in charge
 - number of pages
 - supplements
 - evaluation
 - way of forwarding
 - date of the entering in the archive
 - archive mark/reference number (max 8)
 - Definition of the archive
 - identifier of the folders/draws
- Standard company letter
- Standard company telefax

POSSIBLE IT SOLUTIONS

6. Computer Functions to Help ELD's Work- and Information Processes

6.1. Functional Requirements

Functional Requirements Defined by Process Characteristics

According to the nature and characteristics of ELD's work processes described above, the solution must handle *three distinctively different work item groups*

- 1 The *registration, tracking and organisation* of electricity licensing projects
- 2 The *registration and management* of individual topics serving as background for licensing projects and for the control - evaluation of the licensees
- 3 The *registration of tasks* falling into the general "office infrastructure" departmental level topic

From the viewpoint of management and tracking (follow-up) requirements, topic 1 is seen to be the most critical, while topic 3 is the least severe

All three areas are *information-intensive*, and use *information displayed in a different format (paper, electronic document, data)*

The project and the individual or general work item groups are (will be) managed by topic managers. One topic manager can manage several topics at the same time.

Given the department already facing a serious *internal capacity shortage problem*, rapid progress must be made in the following areas:

- *Internal (format) standardisation*, which includes the administrative *procedures* of projects, the *information* received and generated, and the re-usability of information and procedures
- The separation of the responsibility for projects and individual topics, and within the topics themselves, inserting administrative and information managing automatisms, in order to allocate more time for the actual professional work
- The registration, scheduling and tracking of *tasks* and *work items*, and through these services, the control of the allocation and use of human resources
- The *re-organisation of information stores* (paper, electronic document, data), *information entry/receipt*, the implementation of rapid and simple access and registration methods, the *migration, where necessary, from paper-based towards electronic document management*
- The introduction of "*workgroup*" techniques making individual and group work more efficient in a way that it becomes accessible to "remote" colleagues working at the department
- The application of the different possibilities offered by *electronic information exchange*, in order to achieve better, more efficient communication between the licensees, the government offices and national organisations, and the domestic and foreign partners

Requirements Defined by the Environment

The internal environment of ELD is the Office, while its external environment is given by the licensees, the government offices and national institutions, social organisations, and the domestic and foreign professional partners. The environment has technical, organisational, legal, financial, etc elements, in what follows we will restrict our attention to the ones that have a direct impact on the work and information processes of ELD.

The Office, as Organisational-IT Environment

Subsequent to the implementation of the envisaged computer developments, ELD's IT, organisational and qualification level will exceed the office level, and it is hoped that this, in turn, will require that the methods and devices be extended to the HEO.

level (notably to gas licensing, to the Customer Service and Energy Management Directorate and, in the case of certain functions, to the entire Office)

This imposes the following qualitative and quantitative conditions

- A quantitative condition is to bring all workstations up to the same level, to create a unified, structured and centrally managed office local area network, to purchase additional software licences, and to use the general forms
- A qualitative condition is to re-organise the activities and the information supplied to a given organisational unit according to the ELD model, to organise in-house co-operation at the Office in parallel to extending the workgroup functions, the office level consolidation of work item and document management processes and, finally, to fill the sector-specific templates with the appropriate content

Remark

The more extensive the system becomes, the more EID will become an “office level supplier”

As an internal environmental requirement, here we mention again that the infrastructures installed at HEO and ELD currently use the *MS Windows NT server and the Windows 95 workstation* software platforms, which must be taken into account

External Connections

It is expected that external connections will be maintained via *heterogeneous methods* for some time

IKIM (Ministry for Industry, Trade and Tourism)

The unified solution with the best perspective is the LAN ⇔ WAN-type communication, where the HEO local area network (LAN) is connected to the distant/remote - private or public - data networks (WAN) through modular router(s)

Such a connection and access possibility exists between IKIM and HEO to have access to the supplier of the *Energy Information System* database/application at IKIM from the office workstations (currently EID) (The WAN is an X 25 package switching private data network leased from HTC /MATÁV/)

Remark

Having become acquainted with the information services of EIS, we feel the importance of ELD’s topic managers shall get connected to the system by installing the client software

Governmental mailing system

Some workstations of the Office are connected to the *restricted governmental mailing system* (TLR) through similar routing functions, but which are built in a server (MTA) The system provides electronic message management system functions according to the X 400 (84, 88) standard (the standardised X 500 mailing list service

is not available as yet) HEO can connect to mail via Internet indirectly, through the X 400 ⇔ Internet gateway function installed at the Prime Minister's Office (The fire shiELD external protection function is also located at the exit of the PMO)

Mailing through the M400 system realising the TLR is an existing and possible solution, but at the same time it also constitutes a barrier for HEO We will return to this question later in connection with the concept of internal/external information exchange

Licensees

The currently existing connection is an off-line type, operating through data carriers or telefax or in paper However, the majority of the licensees possesses a general purpose communication tool, which is mainly e-mail (e.g. Internet-mail), which can send attached electronic documents as well

MVM Rt , as an electricity system-level data source

Some files of the "data bank" compiled from the data acquired and processed at MVM Rt in connection with the operation of the electricity system is transferred to EID through a direct connection (modem) These are then converted into a form "appreciable" within the Office by EID However, the better part of the information processed on different (daily, monthly) bases is only available in the form of tables

Remark

The strategic plans and decisions having an impact on the entire electrical energy system (see individual work items) need *reliable macro-level information* - trends, balances, impact studies, analyses and statistics of different depth *Neither the office model nor the data collection-processing-handling system is available* to perform this task. Such a solution is beyond the scope of the present project, regarding both its volume and its cost implications

However, even within the framework of the present project, one could start to determine the format (tables, graphical displays) and contents of the data necessary for individual/grouped project management work *The format and contents will be defined* by ELD's project managers, while the *conditions, requirements and sources* for the supply and extricability - e.g. from MVM Rt reports - of the corresponding information will be identified by EID

International organisations (OECD, EU, UCTPE)

Data supply on paper

International and domestic partners

Telefax, electronic mail, essentially Internet-mail

TCP/IP applications can also be used as general tools for sending information for, and accessing information at, the companies (file transfer, terminal emulation, etc)

6.2. Proposed Functions, Applications and Technologies

Remark

Functions are defined as being those computer services that the users can utilise during their work. Such functions are e.g. document management, mailing, directory search, task tracking, etc.

Applications and user programmes are the software, which provide the functions in a form well-suited for the purposes of ELD. These applications may run on servers and/or user workstations. They can be of general purpose or specific to a given work activity.

Technologies are task-specific, modular software components and tools, from and by the use of which, the applications realising the desired functions can be obtained by additional development and system integration. Such technologies are e.g. data base management, document image management, desk top publishing, etc.

During the selection of possible applications and technologies necessary for ELD, the following has been taken into account:

- Functional requirements stemming from the internal and external environments,
- Preferring standard products and technologies having a solid, reliable background and available through ordinary commercial channels,
- The group of easy-to-adopt energy-specific applications available through professional partnerships (USAID, CEC),
- The use of efficient workflow-, document and database management technologies operating in a client/server environment,
- The already existing investments - using essentially Microsoft technologies ,
- The priorities defined by the financial resources and the necessity of the corresponding phased implementation.

6.2.1. Work Process Management

There are three ways to organise, and manage work processes (administration) by computer:

- 1 The re-organisation of work processes and the associated documents in a project manager and independent topic manager system, together with the creation of the

necessary document management background Definition and introduction of the standardised document format necessary for operation in a project and independent topic manager system

- 2 Adaptation of the CEC work item tracking system, the exploitation of the professional and methodology (plus financial) advantages presented by the adaptation, and the establishment of the associated administrative system
- 3 Based on the experience obtained, the implementation of a general purpose administrative and document management system, allowing for expanding the functions upon request

Minimal Solution

The minimal solution only builds on the solutions attainable through the rationalisation of work- and information organisation, and the introduction of rudimentary computer support

It is based on the better structure of information organisation, the workgroup level organisation of co-operation, and the standardisation of external connections, together with the amelioration of its methods

The prerequisite of the minimal solution is that the MS Office and the MS Exchange services should be available at every workplace In addition to this basic environment, different work item and document registration services will have to be introduced based on the fundamental tools (MS Office) and the services accessible therein During the definition and filling in of (Excel) tables, it may prove to be an advantage to build on the standard database managers and the fact that these tables can easily be imported into the database

Adaptation of the CEC Work Item Tracking System

A possible way to realise the work item tracking system is to appropriately adapt, and then put in place the application called Compliance Tracking System, created, used and further developed by CEC (California Energy Commission)

The main application area of the CTS is the tracking of ELD's licensing projects, that is, to facilitate the work of the licensing project manager and manager review/control

The CTS is based on the Microsoft Access relational database manager, and proposes the functions and services detailed below

CEC, being a reference location of this solution, controls compliance of licensing activities with respect to about 200 requests and reports, in the context of 33 power plant projects - establishment or operational phases included

CTS Functions and Services

General functions

The CTS realises work item tracking based on the management, tracking (follow-up) and compliance control of documents pertaining to the given work item (licensing request)

Through its use, ELD can realise the computerised registration of all the information exchange and mailing which is in relation with the licensing processes of the Department, plus the reporting and intervention obligations imposed by ELD on the licensees

In relation with a particular licensee, it is possible to implement a system managing the entire cycle beginning with the preliminary establishment licence to the termination of the life cycle of the power plant

The applied database ensures for the employees of ELD the information entry related to the four phase power plant creation, and the information entry connected to the licensing processes of supply and distribution companies

It is important that ELD

- be capable of simultaneously and methodically controlling that each and every step of the licensing process is duly complied with, no matter what the nature of the company (power plant, supplier or distributor/servicing company) may be, and
- give electronic information on the status of these steps to satisfy any quick request or response obligation during the authorisation process

The following system makes it possible that ELD shall maintain a registration of all the documents requested during the steps of a licensing process and, in addition, to monitor the completion status of each requirement

ELD can efficiently apply the work item tracking system in the following instances

- to verify whether or not every document necessary for the licensing process has been received,
- to track the issuing of establishment and operational licences,
- to prove that every document and measure required for the licensing has been supplied by the licensee

The first step of using the tracking programme is the entry of the appropriate project-specific document descriptions

The database connections automatically upgrade the status of the licensing process step defined in the database itself, or a specific activity that the licensee has to pursue if the input activity entered by the topic manager is accomplished, or if a particular document has been received

From the database, it is possible to create a wide variety of specific reports based on the input data, concerning the documents related to the licensing project, or those related to the licensing requirements. In particular, it is possible to request a report on

the status of the steps and documents necessary to accomplish the licensing process

The database also produces reports that identify all the future steps and activities along with their scheduled date. This anticipating, proactive rather than reactive approach is a great asset for ELD in its co-operation with his customers/partners

Document management

The tracking system assigns a unique identification number to each and every document entered into the system. This ID number makes it possible for the computer to follow the path of each document, distinguishing it from the other documents present in the system.

It is important that ELD define a document transmittal form (which corresponds to the administration form), to be attached to every document received. This is necessary irrespective of the document consisting only of one page or being a thick bundle.

The above format must be designed on the basis of the information attached to the document

- the computer generated document ID number,
- the date when the document is entered into the tracking system,
- the project name,
- the aim of the document,
- the name of the administrator in charge of the document (and the whole work),
- the date when the file is completed and sealed,
- a remark space for the administrator,
- a signature space for the administrator with an extra blank space where the signer can enter the date of signature

In the case where a document is associated with the number of a licensing requirement, the number of the latter (or any other ID) is to be included, too.

All the elements specified in the registration form are entered into the tracking system, so anyone can have access to the system at any time to verify

- whether any document has been received,
- who was the sender,
- when it was received,
- at what time it was expected,
- when their administration is due to be finished, and
- what the status of the document (e.g. complete, incomplete, additional information required, prior to , etc) is

Document modification management

The tracking system is also capable to retain the modifications or extra insertions made with respect to the licensing procedure or the project definition (plan)

The management of such documents is similar to that of any other document received, however, the former are managed in a separate computer file set apart from the other requests

Addresses, base registry data

Given that the name and address of the licensees, as well as any other relevant names and addresses get registered in the system, it is possible to compile a cumulative list of the names, addresses and phone numbers therein. The mailing addresses can be found directly from the tracking programme, too

Remark

The English summary and user screen interface of the Compliance Tracking System given by CEC are given in *Annex 3 Compliance Tracking System*

Requirements on Licensing Information

In order to introduce the CTS, it is necessary - in addition to the straightforward modifications and some translation jobs - that the submittals needs for tracking/monitoring specific authorisation requests be precised and finalised (in format as well as in content) prior to entry

The group of request forms to be followed is as follows

- The range of information required during licensing
 - Pre-licensing (cca. 11 separate main components)
 - Establishment licence (cca 12 separate main components)
 - Operational licence for new facilities (cca 15 separate main components)
 - Commissioning licence for existing facilities (cca 15 separate main components)
 - Supplier licence (cca. 19 separate main components)
 - Distributor licence (cca 17 separate main components)
- The range of information required subsequent to authorisation
 - The missing documentation defined in the licence
 - The approval requests specified in the licence
 - The regular reports (accounting, financial, technical, abnormal operations, etc) required from licensees
 - The reports approved in the licence by request of HEO
 - The reports defined and required in HEO guidelines

Data verification tables (worksheets)

For each licensing request a *data verification worksheet* must be completed (see

requirements on licensing information)

The data verification worksheet contains information such as

- project ID
- project manager
- date of worksheet completion
- worksheet ID and version number
- topic manager(s)
- description of requested/supplied info
- the regulation or instruction governing info supply
- info location within request (chapter, page no)
- a y/n mark whether or not the supplied information is appropriate
- the missing information to be added for compliance
- the date of addition

Remarks

- 1 A similar data verification worksheet form has been communicated by CEC during the consultations
- 2 Certain lines of the "Control/Sales Procedure Summary Report" described in the chapter on project management coincide with the above mentioned data verification worksheet, therefore they can be unified

The worksheet is a Word file, worth to be generated in several formats

- a blank, predefined general purpose sheet (template),
- a half-filled version (e g requirements) for a given licence type,
- a completely filled (personalised) form considered to be an annex to the particular licence (inspection) programme event registry book

In the first two template formats, the data verification worksheet has to be referred to within the licence-monitoring procedure Both the procedure and the templates must be stored in a directory accessible through the network, so that the project managers (having 'read' and 'copy' rights) and the independent topic managers (with full access rights) can get them

The accessibility of the fully completed worksheets by project and higher level managers permits to take a look into the details of an assessment

The harmonisation and consolidation of the data verification worksheets and the CTS, including the management of the requirements defined therein, is an important task indeed

Exploiting Other Possibilities Offered by Access

Other possibilities emerge because

- Access is a part of the MS Office (Professional) programme package, where the other elements are Word, Excel, Powerpoint and Schedule+
- One may try to exploit the functions in Access not used by the CTS

Accordingly, the following MS Access for Windows 95 functions deserve attention

- Import existing (Excel) tables, table file conversion to relational database, Excel format creation,
- Content- and form-based selection,
- Access data analysis with the aid of the Excel base table wizard,
- Automatic property info generation with built-in report writer

By other possibilities we mean the extension of Access or the CTS beyond the project to those independent topics, where the administrative tasks can be handled in a similar way. Such an independent topic can be e.g. the transfer of properties or quality assurance.

The Access application can be used individually or as groupware through a network (but not in a client/server mode)

Work Planning and Scheduling

Based on our analysis, we do not recommend the adaptation of the Excel macro-written Project Calendar programme, because

- The modification and translation is more laborious than re-writing the macro
- Both in MS Office and in BackOffice there are task and deadline scheduler services, with the aid of which either individual or group level activities, and the deadlines can be planned and monitored, and the busiest scheduling and other conflicts can be anticipated (see also groupwork services)
- In the case of workflow management-based solutions, the management of individual tasks or documents can be determined together with the time and date variables

Procedure-oriented Workflow Management

The Access-based work item management rests on the documents prepared by the licensees and representing the steps of the work item in question, their registration, tracking (follow-up, the control of their compliance, and the database connections realising them)

The administrative procedures to be followed are either memorised by the administrators, or are at their disposal in the form of generic procedure descriptions

If the procedures are drawn up and written down by experienced professionals according to the plans, or if e.g. the project managers can load them down from the network in order to use the generic procedures to compile a particular inspection programme, then this automatically leads us to procedure-based computerised work management

Such a - WFM technology-based system - provides further possibilities

- The licensing-control procedures are put on computer with the help of very simple, computer-aided planning (procedure building) techniques not requiring any programming background
- The formal and logical validation of these procedures are also performed, thus eliminating the errors of manual procedure building
- Procedures are easily modified and can be put in effect on a given date
- All the work items (projects) can be managed, tracked and controlled on computer, including the preparation of different reports and statistics
- Thanks to the integrated functions of the workflow manager, the applications necessary to complete the individual steps (e.g. form filling, database search, report preparation, receiving/sending electronic messages, etc.) of work management and administration can be loaded and run automatically

We suggest that the first support given to work item management should be the adaptation of the CTS, and the introduction of different forms

In part parallel to, and in part subsequent to this (as a function of the internal professional capacity of ELD), the generic procedures can be laid down

If there are sufficient, appropriately complex work item groups requiring authentic procedure tracking, then the migration towards procedure-oriented workflow management or towards integrated work item and document management may commence. During the migration, one can use the results of the work therefore accomplished (procedures, input/output forms, managing temporal and other variables, etc.)

The integrated system provides automatism for monitoring the different documents (e.g. licensing requests), the partial activities defined within the procedures, and the deadlines during the entire administrative duration

The system automatically records the time and date when the documents are received, the identity of the administrator who received them, plus who is responsible for taking what action in view of a given completion deadline

For the procedure-oriented workflow management, we propose the Kodak-Wang *OPEN/workflow for NT*-based solution (we will return to its functions later on, its description is given in *Annex 5*)

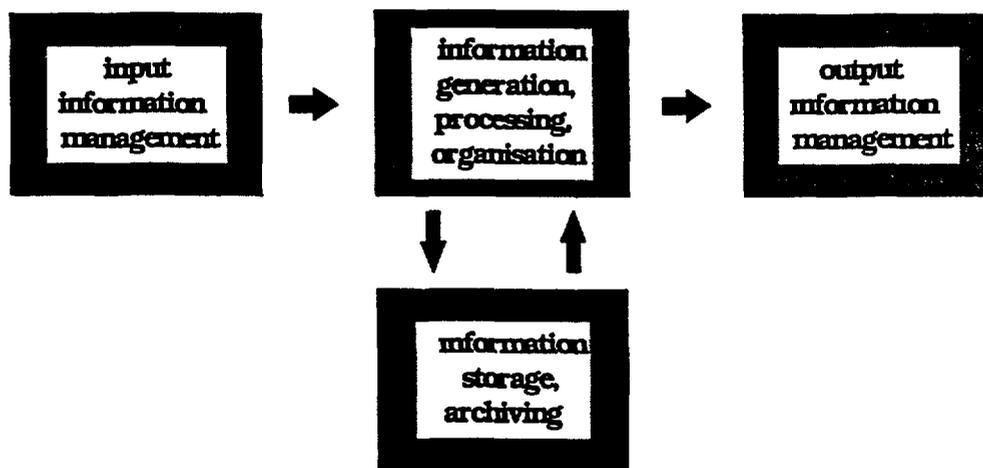
6.2.2. Information Management, Processing, Organisation, Storage/search

Function Range

The realisation of information management, organisation and storage/search functions is, *on the one hand, a technical, an organisational issue on the other*

Consequently, the solution of electronic document management/ processing/storage is not merely a question of technologies. The organisational side of documents and administrative procedures, not forgetting their legislative implications, is equally important

The fundamental scheme of information management, organisation and storage/search is shown in the figure below



Input Information Management

Technical elements of the task

- The physical devices of sending information paper, data carrier, line (leased or switched, private or public, data or telephone network),
- The method of forwarding information post, courier, electronic mail, fax, telephone message, file (data, document) transfer, database query,
- The format of information (word, excel, HTML, TIFF, data, etc files, different mails (X 400, Internet, Notes, fax), voice, printed form, etc)
- security, protection services

Task organisation and management components

- receipt, opening, verification
- classification, grouping, re-routing, returning, copying
- separate management of special (e.g. confidential) information
- registration (acknowledgement, filing, stamping)
- forwarding, distributing, delivery

The first group of activities is usually a central function (managing office, opening service), while the second group can be repeated several times, according to the organisational scheme

Information Generation, Processing and Organisation

Technical components of the task

- editing tools
- data and document entry tools
- application of predefined samples
- registration and tracking system
- access of information bases
- internal and external communication and information exchange
- security and protection services

Organisation and management components of the task.

- project/topic manager system
- attachment of administrator file ("cover sheet")
- manager signature, indices, evaluation, deadlines
- copying, forwarding
- transfer for administration
- motive search
- administration
- preparation, printing and attachment of handout (decision, standpoint, draft reply, response information) documents
- management information
- info directory classification
- registration, tracking
- 'job done' registration (exiting)

Output Information Management

Task technical components

- See input documents management

Organisation and management components of the task

- receipt from administrator
- handout filing
- approval, signing (according to hierarchy)
- preparation of copies
- enveloping, sending
- grouping
- mailing, external destinations

Information Storage, Archiving

Technical components of the task

- the medium storing information (paper, magnetic carriers, optical carriers, etc)
- the type of stored information (data, edited document, document image) and its format
- information store (data base, document and document image store) management systems (individual or grouped)
- security and protection services

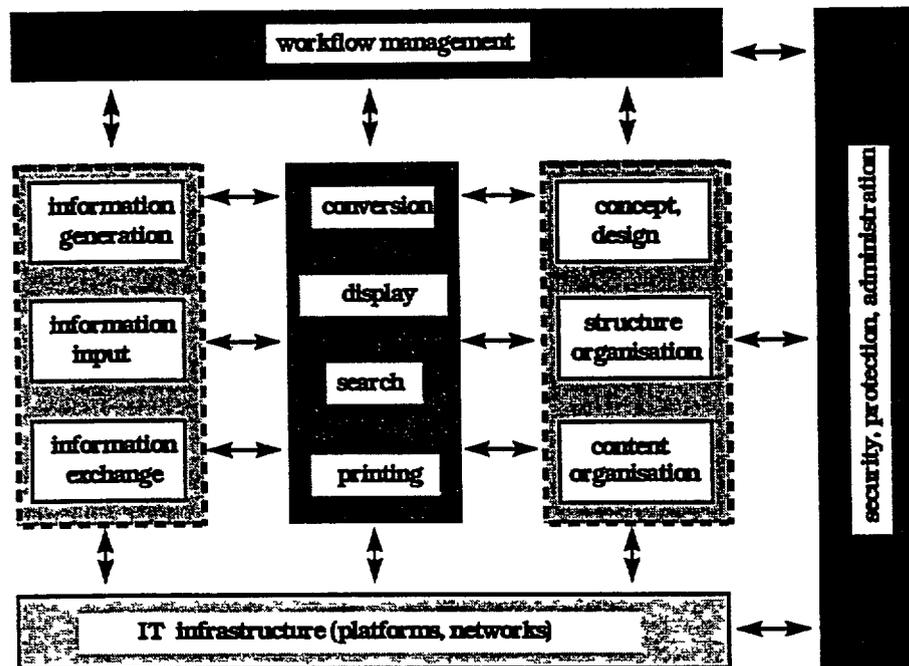
Organisation and management components of the task

- registration, organisation, storage plan preparation and maintenance
- operative storage/central storage/archiving conception
- formulation of access, information security and protection policy
- indexation
- storage in information store
- handout, borrowing
- deletion, transfer to archive

The individual functions can be achieved in a *stand-alone fashion*, such that the information can be used - through the services offered by the local area network - mutually shared. This is the so-called standard solution.

The individual functions can be realised in an *integrated fashion*, such that both the functions and the information can be mutually shared within the framework of the client/server local distributed environment. This is the so-called integrated solution.

The technical links of the above functions are shown in the following figure



Document Preparation and Processing

In accordance with the general central administrative proposals, HEO prefers that the products belonging to the Microsoft Office programme package be used for document generation and processing

Supporting this choice, we recommend that every workstation should be upgraded to the Windows 95 environment Office Professional level, also chosen by the Office and ELD

Office Professional

The package consists of the following applications

Word for Windows 95

Document and calculation chart editor, with functions such as simultaneous spellchecking, automatic formatting and correction, address list, Internet manager, text highlighter

Excel for Windows 95

Table manager, with functions such as higher performance calculations and diagram drawings, data tracking, flexible figure editing, areal data display, display of 10 most significant items, uniformization with Acces (table - database conversion)

PowerPoint for Windows 95

Graphical presentation programme The new developments mainly support conferences and group presentations However, we feel that in addition to conference

talks and project manager exposés it can also facilitate procedure generation or independent topic manager work, too

Access for Windows 95

We have already highlighted the functions of Access in the chapter dealing with “*Workflow Management*”, in connection with the Compliance Tracking System and other possibilities. Further, we will also come back to Access when talking about the document registration and tracking system, and when analysing the database management solutions.

Here we wish to mention that Access can be used both in single and network (common LAN) modes. However, its intensive shared network use significantly increases network business- e.g. with respect to the client/server-type network use.

Schedule+ for Windows 95

is listed here for the sake of completeness only, its functions will be discussed in connection with solutions facilitating groupware.

The essential information on the MS Office programme package is recapitulated in *Annex 5*.

Rationalising Individual and Group Level Document Generation

The unified, integrated programme package range ensuring complete functionality proposed above is but one part of making document generation and -processing more efficient.

The other part is provided by *rationalising individual and group level document generation*.

The main rationalisation components are

Preparation and use of predefined, internally standardised document generation templates and other forms, available and accessible through the network and/or PC (See also the chapter on “*Template Unification*”)

Repeated use of documents already available from previous similar jobs (e.g. licensing projects)

Implementation of a transparent document and template register and the associated document storage protocol (see next chapter)

Applying the Office’s right approved by Law, to instruct the licensees to use the above programmes and, accordingly, to receive the supplied information in an appropriate electronic form.

Reducing paper stream by scanning paper documents, which also has the great advantage of reducing management and retrieval/storage time.

Imaging Paper Documents

Scanning paper documents, and filing the generated images in electronic directories can considerably reduce storage, management and retrieval costs and time.

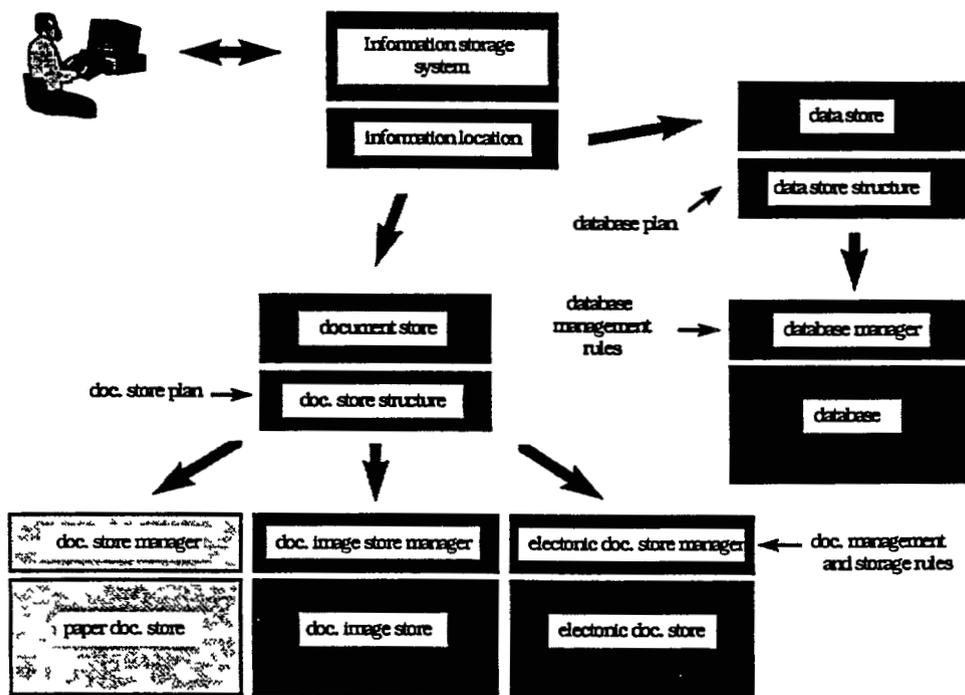
As a first step, - to establish the method, and to start the migration from the widely

used paper documents towards electronic ones - we propose to start with the combined use of Imaging 95 from the Windows 95 package (optional) (see Annex 6) and the existing page reader of ELD

This is a stand-alone solution, therefore in the second step we thoroughly recommend the complete document entry, image managing-filing-retrieval-archiving functions operating in a client/server environment on the ELD- or even on the Office level

Information Management, Organisation and Storage

The concept of information organisation, storage and search is represented in the following figure



One of the basic goals is to permit the user sitting in front of his/her computer screen to search and have access to the information necessary and authorised for him/her in a unified manner, through a centrally maintained registration system - regardless of the fact that the particular piece of information is in a paper register, in an image store replacing the paper documents, in an electronic register containing edited documents, or in a data base

This approach is important, because it will presumably take quite a bit of time to realise the conditions necessary to operate a purely electronic information storage and retrieval system, where every piece of information is located in databases, files generated by scanning the paper documents, and in the form of electronically edited documents

This *mixed system* makes the process of information organisation, registration, tracking and management more difficult

It makes things even more complicated that the solutions for the functional modules can

- belong to different price categories, therefore they
- can have different service levels and
- have different degrees of integrability and modularity, and finally
- can be purchased on the domestic market and then personalised, or can be developed according to specific criteria

In what follows, we will examine these possibilities

Given their different nature, it is worth separating database management systems from document management systems already on the first level

Among document management systems, we distinguish between documents stored in paper stores, image stores and electronic stores. The suitable registration *FIELD* is document format, where it is also noted if for some reason a particular document is stored e.g. both in paper and image or both in paper and edited document form

The overall purpose of the document management function is to enable ELD to track and control the status of individual documents and the administrative tasks represented by them

Information Registration System

The information registration system has to be practically entirely re-built. The associated preparatory and organisational tasks are the following

- 1 To select which data and document should be included in the database (first a list, then the definition of tables/*fiELDs* (see the chapters on "*The Work- and Information Processes of Licensing and Control*" and "*Concepts and Areas of Computerised Licensing Administration System Development*")) Then comes the separation of base data, the elimination of overlaps between tables, and the definition of connections (the design of the database model). The data model or database plan gives the structure of the data store, whose data can be subject to queries or modifications made by the project and topic managers
- 2 The rearrangement of the folders stored in individual or central stores, the deletion of irrelevant documents accompanied by exiting them from the registry file (according to work instruction No 1/1994 issued by the Director General), and the proper registration of the documents still necessary. To accomplish this, we propose the use of the defined document summary sheet - to be used as a

folder and a folder structure for individual, independent projects and topics (see the chapters on “*The Work- and Information Processes of Licensing and Control*” and “*Concepts and Areas of Computerised Licensing Administration System Development*”)

We now turn to the discussion of the different possible realisations of the document registration system. We do not consider the same registration type for data, as that is a fundamental built-in function, together with many others, of database management.

Document Registration System

Based on the above concept, the following solutions and considerations can be applied over the formulation of the document registration system.

- The use of the traditional registry will become superfluous with the introduction of the *administration sheet* (for new documents) and the *document summary registration sheet* (for stored documents) (Instruction No. 1/1994 will have to be amended in this spirit)
- We recommend the development of a - preferably MS Access-based - **electronic document registration system (EDRS)** (This implements e.g. the “Dock” used by CEC or any other receipt-registry office function)

The registration fields are matched to the fields of the administration sheet, to the traditional registry, and to the registry fields of the document management and storage regulations.

The EDRS automatically generates the so-called sequential registry number and the date. The work item group, topic and registry mark are chosen and automatically inserted by selection from the predefined “menu” being identical in structure and contents to the document storage plan.

The network operation makes it possible that the registration can be made from practically anywhere (not only on the secretariat- but also on the administrator level). This way the electronic mails, faxes and other messages received directly by individuals and requiring registry can also be registered.

The registration of irrelevant (not requiring administration, containing no information, or inconsequential due to other reasons) documents is unnecessary (they can go directly to the electronic trashcan folder or into the office paper bin).

In the EDRS, document search can be done based on subject, sender, addressee (administrator), date, etc.)

- In the document format field, one can take note of the available form of carrier(s) of the document and its annexes
- The EDRS entry and information constitute a basis for launching the Compliance (Project) Tracking System, and for issuing the administration sheet containing work item management and administrative tracking information

The termination of the administrative process can also be noted in the document

registration database

- Once implemented at ELD, using the experience gained during the application the EDRS can easily be extended to the entire Office

Remarks

1 *If the administrative process initiated by a received document terminates by issuing a response, then the outgoing response should logically be registered under the number of the received document*

2 *See also "A Fully Integrated Solution"*

Document Tracking

Similarly to the other functions, there exists a multilevel solution for document tracking

- A method similar to, but more efficient and far more reliable than the current tracking based on manual registry is the "who has the document" solution offered in the EDRS
- The *administration sheets*, accompanying the documents all the way through the chain, contain detailed information concerning the administrative process and the management of the associated documents

The administration sheets take on their final form after having passed through at least 4 checkpoints

- registering the document (management prior to administration)
- signing by manager
- document management during administration
- regulations concerning document storage

In the first phase, prior to starting the normal operation of the system it is preferable to print out the administration sheets and fill them in by hand

In the second phase, the administration sheet can be made accessible through the network, to be filled in from a workstation, and it is sufficient to print out only the fully completed form when the administrative process is over and storage is due

A particular row and registry number has its matching pair in an administration sheet bearing the same registry number

By displaying the administration sheet and inspecting its entries, a manager can have firsthand information on the status of the administrative process

- The previously described *CTS* realises work item tracking based on the management, tracking and compliance control attached to the work item (license request)

By its use, ELD can put in place a computerised register about all the mail and

information exchange that is connected to the licensing processes of the Department, and about the reporting and measure taking requirements imposed by ELD on the licensees

- The integrated and procedure-oriented administrative system makes it possible to automatically organise and perform the activities attached to the *work items and documents*
 - identification (registry), registration
 - document routing and tracking within the Office (work item and document tracking)
 - tracking their management phases
 - control of deadlines and task completion

The registration and report making system is suitable for co-ordinating the different activities and the procedures making up the work process

(Remark see also "A Fully Integrated Solution")

Document Organisation, Storage and Retrieval

When formulating the solution for document organisation, storage and retrieval, the following considerations must be taken into account

- 1 The document storage plan, that is, the document storage (logical) structure has to be set up in a unified way, irrespective of the fact that the document is physically located
 - in the paper document store,
 - in the document image store, or
 - in the electronic store

When designing the *document storage plan structure*, the project-specific and topic-specific structures must be followed

⇒ Projects

⇒ *Power plants*

⇒ Licensee 1

⇒ Project 1

⇒ Project k

⇒ Licensee n

⇒ *Supplier(s)*

⇒ Licensee

⇒ Project 1

⇒ *Distributors*

- ⇒ Licensee 1
 - ⇒ Project 1
 - ⇒ Project k
- ⇒ Licensee n
 - ⇒ Project 1
- ⇒ *Office guidelines*
- ⇒ *Procedures, templates*
 - ⇒ Generic procedures
 - ⇒ Generic (compliance) reports
 - ⇒ Recapitulative reports
 - ⇒ Summaries, report forms
- ⇒ **Topics**
 - ⇒ *General work items*
 - ⇒ Legislative background, internal regulations, standards
 - ⇒ EA, Vhr ,
 - ⇒ EA, Vhr
 - ⇒ legislative preparations
 - ⇒ rules of law on energetics
 - ⇒ bulletin
 - ⇒ Stukeman, Elhot
 - ⇒ EEC legal co-ordination
 - ⇒
 - ⇒ HEO resolutions
 - ⇒ Coming into effect
 - ⇒
 - ⇒ *Individual work items*
 - ⇒ Privatisation
 - ⇒ Transfer of property
 - ⇒
 - ⇒ Development strategy, establishment plan
 - ⇒ Long term contracts
 - ⇒ Client demand estimation

- ⇒ Power plant development strategic plan
- ⇒ Competition Model
- ⇒ Energy network system, regulations
- ⇒ Energy saving, DSM
- ⇒
- ⇒ **Templates**
 - ⇒ Administration sheet
 - ⇒ Outgoing response forms
 - ⇒ Document summary sheet

In order to facilitate easy navigation in the mixed (paper and electronic) document files, a seemingly simple but essential task is to build a *file name structure* corresponding to the above discussed structure. If the document exists both on paper and in an electronic form, then both should bear the same name, and a migration has to take place from the currently used number-based identification system towards the name-based "speaking" system.

1 The above multilevel hierarchical document structure - first in principle, later on in practice, too - is realised by three document store managers

- *Paper document store management*: in reality this is a catalogue accessible through the network (and upgraded at the Secretariat), which follows the document storage plan and indicates the physical location of a document within a folder in a drawer of a cupboard

Documents can be borrowed - either from the storekeeper, or by self-service -, whereupon a so-called document replacement form is employed

- *Document image store management*: the document images generated by scanning the paper documents are arranged in a structure identical (cupboard-drawer-folder-document) to that of paper documents. It goes without saying that in this case the document can be accessed without navigating along the tree-structure, but also by using the keywords generated during assigning the indices prior to registration. Given that ELD's activities are document-intensive, the paper-to-document image transition and the associated very rapid information search can be an important element of increasing efficiency.

We propose that document image management should be first implemented via the (optional) Windows 95 *Imaging 95* (desktop imaging) function.

The existence of a sufficient amount of document images and the large scale, general application of the technology will eventually eliminate the need for the client/server solution. Such a full scale "imaging & document management" solution is given by *OPEN/image for NT*, which ensures full compatibility from entry through indexation and document store management to archiving on a magnetic or optical carrier.

- *Electronic data store management* (document management) it facilitates the organisation, management of and access to documents edited at ELD, or received in an edited form (e.g. as an attached document) and then stored and recalled

The *Windows 95* operating system offers services both for individual and grouped document store organisation and shared document utilisation

The so-called *OfficeLinks* tools of Office also offer new functions for the shared use of files

The *folder* orders the different files and file types into a single, easy-to-handle "project file" with precise, transparent page numbering and one step printing

By clicking on the appropriate area of the *command icon row* one can have access to the most frequently used files

With the aid of *quick search* the files can be accessed immediately

The *new file* dialogue panel offers a choice of selection from more than a dozen predefined template samples

The *circular* is an efficient Word tool reading names and addresses for mailing from Schedule+

The considerable growth of the electronically edited document store, the need to search on the basis of indices or occasionally contents, the necessity to catalogize, the registration and tracking of versions, and other functions called for and justified the implementation of such high performance, high service level document management systems as *DOCS OPEN* (A summary of its functions can be found in Annex 5) This choice has the advantage that it fits into the Microsoft Windows NT, SQL Server environment and it co-operates with the *OPEN/workflow* & *OPEN/image* solutions, that is, it is a functional part of a modular but at the same time fully integrable system

Remark

It is perhaps worth mentioning that if in the future there is a significant need in the context of ELD's documents for the application of document technologies familiar from the Intranet/Internet environment (such as HTML), then the support of these will not pose a technical problem, as these are supported by any of the software (Microsoft, Wang, PC DOCS) we proposed for building the ELD solution

- 1 During the design of the document management system solution concept, we have taken into account the possibility to include the following

having finished the appropriate organisational and preparatory works, the functions should be extendible to other organisational units, or even to the entire Office, by using the technical solutions determined in the solution,

in the future, it should be possible to migrate towards a fully electronic document management and storage system

However, it should be noted that even having in mind a fully integrated and greatly automated solution, the "standard solution" is not without benefit, because

- In reality the organisational and formatting work and its documented result are necessary both in the integrated system and during the migration towards it. The generated printer forms, procedures, document store and other "standardisation" procedures can be fully taken over
- The implementation costs and time period of the first level solution are less/smaller
- Several (simultaneous) expectations and conditions are necessary for the implementation of the integrated system

Other Considerations Stemming from HEO Regulations

According to the *HEO document management regulations and -storage plan (1/1994)*, the following provisions have to be applied

- The Central Mail Router is in charge of saving, deleting and archiving the documents after 3 years

The CMR unseals the received documents, then enters them into the registry and applies the receipt stamp, the entries are filled in by the CMR, the organisational unit responsible for registering and the unit-in-charge (receipt number, registry number)

The CMR forwards the documents filed in the receipt daybook to the organisational unit responsible for registering

Finally the CMR registers all outgoing messages into the 'mail out' letter book

- ELD is not an independent registry organisational unit (but the Energy supply directorate is one), and it takes care of the 3-year-long storing. Similarly, ELD has no handout right
- Multilevel signing
- Main/sub numbered registry system
- Distribution-folder applicable
- Registry book must be used
- The "Confidential" mark must be put both on the document and in the registry book (management notes)
- An index book must be used
- When the work item is completed, the document must go on to the document store
- The basic paper document storage rule is to store documents on an annual basis, within one year broken down to items (in different folders), in sequential order (ID No)
- At the end of each year, a document store summary has to be compiled for the

folders safeguarded therein

- A document handed out from the store must be accompanied by an acknowledgement of receipt

A part of this can and will be taken into consideration in the new ELD document management system, while in the case of other - mainly not paper-based - documents, the directive of the Director General will have to be duly amended

Data Management Solutions

Based on the result of the first surveys and analyses, the best solution for ELD is to implement a two-level data(base) manager, the elements of which are fully compatible

- 1 The first level (current) needs can be satisfied by using the Microsoft *Excel*, *Access for Windows 95* (both are parts of Office Professional) services (standard solution)
- 2 At the same time, even in the context of the standard solution it must be taken into account that
 - in the future the ELD database management and development expectations will grow,
 - the data management services will have to be extended to other organisational units, in extremes to the entire Office

These expectations require more efficient network operations, search and database service client/server technologies than those offered by the standard solutions

An almost evident solution is the use of the Microsoft *SQL Server*, supported by two other considerations

- it can amply satisfy expanded ELD demand,
- the OPEN/workflow and OPEN/image for NT, the DOCS OPEN and Exchange described above as being the functional base of the integrated solution can build on the SQL Server as the necessary database manager

The other solution is the *Oracle Workgroup Server* (for NT), which provides robust database management for a reasonable price

Considering the above possibilities and the current and future ELD needs, an Access desktop (client) and SQL Server (server) based solution appears to be preferable

Within this, the standard solution is the Access for Windows 95 (see *Annex 6, Office Professional*) which, as we saw, is the basis of the Compliance Tracking System to be adapted, as well as the newly developed electronic document store system

The Access application can be used individually or in a group through the network (but not in a client/server mode)

Through Access the currently existing or new Excel table needs can be fully satisfied

- by importing Excel tables,
- by converting table files into relational databases,
- by generating Excel formats,
- by format- or content-based selection,
- by analysing data.

Access and Visual Basic provide efficient and simple tools for the development of the new applications

Licensing Database Management System

The central issue of database development is the creation of a *Licensing Database Management System*, according to the following criteria

1 *Formation of the "Licensing Data Model"*

In the first step of database development, one has to collect the range of data received, stored and managed by ELD, and to define the content and structure of each table together with their interrelation

Such already known pieces of information are

licensees' data

- licensee and sector indices calculated on the basis of annual reports
- power plant annual output data
- amount of electricity sold/available at distributor (per month and annual total)
- list of licenses and decisions
- license (project) information
- macro data generated through the analysis of data supplied by MVM Rt

The above can be supplemented by such information as that necessary e.g. for individual topic manager work

1 *Data model optimisation by elimination of overlaps and blanks*

Such a task is presented e.g. by the determination of licensing base data regularly needed for several projects or individual topics

2 *Definition of data entry and report forms*

In the case of information supplied by the licensees, the data entry format is the one which has to be adopted by ELD and the licensees (e.g. Excel table)

3 *Database manager selection according to criteria imposed on data models*

Access

SQL Server for NT

or Oracle Workgroup Server for NT

4 *Development tasks, testing and implementation*

An important milestone of increasing efficiency and reliability is that the information supplied by the licensees through data carriers, line file transfer or even by a file attached to an electronic mail should be received in a format directly transferable to the database management system

The Licensing Database Management System provides software functions for the entry, storage and access of data needed for performing licensing-control-evaluation tasks, and to prepare the related reports and statistics

The client/server architecture *SQL Server* based database management system functions and services are described in *Annex 5*

The concept of the *SQL Server* "public database" ensures that the data can be accessed from other applications - e g the workflow management system - as well

Electric Energy System-level Database Management and Processing Needs

In the light of the surveys, one can readily draw up the scheme of a macro-level data acquisition and processing need for information aiming to facilitate decision-making, office or other, for which today neither the criteria, nor the information decision-making model, nor the (servicing, technical and financial) conditions of implementation are available

In this context, while making a decision or just issuing a statement, not only the direct influence on a given licensee but also the implications on the electricity network as a whole should be considered

To go from the licensee level to the *system level* such complex work item groups have to be assessed and evaluated in their context as

When making strategic decisions

- long term contracts
- power plant development (building) strategic plan
- customer demand estimation
- energy saving, DSM
- energy system, regulations
- Competition Model

When defining service quality

- customer satisfaction
- customer feedback
- feedback on service quality
- reports on abnormal operation

In the above context, a considerable amount of background information has to be acquired and processed in order to issue reliable statements, decisions and guidelines. Starting from the background information, different aggregated, macro-level information blocks have to be set up in the form of quarterly or annual statistics,

trends, balances (e.g. performance balance)

Considering its contents and quantitative aspects, the elaboration of one (or more) such system is beyond the technical, organisational and financial scope of the present project

In addition to data acquisition and -processing, the full scale solution also requires one or more professional (mathematical-statistical and data-) model, which can be used for benchmarking the impact of possible decisions

However, the specific data acquisition and -analysis tasks can be performed even in the currently proposed system, by exploiting the possibilities offered by Access or the SQL Server (Oracle) database manager

6.2.3. Information Exchange Services

Summary of Demand and Constraints

By information exchange services we mean all the computer functions that may be used to satisfy ELD's internal (Office) and external information receipt and forwarding-routing needs

The information exchange need is essentially

- Message and information transfer between individuals and organisational units via telephone, telefax, electronic mail and attached document files. Both internal (LAN operated) and external (WAN connection operated) electronic mail are necessary
- Text and/or data file transfer between external organisations (e.g. licensees) and ELD through data carriers, switching or leased, private or public lines
- To access and browse different electricity information bases via Internet (www)

In the near future, the expected new information exchange needs are

- In parallel to establishing ELD's databases, the demand to internally and externally (by outside correspondents) access and modify the said databases will increase
- On the Office/ELD level, sooner or later an own web file will have to be created not only to present the Office, but also to publish, communicate to the licensees the different (not classified) guidelines, procedures, publications or any other information representing general interest (e.g. for the customers)

Restrictions

The Office is a part of the central government administrative apparatus, therefore it is subject to the "regulations" usually laid down by the PMO. A corresponding restriction is that the governmental bodies are connected to the restricted X 400 based

interministerial mailing system (in X 400 MHS terminology, to the government "private domain") To serve this purpose, a Messenger 400 MTA (Message Transfer Agent) server and several user clients (RUA - Remote User Agent) have been installed at HEO HEO can exit to the outside world (other X 400 domains or Internet) through the PMO gateways and the protection installed therein, which makes information exchange rather complicated (In principle, even fax connections have to be established through that X 400 telefax gateway)

At the same time, Microsoft Exchange clients and mail is operating at ELD as a part of Windows 95 However, in addition to mailing Exchange also requires other (communications and groupware) Internet services, which are ensured by the governmental mailing system as default

Exchange Services and Indicators

We propose that ELD's information exchange, including the different mail and other Internet services, should be based on Microsoft Exchange which fits perfectly into the existing NT environment, and the previously described administration and information organisation systems

The technical presentation of Exchange can be found in *Annex 7*

Among typical Exchange services, we wish to draw attention to the following

- Electronic mail, message sending, information sharing and other groupware supporting functions Pre-programmed selection, routing and forwarding of messages arriving at the mailbox
- The Exchange Server is a subsystem of the Windows NT Server based integrated client/server product package offering *e-mail, Internet and groupware services*
- Built-in X 400 and Internet support
- Full scale of supported standards X 400 (84, 88), SMTP, MIME, POP3, NNTP, HTTP, HTML, LDAP, X 500, MAPI, etc
- Plug components for mail connections to external entities (X 400 Internet Mail, cc Mail, etc), thus suitability for establishing wide information networks
- Different information receipt and storage possibilities mailbox, public folder
- Design of electronic form sheets, creation of one-off applications
- Attachments
- Integrability network fax support, database connections, workflow and document management/archiving systems, full text indexation,
- Daybook possibilities
- Advanced security system (digital signature, encrypt functions)

Mailing System Concept

Operation in X 400 based message manager system

In order to realise as the final goal the integrated work- and information organisation system, and to avoid on the way the unnecessary extra development and integration works and costs, the optimal system technology and user solution is the *NT/BackOffice infrastructure*

At the same time, one has to find a way to co-operate with the governmental mail system, the technical basis of which is given by Exchange standard native X 400 services

The M400 MTA installed at the Office is in this respect a tool for entering the governmental mailing system (X 400 MTA-X 400 MTA connection), which simultaneously provides integration and autonomy

The installation of the M400 RUA clients leads to unnecessary complications at ELD from the point of view of users, without any palpable results

Internet-mail Services

The Exchange services completely satisfy ELD's needs for *Internet mailing*

There are several ways to meet the security requirements of the restricted governmental system

- To re-route Exchange/Internet mail for forwarding through the Internet-gateway of the restricted system,
- Based on the Exchange and NT services, to start up the direct Internet-mail services of ELD, accompanied with auxiliary organisational measures,
- To realise an in-house (thus ELD) Office level fire security service

Remark

professional and other considerations support the latter choice, because

- we think that the office-level individual security is just as important as the centralised security system of the entire governmental administration sector,
- the local protection makes it possible to identify the most efficient, office-specific method, ensuring, in addition to co-operation with the central system, the independence and autonomy of the establishment

E-Mail and Fax within a Single System

The integrability of Exchange (to document manager, workflow and database) also extends to the fax service by now considered almost as a basic default requirement

There exists an available *optional* solution called Faxination for Exchange Server, whose main functions are

- Fax-Mail integration
 - Full Exchange client integration
 - Local and direct fax address support

Personal cover sheet

Document conversion via Gateway

- Retarded sending, timing, grouped sending

Other Internet Services

The independent security solution is important because apart from the ELD and Office levels there is a growing need for other information services www, gopher, ftp, etc

These functions are automatically offered by the NT Internet Information Server and Exchange

Other Information Transfer Services

The full range of the rest of the required but still missing information transfer and communication functions is provided by the NT Server client/server and the Windows 95 client services

- Support of the important protocols TCP/IP, NetBEUI, IPX/SPX, HTTP, PPP, PPTP
- ISDN, X 25, leased line, PSTN (switched telephone line)
- Remote Access Service

The information transfer services of Windows NT and Windows 95 can be found in *Annex 8*

6.2.4. Groupware Support Services

These functions are located between information exchange and workflow management, their main purpose being the co-ordination of groupware within ELD

It is a characteristic of Microsoft products that these functions are supported by almost any product group

- The *Schedule+* for Windows 95 functions offered within the framework of *Office* can be efficiently used by individuals as well as groups to register business and personal contacts, and to rank tasks and make schedules
 - Notice by attaching the appropriate documents to the message it is possible for everyone to prepare for the meetings,
 - Group schedule for organising meetings,
 - Personal calendars, annual or broken down to months or weeks,
 - List of business and personal contacts by name, address and phone number,

- Time schedule (wristwatch functions),
- Sending out circulars according to the names and addresses stored in schedule+
- Integrating functions offered within Exchange
 - Group or personal agenda (calendar) using Schedule+,
 - Creating Internet news- and discuss groups, multisource newsgroup replication,
 - Task assignment using Schedule+,
 - Building web based groupware
 - Address list management Exchange X 500, Schedule+
- Communication, file sharing and other information exchange functions offered by Windows NT and Windows 95 (see the enclosed NT and Win 95 descriptions)

6.2.5. A Fully Integrated Solution

The most important elements of total integration are

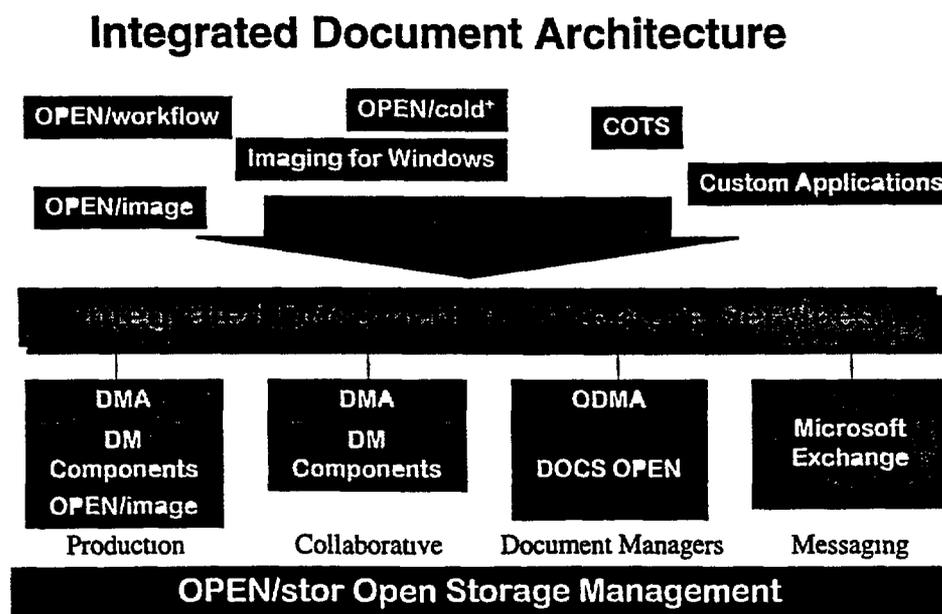
- Functional applications, which connect to and communicate with each other through standard programme interfaces (API)
 - electronic workflow and document image management OPEN & OPEN/image for NT (NT/SQL Server environment)
 - electronic document management OPEN DOCS (NT/SQL Server environment)
 - database management SQL Server (NT environment)
 - information exchange & workgroup services Exchange Server (NT/SQL Server environment)
- Workstation (client) level functions, which run either independently or in a server environment
 - the workstation software (clients) of the above server applications
 - independent functions with network communication scanning, document image management, database management (Access), Office applications, Windows 95 user functions
 - network and communication services
- Unified network and communication infrastructure
 - TCP/IP (LAN,WAN)
 - X 25, ISDN, Ethernet, leased/switched data line

- remote user connection
- Unified server/client platforms
 - Windows NT Server
 - Windows 95 (NT Workstation)

From the system technology and architecture points of view, we feel that it is important to underline the following

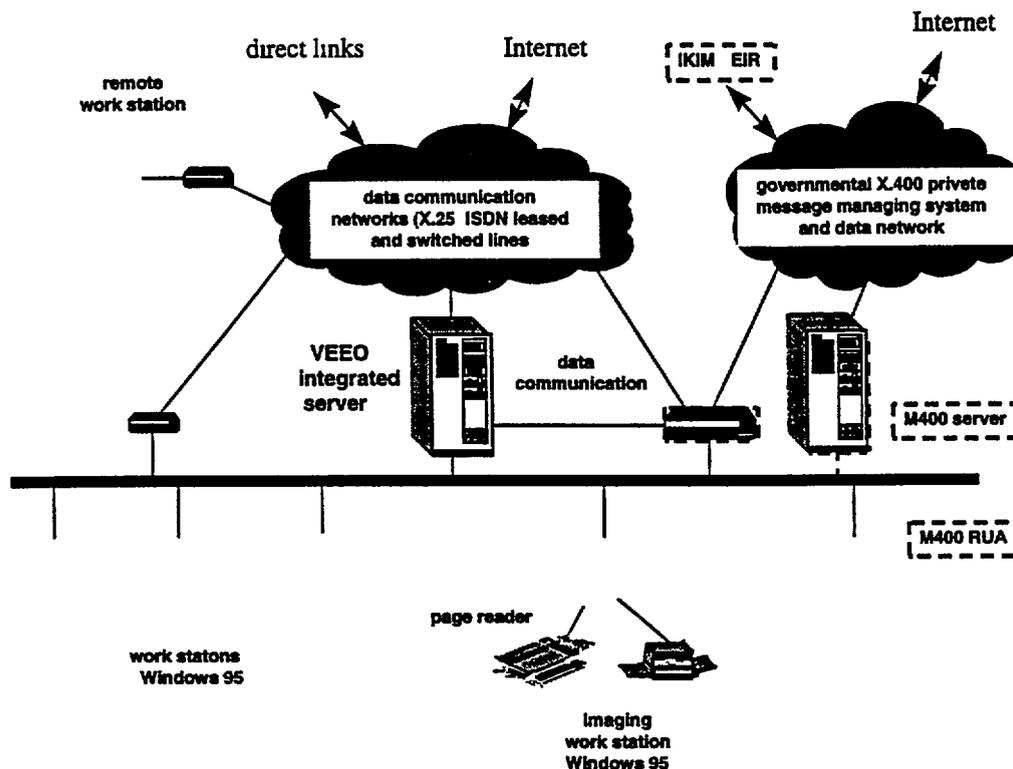
- Workflow management goes beyond organising administrative activities, and actually integrates the functions listed above - according to the predefined administrative procedures. A part of the integration is the (automatic) starting the applications (user functions) necessary to pursue the given activity in question
- If the integrated workflow and document management system solution is adopted, then the registration, tracking, indexation, storage and retrieval of documents is accomplished in a unified system
- "Packaging" is important not only technically (co-operation and version matching), but it also has a great impact on the price (e.g. for BackOffice, Office the whole package is considerably cheaper than some of the components)
- The solution chosen and proposed for implementation is functionally modular, and the unified environment and the available standard interfaces make it possible to architect and implement the system in a phased way always building on previous results

Based on the above principles, the next figure summarises the principles of a unified Wang-Microsoft-PC DOCS document organisation architecture



6.3. Architecture, Topology

The figure below represents the basic principles of ELD's IT solution architecture and topology



Referring to the figure, here we summarise the architectural concept of ELD's IT system. It is important to highlight that in our opinion the main purpose of the solution is *the system optimisation from the viewpoint of ELD as an "independent" organisation*, and the environmental possibilities and constraints deriving from the internal and external information connections of ELD within the Office will be thought of as playing a secondary role.

Integrated Applications in a Client-Server Environment

The perspective information technology solution to ELD is provided by *the integration of the applications and the operation of these applications in a uniform*

Windows NT server and Windows client environment

Note

The decision concerning the latter had actually been made in the computer and the network infrastructure implementation phase which was also financed by Bechtel (see the next section)

ELD integrated server ("the Server")

The Server is meant to create different "logical" user functions (applications) on the same physical server*, and such services can be used by the workstations against their server requests (and rights)

*Note

Should any functions, on account of an increase in the volume or in the user base or for security-safety reasons, need more power or an independent operation, the logical functions can be installed on several (different) servers

Functions of the Integrated Server

1 *System and communications server*

The *network operating system* of the above multifunction Server is *MS Windows NT (4.0)*, while the preferred operating system for the workstations is *MS Windows 95* (their functions and features are described in the "Platforms" section and in Annex 8)

The *NT-based Server* provides a uniform system environment for the mailing (exchange of information) system, the file server, the database management, the communication functions, or the "external" (not Microsoft server) applications

Further functions establishment of directory, built-in Web server

Those working in their homes or other "mobile or remote" users can connect in to the Windows NT server as remote while equal clients through the Remote Access Service (RAS)

Note

Should the entire MS BackOffice package be procured, as it is expedient for cost reasons, the included *SNA Server* (see Annex 7 for details) introduces further network connectivity features, primarily SNA connectivity capabilities That may be particularly interesting if the direct connection of the Office to the SNA network of MVM Rt is worthwhile and possible

2 *Client-server based database management system*

The Server provides two different types of database management functions

- to provide the data collection and query, data processing and database management functions related to the licensing (user) tasks
- to provide the "external or technological" database management functions

required for the workflow, electronic document archives and document image management systems. These databases, for security and system technology reasons, can be accessed by the users only through these applications but not directly.

The proposal for the database management system, to provide all the homogeneous and consistent environment, the full integration and the above two scopes of function, is MS SQL Server.

The description of *SQL Server* is contained in *Annex 5*, the following features are highlighted here:

- Expandable, high-performance database management system, designed specifically for distributed client-server data processing
- Open architecture, options of third party integration (Internet/Intranet, access to official Web pages, E-mail)
- Simple and efficient database administrator and database supervisor tools
- Support to industrial standards, a wide choice of developer's tools (Access, Visual Basic and C++, SQL Windows, etc.)
- Windows NT integration (security, user administration, fault management)

Note

The Oracle RDBMS can also be proposed as an option in an NT environment. Its advantage, as compared to SQL Server, is that it is more robust, its application development tools are very good. The disadvantage is that it requires a special administrator competence, furthermore, it does not fit into the Microsoft environment as an organic part as SQL Server does. Should requirements concerning database management increase to a level beyond SQL Server, which is possible for the management of an Office-wide large database and processing, the Oracle solution could be timely to consider. Given the ELD-level data management requirements, SQL server covers these requirements, including the provision of database management requirements of the below described server functions.

3 *Server for mail and groupware features*

Our proposal, based on the requirement of the uniform system, consistent operation and simple integration, is *MS Exchange Server* (available separately or as part of the BackOffice package).

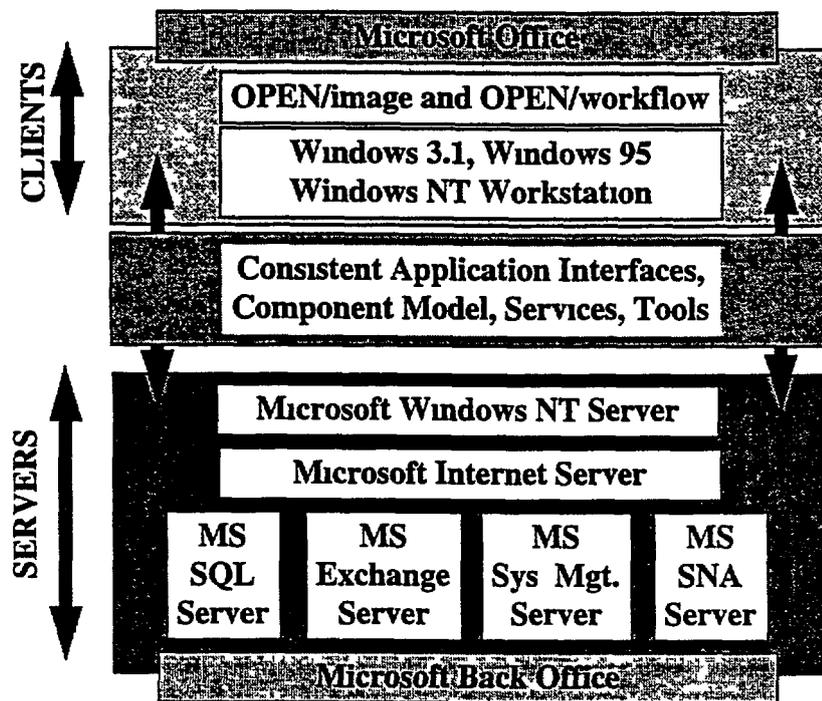
It can establish connections anywhere to anyone, be it e-mail, Internet news and discussion groups or WWW.

Exchange Server is described in *Annex 5*, the following features are highlighted here:

- Integrated mail and groupware features (X 400, X 500, MAPI) Interoperation with other mail and groupware systems
- Support to all Internet standards (SMTP, POP3, NNTP, LDAP, HTTP, HTML, SSL)

- Uniform mailbox for access to any information through MAPI MIME for the attachments PPP and RAS for integrated remote access
- Letter formatting and editing, pre-processing of letters, local replication
- Built-in database engine, customisable rules for the automatic processing of incoming messages (filters, views)
- Automatic routing with message transfer, confirmation of delivery and reading
- Establishment of virtual workgroups on intranet or extranet
- Groupware tools (shared folders, organisation of meetings etc)
- Integrability and interoperation with the other members of the BackOffice package
- Integrability and interoperation with the workflow system

The following figure shows the system of the above functions, implemented in a Windows NT environment



4 *Electronic workflow server Electronic document image management and storage/retrieval server*

Our proposals, based on the requirement of the uniform system, consistent operation and simple integration, are *OPEN/workflow* and *OPEN/image for NT Server* which use the above-described SQL Server for its internal database management tasks

It works in close co-operation and communicates through a standard interface with *Exchange Server* (using the MAPI Workflow Framework mechanism) and the document image and electronic document management systems described below

The main functions, features and characteristics of the OPEN/workflow and OPEN/image for NT system (see also *Annex 5*)

- High scalability it can be expanded from the departmental level to division or Office level, to multiple locations and to more fiELDs of application
- Allows the integration of administration, electronic document management and document image management techniques just as well as that of different e-mail, groupware and other licensing-related applications It integrates people, tasks and information

Automates the flow of tasks and information (e.g. electronic images of documents, documents) within the organisation (by procedures) It manages complex and structured work processes and information processes but it also allows ad hoc management procedures outside the process

- Provides up-to-date graphical tools for the design, authentication and management of work processes, administration procedures Rules, routes, data, applications and any various conditions can be defined - all without programming Different steps of actions can be defined, while the option of conditional performance also exists
- Different electronic templates and forms can be defined or produced, to be used for, among others, the following purposes data entry, optical character recognition, indexing, retrieval, to control the workflow, to select the cases Supported fiELD types are text, integer, decimal, percentage, signature The individual fiELDs can be calculated against other fiELDs and can contain tables
- A communication link of a sufficient speed can allow the connection of remote users or telecommuters
- It allows the monitoring of the status of the work tasks, the co-ordination of the tasks, it optimises the work processes while measuring their efficiency
- By its services the cases/documents (work items) received from different locations can be assembled, indexed, forwarded and finally archived The attachment document format to the work item can be any document image, Office document, format data,
- It supervises the local management and storage of cases and documents (work items) The documents can be organised, stored and retrieved in electronic folders and filing cabinets
- It provides electronic document management and imaging functions It enters paper-based documents and digitises them into electronic document images which then can be forwarded from one processing location to another one or from the document image storage to the administrators within seconds The incoming format can be a text document, facsimile, drawing, manuscript, e-mail, etc

Entry may take place by scanning in the mail distribution office, by facsimile/e-mail or directly generated from an application

- Information can be organised into logical packages and forwarded to the relevant administrators and experts to execute a given task or group of tasks
- Main characteristics of the executive environment on the user PCs
 - the task can be assigned by the system or the user can retrieve it,
 - the document, folder or batch related to the case can be accessed, viewed or printed through a uniform interface,
 - document sorting, folder organisation functions,
 - establishment of status of cases (next, pending, to be forwarded to the next administrator)
- It guarantees access security and the protection of restricted access to given documents

Main server functions

- *Object management*

The cases/documents and folders (work items) being subject of the step in the administration process and the workflow, located in the Image Server are stored and managed. The so-called object-chart is maintained, which records the related information (date of production, modification, author-administrator). Access requests are managed.

Besides the individual documents it is also managed when one document is linked to several cases.

- *Workflow management*

The central server function. It manages, sorts and controls in a pre-defined manner, using the procedure design tool (against the administration procedures and rules), the lines and routes in the administration process. It manages the logging of users onto the system. It manages and administers the entire work process. All data related to the work processes is contained in a database, various reports can be created on that basis on the status of administration process.

- *Management of indices (indexing)*

The index manager handles the indices describing the types, location and characteristics of cases/documents (indices and attributes) for the entire organisation. These indices are used by the electronic archives to create the archiving structure (document management hierarchy) reflecting the archiving plan. The users can query the documents and folders stored in the electronic archives from their workstations as part of the process or in ad hoc manner.

The cases/documents received from different locations to the organisation can be automatically assembled and indexed (e.g. in the filing office) and forwarded to the workflow management server, the archives and archiving.

- *Forwarding and supervision of cases/documents*

It provides services to organise the individual steps of the administration process, it supports and supervises the work steps of accessing, forwarding, archiving and scrapping (deleting) of the cases/documents

- *Archiving - retrieval from the archives*

The software components that provide for all functions of archiving and retrieval to the optical storage devices, including the organisation and registration of archiving/retrieval requests

Documents can be organised by electronic filing cabinets and folders

Indexing/archiving can be automatically performed, in parallel with the administration/processing of cases through the available electronic "double issue" function

5 *Electronic (edited) document management server*

Our proposal, based on the requirement of the uniform system, consistent operation and simple integration, is *DOCS Open* which also uses the above SQL Server for its internal database management functions

Main functions, features and characteristics of the DOCS Open system (see also *Annex 5*)

- *Library server/Document server*

SQL-based database storing the catalogue-cards made for the documents in a controlled manner Each catalogue-card contains information of the referenced document (name of document, description, name of the production application, name of author, data of rights of access to the document, physical location of the document, other key fiELDs) The library server stores all data of the documents (indices of the documents) while the document itself is stored by the SQL Server

So the principal feature of DOCS Open is to find and open the catalogued document

All documents are searched against a completed catalogue-card and the list of hits, the documents matching the search criteria, is returned The selected document is looked up by DOCS Open from the document server and is loaded into the application (Windows-based MS or Lotus)

- Security features access rights to groups of users, to groups of documents or to each individual documents

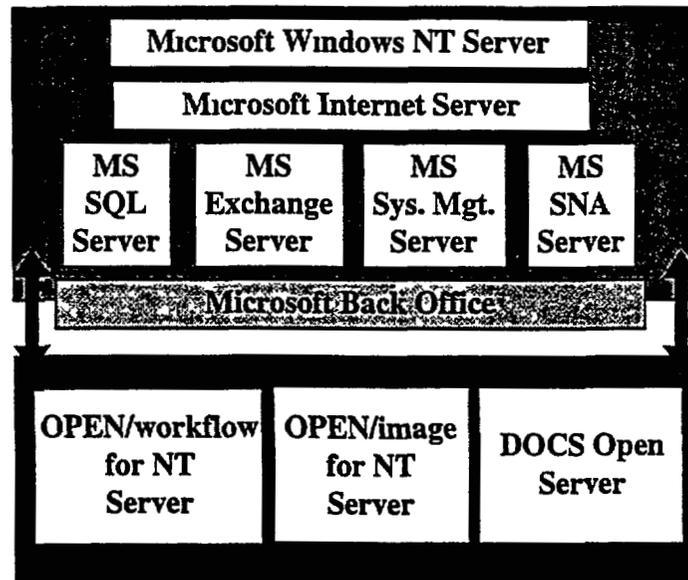
- Management of updates, revisions Entering a document into the library once is sufficient, the version list offers the choice when opening

- Full text search, using several search methods

- Exchange of documents, connected to the workgroup and mail systems (MS Exchange)

- Internet connections

The above server integration and interoperation links are shown in the following figure



Functions based on a shared file system

These functions or shared capabilities are part of the client-server functions described in the previous section or of the local functions provided at workstation level

The range of functions that are within that scope and can be implemented in a Microsoft NT - LAN - Windows 95 environment are as follows

- Access based database management applications
- NT file server and printer server (redirected) functions
- capabilities provided in a Windows 95 environment, e.g. shared use of files or "Exchange peer-to-peer" messaging

(See the section "*Computer and network infrastructure*" and *Annex 8* for more details)

Access to external applications and services

HEO functions as the "IP subnetwork" of IKIM within the governmental network. The subnetwork (HEO) is connected to the IKIM application servers through a router located in the Office and a 64 kbps "private" data line and the router located in IKIM.

The two IKIM application servers

- Energy Information System [EIS]
- M 400 X 400-based messaging system

With respect to exchange of external information (e.g. e-mail), HEO is totally dependent on IKIM, as it can access X 400 messaging functions and Internet capabilities only *through IKIM*. The mailboxes and the message depository of HEO are located on the IKIM X 400 MTA server. Internet access is implemented through the HEO/ITB (Co-ordination Office of Governmental Information Systems) X 400 ↔ Internet gateway.

The M 400 client software (RUA), installed on two workstations in the local network of HEO, is connected to the M 400 "domain" server in IKIM through the HEO router (its user interface is, of course, different to the mail interface of Windows 95).

This problem does not apply to the case of EIS as the system is operated by IKIM and in HEO there are off-site users.

It is also noted that the router installed in HEO under the IKIM EIS PHARE project is also used by EIA (Energy Information Agency) to access EIS (and M 400?).

One advantage of the services available through IKIM is actually their existence and the other one is that the cost of the maintenance of communication and of the traffic has not been on HEO, at least so far.

As ELD basically started by virtue of Windows 95 by the Exchange mail services, the installation of the above-described Exchange Server is proposed instead of the installation of further M 400 RUAs.

This solution has a number of advantages:

- Besides messaging, Exchange provides further functions.
- ELD (in the future even the Office) will have its own X 400 MTA server (including its own mailbox and other services), so it can establish an independent internal mailing system (domain). (By increasing the number of RUAs, the use of a new client would be required to be acquired, even local messages would go to IKIM and then back, administration is provided by IKIM etc.)
- The ELD MTA server can also directly enter into the governmental messaging system through the MTA-MTA connection (the existing router) based on the X 400 standards.
- The Exchange server provides comprehensive and direct Internet services.
- By using a facsimile gateway, the switching to the more economical network

electronic facsimiles might be implemented

Computer and network infrastructure

Server

The network operating system of the above multifunction Server is MS Windows NT (4.0)

Windows NT provides the following features

- Integration of Windows 95 users (clients)
- Shared use of files and printers
- Directory Service - NTDS, by which a directory meeting the requirements can be established even at an Office-wide or higher level
- Network and communication capabilities
 - It contains all major network protocols (TCP/IP, IPX/SPX, NetBEUI, PPP, PPTP)
 - Telephone-based network (Remote Access Service, RAS) to connect "remote" users into the system (X.25, ISDN, phone line)
 - Uniform communication features for facsimile, mail and Internet services
 - Multi-protocol routing function For small and medium-sized organisation (such as ELD) it eliminates the need to buy a dedicated router. It provides LAN-LAN routing on TCP/IP, IPX/SPX networks
 - C2/E3 security level
 - The security API allows to add independent access control solutions to the system
- Internet/intranet capabilities
 - Internet Information Server integrated into the operating system (built-in Web server, WWW, ftp, gopher services)
 - Internet Explorer (HTML support)
 - Index Server (fast searching of information stored in Web and Office documents)
- System administration, network management (diagnostics)
 - Task Manager
 - Network Monitor

Note

Should the entire MS BackOffice package be procured, as it is expedient for cost reasons, the included *Systems Management Server* provides further central management and administration features (see *Annex 7* for details)

- hardware and software inventory (what is on the network and where)
- automatic software distribution and installation
- seeking for faults in remote systems
- network application supervision

The NT contains the Windows 95 user interface. The users can access any information sources, using the universal mailbox based on the messaging API (MAPI)

The current server of ELD (Compaq Pentium) functions using Windows NT version 3.5.1. *The upgrading to version 4.0 is proposed*, primarily for better interoperation with the new services and the other proposed (new) MS products

Workstations (Clients)

According to the preceding decision, Windows 95 is the preferred workstation (PC) operating system (see *Annex 8* for details)

The following features of Windows 95 are highlighted here

- Built-in (peer to peer) MS Exchange client functions in the form of a universal mailbox, in which e-mail messages, facsimile messages, documents and bulletins from different sources can be viewed and processed
- The security rules of the system control what transactions the users can perform on the "desktop" and on the network
- Built-in local and remote network access functions, dial-up networking for remote access of computers

The workstations (PC) of ELD use the Hungarian version of Windows 95 (on Compaq 486 and Pentium hardware)

Networks, communication

Local area network

The local area network implemented in ELD in 1996 by structured cabling (using UTP technology) is suitable for the internal application needs of ELD

This network connected to the Office network based on thin Ethernet technology, using two hubs, so the physical and data link possibility of communication within ELD and the Office is there for the units connected to the network. For the total interoperation it is also required that all workstations and servers being part of it should have the TCP protocol installed (uniform TCP/IP network)

External network and communication links

Currently the only link of a sufficient speed (64 kbps) out of the Office is the governmental data line. However, it provides only indirect

6.4. Standards and Recommendations

The list of standards and recommendations should be taken into consideration

- Dynamic Data Exchange (DDE)
- Dynamic Link Library (DLL)
- Active/X, OCX
- VBX
- Win32 API
- Object Linking and Embedding (OLE2)
- Component Object Model (COM)
- Distributed Component Object Model (DCOM)
- Open Data Base Connectivity (ODBC)
- Open Document Management Architecture (ODMA)
- Structured Query Language (SQL)
- DB-Library, SQL-DMO, Transact-SQL, XA, OLE Transaction
- High Performance File System (HPFS)
- Remote Procedure Call (RPC)
- New Technology File System (NTFS)
- Messaging Application Programming Interface (MAPI)
- MAPI Workflow Framework (MAPI-WF), Workflow Management Coalition (WfMC) recommendations
- Advanced Program-to-Program Communications (APPC)
- NetBIOS
- High Level API (HLLAPI)
- CCITT Group III, Group IV
- Tagged Image File Format (TIFF)
- Integrated Service Digital Network (ISDN)
- CCITT X 25 series
- CCITT X 400 (84, 88), X 500 series
- MIME, SMTP, POP3, NNTP, LDAP, HTTP, HTML, Java, SSL
- TCP/IP services
- C2/E3 Security
- Database reliability, integrity and security requirements according to the ANSI, FIPS and NIST recommendations
- Hungarian Language support ISO 8859P2, CP 852, MSZ 7795

IMPLEMENTATION

7. Cost Estimation

This chapter has been extended and modified. See Appendix 9 for details

7.1. Minimum and Integrated Solution

In the following table you can find the estimation of the cost items related to the main project tasks (*) in Phase 2

No	Products and services, Phase 2 (**)	Minimum Solution	Integrated Solution	Co
1a	MS Office Professional for Win 95 H Word, Excel, PowerPoint, Schedule, Access [10 users]	6520	6520	(1)
1b	Win 95 upgrade [10 users]			
2	Office Professional installation and configuration	900	900	(2)
3	Training course for the using of Office Professional products and working in Win 95 environment <ul style="list-style-type: none"> • electronic data tables generation • electronic forms and templates generation • document publishing • using of shared workgroup services (file, print) • using of scheduling 5 days/1 class/7-10 people training + site preparation	1920	1920	(3)
4	Compliance Tracking System (CTS) localisation, customisation, installation and testing	3200	3200	(4)
5	CTS introduction and operation support	1200	1200	
6	Development of Document Registration and Tracking system (Access-based), installation documentation training	7040		(6)

7	Definition and editing internal standard forms, spreadsheets, templates (20-25 forms)	3200	3200	(7)
8	BackOffice integrated server package NT Server, NT Server file + printing, Exchange Server, SQL Server, SNA Server, System Manager [10 users] Internet Information Server, Connector Internet, Connector X 400	4400 1800	4400 1800	(8)
9	BackOffice installation, configuration	900	900	
10	Exchange, Schedule customisation	1280	1280	
11	BackOffice administrator Training (NT, SNA, System, DB) 5 days minimum, 14 days maximum	1600	4480	(11)
12	Exchange user training 4 days/1 class/7-10 people training + site preparation	1600	1600	

No	Products and services, Phase 2 (**)	Minimum Solution	Integrated Solution	Co
13	Database management system modelling, design, development	(?) 3000	9600	(12)
14	Document Management System (DOCS Open) [10 users]		7000	
15	OPEN/image 3 0 [5 concurrent and 5 occasional users]		27100	
16	OPEN/workflow 3 0 [5 concurrent and 5 occasional users]		18000	
17	Customisation, design and implementation of workflow processes, document structuring, store and retrieval system		9600	
18	DOCS Open, OPEN/image and OPEN/workflow 3 0 user training 7 days/1 class/7-10 people training + site preparation		2660	
19	Faxination for Exchange		3940	
20	AntiVirus Agent for Exchange	680	680	
21	Standalone scanning using Imaging 95 (Win 95), customisation, training	1140		
22	Definition and implementation of security policy, and services, in the NT, Win 95 and BackOffice environment	1420	1420	
23	Project management	4560	11400	
24	Compensation of internal (ELD, EID) implementation tasks (5 people, 3 months)	12000	12000	(24)
	Total implementation cost	58360	134800	

Comments to the cost estimation table

(*) The estimated costs are expressed in the local list price of the products (end of April, 1997) The 1 year maintenance cost is included, if the official list price contains this fee In case of software products, the 1 year maintenance cost is separated item, as within this cost the new upgrades and versions are issued (15-20 % of product price)

So the list price can be justified by some discount (-), and the maintenance cost (+)

The indicative price of the services is based on the Hungarian market prices (end of April, 1997)

The cost (or price information) is expressed in USD

(**) Phase 0 platform installation (1996), Phase 1 (Feasibility Study), Phase 2 Implementation (Minimum or Integrated Solution)

(1) The Office Professional is necessary because of the Access and Schedule+ The upgrading of present Office, including versions, and the addition of the missing products is more expensive than to buy a complete package The existing versions can be installed in other departments (temporarily) The development tools necessary for the customisation and development will be provided by the development service provider

(2) For the installation, the site preparation and participation of EID is a prerequisite

(3) The practical trainings will be done by the using of ELD/EID PC-s, Server and LAN

(4) Prerequisite from CEC detailed documentation (including the description of procedures, and the software guide(s)), the last version of Access and CTS

(6) New (Access-based) development

(8) The price of the complete BackOffice is about the half than the summarised price of the components

(11) System and networking, Exchange, database management and administration training for the EID experts (basic or extended) The extended training is not necessary in case of minimum solution

(12) The minimum solution can be an Access-based or a simplified SQL-based DBMS

(24) This is the cost to compensate the extra workload of ELD/EID people (If the compensation can be solved by the internal bonus system, the project cost can be decreased by this sum) Based on the ELD decision, this cost can be lower, but with too low compensation the desired target cannot be reached

Options

You can see hereafter the optional items, which can be implemented in Phase 2, or Phase 3, which is extension of the ELD system to the Office level

I Own data communication line implementation 2x64 kbps leased line/2xISDN line

- Building 1200/1500 USD
- Monthly recurrent cost of traffic 1500 - 3500 USD

II Implementation of own FireWall feature simple/full 5000/1000 USD

III Library directory other implementation of the document registration system

1400 - 2000 USD development, can be combined with DOCS Open application

IV Compliance with the governmental mail and document management system 1200 - 1800 consulting, integration cost

V Internal/external WWW publishing implementation

- Image design 500 - 800 USD
- Web page design and implementation 300 - 800 USD

7.2. Achievements

From the Management and the Investor point of view, the two general question is.

What is the result, if yes?

or

What is the (negative) result, if not?

The results or achievables can be expected

- Order(ly state), in terms of procedures, information structuring, registration and tracking, work processes
- Quality increasing by
 - the order itself,
 - the reliability of information,
 - the more available time for the professional jobs,
 - the quality of documents, procedures and resolutions
- The increasing in individual, workgroup and department level efficiency in terms of
 - quick response time
 - less overhead
 - less lost information and reproduction
 - less manual job
 - less depending
- Decreasing in costs (including the cost decreasing in systems operations and communication)
- More satisfied licensees, consumers and partners
- More satisfied employees, with higher personal value and mobility
- Finally, increasing prestige and good image

The risks of no go decision

- Losing the above described expected results
- Lower computerisation level, than the average of governmental level
- Critical case/people situation, increasing internal and external pressures

The installed hardware and network will be used at a very low level, because of the lack of necessary applications

8. Implementation Requirements

8.1. Project Implementation Plan

The project implementation plan definition is the function of different decisions and conditions

The most important issues from the project implementation point of view are

- 1 The decision about the level of the solution
 - the minimum solution
 - the integrated solution
 - the scale of Office level extension
 - or a mixed of functionalities of these solutions, as it is possible
- 2 The availability of financing resources in close relation with the level of solution (1) should be implemented
- 3 The readiness and motivation for the receiving of the new solution and technologies at the level of the Energy Licensing Department staff, the Energy Information Department staff, and the Management of the Office
- 4 The starting point (contract signature) of the Phase 2

The detailed *Implementation Plan* will be part of the Contract The main steps of this plan

- Consultancy finalisation of detailed requirements and specification
- Data and procedure modelling Logical and physical system design
- Customisation, localisation, development and testing
- Installation, configuration
- System integration
- Training
- Testing and acceptance
- Operation and operation support

Concerning the duration of the Project Phase 2, and supposing that the integrated solution will be the decision, we estimate six months, with the draft schedule as

- 2 months design
- 2 months development and/or customisation
- 2 months training, introduction and operation

Of course, it is a key issue, that if the product is available (no need for time-consuming design and planning), the introduction can start as soon as possible. The cost estimation in Chapter 7 follows this kind of implementation approach

- 1 Office Professional
- 2 Compliance Tracking System
- 3 Document registration and tracking system
- 4 Using of standard forms, sheets, procedures
- 5 Exchange X 400 and Internet mail services
- 6 Workgroup scheduling
- 7 Standalone imaging
- 8 Database Management System
- 9 Integrated fax
- 10 System, network and database administration, security management
- 11 Integrated workflow, imaging and document management system

8.2. Services

One of the basic condition of the project success is the availability and the providing all of the services which are necessary for the implementation

The scope of these services

- Business (energy-licensing oriented) and IT consultancy
- Planning and design
- Development, customisation and localisation
- Installation, configuration, system tuning
- System integration
- Training and education
- Maintenance and support
- Project management
- Quality assurance

The energy licensing work and information management project is a complex project, so *different expertise should be delivered* in different steps of the implementation

- data modelling
- database management
- office modelling
- document management
- process modelling
- procedure building
- workflow management
- information exchange
- software engineering
- system and network engineering
- security management
- quality management
- project management

8.3. Conditions

The basic and most important conditions for the successful implementation are

- Appropriate Customer and Supplier project organisation and staff
- The financing resources necessary for the solid and consolidated implementation of the selected solution
- Motivated system users and managers Attractive compensation and motivation scheme including the compensation of overload required from the ELD/EID staff
- Strong project (time schedule, task and risk) management
- Good co-operation with the licensees and partners concerning the using of advanced information exchange and communication services

APPENDICES

APPENDIX 1.

The tasks of the Contractor

Requirement analysis

The range of the survey, study and analysis (primarily in the Electric Energy Approval Department and the Energy information Department)

- The analysis and the study of the functions and activities related to the license of the electric energy,
- Definition of the primary work process Study and analysis of the work processes, procedures, roles, work stages, functions,
- Understanding the requirements applying to the documents and data necessary (in certain work stages defined by regulations) to help the work process and the subject matter of work items,
- Study of the requirements applying to the data of various licenses and other cases, their blank forms, reports, and the format of other documents
- Definition that which information have to be stored in the database, the method of the information collecting, e g in a special electronic form, by keywords etc ,
- Review on information collected and provided routinely, routine tasks, formats standardised internally, reports, statistics, document,
- Analysis of the processes of information management (collection, input-recording, organisation-structure, processing, retrieval, distribution, printing, archiving),
- The summarising description and the estimation of the amount of those existing information and information awaiting for input, which are necessary for the full operation of the database,
- Definition the conditions of a database management system which meets the requirement of the department,
- Examination of the information (including the documents as well) processing and managing conditions,
- Definition (types, form, volume, schedule, the current and the advisable information exchange form) of various information, the information exchange

between the suppliers and the consumer (e.g. client/licensee, MVM Rt, IKIM),

- Definition of security-, protection- and availability conditions,
- Regulation considerations (including the regulation issues regarding laws, government resolutions, decrees)

Recommendations for the development and restructure

- Identification of the procedures, functions, and means necessary for the utilisation of the full benefits of the recommended informational solutions and for the increase of the effectiveness,
- Working out the development proposals relating to the modernisation of the management and information,
- The examination of the electronic documentation system - how, when, at what price - and the benefits of its establishment

Concept, the specification of the requirements

The following have to be given

- The features and functions of the approval database manager, and the work process and documentation manager system,
- The description of the proposal about the realisation of the approval database manager, and the work process and documentation manager system,
- The summarisation and identification of the data input forms, reports, procedures, standard documentation formats and blank forms,
- The conceptual plan of the approval database manager system which meets the requirement of the department,
- The conceptual plan of the user-specific software recommended to the solution
The description of the data model which defines the data tables for the user-specific software,
- Introduction of the effective information collecting, recording/inputting and storing methods,
- The description of the concept for organising, structuring (folders, files), storing, retrieving, archiving (folders, bundles, notes, keywords, issues of storing and sequestering) the information,
- The descriptions of the concept for work processes, establishing and managing (controlling, tracking) procedures,
- Correspondence with the aim, strategy and standard of the Office's long term information management,
- Definition of the modelling, developing, and integrating tools necessary for the solution,

- Description of the software available in retail, recommended for the solution,
- Definition of the access, register and report strategy,
- The concept of the unified user?,
- Definition of the requirements related to language "rendering into Hungarian",
- System architecture and environment,
- Definition of the number of the competing and users,
- Conditions of protection, availability, user, system management and administration,
- Description of the software documentation and educational requirements,
- The list of the considering standards and recommendations

The planning of the work

- Creating a schedule broken down into tasks for the realisation of the system during the Phase 2 This is a Work plan for the realisation of the Information System (detailed realisation plan) broken down into such a tasks as software development, education, documentation, entry of the existing data
- Definition of the services of expertise necessary for the implementation (development, creation of model system, system integration, establishment, documentation, project management)
- Preparation of the estimate of the account for the realisation of the system in the Phase 2

The Realisation Plan (report) will be given in printed and in electronic form, in English and in Hungarian language

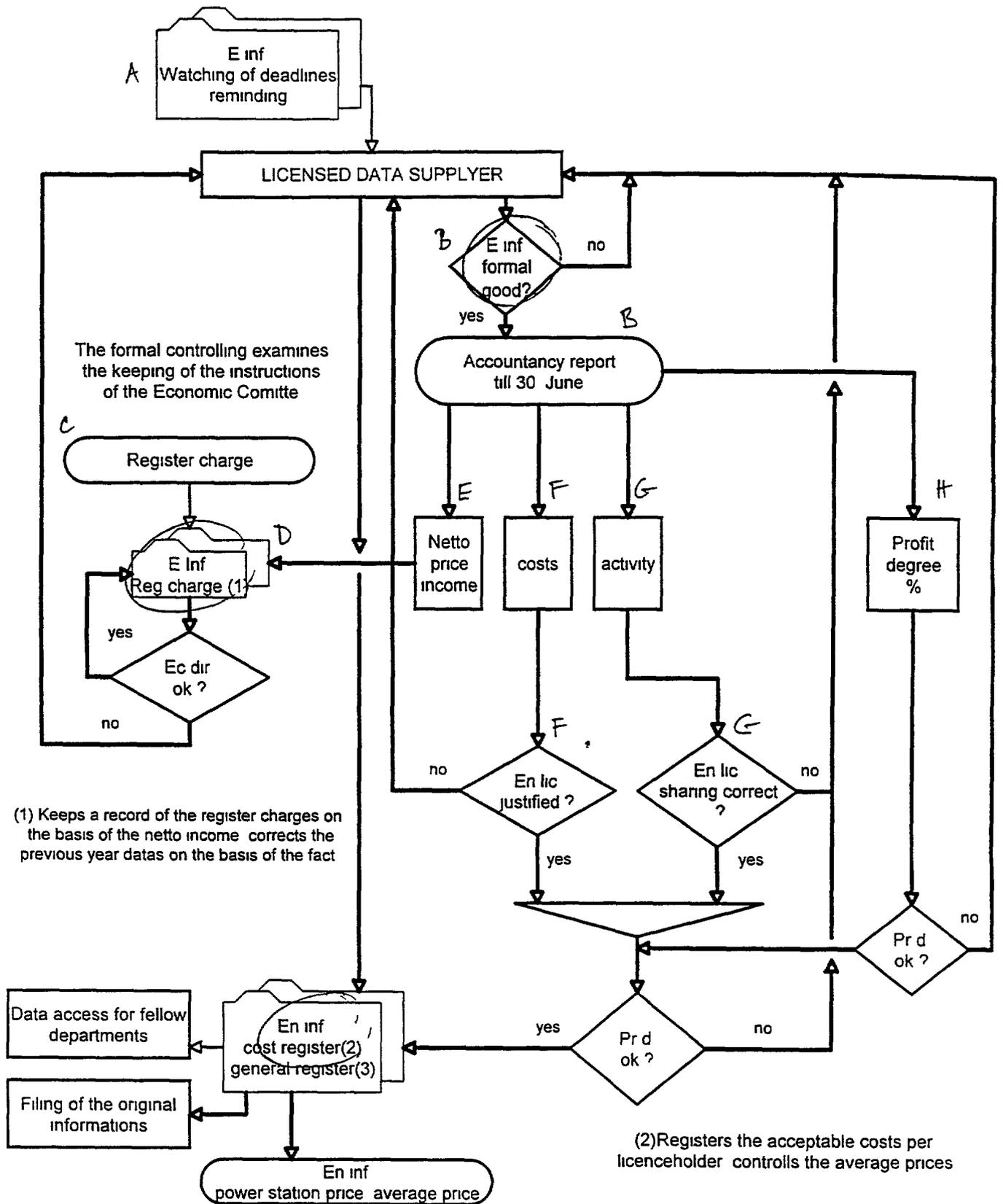
APPENDIX 2.

Process and procedure diagrams

Processes and basic procedures enclosed in the form of diagrams

1. The workflow of the licenses (preliminary, establishment, establishment, operational, closure)
2. The management of the information of the licensees
3. Establishment process connected to the power plant development strategy and the establishment plan
4. Management of the financial and accounting reports and the registering fee
5. Transfer, disposition, bankruptcy-liquidation procedures
6. Performance data, operation, breakdown reporting and processing procedures
7. Management of prices, price issues

1 Accountancy data, handling of the register charge



(1) Keeps a record of the register charges on the basis of the netto income corrects the previous year datas on the basis of the fact

(2)Registers the acceptable costs per licenceholder controls the average prices

Pr d = Price and economic analysing dep
 En lic = Electrical enegy licencing depa
 En inf = Energy information departmer
 Ec dir = Economic director

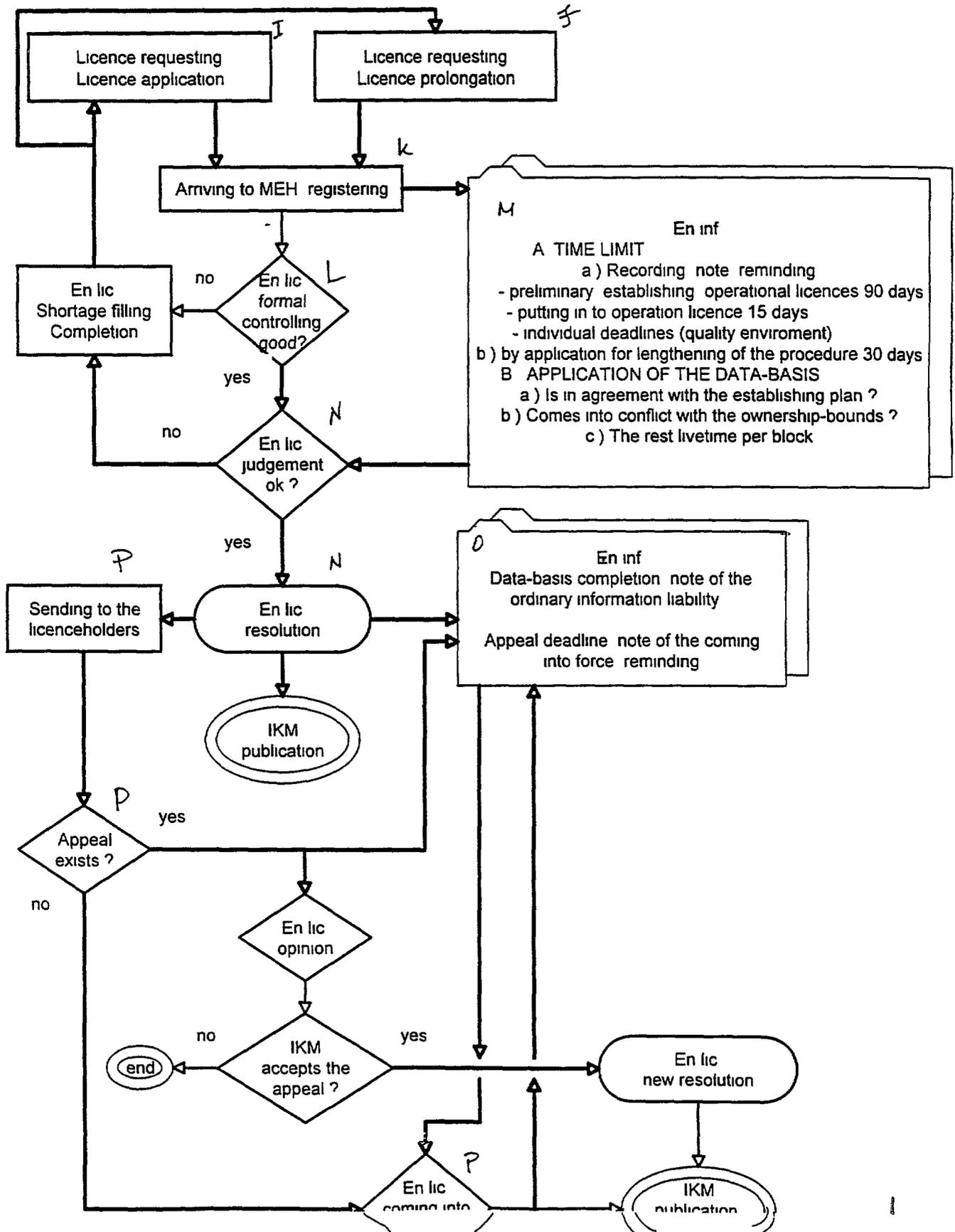
The content form details of the report elaborates the Economic Committe ordered by the Business Regulation with the participation of the Regulatory Office (MEH)

(3)The volume of the datas to be registered has to determine the MEH

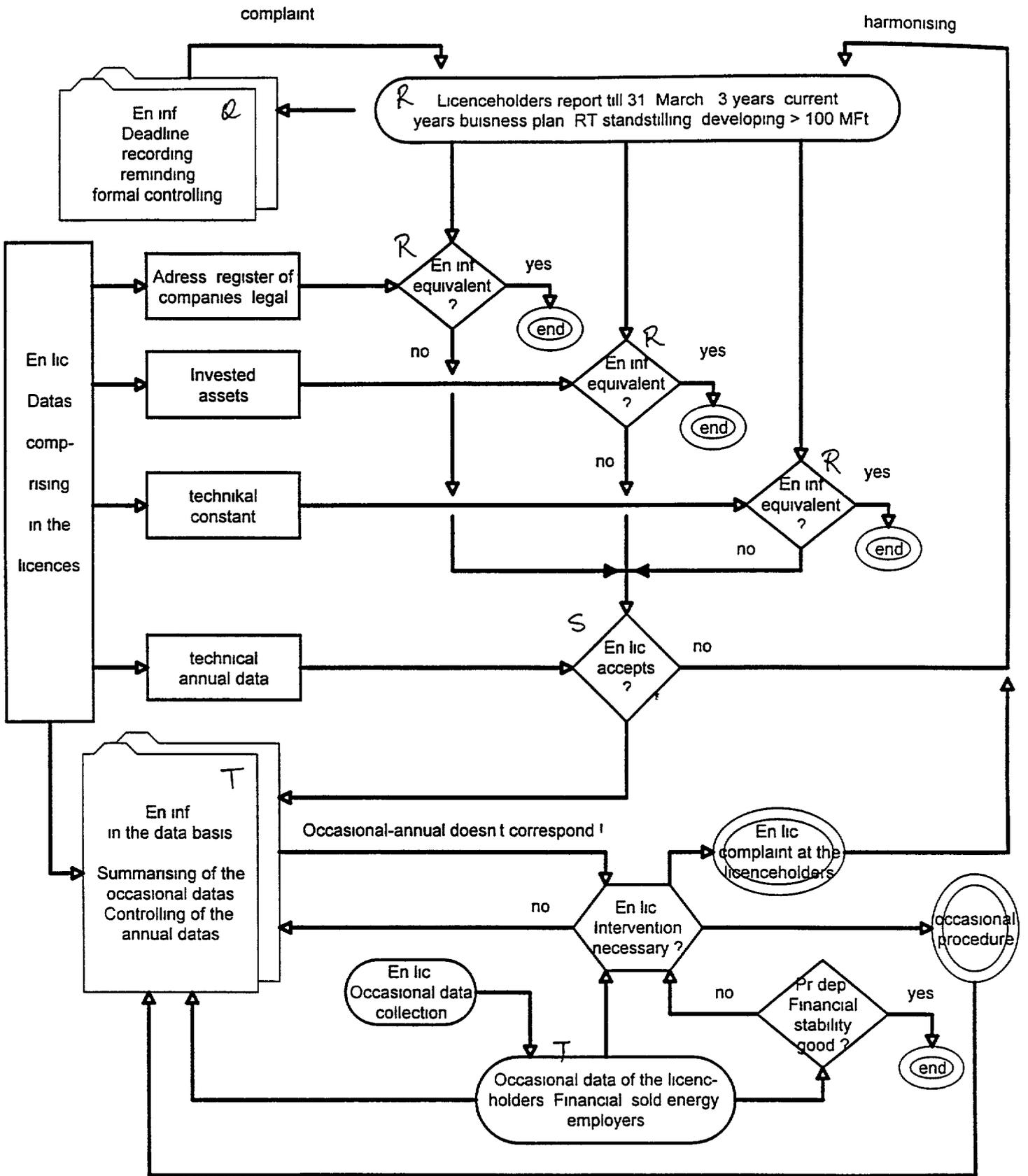
The statements ordered listed in the licences as

- owners and poportion of ownership resp its changing
- the actual value of the invested assets with taking into

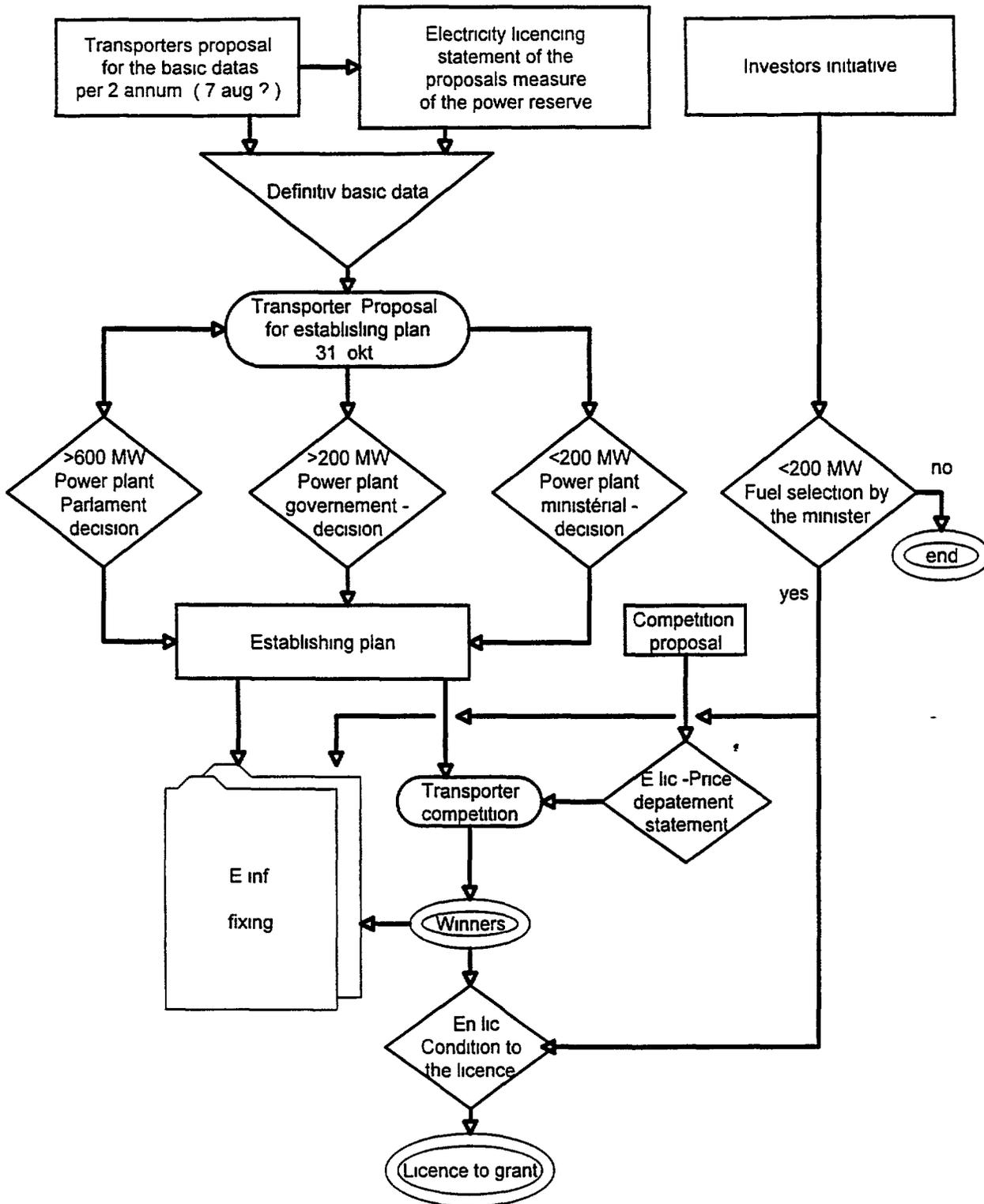
2 Procedure of the licences (preliminary, establishing, putting in to operation, closing)



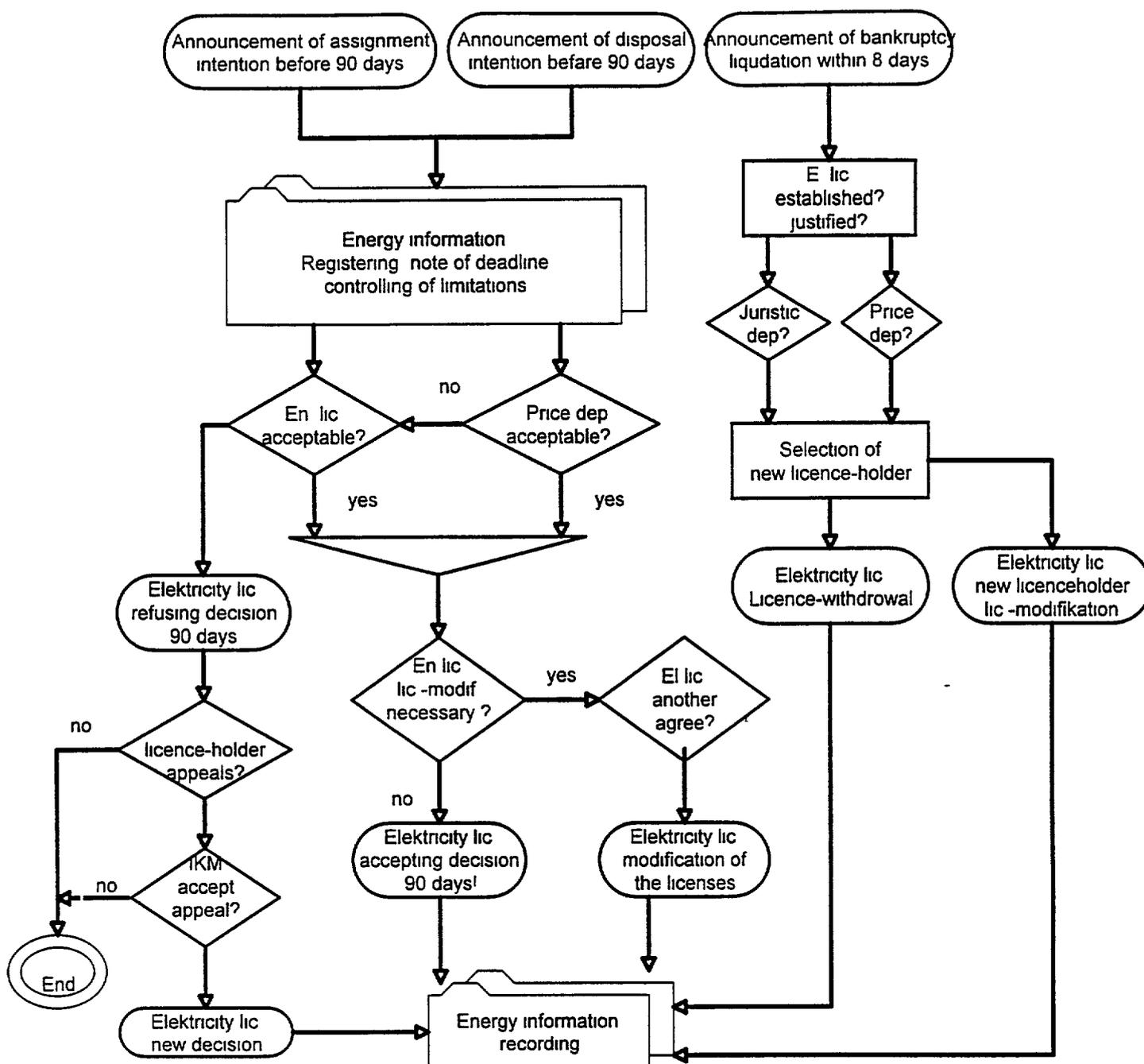
3 The data of licenceholders



4 Power plant developing strategy, establishing plan



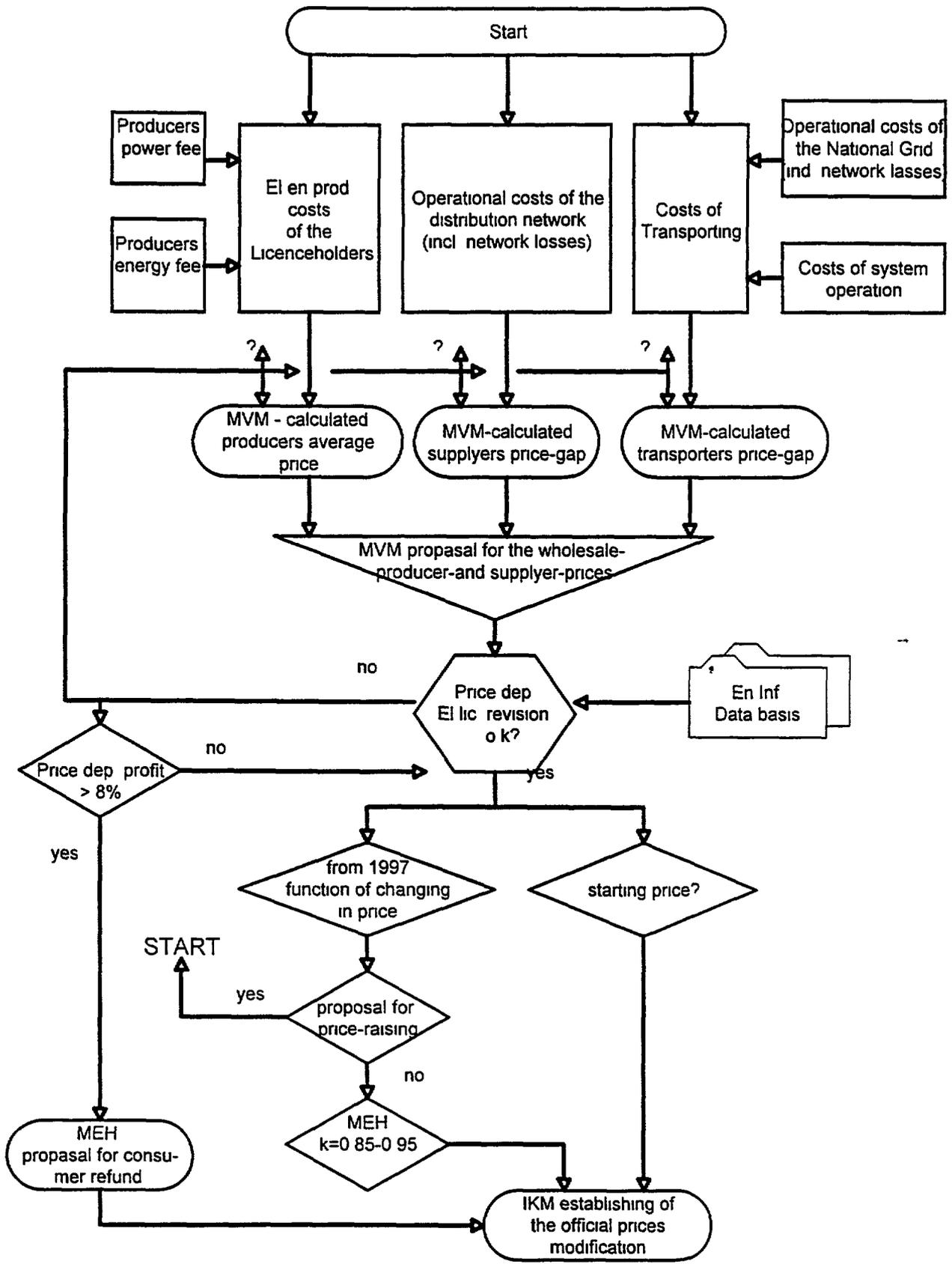
5 Assignment, disposal, bankruptcy liquidation



A beszámoló tartalmát, formáját részletességét az Uzletszabályzat-ban előirt Közgazdasági Bizottság dolgozza ki a MEH részvételével
 (3) A nyilvántartandó adatok körét a MEH-nek magának kell meghatározni
 Az engedélyekben tételesen előirt közléseket amelyek
 - a tulajdonosok és a tulajdoni hányadok ill azok változása
 - a befektetett eszközök aktuális értéke a rendelkezések figyelembe vételével

mindenképpen naprakészen kell tartani

7 Prices



APPENDIX 3.

The Documents of Licensees Controlling

APPENDIX 4.

Compliance Tracking System (CEC)

Microsoft Access - frmAssignLog

File Edit View Insert Format Records Table Window Help

Addr: 960092 Type: C Compliance Program Manager: scott
 Project: 93-AFC-3
 Team: TLSN Est. ID: Assets: 32
 Assign Date: 12/31/1996 Special Instructions: Final report on EMF
 Due Date: 01/14/1997
 Status: C Remarks:
 Assign Date: 01/21/1997

Condition/Event/Response/Comments

70	4	C	Closes condition TLSN-7
----	---	---	-------------------------

Record: 1

Record: 2

Technical comments GAPS NUM

125

Microsoft Access - frmSubmitLog

File Edit View Insert Format Record Tools Window Help

Record Number: 960092

Date: 12/31/1996

Date Received: 12/30/1996

Document Date: 12/24/1996

From: Sacramento Cogeneration

To: Jen Scott

Subject: 93-AFC 2 Condition TLSN-7

Status: C

Date Completed: 01/22/1997

Storage Number:

Record 1 of 3

Long-term storage number of original related documents: CAPS NUM

1719

Microsoft Access - ImCondOICert

File Edit View Insert Format Records Tools Window Help

Project: 93 AFC-3 Status: C

Transmission Line: TLSN Effective Date: 01/21/1997

Condition: 70

Description: The project owner shall engage a qualified EMF consultant to verify that the electric and magnetic field levels are within the parameters calculated by the project owner and staff.

ImCondOICert

Event	Type	Event	Description
1	S		At least 60 days prior to the start of construction to select the qualified consultant
2	S		Within 30 days after the selection of the consultant, the consultant and CEC CPM shall jointly prep
3	S		At least 10 days prior to the scheduled energization of the project transmission line the project ow
4	S		Within 15 days after energization of the transmission line the post-measurements shall be filed

Record: 2

Description of Condition

Microsoft Access - frmAssignLog

File Edit View Insert Format Records Tools Window Help

Log: 960072 Type: C Assigner Program Manager |scott

Project: 93-AFC-2

Req. Acc: BIO Req. Transmitt: Assigned: 31

Assign Date: 11/04/1996 Special Instruction:

Due Date: 11/18/1996

Status: C Comment:

Required Date: 11/18/1996

Condition	Event	Response	Comments
70	2	C	

Records: 1 of 1

Records: 1 of 1

Technical Staff Comments: CAPS NUM

Microsoft Access - frmSubmittalLog

File Edit View Insert Format Database Tools Window Help

[New] [Open] [Print] [Save] [Undo] [Redo] [Find] [Find Next] [Find Previous] [Go To] [Close] [Print] [Print Preview] [Exit]

Log Number:	960072
Log Date:	11/04/1996
Date Received:	11/04/1996
Payment Date:	10/31/1996
From:	Sacramento Cogeneration
To:	Jen Scott
Source:	Project 93-AFC-2 Condition BIO-7
State:	CA
Date Completed:	
Storage Number:	

Record: 1 of 2

Status of submittal (Open or Close)

CAPS NUM

Microsoft Access - frmCondOICent

File Edit View Insert Format Records Tools Window Help

Object Properties:

 Object Name: 93-AFC-2

 Status: 0

 Object Type: BIO

 Object Date:

 Condition: 70

 Description: The project owner will provide to the CEC CPM any additional funds for compensating habitat disturbance with sixty (60) days of determination by the CEC CPM in consultation with the project owner and the California Department of Fish and Game

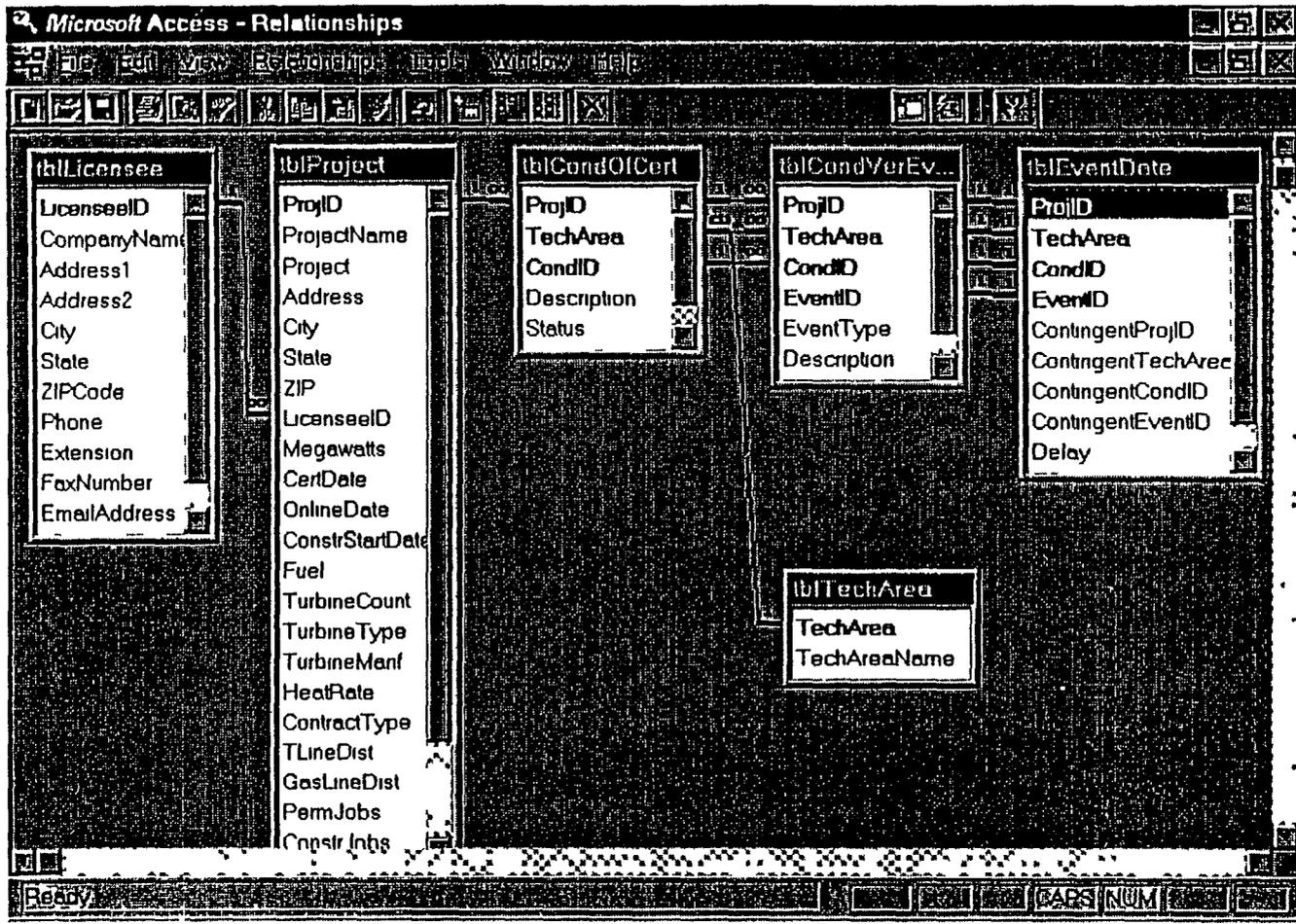
frmCondVerEvent

Event	Type	Event	Description
1	S	<input type="checkbox"/>	Within 90 days prior to the start of construction the project owner will either provide the CEC CPM
2	S	<input type="checkbox"/>	Within 180 days of the completion of the project construction or a time mutually agreed upon the
		<input type="checkbox"/>	

Record: 1 of 1

NUM

Description of Condition



181

APPENDIX 5.

Wang, OPEN/workflow and OPEN/image for NT

PC DOCS, DOCS Open

Microsoft, SQL Server

OPEN/workflow for Windows NT

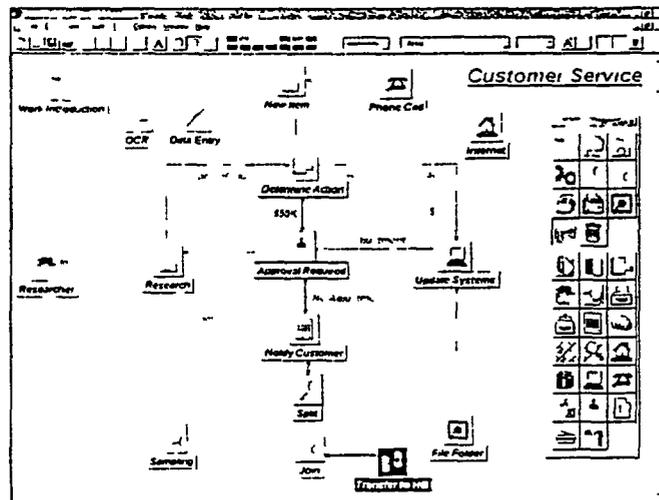
HIGHLIGHTS

- Distributed architecture supports
 - Geographically distributed solutions
 - High volume transaction processing
 - Modular and scalable deployment
 - Fail soft workload balancing
- Sophisticated development environment
 - Graphical tool to create workflows
 - Forms tool to define data
 - Complete set of APIs for application integration
- Flexible user execution environments
 - System push'
 - Interactive pull
 - Remote user access via ISDN
 - Custom in Baskets

Wang's OPEN/workflow for Windows NT provides sophisticated enterprise work management services to organizations whose workflow requirements can encompass large transaction volumes and span geographically distributed locations. OPEN/workflow's proven architecture leverages the Microsoft BackOffice family of server products including Windows NT Server, SQL Server and SNA Server.

Architecture

Designed to support enterprise wide solutions, OPEN/workflow for Windows NT is based on a patented two-tier architecture that allows workflow processing to concentrate on local LAN based domains while supporting the distributed nature of today's organizations. Workstations communicate with domain servers while servers communicate among themselves or with a central indexing mechanism, the enterprise catalog. Workitems entered into the system are distributed to processing.



OPEN/workflow

WANG

Client Development Environment

- *RouteBuilder* A graphical routing and workflow rules definition tool. Supported in Microsoft Windows® 95 and Windows NT™ Workstation. It uses an intuitive point-and-click interface that allows simple and easy creation of powerful work processes. Supporting parallel processing, rendezvous steps, dynamic workset selection, user-defined worksteps and other powerful facilities. RouteBuilder allows customers to define workflows for the most demanding applications.
- *FormBuilder* An integrated forms definition facility for defining data fields for indexing, retrieval, OCR, workflow routing, workitem selection, and data capture. Supports a wide variety of field types such as text, integer, decimal, currency, percentage and signature. Fields can be calculated based on other fields and can include tables. Sophisticated field linking ties fields within the form to zones on documents (that are part of Wang OPEN/image for NT) or on terminal-emulation sessions. Fields can be automatically magnified for greater fidelity and ease of data validation.

Client Execution Environment

- *Document Management Workstation* Supports both interactive, user 'pull' and system-determined 'push' models of workflow interface. The software also supports foldering and the ability to incorporate a variety of documents (image and non image) into the workitem.
- *High Performance Workstation* Designed for high end, transaction-oriented applications with a focus upon imaging documents, the High Performance workstation offers a streamlined interface optimized for fast throughput. It supports configurable pre-fetching to cache workitems to the client for rapid response times. Design mode is a system-determined 'push' of work to desktop. OPEN/workflow configurations can support a mix of both Document Management and High Performance workstations.
- *Remote Workstation* Using an optional Remote Access Module (purchased separately) and an ISDN gateway, this patented technology allows remote users to connect to the domain and achieve the same

performance when accessing workflow items as if locally connected. Workitems are prefetched to the Remote Workstation using the High Performance Workstation methodology so that remote users can achieve the same subsecond response times as local users.

For workflow applications requiring tight integration with a business application, or that are customized and require an alternative to the standard user interfaces, a complete set of APIs can be used to create custom workstations. The Client API is a 32 bit multi-threaded API that provides superior performance for building Windows 95 and Windows NT clients. A DDE API is also available to be used to integrate Windows 3.X applications.

INTEGRATION

A variety of options are available to provide programmatic integration between OPEN/workflow and customer business applications.

Host Integration Support is provided for data interchange with legacy applications via 3270 or 5250 sessions (other host application platforms are potentially supported but require testing and certification). No programming is required to define fields to be transferred automatically between mainframe sessions and work items. OPEN/workflow also supports a Remote Request API, based on Advanced Program-to-Program Communications (APPC) so that CICS and MVS Batch applications can be integrated into a workflow process in a straightforward manner.

APIs A range of client and server APIs allows seamless integration with newly developed applications. The APIs are callable from a variety of programming languages such as Visual Basic, C, C++, and COBOL, as well as 4GL development environments such as PowerBuilder. A 32 bit multi-threaded API is available in native versions for Windows 95, Windows NT, and OS/2 clients.

Form User Exits Custom routines can be created that are linked to fields defined within FormBuilder. Such routines can populate and/or modify field information through verification against external data sources.

Viewer

- 160+ file formats**
- Cut & paste text from viewer**
- Search words highlighted in viewer**

Architecture

- Multi - SQL Database Support**
- Multi - Full Text Engine Support**
- Multi - Network Support**
- Object Oriented Programming**
- Integrated with popular Windows applications**
- ODMA Support**
- API for integration with other applications**
- "Enhanced" filing system option to support imaging & AutoCad documents**
- Email Support via VIM & MAPI**
- OLE Support**

SQL Database

- On-line backup**
- Industry standard for databases**
- Relational database**
- Client/Server**
- Instantly updates data, such as name changes, throughout**
- Data integrity**
- Database can be shared with other applications**
- Supports powerful "off the shelf" Report Writers**

Additional User Features

- Multi Profile Selection**
- Projects**
- Templates (boilerplate)**
- Supports compatible applications (e g Redlining)**

Proximity Searching

- Combination Searches (Profile & Text Together)
- Quick Searches (stored Search criteria)
- List of the last 30 documents the user edited
- List of Templates
- Multi Library (WAN) Searching
- Option to pre-connect Search Libraries
- Single Consolidated list of Wan Search Results
- Date Range Searching
- Last "X" number of days Searching
- Multi-Platform Searching (e.g. one library on Oracle, one on Sybase)

DOCS Open Desktop

- View Document
- Print Document
- Checkout Document
- Copy Document
- Mail Document
- Access to all Search Options
- Access to all applications
- Object Oriented Interface
- MDI - allows multiple Search Results

Administrative Features

- "Shadow" (save documents to server and local drive)
- Shadow Retrieve (reduces network traffic)
- Synchronization of users & groups with network operating system
- Automatically duplicate setups on other libraries
- Document Import
- Database Import
- Track document statistics (e.g. time) for cost recovery

- *FormBuilder* An integrated forms definition facility for defining data fields for indexing retrieval OCR workitem selection and data capture Supports a wide variety of field types such as text integer decimal currency percentage, and signature Fields can be calculated based on other fields and can include tables Sophisticated field linking ties fields within the form to zones on documents or on terminal-emulation sessions Fields can be automatically magnified for greater fidelity and ease of data validation

Client Execution Environment

Documents can be created from scanner input fax servers, or external applications Scanning support includes high volume models such as Kodak IMAGELINK scanners and desktop models from Bell & Howell Fujitsu and Ricoh Indexing of user-defined information of new pages is entered into predefined forms Data can be entered in two ways using bar codes, or using patch codes, as supported by high volume scanners OCR or keyed input

- *Document Management Workstation* Provides a general purpose interface to access workitem documents folders and batches Available tools include the Desktop, the FileCabinet the InBox the batch viewer, the folder viewer and the document viewer Supports both interactive user pull and system-determined push models of work to the desktop The software also supports foldering and the ability to incorporate a variety of documents (image and non image) into the workitem
- *High Performance Workstation* Designed for high end, transaction-oriented applications with a focus upon imaging documents the High Performance workstation offers a streamlined interface optimized for fast throughput It supports configurable prefetching to cache workitems to the client for rapid response times Design mode is system-determined push of work to the desktop OPEN/image configurations support a mix of both Document Management and High Performance Workstations
- *Remote Workstation* Using an optional Remote Access Module (purchased separately) and an ISDN gateway this patented technology allows remote users to connect to the domain and have the same

locally connected users using the High Performance Workstation Configured properly remote users over inexpensive ISDN lines can have consistent sub second response time for transaction processing

For applications requiring tight integration with a business application, or that are customized and require an alternative to the standard user interfaces a complete set of APIs can be used to create custom workstations The Client API is a 32 bit multi threaded API that provides superior performance for building Windows 95 and Windows NT clients The DDE API can be used to integrate Windows 3 X applications

INTEGRATION

Support is provided for data interchange with legacy applications via 3270 or 5250 sessions No programming is required to define fields to be transferred automatically between mainframe sessions and documents OPEN/workflow and OPEN/image also support an Application Programming Interface (API) based on Advanced Program to-Program-Communications (APPC) so that CICS and MVS Batch applications can be integrated in a straightforward manner

A range of APIs allow seamless integration with newly developed applications whether client or server based The APIs are callable from a variety of programming languages including Visual Basic C C++ and COBOL as well as 4GL development environments such as PowerBuilder A 32 bit multi threaded API is available in native versions for Windows 95 Windows NT and OS/2 clients

STANDARDS

OPEN/image reflects Wang's commitment to Microsoft Windows NT and BackOffice Wang is committed to supporting all applicable BackOffice components BackOffice greatly simplifies and facilitates the deployment of work management solutions for large distributed environments and represents a key strategic Microsoft initiative OPEN/image takes advantage of BackOffice components including SQL Server and SNA Server

OPTIONAL SOFTWARE

OPEN/image is client/server software, licensed based upon the number of users. The license includes:

- RouteBuilder
- FormBuilder
- Document Management Workstation
- High Performance Workstation
- Administrative Console
- OPEN/image Server

LICENSING

- OPEN/workflow for Windows NT
- Remote Access Client (for access via ISDN)

REQUIREMENTS

Image Server

- Pentium processor with 64MB (recommended), 80486 with 32MB (minimum)
 - Magnetic disk for caching (minimum one gigabyte)
 - Network adapter (Token Ring or Ethernet)
 - Windows NT Server 3.51 or later
 - Microsoft SQL Server 6.0 or later
- Optional: Microsoft SNA Server 2.11

Workstation

- 80486 processor with 16MB (preferred) 80386 with 8MB (minimum)
- Magnetic disk for caching (minimum 100MB available)
- Network adapter (Token Ring or Ethernet)
- Windows 3.1, Windows for Workgroups 3.11, Windows 95, Windows NT Workstation 3.51
- Networking software
- Appropriate Client Access licenses for Windows NT, ServerSQL Server and, if appropriate, SNA Server

Standard Warranty Applies

Product and company names referenced may be either trademarks or registered trademarks of their respective companies

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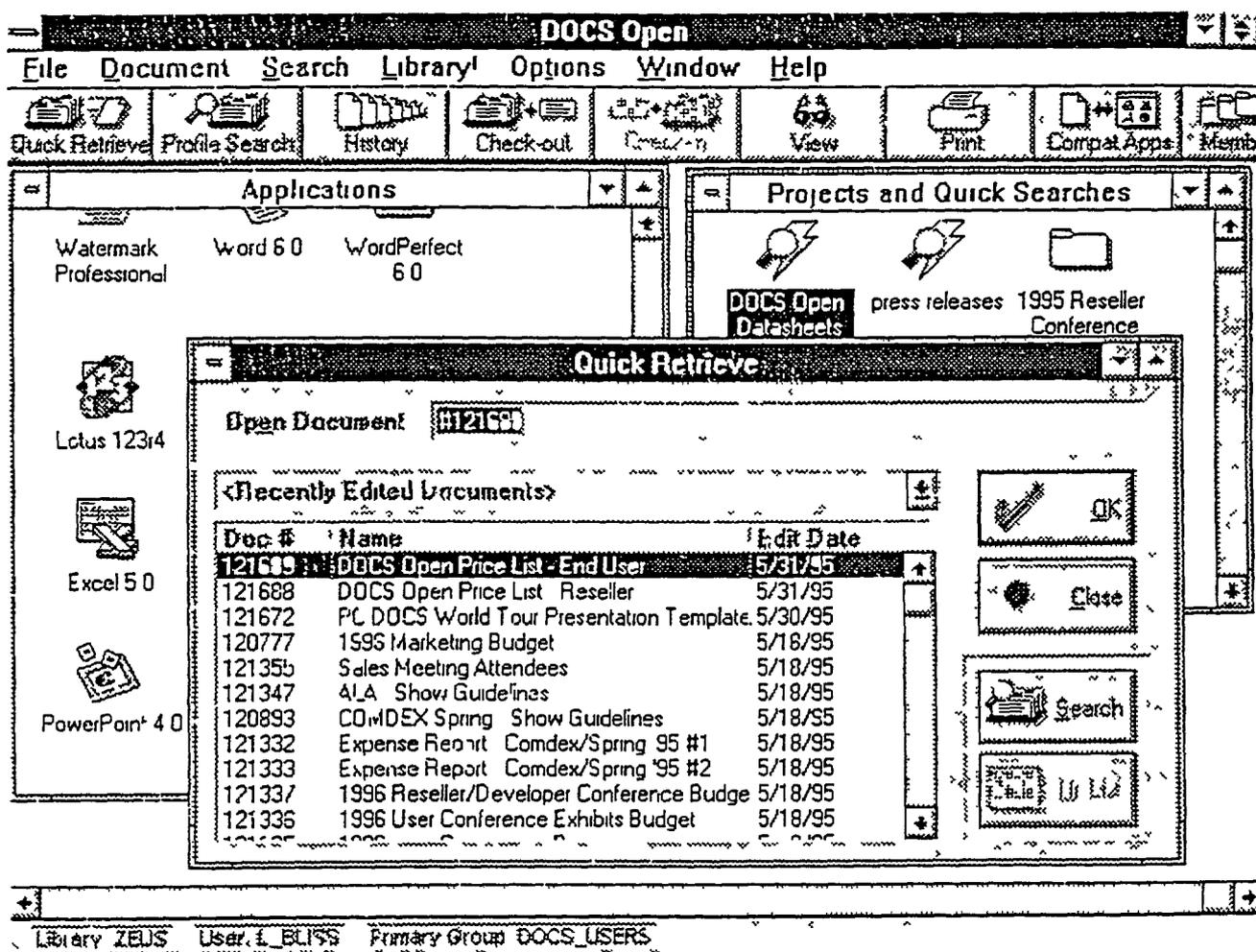
Printed in U.S.A. DS0 0031 4 96

DOCS OPEN for Windows

Like an electronic library, DOCS OPEN allows you to find and manage documents and files on your global enterprise network. DOCS OPEN is built upon a powerful document management framework that will meet your document management needs today and in the future.

DOCS OPEN provides search and retrieval capabilities to allow users to quickly find documents and files on the network. Additional user features include version control, full text searching and security. DOCS OPEN provides system administration features such as storage management for document archival and complete activity tracking.

DOCS OPEN is the only document management system which allows Windows, DOS and Macintosh users to share the same industry standard SQL database, ensuring the data integrity required by mission critical applications like document management.



Illustrative Features

Searching

- Profile Information Searching
- Full Text Searching
- Phrase Searching

Architecture

Designed to support enterprise wide solutions OPEN/image for Windows NT is designed around a patented two tier architecture that allows most resource intensive processing to take place in local LAN based workgroups while providing the solid infrastructure for supporting the enterprise-wide and distributed nature of today's organizations. Workstations communicate with local servers arranged as an OPEN/image domain, which in turn communicate with other domains, document archives, or with a central document indexing mechanism the enterprise catalog. Documents entered into the system are distributed to processing domains either locally or to other parts of the organization. Actual work is performed within a domain with the domain servers operating as a local document cache. Items such as folders or documents are sent across the enterprise-wide infrastructure to other locations either on demand or in accordance with work routing rules created using the RouteBuilder development tool. OPEN/image for Windows NT supports distributed processes that cross departmental and geographic boundaries.

The OPEN/image distributed architecture coordinates the activities of multiple physical servers so they act as a single logical server. This unique capability in production since 1992, allows customers to easily add additional servers to existing configurations as processing requirements. It also provides a measure of fault tolerance by automatically working around a failed server.

DOCUMENT CONTROL AND SECURITY

OPEN/image's access and security functions support the specific requirements of the enterprise. The system provides enterprise-wide locking to coordinate changes to a document by multiple users in multiple locations. In addition, although the system supports distributed local caching, it can deliver the most up-to-date version of a document when needed. Security is controlled by grouping documents by class (e.g. new applications, correspondence, and personnel files) and then deciding which users or groups of users may have access to which document classes.

SCALABILITY AND PERFORMANCE

OPEN/image for Windows NT is fully multi threaded and automatically takes advantage of the latest generation symmetrical multi processing (SMP) machines. Customers can scale-up OPEN/image domains either by adding additional physical servers or by deploying larger SMP machines as they prefer.

COMPONENTS

OPEN/image Server

The server is the core building block of the system, arbitrating workstation access to items either locally or throughout the enterprise, managing locally cached items, enforcing access security, coordinating the staging and retrieval of work to the desktop, transferring items to and from other servers, and providing tight integration with OPEN/workflow when used together. The server uses ODBC-compliant databases, currently Microsoft SQL Server, and runs under Microsoft Windows NT™.

Optional services that can be added to an OPEN/image server include a fax server, high speed printing, optical character recognition, and optical disk storage.

OPEN/image Catalog and Archive

For larger multi-domain applications, an enterprise catalog can be added to coordinate access to items throughout the enterprise. The catalog makes it possible to provide *any document at any workstation* by keeping track of workitems throughout the organization, whether they be on local servers or on optical disk storage units. With a proven ability to handle over 150 million documents, corresponding to hundreds of millions of image pages, the catalog can support the largest production systems.

Client. Development Environment

- **RouteBuilder** A graphical routing and rules definition tool that can be used with OPEN/image. Supported in Microsoft Windows® 95 and Windows NT™ Workstation, it uses an intuitive point-and-click interface that allows simple and easy creation of powerful applications. Supporting parallel processing, rendezvous steps, dynamic workset selection, user defined worksteps and other powerful facilities, RouteBuilder allows customers to define routes for the most demanding applications.

- Mark documents for "Archival" (to tape) - off-line storage
- Option to allow users to copy document in use
- Option to require unique document names

Security

- Security implemented at Network Operating System level
- Default Security Settings
- Security Options ("Rights")

View Profile

View Document

Edit Profile

Edit Document

Copy Document

Delete Document

Authority to Edit Security settings for a Document

- History log tracks all activity on a document

Version Tracking

- Up to 99 versions of a Document
- Up to 26 sub-versions of each version
- Control whether or not previous versions can be edited
- Lengthy comments field to describe each version
- Control the number of versions that can be created

Customizability (DOCS Designer)

- Customize Document Profile Form by group
- Customize Profile Search (QBE) Form by group
- Customize Search Results Form by group
- Customize Table Lookup Form by group
- Full cosmetic control (font, size, color, border, field length, field locations, etc)
- Add data elements (columns or tables) - no limits
- Add multi-level parent-child relationships

DDE A DDE interface is available for integration at the Document Management Workstation and the Administration Console. Third party applications can be employed to augment/perform functions within the DM workstation or can programmatically access report data available to administrators.

LEVERAGING MICROSOFT INITIATIVES

OPEN/workflow reflects Wang's commitment to Microsoft Windows NT and BackOffice. Wang is committed to supporting all applicable BackOffice components. BackOffice greatly simplifies and facilitates the deployment of work management solutions in large distributed environments. OPEN/workflow utilizes several BackOffice products including Microsoft SQL Server and SNA Server.

Wang is also working with Microsoft on the MAPI Workflow Framework initiatives that will extend the industry standard MAPI (Messaging API) with a set of properties that support workflow specific functions. Wang has committed to support these extensions to allow OPEN/workflow to interoperate with MAPI based messaging environments. Microsoft has committed to support MAPI WF within Microsoft Exchange.

LICENSING

OPEN/workflow is client/server software, licensed based upon the number of users. The license includes:

- RouteBuilder
- FormBuilder
- Document Management Workstation
- High Performance Workstation
- Administrative Console
- Workflow Server

OPTIONAL SOFTWARE

Workflow

- Remote Access Client (for access via ISDN)
- OPEN/image for Windows NT

REQUIREMENTS

Workflow Server

- Pentium processor with 64MB (recommended) 80486 with 32MB (minimum)
 - Magnetic disk for caching (1GB minimum)
 - Network adapter (Token Ring or Ethernet)
 - Windows NT Server 3.51 or later
 - Microsoft SQL Server 6.0 or later
- Optional: Microsoft SNA Server 2.11

Workstation

- 80486 processor with 16MB (preferred) 80386 with 8MB (minimum)
 - Magnetic disk for caching (minimum 100MB available)
 - Network adapter (Token Ring or Ethernet)
 - Windows 3.1*, Windows for Workgroups 3.11*, Windows 95, Windows NT Workstation 3.51
 - Networking software
 - Appropriate Client Access licenses for Windows NT Server, SQL Server and, if appropriate, SNA Server
- * DM Workstation, HP Workstation, Administration Console

Standard Warranty Applies

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domains either locally or to other parts of the organization. Actual work is performed within a particular domain with the domain servers operating as local cache for workitems. In addition, workitems can be routed from one location to another according to rules easily defined within the graphical RouteBuilder development tool, thereby fully supporting large distributed processes within different organizations in different locations.

The OPEN/workflow architecture incorporates distributed processing to allow multiple physical servers to function as a single logical server within the domain. This unique capability in production since 1992 allows customers to easily add additional servers to existing configurations as processing requirements change. It also provides a measure of fault tolerance by automatically working around a failed server.

OPEN/workflow's workitem access and security functions support each enterprise's specific requirements. With enterprise-wide locking to coordinate workitem access, multiple users in multiple locations can simultaneously work with the same item. In addition, the system can coordinate its multiple caches to deliver the most up-to-date version of a workitem when needed. Security is maintained by grouping workitems into classes (e.g., new applications, correspondence, and personnel files). The system administrator grants access to users by class.

SCALABILITY AND PERFORMANCE

OPEN/workflow for Windows NT is fully multi-threaded and automatically takes advantage of the latest generation symmetrical multi-processing (SMP) machines. Customers can scale-up OPEN/workflow domains either by adding additional physical servers or by deploying larger SMP machines as they prefer.

In a multi-server domain, each physical server runs a copy of the OPEN/workflow server module and operates as a single logical server. Workitems are distributed amongst the physical servers to ensure optimum processing. OPEN/workflow's unique fail-safe capability enables users to continue working uninterrupted even if one of the physical servers is disabled.

COMPONENTS

Server

The OPEN/workflow server manages the workflow domain, arbitrating workstation access to workitems either locally or throughout the enterprise, locally caching workitems, enforcing access security, and coordinating the staging and retrieval of work to the desktop. It also processes ad hoc retrievals of workitems that are made outside the scope of a particular workflow process. The server uses ODBC-compliant databases, currently Microsoft SQL Server, and runs under Microsoft Windows NT™ Server.

RouteEngine is the core server process. It provides system queue and workflow services according to the workflow definition created with the RouteBuilder development tool. Workflow data is stored within the queues table of the workflow database. A copy of the queues table is required on every workflow server in the configuration and contains information on the current workstep, including the assigned users, various descriptors, and variable information. The workflow engine uses this information to sort, assign, and route work. RouteEngine's workflow activities generate an audit trail that is managed by a separate log table, accessible for custom reports via SQL Server reporting tools or ODBC.

Other services provided within the OPEN/workflow server include:

- Storage and management services for workitems that reside on the server. This includes status information about each document and whether documents belong to more than one workitem.
- Services that control the archive, deletion, transfer, and retrieval of workitems to and from the server.
- Index information that describes the type and location of workitems, permitting ad hoc query/retrieval from the workstation's File Cabinet interface. A single index contains attributes for all the servers within a workflow domain.

-Attachments to documents (e g Redlining output, OCR Text)

-Email Support

Ease of Use & User Conveniences

-Help Files

-User customizable Button Bar

-User definable Profile field default settings

-Drag & Drop support

System Requirements

-Windows 3 1

-80486 or higher

-Minimum 8mb RAM (12-16 MB recommended)

To receive more information about this product send mail to info@pcdocs.com.

This document contains the following shortcuts

Shortcut text	Internet address
info@pcdocs.com	

APPENDIX 6.

Microsoft, Office Professional

Imaging 95

Microsoft® and Wang® present...

Imaging for Windows 95

Document Imaging for Everyone

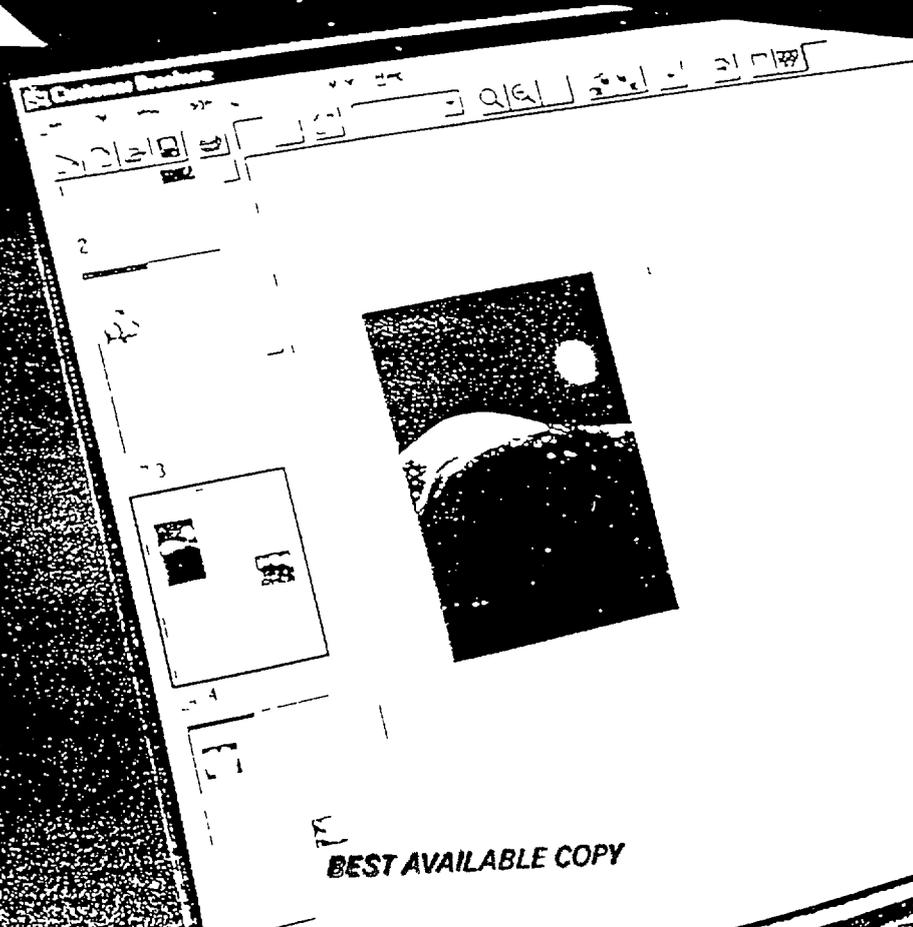
FREE SOFTWARE !!!

<http://www.wang.com>

<http://www.microsoft.com/windows>

in the Windows 95

Software Library



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Microsoft and Wang: Imaging for Windows 95 Makes Enterprise Imaging a Reality!

Microsoft and Wang together will be able to put imaging on millions of desktops, fundamentally changing the basis of the imaging and workflow marketplace.

Scott McCreath,
IDC

Information at work

You have been waiting for an easy-to use, scalable and cost-effective solution that ensures a common and consistent way to handle image documents throughout your enterprise, a solution that brings paper-based information to your fingertips. Imaging for Windows 95 is that solution and it's available from Microsoft® as a Windows® 95 and Windows NT™ Workstation component. With Imaging for Windows 95, you can integrate, access, distribute and control paper-based information throughout your enterprise, from individual desktops, within collaborative teams, and in production-intensive solutions. From desktop users who need to simply scan, fax, annotate and send e-mail or as a foundation for more image-intensive applications, Imaging for Windows 95 offers intuitive personal imaging that meets your needs. Imaging for Windows 95 is the application of choice to

- Capture and store image documents through scanning and incoming faxes
- Send faxes through popular fax products, including Microsoft Exchange

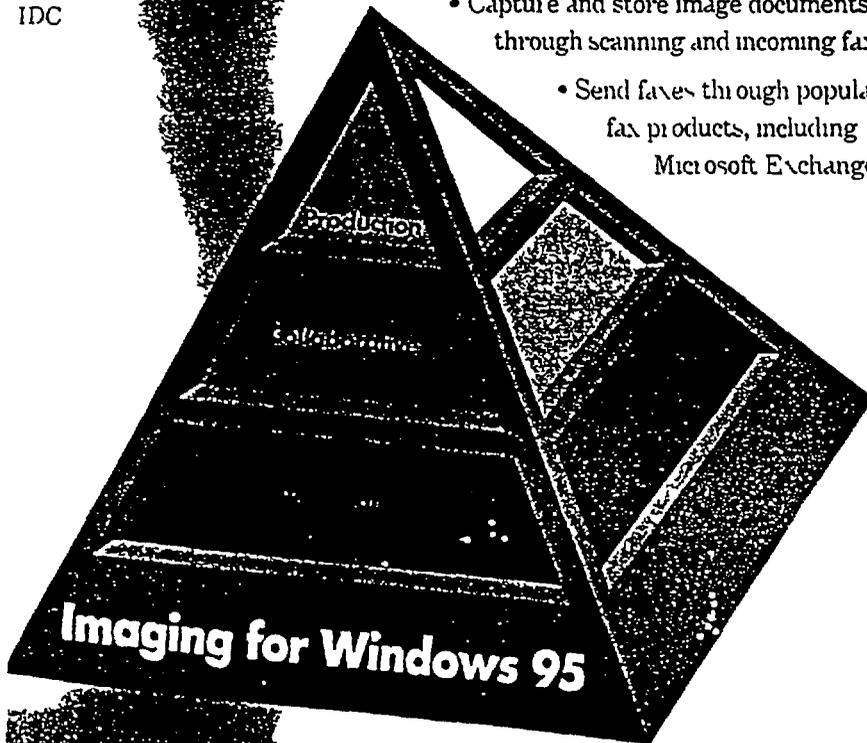
- Add images to your desktop applications
- Imaging for Windows 95 is an open product built on industry standards that can be customized to meet specific business needs.

As a full 32-bit OLE 2.0 based technology, Imaging for Windows 95 offers the powerful capabilities of imaging technology to enhance applications and solutions.

Solution providers and end users can

- Use OLE Linking and Embedding to add image documents to Windows applications
- Use OLE Automation to integrate imaging into line-of-business applications
- Use OLE Controls (OCXs) to build new applications using developer tools of choice

Wang will provide complete support for Imaging for Windows 95 throughout our line of Enterprise Work Management software products. Using current and future Wang products, Imaging for Windows 95 users and developers can seamlessly work with a full line of solutions that will address the imaging needs of individuals, collaborative groups, and production-oriented work places. Because Wang fully supports the industry standards set by Microsoft's Imaging for Windows 95 and adds the value of scalable Enterprise Work Management, you can be assured that the image documents you create and use can be shared across your entire business. With Imaging for Windows 95, you can take advantage of cost-effective solutions for sharing information. Paper documents and faxes are transformed into easy-to-access information. This information can be easily incorporated into all of your organization's processes. As a result, the process is improved, information is distributed quickly and accurately, and communication is timely.



Enterprise Imaging allows sharing of image documents across all levels of your organization.

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Powerful Imaging Features

Scan

Simple way to capture black and white or color documents

Panning

An intuitive and easy way to move around a page

Zoom

Easily zoom in and out of an image page or select a section to enlarge

Fit To

Adjust the size of the displayed image

Paging

You can quickly jump to a specific page or the beginning or end of a document

Custom Window View

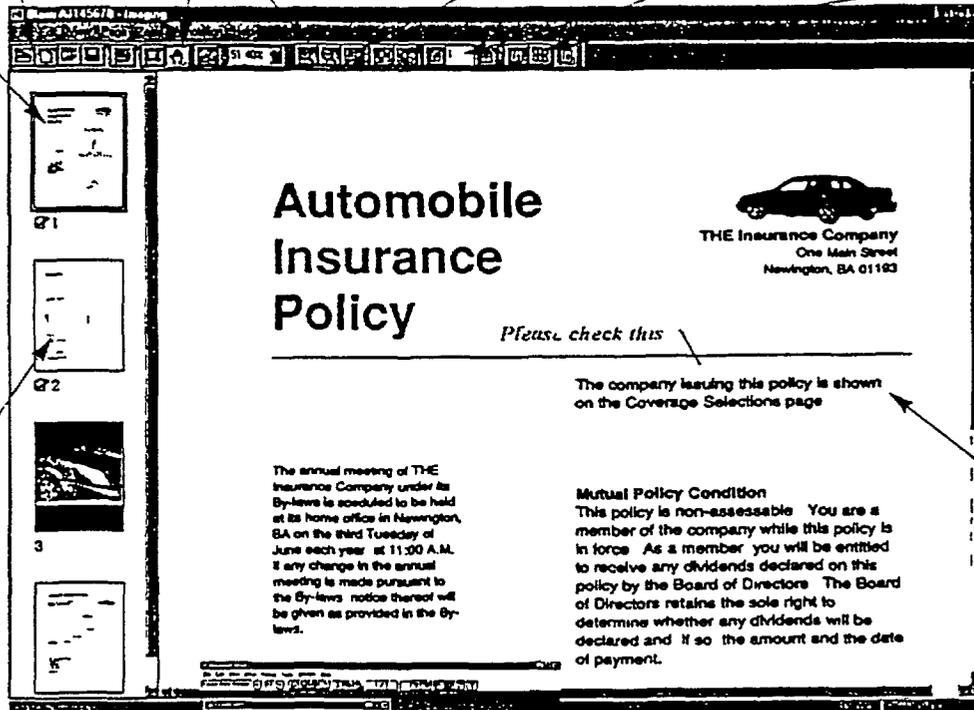
Select the view for the page you are working on
 Thumbnails show a snapshot of pages
 You can select a combination to see the order of pages within context of other pages

Thumbnails

Thumbnails can be sized so that you can view many pages of a document at once

Multiple Views

View documents one page at a time or many pages at a time or select a combination



Please check this

The company leasing this policy is shown on the Coverage Selections page

The annual meeting of THE Insurance Company under its By-laws is scheduled to be held at its home office in Newington, BA on the third Tuesday of June each year at 11:00 A.M. If any change in the annual meeting is made pursuant to the By-laws notice thereof will be given as provided in the By-laws.

Mutual Policy Condition

This policy is non-assessable. You are a member of the company while this policy is in force. As a member you will be entitled to receive any dividends declared on this policy by the Board of Directors. The Board of Directors retains the sole right to determine whether any dividends will be declared and if so the amount and the date of payment.

Annotation

Mark up your f with handwrite notes text highlight rubber stick or sticky notes

OLE Linking and Embedding

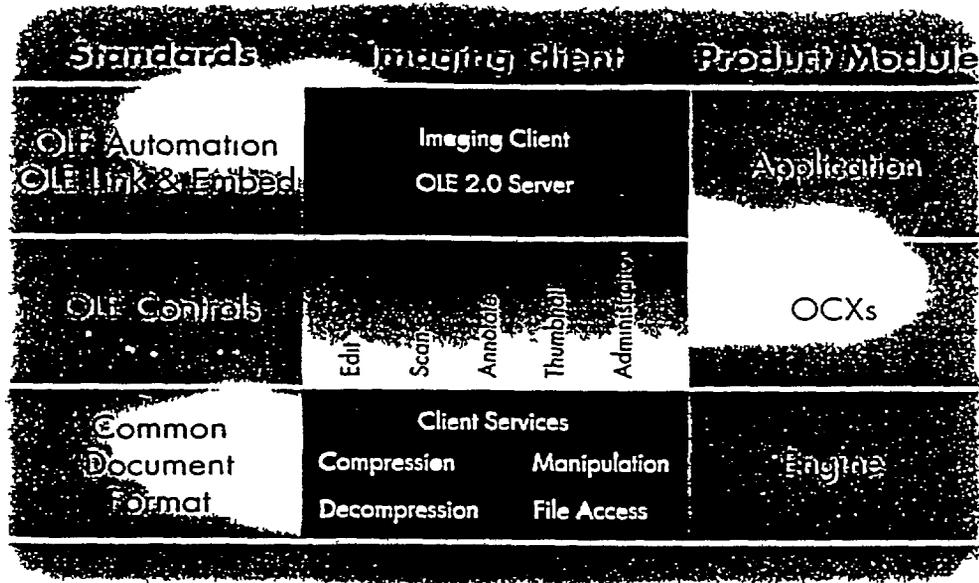
Link or embed images into word processing documents spreadsheets databases or any other OLE enabled application

Mail/Fax

Drag and drop images onto fax or email to send

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Imaging for Windows 95



Solutions builders can take advantage of components and standard interfaces designed into Imaging for Windows 95, including OLE Controls, OLE Automation, TIFF 6.0 multi page document format, and Microsoft's AWD format

OLE 2.0 server

Imaging for Windows 95 is an OLE 2.0 server with object linking and embedding with in place activation

OLE Controls

By providing a 32 bit OLE Controls (OCX) interface Imaging for Windows 95 allows developers to add image components to customized applications

OLE Automation

Imaging for Windows 95 is designed for easy integration with applications via OLE Automation. Other OLE compliant programs can communicate and control functions of the viewer through this interface

Mail and Exchange

Imaging for Windows 95 is MAPI-enabled allowing image documents to be easily communicated

Document formats

Native TIFF 6.0 multi page format (read and write with annotations)
Read and write BMP AWD
Read only PCX DCX and JPG

System Requirements

Any personal computer system running Windows 95

Supported scanners, fax, print

TWAIN-compatible scanners
Any Windows Print to fax
Any Windows-accessible printer

For more information on Imaging for Windows 95 and Wang's line of compatible Enterprise Work Management software products contact our web server at <http://www.wang.com> or call 1 800-229-2973

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APPENDIX 7.

Microsoft, Exchange

Microsoft, BackOffice

APPENDIX 8.

Microsoft, NT

Windows 95

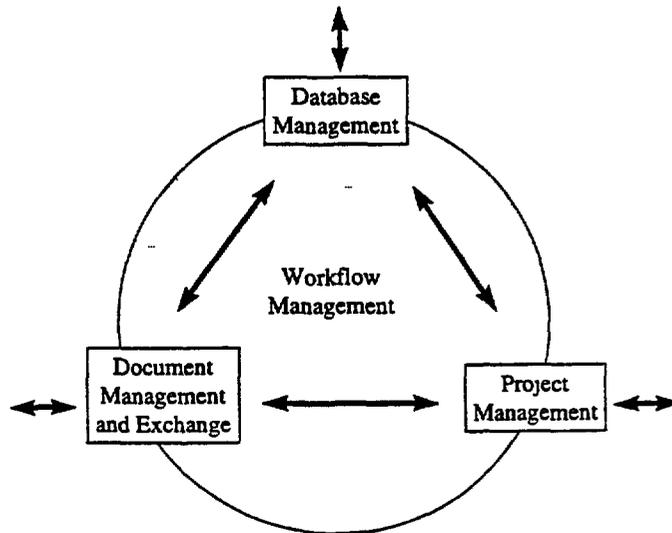
APPENDIX 9.

Budget Estimation

Comment. this appendix is the extension and modification of the Feasibility Study Chapter 7

Implementation scaling and budgeting concept

The next figure shows the main functional segments of licensing work and information management



203

The implementation scheduling and budgeting concept can be defined by

- The *priorities* of segments and functions within the segments, defined by the Customers of Hungarian Energy Office

The priority order suggested by Bull Hungary is

- 1 Basic productivity tools (Office)
- 2 Project Management (Compliance Tracking System)
- 3 Document Registration and Tracking System
- 4 Database Management System (SQL Server based)
- 5 Exchange based document exchange system

- The number of offered server and end-user *functions and services should be/can be implemented within each of these segments* fully/partly implemented functionality

The modelling and design part must be complete, the implementation (in terms of number of functions, and in terms of time schedule) can depend on the budget availability

The remaining functions can be implemented later, when the missing budget is available

The extendible in more steps functions can be

- ◆ Database Management System the number of input tables and the scope of output data processing,
- ◆ The purchasing of BackOffice by its components and not as a whole package NT Server, NT Server File + Printing, SQL Server, Exchange Server, Internet Information Server, Connector Internet, Connector X 400,
- ◆ The degree of the movement from paper to electronic imaging,
- ◆ The level of internal integration of different segments/functions, and of external connections, like the integration with the closed governmental X 400 system,
- ◆ The number of internal standard forms,
- ◆ The number of implemented workflow procedures,
- ◆ Number of administrator training days,
- ◆ The number of project management days proportionally with the fully/partly implementation,

This approach is the way of functional cutting, in accordance with the budget restrictions, or the way of functional extensions if more budget is available

- *The level of the technical solution*, with the acceptance of the related limitations

and restrictions in functionality, architecture, performance and extendibility of lower level solutions

Can be categorised as

- minimum, mid-level, integrated,
- or standalone, work-group, client/server solution

The options

◆ Database Management System

- Excel-based data-management (former minimum solution)
- Access-based solution (former "integrated" column)
- SQL Server-based, Client/Server RDBMS

◆ Document Management System

- Manual management, supported by pre-defined electronic forms and rules and using of document management tools provided by the Office package and Windows 95
- Access-based document registration and tracking system
- DOCS Open and OPEN/image based DMS

◆ Document Imaging System

- No imaging
- Standalone imaging using Imaging 95
- OPEN/image integrated solution

◆ Project Management System

- Manual management, supported by pre-defined electronic forms and rules
- Localised and customised Compliance Tracking System
- Procedures-oriented Workflow Management System

◆ Document (Information) Exchange Services

- Internal Windows 95 level services, external Messenger 400 (IKIM)
- MS Exchange with Internet and X 400 connection, Integration of home-working people
- Integration to the governmental X 400 system

The movement from the lower level option to the higher level option is not an extendibility or scalability question, because of the using of different designing and implementation technologies

Most of the consultation, organisation input and output definition job can be reused in case of migration, but the designing, implementation, training and migration management represent additional cost items. The movement from the low level to the higher level does not cause problem, of course

- The prime-contracting - sub-contracting structure in accordance with the project management and project responsibility consequences
 - Computerland as contract-manager
 - Project-management and management of sub-contractors Bull Hungary or HEO or Computerland
 - Electricity licensing consulting and implementation services

General comments

(*)

The estimated costs are expressed in the local list price of the products (end of April, 1997). The 1 year maintenance cost is included, if the official list price contains this fee.

In case of software products, the 1 year maintenance cost is separated item, as within this cost the new upgrades and versions are issued (15-20 % of product price).

So the list price can be justified by some discount (-), and the maintenance cost (+).

The indicative price of the services is based on the Hungarian market prices (end of May, 1997).

The cost (or price information) is expressed in USD.

(**)

Phase 0 platform installation (1996)

Phase 1 (Feasibility Study)

Phase 2 Implementation. Because of budget and schedule reasons it is divided into two sub-phases: Sub-Phase A and Sub-Phase B.

Phase 3 Extension of the Phase 2 solution.

(***)

Integrated solution is built on a common client/server environment and provides integrated electronic workflow - document - imaging - database - information exchange - system management services for the users.

Phase 2

Sub-phase A

Basic productivity tools

Segment: All

Objectives

- General and unified use of Office/Windows 95 products in order to increase the personal and department-level work-group efficiency
- First level rationalisation and organisation of internal work and document management processes

Related parts in the Feasibility study

– Chapter 5 1 , 5 2 , 6 2 2 , 6 2 4

Budget issues

No	Products and services, Phase 2 Sub-phase A Basic Productivity Tools	Minimum Budget		Maximum Budget		C o
		SW	SER	SW	SER	
A	Software and Services					
PT1	MS Office Professional for Win 95 H Word, Excel, Powerpoint, Schedule, Access [10 users] Win 95 upgrade [10 users]	6520		6520		(1)
PT2	Office Professional installation and configuration		900		900	(2)
PT3	Training course for the using of Office Professional products and working in Win 95 environment <ul style="list-style-type: none"> • Electronic data tables generation • Electronic forms and templates generation • Document publishing • Using of shared work-group services (file, print) • Using of scheduling 5 days/1 class/7-10 people training + site preparation		1920		1920	(3)
PT4	Implementation and using Standard Forms Definition and editing internal standard forms, spreadsheets, templates (20-25 forms) Pre-requisite Items PT1-3		1200		3200	(4)
	Budget Summary	6520	4020	6520	6020	
PM	Project Management for above items		1100		1250	
	Sub-total budget Basic Productivity Tools		11640		13790	

Comments

- (1) The Office Professional is necessary because of the Access and Schedule+ The upgrading of present Office, including versions, and the addition of the missing products is more expensive than to buy a complete package The existing versions can be installed in other departments (temporarily) The development tools necessary for the customisation and development will be provided by the development service provider
- (2) For the installation, the site preparation and participation of EID is a prerequisite
- (3) The practical training will be done by using the ELD/EIO PC-s, Server and LAN

Special arguments no

Document Registration and Tracking System

Segment Document Management

Objectives

- Overall document management facilities for the registration and tracking of incoming and outgoing (to be registered) documents, including the paper, editable and image documents
- The DRTS provides also the “Docket” functions for the Compliance Tracking System

Related parts in the Feasibility study

- Chapters 4 3 3 , 5 1 , 6 2 2

Budget issues

No	Products and services, Phase 2, Sub-phase A Document Registration and Tracking System	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
A	Software and Services					
DR1	Development of Access-based system to track documents Includes installation, software documentation and training Pre-requisite Items PT1-4		7040			(5)
	Budget Summary		7040		7040	
PM	Project Management for above items		700		700	
	Sub-total budget Document Registration System		7740		7740	

Comments

- (5) New (Access-based) development

Special arguments no

208

Compliance Tracking System

Segment Project (workflow) Management

Objectives

- Project Management tools for licensing project managers for the documentation, tracking and management of licensing and controlling procedures
- Localisation and Customisation of Compliance Tracking System developed by California Energy Commission

Related parts in the Feasibility study

– Chapters 4 1 , 4 3 1 , 4 3 2, 6 2 1

Budget issues

No	Products and services, Phase 2, Sub-phase A Compliance Tracking System (CTS)	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
A	Software and Services					
CTS1	Compliance Tracking System (CTS) localisation, customisation, installation and testing		3200		3200	(6) (7)
CTS2	CTS introduction and operation support Pre-requisite Items PT1-4, DR1		1200		1200	
	Budget Summary		4400		4400	
PM	Project Management for above items		450		450	
	Sub-total budget Compliance Tracking System		4950		4950	

Comments

- (6) Prerequisite from CEC detailed documentation (including the description of procedures, and the software guide(s)), the last version of Access and CTS
- (7) The cost and conditions can be finalised after the receiving and study of documentation and the software itself

Special arguments no

Licensing Database Management System

Segment Database Management

Objectives

- Standardisation and automation of incoming licensing data collection, receiving, recording and processing facilities
- Standardisation and automation of licensing activities reporting, evaluation and output data processing facilities
- Providing relational licensing database query, report and management services for the project managers, licensing experts, managers, depending on their data requirements

- Providing maximum and flexible extendibility of RDBMS in accordance with the future requirements in database management and data-processing services
- Providing standard, efficient, high performance, integrated, reliable, saved and secured, easy to administrate and manage DBMS
- Management of data from 1994
- Integration of RDBMS with other applications

Related parts in the Feasibility study

- Chapter 4 3 3 1 (data for project management)
- Chapter 4 3 3 2 (data for licensees control and evaluation)
- Chapter 5 3 (management information system)
- Chapter 6 2 1 (licensing information requirements)
- Chapter 6 2 2 (data-management solutions)
- Appendix 2 , 3
- Annex 1 (future and pending data management needs)

Budget issues

Three options A., B , C

Option A Data management using Excel spreadsheets

No	Products and services, Phase 2, Sub-phase A Data Management	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
A	Software and Services					
DBA	Design and implementation of Excel sheets and Excel based data management Pre-requisite Items PT1-3		3000		3000	(8)
	Budget Summary		3000		3000	
PM	Project Management for above items		200		200	
	Sub-total budget Data Management		3200		3200	

Comments

- (8) This solution provides simple data-management services, using the functional possibilities of Excel spreadsheet software

Special arguments

- This solution provides very limited services which is much far from the concept and requirements
- The results can be used by the database management system

Option B Database management using Access DMS

No	Products and services, Phase 2, Sub-phase A Database Management	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
A	Software and Services					
DBB	Design and development of Access based database management Pre-requisite Items PT1-3		9600		9600	(9)
	Budget Summary		9600		9600	
PM	Project Management for above items		900		900	
	Sub-total budget Data Management		10500		10500	

Comments

- (9) This is the minimum solution for a DBMS introduction

Special arguments

- The solution provides database management services, *with some very strong restrictions and compromises* (comparing with the option C)
 - 1 Lack of data security, integrity, backup and recovery functions
 - 2 Inefficient database administration tools
 - 3 High network load, and response time in case of simultaneous access
Increasing problems in case of remote users
 - 4 Problems when the types and volume of data and relations should be managed will increase
 - 5 There is no standard enquiry
- The volume of database consulting, organisation and modelling services is minimum at same level, than in case of SQL Server based RDBMS solution (see the next C options)
- The migration from Access to SQL Server is very difficult and expensive, except the data migration

Option C Relational database management using SQL Server

No	Products and services, Phase 2, Sub-phase A C/S Relational Database Management	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
A	Software and Services					
DBC1	SQL Server RDBMS	2150		2150		
DBC2	Designing, modelling, development and implementation of SQL Server based relational database management Pre-requisite Items PT1-3		32000		45000	(10) (11)
	Budget Summary	2150	30000	2150	40400	
PM	Project Management for above items		2400		3000	
	Sub-total budget Relational Data Management		34550		45550	

Comments

- (10) The installation and training is included in the implementation
- (11) The minimum budget can cover the complete designing, modelling, and development costs as well. The difference comparing to the maximum budget that less data table will be managed, and only the most important output processing features will be implemented in this sub-phase. If the missing budget is available, the implementation can be extended without any problems.

Special arguments

- The final and right solution for the Licensing Database Management System
- The cost of a temporary (Access based) solution can be avoided
- The SQL Server which is the RDBMS for the Licensing Database System, at the same time can be also the database engine for the integrated document management and document imaging servers (see later)

The next sheet summarises the manpower requirements are necessary for the designing (consulting, organising, modelling), implementation (programming, setting up, testing), training and documentation of SQL Server RDBMS-based Licensing Database Management System

Database functions	Organising	Modelling	Implement	Train+Doc	Total
Basic licensees data	4	8	10	7	29
Yearly licensees data	2	6	8	7	23
Licensees evaluation	2	5	7	6	20
Technical data	2	5	7	6	20
Resolutions, licenses	3	6	9	4	22
Licensing data	10	20	22	14	66
Powerstations data	2	4	6	4	16
Database setup			12		12
Total	25	54	81	48	208

Sub-phase A Budget Summary

The next tables summarise the budgets required for the implementation of above described facilities, selecting the Option C Relational database management using SQL Server solution as the most appropriate one for the fulfilment of requirements

You can see 2 versions, providing the same solution and differing only in the extent of the implementation

Products and Services	SW	SER	PM	Total	
Basic Productivity Tools	6520	6020	1250	13790	
Document Registration&Tracking		7040	700	7740	
Compliance Tracking		4400	450	4850	
Database Management	2150	40400	3000	45550	
	Total	8670	57860	5400	71930

Products and Services	SW	SER	PM	Total	
Basic Productivity Tools	6520	4020	1100	11640	
Document Registration&Tracking		7040	700	7740	
Compliance Tracking		4400	450	4850	
Database Management	2150	30000	2400	34550	
	Total	8670	45460	4650	58780

Services for the efficient use of the system

Segment Project (procedures) Management, Database Management, Document Management

Objectives

The implementation of above defined Sub-phase A the will provide the Electricity Licensing Department with an operable licensing work and information management system and trained people to use it

Beside the functionality and services provided by the system, the other success factor is the involvement of local electricity licensing consultants and experts in order to

- Fill up the standard licensing and controlling frame procedures, sample forms and database with the concrete contents It is a huge amount of job, specially as all the information should be managed and entered retrospectively, since 1994
- Define and write the repository of standard electronic guides can be called by the project managers in given phase of the licensing, approval or controlling procedure
- Consulting services and contribution from the Customers' side necessary during detailed database definition phase

Budget issues

No	Products and services, Phase 2, Sub-phase A Subcontracted Services	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
	Software and Services					
SCS1	Consulting and implementation expertise and services (5 people, 3 months) Definition and writing the electronic repository of <ul style="list-style-type: none"> • standard guides for licensing and controlling (procedures, rules and sample documents), • standard licensing evaluation and control reports, protocols, • licensing data collection, qualification and entering (retrospectively) 		8800		12000	(12)
	Budget Summary		8800		12000	

Comments

- (12) This range of services will be provided by subcontractors who are highly qualified and competent in the definition and implementation of electricity licensing projects, procedures, information (data and documentation) bases and other specific topics

Sub-phase B

Information Exchange

Segment

Information and Document Exchange Management

Networking and communication

System and Network Management

Objectives

- Information Exchange Services (electronic mail, attached documents) providing work-group (department) level tools for
 - Internal mail
 - External mail through Internet
 - External Mail through X 400 MHS

Related parts in the Feasibility study

- Chapter 5 1 , 6 2 3 , 6 2 4 , 6 3

Budget issues

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Options A, B, C**Option A Low-level solution**

Using the existing facilities

- Windows 95 Exchange level closed information exchange services for internal mail
- Using the X 400 and Internet-mail services as sub-network through MEH-MITT-PMO- X 400/Internet GW connection-chain, operated and managed by the Ministry of Industry

This option does not require new budget, but the level of the solution is very poor with a lot of disadvantages, restrictions and dangers

Option B BackOffice based solution with full server extension

No	Products and services, Phase 2, Sub-phase B Server Extension, Information Exchange	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
	Software and Services					
SE1	BackOffice integrated server package NT Server, NT Server file + printing, Exchange Server, SQL Server, SNA Server, System Manager [10 users]	4400		4400		(13) (14)
	Internet Information Server, Connector Internet, Connector X 400	1800		1800		
SE2	BackOffice installation, configuration		900		900	
SE3	Exchange, Schedule customisation		1280		1280	
SE4	BackOffice administrator Training (NT, SNA, System, DB) 5 days minimum, 14 days maximum		1600		4480	(15)
SE5	Exchange user training 4 days/1 class/7-10 people training + site preparation Pre-requisite Items 1-3, 9-12		1600		1600	
SE6	AntiVirus Agent for Exchange	680		680		
	Budget Summary	6880	5380	6880	8260	
PM	Project Management for above items		1200		1500	
	Sub-total budget Server Ext Info Exchange	13460		16640		

Comments

- (13) The implementation of BackOffice Services can be done in two ways
 - 1 Purchasing, delivery, installation and training of a complete BackOffice package including the full server range NT, NT File + Printing, SQL, Exchange, WAN (SNA), System Manager Main argument to do that the price of the complete BackOffice is about the half than the summarised price of the components For example, the 2150\$ SQL Server price in option C can be included here
 - 2 Purchasing, delivery, installation and training of selected server components from the BackOffice, in accordance with the implementation concept (see Option C hereafter)

- (14) The SNA Server and System Manager can be implemented in Phase 3
- (15) System and networking, Exchange, database management and administration training for the EID experts (basic or extended) The extended training is not necessary in case of minimum solution

Option C. Exchange based solution

This option covers the information exchange services, and does not include the server extension functions, in terms of wide area network (SNA) services and system management services. These extensions can be implemented in Phase 3.

No	Products and services, Phase 2, Sub-phase B Exchange Server	Minimum Budget		Co
		SW	SER	
	Software and Services			
EX1	Exchange Server [10 users]	1420		(16)
EX2	Internet Information Server, Connector Internet, Connector X 400	1800		
EX3	Exchange Server, installation, configuration		600	
EX4	Exchange training, 5 days		1600	
	Budget Summary	3220	2200	
PM	Project Management for above items		500	
	Sub-total budget Exchange Server	5920		

Comments

- (16) The integration of Exchange to the closed governmental X 400 electronic message handling network requires different preliminary negotiations (technical, contractual), so we propose to implement it in Phase 3

Document Management, Document Imaging

Segment

Document Management

Objectives

- Management of edited/editable documents and forms generated by Microsoft Office packages. The management covers the organising, filing and retrieval, distribution, archiving and tracking of electronic documents
- Moving from expensive paper system to efficient electronic document management
- Providing department-wide scanning and imaging, indexing, filing and retrieval and archiving facilities
- Implementation of a high-performance, Client/server-based "docket" functions and services in LAN environment

Related parts in the Feasibility study

- Chapter 4.3.4, 5.1, 6.2.2, 6.3

Budget issues

Options. A , B

Option A Low-level solution (Minimum Budget)

See DM1, DM2 hereafter and the referred chapters

Option B. Integrated solution (Maximum Budget)

See DM3, DM4, DM5, DM6 hereafter and the referred chapters

No	Products and services, Phase 2, Sub-phase B Document Management and Imaging	Minimum Budget		Maximum Budget		Co
		SW	SER	SW	SER	
	Software and Services					
DM1	Using the existing HP scanner + driver + OCR features Standalone scanning using Imaging 95 services, integrating the HP scanner	tbd	960			
DM2	Using the document management services provided by the Office		960			
DM3	Document Management System (DOCS Open) [10 users]			7000		(17)
DM4	OPEN/image 30 document imaging system [5 concurrent and 5 occasional users]			27100		(17)
DM5	Customisation, design and implementation of integrated document imaging, store and retrieval system, management				7200	
DM6	DOCS Open, OPEN/image user training 7 days/1 class/7-10 people training + site preparation				1920	
	Budget Summary		1920	34100	9120	
PM	Project Management for above items		200		3500	
	Sub-total budget Document management, imaging		2120	46720		

tbd to be defined

Comments

- (17) Both DOCS Open and OPEN/image uses SQL Server as an external database engine for the document management and filing services Working in NT Client/server environment these products with the SQL Server based licensing database management system should provide a strategic, fully integrated and unified information management environment for the ELD

Phase 3

Phase 3 is related to the extension of the ELD system

- At ELD level, adding additional functions and services to the features implemented in Phase 2. A part of these extensions can be necessary because of budget restrictions in Phase 2 (e.g. Phase B) as well
- At ELD level, adding additional functions and services to the features not implemented in Phase 2, like
 - Telefax - Exchange integration
 - Exchange integration with the governmental M400 system
 - SNA Server
 - System Manager
 - Definition and implementation of security policy, and services, in the NT, Win 95 and BackOffice environment
 - Advanced training for system and database administrators
 - Procedure implementation using workflow management tools
- At Office level, adding new functions, like
 - Exchange integration with the governmental M400 system
 - Own data communication line implementation 2x64kbps leased line/2xISDN line
 - Building 1200/1500 USD
 - Monthly recurrent cost of traffic 1500 - 3500 USD
 - Implementation of own FireWall feature simple/full 5000/1000 USD
 - Library directory other implementation of the document registration system 1400 - 2000 USD development, can be combined with DOCS Open application
 - Compliance with the governmental mail and document management system 1200 - 1800 consulting, integration cost
 - Internal/external WWW publishing implementation
 - Image design 500 - 800 USD
 - Web page design and implementation 300 - 800 USD

ANNEXES

Annex 1.

The concepts of EID: Energy Information System, checking the licensees

Summary

The concepts of the Energy Information Department concerning the collection and process of the information related to the process of electric energy licensing and checking are summarised with the attached informational materials

Attached materials

- The general concepts concerning the energy informational system
- Briefing about the information related to the electric energy sector
 - Checking the licensees
 - Comparing evaluation of the activity of the licensees
 - The possibilities to ensure the information requested from the licensees of the electric energy sector
 - Information management
- The revision of the informational system of the electric energy sector (draft of the topic)

Note part of the material above can be found in the invitation to tender and the requirement system

General ideas on the energy information system

Concept

The EID approaches the establishment of the informational system in regards to the entire Office, in strategic terms

The concept of the informational system creation mentions the following

- The availability of the necessary and sufficient information
- fulfilment of the ad hoc data requests with or without direct data requests
- the requested information is part of the data suppliers' internal system
- the data collection must be realised through modern data transfers and the time for data processing must be kept at a minimum level
- the availability of the processed information (and documentation) must be guaranteed

At the Definition of the scope of the systematically collected information, the necessary data have to be provided in the following break-down

- Management of basic data
The acceptance of the basic data requires the management of large amount of data, but the development of the adequate utility programs makes the preparation of the data processing possible
- Processed (summarised or/and analysed) data
The acceptance of the already processed data has the limits of the processing of these data compared to other procedures

When the data system is prepared, it should be set out, from the defined point of view, in terms of the scope of the information which is directly related to the known tasks

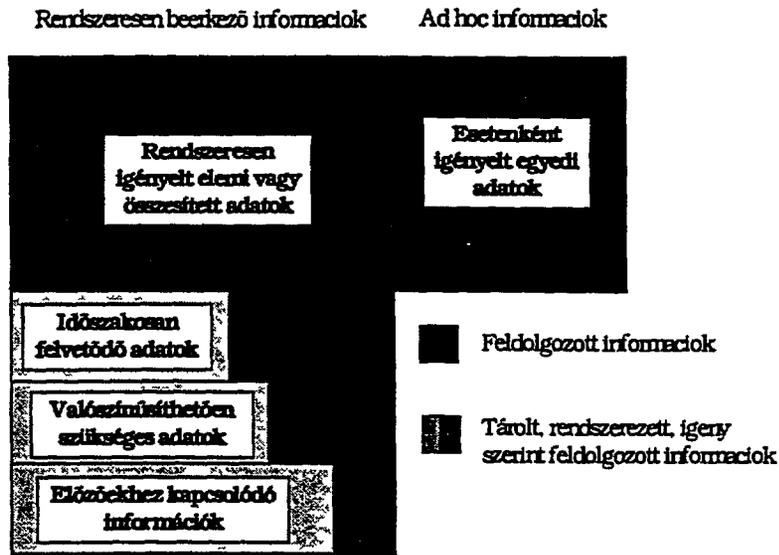
- 1, The regularly requested basic and summarised data according to the present knowledge
- 2, The periodical supplementary data (provisional)
- 3, "Probably-need" data
- 4, Information for the data requested earlier
- 5, Separate data requested ad hoc

Note

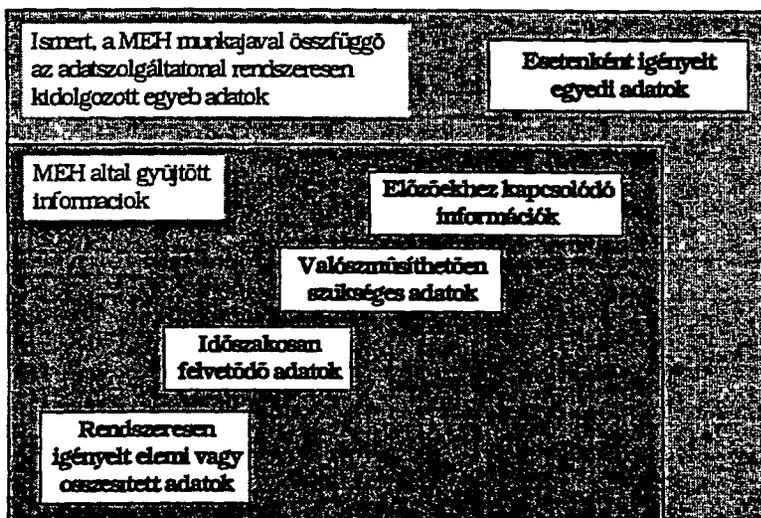
The data

- from the data systems of the licensees
- information collected by the HEO
- other known data connected to the work of the HEO regularly prepared by the suppliers

Definition and management of the different types of information arriving to the Office from the standpoint of frequency and processing of data collection



Licensee's data system from the standpoint of the data request of the HEO



It is advisable to process the part of the information provided regularly or continuously by the separate licensee

This type of information

- Electric energy income and relative expenses
- major disturbances
- consumer complaints
- significant change in the ownership structure
- urgent cases

The following part of information arriving annually should be processed and analysed regularly

- data regarding the supply of technical instruments
- management data (balance, profit-loss count, detailed expense analyses
- up-the date business plan
- report about the yearly activities of the licensee
- combined data regarding the operational disturbances
- realised, planned investment, investment in process

The process and the analysis of the national system level information regarding the activity of the licensee

The global summary of the activity of the licensee makes the evaluation of the process at a system level possible, and it also makes the filtering of such problems which need to be dealt with possible

The calculation of the used energy and performance is another task, for which special information, from the evaluations of the applications for the power plant establishment licence, is necessary

The scope of the national information processed and the analysed at system level

- electric energy balance
- generator
- distribution (by consumer group and by tariff group)
- the fuel for electric energy production
- the expected demand for energy
- the prices of energy sources, yearly average prices, the expenses of consumer energy
- international comparison of the data

- the volume and specific values of the energy consumption
- the volume and specific values of the electric energy consumption
- the prices of the energy sources

Briefing on the information related to the electricity sector

1. Licensees' information data system

Ideas concerning licensees' information system

- 1 Information on work flow (registration)
- 2 Licensing
- 3 Other professional activities in connection with licensing
Arranging professional matters and information flow

2. Data to be collected, processed and stored in the future

- Information necessary to continuously control licensed activities
- Information regularly requested of licensees (MVM Rt)

3. Processing and storing of data

- Data of settlement lines
- Relation between information and activities requiring information

4 Data requirements for estimated demand

Proposal on the control over licensees' activities

A. Control over licensees

- 1 Aim of the control
- 2 Legal ground of controlling activity
- 3 The controlling process
- 4 Closure of control, decision

B Comparative evaluation of licensees' activities

- 1 Indicators to be developed
- 2 Information proposed for the evaluation of licensees' activities

C. A Possibilities to ensure the information required of licensees in the electricity sector

- 1 The current system of data flow and processing
- 2 Future possibilities of data flow and processing
- 3 Licensees' obligation to provide information
- 4 Information to be provided to HEO

D. Information management

- 1 Collection of information
- 2 Processing and evaluation of information

Information proposed for the evaluation of licensees' activities

In general

- Statistical information on the generation and transmission of electricity
- Information defining the features of power plants,
- Data necessary for applying for licenses
- Data on the safety of operation,
- Other data on operation

By processing tables

- Electricity balance and sales statement (T97, T98)
- Monthly data on electricity
 - electricity balance
 - electricity values by the tariff group
 - electricity values by the sector
- Power plants' data supply (via telex)
 - monthly technical report (T112)
 - monthly production data and factual figures of technical indicators (T113)
 - fuel turnover report (T35)
 - evaluation of the performance capabilities of power plants and the co-