4 VISUAL ARTS NETWORK FOR THE EXCHANGE OF CULTURAL KNOWLEDGE

(VAN EYCK)

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The last few years several museum networking projects have been started and completed or are still ongoing. The European Museum Network (EMN) and Remote Access to Museum Archives (RAMA), to name only two, are examples of these projects. The museum world is becoming aware that relevant information may be obtained from all over the world, and that co-operation between museums is no longer limited to the exchange of objects for exhibitions. Art museums participate to some extent in these projects, but art documentation which is by nature closely connected with art museum work is represented to a lesser extent. Integration of this type of documentation with other forms of documentation, registration and library/archive work in closely related fields is a prerequisite for the realisation of an international cultural information network. The VAN EYCK project will add several "bricks" to the building of this structure, be it a castle, the gateway to the garden of Eden, or a palace.

Project partners

The VAN EYCK project is funded by the European Commission, DGXIII, within the framework of the Library Action Plan. Partners involved are:

- Vasari Ltd. (UK) for project management
- Trinity College Dublin (Ireland), Witt Library (UK), RKD (Netherlands Institute for Art History) (Netherlands) as co-operating photo archives
- The Faculty of Computers and Humanities of the State University of Utrecht (Netherlands) is associate partner, mainly for system specification and prototyping activities
- Birkbeck College of London (UK) is the contract partner for further development of an image recognition system.

Project aim and scope

The project is aimed at the design of a scholarly workstation for art historical research which will enable the user to retrieve text and images of several databases simultaneously in real time. The system will run without any need to alter the underlying databases, and will provide for instantaneous international telecommunication.

The results of the project will be:

- Access to major scientific art documentation collections in an easy and cost effective way for users such as academic researchers, art museum staff, lecturers and students, collectors, art dealers, auction houses, journalists, public libraries and the general public.
- Improved art documentation centre management and services, as the availability of image-based systems and standardised text descriptors connected with standardised exchange formats will enable the documentation centres to provide a better managed and more wide-ranging efficient service to its existing users. Likewise collection management in the participating institutions will benefit through the exchange and accession of images and related texts and through extra functionalities such as image recognition.
- The preservation of existing (paper copy) images will benefit from the system as actual physical handling of documents will decrease thus contributing to the protection of cultural resources.

The project is divided into two phases:

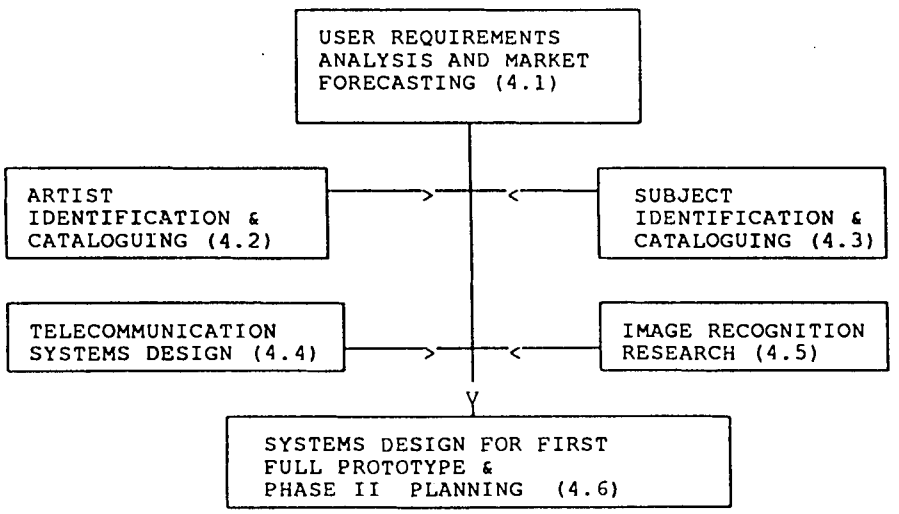
- Phase 1: feasibility study (January 1993 - March 1994)
- Phase 2: system development (to be determined)

If and when the feasibility study has proven that the VAN EYCK system will work effectively at reasonable costs it is hoped that the EC will fund the second phase which will concentrate on the actual building of the system and the expansion to other institutions in other countries.

Detailed project content

The project is divided into several 'workpackages' which all contribute to the overall aims and objectives:

Fig.1 Structure of the project content



In this scheme the workpackages for project management and technology watch are omitted. In the following paragraphs the workpackages will be described in terms of objectives and results to date (April 1993).

User requirements analysis and market forecasting

The objective of this workpackage is to establish a sound understanding of user requirements as a basis for subsequent systems design and implementation and to develop an approach to making market projections for the relevant fields up to the year 2,000. This involves the identification of principal organisational and individual user types, data collection and analysis of user requests by way of structured interviews, and survey of the European situation on copyright, (Fig. 2).

Interviews are conducted with several representatives of the identified sectors during which questions are asked on type of art historical information needed, possible ways of exchanging information, actual use of information (internal, academic purposes, preparation of exhibitions), types and quality of image material needed, and preparedness to pay for extra services. The response so far has been gratifying and in accordance with the basic ideas on the VAN EYCK system as developed by the partners.

Artist identification

The objective of this workpackage is to compare the systems for artist identification in use at the institutions of the partners as a basis for developing a common core system. The assumption is that the three participating institutions are exemplary for documentation practices in the art historical documentation field.

The workpackage is divided into 5 main subtasks:

- comparison of formats and editorial rules
- survey of international standards and practices
- development of a core record structure and cataloguing guideline
- prototype software development
- prototype software user trials experiments.

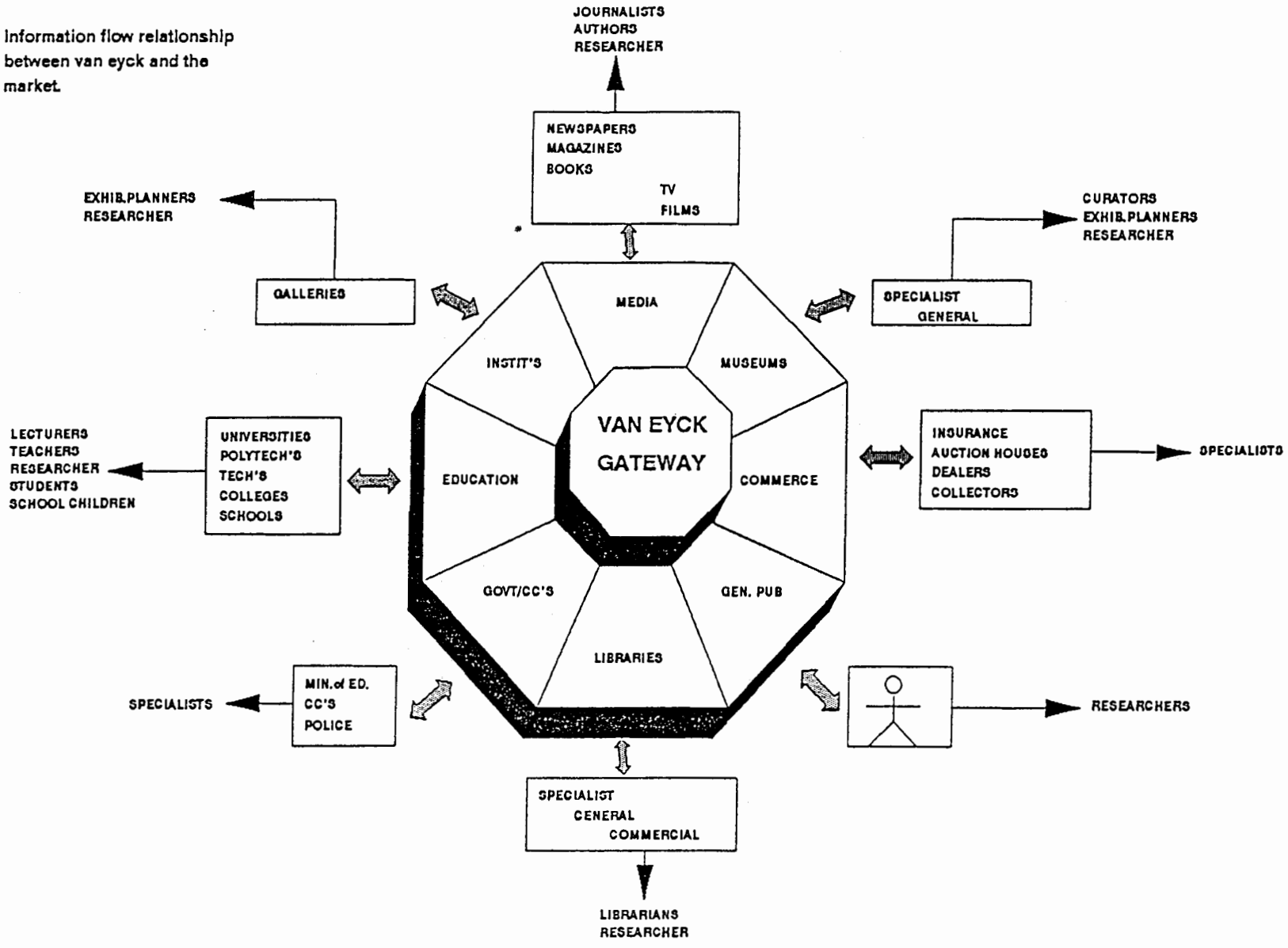
To date (April 1993) the first, second and part of the third subtask are completed. A core record structure has been drafted, consisting of 6 main topics:

- name identification (names and other names)
- life dates and places
- characteristics (art historical nationality, religious affiliation, and artistic qualifier)
- episodes (places and dates of activity)
- documentation (literature, reference sources)
- local (non-core) comments (to be used for every other local qualifier).

This structure is as generally applicable as possible, and the expectation is justified that data from other in the future to be connected institutions will relatively easily fit in.

Fig.2 VAN EYCK End Users

Information flow relationship between van eyck and the market.



Subject identification

The objective of this workpackage is to compare the systems for subject identification in use at the institutions of the partners as a basis for developing a common core system. The assumption is that the three participating institutions are exemplary for documentation practices in the art historical documentation field.

The workpackage is divided into 4 main subtasks:

- comparison of formats and editorial rules
- specification of functional description of subject identification system (part of which is an overview of existing subject indexing practices)
- prototype description and if time allows building of a first version thereof
- user trials, including data transfer.

To date (April 1993) the first subtask is completed as is the overview of the second. A core record structure has been drafted but is still under discussion.

As the Irish partner is still in the process of defining an indexing system, it proved efficient to confine the comparison activities to Witt and RKD systems. Furthermore a field to field comparison for main subject indexing proved to be not applicable, as the main index entry (keyword) at the RKD is confined to one field and Witt only uses Iconclass (i.e. one repeatable field for the code and four other fields which are mainly derived from Iconclass: Keywords, Narrative text explanation, Imbedded text, Key numbers and text explanation).

The purpose of the core record is essentially twofold:

- to enable subject identification
- to enable object identification.

The core record is constructed accordingly.

Elements for subject identification:

- Broad categor(y)(ies)
- Field(s) for the indexing system, e.g. for Iconclass: notation(s) and description(s).

Elements for object identification:

- Title
- Artist name (see WP2)
- General object definition (e.g. painting)
- Specific object definition (e.g. book illustration)
- Last known location
- Dates
- Type of reproduction in the files
- Location of the reproduction
- Other subject identification fields, e.g. topographical code, local keywords, etc.

No formal data analysis has yet taken place. The fields listed are only indications for the fact that information on these topics should be present. The actual image is not part of the record structure, but should be presented along with text information.

A concordance has been drafted between the RKD categories, main categories of the Iconclass system, the actual Witt Iconclass codes, and the Iconclass index terms. This concordance refers to the types of information as held at the various institutions (in fact not limited to RKD and Witt only), which will form the basis for the core record structure under development.

Additionally, for testing purposes a set of records from the Witt library has been indexed according to the RKD categories.

It is our contention that the systems used at Witt and RKD are typical representatives of indexing systems used by other organisations in the art historical field as is corroborated by the findings of the international overview of indexing practices. Although there are still problems to overcome it has been proven that it is possible to relate these two very different systems and to build a concordance which will be suitable as a basis for the development of a common core record structure. This will take into account the basic equality of both RKD broad categories system and the main Iconclass classification system. This will guarantee that the Van Eyck system will be open to professional as well as non-professional use. The interface for the Van Eyck system will be built accordingly.

Telecommunication systems design

This workpackage will concentrate on the determination of the availability, facilities and costs of alternative telecommunication systems for Van Eyck. This will include a survey of available (or in the near future available) systems and an evaluation of these systems. For this workpackage use will be made of the findings of the RAMA project, (Fig. 3).

It is expected that ISDN facilities will be viable to use for the project as Euro ISDN is available in June 1993. This will allow the system to transfer massive amounts of data (text and images) in a controlled way and add functionalities like integrated speech and data transfer. The latter will be crucial for the ease of use of the system as it will allow the user to have an image (or part thereof) transferred on demand.

Image recognition

At Birkbeck College in London the so-called Morelli system has been developed, a system which allows the comparison of images. The system is capable of recognising similar images from different sources even if the measurements differ. Further development should be undertaken to enable the Morelli system to handle the variety of images in the collections of the partners, and to incorporate it into Van Eyck. To date (April 1993) no progress has been made yet, but it is expected that the first results will be available by September 1993.

Systems design and phase II planning

Based upon the findings and results of the previous workpackages the total (first prototype) system will be defined, (Fig. 4).

The system will allow all types of users according to their level of expertise to access several underlying databases, irrespective of their organisation. This means that in the Van Eyck system extensive use will be made of mechanisms which translate the question of the user into the specific (computer) language of the databases. The protocols for these translations are based upon concordances between the name identification and subject indexing systems of the participating institutions. These concordances will take the form

Fig. 3 Telecommunication set-up

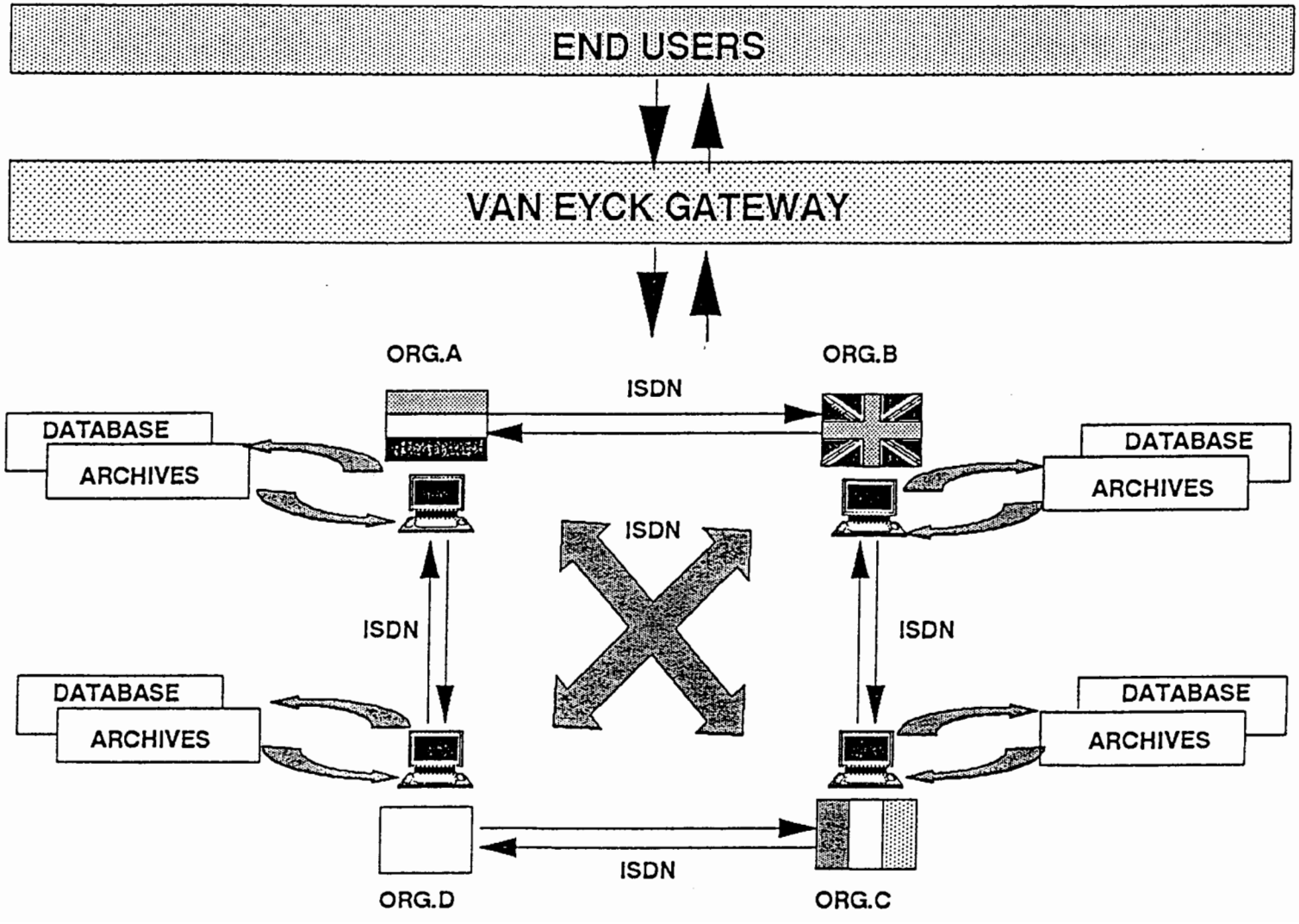
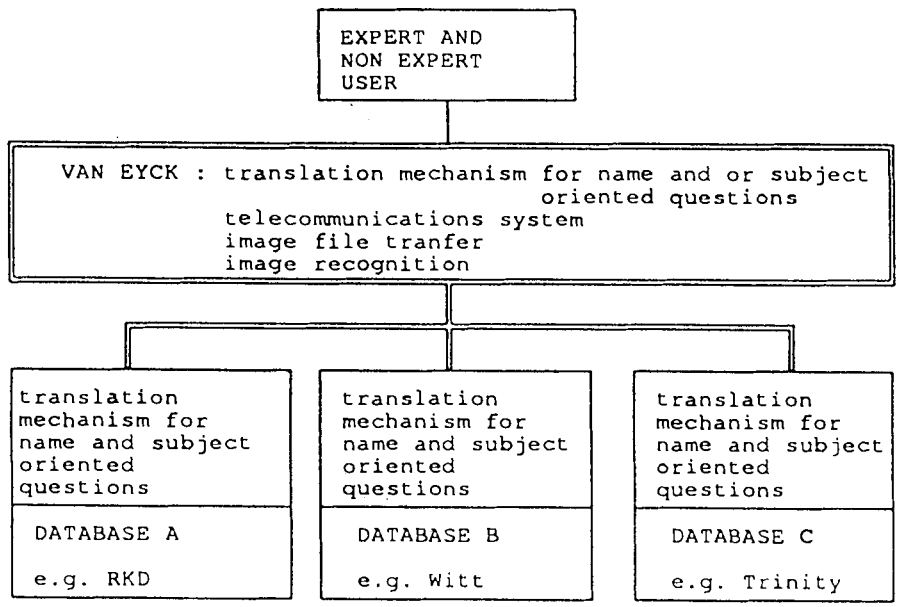


Fig. 4 Initial draft for the VAN EYCK system



of real lists of equivalences (see Subject identification p. 315) or of sets of (programming) editorial rules which standardise data.

The system will be modelled after a client-server model, in which the 'static' uniform parts (e.g. the common interface) will be loaded on the workstation and the dynamic database dependent parts will be loaded on the database server. Thus the actual translation from an uniform query at the workstation into a specific database dependent query will take place at the server. The various concordances will be loaded there.

The planning for Phase II will start in September/October 1993. Drawing up an inventory of possible other cooperating institutions will be part of it, and it is hoped that following the completion of Phase I a start may be made with the actual construction of a marketable product.

Although at the time of writing of this paper (April 1993) still much work has to be done on VAN EYCK, it is the contention of all partners that we will be able to build a system which will constitute a valuable research instrument for the art historical world, be it art historians, journalists, libraries, museum staff or art dealers. The system will form yet another step towards a global network of data files which may be consulted by anyone at any time and any place.