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Special Bulletin #12: Subject Classification for Visual Collections: An Inventory of Some of the Principal Systems Applied to Content Description in Images

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Abstract

With the harnessing of the computer for image access, numerous developments have taken place in the field of subject analysis and access. Early developments in this field relied heavily on bibliographic subject systems such as the Dewey, Sears, and Library of Congress Subject Headings Lists and attempted to apply what were essentially classification systems for text to images...With few models on which to base their systems, numerous independent and project-related subject classification systems developed...Despite the creation of numerous subject classification systems, there are few publications on their structure or format...The nearly fifty studies in this report detail either general classification systems or those specific to an individual project. Brief descriptions are given of each of the systems together with relevant references.

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Subject Classification for
Visual Collections

Colum Hourihane

Visual Resources Association
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Subject Classification for Visual Collections

An Inventory of Some of the Principal Systems Applied to Content Description in Images

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Visual Resources Association
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Introduction

With the harnessing of the computer for image access, numerous developments have taken place in the field of subject analysis and access. Indeed it is safe to say that this field, more than any other classification standard, has attracted the greatest interest since the computerization of image collections started. Various theories have been forwarded as to the origin and development of interest in this field. Recent surveys in the patterns of queries applied to image libraries have substantiated this suggestion (Enser 1993, 1995; Gordon 1996).

The publication of Panofsky's <u>Meaning in the Visual Arts</u> in 1955 is seen by some scholars as a benchmark in this area. It is claimed that this pioneering publication paved the way for a formal analysis to take place with regard to subject matter. Other historians believe that the development of the 35mm slide in the 1950s with the consequent increase in image use forced librarians to develop different approaches to classification, whereas other analysts believe that the interest in subject matter is a natural development from the creation of the large scale photographic library, which is a twentieth-century phenomenon.

Early developments in this field relied heavily on bibliographic subject systems such as the Dewey, Sears, and Library of Congress Subject Headings Lists and attempted to apply what were essentially classification systems for text to images.

Despite numerous studies detailing the inherent differences between these two media and apparent shortcomings as regards users' needs, bibliographic systems still continue to be used in image libraries. For example, PRECIS (Preserved Context Image System), developed by the British Library for the National Bibliography and recently abandoned by them, has been classified as an image retrieval system. In other cases modifications to bibliographic systems, such as the specialized Library of Congress Subject Headings for Graphic Materials, have attempted to build on existing systems while realizing that a difference does exist between these two types of materials.

With few models on which to base their systems, numerous independent and project-related subject classification systems developed. The greatest developments for image classification have taken place in photo archives and not in museums or galleries. The latter, by virtue of the size of their collections, are more easily classified without resort to large-scale developments in subject access systems.

Despite the creation of numerous subject classification systems there are few publications on their structure or format. Emphasis in those few publications has been on the processes of classification rather than on the methodology used.

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It is only within the last ten years or so that systems have developed independently of any specific project, or that international and national attempts have been made to control subject classification. Cooperative projects such as the <u>Lexicon Iconographicum Mythologiae Classicum</u> and the Repertoire International d'Iconographie Musicale have focused on particular subjects and have attempted to apply international cataloging standards and terminology for subject classification.

More recently, proposals have been made to apply systems such as the Art and Architecture Thesaurus (AAT) to image subject classification. The AAT is, however, excluded from this survey by virtue of the fact that it is an object classification system and not a subject classification system. Concepts, named people, places, or objects as simple as an apple are not iconographically classifiable using this system.

Few instructions are available within the museum world as, for example, within the museum documentation package Spectra, where general guidelines mention The Garnier System and ICONCLASS without specifying details. Some projects, realizing their need to match standards used on a wider scale outside their own projects, have attempted to run their own in-house system alongside international systems.

Of the systems studied here it is clear that different approaches to iconographical indexing are possible. It is not the purpose of this introduction to highlight these differences but to simply mention the possibilities.

Subject matter is usually divided into primary, secondary or tertiary fields, but their number is by no means set. The Primary terms are usually controlled in number and application. As a general rule no more than two or three terms can be applied and these refer to the overall theme of the image with no mention of details. Once the number of primary terms exceeds three it is frequently impossible to determine what exactly is the theme of the work. Normally the placement of terms within this category, as within any other division, reflects the cataloger's interpretation. The secondary field is sometimes used to catalog generic terms fund within the image. Normally terms within this division are also controlled and unlike the previous division there should be no restrictions on the number applied. Again, the order in which terms are placed reflects their importance within the image. For example, a dog placed in a position of importance in this division is of more importance than a similar subject placed near the end. The third or tertiary division is usually used to describe the specifics of the image. This is usually a refinement of the previous division and may be used to classify the details specific to the depiction. Whereas in the second division the terms "bridge" or "city" or "portrait" may have been used, the specific details such as "Brooklyn," "London," or "Washington, George" may be described in the third division.

It is possible to use natural language, numerical notations, codes, or a combination of all three. Natural language systems may be either controlled or free-text indexed or again use a combination of both. It is usually found that natural language is more successful in terms of subject retrieval. Free-text descriptions enable the indexer to describe in unparalleled detail actual relationships within the image of specific details (red ball in the foreground; two or possibly three kites are shown in the blue sky). It is the most wasteful in terms of storage space and is also the least consistent. What may be described by one indexer is not necessarily what would be described by another and without guidelines or authority lists errors frequently occur. In such systems, studies have shown that singular or plural versions of the same terms are frequently found; upper or lower cases of the same word(s) are frequently found and formatting standards vary.

Controlled vocabulary indexing may use either key words or subject headings. Controlled words are usually structured in a thesaurus format, hierarchically or alphabetically. The thesaurus is the most widely used and it provides a framework whereby word lists can be incorporated or expanded. Although the numerical approach to subject classification is ideally suited to a computer environment, it is rarely used in a pure form.

The nearly fifty studies in this report detail either general classification systems or those specific to an individual project. They are scattered throughout the world and are found in a variety of contexts. Systems such as Seal Scan are included by virtue of their specialized thesaurus which may extend the interests of more generalized systems. The work in this report was initially undertaken as part of the Van Eyck Project, a European Union funded project, LIB-VAN EYCK/4-1054. In the initial report, thirty systems were studied. For this update, attempts were made to include more recent developments and, where possible, this is reflected in the report. Responses varied among institutions, hence, the completeness in some entries and the lack of material in others.

Brief descriptions are given of each of the systems together with relevant references. Where possible, contact addresses and telephone or fax numbers and Internet addresses are given for each project. More complete bibliographic references are listed at the end of this report. ICONCLASS has purposely been excluded from this survey, but a list of some of the users together with a bibliography of the system is included in the Appendix.

Thanks are due to the Rijksbureau voor Kunsthistorische Documentatie for the information of the Dutch Portraiture Project; to the Witt Library, Courtauld Institute of Art, London, where this project was initially started and in particular, to Catherine Gordon; to The ICONCLASS Research and Development Group, Utrecht; to the contributors who answered my many questions; to Jenni Rodda, who proofread the article and

suggested many valuable additions and alterations; and to Marlene E. Gordon for her patience and perseverance.

Dr. Colum Hourihane
Index of Christian Art
Princeton University
March 1999

List of Systems

Art Information System, National Gallery of Art
Art Loss Register
Ausertung Ikonographischer Bildquellen: An Iconographic
    Interpretation of Pictorial Sources
Australian National University Slide Collection and Iconographic
    Index
The Beazley Archive Computer Project: Computerized Inventory of
    Athenian Figure-decorated Vases
Bibliothèque Publique d'Information (BPI)
Bildarchiv zur Christlichen Ikonographie
Bildindex zur Politischen Ikonographie
Bridgeman Art Library
The British Government Art Collection Computer System
The British Museum Subject Classification System
Catalog of Italian Art with Iconographical Analysis, Università
    degli Studi di Siena
Classification for Slides and Photographs, University of
    Michigan-Dearborn
College of Architecture and Planning, University of Colorado
Data Imaging Project of the Guildhall Libraries and Art Galleries
Frick Art Reference Library
The Glass System (A Subject System for the Visual Arts)
Hill Monastic Manuscript Library
The Historic New Orleans Collection
Ikonoteket, Uppsala Iconographic Archive
The Image System, The Aga Kahn Program for Islamic Architecture,
    Harvard University
The Index of Christian Art, Princeton University
The Index of Jewish Art, Hebrew University of Jerusalem
International Repertoire of Musical Iconography (Repertoire
    International D'Iconographie Musicale)
The Jewish Museum
Library of Congress Thesaurus for Graphic Materials
Mary Evans Picture Library
Rijksbureau voor Kunsthistorische Documentatie
Seal Scan: An Iconographical Analysis of Minoan and Mycenaean
    Seal Design Using Computer Aided Techniques
Sears List of Subject Headings
SIBYL: The Database of Classical Iconography
Slide Classification System, University of California, Santa Cruz
Smithsonian Institution Subject Term Guide
Stichting Iconografische Bureau (IB)/Research Centre for the
    Documentation of Dutch Portraiture
Subject Catalogues of Paintings in Public Collections, Great
    Britain
Thesaurus of Iconographic Terms, The Picture Division, The Public
    Archives of Canada
Thesaurus Iconographique Systeme Descriptif des Représentations
    (Garnier System)
Visual Resources Collection, Architecture and Allied Arts
    Library, University of Oregon

Warburg Library Photographic Collection Classification
    System/Census of Antique Art Known to the Renaissance
Wellcome Institute for the History of Medicine
Witt Library, Courtauld Institute of Art, University of London
Yale Center for British Art, Yale University

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Systems Descriptions

Art Information System, National Gallery of Art
Robin Dowden
Department of Data Processing
National Gallery of Art
Washington, DC 20565
202-842-6394

Collection: This system has been applied to the photographic archives research collection of black and white images, microforms, and reproductive prints which document works of art and architecture from western Europe and America. The collection consists of over 1,020,000 photographs (including prints of the entire Alinari/Anderson/Brogi Collections), 150,000 negatives, (including all Parke-Bernet auction catalog images from the 1950s to 1972), 2,900,000 microform images (including the Witt and Marburg Indexes).
System: Computerized database; adapted MARC-Audio Visual format. Data is entered on OCLC Library network. The original system was IBM 4331 Group II Processor.
Subject: The subject index includes information from the subjects entered in 600-650 tags. These include people and objects represented in the work, personal name subject entries, building name subjects entries, decorative arts subject entries and another catch-all field for other subjects. Subject matter is entered in general primary terms such as Mythology, Literature, and History. These are extended to include secondary terms which are always tagged to the primary term.

Reference: Gibbs, Andrea and Pat Stevens. "MARC and the Computerization of the National Gallery of Art Photographic Archives." Visual Resources 3 (Autumn 1986): 185-208.

The Art Loss Register
13 Grosvenor Place
London SW1X 7HH
England
0171-235-3393
0171-235-1652 (fax)

666 5th Avenue
New York, NY 10110
212-391-8791
212-391-8794 (fax)

Collection: This is a computerized inventory of 60,000 works of art ranging from tapestries to prints from locations throughout the world which have been reported as stolen or missing. The project was started in 1991, and it is hoped that over 100,000 objects will be classified by 1999.

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System: QUEUE on IBM.
Subject: The subject matter in this system is classified in a free-text narrative where as many words as possible are used to describe the content. An attempt is made to describe the object and subject on both a professional and a simple level. Although the catalogers work in a group, the standards vary and particular emphasis is placed on the skills and knowledge of the indexer. An attempt is made to distinguish the two approaches outlined above. The lay description is given, in considerable detail with all of the possible permutations given whereas the art-historical description of the subject matter is brief and concise.

Ausertung Ikonographischer Bildquellen
An Iconographic Interpretation of Pictorial Sources
Elizabeth Vavra
Institut für Mittelalterische Realienkunde Österreichs
Kornermarkt 13
3500 Krems
Austria
43-2732-4793

Collection: This project is based on the classification of Austrian Pictorial Sources from the middle ages to modern times with specific emphasis on iconography. The collection being classified is that of the photo archive of the Institute.
System: The project uses the program CLIO on IBM.
Subject: An in-house thesaurus was developed for the project and consists of controlled vocabulary terms, the <u>Glossarium Artis</u>. Subject matter is classified in two areas. The physical description includes the field "Iconographical Theme," while a separate division within the record has a statement on the "Iconographical" description. Details such as persons and objects are classified here.

Reference: Kuhnel, Harry. "CLIO: Computer Program Supporting the Interpretation of the Iconographic Content of Medieval Pictorial Sources." In <u>CENSUS: Computerization in the History or Art</u>, vol.1. Edited by Laura Corti. Pisa: Scuola Normale Superiore and Los Angeles: J. Paul Getty Trust, 1984: 238-39.

Australian National University Slide Collection & Iconographic Index
Canberra, ACT 0200
Australia

Collection: 100,000 slides have been cataloged from the University's collection using this system. The images range in date from the early Christian period to contemporary Australian art. The project was devised in 1977 and begun in 1979.
The slides are cataloged on a system based broadly on that

employed at the Courtauld Institute of Art, London, while the subject system is again related to a European model.
Subject: An in-house subject thesaurus was forced on the University due to economic pressures. A series of main headings and subheadings was devised in a coded form. Each heading corresponds to a unique number, in a system similar to ICONCLASS but without the letter. There are seventeen main headings such as portraits and landscapes, and 5,600 subheadings. Presently the subject classifications are not computerized. A free-text description also accompanies the image to augment the controlled subject matter.

Reference: Lentsch, Francis. "The Australian National University Slide Collection and Iconographic Index." <u>International Bulletin for Photographic Documentation of the Visual Arts</u> 15 (Spring 1988): 35-36.

The Beazley Archive Computer Project
Computerized Inventory of Athenian Figure-decorated Vases
John Boardman
Beazley Archive
Ashmolean Museum
Beaumont Street
Oxford OX1 2PH
England
0865-278000

Collection: This project is a computerized inventory of Athenian figure-decorated clay vases from the period c625 to 350 BC.
System: DEC, VAX cluster.
Subject: By 1986, over 18,000 clay vases had been cataloged based on the photo archives of the Beazley Collection of more than 200,000 prints. The project started in 1979 with an emphasis on the iconography of these figure scenes. An in-house thesaurus of controlled vocabulary terms was developed which, due to the nature of the material, focuses heavily on the figure, the animal and mythology. Non-figurative decoration is briefly described and only when it is part of a figurative scene. A written description of the subject matter also accompanies the subject headings.

Reference: Carpenter, T.H., D.C. Kurtz and John Boardman. "The Beazley Archive Computer Project: An Inventory of Athenian Figure-decorated Clay Vases c625 to 350 BC." In <u>Automatic Processing of Art History Data and Documents, Pisa, Scuola Normale Superiore, September 24-27, 1984: Papers</u>, vol. 1. Edited by Laura Corti. Pisa: Scuola Normale Superiore and Los Angeles: The J. Paul Getty Trust, 1984: 141-53.

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Bibliothèque Publique d'Information (BPI)
Centre National d'Art et de Culture Georges Pompidou
75191 Paris, Cedex 4
France
http://www.bpi.fr/

Collection: A computerized database of the 120,000 slides in the Centre's library representing a variety of subjects from prints to sculpture.
Subject: This project was started in the early 1980s and has divided subject matter into two areas. The first of these is the "Theme" where the Dewey Decimal Classification System is used. This represents an interesting, but not unusual, application of a bibliographic system to visual material. The second, iconographic division is "Subject" where an average of two terms from an in-house system is applied. The subject headings list is a series of controlled vocabulary terms.

Reference: Albiges, Luce-Marie. "Le Traitement de l'Image à la BPI." In <u>Le Traitement Documentaire de l'Image Fixe</u>. Paris, Bibliothèque Publique d'Information, 1986: 84-87.

Bildarchiv zur Christlichen Ikonographie
Professor Martin Warnke
Universität Hamburg
Warburg Haus
Heilwigstraße 116
20249 Hamburg
Germany
040-4123-6148

Collection: The nucleus of this collection was founded by Gertrude Schiller, who bequeathed her collection of images to Hamburg University. It originally consisted of 12,000 images which were ordered according to her classification of Christian iconography, as expounded in her publications (1946-1991). The images are largely western in nature and represent works from the 10th to the 15th centuries. There is a particular emphasis on works from southern Europe.
System: The collection is not computerized.
Subject: The images are arranged in boxes. Each image is filed under its respective subject heading (nine in all, Genesis-St. John's Apocalypse, Saints, Mary, The Church, etc.). There is a narrative arrangement to her divisions, largely Biblical in structure, and this has been complemented by three additional subject headings (Genesis, Saints, St. John the Baptist).

Examples: Genesis:
        Box 1: (1) General Depictions of Genesis
              (2) How God Created the World
              (3) Images of God the Creator
              (4) Division between Light and Darkness

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            (5) Days of Creation
            (6) Creation of Adam and Eve
            (7) Adam and Eve Prior to the Fall
                    Adam and the land
                    Adam warned by God

    Box 2: (1) Fall-Tower of Babel
    Box 3: (1) Moses-Isaac
    Box 4: (1) Solomon-Jesse
    Box 5: (1) Daniel-Tobias
```

Boxes 2-5 are also subdivided and are included within the overall primary heading of Genesis.

Bildindex zur Politischen Ikonographie
Professor Martin Warnke
Universität Hamburg
Warburg Haus
Heilwigstraße 116
20249 Hamburg
Germany
040-4123-6148

Collection: This project was started in the early 1990s and consists of 150,000 photographic cards which are mounted on board. The images are largely political in content, but this interpretation is a subjective classification and includes what could be called mythological and historical subject matter in other systems. The collection is mainly Germanic in origin and covers all periods from the Middle Ages to the present with particular emphasis on the early 20th century.
System: The collection is not computerized.
Subject: The images are arranged according to an in-house system of 100 Primary headings. These range from Agitation/Demonstrations to Architecture to Medals to Theory of Art. Each subdivision is further subdivided. There is an alphabetical listing under each heading.

Example: 285 Medals
```
            10- Of Honor
            20- Military Medals
            30- Political
            40- Civil
            50- Other Medals
```

Bridgeman Art Library
17-19 Garway Road
London W2 4PH
England
0171-727 4065
0171-792 8509 (fax)
Info@bridgeman.co.uk
http://www.bridgeman.co.uk/

Collection: 60,000 high-quality images of works of art,
principally western in nature, have been cataloged using this
system. A large selection of the images is available on CD-ROM.
The commercial library was developed in 1971 by Viscountess
Bridgeman in collaboration with the photographer A.C. Cooper; it
is used mainly by publishers and printers.
System: Several thousand images are available in electronic form
the the Library, a sample of which is also represented on the
Internet site.
Subject: A series of 188 subject headings have been developed to
classify the subject matter. These include a combination of broad
and specialist terms such as, "Travel and Transport," "Mother and
Child," "Hunting Scenes" and "Portraits." Although all of the
images are not available electronically, the textual records are.
An image database runs in the library on a custom-built free-
text-based search system. Apart from the standard cataloging
field of image content access is also provided from such fields
as "Title" and "Description."

The British Government Art Collection Computer System
Penny Johnson, Director
Government Art Collection
2 Sheraton Street
London W1V 4BH
England
0171-734-1115
0171-734-1181 (fax)

Collection: This computerized database was designed to control
12,600 works of art owned by the Government and distributed among
700 British Government buildings throughout the world. These
works include paintings, drawings, prints, sculpture, tapestries,
and photographs. There are 4,000 works outside of the core
collection: ephemeral items, works on loan, and works that the
Government Art Collection has some form of administrative
relationship with. There are also 3,500 records of de-
accessioned items (mostly returned loans). The first computer
system was installed in 1982.
System: Originally Infomix on Zenix; now Argus Classic (Questor
Systems Inc., Pasadena, CA). UNIX, via terminal emulation program
from Windows. This is the third system to be installed.
Subject: An in-house single term subject heading system limited
by computer restrictions to six characters was devised to

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classify the subject matter. These primary broad categories and
their expansion are controlled. These terms are abbreviated
within the computer record.

Examples: P   Portrait
              BE   Building-exterior
              TS   Townscape
              ST   Still Life
              MY   Mythological

There is no limit to the number of terms that may be applied to
any image. The subject matter, although restricted by computer
space, is augmented by the free-text field in "Title" and an
additional free-text field, "Miscellaneous Data," where a more
detailed description of the subject matter can be given.

Reference: Beal, Mary. "The British Government Art Collection
Computer System: The User's View." In <u>Computers & the History of
Art</u>. Edited by Anthony Hamber, Jean Miles, and William Vaughan.
London: Mansell Press, 1989: 144-154.

The British Museum Subject Classification System
Tanya Szrajber
Department of Scientific Research
British Museum Collections Data Management Section
Bloomsbury
London W11B 3DG
England
0171-323-834

Collection: This system has been mainly applied to the
computerized records of the Department of Prints & Drawings and
to a lesser extent to those of the Department of Japanese
Antiquities and Coins and Medals within the British Museum. It is
planned to eventually extend its use to every department.
System: MAgus Software on a Prime Supermini 6650.
Subject: An in-house subject thesaurus was initially devised for
the Prints & Drawings Department and to date 20,000 works have
been computerized, the majority of which have been classified
using this system. The initial thesaurus was based on The Glass
System proposed by the Victoria & Albert Museum, using an
expandable thesaurus with a series of (1) Narrow, (2) Broad, (3)
Related Terms, and (4) Scope Notes. New terms are added as
necessary, although care is taken to maintain a manageable size
to simplify data entry and retrieval. The thesaurus was
constructed in collaboration with curators, and new terms are
checked with them before being incorporated. The principle
underlying the Subject Thesaurus is that in most instances it
should function as a higher-level form of indexing. More specific
terms falling under many of the categories listed can be
retrieved via the Description field. Thus the term "mammal"
(itself a narrow term of "animal") is listed in the thesaurus,

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but "dog" is not and must be retrieved from the Description. The Subject Thesaurus is complemented by other fields which are not thesaurus-controlled, and which cover topography, names of people, place name, historical events, and book titles. Thus the term "battle" is a Subject Thesaurus term, but "Battle of Waterloo" would be retrieved from the Historic Event field. A peculiarity of the Thesaurus is that it includes combination terms such as "Sport/Pastime," a method which reduces the number of individual entries and hence relationships, and also facilitates data entry in ambiguous cases. The Thesaurus is in the process of being expanded to include an upper or even more general level. Non-preferred terms are also included.

```
Examples:   ANIMAL
            NT Amphibian
               Arachnid
               Bird
               Crustacean
               Fish
               Insect
               Mollusk
               Mammal
               Reptile
            RT Animal-Baiting
               Animal-Fighting
               Animal-Housing
               Stock breeding
```

Reference: Ravenscroft, Jill and Tanya Szrajber. "British Museum Thesauri." In <u>Terminology Working Group, Thesauri for Museum Documentation, The Proceedings of a Workshop held at the Science Museum, London, February 24th 1992</u>. Museum Documentation Association Occasional Papers 18, 1992.

Catalog of Italian Art with Iconographical Analysis
Università degli Studi di Siena

Collection: This project deals with thirteenth-century Sienese paintings and is computerized.
System: STAIRS.
Subject: Subject access is divided into three different free-text fields each of which differs in levels of specificity. The first of these (DESCR) is a short description usually confined to two lines. The second field is the iconographic subject from printed bibliographic sources (BIBLIOG). The source is first specified in abbreviated form with page and illustration references given where these are available and this is followed by a verbatim transcription of that source's description. The third field is the cataloger's detailed iconographic description (DES-ICON) where all the primary and secondary material is included.

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Reference: Bisogni,Fabio. "Un Catologo Memorizzato dell'arte Sienese." In <u>Automatic Processing of Art Historical Data and Documents, Pisa, Scuola Normale Superiore di Pisa, Sept. 24th-Sept.27th, 1984, Papers</u>, vol. 1. Edited by Laura Corti. Pisa: Scuola Normale Superiore and Los Angeles: The J. Paul Getty Trust, 1984: 127-39.

Classification for Slides and Photographs
University of Michigan-Dearborn
Visual Resources Collections
Marlene E. Gordon
1165 Administration Building
Dearborn, MI 48128-1491
313-593-5463
313-593-5452 (fax)
mgordon@umich.edu

Collection: The system is based on the classification system of the University of Michigan-Ann Arbor which is based, in turn, on the system in use at Harvard University. Each site where it is used adds local variations.
System: The cataloging for the areas of science and history were developed using ICONCLASS. The archaeology section was developed using the Art and Architecture Thesaurus (AAT).
Computerization was started in 1986. The initial system was the Michigan Image Collection System (MICS) with migration of the system to Filemaker Pro begun in 1995.
Subject: The system is divided into the following areas:

```
 000   Maps
 100   Architecture
 200   Sculpture
 300   Painting
 400   Work in Minerals
 500   Work in Metals
 600   Work in Wood
 700   Work in Organic Material
 800   Textiles, Tapestries and Embroidery
 900   Graphic Arts
1000   Theater Arts
1300   Happenings, Installations, Performance and Video Art
1500   Archaeology
1600   History
1900   Science and Industry
2200   African Art
2300   pre-Columbian
```

Architecture (100) is divided into nine sections; the numeral nine appears on the third line of the slide label and designates the structure as funerary architecture.

Examples: 9A Altar tombs

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9C    Chamber tombs
9CA   Hypogea
9CC   Megalithic chamber tombs
9CCG  Gallery graves
9CCP  Passage graves
9CP   Chullpas
9CV   Cist graves
9CM   Mastaba
9CP   Pyramid
9CR   Rock-cut tomb
9CRY  Royal tomb
9CS   Shaft grave
9CTT  Tower tomb
```

Reference: Irving, Betty Jo. <u>Slide Libraries: A Guide for Academic Institutions and Museums</u>. Littleton, Colorado: Libraries Unlimited, 1974: 40-44.

College of Architecture and Planning
University of Colorado
Lynn M. Lickteig
University of Colorado, Visual Resource Center
Campus Box 314
Boulder CO 80309-0314
303-492-2808
303-492-6163 (fax)
lickteig@spot.Colorado.edu

Collection: The Visual Resource Center consists of a collection of 25,000 35mm slides. These cover topics relating specifically to the University's curricular needs which are mainly architectural (85%), "The History of Architecture from Ancient times to the Present" and "Urban Planning Issues" (13%). A small collection of landscape and design theory is included although they represent only about 1%-2% of the holdings.

System: VIMS (Visual Information Management System) specifically developed for the department in 1988 by Westar Systems, Colorado Springs. VIMS was originally written in dBase III+ but was subsequently upgraded to dBase 5.0. It is a relational database. This systems is currently being replaced with new software written in Oracle.

Collection: A specifically designed in-house system was developed in 1988. This is based on the Art and Architecture Thesaurus (AAT) Categories and focuses primarily on architecture and related subjects and consists of primary headings which are extended into secondary terms.

Examples: Primary Headings:
Detention:
            Dwellings
            Rooms and Spaces
            Educational

                          Exhibition
                          Barriers
                          Parts of Structures
                          Agricultural Structures
                          Civic or ceremonial
Secondary Headings:
          Barriers: Walls
                     Gateway
                     Fences

Data Imaging Project of the Guildhall Libraries and Art Galleries
Oliver Vicars-Harris
Corporation of London Data Imaging Project
Guildhall Library
Aldermanbury
London EC2P 2EJ
England
0171-332-3097
0171-600-3384 (fax)

Collection: This project has been developed to catalog 40,000 works presently in the collection of the Corporation of London. These are derived from the Permanent Collection of Works of Art (to be housed in the newly developed art gallery). There is a particular emphasis in the collection on Victorian works although many schools and periods are represented. The system is also to cover the Prints, Maps and Drawings Collection which are permanently housed within the Print Room of the Guildhall Public Reference Library. This is the world's primary source for pictorial material relating to the history of London.
System: Presently being developed.
Subject: The core collection is to be centered on 40,000 works from both of these sources. All of the works in the Permanent Collection of Works of Art are to be included and a selection from the Prints, Maps and Drawings. Subject access is provided under a specific field which is to be controlled. This is to consist of a dedicated index of keywords which are searchable. The present London Classification Scheme (specifically developed for the manual system in the library) is to form the basis although the eventual system will be a newly created list of terms. It is envisaged that this system will be a high level series of terms with little provision made for the details of the work. An example of the proposed index term is as follows:

Group Scene>political event

The London Classification System consists of a series of Primary Headings which are further subdivided into Secondary and Tertiary terms. A number of the Primary Headings are also extended.

Examples: Ecclesiastical History
          Social Life

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                    Social Life-Administration-Public Bodies
                    Social Life-Administration-Special Subjects
                    Arts and Learning----Culture in London
                                        Literature-Literary Associations
                                        Libraries
                                        Fine arts
                                        Music
                                        Architecture
                                            Individual public buildings
                                            Domestic

Reference: Vicars-Harris, Oliver. "Picturing Guildhall's Treasures COLDIP: The Corporation of London Data Imaging Project." Computers and The History of Art 6, pt. 1 (1996): 47-64.

Frick Art Reference Library
Deborah A. Kempe, Chief
Office of Collection Management and Access
10 East 71st Street
New York, NY 10021
212-288-8700 x483
212-879-2091 (fax)
kempe@frick.org

Collection: This large photographic collection is arranged by national school, then by artist, then by subject categories within the body of that artist's work. The archive was founded in 1920 by Miss Helen C. Frick to complement the large collection of paintings in the museum and was modeled on the Witt Library, now in the Courtauld Institute of Art, London, England.
System: The system has not been computerized but plans have commenced for electronic access.
Subject: Each national school is given a number derived from the Dewey Geographical Numbering System, 1-9.

        1 American
        2 Britain
        3 Holland
        4 Flemish School
        5 French School
        6 German School
        7 Italian School
        8 Spanish School
        9 Minor Schools

Minor schools are also given an alpha-numerical abbreviation such as Ar9 Argentinean, Au9 Austrian etc. The subject categories (of which there are 500) are numbered according to the in-house classification system. This consists of a series of Primary Subject Headings, each of which is given a numerical abbreviation.

Examples:

```
00    Bible
01    Bible: Old Testament
02    Bible: Apocrypha (Old Testament & New Testament)
03    Bible: New Testament
03-1  Bible: New Testament: Life of Christ: Annunciation
03-2  Bible: New Testament: Life of Christ: Immaculate Conception
03-3  Bible: New Testament: Life of Christ: Visitation
20-1  Genre: Politics
20-2  Genre: Domestic
```

The shelf number must be used with the name of the artist and this consists of the school number with the subject category and the alphabetic letter given to the particular works within that subject category.

Reference: Knox, Katharine McCook. The Story of the Frick Art Reference Library: the Early Years. New York: Harbor Press, 1979.

The Glass System (A Subject System for the Visual Arts)
Victoria and Albert Museum
Kensington
London SW7 2RL
England

Collection: This system was first published in 1969 and was developed in relation to the Prints & Drawings Department in the Victoria & Albert Museum, London, by Elizabeth Glass. The system forms the basis for other classifications such as that employed at the British Museum.
System: The collection has not been computerized.
Subject: The two volume work consists of a system of subject headings and a thesaurus of format terms. The thesaurus terms are expanded to a secondary and tertiary level and are capable of further expansion. The list is alphabetically arranged and is presented in a series of columns. Apart from the primary entry (always capitalized) in the first column there are three further divisions. The second of these presents a series of notes and indicates where further details can be gathered on the primary entry and also includes subdivisions of the primary term. The third column has references to allied subjects and to related concepts.

Examples:

FURNITURE: DOMESTIC	See CABINETS	
	Canterbury's	see MUSIC-Cabinets
		TRAYS
CRADLES		
Cribs	See: CRADLES	
CUPBOARDS		See also: WARDROBES

The second volume consists of cross references only and acts as a guide to related subjects for particular terms.

ACTORS   See: PEOPLE & PORTRAITS
                                THEATER

ALCOHOLISM   See: ADDICTS

Equal importance is given to all subject matter within an image and the subjects are listed alphabetically. No proper places or names are allowed within the system. The present computerized catalog of the Victoria & Albert Museum does not include The Glass System and no account is made as yet for subject access. The Glass system continues to be used within the Prints & Drawings Department.

Reference: Glass, Elizabeth. <u>A Subject Index for the Visual Arts</u>. 2 vols. London: H.M.S.O., 1969.

Hill Monastic Manuscript Library
Fr. Eric Hollas
St. John's Abbey and University
Collegeville, MN 56321
320-363-3515
320-363-3222 (fax)
ehollas@csbsju.edu
http://www.csbsju.edu/hmml/intro.html

Collection: An inventory of Medieval and Renaissance manuscripts.
System: This is a manual iconographical index.
Subject: Each image is accessed through a main entry point which consists of a primary category followed by a qualifier. This format closely follows the Princeton Index of Christian Art system. A series of cross references follows in which the secondary subject matter is described in thesaurus format.

Reference: Bryce, Lynn. "The Visual Image: Its Immediacy and Tradition." <u>Visual Resources</u> 1 (Spring 1980): 19-31.

The Historic New Orleans Collection
Chuck Patch
Director of Systems
Historic New Orleans Collection
533 Royal Street
New Orleans, LA 70130
504-523-4662
504-598-7108 (fax)
chuck@hnoc.org
http://www.hnoc.org

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Collection: This collection documents the history of New Orleans and the surrounding area through approximately 150,000 photographs, prints, and paintings and was started in 1984. The collection itself, though, is older and was established in 1966 by General and Mrs. L. Kemper Williams.
System: MINISIS on a Hewlett-Packard mini-computer.
Subject: Subject access to primary and secondary matter is provided through two distinct phases. There is, firstly, the pre-iconographical description of the subject matter and this is classified through an in-house thesaurus of controlled vocabulary terms. Less than 100 terms per image are given in this phase and archaic terminology, spellings, and nomenclature are preserved to maintain historic integrity.

Examples: Advertisements
                Amusements
                Architecture
                Battle of New Orleans
                Cemeteries
                Churches
                City Views and Street Scenes
                Civil War and Reconstruction

Iconographical analysis is given a separate field and ICONCLASS is used for this purpose.

Reference: Sarasan, Lenore. "Visual Content Access: An Approach to the Automated Retrieval of Visual Information." In <u>Automatic Processing of Art History Data & Documents, Pisa, Scuola Normale Superiore, September 24-27, 1984: Papers</u>, vol. 1. Edited by Laura Corti. Pisa: Scuola Normale Superiore and Los Angeles: The J. Paul Getty Trust, 1984: 387-406.

Ikonoteket
Uppsala Iconographic Archive
Professor Anna Brigitta Rooth
Institute of Ethnology
University of Uppsala
St Johannesgaten 21
S-752 35 Uppsala
Sweden

Collection: The Iconographic Archive is a project at the Department of Ethnography, University of Uppsala. Developed by Professor Anna Rooth in Lund in the 1960s, the project transferred to Uppsala in 1973. The collection comprises 40,000 black and white photographs, 3,000 slides, 40,000 microform images and 22,000 negatives from a private collection. There is an emphasis on cultural and natural history, everyday life and folklore.
Subject: Various broad terms are assigned letter codes and these are fixed in number to twenty-four. Specific details within each

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of these divisions are assigned numbers. Each detail within an image is therefore allocated an alpha-numeric code. The secondary terms are limited generic terms and are not expandable. This system is similar to ICONCLASS in its approach to using codes based on an alpha-numeric sequence.

Examples of broad terms:
- A.   Religious, mythological and other fictional pictures
- B.   Studies of Nature, Flora, Fauna, Minerals
- C.   Historical paintings
- D.   Portraits
- E.   Pictures of Landscapes

A. Religious, mythological and other fictional pictures
- 1.   Biblical, Christian tradition in general (representations of God see A 32)
- 2.   Mary and her life, Anne and Joachim
- 3.   Annunciation
- 5.   Madonna and Child
- 7.   Holy Family

No provision is made for naming specific and identifiable subject matter such as people or places.

Reference: Rooth, Anna. <u>Ikonoteket: Systematic Code Catalogue of the Uppsala Iconographic Archive for Registering Pictorial Material of Ethnological & Culture Historical Interest</u>. Uppsala: University of Uppsala, 1984.

The Image System
The Aga Khan Program for Islamic Architecture
The Aga Khan Visual Archives
Harvard University and The Massachusetts Institute of Technology
Dr. Ahmed Nabal, Archives Specialist
77 Massachusetts Avenue, Rm. 7-304
Cambridge, MA   02139-4307
617-253-2955
617-253-9331 (fax)
annabal@mit.edu

Collection: The videodisk entitled "Images of Islamic Architecture: The Aga Khan Collection" was developed in the early 1980s. It was designed as part of The Image System which is a computerized database of 30,000 black and white photographs which are the property of The Aga Khan Visual Archives. The database contains both text and images and although primarily dealing with architecture, art is also included. The main purpose of this project was to provide faculty and students with easy access to visual materials related to buildings in the Muslim world.
System: PC/FOCUS and GEM with customized software, IBM XT and AT. Two databases were developed specifically for this project.

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These are The Index and The Architectural Images Retrieval Vocabulary. The former provides brief descriptions of the images numerically by the videodisk frame number while the second is arranged alphabetically by the descriptive phrase.
Subject: An in-house specialist architectural system of single vocabulary controlled terms known as The Aga Khan Architectural Images Vocabulary was specifically developed for this project. Terms are arranged in a hierarchical list and divided into thirty-six general categories such as "Maps," "Master Plans," "Settlements," "Urban Phenomena," "Public Spaces," and so on. After initial experimentation of in-depth subject analysis, it was decided to classify the image content on a basic level with the future potential for expanding the information. The subject terms are also supported by a free-text description of the content. The videodisk includes more than 30,000 images arranged according to twelve geographic divisions (North Africa, Arabian Peninsula, and so on). Within each division, the images are arranged alphabetically, first by country, then by city or site, and finally within each city or site the images are classified according to form or function--residential buildings, religious buildings, etc. There are ten such divisions. The videodisk can be consulted only by appointment.

References: Kamisher, Lisa M. "Electronic Images: The Aga Khan Program for Islamic Architectural Videodisk Project." In Computers and the History of Art. Edited by Anthony Hamber, Jean Miles and William Vaughan, London: Mansell Press, 1989: 57-64.

_____. "The Image System: Videodisk and Database Integration for Architecture." Optical Information Systems 6 (November-December 1986): 501-03.

The Index of Christian Art
Dr. Colum Hourihane, Director
Princeton University
Department of Art and Archaeology
107 McCormick Hall
Princeton, NJ 08544
609-258-6363
609-258-0103 (fax)
cph@Princeton.edu
http://www.Princeton.Edu/~ica/

Collection: This was originally a manual listing of subjects and objects of early Christian art up to c1400 AD. The system has been applied to a large file index of 500,000 objects. The Index consists of a series of photographs and card files. The Index was founded in 1917 and currently holds 250,000 images.
System: The computerized conversion of the card files started in 1991 and is still in progress. The software used is Aleph, an international library cataloging system developed by the Hebrew University of Jerusalem. It currently runs on Digital equipment,

but can also run on UNIX platforms.

Subject: The system consists of 26,000 different subjects which are alphabetically listed. It is a thesaurus format which grew from the subjects encountered while indexing. There are five primary categories which are further subdivided. The secondary division is again subdivided. The secondary and tertiary divisions are the only two to appear on the index card and are capable of expansion. Language is controlled throughout. An alphabetic subject file includes lists of persons, scenes, and objects, etc. A free-text description is given on the subject card of the details of each image. ICONCLASS also accompanies the Princeton system and runs in tandem on the database but not on the card files.

Examples: Christ: Crucifixion, Three Crosses, with Longinus
            Stephaton, and Centurion
         Longinus of Jerusalem
         Heraldry, French: Moreuil
         Heraldry, French: Count of Grandpre
         Heraldry, French

The Princeton classification standards have been used in conjunction with ICONCLASS in the Index to Iconographic Subjects in 223 Anglo Saxon Illuminated Manuscripts at Purdue University, Indiana and at the Morgan Library, New York. Modifications of this system have led to the creation of the Index of Jewish Art. There are four copies of the manual system and computerized access to the database available at the Vatican Library, Rome; Biblioteek Rijksuniversiteit, Utrecht; Dumbarton Oaks Research Center, Washington, DC; and The University of California at Los Angeles. An Internet application of the database is available on a subscription basis.

References: Cassidy, Brendan. "Computers and Medieval Art: the Case of the Princeton Index." In <u>Computers and the History of Art</u> 4, pt.1 (1993): 3-16.

Hourihane, Colum, editor, "The Index of Christian Art." <u>Visual Resources</u> 12, no. 3-4 (1998).

The Index of Jewish Art
Dr. Aliza Cohen-Mushlin, Director
Index of Jewish Art
Centre for Jewish Art
Hebrew University
Jerusalem

Collection: This project was established in 1971 to compliment the Princeton Index of Christian Art. No time limits were imposed on the art under study. The index is compiled in various countries. It was firstly a manual card system with over 300 subscribers throughout the world.

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System: IBM CLEO, now ADABAS.
Subject: The Index consists of cards each of which has a detailed description of the object and subject. Textual iconographic references are given on each card and the thesaurus is similar in structure to that used by the Index of Christian Art. The Index is divided into four sections, Archives of Ancient Jewish Art; Hebrew Illuminated Manuscripts; Synagogue and Ritual Art; and Fine Arts. Each card consists of a full description, a photograph and literary references. The Index is computerized for main and secondary subjects. The field "Subject" refers to the general iconographical subject depicted in or on a ceremonial object or in Fine or Folk Arts. In cases where there is more than one subject a secondary card is required.

Examples: Samson and Delilah
            Menorah
            Lamp
            Rabbi

Reference: Narliss, Bezalel and Gabrielle Sed-Rajni. <u>Index of Jewish Art, Iconographical Index of Hebrew Illuminated Manuscripts</u>, vol. 1. Jerusalem: Israel Academy of Science and Humanities, 1976.

International Repertoire of Musical Iconography
(Repertoire International D'Iconographie Musicale)
Barry Brook, Project Director
City University of New York
Research Center for Musical Iconography
33 West 42nd Street
New York, NY 10036

Collection: This project catalogs for research purposes works of art with musical subjects. The project was founded in 1971 and has to date cataloged 15,000 images from twelve countries.
System: SPIRES, customized program on IBM.
Subject: An in-house thesaurus was developed with special emphasis on the nature of the subject matter being cataloged. This thesaurus consists of controlled vocabularies (RIdiM Thesaurus of Indexing Terms) which, it is hoped, will form a standard for the classification of musical iconography in the future.

The Jewish Museum
Barbara Treitel
Visual Resources Collection
The Jewish Museum
1109 Fifth Avenue,
New York, NY 100129
212-423-3250
212-423-3232 (fax)
Treitel@aol.com

Collection: The Collection and museum was founded in the 1940s. The Collection consists of 20,000 images largely based on Jewish culture. These images consist of negatives, lantern slides, 35mm slides, prints, and glass negatives covering various media including sculpture, ceremonial objects, coins, medals, decorative arts, textiles, folk art, and archaeological artifacts.
System: IBM clone using MUSE.
Subject: The images of Judaica are filed firstly on the basis of a geographical classification. Within that overall division there is a series of refinements which are based on date and subject. The subject analysis reflects the material in the collection and is an in-house system. Primary index terms are subdivided.

Example: Subject: Container: Alms
                     Lamp: Hanukkah
                     Lamp: Hanging Sabbath
                     Lamp: Memorial
                     Torah: Ark
                     Torah: Shield
                     Torah: Finial

Library of Congress Thesaurus for Graphic Materials
Elizabeth Parker Betz
Picture Catalog Specialist
Prints and Photographic Division
Library of Congress
Washington, DC 20540
http://lcweb.loc.gov/rr/print/tgm1/

Collection: This system was developed for the Library of Congress Prints and Photographic Division where a collection of approximately 10 million works representing all types of graphics is kept.
Subject: The system is based on the bibliographic classification system used in the Library of Congress Subject Headings and represents a modification from a written to a visual image. Many terms from the Library of Congress Subject Headings have been applied without change to the prints and photographic system while others have had to be modified or reconstructed. New headings have been created and cross references have also been included. Each image has a maximum of four subject headings. The system was primarily designed for automated material and

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indexing systems for use in MARC. The most recent release of this system includes geographic, chronological, topical and national subdivisions. Art historical and iconographical concepts are excluded. This system was ideally constructed for general collections of historical images; however, recent releases have extended its scope. The Thesaurus conforms strictly to the American National Standard Institute Guidelines for Thesaurus Construction. The system consists of 5,504 controlled subject heading terms together with 4,324 cross references which are all alphabetically arranged. Despite these modifications, from the written to the visual image system, several projects continue to use the older of the two Library of Congress systems and apply it to image collections.

Examples: Liberty
            Liberty bell
            Liberty cap
            Liberty loans
                use War bonds & funds
            Liberty tree

These systems are used at the following projects either singly or in combination with others:

The Art Department Slide Library Computerization Project of the
    State University College at Cortland, New York
The Catalog of American Engravings Project, American Antiquarian
    Society, Worcester, Massachusetts
The Iconographical Index to the Principal Manuscripts of the
    Bibliothèque Royale de Belgique
The Interactive Video for the National Gallery of Art,
    Washington, DC
The Program for Art on Film, The Critical Inventory of Films on
    Art, The Metropolitan Museum of Art, New York
The University Survey of Photographic Resources, California
    Museum of Photography

References: Parker, Elizabeth Betz. <u>The Library of Congress Thesaurus of Graphic Materials: Topical Terms for Subject Access</u>. Washington, DC.: Library of Congress, 1987.

_____. "Controlled Vocabulary for Indexing Original and Historical Materials." In <u>Terminology for Museums</u>. Edited by A. Roberts. Museum Documentation Association, 1990: 254-58.

Mary Evans Picture Library
59 Tranquil Vale
London SE3 OBS
England
0181-318-0034
0181-852-7211 (fax)

Collection: This commercial photographic library begun in 1964 by Mary and Hilary Evans concentrates on high quality reproductions of prints, photographs, and ephemera dating from the medieval period to 1939. There are some later additions to the collection which is on open access in files.
System: The collection is not computerized.
Subject: An in-house system was devised to cope with a specific collection. There are eight Primary divisions, and these are: People, Places, Events, Science, Technology and Transport, Arts, Entertainment and Sport, Natural History, Daily Life, Fringe Activities. These are, in turn, subdivided into hundreds of secondary headings. The secondary headings are not controlled but are devised as needs arise. Many of these secondary headings, such as "Games," "Law," "Lighting," "Plants," and so on are classed as primary headings in other systems. Specifics are not provided for except under the generic headings. For example, "Waterloo Bridge" would be found under "Places, Bridges," etc.

Rijksbureau voor Kunsthistorische Documentatie
Jan van der Starre
P.O. Box 90418
2509 LK The Hague
Netherlands
070-347-1514
070-140-450 (fax)
starre@rkd.nl
http://www.rkd.nl/

Collection: The Netherlands Institute for Art History was opened in 1932 and owes its existence to a gift made to the nation by Dr. C. Hofstede de Groot. His collection of 100,000 photographs and reproductions of some 300,000 personal notes on Netherlandish art was supplemented by several thousand auction catalogs. The collection presently has four million art historical documents.
System: BDS was installed in 1995 and is now fully operational in the Department Of Old Netherlandish Paintings. The system runs under Adlite software.
Subject: Particular emphasis is placed on iconography in the Rijksbureau. The collection of images is filed under various in-house subject headings. These are referred to as "Trefworden" and number nearly 200. They reflect a strong bias towards Dutch subject matter with terms which are particularly common in Dutch painting relegated to a primary status.

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Examples: allegories
architecture
anatomy
brothel scene
body
baptism

Since the computerization program started the value of subject access has been further emphasized. There are three distinct fields within the database that are now used. The first of these is the General Subject. This has a maximum allocation of two keywords drawn from the Trefworden. The second field is called the Specific Subject and here ICONCLASS is used. Preceding this ICONCLASS code there is a free-text field used to classify the representational theme. A maximum of three ICONCLASS codes is allowed with a ruling that the first code has to indicate the main subject. The third field is called Append Identification. This field is used for an in-depth analysis of the subject matter and can be written by researchers and staff of the RKD to represent their own personalized opinions. Suggested standards within this field are the Trefworden and AAT Terms. This field may have restricted access depending on the contributor's wishes.

Seal Scan: An Iconographical Analysis of Minoan and Mycenaean Seal Design Using Computer Aided Techniques
Janice Crowley, Project Director
AAIA (Hobart)
University of Tasmania
Box 252C, G.P.O.
7001 Hobart, Tasmania
Australia
61-002-2-2293

Collection: It is hoped that this project will create an iconographical classification for all Minoan and Mycenaean seal designs throughout public collections worldwide.
System: Double Helix on Apple Macintosh.
Subject: Three iconographical steps are envisaged in this project, which has yet to be implemented. In the first stage, there is to be an iconographical analysis of all seal designs. The second stage will be the creation of a complete iconographical classification system which will incorporate all the iconographical descriptions. The third stage will be the creation of a database which will contain all the standard seal data and provide retrieval of this data by means of keywords. The development of an in-house controlled vocabulary subject system is presently in preparation.

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Sears List of Subject Headings

Subject: This system was called after its compiler Minnie Earl Sears and is similar in construction to the Library of Congress Subject Headings List. It is used as a simple guide for classifying image content, particularly throughout the small libraries and museums in America. It was first published in 1923 and has the same limitations as the Library of Congress Subject Headings List since proper names or iconographic content are not encompassed within the system. The fourteenth edition, edited by Martha T. Mooney, was published in New York in 1991.

SIBYL: The Database of Classical Iconography

Jocelyn Penny Small
Rutgers University
Alexander Library
U.S. Center for <u>Lexicon Iconographicum Mythologiae Classicae</u>
169 College Avenue
New Brunswick, NJ 08903
732-932-7404
jpsmall@rci.rutgers.edu

Collection: SIBYL has been developed by Jocelyn Penny Small, Director of the US Center of the <u>Lexicon Iconographicum Mythologiae Classicae</u> (LIMC) at Rutgers University, as a project totally independent from the LIMC in order to catalog and manage the classical objects in American collections with mythological scenes.

System: SIBYL began as a DOS database in the program Advanced Revelation. It currently resides in Access. An Internet application is envisaged as well as a CD-ROM publication.

Subject: SIBYL consists of two major core tables, "Objects" and "Scenes." All information pertaining to an individual object is recorded in the Objects file with the information about the individual scenes recorded in the Scenes file. One of the major strengths of the database lies in its method of recording iconographical information. Not only can different interpretations be entered for individual scenes, but SIBYL also keeps track of every single element within a scene including all figures, architecture, vehicles, animals, flora, and so on. Moreover, each figure is defined with its attributes and dress. The result is that SIBYL can do searches such as finding all women who hold shields or all men who wear chitons. SIBYL is also able to find the object if you have a published reference. It has the only concordance to all major abbreviations for journals in the fields of classics and classical archaeology. SIBYL currently has over 60 related tables with an estimate of over 200,000 records. An extensive free-text description accompanies a set of controlled descriptors.

Examples:

Elements   Dress/Attributes

Porch
Priamos   Beard; Himaton; Staff
Hekabe
Achilleus   Chiton, Short; Greaves; Helmet
                                Shield, Triskeles

Hektor   Beard; Inscription

Snake   Beard
Iris   Chiton; Himation; Necklace; Wingless

Term: Warrior
Synonyms: Hoplite
          Soldier

Usage: Male figure whether fully or incompletely armed. However, not to be confused with the athlete who may have a javelin.

References: Small, Jocelyn Penny and John B. Smith. "Lexicon Iconographicum Mythologiae Classicae." <u>CENSIS: Computerization in the History of Art</u>, vol.1. Edited by Laura Corta. Pisa: Scuola Normale Superiore and Los Angeles: The J. Paul Getty Trust, 1984: 247-249.

_____."A Database for Classical Iconography." <u>Art Documentation</u> 7 (Spring 1988): 3-5.

A Slide Classification System for the Organization & Automatic Indexing of Interdisciplinary Collections of Slides & Pictures, University of California, Santa Cruz

Collection: This system was developed in 1968-1969 with special reference to the slide and picture divisions of the University of California at Santa Cruz. It was envisaged that the system will be applied to other collections of an interdisciplinary nature. The primary subjects of this collection are Science, Art & History.
Subject: The Santa Cruz method of organizing slides is to apply two labels to the frame. The top label bears the call number and descriptive information about the content of the slide. The bottom label contains additional information about the location of the object pictured and the source of the slide. Subject is allocated Sort Field 6. Within the area of Art the subject matter is divided into Architecture, Sculpture, Painting, Drawing, Book Arts, Graphic Arts, Photography, Ceramics and Glassware, Greek Vases, Fashion and Fabrics, and so on. Each of these sections has a series of subheadings. The primary letter allocated to the main section is extended with that of the subdivision to form the classification entry.

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Example:

```
Art-Subject Divisions & Subdivisions
Period
  Country
    Medium
      Style
        Origin
          Subdivided by Subject
```

Painting by Subject:

```
A Abstraction
B Altarpieces
C Animals and Plants
D Asiatic Religious subjects
F Cycles or series
G Architectural interiors or exteriors
H Busts
I Figure, groups
J Figure, male
K Figure, female
```

Reference: Simons, Wendell W. and Luraine C. Tansey. <u>A Slide Classification System for the Organization & Automatic Indexing of Interdisciplinary Collections of Slides & Pictures</u>. Santa Cruz: University of California, 1970.

Smithsonian Institution, Subject Term Guide
Christine Hennessey
Research Databases Coordinator
National Museum of American Art
Gallery Place
8th & G Streets NW
Washington, DC 20560
202-786-2607
http://www.nmaa.si.edu/

Collection: This system was developed in the late 1970s for the Slide & Photographic Archive at the museum. Since that time, it has been expanded to include the Permanent Collection & Research Databases and the Inventory of American Painting and Sculpture. The Research Resources Department was founded in 1977 to coordinate developments within the various branches of the Smithsonian.
System: Originally SELGEM, now INQUIRE on IBM.
Subject: This system employs a hierarchical thesaurus format on a three-level basis. The first level, the Primary Terms, are broad overall classification headings and are forty-six in number (originally forty-one). The list is not expandable. Unlike other systems where the cataloger defines terms without reference

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to a definition, the Guide provides a unique set of descriptors
for the meaning of each term.

Example: "Abstract" is explained as: "Use for artworks which
appear to have no reference to known visible objects (Alexander
Calder) as well as for works in which identifiable objects have
been distorted (Lipchitz cubist work). Always use title of
artwork as indication of additional primary terms; e.g.,
`Abstract Figure' would be assigned two primaries: `Abstract' and
`Figure.'"

The full terms are not used but are encoded in abbreviated form,
examples of which include:

ab Abstract
ak Allegory
am Animal
ao Architecture
ae Architecture exterior
ai Architecture interior
ca Cartoon

The second level is called Secondary Terms and lists specific
names, persons, places, and things and is expandable. An example
of this is: "Landscape-United States-Vermont." The third level
allows the indexer to add additional terms which do not yet have
a generic secondary grouping and is expandable. All terms are
alphabetically arranged within each subdivision of the hierarchy.
In classifying a work of art six Primary Terms and their
appropriate Secondary and Tertiary Terms may be assigned. A
total of eighteen terms may be selected. Although the
Smithsonian considered introducing ICONCLASS, the Art &
Architectural Thesaurus and The Library of Congress Subject Terms
List alongside their own system, financial, staff and resource
limitations have prevented this from taking place. The
Smithsonian Art Index and the Pre-1877 Art Exhibition Catalog
Index are both projects within the Smithsonian Institution which
classify their subject matter on the basis of title as the actual
image are not available.

Examples: CITYSCAPE-ENGLAND-LONDON

CITYSCAPE-WEATHER-RAIN

References: Fink, Eleanor. "Subject Access to the Photographic
Reproductions of American Paintings in the National Collection of
Fine Arts." In <u>Data Bases in the Humanities & Social Sciences</u>:
<u>Proceedings of the IFIP Working Conference on Data Bases in the
Humanities and Social Sciences</u>. Dartmouth College, Hanover NH,
August 23-24 August 1979. Edited by Joseph Raben and Gregory
Marks. Amsterdam, New York, Oxford: North-Holland, 1980: 229-32.

Fink, Eleanor and Christine M. Hennessey. "Testing the
Flexibility of the MARC Format." <u>Spectra</u> 15 (Spring 1988): 10-11.

Stichting Iconografische Bureau (IB/Research Centre for the Documentation of Dutch Portraiture, 's Gravenhage
Koninklijke Bibliotheek
Prins Willem-Alexanderhof 5
P.O. Box 90407
2509 LK The Hague
Netherlands

Collection: This collection consists of a card index for 100,000 portraits which have either been painted, drawn or photographed. The original images come from either Dutch collections or abroad. There is also a collection of 50,000 reproductions, many with accompanying negatives, thousands of portraits, prints and photographs and a collection of family albums with calling card portraits.
System: IBUS on Compac System Pro/UNIX.
Subject: There is a card index to portrait documentation arranged alphabetically according to surname. Access is also permitted through artist, date of execution and collection. Computerization started in 1987. Subject matter is classified through an in-house subject system. Terms such as "costume," "profession," and "artistic technique" are used.

Reference: Delaforterie, C.W. <u>Overzicht van de Verzamelingen berustende bij het centraal bureau voor genealogie en het Iconografische Bureau</u>. `s Gravenhage: Centraal Bureau voor Genealogie, 1989.

Subject Catalogs of Paintings in Public Collections, Great Britain
Celestine Dars
Visual Arts Publishing
82 Sinclair Road
London W14 ONJ
England

Collection: This is a series of computerized and printed catalogs of paintings in public collections throughout Great Britain. Images are not included in the database but are in the second and third of the three volumes published so far. The commercial project was founded by Celestine Dars and is intended for both popular and specialist users. Coverage to date: Vol. I, National Gallery, Wallace Collection, Wellington Museum; Vol. II, Tate Gallery (Historic British Collection); Vol. III, English Heritage, Geoffrey Museum, Guildhall Art Gallery, Royal Holloway College, Thomas Coram Foundation.
System: Microsoft on Apple Macintosh.
Subject: An in-house controlled subject heading system with sixty-five defined terms was developed for this project. Specifics are arranged alphabetically within these broad general categories.

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Examples: Males, Biblical
Male, Figures
Males, Mythology
Male Nudes
Male Portraits
Male Saints
Males Unidentified

Thesaurus of Iconographic Terms, The Picture Division, The Public Archives of Canada
Gerald Stone, Chief, Descriptive Services
Visual & Sound Archives Division
National Archives of Canada
344 Wellington Street
Ottawa, Ontario
Canada K1A 0N3
613-996-7790
613-995-6575 (fax)
gstone@archives.ca

Collection: Although this system was developed in 1980-1981 for use in 150 Canadian federal, provincial and municipal museums to provide a standardized form of subject classification for one million objects, it has yet to be implemented. Instead the community has used the Art & Architectural Thesaurus for object description. As it presently stands, art objects are not iconographically described. The following system is described in this report purely in terms of historical value and has no immediate application.
Subject: The three-level thesaurus consisted of ten fixed, primary broad terms which were not expandable. A secondary level consisted of five to ten subdivisions for each category which were also fixed, and a third and expandable level of some 10,000-15,000 specific indexing terms. A list of qualifiers was also available for each level.

References: Brooks, Diane. "System-system Interaction in Computerized Indexing of Visual Materials: A Selected Review." Information Technology & Libraries 7 (June 1988): 111-23.

Vezina, Raymond. "The Computer: Passing Fad or Thorough-going Revolution?" Visual Resources 1 (Fall 1980/Winter 1981): 204-18.

Thesaurus Iconographique Systeme Descriptif des Représentations (Garnier System)

Collection: Development began on this system in 1976 and was completed in 1984 with its publication by the French Ministry of Culture. It was started without reference to any particular

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project and aims to be a universally applicable system. It is
hoped by the Ministry of Culture that this system will become the
French national standard for subject description.

Subject: The Thesaurus is a controlled word system which is
capable of limited expansion. There are twenty-three primary
divisions which are broadly divided into two sections. There are
fifteen Themes and eight Subjects. These divisions loosely
correspond with the Proper and Generic divisions in the Yale
Center for British Art Subject System; a similar division exists
in ICONCLASS. The first of the Themes is given over to
Caractères Généraux de la Représentation where stylistic and
object related details are included. The general headings do not
appear on the classification entry but act as a guideline for the
classifier and user. There are four further subdivisions of these
general headings, none of which are capable of expansion except
for the last. Each of the divisions modifies its predecessor in
thesaurus format. The controlled words are not arranged in
alphabetical order in the system proper but a general alphabetic
list is to be found at the end of the publication. A limited
amount of stylistic information is included within this system.
There is no limit to the number of entries for any image. Each
word is called a descriptor and there are 3,200 of these within
the system. Relationships between descriptors is indicated by a
colon.

Examples: THEMES:
1. Caractères Généraux de la Représentation
1.1 Genre de la Représentation
1.2 Déterminant de la Représentation
1.3 Localisation de la Représentation

2. La Nature
2.1 L'Univers
2.2 Matière inanimée
2.3 Le temps
2.4 Vegetal
2.5 Animal

7 Armement-Vie Militaire
7.1 Armement
7.1.1 Arme
7.1.1.1 Arme Défensive
   armure
      cuirasse
   bouclier
   casque
   cotte de mailles
7.2 Architecture militaire
7.2.1 Architecture militaire

The system displays a western bias in the descriptors used and
the selection has been criticized as 'hasty' (Bruckman, 1986).

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Published users of this system include the following:

CARRARE-Documentation of the Sculpture in French Museums,
    Ministère de la Culture, Paris.
JOCONDE-Documentation of Paintings & Drawings in French Museums.
    Ministère de la Culture, Paris
MEDIUM-Institute de Recherche et d'Histoire des Textes, Paris and
    Centre National de la Recherche Scientifique. A database
analyzing Medieval manuscripts. Images et Documents du Musée
d'Orsay, Paris.

Examples: Groupe de figures (Paysan, femme: asis, enfan: sommeil,
chein, gallinacé, charrette: foin, garçon: flûte à bec, fillette:
garçon: garde: porc, récipient)

References: Bruckmann, Denis and Richard Philippe. "Le Systems
d'Information Iconographique du Départment des Éstampes et la
Photographie de la Bibliothèque Nationale." In <u>Le Traitement
Documentaire de l'Image Fixe</u>. Paris: Bibliothèque Publique
d'Information, 1986: 21-36.

Garnier, François. <u>Thesaurus Iconographique: Systeme Descriptif
des Représentations</u>. Paris: Ministère de la Culture, 1984.

Visual Resources Collection, Architecture & Allied Arts Library
Christine Sundt
AAA Library
Lawrence Hall, Room 300
University of Oregon
Eugene, OR 97403
541-346-2209
541-346-2205 (fax)

Collection: This collection was established in 1947 and has
approximately 300,000 slides and 20,000 mounted illustrations.
There is a complete manual shelf list of the collection; since
1985 over 100,000 new items have been entered into the SLIDES
database.
System: Pentium-based PC, 1GB hard drive, manufactured by Dell;
17 inch SVGA Monitor. Software: Windows 95 with an interface to
DOS-based DataEase program. Over twenty separate pre-formatted
queries can be used to obtain results.
Subject: An in-house system has been devised. This is a
conflation of headings used in the manual system. These have been
combined in a table of eighty-two item choices ranked from most
frequently used to least used. Catalogers are instructed to
select from the most frequently used where possible and to use
the remaining choices only if none of the former is applicable.
The headings are not based on any known controlled vocabulary,
table or thesaurus. In that eighty-two terms have been applied to
more than 100,000 records they have become their own controlled
vocabulary. Several of the database search strategies work with

selections of the list that apply specifically to the discipline being searched, e.g. Architecture, Paintings, Sculpture, and so on.

Examples: 1. Planning
2. Landscape
3. Religious
4. Residential
5. Civic
6. Educational
7. Business
8. Other

The above choices apply to planning, landscape and architectural material.

9. C10 self-portrait
10. C11 Male Portrait
11. C141 Female

12. C17 Group Portrait
13. C21 Eastern Religions

Warburg Library Photographic Collection Classification System/ Census of Antique Art Known to the Renaissance
Census of Antique Art
Warburg Institute
Gordon Square
London
England
0171-580-9663
http://www.sas.ac.uk/Warburg/

Collection: This was originally the private collection of Aby Warburg and illustrates the survival of the classical tradition. The photographs are mainly of western art and illustrate works from the middle ages to the end of the seventeenth century. Some examples from the contemporary period are also included when they are of interest to the Institute. Many works of Classical art are also in the collection, including those of the Census of Antique Art Known to the Renaissance.
System: The holdings of the Photographic Collection are not computerized, but those in the Census are. The latter use an Olivetti M380.
Subject: The Photographic Collection uses a system of Primary Subject Headings which is subdivided into Secondary Divisions. The Primary Headings are two in number, Religious and Classical. The order of the Secondary Headings may be alphabetical, chronological, Biblical or arranged on various other criteria. For example, the Virgin and Child with Fruit (Secondary Heading) may be subdivided into what types of fruit (listed alphabetically). The Primary Headings are: Antiquities, Gods and Myths, Magic and Science, Secular Iconography, Portraits, Literature, History, Social Life and Religious Iconography. Photographs of illuminated manuscripts are kept separately,

arranged by library and indexed by author and subject. The Census of Antique Art and Architecture Known to the Renaissance was established by Phyllis Pray Bober in 1947 and was intended to document the knowledge of classical works of art up to the time of the sack of Rome (1527). (Copies of the Census are also held at the Getty Center in Los Angeles, and at New York University's Institute of Fine Arts. The latter copy is an incomplete working draft.) More recently the framework has been extended to 1600 and also includes architecture. The project has developed a Subject Headings list, similar to the structure of ICONCLASS. Subject access is also possible through the Title field which is free-text or in the Description Details field which is also free-text. It is here that natural language, free-text description is given without any use of controlled words. The project is now administered by the Humboldt University in Berlin. An Internet application is planned.

References: <u>Summary Guide to the Photographic Collection of the Warburg Institute</u>. London: Warburg Institute, 1985.

Wellcome Institute for the History of Medicine
Iconographic Collections Videodisk
William Schupbach
Iconographic Collections
183 Euston Road
London NW1 2BE
England
0171-611-8582
0171-611-8703 (fax)
http://wihm.ucl.ac.uk

Collection: This collection includes the prints, drawings, photographs, paintings and moving-image films that Sir Henry Wellcome and his agents collected between 1880 and 1936. The works date from the middle ages to the present and include works by such artists as Picasso. Although based primarily on the depiction of medicine the collection is far-reaching in its subject matter and is one of the most important documentary collections in the world. The collection is still being extended.
System: WILDCat Software (Wellcome Institute Library Database and Catalogue). This is a customized version of the URICA System (McDonell Information Systems Ltd.(MISL)). Records are cataloged to UK MARC standard.
Subject: The textual records are stored separately from the images which are available on videodisk; 57,000 different images have been cataloged. These range from prints and drawings to moving images. The subject matter of the images is classified on a series of in-house subject terms which are arranged alphabetically. The terms are derived from the Library of Congress Subject Headings list (LCSH) or else structured using Anglo-American Cataloging Rules to correspond to the LCSH. Those terms that are derived from the Library of Congress List are

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indicated as such. The user of the system is presented with an alphabetical list of the terms which also includes people and places with qualifying extensions. There is an inherent rational order to these terms which is derived and based on that of the nine divisions in the ICONCLASS System. As a published system it acknowledges its debt to ICONCLASS.

Examples: Goiter (LCSH)
Gold(LCSH)
Gold Industry
Gold Jewelry
Golden Age (Mythology)
Golden Calf (Bible)
Golden Temple (Amristar, India)
Goldsmind, Isaac Lyon, Sir

The general search covers topics, genres, names and techniques. People and Institution terms are also included and these are structured using Anglo-American Cataloging Rules.

Witt Library, Courtauld Institute of Art, University of London
John Sunderland
Somerset House
The Strand
London WC2R 0RN
England
0171-873-2745
0171-873-2772 (fax)
http://www.Courtauld.ac.uk

Collection: Since its foundation in the 1890s the Witt Library has had it's own in-house system which has been used to catalog one and three-quarter million images of Western art from the later middle ages (1200) to the present period.
System: Images are filed principally on the basis of national school, and secondly on an alphabetical criterion. Within each artist's work a series of principal subject headings is used which may be further subdivided into secondary subject matter. There are twenty-four primary subject headings which are fixed and not expandable. These include Old Testament, Still Life, Saints, Fruits and Flowers, and so on. The secondary headings within the New Testament are fixed but otherwise this division is expandable. For example, Portraits may be subdivided into Half Length with Hands, etc., Landscapes may be subdivided into those with certain features or without them, e.g. Landscape with water, with bridges etc. The Library is presently being computerized using ICONCLASS.

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Yale Center for British Art, Yale University
Anne Marie Logan
1080 Chapel Street
P.O. Box 2120 Yale Station
New Haven, CT   06520
203-432-2846
203-432-9695 (fax)

Collection: This subject index has been applied to the Photographic Archives held at the Yale Center. These document British Art from 1500 to 1915 from public and private collections throughout the world. The project started in 1974 and has to date cataloged 36,000 images from the entire collection of approximately 80,000 black and white photographs.
System: Cataloging was originally begun using GRIPHOS on an IBM 370 os/VS but now uses FOCUS.
Subject: Subject matter is divided into three categories. The first of these is the Overall Subject Matter, fixed in number to thirty-seven Primary Terms and not expandable.

Examples: animals
architecture
art
catastrophes
cityscape
dress
education

A set of short guidelines for the cataloger accompany this listing:

animals   animals are of primary interest, other than sport and portrait
genre   contemporary scenes of everyday life

The secondary division is called the Proper Subject and it is here that specific details of the image are classified. These include named people and places. The list is expandable and to date includes approximately 14,000 terms. The Tertiary division lists generic terms and is also expandable. It is here that everyday subject matter depicted within the image is found. 3,000 terms are included within this division. An average of three to six terms is applied to every image.

Example: Westminster bridge-London-Lord Mayor's Day-Thames River
architecture: bridge
landscape: water: rivers
marine: boats
townscape

Reference: Sobinski-Smith, Mary Jane. "The Yale Center for British Art: The Photographic Archive and Iconographical Access." Visual Resources 1 (Fall 1980/Winter 1981): 173-87.

Appendix and Selected ICONCLASS Bibliography

ICONCLASS is by far the most widely used subject classification system with, it is estimated, over 1300 copies of both the printed and electronic versions distributed throughout the world. The following projects are among the known users of the system where it is used either singly or in combination with other classification methods:

Austria:
Dekant der Grund- und Intergrativissenschaftlichen Fakultät der Universität Wien
Vienna

Österreichische Nationalbibliothek, Plakate-Sammlung
Vienna

Belgium:
Koninklijke Musea voor Schone Kunsten van België
Brussels

Bulgaria:
Soros Centre for Arts
Sofia

Canada:
Canadian Heritage Information Network (CHIN)
Ottawa

National Gallery of Canada
Canadian Art Department
Ottawa

Denmark:
Kunst Index Danmark
The National Database of Art in Danish Museums
Copenhagen

Statens Museum for Kunst
Copenhagen

Finland:
The Finnish National Gallery
Helsinki

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France:
Connaissance du Patrimonie de Haute-Normandie
Rouen

Germany:
Bildarchiv Foto Marburg
Marburg

Fachhochschule für Bibliotheks- und Dokumentationswesen
Cologne

Fachhoschulbibliothek
Hannover

Freiburger Bücherdienst
Freiburg

Krause Büro-Infomationstechnik
Hannover

Museum für Kunsthandwerk
Leipzig

Niedersächische Landesverwaltungsamt, Institut für Denkmalpflege
Hannover

Universität der Bundeswehr Hamburg
Hamburg

Wallraf-Richartz-Museum
Cologne

Hungary:
Evtvvs Lorand University
Budapest

Italy:
Fratelli Allinari, Instituto de Edizione Artistiche
Florence

ICCD, Instituto Centrale per il Catalogo e la Documentatione
Rome

Scuola Normale Superiore
Pisa

Scuola di Paleografia e Filologia Musicale
Cremona

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Japan:
National Museum of Western Art
Tokyo

Netherlands:
Amsterdamse Hogeschool v.d. Kunsten, Reinwardt Academie
Amsterdam

Bibliotheek Ritman
Amsterdam

Department of Art History, Leiden University
Leiden

Department of Art History, Utrecht University
Utrecht

Dienst voor Schone Kunsten
The Hague

Historisch Museum
Rotterdam

Katholieke Theologisch Universiteit
Utrecht

Koninklijke Bibliotheek, National Library of the Netherlands
The Hague

Museum Boymans-Van Beuningen
Rotterdam

Nedbook International
Amsterdam

Rijksbureau voor Kunsthistorische Documentatie
The Hague

Rijksmuseum
Amsterdam

Universiteir van Amsterdam
Amsterdam

Norway:
Institute for Art History
Oslo

Norsk Folkemuseum
Oslo

Switzerland:
Databank Schweizerischer Kulturguter
Bern

Historisches Museum Basel
Basel

United Kingdom:
English Heritage
London

Leeds Polytechnic
Leeds

National Museums and Galleries on Merseyside
Liverpool

Oxford University
CTI Centre for Textual Studies
Oxford

Victoria and Albert Museum
London

Witt Computer Index
Courtauld Institute of Art
London

United States of America:
Cleveland Museum of Art
Cleveland, OH

Corbis Corporation
Bellevue, MA

Fine Art Library, Fogg Art Museum
Harvard University
Cambridge, MA

Getty Information Institute, Provenance Index
Santa Monica, CA

Indiana University Libraries
Bloomington, IN

Pomona College
Claremont, CA

Princeton University
Index of Christian Art
Princeton, NJ

Sonoma State University
Rohnert Park, CA

Sterling and Francine Clark Art Institute
Williamstown, MA

Trinity College
Hartford, CT

University of North Texas
Denton, TX

University of South Florida
Tampa, FL

University of Texas at Austin
Austin, TX

Yale Center for British Art
New Haven, CT

Further information can be acquired from:

The ICONCLASS Research and Development Group
Department of Computers and Humanities
Universiteit Utrecht
Achter der Dom 22-24
Utrecht
Netherlands
31-30-253-6426
31-30-253-9221 (fax)
iconclass@let.ruu.nl
http://iconclass.let.ruu.nl/

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Hourihane, Colum. "The Use of Proper Names in ICONCLASS: One User's Experience." <u>Visual Resources</u> 12 (1996): 187-97.

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