Development and Present Level of Documentation of Legal Informatics in Europe

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1. LEGAL INFORMATICS AND DOCUMENTATION

1.1. What are legal informatics?

Application of automated data processing (ADP) became self evident in the meantime in nearly all technical and scientific disciplines. In this field too jurisprudence is the « tail light » in development – perhaps apart from some pure theoretical subjects. It has always been difficult for the legal procedure to employ technical innovations and regulate their legal consequences in a convenient and suitable way. No wonder that too often development passed by the lawyers and those normally came too late to have directing influence. Opposite to this in a surprisingly short time-lag

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1. So – for example – only in 1975 (!) application of dictating machines for law court protocolling was sanctioned by law (stated December, 20th, 1974, BGBl, I, 3651) in the Federal Republic of Germany.
2. This phenomenon was described by JULIUS VON KIRCHMANN in his famous lecture given at the Juristische Gesellschaft Berlin in 1848: « Die Wertlosigkeit der Jurisprudenz als Wissenschaft » (Reprint: Darmstadt, Wissenschaftliche Buchgesellschaft, 1966, 46 p.) with sharp irony: « Dies eben ist das klägliche der Jurisprudenz, dass sie die Politik von sich aussondert, dass sie damit sich selbst für unfähig erklärt, den Stoff, den Gang der neuen Bildungen zu beherrschen oder auch nur zu leiten, ... Das Fundament zu legen, den neuen Bau kräftig in die Höhe zu führen, das können Juristen nicht. Wohl aber, wenn der Bau fertig ist, wenn die Säulen ihn tragen, dann kommen sie wie die Raben zu Tausenden und nisten in allen Winkeln und messen die Grenzen und Dimensionen bis auf Zoll und Linie und übermalen und überschnärrkeln den edlen Bau, dass Fürst und Volk kaum noch ihrer Taten Werk darin erkennen » (a.a.O., p. 45).
(for lawyers) the (social-)legal problems connected with the installation of ADP were recognized at least at the start. Early — in the middle of the sixties — out of the scattered single efforts a new field of science was built up in outlines — legal informatics. It can be defined as the discipline that contains the mutual context of ADP and law, i.e., all questions of application of ADP in jurisdiction and administration (automation of law) and on the other side new legal problems, arose with the application of ADP (law of automation).

1.2. Automation and documentation

Affairs of documentation gained new importance by the possibility, given with the application of non-numerical data processing, to control the redundant flood of information (at least quantitatively). Junctions result to legal informatics and juridical information science: automated documentation is an important reach of research and practice of legal informatics. Not ADP-technical details are of interest but the consideration of specific juridical requirements and — especially — legal consequences of documentation and information systems. As far as legal documentation is concerned, the relation to legal informatics is naturally very close. Without contribution of legal informatics for example the uniform federal juridical information system JURIS which is in construction, is not conceivable.

1.3. Necessity of a documentation of legal informatics

The quick progress of ADP in all disciplines was followed by legal informatics too. Meanwhile the special catalogue of the latter has become so extensive — publications are so numerous and simultaneously so scattered — that relatively soon a special documentation became necessary. Since the terms «information» and «information processing» are central ones in legal informatics, systematic registration and processing of knowledge is obvious. The task to process informations of one's own field doc-

3. Occasionally also called legal cybernetics; in other languages known as Rechts-informatik, informatique juridique, informatica giuridica. — The matter concerns less applied informatics than a special kind of information science (see LAISIPEP, KLAUS; LUTTERBECK, ERNST; MEYER-UHLENRIED, KARL HEINRICH: «Grundlagen der praktischen Information und Dokumentation. Eine Einführung», Munich-Pullach and Berlin, Verlag Dokumentation, 1972. DGD-Schriftenreihe, Band 1, p. 64).

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rantly is therefore directly situated in the competence of legal infor-
matics: here documentation becomes an integrated component of the
documented field of knowledge – at least insofar as it deals with automated
documentation.

1.4. International cooperation

Legal informatics are not only of decided interdisciplinary character but
also – like ADP for itself – are dependent on international context. Only
the costs for automated documentation systems of greater size make this
necessary. Hence it is intelligible that documentation of legal informatics
too should become more and more structured homogeneously, at least in
the European area. The co-existence of divers national bibliographies with
different systems has proved itself to be inconvenient and unpracticable –
apart from the unnecessary costs.

In the meantime development has reached a stage, that in the near future
publication of an international bibliography can be expected. The single
steps to reach this aim and the present state of affairs shall be shown in
the following.

2. Former documentations of legal informatics

Starts for bibliographical registration of the wide spread material have been
made years ago. Some of the numerous separate documentations which
touch to legal informatics shall be mentioned:

— Centre de Documentation Sciences Humaines (C.D.S.H.) du C.N.R.S.:
«Informatique et Sciences Juridiques», Collection Documentation, Paris,
— Deutsche Akademie für Staats- und Rechtswissenschaft (ed.): «Staat
— IBM (ed.): «IBM-Wissenschaftliche Bibliothek», Sindelfingen (ir-
regular).
— Istituto per la documentazione giuridica del Consiglio Nazionale delle
Ricerche: «Bollettino bibliografico d'informatica generale e applicata al
— Masson & Co. (ed.): «JURINDEX: L'informatique appliquée à l'actua-
— National Computing Centre, Manchester; Stichting Het Nederlands
Studicentrum voor administratieve Automatisering, Amsterdam: «Inter-
national Computer Bibliography», Manchester/Amsterdam, 1971 ff.
— Schubert, Wolfram; Steinmüller, Wilhelm: «JUDAC - Recht, Daten-
verarbeitung, Kybernetik - Internationale Bibliographie», Munich, C.H.

Two thirds of these bibliographies are especially concentrated on the subject «legal informatics». From these only three documentations work ADP-supported: the German system LEDOC/REDOK, the Italian «Bollettino bibliografico d’informatica generale e applicata al diritto» and the «Collection Documentation» of the French C.N.R.S. These three projects will be the main support of the international bibliography on legal informatics in future. For this reason they shall be considered in detail.

2.1. REDOK (JUDAC, LEDOC)

At the chair of Prof. Dr. Wilhelm Steinmüller at Regensburg in more than one respect a documentation of literature relevant for legal informatics was tried. One of the projects is the documentation of journals called REDOK. The other two — they have been developed earlier — are the international bibliography JUDAC 7 and the automated internal (of the chair) documentation system LEDOC. While JUDAC is a completed single published quadrilingual bibliography 8 LEDOC and REDOK are successive projects.

2.1.1. LEDOC

On account of the experiences gathered by JUDAC in 1971 the development of an automated documentation and retrieval system — geared especially to scientific requirements — was started. The computer programs (Assembler) have been written by Leonhard Ermer, who was at that time cooperator of Prof. Steinmüller. The very comfortable and flexible program package — meanwhile existing in version IV/V — got the name LEDOC («LEhrstul-DOCumentation»). The system has been in use since 1973. LEDOC operates by batch and/or dialogue processing with intellectual indexing; it offers very variable investigations (alternatively automated or manual) according to different locate modes. Descriptors are taken from a schedule which includes at present about 4,700 headings. To each of the stored documents — marked by a certain assigned identification number (Ident-Nummer) — one or more descriptors are allocated. At the same

8. At any rate the first — even if made «by hand» — international bibliography on legal informatics.

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time in addition to each of the descriptors a value number is assigned according to the contents of the document. Manual or automated retrieval finally happens by connection of descriptors and respective identification numbers. Both in allocation of descriptors and in investigation all kinds of logic connections are possible. This type of internal machine connection for which the system is noted yields to an extraordinary favourable recall quote for comparable documentations.

According to the initial objective first the literature collected at the chair since 1968 – if not already contained in JUDAC – was stored and processed. The catalogues available in the form of a computer printout support the scientific work of the chair. The users also are able to process individual investigations with help of the system.

At present LEDOC includes literature and jurisdiction available since 1973, in a wide extent also literature published previously as well as statutes and materials about laws. On the whole at present (fixe date for investigation: 31.12.1975) 6,530 documents have been stored and processed.

2.1.2. REDOK

To make the material included in LEDOC also available to outsiders one decided to publish the output in shape of the most important catalogues. For reasons of capacity and urgency the documentation was restricted to periodicals. From experience we know that the users’ interest is concentrated on the latter ones.

This special documentation of periodicals – an « excerpt » out of LEDOC – first was published and printed early in 1974 by the ‘Arbeitsgruppe LEDOC’ at the chair of Prof. Steinmüller and got the name REDOK. It included quarterly deliveries and besides this an annual edition 9.

The preparation of material by REDOK takes place in four catalogues resp. lists:

— Catalogues of titles: Includes bibliographical details and descriptors with regard to the contents of the single documents. Each title is re-

9. Altogether the following volumes were published:
   REDOK 1973 (literature from 1973);
   REDOK I-IV 1974 (quarterly editions of literature from 1974);
   REDOK 1974 (annual edition from 1974);
   REDOK I-IV 1975 (quarterly editions of literature from 1975);
presented by a certain identification-number (Ident-Nummer). The catalogue is ordered in sequence of identification numbers (see fig. 1).

**FIG. 1**

LEDOC TITELKATALOG 29.10.75 SEITE 7
05732 A D 1975 * 31 PI 128 DVR, BD.04, H.01, S.192
HAFT, FRITJOF: INFORMATIONSVERHALTEN UND INFORMATIONSBEDARF VON JURISTEN DVR BEIHEFT 2, TEIL 1: ANALYSE-BD. BUCHBESPRECHUNG
* IN: DATENVERARBEITUNG IM RECHT. BD.4 (1975) H.12, S.192-195
INFORMATIONSKRIZE, JURISTISCHE (2); INFORMATIONSKRIZE * EDV (2);
DATENBANK, JURISTISCHE, ORGANISATION (1); BENUTZERVERHALTEN (2);

— List of descriptors: Contains in alphabetical order all descriptors allocated to the separate titles connected with identification numbers of those documents in which the respective descriptors are found (see fig. 2).

**FIG. 2**

LEDOC DESKRIPTORENLISTE 30.10.75 SEITE 27
INFORMATIONSFLUT — INFORMATIONSKRIZE, JURISTISCHE
INFORMATIONSKRIZE
5515
INFORMATIONSKRIZE*EDV
5732
INFORMATIONSKRIZE*EXEKUTIVE
5432
INFORMATIONSKRIZE, JURISTISCHE
5732 5559 5734

— Catalogue of authors: Contains in alphabetical order the names of authors, connected with part of the title and identification number of the respective document (see fig. 3).

**FIG. 3**

LEDOC AUTORENKATALOG 30.10.75 SEITE 5
HAFT, FRITJOF
05732 AD 75 INFORMATIONSVERHALTEN UND INFO DVR, BD.04, H.01, S.192
HAROLD, SUZETTE
05560 AE 75 PROGRAMMING FOR THE FUTURE DAYS, JG.16, H.06, S.26
HARTMANN, HEINZ
05577 AD 75 GERICHTSURTEILE AUS DEM COMPUT FR, JG.31, N.213, S.13
HAUFF, VOLKER
05688 AD 75 PRODUKTIVITAETSSTIEGERUNGEN IM GMDSP, (1975) H.01, S.21
Retrieval by REDOK can be made either with help of the catalogue of
authors or by using the list of descriptors combined with the respective
identification numbers (see figs. 2, 3 in connection with fig. 1).

With regard to contents and workability for REDOK incidentally the
same holds like for LEDOC. REDOK too has an own investigation service
by automated retrieval to its disposal.

REDOK has documented periodicals since 1973. At all 2.688 documents
have been processed and published. Because of being part of the interna
tional bibliography on legal informatics since January 1976 REDOK
is no more published.

2.2. "Bollettino bibliografico d'informatica generale e applicata al diritto"

In Italy the Consiglio Nazionale delle Ricerche (CNR) keeps a special
institute for legal documentation with residence in Florence. This "Istitu
to per la documentazione giuridica dei CNR" gives its special attention
to automation-supported documentation in judicial system as well as to
legal informatics. It co-works among others with the information system
ITALGIURE of the italian court of cassation and has imposant capacity
of personnel and machines. The director of the Istituto is Prof. Dr. L.
Lombardi Vallauri.

10. Because of the cooperation at the international bibliography (see chapter 3)
publication of REDOK was stopped in the meantime. It is planned, however, to
integrate the present material into the federal uniform juridical information system
JURIS.
11. I-50127 Firenze, Via Panciatichi, 56/16.
12. The Istituto is equipped with a data processing centre of its own, which is
directed by a research worker; moreover the personnel comprises three program
analysts and two operators. Hardware: an IBM 360/20, an IBM 2741 terminal, an
IBM 029 card punch and an IBM 129 card punch. A leased telephone line connects
with the University of Pisa data processing centre (CNUCE; which is equipped with
an IBM 370/67, an IBM 370/158 and an IBM 370/168.
Since early in 1972 the Istituto edited an own quarterly bibliography on legal informatics, the « Bollettino bibliografico d’informatica generale e applicata al diritto » 13. This documentation was made out by ADP too. It based, however, on an other type of system than used for LEDOC/REDOK. The peculiarities can be characterized as follows:

— Indexing is not - like for LEDOC/REDOK - made by allocating descriptors, but by formulating abstracts (intellectually).
— Beyond it a special classification scheme worked out by the Istituto serves for retrieval.
— Processing of material is made by the KWIC-program (resp. KWOC-system since 1973), developed by IBM.

The « Bollettino » includes three catalogues:

— Key-words’ index (« indice per parole chiave »): It consists of an alphabetical order of headings, which are (semi-automatically) drawn out of the separate titles or abstracts. At the respective heading all titles of that documents are printed which contain the heading. Documents can be found by help of a certain code-number which also is printed out (see fig. 5).

**FIG. 5**

264 - *Indice per parole chiave*

**Chimica**

_Use, Efficiency and Cost of External Information Services._ (Utilità, efficienza e costo dei servizi d’informazione esterna). 246 /3p155

**Cibernetica**

_Linguaggio, cibernetica e traduzione meccanica._ Cibernetica e « teoria dei sistemi »: possibili contributi allo studio della società. 2152 /3p088

_La cibernetica e il diritto._ 2166 /3p131

_La cibernetica e il diritto._ 219 /3p087

— Systematic and analytical bibliography (« bibliografia sistematica e analitica »): Here you can find – following the classification scheme – complete informations about all titles, i.e. all bibliographical informations as well as an abstract (see fig. 6).

13. The following numbers were published:
Vol. 1 (1972) No. 1 (January-March 1972);
Vol. 1 (1972) No. 2 (April-June 1972);
Vol. 1 (1972) No. 3/4 (July-December 1972);
Vol. 2 (1973) No. 1/2 (January-June 1973);
— Author index («indice per autori»): Includes a listing of authors in alphabetical order connected with the respective title(s) and the appropriate code-number (see fig. 7).

 Retrieval for «Bollettino bibliografico...» is made first of all by using the key-words’ index or the author index. With the help of the outprinted code-numbers in these catalogues, whose first parts follow the classification scheme, you can find the complete document in the systematic and analytical bibliography (see figs. 5, 7 connected with fig. 6).

 Contrary to LEDOC/REDOK the application of ADP is limited to registration and processing of documents only. Retrieval is solely made intellectually on the basis of the outprinted bibliography. Automation-supported investigation service does not exist.

 In 1974 (Vol. 3/4) in the course of a beginning cooperation also material from REDOK was adopted in «Bollettino bibliografico...». Because of the systems’ differences the yearly edition of REDOK 1973 with all
catalogues was printed in full extent in an appendix of « Bollettino bibliografico... ».

2.3. « Informatique et Sciences Juridiques »

The French « Centre de Documentation Sciences Humaines » (C.D.S.H.) is similarly like the Italian « Istituto per la documentazione giuridica » part of the national central organization for scientific research (in France: Centre National de la Recherche Scientifique = C.N.R.S.). In 1969 it started with documentation of publications about legal informatics. Since 1973 the automation-supported bibliography « Informatique et Sciences Juridiques » is published yearly. Up to the present the following numbers were published: edition 1973 including 272 documents from the years 1972/73, edition 1974 including 383 documents from the year 1974. In 1971 a first, only manually worked out edition was published.

The French documentation may be not so extensive like the Italian « Bollettino bibliografico... » and the German documentation REDOK, but clearly it surpasses the two others in comfort: The French Collection Documentation includes no less than 9 indices! They are the following ones:

— Index Types de documents (fig. 8).

FIG. 8

Zéro Un Informatique Hebdo.

N° 287/27/05/1974 .......................... 1974-74-0496-F
N° 254/1/10/1973 .......................... 1973-74-0481-F
74-0482-F
74-0483-F

— Index Auteurs.
— Index Organismes (classified by the organization to which a certain author belongs).
— Index Expériences décrites (classified -- ordered for each country -- by the running projects which are described or mentioned).
— Index Concepts (a kind of key-words index connected with a short information about the respective document including its key-words and indication of the number of document) (see fig. 9).

FIG. 9

LIBERTÉS PUBLIQUES

La définition des (…) devant être protégées contre l’ordinateur en France en 1973 .......................... 1974-74-0303-F

15. Published in 1974.
16. Published in 1975.
It seems doubtful whether a reliable retrieval is facilitated by such a diversity. By greater numbers of documents this type of bibliography is possible to become unclear. The fact, however, that the used software – the system SPLEEN – allows to draw up selective dissemination of informations – for example classified by user’s profiles – proved to be extraordinarily useful. Beyond that the Centre de Documentation Sciences Humaines offers an individual investigation service.

3. INTERNATIONAL BIBLIOGRAPHY ON LEGAL INFORMATICS

Bringing together the material out of «Bollettino bibliografico...» and REDOK – connected with a co-work of other foreign centres too – suggested the consequence to let the side by side working individual projects be incorporated in an extensive, consistent international bibliography on legal informatics. Therefore in June 1974 interested experts in legal informatics from several European countries met at the constituting session of an international advisory committee in order to envisage a realization of the project.

3.1. Organization

In Florence already was agreed that the Italian Istituto per la documentazione giuridica del CNR should coordinate the edition of the new
bibliography because of its special capacities. National centres should solely responsible collect and register (on printed sheets) the documents and send them to the Istituto for automated processing and printing. Besides this the German Centre (Dokumentationstelle für Information und Recht – DOSIR, University of Regensburg) has a special position: It is not only responsible for the Federal Republic of Germany, but also – with help of special sub-centres – for all German speaking foreign countries as well as for the socialistic states of Eastern Europe (excepted USSR) and Japan.

Organizational structure of all centres (including sub-centres) you can see in fig. 11.

Due to the agreements, the centres have started their work at the end of 1974 or early in 1975 and registrated first the literature from 1974. This material was given till the autumn of 1975 to the Istituto. Meanwhile the first number of the bibliography, partly including this material, has, been published in July 1976. In a relative short time then the documents from the year 1975 shall be finished off, so that as fast as possible the intended rhythm can be found. Later on the bibliography should be at disposal about three months after the end of the respecting registration period (six months).

3.2. « Informatica e Diritto »

The international bibliography on legal informatics will be published within the quarterly published « Informatica e Diritto » alternating with the « Studi e ricerche » number. The bibliography so in fact is published semiannual.

3.3. Field of registration

The international bibliography has to cover a spectrum of legal informatics (inclusive of its neighbour disciplines) as broad as possible and will include publications out of a great number of documents and kinds of them. Thus to the material to be registrated belong among books and periodicals also judgments and laws (inclusive of materials out of parliament) as well as non-published documents of « grey » literature (referats, papers, expertises, firm scripts etc.), which are relevant for science and practice.

17. DOSIR is because of its cooperation with the international project financed by the « Institut für Dokumentationswesen » (IDW), Frankfurt.
18. Casa Editrice Felice Le Monnier, Via Scipione Ammirato 100, I-50136 Firenze.
19. According to the publishing firm a complete subscription of « Informatica e Diritto » shall cost 48 Dollars abroad. Subscription of only the essay number (studi e ricerche) shall cost 19 Dollars, subscription of only the international bibliography shall cost 36 Dollars annually.
FIG. 11
What concerns the contents of registration the whole field of legal informatics shall be included.

1) Application of ADP in the whole field of law: e.g.
   — documentation systems,
   — decision processes,
   — automation of public administration, courts and parliaments as well as other macro-organizations.
2) Information law and sociologic problems with regard to information systems.
3) Theory and technology of information and data processing including formal and cybernetic aspects, if a possible connection to 1) or 2) can be given.

3.4. Processing of data

Automated processing of the input data is made for the international bibliography as well as for «Bollettino bibliografico...» by the KWIC/KWOC-system of IBM (see 2.2). In this respect international bibliography of legal informatics can be considered as successor of «Bollettino bibliografico...».

3.5. Classification

In order to make retrieval less complicated documents shall be classified in addition to abstracts and key-words. An appropriate (decimal) scheme is yet to be found, a very difficult work in a new and decided inter-disciplinary field like legal informatics. The problem is — after all — not only to find a formal bibliographical order, but also to value and to differentiate the contents. This means that on the one hand classification has to represent the worked fields and their main reaches, on the other hand it has to be open and flexible enough for developments in the future.

In the meantime documents are classified by a method designed newly by the Italian Istituto. For the next time elaboration of a definite classification supported by all participants is planned.

3.6. International advisory committee

The bibliography shall be the result of a real international cooperation 20. Reponsibility (above all the scientific one) shall be beared by all participants. This will be guaranteed by an international advisory board which

20. In the meantime the international bibliography will be published with the abbreviated title «BID» (from the Italian: Bibliografia d'Informatica e Diritto).
consists of leaders and members of the single centres. It has to lay
down the scientific foundations for the common work. At the first con-
stituting session for example the registration field was determined. At
present the most urgent problem is that of working out a new classifica-
tion scheme. Some kind of thesaurus, by structuring the key-words taken,
is also to be found.

In the long run the experiences of documentation work should place a
specialized contact surpassing bibliographical work. At the sight of the
different developments of legal automation in the single countries this
aspect is of special importance and a very fertile cooperation for the whole
legal informatics can be expected.