

# Serials diplomacy at the ISSN International Centre: a unique and sustainable experience (1975-2015)

Gaëlle Béquet

Director of the ISSN International Centre (CIEPS)

E-mail: gaelle.bequet@issn.org

## Abstract

In 1975, the creation of the *Centre d'enregistrement des publications en série* (CIEPS) / International Centre for the Registration of Serial Publications was supported by Unesco and France. This intergovernmental organisation is responsible for identifying serial publications through the International Standard Serial Number (ISSN). Since 1975, this unique international entity has relied on a large network of ISSN national centres established in national libraries and scientific institutions worldwide. The network participation has evolved in parallel with the political evolution of Europe in the 1990s and still attracts new members which enlarge its scope and enhance its effectiveness. The Paris-based ISSN International Centre is at the nexus of this worldwide bibliographic cooperation since it produces and maintains the ISSN Register which records authoritative metadata about print and digital serial publications. The directors of the ISSN International Centre have played a significant role in the rich history of the ISSN network which has been engaged in various projects related to long-term digital preservation and Open Access publications.

**Keywords:** International Standard Serial Number. ISSN. Unesco. Diplomacy.

## ***Diplomacia de publicações seriadas no Centro Internacional do ISSN: uma experiência única e sustentável (1975-2015)***

### **Resumo**

*A criação do Centro Internacional de Registo de Publicações Seriadas (CIEPS) em 1975 foi apoiada pela Unesco e pela França. Esta organização intergovernamental é responsável por identificar publicações seriadas por meio do Número Internacional Normalizado para Publicações Seriadas (ISSN). Desde 1975, esta entidade internacional única contou com bibliotecas nacionais e instituições científicas em todo o mundo para o estabelecimento da grande rede de Centros Nacionais do ISSN. A rede avançou em paralelo com a evolução política da Europa na década de 1990 e ainda atrai novos membros que amplia o seu alcance e melhora a sua eficácia. O Centro Internacional do ISSN, com sede em Paris, é a conexão desta cooperação bibliográfica mundial, uma vez que produz e mantém o registro do ISSN de autoridades de publicações seriadas impressas e digitais. Os diretores do Centro Internacional desempenharam papel significativo na rica história da Rede ISSN, que tem se envolvido em vários projetos relacionados à preservação digital de longo prazo e publicações de acesso aberto.*

**Palavras-chave:** Número Internacional Normalizado para Publicações Seriadas. ISSN. Unesco. Diplomacia.

## ***Diplomacia de publicaciones seriadas en el Centro Internacional del ISSN: una experiencia única y sostenible (1975-2015)***

### **Resumen**

*La creación del Centro Internacional de Registro de Publicaciones Seriadas (CIEPS) en 1975 fue apoyada por Unesco y Francia. Esta organización intergubernamental es responsable de identificar publicaciones en serie por medio del Número Internacional Normalizado para Publicaciones Seriadas (ISSN). Desde 1975, esta entidad internacional única contó con bibliotecas nacionales e instituciones científicas en todo el mundo para establecer la gran red de Centros Nacionales del ISSN. La red avanzó en paralelo con el desarrollo político en Europa en la década de 1990 y todavía atrae nuevos miembros, lo que amplía su alcance y mejora su eficacia. El Centro Internacional del ISSN, con sede en París, es la conexión de esta cooperación bibliográfica mundial, ya que produce y mantiene el registro ISSN de autoridades de publicaciones seriadas impresas y digitales. Los directores del Centro Internacional desempeñaron un papel importante en la rica historia de la red ISSN, que participa en varios proyectos relativos a preservación digital a largo plazo y publicaciones de acceso abierto.*

**Palabras clave:** *Número Internacional Normalizado para Publicaciones Seriadas. ISSN. Unesco. Diplomacia.*

## **INTRODUCTION**

In 2015, the CIEPS<sup>1</sup> / ISSN International Centre is taking the opportunity of the celebration of its fortieth anniversary to look backward and search through its historical archives to remind the library and information science community of the vision of its founders and the main stages of its evolution. As the American historian Stephen Ambrose wrote: “the past is a source of knowledge, and the future is a source of hope. Love of the past implies faith in the future”. This glimpse into the ISSN past seems today an essential prerequisite to better understand where the ISSN International Centre and its network now stand and also to delineate some directions for their future development.

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<sup>1</sup> CIEPS stands for Centre international d'enregistrement des publications en série: it is the intergovernmental organization which was founded in Paris in 1975 and has been in charge of structuring ISDS (see below).

The cornerstone of ISDS<sup>2</sup> was laid by Unesco in the 1970s. The practical implementation of Unesco guidelines owes much to the personality of Marie Rosenbaum (1926-1986) whose professionalism and diplomatic skills were highly praised. Her cosmopolitanism and her good relationships with French administration and Unesco staff were crucial to lay the foundations of a new intergovernmental organization which was unique in the field of information and documentation. She also campaigned worldwide for the accession of countries to the ISDS Statutes and for the use of ISSN by serial publishers and abstracting and indexing services.

Right from the start, it was clear that ISDS International Centre, as it was then called, was to

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<sup>2</sup> ISDS stands for International Serial Data System: it was the name given to the global organization set up to handle the assignment of International Standard Serial Number (ISSN).

develop products based on the ISSN database and sell them to a large community of stakeholders. The distribution and sale of ISSN data (whether print-based bibliographies, cd-roms or online portal) have always represented an important contribution to the ISDS International Centre operational budget. These products pertained to the progress of automation at the ISSN International Centre and in the network. They also show the growing variety of resources which are identified by ISSN, including online publications.

The history of the ISSN International Centre and its network is closely related to Unesco history and it has naturally been strongly influenced by the evolving political, economic and technical backgrounds over the span of the last forty years. Two periods can be roughly identified. Before 1990, the cultural and scientific diplomacy between the Eastern and Western blocks was high on the agenda. The CIEPS was thus created to provide a framework for negotiation and decision-making about the identification of scientific information at the international level. However bibliographic cooperation with Eastern countries proved to be complex. Financial support from Member States was another key issue for CIEPS. The network gradually expanded and the calculation of contributions was a much-debated topic at the Governing Board.

With the end of the bipolarization of the world in 1990 came the decline of centralized State systems, the liberalization and globalization of economy and the emergence of networked information and communication technologies. The CIEPS had to manage the crisis with former CMEA countries by establishing direct contacts with ISSN national

centres and sorting out ISSN records to match new geographic boundaries. Since the early 1990s, the CIEPS has also been faced with the growing importance of electronic serial publications and the consolidation of the publishing sector. The latter has given birth to multinational players with powerful financial capabilities and growing serial productions with which the ISSN network has to keep pace. The recent rise of Open Access publishing has also impacted the business of CIEPS by providing outsiders with the opportunity to launch numerous serial publications that need identification.

## **THE COLD WAR ERA**

### **THE ISSUE OF THE IDENTIFICATION AND EXCHANGE OF SCIENTIFIC AND TECHNICAL INFORMATION**

In 1947, that is barely two years after its establishment, Unesco signed an agreement with the International Federation of Library Associations and Institutions (IFLA), thus demonstrating its interest in library issues. Unesco tackled the issues of the development of national bibliographies and the automation of archives and documentation and organized the Conference on the improvement of bibliographical services (7-10 November 1950, Paris). In the 1970s, two programmes related to libraries and information policies were launched by Unesco. The NATIS programme supported the implementation of national information systems to which IFLA contributed by setting up the Universal Bibliographic Control (LOR, 2012). The second programme was called UNISIST and was meant to foster the development of a world scientific information system. The International Serials Data System was initiated under its aegis.

A milestone study on the feasibility of a world science information system (UNISIST) was conducted between 1967 and 1971 under the auspices of Unesco. It included a very specific recommendation on the creation of a global register of scientific journals and standardized references for scientific and technical periodical literature. It further recommended to elaborate a “universally accepted code applicable to scientific journal titles” (UNESCO, 1971) that would subsequently allow the identification of other library items such as journal articles, monographs and technical reports. INSPEC (Information Services for the Physics and Engineering Communities) contributed to this study by producing a report on the feasibility of an international system of information on periodicals (MARTIN; BARNES, 1970). The Sixteenth session of the General Conference of Unesco took a resolution authorizing the Director General of Unesco “to foster international cooperation in scientific and technical information by improving scientific periodicals, journals abstracts and scientific cooperation” (UNESCO, 1970). At that time, the emphasis was clearly put on scientific serial production.

In 1971 a study was drafted by Marie Rosenbaum under contract between Unesco and the Bibliothèque nationale. She made several interviews and professional visits to identify the future users of the ISDS, i.e. bibliographical information centres, libraries, publishers and subscription agencies. Her report pinpointed the discrepancies between the needs of these different constituencies. Bibliographical centres were keen on having an instrument for identifying serials, including all current scientific and technical ones, in order to exchange standardised data at the international level.

They wanted identification and basic description of serials. Libraries were more interested in creating exhaustive national catalogues of serials whatever their type. They needed identification through a number and data elements ready to use for cataloguing. Publishers insisted upon the rapid numbering of current serials and would have liked the ISSN to adopt the same structure as ISBN so that it would have been easy to identify the country of origin of a serial. They also wanted ISDS to deal with all kinds of serials. It is noteworthy that divergent views were expressed about the initial file (scientific serials versus exhaustive list), the structure of the system (centralization versus decentralization), the number and nature of the descriptive data elements and the mode of ISSN assignment. The 1971 study advocated the setting up of an initial database that would include serials irrespective of their subject fields. The two-tiered system based on an international centre linked to national centres was also introduced. The international centre would compile the basic file whereas national centres would contribute national serials records and maintain more complete records in the national catalogues. The central database would store data elements for identification and for transmission of information and include identification numbers already in use such as CODEN<sup>3</sup>. The identification of the country in the numbering scheme was dismissed.

### THE FOUNDING MOTHER OF ISDS

Marie Rosenbaum played a linchpin role in the creation of CIEPS. She was born in 1926 in

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<sup>3</sup> The CODEN is Six-character unique alphanumeric code that permanently identifies that identifies titles of serial and non-serial publications. Since 1975, it has been managed by the American Chemical Society.

Chisinau, which then belonged to the Kingdom of Romania. She spent some time in the United States during the Second World War and settled in France in 1946. She first studied English literature at the University of Toulouse and received her graduate degree in library science in 1962. She held her first position at the Direction des bibliothèques et de la lecture publique depending on the Ministère de l'Éducation nationale. In 1972 she was recruited as the first director of the incipient ISDS international centre and ISDS network that she built from scratch and managed until her death in 1986<sup>4</sup>.

Her personality was certainly crucial in the success of the ISDS enterprise. Her diplomatic and linguistic skills were highly praised by those who met her. She had a good command of six languages and could hold lengthy meetings. She notably spoke Russian which helped her considerably in tactfully handling the relationship with the CMEA<sup>5</sup> regional center in Moscow. She was also a remarkable librarian very much involved in standardization processes at ISO and IFLA. She contributed to the harmonization of IFLA's ISBD(S)<sup>6</sup> and ISDS manual. After her appointment at ISDS, she started travelling extensively to promote the system and to encourage countries to set up ISDS national centres.

She worked hand in hand with Paul Poindron<sup>7</sup> who also played an important part in the creation of CIEPS as the French representative to Unesco / UNISIST program and senior official in charge of the administration of French libraries. They knew

each other well and he actively campaigned for the creation of the ISDS international center and was a member of the board of directors between 1976 and 1980, where his influence was significant<sup>8</sup>.

### **CIEPS: A NEW AND ORIGINAL ORGANIZATION**

The provisional agreement between Unesco and the French Republic to create the Centre international d'enregistrement des publications en série (CIEPS - International Centre for the Registration of Serials) was signed on July 13th, 1972. For Unesco administration, the objectives of the International Serials Data System (ISDS) were

to develop and maintain an international register of serial publications, to define and promote the use of a standard code (ISSN), to facilitate retrieval of scientific and technical information in serials, to make this information currently available, to establish a network of communication between libraries, secondary-information services, publishers of serial literature and international organizations, to promote international standards for bibliographic description, communication formats and information exchange in the area of serial publications (THE INTERNATIONAL SERIALS DATA SYSTEM, 1973).

CIEPS was first administered by the French governmental library department called Réunion des bibliothèques nationales that also managed CIEPS budget. At that time, the French government agreed to fund the salary of the Centre's director and expenses up to 615,000 francs (equivalent to 580,860 euros in 2013<sup>9</sup>) for the years 1971 and 1972. Unesco subsidized the new organization with 70,000 US dollars (equivalent to 390,000 USD in 2013). This interim agreement was renewed annually and

<sup>4</sup> See the obituary published in the Newsletter of the IFLA section on serial publications (n° 11, April 1987).

<sup>5</sup> Council for Mutual Economic Assistance also known as Comecon.

<sup>6</sup> International Standard Bibliographic Description - Serials.

<sup>7</sup> See the obituary published in Bulletin des Bibliothèques de France in 1980. <http://bbf.enssib.fr/consulter/bbf-1980-02-0051-001.pdf> [19/01/2015]

<sup>8</sup> See tributes to Paul Poindron by Wolfgang Lohner (Unesco) and Simeon Babasany Aje (Nigeria) during the third meeting of the ISDS Governing Board (Paris, April 22-23, 1980). CIEPS Archives.

<sup>9</sup> The tool used to calculate amounts in constant EUR or USD is managed by INSEE and Available from: <http://www.insee.fr/fr/service/reviser/calcul-pouvoir-achat.asp>.



remained in force until the end of 1974. That very same year, the United States of America (USA) paid a first contribution amounting to 40,000 dollars.

The final agreement between France and Unesco creating the CIEPS was signed on 14 November 1974 by René Maheu, Director-General of Unesco, and Pierre Maillard, Ambassador and Permanent Delegate of France to Unesco. This treaty was ratified by the French Parliament in December

1975. Further to the agreement, a circular letter signed by René Maheu appealed to members of the United Nations to join the International Serials Data System network. Some countries such as the United States of America, Australia, Canada and the United Kingdom had already set up ISDS national centres (BRADLEY, 1978). At first, the center was hosted by the Bibliothèque nationale, rue de Richelieu in Paris. It moved to rented premises in 1974 to 20 rue Bachaumont in Paris.

Figure 1 - The signature of the agreement between Unesco (represented by its director René Maheu) and the French Government (represented by Pierre Maillard, head of the French delegation to Unesco) about the creation of CIEPS, november 14, 1974.



From January 1976 on, CIEPS became an independent intergovernmental organization with full financial autonomy (UNESCO, 1976). The statutes<sup>10</sup> were published in the *Journal officiel de la République française* in March 1976. At its first meeting in Paris in October 1976, the ISDS General Assembly amended the text of the Statutes of the International Centre. Four governing bodies were instituted: the General Assembly, the Governing Board, the Technical Advisory Committee and the Director. The General Assembly, which meets every two years, consists of one representative of each of the Member States and Associate Members of Unesco who have acceded to the statutes and one representative of the Director General of Unesco. The Governing Board comprises twelve representatives of Member countries, France and Unesco. It meets on ordinary session once a year. The Director is appointed by the host State, e.g. France, and can be assisted by a Technical Advisory Committee.

Before 1977, both France and Unesco fully supported the operating costs of CIEPS. New activities related to the implementation of the ISDS database caused the budget to become unbalanced and forced the board to approve a resolution on funding. This resolution provided that the French government would cover 60 % of CIEPS budget while Unesco covered 5%. The rest of the budget would be covered by Member States (except France) up to 27% while sales of publications would cover 8% of the total income budget.

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<sup>10</sup> Décret n°76-204 du 24 février 1976 portant publication de l'accord entre le Gouvernement de la République française et l'Organisation des Nations Unies pour l'éducation, la science et la culture au sujet de la création et du fonctionnement d'un centre international d'enregistrement des publications en série signé à Paris le 14 novembre 1974.

It was decided that Member States' contributions would be calculated as follows: a basic uniform contribution of 1% of the total amount charged to the Member States and a variable contribution from Member States whose records represented more than 1% of the Register; the contribution was proportional to the number of records produced and managed by the CIEPS. Finally, it was stated that no country could contribute more than 20% of the total amount charged to the Member States.

The Federal Republic of Germany paid its first contribution in 1977. In 1978, Canada, Nigeria, the United Kingdom and the United States started contributing regularly, and so did Japan in 1979. The issue of contributions came up again on the agenda of the second Governing Board meeting in April 1978. The USSR representative considered that there should not be any financial contribution, as Member States already provided records for the ISDS register which could be regarded as a form of input. He also hoped that contributions, if passed, could be paid in national currency<sup>11</sup>.

In 1980, 23 member countries contributed regularly to CIEPS budget. However, the calculation method was disputed because it penalized countries delivering many records to the ISDS Register. The representative for Canada, Cynthia J. Durance, proposed to base the contribution on the gross national product assessed by Unesco statistics. Dated April 1982, Resolution 7 of the General Assembly thus validated a new formula: Member States (except France) should cover together 35% of the budget. Part of the contribution would depend on the number of records provided to

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<sup>11</sup> The Soviet ruble was not convertible.

the ISDS Register, the other part on the gross national product. In 1987 income distribution changed again: France covered 48% of the total budget, Unesco 3%, Member States 32%, the remaining 17% coming from sales and products. In 1987, there were 50 national centers (against 23 in 1976), out of which 45 were active. There were also two regional centers, one based in Moscow (CMEA<sup>12</sup>), the other one in Bangkok (SEA<sup>13</sup>).

### ISSN PRODUCTS AND PUBLICATIONS

In 1975, ISDS initial database was created out of five existing files delivered by Biosis, Bulletin signalétique, Chemical Abstract Services, Georef and INSPEC. The International Center merged these files and produced ISDS data that were sent to existing national centers for them to check. At the beginning, the complete database collected 50,000 titles and was quickly growing by 2,000 titles per month. The complete database was published on microform.

ISDS Bulletin was another publication that was issued bimonthly from September 1974 on. 1,500 copies were circulated. The subscription cost 200 French francs in 1976 (i.e. 124,76 euros in 2014). From 1986 on, ISDS Bulletin merged with ISDS Register and was published quarterly. In 1987, it sold 292 microfiche copies and 26 copies on tape. There were about 245 subscribers outside the ISSN

network. In 1988, a new complete edition of ISDS Register was published with the complete records in an updated format.

The International Center also produced tapes that were available to national centers only. From 1976 on, the provision of records by member countries became more structured, even if it remained mostly in printed form. The cost of record typing was so huge that annual production was limited to a number between 12,000 and 15,000 records. CIEPS wanted to increase record production and the only way to achieve this was to automate ISDS national centers. In 1981, the ISDS Register contained 135,000 entries and was growing annually by 30,000 records. In July 1985, it contained 231,023 entries and 45,613 short records.

The issue of marketing CIEPS data arose in 1981 when the British Library attempted to sell ISDS register to two British subscription agencies. The Governing Board decided that although national centers could use ISDS data freely, third parties would have to negotiate an agreement with CIEPS.

To ensure the necessary coordination of library practice between ISSN members, CIEPS started organizing training sessions for national centers colleagues in 1978. They lasted between one week and two months. The Manual of ISDS was first published in 1983, 10 years after the publication of ISDS Guidelines. This publication was edited by Albert Mullis (British Library) and Judith Szilvássy (National Széchényi Library), who also served as a liaison with the group of ISBD(S).

ISDS News was published in English and French from 1984 on. It was meant as a communication tool

<sup>12</sup> Based at the International Centre of Scientific & Technical Information in Moscow, CMEA represented the People's Republic of Bulgaria, the Czechoslovak Socialist Republic, the German Democratic Republic, the Hungarian People's Republic, the Mongolian People's Republic, the Polish People's Republic, the Republic of Cuba, the Socialist Republic of Vietnam, the Union of Soviet Socialist Republics.

<sup>13</sup> The Charter of the International Data System Regional Centre for Southeast Asia was approved by the ISDS-SEA Council at the Second meeting held in Singapore 15-17 January 1979. SEA was based at the National Library of Thailand.



between ISDS centers and the rest of the library community. Completely designed by CIEPS team, 5 issues were published in 1984, 7 in 1985.

## **THE ISSUE OF AUTOMATION IN THE ISDS NETWORK**

After the death of Marie Rosenbaum in 1986, a momentum of change was perceptible at CIEPS. At the beginning of year 1987, the ISDS network consisted of 50 National Centres, 45 of which were operational. In addition there were two regional centres (CMEA in Moscow and SEA in Bangkok). The number of records in the ISDS database amounted to 400,000. Cynthia Durance was appointed by CIEPS to prepare its five-year strategy. The ISDS Planning Framework Study (DURANCE, 1987) was based on a large number of interviews with officials from the ISDS network, directors of national libraries and CIEPS staff. This study advocated a change of strategy for ISDS network that needed to establish links with a wider community:

it means that the bibliographic emphasis which has increasingly been overlaid on the program should diminish until the needs of other primary user communities (publishers, abstracting and indexing, subscription agents and distributors) are equally respected. With this renewed focus, the ISDS register must be viewed not as a bibliographic database per se but as a source database which identifies serials, their ISSN and key titles. A source database is defined here as a database which provides standard source data to other databases which are built for a variety of information purposes and uses. These databases augment the ISSN standard source data with data needed for their particular target audience (DURANCE, 1987).

Durance (1987) recommended to develop subject access and to input non-Roman languages. She also supported a formal planning structure for the

International Centre and the network based on management by objectives.

Many changes actually occurred in ISDS management in 1987 and the years that followed. After a short interim period during which Renée Herbouze was in charge, Judith Szilvássy<sup>14</sup> was appointed temporary administrator on 1 April 1987. She remained one year in office and Christine Deschamps replaced her on January 4th, 1988. The latter did not feel at ease with the job and resigned at the end of this very same year. Suzanne Santiago assumed the role of ISDS director from March 1st, 1989 on. It is noteworthy that she had previously been the technical director of Electre, the French Books in Print produced by the company Cercle de la Librairie company (SANTIAGO, 1986). She had been in charge of automating the bibliographic database (1984-1986) and setting up automated ordering services for booksellers. She had close contacts with publishers, distributors and with Agence Francophone pour la Numérotation Internationale du Livre (AFNIL) also managed by the Cercle de la Librairie and that delivered ISBN to publishers based in French-speaking countries.

When Santiago took office, she addressed this crucial issue of automation at the ISDS international center. ISDS data were still input via worksheets which were subsequently keyboarded under contract and many ISDS national centers were still not automated. Indeed, the lack of automated processes prevented the ISDS Register from being updated at a quick pace to fulfil the requirements of publishing companies and other private stakeholders. During

<sup>14</sup> Being a Hungarian citizen, Szilvássy had to submit to a security check as the ISSN register was regarded as a strategic database by Western countries.

year 1987, J. Szilvássy got in touch with Dr. Péter Jacsó and András Szűcs who worked for SZAMALK, a Budapest-based computer system company (JACSO, 1986). They offered her to start developing OSIRIS (that stood for Online Serials Registration Information and Inquiry System) and to base it on the freely-available MICRO-CDS/ISIS<sup>15</sup> application developed by Unesco for the management of documentation centers (HOPKINSON, 2015). A formal contract was finally signed in August 1991 between SZAMALK and S. Santiago, director of the ISDS International Centre, to develop and implement OSIRIS. OSIRIS was first tested at the Hungarian and Irish ISDS centres. The ISDS-OSIRIS User Manual was published in 1992 (SANTIAGO, 1992). ISDS centres for Poland, Italy, Argentina, Greece, Czech Republic, Slovakia, Romania, Chile, Thailand, Colombia and Turkey implemented the software soon after its release. The impact of OSIRIS was much wider than the ISDS network: for example, Leuven Catholic University (Belgium) and the Centro Internacional de Mejoramiento de Maiz y Trigo (Mexico) were interested in using it for specific serial cataloguing purposes. OSIRIS<sup>16</sup> was an interesting global initiative in the field of serials processing for libraries in the 1990s and a good opportunity to spread out the ISDS format. Indeed, serials automation had long been a tricky issue for libraries. In the USA,

a number of libraries developed customized serials control systems during the 1960s and 1970s. The PHILSOM system, developed by the Washington University School

of Medicine Library, is perhaps the most famous example... Several companies and other organizations have developed pre-written software and turnkey systems designed specifically for serials control [during the 1980s] (SAFFADY, 1989).

In France, academic libraries did not seem to use much ILS serials control module at that time whereas public libraries used it but were not pleased with its performance (INFORMATISATION DE LA GESTION DES BIBLIOTHEQUES, 1990). The automation of the ISDS Register enticed the ISDS International Centre to sign a contract with Chadwyck-Healey France in 1991 to distribute a CD-ROM version of the Register. A market survey for ISDS products was also launched this same year. In 1992, the ISSN database contained 620,000 records and grew by approximately 40,000 records per year.

## THE POST-COLD WAR ERA

### FROM ISDS TO ISSN

At the meeting of the ISDS General Assembly held on April 8, 1992, there was a report on the progress of a market study commissioned by the ISDS International Centre. It appeared that the initials ISDS and even the name International Serials Data System were not well understood nor well known in the information community. Most interviewees did not make the connection between ISDS and the ISSN standard. The conclusion of the report was that ISSN had to be included in the name of the International Centre which was effective in 1994.

At the same time, the ISSN network faced a governance issue because there were three different decision levels in the system, i.e. the General

<sup>15</sup> CDS/ISIS stands for Computerised documentation service / Integrated set of information systems. It became available for libraries in 1985.

<sup>16</sup> The International Centre used OSIRIS until 2004 and the German ISSN center at the Deutsche Nationalbibliothek until 2014.

Assembly, the Governing Board and the Governing Board Bureau. It was felt that this organisation was too bureaucratic and costly: there were too many meetings and the Governing Board had lost its importance because key issues were dealt with by the Governing Board Bureau. A proposal was drafted in 1992 by Folke Sandgren who suggested to eliminate the Governing Board Bureau, a body that was not even mentioned in the Statutes, and to reinforce the importance of the Governing Board. A small Executive Committee composed of the Governing Board chairman, vice-chairman and the representatives of France and Unesco was further created to move forward the agenda of the network and to provide advice to the International Centre's director when required.

At the end of 1997, there were 846,858 records in the ISSN database and the annual increase totalled about 45,000 records. The ISSN network consisted in 66 national centres, one regional centre for South East Asia and the International centre. ISSN International Centre sold the database on tapes and cd-rom (ISSN Compact). UNICODE compliant ISSN online was launched in 1997. The ISSN International Centre got involved in a project with ICSTI members (mostly Abstracting and Indexing services) to add coverage information to ISSN bibliographic records. A pilot was implemented with data provided by PsycInfo and INIST. The International Centre started participating in the CASA project (Cooperative Archive of Serials and Articles) supported by the European Commission DGXIII and whose aim was to develop a set of services based on internet allowing access for different types of users to serial content through ISSN records. The British Library Document Supply

Centre, ISSN Greece and ISSN Norway were also involved in this project until 2000 when the project was completed.

Cooperation with the Agence bibliographique de l'enseignement supérieur and the British Library Document Supply Centre to assign ISSN to serials recorded in their databases was buoyant. Suzanne Santiago left ISDS when she was appointed director of the Agence bibliographique de l'enseignement supérieur in March 1998. Françoise Pellé, who had previously worked at the Department for scientific and technical information and for libraries depending on the French Ministry for Higher Education and Research, then became director.

#### **THE BUOYANT BUSINESS OF IDENTIFICATION ON INTERNET**

In the 1990s, the emergence and vitality of cross-border multimedia publishing industry forced libraries to evolve in order to better monitor electronic subscriptions and publishers to adapt in order to control wider online global publishing markets. Publishers were also eager to use or develop numbering schemes (GREEN; BIDE, 1999) to identify information units such as articles, rightsholders and users in the supply chain.

Françoise Pellé, the director of the ISSN International Centre, was well aware of this quickly changing environment. Serial Item and Contribution Identifier (SICI) standard was created as early as 1991 and revised it in 1996<sup>17</sup>. SICI defined the requirements for a variable-length code that uniquely identified

<sup>17</sup> [Viewed 22 May 2015]. Available from: [http://www.niso.org/apps/group\\_public/download.php/6514/Serial%20Item%20and%20Contribution%20Identifier%20%28SICI%29.pdf](http://www.niso.org/apps/group_public/download.php/6514/Serial%20Item%20and%20Contribution%20Identifier%20%28SICI%29.pdf)

each serial item (e.g. issue) and each contribution (e.g. article) contained in a serial. The SICI was a combination of defined segments among which the item segment was naturally based on the ISSN. ISSN started being assigned to electronic serials in 1997 and has become heavily used in the networked environment as a reliable persistent identifier and a reference to a resource beyond the lifetime of the identified resource itself.

In 2000-2001, the ISSN International Centre participated in the implementation of two URN-based resolution systems, URN:ISSN and URN:SICI, the latter being carried out in the framework of a European project called DIEPER. Both implementations used the ISSN Register as a central tool for resolution to access the online content of a serial title, or its metadata or an online article (via SICI). As a result, the ISSN:URN Namespace (RFC3044) was registered by the Internet Assigned Numbers Authority (IANA) in January 2001.

The third revision process of ISO 3297 –which defines ISSN<sup>18</sup>– started in September 2003 and was managed by the ISSN International Centre. A working group was set up including publishers, subscription agencies, collecting societies, representatives of other identifiers such as ISBN, ISTC, ISWC, DOI. The main issues at stake were the scope and policy of ISSN assignment, the functional interoperability between ISSN and other major identification systems and applications and the role and place of ISSN users in the ISSN decision making process. The members of the working group expressed the need to identify a

resource at two levels, the manifestation level and the work level. Different scenarios were thus worked out and it was finally decided after conducting a survey that ISSN would be assigned as a *master* or *reference* ISSN at the title level and secondary ISSN would be assigned to identify each media version. The main outcome of this revision was the creation of ISSN-L whose implementation started in 2008 in the ISSN central IT system. ISSN-L is designated from among the different ISSN assigned to the different media version of a continuing resource (usually the first ISSN assigned to this resource). All records present in the ISSN database were assigned an ISSN-L in 2009. ISSN-L is still used today to link the distinct ISSN assigned to different medium editions of the same resources. Further to this revision the ISSN Manual was also updated and released in 2008. At the end of 2004, the ISSN network consisted in 75 national centres, the ISSN Centre for South East Asia and the International Centre and there were 1,2 million records in the ISSN Register.

Françoise Pellé decided to involve the ISSN International Centre in various projects meant to enhance ISSN services and improve access to ISSN data. VTLS provided the International centre with a new ILS in 2004 to replace OSIRIS. A client was implemented at some ISSN national centres and as a result the ISSN Centre for South East Asia was dismantled. OAI-PMH was later implemented in cooperation with VTLS to give users the opportunity to download ISSN records in MARC XML format without requesting any intervention on the part of ISSN staff. An agreement was also signed in 2009 between ISSN International Centre and EDINA National Academic Data Centre (UK) to create an e-journal preservation registry service

<sup>18</sup> The first edition of ISO 3297 standard was published in 1971 (second edition in 1986, third in 1998, fourth in 2007).



(later to be known as The Keepers Registry) that would report electronic journals and the archiving agencies in charge of their long-term preservation.

Further to SICI, the Association of American Publishers, along with the Corporation for National Research Initiatives as its technical contractor, created their own new identifier called the Digital Object Identifier (DOI) based on The Handle System which was first demonstrated at Frankfurt Book Fair in 1997. When the DOI Foundation wished to get formal recognition of the DOI by ISO, the ISSN network and other constituencies whose business was based on identification were concerned that DOI would encompass all types of digital content and supersede existing identifiers such as ISSN or ISBN in the online environment. During the standardization process, the Agence Française de Normalisation (AFNOR) appealed on ISO/DIS 26324 *Information and Documentation – Digital Object Identifier System* whose scope was very broadly defined as:

A DOI name can be used to identify objects of any material form (digital or physical) where these objects are content-related entities, as well as abstractions (such as textual works)... The principal focus of assignment shall be content-related objects exemplified by, but not limited to: text documents, data sets, sound carriers, books, photographs, serial (ISO/DIS 26324, 2009).

The appeal was finally not supported by members of TC46. Nevertheless, DOI standard published by ISO in 2012 finally included examples of the incorporation of an ISSN with a DOI name, an option which was of utmost importance for the ISSN network. In practice, the links between the implementation of the two standards still need further clarification.

## **ISSN DATA LICENSING ISSUES, OPEN DATA MOVEMENT AND OPEN ACCESS RESOURCES**

All along these years, the budget of the ISSN International Centre and the cost of the production of ISSN data have been supported largely by France and other Member countries. However, there has been a shift in resources since an ever-larger part of these costs has been covered by the income generated by the sales of the ISSN Register and of associated services. The licensing agreement for ISSN data was thus updated in 2010 (and is still in force nowadays) along the principle that only beneficiaries designated in the agreement were entitled to use ISSN data under the provisions of the official license preventing them for passing the records onto external partners that did not have any agreement with the ISSN International Centre.

Meanwhile many governments at the European level (DIRECTIVE ON THE RE-USE OF PUBLIC SECTOR INFORMATION, 2003) and beyond have started implementing Open Data models for governmental databases. Member countries national ISSN centres being usually hosted by national libraries or national scientific and technical organisations depending largely on public monies, they are strongly encouraged to provide data under open license models. Some initiatives such as Europeana have also paved the way for open culture data whereas scientific repositories have bloomed in every part of the world.

The ISSN network deemed this trend as having an important impact on its model. It was also clear that the ISSN International Centre could contribute to the linked open data movement by providing RDF as an additional output format

for the ISSN register or by opening access to a set of ISSN records describing open access journals and repositories under RDF format. In 2013, the Governing Board finally voted the budget to develop the Directory of Open Access Resources<sup>19</sup> (ROAD) in partnership with Unesco. The rationale of the project was to set up a single access point to scholarly journals published worldwide and repositories of articles with an emphasis on multidisciplinary. OA publications would be described following international bibliographic standards and the metadata would be completed by some coverage information to assess the quality of the resource via dedicated services provided by Econlit, Scopus or Impact Factor. ROAD was launched at the end of 2013 and further enhanced in 2014. The ISSN network has indeed demonstrated its ability to identify OA publications and to link with partners to assess scientific information quality. ROAD has also expanded the visibility of ISSN metadata and illustrated the key role ISSN could play as a pivot point for combining information from different sources. It has also broadened the audience of ISSN by addressing new constituencies, such as students and researchers who need accurate assessment of a journal for their future publications, or librarians and journalists who want to identify OA resources and can use ROAD statistics provided by ROAD. ROAD has proved to be a successful test bed for future enhancements of the global ISSN Register.

In June 2014, the Governing Board validated the 2015-2017 Strategic Plan<sup>20</sup> that reasserted the importance of sharing ISSN metadata with a

larger community of stakeholders. This implies to rethink the ISSN business model and find a way to reconcile Linked Open Data with financial revenues drawn from products and services. The underlying assumption is that the ISSN Register should be technically upgraded to be able to interact with web-based innovative applications developed by partners such as publishers, union catalogues or national libraries to name a few. This could in turn bring about new partnerships and services and further enhance ISSN metadata. It is a wonderful opportunity for the ISSN community to think afresh about its global organization, its workflow and its handling of online serial information whose sheer volume and great diversity are definitely challenging. Furthermore, the systematic review of ISO 3297 in 2016 will allow the wider ISSN network including its various constituencies to debate over the key factors that are needed to improve the service rendered by the ISSN network to the serial community.

## CONCLUSION

The creation of the CIEPS/ISDS International Centre, later to be known as CIEPS/ISSN International Centre, is closely related to the initiative led by Unesco and IFLA to identify and record the worldwide production of scientific and cultural knowledge in print form. This goal has been achieved mostly by setting up national bibliographic agencies that have cooperated under the umbrella of IFLA or ISO to produce the bibliographic standards they needed to exchange bibliographic data within their national realms and beyond. Since 1975, the ISSN International Centre – as an intergovernmental organization – and the ISSN network – as a conjunction of bibliographic

<sup>19</sup> [Viewed 22 May 2015]. Available from: <http://road.issn.org>

<sup>20</sup> [Viewed 22 May 2015]. Available in [http://www.issn.org/wp-content/uploads/2013/08/Strategy\\_Web\\_ENG.pdf](http://www.issn.org/wp-content/uploads/2013/08/Strategy_Web_ENG.pdf)

units cooperating at the operational level— have had quite an exotic flavor even more so by being very active in setting the pace in international serial data standardization and automation.

Along its forty years of history, the ISSN network has succeeded in establishing long-lasting relationships with constituencies as diverse as publishers, abstracting and indexing services, GS1 agencies, postal services, union catalogues, discovery services that have all benefited from the sustainability of the ISSN system and from its capacity to meet the requirements of both the information industry and the library community. In the 1970s, the vision of ISDS founders was based on the will to foster international scientific cooperation by the means of an identification system that would ensure neutrality and integrity in a world polarized by the cold war. Radical geopolitical changes have unbalanced the ISSN network in the 1990s but it has endured thanks to the exceptional commitment of its members and the unwavering support of France, Unesco and Member states.

In the digital age, identifiers have attracted renewed interest from information producers, consumers and keepers.

We believe that building collaborative authority registries linked to standardized identifiers is one of the fundamental cornerstones of the new universal bibliographic control. The status, inner workings, economic model and governance of such registries call for international attention (ILLIEN; BOURDON, 2014).

The ISSN Register is definitely an authoritative and internationally collaborative tool that has gained tremendous value to the information community at large. This asset is to be preserved and continuously

enhanced through strategic partnerships to provide a vital and better service to its historical constituencies and the general public.

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