

**NOTES**  
**on**  
**Fundamentals of digital legal information systems:**  
**Primary sources**

**By**  
**Rubens Medina<sup>1</sup>**

**For more than a decade science and technology have been presenting the world with the opportunity to apply their latest advances in almost all aspects of human endeavor throughout the planet. The impact of both has introduced measurable differences in our world in a very short time. The fields of information and telecommunication are perhaps the most outstanding examples of areas that have greatly affected human lives.**

**Within that context, in the field of law, we have now the opportunity to fulfill the old ideal of gaining as rapid access as possible--ideally instantaneous access--to the texts of laws in force and other relevant sources.**

**Laws in force are a special category of legal information. These constitute primary sources of law and as such, they require special attention. In common law jurisdictions, this category of primary source material includes case law in addition to statutes and regulations.**

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<sup>1</sup> Law Librarian of Congress and Director General of the Global Legal Information Network (GLIN).

**Rapid access to legislation and regulation electronically enables governments to carry out their duty to publish their laws as a prerequisite of enforcement. In other words, knowledge of the applicable legal standards by all subjects to their compliance has been widely accepted as a fundamental citizens' right and a duty. Conversely, providing access to such knowledge is an essential duty of governments.**

**Because of the significant impact of legal instruments, nations have established specific requirements for the “making” of laws. There are strict parliamentary and administrative procedures as well as formalities for their promulgation. The outcome of this process is an instrument of official character with full evidentiary strength.**

**It seems fair to state that in consideration of the added power in the field of information management, government institutions with serious commitment to providing electronic access to sources of law should not do so unless the authenticity of the sources is also maintained in the same manner as in print. This is one of the fundamental elements of any digital database that intends to claim reliability for its users. There are other elements of reliability, as we shall discuss ahead.**

**The U. S. Library of Congress was motivated to launch the Global Legal Information Network (GLIN) based on the availability of information technology and the expectations of our constituents. GLIN was by and**

**large based on the following elements: speed, volume and reliability.**

## **Speed**

**Given the technological capabilities for processing data and the commitment to reducing the time for accessing them as much as possible, it was clear that the best option for capturing and processing primary source legal information was the establishment of network stations at the locality where the data originated and was officially published. They are known as National GLIN stations.**

**With some variation, National GLIN stations gain access to official statutory and regulatory sources either instantly, within hours or days. A remarkable improvement over the weeks, months and years of delay required by the previous exclusively printed medium and the additional delays causing by the reliance on the regular mail from country's place of publication and receipt at the processing stations.**

**Because of the processing speed of the electronic medium, digitization has made currency of legal sources a much more realistic objective.**

## **Volume.**

**Available technology has also made possible the processing of large volumes of material. It is therefore valid to assume that the physical space needed to store and process legal sources in the past is no longer required.**

**Instead, we are talking about digital memory that these days is available at very affordable costs instead of physical space. Under the circumstances, it seems reasonable that legal information be made available in digital format with application of global standards. Storage of this volume of information may now reside either in one central repository or distributed in several locations.**

**This capability also influenced the decision to make the scope of the design for GLIN global in dimension as opposed to only national or regional.**

## **Reliability.**

**No matter how careful the re-keying of the text of statutes and regulations may be, the risk of mechanical or human errors is always present. This process has been used, however, by a considerable number of electronic legal publishers.**

**Statutes and regulations are, as noted above, like bank notes, legally required, in most sovereign nations or entities to be issued by competent authorities and officially published in a specially designated source. GLIN has adopted this principle of authenticity as one of its fundamental elements of reliability.**

**The statutory and regulatory texts displayed in GLIN are therefore identical to those displayed in print. Format and content are completely preserved. There are also capabilities that offer more than reasonable level of security to the integrity of the created digital data.**

## **Scope of the Network.**

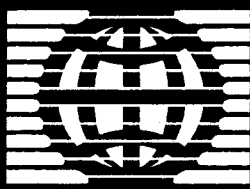
**A browse of the world-wide-web shows a large number of sites with legal content. The majority of these sites contain national sources in the statutory and regulatory categories. Additional categories of legal sources are not commonly found. The emphasis of most of these national legal databases appears to be on selections by subject. There is considerable diversity of architecture, design, and functionality. There are no uniform standards.**

**In consideration of the fact that nations are inevitably entering into a new global order within which mutual dependency and areas of common interest are expanding, and with more frequent and broader**

**bilateral and multilateral transactions and agreements, GLIN was designed to operate as a true cooperative, electronic global network.**

**The global character of GLIN is not only reflective of its intended geographic coverage but also of its universality of subjects. All primary sources of law are included with the only exception of those enactments that affect only private individuals.**

**There are other functional requirements that are necessary for the effective delivery of information on primary legal sources, but to be reliable, the establishment of digital databases of law should adhere to standards noted above. Attached is additional information that will provide more details about the GLIN effort.**



GLIN



## GLOBAL LEGAL INFORMATION NETWORK

<http://www.loc.gov/glin>

## AN OVERVIEW

The need for mutual electronic access to primary sources of the law of all nations has never been greater or more immediate. The Law Library of Congress and a group of similarly interested legislative information centers from around the world have joined to share their expertise to make the response to this need a reality.

The **Global Legal Information Network**, known as **GLIN**, is a cooperative, not-for-profit federation of government agencies or their designees that contribute national legal information to the GLIN database. The database contains statutes, regulations and related legal materials that originate from countries in the Americas, Europe, Africa and Asia. The data are temporarily stored in a server at the Library of Congress in Washington, D.C. and all participating GLIN member nations access this information via the Internet. A distributed network is envisioned and the database will reside on servers in other member nations as well as the Law Library of Congress. While numerous national and regional legal databases have been developed, these serve primarily local uses, whereas GLIN is designed to enable international access and comparative legal research based on a common search method.

After training, the national GLIN stations are expected to be fully capable of capturing, processing and distributing legal information in electronic format. This information may include statutes, constitutions and codes, regulations and selected ordinances, judicial decisions, scholarly writings and legislative debates. Original-source material is required to ensure authenticity and reliability. Consequently, these texts are available to authorized users in their official language versions. Summaries and subject terms, taken from the GLIN thesaurus are offered as search tools in English, and work is in progress to add the same in the vernacular of member nations.

The standards for selecting the texts, analyzing them, producing summaries, assigning index terms, and the testing and selection of applicable hardware and software have been developed originally as an international initiative and contribution of the Law Library of Congress. Agencies and institutions including NASA, the World Bank and the Inter-American Development Bank have provided support for various aspects of the project. GLIN member stations are encouraged to participate in further research and development activities.

GLIN is interested in enlisting new partners for the network and welcomes inquiries at the address given below.

Law Library of Congress  
Washington, DC 20540-3000  
U.S.A.

Tel. (202) 707-9836  
Fax: (202) 707-1820  
Internet: [jhyde@loc.gov](mailto:jhyde@loc.gov)

## **THE GLOBAL LEGAL INFORMATION NETWORK (GLIN)**

### **Basic Requirements to Join GLIN**

I. Individual countries must designate a GLIN Team consisting of: **one manager** with the title of Project Director, to be in charge of representing the country's Team and participating in the decision-making of the network. He or she is also responsible for the local implementation of such decisions and related instructions; **one analyst who is a lawyer, is law-trained or has relevant legal experience**, and is fluent in English, to be in charge of analyzing the texts of the legal instruments selected, formulating the summary for each of them and inputting the summaries into the database; and **one information technology expert**, fluent in English, to be in charge of electronically processing all the related material for transmission over the Internet. The names, current titles and a short curriculum vitae of the designated Team members must be submitted to the GLIN Team at the Law Library of Congress in Washington, D.C. It is recommended that these persons be selected from the permanent-professional support staff rather than elected officials.

II. Individual countries are responsible for seeking and obtaining funding for the above-mentioned lawyer-analyst and the information technology expert to travel to Washington, D.C., for training. This involves: a training fee to cover the cost of instruction and materials, and two round-trip tickets and per diem, or a stipend for room and board, to stay in Washington, D.C. for a period of no less than two weeks.

III. The Law Library of Congress is responsible for training the above-designated experts in their respective fields for the two-week period. Thus, it provides competent instructors, instructional materials and related documentation, training space and equipment, a certificate of training, and continued consultation and guidance as required for the regular operation of the country's GLIN station. English is the common language of instruction and network communication.

IV. The individual country must also seek and secure funding for the travel of a basic Team of Experts consisting of two or three members from the Law Library of the United States Congress (depending on the language of the country) to visit the interested country for a period of seven days to assess the competence of personnel, technical equipment and administrative infrastructure available. The Team is responsible for producing a report with recommendations concerning feasibility of the project according to its findings. This report must encompass the establishment of local GLIN workstations as well as basic telecommunication infrastructure upgrading if needed. The team's travel must be scheduled prior to the training of personnel in Washington, D.C., or shortly thereafter.

V. The individual country is responsible for connecting the GLIN workstations to an Internet node. It is recommended that the node be located at the same facilities as the GLIN workstations or connected to it by means of a fiber optic cable. The minimum recommended line speed is 64 (sixty four) Kbps with the possibility for a future upgrade of capacity.

Further details available upon request.

### **Global Legal Information Network (GLIN)**

Law Library of Congress  
Washington, DC 20540 USA  
FAX: 202/707-1820



## **GLIN Input / Retrieval Station**

**(Minimum Requirements)**

### **HARDWARE:**

PC: IBM compatible with AT bus and 4+ GB Hard Drive  
Processor: Intel Pentium, 300 + MHz  
RAM: 64 MB  
Monitor: 17" high resolution color SVGA  
Mouse: hardware and software compatible  
Printer: laser (for example, Hewlett-Packard LJ 5)

### **SOFTWARE:**

OS: Windows 95, 98, 2000, NT  
Word processing: Office 97, 2000 ( MS-Word 97, 2000 )  
Desktop Publishing Package: Adobe Pagemaker 6.5 for Windows  
File Management Software: Adobe Acrobat 4.0  
WWW Browser: Netscape 4.7, MS IE 5.0  
HTML/SGML Editor: MacroMedia Dreamweaver 4, MS FrontPage 98/2000, HTML Assistant Pro, etc.

## **GLIN Scanning Station**

**(Minimum Requirements)**

### **HARDWARE:**

PC: IBM compatible with AT bus and 4 – 8+ GB Hard Drive  
Processor: Intel Pentium, 300+ MHz  
RAM: 128 MB  
Monitor: 17" high resolution color SVGA  
Mouse: hardware and software compatible  
Printer: laser (for example, Hewlett-Packard LJ 5)  
Scanner: 300 dpi minimum, for example, HP ScanJet 5C, Fujitsu 3096E+ (Twain compliant)

### **SOFTWARE:**

OS: Windows 95, 98, 2000, NT  
Word processing: Office 97, 2000 ( MS-Word 97, 2000 )  
Desktop Publishing Package: Adobe Pagemaker 6.5 for Windows,  
File Management Software: Adobe Capture 2.0.1  
Adobe Acrobat 4.0  
WWW Browser: Netscape 4.7, MS IE 5.0  
HTML/SGML Editor: MacroMedia Dreamweaver 4, MS FrontPage 98/2000, HTML Assistant Pro, etc.

# **GLIN Membership**

Contributing

Trained

Pending

1. Argentina
2. Brazil
3. Ecuador
4. Guatemala
5. Kuwait
6. Lithuania
7. MERCOSUR
8. Mexico
9. Paraguay
10. Romania
11. South Korea
12. Tunisia
13. Ukraine
14. United Nations
15. United States
16. Uruguay

1. Albania
2. Mauritania
3. Peru
4. Russia
5. Sweden

1. Costa Rica
2. El Salvador
3. Honduras
4. Japan
5. Kyrgyzstan
6. Mongolia
7. Nicaragua
8. Taiwan
9. Uzbekistan

continued, over

## GLIN File (1976 - 1996)

(Abstracts in English only -- Produced by GLIN Central Team)

### *Americas*

- Argentina
- Bolivia
- Brazil
- Chile
- Colombia
- Costa Rica
- Cuba
- Dominican Republic
- Ecuador
- El Salvador
- Guatemala
- Haiti
- Honduras
- Mexico
- Nicaragua
- Panama
- Paraguay
- Peru
- Uruguay
- Venezuela

### *Europe*

- Portugal
- Spain

### *Africa*

- Angola
- Cape Verde
- Equatorial Guinea
- Guinea-Bissau
- Mozambique
- São Tomé e Príncipe
- \* Madagascar
- \* Mauritania
- \* Rwanda
- \* Senegal

### *Asia*

- The Philippines

\* *Prototype files only.*

4/96

## **GLIN Standards--Content**

### **Full Text**

GLIN preserves, and offers to contributing members, the authentic, full-text of laws and other legal materials, in the vernacular, as they appear in the official publications of member nations. The Law Library of Congress insists that its electronic database reflect the standard that it has maintained for paper: primary, official sources of laws are the most reliable. Because errors are inevitable in the process of re-keying text, and errors of any sort are unacceptable in the field of law, re-keyed text does not meet the GLIN standard.

### **Summary**

The GLIN database is searched through subject terms taken from the GLIN thesaurus as well as the summary of individual legal instruments. The summary is a concise description of a legal instrument, composed in narrative form, that generally follows the format prescribed by the "anatomy" of most laws: subject, enforcement agency, procedural standards, penalties, and transitory provisions. Amendments or repeals may not include all of these segments. The summary provides a user with enough information to readily identify and locate specific pieces of legislation. The summary record contains additional bibliographic information as well as information on status of legislation. It is through the summary record that one links to the full text of the law as well as related legal information.

### **Subject Terms**

The subject terms serve as one of the primary search and retrieval tools for GLIN. Rather than a full-text search, the GLIN database is searched primarily through a controlled vocabulary derived from the GLIN thesaurus. Subject terms are assigned to each piece of legislation as part of the summary record.

### **Thesaurus**

The GLIN thesaurus is a hierarchical arrangement of legal concepts developed by the Law Library beginning in the 1950s. All terms found in the thesaurus have been taken from legal instruments as published in the official, primary sources of law. The thesaurus is in English with the exception of some culture-bound terms for which there is no English equivalent. GLIN legal analysts from each member country are expected to develop an equivalent thesaurus in the vernacular. A GLIN thesaurus committee comprising legal specialists from the Law Library considers candidate terms for inclusion in the thesaurus as well as relationships between terms. LEXICO software is used for the GLIN thesaurus development and maintenance. The thesaurus is available on-line to users of GLIN for reference and selection of appropriate subject terms for searching the database.

# **GLIN Standards--Technical**

## **Summary**

All fields for the GLIN summary record are entered into the system via HTML input forms. The data is keyed directly into the GLIN database with only basic machine editing, the bulk of editing depending upon the legal analyst.

The application is currently being enhanced to provide additional input fields with more stringent editing, verifications and authority checking for all fields. The summary record will conform to the new Oracle database schema for input and update by authorized GLIN contributors and editors within the Law Library and in foreign member country government organizations and other contributing member organizations, such as universities and law schools.

## **Full Text**

The format for full text in the database is PDF (Portable Document Format). The full-text PDF document is hot-linked to the summary record and is accessed through the summary. The summary is available to anyone with WWW access; the full-text is only available to contributing members, at this time.

The PDF format was selected as ideal for GLIN because of its high compression ratio and because it preserves the exact font, format and presentation characteristics across platforms. Also, the PDF format has become somewhat of a *de facto* standard on the Internet for presentation of high quality documents that retain the appearance and format that the original creator of the document intended. This cannot be guaranteed with current HTML document standards. These characteristics are required to comply with the GLIN model for electronic document presentation.

There are two options for creating the PDF file. The first and preferred method is to obtain authentic, official text in digital format immediately prior to its being printed for publication in the official gazette of the country. Contributors are strongly encouraged to use this method or to transition their operation to this method as soon as possible.

The second or optional method is to scan the official text and produce a PDF file using, for example, Adobe Capture software. Many contributors are currently using this method until an official electronic version of the legislation in the official gazette is available. The scanning option will also be the likely method to capture retrospective material for most contributors.