

## MEMORANDUM

**TO:** Members of the NCAIR Board

**FROM:** Peter W. Martin and Thomas R. Bruce

**SUBJECT:** Report on Activities Supported by NCAIR Grants (1992-93)  
and Plans for 1993-94

**DATE:** July 27, 1993

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The Legal Information Institute at Cornell Law School (LII), supported by generous financial support from NCAIR has completed a very successful first year. This report to the NCAIR Board in time for its Annual Planning Meeting focuses on LII projects supported by successive NCAIR grants, placing them in the context of the Institute's expanding activities. The report then turns to LII plans for the coming year, with an outline of the prospective grant proposal represented by those plans.

### I. LII Accomplishments to Date Supported, in Part, by NCAIR

Background for this report is contained in an appendix which holds the relevant grant proposals and subsequent elaborating documents. Our report dated September 8, 1992 which formed the basis for NCAIR's current grant furnishes a useful framework for reviewing what NCAIR support has made possible. The following list of activities is drawn from part VI of that document, each item being followed by a summary account of LII accomplishment:

\* "Roll out" of e-mail address directory

A year ago, the LII set out to solicit e-mail addresses for all Association of American Law Schools (AALS) faculty, librarians, technical people, and administrators. The resulting directory of e-mail addresses at AALS member schools has grown to 2,000 entries. (We believe that this number represents about 25% of total faculty and law librarians in American law schools, and roughly 85% of those with e-mail capability. This latter figure is an estimate which will become much firmer with the acquisition of data directly from AALS (see below).) NCAIR support enabled the Institute to distribute copies of the directory on disk to all AALS member schools in late 1992. It has also supported maintenance of the directory directly on the Internet where it is accessible by e-mail and more direct Internet access. By this route, a constantly updated directory is available to legal academics not only throughout the U.S. but around the globe. Following the initial disk distribution, several important institutions (including Michigan and Columbia) added their full rosters to the LII directory. A second

disk version was placed on the LII Internet server for download and local installation at the beginning of this year's second term.

Impact and future plans: At the annual meeting of the Association of American Law Schools Executive Director Carl Monk encouraged section chairs to think of e-mail as a means of staying in touch with section members, noting the availability of the LII's directory. In a forthcoming newsletter of the Association its President, Professor Curtis Berger of Columbia, presents the same message. The LII's lead induced the AALS to ask all law school deans for e-mail addresses as part of its spring 1993 questionnaire, the results of which the Association has promised to furnish the LII. An important (if indirect) side effect of the Directory has been its use in convincing law faculty and administrators of the usefulness of the Internet as a channel for communication with their peers, and hence of the need for Internet connectivity. Four institutions have reported to us that an accurate count of law faculty who are e-mail accessible -- and the size of that count -- were instrumental in making an institutional decision to obtain Internet connection.

The new staff person, recently hired with NCAIR support, will enable us to maintain this uniquely valuable information resource. Improving the software in which it is stored will make it easier to pull off disk-based versions for local storage by institutions and individuals. We plan on announcing and distributing a 1993-94 disk version mid-way through the fall term.

\* Pursue the development and distribution of supplementary materials supporting law school courses

During 1992-93, the LII prepared three sets of supplementary course materials for local area network and disk distribution -- **An Introduction to Basic Legal Citation, Intellectual Property Statutes**, and portions of the **U.C.C.** All three were extensively used by students at Cornell. They were also used at several other law school "beta test" sites, including Villanova, University of Pittsburgh, Case Western Reserve, Boston University, and Georgetown.

For 1993-94, the LII's catalog has expanded to include core documents for the following law school courses or course areas:

Administrative Law	<b>The U.S. Administrative Procedure Act and Related Statutes</b>
Civil Procedure	<b>The Federal Rules of Civil Procedure</b>
Commercial Law	<b>The Uniform Commercial Code</b>

Evidence	<b>The Federal Rules of Evidence</b>
Intellectual Property	<b>U.S. Copyright Act</b>
	<b>U.S. Patent Act</b>
	<b>Lanham Act (Trademark)</b>
Legal Ethics	<b>Rules of Conduct Governing</b>
	<b>Lawyers and Judges</b>
Legal Research	<b>An Introduction to Basic Legal</b>
	<b>Citation</b>

These course materials are published with the new FOLIO Views 3.0 software, presently available in a MS-Windows version, soon to be available for DOS and before the 1993-94 academic year is over for Macintosh as well.

Intended to offer a more powerful alternative to the standard print supplements ("Selected Statutes on ...") used in many law school courses, these disk-based FOLIO materials can, in a law school or similar institutional setting, be distributed via local area network, loaded on individual student or faculty machines, or both. The FOLIO software allows student and faculty users to move through core statutes or codes -- entering at any point, following cross-references, checking definitions, moving to official comments (and back) -- all by means of a simple hypertext "point and click". The FOLIO software also enables full text search.

Beyond these "navigation" possibilities, which no print supplement can offer, the software allows print on demand and extraction in the form of text files. More significantly it permits users to add marginal comments, highlight text, create their own hypertext links. As a consequence, the navigation tools are not simply pre-packaged but available to students and faculty members, enabling more active forms of appropriation and annotation than are possible with print. Indeed, the open architecture of FOLIO encourages students and faculty to add and link additional notes and documents to the "published" core text, from the course outline and daily notes to downloaded cases.

Network licenses are available to law schools and other educational institutions at a low annual license fee for each "title", the amount being based on the number of registered students in the course or courses it supports. The full LII catalog will be licensed to schools for a flat fee of \$500. Institutional licensees will also be authorized to distribute individual copies to their faculty and students at a charge of \$20 per title per copy. In all cases the license includes use of the FOLIO VIP software that offers the hypertext, search and annotation capabilities already described.

All these disk-based materials will be distributed via the LII's FTP server on the Internet,

beginning in August. Orders are already coming in.

Impact and future plans: The availability of the new version of the FOLIO software has had an enormous impact on the Institute's preparation of course materials for 1993-94 and promises great potential for the future. (Being able to release a single set of materials that can be used on all three computer platforms widely used in law schools -- Windows, DOS, and Macintosh -- allows the LII to publish for all law schools and their constituents.) Short-term the steadily slipping FOLIO release dates presented us with a major challenge. The MS-Windows version of this software was not released until June. But in July, the LII demonstrated its 1993-94 publications at the American Association of Law Libraries annual meeting. (While the earlier version of FOLIO Views could be seen throughout the exhibit hall, the LII was the only publisher able to show the new software.) Enclosed with this report are copies of a demonstration disk that will allow Board members with MS-Windows to judge for themselves the exciting range of function these publications offer law students and faculty.

In creating these materials the LII has developed the expertise and tools needed to convert data received from diverse word processing systems, from GPO tapes, and from commercial databases to a consistent and polished hypertext format.

Effective distribution of the 1993-94 materials and continuing expansion of the list of titles is a high priority for this coming academic year. Licensing fees have been set at levels calculated to be competitive with the print alternatives and to encourage installation in public workstations and school LANs. During the summer of 1994, we plan to run the full catalog through a revision cycle and add at least 4 additional courses to the list.

\* Completion of software allowing Internet delivery of functionality approaching that available with FOLIO

In June the LII released the beta version of a new Internet browser for Microsoft Windows, named Cello. Cello is a full-featured, multipurpose Net client which browses data from WWW, Gopher, FTP sites, CSO/qi/ph servers and WAIS and others via WWW gateways. Using auxiliary viewers, Cello is also capable of displaying image data.

To date over 2,100 copies of Cello have been distributed, and downloads continue at a rate of approximately 150 per week. We expect that downloading will accelerate greatly with the announcement of a non-beta version in late August, more still with the announcement of a WINSOCK-based version at roughly the same time, and still more as the new academic year begins.

Many of those who obtained early versions of Cello have responsibility for evaluating emerging technologies for their respective campuses and organizations. Several campuses in the US and abroad, as well as AT&T Communications Research, are considering Cello strongly as the supported Internet client for institution-wide distribution. Cello has been demonstrated to favorable response at the CALI-LEAP conference in June, at the AALL national meetings in July, by O'Reilly and Associates at the National Booksellers' Association conference last May, and at many presentations made by beta testers at universities and corporations. (Each copy of Cello and each copy of the LII demonstration disk of FOLIO materials carries acknowledgment of NCAIR's role in making these materials available.)

Together with the LII's work on developing a path from FOLIO documents to the World Wide Web hypertext protocol of the Internet, Cello has succeeded in bring point and click navigation of law documents to the Internet.

\* Complete and publish a disk-based version of the legal manual on Public Benefits in New York for distribution to legal services offices throughout the state

In July, the 1993 edition of this 1500 page manual, prepared by Barry Strom of the Cornell Legal Aid Clinic, was offered to subscribers not only in print but on disk, as well. To date 15 copies of the FOLIO version prepared by the LII have been ordered.

\* Experiment with hypertext "add on" scholarship.

During 1992, topical outlines on Workers Compensation, Environmental Impact, and Privacy were prepared in FOLIO Views 2.1, all linked to the Lawyers Coop CD-ROMs containing the full text of the cited decision.

Similar topical outlines linked to the course materials being offered for 1993-94 are being prepared this summer. Links connecting these outlines to the underlying primary materials will exist in both disk-based versions and on the Internet, in WWW form.

The ability to link hypertext documents generated by the LII with materials prepared and maintained by others, either locally on a LAN or worldwide via the Internet, has provided several opportunities for the LII to add value to materials created originally by others. Indeed, one form of "add on" scholarship has proved to be the most used item on the Institute's WWW Internet server. Throughout 1992-93, the LII mounted on its server short hypertext documents organizing the current output of the Supreme Court by party name, docket number, and date with hypertext links to the full text of the decisions archived elsewhere on

the Internet (at Case Western Reserve in Cleveland). A more sophisticated version of that system is being developed for 1993-94.

## II. Visibility, Secondary Effects, and the Leveraging of LII Projects

The LII's visibility as a hypertext and Internet provider of legal information in innovative and highly organized ways has drawn recognition from many different sources. Its work has been reported on in the Chronicle of Higher Education and the National Law Journal, on the Law Show of National Public Radio and will be featured in a forthcoming issue of the Student Lawyer. Users of the Internet have responded enthusiastically:

From Marc Andreessen of the National Center for Supercomputing Applications:

At the National Center for Supercomputing Applications we are developing a global hypermedia system, NCSA Mosaic, which is based on protocols and formats widely used on the Internet -- in particular, the World Wide Web technology originated at CERN.

LII is a leading provider of quality content within this global information environment. As such they are at the forefront of those pioneering the way to transparent, ubiquitous network-enabled access to information for a broad-based population -- the digital libraries of the future. Their contributions to the online national and international information infrastructure include the full text, complete with relevant hyperlinks and cross-references, of the US Constitution, the US Copyright Act, the US Patent Act, the US Lanham Act, the Uniform Commercial Code, and other legal information, as well as a hypermedia guide to the US Supreme Court archive at Case Western Reserve University.

We at NCSA commonly use the LII document server as a dramatic demonstration of the potential of global hypermedia and online information delivery. The LII information is particularly an ideal demonstration for legal professionals, humanists, social scientists, educators, and others for whom technical (e.g. computer- or network-specific) information would be meaningless. A common reaction to the LII documents upon first viewing is a noticeable widening of the eyes, followed by "How did they do that?", followed by "How can I do that with my information?" -- the connection that is made with the potential of the technology is driven home by seeing understandable information in a common form delivered within a global

hypermedia environment with all the benefits that such an environment can provide.

From Chris K. Davis, a High School English teacher in California:

Please don't disappear!

I teach English and history and will be presenting a workshop on the Internet next March for social studies teachers in California. Your gopher server is a great source, esp. for economics and government teachers.

From Suzanne Devlin, Systems Librarian, DECHERT PRICE & RHOADS:

I am pleased to drop you a line and tell you how wonderful I think your gopher is! As a matter of fact, I will be presenting at PLI's law library workshop in the Fall and this is one source I will discuss in detail.

As a firm librarian, how we use your gopher varies everyday depending on the question. We have just started to use Internet as a library "service" to our patrons, the attorneys. As I discover more things on the gopher, I relay it to the staff and patrons.

From Jim Milles, Head of Computer Services, Saint Louis University Law Library:

The Legal Information Institute ... is the undisputed leader in the use of the medium of wide-area networking to provide legal information to the public. The growing variety of legal sources--intellectual property statutes, the Uniform Commercial Code, and other documents--which the **LII** has published through **Gopher** and World-Wide Web are used daily by both students and non-academics all over the world.

The **LII** has also demonstrated the usefulness of hypertext techniques for to the lawyer and law student. **Cello** ... is an important contribution to the Internet community as a whole....

Most importantly, the **LII** has demonstrated the value of collaboration and cooperation in the development of new tools and resources. The **LII** itself shows the potential of individuals from different disciplines--legal academia and computing--working together in innovative ways. Moreover, the **LII** is a model for other

professionals working together. Acting purely on a voluntary basis, law school computer professionals at a number of different law schools have been working together, under the leadership of the LII, in publishing a wide range of information sources that otherwise would not have been available. The LII, together with friends and colleagues at other law schools, acts as a clearinghouse and think-tank for the exploration of new applications of information technology in legal education.

From a summary of a recent Public-Access Computer Systems Forum survey on gophers:

B. The best gophers (according to the respondents) are:

Rice University; **Cornell Law School**; University of Wisconsin-Madison ...

The LII's activity and visibility have begun to generate interesting partnerships with other institutions and individuals. Some examples:

1) Fletcher School of Law and Diplomacy Multilaterals Project.

In late 1992 Peter Stott of the Fletcher School of Law and Diplomacy at Tufts University announced the ability (via FTP) of a large collection of multilateral treaties which he and his group had rendered into digital form. FTP, the earliest Internet technology for transferring files from one place to another, is seriously limited; end users cannot "browse" or search text offered by this means, for example. Unfortunately, a more advanced and user-friendly distribution scheme was not available at Tufts. The LII quickly offered to provide a "home" for the Fletcher Multilaterals collection, with distribution via Gopher in text-searchable format. Stott agreed, and the collection has grown substantially in the past few months. Stott's group retains responsibility for scanning and correcting texts; the electronic version is then moved to Cornell's machine, where it is indexed and added to the collection on the LII Gopher server. We expect that the collection will continue to grow, and we are currently discussing the possibility of mounting selected treaties in hypertextual format.

2) Other Law Schools.

In March of this year, technical people and faculty at several institutions began discussing the need for inter-institutional cooperation and standards in mounting legal information on the Net. The bulk of the discussion took place on the LII-operated discussion list TEKNOIDS, which currently reaches between two and three hundred computer support staff, faculty, and librarians at law

schools worldwide. Face-to-face discussions followed at the CALI/LEAP conference in June, and perhaps more importantly in a meeting held between LII principals and the NCAIR-funded group from Villanova, in which a series of directions were arrived at and articulated to the larger group.

Not long after, efforts at other institutions to mount Internet servers along lines explored by the LII began to come to fruition, with Gopher servers now maintained at Chicago-Kent College of Law, Indiana Law School, University of Arkansas Law School, Washburn University, and Saint Louis University as well as at some sites which entered the picture earlier, including Washington and Lee, the University of Chicago, and Cleveland State University. WWW servers are planned for Indiana Law School and the University of Arkansas Law School sometime during the next few months. Those involved in these efforts by individual institutions communicate regularly, with informal coordination of activities taking place via electronic mail.

### 3) NASDAQ.

In late June, the LII was contacted by the publications coordinator of The Nasdaq Stock Market. Nasdaq publishes a quarterly journal for CEOs and CFOs in Nasdaq-listed companies, and had been exposed to the work of the LII during a conference on securities regulation held at Stanford University. As a result, they were interested in creating an electronic version of the **Financial Executive Journal** with the LII providing technical expertise and distribution facilities via our Web server. The first electronic edition was mounted a week later.

To date, the **Journal** has been read electronically by individuals at American Cyanamid, Apple Computer, Intel Corporation, Microsoft, Motorola, AT&T, Cray Research, and a variety of other high-tech corporations among a list of about 600 others. It appears to be fulfilling both Nasdaq's wishes for visibility among Silicon Valley and other high-tech companies, as well as the LII's wish to explore the publication process with a wide variety of document types. Future issues featuring more complex hypertext linkages to a wider variety of supporting material are planned.

### 4) CILP Project.

Early on, we realized that the same set of programming techniques we were using to reduce thousands of log file entries from our Internet server to readable reports could be used for other, less pedestrian purposes. The most attractive of these possibilities was the creation of a "highlighted" version of the Current Index To Legal Periodicals produced by the University of Washington. Such a "highlighted" version would allow individually customized versions of the Index to be delivered via electronic mail, with articles of interest to the individual faculty member or practitioner appearing emphasized, at the beginning of the listing, or otherwise flagged for special attention. Some early experimentation led us to the conclusion that the format in which CILP was currently being distributed by the University of Washington was less than desirable for our purposes, and we sought their cooperation in making the "highlighter" service possible. At roughly the same time, Ken Hirsh of the Duke University Law School saw a similar need and expressed interest in working with us on the project.

We are pleased to report that a meeting with University of Washington law library staff during the AALL national conference has resulted in the project going forward. Washington will provide data entry and maintenance services; the LII will provide programming expertise and an Internet "home" for the service; and Duke will provide early testing and evaluation services. At the moment it is unclear whether long-term administration of the service -- and particularly of

the individual profiles needed to generate individually-customized versions -- will be undertaken centrally or by law librarians at each institution and firm, but either method is well within reach.

5) Cello Internet browser software.

Cello users are by no means confined to the legal-academic community; many are university people from other disciplines, government researchers, librarians for corporations, and so on. Its visibility as the first software program of its kind for the Microsoft Windows platform has attracted collaborators from all manner of disciplines and locations, most notably the European Center for Nuclear Research (CERN) and the National Center for Supercomputing Applications at the University of Illinois. It has also opened up WWW technology to a large number of individuals who would not otherwise contemplate distributed hypertext technology as a way of delivering text information. The result has been increased visibility for the legal profession generally as researchers in and users of hypertext and other forms of advanced text retrieval. We are told (see above) that LII-developed substantive materials and software are used extensively in demonstrating the potential of the Internet for use by non-scientists, for example, and our Gopher server is frequently used by others who are training both providers and consumers of information on the Internet.

6) O'Reilly and Associates.

O'Reilly and Associates are widely known in the technical community as publishers of technical books for UNIX programmers and administrators. Outside that community, they are best known as the publishers of the **Whole Internet Users' Guide and Catalog**, arguably the premiere reference for those learning about and navigating the Internet. Individuals at ORA (as it is known) have approached us about various activities, including:

- a) Using Cello as the Windows client for an online book project planned by ORA for late 1993, with some possible funding of development of additional features needed for this project;
- b) Serving as editors of the "legal information" section of new editions of the **Whole Internet Users' Guide**;
- c) Writing one or more articles on LII activities as part of an online magazine project currently underway, to be distributed over the Internet as a hypermedia product.
- d) LII participation in the first online Congressional hearings project, of which

ORA is a sponsor.

As of this writing, these projects -- with the exception of the first magazine article -- are still in the planning stage, but we anticipate that a fruitful relationship is in the offing.

### III. A Review of Expenditures of NCAIR Monies

NCAIR grants have furnished critical support for the activities reported above.

NCAIR monies supported employment of student assistants for the building and polishing of FOLIO course materials and the derivative Internet hypertext versions (\$12,000 for 1992-93 and \$12,000 for 1993-94).

NCAIR supported the courseware and Internet hypertext through summer support for Peter Martin in 1993 (\$11,000).

NCAIR supported the establishment of the Internet server through partial support of the work of Thomas Bruce in 1992-93 (\$10,000).

NCAIR supported the development of Cello an amount of \$5,000 for 1992-93 (which enabled acquisition of a license for essential code) and \$15,000 representing partial support of Thomas Bruce in 1993-94.

NCAIR funded the distribution of sample material and documentation, including participation through exhibits at the AALS and AALL annual meetings (\$8,000).

And NCAIR helped build an effective staff for the Institute with an amount of \$26,000, that enabled the LII to hire Brian Sheldon as systems coordinator.

### IV. Future Plans and Emphasis of NCAIR Grant Proposal for 1994

Having launched this wide variety of projects, the LII's principal aim for the year ahead is effective follow through. Achieving effective distribution of its FOLIO based course materials, continuing its exploration of Internet delivery of legal material, and wide distribution of and support for CELLO are top priorities. While we expect Cornell or other funding sources to provide full support for the effort of the Institute's co-directors, the LII shall continue to need grant support for 1994 at a level comparable to 1993. This is necessary to cover the one staff support position and summer student assistants until the anticipated revenue stream from course materials and joint Internet projects has time to mature. It will also enable us to carry out the projects noted below.

At least as important as the above aims is sharing LII expertise and building tools with other law schools. To this end, we have begun to plan a summer workshop for those at other institutions interested in building hypertext for disk and Internet distribution. We envision a one week session at Cornell, attended by author/technologist pairs from up to 10 institutions. Grant support will be necessary to cover materials, expenses and honoraria for workshop faculty from other institutions, and the room and board costs of attendees.

Other discrete plans with funding implications include:

Acquisition of a license for UNIX database software that will permit better Internet\disk delivery of material like the LII e-mail address directory

Acquisition of a second server to take over the listserv traffic now handled by the same computer that functions as the LII's gopher and WWW server

Acquisition of three few Macintosh computers to test the functionality of LII FOLIO and Internet materials for individuals and institutions using Macs

Acquisition of additional law data from the Government and other public sources

At such later date in this year as fits NCAIR's grant-making timetable, we will, of course, furnish a more detailed proposal for 1994.