

The Legal Information Institute of Cornell Law School - October 1999

I. What is the LII?

A. *Why that is a complex question*

The Legal Information Institute of Cornell Law (LII) has no direct counterparts in the history of the school and unlike such activities as, say, a moot court program, law journal, or (at a university level) university press, it has no close analogs at other U.S. institutions. It cannot be swiftly explained or understood through such familiar reference points. The reference point that superficially seems most useful – other law school Web sites – is more likely to confuse than help, for it mistakes the medium with the purposes to which it has been put.

This short report on the LII provides a fairly linear exposition of the Institute's aims and activities from founding to present, culminating with a look into the near and longer-term future. Because there are numerous ways to understand the Institute, past and potential, the reader may want to consider the following account from a number of perspectives. In its short lifetime the LII has carried out a program of applied research that might be judged in terms of quality and impact. It has accumulated distinctive expertise. It has drawn an immense new audience (domestic and international, professional and lay). Expertise and audience have led to the establishment of LII relationships, both formal and informal, with public bodies (ranging from the U.S. Supreme Court to the New York Court of Claims), law firms (notably the participants in the American Legal Ethics project and subscribers to its current awareness services), the organized bar (New York Bar Association and ABA), with which the school was less connected before this all began.

One constant through the LII's brief history has been an explosive rate of change in the environment in which it has operated. This means that what the LII is likely to be in 5 or 10 years will almost certainly be quite different in its detail (specific collections and services) from today. Indeed, as this report suggests in conclusion, should that not be true the Institute will be accomplishing far less than it could or should along the more fundamental dimensions noted above.

B. *Original purposes and aims*

The Legal Information Institute was established in 1992 as a collaboration of the LII co-directors Peter Martin and Thomas Bruce. Martin, a former Dean of the School, had long-standing interests in hypertext technology as a means of presenting legal information. Bruce, formerly the School's Director of Educational Technologies, was interested in the use of the Internet as an information distribution tool. There was, we believed, at the intersection in our work the basis for a new venture – indeed, a new *species* of venture – in legal education and legal publishing. At a pragmatic level, we intended to experiment in the application of digital technology to law publishing and the creation and distribution of teaching and reference materials for law students.

We imagined this to be a matter of developing a series of products and services that could be used to test our ideas. At a loftier level, our aims resonated with those stated in the first issue of the *Cornell Law Quarterly* in 1915: “to connect the full resources of the school with the legal profession, with other law schools, with the world”. It was our belief that the goals of outreach and service expressed by that second statement could be well served with the applied research suggested by the first.

We thought we could be most successful by structuring the operation as an explicit collaboration between a technologist and a substantive expert in law, working in partnership with (but free from the direction of) outside actors such as law firms, legal publishers, bar associations, software developers, government agencies, and courts. We believed that the ongoing revolution in information technologies created significant opportunities for an institution of Cornell's stature and strength to carry on activities previously impossible or possible only through intermediaries such as legal publishers. We also recognized the

converse: that the very developments giving rise to those opportunities could become threats to the long-term strength and stature of any law school that failed to act on them.

Startup funding for the LII's activities was provided by an initial grant of equipment by the School, and by a grant of \$250,000 from the National Center for Automated Information Retrieval distributed to us on a declining basis over 5 years. A significant portion of Bruce and Martin's effort was given over to the institute, though both continued (and continue) to have other responsibilities to the School. The NCAIR grant permitted us to pay for a full-time systems administrator whose cost is now borne by the School, and to pay some portion of the salary of the part-time administrator who manages our business affairs.

C. Accomplishments and discoveries of the startup years (1992-1996)

We were correct in our approach and lucky in our timing, riding a wave of interest in the Internet that has at times seemed overwhelming (its size is perhaps better described by the current statistics that appear later in this report). In the first few years of our existence we:

- Created the first law site on the Web (indeed, the first site oriented toward a single profession other than high-energy physics).
- Wrote and distributed the first Web browser for Microsoft Windows, Cello. Though now more than a little dated, Cello is still downloaded from our site more than 1000 times every month.
- Established standards for the format and structure of electronic legal documents and collections that have been broadly imitated and adopted in the law-publishing community. Other forms of imitation are yet more flattering; we have spawned namesake operations in Australia, New Zealand, Zambia, and Kazakhstan.
- Built a series of "must-have" collections of legal content now widely used by an enormous and diverse audience of practitioners, professionals, academics, public officials, and ordinary citizens both in the US and abroad. Notably those collections include the recent opinions of the United States Supreme Court and the New York Court of Appeals, the United States Code, a series of topical overviews of particular areas of law akin to a legal encyclopedia, and a number of current-awareness services.
- Established important working relationships (including joint-study and consulting arrangements) with the major legal publishers (West Group, Lexis-Nexis, Matthew Bender, Shepard's-McGraw Hill), private-sector entities (NASDAQ, MCI, IBM), software companies (Folio Corporation) and others. We also secured the cooperation and in some cases the sponsorship of courts, law firms, bar associations, and other collections of "law people".

During much of this period we continued to draw funding from the declining NCAIR grant. To an equal or greater extent we paid our way out of earned income, using funds from joint-study and consulting agreements, along with revenues from software licensing, to fund the Institute. Singing for our supper permitted us to resist sponsorship involving advertising. We were and are the only source of Supreme Court opinions on the Net that is free of advertising, and one of only two that are freely available to the public.

D. Middle years (1996-present)

The growth in popularity of the Net has brought new audience in vast numbers as well as new and not-so-new competitors, information services eager to provide legal information via the Web. During the last few years, we have been primarily concerned with scaling up our operation to match the demands placed on it by a wildly expanding population of users, and with charting a distinct course among increasing numbers of competitors.

On the one hand, much more of our time (and hardware, and software) is taken up with adding increased reliability, speed, and functionality to information collections that now serve numbers of people many times beyond those we originally envisioned. On the other, we have made careful choices about which collections our particular strengths best qualify us to maintain. We have selectively added new services to serve our growing audience while avoiding building anything that is not sustainable in the long run.

Essentially we have matured our existing products and operations while drawing in new external partners and new internal constituencies among students and faculty. Each year has seen increased readership and a growth in the array of software and hardware tools we use to serve them; each year has shown incremental improvement in the scope and quality of our offerings.

II. The present

Today the story of the Institute is told in part by statistics, in part by looking at more affective measures of our impact, and in part by looking behind the scenes at what we do to make our public offerings available.

A. The LII Web site

1. Numbers, numbers, numbers

The LII is a popular place. During the third week of September 1999 our four primary servers logged 6,189,730 "hits" from readers all over the world, an average of a little more than 10 data files transmitted every second, about 880,000 every day. (By way of rough comparison, the only peer law school for which we have any figures available registered an average of 175,000 hits per week on its site during the first week of September 1998). On an average day, readers held 31,528 "sessions" with our machines, each of which lasted an average of just over 15 minutes. Every day the LII provides at least a small measure of legal information to nearly three times the number of people who have graduated from the School since its founding. And the numbers are growing; the number of hits has increased 50% between February and September of this year.

2. We've got mail

Other sources tell a more detailed story than raw statistics can provide. The LII receives over one hundred fifty mail messages a week from users. This small sample gives a panoramic picture of our readership, with members at all levels of legal expertise and interest:

- An agency lawyer at the EPA, looking for information in the US Code;
- A German law student seeking help with a copyright question;
- Grandparents worried about their rights with respect to the children of a deceased child;
- A resident of Texas who is concerned about the state's use of his Social Security number;
- A small-office practitioner thanking us for our service;
- A lawyer in London wanting access to US intellectual-property law;
- Any number of private citizens seeking information that will help them resolve problems with landlords, employers, government agencies, and neighbors.

The Net carries word of the LII in other ways as well. A look at USENET newsgroups, listserv list archives, and other collections of captured discussion on the Net reveals two things: first, that the LII name and its www.law.cornell.edu "trademark" carry strong identification ("I looked it up on the LII" or "Fine, but have you checked www.law.cornell.edu?"), and second, that information we provide informs any number of discussions among specialists in areas ranging from law and human rights to aviation and stage hypnotism. Most people are touched by the law in some way or other at some time or other, and increasing numbers of them use the LII to inform both personal and professional discussion.

3. Linkages

Still another measure of LII reach and impact – perhaps the most telling – is the number of Web sites that offer us implicit endorsement by linking to us. A check of linkages on the popular AltaVista portal site at

the time of writing shows 72,525 sites linking to ours, among them countless libraries, public and private schools, colleges, universities, bar associations, and law firms. Also included are:

- media organizations, including MSNBC (which routinely uses the LII as a source of Supreme Court opinions), the Seattle Times, *die Presse* (Vienna), CNN, the Society of Environmental Journalists, and the American Journalism Review (both a publication in its own right and a central information resource for professional journalists);
- government organizations such as the White House, the House of Representatives, the General Services Administration, the Department of Health and Human Services, the Minnesota State Legislature, the Brazilian Federal Courts, the EPA, the New York State Commission for the Blind and Visually Handicapped, and the League of Wisconsin Municipalities;
- industry organizations such as the Wine Institute, the International Association of Airport Executives, the Colorado Business Resource Center, and the Hong Kong Business Association of Hawaii;
- special-interest and advocacy groups such as the ACLU, the National Organization for Women, the National Right to Work Legal Defense Center, the National Treasury Employee's Union, and the Sons of the Union Veterans of the Civil War;
- high-profile portal sites such as Yahoo, the Dow-Jones Business Resource Center, the Mining Company, Lycos, Magellan, and others, many of whom have given us awards and highly favorable reviews.

B. LII disk publications

The LII is currently in its fourth edition of a CD-ROM product offering more than 600 selected, important decisions of the United States Supreme Court. The collection (priced at \$25 for an individual license) is very popular with, and widely used by, high school and college teachers as well as others who lack access to other electronic sources of these decisions. Enthusiasm from overseas buyers suggests it also has a large potential market outside the U.S.

An earlier CD-ROM publication, prototype for the American Legal Ethics Library (discussed below) first appeared in 1995. During 1999 this legal ethics CD has appeared in two different editions. In addition to an LII edition, which was distributed widely to uniformly favorable reviews, the Library was distributed under license by the ALAS malpractice group, which insures the country's leading law firms, on the same CD-ROM as its own "Loss Prevention Manual."

In addition, the LII continues to update and distribute selected core statutes, codes, and treaties (from the U.C.C. and Federal Rules of Evidence to the GATT) for individual and institutional use. This project was begun in 1992 when distribution required shipping disks. Today, these materials (available in multiple formats) are offered for immediate downloading from a secure LII Web site that permits credit card purchase.

C. LII Listserv lists

The LII hosts a dozen law-related listserv lists, two of them among the ten most popular law-related lists on the Internet. By far the most heavily subscribed (with 19,007 members at this writing, an increase of about 1500 in the last six months) is LIIBULLETIN, the service that delivers summaries of Supreme Court decisions on the day of release. The second most popular, LIIBULLETIN-NY, is described later in this report as a vehicle for student writing. With 2930 subscribers, it has a larger readership than any other student-written publication of the School, including print journals.

We also host widely read groups for the alternative dispute resolution community (DISPUTE-RES), and computer support professionals working in law schools (TEKNOIDS). In total more than 30,000 people have some form of contact with the School via these listserv lists, some of which are the central means of communication for important professional subgroups within the larger legal-education community.

D. Media exposure

The LII name has appeared in over 500 newspaper and magazine stories since its founding, in places ranging from the editorial page of the Boston Globe (exhorting courts to do as we have done in placing decisions online) to the *Singapore Straits-Times*, *PC Magazine*, *ABA Journal*, and a host of other bar journals, specialty-practice newsletters, and Internet publications. We enjoy “pride of place” in many listings of Internet legal resources; especially worth mentioning is Burgess Allison’s *Lawyer’s Guide to the Internet*, the best-selling publication in the history of the American Bar Association.

E. Our audience summarized

We began our existence imagining that we would provide services to “law people” – lawyers, legal academics, law students, and judges in the United States and abroad. Time has proven that we had simply been conditioned to think in terms of that audience; the pent-up demand for legal information and the diversity of its audience was and is far greater. A compilation of current statistics shows that we have succeeded in capturing large numbers of such people. But what do they really mean for us, and for the institution?

First, one can argue that we are performing a service to the public and in particular to the legal profession which is a natural and logical extension of university tradition and of the traditional practices of land-grant institutions in particular. We are also building bridges between legal education and the legal profession it serves. Our activities represent a cost-effective attempt to serve the profession that is both useful to it and inherently national and international in scope. Needless to say, our alumni are among those who benefit, and who can take pride in the exposure that their alma mater receives.

Second, we know that our collections are widely used in secondary schools and in undergraduate education. CD-ROM sales, Web site statistics, and e-mail inquiries all show that our materials are assigned by teachers and used by students in many, many high schools and colleges.

Outreach efforts like those represented by the LII would have importance for any school, but they have a heightened importance for Cornell given its size and location. The fact that its services have particular value for populations not served well by print-based information or the commercial on-line systems resonates strongly with Cornell University’s land grant mission. Its international impact has great importance to the future of the school.

III. Current activities

A. Existing collections

The LII has become a “must-go-to” site for legal and other professionals by concentrating its efforts on high profile collections of statutory material and judicial opinions. Our edition of the United States Code and our collection of Supreme Court decisions between them account for about two-thirds of the traffic to our site. Maintenance and improvement of these collections is a major concern, and takes time from LII principals in proportion to the traffic that these important collections generate.

1. Collection maintenance

A recitation of the details involved in maintaining our collections risks plunging the reader into an alphabet soup of acronyms, a confusing welter of terms somehow related to a law-publishing process in which standards and suppliers refuse to hold still. Any resulting impression of turbulence and confusion would be an accurate one, and we offer the following more to reinforce that impression than because the specifics will be of interest to most reading this report. The important point to be gleaned is that collection maintenance is and will remain an important and challenging activity for us, one demanding significant skill and effort. “The law must be stable, but it cannot stand still” reads a quote from Roscoe Pound that is graven into the walls of Cornell’s Moot Court Room. We find ourselves at times wishing that the law would just calm down a bit.

Within the last year we have completely rewritten the text-processing software that makes the Supreme Court and US Code services possible, roughly 7,000 lines of code in all. In part we do this to attain greater processing and delivery speed. We now routinely scoop all other public services in making Supreme Court decisions available (including CNN and FindLaw). Improvements made this year also permit us to release revised US Code titles much more quickly than in the past. The principal result of this is not a more timely Code (the House only releases revisions of any particular Title once per year); rather, it is a Code to which we can add new features and functionality more or less at will, without waiting for a lengthy regeneration process to run over the full 2 gigabytes of information. We have also added new functionality to both collections. These are in some sense bonuses; usually rewriting is a necessity brought about by changes in the format of the raw information we receive from the legislative and judicial apparatus of government.

In the past three years we have made two changes in the conversion software we used with the Supreme Court decisions. Prior to October of 1997 we based our work on decisions in WordPerfect format; in the fall of 1997 the Court switched to a PDF-based system which we used for a year, and in 1998 we changed our machinery to make use of a tagged ASCII version which had not become available until partway through the 1997 term. Interestingly, the commercial operation which publishes the daily law trade paper in Chicago, Law Bulletin Publishing Company, finds it easier and more reliable to use our conversion routines than to create their own – a relationship which puts the name of the Cornell Law School in front of every Chicago lawyer reading a Supreme Court opinion in its pages.

A similar situation existed this year with the US Code. In prior years we had relied on the GPO version of the Code on CD-ROM, but of late we had grown restive at the untimeliness of its release – usually the code was 18 months out of date before the GPO CD became available – particularly when compared with the versions available from the House of Representatives Internet site. We have now successfully begun using the much more timely version available from the House, but at considerable effort.

2. Work undertaken on collections this year

Though time-consuming, these rewrites do more than allow us to run in place. During the past year we have added functionality to existing collections in many areas:

a) Comprehensive Circuit Court search

A change in the underlying search-engine technology has made this service far more reliable and timely than previously. It provides simple and immediate access to caselaw which serves as scaffolding for several of our other services, as well as being a service in its own right, providing access to thousands of recent decisions in all 13 Circuit Courts of Appeal.

b) Supreme Court decisions

Improvements made this year include greater legibility, better layout, improved navigation aids, and faster searching. We also realized some improvements in speed of publication, making us possibly the most timely source of opinions on the Net currently available to the general public. Our versions of the opinions are also linked to by many news and public-interest organizations, including MSNBC, the Seattle Times, the National Organization of Women, the International Association of Airport Executives, and countless law firms, public libraries, and educational institutions. Within the last month we have added a much-requested service: the ability to search all of the Court's order lists for actions in particular cases. This feature was unveiled at the start of the Court's new term.

c) US Code

This past year we added a number of features, including richer linking of cross-references, more detailed tables of contents, integration with our collection of topical overviews of relevant areas of law, links between the Code and related portions of the CFR, and an updating feature which pulls together separate services offered by the LII, the House of Representatives, and the Government Printing Office.

d) Topical overviews

The LII currently offers more than 100 so-called "topical pages", each of which provides brief exposition of a particular area of law (for example banking law or the law of employment discrimination). The term "page" refers to the fact that each is its own Web page; most are far longer than a single print page in length. All offer concise overviews couched in lay language, and are intended to provide context for someone (perhaps even a lawyer) needing an overview of a particular topic. Each provides links to key primary authority (statutes, regulations, and court opinions) as well as to other high quality resources focusing on topic.

Because of the shifting nature of Internet resources, these pages present a particular maintenance problem. At present we devote several person-weeks' time to their maintenance each summer, but it is becoming increasingly clear that a high-quality job demands ongoing maintenance through the year. The work is amply justified by the audience; these pages are an important source of context-setting information and help for non-lawyer professionals, non-U.S. users, and others accessing our site.

e) Technological reinvestment, systems administration, and security

(1) Hardware and software systems

The LII began seven years ago with less than a megabyte of data mounted on a borrowed workstation whose capabilities seem pitiful when viewed from the present perspective. The hardware and software systems we use today are three orders of magnitude more capable and complex, built with technologies which continue to evolve at an incredible rate.

Maintaining that capacity as our readership and offerings grow demands a great deal from us in administration, maintenance, and improvement of our facilities. Our traffic has doubled each year for the last three years, and is growing at a rate even slightly faster than that of the Net as a whole. We are expected to meet a standard of reliability and accessibility set by commercial organizations and government bodies with vastly greater resources than those available to us. Indeed, in some cases (our offering of the Code of Federal Regulations comes to mind) we are offering a service precisely *because* we have a way to do so which serves users more quickly and reliably than the site officially responsible for doing so. There is little leeway for downtime. 49% of the traffic on our most-heavily used machine occurs outside normal business hours, and even the most lightly trafficked hour (between 4 and 5 AM) sees nearly 2000 user sessions of roughly 15 minutes each on one or another of our machines. Outages of more than five minutes tend to bring phone calls from the likes of the Washington desk of the New York Times, demanding to know where the Supreme Court decisions have gone.

Needless to say we can only hope to meet this standard by constantly reinvesting in hardware and software, and by using efficient and effective system administration techniques to make the most of what we have. We operate with a staff roughly one-third the size that a corporate operation of our scale and scope would use. It is a constant struggle, particularly as (increasingly) we find ourselves moving beyond the capacity and reasonable lifespan of equipment purchased in our early days. We are fortunate in our current system administrator, who has done much with little, but there is always a need to do more. On the financial side, grants for capital equipment have helped us a great deal, but we operate with a very small cushion of machine capacity with nothing to spare and little if any redundancy as a hedge against equipment failures.

(2) Security

We are a highly visible site, and the word "law" is found in our name. Taken together these two facts make us alluring to system crackers. We imagine that they would get the same sort of satisfaction from breaking into one of our systems that miscreants of an earlier era would from stealing a policeman's hat. They certainly try. On the average day we log nearly 50 probes directed at one or another of our machines. Most of these are metaphorical doorknob-rattling by juvenile delinquents. We spend great deal of time seeing to it that they never become more than an irritation.

Our greatest worry, however, is a kind of attack we have not yet experienced: one that is ideologically motivated and carried out with determination and skill. We know from e-mailed commentary on unpopular decisions that many confuse us with the Supreme Court itself. It is only a matter of time before this belief, coupled with disagreement with some action by the Court, leads to an attempt to disrupt our operation in some significant way. For this perhaps slightly paranoid reason we have chosen to treat all security incidents as a kind of dress rehearsal. Needless to say this makes such incidents more time-consuming for us than they might otherwise be.

B. American Legal Ethics Library

In 1995 the LII produced its first CD-ROM, a disk holding a prototype version of the American Legal Ethics Library being prepared under the leadership of Roger Cramton with support from the Keck Foundation. An account of this project, accompanied by the disk itself, appeared in the Summer/Autumn 1995 issue of *Law and Contemporary Problems*. It was the first computer disk of any kind to be bundled as part of a US law journal.

This digital library contains both the codes or rules setting standards for the professional conduct of lawyers and commentary on the law governing lawyers, organized on a state by state basis. It is accessible on the Web and distributed on CD-ROM.

Major law firms, working on a pro bono basis, have contributed narratives on the law of lawyering of their states. As of this writing the jurisdictions covered by such narratives already represent well over half the lawyers in the U.S. Within the next year they should cover over half the states in the U.S.

The narratives for each jurisdiction are linked to relevant primary authorities (rules and statutes), to a shared set of background documents including the ABA Model Rules and important print references on each topic, as well as to a topical index that enables point by point cross-jurisdiction comparison.

All the elements comprising the American Legal Ethics Library have been structured to function as an integrated collection. While each can be the subject of a full text search or entered via a table of contents, all are linked to the rest of the collection in multiple ways permitting a user to track a specific issue or point from code to commentary in a single jurisdiction or vice-versa and to follow that same question into materials covering other jurisdictions. For example, a user interested in Florida's treatment of conflict of interest can readily find the appropriate code provisions, follow a link from them to the related portions of the state narrative, and through the narrative access comparable sections in the ABA Model Rules or Code or the legal ethics codes of other states. The American Bar Association's ethics materials are included in the library to permit the rules of a particular state to be compared with the ABA model provisions and with related provisions in other states.

The CD-ROM and Internet version share this same structure and complement one another. Indeed, the CD-ROM version links to the online collection, which can be more up-to-date and comprehensive. It can be more up-to-date because revisions and additional narratives are placed online as received, more comprehensive because it is able to link to and thereby integrate the fine collections of legal ethics materials others are placing on the Net.

C. Code of Federal Regulations

A year ago we introduced a "virtual version" of the Code of Federal Regulations. In some ways the project is an example of the LII at its best. Though the CFR has always been an obvious target for us, we had in the past stayed away from it simply because of its sheer size and volatility. As a collection it is not only large, but also difficult to maintain, and there are organizations within government much better equipped to undertake such tasks than are we. Indeed, the U.S. Government Printing Office (GPO) had mounted a searchable version which they kept (and keep) as current as may reasonably be expected.

Unfortunately, the GPO did not originally supply browseable tables of contents for the CFR. One is free to search for whatever one wishes; indeed, accessing a particular section on the GPO site is simply a specially-directed search. But it is hard to grasp the meaning and understanding offered by adjacencies and by seeing a particular section in context when one is peering through the keyhole of a full text search. By

contrast, a browseable table of contents not only leads the user to what she is seeking but gives her the possibly serendipitous benefit of all the scenery along the way. The GPO version is also very, very slow, and as we have said even the user who knows quite specifically where she wants to go is held in thrall to the search engine, which provides the only access to specific sections.

Frustration with those deficiencies and several queries from users, one of them an alumnus who also found it odd that we did not have our own CFR, and who strongly articulated the value of browsable tables of contents, caused us to revisit the issue. We quickly recognized that we did not have to take over the maintenance of an entire CFR collection in order to provide a table of contents; we could construct that independently.

Moreover, current technology would permit us to set up a machine that would transparently pass along queries to the GPO search engine and cache the results for subsequent reuse at speeds much faster than querying the GPO engine would allow – in effect, a GPO accelerator. Using both the editorial and the technical talents of students working for us over the summer, we built the CFR tables of contents and released them in late August. (We were rather amused when the GPO added a browseable table of contents roughly three weeks later.) The accelerator was added in late December. The system as it exists permits table-of-contents browsing and, much of the time, is up to two orders of magnitude faster than the GPO service.

D. LIIBULLETIN-NY

Now in its fifth year, the LIIBULLETIN-NY provides commentary on important decisions of the New York Court of Appeals, delivered via e-mail within a few business days of the handing-down of the decision. It provides synopsis and summation plus succinct analysis of the decision and its relationship to prior law in New York and to law in other jurisdictions. Decisions are selected for treatment by a student editor-in-chief and passed on to teams of four to seven student editors; each team generates commentary on one decision. The internal workings of teams are entirely their own affair; some approach the work using a divide-and-conquer strategy; others undertake the entire effort as a group.

The benefit to the audience is timely and insightful commentary that is not available from any other source. The students benefit from a writing experience that is both utterly unlike anything else they will do in law school and very much like work they will encounter in practice. Students who mention their work on bulletin in job interviews report to us that while many practitioners are initially thrown by the electronic nature of the publication, they rapidly realize that the unpredictability of the subject matter and the need for both speed and depth make the LIIBULLETIN-NY experience one which is valuable preparation for work in their firms.

The bulletin currently has approximately 2800 subscribers, more than any of the three student-edited print journals published at the School. It is read at a large number of law firms, by legislative staff in other states, at Ernst & Young and at Andersen Consulting, and in Fiji and South Africa.

E. The LII's distance learning initiative: Copyright and digital works

In 1996-97 LII undertook to explore how digital technology might be used by law schools to reach students (and involve faculty) remote from their campuses. Using the Internet, it offered a law course, for credit, to students of four participating law schools -- Cornell plus Chicago-Kent, Colorado, and Kansas. That course has run for three years. Through it the LII has learned a great deal about the challenges and possibilities of distance learning. Some key elements of this first LII distance learning venture were:

- a) digital course materials (distributed via the Internet)
- b) e-mail and Web-based written exchange as a continuous means of teacher-student, student-student, and student-teacher exchange, and
- c) once a week Internet-based video conference for “face to face” class discussion (scheduled across four school class schedules and academic calendars and three time zones)

Educational institutions are embarking upon "distance learning" for many different reasons and consequently the phenomenon takes many forms. The underlying aim of this particular project (shared by all the participating schools) was to discover ways that network communication, with its ability to nullify barriers imposed by distance and advantages provided by proximity, could be used to give resident students wider educational options, by sharing faculty across institutions.

This initial distance learning experiment closed following a successful three year run. During 1999-2000 we are building two new courses for Net delivery, drawing upon the lessons we have learned, but using an architecture that will require less continuous "real time" involvement by the course preparer.

F. African initiatives

In 1996 the LII joined with the University of Zambia Law School and two Cornell Law graduates serving on its faculty under the Cornell-Peace Corps Lawyers in Africa program to establish a Zambian legal database and Internet site, the Zambia Legal Information Institute or ZamLII. Providing access to Supreme Court decisions and important statutes of recent years, previously inaccessible to most law students and lawyers throughout the country, the young Zambia Legal Information Institute may prove in time to have greater impact than our own. Already the project is a highly conspicuous model, referred to in most discussions of ways to improve the distribution of legal information in developing countries.

The Peace Corps continues to support the law school's "Lawyers in Africa" program which provides staffing support to the University of Zambia Law School and the LII continues to be responsible for what has become an explicit technology component of that program. It also serves as backup resource for ZamLII. In May 1998, Martin joined Professor Robert Kent of the Cornell faculty on a trip through southern Africa, visiting law schools in Uganda, Zimbabwe, Namibia, Lesotho, and South Africa, and exploring the potential uses of digital technology in settings where course materials are all too often costly and out of date and library resources, quite limited. Uniformly, deans and faculties expressed interest in being included in an expanded "Lawyers in Africa" program with particular emphasis on its legal information component. We hope that the Peace Corps will soon extend the program into one or more of the countries on that list. Independent of the Peace Corps program, the LII has been asked to provide consultation on a legislative database project in Uganda and technology initiatives at law schools in Tanzania and South Africa and we have worked with law students from Africa on the design of a legal information enterprise they plan to establish upon their return.

G. New York Court of Claims

The Court of Claims is the court which adjudicates all claims made against state agencies such as the Thruway Authority or the Department of Transportation; its judgements are rarely published. The Court of Claims staff, aware of the work the LII had done with the opinions of the New York Court of Appeals, approached us about the design and creation of a database of Court of Claims judgments.

We were intrigued by the project for two reasons. First, it offered an opportunity to build a "cradle-to-grave" system that would promote tight editorial practices and metadata capture at the source, reducing or eliminating altogether the cataloging and editorial retrofitting problems inherent in working with legacy data never intended for online publication. It represented a very tempting chance to "do one right".

Second, we felt that this was an area where electronic publication could make an important difference to private citizens. The typical plaintiff in a case appearing before the Court of Claims -- someone who, say, breaks her leg on an unsafe piece of playground equipment in a state park, or is hurt in an automobile accident resulting from poor highway maintenance -- is represented by an attorney who has never appeared before that court; there are few repeat players on the plaintiff's side. Absent publication of prior judgments, there is little that the plaintiff's attorney can do to familiarize herself with what the court expects, or to find out on behalf of the client what it is reasonable to expect that the court might do. By contrast, the state's position is defended by lawyers from the state Attorney General's office, many of them repeat players who are experienced in defending matters involving particular agencies. The state's lawyers have access to extensive records of the court's actions maintained internally by the Attorney General's office -- a considerable advantage to the lawyer wanting to know how and what to present to the Court of

Claims judge. Public dissemination of the work of the court by electronic means would help level the playing field, we felt.

A successful prototype including all the judgments from 1995 was constructed and presented to the judges of the court at their annual meeting last October. We are now embarked on the second and third phases of the project, which involve the design and construction of a prospective system for the capture and transport of judgments. Assuming that all goes well, that system will be put into production in January 2000.

H. New York State Bar Association

For two years, the LII has created and maintained resource pages on the Web for many of the New York State Bar Association (NYSBA) sections under contract with the association. It has also run a list for distribution of an e-mail delivered newsletter prepared by one of the NYSBA sections.

Recently NYSBA staff agreed to an expanded "partnership" including two attractive components. The first is NYSBA sponsorship of LIIBULLETIN-NY. For a sum that amounts to most, if not all, of the student wages paid by the LII in producing the bulletin, NYSBA is now recognized as its co-sponsor (with Cornell). In addition to that recognition, NYSBA has acquired the right to distribute appropriate portions of the bulletin in special-interest feeds to its sections -- a project in which we also assist. The second component, a bulk purchase or licensed special edition of the American Legal Ethics Library CD-ROM running to 5,000 or more copies, is still at the proposal stage.

I. LII backgrounders

From the beginning, we have been aware that significant numbers of our audience were people who act as information brokers for others – a phrase that describes high school teachers and journalists as well as librarians and public policy analysts. A little more than a year ago we conceived the possibility of small, topical collections of legal information and exposition which could serve as resource collections and brief introductions to the law affecting matters in which there was both current and recurrent interest – things one might think of as the law behind items in the news. Thus far we have published “LII backgrounders” on both Amistad cases (the original, and the movie copyright case), the insanity defense (in the context of the Unabomber trial), impeachment, Internet gambling, and forfeiture laws.

J. Lexis-Nexis Bridge project

The LII has just completed its second year of a contract to provide technical and instructional-design expertise to LEXIS-NEXIS as they develop an electronic first-year curriculum. The lesson authors are seven prominent members of the Harvard Law School faculty. Bruce was in residence at Harvard during the spring of 1998, providing the springboard for a collaboration that now continues largely via electronic means, with periodic visits to confer. To date some 24 separate modules have been released for comment by law teachers with as many more to follow. Broadly speaking, they are intended to take full but not superficial advantage of hypermedia technology to teach first year students in lawyering meta-skills and legal theory. Though it is early yet (particularly in the very conservative world of legal pedagogy), at least two law schools are considering the use of all or part of the materials as part of an effort at curricular reform.

K. Harvard Law Library

The LII provides consulting services to the Harvard Law Library on a number of projects; two deserve special mention. The first aims to digitize a large collection of archival material from the Nuremberg Military Tribunal, perhaps reaching three million pages in size if the full project is undertaken. At the moment a much smaller but still formidable pilot effort is underway; the intention is to digitize and make available for full-text and image retrieval some 6500 pages comprising the entire record of the first medical trial (commonly known as the Doctors' Trial), along with the trial transcript. The condition of the physical

archive and the need to experiment with an array of scanning approaches has slowed the effort down somewhat, but we expect that much of the work will be completed by late 1999.

The second project is the construction of a large, distributed digital repository of legal journal articles and "grey literature". We are building an initial repository at Harvard, and hope ultimately to run a distributed archive across multiple law schools including Cornell. We imagine that this repository will be similar to the NCESTRL collection of computer-science technical papers (the current flagship implementation for the software systems on which we are basing the effort), but will provide greater functionality for both catalogers and end users. The project has a second and no less important avatar as a technology-transfer and staff-development tool, promoting expertise in digital-library techniques among technical services staff and administration in the Harvard Law Library.

L. Ames Foundation

The Ames Foundation is a private foundation dedicated to the publication of historical legal works, based at the Harvard Law School and largely controlled by Harvard law faculty with an interest in legal history. Last year, the Ames Foundation and the LII co-produced a Web-based version of Bracton's *De Legibus et Consuetudinibus Angliæ* (On the Laws and Customs of England), a thirteenth-century work representing the first attempt at rational organization of English law. The electronic version employs software written at the LII to provide for simultaneous presentation of the Latin text and English translation of the work, permits dual-language searching, and makes use of color and specialized typography to enhance the navigability and legibility of the original over the Web. It provides, in effect, a "scholar's workstation" for working with the text in the original and in translation. The work has proven of interest to medievalists in general as well as legal historians in particular, and has been named as a "five star legal site" by the leading Internet newsletter for lawyers, legal.online.

This year, the LII continues work with Ames on the *Year Books of Richard II*, which provide a record (in the peculiar dialect known as Law French) of the questions argued before judges in the central royal courts during the reign of Richard II (1377-79).

IV. Likely, new, near-term initiatives

A. Commonwealth

In December 1998, Martin was an invited speaker at the annual meeting of the Commonwealth Legal Education Association (CLEA). His presentation on how digital distribution of legal course materials might be used to particular advantage in "low tech" situations, notably law schools with meager financial and library resources, drew an enthusiastic response and led to a meeting with the association's executive committee. At that meeting the committee expressed eagerness to join with the LII in developing a working prototype of that concept, the work to be funded by the Commonwealth Foundation (the principal funding source of the CLEA). Association members have just approved a model syllabus for a course on Human Rights in Commonwealth countries. The proposal that continues under discussion, but without funding, would have the LII serve as Internet and CD-ROM publisher of teaching materials supporting that syllabus, including both documents drawn from public international sources and local materials contributed by CLEA members around the globe.

B. Other curriculum-related efforts

One explanation of the LII's success is simply that we have built things on which others may build, and are ubiquitous as a result. The same strategy could work with properly designed, granular teaching materials; their development would also provide many opportunities to collaborate with and to showcase the talents of a number of Cornell Law School students and faculty. It would also put to use at Cornell the multi-media experience gained through the LII's participation in the LEXIS-NEXIS Bridge Project. At present we have preliminary plans for: evidence lessons based on Professor Faust Rossi's enormously successful bar review lectures, construction of materials in the area of administrative law that would use an enhanced version of

the US Government Manual as their point of departure, introductory intellectual property materials (copyright and patent) and a series of basic economics lessons for law students.

V. Needs

A. *Avoiding death by success*

The current and near-term projects listed above show an interest in our abilities and knowledge that spans a wide range of organizations in the public, governmental, and private sectors. These projects may seem scattered, but they share a common thread in the form of outside interest in the kind of expertise in legal information architecture that we have developed in the process of creating our showcase collections. The consulting contracts that follow that interest have, in the past, been an important means of funding the work of the LII. Such relationships provide us with a good part of our bread and butter. They also (given the importance and diversity of the parties involved) provide independent validation not only of the work we have done but of our approach to that work: our strongly-held belief that we should be primarily concerned with the *application* of research to actual legal information services. We should be happy with this situation and we are. But it is also the cause for some concern.

Today, all LII undertakings depend on a greater or lesser measure of the energies of Martin and Bruce. That simple statement is at the root of our disquiet, but it may not do justice to a complex reality. The situation has a number of facets, each of which reflects a different but related reason for concern.

First, we must be realistic about our long-term ability to continue doing as we have, given the need for renewal of technological expertise in an operation such as ours. The LII established its reputation in the very early days of the Web by taking what was then a largely speculative and little-understood technology and demonstrating that it could be shaped into an effective architecture for the delivery of legal information to audiences both old and new. We have been very successful at that approach, but it rests on a certain periodic renewal of our own expertise that we have found increasingly difficult to sustain so long as so much of the time of the principals must be devoted to existing collections and to work on other peoples' projects. Even simple "look and feel" renovation of our collections, without significant technological enhancement, is a major undertaking. We need to understand and incorporate new technologies for document structuring, digital library techniques, and information architecture and this is difficult to do when so much of our attention is on existing collections and on outside contracts.

There is a second, similar argument to be made about our financial existence and our fiscal relationship with the School. We came of age in a largely self-funded model in which both Bruce and Martin continued other responsibilities within the School and channeled income from consulting, software licensing, and other "net-related" sources toward the continuance of the LII. What minuscule fortunes the LII generated were plowed back into it. We are now dependent on that income both as an actual means of defraying expenses and (perhaps more significantly) as a good-faith pledge to the School that we, as individuals, are not somehow gaining from our joint work at the expense of the institution. And, as with technological renewal, time spent doing outside work is time not spent on other things: in this case the development of a better long-term financial model which would free us and the School from the need to provide subsidy for the LII. We are, out of present necessity, neglecting activities that would help ensure the LII's future.

Third, we founded the Institute in the belief that new delivery systems and ways of thinking about legal information provide new opportunities to draw directly on the strengths of the School: its faculty and its students. Time spent in collaboration with outsiders, however worthy they may be, is inevitably time taken away from collaboration with those at home. To be sure, the two are not entirely, inevitably or directly at odds. We have taken some care to select consulting projects that have honed expertise needed in advancing the mission of the School. For instance, Bruce's work under Lexis-Nexis auspices at Harvard has provided valuable insight into the process needed to develop legal-education products for distance learning that can as easily be applied here (with the further advantage that the costs of developing that expertise have been borne by others). But there will always be a degree to which the fiscal necessity of working with others will detract from our ability to take care of our own.

B. A closer relationship with Cornell Law School through reduced fiscal dependence on consulting and contract income

It follows (somewhat paradoxically) from this that the way to make our relationship with the School a healthier one is to reduce our fiscal dependence on its operating budget by finding other means of support, freeing time for work with collaborators here. Also implied here, we think, is some need for limited growth of staff. Some of our most visible flagship efforts are at the same time poor uses of the time of LII principals. They could be adequately undertaken by staff working under supervision. Not surprisingly, our major needs in this respect are for editorial and programming work of greater sophistication and continuity than can be provided by student workers. Beyond this immediate need to continue our present level of activity and perhaps even expand a little lies the need to ensure the financial and institutional support that will secure the future of this truly unique activity, ideally at Cornell Law School, beyond the years of active involvement by its two founders.

VI. Capsule biographies of LII principals

- **Thomas R. Bruce** - Prior to co-founding the LII (with Peter Martin) in 1992, Mr. Bruce served for several years as Director of Educational Technologies at the Cornell Law School. He is the author of Cello, the first Web browser for Microsoft Windows, and of a variety of other software tools used by the LII and others. Mr. Bruce has consulted on Internet matters for Lexis-Nexis, West Group, IBM, Folio Corporation, MCI, and Mecklermedia. He is a member of the board of directors of the national computer-assisted legal-education consortium, CALI, a Fellow of the University of Massachusetts Center for Information Technology and Dispute Resolution, and a co-founder both of the TEKNOIDS listserv list for technical professionals working in law and of the CALI-sponsored conference at which they congregate annually. Currently, he is working with seven members of the Harvard law faculty on the development of a comprehensive first-year curriculum to be delivered by electronic means. During the summer of 1999 he will be presenting an adaptation of his Cornell seminar in legal information systems as an intensive two-week course at the Syracuse University School of Information Science. His writings appear in the pages of law reviews, in the first volume of the nascent *Journal of Law School Computing* (of which he is an editor) and in *On the Internet*, the magazine of the Internet Society. He is a frequent speaker on the rewards and penalties of computer use in legal education, appearing before groups of law school technologists, law librarians, law teachers, and practitioners. His video on the history of the Supreme Judicial Court of Massachusetts is in use in school systems throughout the state.
- **Peter W. Martin** - Martin is the Jane M.G. Foster Professor of Law at Cornell Law School where he has been a member of the faculty since 1971 and was dean from 1980 to 1988. He is the author of an electronic treatise, *Martin on Social Security Law*, released on LEXIS in November 1990 and published on CD-ROM by Clark Boardman Callaghan in July, 1994, as "Social Security Plus"; an electronic reference work, *Basic Legal Citation* (hypertext 1993); and numerous electronic articles on the history and future of legal information technology. The first of these was published on the Internet in January 1994 by GNN Magazine. His 1994 Internet article on Five Compelling Reasons for Lawyers and Law Firms to Be on the Internet has been widely cited and in revised form appeared as a cover article for the Sept. 1995 ABA Journal. Martin is the author of numerous print works, as well. His most recent journal articles have dealt with the implications of computer technology for legal research, law libraries, and legal education. He received the 1992 Law Library Journal Article of the Year Award and his Social Security treatise received the 1994 Infobase Industry Award for "Best from the Field of Education."

Professor Martin is a past president of the Center for Computer Assisted Legal Instruction and past chair of the Association of American Law Schools Section of Law and Computers. His electronic treatise work was supported in part by the National Center for Automated Information Research (NCAIR), which awarded him the center's first Dixon Senior Research Fellowship in 1988. In 1992 with support from NCAIR and others, he (and Thomas R. Bruce) established the Legal Information Institute at Cornell (the LII).