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## **Proposal -- From the Legal Information Institute, Cornell Law School**

### ***I. Introduction***

This proposal is submitted by the Legal Information Institute (LII), an activity based in and supported by the Cornell Law School, Cornell University. It seeks support for the Institute's long-term (5 year) capital needs -- an amount we calculate at \$160,000.

Our annual report (which is attached) provides most of the background information requested by the APS Proposal Guidelines. Since that report tells the story of the LII and lays out our future plans it is probably the place to begin. This document updates the report and furnishes additional financial detail. Most importantly it, together with a spreadsheet (also attached), provides explanation of the capital needs on which this proposal is focused. The proposal closes with a brief illustration of the range of individuals now served by the Institute's activities.

Since the Legal Information Institute is not a separate entity, but part of Cornell University, we have not included audited financial statements, Form 990, or the U.S. Treasury Department Tax Exempt letter. Our assumption is that APS already has copies of these documents. And it would be difficult for us to obtain them without jeopardizing the confidences we have been enjoined to honor.

### ***II. Five Year Capital Needs and Related Proposal***

#### **A. Background**

As the LII's report for 1995-96 details, the extraordinary loads now carried by the LII servers compel us to upgrade the Institute's basic infrastructure -- an infrastructure that has been assembled piecemeal over the past five years, generally in response to, rather than in anticipation of, performance problems caused by overloading. Beginning with two Sun workstations acquired by the law school when the Institute first began to explore the Internet, the LII has since acquired all additional computers, disk and memory upgrades out of Institute revenues as needed, or more often after needed. Initially all LII services ran off one Sun Sparcstation. But as services have been added and traffic has grown, particular functions have been moved off to special-purpose machines; and as load has increased these have required repeated upgrades. To take but one example, within weeks after the LII mounted its collection of historic Supreme Court decisions on a special-purpose server this September that computer (essentially a 1- year old desktop model) began to reel under the traffic. Quite literally, the server had to be restarted several times a day. Since then we've added memory and upgraded the software. For the time being we've got that machine to the point where it can stay up with the demands of its 10,000 or so users each week.

While such an ad hoc approach to equipment and software was inescapable during the Institute's start-up phase, the scale of the LII's current activities and audience and the ambition of its future plans call for a planned and budgeted approach to equipment and software needs. (This is not to say that the LII won't still need the flexibility to respond to opportunities and challenges that suddenly arise. For example, the notice we received three weeks ago from Case Western Reserve University (CWRU) and the Supreme Court technology staff that CWRU would cease archiving Supreme Court decisions on December 31 forced us to invest in new equipment and software merely to assure continuation of public access to the Court's decisions, for which we have been the Internet gateway since 1993.)

Our projection of necessary replacements and additions for current hardware and software are summarized in the attached spreadsheet, which shows a \$160,000 five-year capital budget figure. Since the spreadsheet itself is quite cryptic, an explanation follows.

## **B. Explanation of Spreadsheet**

The attached spreadsheet embodies one strategy for coping with problems of loading on the LII servers which will only grow more acute as time passes. At present the Institute's two main servers ('www.law.cornell.edu', and the ingeniously-named 'www2.law.cornell.edu'), are hard-pressed to deal with their primary tasks of serving the bulk of the LII's data collection (handled by machine 'www') and offering the Internet analogs to the LII's on-disk publications (handled by machine 'www2'). The volume of requests being serviced now runs to roughly one million per week, with serious peaks in loading occurring at midday and during the late afternoon of most business days. A year ago, we were forced to acquire a third machine ('www3.law.cornell.edu') to handle our automatic e-mail distribution of Supreme Court syllabi, a service which can, on any given day when the court is in session, trigger delivery of large files consisting of summaries of multiple opinions to a subscriber list of over 10,000. The strategy of dividing labor among different computers was successful in bringing performance back to acceptable levels, only to have it sag once more as traffic grew -- 25% or more since August of this year alone. There are other tasks still performed by our main server ('www.law.cornell.edu') which are candidates for offloading to specialized machines, and that approach is the one represented by the attached figures.

High on that list of candidates is the task of constructing the full-text indices which enable keyword searching of the growing LII data collection, something which must be re-done every time a significant addition is made to our holdings. Because the need to do this is driven by data being as it were thrown over our transom, we cannot control its schedule, and it is a task which imposes serious processing demands on the machine doing it; it needs a machine of its own (whimsically called 'grinder.law.cornell.edu' in the attached) because it cannot coexist with production data-serving on www.law.cornell.edu without unacceptably reducing that machine's response to data requests. Another significant consumer of machine resources is perhaps best described as the "amateur query effect" -- something which happens when a naive searcher launches a keyword search using a very commonly-occurring keyword, for example searching the entirety of the US Code for the word "bankruptcy". Close observation of our current system shows that such "gimme-everything" requests are a significant load best handled by a separate computer ('queries.law.cornell.edu'). Finally, our data collections are growing to the point where preprocessing tasks such as converting text from its original format (say, the WordPerfect files transmitted to us by the courts) to the format in which they will be served to the Net represent a large task, one which needs its own computer ('intake.law.cornell.edu'). Not addressed in the accompanying spreadsheet are a wealth of other, smaller tasks such as fax delivery of the LIIBULLETIN-NY and archiving of our various listserv lists, which are and will continue to be handled by much less capable "hand-me-down" machines which have been retired from tasks for which they are no longer adequate.

The six machines listed at the top of the spreadsheet are the Institute's main servers plus the special purpose machines described above. They are followed by machines for the Institute's principal workers. The two of us and our systems administrator will continue to need desktop machines that are primarily Microsoft Windows computers but with greater capacity than the standard issue law school machines; if any of us need a separate UNIX (actually Linux) machine it can generally be created from a "hand-me-down" of the current desktop machine, or the old one can stay as is and the new one become a Linux machine.

The spreadsheet also includes a short list of supporting equipment we should have. The last item is software. Software licensing is going to be an increasingly large expense for us. In our early years we relied almost exclusively on free software, software we ourselves developed, or shareware developed at other academic institutions, augmented by applications or extensions developed here. We now require server software robust enough to handle our volume and to do secure transactions. That is forcing us to license commercial grade applications.

With the exception of our base system and the supporting equipment we have assumed two purchase cycles during the next five years.

## **C. Proposal**

Secure funding for these infrastructure needs, spread over the next five years, should allow the Institute to maintain current services for an expanding international audience and to continue to experiment with new and improved ways to distribute important legal information and commentary to students and teachers at all levels of education, to government workers, professionals of diverse kinds, lawyers and judges. If some of that funding came in a form that challenged others, including particularly those drawing direct benefit as users from the LII's Internet activities, to contribute to the Institute's annual operating budget it would be even more useful.

## ***III. An Update on the Annual Report***

### **A. LII Course Materials**

The LII's electronic course supplements (not casebooks but core documents for important courses focused on codes, treaties, and rules, e.g., the Federal Rules of Civil Procedure and Evidence, the U.C.C., GATT, the A.P.A.) are now, for the first time, available for Internet purchase and downloading. Available in both FOLIO Views and word-processing format, these materials have in the past been sold on disk to law schools, individual students, and law firms. Selling and delivering via the Internet allows us to drop the price to \$5 per title and largely rid ourselves of the burdens of storing and shipping disks. Building the new system required us to surmount a goodly number of technological hurdles and to obtain certification permitting the LII to run a commercial "secure" server doing encrypted credit card transactions. The new system can be inspected by clicking on the link to "hypertext law materials on disk" on the LII's initial Web page < <http://www.law.cornell.edu/> >.

Also new this fall is the LII's CD-ROM Collection of 325 Historic Decisions of the U.S. Supreme Court. This collection is accessible at our Internet site. (To review the collection, you need simply follow the link on the initial LII page to "historic decisions.") The CD-ROM is being sold (for \$25) to college and high school teachers, libraries, and a wide variety of individuals. The initial response has been very positive. Like the LII's course supplements, this CD-ROM was designed with features that make it a kind of educational resource that no mere digital clone of a printed text can be. On the other hand, it competes aggressively with print materials on their own turf, for it has the capacity to deliver high quality print on demand.

### **B. Student-Written Case Commentary**

The liibulletin-ny has entered its second year. The editors, some 30 strong, under the leadership of veteran third year students have this fall prepared and released several rounds of commentary on important decisions of the New York Court of Appeal. These casenotes, focusing on decisions handed down no more than two weeks before, are distributed in bulletin format by e-mail to over 1,500 subscribing lawyers, judges, journalists, and others. The same commentaries are also published at the LII Web site as hypertext headnotes to the decisions. And beginning last month they are available via a third distribution path -- namely, fax -- for those who don't have access to external e-mail (true of most of the state's judges). This new form of delivery is implemented by means of a database-driven fax system created by the LII.

### **C. Legal Education Studies**

Casebooks on disk and students with laptops are growing ever more numerous. The LII's report on these intertwined phenomena based on close study of the 100 first year students in Chicago-Kent's "computer section" received wide dissemination this fall, following its mention on the "lawprof" list. (A copy is available at the LII site.)

The LII's experimental course taught via the Internet to students at Cornell and three other law schools (Chicago-Kent, Colorado, and Kansas) is well underway. Basic details are available at: < <http://www.law.cornell.edu/ecourse/index.htm> >.

#### **IV. The Institute's Funding and Operating Expenses**

As an activity operating within the law school the Institute has not had a fully distinct budget. The two co-directors, Martin and Bruce, are full-time law school employees, both carrying out substantial other responsibilities within the school. During its short history, the LII has succeeded in drawing significant outside support. Start-up funding from the National Center for Automated Information Retrieval (NCAIR) will total \$320,000 running through the end of this year. Aside from a summer stipend for Martin and a few months time for Bruce during the Institute's first year, the NCAIR support has principally funded a systems administrator/programmer position and more recently a part-time administrative manager plus a wide range of incremental expenses ranging from computer disks to travel. It has also made it possible for the Institute to employ 4 or 5 law students to do research, writing, and database building each summer since 1992 and a larger number of part-time workers during the academic year. A promised supplemental grant of \$40,000 (included in the above total) will allow the LII to move rapidly to fill the vacuum created by the recent decision of Case Western Reserve to allow its contract for a direct access to Supreme Court decisions to lapse.

NCAIR has from the beginning stressed the need for the Institute to develop replacement revenue sources. We have done so although in an environment that has shifted so rapidly our strategies for self-sufficiency have performed been adaptive. As noted, NCAIR has funded our student workers. Our aim with such student work has been to reach a level of revenue return from disk-based course materials that will make the current level of effort self-sustaining. The LII course materials and the recently released CD-ROM collection of Historic Supreme Court Decisions show promise of attaining that goal. In addition, the school has been able to attract a grant from the Keck Foundation that is now funding work by students and others on an ambitious electronic publishing project. For Keck this is not a "technology" project but rather a Legal Ethics program that exploits new possibilities opened by CD-ROM and Internet publication.

Software royalties (from the LII's Cello browser) provided revenue for a time, but are not likely to be a major factor in the years ahead.

The digital revolution caught the major law publishers by surprise. We have drawn a modest level of financial support plus some data and software from Corporate sponsors. To firms contributing \$5,000 a year to the LII, we have offered a day of briefing on the Institute's work which in several cases has led to specific joint studies, white papers, or consulting arrangements. Near term we'll likely be able to continue to draw revenue from this sector. Longer term the major commercial players in the legal information field are likely to see less need for external R & D or consultancy. A major issue for us will be the degree to which we (like other Internet sites) seek to replace or increase that revenue by selling advertising space in and about our heavily trafficked information collections. Since we value our current independence from commercial influence, that is not a step we would take lightly.

With our Internet material, both Web and e-mail delivered, we reach many important audiences who would be blocked by any form of subscription fee or transaction charge. Attempting to distinguish between those who could pay and the rest, as well as policing any fee-based distribution to guard against its being circumvented by redistribution involve far greater administrative and other costs than benefits. However, we plan to expand our current pattern of offering for sale disk-based versions of material we also provide via the Internet for free.

Last spring we also adapted the NPR model to one of our services, the Supreme Court newsletter, putting out a special issue that invited all recipients to contribute if they were able (suggesting a level of \$25 per individual, \$100 per firm). We'll repeat the invitation this year and seek ways to expand that approach. That one solicitation brought in a modest \$3,000.

The following tables summarize the Institute's revenue from these non-grant sources for the fiscal year running from July 1, 1995 to June 30, 1996 and the current fiscal year to date. (We are still early in this year's cycle; the absence of 1996-1997 entries for corporate sponsorships and joint studies has no significance.)

**July 1, 1995 - June 30, 1996:**

<b>Category</b>	<b>Revenue</b>
Course Materials on Disk	\$7,147.50
Corporate Sponsors	\$15,000
Joint Studies etc.	\$59,357.00
Contributions from Users	\$1,090.00
Cello Royalties	\$97,399.25
<b>Total 95-96</b>	<b>\$179,993.25</b>

**July 1, 1996 - Present:**

<b>Category</b>	<b>Revenue</b>
Course Materials Sales (Disk & Internet)	\$980.51
Supreme Court CD-ROM Sales	\$6,304.00
Contributions from Users	\$2,045.00
<b>Total 96-97 (to date)</b>	<b>\$9,329.51</b>

## ***V. Whom Does the LII Serve?***

### ***Getting Beyond the Numbers: Unsolicited Feedback Received Over the Past Two Months***

#### **From a Pennsylvania lawyer (11/19/96):**

“Because of this service I was able to locate an opinion directly on point in a case that I have currently before the Pennsylvania Supreme Court. The opinion was only a day old, it would have taken me at least a month before I received the advanced sheets on the case.”

#### **From a high school student in the state of Washington (10/30/96):**

“Hello, As a high school student working on a Supreme Court project in my American Studies class, I found these web sites to be quite useful in my research. My teacher gave our class the address for this site, and now I have access to it at both school and home. Thank you!”

#### **From the Chair of the Department of Politics at a SUNY campus (10/20/96):**

“I’ve taught Constitutional Law here ... for over 20 years and I must say this disc is easily the best thing to come along for that course in all that time.” [The message goes on to explain how prior to the release of the Institute’s CD-ROM Collection of Historic Supreme Court decisions his assignments had severely stressed the single set of Supreme Court case reports in the school library and library staff and also imposed heavy photocopy charges on the students.]

#### **From a writer (10/7/96):**

“I have used your site to research employment law. I’m not a lawyer but have been involved in a case in this area....

“I think the LII is an excellent resource for people who want to see the actual laws. Your introduction [on employment discrimination law] is also useful. For many people this basic information is a starting point in meeting their needs.

“In a society of laws, it’s important for citizens to be well informed. Not all of us are lawyers or have convenient access to a law library. Your information is easily accessible to those who have internet access.”

#### **From another citizen (10/2/96):**

“I was able to gather resource information from your library needed to assist me and my wife in a battle with the Department of Labor. I got everything in minutes, at home, instead of having to pull books at the library and xerox pages. Thank you very much!”

#### **From an attorney in a corporate law department (9/30/96):**

“I’ve been practicing law for 15 years. Your html version of the U.S. code is one of the most useful tools I’ve encountered in those 15 years. Thanks for the obvious effort that went into producing it. If I was a Cornell graduate, I’d be proud to be an alum.”

#### **From a D.C. Commissioner (9/29/96):**

“I thank you for offering this service. The information you have here helps me to fulfill my mission as an elected official of the D.C. government in many ways.”

#### **From a government employee (9/28/96):**

“I am a staff attorney for the Mississippi Department of Human Services, Child Support Enforcement Division. The rural counties to which I am assigned rarely have a complete law library. I just discovered this resource today. I’m sure it will prove invaluable.”