U.S./Canadian Licensing In 2003: Survey Results

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Initial Results of a Survey Conducted in January/February 2004 by the Licensing Foundation of LES (USA & Canada),[1] on behalf of The Licensing Foundation.[2]

ABSTRACT AND SUMMARY OF FINDINGS

The results are reported of a Web-based survey of licensing practices of LES (USA & Canada) members. Such survey was sponsored and conducted by the Licensing Foundation of LES (USA & Canada) (*www.licensingfoundaton.org*). It was conducted in January and February of 2004 by contacting 5,349 member e-mail addresses and providing a link to the online survey.

The focus of the survey and the analysis of the results was on companies who are intellectual property owners and who engage in out-licensing despite their ability, in principle, to directly commercialize their IP or in in-licensing despite their general ability to develop their own technology through internal R&D. 229 respondents to this survey fit this profile. These were further separated into "large" and "small" using the demarcation of 1,000 employees.

The results reported here are related to the business process "trade," or dealmaking, involving technology-based IP. Such dealmaking process was surveyed for three time periods: getting to the point of substantive negotiations, consummating such negotiations, and living with the deal done.

From these data it appears that only a small portion of what is believed to be licensable IP actually is licensed within the time frame of a respondent's experience. A substantial number of factors contribute to deal breakdown both during the period when potential licensees are identified as well as during substantive negotiations, and it is not always about "the money." Finally, looking back on deals done within the past year, the survey suggests that a substantial number of such agreements would have been done differently with respect to various deal terms used in the agreement.

INTRODUCTION

"Licensing" is, literally, the first word of LES, and the single-word appellation of the business process that best describes our Society's primary interest and what most of us designate as our profession (industry) and craft (technê). Yet, the industry of licensing,[3] unlike almost every other business, is both difficult to define or encompass.

A legal perspective of licensing focuses on the forms and protections of intellectual property (IP) rights, contractual vehicles by which such rights can be conveyed, and the applicability of governing law to the behaviors and misbehaviors of individuals and legal entities. A financial perspective leads to an analysis of the value of IP rights as they may be packaged in various forms and with other assets so they may be subjects of commercial transactions ("licenses"). The perspective of a business owner or manager views licensing, and IP, as mechanisms by which investments made can be realized, or the investments of others acquired, all as part of the competitive context of successfully satisfying the needs of its customers, present and future. The licensing expanse, almost like the heavens themselves, seems to cover an earthful (and earful) of activities and interests:

- Internal Research & Development (IR&D), contract R&D,
- Entrepreneurship, innovation, inventions, discoveries, creations,
- Patents, trade secrets, copyrights, trademarks,
- Valuation,pricing, royalties, equity/warrants, minimums, changes of IP rights, supply/purchase commitments,
- Agreements (deals), deal-marketing, negotiation, dealmaking,
- Spinouts, Joint Ventures/Partnerships, research collaborations, startups/NEWCOs, M&As (Mergers & Acquisitions),
- Infringement/IP-theft litigation/negotiation/settlement,
- Government policy related to IP law and policy, economic development, and trade.[4]

1. *www.licensingfoundation.org*. The Licensing Foundation is a wholly-owned 501c3 subsidiary of LES (USA & Canada).
2. The Licensing Foundation in January 2004 was managed by its Board comprised of Louis Berneman , Todd Dickinson, Mel Jager (President), Dwight Olson, Richard Razgaitis, Art Rose, and Jim Soberaj, on behalf of the Board of LES (USA & Canada).
3. Some have characterized the licensing "industry" as the "market for knowledge." The classical Greek term technê, commonly translated craft or art, and perhaps in our context and times could be best translated as "know how," is more appropriate than "knowledge." Although we use "licensing industry" as subject of study, it could perhaps be more comprehensively defined as the "market for owned/protected *technê*."

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The final word in the above list, trade, references a basic, essential business activity that dates from antiquity and one that has had enormous societal impact. Licensing, albeit a very specialized form of trade, has become in the last half of the 20th Century a vibrant, and extremely important part of business and society. LES, which came into existence less than 40 years ago, has grown to 13,000 members worldwide, 5,800 of which are in the U.S. and Canada. Other associations closely related to licensing, such as AIPLA, AUTM, and IPO, have similarly evidenced significant growth and interest. U.S. patents, which date from 1790 (a year when there were just three patents issued), have likewise shown a dramatic level of growth in the past 40 years: from 62,857 issued by the USPTO in 1965 to 169,028 in 2003.[5] Software (including firmware and middleware) was virtually non-existent as an industry 40 years ago but has become a major element in our economy,[6] affecting even our rights to write, print, and transmit articles such as this one.

It is of interest to grasp and characterize the extent and key issues of the business and profession of licensing. This interest has attracted the attention of numerous individuals and groups. The U.S. Patent and Trademark Office (USPTO) makes available detailed statistics on patents applied for and granted. The Intellectual Property Owners (IPO) Association has recently published results of its survey of its member's activities. Since FY 1990, AUTM has published an annual report of its survey results of its member institutions (primarily universities) that include not only data on R&D funding and the resulting invention disclosures and patents but also data on license agreements entered into and royalties and other IP payments received.[7] For many years Battelle has performed annual surveys to provide forecasts of annual R&D spending in both industry and government.[8]

In 2003 LES reported on the results of a survey of compensation for licensing professionals.[9] Other LES groups, such as its Intellectual Capital Management Committee have conducted surveys of licensing metrics relating to best practices. "An International Survey on Technology Licensing Practices" has been completed in draft form on behalf of LES International (LESI), LES (USA & Canada), and LES France.[10] This as yet unpublished survey analyzes 160 written questionnaires regarding 297 technology licensing agreements primarily in Europe, Japan, U.S.A., and Canada. Other such licensing process/issues surveys done by LES members (and others) include Degnan,[11] McGavock,[12] McGavock,[13] and the Corporate Legal Times.[14]

Royalty rate and other IP payments have been widely surveyed by many. Public filings of license agreements that represent material transactions have been useful source data for IP payments and in certain respects for deal structures, particularly in the healthcare industry (pharmaceuticals and biotechnology) and have been compiled into databases by commercial vendors.[15] Razgaitis has summarized numerous such royalty rates and other financial surveys, some dating back to 1975.[16]

Except for the AUTM and Battelle surveys, and the U.S. Patent Office statistics, most of the other survey information has been ad hoc and reflects the particular interests of the surveying group.

One core measure of an industry's significance is total annual revenue for all segments by all participants, and an understanding of such industry's structural taxonomy. There have been multiple sources who have claimed that in the U.S., the licensing industry has $100 billion annual "royalty licensing revenues," which appears to include all forms of IP patents including running royalties;[17] however, there does not appear to be a research foundation for this (or any other) estimate. If such revenues are indeed expressed in nine-figures (> $100 bil-

4. Note than the terms "license" or "licensing" do not explicitly appear in any of such bulleted list, although licensing is commonly an important, directly-related business practice.

5. *http://www.uspto.gov/web/offices/ac/ido/oeip/taf/reports.htm#by_hist.*

6. U.S. software only revenues (which arguably could be considered as substantially *all* licensing revenue) in 2001 are estimated to be $69 billion with an additional $100 billion in sales outside the U.S.; Service Annual Survey, *http://www.census.gov/svsd/www/sas511.pdf*

7. AUTM Licensing Survey: FY 2002, The Association of University Technology Managers, 2003.

8. *http://www.battelle.org/news/04/1-22-04 R&D%20Funding.stm*

9. *2003 Compensation Survey Report*, Licensing Executives Society (U.S. and Canada), 2003.

10. "An International Survey on Technology Licensing Practices; The Diversity of Technology Licensing Agreements and their Clauses," Eric Brousseau (coord.), Camille Chasserant, Christian Bessy; FORUM, Université de Paris X, *http://forum.u-paris10.fr*.

11. Degnan, Stephen A., *The Use of Conjoint Analysis to Establish the Most Important Evaluation Factors in Technology Transfer and Patent Licensing Negotiations*, Ph.D. Dissertation, Golden State University School of Business, June 2002.

12. McGavock, D.M. and Lasinski, M.J., "IP Survey Finds Gap in Information," *les Nouvelles*, Sept. 1998, p. 107-116.

13. McGavock, D.M. and Haas, D.A., "Licensing in the Real World: A Survey of Those Who Know," *Licensing Law and Business Report*, Vol. 13, No. 1, May-June 1990, p. 146-156.

14. Andersen, Steve, "The Evolving IP Counsel, The Inaugural Survey of Chief IP Counsel, *Corporate Legal Times*, June 2002, p. 1.

15. Such as, Recombinant Capital (*http://www.recap.com/*) and Windhover (*http://www.windhover.com*) which focuses on the pharmaceutical/biotech industry.

16. Razgaitis, R., *Valuation and Pricing of Technology-Based Intellectual Property*, John Wiley & Sons, 2003, Chapter 4.

17. Such statistic has been cited for "retail" licensing (primarily trademark licensing): "Licensing is a $100 billion retail market worldwide, with $70 billion in business in North America alone, says Murray Altchuler, executive director of the International Licensing Industry Merchandisers' Association (LIMA)." [Citation at: *http://www.entrepreneur.com/article/0,4621,226781,00.html*]. And $100 billion/year is also cited for technology licensing revenues: "The IP licensing market has grown an estimated 700 percent, from $15 billion in 1990 to well over $100 billion in 1998. Patent licensing revenue is predicted to top half a trillion dollars annually by 2005." [Citation at: "The Basics of Financing Intellectual Property Royalties, Part III: What is the Market?," by Licent Capital, July 2, 2001, *http://www.cafezine.com/Index_article.asp?id=412&deptId=3*]

lion), then licensing would indeed represent a major industry joining other nine-figure segments such as computers/electronic products ($350 billion),[18] telecom ($425 billion),[19] pharmaceuticals, and R&D itself ($284 billion).[20]

In this context, the Licensing Foundation commissioned an initial survey of licensing activity in U.S. for the purpose of contributing to the above available information resources but also, perhaps, to inaugurate a regular, systemic investigation to complement and expand the understanding of licensing as an industry and as business practices. The long-term aspiration of such surveying initiative was and remains:

Provide an annual, synoptic perspective on key statistics, events, and trends in the world of "Licensing" that can assist licensing professionals in understanding and advancing the business environment in which they operate and to which they contribute, and can be used by the public, academic researchers, and government policy analysts to grasp the issues and impacts of licensing business practices.

Based on this background and long-term objective, the Foundation prepared a Request for Proposal (RFP) which was sent to some 30 organizations including leading MBA and entrepreneurship academic programs and other entities known for their interest in this or related areas. After a review of several proposals that responded to the RFP, the team of Professors, Iain Cockburn of Boston University and Ajay Agrawal of the University of Toronto, was selected.

A key aspect of the survey was the desire to focus on licensing matters primarily involving corporate IP asset owners who are members of LES (USA & Canada), since participants were more readily accessible and likely to be responsive to the Licensing Foundation, and which conduct out-licensing despite being (normally) capable of directly commercializing such IP assets and in-licensing despite (normally) having its own R&D/product development capabilities. Such IP owners can be considered to be "OEMs" of licensing. Although the survey was inclusive of all members of LES (USA & Canada) with an e-mail address (5,349 e-mail addresses associated with approximately 2,669 unique organizations), and so included numerous IP service providers (1,401 of such 2,669 unique organizations were such as outside legal counsel and IP valuation organizations), the primary interest was the perspectives of such licensing OEMs (1,268, the difference between 2,699 and 1,401). Such a survey would also reach IP inventor/creator organizations such as universities and research institutes that (normally) lack the means to directly commercialize its own IP opportunities; AUTM-type respondents (universities and institutes) were included in the results reported here (albeit in small numbers). Other survey analysis which we have tested, such as royalties collected as a percentage of EBIT, used only data from commercial firms; so data from AUTM-type respondents were excluded in such calculations. Such EBIT percentage calculations are not reported here because the number and diversity of respondents does not make such analysis statistically reliable. The industry classification used by LES (USA & Canada) to group its membership was also used to classify the survey responses.

To simplify the scope of the survey we excluded licensing activities from the following areas: Right-to-Use licensing (sometimes known as "shrink wrap" licenses), cross-licensing (although we did ask some questions related to the practice), copyrighted content licensing (music, text, and the like), and trademark licensing. Further, because our database of respondents were members of LES (USA & Canada) we asked for data and perspectives for licensing activities in North America.

SURVEY FORMAT[21]

The survey was implemented as an online questionnaire accessible by Web browser, rather than in the traditional format of a hardcopy mail-back questionnaire. The survey was administered in January and February of 2004 by faxing a letter to the membership of the LES (USA and Canada), followed by individualized e-mails containing a link to the survey site explaining the objective of the survey. Web surveys of this type have recently been found to have comparable response rates to mail-based surveys.[22] Web surveys also have obvious advantages over the traditional format in terms of speed, lower printing and distribution costs, and reduced data entry errors. Many individuals find that the "task burden" of responding to a Web-based survey by clicking boxes or choosing among a menu of alternatives is significantly lower than for paper questionnaires, so this format also minimizes intrusiveness and time cost. This "closed" list-based sampling frame, made up of individuals who can safely be assumed to have access to the Internet and a high level of familiarity with using Web browsers, is relatively immune to the problems with sample selection, coverage, and response biases that have been identified with some Web surveys that attempt to draw conclusions about larger and more heterogeneous populations.

Multiple iterations of the survey were tested with various volunteers who provided focus panel counsel. Such counsel resulted in significant reductions in the scope and complexity of the questions in the interest of increasing the likelihood of a larger response. Substantial dis-

18. 2002 U.S. annual revenues as defined by U.S. Census Bureau, 2002 Economic Census, *http://www.census.gov/econ/census02/advance/TABLE1.HTM*
19. U.S. Census Bureau, 2002, Op cit.
20. Battelle R&D Forecast 2004, citing 2003, U.S., *http://www.battelle.org/news/04/1-22-04R&D%20Funding.stm*

21. This section and the one following is substantially the contribution of Prof. Iain Cockburn, whose assistance is gratefully acknowledged.
22. Kaplowitz, M.D., Hadlock, T.D., Levine, R. (2004) "A Comparison of Web and Mail Survey Response Rates." *Public Opinion Quarterly*. 68(1):94-102.

cussion took place regarding the balance between questions that asked for subjective opinion ("strongly agree," "agree," etc.) versus a greater (or total) focus on quantitative responses (dollars, numbers, "facts"). The resulting survey was designed to minimize any need for research numbers (to increase response rate), to be completed in not more than 20 minutes, and to be done with complete anonymity[23] by any or multiple members of any given licensing OEM. This approach precluded the capacity to have OEM data from, say, each of the top ten pharmaceutical companies.

23. Though e-mails to respondents were tracked with a randomly generated serial number to prevent us from reminding people who had already participated in the survey, and to maintain database integrity if respondents visited the survey web pages multiple times, no identifying information about respondents was retained after the survey was closed.

The Web based format also allowed us some flexibility to address the heterogeneity of the LES membership, whose involvement with various aspects of licensing varies greatly, and who belong to quite different kinds of organizations. The questionnaire was structured to serve up questions tailored to respondents answering for an entire company versus business unit, and for those engaged largely in out-licensing, largely in in-licensing, significant amounts of both activities, or indirectly involved as consultants or legal advisors. This prevented respondents from being asked redundant or irrelevant questions, speeding up the process of completing the questionnaire and further reducing the task burden.

Respondents were alerted to the general content of the questionnaire in the faxed invitation letter and follow-up e-mails, and were guaranteed anonymity. Two rounds of "reminder" e-mails were sent during the month long period that the survey was administered.

It is important to distinguish between surveys designed to elicit useful descriptive information about a phenomenon from volunteer respondents, and those designed to precisely measure population statistics. The latter requires strict "probability sampling" i.e. draw a random sample from the population of interest (e.g. dialing random digits to poll the U.S. population) and to get good results may often need "quota sampling" based on population strata and stringent controls to minimize response bias. This makes them both expensive and intrusive, and difficult to implement when key individuals with specialized information must be contacted and persuaded to willingly provide responses including confidential information. The former can usefully be done from "convenience samples" like ours, particularly when targeted at a list such as the

Exhibit 1. Stage 1 Dealmaking Challenges: Getting to Substantive Negotiations

	OVERALL		LARGE ORGANIZATIONS		SMALL ORGANIZATIONS	
QUESTION	Number	Mean	Number	Mean	Number	Mean
Thinking about intellectual assets that could have been licensed in the last fiscal year but weren't, for what percentage were potential licensees identified?	127	26%	54	21%	73	30%
Where potential licensees were identified, for what percentage were negotiations ever started?	121	27%	52	29%	69	27%
Of all the times you entered into substantive licensing negotiations in the last fiscal year, what percentage did not result in a successfully executed agreement? (Organizations engaged in significant in- and out- licensing activity only)	38	43%	16	47%	22	40%
If you had unlimited staff resources to market and negotiate additional licensing deals (above and beyond those your company has already done), what percentage more revenue do you think your company could generate?	143	45%	59	45%	84	45%

"LARGE" organizations defined as those with more than 1,000 employees.

LES (USA & Canada) membership made up of well-informed professionals with an interest in the outcome. But this type of information is vulnerable to response bias (those who choose to answer may not be representative of the sample) and to "frame bias" (the sample is not representative of the population it is drawn from).

A complete copy of the survey instructions and questions is available at the Licensing Foundation Website: *www.licensingfoundation.org*.

RESPONSE RATE

799 unique visitors to the Web site containing the questionnaire were recorded. Of these, 350 proceeded to complete at least part of the questionnaire. Of these 350 respondents, 121 were involved in licensing primarily as consultants or legal advisors, and are excluded from the following analysis. Of the remaining 229 respondents, 117 were engaged primarily in out-licensing activity, 45 primarily in in-licensing activity, and 67 were involved in significant amounts of both in- and out-licensing.

Sample selection has not yet been assessed. The "core" sample of 229 respondents is a small fraction of the total LES membership and in particular the 5,349 with e-mail addresses (as of the time period of the Survey: January 2004). However LES members are affiliated with only 2,669 distinct organizations, of which 1,401 are law firms, consulting companies, banks, or other professional service firms, and are therefore excluded from consideration here. This leaves just over 1400 "target" organizations that can be considered as the survey target OEMs of licensable IP and employ one or more LES members. Results reported here should therefore be thought of as a 15 percent sample from this reference.

It should be recognized that some of the questions posed in the survey received very low numbers of responses (50 or fewer) and the conclusions that can be drawn from these data are obviously very limited. This response rate is low, but not unusual for surveys of this nature. Studies that obtain higher response

Exhibit 2. Stage 1 Dealmaking Breakdowns: Potential Licensees Identified but Negotiations Never Started

	OVERALL		LARGE ORGANIZATIONS		SMALL ORGANIZATIONS	
QUESTION	Number	Mean	Number	Mean	Number	Mean
For *out-licensing*, where potential licensees were identified but negotiations never started, for what percentage of these cases was it due to:						
Insufficient resources for the licensing function?	110	28%	48	28%	62	29%
Difficulty in getting internal approval to enter into negotiations?	106	14%	46	15%	60	13%
Valid IP but difficult for potential licensee to enforce?	107	12%	47	9%	60	14%
Legal/regulatory obstacles (national security, anti-trust, etc.)?	105	6%	45	9%	60	5%
For *in-licensing*, where potential licensors were identified but negotiations never started, for what percentage of these cases was it due to:						
Difficulty in getting internal approval to enter into negotiations?	26	27%	15	26%	11	29%
Insufficient resources for the licensing function?	26	14%	15	10%	11	20%
Valid IP but difficult for potential licensor to enforce?	25	12%	15	15%	10	7%
Legal/regulatory obstacles (national security, anti-trust, etc.)?	25	7%	15	10%	10	2%

"LARGE" organizations defined as those with more than 1,000 employees.

Exhibit 3. Stage 2 Dealmaking Breakdowns: Negotiations Started, but Successful Agreement Never Reached

	OVERALL		LARGE ORGANIZATIONS		SMALL ORGANIZATIONS	
QUESTION	Number	Mean	Number	Mean	Number	Mean
Of all the times you entered into substantive *out-licensing* negotiations in the last year, what percentage did not result in a successful agreement due to:						
Inability to arrive at mutually acceptable financial terms?	93	26%	42	26%	51	26%
Inability to arrive at mutually acceptable non-financial terms?	91	23%	43	19%	48	26%
Delay in reaching agreement?	86	20%	41	20%	45	20%
Inconsistent positions of internal stakeholders?	81	17%	38	14%	43	19%
Too many parties in the negotiation (multiple licensors/licensees)?	79	5%	36	4%	43	7%
IP only being useful if bundled with other technology/IP that was not available?	80	4%	36	4%	44	5%
Licensee/licensor's IP rights disputed by a third party?	80	7%	37	5%	43	8%
Of all the times you entered into substantive *in-licensing* negotiations in the last year, what percentage did not result in a successful agreement due to:						
Inability to arrive at mutually acceptable financial terms?	63	32%	30	31%	33	32%
Inability to arrive at mutually acceptable non-financial terms?	64	17%	30	21%	34	14%
Delay in reaching agreement?	58	11%	28	13%	30	10%
Inconsistent positions of internal stakeholders?	58	15%	28	17%	30	12%
Too many parties in the negotiation (multiple licensors/licensees)?	56	9%	27	12%	29	5%
IP only being useful if bundled with other technology/IP that was not available?	54	3%	25	3%	29	2%
Licensee/licensor's IP rights disputed by a third party?	57	4%	26	4%	31	3%

"LARGE" organizations defined as those with more than 1,000 employees.

rates typically use costly (and intrusive) methods such telephone calls to non-responding members of the sample frame.

CHARACTERISTICS OF SURVEY RESPONDENTS

The respondents' organizations varied in size from less than $1 million in annual revenues and 10 employees to more than $50 billion and 20,000 employees. On average they employed 7,863 people, had sales of $5.6 billion, and annually invested $676 million in R&D. To aid in understanding the effect of organization size, responses were analyzed separately for organizations with more than 1,000 employees (hereafter "large") versus those with less ("small"). The average global metrics of the 96 "large" responding organizations were 18,000 employees, $13 billion in revenues, and just under $1.5 billion in R&D spending, compared to the 133 "small" organizations with 147 employees, $53 million revenues, and $41 million in R&D.

Respondents were asked whether they preferred to answer on behalf of their entire company (CO) or for a specific business unit (SBU) or division: 65 percent did respond on behalf of the CO, and 35 percent for a specific SBU.

Respondents belong to ten of the eleven LES industry categories: the largest category of respondents were in healthcare (29 percent CO respondents, 31 percent SBU), which includes biotechnology, pharmaceuticals, and biology. Approximately 22 percent of the respondents were from the combination of electronics (six percent CO respondents, zero percent SBU), energy (five percent CO & SBU), software (three percent CO, two percent SBU) transportation and mechatronics (three percent CO, two percent SBU), and "other" (seven percent CO, 12 percent SBU). The balance of respondents included university and government laboratories (14 percent CO, 21 percent SBU), and service sectors, primarily and approximately evenly divided between legal and consultants.

SURVEY DATA RELATING TO LICENSE DEALMAKING

Considering "trade" as a core element of "licensing," one of the major areas surveyed were aspects of such dealmaking that are believed to be important or critical. Data were obtained relating to the impediments / difficulties of

Exhibit 4. Stage 3 Dealmaking Concerns: Look Back at Out-Licensing Deals Done

	OVERALL		LARGE ORGANIZATIONS		SMALL ORGANIZATIONS	
QUESTION	Number	Mean	Number	Mean	Number	Mean
Thinking about your *out-licensing* agreements executed during the last fiscal year, with the benefit of hindsight which of the following contract characteristics would you now, on average, structure differently?						
Field-of-use restrictions	82	21%	36	31%	46	13%
Duration of agreements	82	16%	36	14%	46	17%
Geographic restrictions	82	11%	36	17%	46	7%
Degree of exclusivity	82	27%	36	22%	46	30%
Most-favored-nation (MFN) provisions	82	6%	36	11%	46	2%
Technical milestones	82	24%	36	19%	46	28%
Business milestones	82	44%	36	44%	46	44%
Grant-back provisions	82	22%	36	17%	46	26%
Reach-through provisions	82	10%	36	8%	46	11%
Fee schedule (i.e., payment structure)	82	55%	36	64%	46	48%
Payment amount	85	34%	38	34%	47	34%
Terms of use	82	20%	36	25%	46	15%

"LARGE" organizations defined as those with more than 1,000 employees.

dealmaking at various stages: (1) getting to the point of substantive negotiations, (2) consummating such substantive negotiations, and (3) living with the deal (which may include buyer/seller remorse).

The data shown in Exhibit 1 show survey responses for both Small and Large organizations, and for both in- and out-licensing (except where noted) relating to the first two dealmaking stages. Considering Stage 1, getting to substantive negotiations, these data suggest another kind of 25 percent rule: of IP assets that (in the respondent's opinion) could have been licensed (in the past year) only (approximately) 25 percent had been developed to the stage where potential licensees were identified, and of those assets where potential licensees were identified only ca. 25 percent reached Stage 2, initiating substantive negotiations. This result suggests that one out of eight opportunities believed to be licensable became part of serious buyer-seller discussions. In Stage 2, these data show that less than half (43 percent average of Large and Small data sets) reached consummation of a license. Coupled with the earlier stage erosion of dealmaking opportunities, this suggests that the percentage of asset opportunities that reach agreement is in the single-digits, perhaps even less than five percent. Yet, when asked what the effect would have been of unlimited staff resources, the respondents' mean response was 45 percent more revenue than that which actually occurred. From an absolute dollars perspective, 45 percent is a significant number, but from a perspective of the large reported deal opportunity erosion, there must be other important factors than solely additional staff resources.

Considering the large disparity in size between the average Large and Small companies (the Large ones on average have nearly 250 times the annual revenue of the Small), the

Exhibit 5. Stage 3 Dealmaking Concerns: Look Back at In-Licensing Deals Done

	OVERALL		LARGE ORGANIZATIONS		SMALL ORGANIZATIONS	
QUESTION	Number	Mean	Number	Mean	Number	Mean
Thinking about your *in-licensing* agreements executed during the last fiscal year, with the benefit of hindsight which of the following contract characteristics would you, now on average, structure differently?						
Field-of-use restrictions	33	30%	18	33%	15	27%
Duration of agreements	33	12%	18	11%	15	13%
Geographic restrictions	33	3%	18	6%	15	0%
Degree of exclusivity	33	15%	18	11%	15	20%
Most-favored-nation (MFN) provisions	33	9%	18	6%	15	13%
Technical milestones	33	27%	18	33%	15	20%
Business milestones	33	27%	18	39%	15	13%
Grant-back provisions	33	15%	18	11%	15	20%
Reach-through provisions	33	18%	18	17%	15	20%
Fee schedule (i.e., payment structure)	33	46%	18	28%	15	67%
Payment amount	33	49%	18	44%	15	53%
Terms of use	33	18%	18	11%	15	27%

"LARGE" organizations defined as those with more than 1,000 employees.

Exhibit 6. Out-Licensing Dealmaking Provisions (Tools)

	OVERALL		LARGE ORGANIZATIONS		SMALL ORGANIZATIONS	
QUESTION	Number	Mean	Number	Mean	Number	Mean
What percentage of your overall number of ***out-licensing*** agreements was for a single lump sum license fee (not contingent on sales)?	102	13%	49	17%	53	9%
For those *out-licensing* deals that did include running royalty payments, what percentage used a per-unit royalty as opposed to a royalty determined as a percentage of net sales?	99	15%	48	14%	51	15%
What percentage of your ***out-licensing*** agreements involved milestone payments?	101	41%	48	35%	53	47%
For your *out-licensing* agreements executed during the last fiscal year, please check which of the following provisions were routinely used:						
Field-of-use Restrictions	150	75%	63	86%	87	68%
Limited Duration	150	51%	63	59%	87	46%
Geographic Restrictions	150	49%	63	54%	87	46%
Exclusivity	150	61%	63	56%	87	64%
Semi-Exclusivity (fixed number of licensors/licensees)	150	13%	63	19%	87	8%
Non-Exclusivity	150	51%	63	65%	87	41%
Non-Discriminatory (same terms for all licensees)	150	11%	63	11%	87	10%
"Most-favored-nation" (MFN) provisions	150	9%	63	13%	87	7%
Technical milestones	150	47%	63	46%	87	48%
Business milestones	150	57%	63	60%	87	54%
Onus of enforcement of IP placed on the licensee	150	33%	63	35%	87	32%
Grant-back provisions (rights to use improvements made by licensee)	150	41%	63	51%	87	34%
Reach-through provisions (royalties on sales of future products developed through use of the licensed technology)	150	31%	63	25%	87	34%

"LARGE" organizations defined as those with more than 1,000 employees.

Exhibit 7. In-Licensing Dealmaking Provisions (Tools)

QUESTION	OVERALL		LARGE ORGANIZATIONS		SMALL ORGANIZATIONS	
	Number	Mean	Number	Mean	Number	Mean
What percentage of your overall number of ***in-licensing*** agreements was for a single lump sum license fee (not contingent on sales)?	62	16%	29	17%	33	15%
For those ***in-licensing*** deals that did include running royalty payments, what percentage used a per-unit royalty as opposed to a royalty determined as a percentage of net sales?	59	6%	28	9%	31	4%
What percentage of your ***in-licensing*** agreements involved milestone payments?	61	44%	28	50%	33	39%
For your *in-licensing* agreements executed during the last fiscal year, please check which of the following provisions were routinely used.						
Field-of-use Restrictions	42	79%	18	78%	24	79%
Limited Duration	42	48%	18	56%	24	42%
Geographic Restrictions	42	55%	18	56%	24	54%
Exclusivity	42	62%	18	56%	24	67%
Semi-Exclusivity (fixed number of licensors/licensees)	42	14%	18	17%	24	13%
Non-Exclusivity	42	38%	18	50%	24	29%
Non-Discriminatory (same terms for all licensees)	42	5%	18	6%	24	4%
"Most-favored-nation" (MFN) provisions	42	2%	18	22%	24	17%
Technical milestones	42	55%	18	56%	24	54%
Business milestones	42	60%	18	56%	24	63%
Onus of enforcement of IP placed on the licensee	42	33%	18	22%	24	42%
Grant-back provisions (rights to use improvements made by licensee)	42	45%	18	39%	24	50%
Reach-through provisions (royalties on sales of future products developed through use of the licensed technology)	42	36%	18	33%	24	38%

"LARGE" organizations defined as those with more than 1,000 employees.

difference in response to the questions in Exhibit 1 is small, but in some cases it may be significant. Small companies appear to have had more difficulty finding potential licensees (can't get the attention of the right parties?), and Large ones more difficulty in consummating negotiations (because they're more demanding?). On the question of the effect of unlimited resources, and getting from identified potential licensees to the start of negotiations, the Large and Small companies report the same percentages.

The responses of Exhibit 2 look more closely at the inability to get from the point of potential licensee identification in Stage 1 to onset of Stage 2 (negotiations). For out-licensing, the number one factor was insufficient licensing resources reported by 28 percent of the respondents, with, interestingly, no difference between Large and Small entities. For in-licensing (for which we are dealing with very small datasets), the number one impediment was internal approvals (27 percent) with again little if any difference between Large and Small companies. Getting internal approvals was the 2nd most important factor for out-licensing (14 percent), but apparently half as common a problem than finding necessary resources. Concerns about the licensee's ability to enforce the IP was also a relatively low concern (in frequency) but occurs more often for Small companies than for Large. This result may be due to Small companies having earlier and less developed IP. Regulatory concerns were the least important of these four factors for both size categories and of lesser importance to Small companies than to Large. Concerns about IP enforceability of the IP owner/licensor in in-licensing contexts show that Large companies appear to give this far more weight than small companies. This is an approximate reversal of the reported percentages in an out-licensing context, where Small companies report a substantially higher frequency of concern regarding the licensee's ability to enforce.

Exhibit 3 shows dealmaking break-down within Stage 2, namely the inability to consummate negotiations that have begun. For out-licensing, the top four factors, ranging in frequency of citation from 17 to 26 percent were the inability to arrive at mutually acceptable financial and non-financial terms, with financial barriers slightly more important, and the effect of delays and inconsistent positions of internal stakeholders. So the common tagline of dealmaking failure—"show me the money!"—appears to be somewhat valid (it was the highest cited factor), but there were three other factors almost as important. For Small companies, the non-financial terms and inconsistent position of internal stakeholders were more commonly cited than for Large companies. Of far lesser importance for both Small and Large companies, ranging in frequency of cause of breakdown from four to seven percent, were the effects of too many entities in the negotiation (such as a three-way, or more, deal participants), the unavailability of other useful IP, and IP rights disputed by a third party. For in-licensing contexts, the data are similar with the notable exception that nearly one third of the time the negotiation difficulties were really about the money, for both Small and Large companies. All other factors were substantially lower in importance. Also an interesting difference was a reversal of the perceptions of Large and Small companies with respect to non-financial terms in comparison to out-licensing contexts: in out-licensing, the issue of non-financial terms was cited more frequently by Small companies, but in in-licensing, it was cited more by Large companies. This is likely due to the prevalence of Small companies more engaged in out-licensing (relatively speaking) and Large in in-licensing. Another factor for which such reversal is observed is the adverse effect of inconsistent positions of internal stakeholders, likely for the same reason: the buyer-seller roles are reversed.

Moving to Stage 3, living with the deal done, Exhibit 4 and 5 show the survey's results for out-licensing and in-licensing, respectively. In both contexts the question sought to examine near term, less-than-one year post-deal, satisfaction with the deal done. This presented a kind of JD Powers "how are you liking your new car?" perspective. When considering these data we should be reminded that deals are not (normally) like victories, where there is literally a winner-take-all outcome. Deals require by their nature a mutuality of agreement, which casts a shadow, and sometimes a pall, over one's aspirations. The parties usually recognize this situation by feeling somehow that the deal was a tie, not a victory, and yet both sides are benefited by the outcome compared to no deal. Put another way, in some ways dealmaking exhibits the famous five phases popularized by Elisabeth Kübler-Ross associated with grieving, even bereavement: denial, anger, bargaining, depression, and (finally) acceptance. If so, one would think that dealmakers looking back on less than year-old deals would exhibit a high degree of acceptance, expressed by low frequency responses as to provisions or characteristics that they would now "on average structure differently." Yet, the data of Exhibit 4 and 5 show a relatively high frequency identification of deal characteristics that the respondent would now do differently, presumably because of both a more detached perspective away from the negotiating table and also the availability of new information from both sides of the deal.[24]

Looking at Exhibit 4, hindsight perspectives of out-licensing deals done, responses to 12 factors show double-digit frequencies for 11 of these factors. Only MFN provisions are in single digits, and eight of the factors are reported at percentages

24. Another possible explanation is that these data include the perspective of deals that were done but not with the participation of the respondent. In such cases, because deals are compromises not victories, it would not be unexpected that a respondent would have a generally-critical perspective, not having been at the table and faced with the necessary horse-trading to reach an agreement.

of 20 percent or greater. Three of the factors are at percentages above 33 percent, and one was greater than 50 percent. This does not look like Kübler-Ross phase-5 "acceptance;" it is more like phase-4 "depression," which does indeed sometimes follow "bargaining." The top three factors reported at percentages from 34 to 55 percent all relate to "show me the money!": fee schedule (55 percent), business milestones (44 percent), and payment amount (34 percent). It looks like the seller is most unhappy about the timing of payments, then perhaps the business events that trigger such payments, and is also quite unhappy about the magnitude of the payment, all from a less-than-one-year perspective. Given the time period of the question such disappointment is unlikely to be about royalty payments. Is it sublicensing activities and splits there from? Is it lack of licensee implementation? Next are six factors with reported frequencies ranging from 16 to 27 percent: degree of exclusivity (27 percent), technical milestones (24 percent), grant-back provisions (22 percent), field-of-use restrictions (21 percent), terms of use (20 percent), and duration of agreements (16 percent). The technical milestone concerns are likely related to the payment triggering events associated with the top three factors, but it is interesting that business milestones were a greater concern than technical milestones (44 percent vs. 24 percent) by almost a two-to-one ratio. Concerns regarding exclusivity, field-of-use, duration, terms of use, and grant-back may all relate to a form of seller remorse whereby the loss of what has been sold is more keenly felt than had been expected; perhaps this is a dealmaking version of "absence makes the heart grow fonder," or the aphorism that the only time you'll ever miss something is just after you tossed it out. The final three factors ranged from a low of six percent (MFN provisions) to ten percent (reach-through provisions) and 11 percent (geographic restrictions).

These data of Exhibit 4 also show a dramatic difference between Large and Small companies. For two of the factors there is a 16 and 18 point difference between the two category responses. Concerns about field-of-use restrictions and fee schedule where of greater importance to Large companies by 18 and 16 point differences, respectively. There were six additional factors where the difference in response by Large and Small companies was between eight and 10 points: three where Large companies were more concerned (geographic restrictions, MFN, and terms of use), and three that Small companies cited significantly more often (degree-of-exclusivity, technical milestones, and grant-back provisions).

Exhibit 5 provides parallel data to Exhibit 4 but for in-licensing. As with other in-licensing questions, there were substantially fewer respondents, making interpretation more problematic. In the highest frequency category were also fee schedule and payment amount, but here payment amount was the #1 factor at nearly 50 percent (49 percent), and fee schedule was close behind at 46 percent. With respect to out-licensing, the payment amount had been cited substantially less often, 34 percent, reflecting perhaps the difference in perception between paying and being paid. The next most frequent cluster ranging between 27 and 30 percent were business and technical milestones (both at 27 percent) and field-of-use restrictions (30 percent). Business milestones appear to be less of a frequent concern for in-licensing (27 percent) than out-licensing (44 percent), again perhaps reflecting on who is wearing what shoes. In the range of 12 to 18 percent were duration (12 percent), degree of exclusivity and grant-backs (15 percent), and reach-through and terms of use (18 percent). The responses concerning geographic restrictions (three percent) and MFN (nine percent) were in single digits.

Again the differences between Large and Small companies are striking with respect to certain factors. Small companies cited fee schedule concerns 67 percent of the time compared to 28 percent for Large companies, a difference of 39 points. On the other hand Large companies cited business milestone 26 points more often than Small. The only other double-digit spreads were 13 points regarding technical milestones (also more of Large company concern) and a 16 point spread for terms of use (more of a Small company concern).

DEALMAKING PROVISIONS (TOOLS)

Provisions, a common term of dealmaking art, somewhat like "provisions" as used in an expeditionary sense, are used to give the deal a designed life, anticipating the future and sometimes long-term needs and expectations of the respective parties. Switching metaphors, in pragmatic terms, provisions are really dealmaker tools. Well, what tools do our respondents use? Exhibit 6 and 7 give the frequency of use three common IP payment forms and 13 dealmaking provisions for out-licensing and in-licensing, respectively.

Perhaps most surprising from these data is the frequency of use of both grant-back and reach-through provisions, 41 percent and 31 percent, respectively, for out-licensing and even somewhat greater percentage for in-licensing (45 and 36 percent). Perhaps also a little surprising is the frequency of geographic restrictions: in this small/one-world, spaceship earth, global economy, internationalization era about half the agreements (49 percent for out-licensing and 55 percent for in-licensing) evidence geographic restrictions.

One of the interesting issues innate to dealmaking is the question of the licensee's unbounded commercial application of the subject technology. Normally, licensee's want the unfettered use of the licensed subject matter so that it can follow the market like a sunflower the sun, productizing and re-shaping the opportunity in whatever way the market values. The data of Exhibit 6 and 7 suggest that such unbounded freedom is granted by the seller far less often: 75 and 79 percent of the time there are field-of-use restrictions, for out-licensing and in-licensing, respectively.

Not shown in these data are some notable differences in respondents for the "healthcare" industry versus, say, electronics, with respect to the use of single lump sum license fees. As might be expected, the healthcare industry makes comparatively less use of paid up licenses, whereas paid up licenses have been commonly done in the electronics industry. In a similar fashion, the healthcare industry commonly uses royalty rates expressed as a percentage of sales whereas (for example) the electronics industry when it does make use of running royalties it more-frequently does so on some form of per-unit basis. Following this trend, the use of milestone payments is very common in healthcare, and relatively uncommon in electronics. This is believed to reflect the longer time-to-market and perhaps also the ready demarcation of various FDA stage approvals in the health care sector.

WHAT'S NEXT: FUTURE SURVEYS

Returning to the introductory discussion, our data for 2003 simply was not sufficiently extensive to even hint at the answer to the question of the size of the licensing industry. As stated at the outset, we surveyed only the members of LES (USA & Canada) with e-mail addresses. We made no attempt to singularize the reporting for any given company (i.e., making sure we were not double counting revenues) or assuring that every company of reasonable size reported (under confidence) their data. These tasks would be difficult to accomplish.[25] Further, our sample set was useful, we believe, for the observations made here, but insufficient to make statistically reliable inferences about aggregate licensing activity.

A more expansive report of these 2004 results is expected to be published. The Foundation Web site will provide updated information on the availability of such additional information: *www.licensingfoundation.org*.

The original long-term objective of the Foundation's initial attempt was to catalyze a more comprehensive understanding of this important industry, to capture not only its scale, but also its dynamism. We asked the respondents in the subject survey what questions we should have asked and did not, and we received many interesting responses, such as:

- "What percent of your IP do you present license-out? Being the licensing professional in our business I always try to maximize this while [S]BU people try to minimize it."
- "How do you market your technology for licensing?"
- "What was the value of the deals that were done? What clinical phase were the products at the time of the license?"
- "Royalty rates paid or negotiated."
- "How long between when the technology was licensed and when the first commercial application was released?"
- "What was the value of the competitive advantage provided by the new licensed technology?"
- "For most of these deals, the post deal management aspect is overlooked."
- "What state of readiness for commerce when the technology that were investigated? Transacted?"
- "How often did you use reference materials on royalty rates? How often did you use [various] valuation techniques and what techniques were employed most often?"
- "Percentage of out-licensing based on enforcement (stick) versus enticement (carrot)?"
- "Questions related to industrial sectors involved? (There is a big difference)."
- "Splits between patents, trademarks, copyrights, and trade secrets [licensing]?"
- "Use of reverse engineering to increase your licensing odds?"
- "Uncovered reasons for stalling in negotiations and letting deals die on the vine."

This all, of course, leads to another survey. It is the Foundation's plan to conduct in January and February 2005 a second survey built on the learnings of this one. We hope these results contribute to further understanding of certain aspects of our profession and industry and ask that everyone give strong consideration and support of the next survey to make next year's results better. There is another trade at work here: your help in exchange for a better understanding of your industry. Is it a deal?

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25. Although we did not attempt to constrain reporting to one-respondent/one-company, there were in fact no detectable duplicates; however, such duplicates could have occurred because invisible SBU-parent relationships.