

SURVEY RESULTS

FROM

THE 2003 INTELLECTUAL PROPERTY OWNERS ASSOCIATION SURVEY ON STRATEGIC MANAGEMENT OF INTELLECTUAL PROPERTY

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A. Sample Frame and Respondents

The survey questionnaire was administered by mail in the late summer of 2002 to contacts at IPO member companies, as well as to a list of senior IP managers maintained by Delphion Inc. After an initial round of questionnaires were returned, follow-up phone calls were made to the IPO membership list, as well as to a small number of companies identified by Delphion as “high priority targets.” In all, 66 usable questionnaires were returned, representing a response rate of slightly over 30% for the IPO member companies, and under 5% from the Delphion mailing list.

Respondents were largely senior legal staff of the corporation with responsibility for IP or technology: 44% identified themselves as “Chief Patent Counsel” or the equivalent, 21% as “Assistant General Counsel”. Of the remainder, 34% identified themselves as General Counsel of the corporation or senior executives (Vice-President or equivalent).

Respondents overwhelmingly had some university-level technical education. 77% had at least a Bachelor’s degree in engineering, physics, or life sciences, and 12% of respondents had a graduate degree in a technical subject.

88% of respondents had a law degree, and they averaged just over 20 years since passing the bar exam. 75% had been admitted to the Patent Bar. Only 10% of respondents had no legal experience outside IP, with more than 2/3 reporting “extensive” experience with patent prosecution, and 1/4 reporting “extensive” experience with litigation.

Respondent’s companies spanned a wide range of industries, with the majority drawn from the chemical (22%), IT and communications (44%), life sciences (15%) and mechanical (16%) sectors.

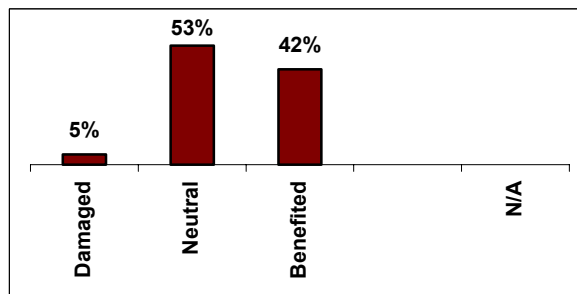
76% of respondents thought that it made sense to treat their company as a single entity in terms of strategic decision making or corporate policy, and more than 86% felt able to answer survey questions in terms of their company as whole.

B. Legislation, Policy etc.

1. How have recent patent reforms and court decisions in the US affected your company?

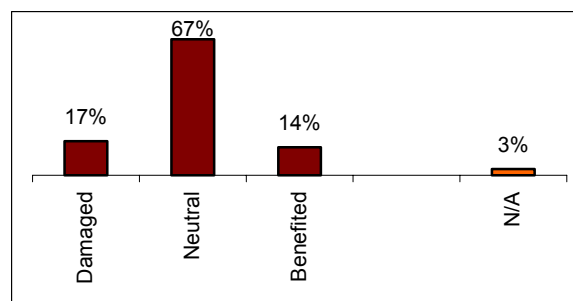
(i) Publication of applications

Very few respondents reported a negative impact.



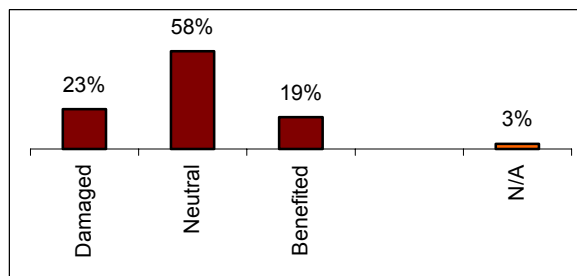
(ii) Patents on methods of doing business

A large majority of respondents were neutral. Of the remainder, slightly fewer reported a positive rather than negative impact.



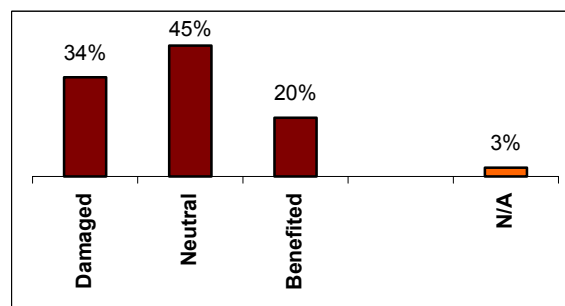
(iii) *Festo*

Opinion on the impact of the *Festo* decision was split. Most respondents reported a neutral impact, among those who did not, slightly more reported that the decision in this case had damaged their company.



(iv) Recent trends in CAFC decisions

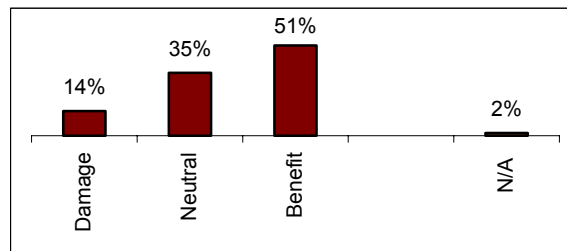
A wide range of assessments were obtained. 1/3 of respondents reported a negative impact, and 1/5 a reported a positive impact.



2. How do you think the following changes to the US patent system would affect your company?

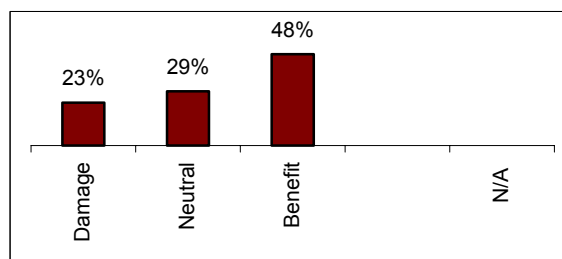
(i) European-style post-grant opposition

On balance, respondents predicted a positive impact of introducing a post grant opposition process.



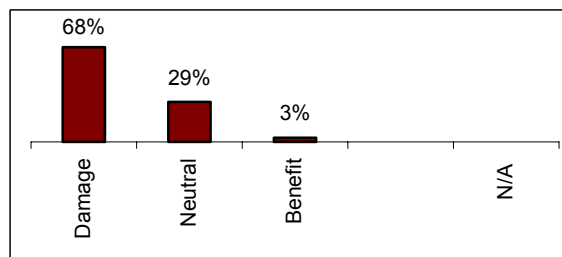
(ii) Extensive prior user rights

Although half of respondents predict a beneficial impact almost 1/4 took the opposite view.



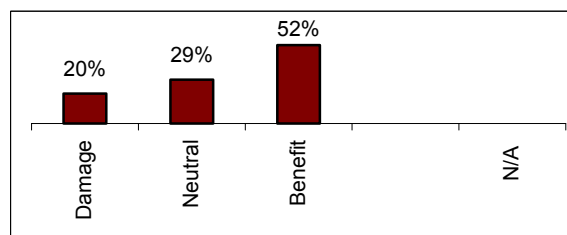
(iii) Registration without automatic examination

Assessments of the impact of introducing a registration system were strongly negative, with less than 5% of respondents predicting a beneficial effect.



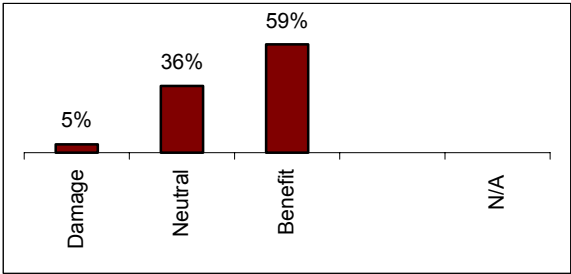
(iv) Increased prior art search requirements

The majority of respondents anticipate a beneficial effect of increased search requirements, though 1/5 predict a negative impact.



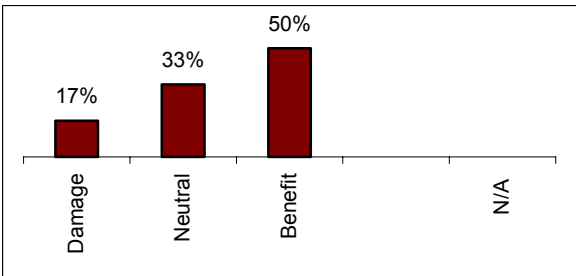
(v) “Raising the bar” for patentability

Only 5% of respondents anticipate being damaged by reforms to the patent process that would make patentability standards more difficult to reach.



(vi) Adopting a first-to-file basis for priority

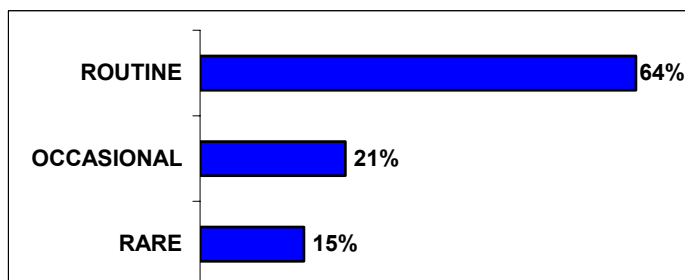
On balance, opinion on the impact of introducing a first-to-file system was positive, with half of respondents predicting a beneficial effect on their company. Just under 1/5 expect to be damaged by moving away from the first-to-invent principle.



C. The Role of IP in Company Strategy

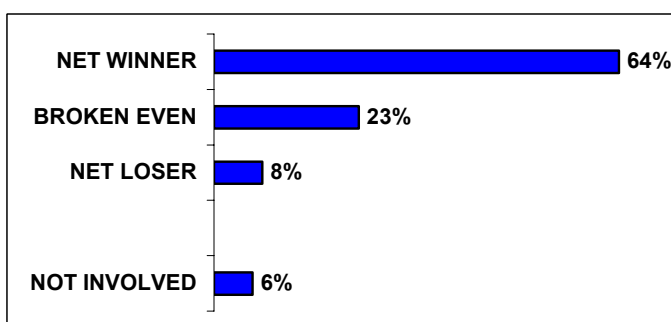
1. IP strategy as an aspect of my company's day-to-day business decisions

IP issues are an integral part of doing business for 2/3 of respondents' companies



2. Impact of my company's involvement in IP disputes in the past 5 years

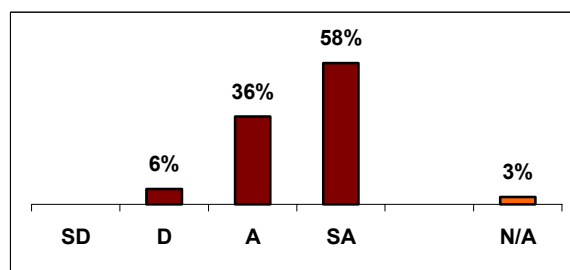
A majority of respondents report that their companies are successful in IP disputes



3. My company's competitive advantage:

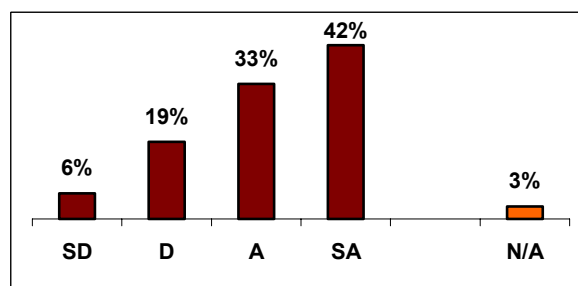
(i) is built on proprietary technology

Only a handful of responding companies do not compete on the basis of proprietary technology



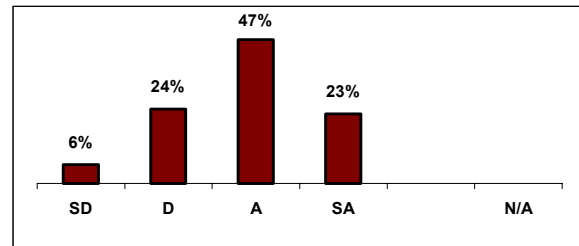
(ii) is driven by rapid new technology development

Speed in developing new technology is a source of competitive advantage for 3/4 of respondents

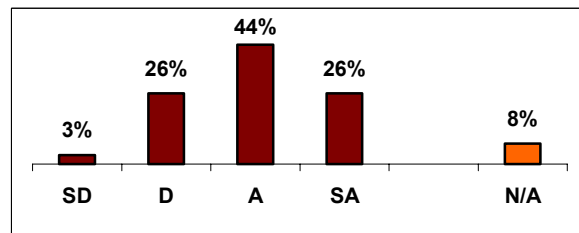


(iii) is driven by marketing

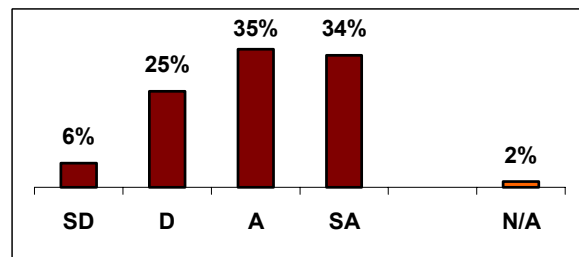
Just under 1/3 of respondents derive competitive advantage from capabilities other than marketing

**(iv) is driven by manufacturing**

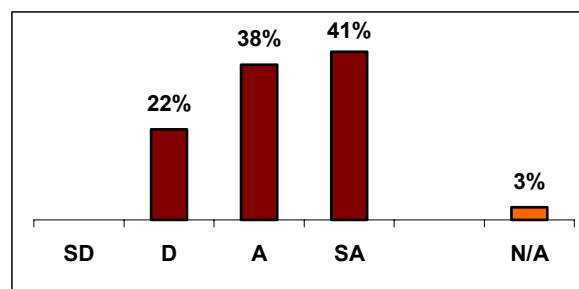
Just under 1/3 of respondents derive competitive advantage from capabilities other than manufacturing

**3. My company's competitive advantage would quickly erode:****(i) without patent protection**

Competitive advantage is sustained by patents for 2/3 of respondents

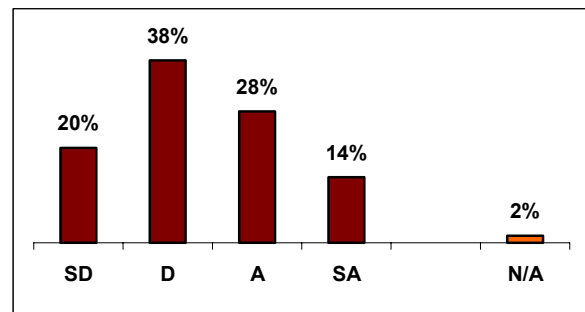
**(ii) without trade secret protection**

Loss of trade secret protection would damage 80% of respondents' ability to sustain their competitive advantage

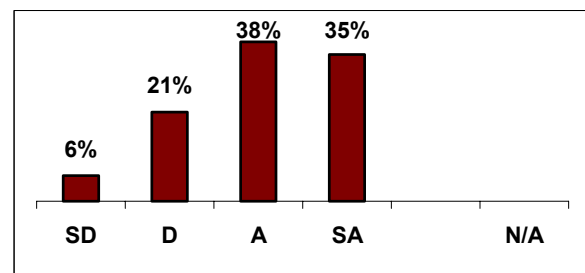


(iii) without copyright protection

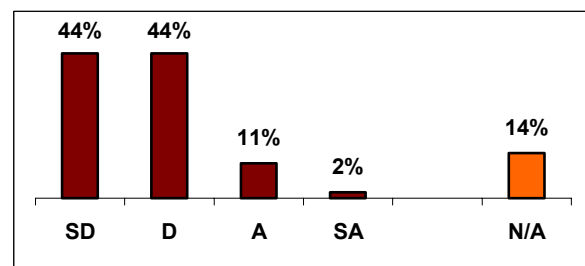
Copyright is an important means of sustaining competitive advantage for more than 1/3 of respondents

**(iv) without trademark protection**

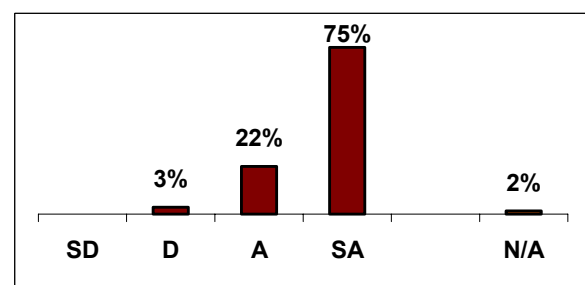
More than 2/3 of respondents rely on trademarks to sustain competitive advantage

**(v) without other IP protection (mask rights, breeders rights etc.)**

Sui generis forms of IP protection protect competitive advantage of less and 1/5 of respondents

**(vi) without our internally developed know-how**

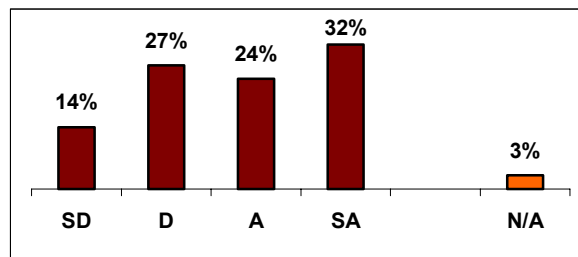
3/4 of respondents build competitive advantage on internal know-how



4. My company would spend significantly less on R&D and technology development:

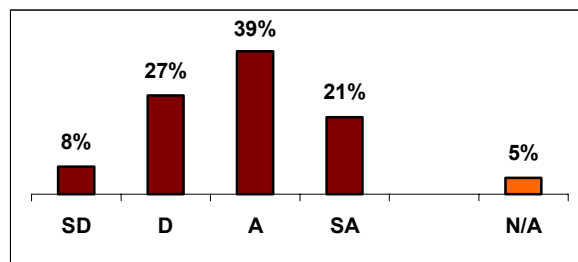
(i) without patents

A wide range of responses was obtained. Losing protection afforded by the patent system would strongly affect R&D spending of 1/3 of responding companies, but over 40% would not lower their spending.



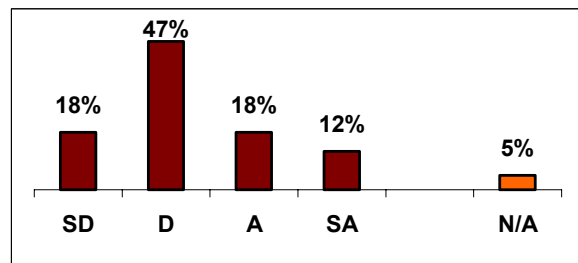
(ii) without trade secrets

1/3 of respondents would maintain R&D spending after losing trade secret protection



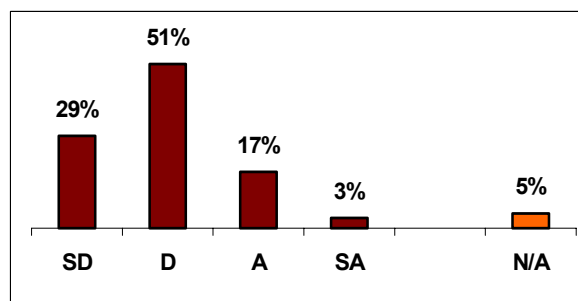
(iii) without trademarks

2/3 of respondents would maintain R&D spending after losing trademark protection for their products



(iv) without copyrights

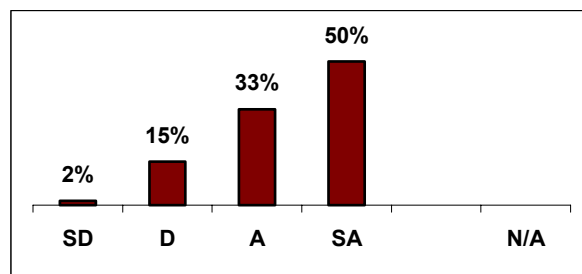
4/5 of respondents would maintain R&D spending in the absence of copyright



5. The most profitable companies in our industry:

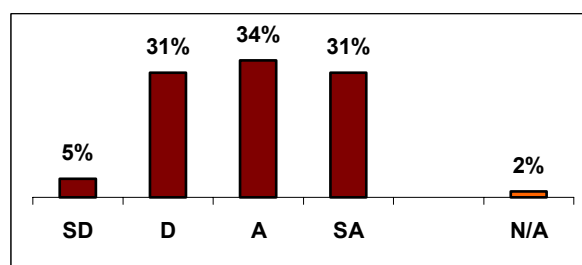
(i) have built up significant IP assets

A large majority of respondents report a strong connection in their industry between profitability possessing IP



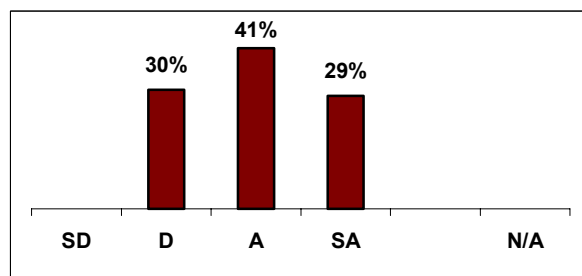
(ii) aggressively assert their IP rights

2/3 of respondents report a connection between profitability and a strong IP “offence”



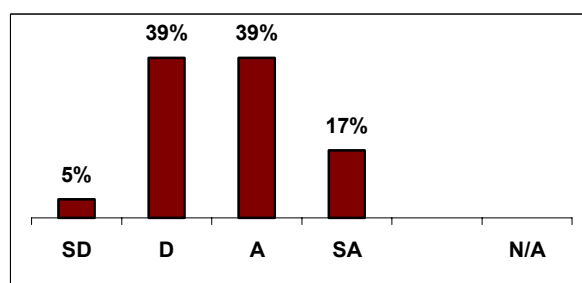
(iii) react aggressively to IP activity by competitors

Strong “defense” is associated with profitability in more than 2/3 of respondents’ industries



(iv) invest in IP mostly for defensive reasons

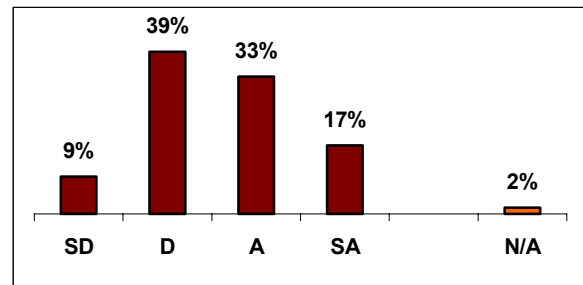
Slightly less than 1/2 of respondents report an association between profitability and a defensive posture on IP strategy



6. Some firms have dominated our industry by:

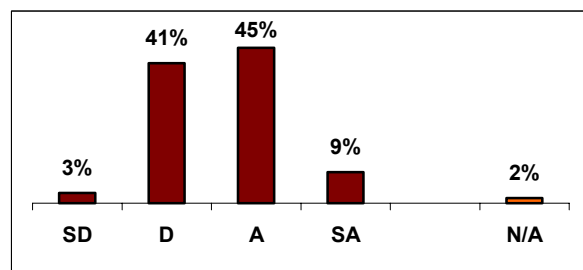
(i) controlling key patents

1/5 of respondents report that control of key patents leads to a dominant position in their industry, though overall respondents were evenly split



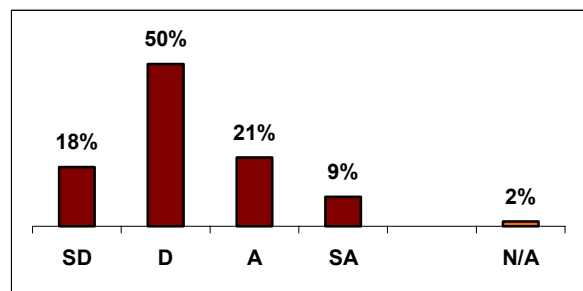
(ii) holding important technology as trade secrets

Overall, respondents were evenly split on the competitive value of keeping technology secret



(iii) owning key trademarks

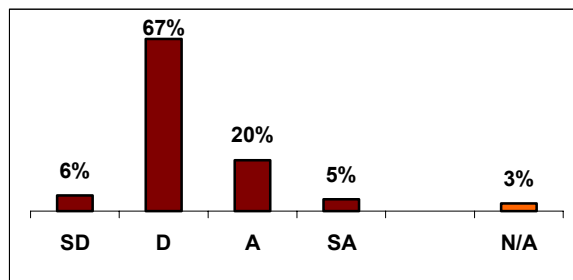
2/3 of respondents reject the idea that trademarks can confer a dominant position in the market.



7. Competitors' patent portfolios seriously constrain my company's freedom to operate by:

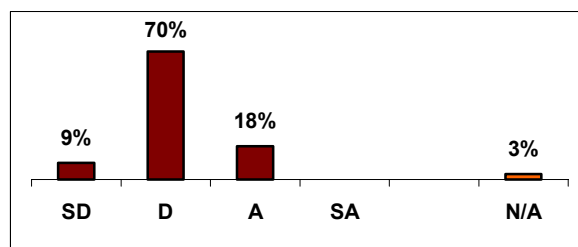
(i) foreclosing technology development in important areas

Competitor IP is a significant constraint on the scope of technology development for 1/4 of respondents



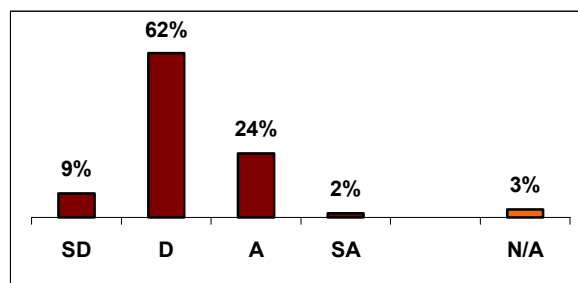
(ii) slowing the pace of technology development

Less than 1/5 of respondents report that competitor IP slows their technology development



(iii) blocking access to important markets

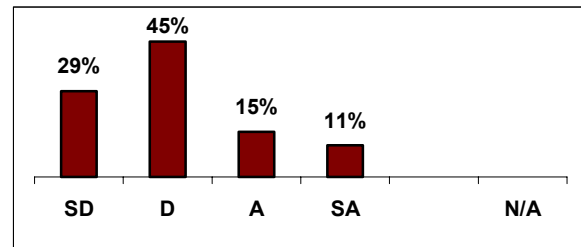
Competitor IP blocks market access for about 1/4 of respondents



8. In our industry:

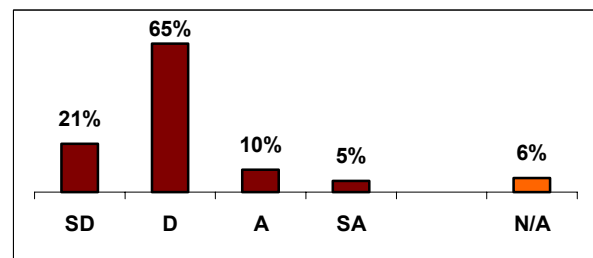
- (i) product lifecycles are typically shorter than the time it takes to get a patent issued

The pendency period is a problem for 1/4 of respondents



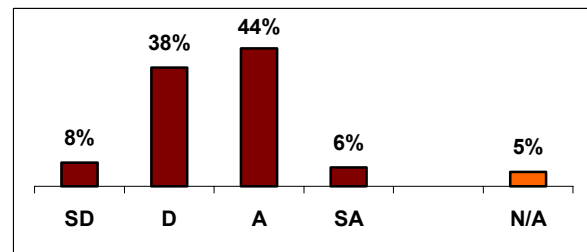
- (ii) patents are a major obstacle to establishing technology standards

Very few respondents report that patents negatively affect standard-setting in their industry



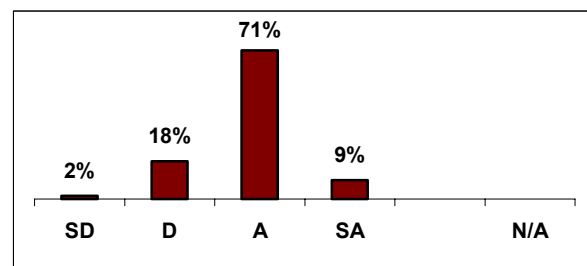
- (iii) IP is primarily important as a bargaining chip in negotiating access to technology

Respondents were evenly split



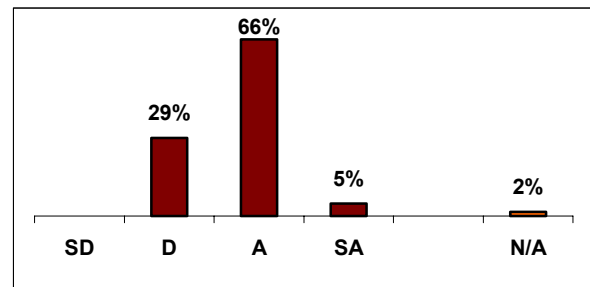
- (iv) it is very difficult to keep new technology secret for long

Information about new technology diffuses rapidly in the industries of 4/5 of respondents



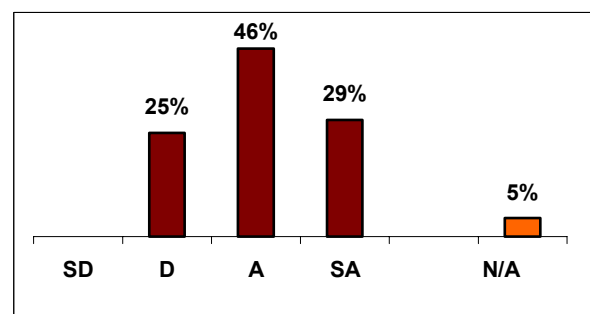
(v) Non-Compete and Non-Disclosure agreements are an effective way to control tech transfer

Just under 1/3 of respondents report that NCAs and NDAs are ineffective in their industry



(vi) to retain control of technology companies have to be able to retain key individuals

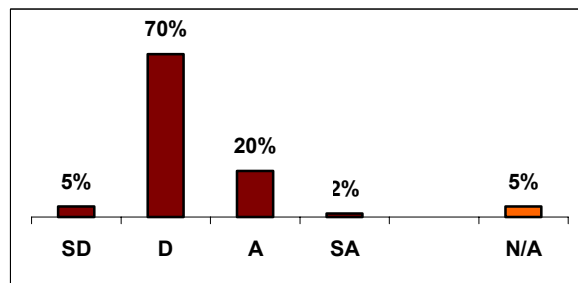
3/4 of respondents agreed



9. In my company, thought leaders generally believe that:

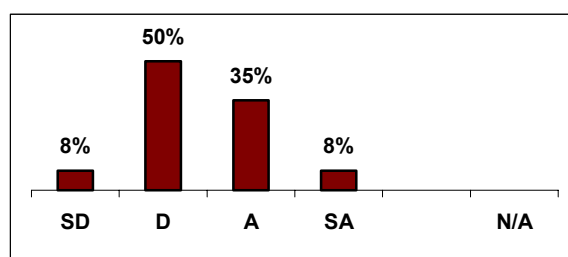
- (i) patent documents tend to disclose too much valuable information to our competitors.

3/4 of respondents disagree



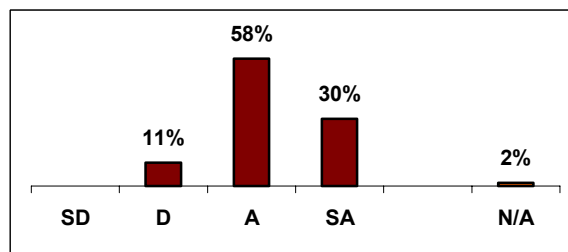
- (ii) many of our most important ideas cannot be effectively protected with patents.

A significant minority of respondents agree, reporting serious limits to patent protection.



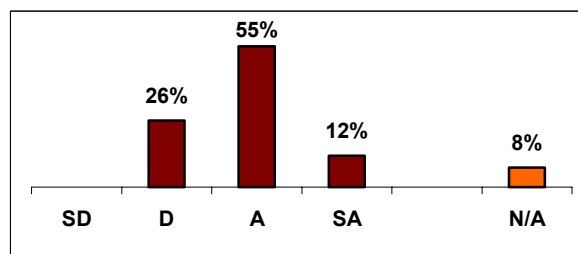
- (iii) the really important intellectual assets are the skills and knowledge of our people

Human capital is highly valued in the great majority of responding companies



- (iv) with enough money and the right people most patents can be invented around

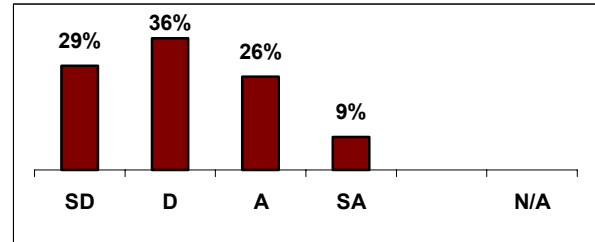
In 3/4 of responding companies, patents are not thought to be insuperable obstacles



10. In my company:

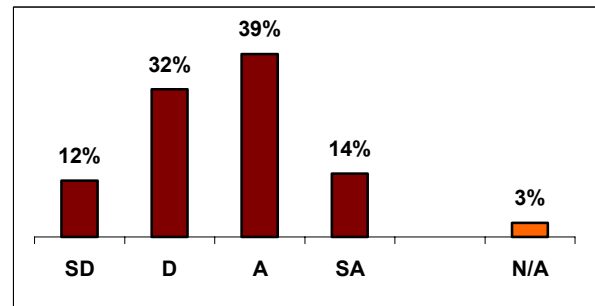
- (i) top leadership is only rarely involved in IP issues

Senior management pay little attention to IP in about of 1/3 of responding companies



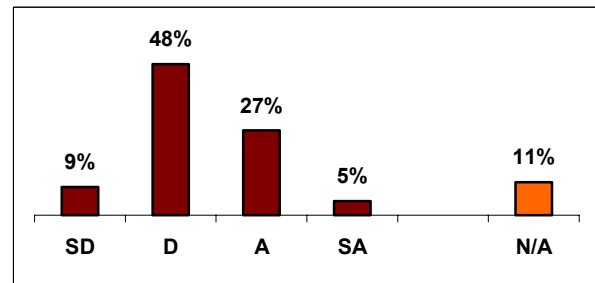
- (ii) each business unit and product team has its own individual IP policies/plans/objectives

More than 1/2 of responding companies allow considerable autonomy in IP strategy



- (iii) business units which obtain IP assets can compete more effectively for internal resources

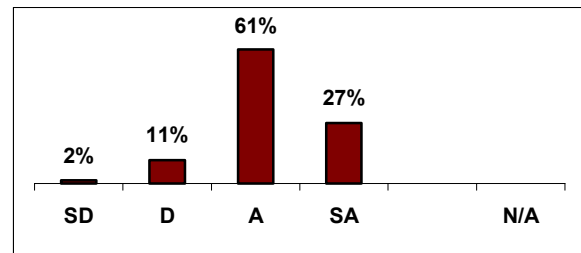
2/3 disagree



11. We think of our patent strategy as a success if we:

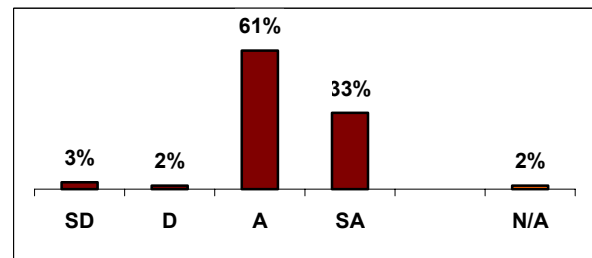
- (i) avoid being sued for patent infringement.

Almost 90% agree



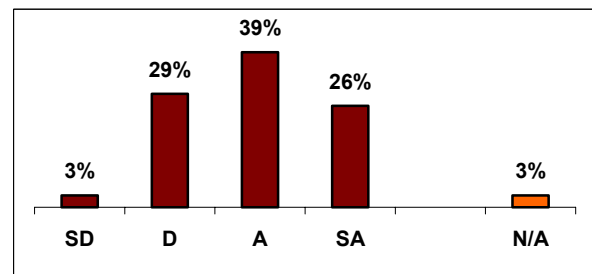
- (ii) settle IP disputes on favorable terms.

Only 5% disagree



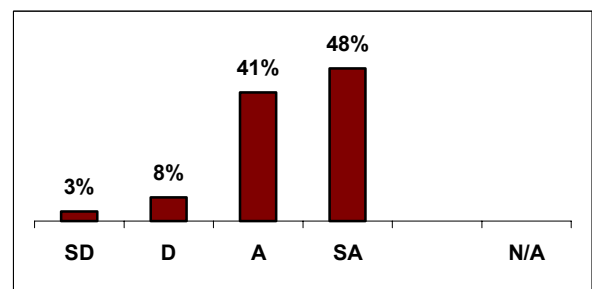
- (iii) generate licensing revenue

1/3 of respondents do not measure success in terms of licensing revenue



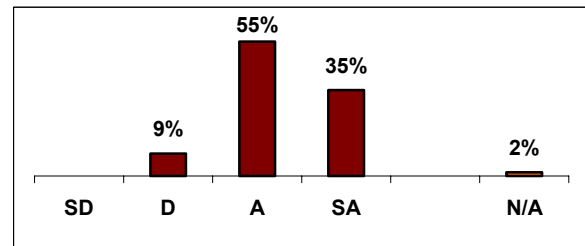
- (iv) prevent competitors from copying our products.

For more than 10% of respondents, prevention of copying is not an important goal of patent strategy



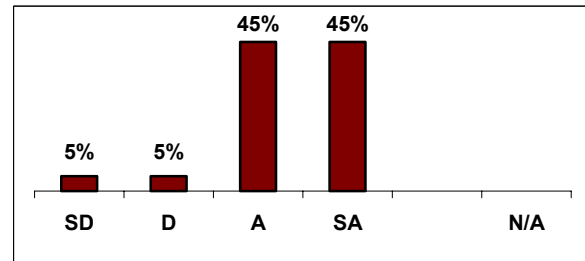
(v) make it more expensive for competitors to be in business against us.

90% of respondents measure success in terms of their ability to raise rivals' costs



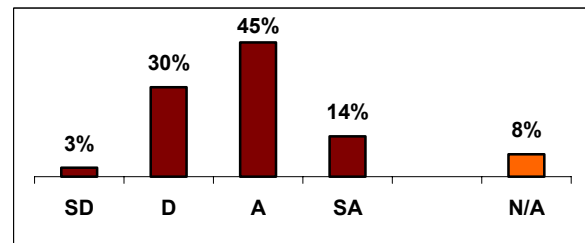
(vi) have a unique product position.

90% of respondents measure success in these terms



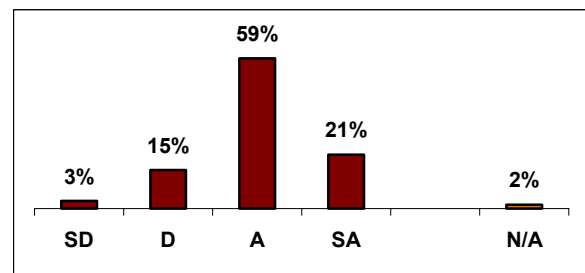
(viii) develop new partner relationships

1/3 of respondents do not measure success in these terms



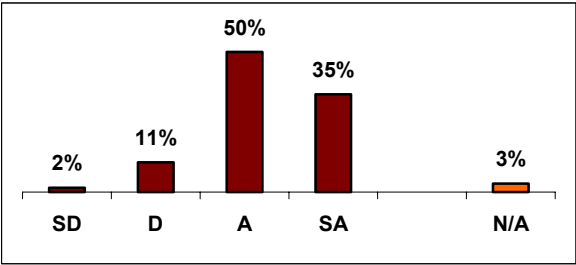
(vii) influence adoption of technology by our industry partners

80% of respondents agree



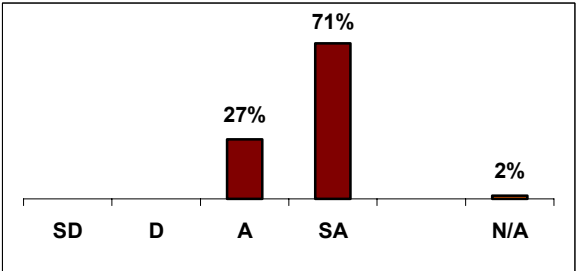
(ix)are able to measure and manage legal risk to our businesses.

85% of respondents measure success of patent strategy in terms of ability to manage risk



(x) maintain freedom to operate in core technologies and businesses.

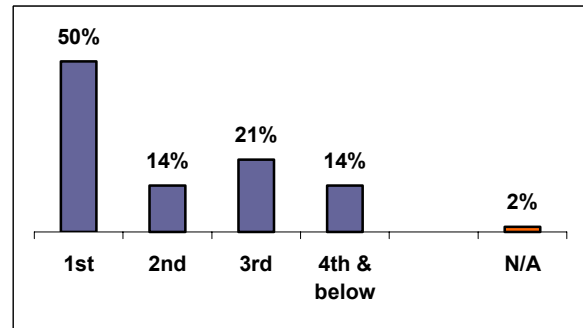
98% of respondents measure success of their patent strategy in these terms, with almost 3/4 “strongly agreeing”



12. The rank of my company's IP assets in order of their dollar value is:
(1=most valuable, 2=next most valuable etc.

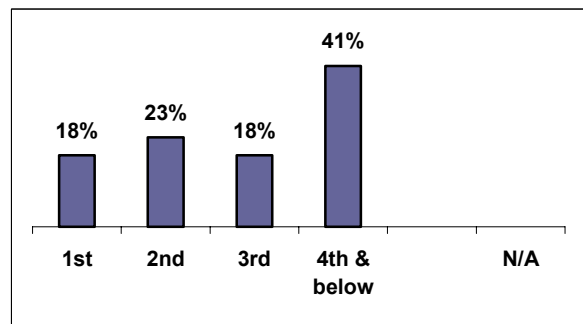
(i) Patents

Over half of respondents identified patents as their company's most valuable IP asset



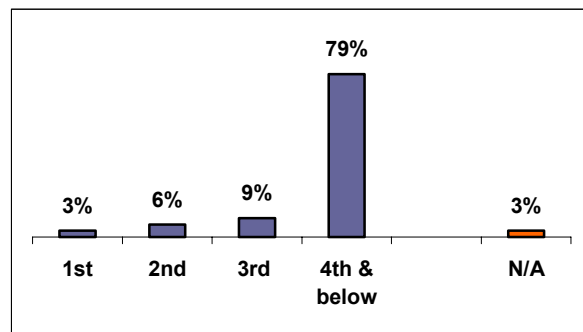
(ii) Trademarks

Almost 1/5 of respondents rated trademarks as their company's most valuable IP asset



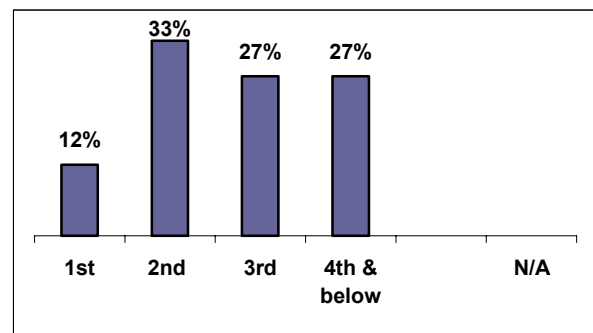
(iii) Copyrights

Almost all respondents rated the value of copyrights very low compared to other IP assets

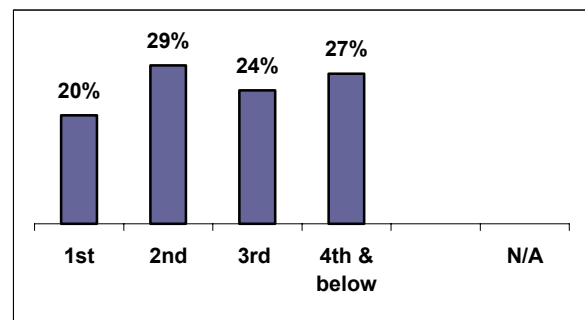


(iv) Trade secrets

Though only occasionally rated the most valuable among IP assets, trade secrets were the most frequently chosen no. 2 or 3

**(v) Know-How**

1/5 of respondents rated know how as the most valuable of their companies' IP assets, know how was also often rated as 2nd or 3rd most valuable IP asset class



12.a How much of the total monetary value of your company's IP assets do the following represent:

Fraction of total monetary value of IP assets				
	N	Average	Minimum	Maximum
Patents	23	44.1%	0	80%
Trademarks	21	19.0%	0	80%
Copyrights	16	6.8%	0	45%
Trade secrets	21	17.4%	0	40%
Know-how	21	13.8%	0	40%

D. Technology Development

1. For your company, please rank the **three most important** sources of new scientific and technical ideas at each stage of the technology development cycle:
(1=most important, 2=next most important etc.)

	Early stage discovery, basic research	New product development, applied research	Product enhancement, incremental innovation
Internal R&D	1.2	1.2	1.4
Vendors	2.5	2.5	2.3
Customers	2.3	2.1	1.7
Competitors	2.3	2.4	2.6
Outside consultants	2.1	2.4	2.8
Partners e.g. alliances, JVs, etc.	2.2	2.3	2.4
“Arm’s length” licensed-in technology	2.3	2.5	2.6
R&D performed in unrelated industries	3.0	N/A	N/A
Government/University relationships	2.5	2.6	3
Professional or academic publications	2.3	2.5	2.3
Patent disclosures	2.3	2.0	2.4

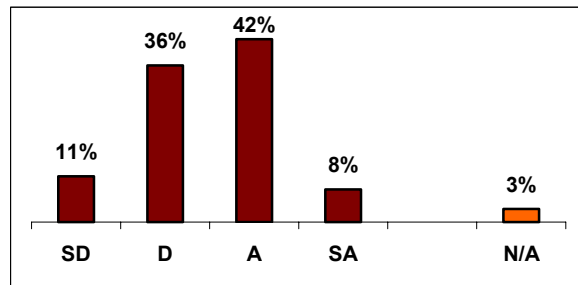
(table entries are average ranking, lower number means more important)

Internal R&D is the most important source of new ideas at all stages of the technology development cycle. Customers are an important source during late stage, incremental innovation and product enhancement. Patent documents are rated more important than competitors, in-licensing, professional publications or government and university partnerships, and roughly equivalent to partnerships and joint ventures. Government/university relationships received a surprisingly low average ranking.

2. Competitors' patents play an important role in shaping the pace and direction of my company's technology development and R&D through:

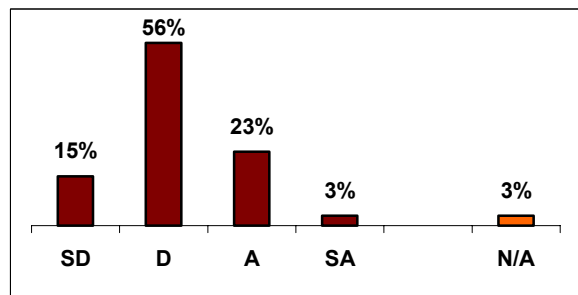
(i) decisions not to pursue otherwise promising technologies.

1/2 of respondents agree



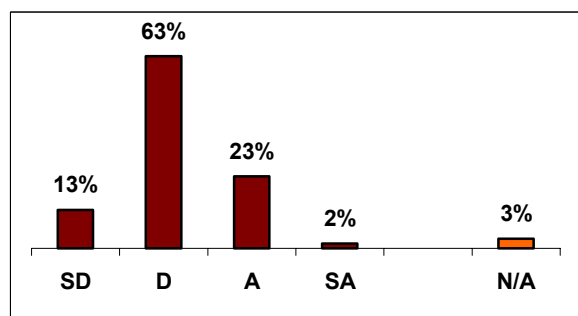
(ii) decisions to abandon later-stage development of otherwise promising technologies.

Over 2/3 disagree



(iii) slowing down the technology development cycle.

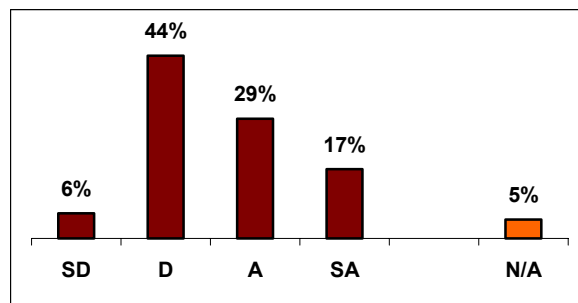
3/4 disagree



3. At my company, scientific and technical personnel are:

(i) recognized for invention disclosures

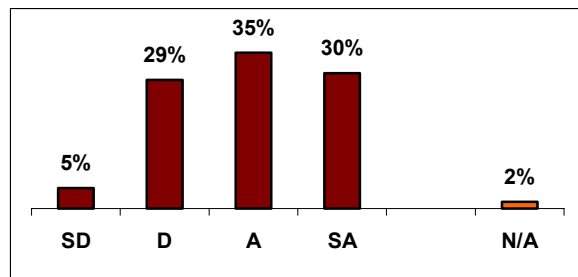
Typical reward: plaque, dinner, t-shirt



(ii) recognized for initial patent filing

Typical reward: \$500-\$1000.

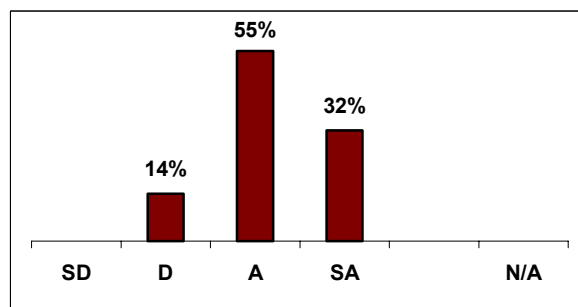
Maximum was \$3000



(iii) recognized for patent grants

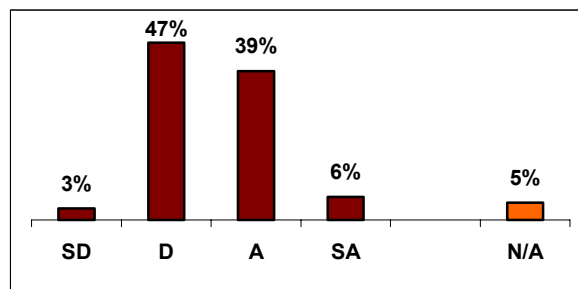
Typical reward \$1000 plus dinner and plaque.

Maximum was \$10million!

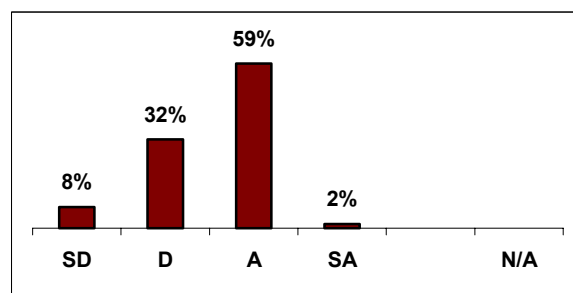


(iv) recognized for generating other IP

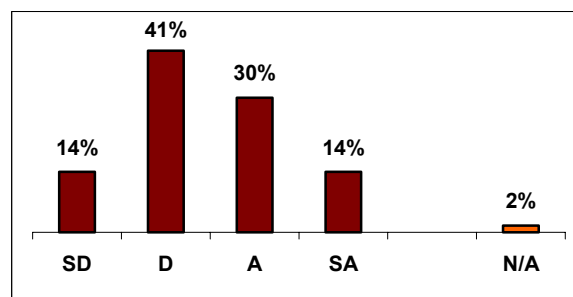
If reward is given, it is typically for “trade secret” and is a token amount of money. “Part of the job” was a common comment from respondents.

**(v) promoted, at least in part, on their record of generating patents.**

The majority of companies do taken inventors record of generating patents into account in promotion decisions, though very few registered strong agreement and 40% of companies do not appear to use this practice.

**(vi) given significant monetary rewards for generating patents.**

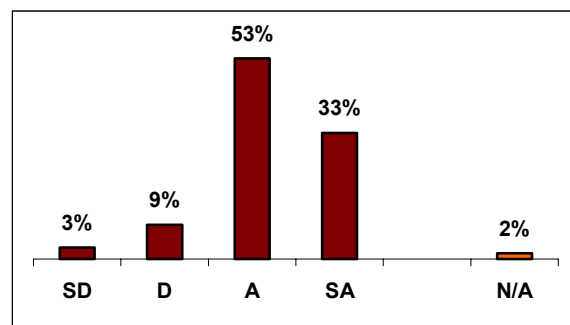
“Significant” appears to have been an important modifier for this question. The majority of companies do reward inventors, but rarely with substantial amounts of money.



4. We routinely monitor our competitors' IP activity:

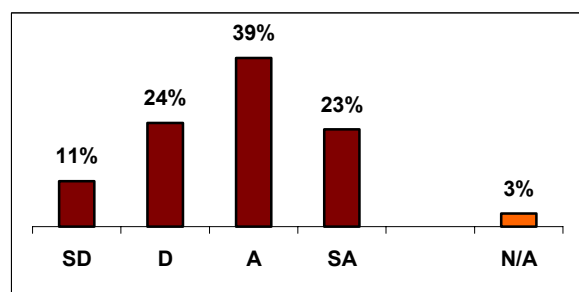
(i) for competitive awareness

Almost 90% of companies do this.



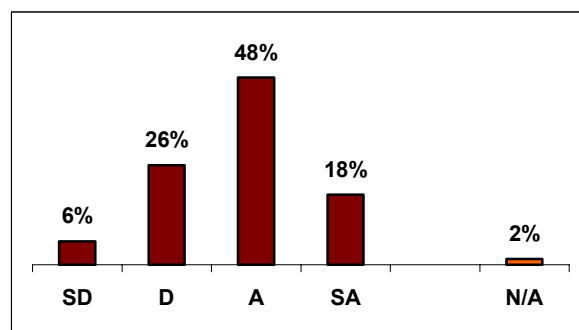
(ii) for oppositions or interferences

More than 1/3 do not monitor competitors for this purpose. This may reflect differences in international patenting practices.



(iii) for technology

1/3 of companies do not do this.



E. IP Organization and Operations

1. What is the exact title of the senior person responsible for intellectual property issues in your company?

General Counsel, Chief Patent Counsel

2. Does that person sit of the Board of Directors / Main Board of your company

11% YES

3. Is that person a member of your company's senior internal management committee?

29% YES

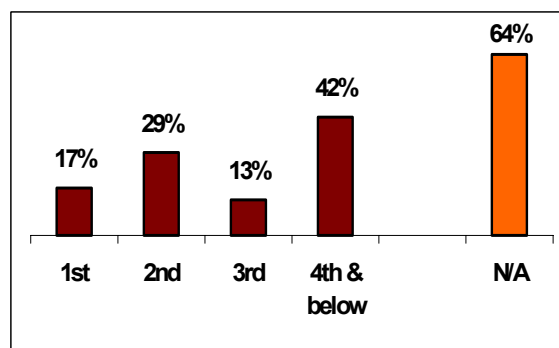
4. Do you have a high-level policy group dedicated to IP issues?

41% YES

If so,

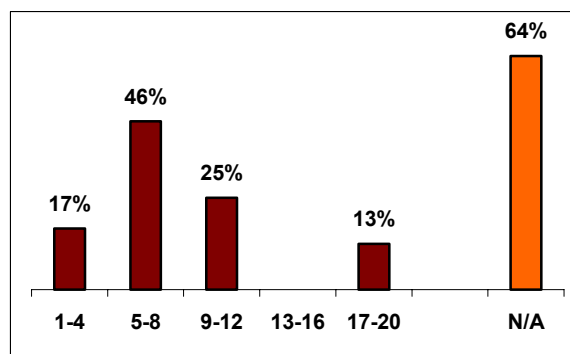
- (i) How often does this group meet?

For those companies with such a group, 1/2 meet at least once per month.



- (ii) How many people are involved?

Typical group size was 5 to 8 people.

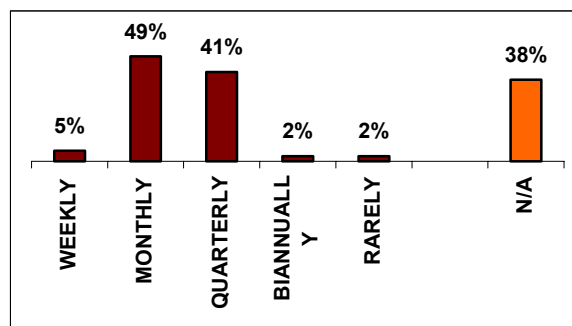


5. Do you have a formal Patent Review Board, or similar committee or process that makes decisions about whether to patent inventions brought forward?

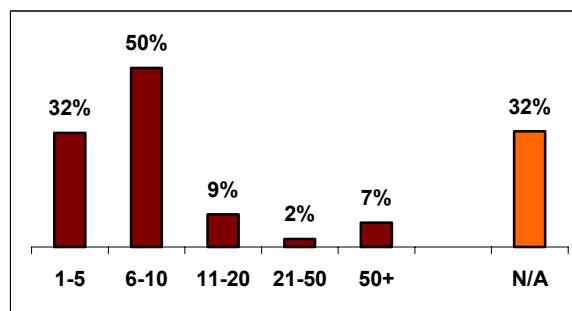
51% YES

If so,

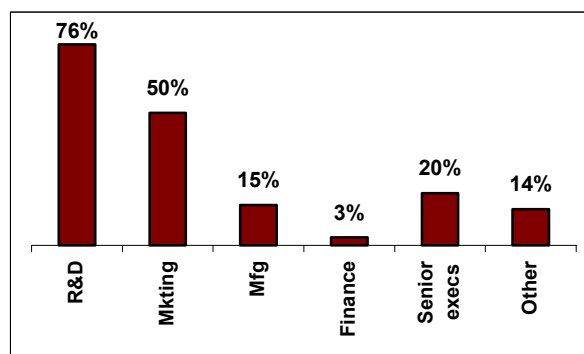
- (i) How often does this group meet?



- (ii) How many people are involved?

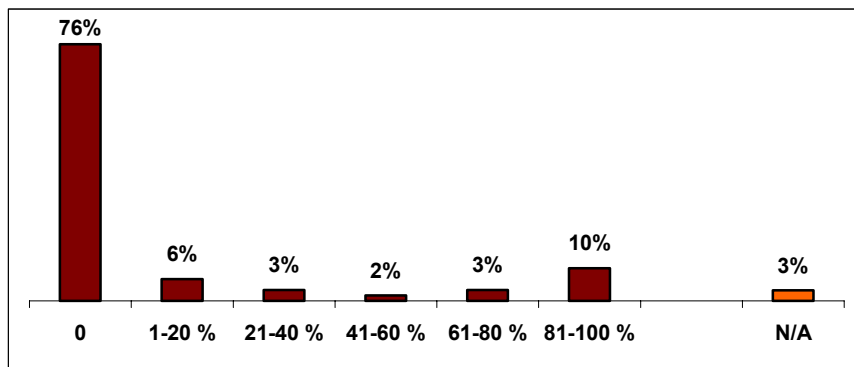


- (iii) Other than IP counsel, which business functions are normally represented in this group?



6. What fraction of your company's total IP headcount report directly to operating units, as opposed to the legal department?

A substantial share of IP staff report to operating units in a very small minority of responding companies. In 3/4 of companies, all of the IP staff report to the legal function.



7. Who has significant input to pay and promotion decisions for IP attorneys and staff?

74% Senior IP Counsel / Head of IP function.
88% Chief Legal Officer / Head of legal function.
17% Business unit managers.
27% Senior non-legal executives.
18% Corporate HR

8. Who has authority over pay and promotion decisions?

General Counsel

9. IP attorneys or specialist staff are frequently / occasionally / never assigned to product development teams, or similar line activities in operating business units.

27% NEVER, 73% N/A

10. Do you routinely outsource IP related tasks? **97% YES**

If yes, what fraction of the total activity in each of the following tasks do you outsource?

44% Prior Art searches
62% Drafting patent applications
56% US patent prosecution
68% Foreign filing
15% Scanning competitive IP
66% Opinions on validity/infringement
38% Maintaining the patent portfolio (renewals etc.)
38% Enforcement
88% Litigation
12% Contracts & Licensing

11. Do you use in-house patent agents?

42% YES

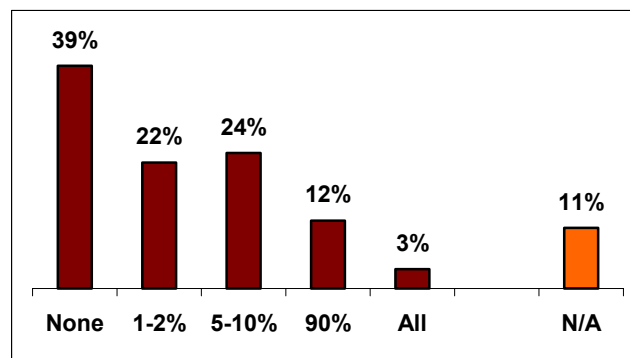
12. Do you use a packaged docketing system to manage your IP portfolio? **46% YES**

13. Do you use any other specialized software applications to automate or support IP management decisions?
26% YES

14. For what fraction of the patents in your portfolio have you calculated a monetary value

Very few companies appear to be able to calculate a monetary value for more than a handful of patents in their portfolio. More than 1/3 of respondents who answered this question indicated that their company has not valued ANY of its patents.

(Category shares are reported as percent of non-missing responses.)



15. Do you use analytical tools to evaluate your patent portfolio? **29% YES**
If so, which?

- 3%** Real options
- 18%** Visualization tools
- 20%** Citation mapping
- 3%** Monte Carlo simulation
- 9%** Other: typically “standard accounting tools”

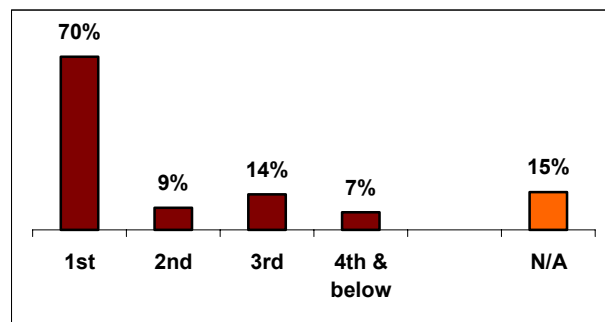
16. How do you measure the effectiveness of your IP group: (check all that apply)

- 47%** Number of invention disclosures reviewed
- 38%** Time from initial disclosure to patenting decision
- 80%** Number of patent applications filed
- 74%** Number of patents granted
- 14%** Time from application to issuance
- 39%** Royalties received
- 18%** Royalties paid
- 77%** Satisfaction of operating company managers
- 27%** Measures of patent quality (if so describe): typically “claim coverage”
- 17%** Number of times named as a defendant in a patent dispute
- 20%** Number of or ratio of favorable/unfavorable dispute resolutions
- 9%** Other: typically “profitability” or “cost savings”

17. My company's biggest challenges in managing IP are:
(rank all that apply in order of importance: 1=most important etc.)

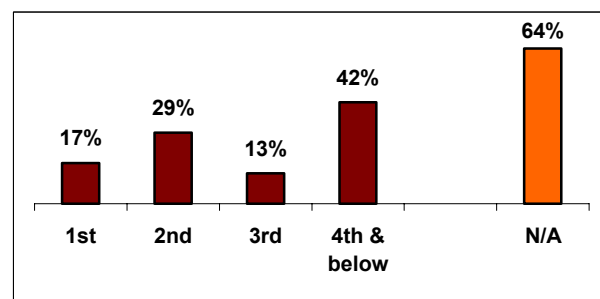
(i) Budget constraints

70% of respondents who ranked this option rated it the top priority



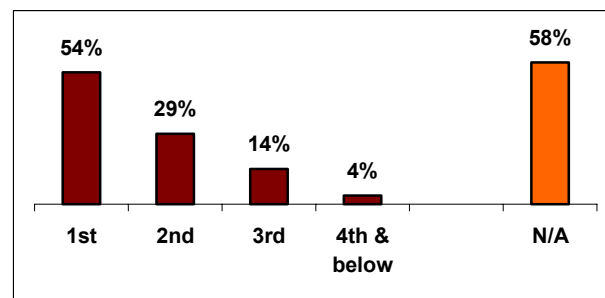
(ii) Lack of internal expertise.

Almost 2/3 did not rank this option, of those who did, less than 1/2 rated it 2nd or higher.



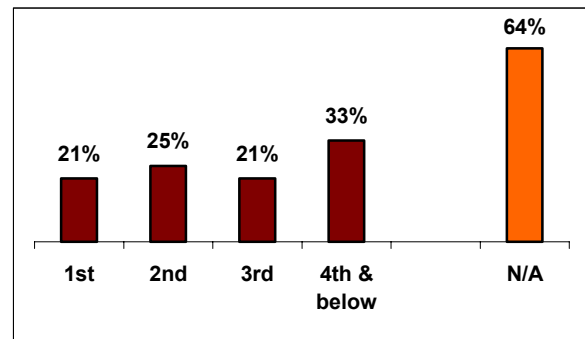
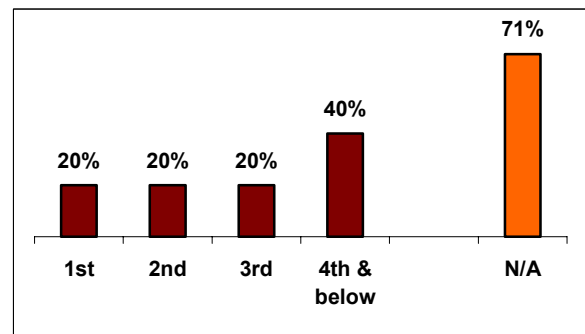
(iii) A lack of understanding of the importance of IP

More than 1/2 of respondents did not rank this option, of those who did more than 1/2 rated it the top priority



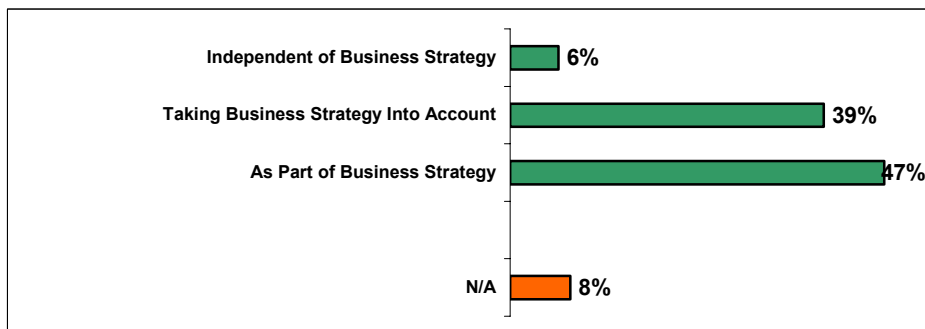
(iv) Lack of management support.

Almost 2/3 did not rank this option, of those who did, 1/3 ranked it 4th or below. The level of non-response is difficult to interpret. Respondents may have had difficulty understanding the question, or may have been concerned about the consequences of registering a response even in an anonymous survey.

**(vi) No perceived need.**

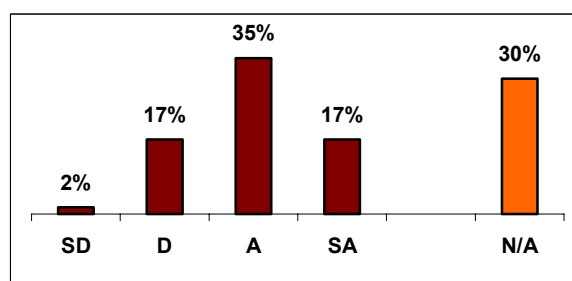
F. IP Management

1. Our IP strategy has been developed:



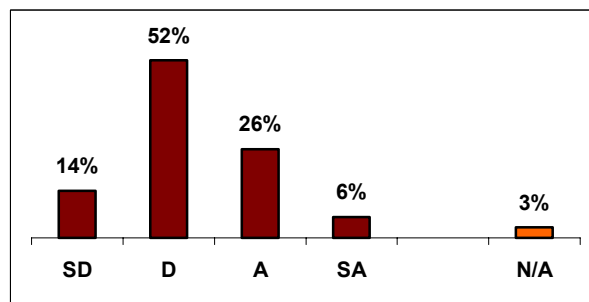
2. Our written Intellectual Asset Plan explicitly incorporates business strategy goals.

30% of responding companies appear not to have a written intellectual asset plan.



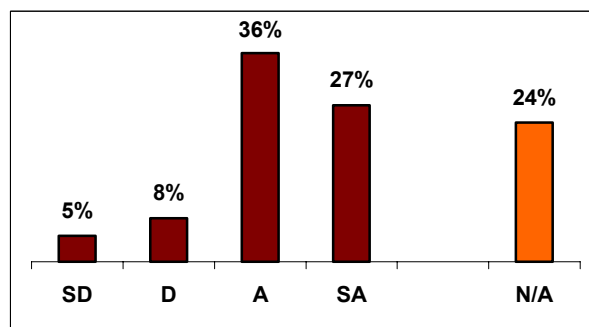
3. A concrete decision as to whether to patent, publish or hold as trade secret is reached for every significant invention.

2/3 of companies do not do this.



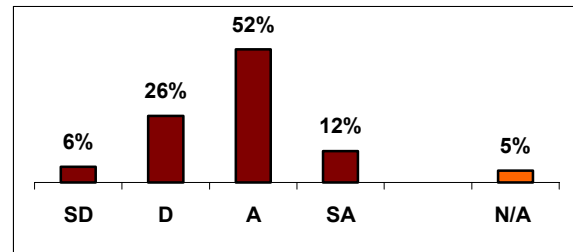
4. We use specific hard-and-fast quantitative criteria to guide our patenting decisions.

The high non-response rate suggests that, in total, over 1/3 of companies do not do this.



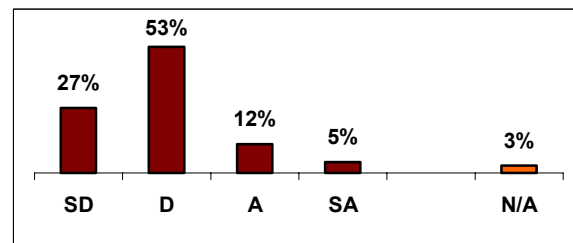
5. We have developed a clear set of guidelines as to what should be patented.

1/3 of companies have not done this.

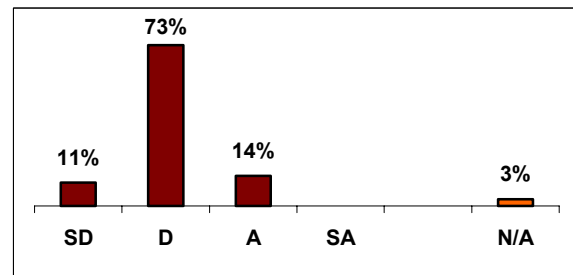


6. We patent nearly every non-trivial idea that is brought forward.

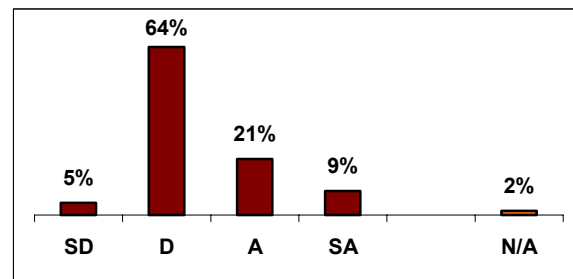
Patenting is not “automatic” except in a small minority of companies.



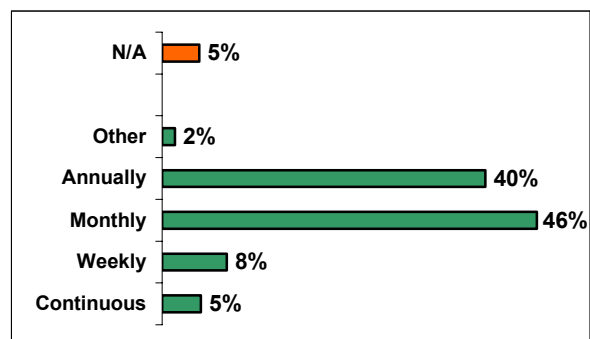
7. Patenting decisions are often controversial.



8. Budget issues tend to dominate our filing decisions

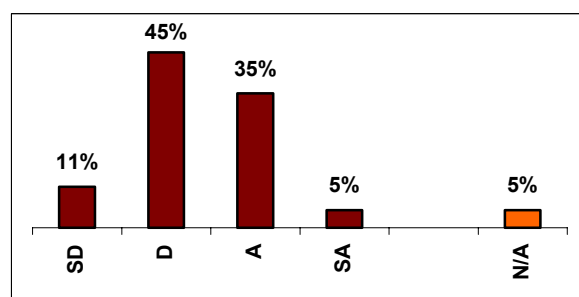


9. We audit our IP portfolio at the following intervals:

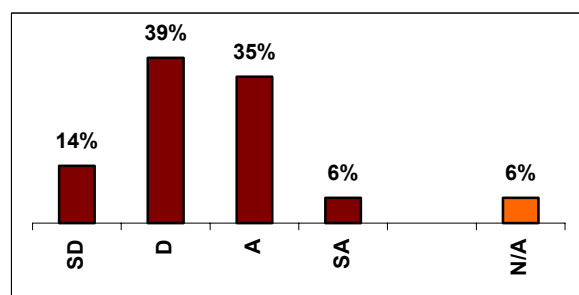


10. In my company, patentability has been compromised by:

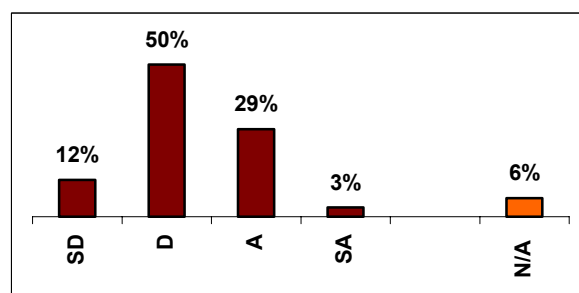
(i) publication before establishing priority



(ii) violating the on-sale bar



(iii) non-written disclosure



11. Normally, when decisions are made about whether a patent should be filed:

	Is consulted	Plays a significant role	Has a veto	Normally controls the decision	Is not Involved
R&D	13%	56%	3%	28%	0
IP counsel	8%	37%	19%	37%	0
Non-IP legal	5%	4%	2%	2%	88%
Marketing	30%	30%	3%	5%	33%
Manufacturing	63%	17%	15%	3%	2%
Product managers	27%	40%	7%	2%	25%
Finance	2 %	2%	0	0	97%
Senior corporate management	18 %	4%	4%	5%	70%
Corporate Business Development	7%	7%	2%	0	84%
Cross-functional IP group	4%	25%	2%	32%	38%

12. Normally, when strategic decisions must be made during the patent application process

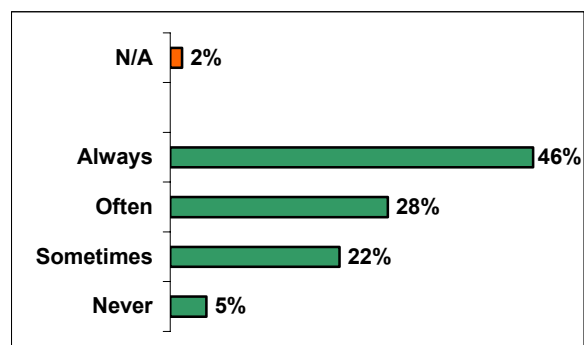
	Is consulted	Plays a significant role	Has a veto	Normally controls the decision	Is not Involved
R&D	39%	39%	5%	11%	7%
IP counsel	5%	21%	8%	67%	0
Non-IP legal	4%	4%	2%	2%	89%
Marketing	19%	7%	3%	0	71%
Manufacturing	16%	2%	2%	2%	77%
Product managers	36%	10%	2%	2%	50%
Finance	0	0	2%	0	98%
Senior corporate management	9%	5%	4%	2%	81%
Corporate Business Development	5%	7%	0 %	2%	89%
Cross-functional IP group	16%	7%	0 %	10%	67%

13. Normally, when decisions must be made about paying maintenance fees

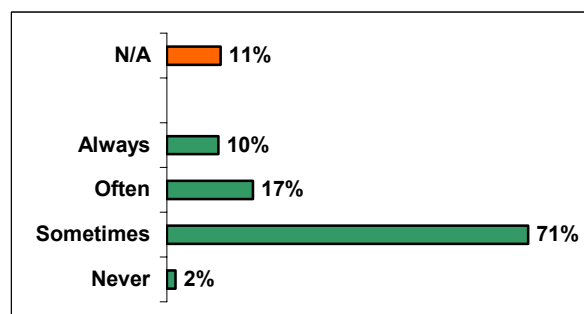
	Is consulted	Plays a significant role	Has a veto	Normally controls the decision	Is not Involved
R&D	33%	23%	2%	25%	17%
IP counsel	9%	41%	13%	33%	6%
Non-IP legal	6%	2%	2%	2%	88%
Marketing	29%	20%	4%	5%	43%
Manufacturing	16%	8%	2%	2%	43%
Product managers	16%	8%	2%	2%	73%
Finance	23%	23%	2%	9%	43%
Senior corporate management	2%	0	0	0	98%
Corporate Business Development	11%	4%	2%	7%	76%
Cross-functional IP group	15%	4%	0	2%	80%

14. When we want to understand a competitor's IP position we use:

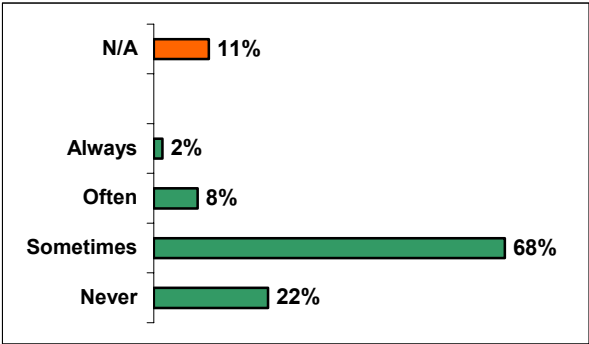
(i) In-house IP specialists



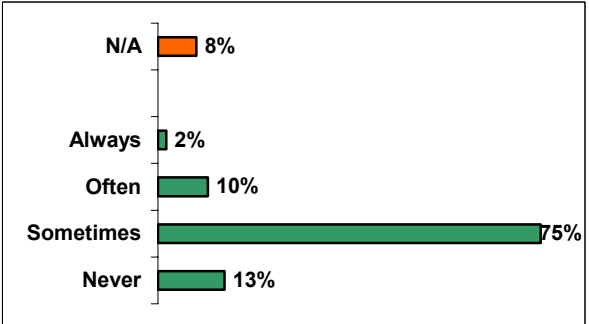
(ii) Reports from in-house R&D



(iii) Out-sourced search services

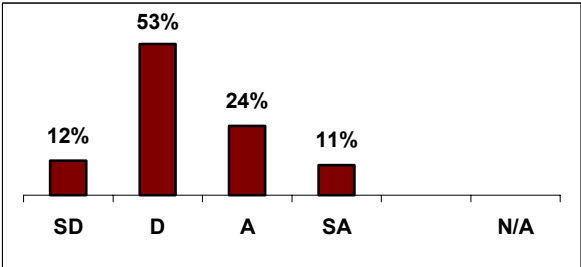


(iv) Outside IP counsel

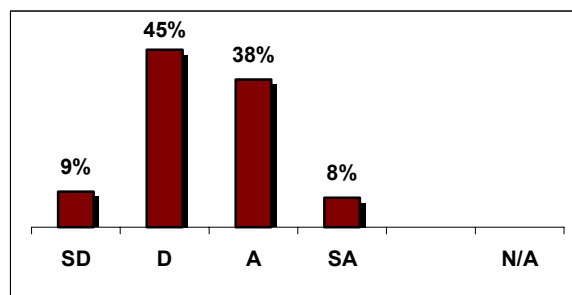


Patent Search

15. We always do a patent search before initiating any R&D or product development effort.

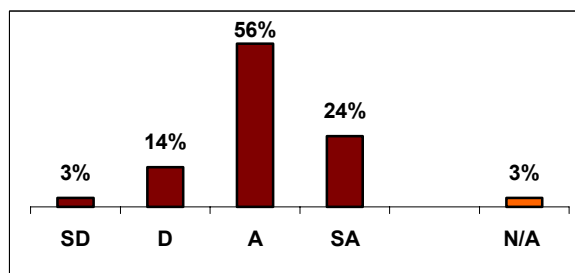


16. Now that patent applications are being published in the US, we are becoming aware of competitors' IP activity much sooner than in the past.

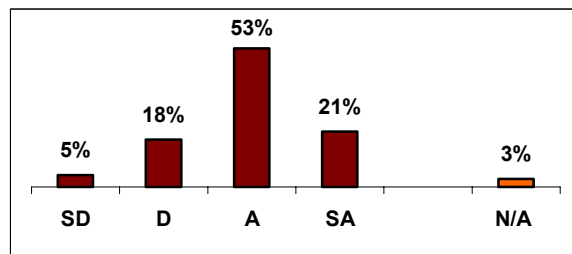


17. Our company has adequate internal search capabilities for:

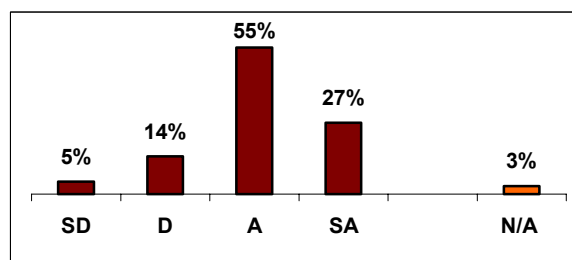
(i) supporting R&D activities.



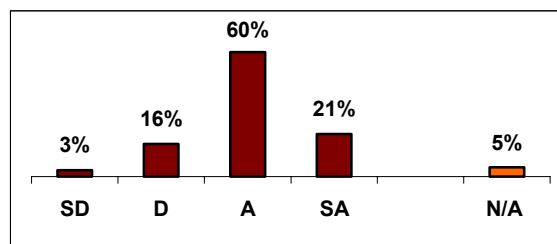
(ii) competitor intelligence



(iii) patent searching and analysis



(iv) trademark search and analyses

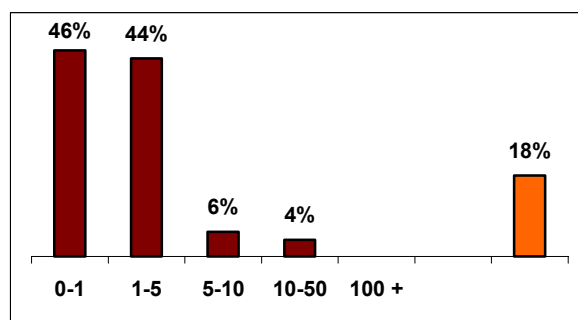


18. Patent searches are normally performed by people from: (Check all that apply)

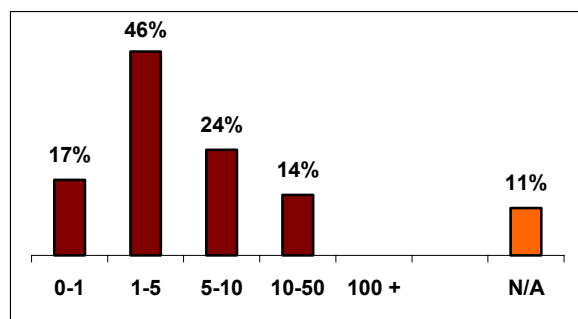
61% R&D
83% In-house legal/IP
8% Business function
26% Out-sourced specialist search services
50% Outside IP counsel

19. Average number of hours of search per disclosure or per patent

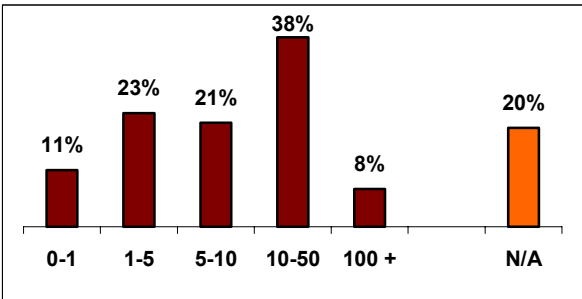
(i) to support Patent Review Board



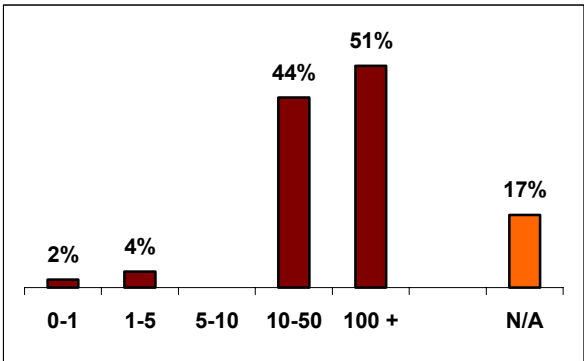
(ii) to prepare an application for filing



(iii) for product clearance



(iv) to prepare for litigation

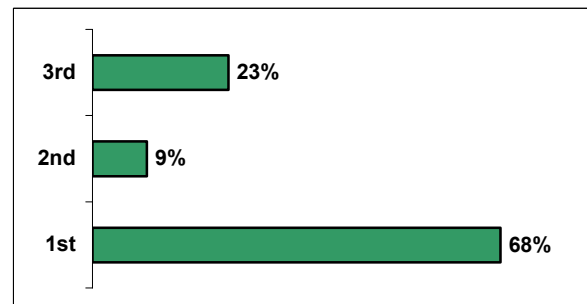


G. Trade Secrets

1. Please rank the importance to your company of the following means of controlling the use of technology:

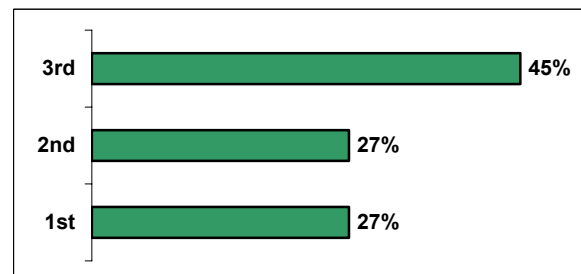
(i) Formal IP: Patents, Copyrights, Trademarks etc.

Ranked most important by more than 2/3 of respondents.



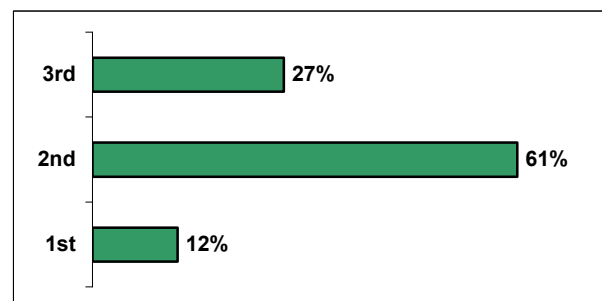
(ii) Secrecy

Ranked most important by more than 1/4 of respondents



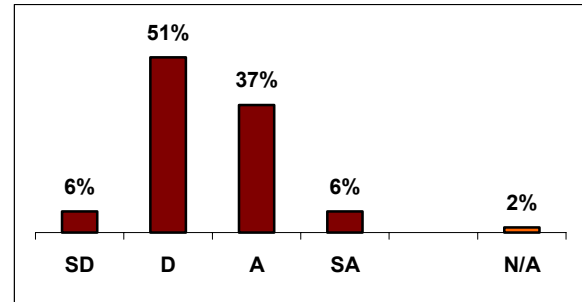
(iii) Contract law: NDAs, licensing agreements, partnership agreements etc.

Ranked second most important by many respondents.



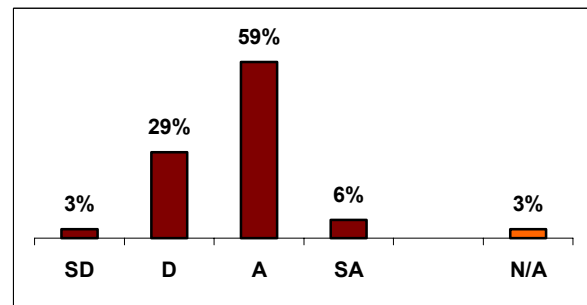
2. Theft/misappropriation of trade secrets is a serious problem for our company

2/3 of respondents disagreed. Very few registered strong agreement.



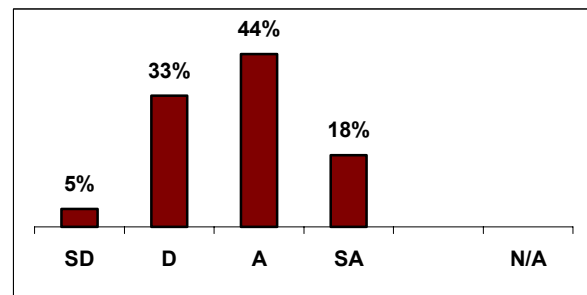
3. Trade secret law is an effective way for us to retain control of important technology

2/3 of respondents agreed.



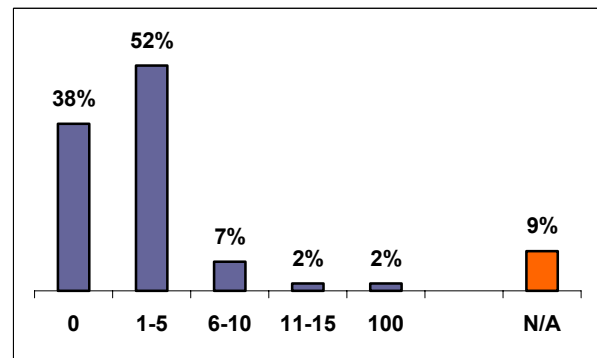
4. In our industry, it is usually easy to reverse-engineer competing products.

The majority agreed.



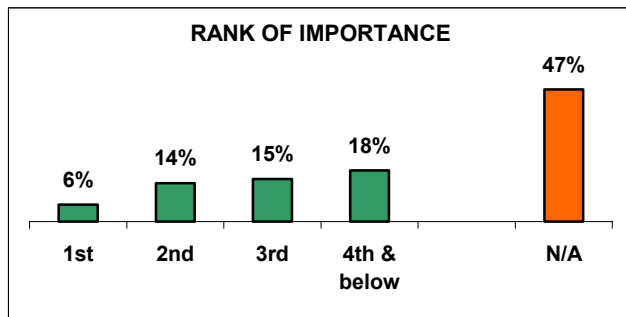
5. In the past 5 years, about how many times has your company initiated legal action to protect trade secrets?

Only a small minority report having initiated legal action on trade secrets more than once per year.



6. When trade secrets leak out, how important the following channels? Approximately what fraction would you say was through each channel?

(i) inadvertent disclosure



Fraction

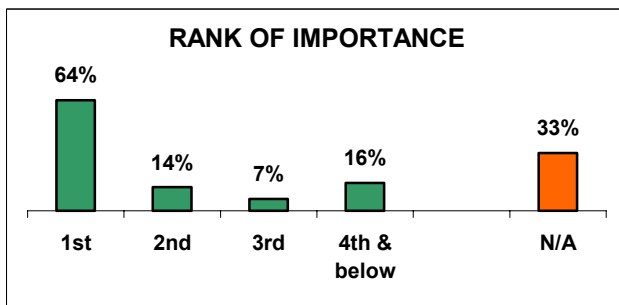
Mean=13%

Min=0

Max=50%

Computed from non-missing responses

(ii) employee turnover



Fraction

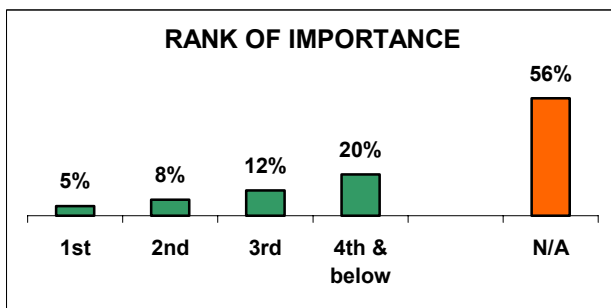
Mean=44%

Min=5%

Max=100%

Computed from non-missing responses

(iii) employees in contact with competitors



Fraction

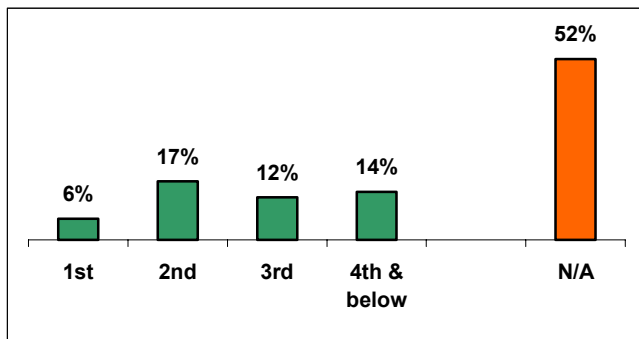
Mean=26%

Min=0

Max=100%

Computed from non-missing responses

(iv) vendors

**Fraction**

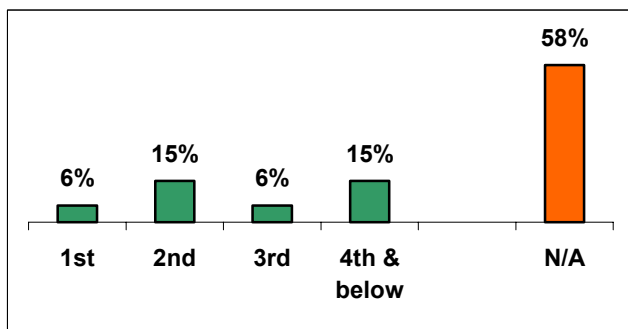
Mean=19%

Min=5%

Max=45%

Computed from non-missing responses

(v) customers

**Fraction**

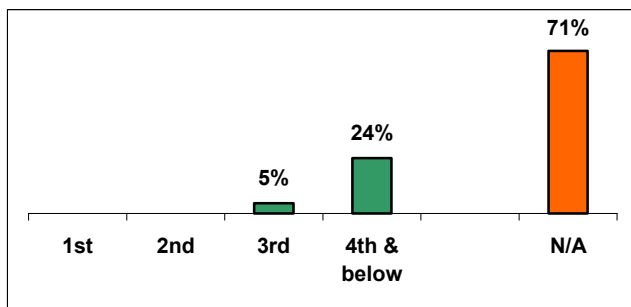
Mean=19%

Min=2%

Max=75%

Computed from non-missing responses

(vi) industrial espionage

**Fraction**

Mean=9%

Min=0

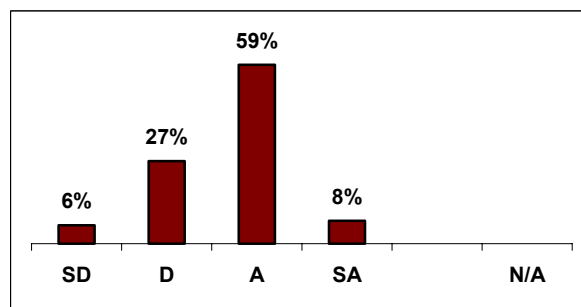
Max=25%

Computed from non-missing responses

H. Resources

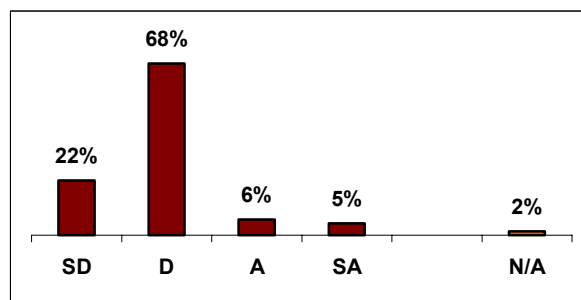
1. The IP function in my company is adequately funded.

Resource constraints are a problem for 1/3 of respondents



2. Operating managers frequently say that we spend too much time/money on IP issues.

If line management are dissatisfied with the level of resources devoted to IP, they are not communicating this to respondents.



3. Relative to the benefit derived, the amount of time/resources spent on IP issues by the following people is

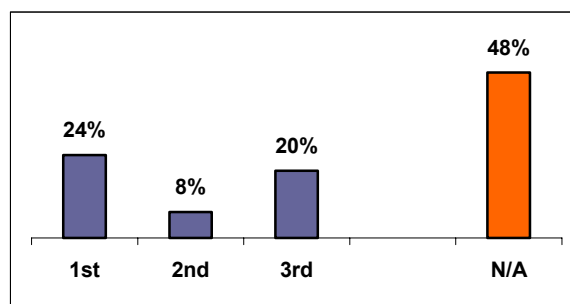
	Too much	Appropriate	Too little
R&D	38%	62%	
Legal	26%	74%	
Line management	41%	59%	
Top leadership	37%	63%	

Again, no evidence for under-spending on IP.

4. If more resources were devoted to IP in my company, the **top three** uses in order of priority should be:

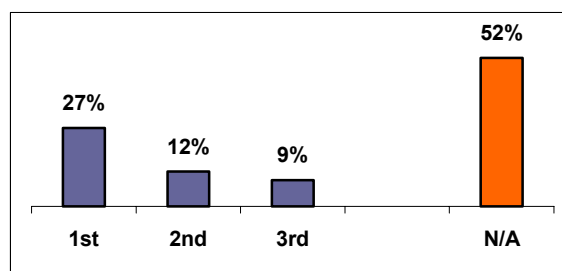
(i) exploring licensing opportunities

Overall, the second choice for top priority, though 1/2 of respondents did not choose this option.



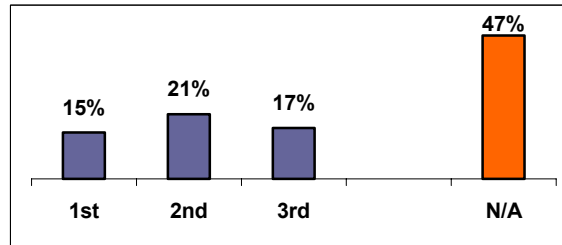
(ii) getting involved in the new product design process earlier

More respondents rated this the top priority for use of additional resources than any other option, though more than 1/2 of respondents did not choose this option.



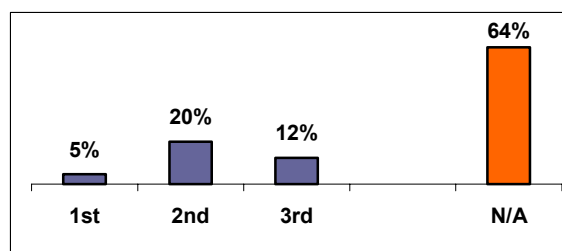
(iii) obtaining more patents

1/3 of respondents who chose this option rating this 1st or 2nd priority for use of additional IP resources,



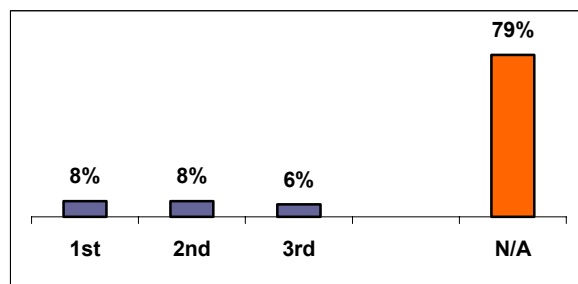
(iv) enforcing our patent portfolio more aggressively

Very few respondents rated this the top priority for use of additional IP resources, even among the minority to choose this option.



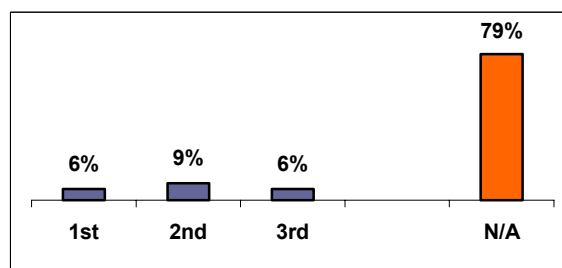
(v) bringing prosecution in-house

Most of the respondents who saw an advantage to in-house patent prosecution had evidently already done so.



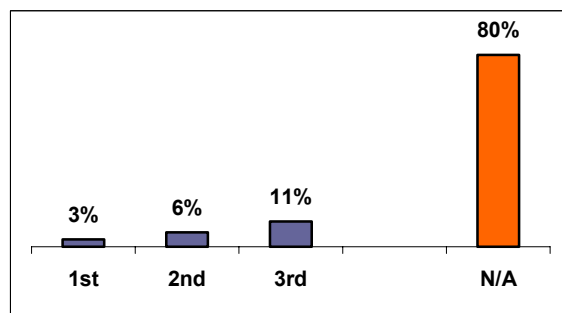
(vi) competitive intelligence

Very few respondents rated this a priority use of additional IP resources.



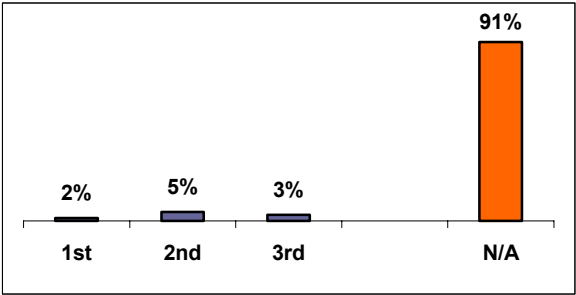
(vii) training

Again, very few respondents rated this a priority use of additional IP resources.



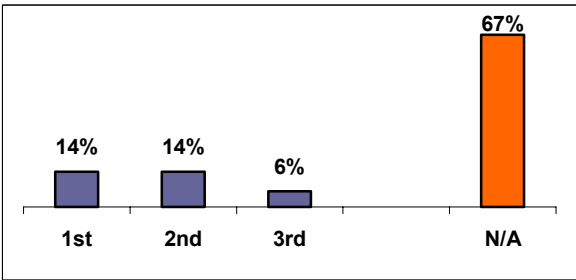
(viii) administration

Very few respondents rated this a priority use of additional IP resources.



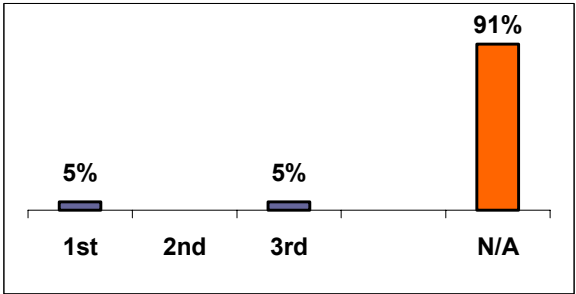
(ix) adding IP staff

Understaffing appears to be a source of concern for a small number of respondents, though 2/3 did not identify adding staff as a priority.



(x) other: typically “more foreign filing”

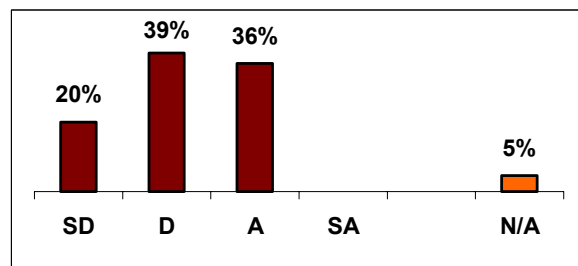
Very few respondents rated this a priority use of additional IP resources.



I. IP Strategy

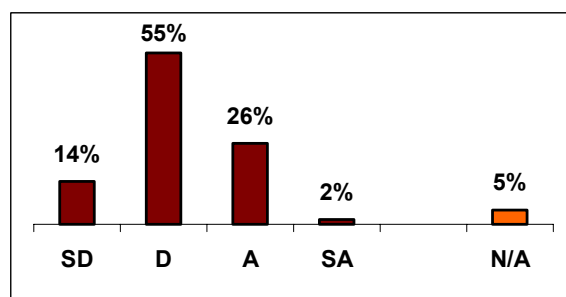
1. In our industry, companies actively publish technical material with the aim of limiting competitors' ability to obtain patents

Almost 2/3 report little tendency in their industry to proactively use the public domain to "fence in" competitors



2. Defensive publication is an important strategic tool for my company

2/3 of respondents discount the value of defensive publication as a strategic tool.



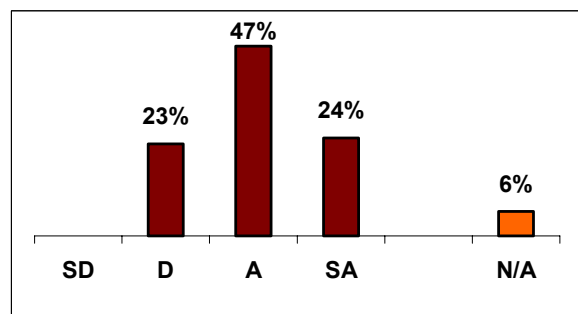
3. When we proactively place information in the public domain we use:

- 17%** Publication in house-sponsored journals
- 42%** Placement of articles in the trade press
- 52%** Publication in academic or professional journals
- 8%** Statutory Invention Registration
- 27%** Marketing materials
- 20%** On-line publication services
- 14%** Company web site
- 5%** Other

Technical journals and the trade press are the dominant channels for putting information in the public domain

4. The value of any particular patent in our portfolio is determined by inter-relationships with other patents that we hold: for most of our portfolio, "the whole is greater than the sum of the parts"

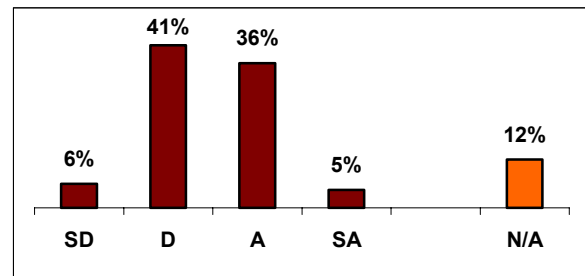
Almost 3/4 of respondents agree that inter-relationships among patents in their company's portfolio are important.



5. For a typical new product developed by my company:

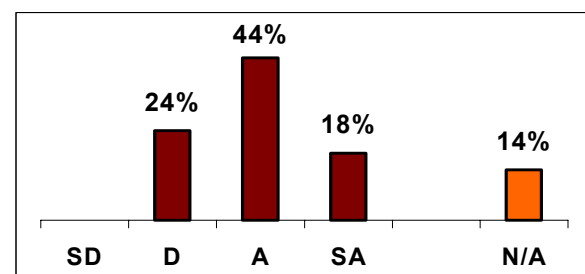
- (i) a single patent with broad claims would provide ample protection

Respondents are evenly split



- (ii) imitation would only be effectively prevented by a “thicket” of related patents

3/4 of respondents who answered this question see “thicketing” as an effective means of preventing imitation



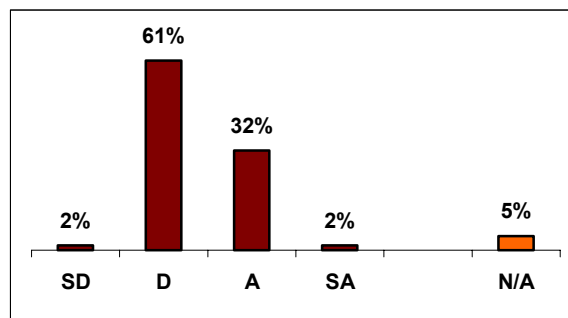
6. Approximately what fraction of your patent portfolio is

- 47%** used to protect current product line from imitation
- 35%** used to establish freedom to operate
- 10%** generating license revenue
- 21%** held only for potential future own business use
- 9%** held only for potential licensing
- 32%** likely to be allowed to expire before full term

Patents have multiple uses: prevention of imitation is the dominant motivation for holding patents. On average, 1/5 of the portfolio is being held for option value, and 1/3 of the portfolio is likely to be allowed to expire before term.

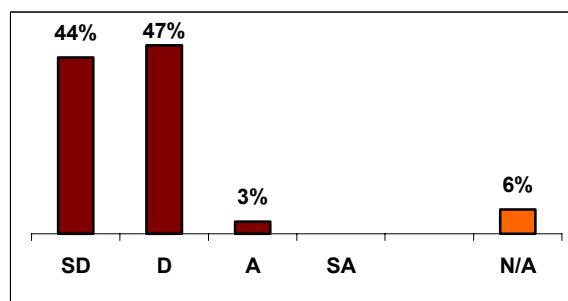
7. Filing lots of patents in a new area is likely to trigger an “arms race” among competitors

Only 1/3 of respondents anticipate an aggressive response by competitors to this type of development



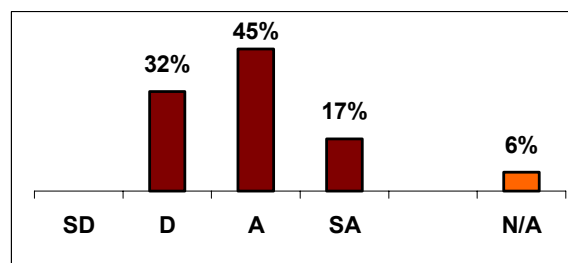
8. We always evaluate competitors' reactions before filing patents

Only a tiny minority of respondents report that their company does this.



9. We always file patents as quickly as possible to avoid competitors getting priority

“Brinksmanship” is not a popular game. Only 1/3 of respondents' companies do not file promptly, whether for strategic or other reasons.



10. For the following types of innovations my company would normally respond by

For an innovation with:	Patent intensively to obtain maximum coverage	File a single patent	Maintain as a trade secret	Proactively place it in the public domain	"Wait and see"
Minor technological significance	0	53%	30%	20%	14%
Major technological significance	86%	12%	3%	0	0
Minor market Impact	3%	52%	32%	12%	21%
Major market impact	92%	8%	3%	2%	0

Major innovations result in intensive patenting, to the exclusion of other strategies, whereas minor inventions result in a variety of responses.

11. If it came to our attention that a competitor firm was filing patents on the following types of innovations, my company would normally respond by:

For an innovation with:	Filing or in-licensing large numbers of patents to "fence" in the competitor	Immediately obtaining legal opinion on scope of competitor's claims	Filing or in-licensing patents with a view to securing rights to practice our technology	Placing current technology in the public domain as a "spoiling" tactic to limit the competitor's activity	Adopting a "Wait and see" strategy	Gathering prior art for a possible validity challenge
Minor technological significance	0	8%	14%	5%	67%	21%
Major technological significance	15%	44%	44%	5%	11%	50%
Minor market Impact	0	6%	14%	5%	64%	17%
Major market Impact	17%	44%	48%	5%	12%	52%

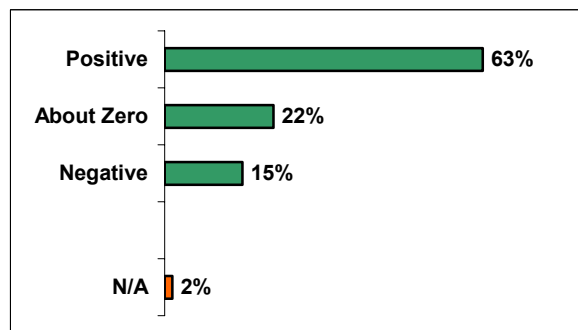
Competitor patents generate a broad range of responses for both major and minor innovations. Responses to minor innovations are generally "relaxed", whereas competitor patents on major innovations generate prompt action on a variety of fronts.

12. Does your company routinely make use of provisional applications? **62% YES**

J. Licensing

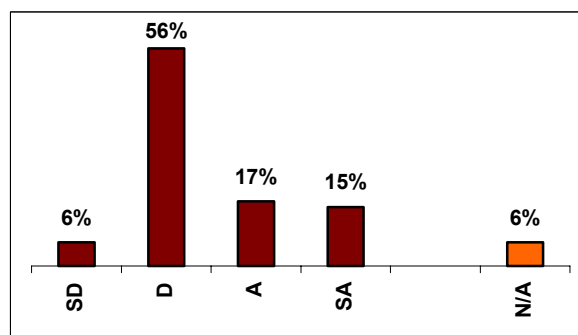
1. In the past five years, net licensing revenue received by us has been:

Respondents' companies were significant net beneficiaries from licensing



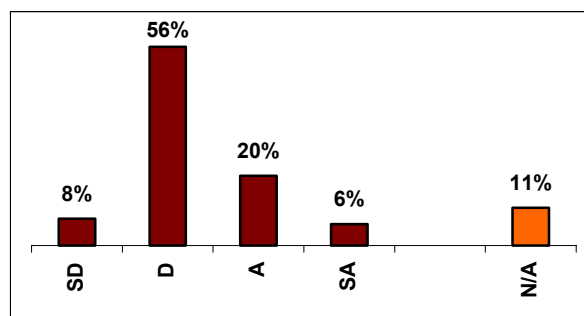
2. In negotiating licenses, maximizing licensing revenue is our number one priority

Licensing is a complex phenomenon: almost 2/3 of respondents report that other priorities dominate revenue generation



3. Additional licensing revenue could only be realized from our portfolio at the cost of significantly impairing our competitive advantage

Apparently there is "money on the table". Only 1/4 of respondents appear to have reached the limit of their ability to profitably increase licensing revenue.



4. In decisions over whether a patent should be licensed:

	Is consulted	Plays a significant role	Has a veto	Normally controls the decision	Is not involved
R&D	55%	47%	20%	9%	6%
IP Counsel	35%^	76%	12%	12%	0
Non-IP legal	17%	14%	3%	2%	44%
Marketing	50%	29%	12%	6%	12%
Manufacturing	26%	6%	5%	0	42%
Product managers	49%	26%	11%	5%	14%
Finance	15%	6%	2%	0	53%
Senior corporate management	42%	23%	21%	20%	8%
Corporate Business Development	26%	20%	6%	6%	36%
Cross-functional IP group	27%	20%	5%	8%	32%
Other: (typically "contract group")	2%	3%	3%	3%	6%

A relatively broad range of functions are involved in licensing decisions, though manufacturing, finance, and non-IP legal are often excluded. R&D and IP counsel have the dominant role.

5. What fraction of your patent portfolio is
out-licensed? **17.6%**
in-licensed? **8.4%**
6. What fraction of your trademark portfolio is
out-licensed? **12.2%**
in-licensed? **3%**
7. What fraction of your licenses are non-exclusive? **75.5%**
8. What fraction of your technology licensing activity does not involve any patents? **25.4%**
9. Does your company ever initiate technology development in the expectation that returns will be realized solely through licensing revenue, rather than through product sales?
12% "YES"
10. What share of your patent licensing activity involves cross-licensing, alliance agreements, etc, in which there is no direct financial consideration? **26.8%**

11. What constrains your licensing revenue?

- 65%** Difficulty in finding appropriate licensees
- 59%** Insufficient resources to pursue opportunities
- 15%** Difficulty in negotiating the terms of agreements
- 38%** Operating managers are reluctant to let us license
- 18%** Other: typically "lack of interest/focus/priority"

12. Who in the organization receives revenue credit from a license?

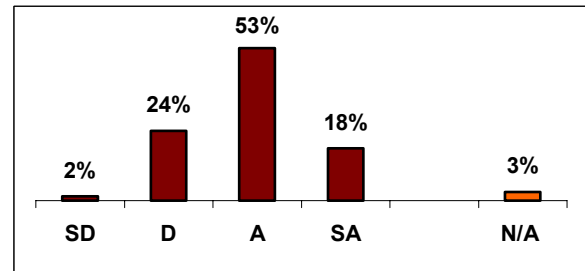
- 47%** the business unit which originated the technology
- 17%** the business unit which initiated the license negotiation
- 26%** Corporate
- 11%** IP/legal
- 21%** Other: typically "holding company"

K. Litigation and Enforcement

1. It would be straightforward to identify infringement of:

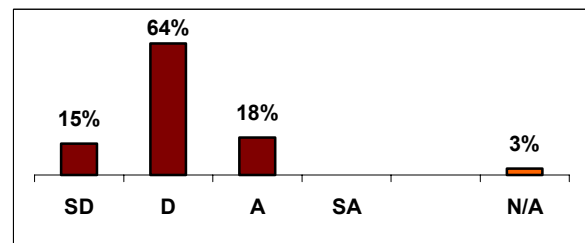
(i) most of our product patents

3/4 of respondents agreed



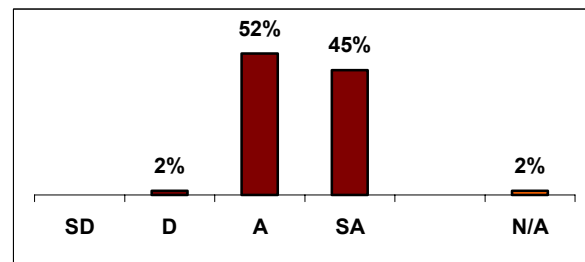
(ii) most of our process patents

3/4 of respondents disagreed



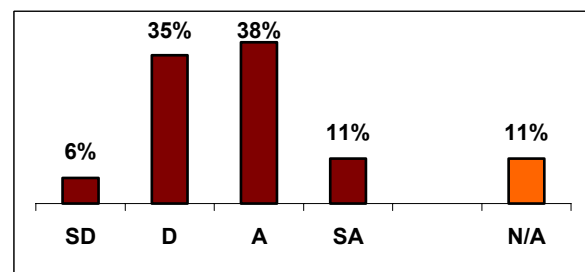
(iii) most of our trademarks

Only 2% of respondents disagreed



(iv) most of our copyrights

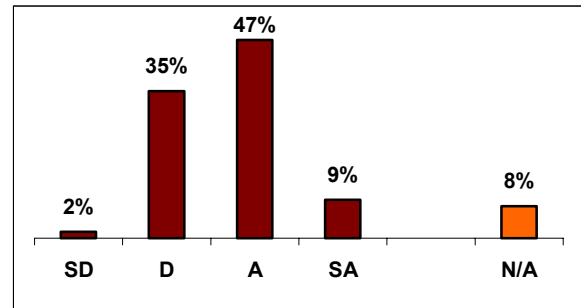
Respondents were evenly split



2. Compared to other kinds of civil litigation, patent suits tend to:

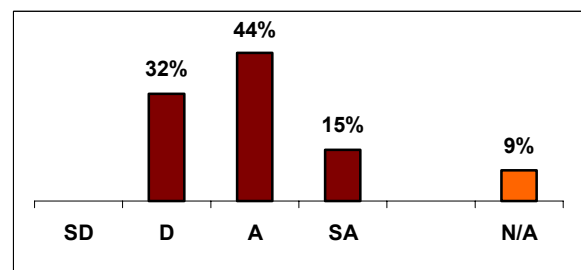
- (i) be too costly relative to the benefits that we receive.

A slender majority of respondents who answered this question agreed.



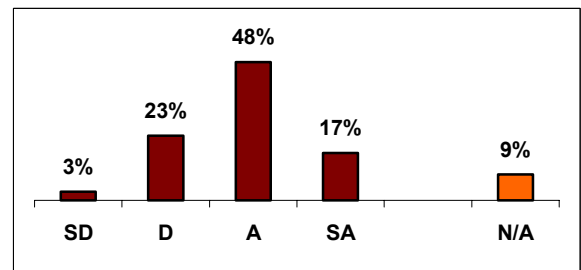
- (ii) have much less certain outcomes

2/3 of respondents who answered this question agreed.



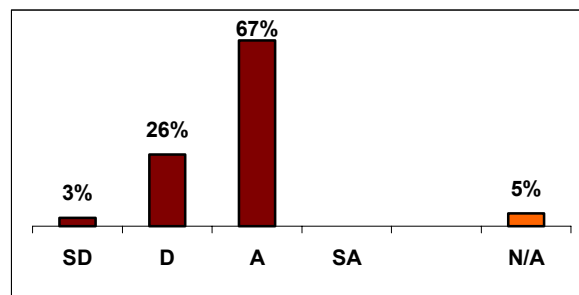
- (iii) be harder to bring to resolution fast enough to properly protect our interests

2/3 of respondents who answered this question agreed.



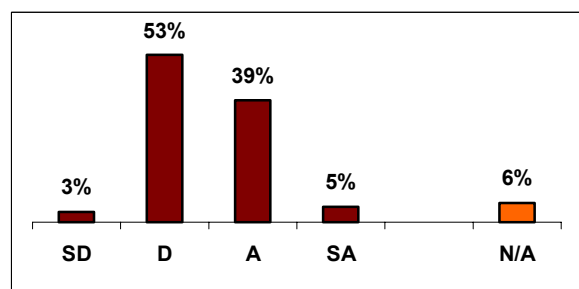
3. In our industry, courts and arbitrators involved in IP litigation generally reach the “right” decisions.

A clear majority of respondents appear to be satisfied with the accuracy of dispute resolution.



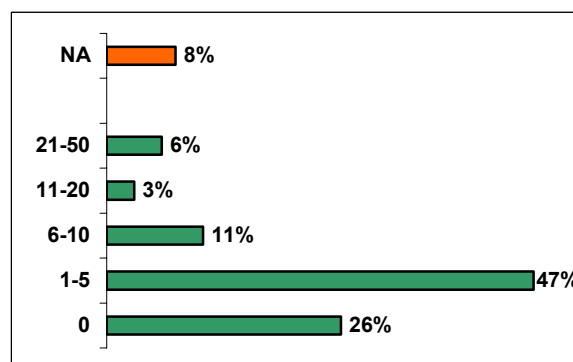
4. The threat of a patent suit is usually enough to make us revise business decisions

A slim majority of respondents disagree.



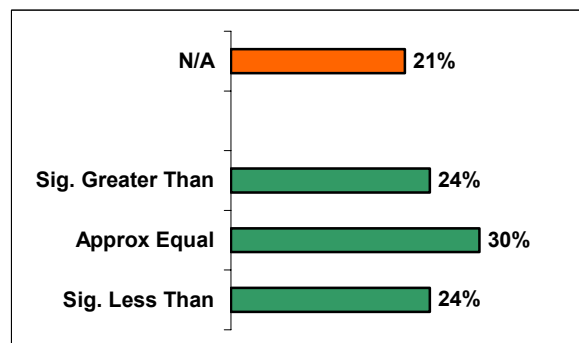
5. In the past 5 years, about how many times did you file suit to enforce any of your patents?

Just under 1/3 of respondents have not filed suit recently. A tiny minority are very active litigators, while the majority initiate, on average, one to two suits per year.



6. In your industry, when damages are awarded or a financial settlement is reached in IP disputes, net of the cost of litigation, how do these amounts typically compare to the economic loss experienced by plaintiff

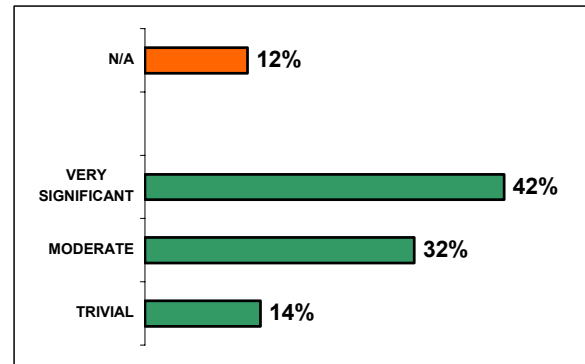
Respondents' experience is highly varied: a significant fraction did not answer this question, and among those who did, there is no clear consensus.



7. Did any firm take action to enforce their IP rights against your firm? **89% YES**

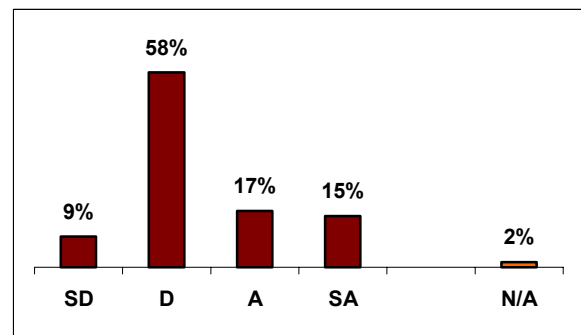
How would you rate this action?

For almost half of those who answered this question, defending IP suits consumed “major amounts of managerial time and attention”



8. Dealing with “nuisance” IP litigation from non-competitors consumes significant amounts of my company’s time and resources

Litigation by non-competitors was a significant resource drain for 1/3 of respondents.



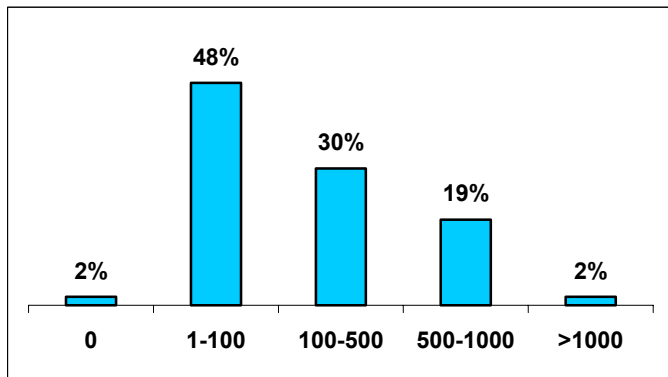
L. Quantitative Data

In 2001:	N	Average	Std. Dev.	Minimum	Maximum
Number of disclosures from employees	50	442.5	614	0	>3000
Fraction of internally generated disclosures being pursued	52	55.2%	24.6	0	100%
Unsolicited disclosures from non-employees	46	79.3	239	0	>1500
Fraction of unsolicited disclosures being pursued	43	1.2%	2.7%	0	13%
Number of US patents applied for	54	264.1	379	0	>2000
Fraction of these for which also filed in					
Europe and Japan	54	58.7%	36.3%	0	100%
Other OECD	49	44.9%	34.4%	0	100%
Emerging Markets	43	17.6%	24.2%	0	100%
Number of articles published in open literature	28	172.9	316.9	0	1500
Fraction of articles published in trade press vs. academic journals	18	51.8%	37.9	2%	100%
Approximate licensing revenue \$MM	27	91.5	294.2	0	>1000
Approximate licensing fees paid \$MM	23	25.5	108.6	0	>500
Full time & equivalent employees in IP Group					
IP attorneys	58	13.9	24.3	0	>100
Patent Agents	44	6.5	25.6	0	>150
Support staff	53	18.2	29.3	0	>125
Full time & equivalent IP employees in business units					
IP attorneys	31	1.2	4.7	0	>25
Patent Agents	30	2.0	8.2	0	>40
Support staff	33	2.6	5.5	0	>25
Productivity measures for the IP function:					
US applications per disclosure	49	0.59	0.312	0.2	2.01
US applications per IP attorney	47	43.9	103.8	1	700
Net licensing revenue per IP attorney \$MM	23	0.83	7.7	-19	28.2

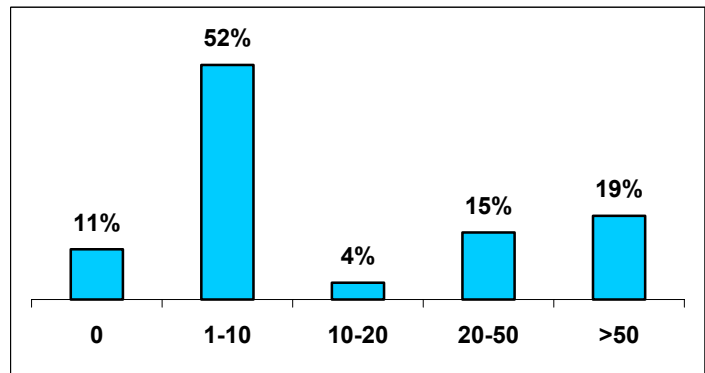
2001 data for 59 publicly traded companies in the sample:	Average	Std. Dev.	Minimum	Maximum
Sales (\$bn)	19.9	35.7	<0.2	>150
Market cap (\$bn)	43.8	74.7	<0.2	>250
Employees (1000s)	50.4	60.4	<0.5	>150

Frequency distributions of selected variables, 2001

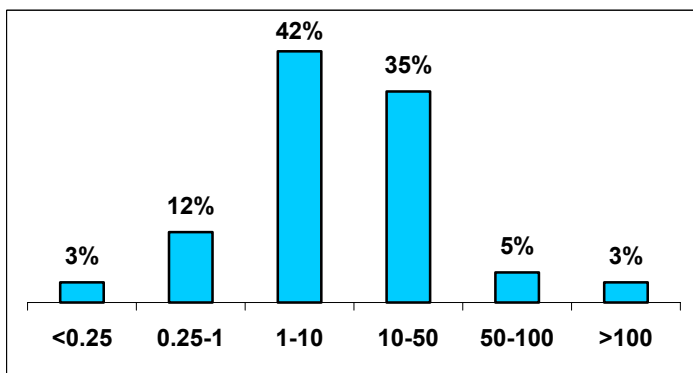
Number of patents applied for:



Licensing revenues (\$MM):



Sales (\$bn)



Employees (1000s)

