

Dispelling the benchmarking myth

How machine learning increases efficiency
and reduces costs

March 2021

Incorporating the key findings of the Cipher Benchmarking
Survey conducted in collaboration with IAM

“Benchmarking is storytelling with data.”

Daryl Bradley, Head of Patent Prosecution, ARM

A remarkable 98% of patent owners rely on benchmarking to support their patent strategy, according to a recent survey by Cipher conducted in association with IAM. However, over half of respondents are unhappy about the time and expense involved, with a similar proportion lamenting a lack of objective and reliable data. This is more than a coincidence; it is causation. If the task is hard enough, it is only human nature to avoid it.

On the positive side, things are changing, and the pace of change is accelerating. Advances in machine learning over the last 5 years have delivered a step-change in the ability of patent owners to benchmark their portfolios and their competitors. For those patent owners that have embraced these capabilities, this has resulted in improved decision making and better communication to stakeholders across the organisation, including to the CTO, CFO and the board, enabling a more direct contribution to the creation of shareholder value.

Those who are not taking advantage of this capability risk being at a significant competitive disadvantage. Benchmarking is at an inflection point where over half of organisations have access to the data and analysis they require to support evidence-based decisions. The other half still struggle with an information deficit largely attributable to obstacles that machine learning and process improvements can eliminate.

This report is in three parts. Part 1 summarises the key findings of the global benchmarking survey conducted by Cipher in association with IAM. The survey highlights the importance of benchmarking to developing and executing patent strategy and provides insight into the metrics used and the breadth of audiences with an appetite for this analysis. This also identifies obstacles encountered in the production of the data. These include a lack of objective and reliable data, absence of industry standards and the time and cost of conducting benchmarking.

Part 2 describes benchmarking best practice. Actionable benchmarking can now be done efficiently, frequently and reliably using machine learning to conduct the technology to patent mapping and automation to calculate benchmarking metrics. Part 3 provides a case study using a number of industry standard benchmarking metrics and highlights the importance of visualisation and communication.

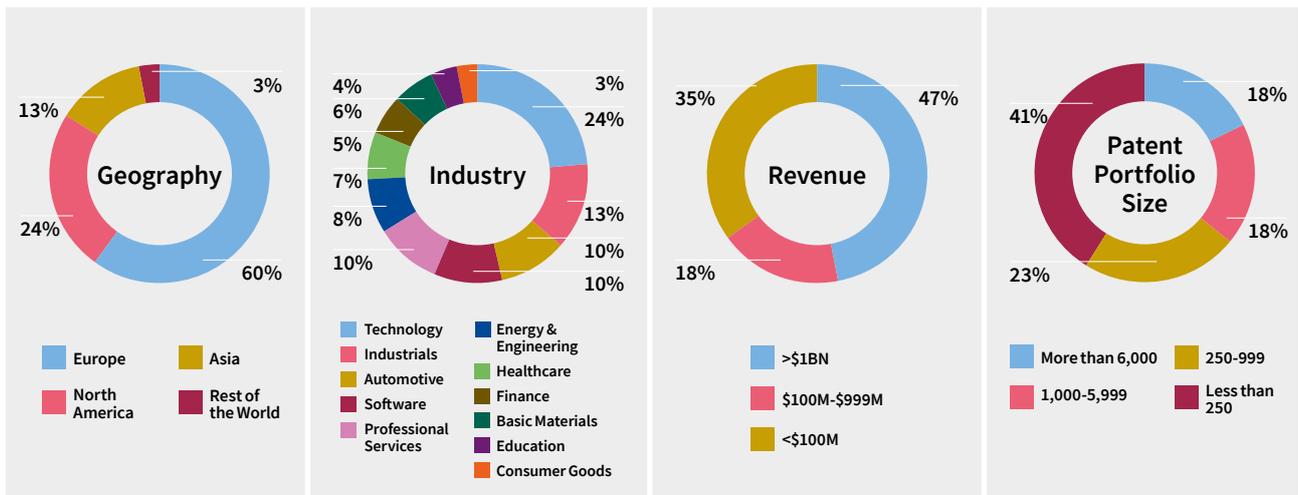
This is a timely reminder of the critical need for well organised and reliable data in support of patent strategy. Increasingly the strategic importance of patents is being communicated to audiences who are neither seasoned nor interested in the technicalities of patents. What they require is timely evidence in support of the strategic decision at hand. The solution is the automation of the manual processes that have stood in the way of those who need access to the data.

The risk for those who are being left behind is that they lack objective evidence in support of patent strategy, and struggle to respond to the myriad of questions from the business ranging from competitive intelligence to budget justification.

A Key Findings

About the survey

The report is based on the first global survey investigating the importance of patent benchmarking. It was conducted in collaboration with IAM between October and December 2020. Survey respondents are global, with a bias towards patent owners in US and Europe (84%), cross-sector (with 24% from Technology) with a balanced response from owners of both large and small portfolios. The survey responses were supplemented with interviews with senior IP professionals.



Total number of respondents = 108.

The key findings from the survey are:

1 Benchmarking feeds directly into patent strategy for nearly all patent owners and is essential for most

Over 98% of organisations use benchmarking to support their patent strategy, and 73% report that it is essential. One succinct response from a senior IP professional “how else would you do it?” sums up the importance of benchmarking to patent strategy an opinion reinforced by Andreas Iwerback, Head of Technology & IP intelligence at Husqvarna: “It’s critical to have benchmarking data because you don’t want to operate in a vacuum”. Other reasons given for benchmarking include competitive intelligence (89%) and budget management (77%). Refer to Figure 1 for the full set of responses.

While this confirms the generally held view that patent benchmarking and competitive intelligence are being undertaken for broadly similar reasons to benchmarking in all other areas of the business, it is also evident that patent benchmarking is playing catch-up. Interviewees report that the evolution of portfolio benchmarking is relatively recent and is still in an evolutionary period. Jason Skinder, Chief IP Counsel for Connected Enterprise at Honeywell suggests that: “The Stone Age of analytics was 2008/9 and in just over a decade it’s been like flipping a switch from zero to everything being available. That created its own Big Data challenge because the data is not always easy to organise. So much has changed in a short period of time”.

98%

of organisations use benchmarking to support their patent strategy

73%

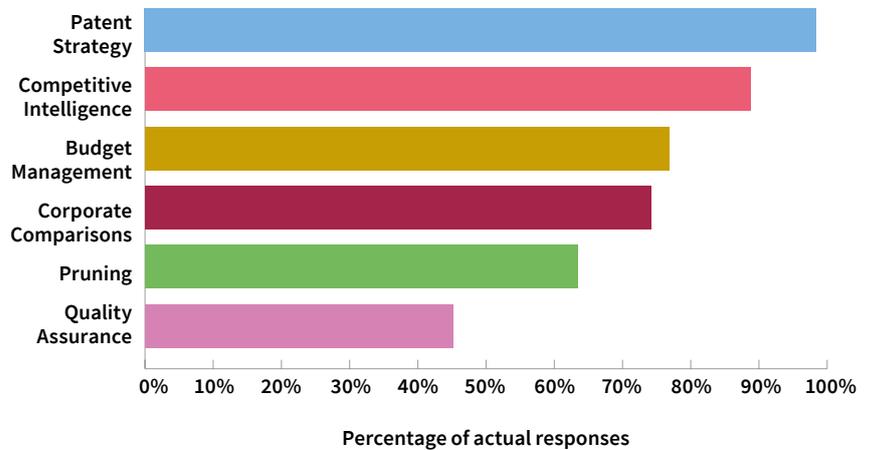
report that it is essential

By far the most common consumer for benchmarking data is the head of IP, with substantial use by portfolio managers also (Figure 2).

Benchmarking is only reviewed by the CFO or the Board in about 10% of situations, with CTOs reviewing the data in around 25% of cases. The relatively low response rate for the CFO (e.g. for budget) does not align well with the interviews conducted and our previous research on patent budgets in times of recession. This may be because the budget challenge is being passed to the head of IP who in 67% of cases is reviewing this data. On the flip side, it suggests that the potential for increased use of benchmarking is considerable when considered alongside the imperative that patent risk and value be understood by the c-suite and more widely.

Worth noting, however, are the substantial variations across regions (Figure 3) for those reviewing the data for the purposes of patent strategy: CFO (18% US, 16% Europe and 0% Asia) and CTO (40% Asia, 36% US, Europe 16%).

Figure 1 | Why do you benchmark your portfolio?



Source: CIPHER IAM Benchmarking Survey 2020

“It’s critical to have benchmarking data because you don’t want to operate in a vacuum.”

Andreas Iwerback, Head of Technology & IP Intelligence, Husqvarna

Figure 2 | Who’s reviewing the data and why?

	Patent Strategy	Competitive Intelligence	Budget Setting	Corporate Comparison	Pruning	Quality Assurance
Board	13%	20%	12%	26%	8%	11%
CFO	10%	7%	16%	11%	10%	4%
CTO	23%	44%	20%	33%	18%	14%
General Counsel/Head of Legal	21%	20%	24%	26%	13%	18%
Head of IP	81%	82%	67%	78%	67%	71%
Head of Patents	42%	42%	41%	41%	44%	46%
Patent Portfolio Manager	52%	42%	55%	46%	59%	68%
Other teams	18%	35%	18%	26%	26%	11%

Source: CIPHER IAM Benchmarking Survey 2020

Values represent the percent of the total responses for each workflow

Figure 3 | Who is reviewing the data for the purposes of patent strategy?

	US	Europe	Asia
Board	9%	13%	0%
CFO	18%	9%	0%
CTO	36%	16%	40%
General Counsel/Head of Legal	27%	13%	20%
Head of IP	91%	81%	80%
Head of Patents	55%	41%	20%
Patent Portfolio Manager	64%	53%	60%

Source: CIPHER IAM Benchmarking Survey 2020 Values represent the percent of the total responses for each workflow

Our expectation is that this will change dramatically in the coming years, as patents receive increasing levels attention from audiences outside the IP team. As John Simmons, Head of IP at Givaudan says: *“Benchmarking exercises help to explain to management how we can create value and not just be a risk and compliance function within the organisation.”*

2 Benchmarking patent portfolios requires comparison with competitors and others as well as an analysis of your own portfolio

88% of patent owners report that benchmarking involves a comparison to competitors. The complete set of answers are reflected in Figure 4.

Those who responded “Other” referenced customers, industry leading companies, NPEs (typically a subset of threats) and the need to monitor both market and technology trends. This reflects the reality that competitors are only a part of the patent ecosystem that need to be included in benchmarking studies, as in an era of technology disruption it is very often the case that the patent owners of interest are not your competitors today.

Figure 4 | Who do you benchmark against?



Source: CIPHER IAM Benchmarking Survey 2020

On benchmarking metrics, the most commonly used are portfolio size, geography, quality and age. Also of note is the use of metrics that combine patent data with business metrics such as spend, revenue and number of employees.

This trend towards combining patent data with other sources of business data was also a common theme in the interviews conducted alongside the survey. As John

“Benchmarking exercises help to explain to management how we can create value and not just be a risk and compliance function within the organisation.”

John Simmons,
Head of IP,
Givaudan

Simmons at Givaudan says: *“Looking at one isolated patent metric has little analytical power, you have to integrate it with other data points within the business”*. This is a topic which was also extensively discussed in Beyond Portfolio Optimisation (IAM 100).

3 Benchmarking at the technology level is preferred over analysis at the aggregate portfolio level

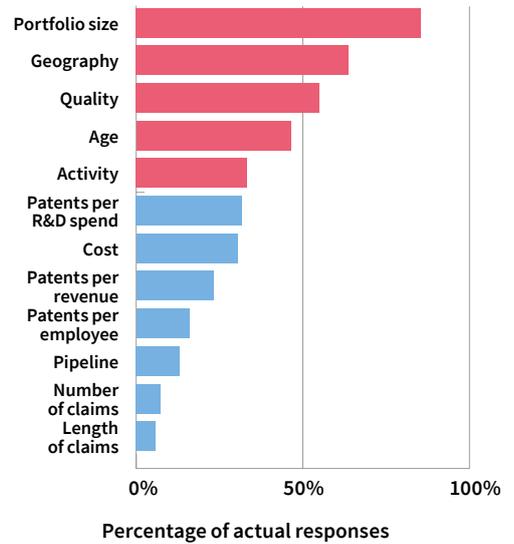
Benchmarking must be conducted at the right level of granularity to be actionable. 75% of patent owners report that benchmarking is conducted at the technology level. As one expert on IP analysis and business intelligence at a major European semiconductor company puts this succinctly: *“Benchmarking at the technology level is the only way to compare ‘apples with apples’ and to spot meaningful trends”*.

The survey also indicates that there are a significant minority (22%) who benchmark individual patents. This is consistent with the small numbers who measure the number or length of patent claims (*metrics*, Table 5). This highlights the fact that while benchmarking is primarily conducted for strategic reasons, it has a role to play for tactical and operational decisions also. Figure 6 includes the full set of responses.

When analysing the responses on a regional basis, there are not huge differences. This analysis does reveal that the US leads for technology level analysis which may be attributable to their faster rate of adoption of machine learning and automation, a topic which is discussed in more detail later.

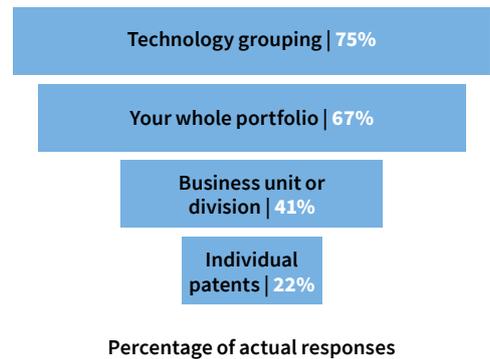
The interviews provide a deeper understanding of the question of granularity. There is a consensus that technology level analysis delivers more valuable insight and recognition that portfolio analysis is easier to conduct. This suggests a tipping point in benchmarking. Now machine learning has automated the challenge of technology to patent mapping, the floodgates have opened to the solution that patent professionals prefer.

Figure 5 | What benchmarking metrics do you use?



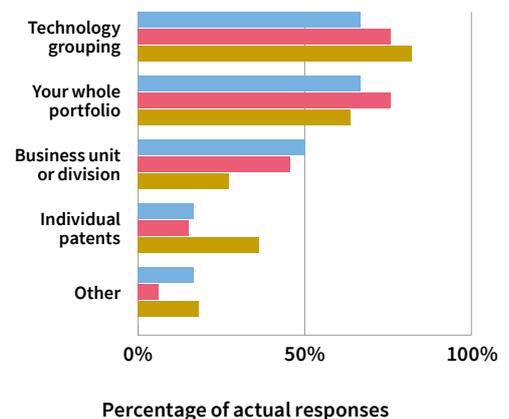
Source: Cipher IAM Benchmarking Survey 2020

Figure 6 | Level of granularity



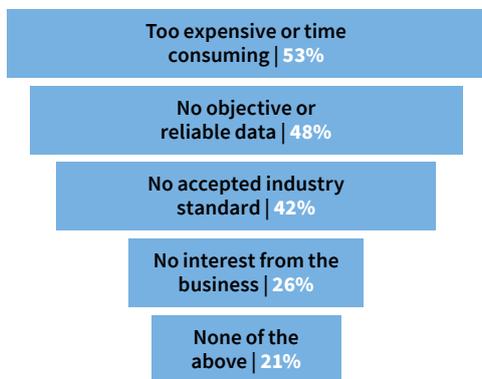
Source: Cipher IAM Benchmarking Survey 2020

Figure 7 | Level of granularity: By region



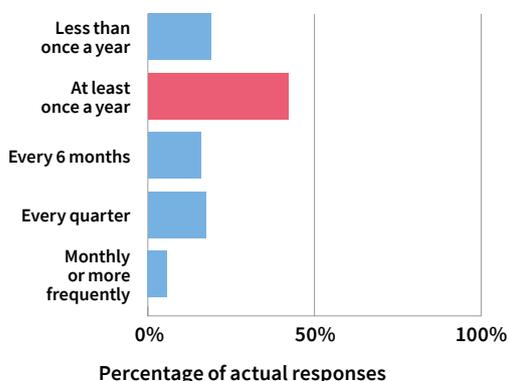
Source: Cipher IAM Benchmarking Survey 2020

Figure 7 | Challenges to benchmarking



Source: CIPHER IAM Benchmarking Survey 2020

Figure 8 | Benchmarking frequency



Source: CIPHER IAM Benchmarking Survey 2020

4 The main obstacles to benchmarking are the cost and time-consuming nature of the process and the absence of objective or reliable data

While benchmarking is regarded as critical to patent strategy, 53% of respondents state that the primary challenge is that it is too expensive or time consuming (Figure 7). Other challenges include lack of objective and reliable data (48%) and a lack of industry standards (42%).

The fact that for the majority of patent owners benchmarking is being obstructed by efficient access to data is perhaps the most striking finding of all. It impacts owners of both large and small portfolios. As Anne McAleer, Head of IP at Paragraf observes: *“Benchmarking is seeing yourself as others see you. It touches on all aspects of building a patent portfolio that matters to the business, from the high-level helicopter view to the detailed aspects of patent strategy. I wish I had more time to do more time with patent data.”*

The same picture emerges from the frequency data (Figure 8). On the positive side, over 84% of organisations are

benchmarking at least once a year. Those who benchmark more frequently however tend to be those who have automated the manual steps that introduce both delay and impact reliability.

84%

of organisations are benchmarking at least once a year

B Benchmarking Best Practice

This survey is effectively a handbook for benchmarking. It starts by teaching that benchmarking is essential to developing and implementing a patent strategy. The benefits of benchmarking extend beyond that to core competencies such as budget management and portfolio optimisation. It establishes that benchmarking requires comparison with competitors and others, and that analysis at the technology level is preferred. The survey also identifies the challenges that need to be overcome, which include the expense and time-consuming nature of benchmarking and the lack of objective and reliable data.

In this section, we outline the benchmarking process implemented by patent owners who have eliminated the manual tasks that introduce delay and stand in the way of objectivity and reliability.

Figure 9 depicts the end-to-end process.

Referring to each step in turn:

Step 1: Create Technology Taxonomy

All businesses know which technologies are important to them. This understanding is captured in a taxonomy and organised in a hierarchical structure, with the top-level aligning to technology areas or divisions, with secondary and tertiary levels (each with increased levels of granularity). These taxonomies do not bear any relationship with CPC/IPC codes as this is not how businesses organise themselves.

“So much has changed. This is a combination of the increased amount of data that’s available, the tools are better and importantly questions that the organisation wants to answer are different.”

Sarah Guichard,
Head of Patent
Transactions, Google

Figure 9 | Benchmarking process



Step 2: Map Taxonomy to Own Portfolio

Organisations generally understand their own portfolios and have processes for manually tagging their own patents to the categories in the technology taxonomy. Patent owners do report that this activity is becoming more challenging with frequent acquisitions, divestments and rapidly changing technology and business evolution.

Step 3: Third Party Patent to Technology Mapping

Historically, this has been the roadblock. Mapping an organisation’s taxonomy to third party portfolio is a herculean task, and a task badly suited to conventional approaches to patent search. This is, however, a problem well suited to machine learning and technology solutions such as Cipher classifiers. Automated solutions of this sort eliminate manual tagging. Sarah Guichard, Head of Patent Transactions at

Google explains the transformation in this way: *“So much has changed. This is a combination of the increased amount of data that’s available, the tools are better and importantly questions that the organisation wants to answer are different.”*

Patent owners who have implemented this approach report significant time savings, with a corresponding increase in objectivity and reliability. Daryl Bradley, Head of Patents at ARM states: *“We’ve adopted ML classification of our portfolio for benchmarking and optimisation and, while there’s still going to be inaccuracies, it’s far more accurate than we’ve ever had before. It’s made a massive impact”*. Jason Skinder at Honeywell reports the same experience: *“Advances in AI and ML can reduce the workload by 80%. That’s a huge amount of time saved and especially for analysis you want to do on a repeatable basis. Removing unnecessary manual work is essential to efficiency”*.

80%

Advances in AI and ML can reduce the workload by 80%

It is fair to observe that, until a few years ago, there was scepticism about algorithmic solutions to this sort of process, but increased adoption and use has earned the required levels of trust. This has been helped by the general trend towards AI/ML solutions for a range of IP tasks and a number of scientific studies (eg: *Construction and evaluation of gold standards for patent classification*, Harris et al, *World Patent Information*, Volume 61, 2020).

Step 4: Calculation of Benchmarking Metrics

Patent experts tend to know which metrics are required for what purpose. Sophisticated strategic patent intelligence platforms have the ability to calculate, visualise and export the desired metrics. Some patent owners complain that some conventional patent software makes it difficult to exchange patent data between systems, and it is only a matter of time before an industry standard is adopted that eliminates this unwanted and unnecessary friction.

Step 5: Report Production

Those responsible for strategic patent decisions have developed a different set of communication skills. In this context, this includes selecting and presenting the right data for the decision in hand. Gilbert Wong, Associate General counsel for patents at Facebook explains that *“benchmarking supports the communication of our approach, our strategy and why we are building the portfolio in the way that we are”*.

While many report that engaging with the likes of the CFO or other senior executives requires learning a new language, there is near universal recognition that this is a vital part of the process. Sarah Guichard at Google summarises the challenge and opportunity in this way: *“One of the most important jobs is to communicate your strategy to people that are not intimately familiar with the patent world and benchmarking is an important way to do that. The more data we have, the more questions we realise we can answer”*.

“Benchmarking supports the communication of our approach, our strategy and why we are building the portfolio in the way that we are.”

Gilbert Wong,
Associate General
Counsel for
Patents, Facebook

© Benchmarking Example

This real-world example focuses on the technology area of *mobile devices for receiving payments*, using the following 10 organisations as the comparison set: MasterCard; USAA; IBM; BlackBerry; Bank of America; Visa; PayPal; CapitalOne; J P Morgan Chase; and American Express.

The data is presented from MasterCard’s perspective. The benchmark metrics are limited to size, geography and quality – the top metrics identified in the survey. In practice, metrics are selected depending on the decision in hand.

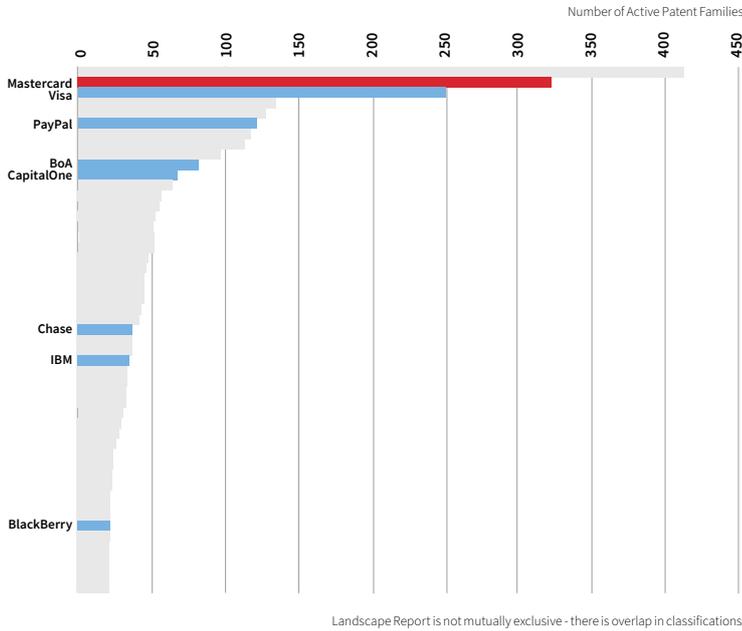
The fundamental tenet of benchmarking is relativity, as illustrated by the data in Figure 11(a). While MasterCard has the largest portfolio in the cohort, it is ranked second in the overall landscape. This example includes the top 40 patent owners. The chart also analyses the size of this technology area relative to all owners of patents for Mobile Devices for Receiving Payments; in this case MasterCard owns c.3.5% of all patents published in the area. The chart also includes hypothetical annotation identifying whether these owners are competitors or otherwise regarded as a threat eg: IBM is not a competitor but owns relevant patents and has an active patent licensing programme.

MasterCard predominantly protects this technology in the US, which is in line with the geographic strategy of the cohort group (Figure 10B). Geography data is susceptible to much more detailed analysis. For example, the cohort analysis hides the different filing strategies of individual companies in the top 40, such as Alibaba and Huawei eg: 60% of Alibaba’s patent portfolio is protected in China and only 6% in the US.

Similarly, by understanding the similarities and differences in international filing strategy, it may be possible to identify patents regarded to be of primary and secondary importance – many companies have a tiered filing structure which can be revealed through this data lens eg: where an owner

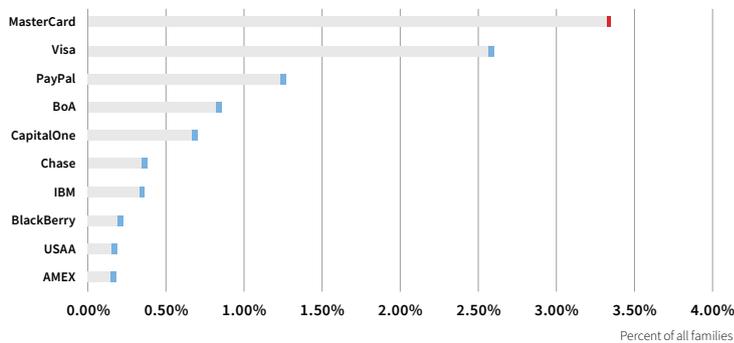
Figure 10A | Benchmark metric – Portfolio Size

Top 50 Landscape: Mobile Devices for Receiving Payments



Rank	Patent Owner	Group	Number of Active Patent Families
1	Bizmodeline Co		416
2	MasterCard	Tier 2 Threat List	324
3	Visa	Tier 2 Threat List	251
4	Square		135
5	LG Electronics		128
6	PayPal	Tier 1 Threat List	122
7	SK Telecom		118
8	Samsung Electronics		114
9	Beijing Inspiry		98
10	Bank of America	Key Competitors	83
11	CapitalOne	Key Competitors	68
12	KT		64
13	Nubia Tech		57
14	China UnionPay		56
15	Vivo		53
16	Huawei Technologies		51
17	Apple		51
18	Alibaba		48
19	Google		47
20	First Data		45
21	ZTE		45
22	Oppo		45
23	Boku		44
24	Walmart Stores		42
25	JPMorgan Chase	Key Competitors	37
26	NCR		37
27	Sprint		37
28	IBM	Tier 1 Threat List	35
29	China Mobile		34
30	Wells Fargo		34
31	Intuit		33
32	Rakuten		32
33	Industrial & Commercial		31
34	LG Uplus		30
35	Giesecke & Devrient		28
36	Sony		26
37	Nationz Tech		24
38	Nokia		24
39	Amazon.com		23
40	Timonet		23

Portfolio size: Percent of the Total Active Families Published



Landscape: Not mutually exclusive

Source: CIPHER

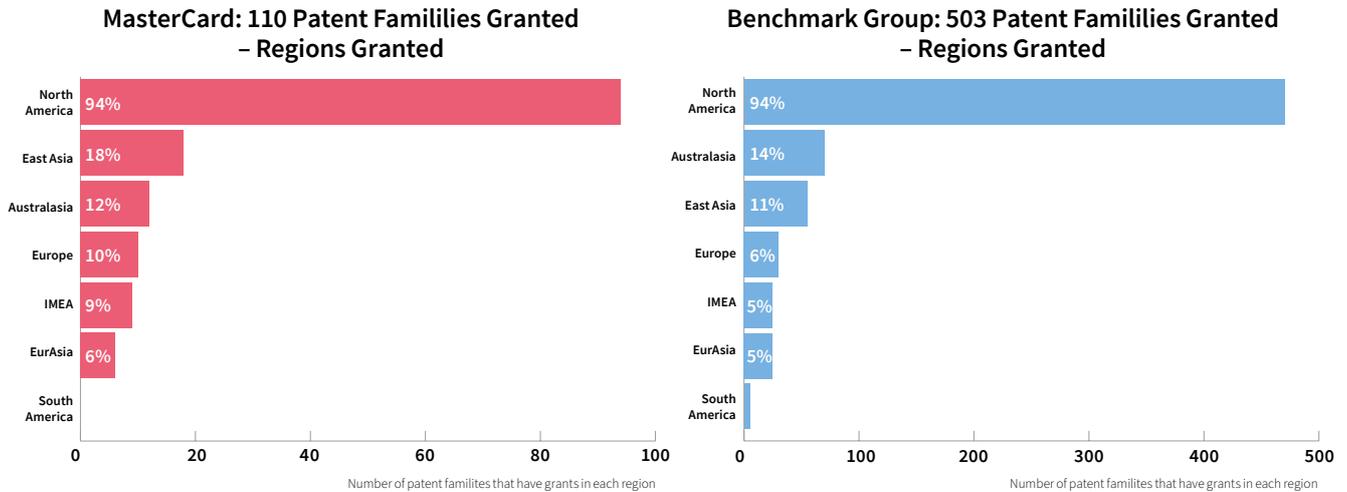
Mobile Devices for Receiving Payments scope includes portable devices such as mobile credit card devices, terminals, point of sale machines, machines to read EMV. Excluded are wearable devices, personal information transfer and ATM machines.

protects a technology in US, Europe and Asia (commonly referred to as a trifecta family), this technology is often regarded to be of greater significance.

Patent quality scores are derived from a combination of citation and geography data. The benchmarking charts reflect the PVIX score, that adopts a methodology published by Unified Patents and widely used. In this example, Visa leads on mean PVIX score (total PVIX for all relevant patents divided by total number of families).

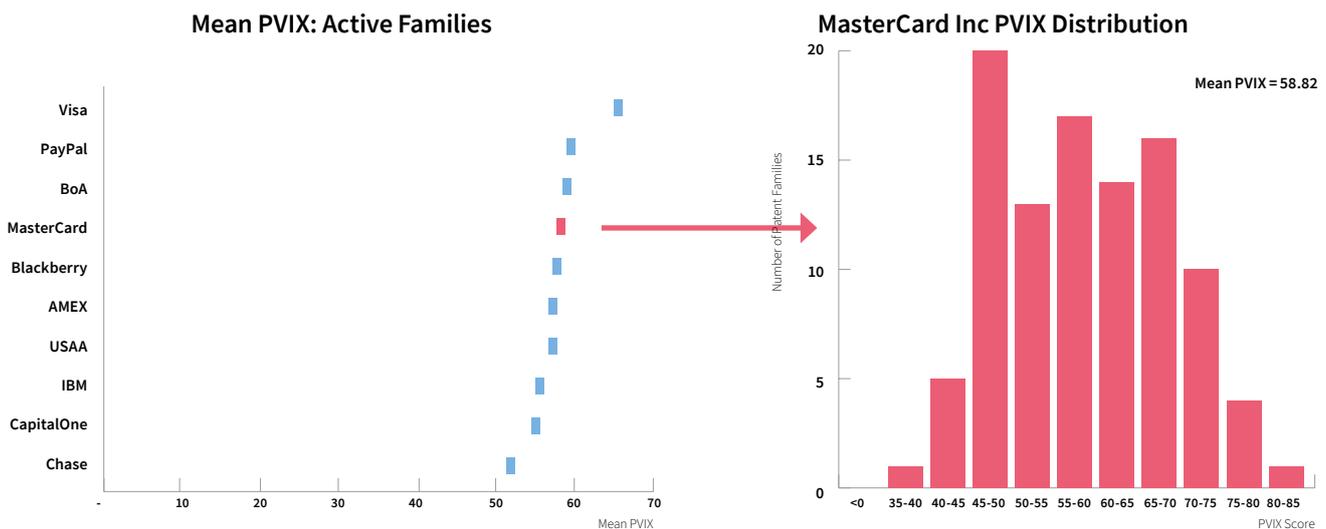
Once again, benchmarks of this sort are typically subject to more detailed analysis and Figure 10C includes the MasterCard distribution of PVIX scores for this technology area. There are many situations where analysing PVIX scores over time will identify a trend towards (or away) from patent quality.

Figure 10B | Benchmark metric – Geography



Source: CIPHER

Figure 10C | Benchmark metric - Quality (PVIX)



Source: CIPHER

This example reinforces a number of the important messages from the survey:

Start with why

With advances in the availability of strategic patent intelligence, there is so much more analysis available. For many of the new audiences for patent benchmarking data, more is not necessarily better. Understanding your why makes the storytelling and metric selection so much easier. As Daryl Bradley, ARM puts it “benchmarking is like story telling with data”.

The benchmark metrics required by a portfolio manager or head of patents to determine filing targets for the coming year will be totally different to those which would be useful in a trend or budget discussion with the CTO or CFO.

Focus on the technology level

While portfolio size remains a popular metric, benchmarking at the technology level delivers significantly greater insight. An automotive OEM that owns 10,000 families, of which 10% covers internal combustion engines and 90% covers autonomy is not the same as another OEM with the same number of patents but with the weighting the other way round.

Create a common language

Adopt a technology taxonomy that is common across the organisation, including both patent professionals and technology and business executives more broadly. This dramatically closes the communication gap between the technical language of patents and the insight required by the c-suite.

Patent data may not tell the whole story

It is increasingly common for patent data to be combined with other business metrics such as R&D spend and revenue/market information. As explained by Tim-Alexander Oelmann, Head of Business IPR Management at Deutsche Telekom: *“Without layering in economic data, you’re never going to get a full picture of balance against different sized competitors”.*

While outside the scope of this report (again refer to Beyond Portfolio Optimisation for a discussion about economic models), this is way of increasing the connection between the portfolio and the business. Using the same automotive example referred to above, if the first OEM only sells combustion engines the data may be no cause for alarm.

Automation and efficiency

Eliminate all unnecessary manual steps. While the example is hypothetical, it is real in three very important respects. First, the identification of owners of patents relating to *Mobile Devices for Receiving Payments* used a Cipher classifier developed in collaboration with a number of leading financial institutions. No manual clean-up of the data was required. Secondly, having selected which metrics on which to focus, the calculations were machine-time, not human-time. Thirdly, the dashboard visualisation. While the presentation layer is user defined, it populates with up-to-date data on demand.

The “ideal solution” was defined by a European Head of IP as *“where you can link your technology fields to all the relevant patents owned by others – without the need to clean up the data, so that when you generate the KPIs and metrics there are no discussion about the data, and the focus can be on the decision.”*

“Without layering in economic data, you’re never going to get a full picture of balance against different sized competitors.”

Tim-Alexander Oelmann, Head of Business IPR Management, Deutsche Telekom

A new era of transparency

Benchmarking is a core competence and essential to successful patent strategy. Any organisation that can justify the investment in a substantial patent portfolio must have objective and reliable evidence that enables it to monitor, measure and communicate that investment. What other function within an organisation does not have metrics and measures to justify and explain the efficiency and effectiveness of their operations?

Access to objective and reliable data is critical to patent professionals who need to communicate with the broad range of executives outside the legal arena who need to understand the strategic importance of patents. This is increasingly the case when communicating value to the business in the context of the substantial costs associated with large patent portfolios.

The patent world is divided between those who have access to the data they need and those who struggle for a range of reasons including the cost and time-consuming nature of the process. Whichever camp you are in, machine learning offers the ability to automate the manual task and eliminate the heavy lifting that creates the obstacles. Kent Richardson, Partner at Richardson Oliver Law Group offers encouragement in these terms:

“Analytics provide a competitive advantage. In terms of market adoption, we are way beyond the pioneering days; the early majority are securing a very real advantage over the late majority. As always, the laggards will simply be left behind”.

This is not a matter for complacency. What this means in practice is information asymmetry, where there is no level playing field across a range of strategic patent decisions that matter. These start with internal decisions such as patent budget and portfolio optimisation, but quickly spill over into competitive intelligence important to a range of R&D decisions, M&A strategy and the ability to mitigate patent risk.

Organisations that have access to objective and reliable benchmark data and leverage this insight inevitably have a competitive advantage over those who either do not have the data or struggle with the process. Expect this imbalance to be eliminated quickly as advances in machine learning make implementation of benchmarking best practice significantly more straightforward.

Nigel Swycher, CEO and Niall McMahon, Head of Research and with acknowledgement to the research team including Mo Ahmed and Stuart Hall at Cipher, London

Action Plan

Benchmarking is an essential and core competence for all patent professionals. The insight and evidence delivered by reliable and objective analysis of your own portfolio compared to competitors and others informs strategic decisions. These range from core patent strategy and budget management to topics directly relevant to shareholder value including both R&D and patent risk management.

Patent owners need an objective and repeatable process for performing benchmarking which includes:

- Sustainable and repeatable approach for patent to technology mapping
- Consistent benchmarking metrics enabling comparison over time
- Dashboards and other reporting frameworks to facilitate communication to the many engaged audiences who are not familiar with the technicalities of patents.

Patent owners who are struggling with outdated or sub-standard benchmarking practices should embrace the efficiencies and opportunities offered by machine learning and established best practice. Failure to do so leaves their organisation at a significant competitive disadvantage to those that do.

About CIPHER

Cipher enables the rational understanding of patents by providing the patent intelligence required by IP teams to support their strategic patent decisions and communicate the value of patents both internally and externally. No more manual reviewing and tagging of patent as Cipher uses machine learning to automate the analysis. By using your view of the key technologies, Cipher is able to design and build your custom taxonomy.

With Cipher you can optimise your portfolio, gather competitor intelligence, model cross licensing, monetise your portfolio, manage your budget, conduct due diligence, tackle inbound patent assertion and benchmark your portfolio.

For more information, go to www.cipher.ai or email info@cipher.ai



About IAM

***IAM* is universally acknowledged as the world's leading IP business media platform. It was launched as a magazine in July 2003 to address the need for organisations to maximise the value of their intellectual property and other intangibles, and to examine the strategies they can put in place to do this. *IAM* now produces a wide range of publications, as well as a weekly email and daily blog.**

IAM is unique because it treats intellectual property as a business asset and tool, rather than simply as a legal right. With this unequalled appeal to the boardroom, *IAM* has established itself as the only IP publication that many senior corporate executives read regularly.

For more information visit www.iam-media.com

