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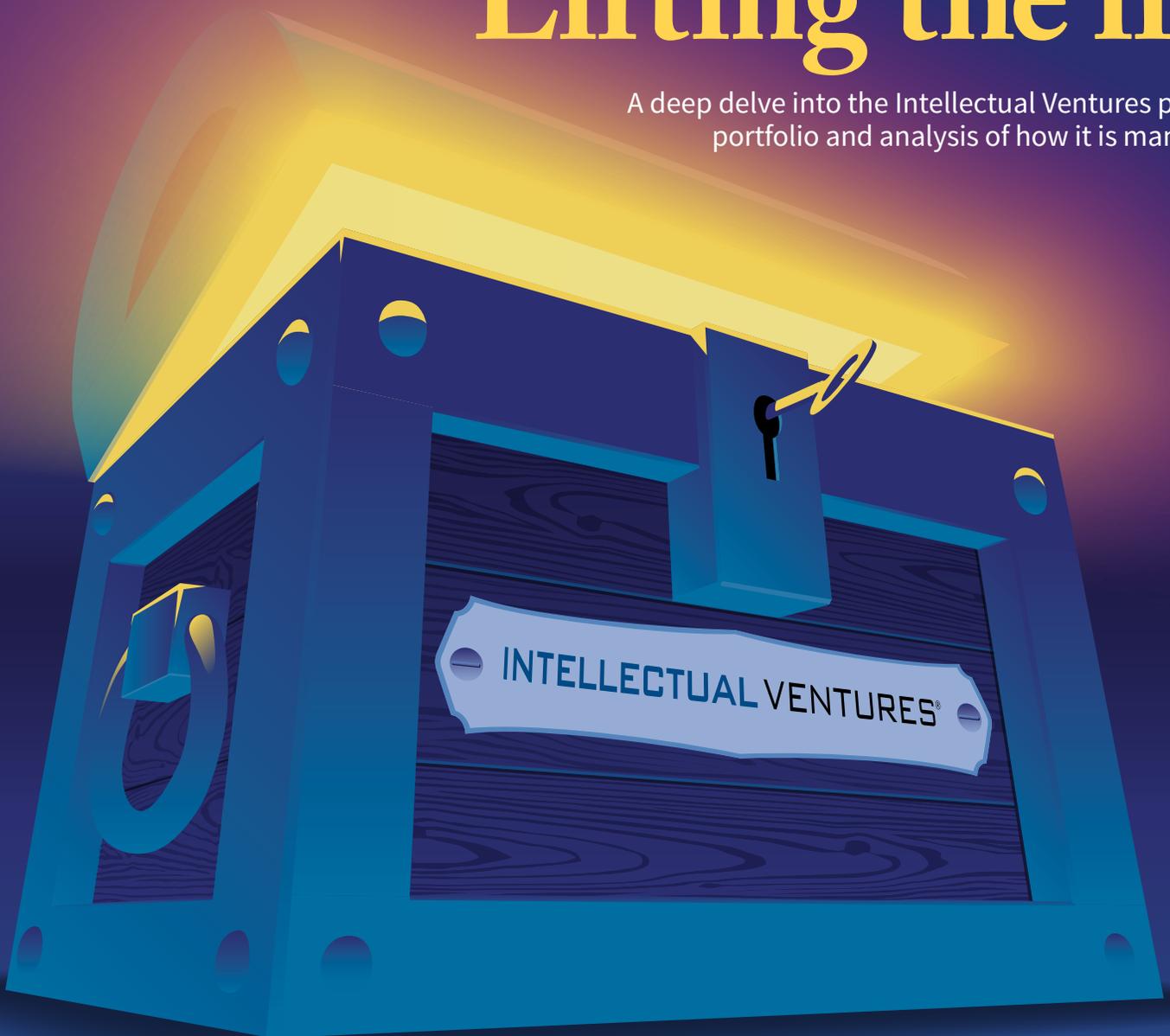
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## Lifting the lid

A deep delve into the Intellectual Ventures patent  
portfolio and analysis of how it is managed



# How Intellectual Ventures is streamlining its portfolio

By comparing Intellectual Ventures' announced 2013 assets with its 2016 assets, it is possible to draw conclusions about the firm's buying, selling and assertion activity – and to identify what you can do to help yourself should it come knocking

By Erik Oliver, Kent Richardson and Michael Costa

In December 2013, Intellectual Ventures (IV) first published a list of 33,000 patent assets, representing 82% of its patent monetisation portfolio (see "What's inside IV's patent portfolio?", *LAM*, Issue 66, July/August 2014). We revisited that list in January 2016 and found significant changes to IV's portfolio and what it has been doing.

Our analysis reveals answers to important questions such as the following:

- Where is the portfolio growing and where is it shrinking?
- How much has IV been selling and where are those assets landing?
- How much litigation has IV initiated and against whom?

Why study IV? As the largest non-practising entity (NPE), IV represents a significant force in the fields of patent licensing, buying and development. We believe that others can use this kind of data to help in negotiations with IV, benchmark their own practices and better understand IV's direction.

Additionally, we have been able to use this data to help our clients better understand where they may have exposure to IV, create fact-based arguments in licensing negotiations with it and make long-term plans to reduce their risk to similar portfolios. In particular, our data suggests that cross-licences, springing licences on transfer to NPEs and micropools can greatly reduce the risk of NPE assertions.

Our fact-driven analysis is based on information supplied by IV about its monetisation portfolio and intentionally avoids offering opinions on IV's business model. We primarily used the publicly published asset list to prepare this paper. However, unlike in our last article, we supplemented the data with some assignment searches and also contacted IV to ask for clarity on some of the data.

We thank IV for providing that information – we did not consult with IV on our conclusions or the analysis. IV was founded in 2000 with the stated purpose of reducing patent risk for its corporate

investors and assisting companies and individual inventors in monetising their inventions. Since its founding, it has reportedly raised over \$6 billion in capital. A large portion of this has come from corporate investors in the high-tech space, such as Microsoft, Intel, Sony, Nokia, Apple, Google, Yahoo, American Express, Adobe, SAP, NVIDIA and eBay. Of note, Google did not invest in IV's second or third funds.

Back in December 2013 IV reported that it had raised approximately \$5.5 billion and spent about \$2.3 billion buying and developing patents through its patent purchasing programmes – primarily Invention Investment Fund (IIF) 1/2 – with the remaining \$2.2 billion spent on operations and management fees. The additional \$0.5 billion raised in the intervening period has likely been used for additional acquisitions, operations and management, or will be callable for planned future acquisitions for IIF3.

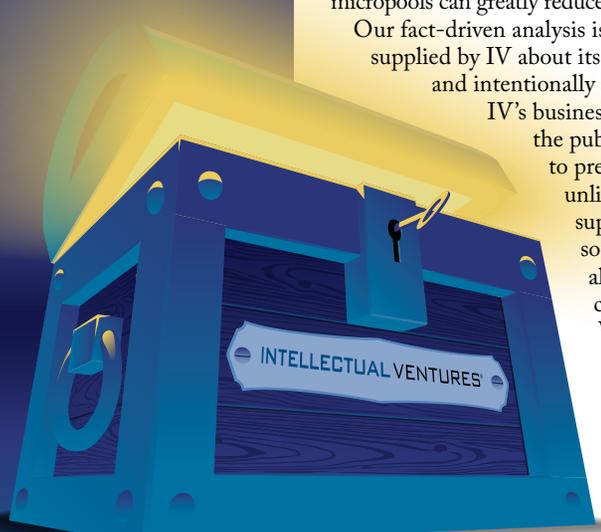
The vast majority of IV's revenue does not come from making products or offering services. Rather, it comes from licensing its portfolio to other companies – IV is the quintessential NPE.

Some of our findings may surprise you, while others will reinforce your existing beliefs. Here are a few highlights:

- IV's third fund (IIF3) appears to be much smaller than previous funds, at least as far as patent buying is concerned.
- IV is selling assets from the first two funds, which appear to be going to other NPEs.
- IV is abandoning cases much faster than might have been predicted. In our previous article, we expected 50% of IIF1/2 to have expired by 2021; our current projection is that 50% of the assets will have expired by 2019.
- For those negotiating a licence with IV, the Invention Science Fund (ISF) and the Invention Development Fund (IDF) continue to complicate the licensing picture. These two funds are positioned differently within IV, with different stated goals and different rights. ISF and IDF do not have the same acquisition criteria and appear to have different licensing criteria.

## Overview of IV's funds

Figure 1 shows the relationship between the patent assets which IV reports that it has purchased or developed (approximately 75,000), its current asset monetisation portfolio (approximately 38,000) and the list of assets that had been made public as of 2016 (35,000). To begin our analysis of IV's buying, we first



needed to understand what is in its patent monetisation portfolio. Put another way: how many of the 38,000 patent assets in IV's current monetisation portfolio stem from its buying activities as opposed to its investment and development activities?

The numbers in Figure 1 are based on data from IV's buying, selling and pruning since the last article, together with extrapolations. IV's website shows a similar figure with different numbers, but has not been updated since 2013.

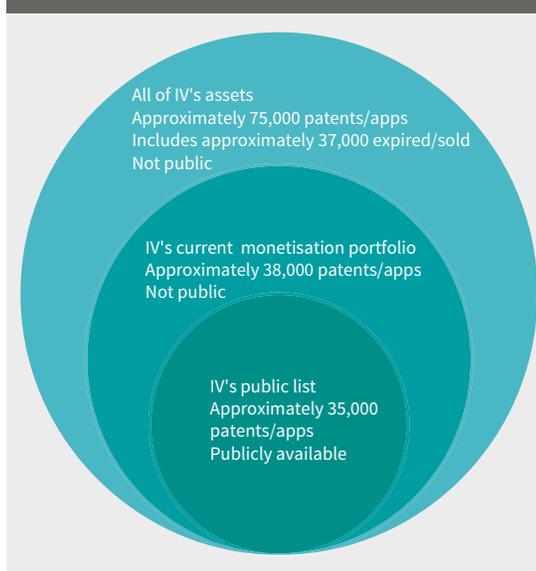
Turning to Figure 2, IV's monetisation portfolio is spread across different fund categories. The IIFs primarily represent IV's purchased patent assets. For the purposes of the analysis, we group IIFs 1 to 3 together as one fund. We have also categorised patent assets to include applications, pre-grant patent publications and patents. Patent buying for IIF1/2 stopped years ago. Since our last article, at least some of the capital for IIF3 has been raised and patent buying has begun.

The ISF contains patent assets that IV has developed in-house. The IDF contains patent assets created through R&D funded by IV in exchange for the right to license any resulting patent assets. Interestingly, IDF assets tend to be university licensing deals. These three fund groups make up approximately 80%, 10% and 10% of the monetisation portfolio respectively. Restrictions on what IV can and cannot easily license from ISF and IDF can complicate negotiations and we recommend paying close attention to these two funds. Although ISF and IDF are interesting in their own right, our analysis focuses on IIF because this is where IV spends the majority of its time, money and effort. It is also the portfolio that, we believe, poses the highest potential infringement risk to other companies.

To focus on IIF, we wanted to identify the monetisation portfolio assets directly attributable to the IIF portfolio. Referring to Figure 2, by using a combination of IV's public data, assignment searches and family information supplied by IV, we estimated that it has 30,900 assets in IIF, 2,900 assets in ISF and 4,300 assets in IDF – a total of 38,700 assets. IV's average family size is about 2.4 assets and it controls about 14,600 families. Because of rounding, the columns and rows do not add perfectly.

For simplicity during the calculation of expiration dates, we assumed 20 years of life after the earliest priority date and did not factor in term extensions or terminal disclaimers. Additionally, as IV did not list its expired assets, our data provides a snapshot of the IV portfolio of live assets as of January 2016. In its overview documents, IV states that 70,000 patent assets have been

FIGURE 1. IV's portfolio – what is public and what is not



bought/developed. We believe that these documents are out of date, as we estimate the number is closer to 75,000 assets. This means that approximately 36,000 assets are no longer in the monetisation portfolio. Therefore, any per-year analysis reflects survivorship bias – only those patents that are still alive are in IV's public monetisation portfolio. This makes extrapolations about IV's buying activity in the early years more difficult. Finally, we used IV's most recently published list (January 2016), so any purchases added after that date do not appear.

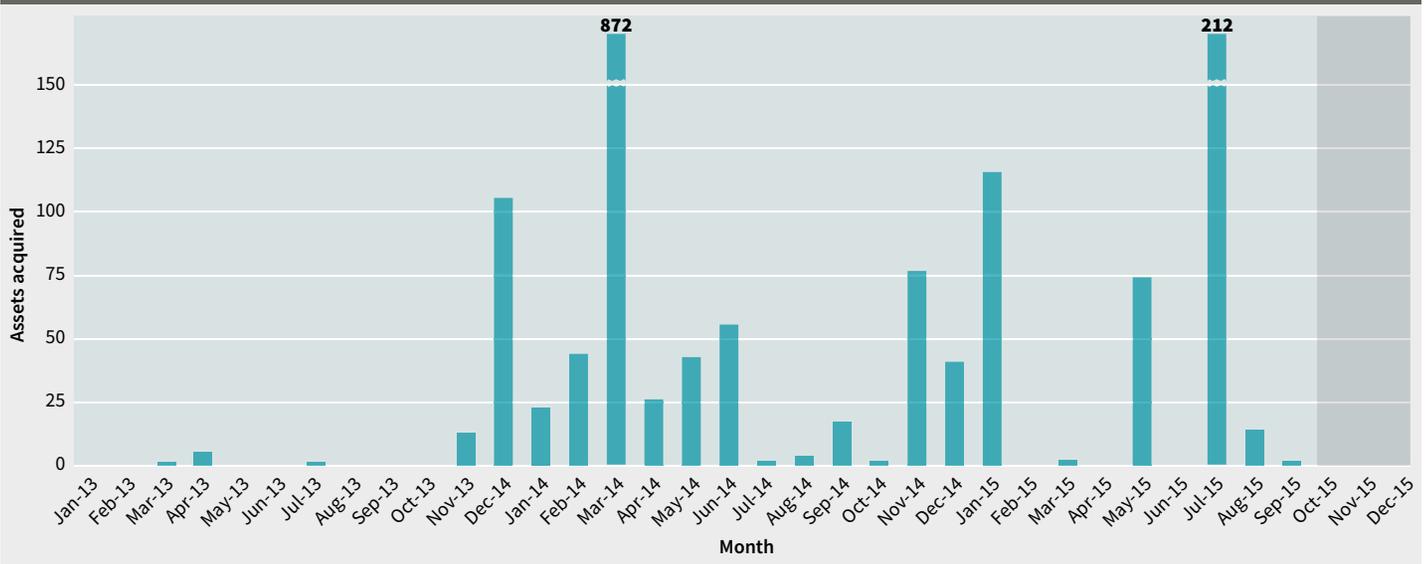
### IIF3 – IV's newest fund

IV's third fund (IIF3) had a rocky start. In April 2014, Reuters reported that both Apple and Intel were not investing in IIF3, leaving only Microsoft and Sony as early investors ([www.reuters.com/article/us-microsoft-apple-patents-idUSBREA3A0R020140411](http://www.reuters.com/article/us-microsoft-apple-patents-idUSBREA3A0R020140411)). In July 2014, we analysed assignment records and reported that IV was buying patents for IIF3 ([www.richardsonoliver.com/news/2014/7/16/intellectual-ventures-is-buying-again](http://www.richardsonoliver.com/news/2014/7/16/intellectual-ventures-is-buying-again)). Then, in April 2015, Apple and Intel were reported to be investing in IIF3 ([www.iam-media.com/blog/detail.aspx?g=b106ad9b-330a-4b49-9f0a-697127dfda4e](http://www.iam-media.com/blog/detail.aspx?g=b106ad9b-330a-4b49-9f0a-697127dfda4e)). All in all, this was not as smooth a start as IIF2. IIF2 also had more non-corporate financial investors; but given its reportedly poor returns, finding similar investors for IIF3 may have been challenging.

TABLE 1. Estimated assets per IV fund as of January 2016

Fund	Entire monetisation portfolio	IV's public list monetisation portfolio	US patents and pre-grant publications	Assignment to IV identified – IDF removed	IIF US-bought portfolio – science fund removed
IIF1/2 (buying)	28,000	25,100	18,200	18,200	18,200
IIF3 (buying)	2,900	2,700	1,800	1,800	1,800
ISF (in-house developed)	3,600	3,600	2,300	2,300	0
IDF (university collaboration)	4,300	3,500	700	0	0
<b>Asset count (approximate)</b>	<b>38,700</b>	<b>34,900</b>	<b>23,000</b>	<b>22,300</b>	<b>20,000</b>

**FIGURE 2.** Recorded US asset assignments to IIF3 by month



This left strategic corporate investors – those that want access to obtain licences to the patents that IV buys, plus the potential to make money from the investment. IV’s poor public image as a patent asserter (see “When Patents Attack”, *This American Life*, Ep 441, July 22 2011) probably cut this pool of potential investors further, making it likely both that IV had a tougher time pulling together the equity to start IIF3 and that this fund is much smaller than IIF2.

However, despite this rough start, IV has bought nearly 3,000 patents for IIF3. Figure 2 shows the actual number of recorded US asset assignments per month being bought by IIF3. This includes neither international assets nor the scaling factor to bring IIF3 to the full monetisation portfolio size of nearly 3,000. IIF’s purchases began in earnest in December 2013. Excluding extraordinary deals (more than 200 assets in a purchase), IV is buying about 31 US assets a month. Assuming that it continues to buy assets at a similar rate and continues to have periodic large deals over a 10-year

period, we believe that IIF3 will acquire about 13,600 patent assets. Accounting for expirations, we believe that the fund will peak at about 11,000 active assets. This is significantly smaller than the estimated 56,000 assets to pass through IIF1/2. Figure 3 shows our projections for IIF3, including adjustments for expirations.

We believe that IV not only is working with a smaller capital pool, but is also concerned about overinflating the prices of patents. From our previous IV analysis and annual market analysis, we estimate that IV may have contributed an additional \$150 million a year to a market that otherwise would be worth about \$250 million a year, resulting in a run-up of patent prices.

**IV’s current buying interests for IIF3**

IV’s buying interests help us to understand what criteria it believes match up with effective patents, help our clients to understand their exposure to (or benefit from) the IV portfolio and allow us to make predictions about the trajectory of IV’s portfolio.

**FIGURE 3.** Projection for IIF3 (including estimated expirations)

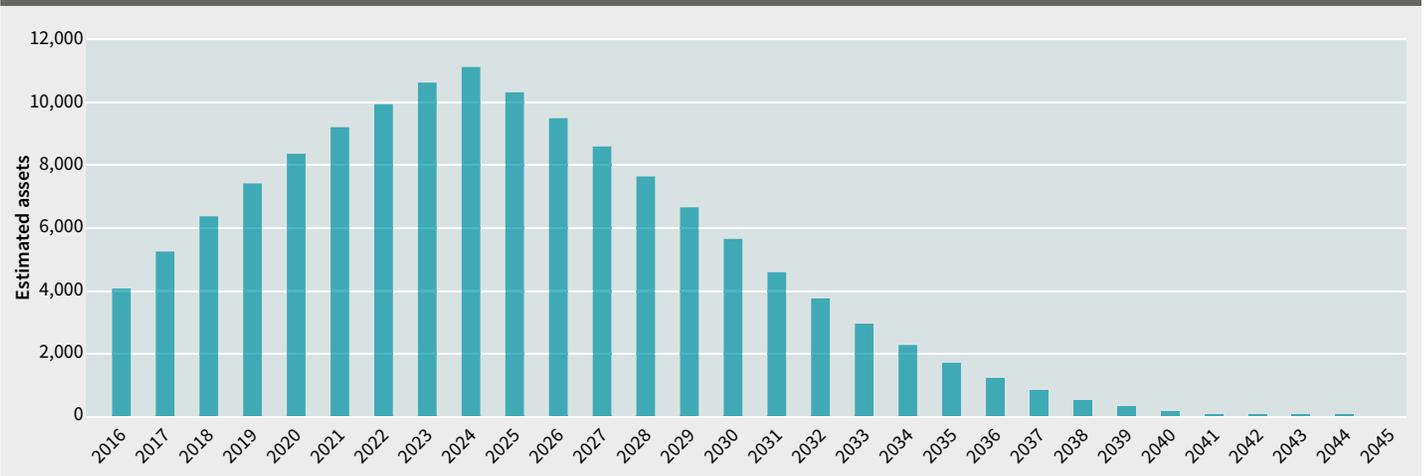


Figure 4 shows the technology sectors and fields for patents in IIF3; IV is still primarily focused on information and communications technology. We analysed the patents on a per-sector and per-field basis, and applied the methodology for assigning technology categories that we had followed previously. The vast majority of assets are, unsurprisingly, focused in the electrical engineering sector. This sector includes a mix of digital communications, semiconductors, audiovisual technology, hardware and computer software. Importantly for those in fibre optics, IV appears to have de-emphasised this category.

We expect IV to continue buying in the electrical engineering sector, likely staying more focused on hardware and communications than in the past.

**How old are IIF3 patents when bought?**

IV shows a distinct preference for older patents. For IIF3, the vast majority of the patents were purchased when they were between six and 14 years old (see Figure 5). This was calculated as the difference in years between the date of the assignment to IV and the earliest claimed priority date. The age of the asset is one of the key characteristics that buyers consider when deciding whether to buy. Note that survivorship bias shifts Figure 5 slightly to the left – suggesting that the purchases had a longer remaining life than they did in actuality. However, IIF3 is so new that survivorship bias should not be a major factor. Through the distinct preference for buying assets in the six to 14-year age range, IV reflects that the value of a patent begins to show at around that time – a fact that we have observed and has also been reported in academic papers. At eight years after priority, the technology has had a chance for significant market adoption, has proven itself as being compelling against alternatives and is mature enough to have a better chance of withstanding a prior art challenge.

**How do IIF3 purchases rank?**

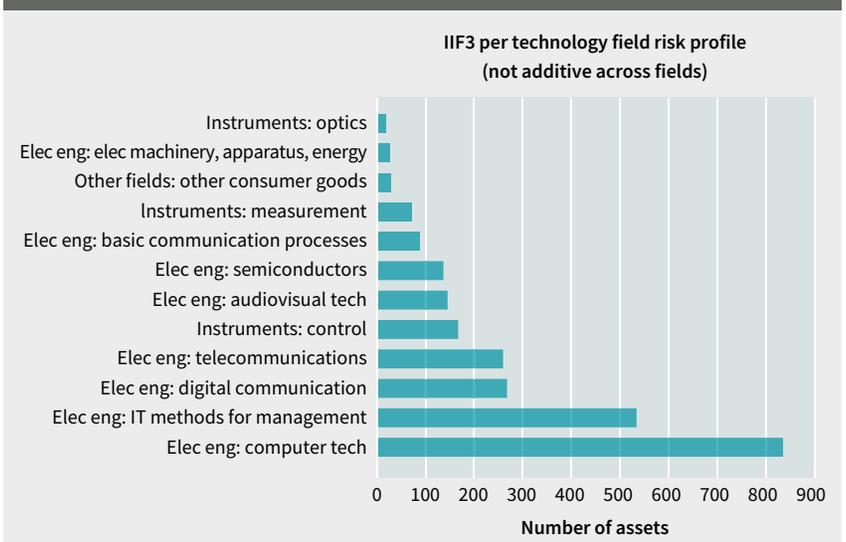
We applied our automated ranking system to the IIF3 US assets that IV has been buying and compared those to the US assets listed during the IIF3 buying period in our broader database of more than 60,000 patents for sale on the brokered market. IV’s buying shows a much higher percentage of high-ranking assets, as seen in Figure 6. We are unsurprised that IV buys higher-ranked assets. Compared with IIF1/2, the percentages of high-ranked assets are at their highest; IV seems to be much more focused on assets of high potential value for this fund.

Because IIF3 is so new, we did not analyse the portfolio for the intensive post-acquisition continuation practices we saw when studying IIF1/2. We expect that IV will continue post-acquisition development, albeit more selectively than in the past.

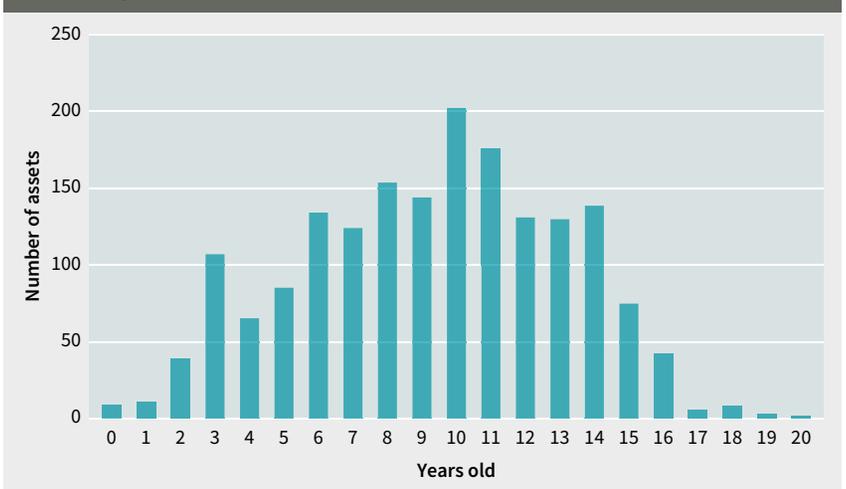
**How much is IV spending in IIF3?**

Based on public data from IV’s first eight years of buying – and from anecdotal comments – we believe that IV continues to pay towards the bottom of the market for its assets (previously, it was paying about \$50,000 per asset). If we assume that it is taking advantage of the decline in patent pricing and is now paying between \$30,000 and \$45,000, we see spending at between \$87 million and \$130 million total. This would be over a two-year period, suggesting that IV is spending between \$44

**FIGURE 4.** IIF3 technologies bought



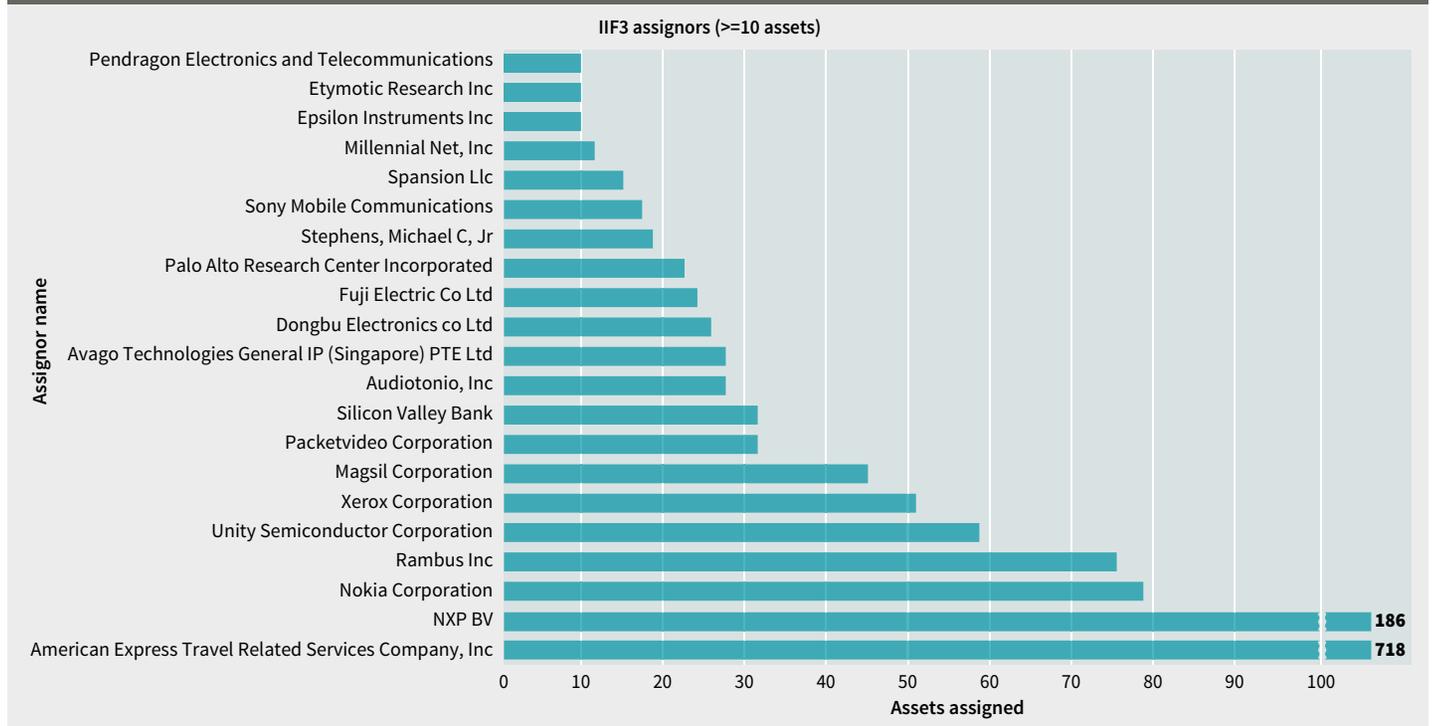
**FIGURE 5.** Age of asset at purchase date



**FIGURE 6.** Ranking of IIF3 assets compared to general brokered market assets



**FIGURE 7.** Top sellers to IV for IIF3



million and \$65 million per year on new assets. This is far less than the peak of its spending in 2008 (estimated at \$150 million).

**Who is selling to IV?**

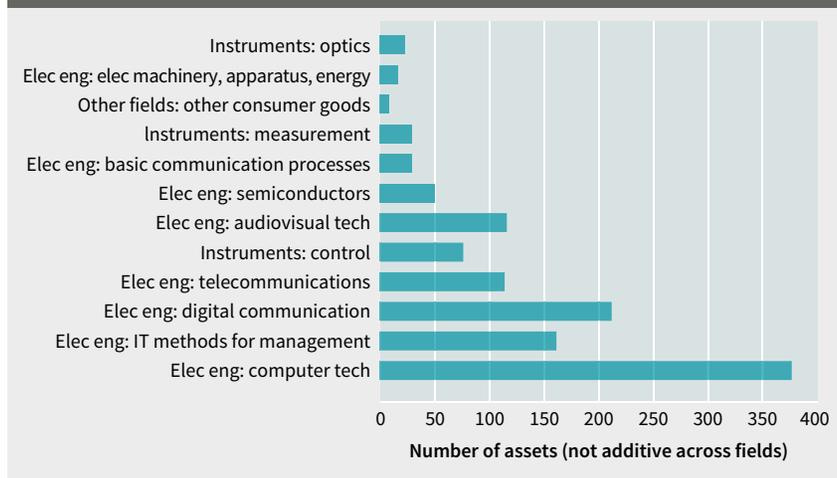
Figure 7 shows the top sellers to IV for IIF3. As seen in our past analysis, many of the top sellers are struggling companies. For example, NXP, Nokia, Xerox, Silicon Valley Bank (assuming these assets are acquired through liens on distressed companies’ assets), Fuji, Sony and Spansion have all had declining revenue and/or profits in recent years, or have disappeared entirely. Sales by NXP and American Express currently represent 50% of the assets in IIF3 and the top 16 sellers represent 80% of IIF3.

Our advice remains the same: to reduce your risks, an effective strategy incorporates active cross-licensing, licence-on-transfer and participation in organisations such as AST, RPX, OIN and Unified Patents. Some of these practices can have minimal costs and limited impact on your own portfolio. The data is clear: it is critical to consider these strategies to reduce your overall exposure to IV’s portfolio.

**Portfolio management**

What IV does with its assets once it purchases them tells us a great deal about its strategy. We see IV selling assets to third parties, increasing its abandonment rate and decreasing its international patent exposure. For this analysis, we are primarily looking at IIF1 3.

**FIGURE 8.** Risk profile from new owner parties by technology field



**Sales**

As stated above, IV is selling its patents. We identified 751 patents currently in the hands of third parties. Many of these patents are then used in litigation. Unfortunately, the implication for those without IV licences is clear: obtain a licence or face a horde of NPE assertions. That said, not all of the new owners are NPEs; Verizon and Cisco have both bought patents from IV.

Those with a licence or negotiating one should assume that IV will sell patents in which they have an interest. We highly recommend a clause granting a perpetual licence to any asset that IV sells. If you have a time-limited licence, it is deeply frustrating to learn that IV no longer has the right to license those patents.

Figure 8 shows the technology areas in which IV has been selling. Unsurprisingly, these are also the areas where it has the most patents: computer technology, IT management and communications.

### Expirations and abandonments

Since our last article, we found 1,437 IIF1/2 assets that we determined to have expired either due to time (63%) or from non-payment of maintenance fees (37%). Importantly, IV is abandoning assets faster than we expected. In our previous article, we expected 50% of IIF1/2 to have expired by 2021; our current projection is that 50% of the assets will have expired by 2019. This means that any licensing models should be adjusted for a smaller asset base and, presumably, a less valuable licence – your model should include a reduction in value for the future licence.

Figure 9 shows the technology fields in which IV is abandoning patents. A few observations about the abandonments:

- Computer technology and telecommunications represent a large number of abandonments, suggesting that IV feels that its current assets in these areas are sufficient or that it has sufficiently developed families to allow other members of the patent families to be abandoned;
- Optics appears to have been a bust for IV, as it has reduced buying and is abandoning at a much faster rate; and
- The US Supreme Court’s decision in *Alice* may be increasing abandonments in some software and finance technology fields.

### Combined IIF portfolio projection

Looking at the overall trend and projections for IV’s asset base can help you to plan ahead of any licensing or renewal discussions. In the current active asset count for IIF, we see a net reduction of about 1,000 assets in the past two years (purchases for IIF3 less abandonments and sales in IIF1/2). Although not as great of a fall as might be expected if one believed the rumours of IV’s demise, the reduction in the asset base is an important trend that we will continue to monitor.

The reduced asset base trend will become more pronounced as a large number of older IIF1/2 assets expire soon. Figure 10 shows the projected size of IIF for the next 10 years. With expirations in all three funds and reduced purchasing in IIF3 as compared to IIF1/2, IV’s active asset base shrinks from about 30,900 to about 13,100. This does not account for the possibility of IV raising another fund – so far, IV has raised a new fund about every five or six years.

### International coverage

IV has historically focused on US assets, picking up international assets where these are available and inexpensive. Table 2 shows the filing country breakdown by fund. Looking across all the funds, of approximately 14,600 families, 1,158 have no US assets, while 9,540 have US-only assets. (For this section, we switch to a data set supplied by IV directly, which included family identifiers to help us analyse its international holdings. The data in this section is not directly comparable with the other data in this article. However, we used the family analysis to supplement our other data and estimate the international ratios for the portfolio and fund sizes. Like the public list, this dataset does not encompass the entire monetised portfolio.)

Purchasing in IIF3 currently has a much higher US component (89% compared to 69%), likely due

FIGURE 9. IV abandonments – no longer a risk

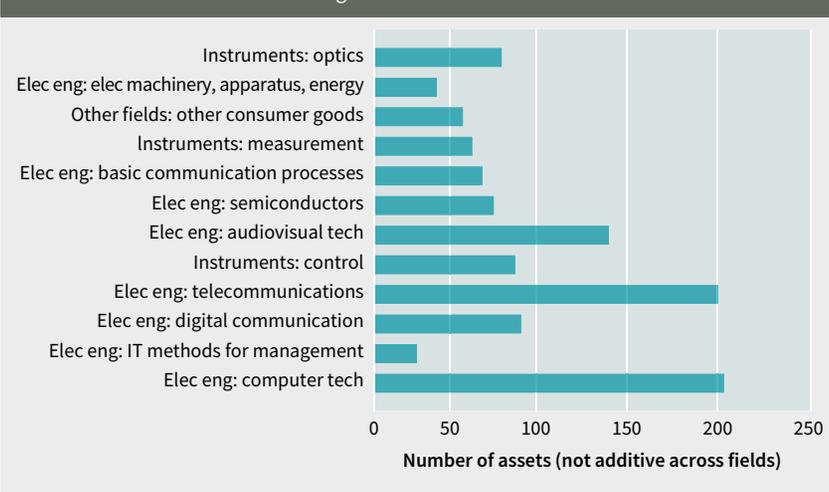


FIGURE 10. IIF funds’ 10-year projection (by end of year)

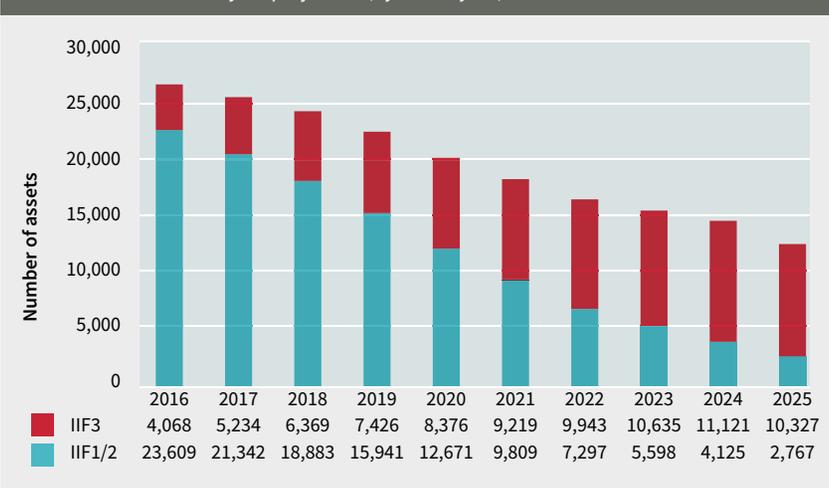


TABLE 2. IV portfolio top country breakdown by fund

Jurisdiction	IIF1/2	IIF3	ISF	IDF	Fund not identified
United States	18,821	1,004	2,348	670	205
Japan	1,490	12	114	1	2
Great Britain	1,256	19	61	21	205
Germany	1,143	14	41	16	36
France	1,122	11	12	19	190
South Korea	890	8	127	33	256
China	860	13	203	44	280
Taiwan	596	8	5	20	198
European Patent Convention	405	16	140	1	14
Patent Cooperation Treaty	382	7	20	3	9
Canada	178	10	0	28	231
India	52	9	18	8	223

to a few large and inexpensive purchases primarily containing US assets. We will continue to watch IV's purchases to see whether they shift focus and buy more international patents. We expect IV to increase the international percentage of assets in IIF3 because of the negative patent environment in the United States, IIF3's European headquarters and the potential of a unitary European patent.

### Litigation and Patent Trial and Appeal Board actions

Shifting our focus from management to licensing and assertions, we know that IV licenses and litigates a great deal. We consider litigation to be a proxy for licensing activity and one that greatly underestimates the licensing activity. We assume that IV litigates much less often than it asserts patents in private discussions with companies. Looking across the names and technology categories in the tables below, a picture emerges of where IV has struggled to sign licensees. From sectors such as wireless service providers to financial services to semiconductors to retail, IV is in disputes with many companies. We assume that all of these companies have been approached by IV to take a licence and decided that the price was too high.

As a percentage of its portfolio, IV's litigations and *inter partes* reviews are relatively small. However, in aggregate, the number is large; looking at only IV's current public licensable list, 120 US litigations were filed after it acquired the assets. These cases encompassed 575 assertions of 148 unique US patents. We do not believe that any organisation has ever had this many litigations on this many patents spanning so many sectors and technologies.

Table 3 shows the companies with which IV has litigated most. Of the 12 companies with three or more litigations, nine are communications companies. This suggests that IV's campaign in the wireless and WiFi services space ran into significant headwinds and IV felt that only litigation would address the impasse. It also suggests a serious problem in its approach to that industry.

Companies are also using *inter partes* reviews and covered business method reviews against IV, although almost exclusively where the assets are already in litigation. IV is defending 80 *inter partes* reviews on 42 patents and 11 covered business method reviews on 11 patents. Only four of the *inter partes* review/covered business method review patents cover patents that have never been in litigation by IV. Put another way, 44 of the 148 unique assets asserted in litigation (across multiple cases) were challenged with at least one *inter partes* review or covered business method review.

Unsurprisingly, the more cases in which an asset was asserted, the more likely it was challenged before the Patent Trial and Appeal Board (PTAB). Tables 4 and 5

**“Looking at only IV’s current public licensable list, 120 US litigations were filed after it acquired the assets. These cases encompassed 575 assertions of 148 unique US patents”**

**TABLE 3.** Most targeted companies where IV is plaintiff (>three cases)

Party name	Cases as target
AT&T	9
Cingular	8
T-Mobile	7
Sprint Nextel	6
US Cellular	6
Nextel	6
SBC Internet Services	5
Canon	4
Cricket Communications	4
Wayport	4
Capital One	3
Symantec	3

**TABLE 4.** Petitioners for *inter partes* reviews against IV

Party name	Frequency as petitioner
International Business Machines Corporation	23
Ericsson	19
Old Republic Insurance Company	8
Canon	7
Commerce Bank	6
First National Bank of Omaha	6
Compass Bank	6
Google	5
Marvell Semiconductor	5
BBVA Compass Bancshares	5
First National Bank of Nebraska	5
Toshiba	4
Motorola Mobility	3
Bitco	3
Great West Casualty Company	3
Xilinx	2
Unified Patents	1

**TABLE 5.** Petitioners for covered business method reviews against IV

Party name	Frequency as petitioner
Bank of America	5
PNC Bank	5
Paymentech	2
JP Morgan Chase	2
Chase Bank USA, NA	2
Old Republic Insurance Company	2
Great West Casualty Company	1
Bitco	1
Motorola Mobility	1
Google	1

**TABLE 6.** IV is not the plaintiff (>two cases), patent in IV's public list

Party name	Cases as target
LinkedIn Corporation	3
Capital One Financial Corporation	2
Wal-Mart Stores, Inc	2
Bluecat Networks, Inc	2
Freescale Semiconductor, Inc	2
Orbitz, LLC	2
Sabrent USA	2
Echo Bridge Entertainment, LLC	2
Finem, Inc	2
MG DP Corp	2
Well Go USA, Inc	2
RLJ Entertainment, Inc	2
The Weinstein Company LLC	2
MindGeek USA, Inc	2
Platinum Disc, LLP	2
Nordstrom, Inc	2
The Gap, Inc	2

**TABLE 7. Summary of key developments**

Summary	Jan 16	Dec 13
Total size of IV portfolio (reported in 2013, calculated in 2016)	38,000	40,000
Year at which 50% of IIF1/2 patents expire (IIF3 excluded)	2019	2021
Average remaining life of asset at IV purchase	11 years	10 years
Average asset purchases per year (scaled) (IIF3 number includes two large deals)	899	3,972
Average spend per year on purchases (estimated)	\$55 million	\$107 million
Number of sellers to IV to reach 60% of assets in fund?	5 (IIF3)	100 (IIF1/2 combined)
Number of patents litigated by IV	575	352
Number of <i>inter partes</i> reviews (IV defending)	80	N/A
Number of covered business method reviews (IV defending)	11	N/A

show the companies filing the most *inter partes* reviews and covered business method reviews. If Table 3 is compared with Tables 4 and 5, one can see that there is no overlap of companies; using IBM listed in Table 4 as an example, the IV patents that IBM has filed for *inter partes* review are not ones that IV has litigated against IBM, but they have been heavily litigated. It can be inferred that IBM was approached by IV; however, as yet, no litigations have been filed against IBM.

We noticed that some of the litigations – 48 of the 120 – were not in IV's name. However, the patents in

## Action plan

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Those who are doing deals with – or face assertions from – IV should consider the following:

- Check whether your competitors are in one of the litigation tables – if IV has not approached you yet, we recommend that you prepare for an assertion.
- Analyse IV exposure – determine what your initial exposure to IV looks like and find out when that portion of the portfolio expires.
- Consider key deal terms for any potential IV deal (eg, a licence on transfer when assets leave IV or a perpetual licence for patents presented with evidence of use).
- Reduce future NPE risks by entering into cross-licences or licences that spring when a transfer occurs.
- Refine patent buying programme criteria to favour patents between six and 14 years from the priority date, as well as the availability of open continuations. Post-acquisition, implement a patent development plan for acquired assets.

those 48 litigations are still included in IV's public list (as available to license from IV). These litigations were not included in Table 3. We know that IV retains some rights to license some patents after it sells them (at least for a certain period). Table 6 shows litigations where the assets appear to be transferred to a third party, litigation has begun and IV is reporting the assets as part of its monetisation portfolio. From a high level, IV appears to be selling off portions of its portfolio to monetise indirectly, thereby increasing pressure on potential licensees to take a licence sooner.

### Assess risk

The continued availability of IV's public list of its monetisation portfolio provides insight into how the company has deployed over \$6 billion to buy and develop patents. With reduced funding, sales and increased abandonments, we believe that IV's portfolio will look very different five and 10 years from now – smaller and more focused on higher-value assets.

The continued concentration of sellers to IV suggests that companies can significantly mitigate patent risk from IV and similar NPEs by long-term cross-licensing, licensing on transfer and defensive aggregation. In IIF3, licences with a handful of struggling companies account for the vast majority of the portfolio. Additionally, IV's sales activity represents a new source of risk for companies. With the majority of sales ending in the hands of NPEs, IV continues to apply pressure on companies to take a licence.

We encourage companies to undertake a risk assessment of their exposure to the IV portfolio. The standardised technology taxonomy can be compared to your company's revenue sources and the IV portfolio expiration dates. These can be used to assess your particular risk over time and by product segments and to inform potential negotiations with IV. Similarly, the party names in litigation, *inter partes* reviews and covered business method reviews can help companies to pre-identify the potential for risk in their industry. **iam**

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