Inside the world of public auctions

It is relatively easy to identify the sellers at the public IP auctions organised by Ocean Tomo between 2006 and 2009, as well as the prices they achieved. But finding out who did the buying has been significantly harder – until now

By **Tom Ewing**

Little information has previously been revealed about the buyers of publicly auctioned patents. While the auctioned patents have been scrutinised, the sellers noted and the published sales prices analysed, the buyers have remained something of a mystery. We aim to fill that void by describing the buyers. We also discuss the evolving nature of public patent auctions and what their success says about open innovation in the knowledge economy. We remain hopeful about the long-term prospects of public IP sales processes, generally, as we believe they play a vital role in rationalising the intellectual property infrastructure.

Public patent auctions offer a small glimpse into the shadowy world of IP transactions. The nine public Ocean Tomo patent auctions from April 2006 to March 2009 provide a huge collection of public data – some 677 patent lots were offered in the first nine auctions and some 302 of these lots (or 44.6%) actually changed owners, according to USPTO data. We suspect that the auction process has also encouraged the exchange of other groups of non-auctioned patents. For example, we note that for Intellectual Ventures (IV), several of its auction-related purchases have included some patents not specifically mentioned in the relevant auction catalogue. The sellers and patents at the Ocean Tomo auctions have been identified previously along with the sales prices for about 80% of the patents sold. The buyer's identities are the only missing piece.

Our research appears to confirm the rumours that IV bought most of the lots sold at the auctions. As shown in Figure 1, the firm appears to have purchased some 76% of the lots sold, with the remaining 24% split among more than 40 other entities. Operating companies represent just slightly more than 11% of the buyers and other non-practising entities represent the remaining 13%. IV paid some US$61,075,951 for the lots having available pricing data, with the non-IV buyers paying another US$20,757,781 for the lots having available pricing data. The average non-IV lot price for lots having available pricing data was approximately US$442,000.

Patent auctions have existed for many years. However, most patent auctions have been conducted privately among a selected group of buyers and often with a single seller. In Spring 2006, the Ocean Tomo firm began offering a public patent auction. Since the first auction, 11 other auctions have been held – the last two by ICAP Ocean Tomo, which bought Ocean Tomo's auction business in June 2009. Jim Malackowski, the founder of Ocean Tomo, has described patent auctions as a fundamental step in the evolving importance of IP in the knowledge economy.

Operating companies and open innovation

Auction results show that operating companies have become significantly less reluctant about selling IP assets than they were in the past, as nearly half of the patent lots derived from operating companies. The remainder of the sellers was split among

individual inventors, government research labs, universities and brokers (further analysis of the sellers may yield slightly different results). But in purchasing less than 12% of the lots sold, operating companies showed only tepid interest in buying IP assets. One could conclude that operating companies are significantly less interested in buying third-party IP than they are in selling it.

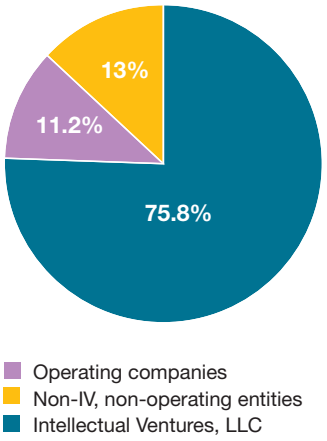
Philips ranks close to the top of operating company auction purchasers. Ruud Peters, CEO of Philips Intellectual Property & Standards, said that while his company has no reluctance about purchasing patents at a public auction, he knows that the acquisition process is so removed from many corporate IP departments that they simply have no budget for acquiring third-party IP. Even when a corporation overcomes the traditional reluctance to trade in IP assets, the exchanges tend to be complicated affairs, sometimes even requiring board approval. "We would indeed encourage other operating companies to look actively at IP offered at public auctions. They may find IP which would strengthen their IP portfolios and support their IP strategies," said Peters.

We found 48 separate buyers for the patents sold at the auctions shown in Table 1 (these are all the auctions conducted by Ocean Tomo before the sale to ICAP). Post-auction press releases have announced fewer sales. Our data is based on lots having a corresponding assignment document recorded at the USPTO for at least one of the patents offered at auction. This methodology produces a greater number of lots transacted, as sale negotiations can drag out for many months after the issuance of a post-auction press release.

Without IV's participation, just slightly more than 10% of the offered lots would have sold, a result that ran fairly constant throughout all auctions. Table 1, which is based on data from patents actually sold, breaks down the pie chart shown in Figure 1 on an auction-by-auction basis. As shown in this table, the non-IV buyers' participation started out ahead of IV's participation, then slowly dropped over time before levelling off at a fairly consistent five to seven lot figure. Table 1 also seems to confirm the rumours that the immediate cause of the perceived failure of the Spring 2009 auction was IV's absence.

Table 2 ranks the apparent auction buyers in terms of lots purchased. IV holds the top purchaser position by far, with the remaining purchasers clustered in single digit lot purchases. Only 13 parties purchased more than two lots (the number of patents purchased may vary somewhat, as different lots contained different numbers of patents).

Figure 1. **Buyers of publicly auctioned patent lots by category**



Strength of open innovation

Public IP sales serve as one bellwether indicator for the strength of open innovation in a knowledge-based economy. A central tenent of open innovation is that companies should trade research results, and related assets such as patents, as readily as they trade other assets, especially in a world where knowledge is widely distributed and easily transmissible. In an open innovation economy, corporate actors should buy and sell innovations and related IP assets as needed. Even in a thriving knowledge economy, the liquidity factors described below for patents will remain — validity and commercial relevance will always matter — but what is overcome in an open innovation model is the conventional corporate cultural reluctance to trade even when both factors are evident.

Table 3 identifies the operating companies (broadly defined) that participated in patent auctions. The apparently limited participation by operating companies indicates that an open innovation era has not fully blossomed. If such an era were to begin, then, all things being equal, the operating companies would have much more of a presence at the public sales than they have shown thus far. It is possible, of course, that patents from the lots purchased by non-practising entities may eventually migrate to other operating companies.

On a continuum of sales processes, as Figure 2 illustrates, public sales such as auctions mark the outer edge of the

Table 1. **Auction lots sold to third parties**

Auction	IV	Non-IV	IV %	Non-IV %
Spring 2006	14	16	46.67	53.33
Fall 2006	19	11	63.33	36.67
Spring 2007	28	13	68.29	31.71
Summer 2007	14	7	66.67	33.33
Fall 2007	35	7	83.33	16.67
Spring 2008	54	2	96.43	3.57
Summer 2008	26	5	83.87	16.13
Fall 2008	39	5	88.63	11.36
Spring 2009	0	7	0	100
Total	**229**	**73**	**75.83**	**24.17**

Table 2. **Rankings of apparent auction buyers by lots purchased**

Rank	Apparent buyer	Lots purchased
1	IV	229
2	Open Invention Network LLC	8
3	Resource Consortium Limited	5
4	Wi-Lan Inc	5
5	Altitude Capital Partners	3
6	RPX Corporation	3
7	Adobe Systems	2
8	Asaba Group	2
9	General Patent Corporation	2
10	Koninklijke Philips Electronics	2
11	Mosaid Technologies	2
12	Samsung Electronics	2
13	Silicon Laboratories Inc	2
14	35 other buyers	1 each

conventional approaches for trading IP. Private sales, the most conventional practice, can most easily adapt themselves to the unique properties of patents and the unique requirements of both the buyer and the seller. However, private transactions alone stand in contrast to the traditional corporate reluctance to trade in IP assets at all. The transactions are typically not concluded via a simple purchase agreement. Companies that trade IP assets tend to include a variety of contingency terms, retained licences, exclusions and other arrangements that add layers of complexity to the final agreement. Corporations have typically been more willing to trade IP assets in private because, among other things, the corporate actors can carefully control the public information about such transactions and may even be able to keep them out of the public view altogether. A purely private transaction allows the parties to craft sales agreements that fit not only their unique circumstances, but the unique characteristics of a specific IP asset as well.

Buyers and sellers

An essential characteristic of a liquid market is that there are ready and willing buyers and sellers at all times. Because each patent asset must not only be absolutely unique in order to be valid, but also be commercially relevant, there is a distinct limit on the liquidity of patents as an asset class. Individual buyers may accept the validity of a given patent, but question its commercial relevance. Conversely, buyers may not question the commercial relevance, but may be suspicious about the validity of a given patent or its effective breadth. As an additional complication, buyers do not universally have access to the same information. The pool of potential buyers who understand a given patent, can make use of that specific patent, can actually afford to buy the patent and have no cultural impediments to acquiring third-party IP is typically a very small pool – and for some technologies may be a null set. Finding an adequate pool of buyers and convincing them of a patent's value can be a difficult,

time-consuming and costly process. Consequently, offering a public patent sale – by any format – is a challenging proposition. A completely separate consideration is the availability of data related to these three factors. In the IP world, there is no analogy to the comparables that one can find in the real property market. Not only are patents more unique than homes, but the sources of data for the real estate market completely dwarf the sources of information about patent transactions between willing buyers and willing sellers. One of the greatest contributions of Ocean Tomo's public patent auction has been to provide a significant amount of sales data regarding patent valuations.

Only a few buyers enter the market looking for an average telecom patent or a generic pharma patent, and few of these buyers will be operating companies. The typical operating company will be looking for patents satisfying some very specific characteristics, and the odds that such a patent will be waiting for them are slim.

"Finding these high-quality portfolios is like panning gold!" said Peters. He explained that Philips receives a significant number of portfolio solicitations each year, but that only a fraction of the portfolios fall within the products/technical fields where the company is interested in purchasing patents. Only a small fraction of these portfolios turn out to have the qualities that make the company interested in wanting to acquire them.

Ocean Tomo made a reasonable assumption that it would have a more enthusiastic buyer pool by pre-screening the patents available at its auctions. In the first auction, the company claimed to have whittled the 1,200 patents submitted down to 400. This step is likely to have brought in more buyers, as it probably improved the quality of patents offered.

Quality questions

Peters agreed that one advantage of the IP offered at public auctions is that it has already been categorised and provided with short summaries, which simplifies the first phase of the selection process for unsolicited IP portfolios. "Moreover, we believe that the quality of the IP offered at the auctions is generally higher than IP offered by other sources," Peters added.

"One of the problems we have seen when these auctions started is that companies mostly brought only relatively low-quality IP to these auctions in the hope of getting some money for IP which they otherwise would have abandoned," said Peters. This effect was amplified by the economic crisis, when corporate IP departments had to reduce their portfolio cost and as a result flooded the market with mostly relatively low-quality IP, Peters explained. Combined with the shortage of cash to invest in IP, this led to a severe drop/collapse of the market for IP sales/acquisition. "We hope that when the economy improves, this market will bounce back again as we believe that selling and buying IP should be a fixed element in managing IP in corporations (and other entities, like SMEs and universities)," Peters said.

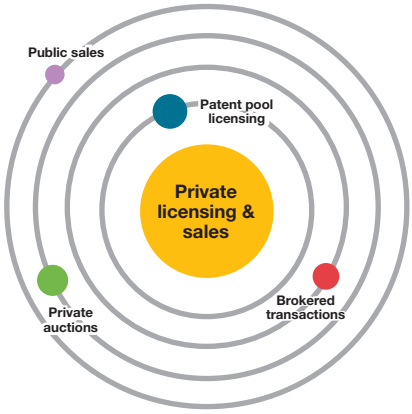
Our research has also provided data on the prices paid for various auction lots. By identifying and classifying the buyers, as well as determining when sales transpired, we can offer some additional research regarding the prices of lots sold at auction.

While the operating companies purchased only a few lots, our analysis shows that the operating companies generally paid more for the lots they purchased than did the non-operating companies. As shown in Table 4, the four highest average prices for patent lots were purchased by operating companies. Thus, operating companies are

Table 3. **Auctioned lots purchased by operating companies**

Rank	Operating company	Lots purchased
1	Wi-Lan Inc	5
2	Adobe Systems	2
3	Asaba Group	2
4	Koninklijke Philips Electronics	2
5	Samsung Electronics	2
6	Silicon Laboratories Inc	2
7	ABB Inc	1
8	Advanced Biological Laboratories SA	1
9	Agere Systems Inc (now LSI)	1
10	Apple Inc	1
11	Chi Mei Optoelectronics	1
12	Comcast	1
13	Enablence Inc	1
14	Facebook Inc	1
15	FlashPoint Technology Inc	1
16	Garmin Ltd	1
17	Intel Corporation	1
18	Microsoft	1
19	Senorx, Inc	1
20	Teklium Inc	1
21	The Trizetto Group Inc	1
22	Tracfone Wireless Inc	1
23	United Parcel Service	1
24	Verisign Inc	1
25	Virwall Systems Inc	1
Total lots purchased by operating companies		34
Percentage of total lots sold (%)		11.3

Figure 2. **Intellectual property trading by frequency and conventionality**



willing to purchase patent assets at public auction at market-leading prices.

Peters commented that if many competitors are interested in and bid for the same IP, this will drive up the price for that IP, as can happen at an auction. "In turn, this will be an incentive for IP holders to offer better-quality IP for auction. More competition by buyers at the auctions is needed to make the auction more interesting as a sales channel and thus for making the auction into a sustainable business," he added.

Non-practising entities

Non-practising entities (NPEs) come in a variety of forms. Their essential characteristic is that they do not themselves practise the inventions described in the patents they own. Universities and research labs are classical non-practising entities. NPEs also include companies formed for the purpose of patent licensing and/or litigating patent infringement claims against operating companies.

IV is the world's largest NPE. In just a few short years, IV has acquired at least the fifth largest patent portfolio among domestic US companies and within the 15th largest patent portfolio worldwide. In the past year, IV has announced that its portfolio comprises some 30,000 "invention assets". The company is rumoured to privately boast even higher numbers.

IV does not typically define the neologism "invention assets", but we assume that this phrase refers to patents, patent applications, non-filed invention disclosures and other trade secrets owned or licensed by the company (it claims to have some 3,000 unfiled invention disclosures). If the number represented the company's US patent portfolio, then it would hold a portfolio larger than IBM's, which is generally acknowledged as the largest American portfolio. Similarly, the company is not clear about where these assets exist, but we assume that this represents the company's worldwide portfolio. We believe that our data supports a worldwide portfolio in excess of 10,000 patent families that comprised at least 25,000 to 50,000 patents/applications worldwide by the end of 2009, and possibly even more, depending on factors such as the company's international filing preferences.

According to one common myth, IV pays no more than US$40,000 per patent. Only a few of IV's non-auction sales transactions have been made public. While IV tends to pay less per lot than the non-IV buyers, IV does not appear to purchase only cheap patents. Arbitrage is not a synonym for cheap and IV is the world's largest IP arbitrageur.

According to another common myth, IV acquired most of its portfolio at auction. Based on our investigation of IV's patent holdings, we find that IV's 229 acquired auction lots amount to no more than 7% of its total patent holdings. We have sales data for 188 lots of the 229 lots purchased at auction by IV. These lots sum to US$61.076 million in purchase costs (including all auction commissions). In July 2009, IV indicated in an article published in issue 36 of *IAM* that it had spent approximately US$1.3 billion to date in acquiring its portfolio. Thus, on a cost basis, these 188 auction purchases amount to approximately 4.7% of the total expended by IV in acquiring its portfolio.

IV has recently begun selling off small lots of its acquired patents. Of the patents acquired by IV at auction, its SF IP Properties 24 LLC shell sold three patents to InMotion LLC, a licensing company in Marshall, Texas, in November 2009. According to Ocean Tomo's post-auction press release, IV paid US$770,000 for the patents of Lot 24 in the Spring 2008 auction. Don Merino, senior vice-president of licensing at IV, said the sales were a logical step for IV. "I have enough of a set of assets where it just makes sense to start turning inventory," he said, according to Dow Jones Newswires on 24th February 2010.

Figure 3 shows that the participation of non-IV buyers remained reasonably consistent throughout all the auctions conducted from Spring 2006 through Spring 2009. More than half of the remaining patent lots were purchased by non-practising entities. The Open Invention

Table 4. **Average prices paid per lot, excluding Intellectual Ventures**

Rank	Apparent buyer	Priced lots	Cost (US$)	Average per lot (US$)
1	FlashPoint Technology Inc	1	$2.86 M	$2,860 K
2	Comcast	1	$1.54 M	$1,540 K
3	Samsung Electronics	2	$2.86 M	$1,430 K
4	Verisign Inc	1	$1.21 M	$1,210 K
5	Quito Enterprises LLC	1	$1.07 M	$1,073 K
6	Vtran Media Technologies	1	$0.99 M	$990 K
7	Cordoba Enterprises LLC	1	$0.82 M	$825 K
8	Open Invention Network	7	$5.22 M	$745 K
9	The Trizetto Group, Inc.	1	$0.55 M	$552 K
10	Online Data Exchange LLC	1	$0.45 M	$451 K
Average non-IV lot price				**$442 K**
11	Intel Corporation	1	$0.37 M	$374 K
12	RPX Corporation	1	$0.36 M	$358 K
13	Apple Inc	1	$0.35 M	$352 K
14	ABB Inc	1	$0.34 M	$340 K
15	31 other buyers			< $300 K

Network, another non-practising entity, represents the second largest purchaser.

At least four patent lots purchased at auction by NPEs have been used in patent litigation. Vtran Media Technologies, LLC spent US$990,000 on Lot 21 in the Fall 2006 auction and has subsequently sued nearly a dozen companies for infringement of the video on demand patents it purchased. Eleven Engineering Game Control LLC bought Lot 72A at the Spring 2009 patent auction and has filed infringement lawsuits against Nintendo, Sony and Microsoft. Corveq LLC Imaging bought Lot 26 at the Fall 2008 auction for US$27,500 and has subsequently sued Adobe and Kodak for patent infringement. Quito Enterprises LLC paid more than US$1 million for Lot 6 at the Spring 2008 auction and subsequently filed suit against some 13 companies for patent infringement.

The auction format

All of the patent auctions to date appear to have been conducted with great professionalism by the Ocean Tomo and ICAP teams. Following the Spring 2009 auction, Ocean Tomo sold its auction business to ICAP, a London-based money broker, for a reported US$10 million. "Patent brokerage is an exciting new field that will help to provide a marketplace and access to liquidity for an asset that has historically not been served by a vibrant trading market," said Michael Spencer, group CEO of ICAP, in a press release.

At this stage of economic development, any sort of public IP asset sale is probably not going to be easy and the market organisers will rightly make efficiency adjustments. In creating the public auction format, Ocean Tomo had to engage in a fair amount of market creation. An element of this market creation was creating "a sense of urgency and closure to IP transactions," according to the company's literature, in order to "create a centre for IP liquidity and effectuate transparency for a market in which none had historically existed".

Ocean Tomo has referred to each auction as a six to 12 month process. We suspect the time and effort expended by the auctioneer in organising each sale was considerable. Ocean Tomo described the processes involved in organising an auction as first commencing with screenings of submitted patents, followed by development of contracts and reserves for the patent lots selected by the auctioneer. These steps were followed by catalogue and data room publications, general promotions and solicitation of targeted buyers, according to the company. Once interested buyers appeared, Ocean Tomo facilitated the buyers' due diligence processes. The firm has commented that the process was similar to traditional M&A activities coupled with patent diligence.

We have derived much of our information here by studying recordation data in the US Patent & Trademark Office. The office's recordation database includes two dates for each patent: the execution date and the recordal date. The execution date is typically the date on the sales document itself and the recordal date is the date that the sales document was recorded by the office.

Figure 3. **Auction lots purchased by non-IV entities as a percentage of total lots offered**

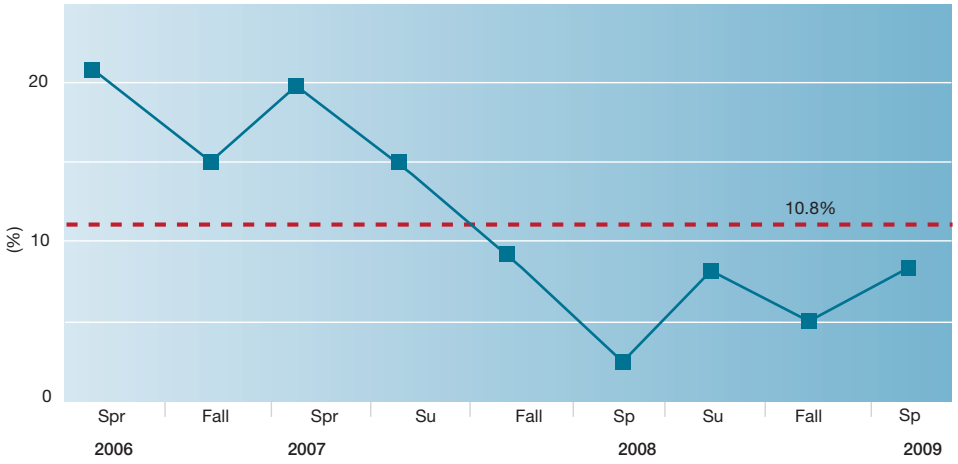
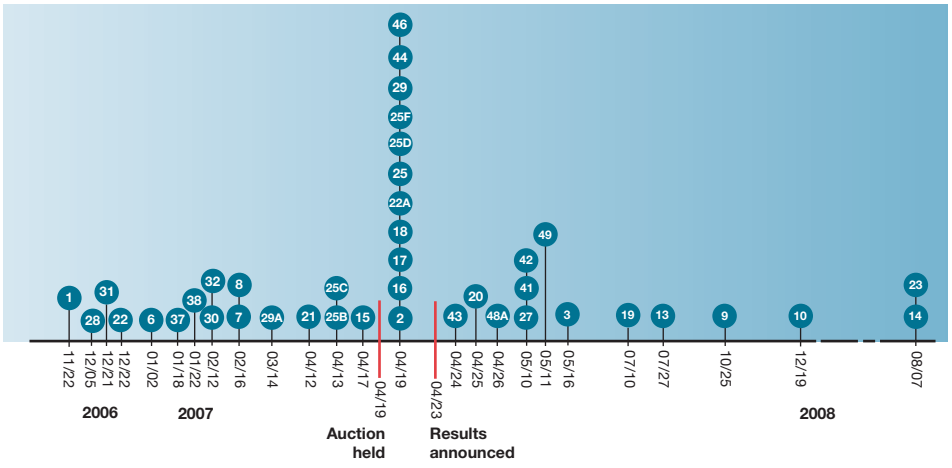


Figure 4. **Execution date timeline for Spring 2007 auction**



By studying the execution dates for patents transacted during the patent auctions from Spring 2006 to Spring 2009, we observed that about 50% of the patents sold at auction had recorded execution dates on the auction date or within a month of the auction date. Nearly 30% of the patents have recorded execution dates ahead of the sales date, and a bit more than 20% have recorded execution dates more than a month after the auction date. We provide a timeline in Figure 4 as a representative indicator of the execution dates recorded in the patent office. The encircled numbers in the figure represent patent lots, and the corresponding dates represent the execution date for at least one patent in that lot as shown in the USPTO data.

We asked Dean Becker, president of ICAP Global Patents, about the pre-auction execution dates, and he responded that the sellers are required to complete an assignment document pre-sale that is held in escrow until the auction is completed. We wondered whether documents with post-auction execution dates represented patents whose sales terms or conditions were re-negotiated by the parties, but he said this was unlikely. So, the recorded post-auction execution dates remain something of a mystery for now.

Becker insisted that no patents had been sold before auction prior to the implementation of a buy-now feature in the Spring 2010 auction. Becker's position seems to be borne out by the USPTO assignment database. Of the 302 patent lots sold at Ocean Tomo auctions, only two patent lots have recordal dates before the auction date; all the rest were recorded after the patent auction. PC-Tel Inc offered Lots 30 and 32, each lot containing one patent, in the Spring 2007 auction, which was held on 19th April 2007. PC-Tel assigned both patents to Silicon Technologies Inc in transactions executed on 12th February 2007 and recorded on 16th March 2007, according to the USPTO. We asked representatives from both PC-Tel and Silicon Technologies to comment on the transactions, but neither company responded to our queries.

Study methodology

This research has been conducted entirely on publicly available information. We reviewed the auction catalogues and consulted the USPTO's assignments database, as well as its PAIR database. We tried to contact six of the top 10 corporate buyers; only one responded. We did not expect any of them to respond.

Secrecy is an elemental assumption in IP transactions. Say nothing. Ever. CFOs nervously roll IP licensing expenses into the costs of goods produced to avoid any public slip. Miniature versions of actual sales documents are publicly recorded to thwart greater disclosure. Creating a limited liability company to hold IP assets provides still greater uncertainty. No one holds a god's eye view over the IP landscape. The most frequent players probably have a better, but flawed picture overall. Less frequent players have few navigational instruments. Intermediaries thrive. Whether secrecy strengthens the IP transaction infrastructure is doubtful.

While completing the second edition of our IV report, we noticed that several of the IV shell companies had auction-like names. So, we investigated the transaction

mechanism for the patents assigned to these shells and discovered the Ocean Tomo auctions. When we began looking at the Ocean Tomo auctions themselves, we noticed that still other IV shells had participated. Identifying the IV shells that participated in the auctions simplified the process of identifying the other buyers, given that so few of the buyers appeared to be independent of IV.

We have developed a series of techniques that can help identify the owner, or apparent owner, of a shell company. But there is sometimes still a bit of uncertainty. The greatest certainty appears when the owner confirms its ownership. For example, our techniques indicated that SF IP Properties 24 LLC was owned by IV and, as discussed above, IV eventually confirmed its ownership.

Likewise, when we find a signed power of attorney submitted to the USPTO by an employee of the owning company, then we have also found a strong indicator of ownership. For example, AMOF Advance LLC purchased Lot 8 of the Summer 2008 auction from Angel Decegama for an undisclosed sum. We have seen the power of attorney submitted by an IV employee who has signed at least some 60 other power of attorney documents for various other IV shell companies (many have no connection to the auctions).

We have developed other techniques as well. Together, these techniques provide varying degrees of clarity regarding ownership. Once the IV shells were identified, then we moved to the other companies. Many of them appeared to be much less well hidden than IV's patents. Of course, it is always possible that even these apparent owners are still just beneficial owners for still other parties. *iam*

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This article is based on the study *Publicly Auctioned Patent Buyers: Intellectual Ventures & Others*, published by Avancept in March 2010. www.avancept.com