

## Patent Auctions: How Far Have We Come?

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### I. Introduction

In April 2006, Ocean Tomo, LLC held what it described as the “world’s first ever live patent auction.”<sup>2</sup> Since then, it has held nine more, each of which has been widely publicized. As with all auctions, the purpose of the Ocean Tomo auctions has been to facilitate the expeditious and fair transfer of patent rights. The frequent and regular collection of interested buyers and sellers is expected to convey speed, and the sheer magnitude of parties bidding, with ultimate prices tending toward “true value,” is expected to result in fairness.

While patent rights have transferred hands in many ways for generations, auctions have been an infrequently used tool to facilitate such transfers. With its open-outcry auction format and well-publicized multi-day events, Ocean Tomo has succeeded in bringing a level of “buzz” to this particular method of matching buyers and sellers of patents.

In this paper, we describe the structure of the Ocean Tomo auctions, present the results of the auctions that have been held to date<sup>3</sup> and evaluate the successes and shortcomings of those auctions. We find that the use of auctions has been validated as a tool to transfer patent rights and that the structure chosen by Ocean Tomo does facilitate expeditious transactions. However, especially of late, the volume and magnitude of patent transfers has been limited. A lack of flexibility in Ocean Tomo’s auction structure, combined with the inherently complex nature of patents, render it unlikely that the current Ocean Tomo auction format will, to any great extent, replace conventional transfer mechanisms.

### II. Mechanisms For Transferring Patent Rights<sup>4</sup>

Markets facilitate the exchange of goods and services, including intangibles such as patent rights. They vary in how public they are, and public markets

differ in how exchange is facilitated. In private markets (such as those created by bilateral negotiations), both what is sold and its price can be determined simultaneously. In public markets, exchange generally is facilitated by either price or quantity setting. But regardless of the mechanism, the object is to establish a price and set of rights that result in the transfer (partial or entire) of ownership from one party to another.

#### A. Bilateral Negotiations

Traditionally, patent rights have been transferred in private transactions in which the seller and buyer negotiate back and forth to reach an agreed-upon set of terms (so-called “bilateral negotiations”). While a patent seller may “shop” technology to more than one potential buyer, most negotiations are not public (i.e. confidential) and the shopping often is sequential (i.e., one suitor, or a limited number, at a time). Non-disclosure agreements are common to protect both the buyer and the seller,<sup>5</sup> and the patent transfer usually does not take place until a great deal of due diligence has been conducted by all parties.<sup>6</sup> The seller often wishes to ensure a financially sound buyer,

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1. The authors wish to thank Nisha Rai for excellent research assistance.

2. Press Release, Ocean Tomo LLC, Ocean Tomo Releases Results of World’s First Ever Live Patent Auction (May 11, 2006).

3. As of the date of writing, the most recent Ocean Tomo auction was held in Summer 2009, and Ocean Tomo had not released complete results of its Spring 2009 auction held in San Francisco.

4. The discussion here is directed to the transfer of patent rights, but the same points hold for other kinds of intellectual property.

5. Jennifer Giordano-Coltart and Charles Calkins, *Best Practices in Patent License Negotiations*, BIOENTREPRENEUR, Oct. 26, 2007, at <http://www.nature.com/bioent/2007/071001/full/bioe.2007.5.html>.

6. EXCHANGING VALUE: NEGOTIATING TECHNOLOGY LICENSE AGREEMENTS, WORLD INTELLECTUAL PROPERTY ORGANIZATION 21-23 (2005).

while the buyer often wishes to ensure that the patent it is purchasing will deliver its promised value.

Traditional bilateral negotiations have been the standard mechanism for the transfer of patent rights for good reason. By strategically choosing a limited number of negotiating partners and by requiring non-disclosure agreements, parties can share otherwise proprietary information regarding potential patent value while maintaining a reasonable expectation that such information will not be made available to competitors. Additionally, negotiation enables flexibility, thus increasing the likelihood that a deal can be reached. Negotiation can lead to the outright transfer of ownership in exchange for a single or series of lump sum payments, or a deal can be structured for partial “ownership” and can include a combination of up-front fees, running royalties, minimum payments and/or milestone payments.<sup>7</sup> Subsets of rights can be carved out, payment timing can be customized, and risk sharing agreements in various forms can be structured to meet the specific needs of the patent buyer and seller.<sup>8</sup> Such flexibility is particularly valuable in the common case where the buyer and seller do not agree on the market potential of the patent—and/or the likelihood of realizing that potential—at the time of negotiation.

While attractive in terms of information sharing and flexibility, traditional bilateral negotiations have several potential drawbacks. First, it may be difficult for sellers to find appropriate partners without incurring the cost of widely advertising the availability of their patents. Potential buyers often do not want to publicize a desire to acquire a patent for fear of revealing competitive or legal weakness in their patent portfolios. Sometimes, this matching problem can be reduced through the use of brokers or other centralized sources of information. Second, traditional bilateral negotiations can be time-consuming<sup>9</sup>

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7. “Because of the difficulty in determining one single number as an equitable valuation, and the subsequent dissatisfaction that one or the other parties can be expected to feel, it is common for the parties to instead structure the valuation so that both the buyer and the seller share some of the risk and some of the reward associated with uncertain outcomes.” Richard Razgaitis, VALUATION AND PRICING OF TECHNOLOGY-BASED INTELLECTUAL PROPERTY, 272 (2003).

8. Jennifer Giordano-Coltart and Charles Calkins, *Best Practices in Patent License Negotiations*, BIOENTREPRENEUR, Oct. 26, 2007, at <http://www.nature.com/bioent/2007/071001/full/bioe.2007.5.html>.

9. Jennifer Giordano-Coltart and Charles Calkins, *Best Practices in Patent License Negotiations*, BIOENTREPRENEUR, Oct. 26, 2007, at <http://www.nature.com/bioent/2007/071001/full/bioe.2007.5.html>.

and costly to buyers and sellers—both in terms of the out-of-pocket costs associated with conducting extensive due diligence and in terms of the opportunity cost associated with devoting a substantial portion of a patent’s limited life to patent negotiation rather than patent exploitation. These costs can become particularly acute if negotiations break down and must be restarted with a new partner. Third, even after extensive information sharing and due diligence, buyers and sellers may remain separated by information barriers, resulting in “thin” markets that do not facilitate robust bids and counter-bids, and, ultimately, prices that are far from “fair.”

## B. Auctions<sup>10</sup>

In most public markets, sellers post prices and buyers decide the quantities they want to purchase at those prices. In contrast, during auctions, the seller establishes the quantities and the auction process elicits bids to deliver the market-clearing prices.

Auctions can be divided usefully along several dimensions.

- *Common value versus private value auctions.* Common value assets are those for which all bidders have roughly the same valuation (e.g., the market value per barrel of oil extracted under an oil lease), but for which bidders may have different, privately-held, information (e.g., individuals may hold different interpretations of available data indicating the quantity of oil that may be available in a given lease area).<sup>11</sup> Auctions of common value assets can be structured to facilitate discovery of this privately-held information among bidders (e.g., a bidder may update his or her beliefs and reinterpret privately-held information upon observing the bidding behavior of others), and are considered useful in discovering the “true” value of common value assets, provided the number of bidders is large enough and the structure allows effective information discovery. Private value assets are those for which information regarding the inherent value of the asset is privately held; that is, the value of an asset may be unique to each bidder. In auctions of assets that are of purely private value, observing the bidding behavior of others has little effect on the valuation of any individual bidder. In

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10. This section is intended to give only a brief overview of auctions. For an overview of the extensive literature on auctions, see Paul Klemperer, *Auction Theory: A Guide to the Literature*, 13 J. ECON. SURV. 227-286, 229 (1999).

11. Paul Klemperer, *Auction Theory: A Guide to the Literature*, 13 J. ECON. SURV. 227-286, 229 (1999).

practice, many assets have both a private value and a common value component.

- *Open-outcry versus sealed bid auctions.* In open-outcry auctions, the bidding is oral and is conducted either with prices ascending (a so-called English auction, where the last and highest bid wins) or descending (a so-called Dutch auction, where the first to bid at a newly-lowered price wins). As the open-outcry auctions facilitate the discovery of privately-held information among bidders, they aid the efficient sale of predominantly common value assets. Sealed bid auctions are structured such that the party with the highest bid wins, but may pay the highest or second highest price. Single round sealed bid auctions are better suited for the sale of predominantly private value assets, where observing the bidding behavior of others is less valuable.

- *Single versus multi-unit auctions.* Some assets, such as indivisible items like art, may only be sold in single units. Others are divisible assets, such as blocks of communications spectrum, treasury securities, or commodities. When multiple assets are being sold, timing becomes an issue. In sequential auctions, each asset or unit of an asset is bid on individually and one asset at a time is offered for bidding. In simultaneous auctions, multiple assets or units of an asset are offered for bidding at the same time. Simultaneous auctions tend to be more efficient when the values of the items at auction are strongly related to each other. Some auctions allow bidders to submit bids indicating a range of prices depending on a range of quantities of assets or units of a multi-unit asset to be purchased. Other auctions, called combinatorial auctions, allow bidders to submit bids for packages of assets or units that would otherwise be sold individually. Combinatorial auctions are often used when individual items have complementary value.<sup>12</sup>

The format of the Ocean Tomo auctions can be understood by recognizing the nature of patents along the lines described above. Some patents have significant common value when the value to a given bidder of one patent lot is correlated with the value of that same lot to another bidder. The Ocean Tomo open-outcry auction format facilitates bidders' learning from each other, which is appropriate with

common value items. To the extent that the value of most patents is largely unrelated to the value of other patents, selling items sequentially makes sense. For example, bidders do not learn much about the value of a medical patent from the bidding on a telecommunications patent.

Sequential auctions, however, are inappropriate when the values of subsets of patents are related. Selling related patents together avoids the exposure problem. The exposure problem occurs when a bidder values a collection of items more than the sum of the stand-alone values of the items in that collection. In a sequential auction, such a bidder is not willing to pay as much for an item as he would if he was guaranteed to win all the items in the desired collection. Additionally, grouping patents into lots does not provide as much opportunity for price discovery, particularly in the case when there is not universal agreement among bidders as to how the lots should be organized.

Ocean Tomo's open-outcry live auctions are not new to the patent world. In fact, open-outcry live auctions were held by Shanghai Intellectual Property Service Center in Shanghai in late 2004<sup>13</sup> and by Patent Auctions GmbH in Germany in May 2007.<sup>14</sup> Well before those events, auctions of patent rights were held in bankruptcy proceedings. In 1993, the IRS auctioned off patents to recover back taxes.<sup>15</sup> In July 1995, the patent portfolio of the bankrupt disk drive manufacturer, Orca Technology, Inc., was sold at auction for \$3.65 million to an anonymous bidder, later identified as Samsung Electronics Co. Ltd.<sup>16</sup> In fact, one of Ocean Tomo's first forays into patent auctions was in December 2004, when it structured the auction of bankrupt Commerce One's IP, technology directed towards paying bills and purchasing supplies online, for \$15 million.<sup>17</sup> There, Ocean Tomo ap-

13. "The first patent auction was held in Shanghai Intellectual Property Park on December 22 [2004]. Eight of 39 intellectual property rights, over CNY 12 million, have been sold. ... More than 70 companies and investors attended the auction." See *First Patent Auction Held in Shanghai*, SINOCAST CHINA BUS. DAILY NEWS, Dec. 29, 2004.

14. *Bayer, Rolls-Royce, Famous Research Centres and Individual Inventors Sell Their Patents and Licenses at Live Auction in Munich*, PR NEWSWIRE, Mar. 5, 2007.

15. *IRS auctions assets of Cooke companies prescription vial molds are sold via IRS auction to Clarke Container*, PLASTICS NEWS, Jan. 3, 1994.

16. Bruce Rubenstein, *Patent Auction: The Property Isn't Real but the Money Is*, CORP. LEGAL TIMES, Jul. 1995.

17. Perry J. Viscounty, Eric M. Kennedy and Michael Woodrow De Vries, *Patent Auctions: Emerging Trend?*, NAT'L L. J., May 8, 2006.

12. For an overview of combinatorial auctions, see Peter Cramton, et al., *Introduction to Combinatorial Auctions*, at <http://www.cramton.umd.edu/papers2000-2004/cramton-shoham-steinberg-introduction-to-combinatorial-auctions.pdf> (last visited Nov. 25, 2008).

proached numerous companies, and identified eight finalists who promised to bid at least \$1 million for the licenses.<sup>18</sup>

Promising pharmaceutical innovations also have been “auctioned.” However, the circumstances surrounding such transfers more closely resemble “beauty contests” rather than open-outcry auctions. In 1995, Rockefeller University held an auction for rights to its newly-developed weight-loss drug, inviting more than a dozen firms to bid for their technology. Amgen won the auction by agreeing to pay a \$20 million signing fee, plus unspecified royalties.<sup>19</sup> When Procter and Gamble (“P&G”) developed micro-needle technology, it used a modified auction construct to find a development partner. P&G began the process with non-confidential informational meetings with about 20 companies to showcase the technology and its potential. Interested companies were then asked to submit both a monetary offer and a business plan; seven firms responded. Of these seven, three were selected for a final round of discussions, where two-way confidentiality agreements were signed to promote a fuller discussion of the business development plans and financials. These three finalists then bid against each other until the winner was selected.<sup>20</sup>

Over the past 20 years, various forms of patent exchanges have been attempted as well. Many of these attempts have involved Internet exchanges aiming to accomplish the same end as auctions—overcoming information barriers separating buyers and sellers, and helping to reduce transactions costs.<sup>21</sup> Many of these ideas did not, in fact, come to fruition. Perhaps the most prominent example is pl-x. In 1999,

pl-x planned to establish an online presence where companies would be able to buy and sell intellectual property securely, and obtain patent valuation based on its proprietary TRRU<sup>®</sup> Metrics method.<sup>22</sup> By 2001, pl-x claimed to have more than 400 U.S. subscribers, including companies, universities and research centers, and to have nearly \$34 billion in IP assets under management.<sup>23</sup> By 2006, pl-x’s business model had changed to one where it offered enterprise management software that could help manage IP license contract management, royalty processing, revenue reporting and billing. pl-x was acquired by Access Integrated Technologies in June 2006.<sup>24</sup>

Some patent exchanges are still in existence today. They include IBM’s Intellectual Property Network, as well as others offered by TAEUS, Tynax, eBay, Yet2.com, IpAuctions.com, and wikipatents.com.<sup>25</sup> Since 2004, FreePatentAuction.com has offered IP owners a place to list, without charge, any patented technology available for sale. This site claims to be “one of the major online marketplaces for patented inventions.”<sup>26</sup> IPMarket.com allows IP owners a choice between a free “passive” listing of their available for sale technology, or a “standard” listing for a \$200 fee which includes marketing support, and a “potential buyers report.” For an additional fee, IPMarket.com will provide video hosting.<sup>27</sup> Conceived in 2005 as a way to sell “ideas,” including intellectual property and art to the global market, the Idea Trade Network claims to have over 20,000 registered members.<sup>28</sup> IPAuctions.

18. Michael Liedtke, *Bankrupt Commerce One Fetches \$15.5 million for Prized Patents*, ASSOCIATED PRESS NEWSWIRE, Dec. 6, 2004.

19. Michael Unger, *Weighing Investor Risk in Obesity Drug*, NEWSDAY, Jul. 28, 1995, at A51 and Richard Razgaitis, *Pricing the Intellectual Property of Early-Stage Technologies: A Primer of Basic Valuation Tools and Considerations*, in 857 IP HANDBOOK OF BEST PRACTICES.

20. Kathleen Denis, *Partnering Deals: Solutions through Synergy*, *les Nouvelles* 29-39, 36, Mar. 2005.

21. See, e.g., Intellectual Property Exchange International, Inc., at <http://www.ipxi.com> (last visited Jun. 12, 2009), which is owned by Ocean Tomo and offers services as a “master licensing agent” that publicizes sales, structures deals, manages enforcement of patent rights and the Patent and License Exchange which offered listings, transaction services (escrow agents, patent validity insurance), and valuations. The Patent and License Exchange, at <http://www.pl-x.com> (last visited Jun. 12, 2009) was started in 1999, but does not appear to operate today. *Ernst & Young’s Investment in Patent & License Exchange, Inc. -pl-x.com- Gives Firm Stake in Future E-Business Leader*, BUS. WIRE, Sept. 8, 1999.

22. *The Patent & License Exchange’s Network of Intellectual Property Consultants Ready to Respond to FASB Challenge*, BUS. WIRE, at [http://findarticles.com/p/articles/mi\\_m0EIN/is\\_1999\\_Sept\\_8/ai\\_55682176/print](http://findarticles.com/p/articles/mi_m0EIN/is_1999_Sept_8/ai_55682176/print) (last visited Mar. 18, 2008).

23. Daniel Scuka and Chiaki Kitada, *Patent Market Pending*, J@PAN-INC., Feb. 2001, at <http://www.japaninc.com/article.php?articleID=165> (last visited Mar. 18, 2008).

24. *Access Integrated Technologies Acquires PLX Systems Inc.*, PR NEWSWIRE, at <http://www.redorbit.com/modules/news/tools.php?tool=print&id=531845> (last visited Apr. 17, 2009).

25. Kelly Spors, *Profiting From an Invention*, WALL ST. J. ONLINE, May 15, 2007, at <http://online.wsj.com/article/SB117920214509203081.html>; Perry J. Viscounty, Eric M. Kennedy and Michael Woodrow De Vries, *Patent Auctions: Emerging Trend?*, May 8, 2006; Mel Duvall, *IBM Opens Intellectual Exchange*, INTERACTIVE WK. FROM ZDWIRE, Jun. 5, 2000; *IP Auctions Selling Cell Works Patents*, LAB BUS. WK., Jul. 15, 2007; <http://www.taeus.com/patent> (last visited Mar. 27, 2009); <http://www.tynax.com/ttx1/default.asp> (last visited Mar. 30, 2009).

26. <http://www.FreePatentAuction.com> (last visited Apr. 17, 2009).

27. <http://www.IPMarket.com> (last visited Apr. 17, 2009).

28. <http://www.newideatrade.com/info.htm> (last visited Apr. 17, 2009). *GCCI Announces Alternative to Innovation Outsourcing*, BUS. WIRE, May 3, 2005. Currently, the one-time membership fee is \$99.95.



com was founded in 2001, and conducts Internet auctions of intellectual property. Recent sales have included University of Nevada, Las Vegas Research Foundation anti-cancer patents for \$5.5 million, as well as the sale of a corporate domain name for over \$200,000.<sup>29</sup> Ocean Tomo has launched its own online patent exchange as well.<sup>30</sup>

### III. Description of Ocean Tomo Auctions

#### A. Structure

As noted above, Ocean Tomo has held ten open-outcry English auctions covering patent rights.<sup>31</sup> The auctions have been live, with interested parties bidding real-time in person, by proxy, or remotely in advance of the auction.<sup>32</sup> Up until Fall 2008, bidders competed solely on the amount of a lump sum payment for full ownership of the patent or patent portfolio. In the Fall 2008 auction, bidders were directed in the auction catalog for the first time to “inquire regarding bidding process” for certain lots being sold by NASA.<sup>33</sup> One of these lots was sold for an up-front payment plus a pre-specified ongoing royalty, and bidding was conducted for the amount of the up-front payment.<sup>34</sup> As with any U.S. governmental entity, NASA retained ownership of the patents, but was allowed to grant nonexclusive, co-exclusive, partially exclusive or exclusive licenses.<sup>35</sup>

For each of the auctions, Ocean Tomo has charged sellers a listing fee of \$1,000 to \$6,000 for patents, \$1,000 to \$3,000 for trademarks/copyrights and

\$250 to \$3,000 for domain names.<sup>36</sup> Bidders have been required to pre-register, pay a registration fee and present a bank letter of credit to ensure they were qualified to make purchases.<sup>37</sup> In addition to up-front fees, Ocean Tomo also received a 10 percent buyers’ premium and a 15 percent sellers’ premium for lots that changed hands.<sup>38</sup> The auctions have been the centerpiece of a multi-day event, featuring business seminars, a dinner with a keynote speaker, networking opportunities and an open bar. According to Andrew Ramer, former President of Ocean Tomo Auctions, “We wanted to make the event itself a centralized forum for who’s who in IP.”<sup>39</sup> Not surprisingly, the events have been open to non-buyer/non-seller attendees, and Ocean Tomo has collected registration fees from those attendees as well.

At the first auction, some lots were listed without reserve, (i.e., minimum amounts sellers were willing to accept).<sup>40</sup> Beginning with its second auction, Ocean Tomo has required a minimum reserve price of \$10,000,<sup>41</sup> and charged a higher listing fee for lots listed with a seller-determined reserve price than for those listed at the minimum reserve price.<sup>42</sup>

Ocean Tomo Patent Ratings, which purports to calculate an “objective” measure of a patent’s value by looking at multiple metrics, has conducted initial screening of submitted patents for “suitability” for live auction, helped sellers set reserve prices and provided an estimated “value” for each lot.<sup>43</sup>

In the case of lots of rights that were not sold during the auction, Ocean Tomo has allowed sellers to strike

29. <http://www.IPauctions.com> (last visited Apr. 17, 2009).

30. Patent/Bid-Ask™ (P/B-A), which describes itself as a “Web-and voice-enabled public forum that allows buyers and sellers to make and receive offers on all 33 million plus issued patents and patent applications across 81 countries and patent-issuing authorities.” <https://www.otpba.com> (last visited Apr. 17, 2009).

31. This paper is based on complete auction results from the Spring 2006 Auction, held on Apr. 6, 2006 through the Fall 2008 Auction, held on Oct. 30, 2008; partial results from the auction held in Spring 2009; and full results from the Summer 2009 auction.

32. Bidders are allowed to submit absentee bidding instructions to a Ocean Tomo representative in advance of the auction, or to submit instructions to an Ocean Tomo representative by telephone in order to bid live from a remote location. [http://www.oceantomo.com/auctions\\_summer09\\_cos.html](http://www.oceantomo.com/auctions_summer09_cos.html) (last visited Mar. 27, 2009).

33. OCEAN TOMO FALL 2008 AUCTION CATALOGUE 202, 209, 214.

34. Press Release, Ocean Tomo LLC, Ocean Tomo Auctions Announces Impressive \$12.8m Results from Fall 2008 Live Intellectual Property Auction (Nov. 3, 2008).

35. 37 C.F.R., §404.4.

36. Specific listing fees varied by auction, by whether lots were individual or bundled assets and by whether the reserve price was seller-set or not. See, e.g., OCEAN TOMO SPRING 2007 CATALOGUE 4; OCEAN TOMO FALL 2007 CATALOGUE 12; OCEAN TOMO FALL 2008 CATALOGUE 12.

37. Pre-registration has allowed buyers to both access due diligence and transfer documents via a password-protected online data room and to contact sellers in writing or through conference calls and in-person meetings. See Jenny B. Davis, *IP Going Once... Twice*, ABA J., Aug. 2007, at [http://www.abajournal.com/magazine/ip\\_going\\_once\\_twice](http://www.abajournal.com/magazine/ip_going_once_twice).

38. Don Clark, *Inventors See Promise In Large-Scale Public Patent Auctions*, WALL ST. J., Mar. 6, 2006.

39. Jenny B. Davis, *IP Going Once... Twice*, ABA J., Aug. 2007, at [http://www.abajournal.com/magazine/ip\\_going\\_once\\_twice/](http://www.abajournal.com/magazine/ip_going_once_twice/).

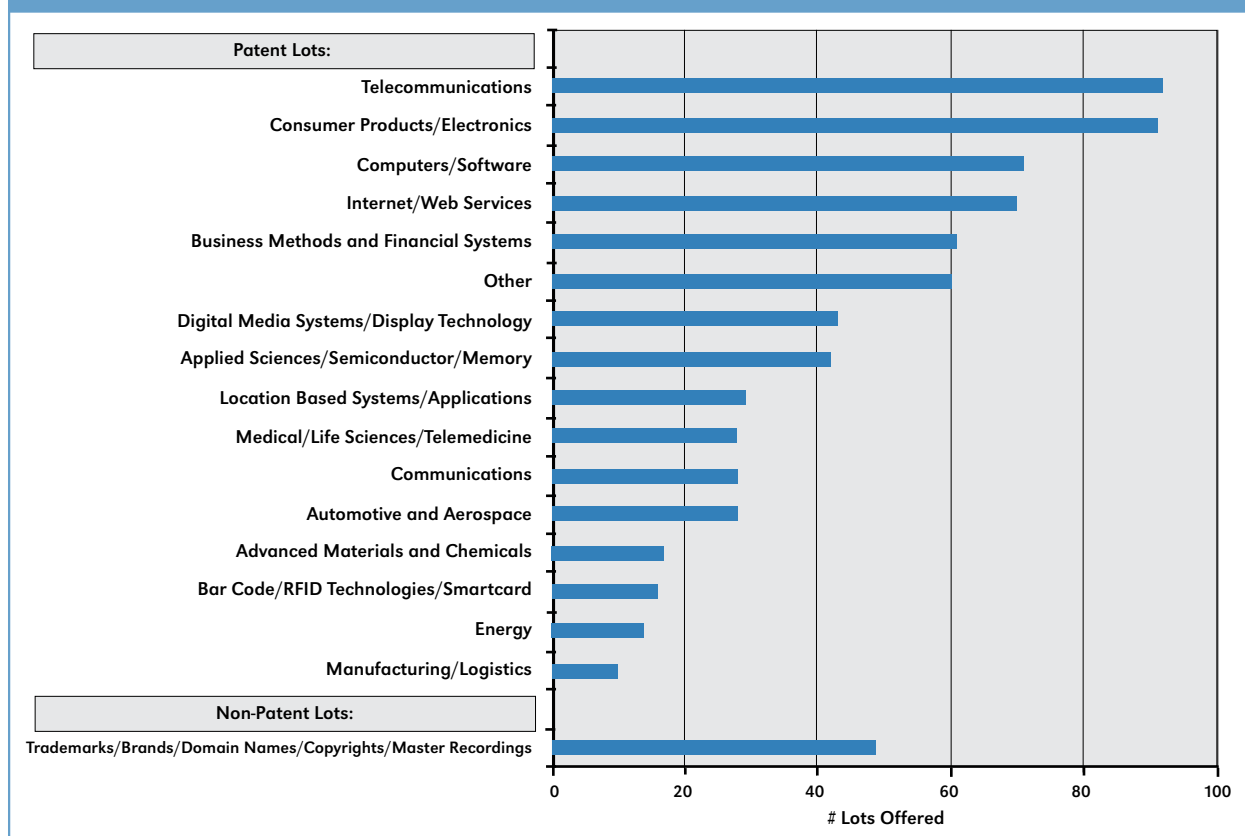
40. See, e.g., OCEAN TOMO SPRING 2006 CATALOGUE 28, 156.

41. OCEAN TOMO FALL 2006 CATALOGUE 4.

42. See, e.g., OCEAN TOMO FALL 2007 CATALOGUE 9; OCEAN TOMO FALL 2008 CATALOGUE 12.

43. Paul Sloan, *The Patent Machine*, Business 2.0 73, Jul. 2006, at [http://www.oceantomo.com/press/Business\\_2.0\\_article\\_7.06.pdf](http://www.oceantomo.com/press/Business_2.0_article_7.06.pdf).

Figure 1. Number Of Lots Offered, By Industry



private deals with buyers after the auction, including deals below the seller's initial reserve price.<sup>44</sup>

The Ocean Tomo auctions have offered multiple types of IP, including patents, trademarks, copyrights, and domain names,<sup>45</sup> spanning a wide range of industries and a diverse group of technologies. As shown in Figure 1, 49 of the 749 lots offered were rights in trademarks, copyrights, domain names or other non-patented assets. The remaining lots—over 90 percent of those offered—were patent lots. Patents identified as being relevant to the consumer products/electronics and telecommunications industries were the most common kinds offered.

Prior to listing, Ocean Tomo has required sellers “to make certain basic representations as to ownership, encumbrances and other material factors,” and has indicated that it may also ask sellers for information regarding chain of title, involvement in standards set-

ting bodies, knowledge of infringement, involvement in litigation, and other factors.<sup>46</sup> Buyers can evaluate information provided by the sellers in the Ocean Tomo Catalogues, Ocean Tomo's online secure data room, and through one-to-one meetings with the sellers.<sup>47</sup>

Some of the patents offered at the auctions were made available individually, while others were offered in bundled lots. Over all ten auctions, 43 percent of patent lots comprised bundles of more than one patent, while 57 percent of patent lots consisted of individual patents.<sup>48</sup> Bidders did not have the option to bid for combinations of lots simultaneously, or to bid on subsets of bundled lots.

## B. Results

Over three years, as shown in Figure 2, Ocean Tomo has facilitated the transfer of at least 282 lots of patent, trademark, copyright and domain name rights,

44. James Malackowski, *The Intellectual Property Marketplace: Past, Present and Future*, 5 J. MARSHALL REV. INTELL. PROP. L., 605-616, (2006).

45. See [http://blogs.wsj.com/law/2006/10/27/jimi-hendrix-steals-the-show-at-intellectual-property-auction/October 27, 2006](http://blogs.wsj.com/law/2006/10/27/jimi-hendrix-steals-the-show-at-intellectual-property-auction/October%2027,%202006) (last visited Mar. 25, 2008).

46. See, e.g., OCEAN TOMO SPRING 2007 CATALOGUE 7; OCEAN TOMO FALL 2008 CATALOGUE 12.

47. [http://www.oceantomo.com/auctions\\_summer09\\_cos.html](http://www.oceantomo.com/auctions_summer09_cos.html) (last visited Mar. 27, 2009).

48. In the first few auctions, more than half of patent lots contained bundles of patents. In more recent auctions, the portion of total patent lots that contain individual patents has increased.

**Figure 2: Summary Of Auction Outcomes**

Sales	Spring 2006	Fall 2006	Spring 2007	Summer 2007	Fall 2007	Spring 2008	Summer 2008	Fall 2008	Spring 2009	Summer 2009	Total
[1] Total Number of Lots	31	25	34	14	38	53	29	48	6	4	282
[2] Number of Patents	98	39	89	39	66	155	60	77	Not Released	18	641
[3] Price Paid by Bidder (all lots sold)	\$8,446,100	\$23,903,000	\$12,529,000	\$8,100,505	\$11,599,500	\$19,629,500	\$12,674,043	\$12,842,500	\$3,190,000	\$1,727,000	\$114,641,148
[4] Price Paid by Bidder (only lots sold with published estimated value)	\$8,446,100	\$7,403,000	\$12,529,000	\$3,204,955	\$9,674,500	\$11,544,500	\$12,674,043	\$12,281,500	Not Released	\$1,727,000	\$79,484,598
<b>During</b>											
[5] Individual Patent Lots	13	13	20	6	27	39	15	35	N/A	2	170
[6] Bundled Patent Lots	13	9	14	7	11	14	14	13	N/A	2	97
[7] Non-Patent Lots	0	3	0	1	0	0	0	0	N/A	0	4
[8] Number of Lots	26	25	34	14	38	53	29	48	6	4	277
[9] Price Paid by Bidder	\$3,026,100	\$23,903,000	\$11,429,000	\$8,100,505	\$11,599,500	\$19,629,500	\$12,674,043	\$12,842,500	\$3,190,000	\$1,727,000	\$108,121,148
[10] Price Paid by Bidder (only lots sold with published estimated value)	\$3,026,100	\$7,403,000	\$11,429,000	\$3,204,955	\$9,674,500	\$11,544,500	\$12,674,043	\$12,281,500	Not Released	\$1,727,000	\$72,964,598
<b>Post</b>											
[11] Number of Lots	5	Not Released	Not Released	Not Released	Not Released	Not Released	Not Released	Not Released	Not Released	Not Released	N/A
[12] Price Paid by Bidder	\$5,420,000	Not Released	\$1,100,000	Not Released	Not Released	Not Released	Not Released	Not Released	Not Released	Not Released	N/A
<b>Offered</b>											
[13] Individual Patent Lots	32	30	39	11	49	61	44	73	53	10	402
[14] Bundled Patent Lots	44	41	26	36	27	25	20	31	30	18	298
[15] Non-Patent Lots	0	25	2	4	0	0	1	14	2	1	49
[16] Number of Lots	76	96	67	51	76	86	65	118	85	29	749
[17] Number of Patents	410	260	171	223	146	208	106	179	200	167	2,070
[18] Ocean Tomo Estimated Value	\$63,100,000	\$36,270,000	\$56,065,000	\$23,460,000	\$50,130,000	\$23,585,000	\$47,265,000	\$48,055,000	\$39,635,000	\$7,720,000	\$395,285,000
[19] Percentage of Bundled Patent Lots Sold	30%	22%	54%	19%	41%	56%	70%	42%	N/A	11%	36%
[20] Number Lots Sold / Number Lots Offered	41%	26%	51%	27%	50%	62%	45%	41%	7%	14%	38%
[21] Number Patents sold / Number Patents Offered	24%	15%	52%	17%	45%	75%	57%	43%	N/A	11%	31%
[22] Price Paid by Bidder (only lots sold with published est. value)/ Est. Value	13%	20%	22%	14%	19%	49%	27%	26%	N/A	22%	20%

which represents 38 percent of the lots offered. It appears that the vast majority of lots transferred (277) have been sold through the course of the auctions; the remainder through post-auction activities. The ten auctions from Spring 2006 through Summer 2009 have generated \$114.6 million in revenues,<sup>49</sup> averaging \$11.5 million per auction. The auctions have attracted the attention some of high-profile sellers, such as NASA, and some high-profile assets, such as rights to the Jimi Hendrix music library.

Beginning with its first auction in San Francisco, Ocean Tomo has now held similar events at locations all over the world, including New York City, Chicago, London, and Amsterdam. Future auctions are scheduled to be held in Paris, Chicago and online.

Transaction volume, revenues and activity generated by the Ocean Tomo auctions have been noticeable, but have paled in comparison with the “buzz” created by these events. Indeed, on its Web site, Ocean Tomo reports:

Ocean Tomo Auctions are unique events in the world of intellectual property. Ocean Tomo has

become the standard in the sale of IP assets, and I personally look forward to every auction with excitement. The auctions are not only excellent for their networking opportunities and the quality of their speakers, but the friendliness and professionalism of the OT staff make the experience extremely enjoyable.

- Olivier Huc, Questel DigiPat

Ocean Tomo consistently delivers premier events to the intellectual property community. Between the excitement of the live auction, the excellent workshops, and the outstanding opportunities to network with other top IP professionals, attendance at the Ocean Tomo Auctions is an important element of the job for IP leaders.

- Richard Baker, 3Com

Ocean Tomo and their patent auction have shown us, through results, the way to creating more liquid markets for patents, benefiting both buyers and sellers. The old world of illiquid, back-room patent deals are quickly becoming a relic of the past. Patent auctions, IP deals and through leadership are all about critical mass, which Ocean Tomo delivers on a global scale.

- George Hoyem, Blueprint Ventures

49. Includes both buyer and seller premium paid to Ocean Tomo, as well as the net proceeds to the seller. See Figure 2.

Ocean Tomo's Auction is one of the most innovative developments to affect the IP community during the last decade. It has single-handedly created an efficient marketplace for monetizing intellectual property assets. The excitement with respect to the Auction has permeated the entire IP community, including inventors, start-up companies and large corporations that continue to embrace and support the event.

- Michael Carrillo, Neal, Gerber & Eisenberg<sup>50</sup>

Interestingly, though the selected (and presumably most glowing) quotes address the auction and associated event concepts, and the excitement created, little mention is made of actual, tangible results.

#### IV. Successes of the Ocean Tomo Auctions

Because IP auctions, in various forms, were used for years prior to Ocean Tomo's foray, it is not the case that a new mechanism for transferring patents (or any IP rights) has been created. However, Ocean Tomo has successfully extended and effectively publicized the use of live auctions as a mechanism for IP transfer.

To the extent that the auctions can be deemed a success, such success emanates from three sources. First, they reduce some of the costs associated with traditional bilateral negotiations. Second, and related, they are a speedier alternative to such negotiations. Third, anonymity in the process protects the dissemination of certain private information.

##### A. Cost

Through the auctions, Ocean Tomo has become a broker for both prospective sellers and buyers of IP (including patent) rights.<sup>51</sup> By listing IP in the auction catalogs, by holding the multi-day, pay-to-attend event offering seminars, receptions, and networking opportunities, and by soliciting sponsorship revenues from entities involved in the IP industry,<sup>52</sup> Ocean Tomo has reduced the cost to many sellers of marketing their IP. The novelty (at least initially) and excitement of an open-outcry auction format also has generated a certain amount of free publicity for the events. Moreover, by screening prospective buyers as to their financial wherewithal, Ocean Tomo has offered to sellers only motivated and serious suitors. For buyers, Ocean Tomo, in theory, has culled the set of available IP to that which is likely to have true

technical and commercial merit, has offered a single forum for consummating transactions and has provided financial valuations for many of the lots. The search costs for both parties have been, in theory, greatly reduced.

As noted above, sellers pay a listing fee of \$1,000 to \$6,000. Moreover, sellers pay an additional 15 percent premium upon consummation of a transfer, and buyers pay a 10 percent premium.<sup>53</sup> Even if lots do not sell at auction, buyers' and sellers' premiums are still paid on any lot that was offered at auction and sold in a private post-auction transaction within six months of the auction.<sup>54</sup>

No doubt, Ocean Tomo has generated income from its auctions.<sup>55</sup> The total buyers' premium received by Ocean Tomo for the 2006 through 2008 auctions is roughly \$10 million and the total sellers' premium is roughly \$15 million.<sup>56</sup> Structuring the auction as the centerpiece of a multi-day event allows Ocean Tomo to not only earn revenues associated with running the auction, but also to use the auction as a mechanism for publicizing its other IP transaction-related services, such as valuations, its online patent exchange, an IP negotiation and settlement service, and an IP-based equities index.

##### B. Speed

Traditional royalty negotiations are often quite time consuming, lasting from several months to many years to negotiate. An auction streamlines the due diligence timeline and simplifies the negotiation process.

Auctions facilitate faster transactions because they

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50. *Ocean Tomo Live IP Auction & Conference 2009 Sponsorship Opportunities*, at [http://www.oceantomo.com/PDFs/2009sponsor\\_packet.pdf](http://www.oceantomo.com/PDFs/2009sponsor_packet.pdf) (last visited Jun. 17, 2009).

51. Mario Benassi and Alberto Di Minin, *Playing In Between: Patent Brokers in Markets for Technology*, R&D MGMT 69 (2009).

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52. OCEAN TOMO SPRING 2006 CATALOGUE 3-5; OCEAN TOMO FALL 2006 CATALOGUE 14-17; OCEAN TOMO SPRING 2007 CATALOGUE 8, 20-24; OCEAN TOMO SUMMER 2007 CATALOGUE 10; Ocean TOMO FALL 2007 CATALOGUE 15, 27-29; OCEAN TOMO SPRING 2008 CATALOGUE 13-16; OCEAN TOMO SUMMER 2008 CATALOGUE 17; OCEAN TOMO FALL 2008 CATALOGUE 14-15, 17-19; *Ocean Tomo Live IP Auction & Conference 2009 Sponsorship Opportunities*, at [http://www.oceantomo.com/PDFs/2009sponsor\\_packet.pdf](http://www.oceantomo.com/PDFs/2009sponsor_packet.pdf) (last visited Jun. 17, 2009).

53. Don Clark, *Inventors See Promise In Large-Scale Public Patent Auctions*, WALL ST. J., Mar. 6, 2006.

54. See bidding information and conditions of sale in the Ocean Tomo auction catalogues. This period was 12 months for the Spring 2006 auction.

55. According to Dr. Hidero Niioka: "While this kind of marketplace may be a good business opportunity for patent auctioning firms, it remains doubtful that it is a good marketplace for investors looking for valuable patents or other IP rights." Hidero Niioka, *Patent Auctions: Business and Investment Strategy in IP Commercialization*, 1 J. INTELL. PROP. L. & PRAC., 730 (2006).

56. Estimated based on total reported auction revenues. Actual payments to Ocean Tomo are unknown.



require bidders to have demonstrated the financial means to close the transaction. Ocean Tomo requires interested bidders to pre-register before an auction. Pre-registration requires a firm to pay a bidder registration fee of \$1,495<sup>57</sup> and complete a number of forms, including a bidder agreement, a registration form, and a bank letter of guarantee which not only precisely specifies the dollar amount a bidder is qualified to offer, but also discloses the bidder's current account balance.<sup>58</sup> By requiring that buyers pre-register and pre-qualify before an auction, Ocean Tomo presumably ensures that bidders can honor the sums they have offered, and removes the time-consuming burden of financial-related due diligence from the seller. Pre-qualification of bidders also provides some peace of mind to bidders, as it is likely to reduce "shilling"—a practice where the seller, or people affiliated with the seller, deceptively bid on an item solely to increase the final bid price.

The most common method of price setting chosen by Ocean Tomo—bidding for an up-front payment—also streamlines the process. By removing from the compensation package running royalties, milestone payments, rights' carve outs, or "kicker" provisions associated with performance, the auction has fewer moving parts than the typical negotiation process. (It should be noted, however, that a similar outcome could be achieved outside an auction setting.) The seller articulates his/her own minimum acceptable valuation of the asset via the reserve price, and the potential buyer(s) articulates their valuations via bidding. The evaluation of offers from multiple interested buyers is straightforward, and if the seller's valuation exceeds that of the potential buyer(s), there is no back-and-forth negotiation, no re-structuring of payment terms for sharing of risks and payoffs—the transaction simply does not occur during the auction. Limiting bidding to the amount of up-front payments also removes the due diligence burden associated with evaluating a buyer's ability to successfully commercialize the patent—an important concern in agreements with performance-based components such as running royalty rates, but one that is irrelevant to the auction structure chosen by Ocean Tomo (where the lot simply goes to the highest bidder).

Lengthy negotiations increase uncertainty in bilateral bargaining. The very existence of the Ocean Tomo

auctions may encourage shorter negotiation times for traditional bilateral negotiations. A deadline, such as a looming auction date, may decrease negotiation time. The prospect of having a patent offered for auction on a scheduled date may encourage slow-moving potential purchasers to commit to a deal rather than risk having the patent they are interested in be put up for auction. If the technology is one where a great deal of due diligence is not required to evaluate a patent's merits, the presence of a valid and vibrant auction format may indeed encourage more deals to be settled more quickly in private.

### C. Anonymity

Prospective patent purchasers often strongly prefer to have a way to act anonymously and keep their identities confidential because the purchase of a patent can be valuable competitive intelligence. According to Andrew Ramer, former President of Ocean Tomo Auctions, LLC: "If you're a Motorola and you want to acquire IP, you don't want people to know your strategic plans, and you don't want people to know how much you're willing to pay."<sup>59</sup> When the patent portfolio of Orca Technology, Inc., a bankrupt disk drive manufacturer, was auctioned by the U.S. government, "[a]nonymity was required because the likely bidders were companies that manufacture infringing products ... the winning bidder would see the losers as candidates for a lawsuit."<sup>60</sup>

The Ocean Tomo auctions have several mechanisms for maintaining bidder anonymity, including remote bidding as well as proxy bidding via Ocean Tomo staff and even shell corporations set up specifically for the auction, thus enabling bidder anonymity not only from fellow bidders, but also from Ocean Tomo. Many sales at the Ocean Tomo auctions were to anonymous bidders. In some of the Ocean Tomo sales, bids via telephone were just as common, if not more so, than bids from the auction floor. In fact, anonymous bidding was so prevalent at the Fall 2006 auction that only two bidders—Intellectual Ventures and AT&T Corporation—were not operating anonymously.<sup>61</sup> Additionally, in the Spring 2009 auction, the "most

57. <http://www.regonline.com/Checkin.asp?EventId=678231> (last visited Mar. 17, 2009).

58. Ocean Tomo FAQs, at [http://www.oceantomo.com/auctions\\_FAQ.html](http://www.oceantomo.com/auctions_FAQ.html) (last visited Mar. 17, 2009).

59. Jenny B. Davis, *IP, Going Once ... Twice*, ABAJ., Aug. 2007, at [http://www.abajournal.com/magazine/ip\\_going\\_once\\_twice](http://www.abajournal.com/magazine/ip_going_once_twice). Additionally, George Hoyem, managing director of Blueprint Ventures, stated that, "Corporations don't want open and free flowing information around intellectual property—they want to keep it close." See Deborah Gage, *Few Bidders for High-Tech Patents at Auction*, S. F. CHRON., Mar. 28, 2009.

60. Bruce Rubenstein, *Patent Auction: The Property Isn't Real but the Money Is*, CORP. LEGAL TIMES, Jul. 1995.

61. John Brigardner, *Going Twice*, IP L. AND BUS., Dec. 1, 2006.

serious bidders made bids by phone.”<sup>62</sup> The extent to which bidders were able to successfully maintain their anonymity after the auctions is unknown.

## V. Shortcomings of the Ocean Tomo Auctions

Though lauded by some as a “great success,”<sup>63</sup> the actual data gathered from publicly available sources regarding Ocean Tomo auctions, particularly of late, paint a somewhat less upbeat picture. The number of offers and transactions has been modest, the revenues generated for patent sellers have been low, even compared with Ocean Tomo’s own expectations, and the growth in auction activity over time has been limited.

### A. Offer and Transaction Volume

As Figure 2 shows, sellers have offered 698 patent lots covering 2,037 individual patents through the Ocean Tomo auctions. For the last two years, roughly 500 patents have been made available annually.

By several measures, the pool of available IP rights offered through the auctions has been small.

- From 2000 to 2008, the U.S. Patent and Trademark office issued over 150,000 patents annually.<sup>64</sup>
- Ocean Tomo has claimed that, cumulatively, there are over 33,000,000 patent assets available worldwide.<sup>65</sup>
- TechTransferOnLine.com, which claims to be the largest IP portal in the world, currently has 50,000 patent facilities listed on its Web site as available for purchase or licensing.<sup>66</sup>
- More than 10,000 transferable technologies from 40 research institutions are available at [www.SparkIP.com](http://www.SparkIP.com).<sup>67</sup>

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62. Deborah Gage, *Few Bidders for High-Tech Patents at Auction*, S. F. CHRON., Mar. 28, 2009.

63. Don Clark, *Patent Auction Fails to Generate Much Revenue*, WALL ST. J., Apr. 6 2006 (quoting Ocean Tomo CEO James Malackowski).

64. [http://www.uspto.gov/go/taf/us\\_stat.htm](http://www.uspto.gov/go/taf/us_stat.htm) (last visited Mar. 26, 2008).

65. Press Release, Ocean Tomo LLC, Ocean Tomo’s *www.PatentBidAsk.com* Features Patents Available For Immediate Purchase Related to Art Quality Inkjet Printing on Fabrics, Therapeutic Uses on 13-CIS-Retinoic Acid, and Other Novel Technologies (Jul. 8, 2008).

66. Press Release, e-IP, *www.TechTransferOnline.com* Becomes Free to List Intellectual Property (Dec. 4, 2008) and E-mail from Christophe Sevrain, Jan. 7, 2009.

67. <http://www.sparkip.com/#2;17> (last visited Apr. 8, 2008). SparkIP has commitments from 25 additional research institutions to list their technologies in the near future.

• Tynax, a global patent and technology exchange, has over 10,000 available patents and technology<sup>68</sup>.

• IPVALUE Management, an IP commercialization firm, engages with partners who owned, as of 2005, 18,000 patents worldwide.<sup>69</sup>

• Intellectual Ventures, a company that focuses on funding the creation of new inventions, has more than 20,000 investment assets under management. “The company files thousands of patents a year and works with hundreds of inventors worldwide.”<sup>70</sup>

Figure 2 also shows that only 276 lots (covering 641 patents) were actually sold over the course of the auctions for which complete results were published.<sup>71</sup> In 2006 and 2008, about 240 patents actually changed hands on an annual basis.

On several bases, the number of consummated transactions has been small as well.

• TechTransferOnLine, the IP portal, has reported that it sells or licenses 600 to 1,200 patents per year.<sup>72</sup>

• IPotential, which is a patent brokerage service firm, has been involved in 4,000 transactions of patents and applications since 2004.<sup>73</sup> That equates to roughly 800 patent transactions annually.

• SRI International, a non-profit scientific research institute, has licensed “hundreds of SRI patents,” and has more than 1,000 patents worldwide.<sup>74</sup>

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68. <http://www.tynax.com/ttx1/default.asp> (last visited Mar. 30, 2009).

69. Press Release, IPVALUE Management, PARC Partners with IPVALUE for Commercialization of Intellectual Property (May 5, 2005).

70. INTELLECTUAL VENTURES FACT SHEET, SPRING 2009, at [http://www.intellectualventures.com/docs/IV\\_FactSheet\\_Mar09.pdf](http://www.intellectualventures.com/docs/IV_FactSheet_Mar09.pdf) (last visited Mar. 30, 2009). Intellectual Ventures has purchased patent lots through the Ocean Tomo auctions.

71. An additional 6 lots appear to have been sold in the Spring 2009 auction, covering at least 6 patents. See Deborah Gage, *Few Bidders for High-Tech Patents at Auction*, S. F. CHRON., Mar. 28, 2009.

72. According to Christophe Sevrain, “[A]pproximately 50-100 patents are sold or licensed [using *TechTransferOnline.com*] every month.” Press Release, e-IP, *www.TechTransferOnline.com* Becomes Free to List Intellectual Property (Dec. 4, 2008).

73. <http://ipotential.com/> (last visited Jun. 15, 2009) and Erin Coe, *Patent Auctions Invite New Opportunities, Risks*, LAW360, Jun. 17, 2008, at [http://www.law360.com/print\\_article/57744](http://www.law360.com/print_article/57744).

74. <http://sri.com/about/facts.html> (last visited Mar. 30, 2009); SRI Overview, 2008, at <http://sri.com/about/documents/SRI-Overview.pdf> (last visited Mar. 30, 2009); [http://sri.com/rd/ho\\_t.html](http://sri.com/rd/ho_t.html) (last visited Mar. 30, 2009).

- General Patent Corporation, the oldest patent enforcement firm in the U.S., has had 10 clients for whom it negotiates agreements for the use of their technology.<sup>75</sup> It has engaged in “many successful patent and trademark licensing and enforcement campaigns that have netted millions of dollars in licensing revenues and settlements for [its] clients.”<sup>76</sup>
- RoyaltySource, perhaps the most well-known technology and trademark sales and licensing transaction database, contained over 7,000 licenses in its database by the end of 2007 (over 500 of which were added in 2008).<sup>77</sup>
- Figure 2 also shows that while many lots have been offered for sale at each auction, Ocean Tomo has, on average, been able to sell only 38 percent of those listed. The percent of lots sold ranged from only 7 percent in the Spring 2009 auction to a high of 62 percent in the Spring 2008 auction.

Though a lot sale percentage in the 40 to 50 percent range may be considered by some an impressive success rate,<sup>78</sup> the stock of available lots has been screened by both Ocean Tomo and the sellers. Sellers screen by simply choosing whether a patent is likely enough to sell to merit their furnishing due-diligence materials and paying a listing fee of \$1,000 or more. Ocean Tomo, which “employs a number of evaluative techniques and proprietary methods to determine qualification of intellectual property to the auction,”<sup>79</sup> also culls down the stock of available lots to those with at least some likelihood to sell. In theory, the lots made available should be modestly attractive ones.

Although the lots have been pre-screened, they still

may be subject to adverse selection, i.e., sub-optimal sorting due to asymmetric information, which in the present context means that the IP auctioned may be for sale precisely because the sellers are willing to sell it.<sup>80</sup> As noted by one commentator, it is reasonable to doubt that savvy patent holders would part with IP that was core to their business or sell IP that had a high likelihood of being successfully (lucratively) asserted against others—at least not below a reasonable reserve price. Such logic should make potential buyers skeptical of acquiring any “gold nuggets” for a “steal.”<sup>81</sup> Anecdotal evidence indicates that at least some sellers at the auction had tried to sell their technology through traditional means and failed, and were using the auction as a selling mechanism of last resort. Such logic can lead to bidder expectations that the lots offered are of low quality, with corresponding lowering of expected value of the items for sale, was presumably what motivated one participant in the Spring 2006 auction, a licensing professional affiliated with Kansas State University looking to raise funds by selling donated patents, to comment that, “Going to auction was a hard decision for us,” because “[w]e do not believe we will get fair market value.”<sup>82</sup>

## B. Revenues Generated

Across the ten auctions, \$114.6 million reportedly has been raised. For the first eight auctions, the \$109.7 million raised equates to about \$176,000 per patent sold. The most recent auction generated \$1.7 million—equating to an average of \$95,900

75. <http://generalpatent.com/about/clients-general-patent-corporation> (last visited Mar. 30, 2009).

76. <http://generalpatent.com/about/facts> (last visited Mar. 30, 2009).

77. *Industry Royalty Rate Data Summary, 2008-6 LICENSING ECON. REV.* 1-12, 6 (Dec. 2008).

78. “... those who have ever attended a Sotheby’s auction or a car auction know that typically only about one-third to one-half of the items offered for sale are actually going to sell.” James Malackowski, *The Intellectual Property Marketplace: Past, Present and Future*, 5 J. MARSHALL REV. INTELL. PROP. L. 605-616, 608 (2006). In contrast, according to an one study, “The average sale rate for impressionist and modern art is 71% over the period of the sample [1980-1990], and the average sale rate for contemporary art is 77% [sample period=1982-1994].” Orley Ashenfelter, Kathryn Graddy, and Margaret Stevens, *A Study of Sale Rates and Prices in Impressionist and Contemporary Art Auctions*, at 7 (2001), at <http://www.cepr.org/meets/wkcn/6/696/papers/graddy.pdf> (last visited Apr. 14, 2009).

79. More specifically, “Ocean Tomo will conduct an initial assessment of submitted IP to determine if it is appropriate for live auction. It will be intensively reviewed to ensure that the highest quality property is at auction. For the patent assets, Ocean Tomo utilizes its proprietary rating and assessment platform, the Intellectual Property Quotient or (IPQ), which objectively scores and rates patent assets based on a proven statistical methodology.” [http://www.oceantomo.com/auctions\\_FAQ.html](http://www.oceantomo.com/auctions_FAQ.html) (last visited Apr. 14, 2009). For its Spring 2006 auction, Ocean Tomo winnowed down the submissions of more than 1,000 patents to 410 patents in 76 lots. (“more than 1,000 patents” from Don Clark, *Inventors See Promise in Large-Scale Public Patent Auctions*, WALL ST. J., Mar. 9, 2006, at B1; number of patents and lots offered for auction from authors’ data.

80. For the classic explanation of this phenomena as illustrated by the used car market, see George A. Akerlof, *The Market for ‘Lemons’: Quality, Uncertainty and the Market Mechanism*, 84 Q. J. ECON., 499-500 (Aug. 1970).

81. Hidero Niioka, *Patent Auctions: Business and Investment Strategy in IP Commercialization*, 1 J. INTELL. PROP. L. & PRACTICE, 730 (2006).

82. Don Clark, *Inventors See Promise in Large-Scale Public Patent Auctions*, WALL ST. J., Mar. 9, 2006, at B1. One is left to wonder why, if the seller did not expect to receive fair market value from selling at auction, the lots were offered at auction anyway.

per patent sold. The past two years' auctions have resulted in annual revenues averaging approximately \$31 million.<sup>83</sup>

Much of the revenue that was realized in the auctions was generated by a small number of transactions. Nearly 25 percent of total revenues generated by the auctions emanated from the top three lots, and approximately 36 percent of total revenues generated emanated from the highest selling lot in each auction.<sup>84</sup> Excluding those transactions, the median prices paid in the first eight auctions have been between \$110,000 and \$131,000 per patent.<sup>85</sup>

In relative terms, the \$30.8 million raised per year has been small.

- The U.S. patent “market” was reported to have generated transactions totaling \$500 million in 2006 alone.<sup>86</sup>
- IPotential, an IP patent and brokerage firm, sold \$104 million in patents in 2007, \$50 million in Q2 2008, and \$265 million over its five years of existence.<sup>87</sup>
- Patent licensing revenues were in the tens of billions of dollars as far back as the early 1990s<sup>88</sup> and have

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83. Based on revenues from the Fall 2007 through Summer 2009 auctions.

84. The top three lots include the rights to the entire Jimi Hendrix music catalogue, which sold for \$16.5 million in Fall 2006; a portfolio including over 85 patents related to processing of digital data in bit streams (described as “a notable IP portfolio owned by the subsidiary of a world-renowned multi-national corporation”), which sold for \$6.6 million in Spring 2008; and an Internet shopping patent, which sold for \$4.9 million in Summer 2007. See Ocean Tomo LLC Press Releases for Apr. 4, 2008, Jun. 4, 2007 and Nov. 2, 2006. The remaining 7 lots include lot 20 from Spring 2006, lot 20 from Spring 2007, lot 20 from Fall 2007, lot 7 from Summer 2008, lot 19 from Fall 2008, lot 59a from Spring 2009 and lot 5 from Summer 2009, each of which related to patent rights and sold for between \$900,000 and \$2.8 million each.

85. Deducting the seller and buyer premiums reduces those amounts to \$100,000 to \$119,091.

86. Ashby H. B. Monk, *The Emerging Market for Intellectual Property: Drivers, Restraints, and Implications*, Dec. 11, 2008, at 7, at <http://ssrn.com/abstract=1092494>.

87. Press Release, IPotential, IPotential Announces Record Patent Sales of \$104 Million in 2007 (Feb. 19, 2008), at [http://ipotential.com/news/releases/IPotential-Record%20Year\\_Adds%20%20senior%20staff.pdf](http://ipotential.com/news/releases/IPotential-Record%20Year_Adds%20%20senior%20staff.pdf); Press Release, IPotential, IPotential Announces Record Patent Sales of \$50 Million in Q2 2008 (Jul. 23, 2008), at <http://ipotential.com/news/releases/IPotential%20Announces%20Record%20Patent%20Sales%20of.pdf>; and Press Release, IPotential, IPotential Announces 5th Consecutive Year of Record Patent Sales (Jan. 29, 2009), at <http://ipotential.com/news/releases/IPotential-2008%20Year%20Results.pdf>.

88. Kevin G. Rivette and David Kline, *Rembrandts In The Attic: Unlocking The Hidden Value Of Patents* 6 (2000), Citing The Economist, Aug. 22, 1992, at 56 and Fred Warshofsky, *The Patent Wars: The Battle To Own The Worlds Technology* 30 (1994).

reached over \$100 billion annually since then.<sup>89</sup>

- U.S. universities, hospitals, research institutions and technology management companies that are members of the Association of University Technology Managers (“AUTM”) have collectively earned in excess of \$1 billion in annual licensing revenue every year from 2000 to 2007. In 2007, AUTM members received over \$2.6 billion in licensing revenues.<sup>90</sup>
- For the past 15 years, IBM has been awarded more U.S. patents than any other company. In 2005 alone, IBM was awarded 2,941 U.S. patents, and in 2007 earned about \$1 billion annually from its intellectual property.<sup>91</sup>
- Academic institutions have made the following amounts in recent structured IP sales: Emory University, \$540 million in 2005; New York University, \$650 million in 2006; Massachusetts General Hospital, \$284 million in 2007; Northwestern University, \$700 million in 2007.<sup>92</sup>

Ocean Tomo's financial results appear to be disappointing in relation to even its own assessment of the value of the patents. The lots that actually sold commonly changed hands for a price well below the Ocean Tomo estimated value (when that value was

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89. Andrew W. Carter and Fayth A. Bloomer, *Generating Cash from a Patent Portfolio*, PAT. STRATEGY & MGMT., 5 (Aug. 2004).

90. AUTM U.S. Licensing Activity Survey: FY 2004, *Survey Summary*, 24 (2005); AUTM U.S. Licensing Activity Survey: FY 2005, *Survey Summary*, Data Appendix (2006); AUTM U.S. Licensing Activity Survey: FY 2006, *Survey Summary*, Data Appendix (2007); AUTM U.S. Licensing Activity Survey: FY 2007, *Survey Summary*, Data Appendix (2008).

91. “As a result of innovations in these and other areas, IBM was once again awarded more U.S. patents in 2007 than any other company. This marks the 15th year in a row that IBM achieved this distinction. In addition to producing world-class hardware and software products, IBM innovations are a major differentiator in providing solutions for the company's clients through its growing services activities. The company's investments in R&D also result in intellectual property (IP) income of approximately \$1 billion annually. Some of IBM's technological breakthroughs are used exclusively in IBM products, while others are licensed and may be used in either/both IBM products and/or the products of the licensee.” International Business Machines Incorporated, 2007 Annual Report (Form 10-K) 6 (2008). IBM was awarded approximately 3,000 patents in both 2005 (2,941) and 2004 (3,248). Press Release, United States Patent and Trademark Office, USPTO Releases Annual List of Top 10 Organizations Receiving Most U.S. Patents (Jan. 10, 2006), at <http://www.uspto.gov/web/offices/com/speeches/06-03.htm>.

92. David Yurkerwich, *Patent Sales and the IP Business Plan, Licensing in the Boardroom* 39 (2008), at <http://www.iam-magazine.com/issues/Article.ashx?g=a81ebc24-c1bd-476d-a49f-af600075eb7c> (last visited Apr. 17, 2009).



**Figure 3: Distribution Of Sales Value As A Percent Of Estimated Value**

	Spring 2006	Fall 2006	Spring 2007	Summer 2007	Fall 2007	Spring 2008	Summer 2008	Fall 2008	Spring 2009	Summer 2009
Unsold	65.8%	74.0%	49.3%	72.5%	50.0%	38.4%	55.4%	59.3%	N/A	86.2%
Sold at < 80% of estimated value	30.3%	5.2%	19.4%	17.6%	40.8%	39.5%	33.8%	29.7%	N/A	0.0%
Sold at +/- 20% of estimated value	3.9%	15.6%	16.4%	3.9%	6.6%	10.5%	6.2%	7.6%	N/A	3.4%
Sold at > 120% of estimated value	0.0%	4.2%	14.9%	3.9%	1.3%	8.1%	4.6%	2.5%	N/A	10.3%
Sold & Estimated Value N/A	0.0%	1.0%	0.0%	2.0%	1.3%	3.5%	0.0%	0.8%	N/A	0.0%

known).<sup>93</sup> With the exception of Spring 2008, when approximately 50 percent of estimated value was realized at sale,<sup>94</sup> and Spring 2009,<sup>95</sup> the percent of total estimated value of lots offered for sale that has been realized as revenue through actual sales in any given auction has ranged from 13 to 27 percent<sup>96</sup> and has shown little discernable trend. Of the lots for which an estimated value was available, Figure 3 shows that up to 40 percent sold for less than 80 percent of the Ocean Tomo estimated value. In the three auctions held in 2008, one-third or more of lots for which estimated value was available sold for less than 80 percent of the estimated value. By contrast, between zero and 15 percent of lots per auction sold for greater than 120 percent of the estimated value in the first eight auctions, and in the most recent three auctions, between 2 and 10 percent of lots sold for greater than 120 percent of the estimated value.

93. Ocean Tomo estimated values for roughly 90 percent of the lots across the eight auctions from Spring 2006 through Fall 2008. For the Summer 2009 auction, reserve prices, rather than estimated values, were published.

94. This increase appears to be largely driven by the sale of three lots that sold for over \$400,000 in excess of the estimated value. The Spring 2008 was also the auction with the highest percentage of lots sold.

95. Spring 2009 individual lot sales values are unavailable. Lot 59a, Prepaid Wireless Phone System, was the highest selling lot at \$1.5 million, however its estimated value was not publicly available.

96. See Figure 2. All percent of estimated value sold calculations includes sales of only those lots for which estimated value was made publicly available. For some lots that sold for high values, such as a lot that sold for \$6.6 million in Spring 2008, estimated value was not made publicly available.

In the early auctions, some lots sold for as little as \$2,000,<sup>97</sup> and in later auctions, many sold for the minimum reserve price of \$10,000. Despite attendance of between 200 to 500 people at the auctions, the weak sales prices relative to the valuations may be indicative of “thin” markets for individual patents at the auctions.<sup>98</sup>

Many lots received no bidding at all, and a number of those that did receive bids had limited competition. Vigorous bidding appeared to be the exception, rather than the rule. But Ocean Tomo’s press releases have focused on those lots that actually generated vigorous

97. John Brigardner, *Going Twice*, 4 IP L. AND BUS. 14 (2006).

98. See, e.g. Press Release, Ocean Tomo LLC, Ocean Tomo Announces Impressive \$12.8m Results from Fall 2008 Live Intellectual Property Auction (Nov. 3, 2008); Press Release, Ocean Tomo LLC, Ocean Tomo Completes First Pan-European Live Intellectual Property Auction with Record-Breaking Results (Jun. 4 2007). Number of attendees includes non-bidders. The number of actual bidders at the auctions has not been publicized. As it is unlikely that, for example, a bidder interested in obtaining automotive-related patents was also interested in obtaining medical-related patents, the patent marketplace at the Ocean Tomo auctions cannot be described as one single marketplace, but rather a collection of marketplaces for different types of patents. Thus, total attendance at an auction will not accurately reflect the number of actual bidders interested in any given lot, especially at auctions where 50 to 100 lots across X to Y categories are offered for sale. By way of illustration, one attendee of the Spring 2009 auction wrote, “The impression I had there was the same that many who first attended yesterday probably came away with - i.e., that this is a very thin market, with few bidders, and very specialized property for sale.” *Spring 2009 Ocean Tomo Auction: The Secondary Market Evolves*, at [http://brokensymmetry.typepad.com/broken\\_symmetry/2009/03/spring-2009-ocean-tomo-auction-the-secondary-market-evolves.html](http://brokensymmetry.typepad.com/broken_symmetry/2009/03/spring-2009-ocean-tomo-auction-the-secondary-market-evolves.html) (last visited Apr. 16, 2009).

bidding competition.<sup>99</sup> Often, bidding would fail to meet the set reserve price, resulting in a failure to sell.<sup>100</sup> In the Spring 2008 auction, only 14 of the 80 lots received any bids at all.<sup>101</sup> The pre-registration requirement for bidders may have prevented last-minute bidders from jumping in and bidding on lots with unexpectedly low prices.<sup>102</sup> Although there may have been many attendees in the aggregate, lack of bidding indicates that attendance was “thin” in terms of interest for any particular lot.

Sales have taken place in private negotiations after the auctions’ close. In the 2006 auctions, the auctioneer encouraged bidders to seek post-auction deals when little or insufficient interest was shown on the auction floor.<sup>103</sup> The value of the post-auction sales in the Spring 2006 (\$5.4 million), in fact, exceeded the value of the lots sold during the auction (\$3.0 million). There were at least \$1.1 million in post-auction sales associated with the Spring 2007 auction.<sup>104</sup> A press release after the Summer 2008 auction in Europe reported that, “Twenty-nine of the sixty offered lots were sold on the floor for a 48 percent transaction success rate, and based on immediate post-auction interest, this rate is expected to exceed 60 percent.”<sup>105</sup> In closing remarks after the Spring 2009 auction, Ocean Tomo’s CEO James Malackowski reported, “I

anticipate there will be extensive post-auction activity.”<sup>106</sup> Further information regarding post-auction sales is limited, but Ocean Tomo personnel and press releases have indicated that a post-auction market is routinely expected after each auction and has, at least at times, been vigorous.<sup>107</sup> According to Andrew Ramer, “[w]hen you bring that many decision-makers into the room, there are plenty of deals happening that we aren’t even involved in.”<sup>108</sup>

By its own *ex ante* standards, it would be difficult for Ocean Tomo to conclude that the auctions have been a success. For the first auction alone, it had hoped to generate \$100 million.<sup>109</sup> It succeeded in generating, however, \$8.4 million.<sup>110</sup> At the March 2009 auction, only six out of over 80 lots sold, generating under \$3 million, and only eight others received any bidding at all.<sup>111</sup> A live auction previously scheduled for June 2009 in Hong Kong was cancelled, and there has been a recent leadership change in Ocean Tomo’s transaction business, of which its live public auctions are a part.<sup>112</sup>

99. Auctioneer Charlie Ross commented on bidding in the Fall 2007 auction, saying, “We were treated to some extremely spirited bidding on several of the lots.” Press Release, Ocean Tomo Auctions Releases Results of Fall 2007 Live Intellectual Property Auction (Oct. 30, 2007) (emphasis added). Ocean Tomo described the bidding in the Fall 2008 auction: “The auction included several rounds of active floor bidding.” Press Release, Ocean Tomo Auctions Announces Impressive \$12.8M Results From Fall 2008 Live Intellectual Property Auction (Nov. 3, 2008) (emphasis added).

100. See, e.g. Machael Kanellos, *Few Buyers at Patent Auction*, Apr. 6, 2006, at [http://news.cnet.com/2102-1014\\_3-6058737.html](http://news.cnet.com/2102-1014_3-6058737.html) (last visited Jun. 15, 2009), indicating “buyers and sellers had a tough time connecting at the highly publicized auction. . . . Most of the time, the bids failed to meet the minimum reserve price set by the seller, causing the item to be withdrawn.”

101. Deborah Gage, *Few Bidders for High-Tech Patents at Auction*, S. F. CHRON., Mar. 28, 2009.

102. “Some people told me after the auction, ‘If I had known that patent would sell for \$15,000, I would have bought it,’” says Malackowski. Seidenberg, Steve, *On the Block: Despite Poor Sales, Experts Deem Ocean Tomo’s IP Auction a Success*, INSIDE COUNS., Jul. 2006.

103. Mike Langberg, *Lots of Patents for Sale, but Few Bids*, SAN JOSE MERCURY NEWS, Apr. 7, 2006.

104. Press Release, Ocean Tomo LLC, Ocean Tomo Auctions Releases Results of Spring 2007 Live Intellectual Property Auction (Apr. 23, 2007).

105. Press Release, Ocean Tomo LLC, Ocean Tomo Auctions Announces Impressive \$12.6m Results from Second European Live Intellectual Property Auction (Jun. 30, 2008).

106. *Bummer Before the Summer: Ocean Tomo Auction a Bust*, at [http://thepriorart.typepad.com/the\\_prior\\_art/2009/03/ocean-tomo-2009-spring-auction-results.html](http://thepriorart.typepad.com/the_prior_art/2009/03/ocean-tomo-2009-spring-auction-results.html) (last visited Apr. 16, 2009);

107. “... numerous sellers came to the green room after the auction and said they were willing to reduce their reserves and willing to make a deal. We were surprised at how much of that happened.” James Malackowski, *The Intellectual Property Marketplace: Past, Present and Future*, 5 J. MARSHALL REV. OF INTELL. PROP. L., 605-616, (2006). Ocean Tomo post-auction press releases detailing auction results consistently indicate “further transactions anticipated to close in the coming weeks.” See, e.g., Press Release, Ocean Tomo LLC, Ocean Tomo Announces Impressive \$12.8m Results from Fall 2008 Live Intellectual Property Auction (Nov. 3, 2008); Press Release, Ocean Tomo LLC, Ocean Tomo Completes First Pan-European Live Intellectual Property Auction with Record-Breaking Results (Jun. 4 2007).

108. Jenny B. Davis, *IP Going Once... Twice*, ABA J., Aug. 2007, at [http://www.abajournal.com/magazine/ip\\_going\\_once\\_twice](http://www.abajournal.com/magazine/ip_going_once_twice).

109. Hidero Niioka, *Patent Auctions: Business and Investment Strategy in IP Commercialization*, 1 J. INTELL. PROP. L. & PRACTICE, 729 (2006).

110. See Figure 2.

111. *Bummer Before the Summer: Ocean Tomo Auction a Bust*, at [http://thepriorart.typepad.com/the\\_prior\\_art/2009/03/ocean-tomo-2009-spring-auction-results.html](http://thepriorart.typepad.com/the_prior_art/2009/03/ocean-tomo-2009-spring-auction-results.html) (last visited Apr. 16, 2009); Deborah Gage, *Few Bidders for High-Tech Patents at Auction*, S. F. CHRON., Mar. 28, 2009.

112. *Head of transactions at Ocean Tomo resigns*, MANAGING INTELL. PROP., Apr. 1, 2009, at <http://www.managingip.com/Article.aspx?ArticleID=2168564>; Press Release, Ocean Tomo LLC, Ocean Tomo Predicts New Direction in IP Transactions: Dipanjan Nag and Michael Anglin to Co-Head Efforts (Mar. 2, 2009), at [http://www.oceantomo.com/press/Transactions\\_3.2.09.pdf](http://www.oceantomo.com/press/Transactions_3.2.09.pdf).

### C. Growth in Activity

Figure 2 reveals that, until the auction in Spring 2009, in general, there has been growth in the number of lots offered and the number of lots sold at auction. The former has grown from 76 in Spring 2006 to 118 in Fall 2008. The latter has grown from 26 to 48.

Growth has not been consistent throughout the period, however. Both the number of lots offered and the number of lots sold has increased 4 times but decreased 5 times from auction to auction. The average price paid per patent has similarly experienced fluctuations. Measured annually from Spring to Spring, the number of lots offered shrank 12 percent from Spring 2006 to Spring 2007, grew 28 percent from and Spring 2007 to Spring 2008 and remained relatively flat from Spring 2008 to Spring 2009, while the number of lots sold grew 10 percent from spring 2006 to Spring 2007, grew 56 percent from Spring 2007 to Spring 2008, and shrank 89 percent from Spring 2008 to Spring 2009. Measured annually from Fall to Fall, the number of lots offered shrank 21 percent from Fall 2006 to Fall 2007 and grew 55 percent from Fall 2007 to Fall 2008, while the number of lots sold grew 52 percent and 26 percent over those periods, respectively. Over a two year period, from Spring 2006 to Spring 2008, the number of lots offered grew from 76 to 86 (13 percent) and the number of lots sold grew from and 31<sup>113</sup> to 53 (71 percent). From Fall 2006 to Fall 2008, the number of lots offered grew from 96 to 118 (23 percent) and the number of lots sold grew 25 to 48 (92 percent). The lumpiness of activity makes it difficult to discern trends. The current economic recession further complicates growth trends. The patents for the Spring 2009 auction were chosen before the recent economic downturn. With only 6 sold lots out of the 85 that were offered, auctioneer, Charlie Ross, said afterward, “I haven’t talked to myself so much in years.”<sup>114</sup> “Increased acceptance” would be a difficult conclusion to draw.

RoyaltySource, in contrast, shows a relatively constant growth in the number of technology transactions in 15 tracked industries from 2,557 to 3,015 (18 percent) from 2006 to 2007 and 3,015 to 3,525 (17 percent) from 2007 to 2008, for growth over the two year period of 38 percent. According to these same RoyaltySource data, the average licensing rate

also increased relatively steadily from 2006 through 2008.<sup>115</sup>

Lack of “increased acceptance” may be due to the fact that the purported advantages associated with costs, speed and anonymity may not be as unequivocal as hoped.

#### 1. Cost

Although the publicity Ocean Tomo provides may reduce search costs for buyer and seller, and the chosen auction format reduces time and costs for both buyer and seller associated with a lengthy negotiation process, the time and cost associated with due diligence regarding the inherent value of the asset itself is not (and cannot be) reduced by the Ocean Tomo auctions. The cost to a potential buyer of determining his/her maximum willingness to pay is not diminished by the price setting format dictated by the auction. This was recognized by one observer of the Ocean Tomo auctions, who indicated that “[i]f there are some gems in there, it would be tough to find them and expensive to evaluate them.”<sup>116</sup>

Because the payment made by the buyer for the majority of lots offered for sale at the Ocean Tomo

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114. Deborah Gage, *Few Bidders for High-Tech Patents at Auction*, S. F. CHRON., Mar. 28, 2009. The blog Techdirt further commented on the performance of the Spring 2009 Ocean Tomo auction to state, “We’ve never been a fan of Ocean Tomo, the ‘patent auction’ shop that was seen as something of a clearing house for lawyers and patent hoarders looking to buy up patents to squeeze money out of other companies. However, in February, we wrote about an article in the *Chicago Tribune* insisting that the tough economy was increasing patent sales as companies looked to squeeze more value out of their patent portfolios. We questioned the article, noting that it showed absolutely no proof whatsoever that sales were up—other than a claim (with no data) from an Ocean Tomo exec, who had every incentive to make believe people that sales were up. But, in reality, it turns out sales aren’t up. They’re way, way, way, down. Joe Mullin [a reporter at IP Law & Business] writes about the latest Ocean Tomo auction that can reasonably be termed a total disaster after sales didn’t just fall, but fell off a cliff: While some folks I spoke to before the auction said they expected sales this year to be down by as much as 50% from last year, the final results were much worse. Friday’s auction took in just under \$2.9 million—more than 80% less than the roughly \$17 million in patent sales generated by the company’s San Francisco auction last year.” See *Is the Economy Taking a Bite out of Abusive Patent Lawsuits?*, TECHDIRT, Mar. 31, 2009 and <http://thepriorart.typepad.com/> (last visited Apr. 24, 2009).

115. *Industry Royalty Rate Data Summary*, 2006-6 LICENSING ECON. REV.6, Dec. 2006; *Industry Royalty Rate Data Summary*, 2007-6 LICENSING ECON. REV.6, Dec. 2007; *Industry Royalty Rate Data Summary*, 2008-6 LICENSING ECON. REV.6, Dec. 2006.

116. Michael Kanellos, *Patent Auctions: Lawyer’s dream or way of the future?*, CNET NEWS.COM, Mar. 3, 2006.

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113. Includes 5 lots that sold post auction.

auctions is limited to an up-front payment, it is the buyer who must incur the cost of complete up-front evaluation of the technology.<sup>117</sup> Economists have theorized that “licensees prefer to pay royalties instead of lump sum payments because the latter oblige them to make greater efforts in measurement and assessment ex-ante, and introduce tremendous risks (because of the uncertainty concerning the actual value of the technology and the licensee’s ability to efficiently implement it in his products or processes)” and that “lump sum payment [sic] gives purchasers an incentive to engage in extensive presale measurement of the exact value of the technology that is licensed, whereas royalties reduce the licensee’s incentives but require greater post-agreement monitoring and enforcement mechanisms.”<sup>118</sup> The transfer of such costs to buyers limits the total reduction in costs that buyers can actually realize from participating in an auction format IP transaction, and, when combined with the compressed time period available to evaluate the technology (discussed below), is likely to dampen potential buyers enthusiasm for the auction format.

## 2. Speed

When IP is auctioned, “[i]t is in the seller’s interest to make the due diligence burdens [associated with evaluating the IP] as low as possible in order to induce as many bidders as possible.”<sup>119</sup> Ocean Tomo has addressed, in part, the need for bidders to conduct due diligence prior to bidding. Potential buyers who register as bidders receive a password that allows them access to “Data Rooms.” The Data Rooms are secure, online spaces maintained by an independent third party. Each Data Room is specific to an individual lot being offered for auction, and contains due diligence materials about the lot. During the auction itself, Ocean Tomo also makes available a due diligence library assembled by the seller to which only registered bidders have access.<sup>120</sup>

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117. The valuations provided by Ocean Tomo in the auction catalogues may be an attempt to reduce this cost. The usefulness of these valuations is limited, however, because: 1) Ocean Tomo does not purchase the patents and then sell them to willing buyers (as a traditional securities dealer would); 2) Ocean Tomo has an incentive to place the highest valuation possible on the lots, since a portion of its own compensation is a function the final sales price; and 3) as discussed above, few auction transactions have actually come in at or above the Ocean Tomo valuation.

118. Christian Bessy et al., Payment Schemes in Technology Licensing Agreements: A Transaction Cost Approach, 4-5, at <http://ssrn.com/abstract=1259394> (last visited Apr. 10, 2009).

119. Richard Razgaitis, VALUATION AND PRICING OF TECHNOLOGY-BASED INTELLECTUAL PROPERTY 260 (2003).

120. [http://www.oceantomo.com/auctions\\_duediligence.html](http://www.oceantomo.com/auctions_duediligence.html) (last visited Jun. 15, 2009).

Once due diligence is made available, however, potential buyers need time to evaluate it. IP to be made available at Ocean Tomo auctions generally has been announced only a few months prior to the auction date. For example, the auction catalogue for the Spring 2006 auction, which took place April 6, 2006, was made available in February 14, 2006—2 months before the auction. Some lots made available at that auction were announced as late as one week prior to the auction. The auction catalogue for the Spring 2007 auction, which took place April 19, 2007, was made available January 25, 2007, and lots made available for that auction were announced as late as April 5, 2007; the auction catalogue for the Fall 2008 auction, which took place October 30, 2008 was made available August 20, 2008, and availability of additional lots was announced as late as October 21, 2008.<sup>121</sup> By contrast, traditional bi-lateral negotiations can take much longer. A 1997 licensing survey found that the average time to negotiate a patent license was three to 12 months.<sup>122</sup>

Ocean Tomo, in fact, recognized that a complex due-diligence process can make certain patents unsuitable for auction. According to Andrew T. Ramer, “...the auction format was suited to all types of intellectual property except complex pharmaceutical patents, where the density of information is too great for the compressed negotiating atmosphere of an auction.”<sup>123</sup>

In traditional bilateral negotiations, due diligence is sometimes conducted by the seller. In the Ocean Tomo auctions, this is not possible, as bidder identity is kept anonymous and the patent is sold to the highest bidder.<sup>124</sup> As part of seller due diligence, the seller in a traditional bilateral negotiation will not only investigate a buyer’s ability to honor its financial promises, but also a buyer’s ability to successfully commercialize (or otherwise extract value from) the IP at issue.<sup>125</sup> As part of the P&G/Corium “auction” to find a development partner for micro-needle technology, potential partners were asked to submit

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121. [http://www.oceantomo.com/press\\_releases.html](http://www.oceantomo.com/press_releases.html) (last visited Dec. 3, 2008).

122. Stephen A. Degnan and Corwin Horton, *A Survey of Licensed Royalties*, 32 *les Nouvelles*, 91-69, at 92, (1997).

123. Kevin J. O’Brien, *Intellectual Property Is On the Block at a German Auctioneer*, N. Y. TIMES, May 15, 2007.

124. Ocean Tomo’s provision of a bank guarantee does provide some form of due diligence.

125. Given that the Ocean Tomo auctions typically facilitate the outright transfer of patent rights, due diligence of the buyer may not be as critical as in a traditional strategic alliance/license.



a business plan and financials. P&G discovered that “...the more robust the business plan, the more robust the financial offer, because as folks got deeper into the potential for the technology, the value went up.”<sup>126</sup> Because sellers cannot interact with potential buyers and encourage them to compete on their ability to “go deeper” as part of the pre-bidding due diligence process, bidders may place bids based on an incomplete evaluation of the technology, lowering the seller’s expected auction revenues.

The NASA lots in the Fall 2008 auction, which included an obligation to pay what was described as “an ongoing royalty stream” in addition to the up-front payment upon which bidders competed, provide an additional example of an instance where additional due diligence could benefit the seller. If the bidder with the highest bid for up-front payment intended to use the NASA IP for blocking purposes rather than for commercialization purposes (and thus expected to pay zero future running royalties), NASA might have preferred to accept a lower up-front payment in exchange for a large future revenue stream. Even among bidders who intend to commercialize the IP, NASA might prefer one with a lower up front and better commercialization skills than one with the opposite attributes.

While it may be the case that faster transactions can be beneficial in general, who the benefit accrues to may not be known until long after the auction gavel falls, particularly in situations where the IP is purchased by a buyer who intends to commercialize it. Resource-constrained sellers may prefer to forego the opportunity to share in the upside potential of a performance-based compensation scheme in order to avoid costly due diligence, advertising, and monitoring costs and receive a guaranteed, up-front payment for their IP instead. If the IP turns out to be a blockbuster, however, the seller may be worse off for having chosen the cheaper, speedier process (while the buyer is better off). Similarly, optimistic buyers may prefer a speedier, less costly up-front payment that allows them to retain all the future benefits of a blockbuster. But if the IP proves to be a failure, the buyer may have overpaid relative to what payments under a carefully negotiated performance based contract would have been (while the seller is better off). Similarly, buyers who feel they have had insufficient time to evaluate the IP being auctioned may lower

their valuation of the asset in order to compensate for the higher risk associated with purchasing a less than thoroughly evaluated asset.

Speedier transactions could also be beneficial to so-called patent “trolls”—firms that do not commercialize IP, but monetize it through other means (largely through litigation or threat of litigation). To the extent a looming auction deadline reduces the time available for potential buyers to thoroughly evaluate the IP up for sale, this reduced due diligence could increase the appeal of the auction format to potential “trolls.” One observer of the Ocean Tomo auctions indicated that “[i]f there are some gems in there, it would be tough to find them and expensive to evaluate them... this sort of event appeals to potential plaintiffs. It also appeals to companies that want to take things off the market.”<sup>127</sup>

As noted earlier, some buyers who plan to commercialize the IP may have a preference for traditional, private negotiations, as they may fear exposing weaknesses in their own patent/product portfolios if they express interest in purchasing specific intellectual property, particularly if they believe anonymity cannot be maintained through the bidding process. This would further support the argument that the speedier transaction time associated with the auction format is a boon to potential “trolls” who have less of a need to keep their identity secret. Some consider the firm Intellectual Ventures to be a potential patent troll, and Intellectual Ventures has demonstrated its ability to use the Ocean Tomo auction catalog to identify and purchase intellectual property before it even reaches the auction block.<sup>128</sup>

### 3. Anonymity

While, in general, the value of maintaining anonymity in an auction setting is high, the value of and efficient mechanisms for maintaining anonymity can vary depending on the extent to which the assets being sold are of common vs. private value. Some highly-specialized IP lots with limited areas of use and few complementary forms of IP may have strong common value elements, whereas other IP lots—particularly those for which intended use may vary greatly from buyer to buyer, and for those for which complementary IP is both valuable and varies from

126. Kathleen Denis, *Partnering Deals: Solutions Through Synergy*, *les Nouvelles* 29-39, 36 (2005).

127. Michael Kanellos, Patent Auctions: Lawyer’s dream or way of the future?, CNET NEWS.COM, Mar. 3, 2006.

128. See, e.g., the case of the Bell South patents referenced earlier. Michael Orey, *Inside Nathan Myhrvold’s Mysterious New Idea Machine*, BUS. WK., Jul. 3, 2006.

buyer to buyer—are likely to have a strong private value element.<sup>129</sup>

Sellers benefit from successful protection of anonymity to the extent it encourages a larger number of bidders to participate in the auctions. However, for lots that have a strong common value component to their value, the benefits to the seller of anonymity are militated against by the fact that the identity of a bidder is an important component of price discovery in an auction of common value goods in that high bids from a bidder that is a well-respected, successful firm may be taken as a stronger signal of value than bids from an unknown entity.

It is possible, however, that Ocean Tomo could have provided an enhanced level of anonymity for bidders on assets that had a strong private value element to their value, that is, on assets for which an individual's valuation is not affected by the valuations of others. For such private value assets, an open-outcry English auction format was not necessary. While auction theorists have argued that the outcome of an ascending price auction like that used by Ocean Tomo should be effectively the same as the outcome of a sealed bid second price auction,<sup>130</sup> to the extent some bidders would have felt more comfortable with a sealed bid format than an open-outcry format, some lots with high private value elements may have had more bidders if the bidding had been sealed. On the other hand, a sealed bid auction is less exciting for participants and spectators, and may have resulted in less “buzz” and reduced free publicity both for sellers and for Ocean Tomo. Ultimately, if the incremental participation spurred by the additional anonymity provided by a sealed bid format was low, the choice of the higher profile open-outcry format may have been, on net, beneficial.

#### D. Risk Sharing and Financial Arrangements

Restricting bidding to only lump-sum payments has costs as well as benefits. As discussed above, limiting bidding to up-front payments narrows the space of competition (the amount of payment) which can speed up the time it takes to consummate a sale. The potential problem with only allowing up-front

payments is that it excludes all of the other financial innovations developed over the years to facilitate the development of intellectual property.

Much of the difficulty in transferring intellectual property comes from uncertainty or disagreements over the value of the patents at issue. Even when parties agree on general valuation parameters, there can still be significant uncertainty around an expected value of a patent. When a patent is sold for a lump sum, there is no scope for the future unraveling of events to influence current payments. Both parties to the transaction are required to find the ‘certainty equivalent’ value of the patent. Because bearing risk is costly, the lump sum value must be less than the expected value of the patent. (The difference between the two is the insurance value of eliminating the risk.) This arrangement requires the purchaser to insure the seller against the risks associated with the patent. If the seller is in a better position to bear the risk associated with a patent (perhaps because the seller is a larger, more diversified firm) then forcing the transaction to be a sale can be inefficient and lead to lower revenues.

#### VI. Improvements to the Ocean Tomo Auctions

Although the Ocean Tomo auctions have sold hundreds of lots and generated over \$114 million in revenues, the liquidity and revenues generated at auction could be enhanced by modifying the format of the auction to allow risk sharing, introducing combinatorial bidding, and by curtailing post-auction sales activity.

##### A. Format

Auctions work best when bidders are able to easily ascertain the value of the asset offered for sale. At the Ocean Tomo auctions, many of the assets sold were not purely “common value.” Common value assets are generally appropriate for auctions because auctions facilitate the sharing of information and the subsequent price discovery. Whether the IP offered for sale at the Ocean Tomo auctions can be considered common value goods or private value goods depends on the nature of the IP being offered—some IP with a clearly defined use, such as copyrights to a music portfolio, may fall closer to being a common value good, whereas other kinds of IP, such as patents with a wide range of applications, are likely to hold a value that is unique to each bidder because bidders determine value of the lots in combination with their own IP, skill portfolio, and intended use.

As traditional licensing often involves a long-term relationship between inventor and user, it may be

129. According to Ron Epstein, former licensing director of Intel Corp., “One of the problems with patent auctions is they assume similarly situated buyers, but no one is similarly situated because information about a patent cannot be published, such as the contents of an existing confidential licensing agreement.” Erin Coe, *Patent Auctions Invite New Opportunities, Risks*, LAW360, Jun. 17, 2008, at [http://www.law360.com/print\\_article/57744](http://www.law360.com/print_article/57744).

130. Paul Klemperer, *Auction Theory: A Guide to the Literature*, 13 J. ECON. SURV. 227-286, 230 (1999).

possible that inventors will prefer an outright sale only when they have less faith in their invention's likelihood to achieve commercial success.<sup>131</sup> To the extent would-be buyers attending the auctions expected such an adverse selection problem to exist, these buyers may have placed a lower valuation on the IP than they might have in a traditional bilateral negotiation, thus reducing auction prices received by sellers.

Allowing more use of running royalties could enhance risk sharing, sharing of due-diligence costs, and promote more efficient transfer of patents. Unfortunately, once two variables can change (upfront payment and royalty rate), a standard auction is much more difficult to implement. (It requires explicit trade-offs in valuing up-front payments and running royalties.) Allowing more fixed running royalties in combination with bidding on an upfront payment—as was done with some of the NASA patents—would be a move in the right direction. This has precedence in other auctions, such as those for oil leases.<sup>132</sup>

Finally, the Ocean Tomo auction format is not suitable for technologies where a strategic partner is desired, or where know-how is vital. In such situations, it is more important for the inventor and user to establish mutual trust and a strong business relationship than to merely receive the highest market price. In license negotiations to nascent technologies, such as those developed at universities, there is a strong desire on the part of the licensor to ensure that the technology is developed. In such agreements, the licensee must meet development and commercialization milestones, or the technology in many cases will revert back to the licensor. Such licensors would not be interested in auctioning their patent rights, as they would lack recourse against a licensee/acquirer who was interested in the patent merely for defensive purposes, or who might “put it on a shelf” in the face of changing business plans.

## B. Bundling

Rather than auction off each patent individually, Ocean Tomo often chose to bundle similar patents, together with related IP, such as domain names or trademarks, into lots for auction. Yet, such bundling may not be optimal for liquidity or for risk-sharing

because not all IP holders use IP in the same manner. Whereas some purchases wish to put the IP to use, others prefer to use the negative right granted by a patent to block the efforts of others. Some users may be willing to pay for only a limited subset of IP rights for a given patent; others may only be interested in a subset of patents in a given lot.

The Ocean Tomo strategy of packaging patents into lots is effective only to the extent that all bidders would want to purchase the entire package of patents. Inflexible bundling of seemingly-related rights offered at auction may deter some buyers from purchasing if they believe there is risk that they cannot re-sell the portion of the bundle they do not intend to use. Thus, the bundling currently used in the auctions may actually reduce liquidity relative to a flexible bargaining arrangement. It appears that unbundled patent rights sold with more frequency than patent bundles. In fact, as shown in Figure 2, in the Spring 2006 through Fall 2008 auctions, 50 percent of unbundled patent lots sold, whereas only 38 percent of lots that contained more than one patent were sold at auction, and only 12 percent of bundled patent lots sold in the Summer 2009 auction.<sup>133</sup>

On the other hand, some buyers who value acquiring rights to a group of related patents, but would not value any of the group of patents if acquired individually, may be unwilling to risk winning the bid on one patent but losing it on the other(s).

In instances where some bidders would prefer to purchase only some of the patents in a lot, or in which a bidder only wishes to create his/her own combination of desired patents, a combinatorial auction would be more efficient. In a combinatorial auction, bidders can place bids on individual items or packages of items.<sup>134</sup> Bidders may create their own bundles of lots and submit a bid that is conditional on receiving each of the lots in the bundle. This format could address both the needs of bidders who are interested in individual patents and those who are interested only in specific bundles. Whether a group of patents is sold as a package or individually is then determined by which method generates the greatest value.

Like all multi-unit simultaneous auctions, combinatorial auctions are incompatible with the open-outcry

131. See, e.g., Hidero Niioka, *Patent Auctions: Business and Investment Strategy in IP Commercialization*, 1 J. INTEL. PROP. L. & PRACTICE, 730-731 (2006).

132. See, e.g., Robert H. Porter, *The Role of Information in U.S. Offshore Oil and Gas Lease Auctions*, Northwestern University, Department of Economics, Discussion Paper No. 1008 (Sept. 1992).

133. Complete information regarding the Spring 2009 auction was not available.

134. For an overview of combinatorial auctions, see Peter Cramton, et al., *Introduction to Combinatorial Auctions*, at <http://www.cramton.umd.edu/papers2000-2004/cramton-shohamsteinberg-introduction-to-combinatorial-auctions.pdf> (last visited Nov. 25, 2008).

auction format used by Ocean Tomo. Although combinatorial auctions are more complex to participate in and to evaluate than open-outcry English auctions, and are not well-suited to the press-generating kinds of public “events” the Ocean Tomo auctions represent, such formats may increase the liquidity of related patents offered at auction and go a long way towards ensuring patents make their way into the possession of those who value them the most.

### C. Post-Auction Activity

During several of the auctions, the large number of lots that received bids but failed to meet the reserve price prompted the auctioneer to promote post-auction negotiations in order to close a sale. Ocean Tomo press releases leave the possibility of post-auction sales open. Yet, permitting post-auction negotiations is not optimal for producing actual sales during the auction. If post-auction negotiations are allowed, sellers have an incentive to set reserve prices too high. Bidders, in return, may have used the auction for limited price discovery, and then used that information in post-auction negotiations. The practice of allowing, and even promoting, the possibility of post-auction transactions, may be an indication that the auctions are less of a mechanism for producing at-auction transactions, and more of a mechanism for increased publicity in creating a larger market for IP.

Even with the benefits of publicity, such a strategy is risky. If an auction “fails” because there were no bids, it may have been better not to have entered the auction at all. Now, potential purchasers or licensees

will have observed that the perceived value of this technology is low, and will consequently offer much less than their original willingness to pay.

### VII. Conclusion

Although the Ocean Tomo live patent auctions have generated over \$114 million in auction revenue in a little over three years, much of the revenue has been generated by a small number of lots. And while some lots saw vigorous bidding and sold for high prices, most lots either went unsold or sold at a substantial discount to their estimated value. And activity has fallen dramatically in 2009, perhaps reflecting a difficult macroeconomic environment.

The auctions have benefited buyers by allowing anonymous evaluation and bidding, and have benefited both Ocean Tomo and sellers by generating publicity and revenues. While the auction format chosen by Ocean Tomo is easy to understand and administer, and successfully creates a public “buzz” that makes availability of IP for sale known to a wider range of potential buyers, it is not clear that the chosen format has been optimal for all kinds of IP. Allowing additional time for due-diligence and breaking assets into smaller bundles and then using a combinatorial auction may have enhanced liquidity for certain lots. Overall, the auction results indicate that the Ocean Tomo auctions appear to have increased liquidity by bringing together buyers and sellers and by assisting in the due diligence process, but that the current format is suitable only for a small subset of IP rights, and is unlikely to replace traditional bilateral negotiations anytime in the near future. ■