# Q4 2014 Public PAE Report



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### Introduction

Publicly traded patent assertion entities ("PAEs") are a relatively recent phenomenon. Over the past few years, the proliferation of public PAEs has cast some light on the ways in which PAEs seek to earn revenue based on their primary factors of production—capital and patents.

Over the past four quarters alone, the public PAEs detailed in this report have raised over \$916 million in the debt and equity markets while spending more than \$159 million on over 34 patent portfolios. The acquired patents, which relate to a variety of sectors, will likely be enforced by the PAEs.

Even with all of this activity, the public PAE industry is still considered too niche to have widespread, comprehensive coverage by sell-side equity analysts who independently research and analyze companies to generate investment recommendations. The dearth of insight into these companies has enabled a contingent of speculators and day traders who opine—often incorrectly—on what legal developments will mean for the prospects of future settlements or revenue for these companies.

In addition to the lack of sell-side coverage of PAEs, the art of analyzing public equity markets and SEC filings is not a core strength generally for many IP professionals, putting them at a disadvantage when encountering public PAEs as counterparties in patent transactions and/or as potential courtroom adversaries.

Since our inception in 2008, RPX has strived to increase transparency in the patent markets. To that end, this RPX Public PAE Report offers analysis of public PAEs and provides summary statistics for a variety of metrics relevant to the public market, including financial performance and enforcement activity. The goal of this report is to deliver comprehensive information that gives IP professionals unique perspective on public PAEs.

# **Key Findings**

Note: Aggregate figures and counts are relative to the 22 public PAEs detailed in this report.

- Taken as an index, public PAEs have outperformed the NASDAQ over the past quarter at 13.1% (versus 7.1%), largely due to market-cap weighting of the PAE index, but underperformed the NASDAQ over the last 12 months at 8.1% (versus 13.4%). Only seven public PAEs had a positive stock price performance in the fourth quarter of 2014. Please see charts 1, 2, and 3.
- Public PAEs tend to be small—only four public PAEs have market capitalizations greater than \$1 billion as of December 31, 2014. Please see chart 4.
- Aggregate royalty revenue for Public PAEs was \$343 million in the fourth quarter of 2014, yet only six PAEs had royalty revenue above \$10 million. Please see charts 5 and 6.

- Despite underperforming the NASDAQ, PAEs have capitalized on bullish markets by raising more than \$916 million across 26 transactions over the past 12 months. Please see charts 10 and 11.
- Only eight public PAEs have more than \$50 million in cash and four have less than \$5 million as of December 31, 2014. Please see chart 14.
- Public PAEs are prolific acquirers of patent portfolios, with 34 disclosed purchases over the last 12 months. Please see chart 15 and 16.
- While cash is the most prevalent form of consideration in public PAE patent acquisitions, the majority of transactions include some mix of contingencies (i.e. back-end arrangements). Please see chart 19.
- Public PAEs are also prolific plaintiffs, accounting for 31 new campaigns and 305 new cases over the last 12 months, representing 608 active defendants as of December 31 2014. Please see charts 20, 23, and 24.

# Methodology

RPX strives to continuously improve the accuracy and scope of its data and may make minor changes to methodology and underlying data presented in future analyses and reports. In addition, certain aspects of our methodology may result in slight changes as time passes.

### **Timing**

- This report reflects available financial information as of April 1, 2015, which encompasses Q4 2014 reports and filings for all but one company highlighted in the report. Data are collected when the selected list of public PAEs report financial data, which can take two to three months after the close of a fiscal quarter or year, thus contributing to the time-gap between the availability of this report and the end of the quarter.
- For companies with off-cycle financials that do not coincide with standard quarter and year-ends of March 31, June 30, September 30, and December 31, financial data were taken from the guarter with the closest associated end-date.

#### **Public PAE Definition**

• For purposes of this report, Public PAEs are considered to be entities whose revenues, activities, or market valuation are largely related to patent assertion.

#### **Public PAE Identification**

 RPX identifies public PAEs through a manual review process performed by experienced employees with knowledge of the patent industry.

- The process includes, among other things, reviewing public filings; searching for evidence of operating or patent monetization activities on the Internet including company websites; reviewing complaints, with a focus on accused products and allegations regarding products and/or services sold by the patent owner; considering the outside counsel employed by the entity (e.g. whether outside counsel has a history of representing public PAEs); reviewing corporate disclosure statements filed in litigation; and soliciting market intelligence from patent professionals.
- The public PAEs for this particular report represent the largest, most established public PAEs as well as several recently formed public PAEs that have become public via reverse mergers.
- While there are elements of subjectivity in this approach, we believe that the process is robust based on feedback from other patent professionals.

### **Data Set**

• This report uses data from publicly available sources (public filings, press releases, company websites, etc.) and from RPX's proprietary litigation database.

### **Primary Market Sector**

• RPX patent professionals classify portfolios into proprietary market sectors. Each portfolio offered may be classified into multiple market sectors. For purposes of this report, only the most relevant or "primary market sector" is used.

#### **Cases Filed**

 "Cases filed" refers to filed actions. A single case filed may include multiple defendants. The date for a case filed is the date that it was originally filed.

# Campaign, New Campaigns Filed, Total Campaign Defendants, and Unique Campaign Defendants

- "Campaign" refers to all cases filed by the same plaintiff (inclusive of all members in the corporate family) where each case has at least one patent or family member of a patent in common with another case in the campaign.
- "Campaigns filed" refers to unique campaigns. The date for a campaign filed is the
  filing date of the first case filed in the campaign. For example, if a campaign includes
  ten cases, there will be only one new campaign filed; the filing date for the campaign
  is established by the filing date of the first case filed in the campaign.

### **Litigation Identification**

• RPX excludes false marking cases, misfiles, and ownership disputes.

#### **PAE Related Entities**

RPX's proprietary litigation database rolls up certain related PAEs into a single
public PAE entity. RPX has manually identified these relationships by, among other
things, reviewing corporate disclosures, patent assignment records, and RPX market
intelligence. For example, Acacia has numerous subsidiaries that RPX has identified.
These entities are all represented as Acacia in this report's analyses.

### **Small Cap and Large Cap PAEs**

• Small cap PAEs refers to those with a market cap of less than \$300M and large cap PAEs refer to those with a market cap greater than or equal to \$300M.

#### **Patent Transaction Identification**

• This report notes patent acquisitions and patent sales that are publicly disclosed by the selected list of PAEs. This may refer to disclosures in public filings, press releases, or any other publicly available and credible source.

### **PAE Financings Classification**

- Financings classified as Equity deals are deals publicly identified as: Bought Deals, Follow-Ons, PIPEs, Private Placements, Registered Directs, Rights Offerings, and Warrant Sale.
- Financings classified as Debt deals are deals publicly identified as: Debt, Loan Facilities, and Secured Notes.
- Financings classified as Hybrid deals are deals publicly identified as:
   Convertible Debentures, Convertible Notes, Convertible Senior Notes, and Senior Convertible Notes.

#### **Historical Data**

 For consistency purposes, historical PAE data are not adjusted quarter over quarter if the PAE list is modified due to various reasons (bankruptcy, acquisition, discontinuation of PAE activity, etc.). Historical data may change to reflect differences in public disclosure over time.

# **Market Data**

The following pages feature charts and highlights relating to PAE market performance.

### **Public PAE Overview**

				Q4 2014			Last 12 Mo	onths	
Large Cap Companies	Ticker	Stock Price (As of 9/30/14)	Market Cap (\$USD M)	High	Low	Stock Performance (% change)	High	Low	Stock Performance (% change)
Rovi	ROVI	\$22.59	\$2,140.0	\$22.96	\$17.61	14.0	\$25.34	\$17.52	14.7
InterDigital	IDCC	52.90	1,966.0	54.63	38.82	35.6	54.90	26.25	79.4
Tessera	TSRA	35.76	1,887.1	36.84	25.54	36.7	36.99	17.60	81.4
Rambus	RMBS	11.09	1,272.6	12.16	10.08	(7.0)	14.82	8.38	17.1
Acacia	ACTG	16.94	849.0	19.50	14.23	11.7	19.93	13.11	16.5
Pendrell	PCO	1.38	368.2	1.67	1.26	8.7	1.99	1.06	(31.3)
WiLAN	WILN	3.01	361.2	3.51	2.92	(11.5)	3.76	2.74	(2.0)
Small Cap Companies									
VirnetX	VHC	5.49	285.5	6.17	4.09	(1.8)	25.49	3.80	(71.7)
Marathon Patent	MARA	8.42	114.3	9.67	5.86	21.2	9.73	2.78	167.3
Unwired Planet	UPIP	1.00	111.8	1.82	0.85	(43.2)	2.44	0.80	(27.5)
ParkerVision	PRKR	0.91	88.4	1.31	0.85	(18.8)	5.80	0.80	(80.0)
Finjan	FNJN	2.70	60.6	3.09	2.19	(12.5)	10.30	1.97	(58.0)
Network-1	NTIP	2.20	53.8	2.35	2.10	4.8	2.40	1.39	39.2
Vringo, Inc.	VRNG	0.55	51.3	1.10	0.53	(41.9)	5.45	0.49	(81.4)
Patent Properties	PPRO	2.10	43.6	2.74	2.05	(17.6)	4.50	1.49	(43.2)
SITO	SITO	0.20	31.4	0.39	0.17	(51.2)	0.70	0.16	(61.9)
Spherix	SPEX	1.08	30.9	1.61	0.96	(3.6)	10.40	0.75	(86.6)
ITUS	ITUS	0.11	24.2	0.22	0.10	(50.0)	0.48	0.10	(42.1)
DSS	DSS	0.45	20.6	0.83	0.40	(44.4)	2.46	0.40	(78.3)
Inventergy	INVT	0.70	18.8	1.67	0.58	(58.1)	5.69	0.51	(71.2)
Revolutionary Concepts	REVO	0.00	0.9	0.00	0.00	(70.5)	0.03	0.00	(35.0)
Endeavor IP	ENIP	0.02	0.7	0.02	0.02	(25.1)	0.81	0.01	(97.8)

Note: Last 12 months data through end of Q4 2014.

# **Small Cap PAEs Have Underperformed While Large Cap PAEs Have Outperformed the Market**

Chart 1: Q4 2014 Index Chart

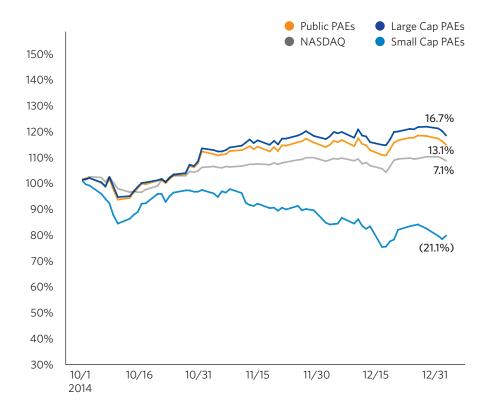
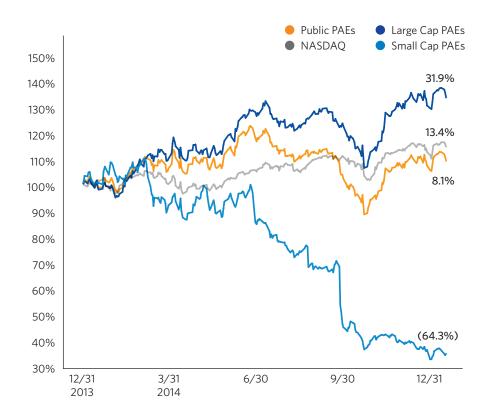


Chart 2: Last 12 Months Index Chart as of 12/31/2014



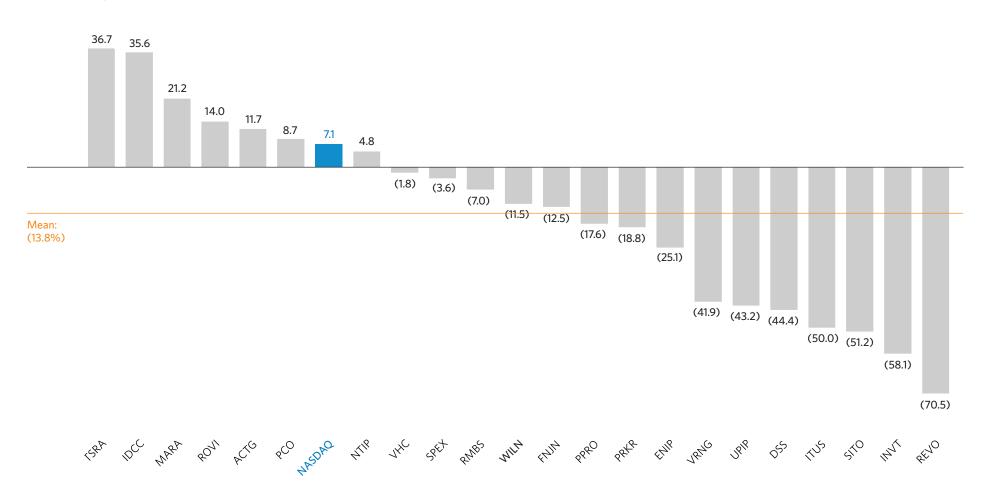
### Methodology Note:

The "Public PAEs", "Large Cap PAEs", and "Small Cap PAEs" indices are market cap weighted—each stock is weighted based on its market capitalization, with larger companies carrying a larger percentage weighting of the index.

### Sluggish Q4 2014 Stock Performance

### **Chart 3: Q4 2014 Stock Performance Percentage**

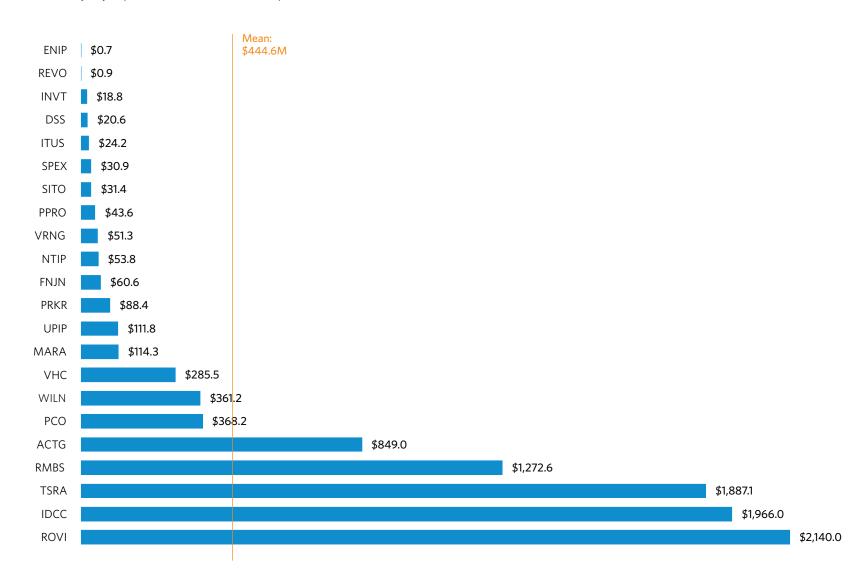
With the exception of a few companies, public PAEs underperformed the market in Q4 2014.



### Public PAE Market Cap Summary as of Q4 2014

### Chart 4: Public PAE Market Cap (\$USD M)

There are only four public PAEs with a market cap over \$1B, with the majority of public PAEs under a market cap of \$120M.



# **Financial Data**

The following pages feature charts and highlights relating to key financial data for public PAEs.

### **Royalty Revenue Decreasing Since Q2 2014**

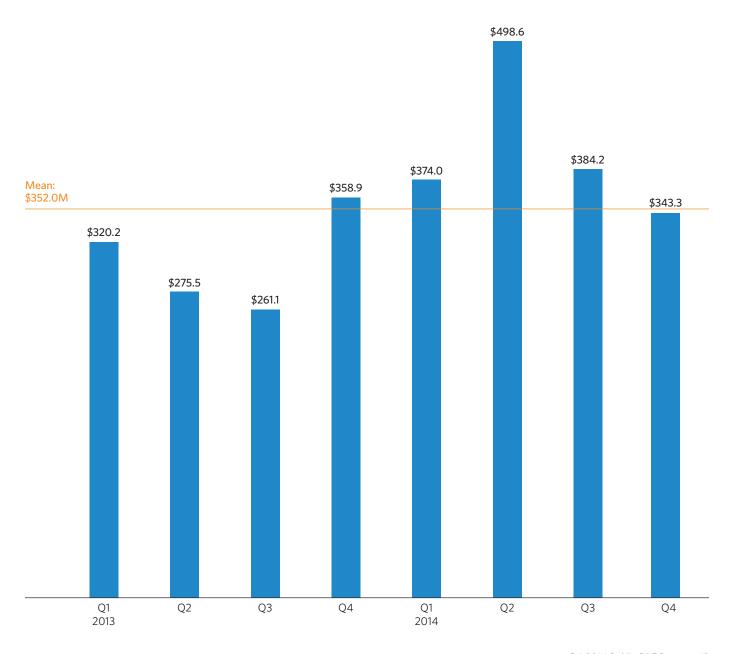
### **Chart 5: Total Royalty Revenue (\$USD M)**

Royalty revenue reached high in Q2 2014, and has decreased since.

### Methodology Note:

Revenue is considered "royalty revenue":

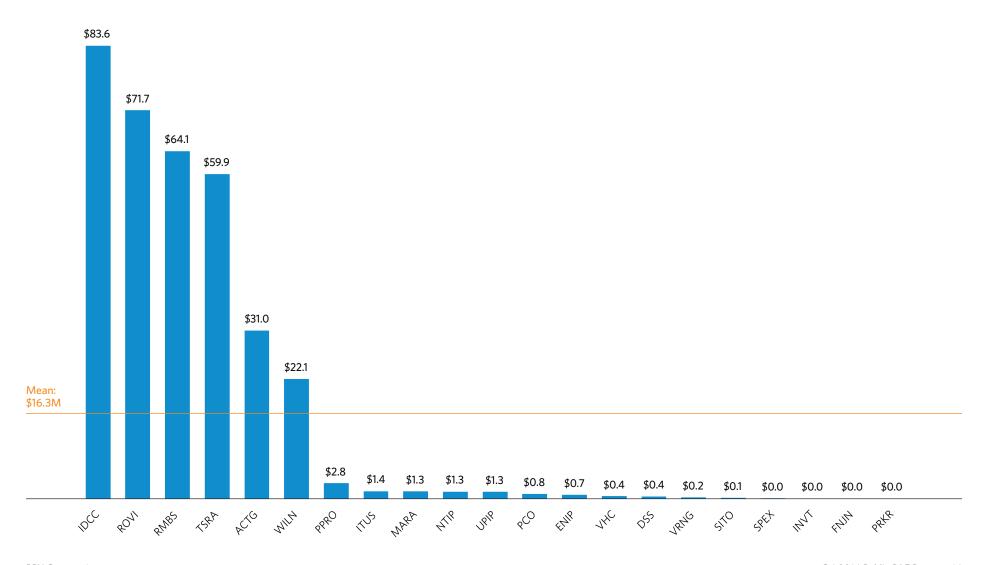
- If it is specifically classified or broken out as royalty or licensing revenue
- If the public PAE's only source of revenue is from licensing its patents



# Royalty Revenue Was Largely Driven by Six PAEs in Q4 2014

Chart 6: Total Q4 2014 Royalty Revenue (\$USD M)

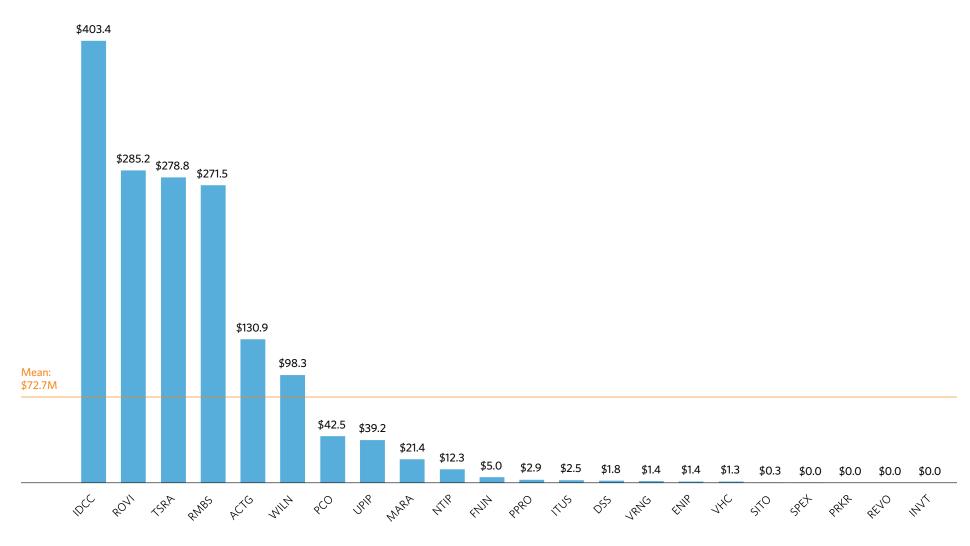
Six public PAEs accounted for 97% of total royalty revenue of all selected public PAEs for Q4 2014.



### ...And Over the Last 12 Months

### Chart 7: Last 12 Months Royalty Revenue (\$USD M)

Four public PAEs accounted for 77% of total royalty revenue of all selected public PAEs for the last 12 months as of Q4 2014. Most have revenue under \$100M.



**RPX Corporation** 

### **Pattern of Net Losses for Public PAEs**

2013 Q1

Q2

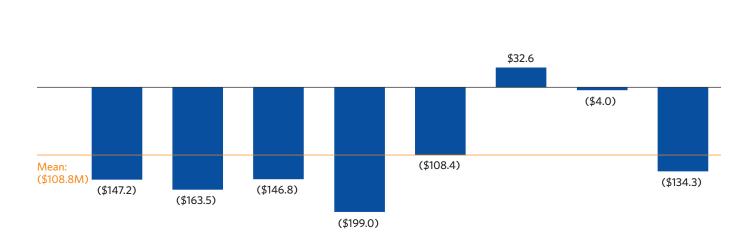
Q3

### Chart 8: Total Net Income/ Loss per Quarter (\$USD M)

Public PAEs have consistently experienced net losses over the past two years.

### Methodology Note:

Net income/loss reflects the operations of the whole company and not specifically the operations related to patent assertion, as most public PAEs do not publicly disclose segmented profit/loss information for their patent assertion businesses.



Q4

2014 Q1

Q3

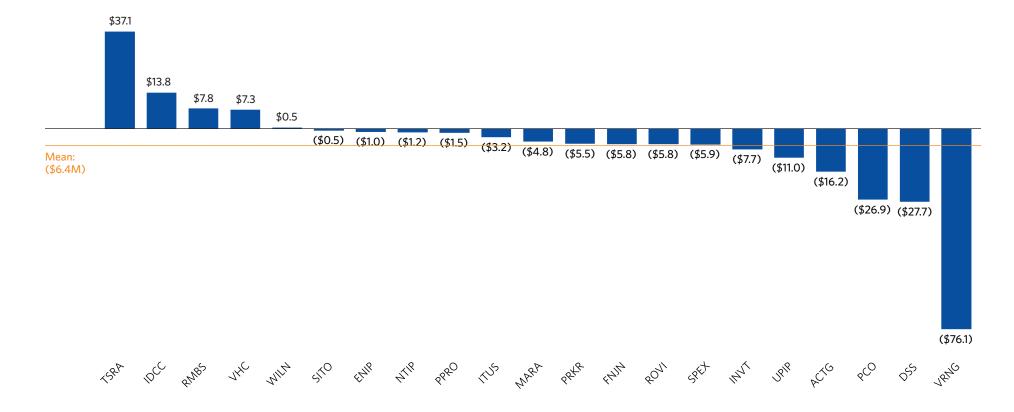
Q2

Q4

### **Net Losses Common Across Most Public PAEs**

### Chart 9: Total Q4 2014 Net Income/Loss (\$USD M)

Only five public PAEs generated positive net income in Q4 2014.



## Detailed List of Public PAE Financings— Last 12 Months as of Q4 2014

During the 12 months as of Q4 2014, there were eight equity deals totaling \$50 million, four debt deal of \$853 million, and 14 hybrid deals totaling \$13 million, with a total amount raised of \$916 million.

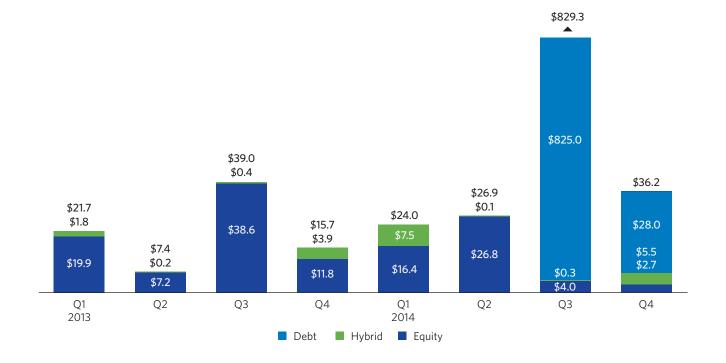
Close Date	Issuer	Туре	Amount Raised (\$USD M)
12/23/14	Document Security Systems	Equity	\$1.7
12/23/14	ParkerVision	Debt	\$7.0
10/16/14	Marathon Patent Group	Hybrid	\$5.5
10/03/14	SITO	Debt	\$10.0
10/03/14	SITO	Equity	\$1.0
10/01/14	Inventergy	Debt	\$11.0
09/30/14	Revolutionary Concepts	Hybrid	\$0.0
07/31/14	Revolutionary Concepts	Hybrid	\$0.0
07/16/15	Endeavor IP	Hybrid	\$0.3
07/15/14	ITUS	Equity	\$4.0
07/09/14	Endeavor IP	Hybrid	\$0.0
07/02/14	Rovi	Debt	\$825.0
06/30/14	Revolutionary Concepts	Hybrid	\$0.0

Close Date	Issuer	Туре	Amount Raised (\$USD M)
06/24/14	Endeavor IP	Hybrid	\$0.1
06/12/14	Document Security Systems	Equity	\$0.3
05/31/14	Revolutionary Concepts	Hybrid	\$0.0
05/28/14	Spherix	Equity	\$20.0
05/05/14	Marathon Patent Group	Equity	\$6.5
04/30/14	Revolutionary Concepts	Hybrid	\$0.0
03/31/14	Revolutionary Concepts	Hybrid	\$0.0
03/26/14	Spherix	Equity	\$4.4
03/24/14	Inventergy	Hybrid	\$3.0
03/13/14	ParkerVision	Equity	\$12.0
02/28/14	Revolutionary Concepts	Hybrid	\$0.0
02/13/14	Document Security Systems	Hybrid	\$4.5
01/31/14	Revolutionary Concepts	Hybrid	\$0.0

### **Equity Financings Have Been Common Amongst PAEs**

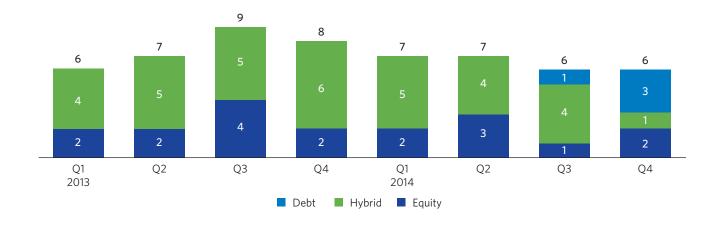
# Chart 10: Total Amount Raised by Type (\$USD M)

Financings are typically equity, with occasional hybrid and debt transactions, with an average of \$125 million raised per quarter driven by Rovi's Q3 2014 \$825 million loan facility.



### **Chart 11: Number of Financings by Type**

On average public PAEs have executed seven financings per quarter. Use of debt has increased in recent quarters.



### **Public PAE Cash Declining**

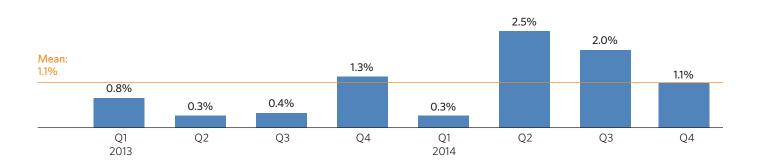
Chart 12: Total Public PAE Cash Balance per Quarter (\$USD M)

Total public PAE cash has declined over the past two years, and remains below peak.



Chart 13: Cash Spent to Acquire Patents as a Percentage of Total Public PAE Cash Balance

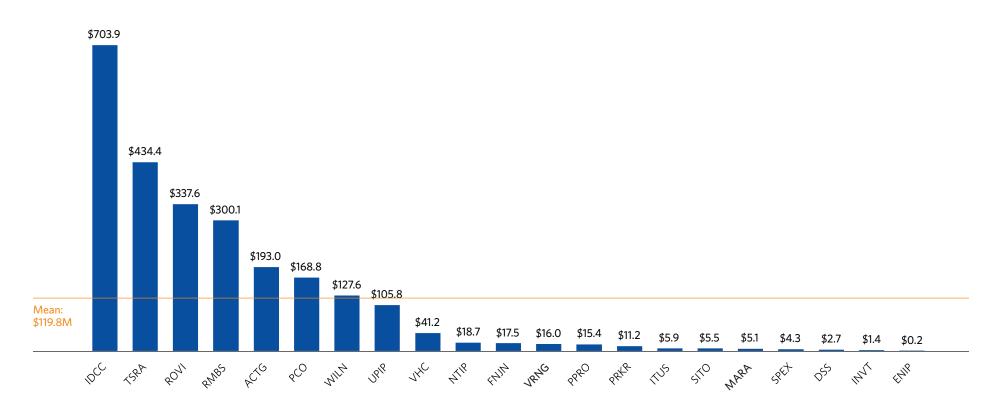
Cash spent on patents has been erratic quarter over quarter, with a high of 2.5% in Q2 2014.



### **Most Cash Concentrated Among Very Few Public PAEs**

### Chart 14: Total Q4 2014 Cash Balance (\$USD M)

The top five public PAEs accounted for 78% of the total cash balance of all selected public PAEs in Q4 2014.



# **Patent Transactions**

The following pages feature charts and highlights relating to public PAE patent acquisitions and sales.

# Disclosed Patent Transactions— Last 12 Months as of Q4 2014

### **Patent Transaction Identification**

This report notes patent acquisitions and patent sales that are publicly disclosed by the selected list of PAEs. This may refer to disclosures in public filings, press releases, or any other publicly available and credible source.

Date of Transaction	Acquirer	Seller	Portfolio	Purchase Price (\$USD M)	Number of Assets
12/29/2014	AUO	ITUS	ePaper electrophoretic display	\$7.0	10 active U.S. patents and 1 application
12/15/2014	WILN	Not Disclosed	Power inverter technology	Not disclosed	Not disclosed
12/1/2014	ACTG	Nokia Networks	2G/3G/LTE and LTE-Advanced technologies	Not disclosed	Not disclosed
11/13/2014	WILN	Not Disclosed	LED lighting	Not disclosed	Not disclosed
11/6/2014	WILN	HP	Lighting and building systems technologies	Not disclosed	Not disclosed
11/5/2014	WILN	Not Disclosed	Touch keypads used in consumer electronic devices	Not disclosed	Not disclosed
10/29/2014	WILN	ROHM	Semiconductor packaging	Not disclosed	Not disclosed
10/20/2014	WILN	Panasonic	Vending machine systems	Not disclosed	Not disclosed
10/13/2014	MARA	MedTech Development	Kyphoplasty, intervertebral inserts and heart valve technology	\$15.5	Not disclosed
9/19/2014	MARA	TLI Communications	Telecommunications	\$1.2	1 patent
9/16/2014	WILN	Not disclosed	Technology used in Smart Meters that are deployed in the energy market	Not disclosed	Not disclosed
8/29/2014	MARA	Clouding IP, LLC	Network and data management technology	\$15.8	Not disclosed
8/14/2014	WILN	Hospital Special Surgery	Orthopedic technologies	Not disclosed	30 patents and applications
7/8/2014	WILN	Memory Company	Non-volatile memory	Not Disclosed	Not disclosed
7/7/2014	ROVI	Not disclosed	Guidance, search and recommendation, DVR, video-on-demand, and second screen functionality	\$28.0	500 patents and applications
7/7/2014	WILN	Nokia Networks	Current and future wireless handset and infrastructure technologies	Not disclosed	Not disclosed
6/30/2014	ITUS	Not disclosed	Enhanced presentation and cross selling technologies	Not disclosed	Not disclosed
6/17/2014	MARA	Selene Communication	Tools for intelligent searches applied to data management systems and global information networks	\$0.9	3 U.S. patents
6/10/2014	WILN	Not disclosed	Stent technology	Not disclosed	Not disclosed

Date of Transaction	Acquirer	Seller	Portfolio	Purchase Price (\$USD M)	Number of Assets
6/9/2014	INVT	Nokia	IP Multimedia Subsystems	\$3.0	77 patents and applications
6/1/2014	ACTG	Renesas Electronics	Semiconductor	Not disclosed	Not disclosed
5/23/2014	DSS	Dongbu Hitek	Certain methods and processes in the semiconductor industry	\$1.2	115 patents
5/2/2014	MARA	Dynamic Advances	Method of diagnosing arterial stenosis	\$6.7	4 U.S. patents
5/2/2014	MARA	IP Liquidity	Life sciences and tire pressure portfolio	\$6.7	6 U.S. patents
5/2/2014	MARA	Sarif Biomedical	Microsurgery methods and related equipment	\$0.6	1 U.S. patent and 4 foreign patent/applications
4/22/2014	WILN	Datascape (Open Network Solutions)	Networking capabilities of non-standard devices	Not disclosed	10 patents
4/17/2014	Lenovo	UPIP	Telecommunications infrastructure including mobile device technologies	\$100.0	142 patents (21 patent families)
4/16/2014	WILN	Not disclosed	Operation of irrigation control systems	Not disclosed	Not disclosed
4/10/2014	WILN	Pendragon Electronics	Automotive diagnostic technology	Not disclosed	1 patent
4/1/2014	ACTG	Leading semiconductor company	High speed digital display interface technology	Not disclosed	Not disclosed
4/1/2014	WILN	Not disclosed	Automotive headlights	Not disclosed	Not disclosed
4/1/2014	Not disclosed	RMBS	Wireless and other technologies	\$1.9	Not disclosed
3/20/2014	UPIP	Ericsson	Details not disclosed	\$10.0	Not disclosed
3/1/2014	ACTG	Not disclosed	Shared memory in multimedia processing systems such as mobile phones, tablets and other consumer electronic devices	Not disclosed	Not disclosed
2/28/2014	ROVI	Veveo	Personalization capabilities, contextual search and natural language expertise	\$67.6	50 patents, 80 patent applications
2/20/2014	ACTG	Not disclosed	Ceramics and associated manufacturing processes for medical devices	Not disclosed	Not disclosed
1/6/2014	INVT	Panasonic	3G and 4G communications	Not disclosed	500 patents
1/1/2014	Not disclosed	RMBS	Wireless and other technologies	\$2.5	Not disclosed

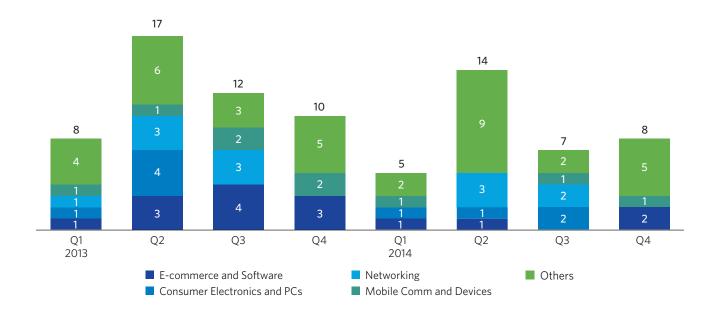
### **Public PAEs Have Been Active in Acquiring Patents**

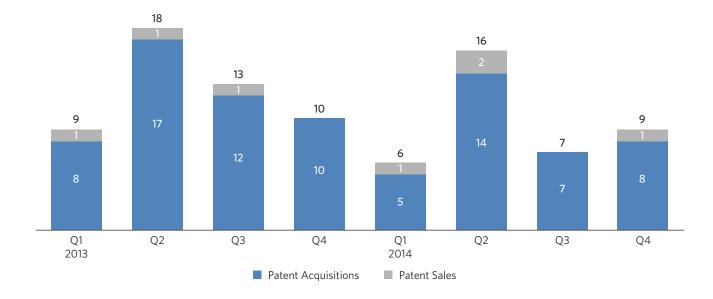
# **Chart 15: Number of Disclosed Patent Acquisitions by Sector**

With the exception of the "Consumer Electronics and PCs" sector, patent acquisitions have been spread out relatively evenly between the other named sectors, with an average of ten total transactions per quarter. Also, in Q3 and Q4 2014, there has been a falloff in e-commerce and software patent acquisitions following the Alice Corp ruling by the Supreme Court.



Public PAEs generally buy patents rather than sell them, with an average of 11 total transactions per quarter.





### **Most Deals Funded by Cash**

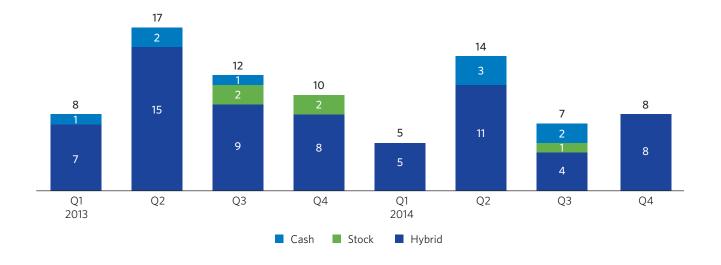
# Chart 17: Capital Spent on Patents by Type—Total \$ Amount (\$USD M)

Public PAEs typically use cash to finance patent transactions, with DSS and Spherix accounting for the stock spent on patents in Q3 2013 and Q4 2013, respectively. Since Q1 2013, public PAEs have spent an average of \$42 million per quarter on patents.



The majority of patent acquisitions have been funded with cash with an average of ten total patent acquisitions per quarter.

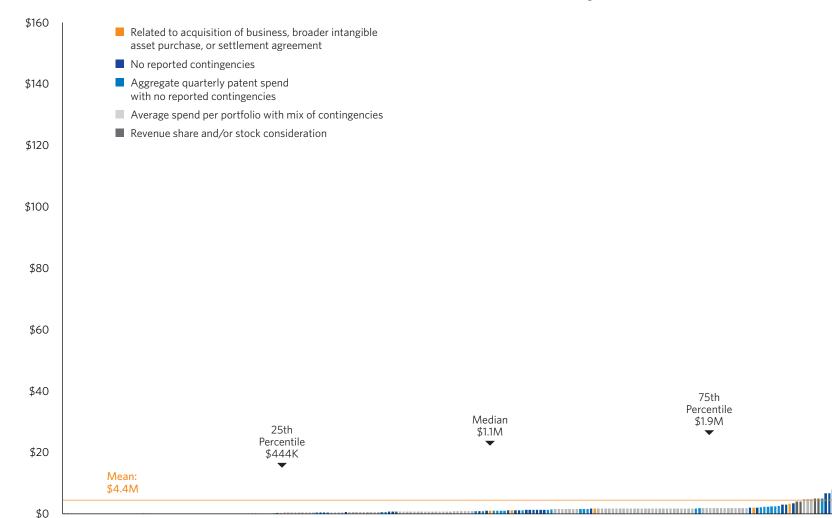




# **Guaranteed Purchase Prices of Public PAE Portfolio Acquisitions**

# **Chart 19: Guaranteed Purchase Prices of Public PAE Portfolio Acquisitions** (\$USD M)

Though there have been sizeable purchase prices for patent portfolios, the majority of recent purchase prices have been modest, hovering around \$1 million.



### Methodology Note:

For the same 22 public PAEs and back to 2010, RPX included in this chart (a) all known transactions, (b) where transactions are unknown, RPX took one quarter's acquisition spend and deemed it one transaction, and then (c) differentiated the transactions by the selected categories.

95th Percentile \$18.7M

# **Litigation Data**

The following pages feature charts and highlights relating to public PAE litigation data.

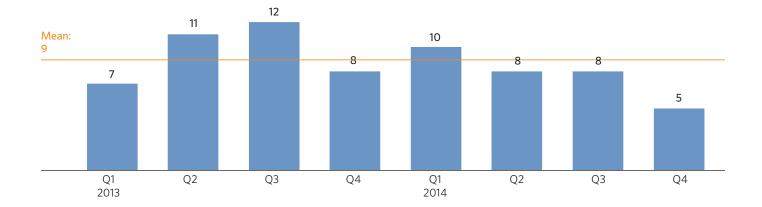
# New Public PAE Campaigns in Q4 2014

Public PAE	Campaign Name	Campaign Summary	Defendant(s) Named in Q4 2014	Number of Patents
Acacia Research	Cellular Communications Equipment	Acacia has filed suit against a number of companies in the cellular industry	AT&T, Kyocera Corporation, LG Electronics, Inc., SOFTBANK Corporation, Sony Corporation, T-Mobile, Verizon Communications Incorporated	3
Acacia Research	Diamond Grading Technologies	Acacia has initiated a new campaign against products within the diamond cutting industry	American GEM Society, Gemological Institute	2
Acacia Research	SOTA Semiconductor	SOTA Semiconductor, a subsidiary of Acacia Research, has filed a suit against 15 companies related to apparatuses with microprocessors and microcomputers	Acer Incorporated, ASUSTek Computer, Belkin International Incorporated, Dell Incorporated, Hewlett-Packard, Hisense Group Company Limited, Konica Minolta Holdings Incorporated, Lenovo Group, Marvell Technology Group Limited, Microsoft, NETGEAR Incorporated, NVidia Corporation, Samsung, Seagate Technology Public Limited Company, Western Digital	2
ITUS	VPN Multicast Technologies	This new campaign targets managed cloud platforms as well as VPN systems	AT&T, Dimension Data LLC, Nippon Telegraph and Telephone Corporation	1
Marathon Patent	Vantage Point Technology	Marathon is largely targeting cloud services and file-sharing products	Amazon.com, Apple, Box Incorporated, Dropbox Incorporated, Google Inc., SugarSync Incorporated	1

# **New Public PAE Campaigns Relatively Stable over Time**

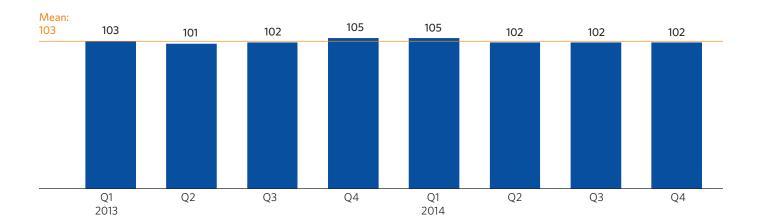
**Chart 20: Total New Campaigns per Quarter** 

Since Q1 2013, there has been an average of nine new campaigns every quarter.



**Chart 21: Total Active Campaigns per Quarter** 

The number of active campaigns has stayed relatively constant since Q1 2013.



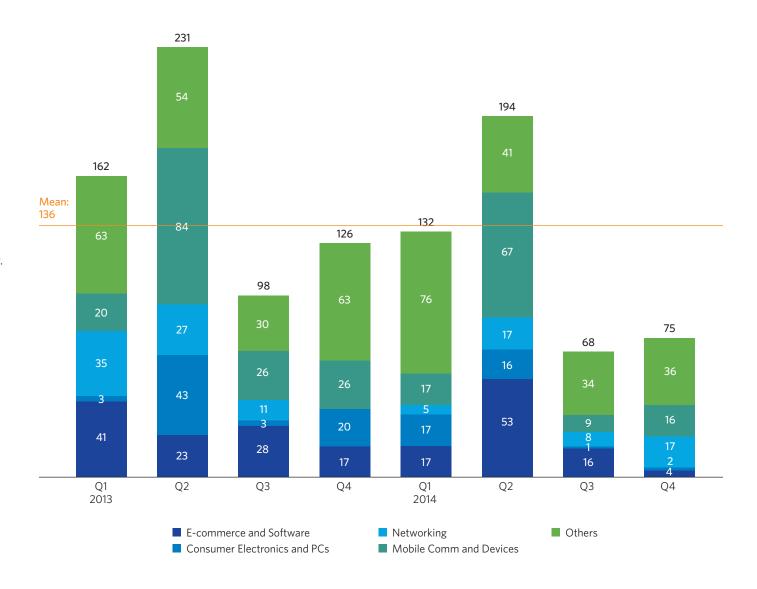
### **Public PAE Defendants Added Near Two-year Low**

# **Chart 22: Total Public PAE Defendants Added per Quarter**

The number of total public PAE defendants added have been sporadic quarter over quarter, with a high of 231 in Q2 2013. Also, the two quarters with the fewest number of public PAE defendants added were Q3 2014 and Q4 2014.

# Total Public PAE Defendants Added by Sector per Quarter

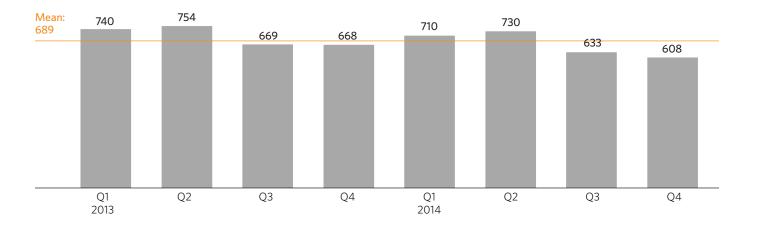
The mobile communication devices and e-commerce and software sectors have seen the most public PAE litigation activity. However, there has been a drop-off in the e-commerce and software sector in Q3 and Q4 2014 partly due to the Supreme Court Alice ruling on June 19, 2014.



# **Number of Active Defendants of Public PAE Litigation Has Not Seen Wide Fluctuations**

**Chart 23: Total Active Defendants per Quarter** 

There has been an average of 689 active defendants of public PAE litigation per quarter since Q1 2013.



### Fewer New and Active Public PAE Cases in Q4 2014

**Chart 24: Public PAE Cases Filed per Quarter** 

Public PAE cases filed per quarter is sporadic with a high of 143 in Q2 2014 and a low of 32 in Q4 2014.



# **Chart 25: Active Public PAE Cases per Quarter**

There has been an average of 451 active public PAE cases every quarter since Q1 2013.

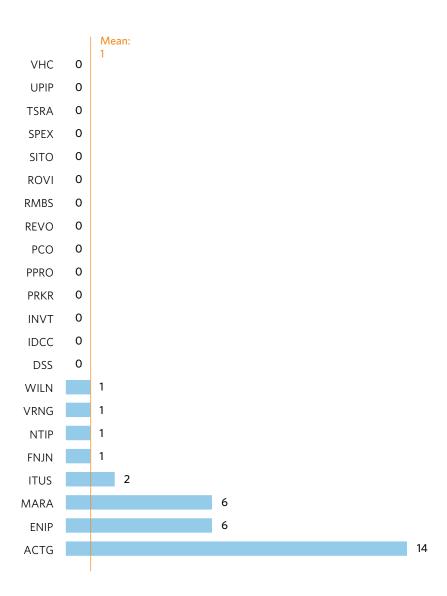


### **Public PAE Litigation Activity Largely Driven by Acacia**

### Acacia and Marathon Have the Most Active Cases

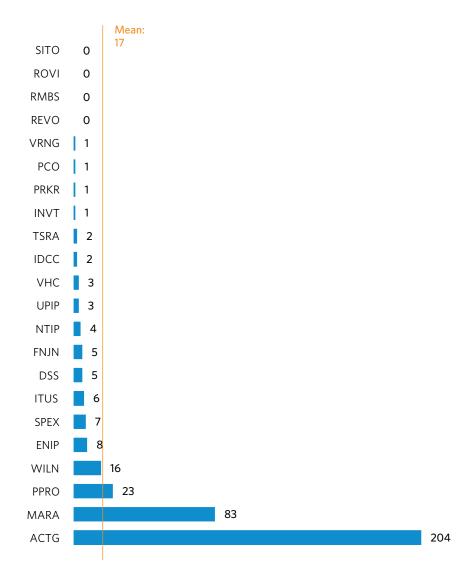
### Chart 26: Total Cases Filed in Q4 2014

Acacia accounted for 44% of total cases filed by major public PAEs in Q4 2014.



### Chart 27: Total Active Cases in Q4 2014

Acacia and Marathon are the most active on the public PAE litigation front, with a total of 287 total active cases.



# **Profiles**

The following pages feature overview information and detailed summaries of public PAEs studied in this report.

### **Overview**

Company Name	Formation Type and Description	Primary Technologies
Acacia Research	Initial public offering in 1995	Consumer Electronics and PCs, E-commerce and Software, Media Content and Distribution, Medical, Mobile Communications and Devices, Networking
DSS	Reverse merger (announced 10/2/12)	E-commerce and Software, Media Content and Distribution, Networking
Endeavor IP	Reverse merger (announced 5/13/13)	Mobile Communications and Devices
Finjan	Reverse merger (announced 6/3/13)	Web and Network Security
InterDigital	Initial public offering in 1981	Mobile Communications and Devices, Networking
Inventergy Global	Reverse merger (announced 12/13/13)	Consumer Electronics and PCs, Mobile Communications and Devices, Networking
ITUS	Began focusing on PAE activity in Q1 2013 (previously an operating company)	Consumer Electronics and PCs, E-commerce and Software, Mobile Communications and Devices
Marathon Patent Group	Reverse merger (announced 11/20/12)	E-commerce and Software, Mobile Communications and Devices, Networking
Network-1	Operating company with PAE activity (first PAE litigation in August 2005)	Networking, Consumer Electronics and PCs, Media Content and Distribution, E-commerce and Software
ParkerVision	First patent infringement case in July 2011 against Qualcomm	Mobile Communications and Devices, Semiconductors
Patent Properties	Reverse merger (announced 7/15/13)	Consumer Electronics and PCs, E-commerce and Software, Media Content and Distribution, Mobile Communications and Devices, Networking
Pendrell	Began focusing on PAE activity second half of 2011 (previously an operating company)	Mobile Communications, Devices , E-commerce, Software

Company Name	Formation Type and Description	Primary Technologies
Rambus	Initial public offering in 1997 with core focus on product licensing	Semiconductors
Revolutionary Concepts	Operating company shift to PAE in 2012 after receiving bulk of its 7 patents midyear 2012	Consumer Electronics
Rovi	Operating company with PAE activity (first PAE litigation in 2007)	Digital entertainment
SITO	Operating company with PAE activity (first PAE litigation in February 2012)	Mobile search, commerce, advertising and streaming media
Spherix	Reverse merger (announced 2/22/13)	Mobile Communications and Devices
Tessera Technologies	Initial public offering in 2004	Semiconductors
Unwired Planet	Began focusing on PAE activity in May 2012 (previously an operating company)	Mobile Communications, Devices , E-commerce, and Software
VirnetX	Reverse merger (announced 1/19/07)	Consumer Electronics and PCs, E-commerce and Software, Media Content and Distribution, Mobile Communications and Devices, Networking
Vringo	Reverse merger (announced 3/14/12)	E-commerce and Software
WiLAN	PAE activity since 2007	Consumer Electronics and PCs, Mobile Communications and Devices, Networking

### **Profiles**

### **Acacia Research Corporation**

Consumer Electronics and PCs, E-commerce and Software, Media Content and Distribution, Medical, Mobile Communications and Devices, Networking

Stock Price (as of 12/3	<b>31/14)</b> \$16.94
Market Cap (\$USD M	\$849.0
52-week High	\$19.93
52-week Low	\$13.11
Cash (\$USD M)	\$193.0
Debt (\$USD M)	\$0.0
Employee Count	57
Patent Count	Over 200 portfolios

Acacia Research is a programmatic patent enforcement entity that uses subsidiary companies to assert its patents. The company has at least 200 known subsidiaries, only a handful of which use the Acacia name. Acacia went public in December 2002 but began litigating patents in 2000. It continues to create new subsidiaries, which partner with inventors and

patent owners to license and assert patents. Acacia controls thousands of patents across at least 200 portfolios and has been involved in more litigation than any other public PAE. Despite that distinction, Acacia has only one infringement verdict in litigation.

### **DSS**

E-commerce and Software, Media Content and Distribution, Networking

Stock Price (as of 12/31/14)	\$0.45
Market Cap (\$USD M)	\$20.6
52-week High	\$2.46
52-week Low	\$0.40
Cash (\$USD M)	\$2.7
Debt (\$USD M)	\$8.2
Employee Count	108
Patent Count	Over 100

DSS operates through four segments, DSS Technology Management, Inc. (DSS TM) being the entity primarily responsible for acquiring and/or developing patented technology, with the purpose of monetizing those assets through various means, including litigation. DSS, through its subsidiaries, owns at least 100 US patents in disparate technology areas. DSS acquired social networking patents originally issued to Bascom Research, Bluetooth patents

originally issued to BBN Corporation, and many semiconductor patents originally issued to Cypress, Dongbu, and/or ANAM. Since October 2012, DSS has asserted patents from all three of these technologies in over ten patent infringement lawsuits in the US.

#### **Endeavor IP**

#### Mobile Communications and Devices

Stock Price (as of 12/31/14)	\$0.02
Market Cap (\$USD M)	\$0.7
52-week High	\$0.81
52-week Low	\$0.01
Cash (\$USD M)	\$0.2
Debt (\$USD M)	\$2.0
Employee Count	1
Patent Count	6

Endeavor IP, Inc. is a development stage company engaged in the commercialization of IP assets. It is a Nevada corporation currently located at a residential address in Half Moon Bay, CA. (Prior to June 2012, it operated as a workplace ergonomic consultancy under the name Finishing Touches Home Goods Inc.) Endeavor owns at least six patents to date, purchasing wireless network patents from Mesh Comm, LLC. and energy monitoring system patents from Solid Solar Energy, Inc.

Endeavor incorporated two subsidiaries to assert these patents: Endeavor MeshTech, Inc. and Endeavor Energy, Inc. Endeavor has a single employee, Ravinder Dhat, its CEO and Chairman. Dhat has worked for both Tessera and Rambus. Endeavor has two other directors: Franciscus Diaba, a former patent litigator, and Andrew Uribe, an executive with no prior experience in intellectual property acquisition or enforcement.

### **Finjan**

### Web and Network Security

Stock Price (as of 12/31/14)	\$2.70
Market Cap (\$USD M)	\$60.6
52-week High	\$10.30
52-week Low	\$1.97
Cash (\$USD M)	\$17.5
Debt (\$USD M)	\$0.0
Employee Count	13
Patent Count	44

Finjan Holdings, Inc. was formed in June 2013 as a result of a reverse merger of Finjan, Inc. with Converged Organics, a fertilizer company. The entity's primary business is to monetize the IP portfolio of Finjan, Inc., a former operating company that was founded in 1997 as an online security technology provider. M86 Security acquired Finjan, Inc.'s assets and business operations in 2009, but the company retained its IP portfolio. In 2013, Finjan appointed Phil Hartstein, formerly an IPNav

vice president, as its CEO. Finjan and its subsidiaries have filed 13 infringement suits since 2006, mostly in 2013–2014. Past defendants include Fireye, McAfee, and Palo Alto Networks. The PAE holds at least 22 patents, most of which it has asserted in litigation. In September 2014, the Federal Circuit upheld a lower court's ruling that two patents Finjan asserted against Sophos, Symantec, and Websense are invalid.

### **InterDigital**

### Mobile Communications and Devices, Networking

Stock Price (as of 12/31/14)	\$52.90
Market Cap (\$USD M)	\$1,966.0
52-week High	\$54.90
52-week Low	\$26.25
Cash (\$USD M)	\$703.9
Debt (\$USD M)	\$217.8
Employee Count	320
Patent Count	20,500

InterDigital is a public patent assertion entity that operates as a research and development company. It was founded in 1972 and has focused its efforts on the development of wireless technology. InterDigital has ten known subsidiaries, many of whom use the InterDigital name. The PAE has a large patent portfolio, with over 3,000 US patents and applications, mostly related to wireless data technology. InterDigital licenses its

portfolio to a number of companies involved in wireless communication. It has also filed a small number of enforcement litigations, most of which are still open. Only two of those cases have reached a resolution, both ending in settlement. Many of the executives in InterDigital's leadership team previously worked for operating companies.

### Inventergy

### Consumer Electronics and PCs, Mobile Communications and Devices, Networking

Stock Price (as of 12/31/14)	\$0.70
Market Cap (\$USD M)	\$18.8
52-week High	\$5.69
52-week Low	\$0.51
Cash (\$USD M)	\$1.4
Debt (\$USD M)	\$8.2
Employee Count	10
Patent Count	755

Inventergy launched in June 2013 and became a public entity through a reverse merger with eOn Communications Corp on December 18, 2013. The entity owns two patent portfolios related to mobile communication and devices, acquired from Huawei and Panasonic, which include just fewer than 150 US patents and applications. The entity has no known licensees to its portfolio as of January 2014 but has begun licensing efforts through assertion letters. In press releases

it places significant emphasis on its "elite management team" that includes individuals who have previously worked in management and executive positions for technology companies. CEO Joe Beyers was formerly the head of IP licensing for HP and Paul Roberts, the VP of IP licensing, was formerly at patent assertion entity Rovi, and General Counsel Wayne Sobon was previously at Rambus.

### **ITUS Corporation**

#### Consumer Electronics and PCs, E-commerce and Software, Mobile Communications and Devices

Stock Price (as of 12/31/14)	\$0.11
Market Cap (\$USD M)	\$24.2
52-week High	\$0.48
52-week Low	\$0.10
Cash (\$USD M)	\$5.9
Debt (\$USD M)	\$0.0
Employee Count	7
Patent Count	10 portfolios

ITUS Corporation develops, acquires, licenses, and enforces patented technologies for the purposes of patent monetization and patent assertion. It has ten patent portfolios in the areas of Key Based Web Conferencing Encryption, Encrypted Cellular Communications, E-Paper Electrophoretic Display, Nano Field Emission Display (nFED), Micro Electro Mechanical Systems Display (MEMS), Loyalty Conversion Systems, J-Channel

Window Frame Construction, VPN Multicast Communications, Internet Telephonic Gateway, and Enhanced Auction Technologies. The company was formerly known as CopyTele, Inc. and changed its name to ITUS Corporation in September 2014. ITUS Corporation was founded in 1982 and is based in Melville, New York.

#### Marathon

### E-commerce and Software, Mobile Communications and Devices, Networking

Stock Price (as of 12/31/14)	\$8.42
Market Cap (\$USD M)	\$114.3
52-week High	\$9.73
52-week Low	\$2.78
Cash (\$USD M)	\$5.1
Debt (\$USD M)	\$22.5
Employee Count	9
Patent Count	378

Marathon Patent Group, Inc. is a patent acquisition and monetization company. The company was formerly known as American Strategic Minerals Corporation and changed its name to MPG in February 2013. Marathon Patent Group, Inc. was incorporated in 2010 and is based in Alexandria, Virginia. MPG acquires patents from various patent holders, from individual inventors to Fortune 500 companies.

It has a portfolio of 124 patents, as well as contract rights related to revenue generated from approximately 50 patent assets. MPG has monetized its portfolios through actively managed patent licensing and litigation campaigns. It has been involved in over 80 litigations, the most recent of which was filed in October 2014.

#### Network-1

Networking, Consumer Electronics and PCs, Media Content and Distribution, and E-commerce and Software

Stock Price (as of 12/31/14)	\$2.20
Market Cap (\$USD M)	\$53.8
52-week High	\$2.40
52-week Low	\$1.39
Cash (\$USD M)	\$18.7
Debt (\$USD M)	\$0.0
Employee Count	3
Patent Count	24

Network-1 Technologies, Inc. is a patent licensing firm, founded in 1990, that began filing litigation in 2004. Together with subsidiary Mirror Worlds Technologies, LLC, it has filed almost 20 suits. Network-1's two most active campaigns involve patents related to power-over-Ethernet and document streaming. The entity owns more than 20 patents, all acquired from other sources and including some developed by Mirror Worlds prior to its acquisition by Network-1. The entity has asserted only a handful in

litigation, and has not taken any cases to trial; it currently has fewer than five active cases. Most of Network-1's operating income comes from the licensing of patent 6,218,930, which has generated \$65 million since 2007, according to Network-1's most recent 10Q filings. In December 2012 the PTAB instituted an inter partes reexam of the '930 patent based on a petition by Avaya, but the patent emerged from reexam with all claims intact.

### **ParkerVision**

Mobile Communications and Devices, Semiconductors

Stock Price (as of 12/31/14)	\$0.91
Market Cap (\$USD M)	\$88.4
52-week High	\$5.80
52-week Low	\$0.80
Cash (\$USD M)	\$11.2
Debt (\$USD M)	\$0.0
Employee Count	48
Patent Count	312

ParkerVision claims it designs, develops, and markets proprietary radio frequency (RF) technologies and products for use in semiconductor circuits for wireless communication products in the US. ParkerVision touts a three-part growth strategy for commercializing innovations that includes intellectual property licensing and/or product ventures, intellectual property enforcement, and product and component development, manufacturing,

and sales. Current CEO Jeffrey L. Parker is an inventor on several of the company's patents, which number over 150. In October 2013, ParkerVision won an infringement verdict against Qualcomm, and in May 2014, it filed another suit against Qualcomm, HTC, and Samsung. It has otherwise not been involved in patent infringement lawsuits.

### **Patent Properties, Inc.**

Consumer Electronics and PCs, E-commerce and Software, Media Content and Distribution, Mobile Communications and Devices, Networking

Stock Price (as of 12/31/14)       \$2.10         Market Cap (\$USD M)       \$43.6         52-week High       \$4.50         52-week Low       \$1.49         Cash (\$USD M)       \$15.4         Debt (\$USD M)       \$0.0         Employee Count       22         Patent Count       460	Patent Properties, Inc. is an inventor-controlled entity that formed in 2013 as a result of a reverse merger of Global Options Group with Walker Digital, LLC. The entity is controlled by inventor and entrepreneur Jay Walker, the founder of Priceline. Patent Properties holds at least 420 US and foreign issued patents as of November 2014; Walker is a named inventor on all the patents. They relate to a range of technologies, including authentication techniques, Internet searches and advertising, and online transactions. As of
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November 2014, Patent Properties has not filed a single patent infringement suit; rather, the PAE's subsidiaries, including Walker Digital and Inventor Holdings, litigate Walker's patents. Patent Properties has 12 known subsidiaries. Together, these entities have filed more than 60 infringement suits against over 150 companies since 2009.

### **Pendrell**

Mobile Communications, Devices, E-commerce, and Software

Stock Price (as of 12/31/14)	\$1.38
Market Cap (\$USD M)	\$368.2
52-week High	\$1.99
52-week Low	\$1.06
Cash (\$USD M)	\$168.8
Debt (\$USD M)	\$0.0
Employee Count	57
Patent Count	1,200

Pendrell is a patent investment company that acquires patents as well as patent holding entities. It has 14 known subsidiaries, many of which hold patents in their own names, and several of which provide IP monetization analysis to Pendrell. Only one subsidiary, ContentGuard Holdings, Inc., has filed litigation, filing four suits since 2012. Pendrell began as an operating company named ICO Global and was involved in satellite communication through the 1990s and 2000s. In June 2011,

that company renamed itself Pendrell Corporation and began licensing efforts. Through its subsidiaries Pendrell owns more than 1,200 patents and applications. Its largest patent portfolio, assigned to ContentGuard, contains patents related to digital rights management (DRM). Other portfolios relate to data storage and security, media content, networking, semiconductors, and wireless communication.

#### Rambus

Semiconductors

Stock Price (as of 12/31/14)	\$11.09
Market Cap (\$USD M)	\$1,272.6
52-week High	\$14.82
52-week Low	\$8.38
Cash (\$USD M)	\$300.1
Debt (\$USD M)	\$154.2
Employee Count	505
Patent Count	1,784

Rambus is a technology development and licensing company that was founded in 1990. It began filing patent litigation in 2000 and has since filed almost 30 suits involving more than 50 patents. The entity owns a portfolio of over 1,500 US patent publications, all of which relate to various aspects of semiconductor technology. In addition to litigation, Rambus has an active licensing program for the technology it develops.

Rambus has secured substantial revenues from its patent enforcement programs, including a \$397M damages award against Hynix Semiconductor in March 2009, and a \$900M settlement with Samsung in January 2010. It hasn't filed new litigation since 2010, but it sold a portfolio of patents to Acacia Research in 2013 that are involved in an active campaign.

### **Revolutionary Concepts, Inc.**

#### Consumer Electronics

Stock Price (as of 12/31/14)	\$0.00
Market Cap (\$USD M)	\$0.9
52-week High	\$0.03
52-week Low	\$0.00
Cash (\$USD M)	NA
Debt (\$USD M)	NA
Employee Count	Not Disclosed
Patent Count	7

Revolutionary Concepts, Inc. (RCI) is a technology development company that develops patents related to mobile video software and security communications systems. It has not filed any assertion litigation but in February 2014, RCI's licensed its patents to Eyetalk365, LLC. In September 2014, Eyetalk launched a campaign asserting RCI's patents against four security companies. RCI will receive 40% of any gross profit generated

from the litigation campaign and any additional licensing efforts. The deal also included the cancellation of \$900,000 of debts held by RCI. According to its most recent SEC filings, RCI does not currently generate any revenue.

### **Rovi Corporation**

### Digital Entertainment

Stock Price (as of 12/31/14)	\$22.59
Market Cap (\$USD M)	\$2,140.0
52-week High	\$25.34
52-week Low	\$17.52
Cash (\$USD M)	\$337.6
Debt (\$USD M)	\$1,123.7
Employee Count	1,200
Patent Count	5,902

Rovi Corporation, formerly known as Macrovision Solutions Corporation, began as an operating company selling digital entertainment services. Since its rebranding in 2009, the entity has focused more on licensing its portfolio, and according to SEC filings more than half of its revenue comes from intellectual property licensing. Rovi has sued some entertainment and media streaming companies, including Amazon, Hulu, Lenovo,

LGE, and Toshiba, but has not filed new litigation since 2012. It does not currently have any active litigation and has not taken a patent assertion case to trial. Rovi's portfolio relates to content discovery, DVR and VOD functionality, multi-screen functionality, as well as interactive applications and advertising.

### SITO Mobile, Ltd.

### Mobile Search, Commerce, Advertising and Streaming Media

Stock Price (as of 12/31/14)	\$0.20
Market Cap (\$USD M)	\$31.4
52-week High	\$0.70
52-week Low	\$0.16
Cash (\$USD M)	\$5.5
Debt (\$USD M)	\$8.6
Employee Count	21
Patent Count	27

SITO Mobile, Ltd., formerly Single Touch Systems, Inc., is an operating company that began monetizing its patents in 2012. SITO's mobile platform enables clients to send personalized messages and ads to customers based on their user preferences and purchase histories. SITO made a series of announcements in late 2014 that signal a shift in its business model, including a \$10M credit facility and a \$1M equity investment received from

Fortress Investment Group. The loan is secured by SITO's patent portfolio. SITO holds at least 24 issued patents and 34 applications as of November 2014. The company has asserted only three of its patents in litigation, in 2012 cases against Zoove and Hulu. The complaints target defendants' mobile marketing platforms. The cases both terminated within a year of the complaints being filed.

### Spherix, Inc.

#### Mobile Communications and Devices

Stock Price (as of 12/31/14)	\$1.08
Market Cap (\$USD M)	\$30.9
52-week High	\$10.40
52-week Low	\$0.75
Cash (\$USD M)	\$4.3
Debt (\$USD M)	\$0.6
Employee Count	3
Patent Count	Over 330

Spherix, Inc. began as a research company in 1967 and owns more than 300 patents and applications, including a portfolio acquired from Rockstar Consortium in July 2013. Many of its patents relate to aspects of wireless communication and networking, and those patents have been asserted in its litigations. Spherix began asserting patents in litigation in 2011,

but filed most of its litigations in 2013 and 2014. More than half of Spherix's cases have concluded, but none have reached trial. In addition to litigation, Spherix monetizes its portfolios through licensing and partnerships with operating companies. Rockstar Consortium is also a shareholder in Spherix.

### Tessera Technologies, Inc.

#### Semiconductors

Stock Price (as of 12/31/14)	\$35.76
Market Cap (\$USD M)	\$1,887.1
52-week High	\$36.99
52-week Low	\$17.60
Cash (\$USD M)	\$434.4
Debt (\$USD M)	\$0.0
Employee Count	203
Patent Count	3,705

Tessera Technologies, Inc. is an operating company that began asserting its patents in litigation in 2000. The company began as a designer of semiconductor miniaturization technologies, but in 2013 TSRA underwent a "turnaround campaign", or shareholder intervention, led by Starboard Value LP. The result was a refocus on the monetization of its patent portfolio. As of November 2014, Tessera has at least 30 known subsidiaries, including Invensas Corporation, which has been active in

litigation. Tessera holds at least 1,930 patents and 1,650 applications as of November 2014. More than 20 of those patents have been asserted by Tessera in litigation, mostly against chip manufacturers and companies that make and/or sell electronics that include semiconductor chips. Defendants include Advanced Micro Devices, Acer, Freescale, Hitachi, Motorola Mobility, Qualcomm, Spansion, and STMicroelectronics.

### **Unwired Planet, Inc.**

### Mobile Communications, Devices, E-commerce, and Software

Stock Price (as of 12/31/14)	\$1.00
Market Cap (\$USD M)	\$111.8
52-week High	\$2.44
52-week Low	\$0.80
Cash (\$USD M)	\$105.8
Debt (\$USD M)	\$27.7
Employee Count	15
Patent Count	2,500

Unwired Planet, Inc., previously Openwave Systems, is an operating company turned PAE. In 2012, the entity announced it would focus exclusively on the monetization and enforcement of its patent portfolio. Unwired Planet received a \$50M investment from Indaba Capital Fund in June 2013 to finance its licensing efforts. William Marino, the CEO of Pragmatus, and Rich Chernicoff, past President of Tessera IP Corp., are among

Unwired Planet's board members. Unwired Planet reportedly holds over 2,500 patent assets, which it says focus exclusively on mobile technologies. The entity has filed six infringement suits since 2009, asserting over 30 patents against defendants including Apple, Google, RIM, and Square.

#### **VirnetX**

# Consumer Electronics and PCs, E-commerce and Software, Media Content and Distribution, Mobile Communications and Devices, Networking

Stock Price (as of 12/31/14)       \$5.49         Market Cap (\$USD M)       \$285.5         52-week High       \$25.49         52-week Low       \$3.80         Cash (\$USD M)       \$41.2         Debt (\$USD M)       \$0.0         Employee Count       14         Patent Count       105	VirnetX develops and asserts security technology patents. At least 20 of VirnetX's patents originated with Science Application International Corporation (SAIC), a defense contractor that formerly employed VirnetX's founders as well as its current CTO and Chief Scientist. Kendall Larsen is President and CEO; his experience prior to joining VirnetX includes a senior position at CIA contractor Phoenix Technologies. On the basis of regulatory filings, it appears that Larsen has used VirnetX shares as collateral for personal
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lines of credit. As of November 2014, VirnetX holds at least 30 US patents, nine of which have been asserted in litigation. VirnetX has filed ten infringement suits since 2007 against companies including Apple, Cisco, and Microsoft. In September 2014, the Federal Circuit vacated a jury verdict that ordered Apple to pay VirnetX \$368M in damages for infringement of a group of VPN and secure communications patents.

### Vringo, Inc.

#### E-commerce and Software

Stock Price (as of 12/31/14) Market Cap (\$USD M) 52-week High 52-week Low Cash (\$USD M) Debt (\$USD M) Employee Count	\$0.55 \$51.3 \$5.45 \$0.49 \$16.0 \$0.0	Vringo, Inc. is a PAE that merged with Innovate/Protect, a privately held patent assertion entity, in July 2012. The reverse merger resulted in the acquisition of a portfolio of patents that originated with Lycos as well as Innovate/Protect subsidiary I/P Engine. Vringo personnel include Andrew "Ken" Lang, CTO, formerly of Lycos, and David Cohen, Chief Legal and IP Officer, formerly of Nokia. The PAE has at least five known entities, including Vringo Infrastructure, its only subsidiary besides I/P
Employee Count	13	including viringo initrastructure, its only subsidiary besides i/ i
Patent Count	600	

Engine that has been active in litigation. As of November 2014, Vringo has filed only four infringement suits, all of which have closed; the cases assert a total of three patents. In August 2014, the Federal Circuit invalidated two of Vringo's patents litigated against AOL, Gannet, Google, IAC, and Target, reversing a 2012 jury verdict that ordered the defendants to pay I/P Engine \$30M.

### **WiLAN**

### Consumer Electronics and PCs, Mobile Communications and Devices, Networking

Stock Price (as of 12/31/14) Market Cap (\$USD M) 52-week High 52-week Low Cash (\$USD M) Debt (\$USD M) Employee Count	\$3.01 \$361.2 \$3.76 \$2.74 \$127.6 \$44.9 66	WiLAN is a Canadian PAE that began litigating its patents in 2007. It was established in 1992 as an operating company selling products and licensing its inventions. In 2006, after years of stagnant stock valuation, it became an assertion-only entity. Both WiLAN's CEO, Jim Skippen, and its COO, Michael Vladescu, came from MOSAID (now Conversant IP). WiLAN reportedly made several bids to purchase MOSAID—an effort that eventually fell through in 2011. WiLAN has over 30 known
Patent Count	4,000	

subsidiaries, including Open Network Solutions, its most active subsidiary in litigation. The PAE reportedly holds over 4,000 patents. In Q1 2014, WiLAN announced it would shift its focus from outright patent acquisition to privateering deals with patent holders. As of November 2014, WiLAN has filed over 50 cases against more than 75 companies, mostly defendants that manufacture and/or sell electronics and mobile devices.

### **About RPX**

RPX Corporation (NASDAQ: RPXC) helps operating companies reduce the cost and risk associated with NPE (non-practicing entity) patent litigation. Members of the RPX client network pay an annual fee that reflects their particular NPE risk. We then use this aggregated capital to acquire potentially problematic patents and rights in the open market and out of active litigations before they can become a costly problem for our clients. RPX promises never to litigate or assert the patents it purchases.

In addition to our core defensive patent acquisition service, RPX also negotiates syndicates to purchase and clear significant portfolios from the market on behalf of our clients. We offer unique NPE liability insurance, written on A-rated paper and backed by a Lloyd's syndicate, which provides comprehensive coverage against the costs of patent assertion. We also provide members of our network with in-depth industry data, market intelligence, and patent advisory services.

To date RPX has invested nearly \$2 billion to acquire 10,000+ US and international patent assets and rights, achieved nearly 700 litigation dismissals, and prevented more than 2,500 of NPE litigations from occurring. Since our founding in 2008, we have saved our clients more than \$2.5 billion in avoided NPE legal and settlement costs.

The RPX network comprises more than 200 clients in sectors including automotive, consumer electronics and personal computing, E-commerce and software, financial services, media content and distribution, mobile communications, networking and semiconductors.

### Contacts

If you have questions about this report, please email reports@rpxcorp.com or contact your Client Relations or Client Development professional at RPX.

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