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5 reasons to be skeptical of a \$1B Yahoo patent sale

Prepared by Sherpa Technology Group

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Key messages

- Yahoo is marketing a portfolio of seminal patents related to web search and advertising. Press attention has focused on the possibility of a \$1B+ sale
- While a few \$1B+ patent sales have occurred in the past, there are reasons to be skeptical that such a price will be achieved in this instance
- Investors and company Boards need to recognize the current environment for patent sales and should not be led astray by advisors emphasizing the high potential of this Yahoo transaction
- We can describe scenarios that would lead to a \$1B sale, but we handicap the likelihood of such a deal as very low

The media is reporting that Yahoo expects serious money from its patent sale

THE WALL STREET JOURNAL

Yahoo seeks to raise \$1 billion in patent auction

Published: June 7, 2016 9:10 p.m. ET



Mid-June deadline on bids for 3,000 patents

A Yahoo spokeswoman confirmed the company is exploring the sale of about 3,000 patents and pending applications. "This represents a unique opportunity for companies operating in the internet industry to acquire some of the most pioneering and foundational patents related to web search and advertising," she said in a statement.

We feel that that the valuation expectations being set are unrealistically high

5 reasons to be skeptical of a \$1B Yahoo patent sale

Reasons for skepticism

- 1** \$1B+ patent sales are a historical anomaly – only a few have occurred, all within the “patent bubble” of 2010-2013
Patent valuations are down significantly since the 2010-2013 era; no public deal of even \$50M in the last 18 months
- 2** The legal and regulatory environment has changed significantly since the bubble years, which will directly effect Yahoo
The new ability to kill existing patents (esp. software) has created uncertainty, and courts have been unpredictable
- 3** Smartphone patent wars drove most of the blockbuster patent deals, and there has been a détente
Most big tech cos signed cross-licenses (truces) and have bought vast troves of IP – reduced need for big purchases
- 4** Yahoo may have already sold or licensed its most valuable assets
\$300M+ in past patent sales – the most logical buyers may already have access to the Yahoo IP they need
- 5** No obvious \$1B buyer(s)
While several profiles of buyers should have interest at some price level, \$1B will be difficult for any of them to justify

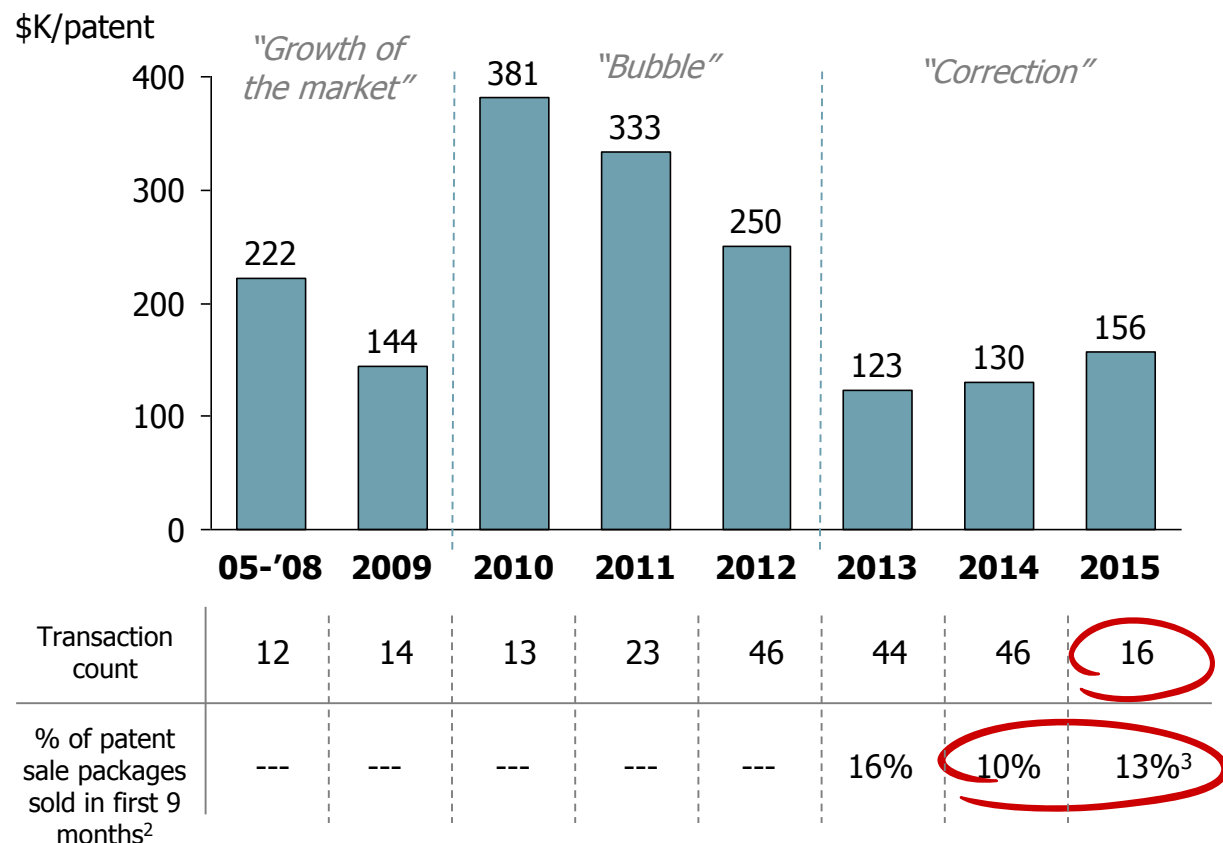
Ways it could work out for Yahoo

- “All you need is one” – a strategic buyer could decide it has to have this asset and meet the asking price. In particular, a cash-rich company with a perceived need for IP may be less price sensitive (e.g., emergent Chinese tech cos)
- A consortium of companies might pool together enough capital to approach the asking price
- Yahoo and its advisors may uncover numerous hidden gems in the portfolio and be able to demonstrate their value

Patent valuations experienced a bubble several years ago and have declined significantly since then

Median deal value by year (\$K/patent¹)

Commentary














- Over the past 18 months the median value of patent transactions tracked by STG is approximately \$150,000 per US issued patent - less than half the median value during the bubble years
- Volume of patent transactions also declined precipitously over the past few years. There are fewer active buyers and the majority of attempted patent sales do not close in a timely manner if at all

Notes:

1. Based on STG IP deal tracking database consisting of public sources and STG's own transaction experience. Calculations based on US issued patents

2. Source: Richardson Oliver Law Group. 3. First 8 months

We have to go back to 2014 to find publicly reported patent transactions of \$50M or greater

<i>Seller</i>	<i>Buyer</i>	<i>Date</i>	<i>Price (\$M)</i>	<i># Patents</i>	<i>\$K/Patent</i>	<i>Technology/Notes</i>
 Microsoft	 Xiaomi	June 2016	\$40M ¹	1,500	27	Mobile devices; deal also included product collaboration/license
 Unwired Planet*	Optis UP Holdings	Apr 2016	40	963	31	Wireless technologies for mobile devices (2G, 3G, 4G and cloud based applications and services)
 freescale semiconductor	WiLAN TM	Nov 2015	Revenue split / no upfront cash	3300	Not public	Processors, memory, semiconductor packaging, wireless, and IoT
 infineon	WiLAN TM	June 2015	33	7,000	5	DRAM, FLASH memories, semiconductor, lithography, packaging
Rockstar 	RPX RATIONAL PATENT [®]	Dec 2014	900	4,000	225	Telecommunications (previously the Nortel Networks portfolio)
 Qimonda	 infineon	Sept 2014	320	7,500	43	DRAM, FLASH memory
 Unwired Planet*	lenovo	April 2014	100	142	704	Telecommunications infrastructure including mobile device technologies; deal includes license
Rockstar 	 SPHERIX	Jan 2014	60	101	594	Access, switching, routing, optical/voice communication network devices

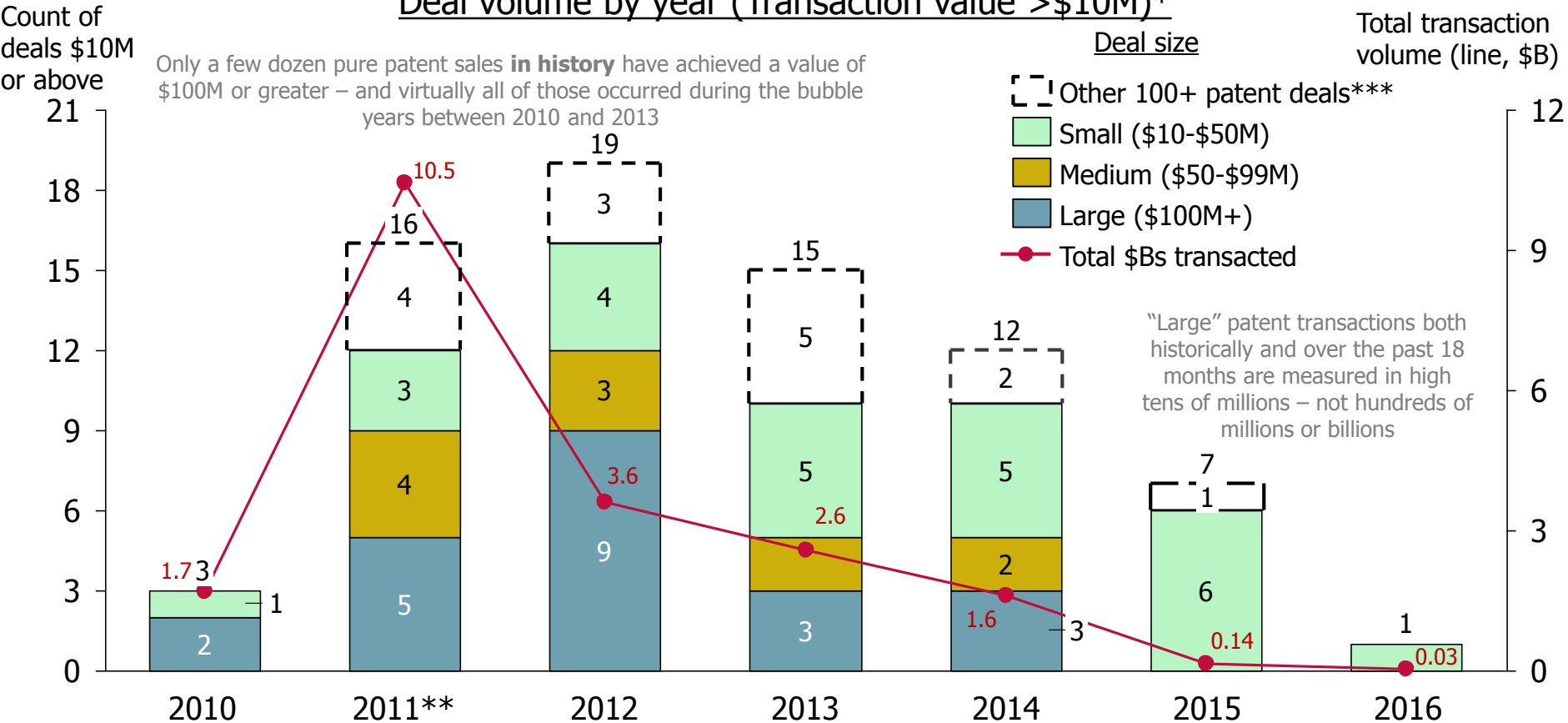
Note: 1. Xiaomi deal size not confirmed, but reported here in Mandarin:

http://mp.weixin.qq.com/s?biz=MzA5MDU0MTC3Ng==&mid=2653742245&idx=1&sn=0a45aedb3ae944cf3e4b668717b6847e&scene=4#wechat_redirect, which was

referenced by IAM (<http://www.iam-media.com/blog/Detail.aspx?q=71017e81-a7d4-4427-9426-f3dc0edc46da>)

\$100M+ deals are rare historically

Deal volume by year (Transaction value >\$10M)*



Even for a seminal portfolio like Yahoo’s, a \$1B deal would be an outlier – a nine-figure deal should be viewed as a success in the current environment

*Histogram includes estimates for deals where purchase prices are not reported

**MOTO/Google deal assumes \$4.5B purchase price based on industry estimates of value allocated to patent portfolio

***Pricing information for these deals is not publicly available

Changes in the legal and regulatory environment make it more difficult to justify high valuations

Legal/regulatory shift

Description

Impact

Introduction of new mechanisms to challenge and kill (invalidate) existing patents

- The America Invents Act (2011) created proceedings such as inter partes reviews (“IPRs”), which allow third parties to challenge a patent’s validity (i.e., enforceability)
- If the challenger wins, the patent is invalidated – the ability to enforce the patent is revoked, thereby rendering it worthless

- Third parties have successfully invalidated a high percentage of patents through the IPR process
- High cancellation rate creates risk, reduces value for any patent; defending an IPR can cost \$500K over 2-3 yrs through appeals

Legal rulings call into question the validity of many existing patents related to software

- The US Supreme Court’s *Alice v. CLS Bank* (2014) decision allows third parties to challenge the enforceability of existing, granted software patents
- *Alice* creates uncertainty as to whether software is “patent-eligible” subject matter – even if the patent office previously allowed the patent

- Courts have ruled that numerous software patents are no longer enforceable
- Uncertainty reduces value for any patent that relates to software – **Yahoo patents susceptible**

Changes in how patent damages are awarded (and upheld) in the US court system

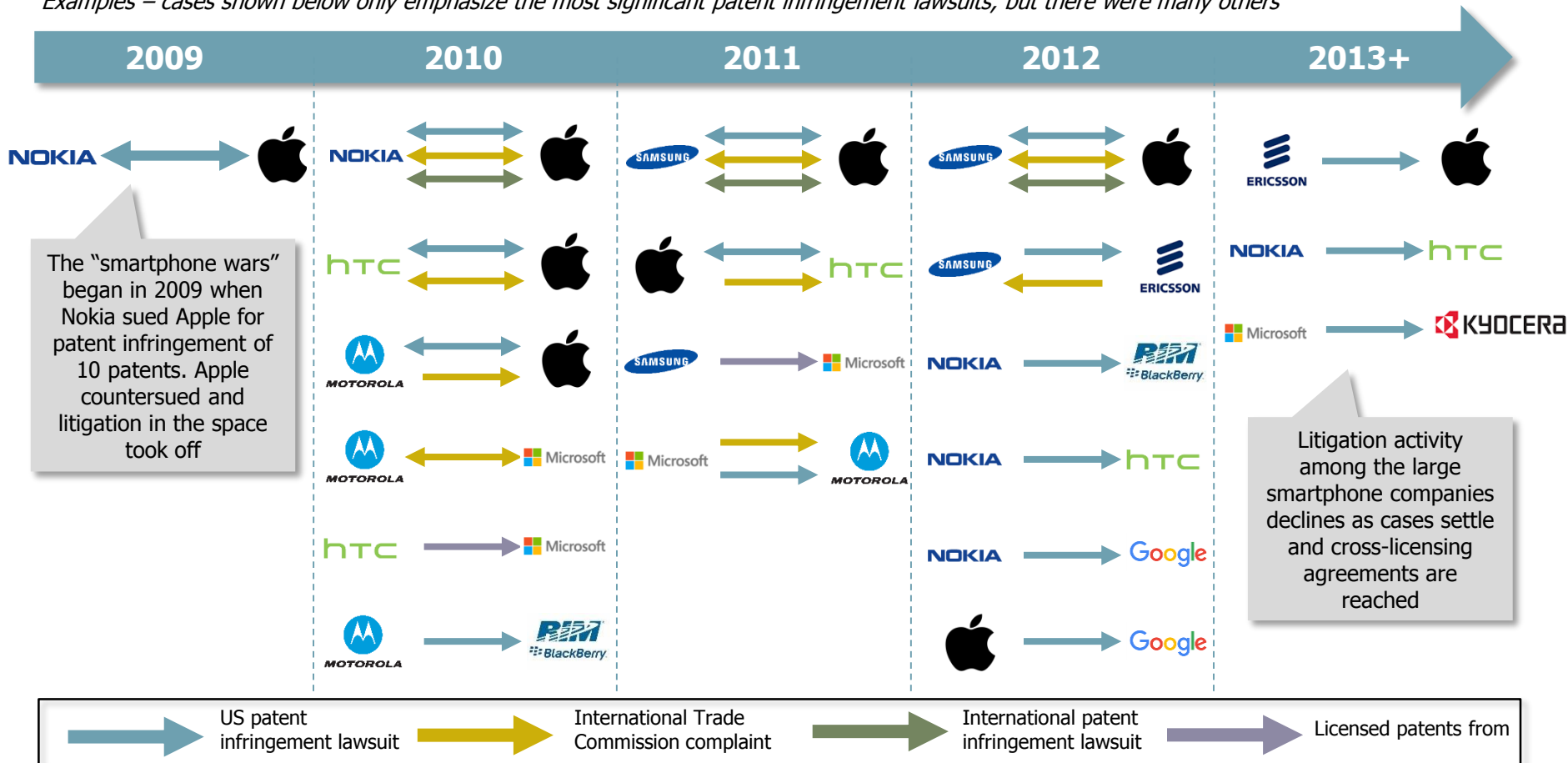
- \$ awards to owners of infringed patents have been unpredictable: judicial views on damages are evolving and jury verdicts are uncertain
- General “anti-patent” zeitgeist makes enforcement of patents more difficult

- More than \$1B in damages awarded by federal US jury verdicts have been thrown out over the last several years¹
- Uncertainty around what will hold up in court reduces patents’ value

Note: 1. E.g., Smartflash, VirnetX, ParkerVision, and Vringo verdicts (in some cases re-trials issued)

As the smartphone patent wars die down, big tech cos have less of an incentive to buy new IP

Examples – cases shown below only emphasize the most significant patent infringement lawsuits, but there were many others



The "smartphone wars" began in 2009 when Nokia sued Apple for patent infringement of 10 patents. Apple countersued and litigation in the space took off

Litigation activity among the large smartphone companies declines as cases settle and cross-licensing agreements are reached

After years of litigation, many of the large tech cos have signed cross-licenses (truces) with competitors – less of a need to pay top dollar for portfolios like Yahoos

Furthermore, many big tech cos spent lots of money buying large patent portfolios – there has been a “hangover” effect

Example transactions

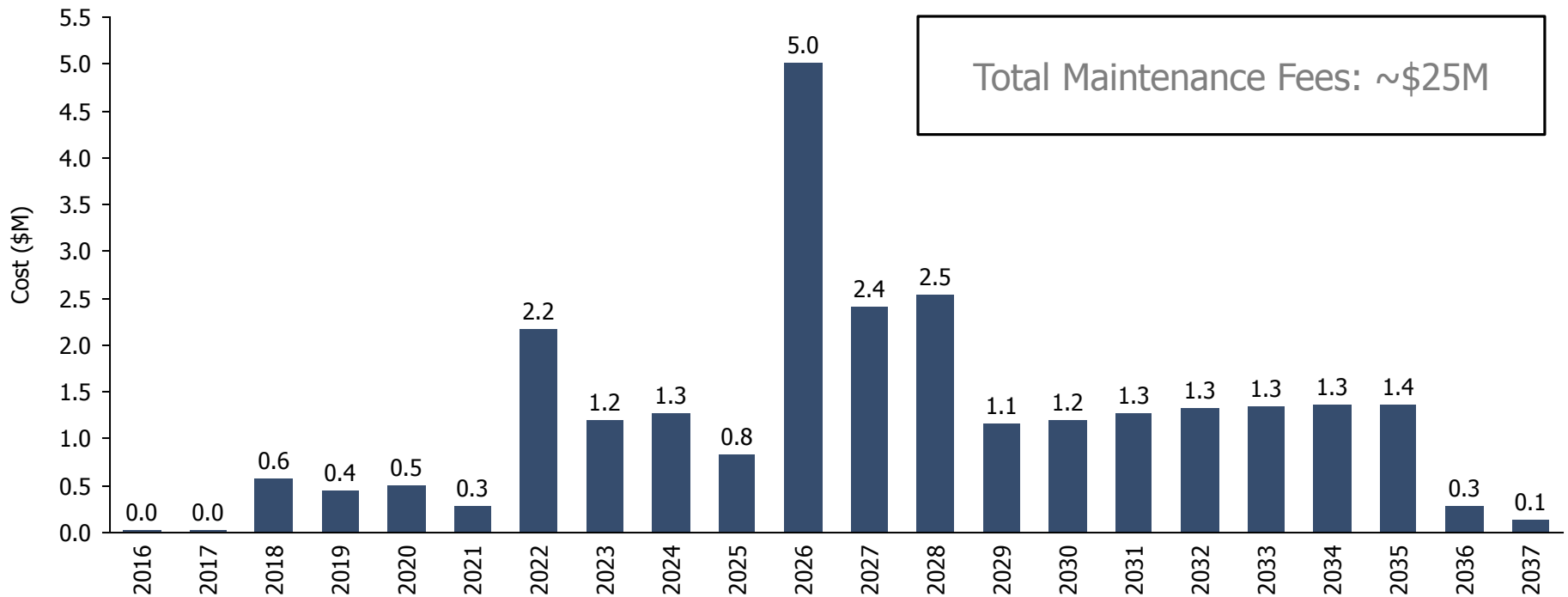
- **Google:** acquired Motorola Mobility in 2012 for \$12.5B (10s of thousands of patents)
- **Apple:** acquired patents from Nortel in 2011 as part of the \$4.5B Rockstar consortium purchase
- **Microsoft:** acquired patents from AOL in 2012 for \$1.1B
- **Facebook:** acquired certain ex-AOL patents from Microsoft in 2012 for \$550M
- **Lenovo:** acquired/licensed patents from Unwired Planet in 2014 for \$100M
- **Twitter:** acquired 900 patents from IBM in 2014 for \$36M

Note: while at first glance one may look at the AOL deals as comps for Yahoo, keep in mind that the Alice software ruling occurred in 2014 – 2 years after AOL had already sold the patents. Those same AOL patents would likely sell for much less today because of “Alice” risk

Do any of these companies feel the need to spend \$1B on more patents?

One reason buyers don't necessarily value bulk: it costs money to maintain a patent

Estimates of Maintenance Fee Payments Required for the Yahoo Patents







Yahoo's portfolio of ~3,000 patents will cost roughly \$25M simply to maintain; Buyers that already bought in bulk are now more focused on a small number "gem" patents so they don't have to pay just to keep piles of patents alive

Note: Includes US and foreign equivalents of all US granted patents assigned to Excalibur IP LLC, the entity into which Yahoo transferred ~1,700 US granted patents on April 18, 2016. We have used this patent list as a proxy for the patents for sale – this is an estimate as Yahoo has not publicized the patent list for sale. Using this list, we estimated the maintenance fees that would be due in covered geographies. We assumed that only 75% of applications will ultimately grant and that grants occur in the next three years. Furthermore, we assumed that WO applications are converted primarily to CN, DE, and GB; Our analysis excludes redundant CN and US applications.

Yahoo has sold lots of patents already – is the best stuff gone?

In Yahoo's 2015 10-K pg. 58, it reports \$339M in gains from 2013-2015 patent sales

<i>Buyer of Yahoo patents</i>	<i>Year</i>	<i>Deal Size</i>	<i>Est. # of patents</i>
 HUAWEI	2016	Not known	~15
 snapchat	2015	Not known	~10
Jollify Management	2015	Not known	~10
LinkedIn	2015	Not known	~10
Energetic Power Investment Limited	2014	Not known	~25
 Google	2014	Not known	~50
 Alibaba.com	2014 + 2013	\$24M gain + \$70M sale	Not known
match.com	2013	Not known	~5
PANDORA	2013	Not known	~5
VISA	2012	Not known	~5

One has to wonder if the best patents in the portfolio have already been picked over by buyers and whether lower quality assets remain. Of course it is also possible that the patents currently for offered sale were not available for sale previously

Note: Examples based on Yahoo's public filings and from the publicly available US patent reassignment database. "Energetic Power Investment Limited" may be an Alibaba subsidiary, but that is conjecture based on the timing of the patent reassignment and the second sale to Alibaba shown in Yahoo's 10-K. If that is the case, we are potentially double counting that transaction in the table above. Yahoo also reports a sale of patents to Yahoo Japan, which we are not including in the table above or in the \$339M figure in the slide subtitle

Realistically, who is left to pay \$1B for these assets?

None of these seem likely to us, but some are less unlikely than others

Higher likelihood buyers

Illustrative only

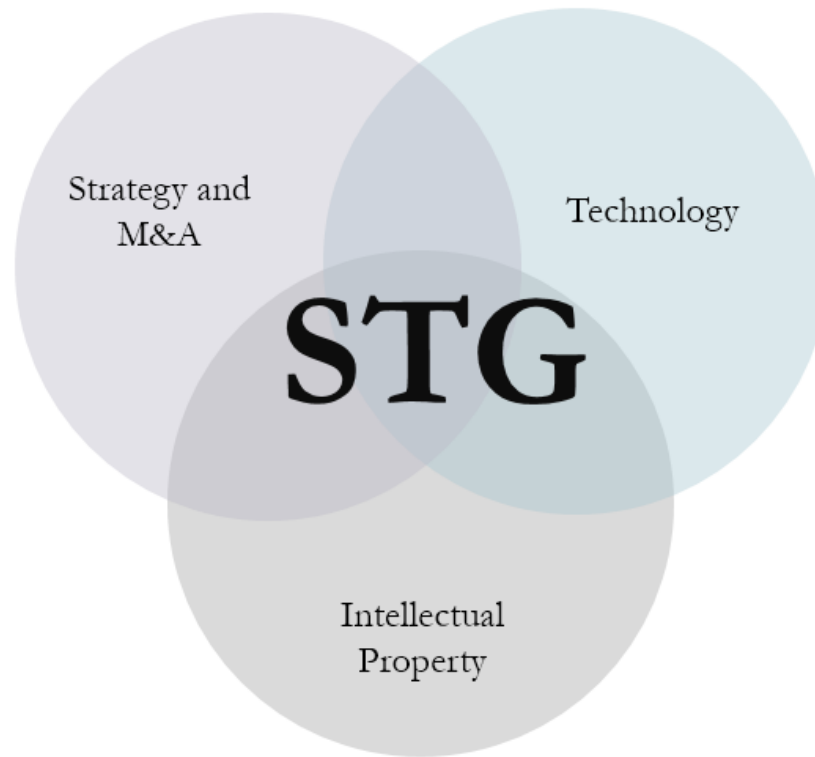
Most unlikely to pay \$1B

Category of Potential Buyer	Examples of Companies	Why/Why Not a \$1B Buyer
"Recently" emergent Chinese tech companies	Tencent, Baidu, Xiaomi, Oppo	<ul style="list-style-type: none"> Lots of cash; in theory could swallow a \$1B portfolio Xiaomi has made some purchases already, however (Intel, Microsoft, Broadcom patent acquisitions) Is IP important enough to them to spend \$1B?
Consortium of companies	Historical examples include Rockstar Bidco (Nortel), RPX/Intellectual Ventures-led consortium (Kodak)	<ul style="list-style-type: none"> A group of companies might be more likely to collectively pay \$1B than an individual company But patent aggregator-organized consortia (e.g., RPX) have never paid \$1B; at most, \$100s of millions Rockstar paid \$4.5B for Nortel's patents, but in 2011
Companies that have already bought patents from Yahoo	Alibaba, Huawei, Snapchat, LinkedIn, Pandora	<ul style="list-style-type: none"> They already know how to get a deal done w/ Yahoo Alibaba has paid ~\$100M – far less than \$1B If they already got the patents they wanted, they may have less interest here, esp. for a \$1B price
Tech companies active in the smartphone wars	Google, Microsoft, Apple, Facebook, Ericsson, Nokia, Amazon, Samsung, LG, HTC, Lenovo	<ul style="list-style-type: none"> Many already spent lots of money on lots of patents With cross-licenses in place following smartphone wars, new patents do less for them Why spend another \$1B and take on the costs?
Converging industries (e.g., automotive, digital media)	Auto: Ford, GM, Hyundai, Tesla, Uber, Lyft Digital media: Netflix, Rovi/Tivo, Comcast, Dropbox	<ul style="list-style-type: none"> As the tech industry converges with other industries, new players will need tech IP More likely to buy a targeted number of patents for an amount smaller than \$1B
Non-practicing entities "NPEs" (buy patents and monetize through licensing/litigation)	Intellectual Ventures, Acacia, Wi-LAN, Conversant, Marathon	<ul style="list-style-type: none"> Because of the risk of enforcement, these companies tend to avoid large up-front payments (prefer revenue sharing/"back-end"-loaded deals) Most NPEs don't have \$1B to spend; if they spend 7-figures that's a big deal for them

Note: list of companies is exemplary only; not intended to be comprehensive

Though a \$1B patent sale is unlikely, “it ain’t over ‘til it’s over”

- **It just takes one buyer that feels the need to pay \$1B**
 - One never knows how parties will act in competitive auctions, and patent sales for at least \$1B *have* occurred (though very few ever and none recently)
- **A cash-rich company with a perceived need for IP might be less price sensitive**
 - For example: an emergent Chinese technology company that wants to acquire a marquee portfolio at any price (within reason)
- **The value will increase if the patent broker can uncover a large number of gems in the portfolio and show that the patents are infringed and valid**
 - A critical mass of believable and detailed claim charts/evidence of use analyses will improve the chances of a higher valuation
- **Several cases under review by US courts could be resolved in the next several months, and could swing the pendulum in favor of patent values**
 - Court rulings related to the IPR process (e.g., *MCM Portfolio* and *Cuozzo Speed Technologies*) and patent damages (e.g., *Commonwealth Scientific and Industrial Research Organization*, *Stryker Corp.* and *Halo Electronics*) could benefit valuation for all patents (but still a long way to go to reach \$1B...)



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