專利市場的過去與展望

2017 MAY

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纲　要

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1　一些背景

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Who is FAITH

A Transpacific IP “spin-out”

- 原宇东集团台湾公司
- 宇东集团 “全球中央厨房”
- 亚洲最富实战经验的专利资产化与交易服务团队

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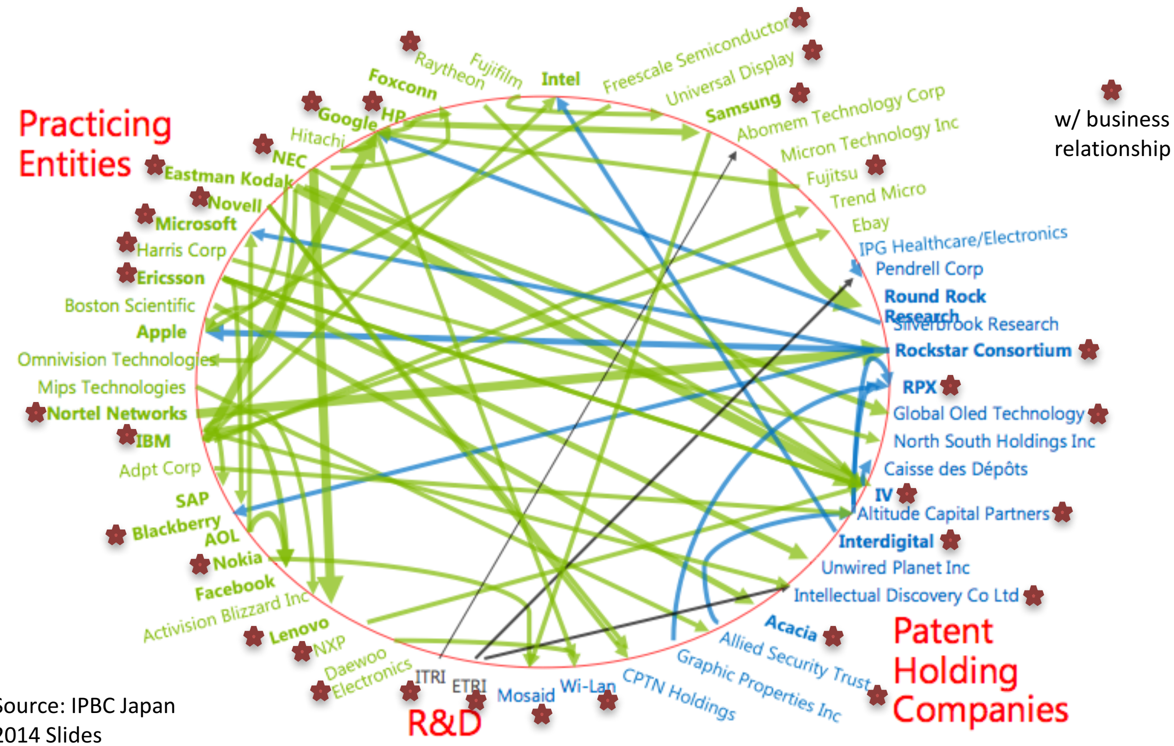
专利交易经验值



Source: IPBC Japan
2014 Slides

SIGNIFICANT TRANSACTIONS '11-'13

经验值

– **900+ 项目**

2.5 万　家族
10 万　专利

– **占比**

交易服务	60%
资本介入	35%
直投项目	5%

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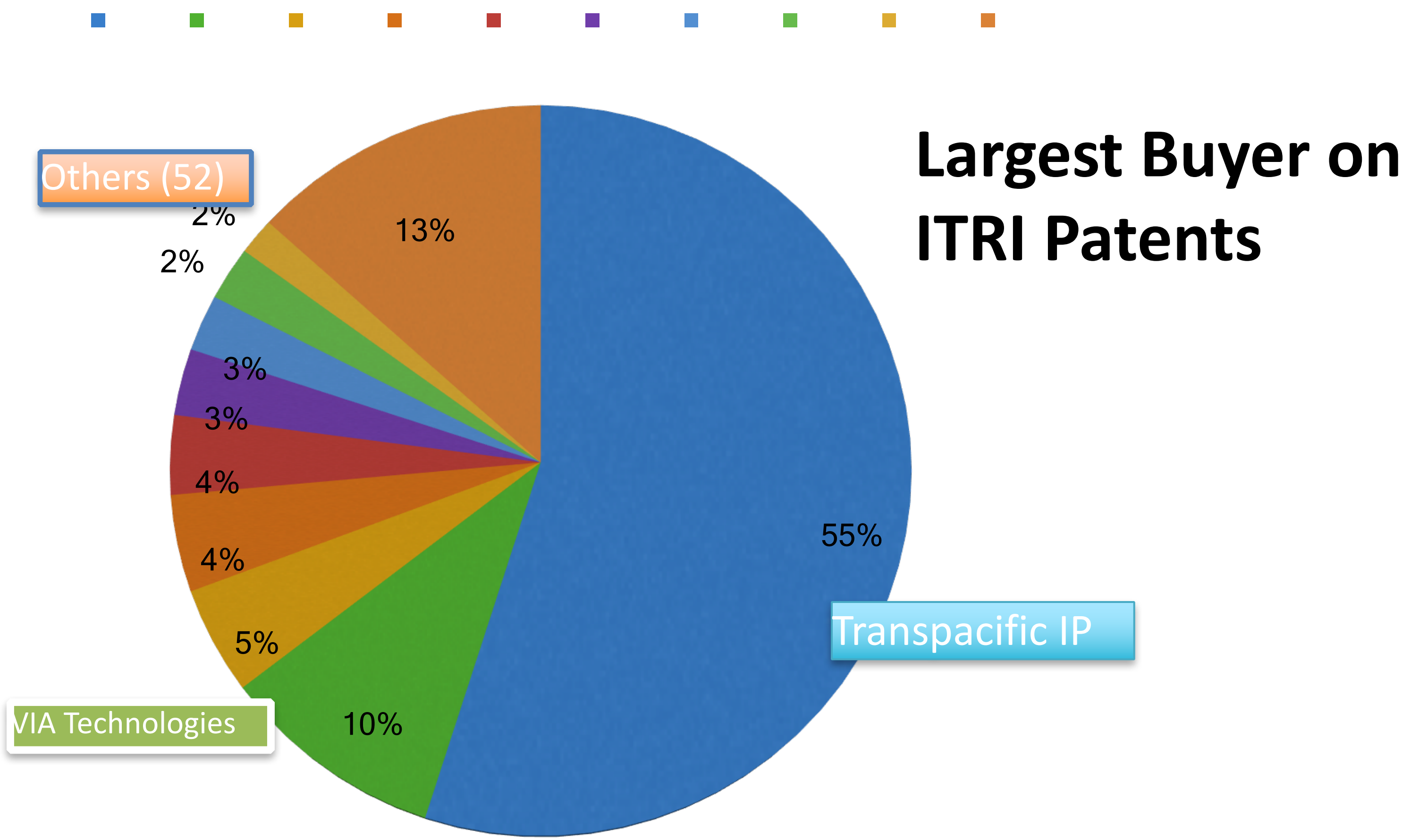
全球第二 / 亚洲最大 的专利收购经验



DATA SOURCE: *USPTO ASSIGNMENT DATABASE, DATA AS OF 15TH JUNE 2014; TOTAL 1,133 US PATENTS ASSIGNED BY ITRI HAVE BEEN LOCATED; 113 PATENTS ASSIGNED TO ITRI ITSELF HAVE BEEN REMOVED FORM THIS RESEARCH; 105 PATENTS CO-OWNED BY ITRI AND OTHER 7 COMPANIES HAVE ALSO BEEN CONSIDERED NOT OF PURE PATENT TRANSACTION DEAL(S)*

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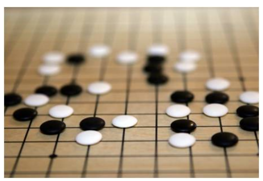
专利世界 过去的这15年



- 过去的15年, 以美国主导的全球专利经济发生了两阶段的大事, 2010年之前, 由高智公司 (IV) 掀起的专利交易风潮在 ‘08年时到达高峰, 10年间, “patents as products”与 “patent monetization” 蔚为显学; 然而因专利权使用达到历史高峰, 企业权利金成本极高, 因此美国也在2013年修法, AIA (America Invent Acts) 造成第二阶段大事, 可以说, AIA达到了一个将专利经济去泡沫化的功效。目前看来, 专利的被重视程度仍然是全球一致, 但回归到 “patent in product”的路线上。

- AIA 对美国的知识经济已带来反效果, 专利维权与专利授权经济变成了一个极端 M型化的市场, 不能至少准备1千万美金的运营成本 (不考虑专利本身成本) 的运营体只能取得极小的回报 (通常在50万美金以下), 矽谷也因为许多人对专利价值信心的丧失, 而出现了大量研发团队融资困难的状况。

- 日韩在过去15年间出现交叉, 韩国早期选择完全以美式作风做科技运营与专利操作, 因此其专利整体效益在这几年来显著的压倒专利大国日本, 也因此日本在2013年成立IP Bridge, 企图翻转日本全国保守而过时的专利思维。

- 中国大陆不同于日韩台之处在于具有庞大的本土市场因此美国市场的依赖度较低, 美国专利对于中国的影响较小, 但中国也从没有停止专利战略的重视, 2012年起, 中国就出现了妨效高智的专利基金公司, 至今虽还在摸索中, 但发展与不可逆的趋势是肯定的。

讲者眼中的大事纪

IBM

2000
INTELLECTUAL VENTURES®

2004
工業技術研究院 Industrial Technology Research Institute

2008
RPX RATIONAL PATENT®

2009
Google™

2011
NORTEL

2013
IPBridge

America Invents Act

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2 IP“商人”的经济观

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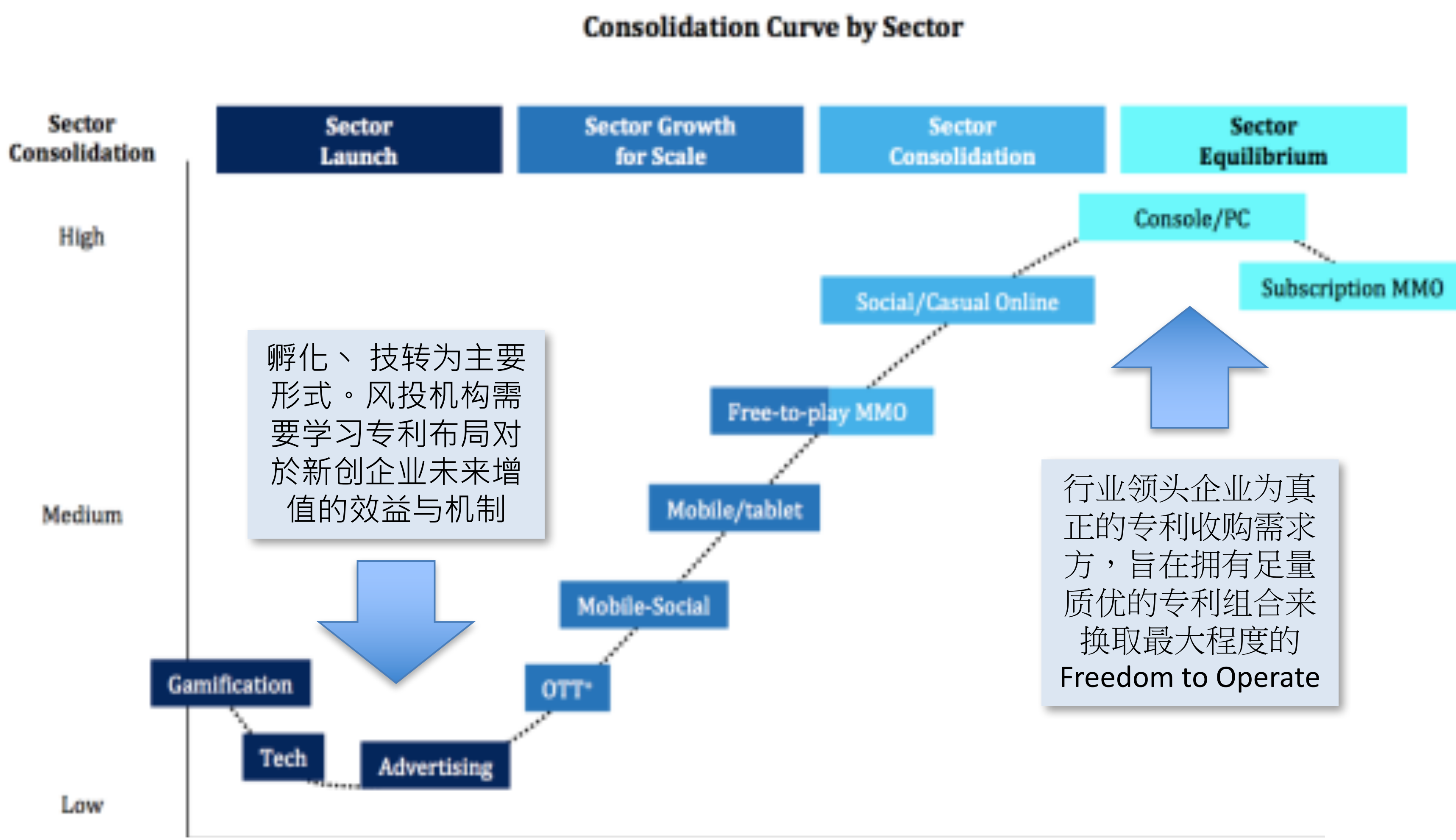
以新创企业成长曲线说明
两个端点的知识产权运营价值特别与差异
（线上游戏产业為例）



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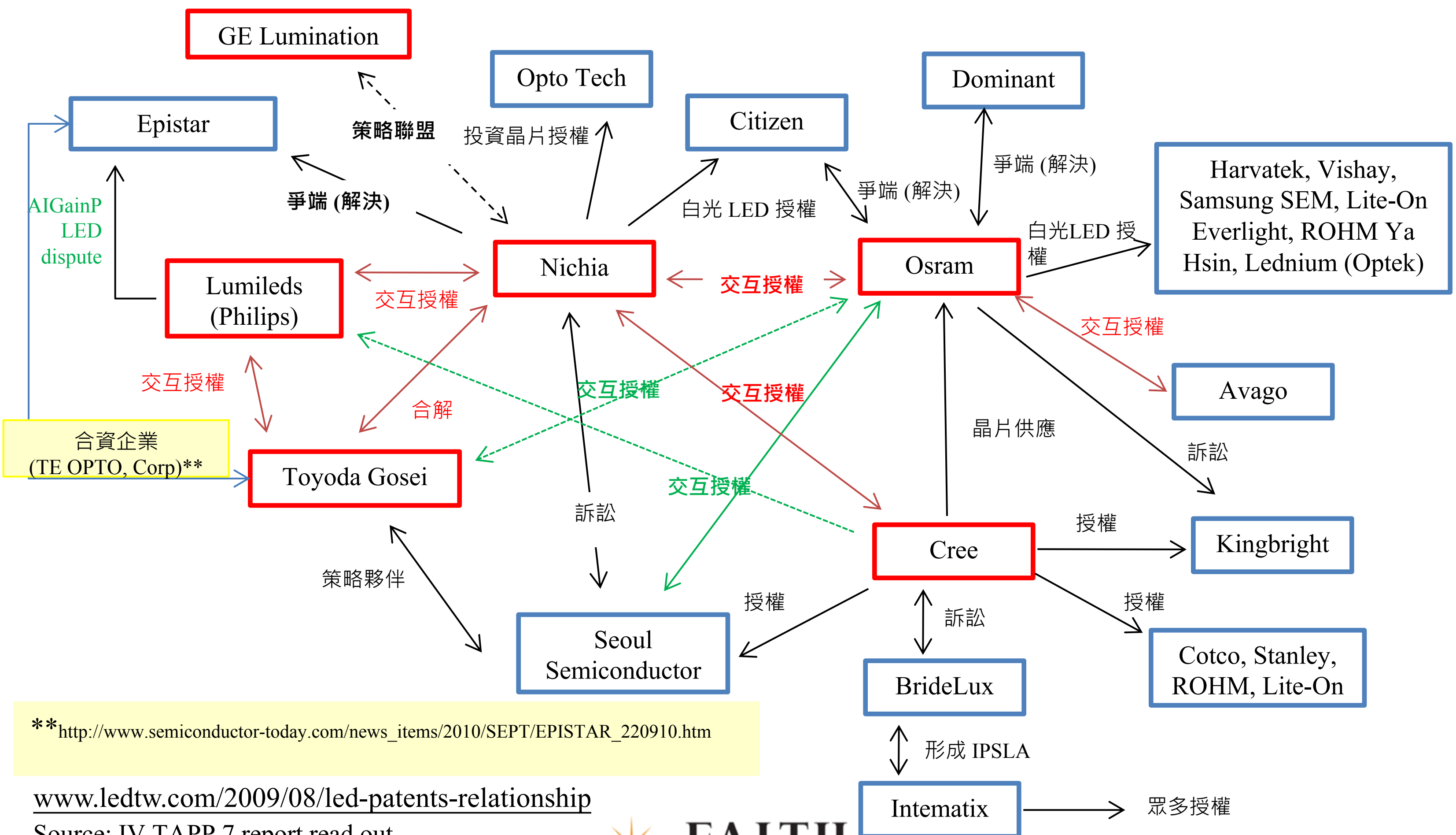
成熟企业借由知识产权以抑制市场被瓜分

LED 晶片过去是重度交叉许可 ，平静的专利市场



**http://www.semiconductor-today.com/news_items/2010/SEPT/EPISTAR_220910.htm

www.ledtw.com/2009/08/led-patents-relationship

Source: IV TAPP 7 report read out

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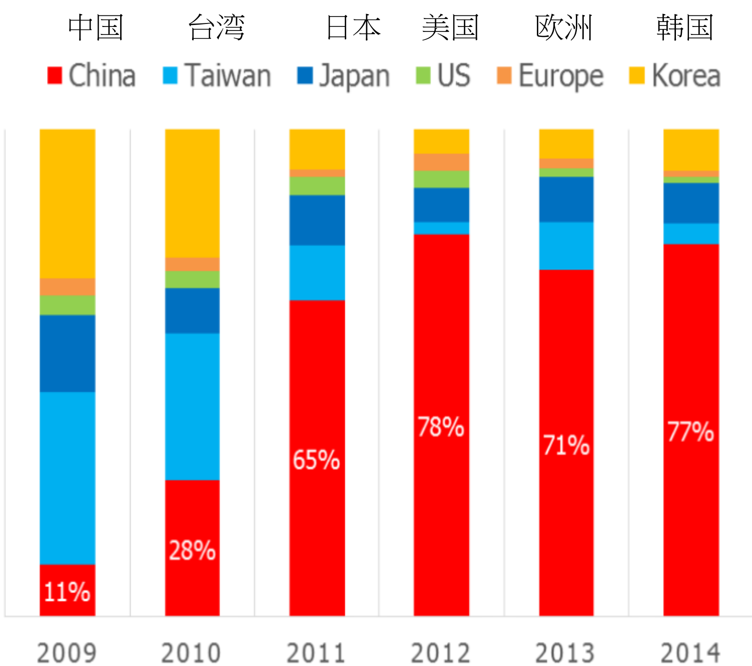
平衡的改变

全球有机金属化学气相沉积 (MOCVD)*系统安装率



***MOCVD系统适用于研究及生产磊晶材料,，MOCVD制程是LED效能的最关键决定因素。**

前五大MOCVD系统扩张率的中国LED芯片制造商

2014	2015
华灿光电 **HC Semitek**	三安光电 **Sanan Opto.**
三安光电 **Sanan Opto.**	干照光电 **Changelight**
干照光电 **Changelight**	开发晶 **Kaistar**
澳洋顺昌 **Aucksun Opto.**	华灿光电 **HC Semitek**
新纳晶光电 **Nanojoin**	清华同方 **Tsinghua Tongfang**

数据源：
Asian Manufacturers Spur Low Priced Lighting Era – 2015
DOE SSL R&D Workshop

流动性的产生

三安光電收購Luminus Devices，意在獲取專利權

2013-06-06 08:52 [編輯：jasminezhuang]

LED板塊近期的強勢崛起，三安光電在其中表現十分搶眼，公司昨日公告稱，花費2200萬美元將美國一LED公司收入囊中。但《每日經濟新聞》記者注意到，三安光電此次收購的是一家淨資產為-556.91萬美元的公司。

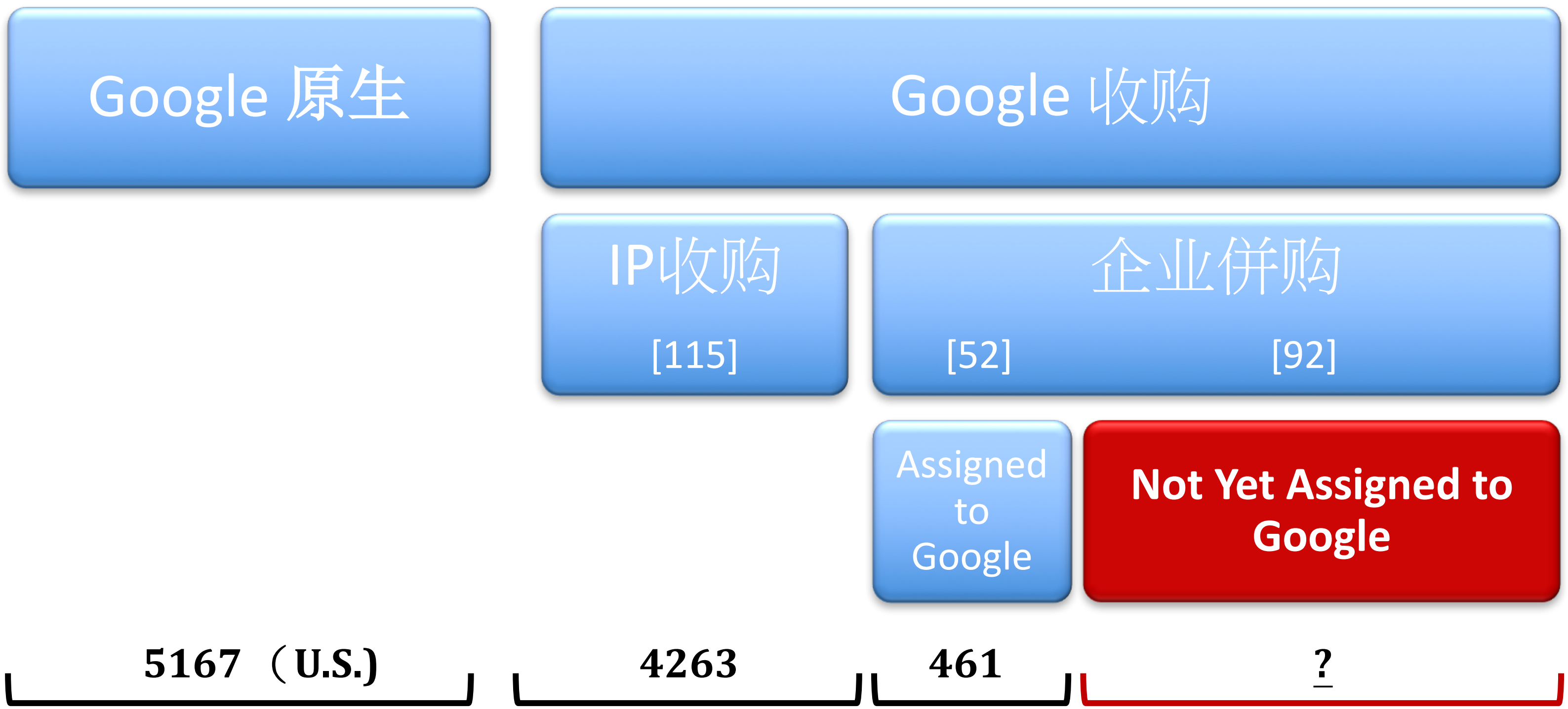
Lumileds 賣給金沙江告吹，飛利浦遺憾終止交易

作者 LEDinside | 發布日期 2016 年 01 月 22 日 20:24 | 分類 中國觀察 , 光電科技 G+1 讚 分享 876

中國三安光電傳將收購德國照明廠歐司朗 德經濟部長反對

作者 Atkinson | 發布日期 2016 年 10 月 07 日 9:15 | 分類 國際貿易 , 手機 , 晶片 G+1 讚 分享 0

GOOGLE – 2013 年初时的专利统计情况



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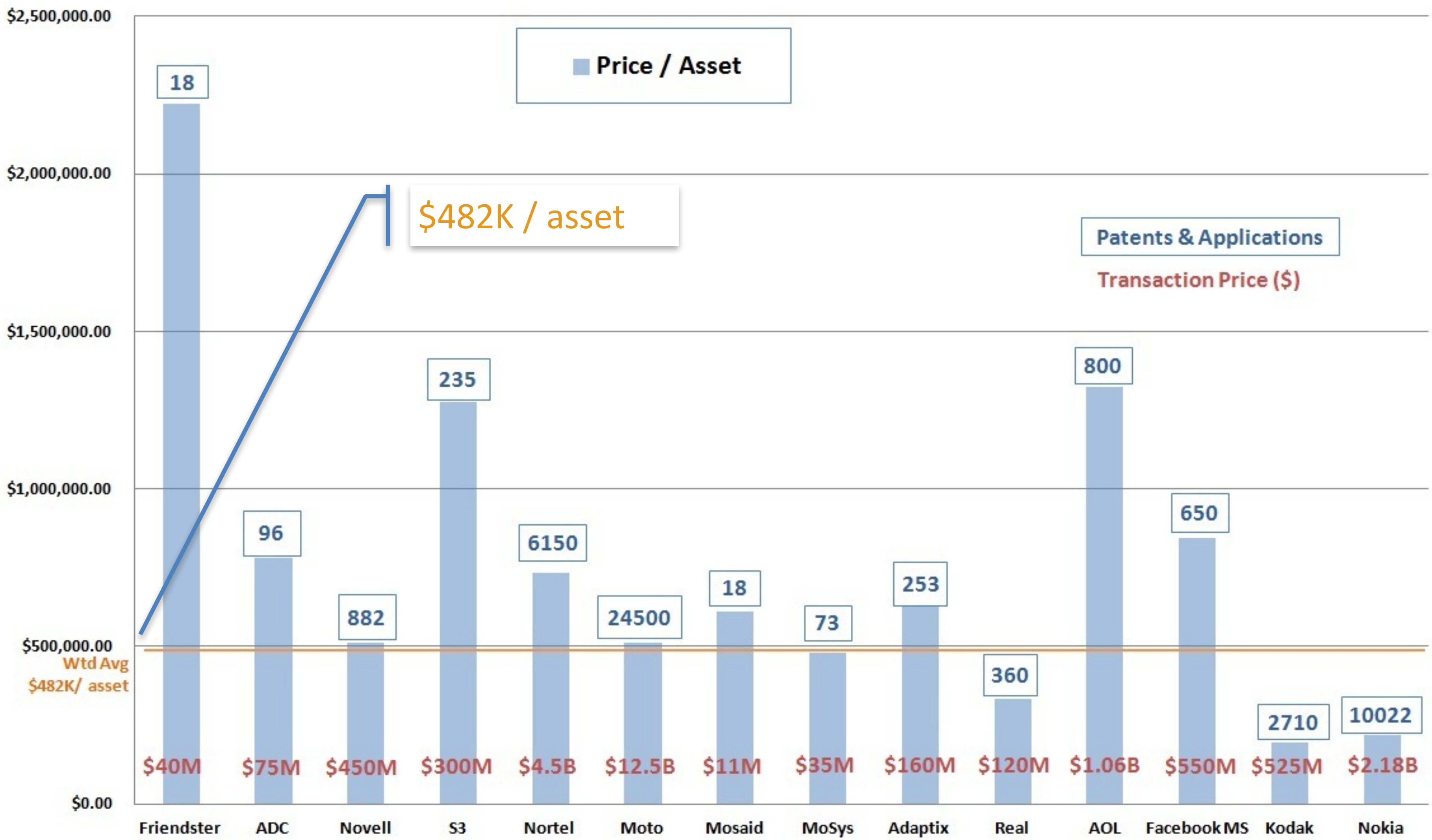
2011年以前的美国IP法庭十大判赔

Year	PLAINTIFF	DEFENDANT	Verdict (M USD)
2009	Centocor Inc.	Abbott Laboratories	1,848
2007	Alcatel–Lucent	Microsoft	1,538
2010	Mirror Worlds LLC	Apple Inc.	626
2011	Bruce N. Saffran M.D.	Johnson&Johnson	593
2003	Eolas	Microsoft	521
2008	Bruce N. Saffran M.D.	Boston Scientific	432
2009	Uniloc USA	Microsoft	388
2008	Lucent	Microsoft	368
2006	Rambus	Hynix	307
2009	i4i Limited	Microsoft	277

着名巨额专利交易范例

SOME ”FAMOUS” TRANSACTION DEALS



Source: FAITH-IA research

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3 知识产权许可 & 交易：

透过 IP基金实操 来理解

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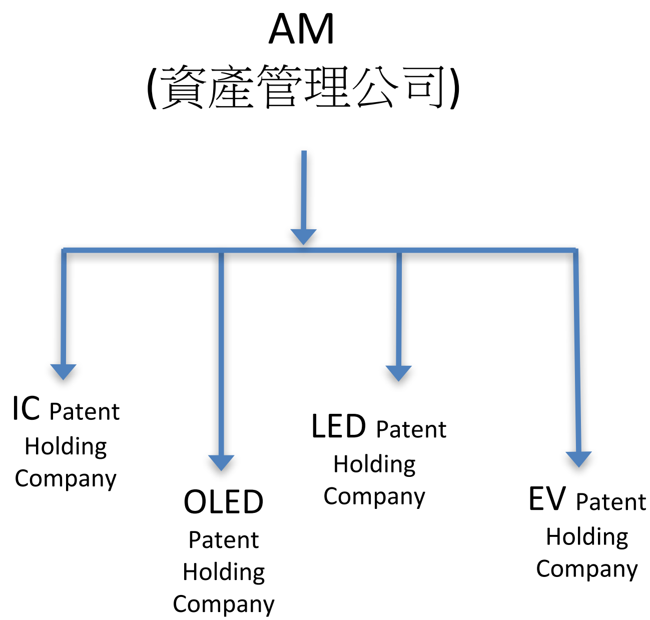
IP 基金 框架流程



計劃&募資

- 每個項目都因主要戰略投資伙伴的不同而須設計不同的 IP收購計劃
- 收益主要來自基金管理費與運作時的各種開銷服務費

IP 收購

- 為最重要且繁重的工作階段
- 通常耗時 3-5 年
- 工作流程見下頁

移交or代持

- 移交：AM 退場
- 代持：AM 可繼續提供 對外 IP許可服務

计划or募资阶段 的 战略说明书工作要点

- 決定市場 或 選定主要戰略投資伙伴
- 市場與供應鏈分析 – 誰是競爭者
- 專利地圖 – 專利在誰手上
- 指出沒有戰略價值的專利子領域
- 占據具戰略價值 （瓶項位置）的子領域

- 成本與效益分析
  - 成本： 收購成本估算
    自建成本估算
    持有總費用估算
    許可費用估算
  - 效益： 總體可許可市場市值估算
    競爭專利許可實體與風險評估
    權利金比率落點評估
    運營成本評估

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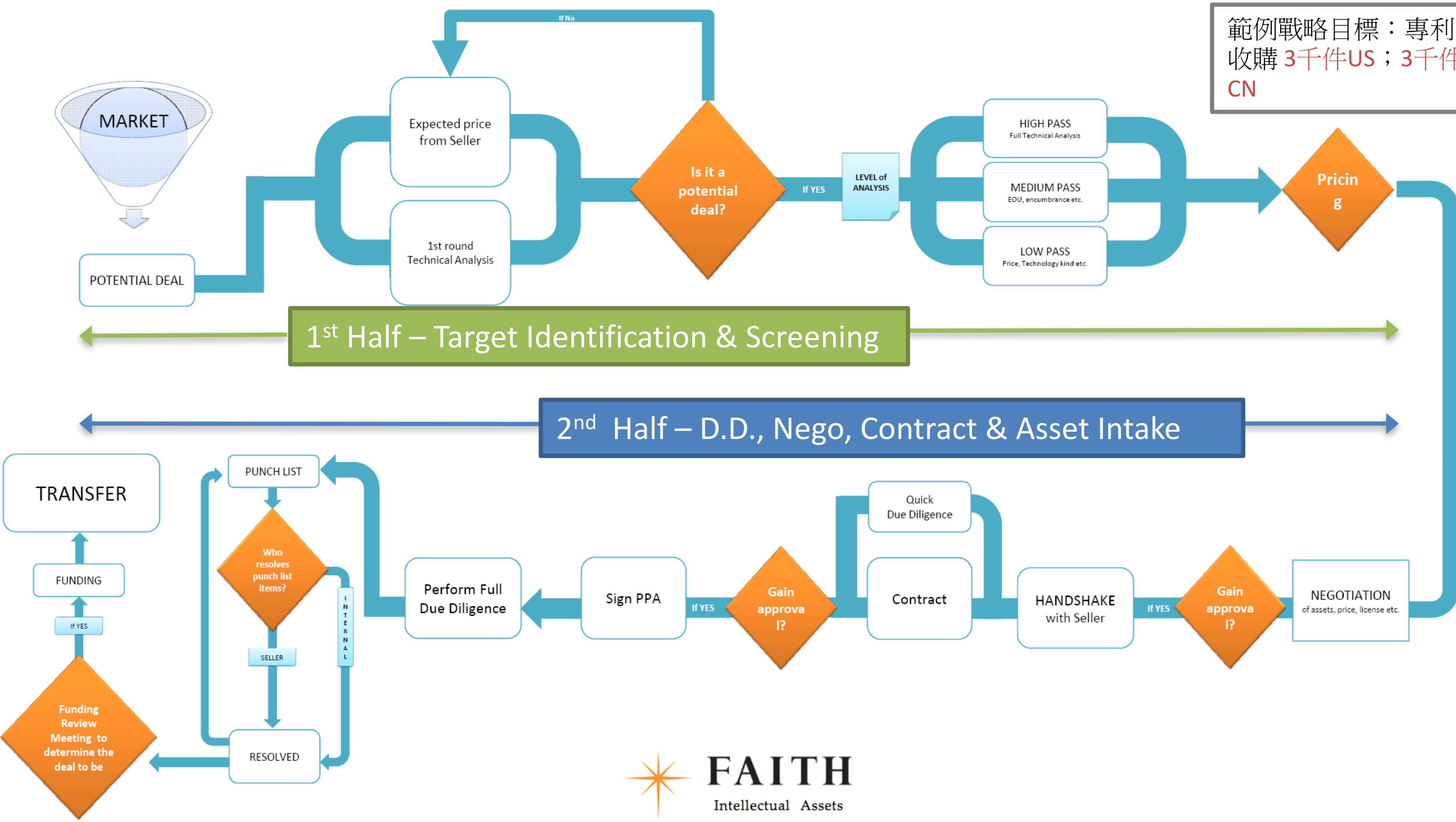
IP 收购 流程示意图

範例：查找3萬件US及1.5萬件CN可收購專利

範例：初階技術分析與商談-排除 20%-40% 專利

範例：進階技術與價值評估確認收購標的

範例戰略目標：專利收購 3千件US；3千件CN



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移交or代持阶段 工作要点

移交

- 相對單純
- 主要戰略投資伙伴收購：
  - ➢ Patent holding company 股份

  或

  - ➢ 直接收購專利

代持

- 行使專利權
- Licensing Campaign
- 對於主要戰略投資伙伴的：
  - ➢ 直接競爭對手：以大量取得交互許可為主戰略
  - ➢ 非競爭企業：儘可能收取高額權利金，類似NPE操作

获利型 IP基金项目– 概念数字范例

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专利许可项目 - 目标与权利金粗估范例

EXAMPLE - LICENSING TARGETS & THE VALUE BASE (SMART DEVICES)

Royalty Estimate of Smart Devices: 0.5% rate applied

(US$M)	2013	2014	NPV@15%	2015	2016	2017	2018	2019	2020	2021	2022
Samsung	$888.94	$785.09	**$3,589.86**	$800.00	$800.00	$800.00	$800.00	$800.00	$800.00	$800.00	$800.00
Apple	$376.97	$478.57	**$2,243.66**	$500.00	$500.00	$500.00	$500.00	$500.00	$500.00	$500.00	$500.00
Microsoft	$376.25	$278.49	**$1,278.89**	$285.00	$285.00	$285.00	$285.00	$285.00	$285.00	$285.00	$285.00
Lenovo	$66.46	$84.03	**$403.86**	$90.00	$90.00	$90.00	$90.00	$90.00	$90.00	$90.00	$90.00
LG Electronics	$103.64	$114.14	**$538.48**	$120.00	$120.00	$120.00	$120.00	$120.00	$120.00	$120.00	$120.00
Huawei	$53.30	$70.50	**$314.11**	$70.00	$70.00	$70.00	$70.00	$70.00	$70.00	$70.00	$70.00
TCL Communication	$37.15	$48.02	**$218.76**	$48.75	$48.75	$48.75	$48.75	$48.75	$48.75	$48.75	$48.75
Xiaomi	$10.07	$42.40	**$201.93**	$45.00	$45.00	$45.00	$45.00	$45.00	$45.00	$45.00	$45.00
ZTE	$59.90	$53.91	**$246.80**	$55.00	$55.00	$55.00	$55.00	$55.00	$55.00	$55.00	$55.00
Sony	$56.39	$56.69	**$269.24**	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00	$60.00
Micromax	$12.72	$18.55	**$89.75**	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00
Others	$293.88	$314.68		$325.00	$325.00	$325.00	$325.00	$325.00	$325.00	$325.00	$325.00

Sample Diagram

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专利许可项目现金流规划范例

EXAMPLE - A LICENSING CASH FLOW PROJECTION

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Early License Rev		$10.2	$69.6	$33.1							
Cases Award							$435.2	$72.5	$72.5	$72.5	
Patent Cost	($9.1)	($0.1)	($0.1)	($0.1)	($0.1)	($0.2)	($0.1)	($0.2)	($0.2)	($0.7)	
Legal Cost		($2.0)	($8.0)	($4.3)			($43.5)	($7.3)	($7.3)	($7.3)	
Litigation Cost					($1.0)	($3.0)	($3.0)	($1.0)	($1.0)	($1.0)	
Engineering Cost	($0.7)	($0.7)	($0.7)	($0.7)							
Cash Flows	($9.8)	$7.4	$60.9	$28.0	($1.1)	($3.2)	$388.5	$64.1	$64.1	$63.5	IRR
Project Cash	$10.3	$17.7	$78.6	$12.0	$10.9	$7.7	$12.0	$12.0	$12.0	$0.0	
Returns	**($20.0)**	$0.0	$0.0	$94.6	$0.0	$0.0	$384.2	$64.1	$64.1	$78.5	97%

Sample Diagram

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4 知识产权评价

一些重要基准

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A 诉讼判赔基准（收益基准）

Litigation Damage Benchmark

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美国法院十大专利判赔

U.S. PATENT LITIGATION DAMAGES - TOP 10

Top ten largest initial adjudicated damages awards: 1995–2013

Year	Plaintiff	Defendant	Technology	Award (in $MM)
2009	Centocor Ortho Biotech Inc.	Abbott Laboratories	Arthritis drugs	$1,673
2007	Lucent Technologies Inc.	Microsoft Corp.	MP3 technology	$1,538
2012	Carnegie Mellon University	Marvell Technology Group	Noise reduction on circuits for disk drives	$1,169
2012	Apple Inc.	Samsung Electronics Co.	Smartphone software	$1,049
2012	Monsanto Company	E.I. Dupont De Nemours and Company	Genetically modified soybean seeds	$1,000
2010	Mirror Worlds LLC	Apple Inc.	Operating system	$626
2005	Cordis Corp.	Medtronic Vascular, Inc.	Vascular stents	$595
2004	Eolas Technologies Inc.	Microsoft Corp.	Internet browser	$521
2011	Bruce N. Saffran M.D.	Jonhson & Johnson	Drug-eluting stents	$482
2008	Bruce N. Saffran M.D.	Boston Scientific Corp.	Drug-eluting stents	$432

Source: PWC 2014 patent litigation study

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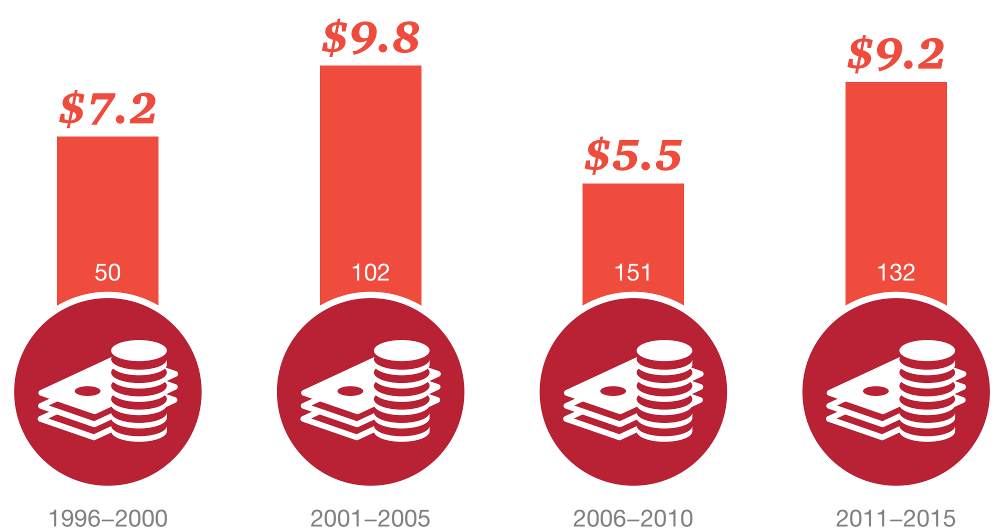
美国法院专利判赔

U.S. PATENT LITIGATION DAMAGES - MEDIAN （中位）

Median damages award at ***highest*** point in ***10*** years

Fig 5b: Median damages award (excluding summary and default judgments)

Median damages awarded (in $M)

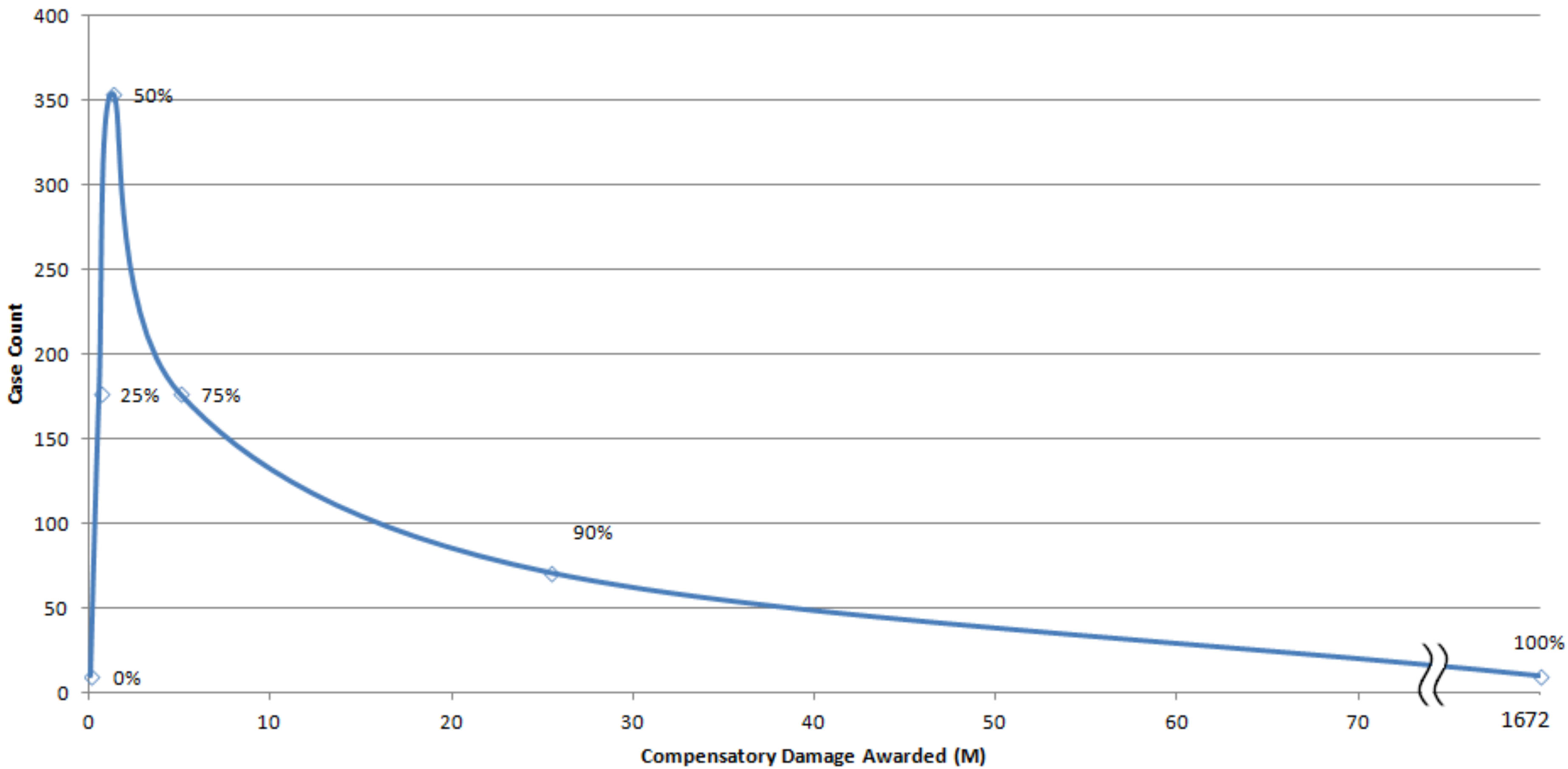


The number of identified decisions is indicated within the respective column.

Source: PWC 2016 patent litigation study

美国法院专利判赔

U.S. PATENT LITIGATION DAMAGES – DISTRIBUTION （分布）



Source: FAITH-IA research

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合理权利金信息的重点 - 市值 & 市占龙头

REASONABLE ROYALTY RATE – MARKET BASE & TOP PLAYERS

Industry		Revenue (billion USD)	Revenue Remarks (corresponding year, if not stated the other)	Top 1	Top 2	Top 3	Top 4	Top 5
Telecommunications								
Base Station		42.0	US$ 34b in 2010 to US$ 42b in 2015	Ericsson (25%)	Huawei (25%)	NSN (25%)	Alcatel-Lucent (15%)	Others (10%)
Small Cell		7.7	US$ 0.3b in 2010, to US$ 7.7b in 2015/ Other positive study shows the market may exceed US$ 20b in 2016/ **The market is too early to determine clear top 3.**	NSN	Alcatel-Lucent	Cisco	ZTE	ip.access
Routers and Switches		11.5	2011	Cisco (36.6%)	Juniper (18.7%)	Alcael-Lucent (16.7%)	Huawei (15.3%)	ZTE (2.0%)
Carrier		1479.0	2012	AT&T (8.6%)	Verizon (7.8%)	NTT (7.4%)	China Mobile (6.2%)	Telefonica (5.6%)
	Mobile	870.0	2012	China Mobile (10.0%)	Verizon (8.7%)	AT&T (7.7%)	NTT (6.6%)	Telefonica (5.9%)
	Fixed	606.0	2012	AT&T (9.9%)	Verizon (6.6%)	Telefonica (4.8%)	China Telecom (3.5%)	NTT (3.3%)
NFC	total applications	7.7	2011(34.5B in 2016, at an estimated CAGR of 35% from 2011 to 2016)					
NFC	controller chips			NXP (74.4%)	Inside Secure (8.9%)	Broadcom(5.4%)	Sony (4.5%)	Renesas (3.0%)
NFC	Secure elements			NXP (56.9%)	Infineon (18.8%)	STMicroelectronics (18.1%)	Renesas (4.5%)	Samsung (2.1%)
VoIP		63.0	2012	Huawei	Alcatel-Lucent	Genband	NSN	Acme Packet
IC/Components								
Combo Chip		9.2	around US$ 9.2b in 2012, to include all mobile phone, tablet, and laptop	Broadcom (75%)	TI (17%)	Marvell (3%)	others (5%)	
MPU		54.1	2012	Intel (65.3%)	Qualcomm (9.4%)	Samsung+Apple (9.2%)	AMD (6.4%)	Freescale (1.9%)
MPU	Applications Processor(for	12.9	2012	Qualcomm (43%)	Apple's AX (16%)	Samsung's Exynos (11%)	MTK	Broadcom
Baseband		14.2	US$ 14.16b in 2010, The market share is for 2011	Qualcomm (45%)	MTK (13%)	ST Ericsson (11%)	Intel (10%)	Broadcom (5%)
NAND Flash		20.1	2012	Samsung (36.9%)	Toshiba (30.8%)	Micron (13.6%)	SK Hynix (11.4%)	Intel (7.1%)
DRAM		26.4	2012	Samsung (39.5%)	SK Hynix (23.9%)	Elpida (12.9%)	Micron (12.5%)	Nanya (4.6%)
Graphic Chip				Intel (57.37%)	AMD (24.2%)	Nvidia (17.85%)	VIA/S3 (0.54%)	Matrox (0.04%)
Image Sensor		9.5	2012	SONY (37.3%)	Canon (12.2%)	Samsung (11.8%)	OmniVision (8.6%)	Aptina (6.2%)
MEMS		11.0	2012	STMicroeletronics (12.5%)	Robert Bosch (10.5%)	TI (10.3%)	Hewlett Packard (8.1%)	Knowles Electronics (5.5%)
Display		156.0	2012	LG (27%)	Samsung (23%)	Chimei Innolux (20%)	AUO (16%)	BOE (5%)
LCD Driver IC		6.2	2012	Novatek (17%)	Renesas (10%)	Himax (10%)	Ilitek(6%)	Raydium (5%)
Glass Substrate		16.5	2011 (large size TFT-LCD substrate registers around US$ 15.7B)	Asahi Glass Co. Ltd. (69.6%)	Samsung Corning Precision Materials Co. Ltd. (29%)	Corning Inc. (18.2%)	Nippon Electric Glass Co. Ltd. (17.6%)	Avanstrate Inc.
Glass Substrate	Display Glass Slimming Technology	1.0	2014					
Polarizer		10.0	2012	LG Chem,Ltd. (27%)	Nitto Denko (26%)	Sumitomo (26%)	CMMT (7%)	BQM(Daxon) (6%)
Driver IC (DDI)		6.1	2012 (It's expected that the DDI will be US$ 5.48B in 2014.)	Samsung (16%)	Novatek (17%)	Himax (11.7%)	Renesas (9.5%)	Ilitek (6.3%)
LED Lighting		11.7	US$ 11.72 b in 2012, including LED lighting and LED replacement lamps and luminaire. LED component revenue for lighting applications reached US$3.11 billion in 2012. **Market share on the right are reflecting the status of packaged LED in 2009.**	Nichia (24%)	Samsung LED	Osram (10.5%)	LG Innotek	Seoul Semi/Philip Lumileds (6.5%)
Consumer Electronics								
Tablet		64.0	Expected to reach 190m units in 2013, or $64 billion in sale.	Apple (43.6%)	Samsung (15.1%)	Amazon (11.5%)	ASUS (5.8%)	Barnes & Noble (1.9%)
Mobilephone		200.0	contracted price, lower estimated, 2012	Samsung (28.2%)	Apple (20.9%)	Nokia (13.3%)	HTC (5.6%)	RIM (5.3%)
Mobilephone	Smartphone	325.1	722.4m unts in 2012, expected market size at US$ 325.1 billion.	Other Androids (38.9%)	Samsung (Androids, 29.9%)	Apple iOS (18.8%)	Blackberry (4.5%)	Windows Phone (2.5%)
Digital Camera		16.9	2012	Canon (46.02%)	Nikon (27.5%)	Sony (17.44%)	Olympus (5.62%)	Panasonic (1.98%)
Digital Camera	Camera Module for Smartphone	13.9	2012	Foxconn (11%)	STMicro (10%)	Toshiba (10%)	Sharp (7 %)	LG-Innotek (7%)
Laptop		164.2	2012	Acer (15.4%)	Lenovo (15.3%)	HP (15.3%)	Asus (10.7%)	Dell (10.0%)
TV		132.9	2012	Samsung (27.7%)	LGE (15.0%)	SONY (7.8%)	Panasonic (6.0%)	Sharp (5.4%)
TV	Smart TV	86.0	2010	Sony (51%)	Philips (36%)	Sharp (28%)	Samsung (26%)	LGE (12%)
Set Top Box		14.7	2012(would be 26B in 2017)	Cisco	Motorola	Skyworth Digital	Pace	Jiuzhou
Gaming		1.7	about US$ 1.68b (console and handheld only) in 2013	SONY (45%)	Microsoft (29%)	Nintendo (26%)		

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B 交易市场基准

Transaction Market Benchmark

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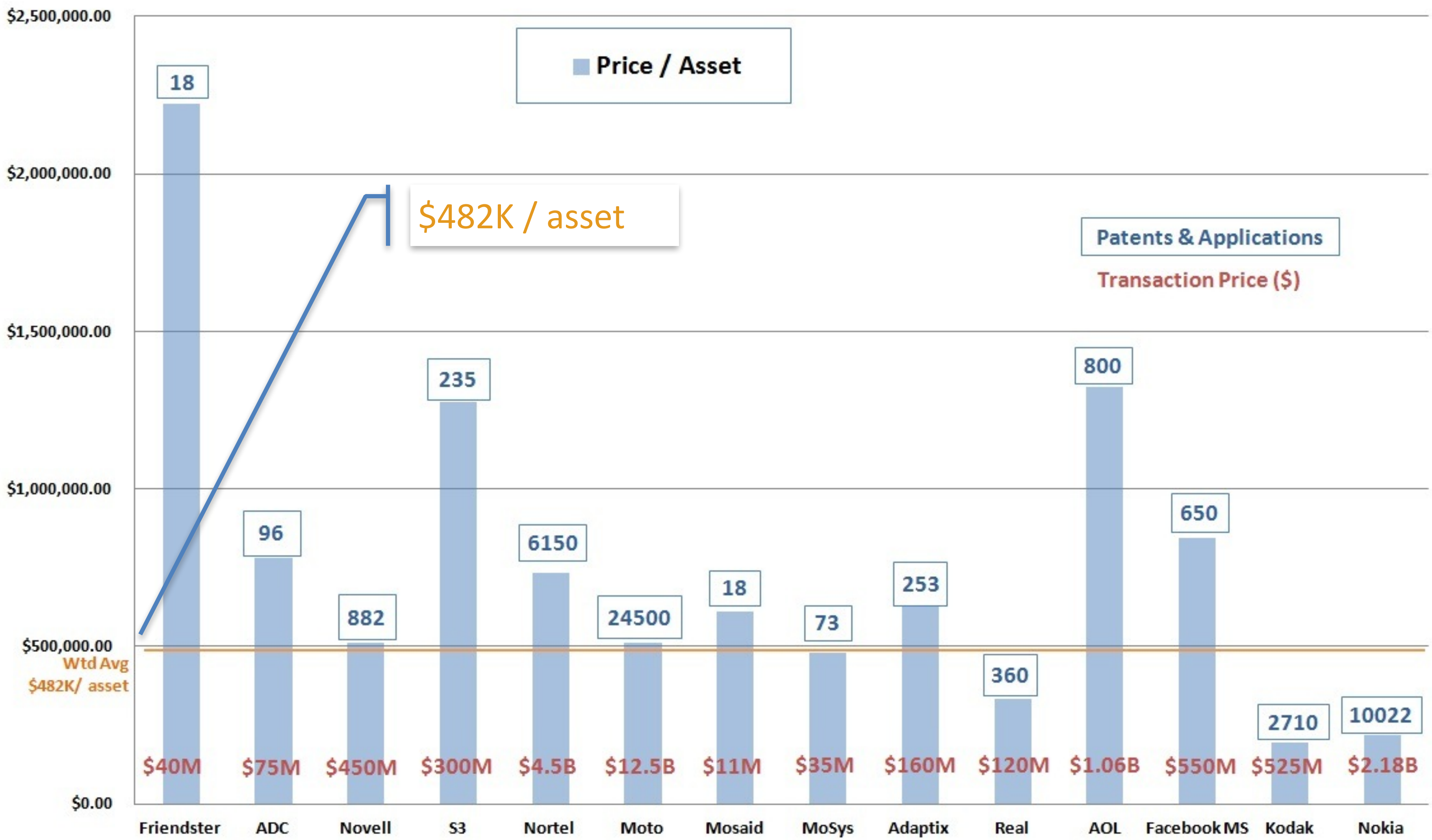
着名巨额专利交易范例

SOME ”FAMOUS” TRANSACTION DEALS



Source: FAITH-IA research

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C 成本基准

Cost Reference

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企业的专利持有成本

Patent Holding Cost

(Unit: USD)

Annuity

Country / Year	US	CN		JP	KR	TW		DE	Total
		Invention	Utility			Invention	Utility	Invention	
Patent #	**784**	**575**	**7**	**24**	**24**	**831**	**35**	**1**	**2281**
2014	204,000	141,135	1,208	3,881	5,274	25,531	5,327	397	386,753
2015	463,200	215,197	1,404	5,035	8,454	85,401	5,344	479	784,513
2016	579,000	247,003	1,078	8,717	10,463	171,528	6,333	643	1,024,765
2017	481,600	330,796	1,437	9,489	11,980	209,891	6,201	848	1,052,243
2018	630,200	392,187	1,698	12,866	13,414	235,884	5,542	1,040	1,292,831
2019	944,800	433,986	1,045	17,379	15,062	277,282	5,278	1,245	1,696,078
2020	1,104,600	516,279	653	19,470	16,448	313,765	3,167	1,450	1,975,833
2021	861,800	574,407	653	22,953	18,013	348,599	1,847	1,683	1,829,955
2022	1,006,400	603,470	0	24,668	18,256	403,752	1,056	1,929	2,059,531
2023	1,272,800	665,514	-	22,523	17,854	419,057	-	2,176	2,399,924
2024	1,221,000	696,537	-	20,378	17,563	401,113	-	2,408	2,358,999
2025	569,800	684,454	-	16,088	14,491	365,752	-	2,655	1,653,239
2026	-	634,818	-	6,435	6,819	315,612	-	-	963,685
2027	-	548,608	-	5,363	5,967	265,473	-	-	825,411
2028	-	253,405	-	5,363	4,262	186,834	-	-	449,863
2029	-	71,842	-	4,290	2,557	97,639	-	-	176,328
2030	-	5,225	-	4,290	1,705	30,611	-	-	41,831
2031	-	-	-	3,218	852	5,278	-	-	9,348
2032	-	-	-	2,145	0	0	-	-	2,145
Total	9,339,200	7,014,862	9,176	214,549	189,434	4,159,003	40,095	16,954	**20,983,274**

(Unit: USD)

Remaining Prosecution Cost

Country	US	CN	EP	TW	Total
Application filed within 3 years	107	181	1	228	517
Prosecution Fee (including 2 OA Fee)	535,000	651,600	5,200	684,000	**1,875,800**

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谈判对象的 "关键报告"

1-Sheet Summary

Industry
Electronic Parts and Components Manufacturing, Software Design Services & International Trade

Company Nature
public

Proposed Client Nature
buyside

Related Product Sectors
1) *SoC Solutions for Emerging Needs of Multimedia*
2) *Display Driver IC*

Headquartered @
2F, No. 13, Innovation Rd I, Hsinchu Science Park, Hsinchu 30076, Taiwan, R.O.

Website
http://www.novatek.com.tw/index.asp

Current Portfolio Shape:
Major jurisdictions:
US: 653
CN: 325
JP: 0
KR: 0
TW: 777
DE: 0
FR: 0
GB: 0

Ave. Annuity Cost*:
US$ 2,296,956

Remaining Prosecution Cost**:
US$ 14,024,595

** Ave. estimated cost of the coming 5 yrs.*

*** Pending application filed within 3 years, estimated with 2 OAs, issue fee and 17ar M. Fee.*

Facts, Financials, and Benchmarks (Capital: NTD$6,085,114,690)

Novatek (USD $M)	*2012*	*2013*	*2014*	*Himax Technologies, Inc.(敦泰)*	*ILITEK Technology corp.(奕力)*
Current Cash*			625.4	23.6	70
Revenue	1157.1	1295.3	1689.6	309.1	314
Gross Profit	324.6	359.2	480.9	40.6	55.4
Gross Profit Margin	28%	27.7%	28.4%	13.1%	18%
RD Expense % of Rev	11.4%	11%	11.4%	7.6%	8%
Operating Margin	138.7	148.3	226.8	4.4	15

**Current Cash, 2015*

- Novatek, found in 1997 (divided by United Microelectronics Corporation), was manufacturing a wide range of display driver ICs & SoC solutions, in August 2002, Novatek was listed on the main board of the Taiwan Stock Exchange (TSE), stock code: 3034.
- In 2008, Novatek and Cheertek merged, this deal made Novatek enhance design and development capability and develop SoC market.
- Novatek owns nine 100% subsidiary companies and sets up strongholds the in the east Asia. It helps Novatech cooperate with regional business partner (such as 中電熊貓、華星光電) and expand business in various area.
- Novatek had been prepared to usher the Ultra HD era many years ago and made an effort to develop high quality display driver IC to exploit potential market such as UHD smartphone or Wearable devices.
- Novatek still face many rivals, Himax Technologies, Inc.(奇景) compete for the TV display driver IC and Renesas seize the smartphone driver IC order. External investors lowered the expected stock price.
- **Business (2014):**

Item	Share
Display Driver IC	73.43%
SoC	26.43%
Others	0.14%

- **Revenue by geographical (2014):**

Region	Taiwan	Asia-Pacific
Rev (USD$M)	635.7	1069
Share	37.63%	63.27%

Five Forces Analysis

Competitors	Suppliers	Clients
· Himax Technologies, Inc.(奇景)	聯華電子	友達光電
· Sitronix Technology	蘇州和艦	群創光電
Corporation(矽創)		中華映管
· ILITEK Technology corp.(奕力)		瀚宇彩晶
· Raydium Semiconductor		BOE
Corporation(瑞鼎)		中電熊貓
· FocalTech Systems Limited(敦泰)		華星光電

Past Actions:

1. **Litigations:**

- The Sollami Company v. Novatek. (filed: Dec 05, 2011/ closed: 02/09/2012)
- Sollami Company, The v. Novatek. (filed: July 13, 2011/ closed: 11/28/2011)
- Novatek Inc. v. Sollami Company, The (filed: Feb 16, 2011/ closed: 04/30/2013)

2. **Recent Acquisitions:**

- In 2008, Novatek and Cheertek merged.

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Total Patent Cost

Jurisdiction	Cost Ref.
美国	37K USD
欧盟 （进入德英法）	55K USD
中国大陆	27K USD
日本	34K USD
韩国	27K USD
台湾	21K USD

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D 其它影响因子

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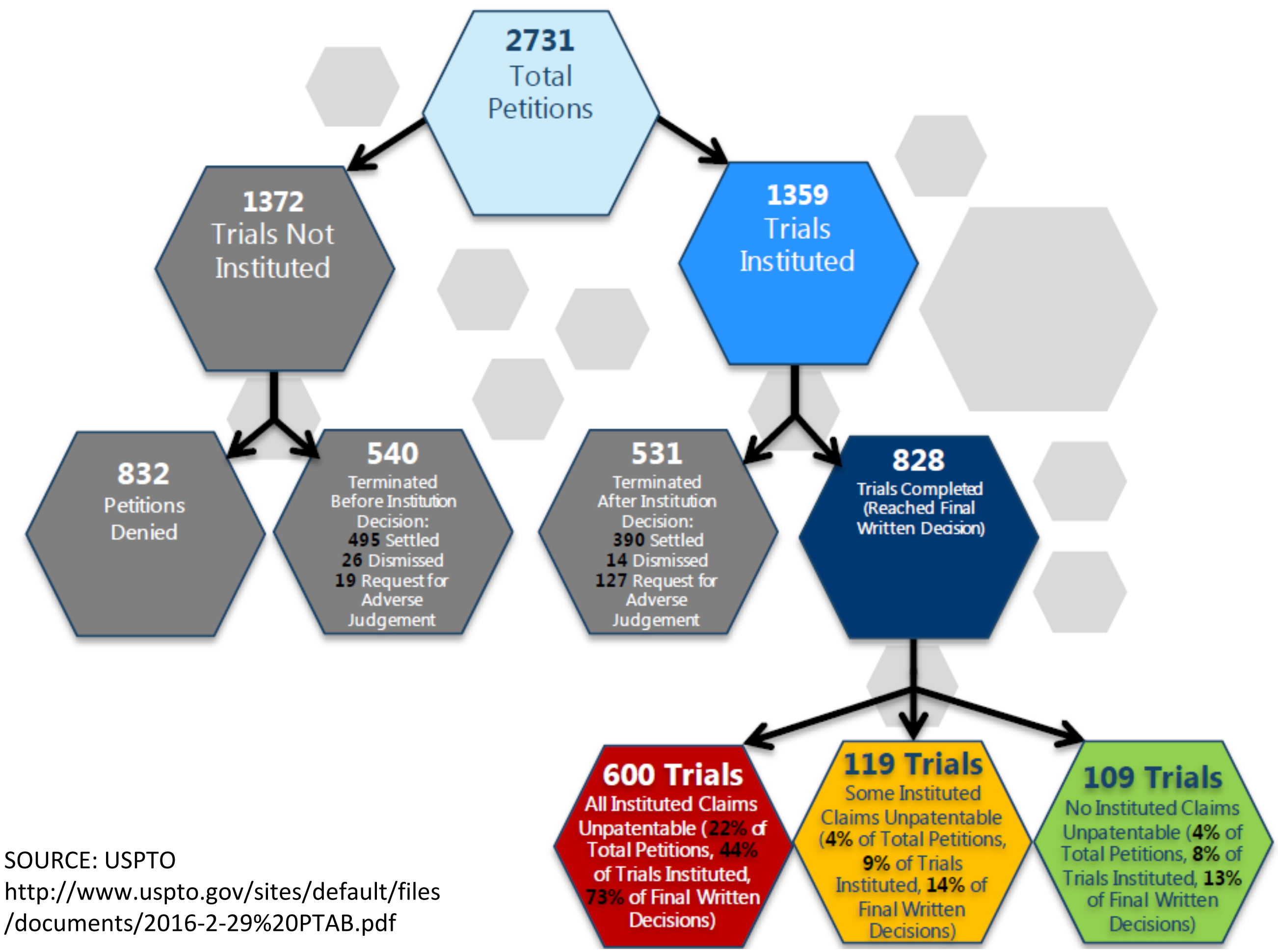
美国多方复审系统

THE POST GRANT REVIEW ENVIRONMENT



SOURCE: USPTO
http://www.uspto.gov/sites/default/files
/documents/2016-2-29%20PTAB.pdf

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专利丛林化 / ROYALTY STACKING

https://www.wilmerhale.com/uploadedFiles/Shared_Content/Editorial/Publications/Documents/The-Smartphone-Royalty-Stack-Armstrong-Mueller-Syrett.pdf

Company	Announced LTE Rate	Royalty ($400 device)
Qualcomm	3.25% of device[31]	$13.00
Motorola	2.25% of device	$9.00
Alcatel-Lucent	Up to 2% of device	$8.00
Huawei	1.5% of device	$6.00
Ericsson	1.5% of device	$6.00
Nokia	1.5% of device	$6.00
Nortel[32]	1% of device	$4.00
ZTE	*1% of device*	*$4.00*[33]
Siemens	0.8% of device	$3.20
Via Licensing	Per Unit Sliding-Scale Fee Based on Volume[34]	$2.10 per unit (sales over 10M units)
Sisvel Patent Pool	0.99 Euros per device[35]	$1.36
Vodafone	Free[36]	$0.00
Total		**$54.30**

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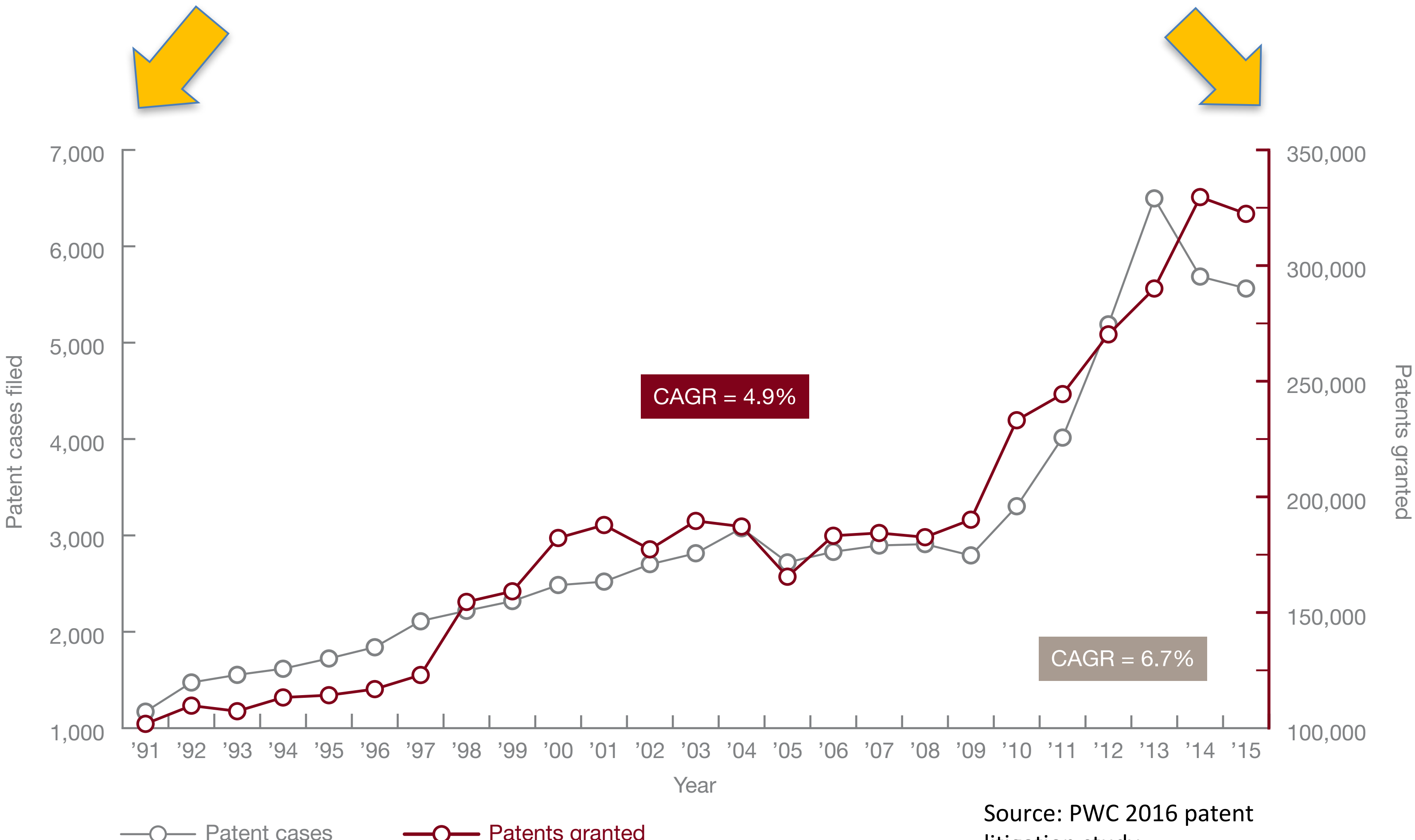
专利丛林化 / PATENT STACKING



Source: PWC 2016 patent litigation study

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5 知识产权经理人关键能力

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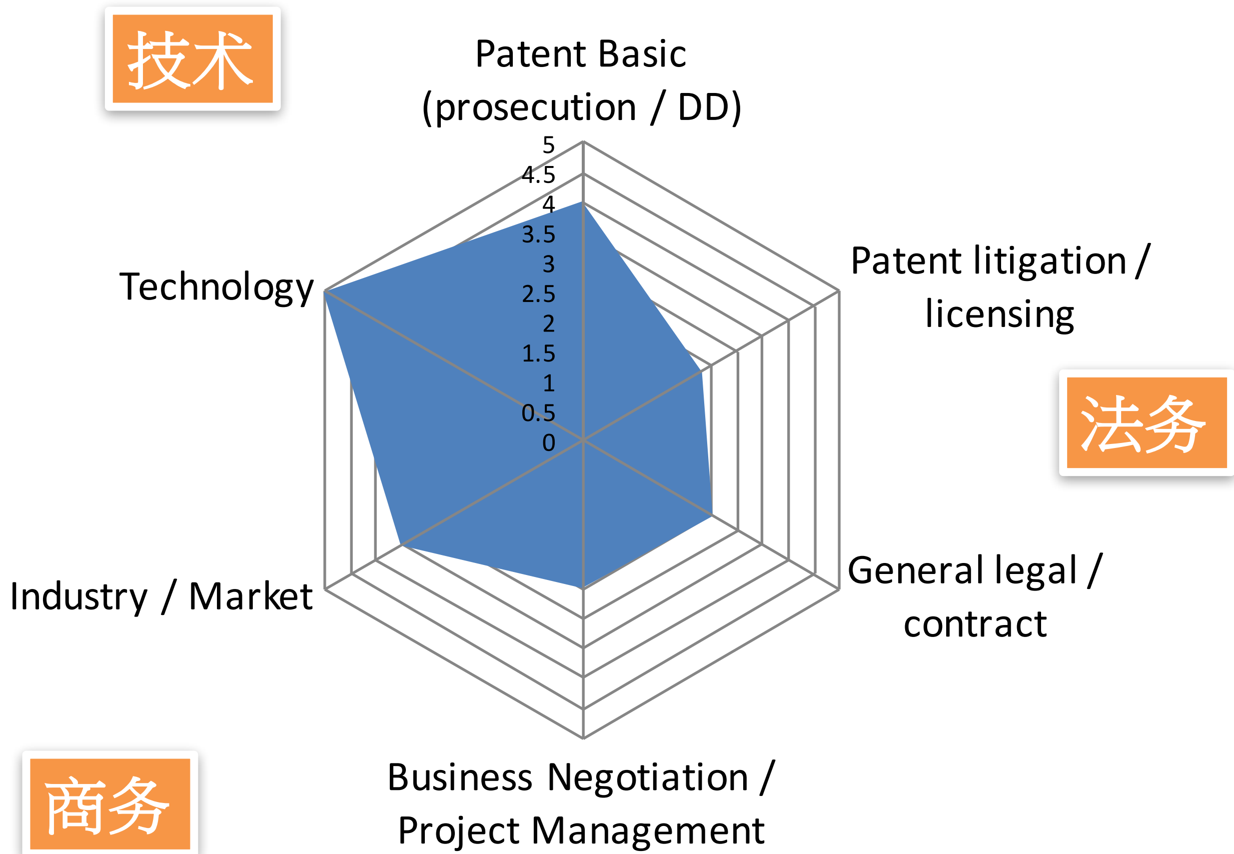
知识产权经理人关键能力



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FAITH 管理團隊

張智為
Joseph Chang

- 前宇東集團(Transpacific IP)臺灣分公司總經理，主導其大中國市場的業務發展。
- 與亞太高科技公司與國家級機構的關係密切，為亞洲頂尖的專利運營領袖。

劉爾順
Er-Shun Liu

- 前國際智權事務所及智權管理公司主持律師，十餘年專利商標等智權法律經驗。
- 曾提供多家上市公司及中小企業專利申請、佈局、制度規劃建立等智權法律服務。

黃勁傑
Jack Huang

- 前宇東集團(Transpacific IP)專利交易服務負責人。
- 為全球專利交易查核(DD)具有最豐富經驗的第一人，管理專利組合千餘包，管理人員數近百人。

王柏翔
Vince Wang

- 於2006至2016年服務於宏達電(HTC)，擔任智權訴訟暨授權資深處長，負責多國的專利訴訟與授權談判達300個以上，並依照公司策略和投資方向發展最適當的專利組合。

呂柏昇
Wells Lu

- 前御智管理顧問有限公司專利經理並作為四家中大型企業的專利顧問。曾執行權利金總計超過一億美元的專利授權案及主導臺灣最大宗公司併購案內之近一萬件專利的整合。

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FAITH 服務

- 申請前專利組合策略規劃（貨幣化視角）
- 各國專利申請、答辯、翻譯、送件
- 專利收購服務
- 專利資產貨幣化（變現）服務
- 專利被授權談判代理
- 專利資產代管理
- 專利盤點
- 專利募資 & 基金

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- 張智為 – FAITH Intellectual Assets ［萬晟佳音（廈門）知識產權事務有限公司；台灣相信光知產運營股份有限公司］創辦人與 CEO。 FAITH 是亞洲最富實戰經驗的專利運營商，提供專利交易，專利組合建制，FTO戰略以及專利貨幣化等應用型服務與諮詢。張智為帶領前宇東集團資深團隊成立FAITH公司，挾超過十萬件全球專利交易，分析，估值議價與訴訟管理經驗；FAITH高管並包括前 HTC專利維權負責人-具超過300件國際專利訴訟經驗，為亞洲專利訴訟實務經驗第一人；FAITH 並網羅了亞洲最成功的企業patent privateering case 的專利授權專家 ，其單個專利包的全球權利金收益超過一億美元。

- 在技術領域上，張智為的涉獵領域也相當廣泛，例如：半導體製程、顯示相關 (包括：LCD, LED, OLED…等)、光學技術相關 (包括：投影、 掃描、列印、 光儲存、 光通訊…等) 、影像處理、電腦系統架構、通訊網路以及無線技術…等。在職涯背景上，張智為在學校教育後首先服務於專利代理所，客戶包括台灣許多主要的研發公司及單位 (例如：友達、台積電、工研院以及聯發科…等) ，共親撰超過600件發明案，非常熟稔於美中歐日韓等各國的各種專利法務程序實操。

- 不論在專利實務操作或是專利技術上張智為 執行長的經驗都相當扎實，因此經常獲得亞洲區大學院校或研究機關的邀請，講述關於專利組合發展、專利資產管理及相關的其他智財議題，並分享其專利貨幣化的豐富經驗。張智為是兩岸在知識產權運營的各種論壇上的演講常客，更是在蓄勢待發的中國大陸IP經濟的長期觀察家與實踐家。

學歷 /資格

- Certified Patent Valuation Analyst, Business Development Academy, 2008, Singapore
- 商業發展研究院 專利估值分析師
- Bachelor of Arts in Applied Chemistry , National Chiao Tung University, 2000, Taiwan
- 台灣 交通大學應用化學系

社會貢獻

- Lecturer for Taiwan Intellectual Property Training Academy (TIPA) 台灣智慧財產培訓學院 授課講師
- Industrial lecturer for National Tsing Hua University Graduate Institute of Technology management, Taiwan 台灣清華大學科技管理研究所外聘業師
- Industrial lecturer for the National Cheng Chi University Graduate institute of technology, innovation & IP management, Taiwan 台灣政治大學科技管理與智慧財產權研究所外聘業師
- Counselor member for Chinese Association of Industrial Structure Re-alignment 現任中華產業結構調整交流協會理事

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being sure of what we hope for and certain of what we do not see