專利實務二

-從專利分析看研發佈局-

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- **學歷**
- -- 元智大學電機所　碩士
- -- 中國東北財經大學 法學碩士
- **經歷**
- -- 元智大學機械系　兼任講師
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- -- 中威光電公司　製程整合課長
- -- 中山科學研究院 副研員
- **講座-（僅列97年法人、學校部份）**
  - 經濟部專研中心–進階專利分析 訓練課程　講師
  - 財團法人連接器協會–專利侵權鑑定與實作演練課程　講師
  - 台灣大學生科中心 - 從專利侵權鑑定過程談專利迴避設計之技巧　講師
  - 中興大學電機所 - 從專利侵權鑑定過程談專利迴避設計之技巧　講師
  - 清雲科大-從專利侵權鑑定過程談專利迴避設計之技巧　講師
  - 中興大學 教育部顧問室- 高科技專利取得與攻防研習課程講師
  - 工研院- 管理者對專利及其應用策略解析　講師
- 榮譽 工研院 96年度　桂冠講師

內 容 大 綱

- 為什麼不能不作專利地圖分析？
- 專利的殺手級應用-專利地圖分析
  - 專利分析之製作與分析流程
  - 專利分析首部曲-技術佈局圖製作與分析
  - 專利分析二部曲-管理圖表製作與分析
  - 專利分析三部曲-引證族譜圖製作與分析
- 專利佈局實戰說明

為什麼不能不作專利地圖分析？

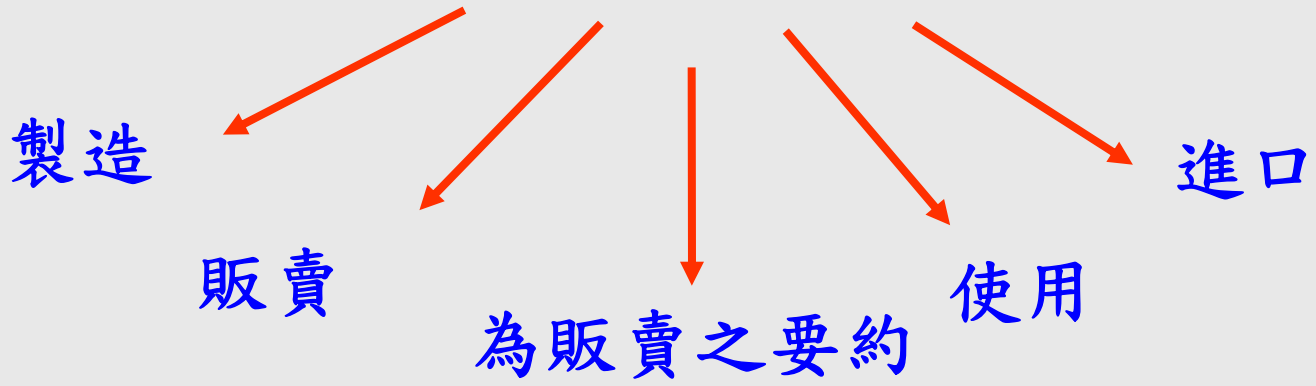
專利權之權利特性

專利權

排他權

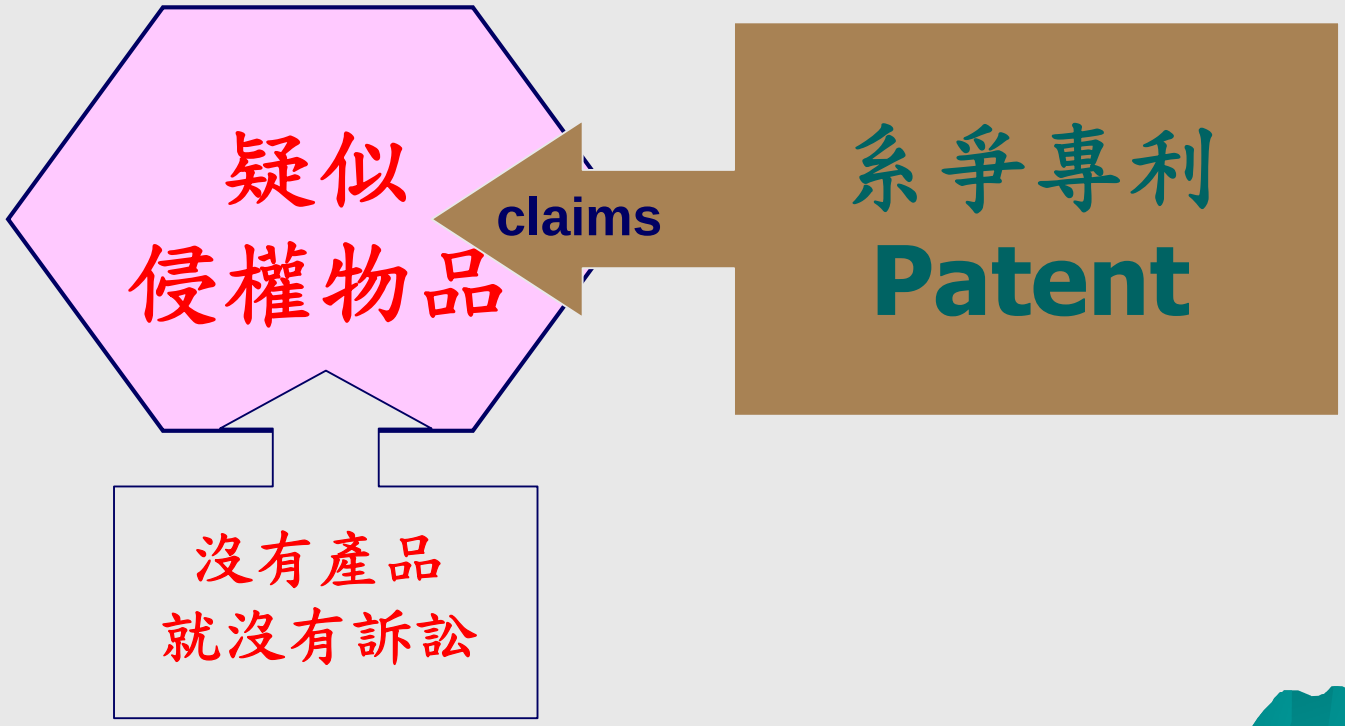
未經專利權人同意

不可



侵害專利權

專利侵權基本要件



專利侵權的損失與專利訴訟趨勢

Top Ten Reported Settlements (1993~2004)

No.	Plantiff	Defendant	Year	Announced Value
1	Sun Microsystem Inc.	Microsoft Corp.	2004	$ 900 million
2	Litton	Honeywell Inc.	2001	$ 440 million
3	InterTrust Tech. Corp.	Microsoft Corp.	2004	$ 440 million
4	Pitney Bowes	Hewlett-Packard Co.	2001	$ 400 million
5	Yahoo, Inc.	Google, Inc.	2004	$ 328 million
6	Intergraph	Intel	2002	$ 300 million
7	Univ. of Minnesota	GlaxoSmithKline	1999	$ 300 million
8	Univ. of California	Genentech	1999	$ 200 million
9	Proctor & Gamble Co.	Paragon Trade Brands	1999	$ 163.5 million
10	Kimberly-Clark Corp.	Paragon Trade Brands	1999	$ 115 million

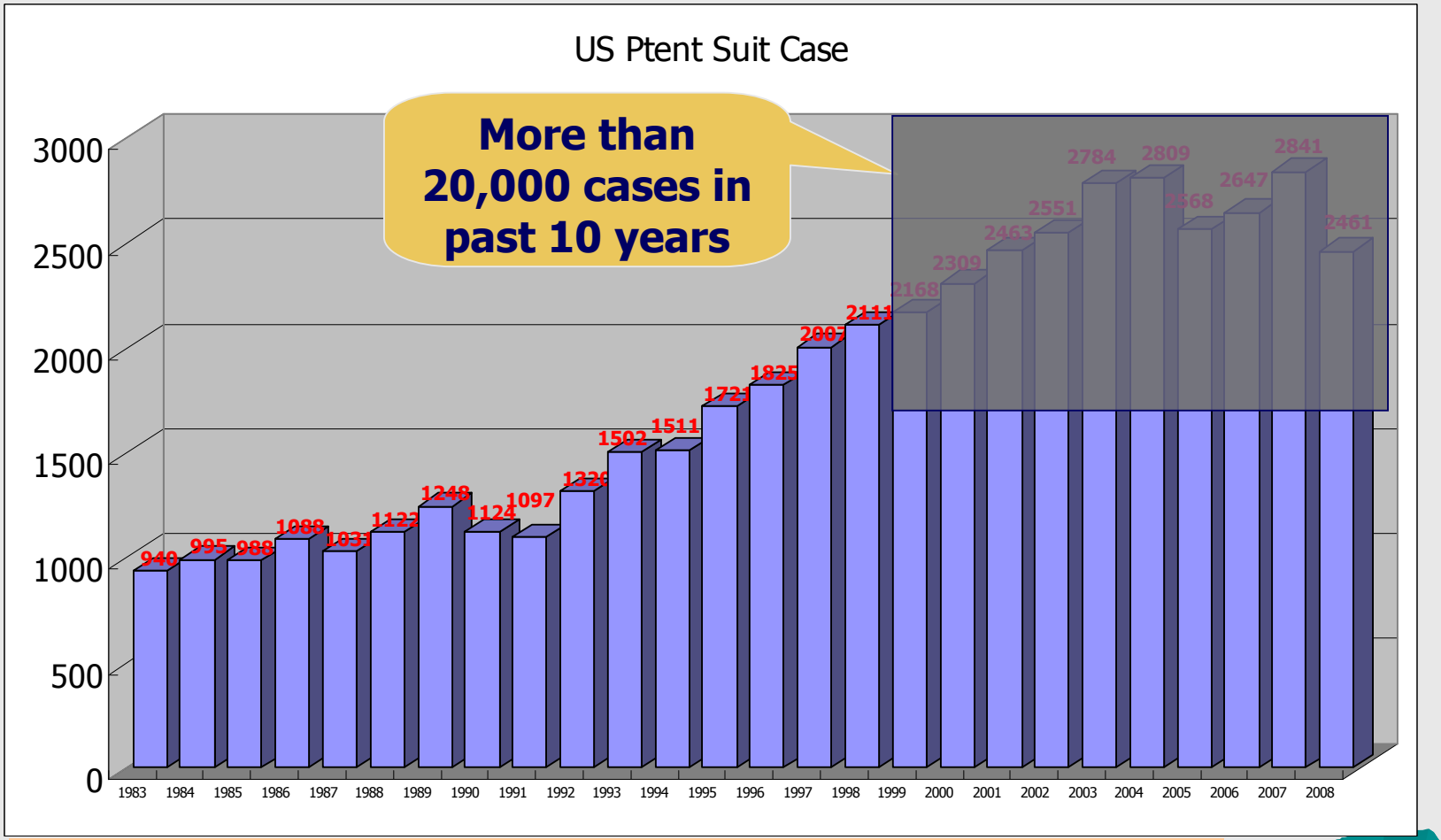
Top Ten Damage Awards
(1990~2004)

	Case	Year	District Award	J/B
1	Polaroid v. Eastman Kodak	1991	$ 909,457,567	Bench
2	Eolas Technologies v. Microsoft	2004	$ 565,894,878	Jury
3	Aplex Computer Co. v. Nintendo Ltd.	1994	$ 253,641,445	Jury
4	Haworth v. Steelcase	1996	$ 211,499,731	Bench
5	Procter & Gamble v. Paragon Trade	1997	$ 178,429,536	Bench
6	Exxon Chemical v. Mobil Oil	1998	$ 171,000,000	Bench
7	Advanced Cardiovascular System v. Medtronic	2002	$ 166,681,773	Bench
8	Viskaase Corp. v. American National Can Co.	1999	$ 164,925,789	Jury
9	Hughes Aircraft v. United States	1999	$ 153,775,000	Bench
10	Exxon Chemical Patent v. Lubrizol Corp.	1994	$ 128,400,000	Jury

Top Ten Damage Awards
(2005~2008)

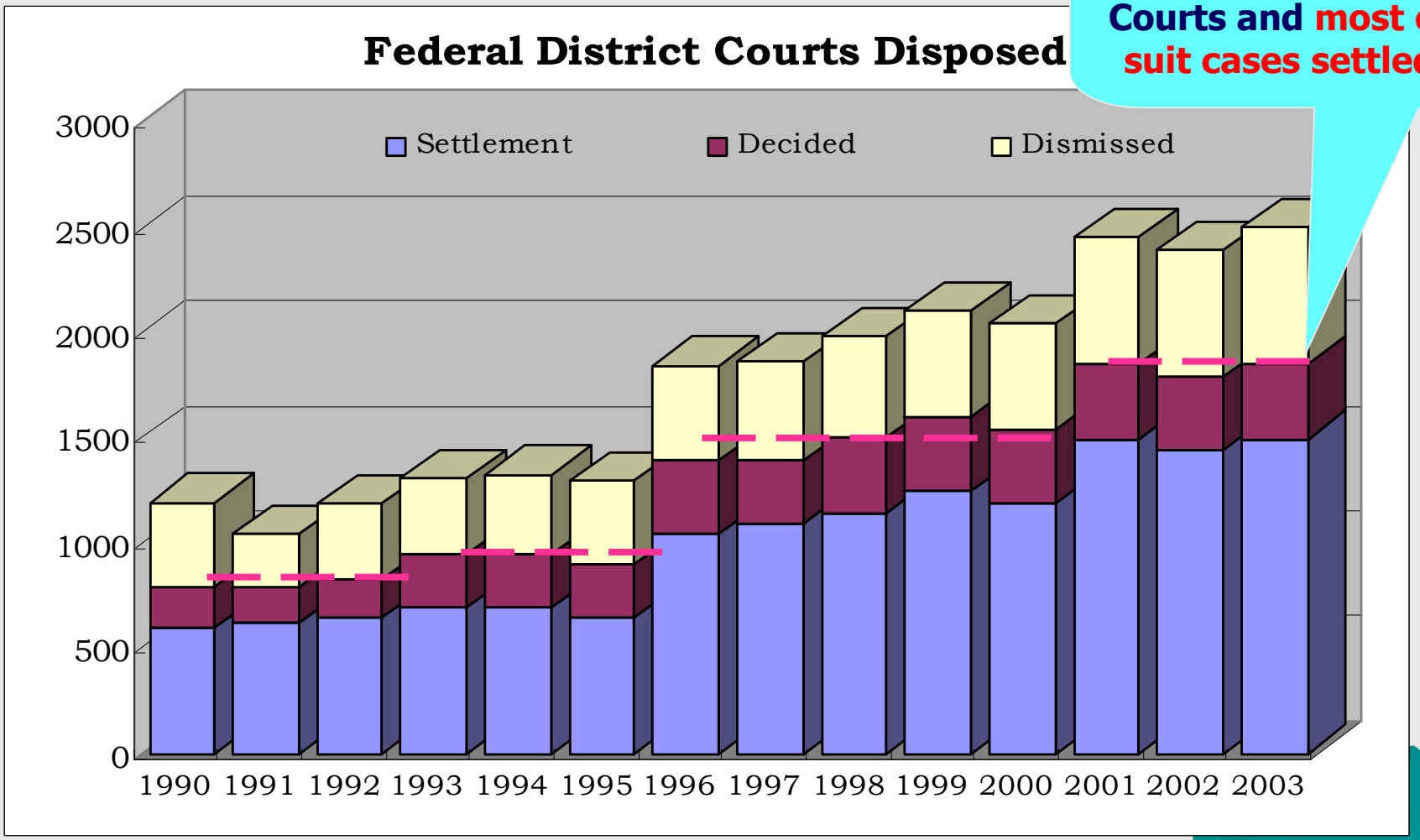
	Case	Year	Damage (Million)	Technology
1	Alcatel-Lucent v. Microsoft	2007	$ 1538	MP3
2	Bruce N. Saffran v. Boston Scientifc Corp	2008	$ 423	Drug
3	Alcatel-Lucent v. Microsoft	2008	$ 368	Data entry
4	Rambus v. Hynix Semiconductor	2006	$ 307	Memory Chips
5	Medtronic v. Boston Scientifc Corp	2008	$ 250	Catheters
6	DePuy Spine v. Medtronic	2007	$ 226	Spinal implant devices
7	C.R. Bard Inc v. WL Gore & Associates	2007	$ 185	Vascular
8	Cornell University v. H P	2008	$ 184	CPU
9	Z4 Technologies v. Microsoft, Autodesk	2006	$ 133	Anti-piracy
10	Freedom Wireless, Inc v. AT&T Wireless	2005	$ 128	Prepaid-wireless service

Patent Suit Case Filed in US



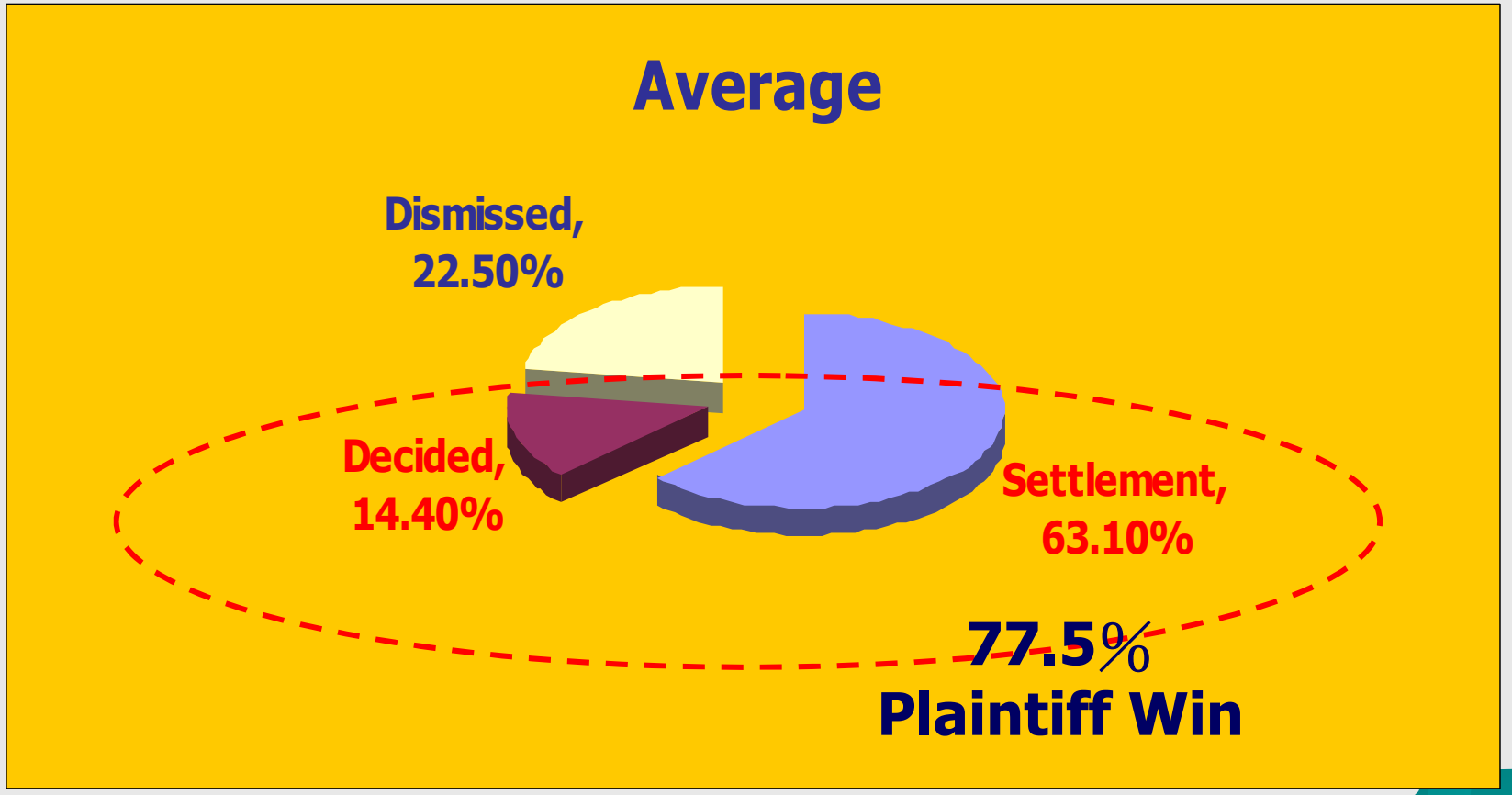
只要天亮一上班，就有十件以上的專利訴訟案發生.....
今天發生完，明天再繼續.....

Patent Suit Case Disposed by Federal District Courts

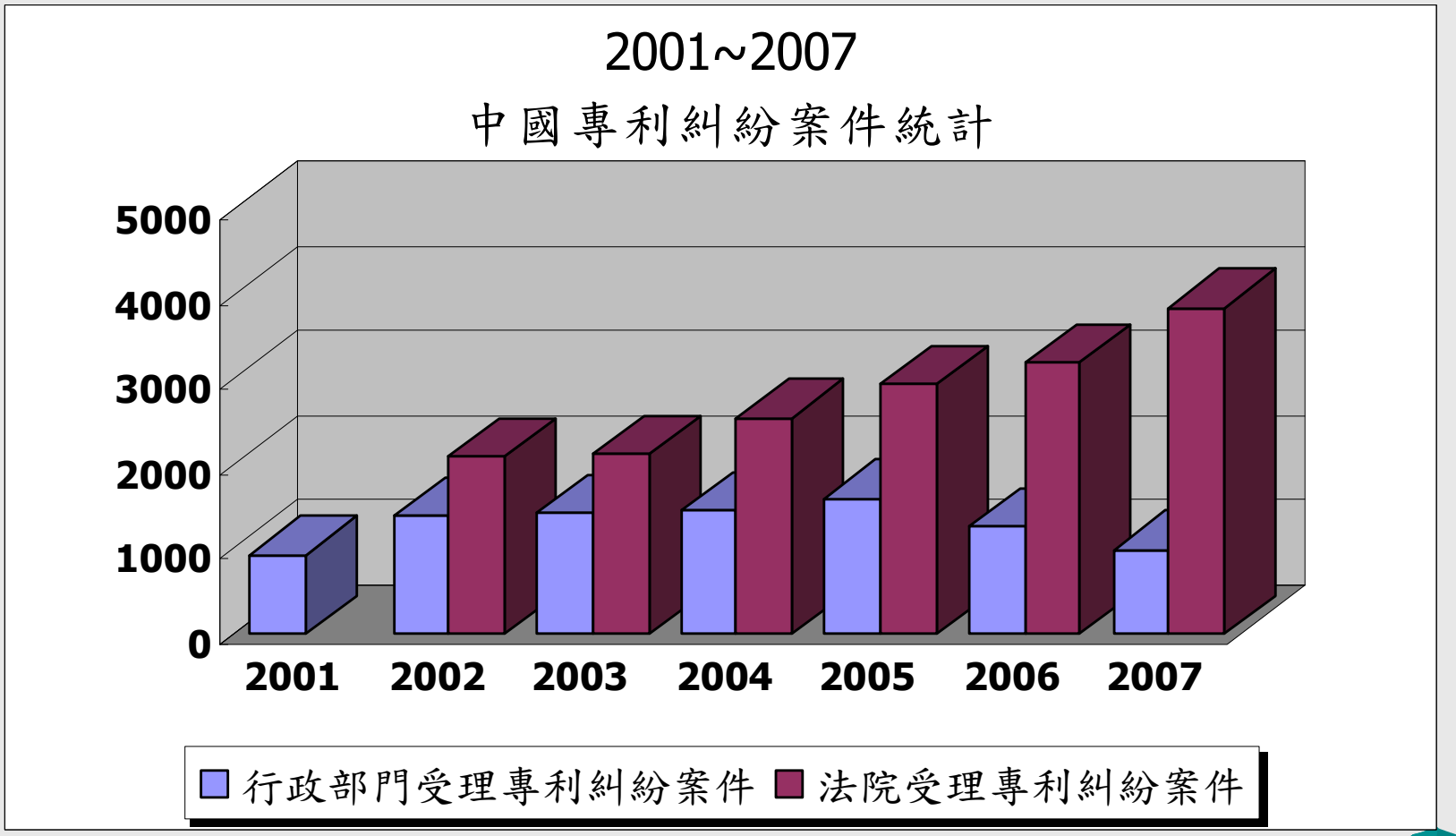


Favor to Plaintiff in Federal District Courts and most of suit cases settled

The Ratio of Deposed



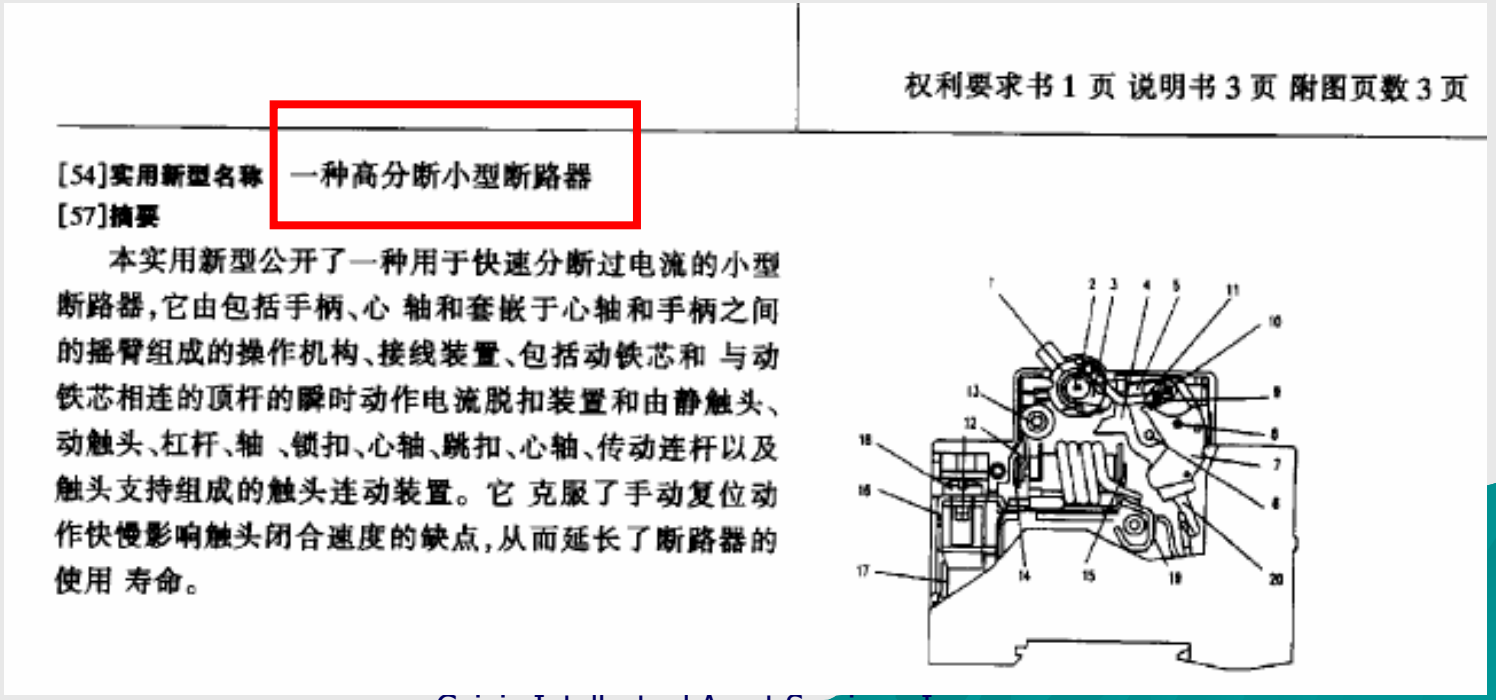
中國專利案件糾紛統計



資料來源:國家知識產權局；中科專利商標代理

中國標的最大知識產權案達成和解

- 浙江省高級人民法院宣佈，正泰集團股份有限公司（下稱正泰集團）與施耐德電器集團就施耐德電氣低壓（天津）有限公司（下稱天津施奈德）專利侵權糾紛案達成庭外和解，天津施奈德向正泰支付補償金1.5億餘元。此外，正泰與施耐德還達成一系列全球和解協定。



权利要求书 1 页 说明书 3 页 附图页数 3 页

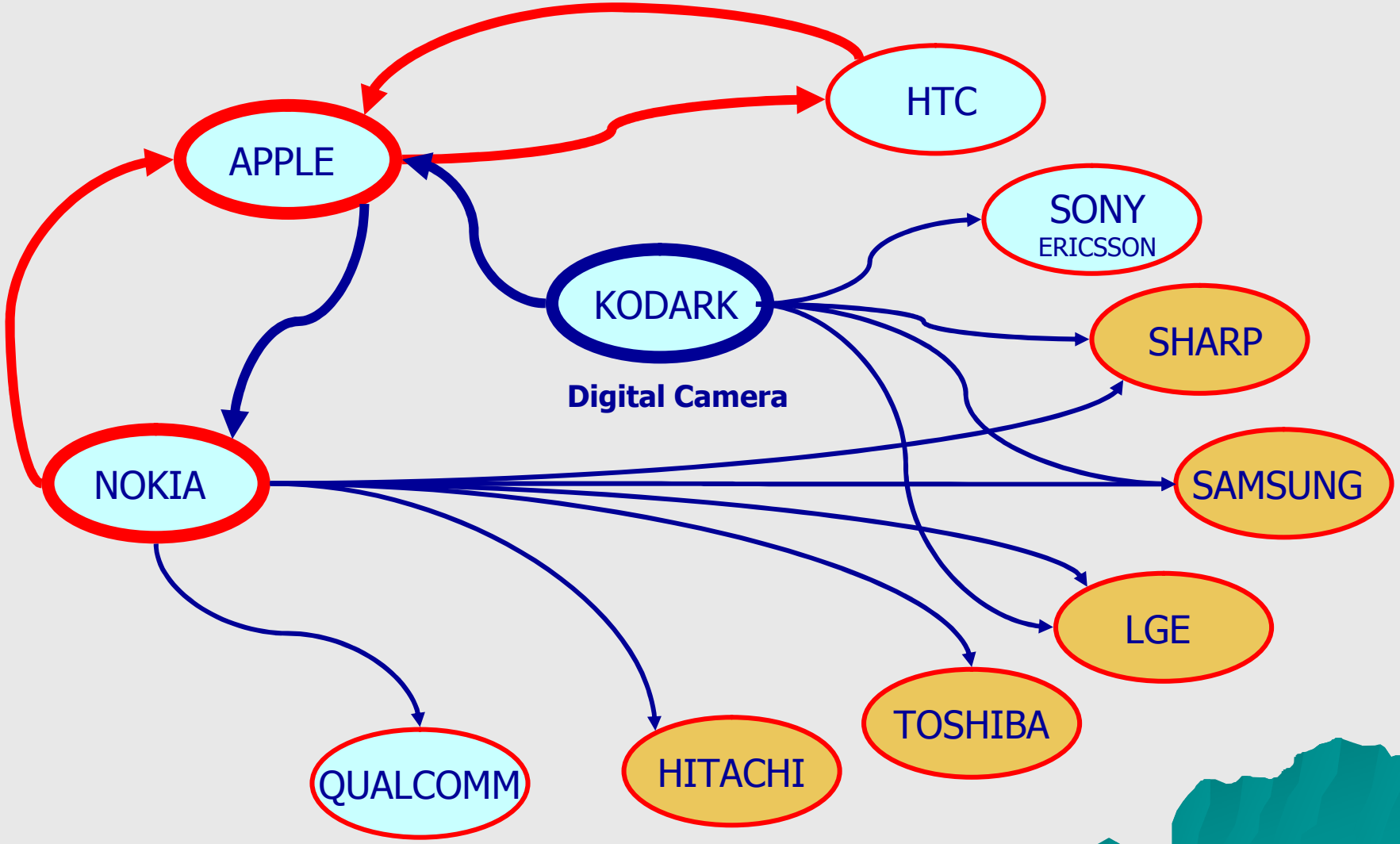
[54]实用新型名称 一种高分断小型断路器

[57]摘要

本实用新型公开了一种用于快速分断过电流的小型断路器，它由包括手柄、心 轴和套嵌于心轴和手柄之间的摇臂组成的操作机构、接线装置、包括动铁芯和 与动铁芯相连的顶杆的瞬时动作电流脱扣装置和由静触头、动触头、杠杆、轴 、锁扣、心轴、跳扣、心轴、传动连杆以及触头支持组成的触头连动装置。它 克服了手动复位动作快慢影响触头闭合速度的缺点，从而延长了断路器的使用 寿命。

訴訟是
公司間競爭的一種手段

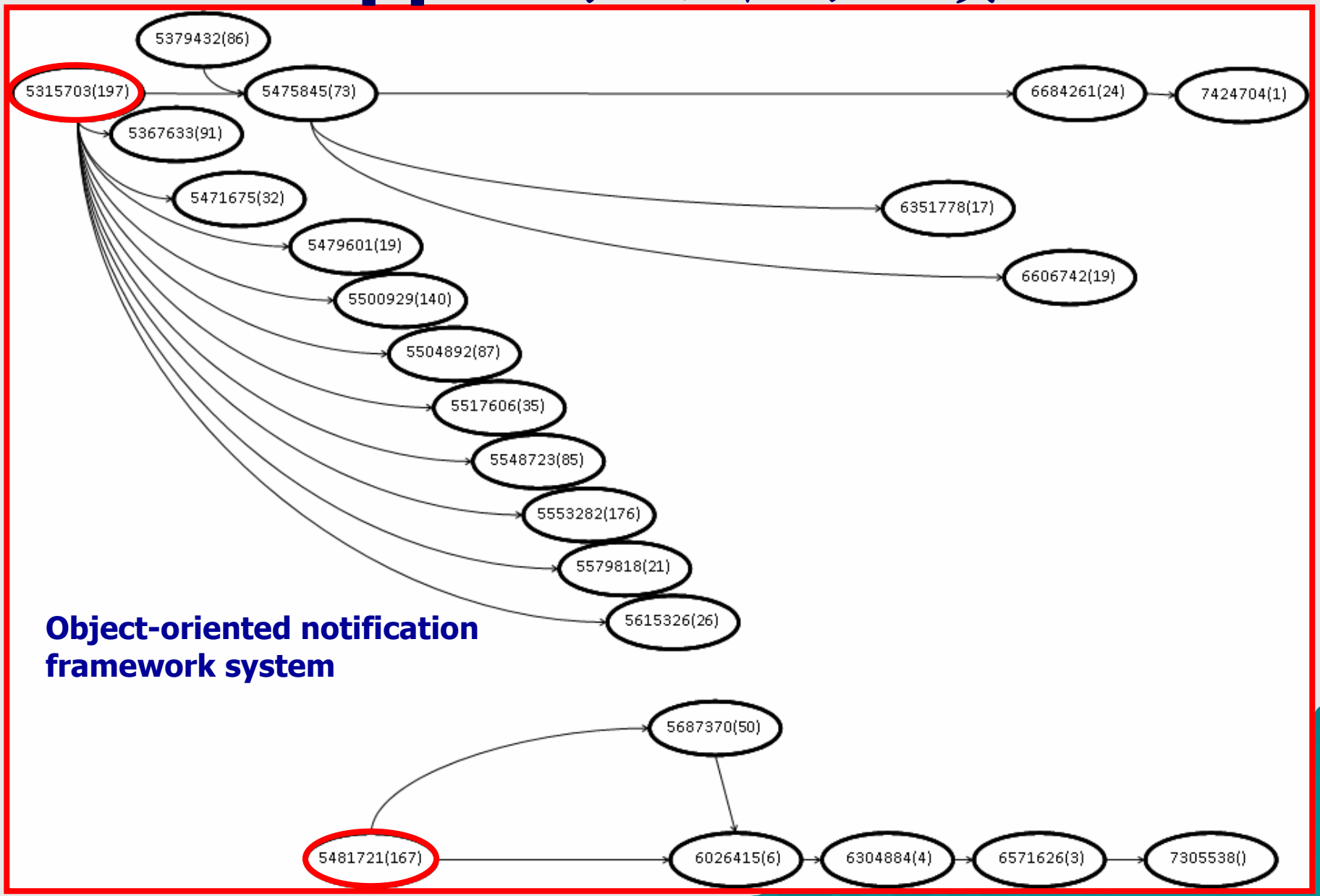
智慧型手機之(專利)訴訟



又是爭奪市場及宣示主權

- Nokia與Apple這兩個品牌大廠，從箭頭的方向可以看出，Apple為眾矢之的，Nokia則是興訟最多的公司，這是因為Apple賺錢讓大家眼紅；然而，Nokia則是強弩之末，但是因為切入市場早，應該擁有比較多的基礎權利。
- 而Nokia對Sharp, Hitachi, LG, Toshiba, Samsung的訴訟不是專利的爭議，而是手機顯示器的定價問題。
- 另外一個獲利者是Kodak ，因為當手機切入數位影像的領域後，Kodak就積極興訟。 但， Kodak這批早期的影像轉換、取樣後再儲存於可攜記憶卡的專利都將在這兩年期間過期。

Apple 專利佈局面廣



HTC v APPLE

- US5541988
- US6058183
- US6320957
  - GEZ MICROSYSTEMS, INC. (1997)
  - SAXON INNOVATIONS LLC (2008)
  - **HTC CORPORATION (2009/0331)**
- US6999800
  - **HTC CORPORATION**
- US7716505
  - **HTC CORPORATION**

專利之心法

Litigation in Mind.

專利地圖分析

專利分析之製作與分析流程
專利分析首部曲-技術佈局圖製作與分析
專利分析二部曲-管理圖表製作與分析
專利分析三部曲-引證族譜圖製作與分析

專利分析流程

研發各階段所需要執行的專利工作

研發之前與前期的專利工作

- 研發之前：擬定研發方向
  - 專利檢索
  - 專利管理圖：瞭解發展趨勢、競爭地區、競爭公司、**key person**
- 研發前期
  - 專利引證圖
    - **Key patents(高影響力專利、高創造性專利)**
    - 技術發展脈絡**(Skeleton)**
  - 專利技術圖：擬定研發與市場策略
    - 技術分佈
    - 技術功效佈局矩陣
  - 研發概念提出專利申請

研發中期的專利工作

- 研發中期：針對關鍵專利，
  - 進行規避設計
    - 權利要求分析
    - 法律地圖
      - 法律狀態**(Legal Status)**
      - 繳費維護狀態、轉讓、授權、許可狀態
    - 家族地圖**(Family Map)**
    - **File wrapper**
      - 搜集禁反言證據
    - 專利不侵權鑒定
  - 提起無效之訴**(Invalid)**
    - 專利檢索
  - 建構專利組合：針對規避設計的結果提出專利申請

研發後期的專利工作

- 研發後期
  - 競爭對手的專利檢索與監控
    - 如有必要，提起無效之訴**(Invalid)**
  - 持續建構專利組合
    - 針對先前研發概念的改良繼續提出專利申請
    - 針對規避設計結果的改良提出專利申請
- 研發之後，產品製造與銷售階段
  - 競爭對手的專利檢索與監控
    - 如有必要，提起無效之訴**(Invalid)**
  - 製造地與銷售地的專利檢索與監控
  - 持續鞏固專利組合：針對產品的局部改良繼續提出專利申請
  - 競爭對手的產品監控
    - 如有侵權，排除侵害 (警告、訴訟)
    - 如有侵權，專利授權

產品停止生產之後的專利工作

- 產品停止製造之後
  - 競爭對手的產品監控
    - 如有侵權，排除侵害(警告、訴訟)
  - 專利鑒價
  - 專利交易

管理圖分析

專利分析是一種選擇，

不是一種規則。

管理圖分析

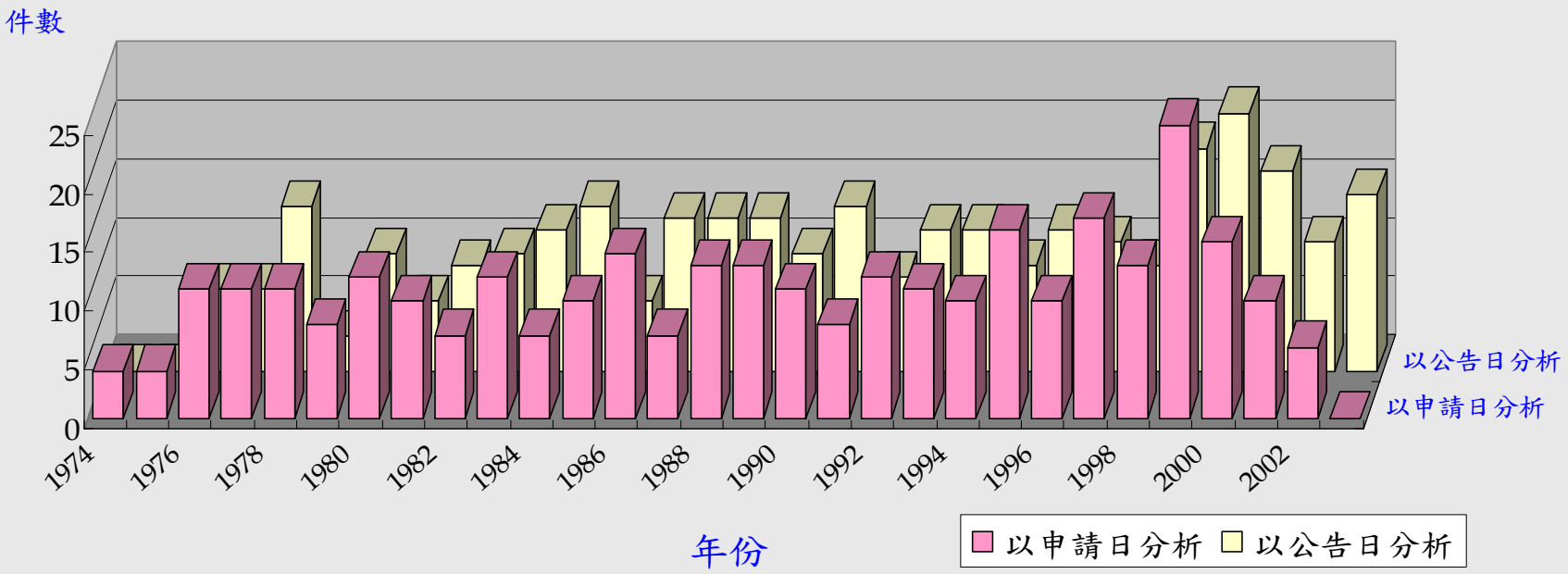
- 專利趨勢分析
- 國家別分析
- 專利權人(公司)分析
- 發明人分析
- IPC分析
- UPC分析

- 分析前之要務-修訂
  - 國家代碼確認
    - Country code vs State code
    - 國家代碼編修
  - 專利權人名稱檢查
    - 專利權人名稱編修
    - 專利權人名稱合併
  - 發明人合併
- **Google是好工具**
  - **http://www.google.com/patents**

專利趨勢分析

- 據以了解整個產業技術領域專利產出數量之發展趨勢。
- 歷年專利數量比較圖
  - 歷年公告專利數量比較圖：瞭解專利技術之發展成果
  - 歷年申請專利數量比較圖：瞭解專利技術的萌芽時間
- 專利趨勢預測
- 專利權人趨勢預測
- 技術生命週期圖：二維分佈圖，目的係了解相關技術變化過程
  - 技術生命週期圖(以專利權人數分析)：縱軸係專利數量，橫軸係專利權人數，將每年份之專利數量與專利權人數分佈於圖上對應位置，再以平滑曲線連結得之。
  - 技術生命週期圖(以發明人數分析)：縱軸係專利數量，橫軸係發明人數，將每年份之專利數量與發明人數分佈於圖上對應位置，再以平滑曲線連結得之。

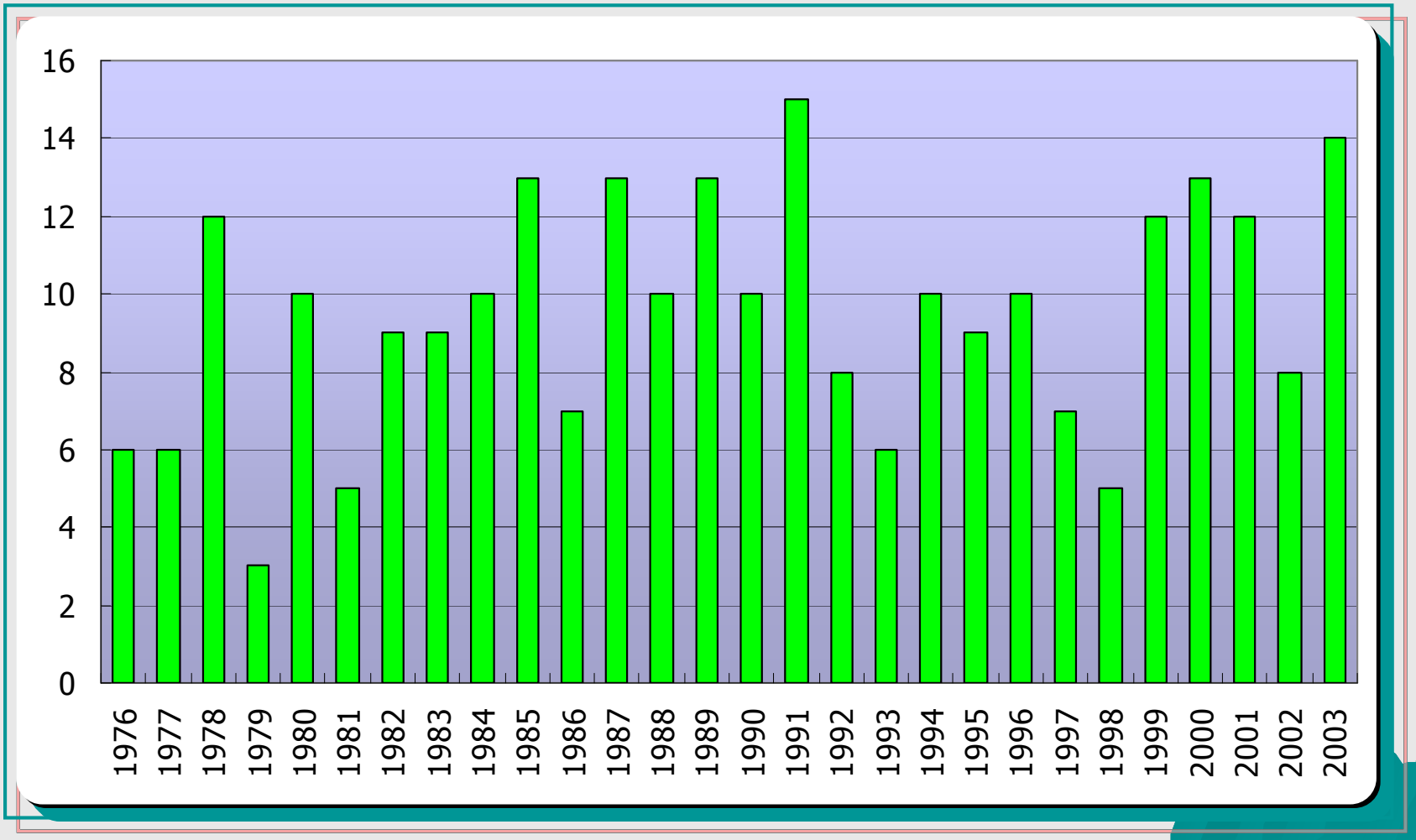
歷年專利件數



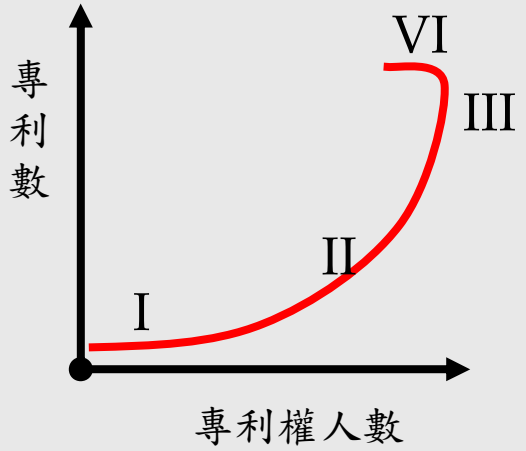
年份	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
公告日			7	7	14	3	10	6	9	10	12	14	6	13	13
申請日	4	4	11	11	11	8	12	10	7	12	7	10	14	7	13

年份	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
公告日	13	10	14	8	12	12	9	12	11	9	19	22	17	11	15
申請日	13	11	8	12	11	10	16	10	17	13	25	15	10	6	

歷年專利權人數



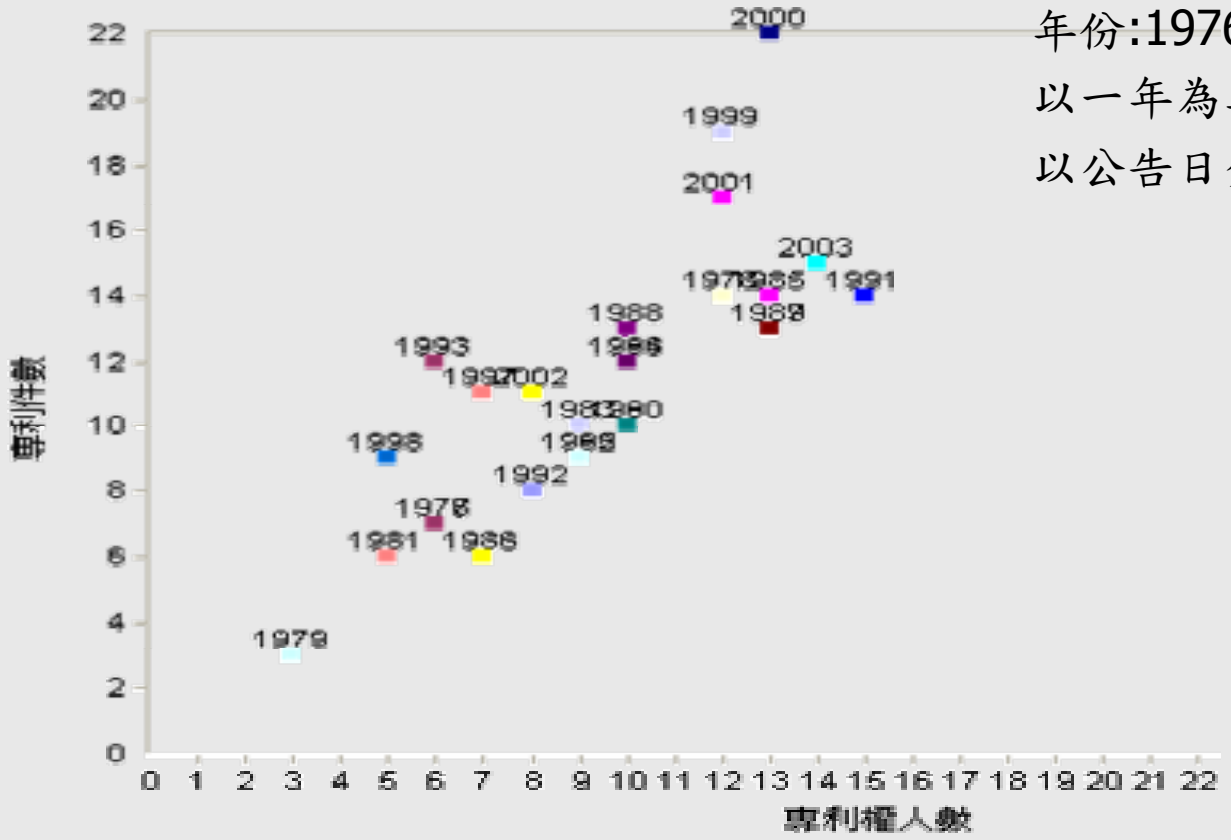
技術生命週期



- 第一階段：技術萌芽階段
  - 廠商的投入意願低，專利的申請件數與專利權人數均較少，專利共有或委託研究的狀況較多。
- 第二階段：技術成長期
  - 技術有突破或廠商對於市場價值有了認知，競相投入發展，專利的申請量與申請人數會大幅上升。
- 第三階段：技術成熟期
  - 少數廠商大肆擴張專利申請，構築專利圍牆，以嚇阻其他廠商進入，專利申請量激增，但申請人數成長減緩。
- 第四階段：技術瓶頸期
  - 廠商投資於研發與專利申請的資源不再擴張

技術生命週期

- 資料零散波折，不易形成曲線



年份:1976-2003

以一年為單位

以公告日分析

以移動平均法調整資料

年代	專利數	專利權人數
1972	2	2
1973	2	2
1974		
1975		
1976		
1977		
1978		
1979		
1980		
1981		
1982	1	1
1983		
1984	2	2
1985	1	1
1986	4	4
1987	3	3
1988	6	6
1989	10	10
1990	10	9

以三年移動平均法計算技術生命週期所需之專利權人數與專利件數

年代	專利數	專利權人數
1972	2.0	2.0
1973	1.3	1.3
1974	0.7	0.7
1975	0.0	0.0
1976	0.0	0.0
1977	0.0	0.0
1978	0.0	0.0
1979	0.0	0.0
1980	0.0	0.0
1981	0.3	0.3
1982	0.3	0.3
1983	1.0	1.0
1984	1.0	1.0
1985	2.3	2.3
1986	2.7	2.7
1987	4.3	4.3
1988	6.3	6.3
1989	8.7	8.3
1990	8.7	8.3

以移動平均法調整資料

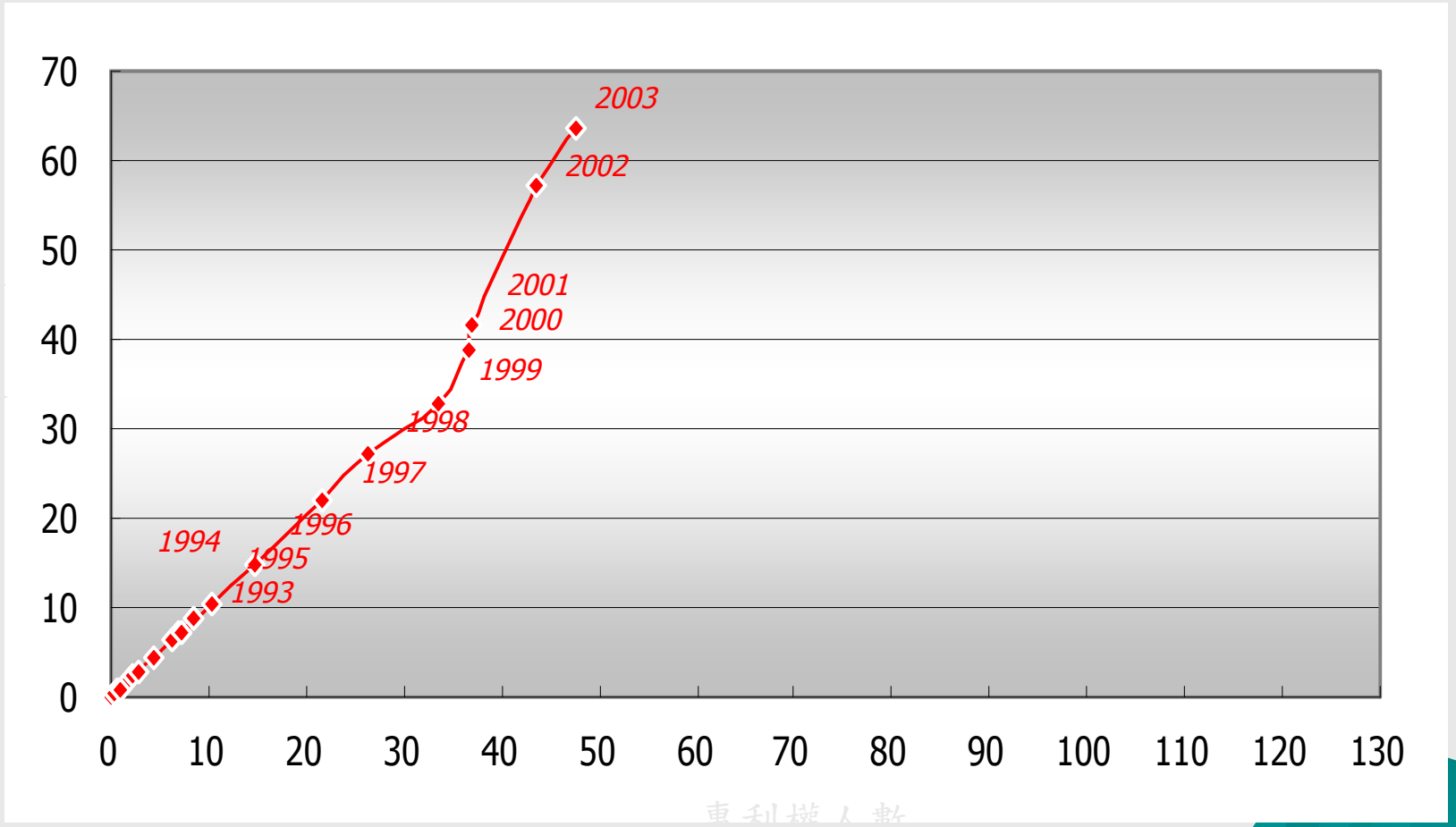
年代	專利數	專利權人數
1991	6	6
1992	6	6
1993	7	7
1994	9	9
1995	6	6
1996	16	16
1997	22	22
1998	28	27
1999	32	30
2000	39	44
2001	45	36
2002	41	31
2003	86	64
2004	69	51

以三年移動平均法計算技術生命週期所需之專利權人數與專利件數

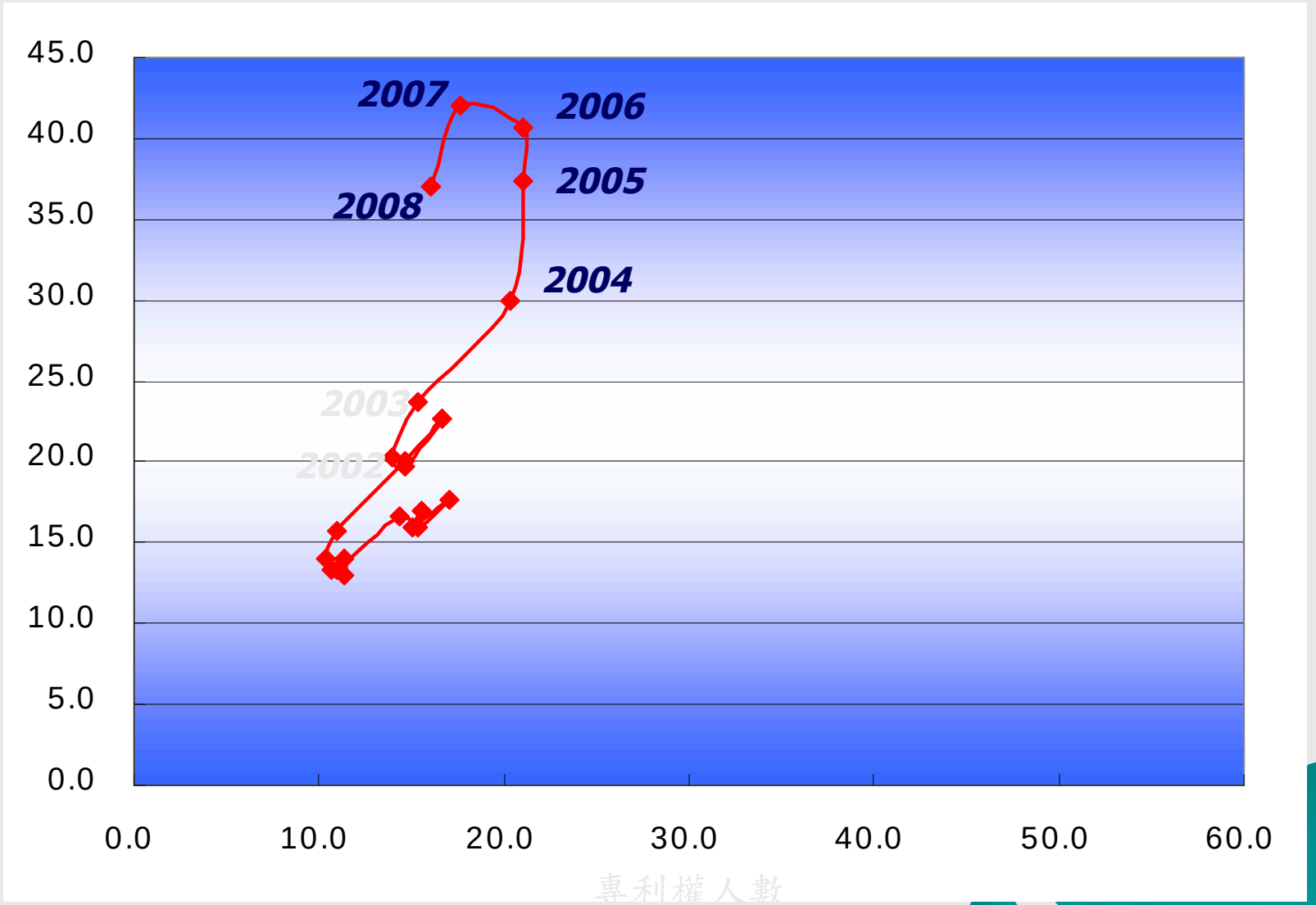
年代	專利數	專利權人數
1991	7.3	7.0
1992	6.3	6.3
1993	7.3	7.3
1994	7.3	7.3
1995	10.3	10.3
1996	14.7	14.7
1997	22.0	21.7
1998	27.3	26.3
1999	33.0	33.7
2000	38.7	36.7
2001	41.7	37.0
2002	57.3	43.7
2003	63.5	47.5

技術生命週期圖

- X軸-Y軸的尺度比例必須是1:1



技術生命週期圖



專利權人數

引證分析

引證分析

- 1. Forward Citation
  - 被引證數分析(尋找影響力高之專利)
- 2. Citation Tree
  - 引證族譜圖(技術發展主流脈絡)
- 3. Backward Citation
  - 引證前案數分析(尋找專利性強創新度高的專利)
- 4.公司交叉引證分析
  - 技術的相互依存度分析

United States Patent [19]

Young et al.

[11] Patent Number: 5,393,932

[45] Date of Patent: Feb. 28, 1995

[54] **WIRE CONNECTOR**

[75] Inventors: **John S. Young**, Leander; **Robert B. Ericson**; **Gary S. Natwig**, both of Austin, all of Tex.

[73] Assignee: **Minnesota Mining and Manufacturing Company**, St. Paul, Minn.

[21] Appl. No.: **145,372**

[22] Filed: **Oct. 29, 1993**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 17,852, Apr. 20, 1993, which is a continuation-in-part of Ser. No. 835,803, Feb. 14, 1992, abandoned.

[51] **Int. Cl.**[6] **H01R 4/02**; H01R 43/02

[52] **U.S. Cl.** ..... **174/84 R**; 29/869; 174/DIG. 8; 228/56.3

[58] **Field of Search** ..... 174/84 R, 84 C, DIG. 8; 228/56.3, 56.5, 224, 265; 29/869, 871, 873

[56] **References Cited**

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Primary Examiner—Morris H. Nimmo
Attorney, Agent, or Firm—Gary L. Griswold; Walter N. Kirn; John C. Barnes

[57] **ABSTRACT**

A wire connector having a conductive barrel with a solder disc disposed in the barrel with wire retaining means to hold the wires in place during heating and melting of the solder disc to form a permanent connection. A shrinkable sleeve, provided with means of sealing, formed around the barrel and extending beyond the

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(1 of 1)

United States Patent **5,393,932**
Young , et al. **February 28, 1995**

Wire connector

Abstract

A wire connector having a conductive barrel with a solder disc disposed in the barrel with wire retaining means to hold the wires in place during heating and melting of the solder disc to form a permanent connection. A shrinkable sleeve, provided with means of sealing, formed around the barrel and extending beyond the ends of the barrel is also shrunk down onto the wires to seal and insulate the connection and hold the wires.

Inventors: **Young; John S.** (Leander, TX), **Ericson; Robert B.** (Austin, TX), **Natwig; Gary S.** (Austin, TX)
Assignee: **Minnesota Mining and Manufacturing Company** (St. Paul, MN)

Appl. No.: **08/145,372**
Filed: **October 29, 1993**

Application Number	Filing Date	Patent Number	Issue Date
17852	Apr., 1993		
835803	Feb., 1992		

Current U.S. Class:	**174/84R** ; 174/DIG.8; 228/56.3; 29/869
Current International Class:	H01Q 1/24 (20060101); H01R 4/70 (20060101); H01R 4/72 (20060101); H01R 4/48 (20060101); H01R 004/02 (); H01R 043/02 ()
Field of Search:	174/84R,84C,DIG.8 228/56.3,56.5,224,265 29/869,871,873

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Forward Citations

U.S. Patent Documents

Backward Citations

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Forward Citations

Searching US Patent Collection...

Results of Search in US Patent Collection db for:
REF/5393932: 19 patents.
*Hits **1** through **19** out of **19***

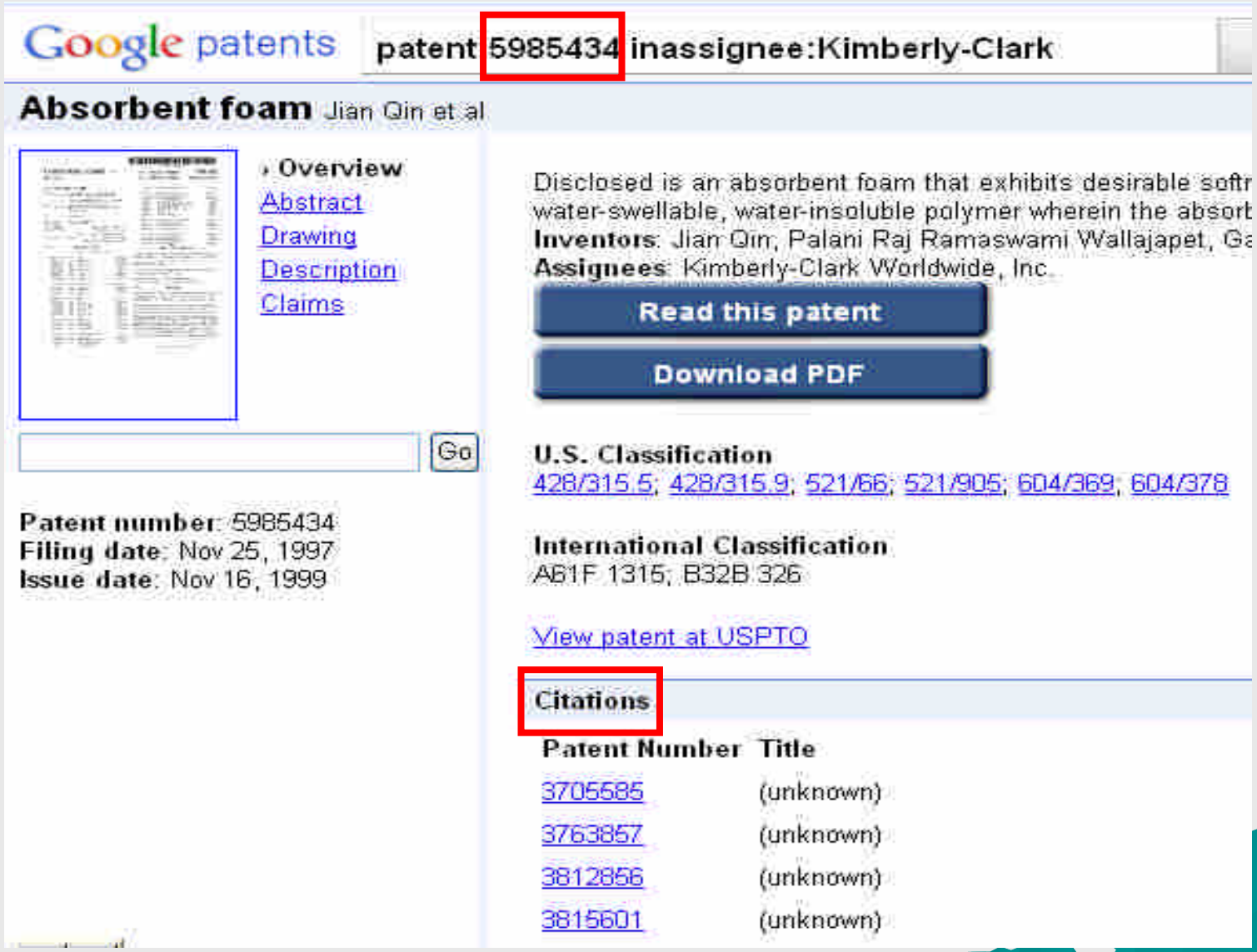
Forward Citations

Jump To

Refine Search ref/5393932

	PAT. NO.	Title
1	7,448,922	Wire connector with easy entry and manufacturing method thereof
2	7,427,219	Terminal connector with easy entry and manufacturing method thereof
3	7,364,478	Connector and method for manufacturing and connecting wire
4	7,344,061	Multi-functional solder and articles made therewith, such as microelectronic components
5	7,341,232	Methods and apparatus for suspending fixtures

以 Google Patent 查



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Results of Search in US Patent Collection db for:
REF/5266514: 151 patents.
*Hits **1** through **50** out of **151***

No. 1 Forward Citation Count
In all ITRI's patents

Next 50 Hits

Jump To

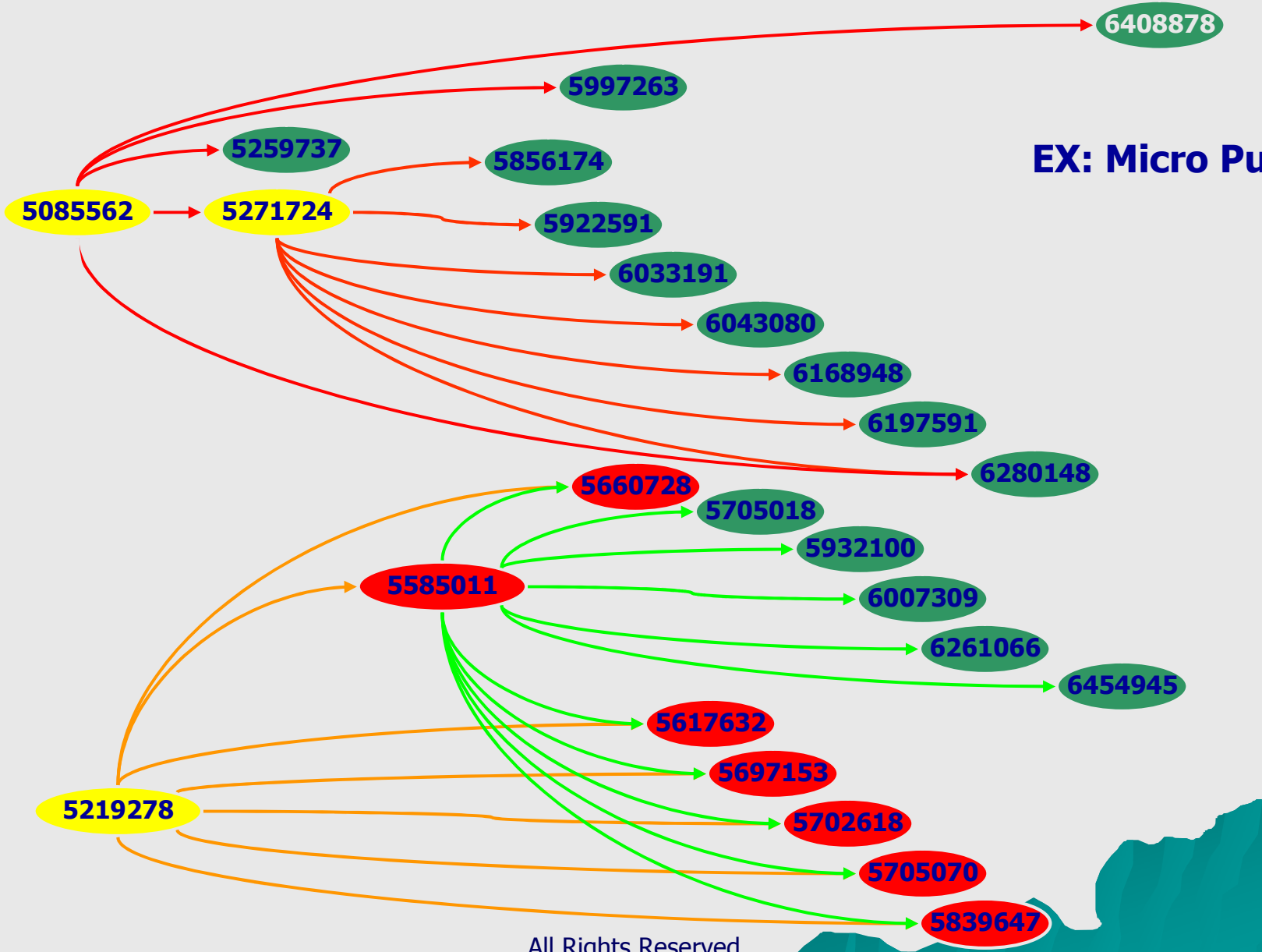
Refine Search ref/5266514

	PAT. NO.	Title
1	7,410,668	Methods, systems, and apparatus for uniform chemical-vapor depositions
2	7,408,216	Device, system, and method for a trench capacitor having micro-roughened semiconductor surfaces
3	7,298,000	Conductive container structures having a dielectric cap
4	7,238,613	Diffusion-enhanced crystallization of amorphous materials to improve surface roughness
5	7,223,678	Circuit and method for a folded bit line memory cell with vertical transistor and trench capacitor

以引證分析釐清技術發展脈絡

- 定位核心專利
  - 源頭專利
  - 整合性專利
  - 高影響力之專利
- 發現技術發展脈絡
  - 技術主流
  - 主流外之新穎技術

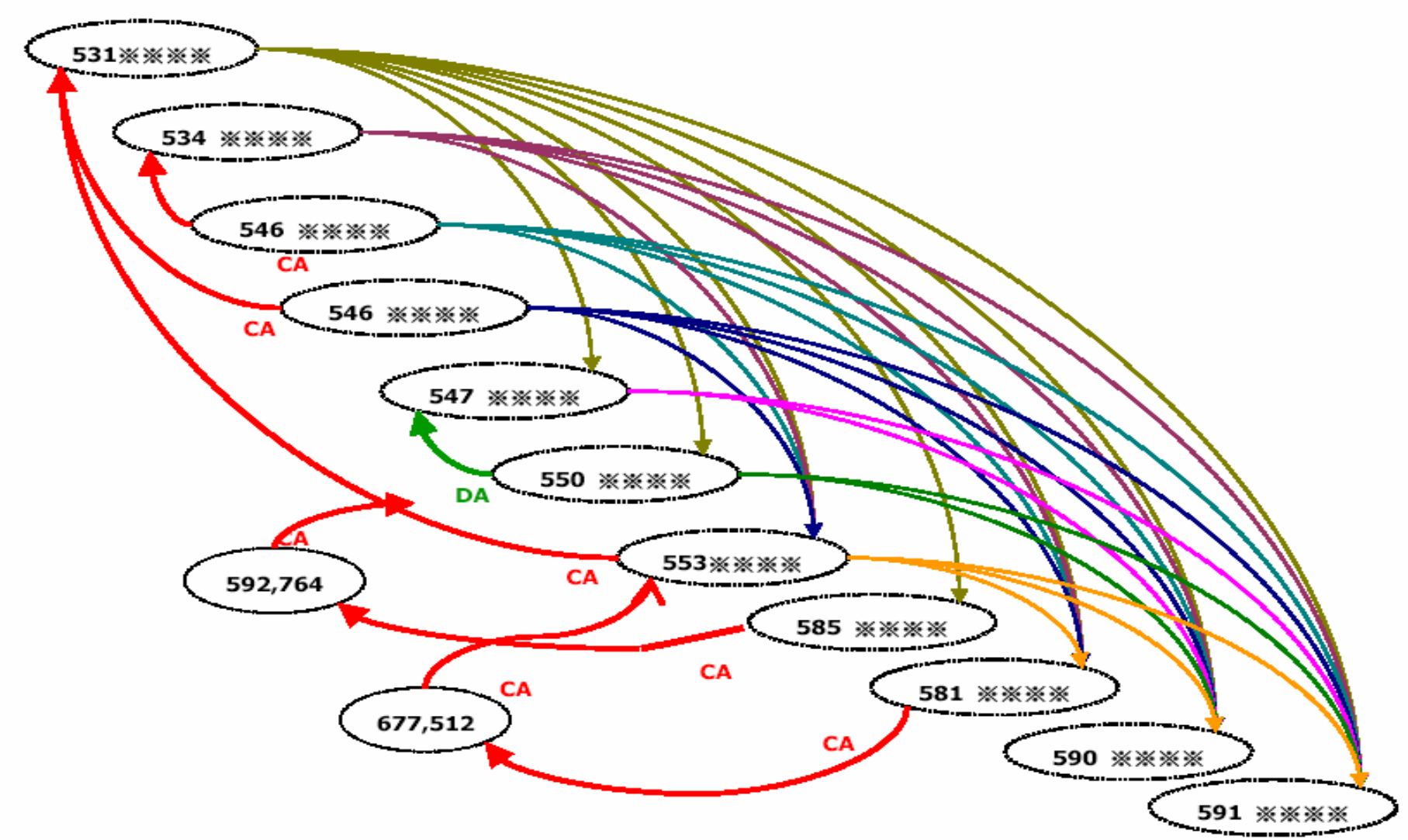
引證族譜圖



EX: Micro Pump

引證族譜圖

專利組合典型範例



心得

- 當專利量多時，引證族譜圖提供快速篩選歸納出重要專利的作法。
  - 源頭型專利
    - 被引證數多，影響力較大
  - 整合型專利
- 關鍵專利彼此間仍須檢查其claim與法律狀態。
- 創新性強的專利可能有突破性的技術內容。

- 引證族譜圖無法顯示專利家族資訊，必須用其他方式分析。

技術分析

專利技術地圖分析方法之基本步驟

檢索專利 ➔經過篩選

製作魚骨圖 ➔定出技術及功效等架構，其為技術分析的關鍵

功效分類基本表 ➔列出每件專利的技術特徵以及功效

製作技術／功效矩陣圖 ➔定出專利地雷區以及空窗區

技術／功效 分類方法

- 係就經篩選後之特定專利，彙整相關專利，分解其技術手段(way)與達成功效(result)，製成矩陣型態之統計表。
  - 1. 擬定技術分類架構
  - 2. 擬定功效分類架構
  - 3. 閱讀專利
  - 4. 歸納整理
    - 技術鳥瞰圖
    - 功效鳥瞰圖
  - 5. 技術功效矩陣
  - 6. 製作專利分析摘要表
- 由統計表中該領域之各種技術手段與功效，可作為後續進行「**迴避設計**」、「**創新設計**」、「**專利組合與佈局**」與「**IP事業化評估**」之資料庫，以架構專利網或衍生新的專利。

技術/功效分類架構

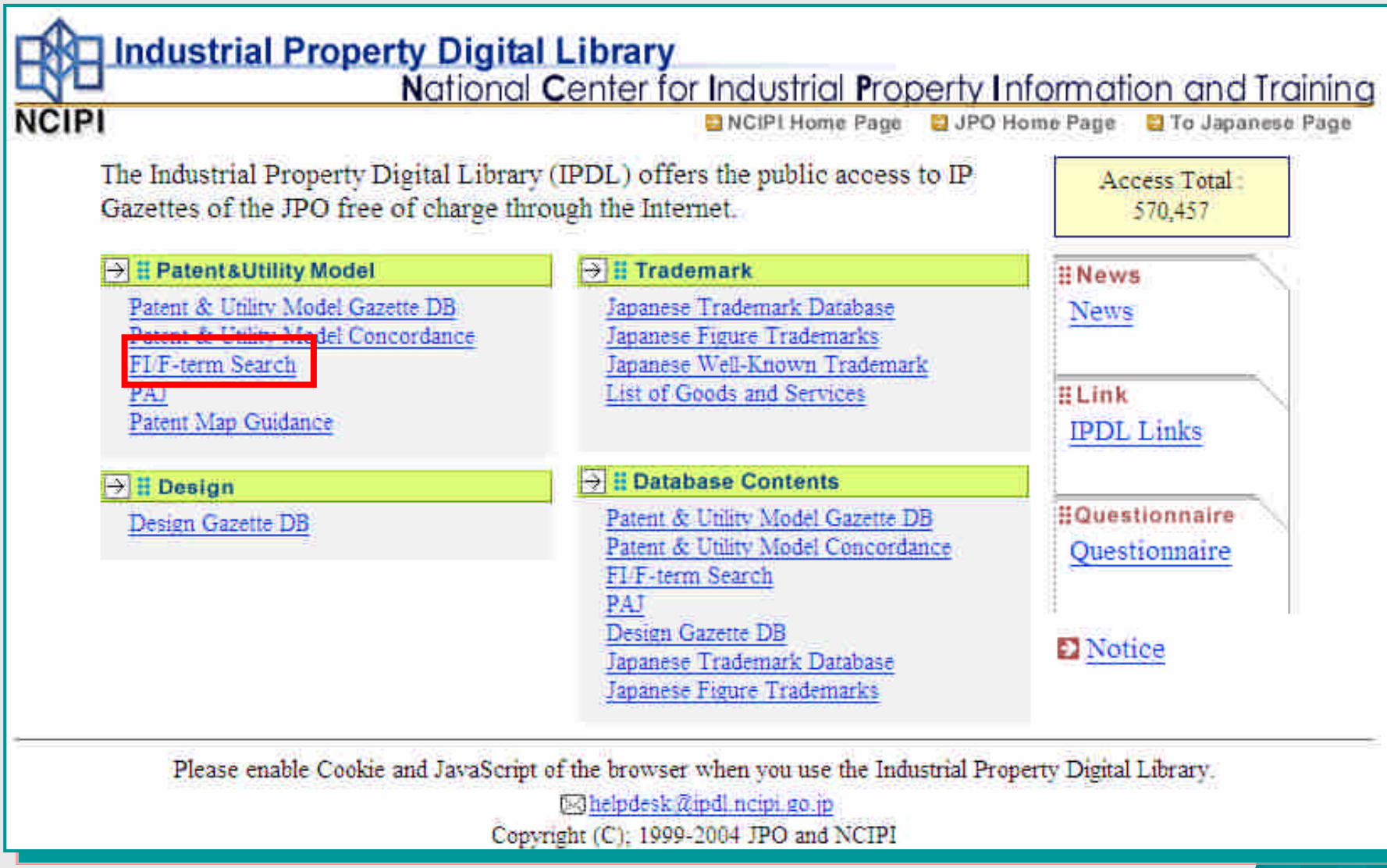
- 技術分類架構
  - 修改化油器
  - 修改進氣系統
  - 修改排氣系統
  - 修改空氣濾清器
  - 修改引擎懸吊
  - 修改散熱器
  - 修改油箱
  - 修改傳動軸
  - 修改水冷系統
  - 修改引擎設計
- 功效分類架構
  - 改善可用空間
  - 改善振動
  - 提升進排氣與引擎效率
  - 提升冷卻與散熱效率
  - 操作維修容易
  - 降低重量與成本

技術功效矩陣

功效 / 技術	改善可用空間	改善振動	提升進排氣與引擎效率	提升冷卻與散熱效率	操作維修容易	降低重量與成本
修改化油器	1		4		1	
修改進氣系統	2		**7**	1	1	
修改排氣系統	2		3	3		
修改空氣濾清器	2		3		1	
修改引擎懸吊	2	3	1			1
修改散熱器	2			1		1
修改油箱	1				2	
修改傳動軸	1					
修改水冷系統				1		
修改引擎設計	1		2			1

技術/功效分類魚骨

- 技術/功效分類是技術分析成敗的關鍵
  - 「合適」的分類遠較「正確」的分類重要
- 宜由研發主管或資深RD負責
- 他山之石、可以攻錯：「F-Term分類法」之借用
- F-Term
  - 針對日本特許專利
  - 由(日本)財團法人工業所有權協立中心製作
  - 以專利文獻資料的技術思想，再以技術領域分類法做成的資料庫。
  - 參考F Term分類方式，可減少自訂分類的難度並縮短分類時間。
    - http://www4.ipdl.inpit.go.jp/Tokujitu/tjftermena.ipdl?N0000=114
  - 使用方式：可由「重點IPC」開始，檢索其對應之F-Term，再由F-Term矩陣表挑選可用的技術分類項目。



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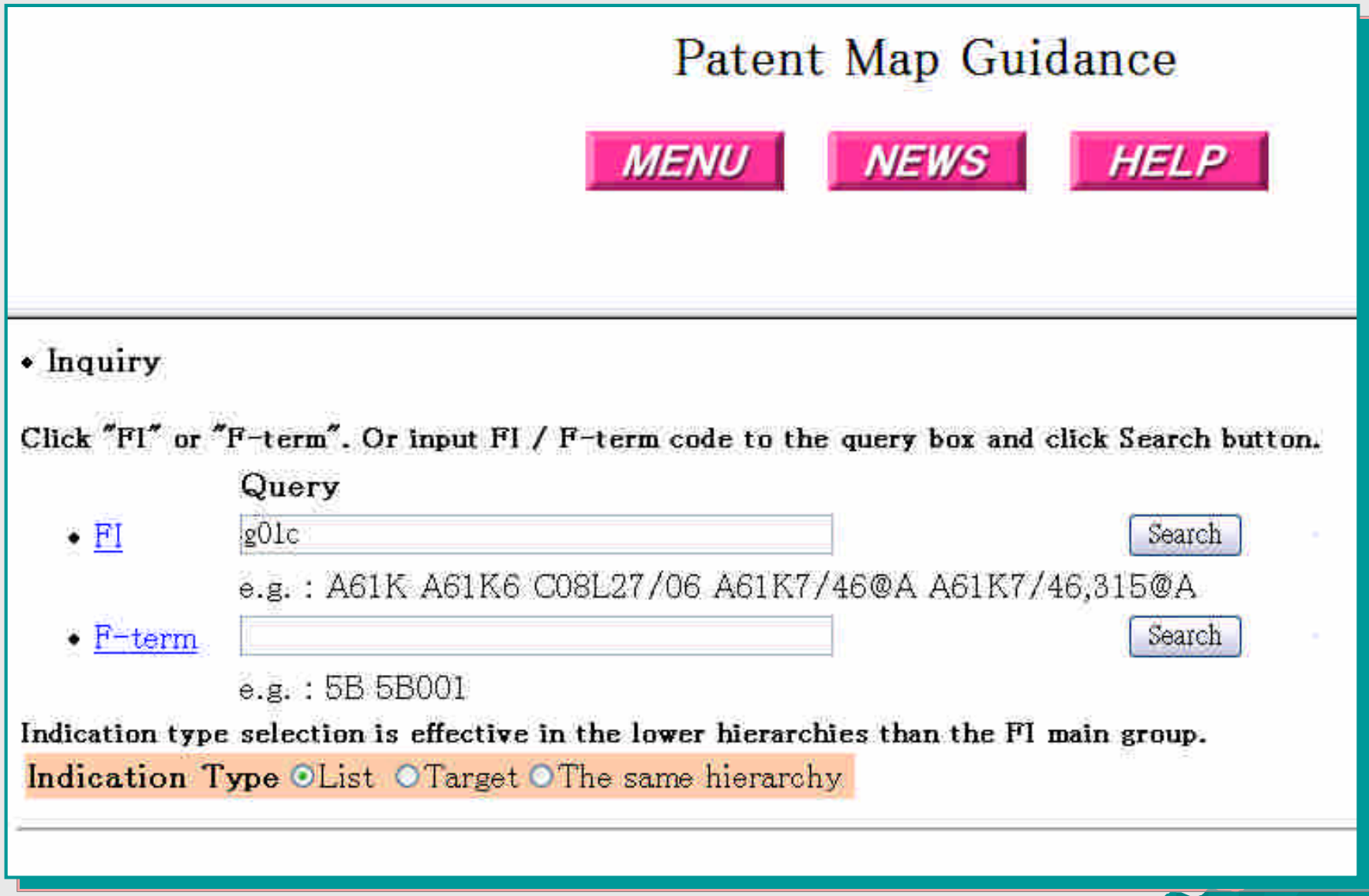


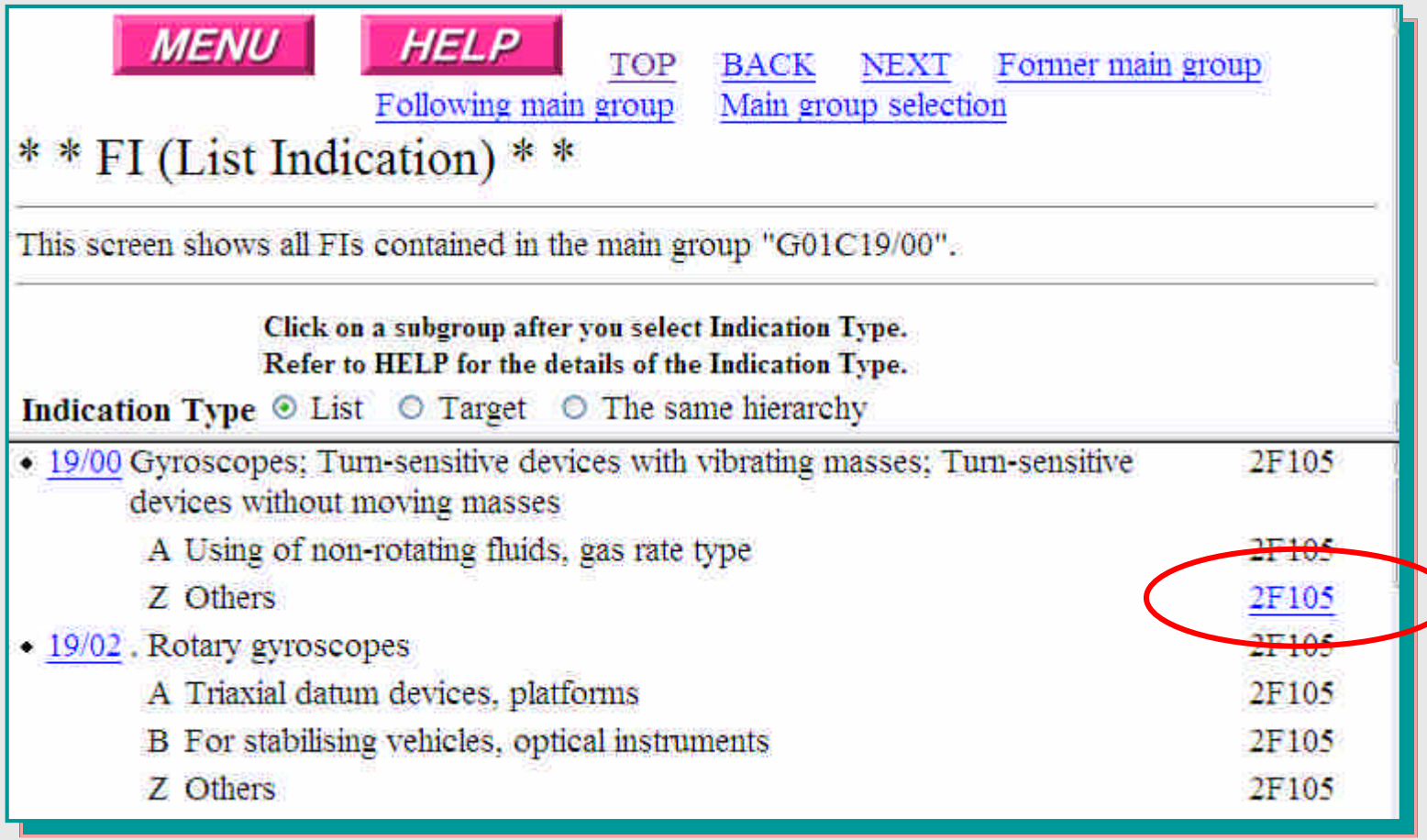
MENU HELP TOP BACK NEXT Upper hierarchy

* * FI Main Group / Facet Selection * *

A main group or Facet contained in "G01C" can be chosen on this screen.
Click on a main group or Facet to display the lower hierarchy.

G03B 37/00)

- 13/00 Surveying specially adapted to open water, e.g. sea, lake, river, canal (liquid level metering G01F; measuring liquid velocity G01P; determining existence or flow of underground water G01V)
- 15/00 Surveying instruments or accessories not provided for in groups G01C 1/00 to G01C 13/00
- 17/00 Compasses; Devices for ascertaining true or magnetic north for navigation or surveying purposes (using gyroscopic effect G01C 19/00; for geophysical or prospecting purposes G01V 3/00)
- 19/00 Gyroscopes; Turn-sensitive devices with vibrating masses; Turn-sensitive devices without moving masses
- 21/00 Navigation; Navigational instruments not provided for in preceding groups (measuring distance traversed on the ground by a vehicle G 01 C 22/00; measuring linear or angular speed or acceleration G 01 P)



MENU HELP TOP BACK NEXT Former main group
Following main group Main group selection

* * FI (List Indication) * *

This screen shows all FIs contained in the main group "G01C19/00".

Click on a subgroup after you select Indication Type.
Refer to HELP for the details of the Indication Type.

Indication Type ◉ List ○ Target ○ The same hierarchy

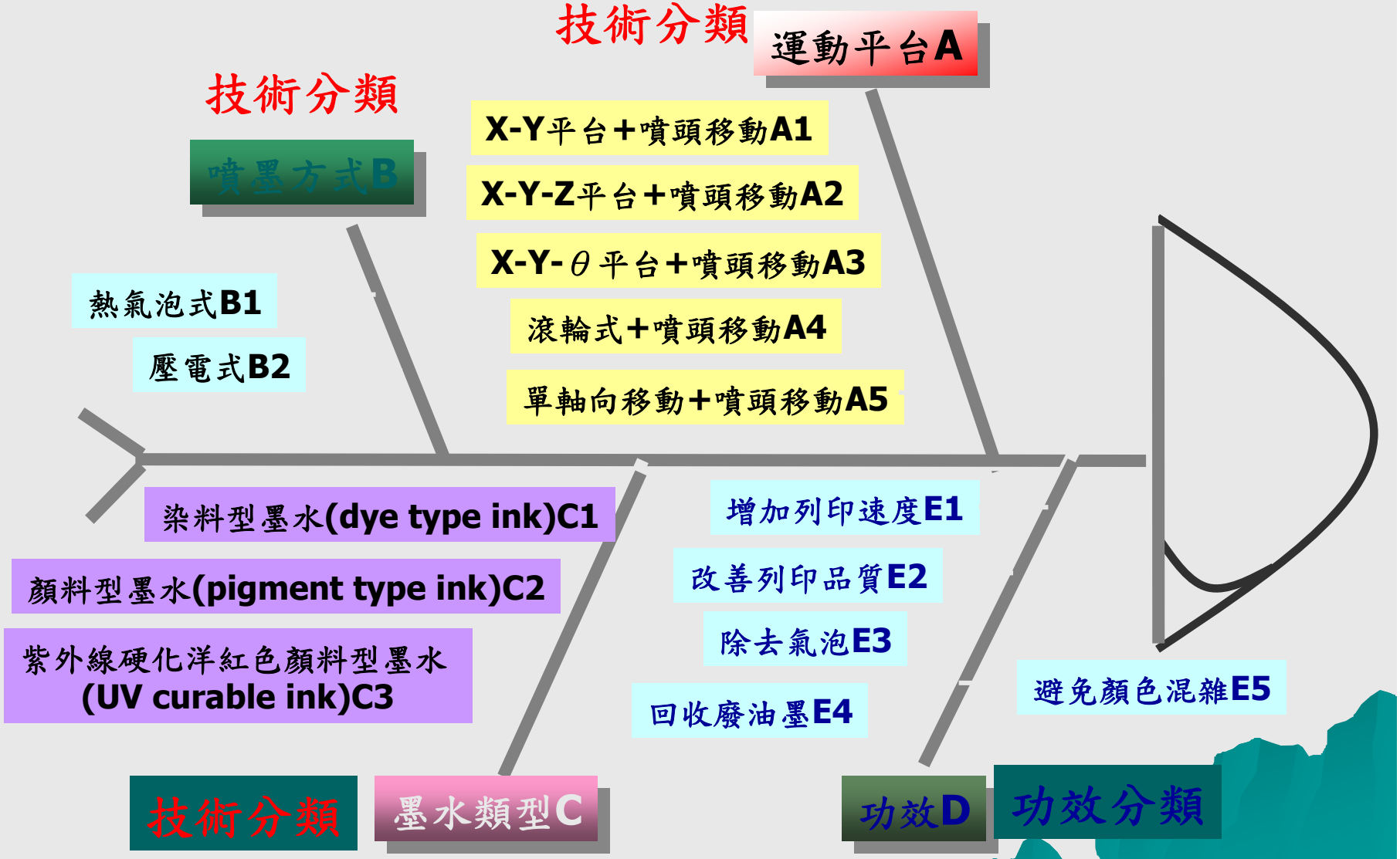
• 19/00 Gyroscopes; Turn-sensitive devices with vibrating masses; Turn-sensitive devices without moving masses	2F105
A Using of non-rotating fluids, gas rate type	2F105
Z Others	2F105
• 19/02 . Rotary gyroscopes	2F105
A Triaxial datum devices, platforms	2F105
B For stabilising vehicles, optical instruments	2F105
Z Others	2F105

* * F-term List * *

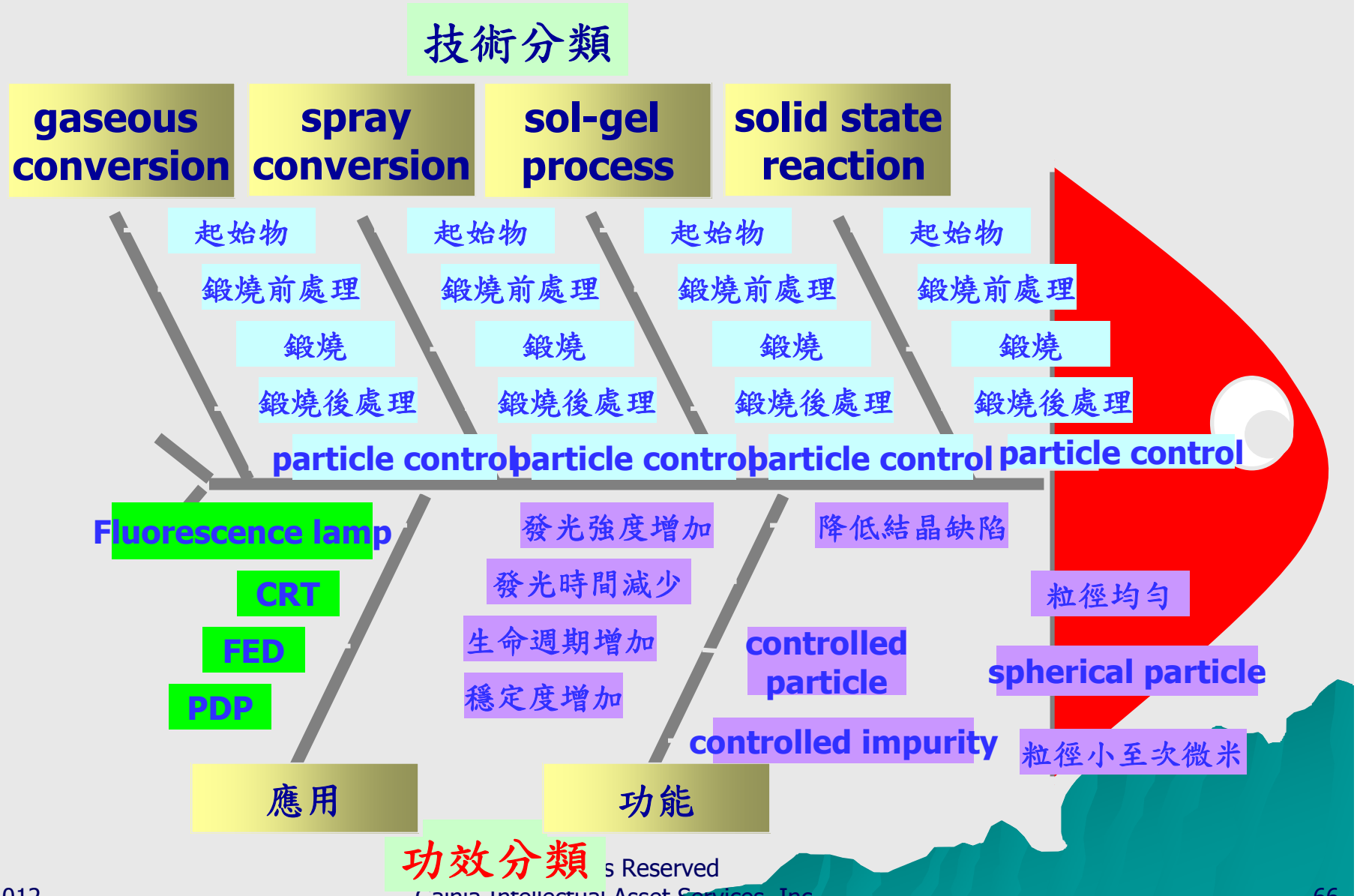
This screen shows the F-term list of the theme "2F105".

2F105		Gyroscopes G01C19/00-19/72@Z									
AA	AA00	AA01	AA02	AA03		AA05	AA06		AA08		AA10
	APPLICATIONS	. Modes of transportation	. . Automobiles	. . Aircraft		. Rockets and missiles	. Robot		. Optical equipment		. Others
BB	BB00	BB01	BB02	BB03	BB04	BB05		BB07	BB08	BB09	
	OBJECTIVES	. Improvement of performance	. . Improvement of sensitivity	. . Reduction of noise	. . Stabilization	. . Expansion of dynamic ranges		. Compensation and correction	. . Zero point and drift	. . Temperature	
		BB11	BB12	BB13	BB14	BB15		BB17			BB20
		. Improvement of composition	. . Simplification and solidification	. . Reduction of size or weight	. . Quality of materials	. . Ease of manufacture		. Combinations with other types of sensors			. Others
CC	CC00	CC01	CC02		CC04	CC05	CC06	CC07	CC08		
	FORMS OF VIBRATING GYROSCOPES	. Tuning fork types (i.e., including H-shaped configurations)	. . Orthogonal types		. Solid forms	. . Triangular poles	. . Square poles	. . Poles with five or more angles	. . Circular poles		
		CC11			CC14		CC16				CC20
		. Combinations			. Surface wave types		. Acoustic wave types				. Others
CD	CD00	CD01	CD02	CD03		CD05	CD06	CD07			
	COMPOSITION OF VIBRATING GYROSCOPES	. Detection means	. . Piezoelectricity	. . Electrostatic capacity		. Driving means	. . Piezoelectricity	. . Electromagnetic induction			
		CD11		CD13							CD20

技術分類魚骨圖(技術分析的關鍵)



技術/功效分類魚骨圖



技術功效矩陣之應用

專利地雷區(紅海?)

空窗區(藍海?)

技術功效矩陣

功效 / 技術	改善可用空間	改善振動	提升進排氣與引擎效率	提升冷卻與散熱效率	操作維修容易	降低重量與成本
修改化油器	1		4		1	
修改進氣系統	2		7	1	1	
修改排氣系統	2		3	3		
修改空氣濾清器	2		3		1	
修改引擎懸吊	2	3	1			1
修改散熱器	2			1		1
修改油箱	1				2	
修改傳動軸	1					
修改水冷系統				1		
修改引擎設計	1		2			1

還有後話...要記得把自己的技術放進去，如果分析之前已有自己的技術時

創新模型的交互運用

- 挖洞式創新
  - 在專利空洞區創新，創造技術無人能及的「藍海」。
  - 專利侵權疑慮低
  - 商品化成功率不確定
  - 適合於研究機構、學術機構
- 聚焦式創新
  - 在專利競爭眾多的「紅海」區創新
  - 專利侵權疑慮高
    - 需進行侵權鑑定與規避設計
  - 商品化成功率高
  - 適合於企業

專利佈局實戰說明

專利加值運用

專利佈局(組合)的戰略

專利加值運用
成功案例一

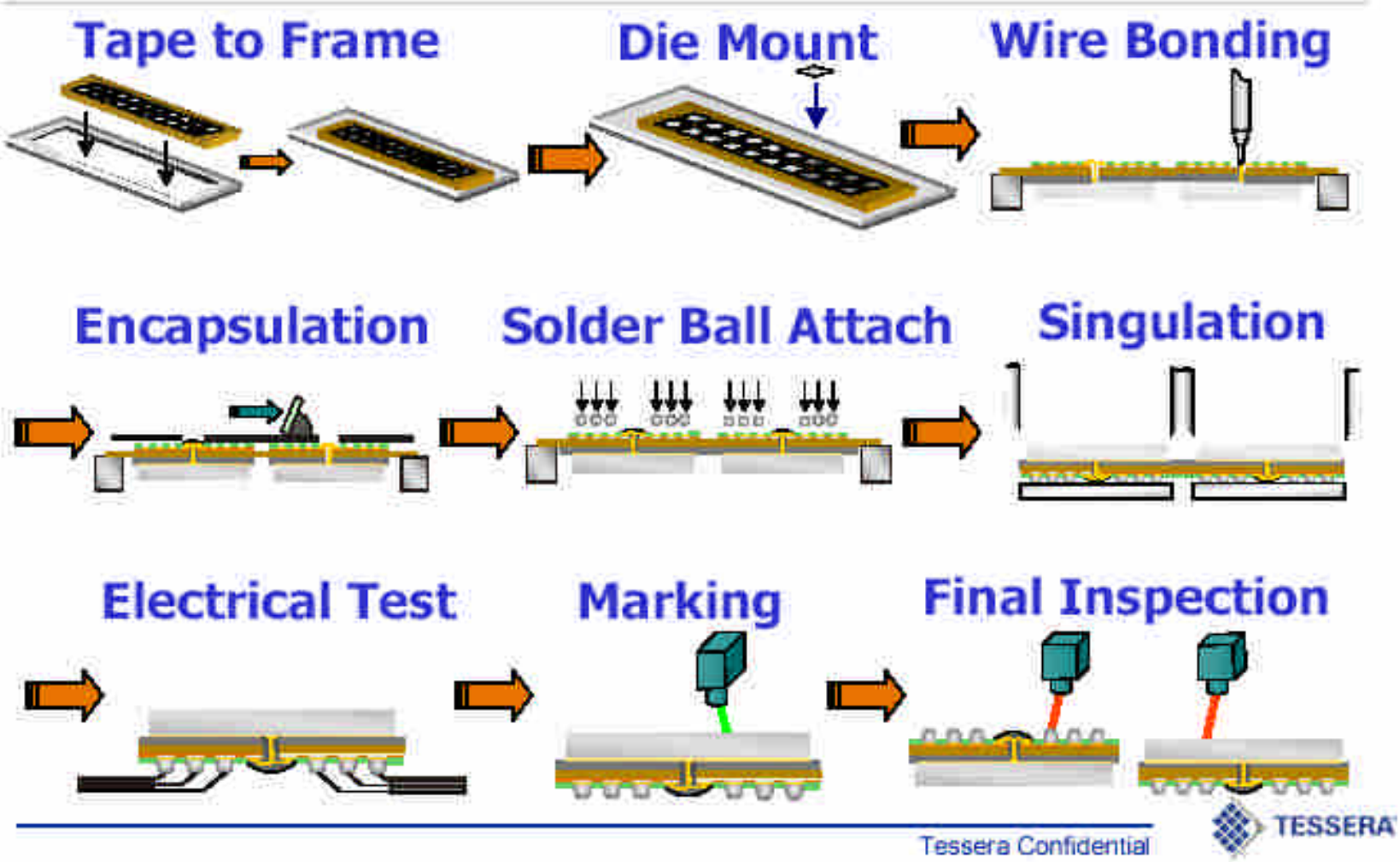
晶片技術公司 Tessera

- 半導體封裝與小型化技術業者
- 於1990年成立，總部設於加州聖荷西，提供製造小型與快速微晶片的技術，用於各式消費電子裝置，以及諸如個人數位助理、個人電腦、伺服器和遊戲主機等網際網路應用。
- 自1998年起，公司轉型。

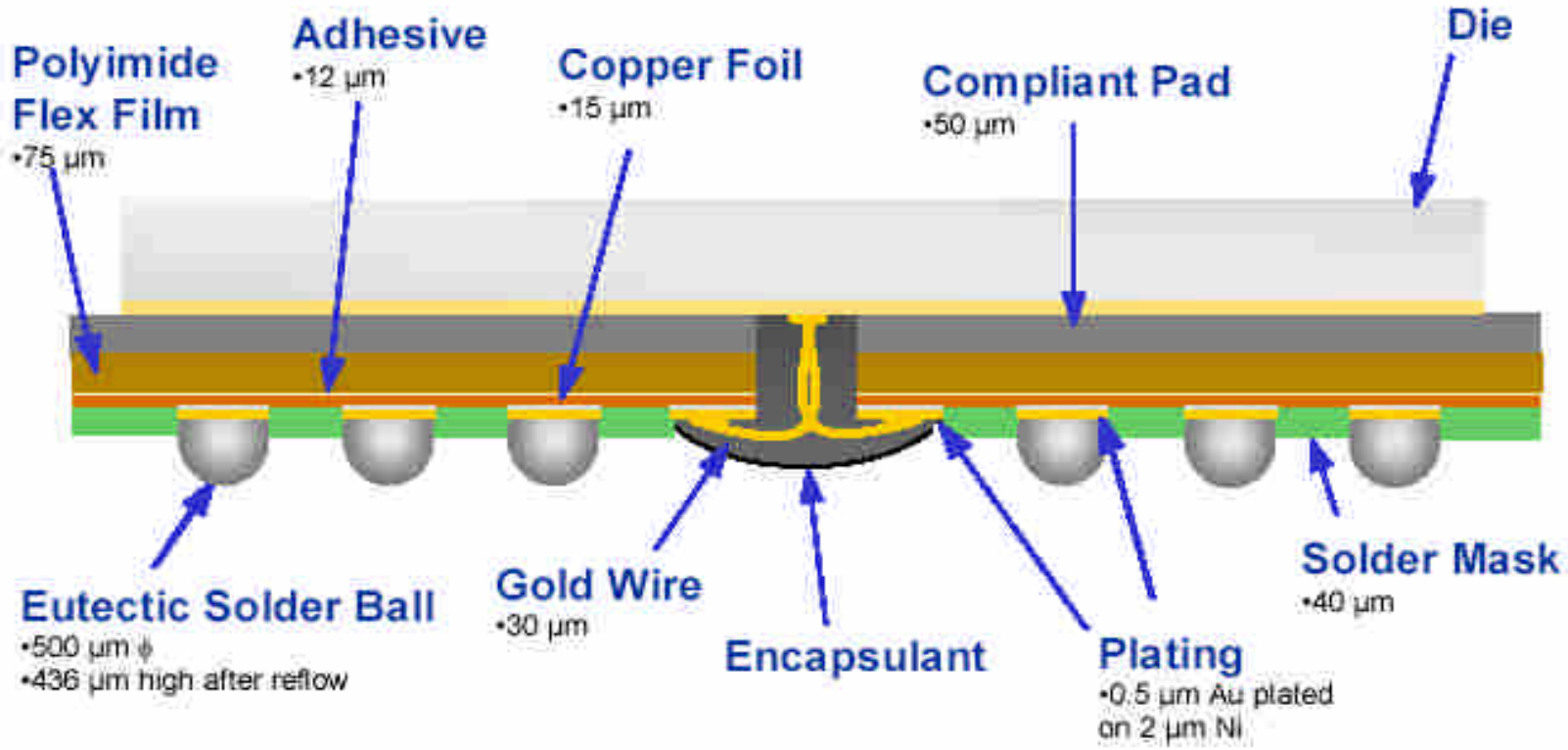
行政管理團隊

- Bruce M.McWilliams 博士
- 董事長，首席執行官兼總裁
- 自 **1999** 年擔任首席執行官以來，**McWilliams** 制訂了 **Tessera** 的發展和盈利戰略，使公司扭虧為盈，收入增長率在 **2002 - 2006** 年期間達到了 **65%** 。**McWilliams** 成功預測了電子行業的未來需求，正在推動 **Tessera** 開發可滿足消費者、計算和無線電子產品未來需求的技術和解決方案。

µBGA®-W Package Assembly Review



µBGA®-W Package Cross Section

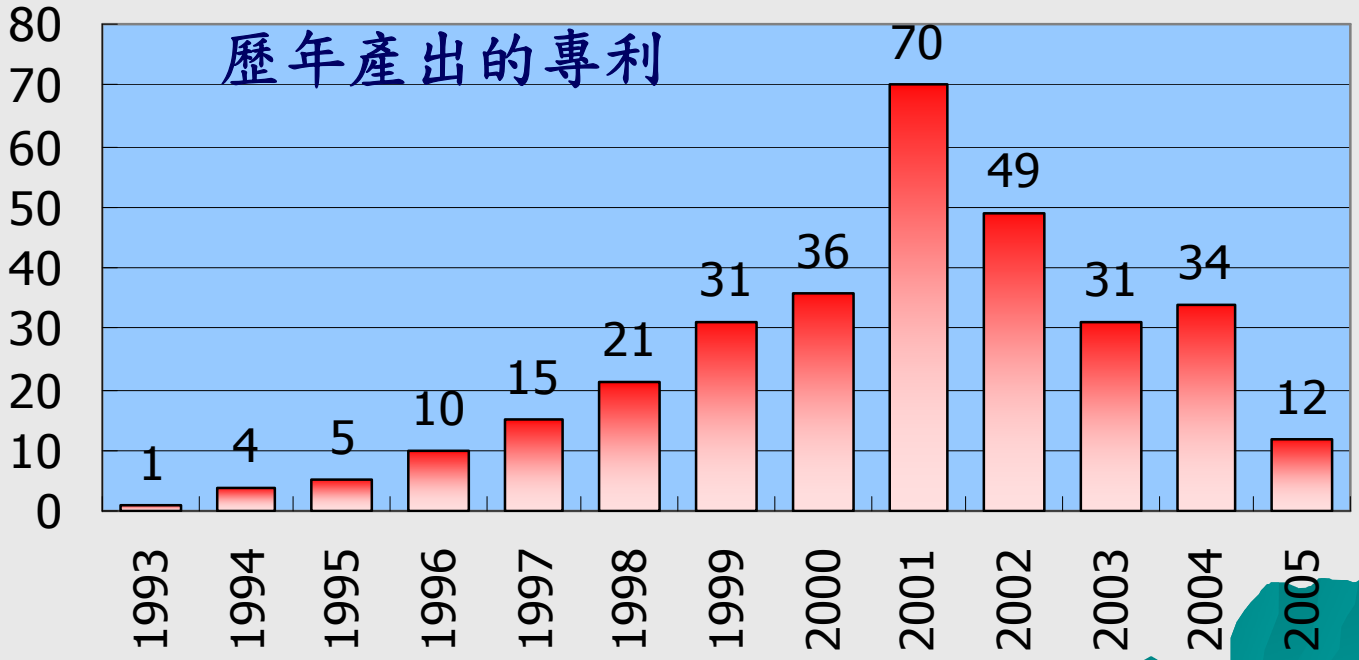


Tessera Confidential

TESSERA

Tessera Technologies

- A leading provider of miniaturization technologies for the electronics industry
- 319 US patent grants, 78 US patent publications, covering **chip-scale and multi-chip packages (CSPs and MCPs)**

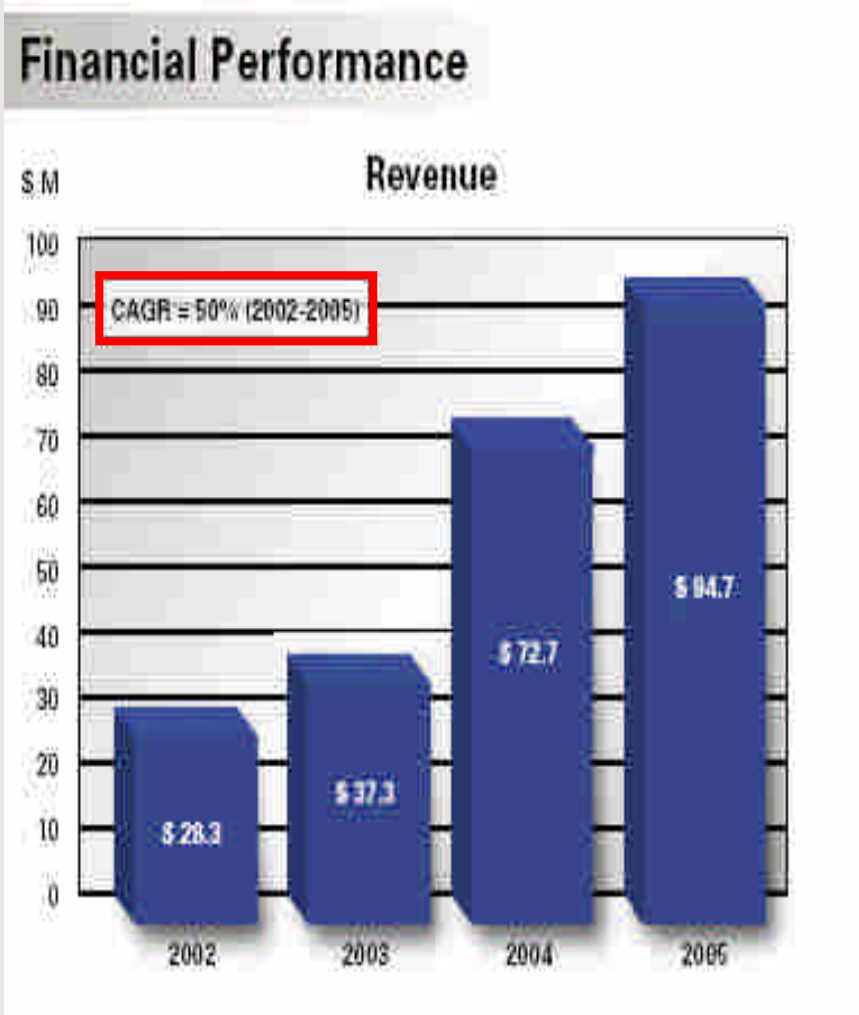


Revenue from IP

- 2004 vs 2003
  - Total revenue for 2004 was $72.7 million, increasing 95 percent.
  - Total IP revenue for 2004 was $59.6 million, up 109 percent.
  - IP revenue (patent) for 2004 was $39.6 million, rising 56 percent.

- 2005 Q1 Compared to 2004 Q1
  - Total revenue was $27.9 million, up 113 percent.
  - Total intellectual property revenue was $24.1 million, up 122 percent.

Annual Report 2005

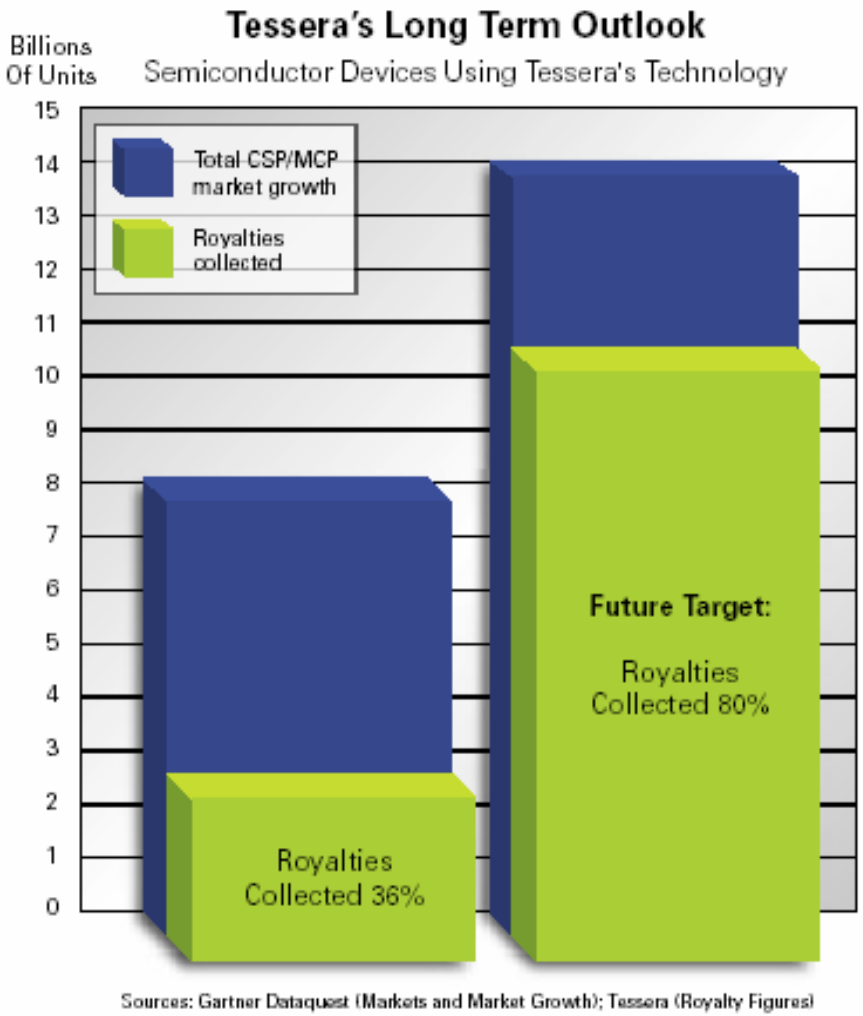


- Tessera's total revenue was $94.7 million, up 30 percent from the prior year.
- More importantly, **royalties and license fees, our core revenue stream**, grew by 44 percent year-over-year to $56.9 million.

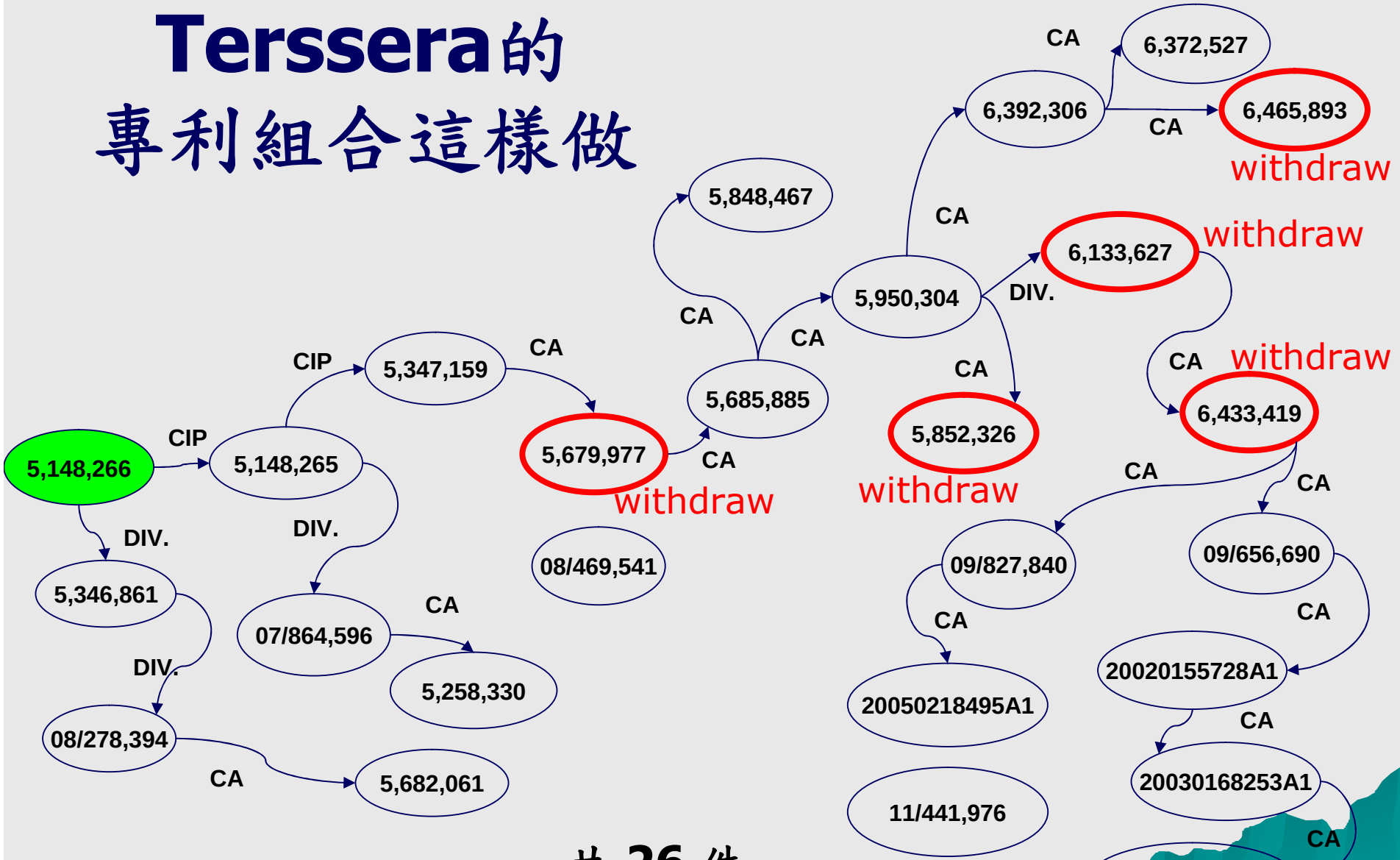
年複合成長率**(Compound Annual Growth Rate; CAGR)**

Tessera 小結

- 撤除製造生產線，留下研發與智權法務部門。
- 確立營運方針，以智慧財產權為獲利之知識產品。
- 以大型專利組合提起訴訟，製造對手高度困擾與壓力。
- 先向指標型對手開刀，成功之後，再向小型對手施壓。
  - **Samsung**
  - **TI**
  - **Sharp**



Terssera的專利組合這樣做



共 26 件

矽品全力反制

李洵穎／台北 2008/02/29

- 惟Tessera於2007年3月對封測廠所提起專利侵權及**違約訴訟**，加州法院已於5月下令停止該訴訟案。矽品亦不甘示弱，於**2007年就Tessera 5個專利向美國專利局(PTO)請求再審查。**
- Tessera更在2007年底擴大控告範圍，向美國德州東區地方法院和美國國際貿易委員會(ITC)指控威剛、宏碁及美國子公司、南亞科技、力晶、茂德、勤茂、爾必達(Elpida)、金士頓(Kingston)等公司侵權，並要求禁止這些侵權產品進口及銷售。原本和解的美光、三星、奇夢達和海力士等因Tessera專利有疑慮，而停止支付費用。
- **美國專利局經過實質審查程序，並於2008/02/26宣布，在矽品提出Tessera的5個專利再審查案中，包括U.S.6,433,419、6,465,893和5,852,326等3項專利被認定有疑慮。**
- 德州法院也依此下令包括Tessera與高通、摩托羅拉ATI及飛思卡爾等訴訟案停止。

專利加值運用成功案例二

LG's side-mount LCM

專利佈局實例

問題

- 只有四顆螺絲釘.....
  - 可以申請專利嗎?
  - 值得申請專利嗎?
  - 該怎樣申請專利?

- 看看LG怎麼做.....

LG's US5835139

United States Patent [19]

Yun et al.

[11] **Patent Number: 5,835,139**

[45] **Date of Patent: Nov. 10, 1998**

[54] **COMPUTER HAVING LIQUID CRYSTAL DISPLAY BETWEEN FRAMES ATTACHED AT THE EDGES**

[75] Inventors: **Hee Young Yun**, Kumi; **Kyo Hun Moon**, Kimcheon; **Byeong Yun Lee**, Suwon; **Yong Bum Kim**, Kumi; **Young Un Bang**, Ansan, all of Rep. of Korea

[73] Assignee: **LG Electronics Inc.**, Seoul, Rep. of Korea

[21] Appl. No.: **888,164**

[22] Filed: **Jul. 3, 1997**

[30] **Foreign Application Priority Data**

Apr. 8, 1997 [KR] Rep. of Korea 1997-12899
Apr. 17, 1997 [KR] Rep. of Korea 1997-14278

[51] **Int. Cl.**[6] **G02F 1/1333**; H05K 5/001

[52] **U.S. Cl.** **349/58**; 361/681

[58] **Field of Search** 349/58, 1; 361/681

FOREIGN PATENT DOCUMENTS

0317261	5/1989	European Pat. Off. .
425793	6/1991	European Pat. Off. .
0 532 284	3/1993	European Pat. Off. .
0604872	7/1994	European Pat. Off. .
4120950	12/1992	Germany .
01237591	9/1989	Japan .
1237591	9/1989	Japan .
05080334	2/1993	Japan .
7-199180	8/1995	Japan .
7-281184	10/1995	Japan .

OTHER PUBLICATIONS

IBM Technical Disclosure Bulletin, vol. 39, No. 01, Jan. 1996 entitled "Structure Design for Liquid Crystal Display Module".

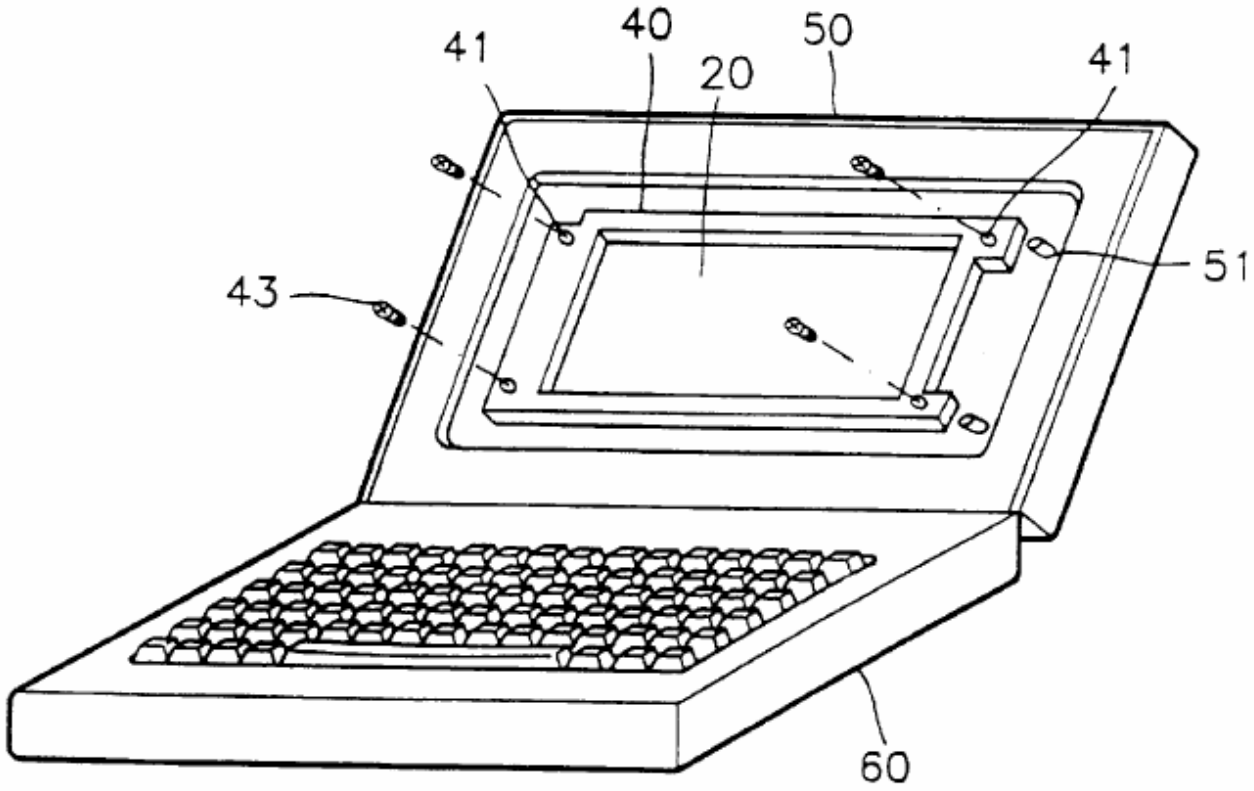
IBM Technical Disclosure Bulletin, vol. 37, No. 12, Dec. 1994 entitled "Cell Support Assembly without Screw".

Structure Design for Liquid Crystal Display Module, IBM Technical Disclosure Bulletin, vol. 39, No. 1, Jan. 1996, S. 71–73.

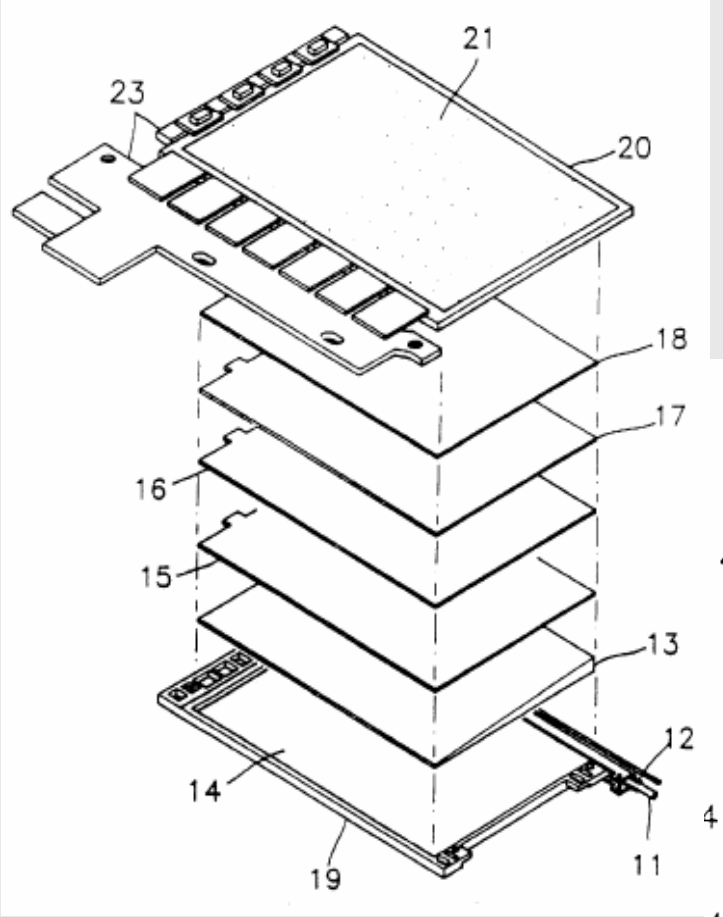
High Efficiency Back Light for LCD, IBM Technical Disclosure Bulletin, vol. 33, No. 9, Feb. 1991, S. 261, 262.

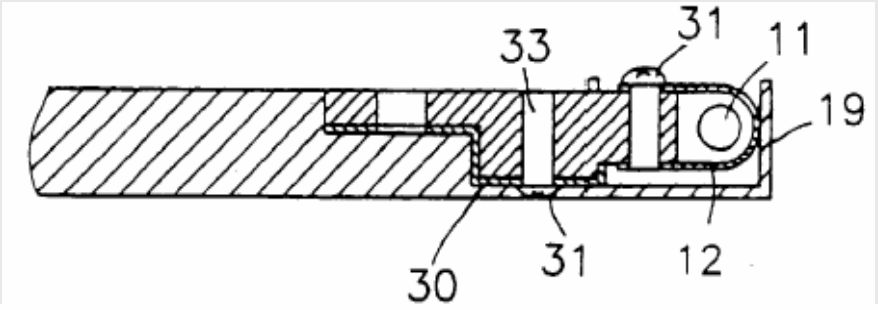
The prior art

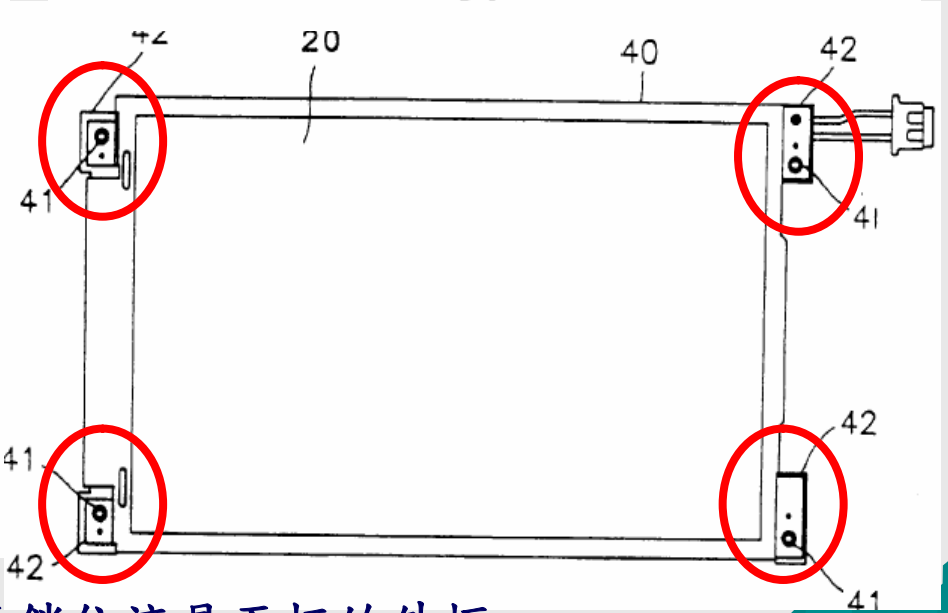
FIG. 5
PRIOR ART



The prior art



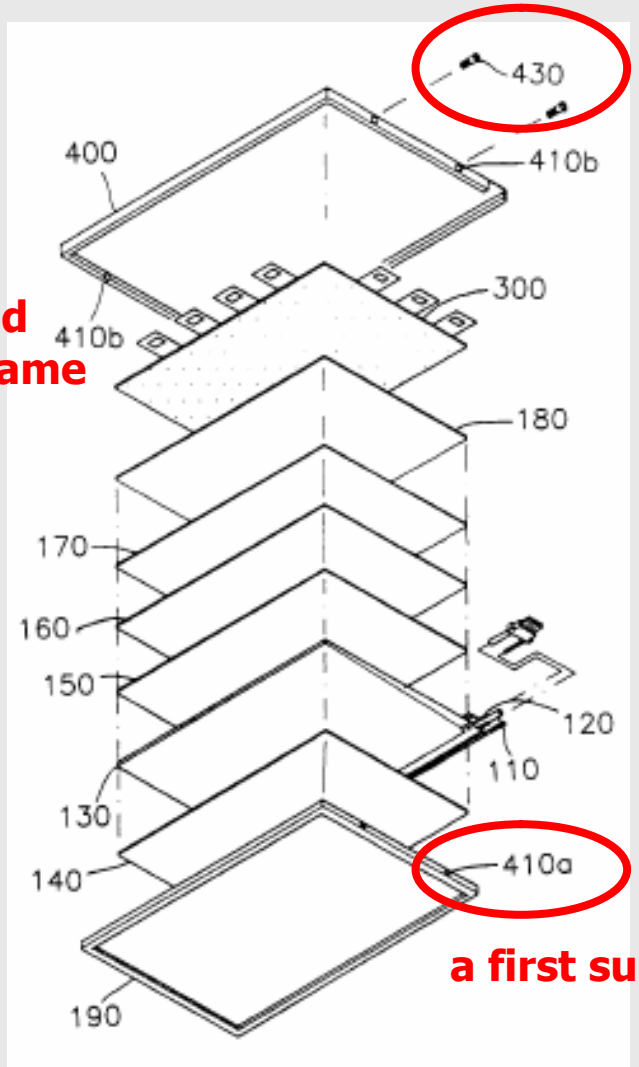


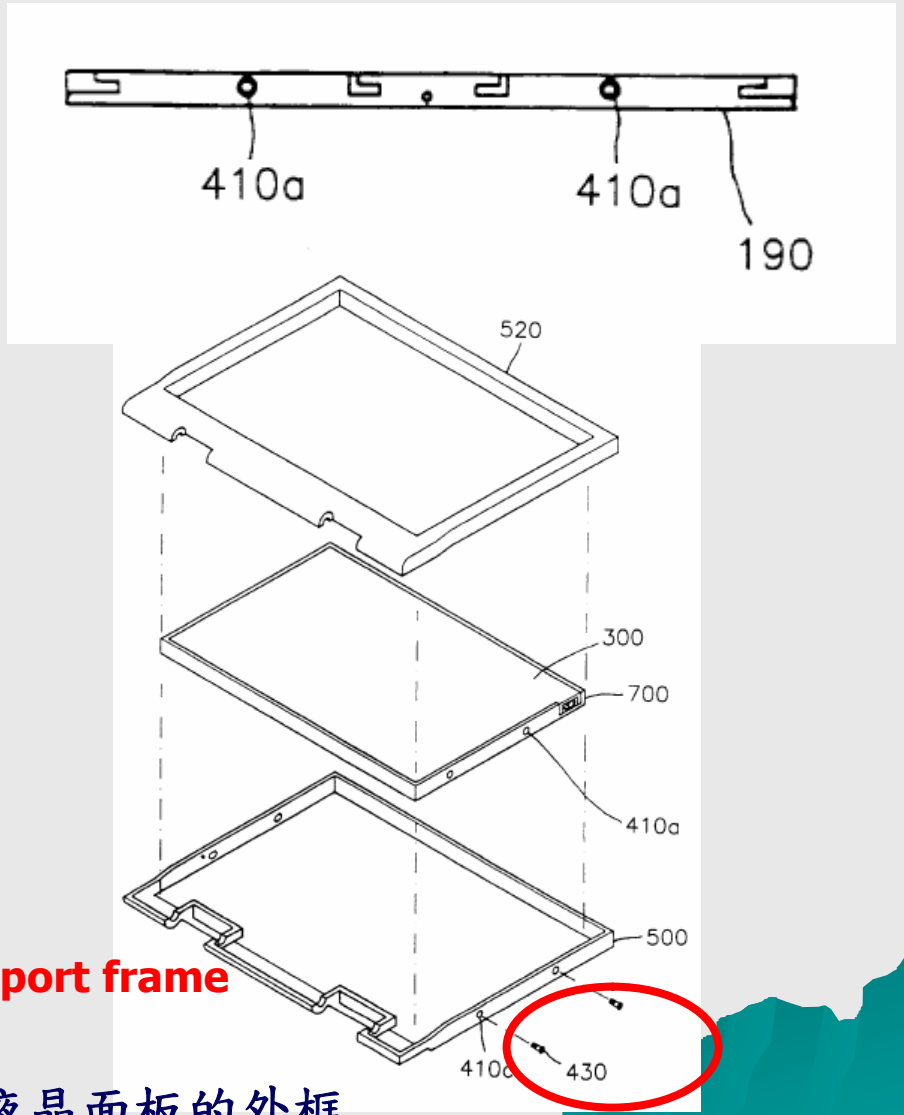


傳統的作法，用四顆螺絲正面鎖住液晶面板的外框
鎖得很牢，但是造成外框太厚了.....

LG這樣改.....

a second support frame



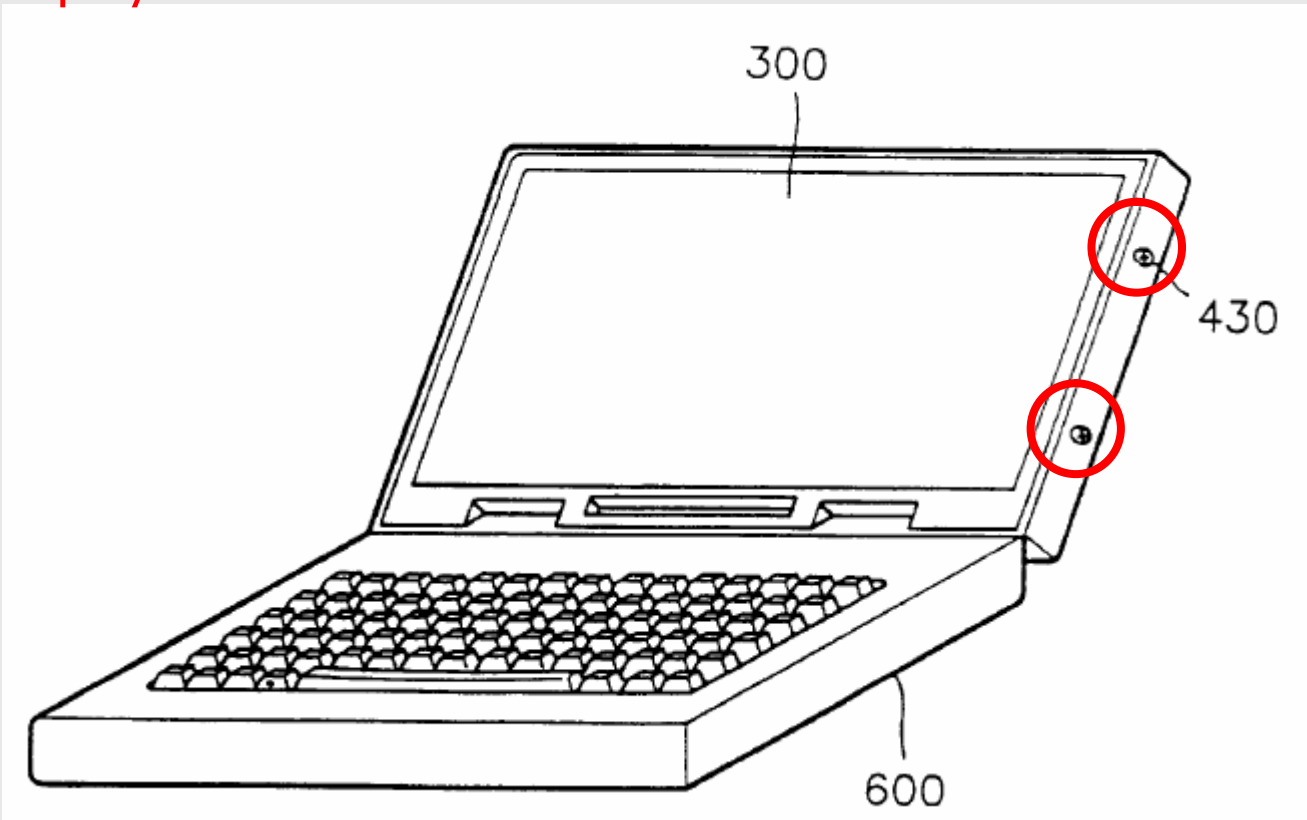


a first support frame

LG把四顆螺絲改從側邊鎖住液晶面板的外框
簡單！搞定！

Side-Mount

- An object of the present invention is to increase the ratio of the viewing area to the whole area of a computer display.
- Another object of the present invention is to provide a thin, light weight display unit.



專利標的是液晶顯示器

Claim 1

權利範圍很大

- 1. A **liquid crystal display** device comprising:
  - a liquid crystal panel with a display area and having front and back surfaces and a first plurality of edges;
  - a light unit with a second plurality of edges joined with the liquid crystal panel;
  - a first support frame(190) supporting the light unit and having a portion that extends parallel to at least one edge of the light unit;
  - a second support frame(400) coupled to the portion of the first frame;
  - an outer casing(500), and
  - a fastening part(430, 410a, 410b, 410c) joining together the first and second support frames(190,400) and the outer casing(500) through the portion(410a) of the first support frame(190) that is coupled to the second support frame(400).

螺絲在這裡

Claim 5 & 8

專利標的是NB

- 5. A **portable computer** comprising:
  - a liquid crystal display device having a display surface and a first plurality of side edges;
  - a body having an input device;
  - a cover, coupled to an edge of the body, having a second plurality of side edges, and
  - a fastening unit attaching the first plurality of side edges of the liquid crystal display device to the second plurality of side edges of the cover, the liquid crystal display device being mounted to the cover.

螺絲在這裡

- 8. A **portable computer** comprising:

專利標的是NB

  - a liquid crystal display device having a first side edge;
  - a body having an input device;
  - a cover joined with the body and having a second side edge, and
  - a fastening unit joining together the liquid crystal display device and the cover through the first and second side edges of the liquid crystal display device and the cover, respectively.

螺絲在這裡

專利標的是液晶顯示器

Claim 9

- 9. A **liquid crystal display device** comprising:
  - a first support frame having a first fastening member at a side edge of the first support frame;
  - a reflector unit adjacent the first support frame;
  - a light source adjacent to the reflector unit;
  - a light guide unit adjacent the reflector unit;
  - a protection unit adjacent the light guide unit;
  - a prism unit adjacent the protection unit;
  - a diffuser unit adjacent the prism unit;
  - a liquid crystal panel adjacent the diffuser unit, and
  - a second support frame having a second fastening member at a side edge of the second support frame, wherein the reflector unit, the protection unit, the prism unit, and the diffuser unit, the liquid crystal panel are between the first and second support frame, and the first and second support frames are attached to each other through the first and second fastening members only through the side edges of the first and second support frames.

LG's US5926237

United States Patent [19]

Yun et al.

[11] **Patent Number: 5,926,237**

[45] **Date of Patent: *Jul. 20, 1999**

[54] **COMPUTER HAVING LIQUID CRYSTAL DISPLAY**

[75] Inventors: **Hee Young Yun**, Kumi-shi; **Kyo Hun Moon**, Kimcheon-shi; **Byeong Yun Lee**, Suwon-shi; **Yong Bum Kim**, Kumi-shi; **Young Un Bang**, Ansan-shi, all of Rep. of Korea

[73] Assignee: **LG Electronics Inc.**, Seoul, Rep. of Korea

[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: **09/145,357**

[22] Filed: **Sep. 1, 1998**

Related U.S. Application Data

[63] Continuation of application No. 08/888,164, Jul. 3, 1997, Pat. No. 5,835,139.

[30] **Foreign Application Priority Data**

Apr. 8, 1997 [KR] Rep. of Korea 97-12899
Apr. 17, 1997 [KR] Rep. of Korea 97-14278

FOREIGN PATENT DOCUMENTS

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0604872	7/1994	European Pat. Off. .
4120950A1	12/1992	Germany .
01237591	9/1989	Japan .
05080334	2/1993	Japan .
071991180	8/1995	Japan .
07281184	10/1995	Japan .
2305689	4/1997	United Kingdom .
2305690	4/1997	United Kingdom .

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High Efficiency Back Light for LCD, IBM Technical Disclosure Bulletin, vol. 33, No. 9, Feb. 1991, S. 261, 262.

JP 2–79893 Patents Abstracts of Japan, P–1061, Jun. 3, 1990, vol. 14, No. 274.

IBM Technical Disclosure Bulletin, vol. 37, No. 12, Dec. 1994 entitled "Cell Support Assembly without Screw".

"14.2" XGA (Ver. 2) Technical Data, AA142XB11," Advanced Display, Inc.

Independent Claims

- 1. A method of forming a liquid crystal display device
- 6. A method of assembling a portable computer comprising a liquid crystal display
- 9. A method of assembling a portable computer comprising a liquid crystal display device
- 10. A method of forming a liquid crystal display device
- 15. A method of forming a liquid crystal display device
- 25. A method of forming a liquid crystal display device
- 35. A method of making a liquid crystal display device
- 45. A method of making a portable computer
- 54. A method of making a portable computer

LG's US6002457

United States Patent [19]

Yun et al.

[11] **Patent Number: 6,002,457**

[45] **Date of Patent: *Dec. 14, 1999**

[54] **COMPUTER HAVING LIQUID CRYSTAL DISPLAY**

[75] Inventors: **Hee Young Yun**, Kumi; **Kyo Hun Moon**, Kimcheon; **Byeong Yun Lee**, Suwon; **Yong Bum Kim**, Kumi; **Young Un Bang**, Ansan, all of Rep. of Korea

[73] Assignee: **LG LCD, Inc.**, Rep. of Korea

[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: **09/178,832**

[22] Filed: **Oct. 26, 1998**

Related U.S. Application Data

[63] Continuation of application No. 08/888,164, Jul. 3, 1997, Pat. No. 5,835,139.

[30] **Foreign Application Priority Data**

Apr. 8, 1997 [KR] Rep. of Korea 97-12899
Apr. 17, 1997 [KR] Rep. of Korea 97-14278

FOREIGN PATENT DOCUMENTS

0317261	5/1989	European Pat. Off. .
425793	6/1991	European Pat. Off. .
0 454 120	10/1991	European Pat. Off. .
0532284	3/1993	European Pat. Off. .
0604872	7/1994	European Pat. Off. .
4120950	12/1992	Germany .
1-237591	9/1989	Japan .
1-237591A	9/1989	Japan .
05080334	2/1993	Japan .
07199180	8/1995	Japan .
07281184	10/1995	Japan .
2305689	4/1997	United Kingdom .
2305690	4/1997	United Kingdom .

OTHER PUBLICATIONS

"14.2" XGA (Ver. 2) Technical Data, AA142XB11, Advanced Display Inc.

Structure Design for Liquid Crystal Display Module, IBM Technical Disclosure Bulletin, vol. 39, No. 1, Jan. 1996, S. 71–73.

High Efficiency Back Light for LCD, IBM Technical Disclosure Bulletin, vol. 33, No. 9, Feb. 1991, S. 261, 262.

JP2–79893 Patents Abstracts of Japan, P–1061, Jun. 13, 1990, vol. 14, No. 274

Independent Claims

- 1. A liquid crystal display device
- 5. A liquid crystal display device
- 9. A liquid crystal display device
- 13. A liquid crystal display device
- 18. A liquid crystal display device
- 23. A liquid crystal display device comprising the steps of
  - Product by process claim
- 33. A liquid crystal display device
- 37. A liquid crystal display device

LG's US6020942

United States Patent [19]

Yun et al.

[11] **Patent Number: 6,020,942**

[45] **Date of Patent: *Feb. 1, 2000**

[54] **COMPUTER HAVING LIQUID CRYSTAL DISPLAY**

[75] Inventors: **Hee Young Yun**, Kumi; **Kyo Hun Moon**, Kimcheon; **Byeong Yun Lee**, Suwon; **Yong Bum Kim**, Kumi; **Young Un Bang**, Ansan, all of Rep. of Korea

[73] Assignee: **LG LCD, Inc.**, Rep. of Korea

[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: **09/178,711**

[22] Filed: **Oct. 26, 1998**

Related U.S. Application Data

[63] Continuation of application No. 08/888,164, Jul. 3, 1997, Pat. No. 5,835,139.

[30] **Foreign Application Priority Data**

Apr. 8, 1997 [KR] Rep. of Korea 97-12899
Apr. 17, 1997 [KR] Rep. of Korea 97-14278

FOREIGN PATENT DOCUMENTS

0317261	5/1989	European Pat. Off. .
425793	6/1991	European Pat. Off. .
0 454 120	10/1991	European Pat. Off. .
0532284	3/1993	European Pat. Off. .
0604872	7/1994	European Pat. Off. .
4120950	12/1992	Germany .
01237591A	9/1989	Japan .
1237591	9/1989	Japan .
05080334	2/1993	Japan .
07199180	8/1995	Japan .
07281184	10/1995	Japan .
2305689	4/1997	United Kingdom .
2305690	4/1997	United Kingdom .

OTHER PUBLICATIONS

"14.2" XGA (Ver.2) Technical Data, AA142XB11," Advanced Display Inc.

Structure Design for Liquid Crystal Module, IBM Technical Disclosure Bulletin, vol. 39, No. 1, Jan. 1996, S. 71–73.

High Efficiency Back Light for LCD, IBM Technical Disclosure Bulletin, vol. 33, No. 9, Feb. 1991, S. 261,262.

JP 2–79893 Patents Abstracts of Japan, P–1061, Jun. 13, 1990 vol. 14 No. 274

Independent Claims

- 1. A portable computer
- 4. A portable computer
- 10. A portable computer
- 13. A portable computer
- 14. A portable computer
- 23. A portable computer

LG's US6373537

(12) **United States Patent**
Yun et al.

(10) **Patent No.: US 6,373,537 B2**
(45) **Date of Patent: *Apr. 16, 2002**

(54) **COMPUTER HAVING LIQUID CRYSTAL DISPLAY BETWEEN FRAMES ATTACHED AT THE EDGES**

(75) Inventors: **Hee Young Yun**; **Kyo Hun Moon**, both of Kyungsangbook-do; **Byeong Yun Lee**, Suwon-shi; **Yong Bum Kim**, Kyungsangbook-do; **Young Un Bang**, Kyunggi-do, all of (KR)

(73) Assignee: **LG. Philips LCD Co., Ltd.**, Seoul (KR)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/326,540**

(22) Filed: **Jun. 7, 1999**

(30) **Foreign Application Priority Data**

Apr. 8, 1997 (KR) 97-12899
Apr. 17, 1997 (KR) 97-14278

FOREIGN PATENT DOCUMENTS

DE	41 20 950	12/1992
EP	0 317 261	5/1989
EP	0 425 793	6/1991
EP	0 454 120	10/1991
EP	0 532 284	3/1993
EP	0 604 872	7/1994
GB	2 305 689	4/1997
GB	2 305 690	4/1997
JP	1-237591	9/1989
JP	5-080334	2/1993
JP	07099394	4/1995
JP	7-199180	8/1995
JP	7-281184	10/1995

OTHER PUBLICATIONS

IBM Technical Disclosure Bulletin, vol. 33, No. 9, Feb. 1991 entitled "High Efficiency Back Ligh for LCD".

IBM Technical Disclosure Bulletin, vol. 37, No. 12, Dec. 1994 entitled "Cell Support Assembly Without Screw".

IBM Technical Disclosure Bulletin, vol. 39, No. 01, Jan. 1996 entitled "Structure Design for Liquid Crystal Display Module".

Advanced Display Inc., "14.2XGA (Ver. 2) Technical Data, AA142XB11".

Primary Examiner—Toan Ton

Independent Claims

- 1. A liquid crystal display device
- 2. A liquid crystal display device mountable to a housing
- 7. A portable computer
- 12. A portable computer

迴避設計

LG's US6456343

(12) **United States Patent**
Kim et al.

(10) **Patent No.: US 6,456,343 B2**
(45) **Date of Patent: Sep. 24, 2002**

(54) **LIQUID CRYSTAL DISPLAY**

(75) Inventors: **Young-Su Kim; Joung-Jae Lee**, both of Kumi-shi (KR)

(73) Assignee: **L.G. Philips LCD Co., Ltd.**, Seoul (KR)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/826,101**

(22) Filed: **Apr. 5, 2001**

(30) **Foreign Application Priority Data**

Jul. 20, 2000 (FR) 2000-41531

(51) **Int. Cl.**[7] **G02F 1/1333**
(52) **U.S. Cl.** **349/58**; 361/368; 345/905
(58) **Field of Search** 349/58; 361/368; 345/905

5,872,606	A	*	2/1999	Kim	349/58
6,064,565	A	*	5/2000	Ishihara et al.	361/681
6,128,183	A	*	10/2000	Ichiyama et al.	361/681
6,144,423	A	*	11/2000	Kim	349/58
6,292,239	B1	*	9/2001	Nagamura et al.	349/58

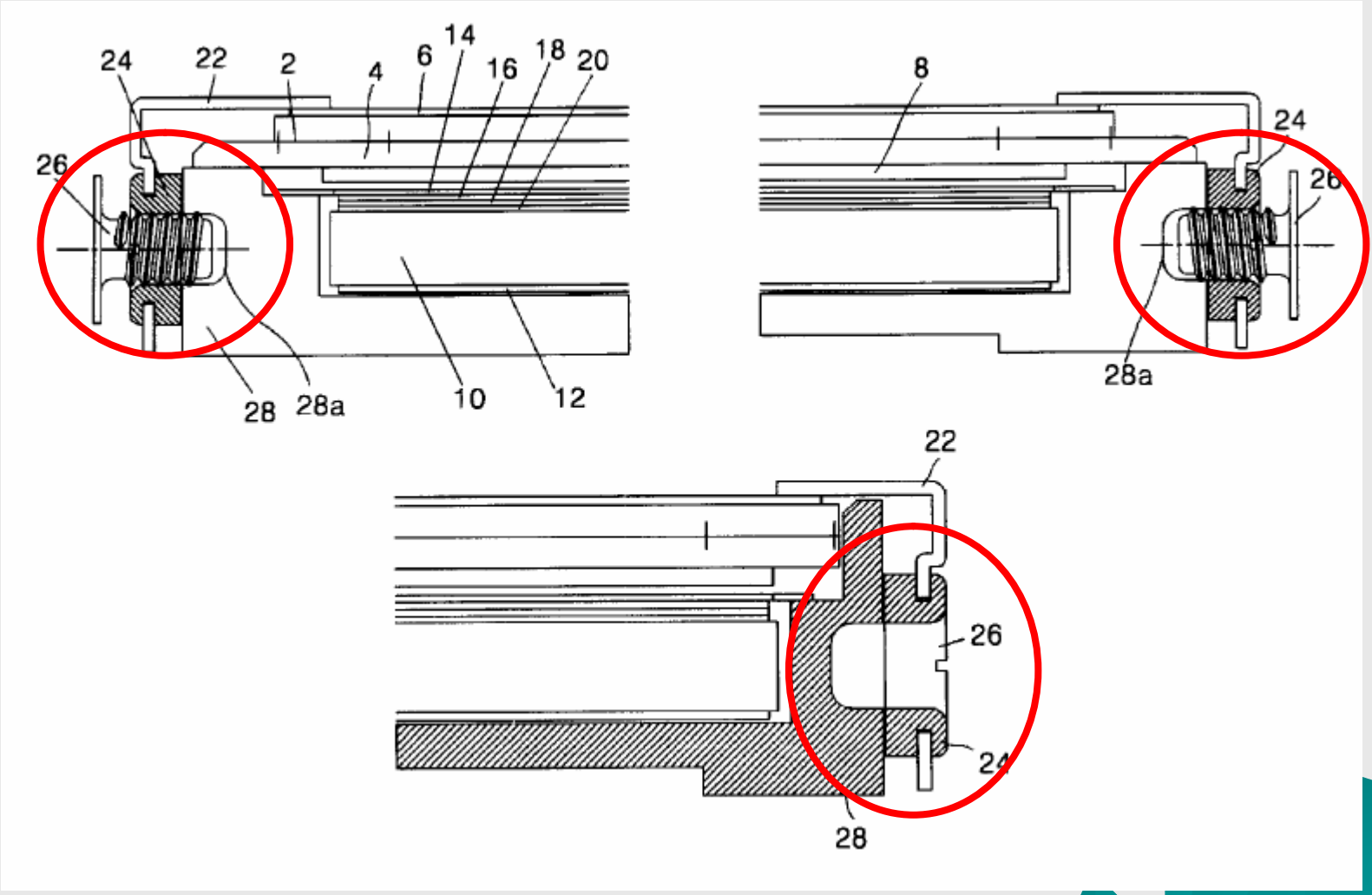
* cited by examiner

Primary Examiner—Kenneth Parker
Assistant Examiner—V. Litovchenko
(74) *Attorney, Agent, or Firm*—McKenna Long & Aldridge

(57) **ABSTRACT**

A liquid crystal display that resists idling of a nut used for fixing a liquid crystal module in a main supporter. In the liquid crystal display a main supporter holds a backlight unit and a liquid crystal display panel. A top case encloses edges of the liquid crystal display panel and the main supporter. An inserting nut is pressed into a cross-shaped hole in the top

防鬆之增強構件



Claim 1 & 12

- 1. A liquid crystal display device, comprising:
  - a main supporter holding a backlight unit and a liquid crystal display panel,
  - a top case enclosing a top edge and a side edge of the liquid crystal display panel, and a side edge of the main supporter, wherein said top case includes a hole;
  - an inserting nut press formed in said hole, and
  - a screw threaded into said inserting nut, wherein said screw fixes said top case to said main supporter such that said liquid crystal display panel is retained in said main supporter.
- 12. A method of assembling a liquid crystal display device, comprising:
  - installing a backlight unit and a liquid crystal display panel in an interior chamber of a main supporter;
  - inserting an inserting nut in a predefined hole in a side edge of a top case;
  - press forming said inserting nut such that the inserting nut is retained in the predefined hole;
  - locating the top case on the main supporter such that the liquid crystal display panel has a top edge and a side edge protected by the top case and such that the inserting nut is aligned with a recess in the main supporter, and
  - fixing the top case and the main supporter together by threading a screw into the inserting nut, wherein the liquid crystal display panel is retained in the main supporter.

再迴避設計

LG's US6512558

(12) **United States Patent**
Kim

(10) **Patent No.: US 6,512,558 B2**
(45) **Date of Patent: Jan. 28, 2003**

(54) **FLAT DISPLAY MODULE-HOUSING ASSEMBLY**

(75) Inventor: **Sung Kon Kim**, Pusan-shi (KR)

(73) Assignee: **LG.Philips LCD Co., Ltd.**, Seoul (KR)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/028,701**

(22) Filed: **Dec. 28, 2001**

(65) **Prior Publication Data**

US 2002/0186526 A1 Dec. 12, 2002

(30) **Foreign Application Priority Data**

Jun. 11, 2001 (KR) 1-32613

(51) **Int. Cl.**[7] **G02F 1/1335**
(52) **U.S. Cl.** **349/58**
(58) **Field of Search** 349/58

6,016,175 A * 1/2000 Kim 349/58
6,055,029 A * 4/2000 Kurihara et al. 349/58
6,166,788 A * 12/2000 Ha et al. 349/58
6,229,695 B1 * 5/2001 Moon 349/58
6,292,239 B1 * 9/2001 Nagamura et al. 349/58
6,295,103 B1 * 9/2001 Yamatani et al. 349/58
6,392,724 B2 * 5/2002 An et al. 349/58

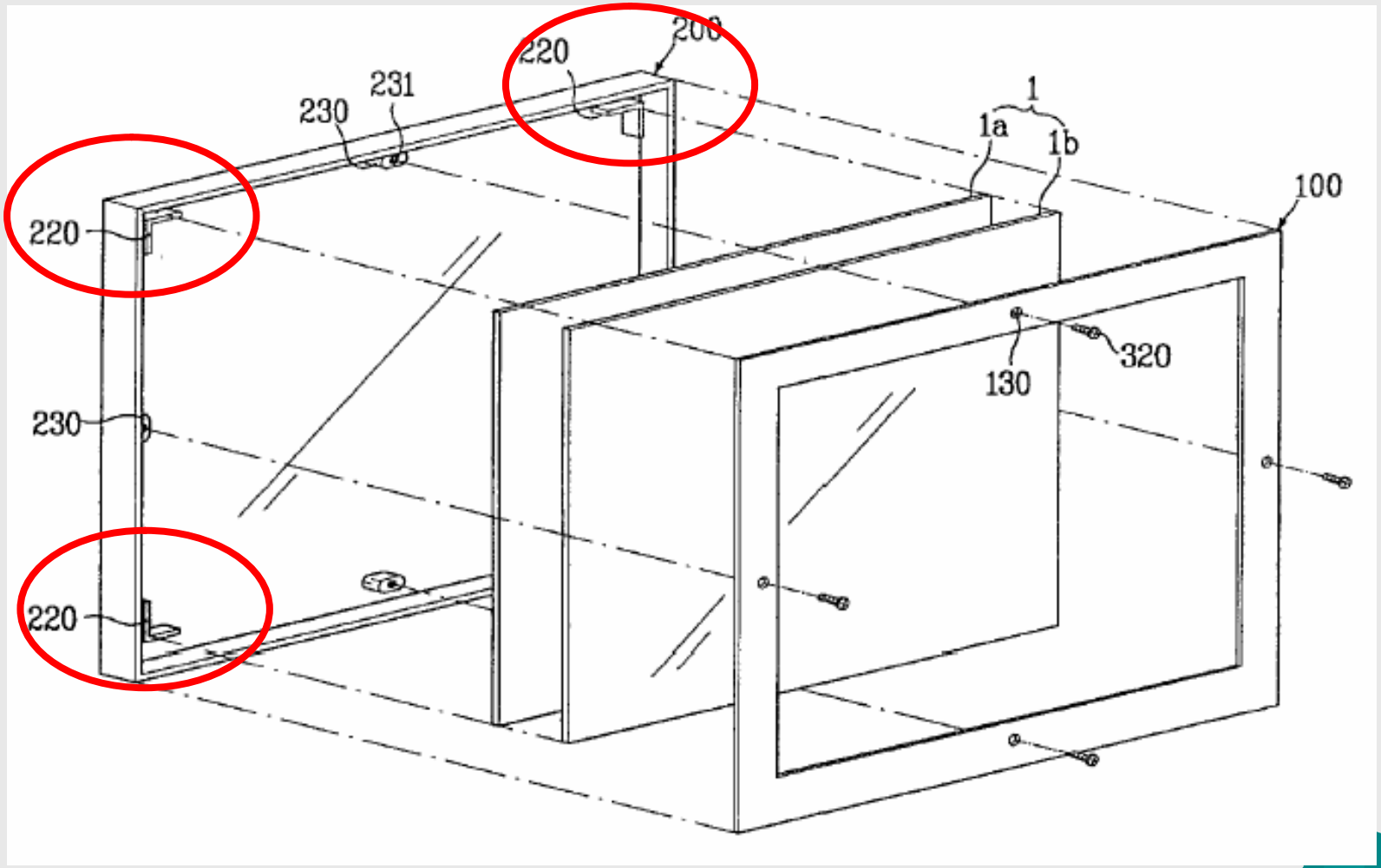
* cited by examiner

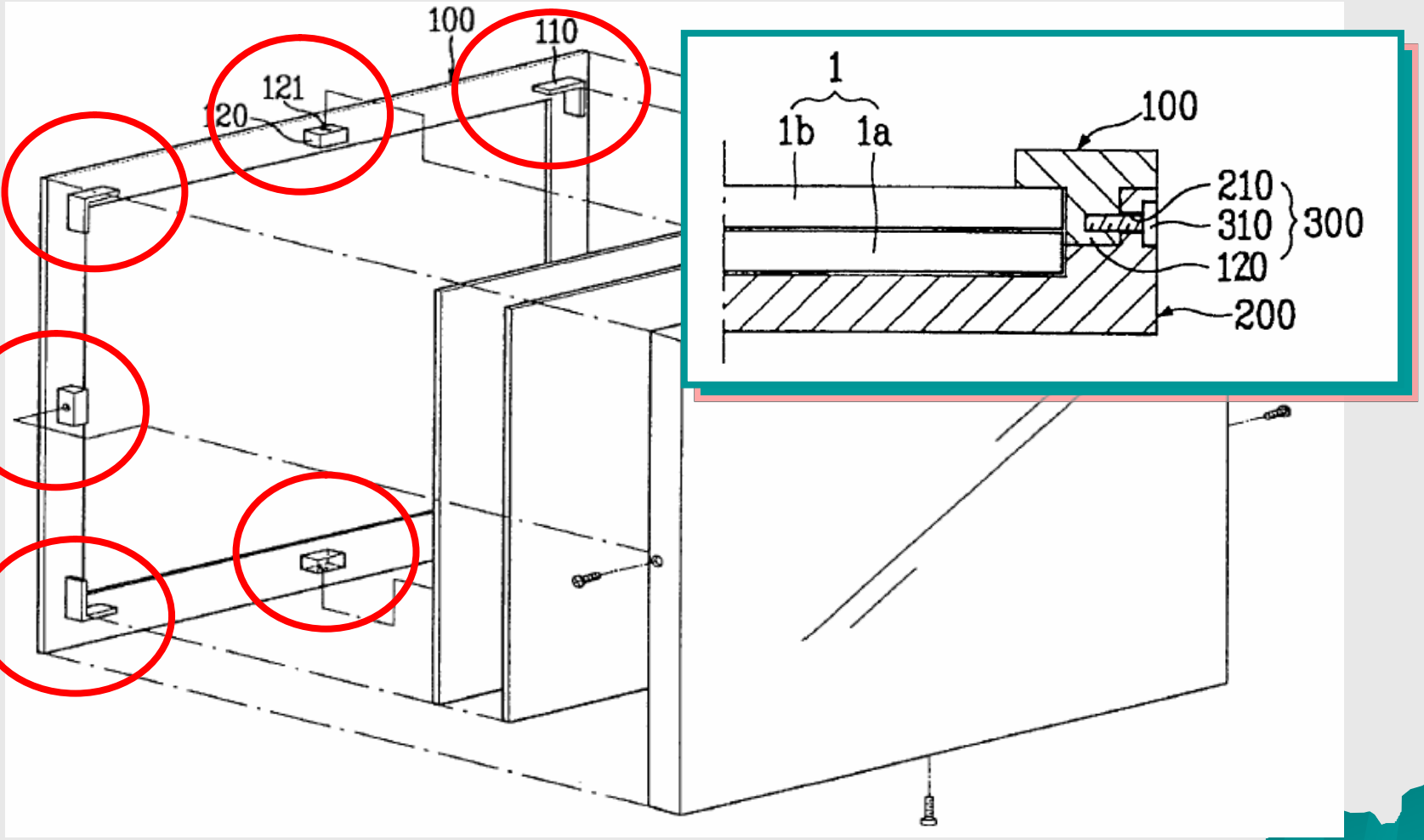
Primary Examiner—James Dudek
(74) *Attorney, Agent, or Firm*—Morgan, Lewis & Bockius LLP

(57) **ABSTRACT**

A display module-housing assembly includes a flat display module for displaying images; a display housing having a front housing and a rear housing, the front housing being fitted to the front of the flat display module, and a rear housing being fitted to the rear of the flat display module; and a coupler for coupling the front housing to the rear

positioning part 220 is a bracket projecting from the inner surface of the rear housing 200

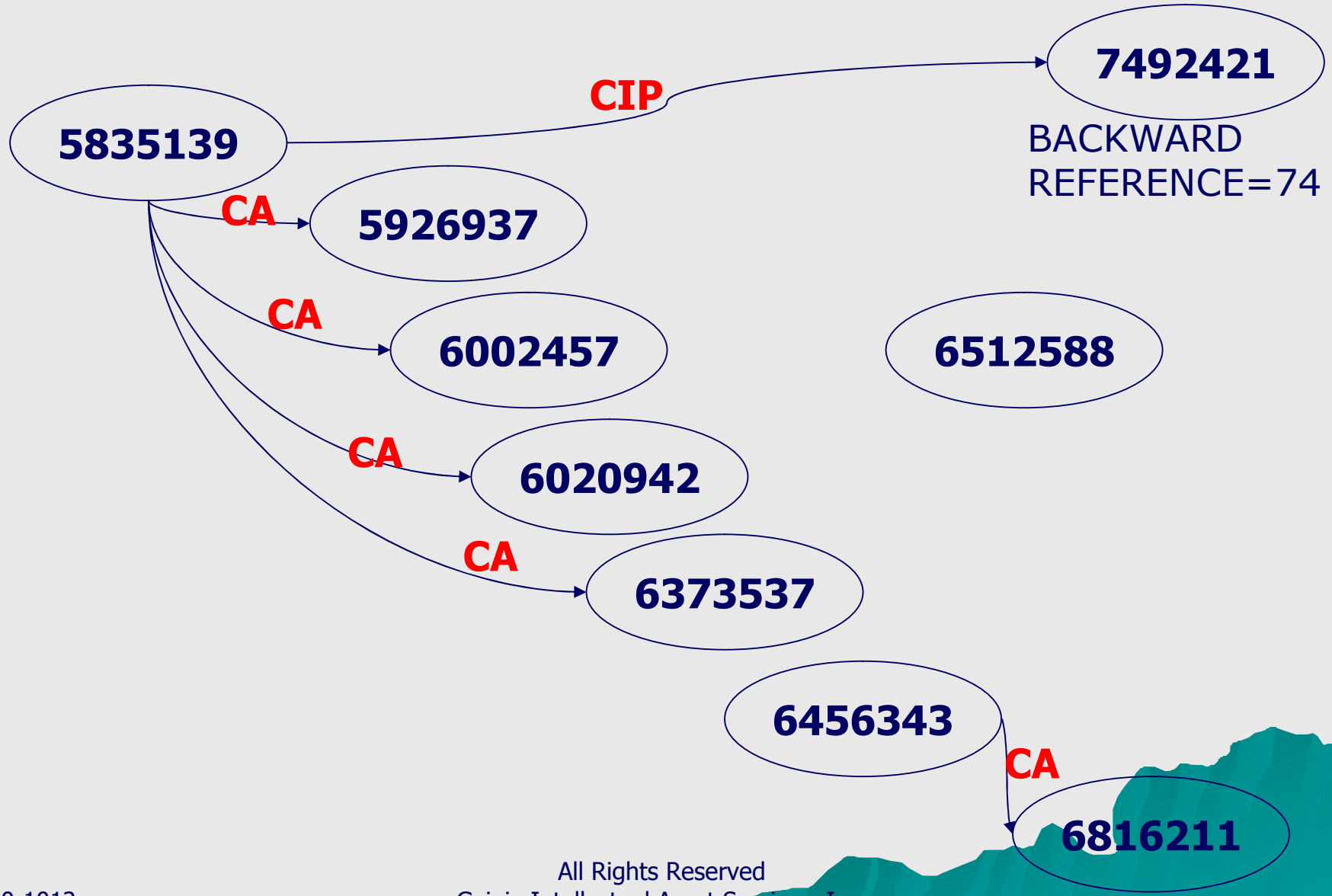




Claim 1

- 1. **A display module-housing assembly** comprising:
  - a liquid crystal flat display module for displaying images;
  - a display housing having a front housing and a rear housing, the front housing being fitted to the front of the flat display module, and the rear housing being fitted to the rear of the flat display module, and
  - a coupler (220;300)for coupling the front housing to the rear housing to fix the flat display module directly between the front housing and the rear housing,
  - wherein the flat display module includes a backlight part for emitting light, and a liquid crystal panel part for receiving the light from the backlight part to display images, and
  - wherein the liquid crystal panel part is directly attached to the front housing, and the backlight part is directly attached to the rear housing.

族譜圖



Comment

- A portfolio constructed by 7 patents.
- Filed from 3 JUL 1997 to 28 DEC 2001
- 35 independent claims
  - A LCD
  - A method of making a LCD device
  - A portable computer
  - A method of making a portable computer
  - A kit for assembling a display module-housing assembly for a LCD module
- 目的
  - 簡單的創意，獨特的發明，強大的專利組合
  - 擴大訴訟之求償基礎與授權談判之能力
  - 獲取的權利金遠超過專利申請費用

LPL vs. 華映

- LPL於2002年8月在美國加州控告華映的面板侵害其四件Side-mount專利（**US6,002,457**、**US5,926,237**、**US6,373,537**、**US6,020,942**），與二件Process專利（US4,624,737、US5,825,449）。

- LPL所主張的專利實際是華映在2004 年初自惠普 (HP)取得的專利，故華映主張LPL的Side-mount專利無效。
- 華映表示，加州法院以 LPL 所提 Side Mount專利欠缺專利性，已下令駁回LPL之訴訟。

Top 10 Patent Awards in 2006

Plaintiff	Defendant	Damage Award
Rambus	Hynix Semiconductor	US$ 307 million
Z4 Technologies	Microsoft, Autodesk	US$ 133 million
Texas Instruments	GlobespanVirata	US$ 112 million
Finisar	DirecTV Group	US$ 78.9 million
TiVo	EchoStar Communications	US$ 74 million
Ariad Pharmaceuticals	Eli Lilly	US$ 65.2 million
LG Philips LCD	**Tatung**	**US$ 53.4 million**
LG Philips LCD	**Tatung**	**US$ 52.5 million**
MuniAuction Inc.	Thomson	US$ 38.5 million
Power Integrations	Fairchild Semiconductor	US$ 34 million

它山之石

- LPL的" Side Mount "技術，並非LCD相關產品的核心技術，而是週邊應用之技術。
- 雖然" Side Mount "只是週邊應用之技術，但卻是組裝成一部LCD產品的必要手段。
- 雖然" Side Mount " 並非LCD相關產品的核心技術，但卻可以以其特徵拿到專利權，**並經由良好的撰寫，使得可以得到很大的專利權範圍。**
- 經由不斷的迴避設計，可以形成完整的專利組合，阻卻別人使用或進入。

華映之後作為

Publication	Pub. Date	Filed	Title
US20060209504A1	2006-09-21	2006-05-03	Flat-panel display mounting system for portable computer
US20060209503A1	2006-09-21	2006-05-03	Flat-panel display mounting system for portable computer
US20060198091A1	2006-09-07	2006-05-03	Flat-panel display mounting system for portable computer
US20060198090A1	2006-09-07	2006-05-03	Flat-panel display mounting system for portable computer
US20050088810A1	2005-04-28	2004-12-06	Flat-panel display mounting system for portable computer
US20050088075A1	2005-04-28	2004-12-06	Flat-panel display mounting system for portable computer
US20050082961A1	2005-04-21	2004-12-06	Flat-panel display mounting system for portable computer
US20050078439A1	2005-04-14	2004-12-06	Flat-panel display mounting system for portable computer
US7310222	2007-12-18	2004-12-06	Flat-panel display mounting system for portable computer
US6838810	2005-01-04	1997-03-21	Flat-panel display mounting system for portable computer

專利組合之價值

- 擁有強大專利組合的公司，成為科技領域的寡佔者。
  - 2003年IBM獲准專利數量連續十一年蟬聯美國專利排行榜榜首，累計超過25,000件，一年光是專利授權金即高達十億美元，相當於IBM營業額的百分之二十。
  - 2004年專利數量最多的仍然是IBM，一年的專利數量達3,277件
  - IBM於2004年收了20億美元的授權金收入，其中，單在半導體產業的專利授權，即有10億美元的收入。
  - Technologies available for licensing from IBM are organized in the six broad categories. This portfolio represents a compilation of areas of current licensing activity, but is not an exhaustive list of IBM technology available for licensing. The portfolio is updated quarterly.
    出處Http://www.ibm.com/ibm/licensing/technology/portfolio.shtml)

Comment

專利組合

加上

實際的產品

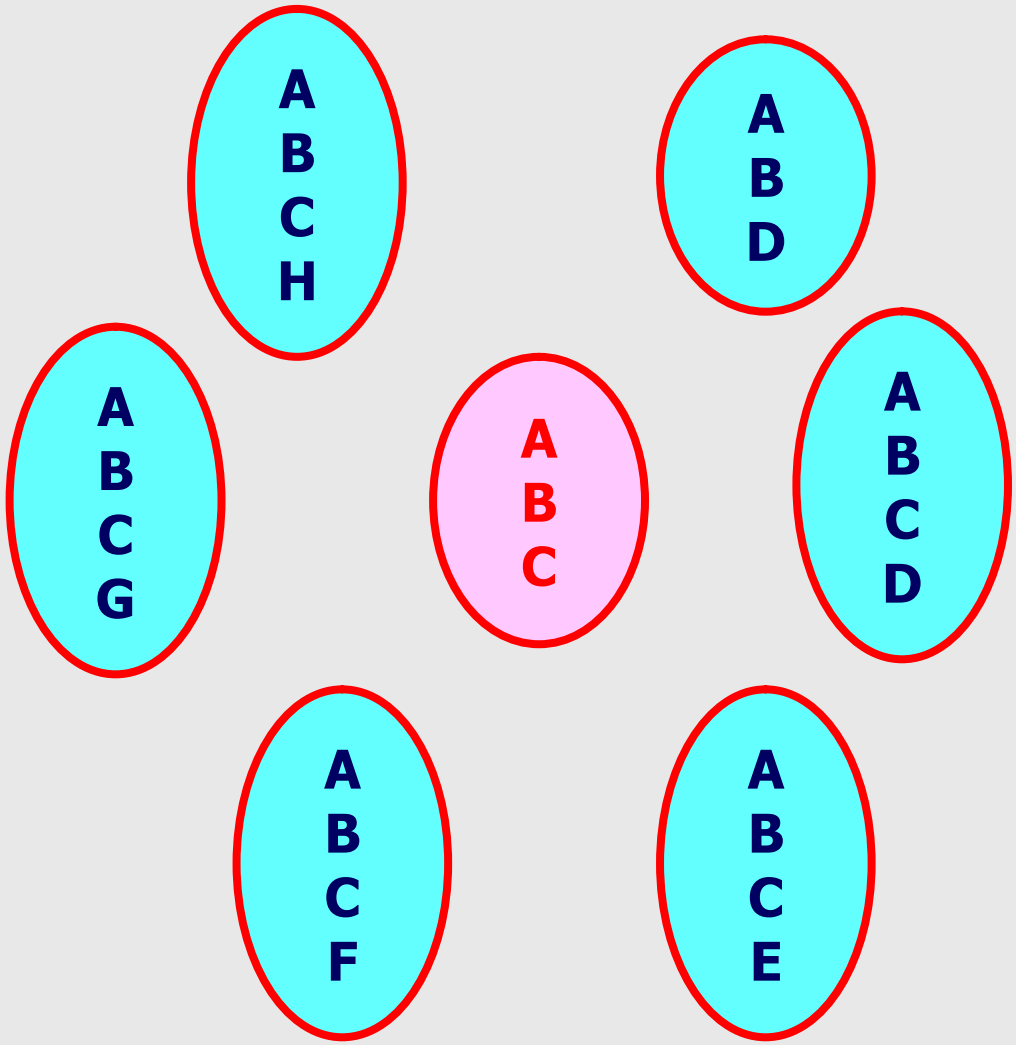
價值

-- 善用權利耗盡原則 --

- 根據專利權耗盡原則，專利產品的買方不須得到專利權人的同意即能使用和銷售該項專利產品；因此，對專利權人而言，專利耗盡法則是一種限制，因為專利權人在銷售專利產品以獲取所欲取得的報償時，即已放棄該項產品的使用權及銷售權，且買方為購買專利產品而支付代價，因此應有與其他物品的擁有者同樣的權利，亦即使用和重新銷售的權利。所以，專利權耗盡原則也被稱作「第一次銷售原則（Patent First Sale Doctrine）」。

- http://www.eff.org/files/filenode/quanta_v_lg/06-937bsacPapst.pdf

專利组合的戰略



(12) **United States Patent**
Liu

(10) **Patent No.: US 6,869,812 B1**
(45) **Date of Patent: Mar. 22, 2005**

(54) **HIGH POWER ALLNGAN BASED MULTI-CHIP LIGHT EMITTING DIODE**

(76) Inventor: **Heng Liu**, 782 The Dalles Ave., Sunnyvale, CA (US) 94087

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/438,108**

(22) Filed: **May 13, 2003**

(51) **Int. Cl.**[7] **H01L 21/00**; H01L 21/20

(52) **U.S. Cl.** **438/22**; 438/46; 438/99; 438/127

(58) **Field of Search** 438/22, 46, 99, 438/127, 45, 15, 16, 946; 257/94–98, 101–103, 201, 613

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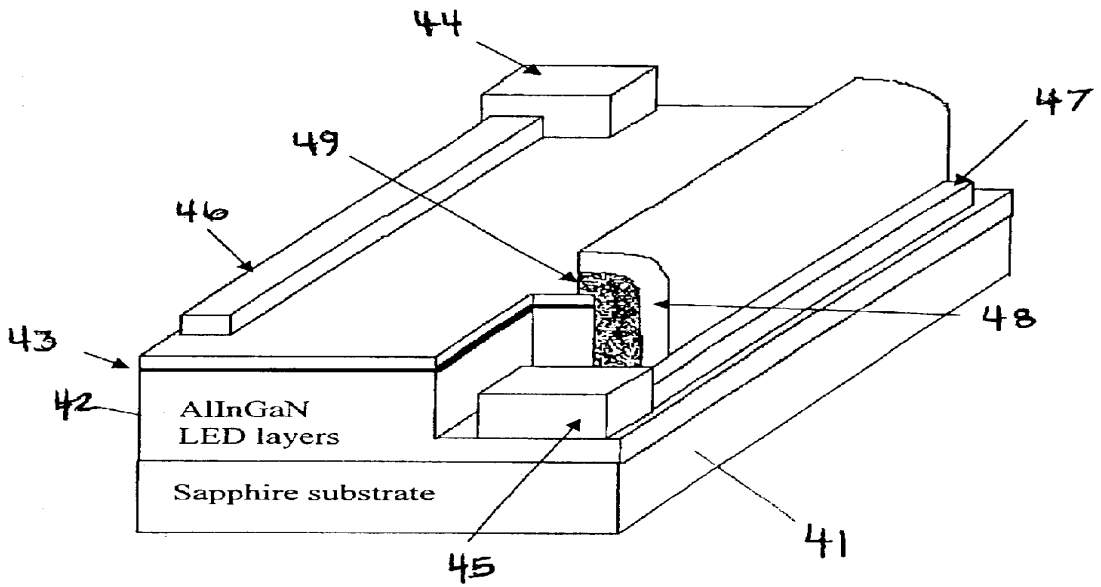
Primary Examiner—Michael Lebentritt
(74) *Attorney, Agent, or Firm*—MacPherson Kwok Chen & Heid LLP; Norman E. Carte

(57) **ABSTRACT**

A light emitting diode chip having a substantially transparent substrate and having an aspect ratio which defines an elongated geometry provides enhanced efficiency and brightness. Method for forming and operating the same are also disclosed.

39 Claims, 7 Drawing Sheets



Claim 1

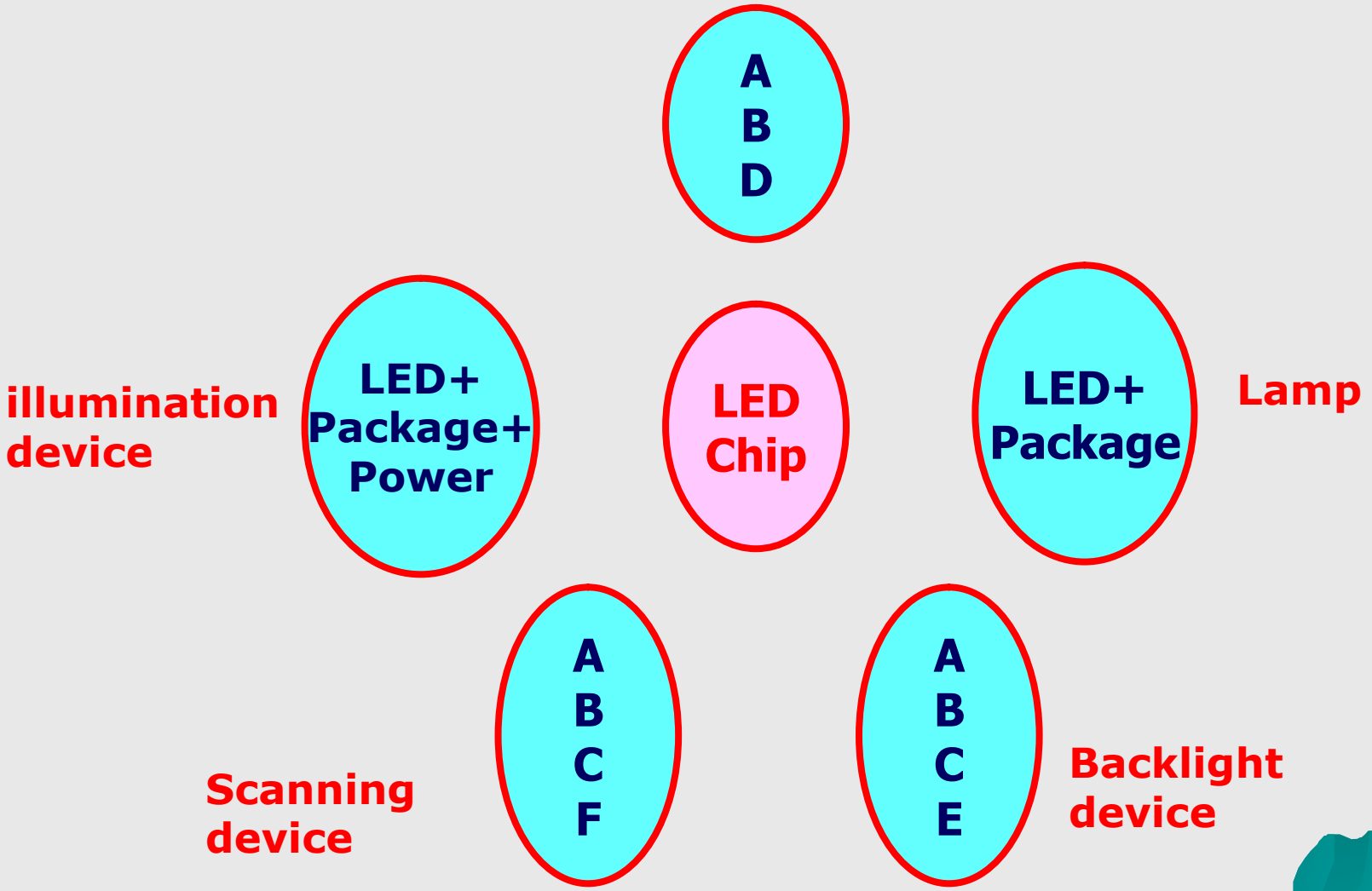
上位**claim**

1. A light emitting diode chip comprising:

- a substantially transparent substrate; and
- an active region formed upon the substrate;
- wherein an aspect ratio of the active area is greater than approximately 1.5 to 1.

9. The device as recited in claim 1, wherein the substrate comprises a material selected from the group comprising: sapphire, spinel, ZnO, SiC, MgO, GaN, AlN and AlGaN.

專利組合的戰略



下位**claim**
產品

Claim 17

17. A light emitting diode **lamp** comprising:

a package;

at least one light emitting diode chip disposed within the package, the light emitting diode(s) comprising;

a substantially transparent substrate;

an active region formed upon the substrate; and

wherein an aspect ratio of the active area is greater than approximately 1.5 to 1.

下位claim
產品

Claim36

36. An **illumination device** comprising:

a power source;

a light emitting diode lamp in electrical communication with the power source, the light emitting diode lamp comprising:

a package;

at least one light emitting diode chip disposed within the package, the light emitting diode(s) comprising:

a substantially transparent substrate;

an active region formed upon the substrate; and

wherein an aspect ratio of the active area is greater than approximately 1.5 to 1.

討　論

- 如果A公司之專利只有LED Chip 之獨立項時，當此LED Chip賣給B公司後，由於LED Chip權利用盡原則，因此，B公司將買來的LED Chip製造成其他產品時，則這些使用LED Chip之產品即不屬於侵權行為。

- 如果A公司之專利除了有LED Chip之獨立項外，還進一步有Lamp之獨立項或是更進一步有Illumination device之獨立項時，此時，當B公司將買來的LED Chip製造成Lamp或Illumination device時，就有落入Lamp或Illumination device之獨立項之權利範圍，而有侵權疑慮。

結論與建議

結論與建議

- 花錢申請專利之目的在於準備訴訟
  - 專利訴訟能勝訴時，可利用專利賺錢
- 專利訴訟是公司間競爭的一種手段
- 使用專利分析的知識瞭解產品研發方向以及競爭對手的專利佈局
  - 知己知彼，百戰百勝
- 以專利分析的結果，找出研方向並進行適當之佈局
  - 增加專利訴訟勝訴機會。
- 申請專利很重要，但是否能把專利變成實際之產品並且銷售出去，才是勝負關鍵。

The End
Thank you!

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