

#### Designs in the US and Globally

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Chief Economist
USPTO



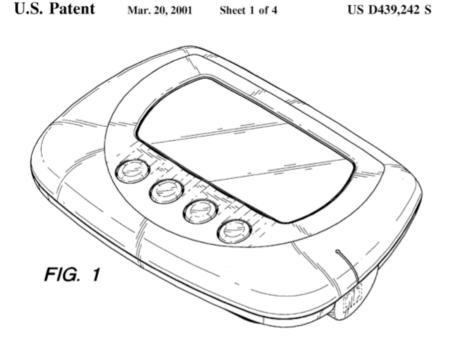
#### **Bundling and Complementarities**

- □ USPTO multiple types
  - Trademarks, Utilities, Designs
- □ Complements?
  - Burgeoning literature
    - $\checkmark$  Level of the invention => innovation?
  - Heterogeneity achieved in different bundles?
    - ✓ Bundles within type, across types
- Designs
  - Traditionally given short shrift
    - ✓ Example, NBER data 1963-1999
- ☐ Goal today descriptive



# What do US design patents protect?

- □ Visual ornamental characteristics embodied in, or applied to, an article of manufacture
  - Configuration or shape of an article
  - Surface ornamentation applied to an article
  - Combination of configuration and ornamentation
- NOT: design that is dictated primarily by the function of the article—lacks ornamentality





# How does US design differ from utility?

|   | Utility Patent  | Design Patent   |
|---|---|---|
| What is protected?                      | How an article is used and works  | How an article looks  |
| How long is the protection?             | 20 years from filing date   | 14 years from grant date  |
| How much can be claimed?                | Several independent and dependent claims  | Only a single claim on a single design  |
| What does it take to show infringement? | Infringing product or process must perform substantially the same function in substantially the same manner to achieve substantially the same result as the patented product or process | Infringing design must look substantially the same:  • resemblance so similar as to deceive ordinary observer, inducing him to buy one supposing it to be the other |

#### Design Impact: Apple v. Samsung

| Accused Samsung Product     | Damage Award to Apple | (Claim 19)<br>'381 Patent | (Claim 8)<br>'915 Patent | (Claim 50)<br>'153 Patent | D'677 Patent | D'087 Patent |
|-----------------------------|-----------------------|---------------------------|--------------------------|---------------------------|--------------|--------------|
| Captivate                   | \$80,840,162          | 1                         | 1                        | 0                         |              |              |
| Continuum                   | \$16,399,117          | 1                         | 1                        | 0                         |              |              |
| Droid Charge                | \$50,672,869          | 1                         | 1                        | 1                         |              |              |
| Epic 4G                     | \$130,180,896         | 1                         | 1                        | 1                         |              |              |
| Exhibit 4G                  | \$1,081,820           | 1                         | 1                        | 1                         |              |              |
| Fascinate                   | \$143,539,179         | 1                         | 1                        | 1                         | 1            |              |
| Galaxy Ace                  | \$0                   | 1                         | 0                        | 1                         | 0            |              |
| Galaxy Prevail              | \$57,867,383          | 1                         | 1                        | 1                         |              |              |
| Galaxy S (i9000)            | \$0                   | 1                         | 1                        | 1                         | 1            | 1            |
| Galaxy S 4G                 | \$73,344,668          | 1                         | 1                        | 1                         | 1            | 1            |
| Galaxy S II (AT&T)          | \$40,496,356          | 1                         | 1                        | 1                         | 1            | 0            |
| Galaxy S II (i9100)         | \$0                   | 1                         | 1                        | 1                         | 1            | 0            |
| Galaxy S II (T-Mobile)      | \$83,791,708          |                           | 1                        | 1                         | 1            |              |
| Galaxy S II (Epic 4G Touch) | \$100,326,988         |                           |                          |                           | 1            | 0            |
| Galaxy S II (Skyrocket)     | \$32,273,558          |                           |                          |                           | 1            | 0            |
| Galaxy S Showcase           | \$22,002,146          |                           |                          |                           | 1            |              |
| Galaxy Tab                  | \$1,966,691           | 1                         | 1                        | 1                         |              |              |
| Galaxy Tab 10.1 (WiFi)      | \$833,076             | 1                         | 1                        | 1                         |              |              |
| Galaxy Tab 10.1 (4G LTE)    | \$0                   |                           |                          |                           |              |              |
| Gem                         | \$4,075,585           | 1                         | 1                        | 0                         |              |              |
| Indulge                     | \$16,011,184          | 1                         | 1                        | 0                         |              |              |
| Infuse 4G                   | \$44,792,974          | 1                         | 1                        | 1                         | 1            | 0            |
| Intercept                   | \$0                   |                           | 0                        | 0                         |              |              |
| Mesmerize                   | \$53,123,612          | 1                         | 1                        | 1                         | 1            |              |
| Nexus S 4G                  | \$1,828,297           | 1                         | 1                        | 0                         |              |              |
| Replenish                   | \$3,350,256           | 1                         | 0                        | 1                         |              |              |
| Transform                   | \$953,060             |                           | 1                        | 0                         |              |              |
| Vibrant                     | \$89,673,957          | 1                         | 1                        | 0                         | 1            | 1            |

Apple received high damage awards as to a number of infringing Samsung products.

 BUT most of these products infringed Apple's utility <u>and</u> design patents.

Apple Inc. v. Samsung Electronics Ltd. Inc., No. 11-1846: Amended Jury Verdict (Aug. 24, 2012).

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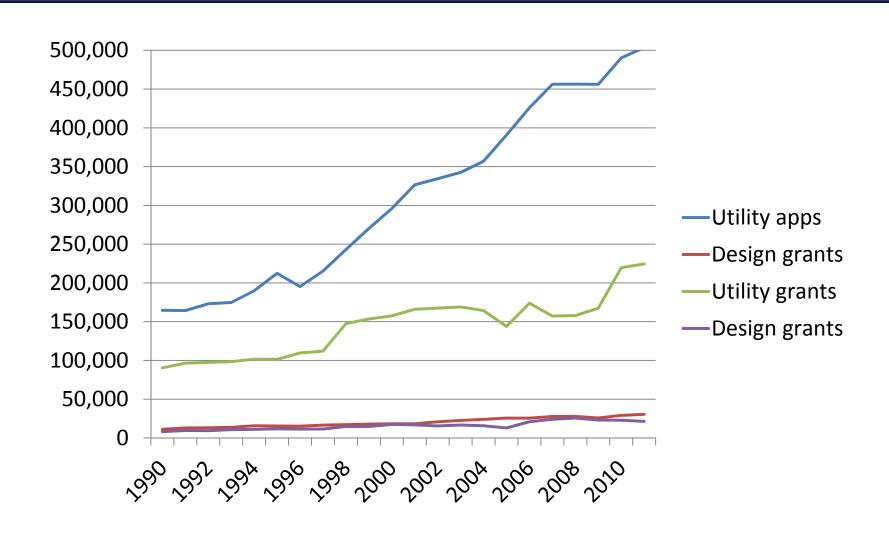
Apple received high damage awards as to a number of infringing Samsung products.

- BUT most of these products infringed Apple's utility <u>and</u> design patents.
- 3 Samsung products infringed only Apple's design patents.
- The damages on these alone totaled \$154.6 million.

Apple Inc. v. Samsung Electronics Ltd. Inc., No. 11-1846: Amended Jury Verdict (Aug. 24, 2012).

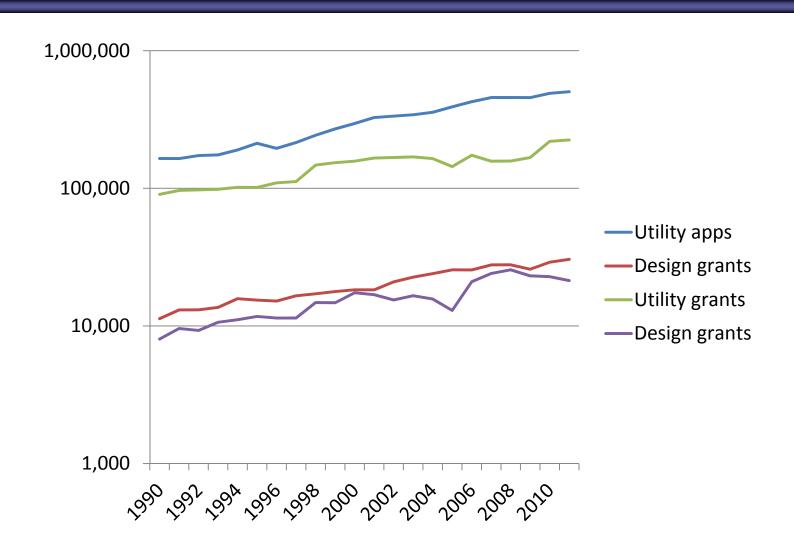


#### **Utility and Design: Applications & Grants**





## Utility and Design: Applications & Grants (log scale)





### Most Design Patent Grants, by Class, 2011

| Class | Class Description (abbrev.)  | Type   | Counts |
|-------|------------------------------|--------|--------|
| D14   | Recording/Comm./Info         | Grants | 2,457  |
| D12   | Transportation               | Grants | 1,391  |
| D06   | Furnishings                  | Grants | 1,319  |
| D09   | Packages/Containers          | Grants | 1,311  |
| D26   | Lighting                     | Grants | 1,284  |
| D24   | Medical/Laboratory           | Grants | 1,186  |
| D08   | Tools/Hardware               | Grants | 1,178  |
| D07   | OtherFood/DrinkEquip.        | Grants | 1,153  |
| D13   | EnergyProd./Dist./Transform. | Grants | 1,138  |
| D23   | Environmental, Misc.         | Grants | 1,085  |
| D02   | Apparel/Haberdashery         | Grants | 925    |
| D21   | Games/Toys/SportsGoods       | Grants | 896    |



### **Design Patents: Growth**

|            |                              | Avg. Growth       |
|------------|------------------------------|-------------------|
| Class      | Description                  | <b>Since 2001</b> |
| D05        | Textile/PaperYard            | 7.76%             |
| D13        | EnergyProd./Dist./Transform. | 7.54%             |
| D30        | AnimalHusbandry              | 7.31%             |
| •••        |                              |                   |
| D06        | Furnishings                  | -3.22%            |
| D99        | Miscellaneous                | -3.35%            |
| <b>D27</b> | Tobacco/Smoking              | -3.54%            |



### **Judicial Treatment of Designs in US**

|                   |                     |           | Monthly YoY |         | Moving 12month Yo |         |
|-------------------|---------------------|-----------|-------------|---------|-------------------|---------|
| Cohort            | <u>Applications</u> |           | %change     |         | %change           |         |
| Appl. Month       | Design              | Utility   | Design      | Utility | Design            | Utility |
| 2012/10/01        | 2,743               | 31,015    | 15.06%      | 13.95%  | 7.37%             | 6.49%   |
| 2012/09/01        | 2,497               | 37,328    | -4.44%      | 2.83%   | 7.15%             | 6.94%   |
| 2012/08/24: Sams  | ung v. App          | le Amende | ed Decisio  | n       |                   |         |
| 2012/08/01        | 2,699               | 34,104    | 6.51%       | 11.77%  | 8.13%             | 7.53%   |
| 2012/07/01        | 2,593               | 30,468    | 17.28%      | 15.54%  | 7.79%             | 6.43%   |
| 2012/06/01        | 2,831               | 33,757    | 7.60%       | 4.06%   | 6.76%             | 5.64%   |
| 2012/05/01        | 2,952               | 31,362    | 16.50%      | 10.70%  | 7.26%             | 6.04%   |
| 2012/04/01        | 2,626               | 29,778    | 5.59%       | 8.40%   | 5.76%             | 5.17%   |
| 2012/03/01        | 2,863               | 34,421    | 7.39%       | 2.46%   | 5.11%             | 5.03%   |
| 2012/02/24: Crocs | Inc. v. ITC         | Decision  |             |         |                   |         |
| 2012/02/01        | 2,494               | 28,671    | 17.92%      | 11.52%  | 5.04%             | 5.28%   |
| 2012/01/01        | 2,437               | 27,158    | 0.16%       | 5.14%   | 4.52%             | 5.31%   |
| 2011/12/01        | 2,519               | 34,430    | -0.08%      | 2.43%   | 4.96%             | 5.39%   |
| 2011/11/01        | 2,554               | 28,446    | 11.38%      | 1.10%   | 6.02%             | 6.07%   |



## International participation in US Design Patenting, 2000-2010

| Year | Grants          | Any foreign inventor | Share  | First inventor foreign | Share  |
|------|-----------------|----------------------|--------|------------------------|--------|
| 2010 | 1 <i>7,</i> 262 | 8,021                | 46.47% | <b>7,</b> 694          | 44.57% |
| 2009 | 20,056          | 9,277                | 46.26% | 8,889                  | 44.32% |
| 2008 | 21,297          | 10,490               | 49.26% | 10,063                 | 47.25% |
| 2007 | 21,660          | 10,475               | 48.36% | 10,030                 | 46.31% |
| 2006 | 20,454          | 9,733                | 47.58% | 9,345                  | 45.69% |
| 2005 | 20,952          | 9,838                | 46.95% | 9,421                  | 44.96% |
| 2004 | 19,670          | 8,929                | 45.39% | 8,600                  | 43.72% |
| 2003 | 18,655          | 7,777                | 41.69% | <b>7,</b> 531          | 40.37% |
| 2002 | 1 <i>7,</i> 201 | 7,059                | 41.04% | 6 <b>,</b> 774         | 39.38% |
| 2001 | 15,589          | 6,485                | 41.60% | 6,249                  | 40.09% |
| 2000 | 15,833          | 6,297                | 39.77% | 6,104                  | 38.55% |



## Top Countries in Industrial Designs (WIPO)

#### **INDUSTRIAL DESIGN APPLICATIONS FOR THE TOP 15 OFFICES, 2010**

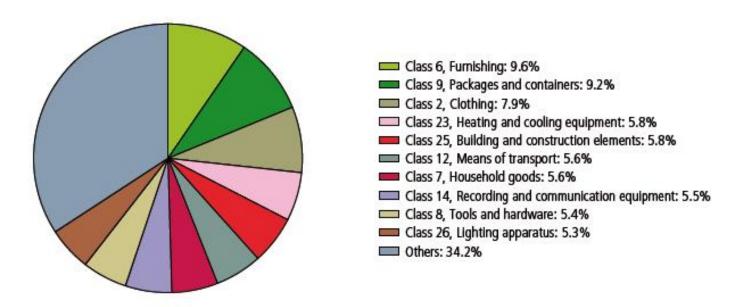
Source: WIPO Statistics Database, May 2012

|                    | Application Year |         |         |                |             |  |
|--------------------|------------------|---------|---------|----------------|-------------|--|
| Office             | 2008             | 2000    | 2010    | Share of total | Growth (%): |  |
|                    | 2006             | 2009    | 2010    | (%): 2010      | 2009-10     |  |
| Total              | 557,000          | 587,000 | 669,000 | 100.0          | 14.0        |  |
| China              | 312,904          | 351,342 | 421,273 | 63.0           | 19.9        |  |
| Republic of Korea  | 56,750           | 57,903  | 57,187  | 8.5            | -1.2        |  |
| Japan              | 33,569           | 30,875  | 31,756  | 4.7            | 2.9         |  |
| USA                | 27,782           | 25,806  | 29,059  | 4.3            | 12.6        |  |
| OHIM               | 20,143           | 20,288  | 21,898  | 3.3            | 7.9         |  |
| Turkey             | 7,243            | 7,092   | 7,920   | 1.2            | 11.7        |  |
| Germany            | 5,941            | 5,900   | 6,285   | 1.0            | 6.5         |  |
| India*             | 6,557            | 6,092   | -       | 1.0            | -7.1        |  |
| Australia          | 6,077            | 5,136   | 5,863   | 0.9            | 14.2        |  |
| Brazil             | 2,761            | 5,292   | 5,501   | 0.8            | 3.9         |  |
| Canada             | 5,282            | 4,269   | 5,142   | 8.0            | 20.4        |  |
| France             | 4,473            | 4,846   | 4,891   | 0.7            | 0.9         |  |
| Indonesia          | 4,307            | 4,563   | 4,066   | 0.6            | -10.9       |  |
| Russian Federation | 4,711            | 3,740   | 3,997   | 0.6            | 6.9         |  |
| Thailand           | 3,820            | 3,873   | 3,614   | 0.5            | -6.7        |  |
| Others             | 54,680           | 49,983  | 60,548  | 9.1            | 21.1        |  |



#### International Class Distribution (WIPO)

#### D.5 TOP CLASSES SPECIFIED IN APPLICATIONS, 2010



Note: For a complete list of the 32 class definitions, refer to the International Classification for Industrial Designs under the Locarno Agreement: www.wipo.int/classifications/nivilo/

WIPO Statistics Database, May 2012



### Industrial Design versus Design Patents (WIPO and USPTO data)

#### **TOP CLASSES SPECIFIED IN INDUSTRIAL DESIGN APPLICATIONS, 2010**

Source: WIPO Statistics Database, May 2012 - USPTO Data

THESE COLUMNS ADDED FROM USPTO

| Top 10 Classes                        |              |                    |             |                       |            |
|---------------------------------------|--------------|--------------------|-------------|-----------------------|------------|
| Class                                 | Applications | Share of total (%) | US<br>App's | Share of US total (%) | US<br>Rank |
| Class 6, Furnishing:                  | 14,131       | 9.6                | 1,892       | 6.7                   | 2          |
| Class 9, Packages and containers:     | 13,578       | 9.2                | 1,733       | 6.1                   | 3          |
| Class 2, Clothing:                    | 11,639       | 7.9                | 1,307       | 4.6                   | 10         |
| Class 23, Heating and cooling equipt: | 8,613        | 5.8                | 1,304       | 4.6                   | 11         |
| Class 25, Building and construction:  | 8,603        | 5.8                | 491         | 1.7                   | 19         |
| Class 12, Means of transport:         | 8,327        | 5.6                | 1,610       | 5.7                   | 5          |
| Class 7, Household goods:             | 8,194        | 5.6                | 1,635       | 5.8                   | 4          |
| Class 14, Recording and comm. equipt. | 8,142        | 5.5                | 3,275       | 11.6                  | 1          |
| Class 8, Tools and hardware:          | 8,012        | 5.4                | 1,510       | 5.3                   | 9          |
| Class 26, Lighting apparatus:         | 7,749        | 5.3                | 1,512       | 5.3                   | 8          |
| Others:                               | 50,447       | 34.2               | 12,026      | 42.5                  |            |



#### In Sum

- Designs being used increasingly,
   although in many countries
   comparatively small numbers
  - But, value in tail?
- ☐ The research challenge
  - How do these rights relate to different aspects of value, or appropriability?
  - What evidence can we generate to enable evidence-based policymaking in how these rights, and their use, relate to innovation and economic growth?



