Protecting Creations in The Virtual World

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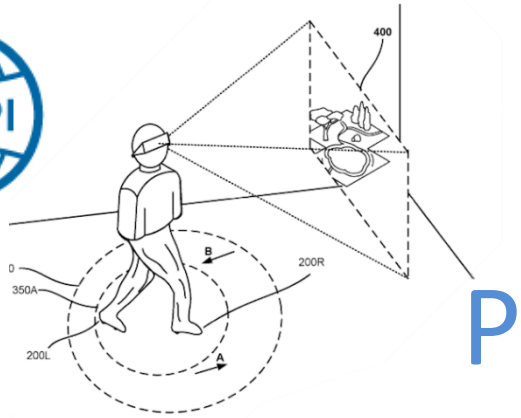
Background

- Virtual Reality (VR) and Augmented Reality (AR) are two areas where technology is advancing rapidly
- Numerous creative "virtual designs" have been created in these areas
- These "virtual designs" and supporting technology can be used for work and/or entertainment purposes



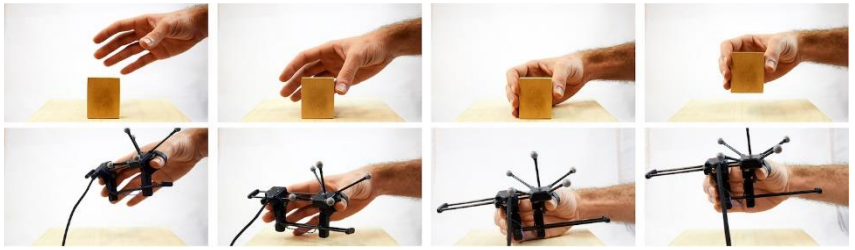
Past to Future

Varjo's Flight simulator

- VR is old technology dating back to 1960s,
- NASA amongst earliest developers
- First commercial tools 1980s
- Through 90's game applications
- 2010 Palmer Lucky's VR proto-type, to become OCULUS RIFT followed by VIBE etc

Stanford Medicine VR Theatre

- Currently not just games, clinical studies, rehabilitation, surgical simulation, education, elder-care, treating mental health (e.g. phobias)
- Future – improved haptics
- Tactile TMs?



Shape Lab's Grabity wearable haptic interface

Virtual Reality

- "a three-dimensional, computer generated, environment which can be explored and interacted with"
- VR immerses individuals in a completely artificial, digitally-generated environment
- VR headsets or glasses are the most common method

Image by contributor Rido

Virtual Reality

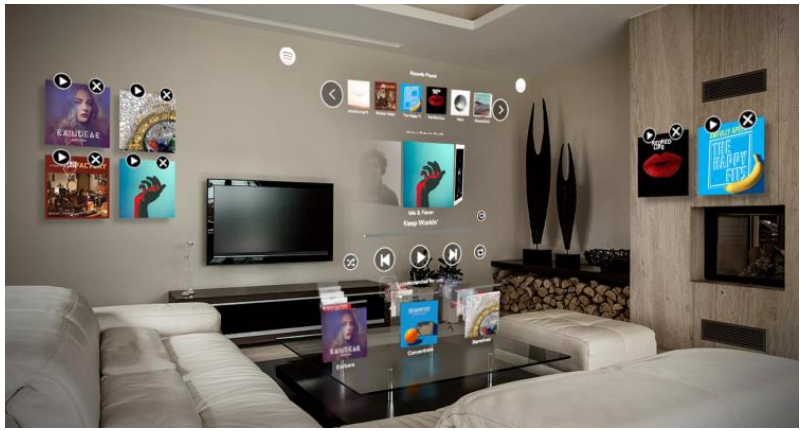
Augmented Reality

- "an interactive experience of a real-world environment whereby the objects that reside in the real-world are *augmented* by computer-generated perceptual information"
- AR overlays digital objects onto the real-world environment
- Mobile phones are the most common method

Augmented Reality

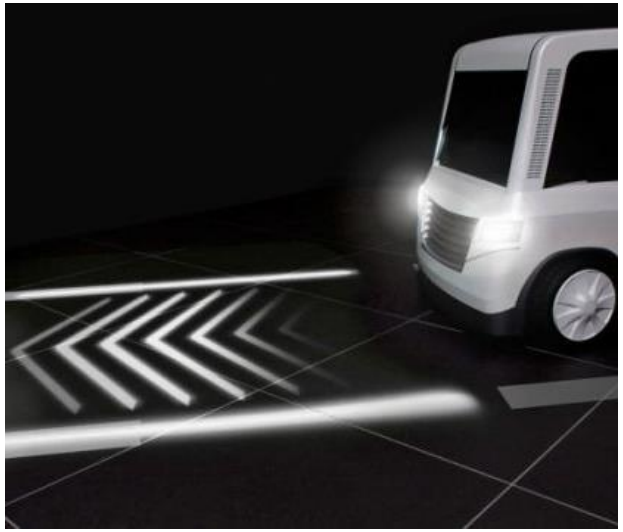
Augmented Reality Examples

- Pokémon GO
  - Starbucks became Poké Stops or Poké gyms merging real and virtual worlds
  - Frappicino sales integration
  - Not on menu, tap on Starbucks in game
- Magic Leap + Spotify



Projected Designs

- Mitsubishi have developed a indicator system that projects the path of the car onto the road



- A number of projected keyboards are now available (see here)

Will Design Patents Protect Works in the Virtual World?

- Most frequent jurisdictions where patent protection for VR is sought:
  - US (by a wide margin)
  - EU, also Korea
- Huge increase in VR/AR Patent applications in last 5 years
  - 2013 ~10,000
  - 2018 > 30,000
- **Microsoft, Intel, Sony**, Samsung, Google, IBM, Canon, Qualcomm
- USPTO continues to grant design patents for 3-d virtual works #
- Federal Circuit has signaled that the contrary view

AR/VR Design Patents US - Basics

- "design for an article of manufacture"

  35U.S.C. §171(a)

  In Re Zahn 617 F.2d 261, 268 (CCPA 1980) said the word "therefore" in the phrase "may obtain a patent therefore" refers back to design not article of manufacture

- Design patents protect aesthetic appearance

  MPEP§ 1502.01

- Solid lines = actual ornamental aspects, dashed lines show environment that is not part of claim
- Need to be
  - Novel
  - Not obvious
  - Ornamental
  - Article of manufacture

Requirements for Design Protection US

- §171 designs analogous to § 101 for utility
- No requirement to be useful but a requirement to be novel and original
- Ornamentation requirement

  "a design must present an aesthetically pleasing appearance that is not dictated by function alone"

  Bonito Boats Inc. v. Thunder Craft Boats, Inc. 489 US 141 (1989)
- Article of Manufacture is the issue for AR/VR

US -Article of Manufacture

- *In re Hruby* 373 F.2d 997 (C.C.P.A 1967) Court interpreted the scope of "article of manufacture" to include the ornamental display of a fountain after the Examiner and Board rejected
- Rejected notion that something made of "fleeting" or "ephemeral" particles could not be protected
- Water particles were like molecul
  in all articles
- Rejected finding that water sprays

could not be articles of manufacture

Because they did not "exist of themselves"

Icons and CGIs

- Icons and computer generated graphics were the first modern day test of *Hrudy* principles
- USPTO granted design patents to Xerox for extremely simple icon designs in early 80's
- Feedback generally positive but then USPTO began rejecting
- Xerox challenged refusal of "a design for a[n] Information Icon for Display Screen of a Programmed Computer System"

  Ex parte Strijland No 92-0623 26 USPQ 2d (BNA)

Icons

- Xerox argued the computer was the article of manufacture
- Examiner rejected bc applicant did not include a depiction or description of the computer in the application.
- Board said merely presenting a picture on a computer display does not constitute a protectable design
- Next effort by applicants was to reference Hruby and argue dependency, ephemeral nature and permanence did not preclude protection as a design
- Board rejected on basis icon was surface ornamentation (not "applied" like fountain) and ornamentation must be applied to article of manufacture
- USPTO then changed tack again and started accepting icons for protection publishing interim guidelines and examining

Icons

- USPTO required solid lines around icon to represent the computer display thereby meeting AoM requirement
- 1996 Finalized Practice allowed solid or dashed
- Federal Circuit has not heard a case on scope of protection for icons

?

Look to Utility Patents For Guidance?

- Subject matter construed "manufacture" broadly by SCC in *Chakrabarty* 4
  47 U.S 303 (1980)
- But more narrowly in *Nuitjen*
  - Watermarked signal not "a manufacture" (dissent included issue of contradictory approach for these cases)
    500 F. 3d 1346 Fed. Cir. 2007
- Court dealt with *Hrudy* as a precedent by limiting findings to §101 not §171

Utility Patents – Importation of "Articles"

- *ClearCorrect* case
  - ? Did U.S. Int'l Trade Commission have juris. Tariff Act s.337
  - Considered meaning of "article" to see if ITC
  - 3-D digital models of teeth aligners
  - ClearCorrect:
    - took scan of teeth creating digital representation;
    - digital file sent to Pakistan;
    - incremental changes to teeth position modelled there
    - data sets sent back
    - 3-d prints molds used on teeth in US
  - Unfair acts involving the importation of "articles" was question before ITC.
  - If yes, Align Technology could sue for patent infringement
  - ITC found digital data was "article"

ClearCorrect – Digital importation of Digital Models of Teeth

- Fed Cir. Reversed saying "articles" refers only to "material things" and does not extend to 3-D digital models
- Dissent held:
  - findings conflicts with SCC rulings, Fed. Cir. etc.
  - Law had to evolve for digital age
  - Meant to apply to all patented technologies including digital
  - Rejected tangible limitation on articles

Courts - "Articles"

- Newman Dissent

The new technologies of the Information Age focus on computer-implemented methods and systems, whose applications of digital science provide benefits and conveniences not imagined in 1922… Throughout this evolution, Section 337 served its statutory purpose of facilitating remedy against unfair competition by providing for exclusion of imports that infringe United States intellectual property right.

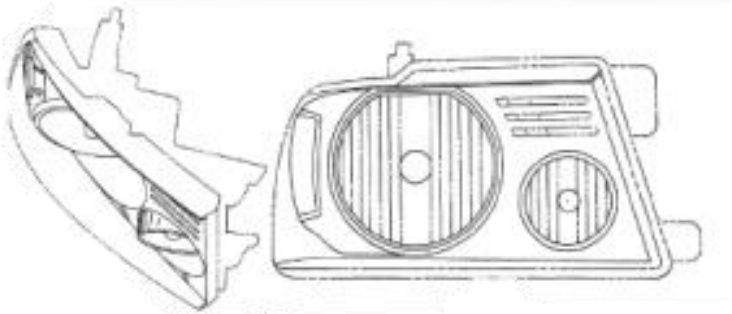
Until today.

The court removes from Section 337 protection from importations that are conducted by electronic transmission.

…The court's exclusion of digital products and data technologies imported by electronic transmission has no support in statute. precedent. or policy.

…the panel majority has locked the ITC into technological antiquity…

No Design Patent Specific Doctrines



- *Automotive Body Parts Ass'n v. Ford Global Techs., LLC*, Case No. 2018-1613 (Fed. Cir. July 23, 2019). Spare parts for hoods and headlights
- Same rules apply to design patents as utility patents so look to utility patent law not trade dress
- Design Patent law prohibits protection for primarily functional designs
  - if feature essential to use can't be protected*
- ABPA argued that protection should be prohibited because the design was aesthetically functional
- Court aesthetic appeal is not functional
- ABPA argued there is a functional benefit to designs that are aesthetically compatible with [consumer's] vehicles

**L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123 (Fed. Cir. 1993)

Design Protection Globally

- Design laws can be broadly classified as:
  - Requiring the design to be applied to a product/article of manufacture
  - Not requiring this, by virtue of allowing protection of icons or defining product broadly to include 'graphic symbols'
- The first category make it difficult to protect 'non-applied' designs
- The second category seems to make protection possible (but not clear)

How can these be protected?

- Singapore is leading the way by broadening registrable designs to include "features of design applied to a non-physical product"

  Defined to include virtual or projected designs

- Japan has recently expanded the definition of designs to include digital images (not necessarily recorded on articles, but displayed outside an article) (projected designs)

How can these be protected?

- The ID5 has studied "protection of new technological designs"

In particular, considering changes to products and services and the new uses of industrial designs brought about by the Fourth Industrial Revolution, the Partners intend to enhance their efforts to effectively protect industrial designs, noting user interest and input.

ID5 Joint Statement, November 2018

FICPI Advocacy

- Encouraging offices to take an expansive view of design protection

- Resolution

FICPI Advocacy

FÉDÉRATION INTERNATIONALE DES CONSEILS EN PROPRIÉTÉ INTELLECTUELLE

INTERNATIONAL FEDERATION OF INTELLECTUAL PROPERTY ATTORNEYS

INTERNATIONALE FÖDERATION VON PATENTANWÄLTEN

Resolution of the Executive Committee, Turin, Italy 31 March to 4 April 2019

"Virtual Designs"

FICPI, the International Federation of Intellectual Property Attorneys, broadly representative of the free profession throughout the world, assembled at its Executive Committee held in Turin, Italy, 31 March to 4 April 2019, passed the following Resolution:

Noting the well-established value of Industrial Design in both domestic and global markets, and the increasing commercial importance of Virtual Designs, such as projected designs and designs in virtual and augmented realities,

Recognising that significant investment goes into creating such designs,

Further recognising some jurisdictions require that a design be embodied in or applied to an article of manufacture for registration and/or enforcement in a way that means Virtual Designs are not registerable and/or not enforceable,

Also recognising some jurisdictions already allow the registration and enforcement of Virtual Designs without such a requirement,

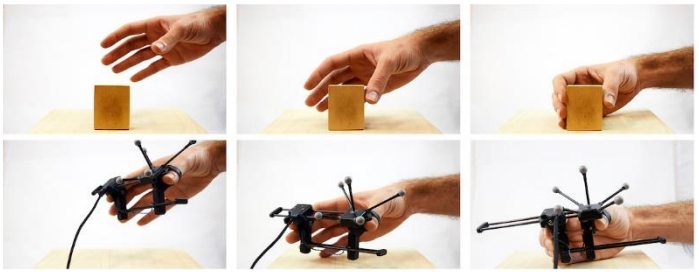
Believing that the definition of an Industrial Design should not be overly restrictive and should reflect advances in technology and commerce,

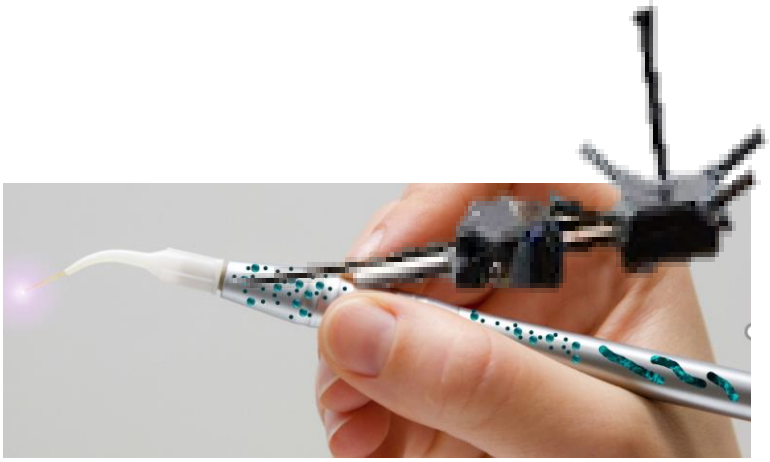
Urges jurisdictions to allow for the registration and enforcement of Virtual Designs.

Protection and Enforcement – Other IP Rights?

- Trademark – use in commerce?
  - Pokemon Starbucks
  - Buying clothing/accessories in VR world?
  - City of Heroes case
  - Court rejected Marvel's claim that NCSoft's providing tools to design Wolverine, Spiderman or Captain America costumes was not infringement bc no use in commerce.
- Distinctiveness
- Deceptiveness
- Tarnishing dilution? Like product placement?
- Damages? Superimposition of AR on real buildings in Pokémon Go but what is the damage.
- Like 3-D printing licensing might be a way to ensure owners have measure of control

Protection & Enforcement Other IP?





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Questions?

Thanks for your participation in our seminar!

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