



Rigorous empirical
research on
intellectual property



International
Trademark
Association

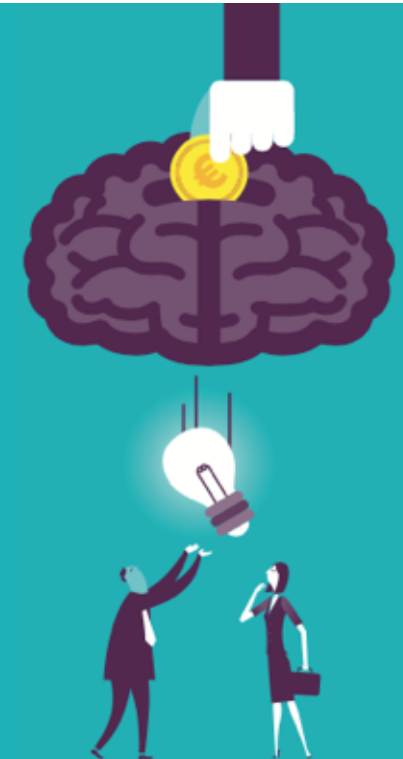
3D printing and intellectual property: issues and solutions

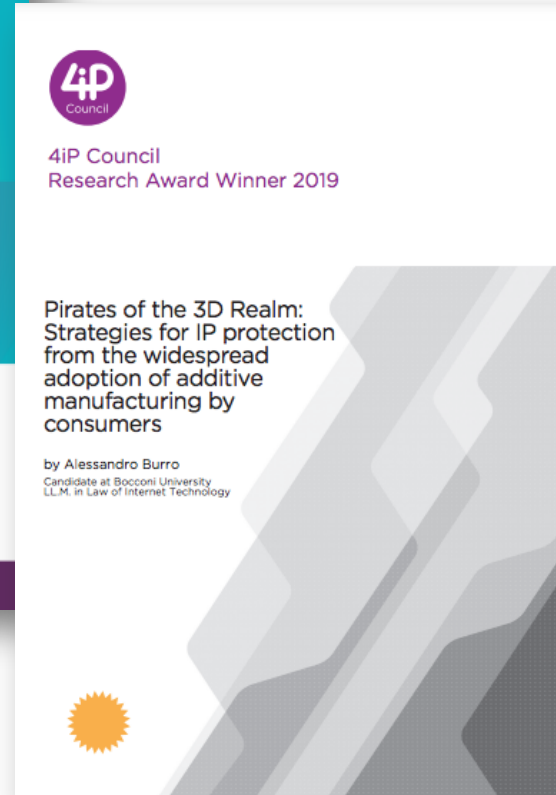
Host: Axel Ferrazzini, Managing Director, 4iP Council

Presenters:

Dr. Peter Schramm, Attorney at Law, Meyerlustenberger Lachenal Ltd. (MLL), Zurich
on behalf of INTA

Alessandro Burro, 4iP Council Research Award winner 2019, LL.M. in Law of Internet
Technology, Bocconi University





Case Law post CJEU ruling *Huawei v ZTE*

4iP Council **Case law home** **CJEU Huawei v ZTE** **German court decisions** **Italian court decisions** **English court decisions** **English/Irish court decisions** **Romanian court decisions** **French court decisions** **Dutch court decisions** **National Courts Guidance**

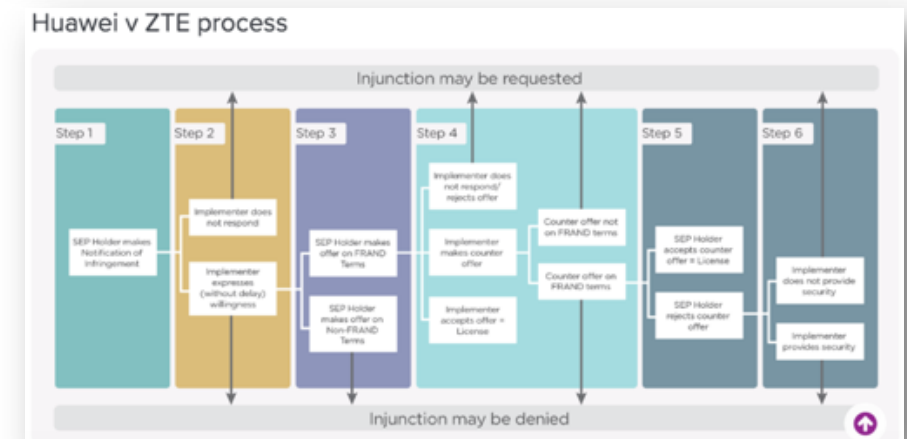
Authors & contributors

National Courts Guidance

Negotiating Licenses for Essential Patents in Europe

Increased clarity provided on the principles established by the Court of Justice of the European Union in *Huawei v ZTE*.

The Court of Justice of the European Union clarified, in *Huawei v ZTE* (Case No. C-170/13), European law relating to the availability of injunctive relief for infringements of FRAND-based standard essential patents. In doing so, the Court provided a legal framework focused on the good faith



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Rigorous empirical research on intellectual property

Types of IP
Benefits of IP
IP for Business Growth
4 Reasons to Patent
4 Reasons 4 Copyright
4 Reasons 4 Trademarks
SME Features
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4 REASONS TO PATENT

- 1 - MARKET ACCESS
- 2 - NEGOTIATING
- 3 - FUNDING
- 4 - STRATEGIC VALUE

Explore how patents add value with our **interactive guide**.

4 REASONS 4 COPYRIGHT

- 1 - COMPETITIVE EDGE
- 2 - REPUTATION
- 3 - COLLABORATION
- 4 - FUNDING

Explore the benefits of copyright with our **interactive guide**.

4 REASONS 4 TRADEMARKS

- 1 - DIFFERENTIATION
- 2 - PROTECTION
- 3 - REPUTATION
- 4 - REVENUE

Explore the benefits of trademarks with our **interactive guide**.

4 REASONS 4 DESIGN RIGHTS

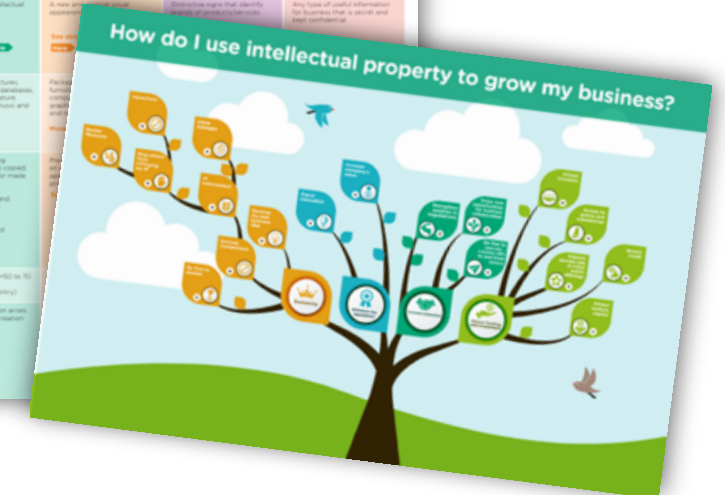
- 1 - EXCLUSIVITY
- 2 - COMMERCIALISATION
- 3 - REPUTATION
- 4 - VALUE

Explore the benefits of design rights with our **interactive guide**.

Which types of intellectual property do you need?

Filter table columns

	PATENTS	COPYRIGHTS	DESIGNS	TRADEMARKS	TRADE SECRETS
What do they protect?	All inventions, new and innovative way of doing something or solving a technical problem. See also more	A work, an original intellectual creation. See also more	A new and original design. See also more	Any sign that identifies goods or services. See also more	Any type of useful information for business that is secret and kept confidential. See also more
Examples of what is protected	Inventive products and processes in all areas of business. For examples of successful inventions see this . See also more	Audio-visual works, software, graphics, architecture, databases, software, designs, literature, novels, poems, plays, music and video, graphic works. See also more	Product and service designs. See also more	Words, logos, slogans, symbols, etc. See also more	Business secrets, such as recipes, formulas, etc. See also more
How are my rights protected?	Prevents unauthorised making, using or selling of the patented invention. See also more	Prevents the work being copied, reproduced or made available online. Protects the integrity and attribution of the work. Related rights: Public performance and rights of the 2 years. See also more	Protects the integrity and attribution of the work. See also more	Related rights: Public performance and rights of the 2 years. See also more	Prevents the work being copied, reproduced or made available online. See also more
How long is my invention protected?	Up to 20 years. See also more	Lifetime of the author plus 70 years after their death, depending on the country. See also more	Up to 15 years. See also more	Up to 10 years. See also more	As long as the information remains secret. See also more
Do I have to register it?	Yes, filing an application to a patent office is required. More on patent applications in this . See also more	No, copyright protection arises automatically with its creation. See also more	Yes, filing an application to a design office is required. More on design applications in this . See also more	Yes, filing an application to a trademark office is required. More on trademark applications in this . See also more	No, registration is not required. See also more



3D printing and intellectual property: issues and solutions



Dr. Peter Schramm

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on behalf of INTA



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3D printing and IP rights: Legal issues

Short introduction by Dr. Peter Schramm

3D printing: Process of producing a three-dimensional solid object made from a digital model

- **Making of the 3D model:** scanning the object or by directly writing a digital CAD file (designer of the blueprint/CAD file)
- **Dissemination of the 3D model:** usually a website platform offering links to the 3D model (Commercial or non-commercial disseminator)
- **Printing act:** Printing the replica based on the 3D model (designer/manufacturer/retailer/seller of 3D printer; commercial and non-commercial end-users)
- **Distribution of printed replicas:** for private and non-commercial purposes (commercial or non-commercial end users, professional printing company)

- **IP rights at stake:** copyright and design right, patents and trademarks.
- **Subject to infringement by the end-user or intermediaries** in the technology's creation and dissemination process.
- **End user:** 3D printing allows end-users to obtain counterfeit goods without the intervention and assistance of commercial counterfeiters, enables new form of product piracy which makes it harder to enforce IP rights.
- **Intermediaries:** involved in the process of 3D printing, from the creation and dissemination of the object design or computer aided design (CAD) files, to the actual creation and dissemination of the 3D printed object; raises question of direct and indirect infringements.

Copyright

- Harmonization/lower threshold for protection of works of applied art after CJEU C-683/17 – COFEMEL and CJEU C-833/18 - Brompton (“own intellectual creation”)
- No commercial use requirement: Can copyright also be invoked against private use?
- Are CAD Files Copyright-protected? As a computer program? But unlike traditional software, a CAD file does not control the hardware of the 3D printer, it just represents, embodies the 3D object... Because of its technical drawings, diagrams and models? But no copyright is granted to technological solutions and progress...
- The use of the CAD file to print the physical object in 3D should not be considered counterfeit because the physical object itself does not carry the copyright that was vested in the CAD file.

Designs

- Useful intellectual property right for larger manufacturers to challenge commercial 3D printing of their products
- No design right infringement if the end-user makes the 3D print for personal and non-commercial use, no fair compensation rules in design law
- Can intermediaries be held liable for design infringements based on the indirect infringement rules in EU e-commerce law? A CAD file does not necessarily infringes a registered design.

3D PRINTING CHALLENGES EXISTING INTELLECTUAL PROPERTY LAWS!

3D printing and Intellectual property: a looming crisis?

Presentation by Alessandro Burro

Part I: What is 3D printing?

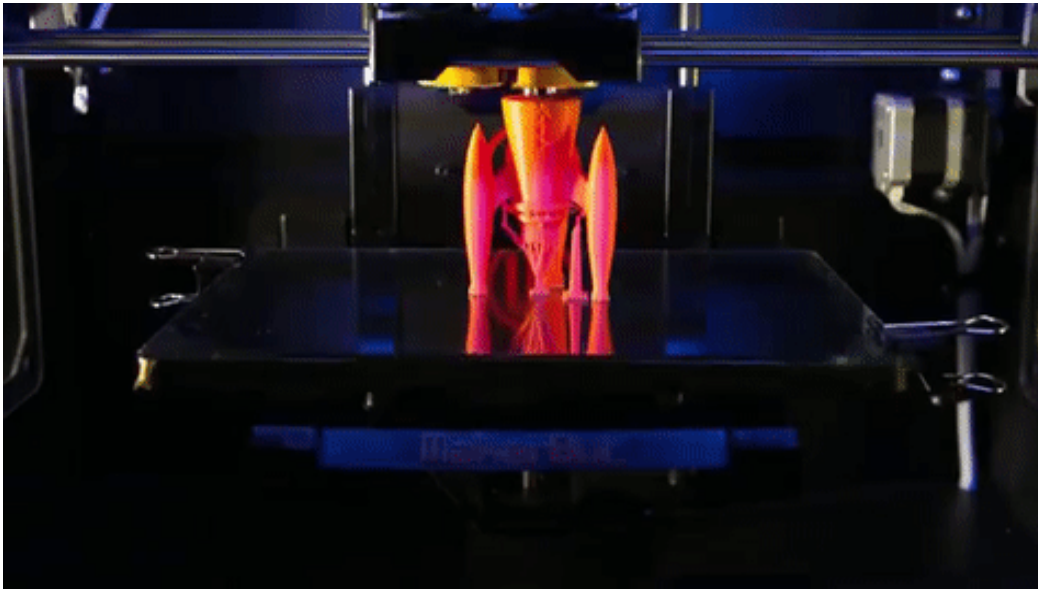
Part II: Why it should concern us all

Part III: What solutions could we adopt?

Part I: What is 3D printing?



3D Printing



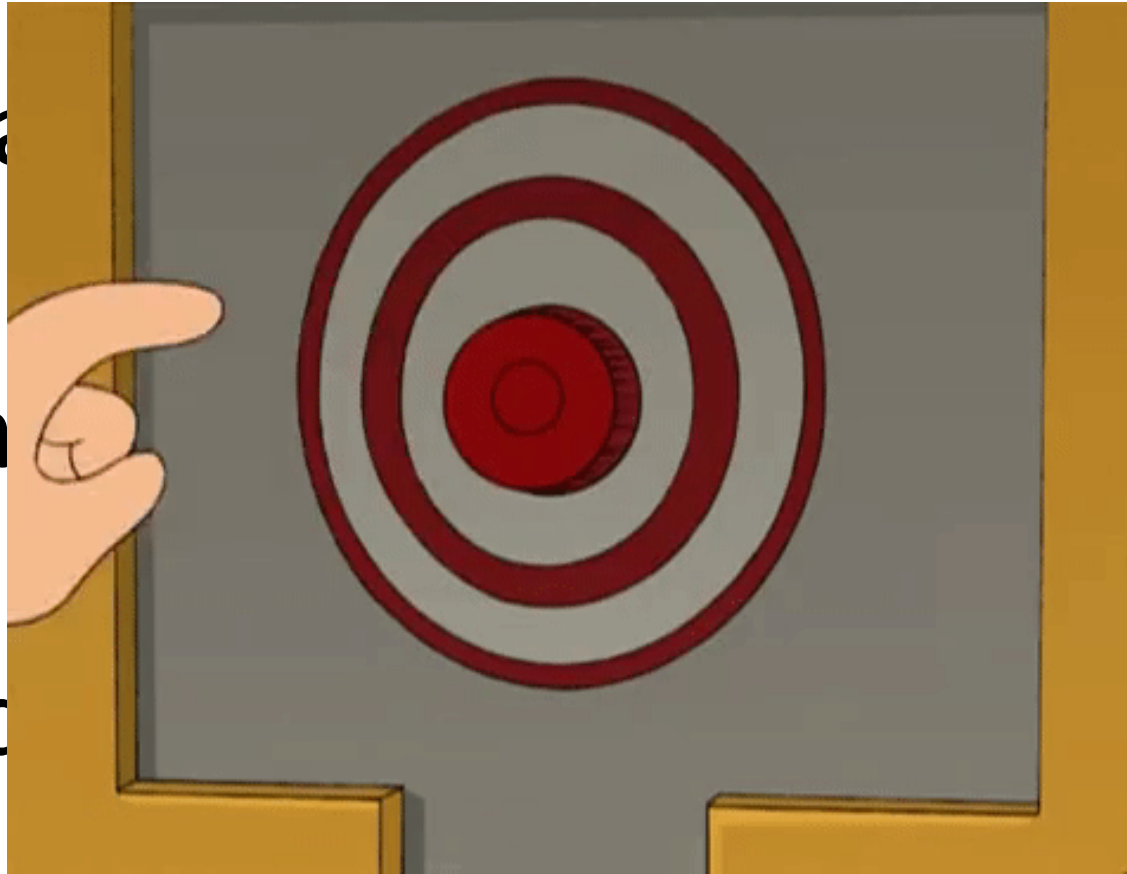
Traditional Manufacturing



Step 1: Create

Step 2: Tran

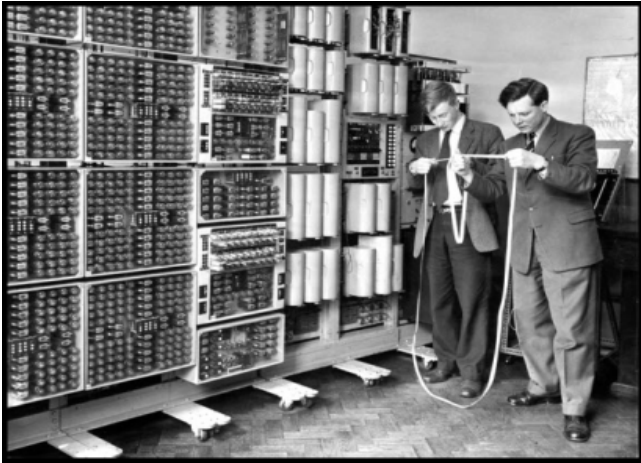
Step 3: Send



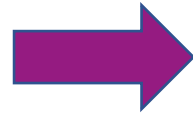
Printer

Step 4: The 3D printer prints the object following the .stl file directions

Part II: Why it should bother us



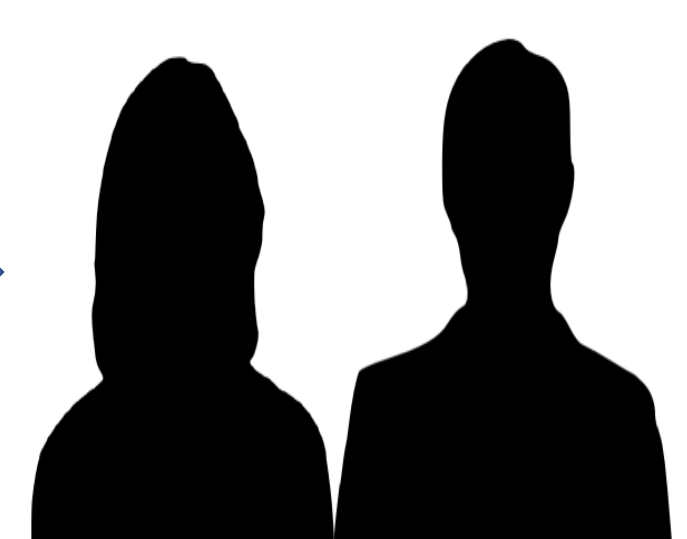
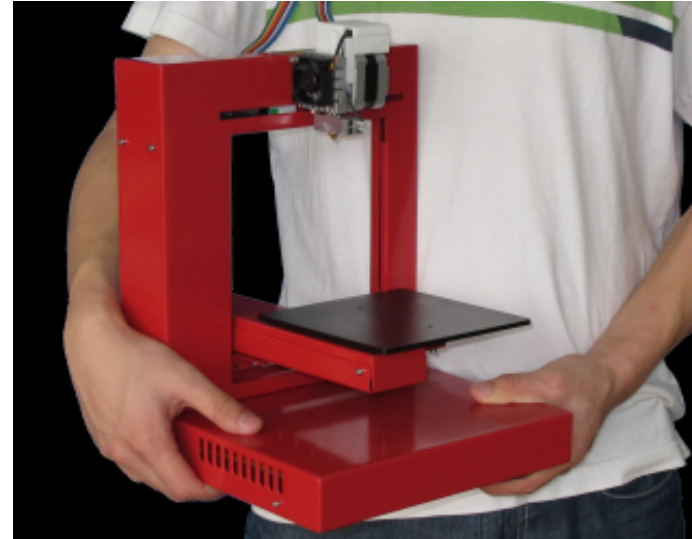
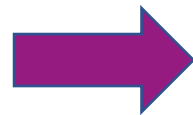
Cumbersome, costly, difficult to operate



Smaller, cheaper, easier to operate



Standard consumer interface, appealing for mass consumption



P2P piracy crisis of the '2000s

- Music and Movie Industries were the most affected
- Billions of dollars were lost due to pirated content
- Illegally downloaded content was not perceived by the majority of the public opinion as stealing
- Extremely difficult to prosecute every single infringer of these intellectual property rights



Now you can!



P2P piracy crisis of the 2000's

- Copyright

3D printing crisis of the 2020's

- Copyright
- Patents
- Trademarks

Part III: What solutions could we adopt?



Subjects of the possible solutions:

- Consumers
- Intermediaries
- Pirates

Striking a balance between:

- Intellectual Property rights protection
- Supporting the new economy

Solution 1: Intermediary Liability



Strict Liability

- Detrimental for the new economy
- Resource and time consuming

Safe Harbor

- Human
- Algorithmic
- Hybrid

Private Copying Levy

- Confusion regarding the area impacted
- It would hamper or suppress the 3D printers' market
- Would it impact both 3D printers and 3D printing materials?

Safe Harbor is best option for now



Inspired by



Already implemented by:



In these cases:

Penrose's Triangle case



Warhammer case



Solution 2: DRMs&Consumers



Black Box

- Excessive violation of Privacy?
- Costly for the producers of 3D printers
- The cost could limit the expansion of 3D printers' market

Integrated Copyright Enforcer

- Excessive violation of Privacy?
- Always-on-line: hamper the geographical spread of 3D printers
- Offline: not updated and could be easily bypassed

Physical Printed Identifier

- Excessive violation of Privacy?
- Can be easily bypassed
- Could be difficult to implement on smaller 3D printed parts

Other ways to entice consumers to the lawful side



- Better quality and variety
- Subscription model
- Virus free guarantee



NETFLIX

Solution 3: Targeting the pirates

Profiles of Pirates:

For Profit

- Can be suppressed through enough enforcement
- But they have Survivor Bias
- To be taken down only if they go very big



For Ideology

- For every pirate taken down two more appear
- Risk of creating martyrs
- Unpopular and time and resource consuming

Title



Presenters slides here

Thank you
Q & A

Forthcoming webinars

2 March 2021, 16.00-17.00 CET	Downsides of Using Inadequate Open Source Software Processes and Licenses within Standard Development	Michele Herman, CEO of Early Stage Health-Tech Startup and Founder of JusTech Law Dr. Justus Baron, Senior Research Associate at the Center on Law, Business, and Economics, Northwestern University Pritzker School of Law
18 March 2021, 16.00-17.00 CET	Title to be added	Presenters to be added

Stay tuned to our website for more details and more topics and dates