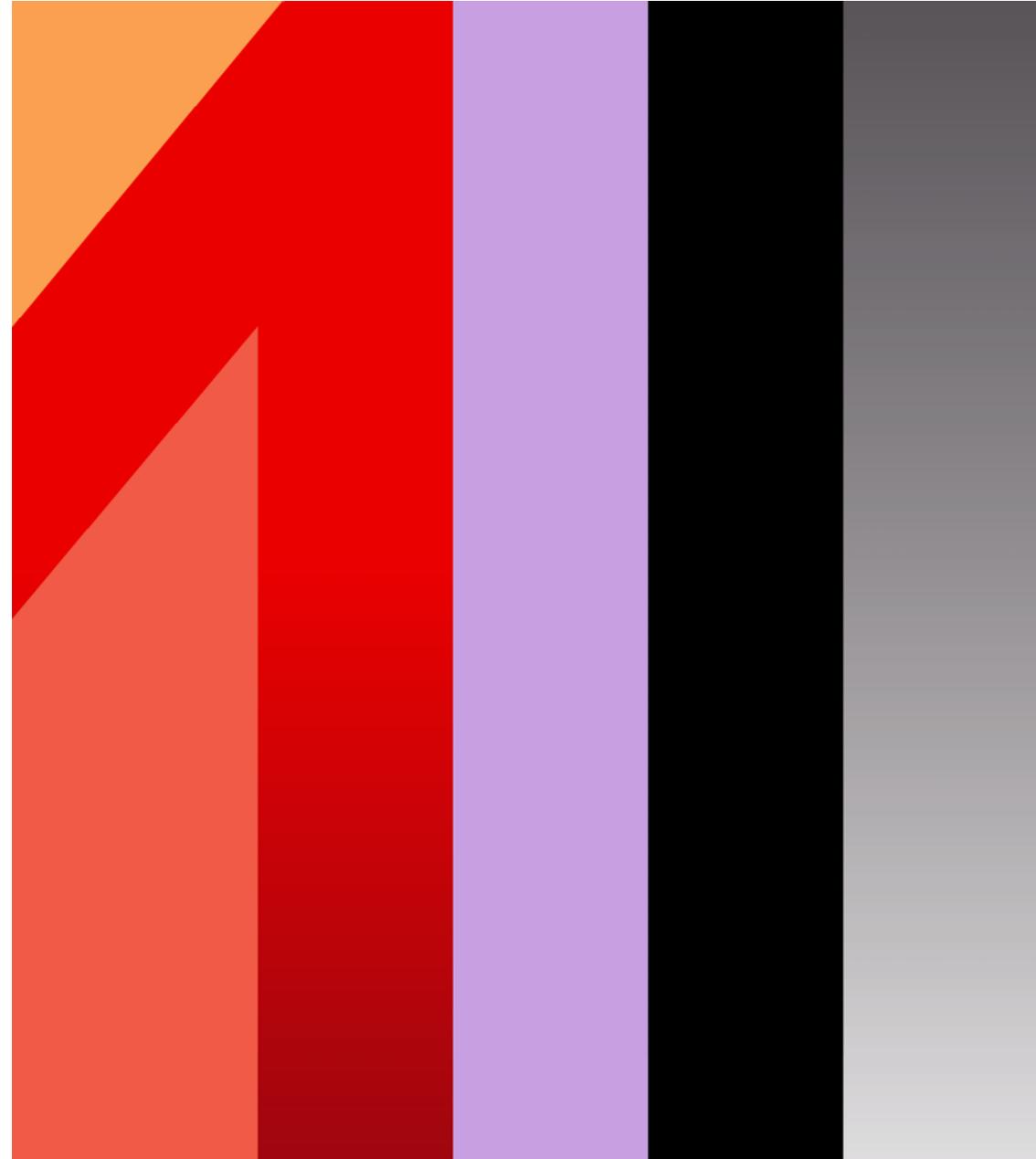




# IP and the Digital Transformation

Dr. Reinhard Oertli  
19 May 2022

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# Dr. Reinhard Oertli, Attorney at Law, LL.M., Partner

- **Education**

- Admitted to the bar in Zurich, Switzerland and New York, USA
- University of Pennsylvania Law School, LL.M. (1989)
- University of Zurich, Dr. iur. (1988)

- **Memberships**

- International Association for the Protection of Intellectual Property Switzerland (AIPPI): Vice-Chair Standing Committee on Development and IP; Member of Standing Committee on Digital Economy
- Swiss-American Chamber of Commerce, Chairman Subcommittee on Data Economy

- **Languages**

- German
- English
- Italian
- French

- **Practice Areas**

- Intellectual Property
- ICT & Digital



# IP and the Digital Transformation

- Impact on IP of accelerated transition into a digital economy
- Challenges and Opportunities for IP through Access to Digital Markets
- Development, Protection and Use of new digital IP, such as AI-generated and AI-administered works, and data

# Impact on IP of transition to digital economy

- Current IP system was developed in an economic world of standardised goods in tangible form (books printed on paper, cans of soil-grown, processed food, human-driven cars) (“industrial economy”)
- Now: advanced data-driven digital technology (“digital economy”)

# Impact on IP of transition to digital economy

- Impact of transition from industrial to digital economy on the IP system
  - (a) IP system becomes overused
  - (b) IP system becomes irrelevant
  - (c) Certain aspects of the IP system take on a new importance
  - (d) Data as new IP

# Impact on IP of transition to digital economy

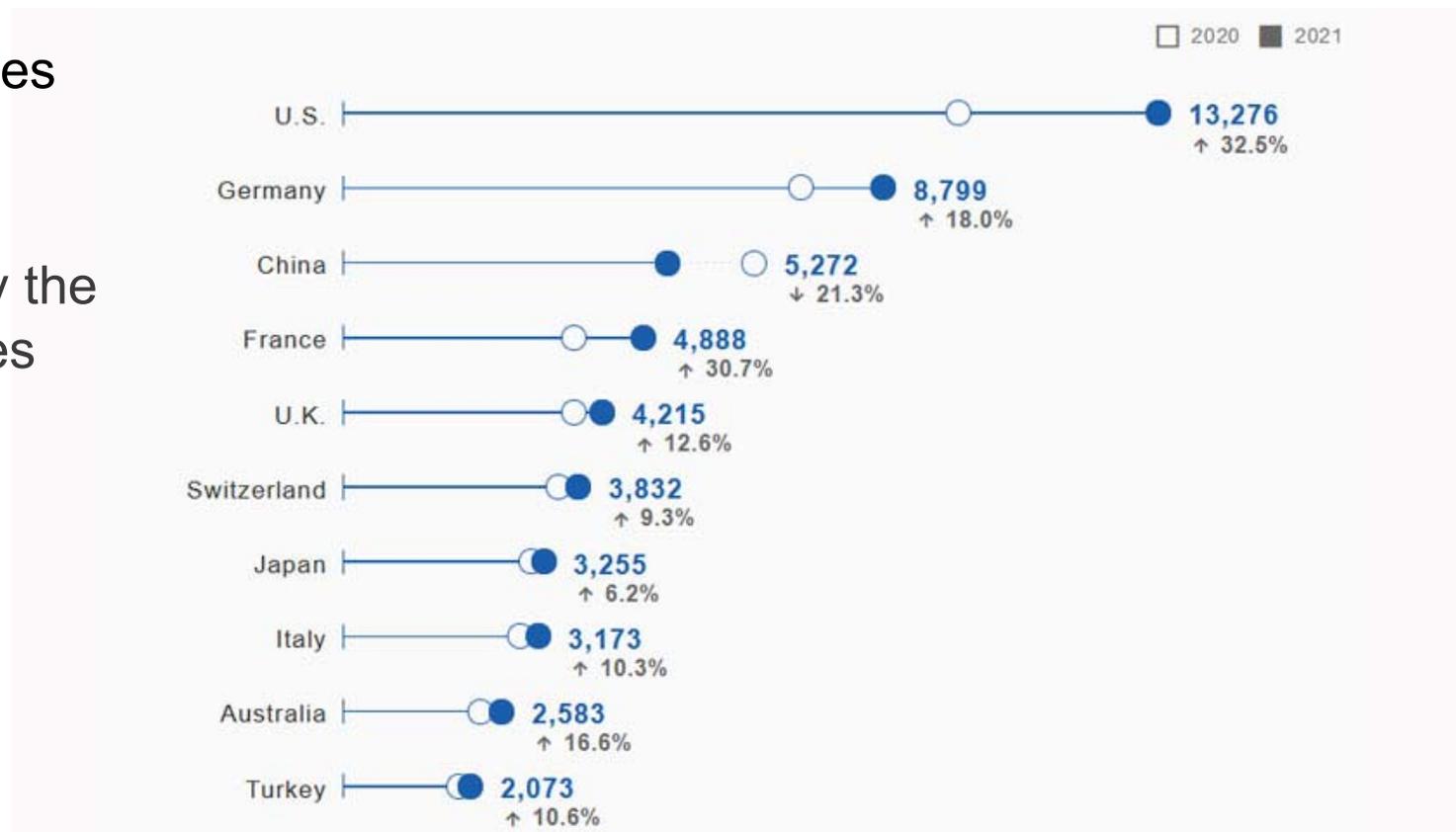
(a) IP system becomes overused  
clogging of the trademark roll:

2021: 73,100 international trademark applications filed  
14.4% surge in filings compared to 2020

# Impact on IP of transition to digital economy

(a) IP system becomes overused

2021: surge in filings compared to 2020 by the biggest filing countries



# Impact on IP of transition to digital economy

(a) IP system becomes overused: clogging of the patent roll

Electrical machinery apparatus energy; Audio-visual technology;  
Telecommunications; Digital communication; Basic communication processes;  
Computer technology; IT methods for management; Semiconductors

Increase of PCT patent applications between 2011 and 2021: 185%

Audio-visual technology and Computer technology : 250%

# Impact on IP of transition to digital economy

(b) IP system becomes irrelevant

- NFT as de-facto substitute for IP rights:
- Control of use:
  - any holder of an NFT can use a work in digital form, an invention, including any subsequent transferee (exhaustion)
  - No-one who is not a holder of an NFT can use a work, an invention, also no former holder
  - encryption while in use
  - Any instance of use leads to a payment to the original rightsholder (smart contract)

# Impact on IP of transition to digital economy

(b) IP system becomes irrelevant

- Control of money flow through smart contracts:
  - Any transfer of the NFT leads to a payment to the original rightsholder (droit de suite, resale royalty)
  - Any instance of use leads to a payment to the original rightsholder (license fee)
- Domain name registries have done it for a long time
- Oline sales platforms, online content-sharing service providers and social media operators are beginning to do it: alternative dispute regulation (limited due process)

# Impact on IP of transition to digital economy

(c) certain aspects of the IP system take on a new importance:

Copyright gives the rightsholder the exclusive right to make copies of the work.

Is feeding a work into an AI system as input data “copying”



# Impact on IP of transition to digital economy

## (d) Data as new IP

- Personal data and factual (non-person related) data

“We need to define appropriate and legitimate practices with respect to the collection, storage and use of data. ... we need to identify what restrictions are appropriate for the collection and subsequent use of data and we need to understand why these restrictions are necessary.” *Francis Gurry, then WIPO Director General*

- Who has Data Sovereignty: you? your government? or facebook?

# Impact on IP of transition to digital economy

## (d) Data as new IP

- EU Data base protection: living dead?
- non-public data of somebody who has taken reasonable steps to keep it confidential, may constitute that person's trade secret
- But: trade secrets are covered by tort claims, not IP or similar property right: a third party in good faith cannot be prevented from using stolen data
- Blanked permission to use (factual and anonymized personal) data for scientific purposes? Arts? Statistics? The common good? Betterment of mankind? Even consent could be obtained or data could be garnered from other sources?

# Impact on IP of transition to digital economy

## (d) Data as new IP

- $TC \approx 0$  (the world is flat);  $U \propto n^2$  (network effect)
- online content-sharing service providers and social media operators:

data



- Winner takes it all (data)

# Challenges and Opportunities for IP through Access to Digital Markets

- Digital works in the metaverse
- Controlled through NFT
- Uploaded and controlled
- Ubiquitous copies (fair use, private use)



# AI of the future

- AI that transfers knowledge gained in one field into another field, that experiments with novel approaches, that tries out things that have no basis in the input data.
- Modelling human dilemmas, controversy, clash of axioms, fundamentals and values, principles, joy, playfulness, emotions, understanding the emotions of others, compassion, willingness to help, appreciation for the arts, for its own creations and its own creator, notion of death (retirement).
- Dr. Stephen Thaler, the inventor of the “device for the autonomous bootstrapping of unified sentience” (DABUS), turns up the synaptic noise to create machines that dream:

“The more intense periodic hallucinations, false perceptions, attention deficits, and inability to differentiate fantasy from reality are, the more original is the creative output. Feelings or sentience are the basis of the ability to produce not only complex concepts, but also of the awareness for the consequences of these concepts.”

# IP rights management and AI

- enforcement of IP rights
- Verification of authenticity through machines (NFTs): trademarks, patents, works of art
- Use of recognition tools to monitor infringement
  - Micro-image recognition to monitor copyright infringement
  - Music recognition to monitor copyright infringement on audio and audiovisual works made available in the internet

# IP Infringement by AI machines

- Processing: IP protected material use as training data for training an AI machine. (Text and data mining exception to copyright (Art. 3(4) EU DSM Directive 2019/790).
- Output:
  - A customer designs and produces for himself/herself a 3D printed car that violates copyright of Porsche, Ferrari etc.



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Thank you for your  
time and interest



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