

KU LEUVEN

CiTiP

CENTRE FOR IT AND IP LAW

EU copyright, quo vadis ? The challenges of Artificial Intelligence

Setting the Scene

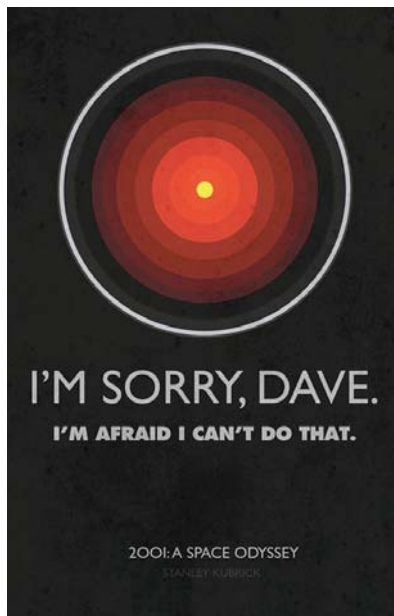
Marie-Christine Janssens

Brussels, 25 MAY 2018

ecs EUROPEAN COPYRIGHT SOCIETY

Artificial Intelligence (AI) – a new looming challenge for copyright law

- Not “a UFO”



AI – a **new** looming challenge for copyright law

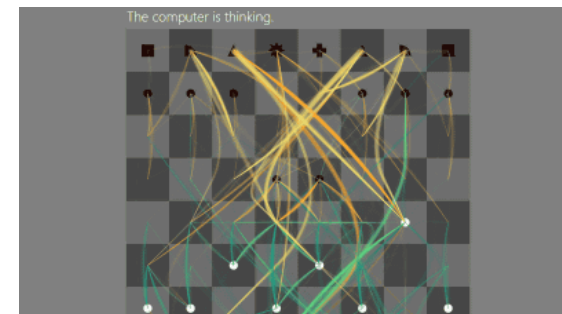
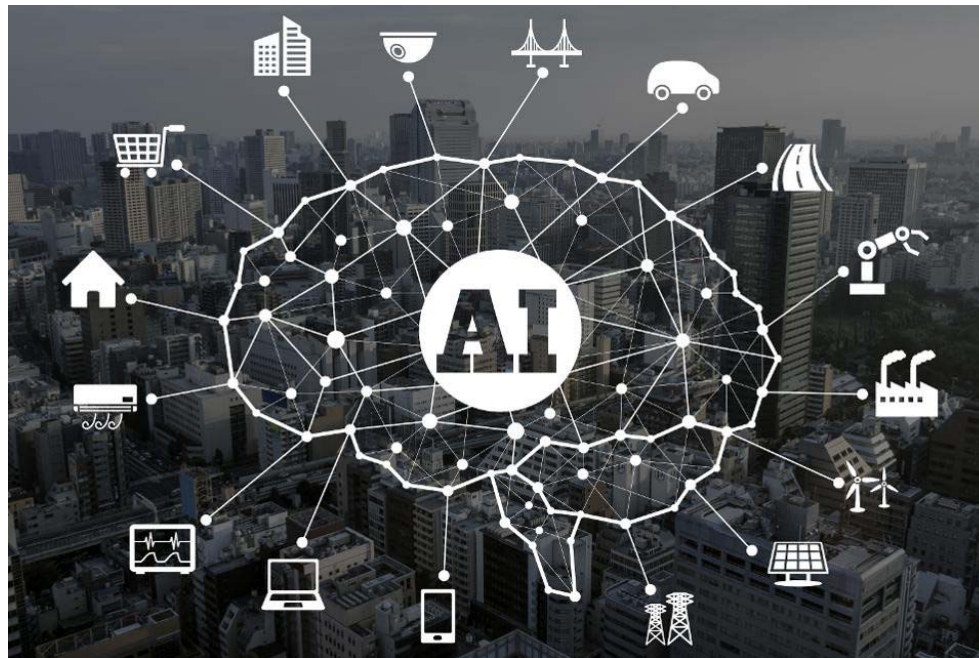
- **TIMOTHY L. BUTLER, “Can a Computer be an Author? Copyright Aspects of Artificial Intelligence”, 4 Comm/Ent L.S. 707 (1981)**

- *Helene watched John and cogitated: A supper with him? Disgusting! A supper would facilitate a dissertation and a dissertation or tale was what John carefully wanted to have. With what in mind? Wine, otters, beans? No! Electrons! John simply was a quantum logician; his endless dreams were captivating and interesting; at all events Matthew, Helene, and Wendy were assisting him in his infuriated tries to broaden himself. Now legions of dreams itched to punch Wendy's consciousness. Yet John whispered, "Just a minute! Helene's a maid, I'm a quantum logician; can maids know galaxies and even stars or a multitude of galactic systems? ... Can maids realize electrons?1*

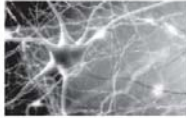
Published in 1981

Artificial Intelligence (AI) – a new looming challenge for copyright law

- AI: “the science of making computers do things that require intelligence when done by humans” (*R. Kurzweil, 1990*)
 - E.g. creating ‘works’ (incl. artistic works)

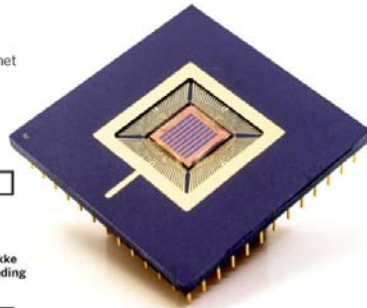


Non-human creations

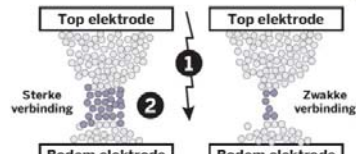


Zo werkt de Imec-chip

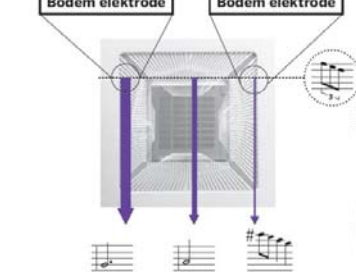
De chip 'leert' door verbindingen te versterken, net zoals de hersenen leren door connecties tussen neuronen te versterken.



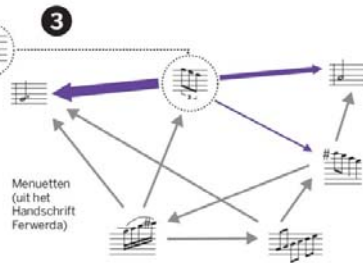
1
Door stroom te sturen door het geheugen-element wordt er een verbinding gemaakt (de weerstand van het element zakt – vandaar de naam Resistive Memory)



2
Als het element herhaaldelijk gestimuleerd wordt, wordt de verbinding sterker (en zakt de weerstand verder).



3
De Imec0-chip leerde patronen uit menuetten, en kan die gebruiken om nieuwe muziek te creëren.



- Google's Comp. DeepMind A.I. → Composes and Performs Piano Beyond The Masterpiece Level in Realtime
 - <https://youtu.be/Y8UawLT4it0>

„THE DAY A COMPUTER WRITES A NOVEL“

In March 2016 a novel written almost entirely by a software was submitted to a literary competition and even made it through the first round



LOOK HOW IT ENDS:

The image shows a close-up of a white and blue robotic hand holding a blue pen over a yellow notepad. The notepad has a spiral binding on the left side. The text on the notepad is written in cursive and reads: 'The day a computer wrote a novel. The computer, placing priority on the pursuit of its own joy, stopped working for humans'.

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The Guardian

design Film Games Classical Stage

World's first computer-generated musical to debut in London

Beyond the Fence, the story of a family at Greenham Common, will incorporate machine-generated plot and music

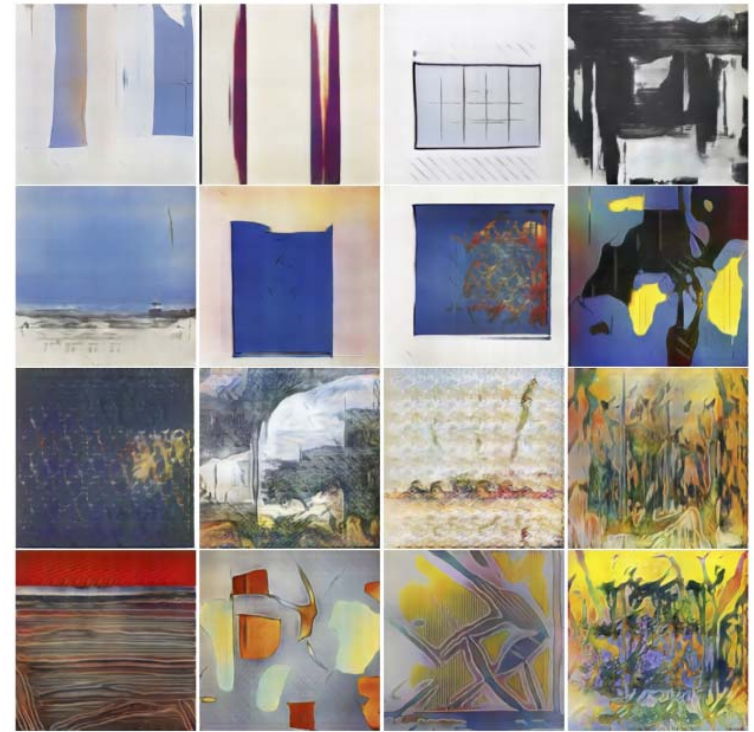


▲ Dr Pablo Gervás from the Complutense University of Madrid talks Benjamin Till and Nathan Taylor through

most viewed

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- The Mediterranean gone: region's child fattest in Europe
- Live Deutsche Bank more than 7,000 job: business live
- North Korea casts dc summit and warns U 'nuclear showdown'
- This shows people d Georgia jury awards victim \$1bn in dama

- Artworks created by Creative Adversarial Networks (CAN) artificial intelligence.
 - Art and Artificial Intelligence Laboratory, Rutgers University.



Where is “the author’s own intellectual creation ?”

Answer to the machine is in Copyright ?

- **European Parliament Resolution 2017**

- The resolution calls on the Commission to come forward with a balanced approach to intellectual property rights when applied to hardware and software standards and codes that protect innovation and at the same time foster innovation. **Moreover, the elaboration of criteria for "own intellectual creation" for copyrightable works produced by computers or robots is demanded.**

- Is copyright law the good/bad/best/worst ... answer ?

- i.e. a non-human copyright ?
 - A challenge for the Justification of the whole copyright system?
 - Incentive needed ? There will be AI (and robots) anyhow
- A new neighboring right ? ('producer')
 - Millions of new 'productions' per day/second ?

THE ECONOMY OF
creativity

Blurred lines

AI assisted works
(cf. UK law)

AI generated
works

