

Jean Monnet Seminar, University of Bologna

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*Algorithmic Arts, Digital Creativity
and Aesthetical Progress
in Patent Law*

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Fairness, morality, equality in European IP Law (Fame-IP)



A Cabinet of Curiosity



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Kanna

Kanna i form av en sittande kräfta/langust i glaserat och delvis förgyllt biscuit. Kina, Mingdynastin, Van-li (1573-1619)

Augsburg Art Cabinet' (1632)

Housed 1000 objects: Uppsala University
Museum

Patent as The Useful Cabinet: Inventor as a 'Useful Artist'

No. 1.—Vol. 1.

OF THE

USEFUL CABINET.



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USEFUL CABINET,

PUBLISHED IN MONTHLY NUMBERS,

FOR THE

Newengland Association

OR

INVENTORS AND PATRONS

OF

USEFUL ARTS.



Vol. I.

FOR THE YEAR 1808.

PRINTED FOR THE ASSOCIATION, BY EPHRAIM C. BEALS,
NO. 10, STATE-STREET, BOSTON.

McN

JANUARY, 1808.

DESCRIPTION OF THE DEVICE IN THE TITLE PAGE,
REPRESENTING THE SEAL OF THE ASSOCIATION.

A TREE, richly laden with Fruit, is encircled by a Wall; within the enclosure is TIME, who, having thrown his Scythe into the back ground is watering the root of the Tree.

APPLICATION.

THE Fruitful Tree represents the Benefits which Society may derive from the Labours of the Inventor, if properly secured by a Wall of Protection. The nourishment received from the hand of TIME, is emblematical of the long and arduous attention necessary for bringing to maturity Useful Improvements. The Motto "IN ITS OWN SOIL, PROTECT AND NOURISH IT," is a simple dictate of common sense, respecting the Fruit of Genius in our own Country. The initials, N. A. U. A. for designating the members, are abbreviations of the words *Newengland Associated Useful Artists*.

INTRODUCTION.

THE *Newengland Association of Inventors and Patrons of Useful Arts*, having offered for subscription the Prospectus of this Work, the Editors are sensible that the public will expect, in this first number, to be informed of the origin and design of the Association. It has been contemplated for several years by some of its members, who are Inventors and Patentees of what they believe to be useful improvements in science and arts; that an association of inventors, patenters, proprietors of patent rights by purchase, persons possessing extraordinary practical skill in some useful art or science, authors of valuable treatises relating thereto, with a proportion of such gentlemen as are considered to be patrons of useful artists; would be highly advantageous to inventors and beneficial to society. Utility is the object of the establishment, the public therefore will not look into the pages of the *Useful Cabinet* for refined philosophical speculations. Of those benefits which may be anticipated, from this first institution of



Starting Questions

- » Patentable Subject Matter, Inherent Patentability
- » Are Aesthetical Objects excluded from Patent Protection ?
 - » History?
 - » Why?
 - »Aesthetic, Expressive vs Useful, Inventive
 - »Form v Function
 - »No overlap in protection ?
- » Should there be no Overlap and Hybrids (Mixed subject matters) ?
- » Is a hard demarcation normatively good?
- » **Should inventive intent matter in patent law ?**

Confusing inventions and design- History in 1700s (UK)

- » 1787 Act on Calico Printers (UK) ‘...every person who shall **invent**, design and print, or causes to be invented, designed and printed, and become the proprietor of any new and original pattern or patterns for printing Linens, Cottons, Calicoes or Muslins...a sole right and liberty of printing and reprint’ the design.
- » Engraver’s Act of 1735-1777 which was actually for a protection of printed matters included expression ‘invent and/or design’ or from his own work and invention...cause to be worked’ and granted protection against ‘any other manner copy in the whole or in part, by varying addition to or diminishing from the main design.’

→ Introducing registration with strict demarcations

History of no overlap? - fine art and useful/industrial arts in 18 century

The court ‘dissolved an injunction issued in a copyright case, in part because it was unclear whether the plaintiff’s design for ladies’ fans, which had adapted the principles of telegraphy so women could converse with each other by how they held their fans, was the subject matter of copyrights or of utility patents.’

Clarke v. Cock(s), as reported in the Morning Post and Gazetteer (London), July 24, 1798.



Fan Flirtations.	
Carrying in right hand in front of face.....	<i>Follow me.</i>
Carrying in left hand	<i>Desirous of an acquaintance.</i>
Placing it on the right ear.....	<i>You have changed.</i>
Twirling it in left hand	<i>I wish to get rid of you.</i>
Drawing across forehead	<i>We are watched.</i>
Carrying in right hand	<i>You are too willing.</i>
Drawing through the hand	<i>I hate you.</i>
Twirling in right hand.....	<i>I love another.</i>
Drawing across the cheek.....	<i>I love you.</i>
Closing it.....	<i>I wish to speak to you.</i>
Drawing across the eye.....	<i>I am sorry.</i>
Letting it rest on right cheek.....	<i>Yes.</i>
Letting it rest on left cheek.....	<i>No.</i>
Open and shut	<i>You are cruel.</i>
Dropping.....	<i>We will be friends.</i>
Fanning slow	<i>I am married.</i>
Fanning fast	<i>I am engaged.</i>
With handle to lips.....	<i>Kiss me.</i>
Shut.....	<i>You have changed.</i>
Open wide	<i>Wait for me.</i>

Webster: Strict demarcation



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‘...*the foundation so to speak, or principle upon which the protection rests, is different.* In the case of letters patent, the question of shapes and configuration, as such, rarely arises; they are generally wholly immaterial, and when not wholly immaterial are controlled by other considerations; whereas in *a design everything depends on the patterns, shape and configuration*; and *nothing can be protected beyond or different from the particular shape and configuration*...Many cases may be conceived in which *registration under the Designs Copyright Acts*, may come in aid of letters patent, and *protect the form and configuration* of articles themselves the *subject letters patent*; *but as a general rule, it may be assumed that the subject of protection by one does not admit of protection by the other*...for inasmuch as each act has its own proper objects, ...no protection can be obtained except under one of the acts, a registration under the wrong act is invalid.’ (emphasis added)

Thomas Webster (1851) *The law and practice of Letters Patent for Inventions and Copyright of Designs in the Arts and Manufactures*



However, Turner

‘Either extreme is theoretically possible; the most complex patent may be called a new form... The purpose of utility is absolutely dependent on form, shape, and configuration ; for instance, the cylinder must be continuously connected with the boiler, or the steam will escape... You cannot have principle without special form, any more than you can have respiration without lungs. Then, as to the other extreme, principle is never absent; you might put all useful contrivances to the head of patents.....’

Thomas Turner (1849) On Copyright in Design in Art and Manufactures, London; F.Elsworth, 19 Chancery Lane at 48-49.



Case law ITS Rubber Ltd's application [1979] R.P.C. 318

‘a squash ball characterised by a blue colour which, so the applicant maintained, gave surprisingly enhanced visual impact during play to the consequential advantage of the players.’

- Rejected as it concerned a known subject matter, and although colouration was useful, merely served to present alternative information
- On appeal, Whitford J. overruled because it is NOT nothing more than a known ball of particular colour, the colour 50 being chosen for nothing more than eye appeal.’
- The use of the blue colouring was judged to improve the operation of the claimed subject matter.



EPC History and Now

- » ‘it is a well established rule that the creation of forms attracts protection of design and industrial models and not patents. Likewise, typographic presentation of printed matter relates eventually the law of artistic property.’ *
- » 1970 draft, ‘purely aesthetical creations’ were excluded as (c) and presentation of information was not listed separately
- » EPC 1973 & 2000: Art 52(2) excludes (b) aesthetical creations and (d) presentations of information, *subject to the limitation of ‘as such* under the article 52(3).
- » EPO practice: contribution to non excluded subject matter required. See e.g. T 0119/88 Coloured disk jacket of 25.4.1989, T 1689/07 Colour-changing absorbent article (2009)

*Council of Europe (1953) Document EXP/Brev (53) 18, ‘Etude Comparative Du Droit Materiel Envigueur Dans Les Pays Representes Au Comite D’Experts, (Comparative study on the substantive law in force in the countries represented by the committee of experts,)’ [hereinafter *Comparative Study 1953*], 7 November 1953



Case studies

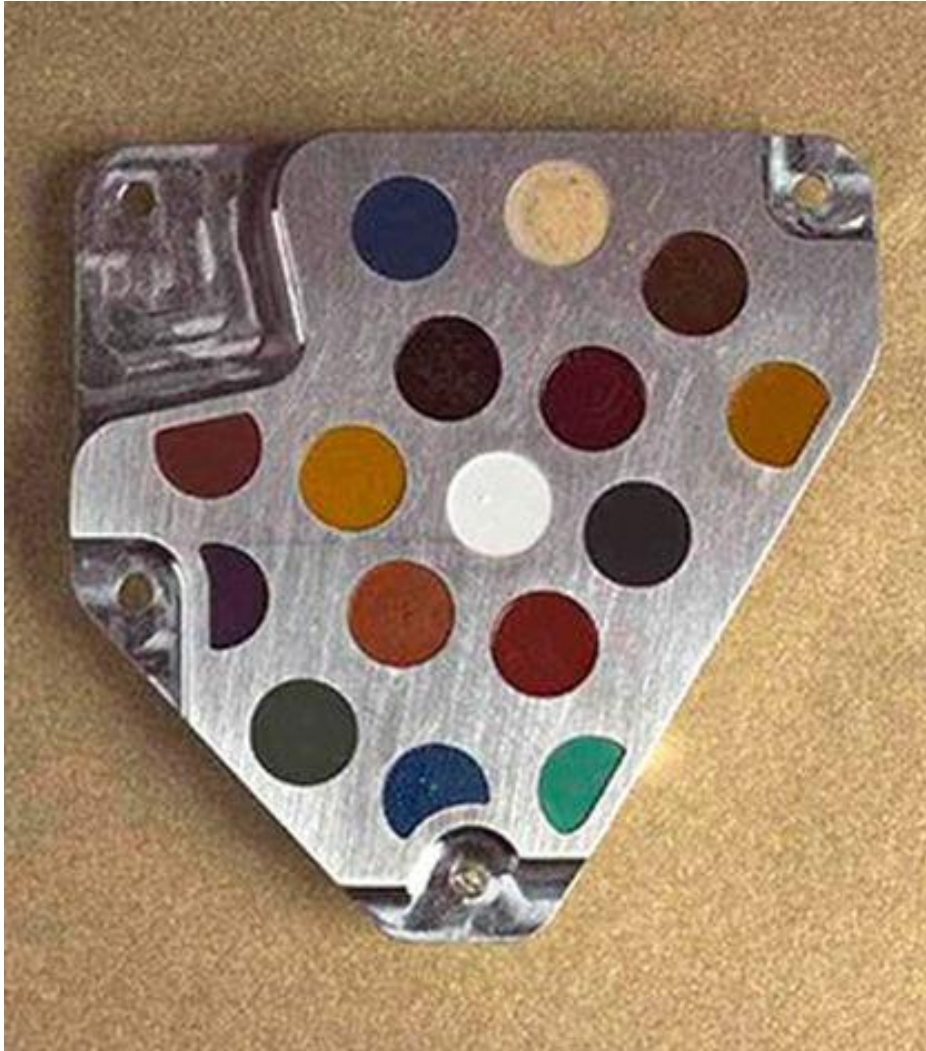
- o. Useful industrial design covered by copyright/design protection as well as patents (for example, C-833/18, CJEU SI and Brompton Bicycle Ltd v Chedech / Get2Get 2020)
 1. Aesthetic expression has technical function
 2. Tools used/assistance determines the aesthetic expression
 3. Hybrid aesthetic innovation: TEAM LAB

1. *Damien Hirst*



Damien Hirst's *English Lilac* (2016), household gloss on canvas
406 x 610mm. Photograph: © Damien Hirst and Science Ltd

Damien Hirst: Art on Mars Beagle 2



The spot painting lends itself to this project and *as an artist all the things you make you want to be useful on some level.* 'The spots were applied with pigment that could withstand the rigours of space flight. The test card was to be used as a reference chart to allow scientists back on Earth to calibrate the probe's equipment.'

Largely based on iron oxides, *each spot contains pigments that provide a reference colour or wavelength signal in the detectors, thus having a technical effect as well as colour itself makes technical contribution*

2. Tool deciding the expression: *AI Art Collective*



Generative Adversarial
Network Artist
Robbie Barrat /GAN –
Portrait of Edmond de
Belamy by 'Obvious'

Is the tool (AI) inherently
patentable or
Is the contribution only to the
excluded subject matter?

$$\min_G \max_D \mathbb{E}_x [\log(D(x))] + \mathbb{E}_z [\log(1 - D(G(z)))]$$



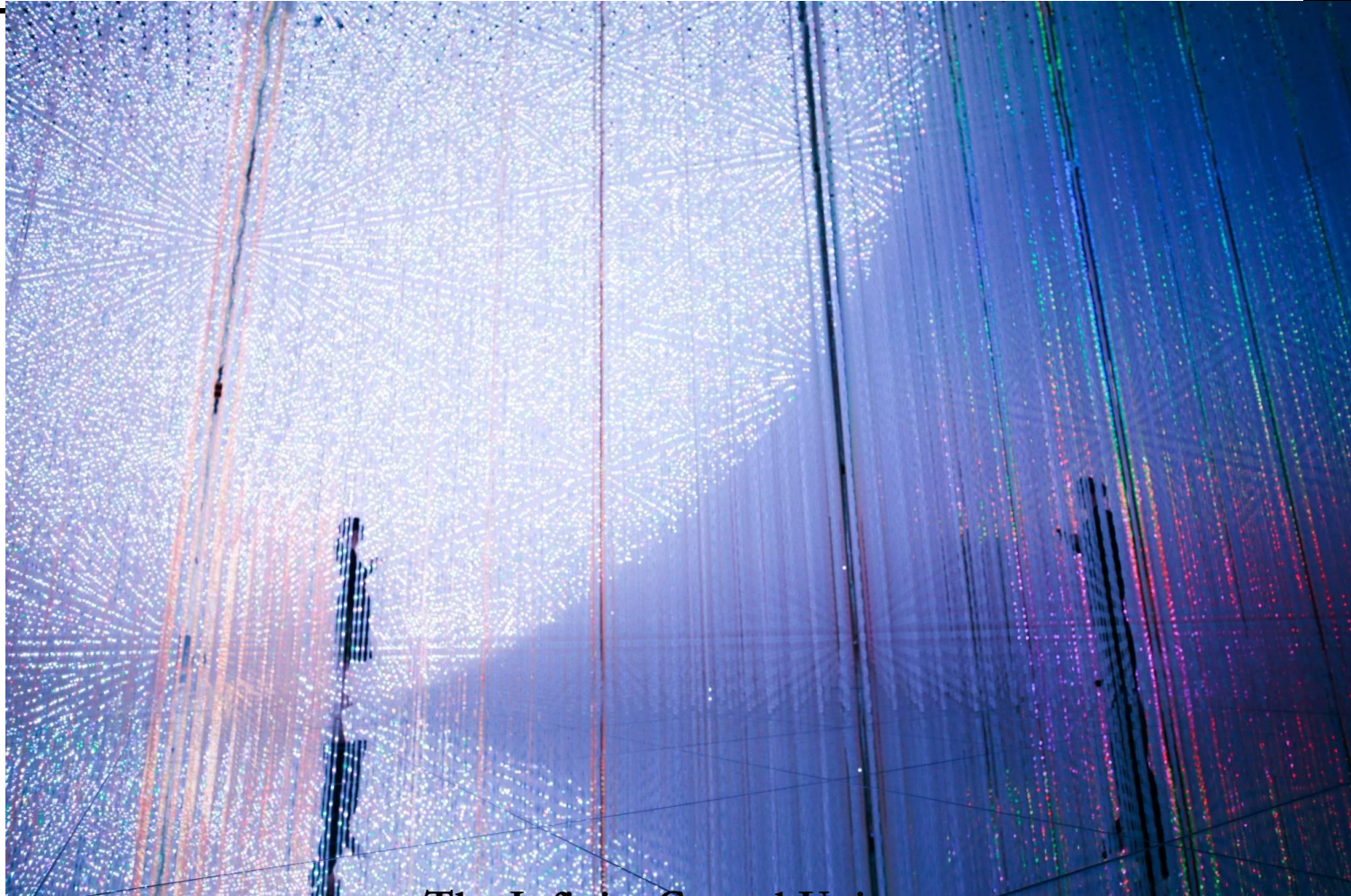
3. *TEAMLAB*

- » Hypertechnologist Art Collective
- » Toshiyuki Inoko
- » an experimental place of ‘collective creation’, in which I could insert myself. As for the name of the artist [appended to the artworks], moreover, it was to be a veritable ‘team laboratory’, a place of experimentation. The kind of people whom I want to come here are those who believe in the importance of a repeated process of collective experimentation for the purpose of creation.
- » In addition, I want to develop new frontiers of beauty that do not fit easily into the existing definitions of value, such as ‘looking cool’ or ‘looking uncool’. My long-cherished ambition has been for our artworks to change viewers’ values and/or behaviour.

3. *A hybrid?*



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The Infinite Crystal Universe,

teamLab, 2018, Interactive Installation of Light Sculpture, LED, Endless, Sound: teamLab
Patnet CN10664399 (Granted in Japan, and US10140759 (B2))

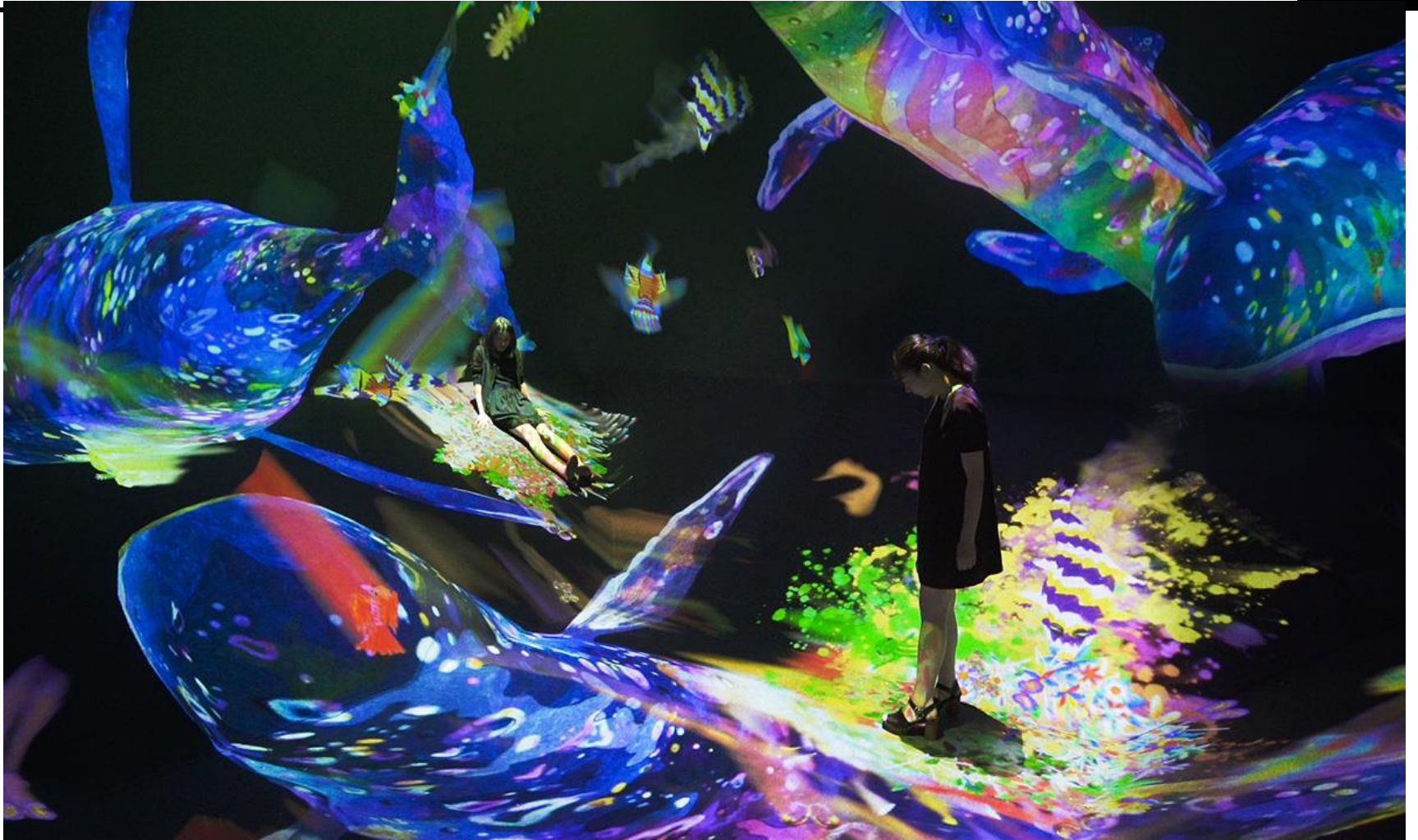


- » The participants walk through mirror covered room with crystal LED lights where either their presence or their interaction with their mobile phone or touch screen generate firework like light display and movement of lights. Participants experience a sense of infinity which they have some roles or controls over the image displayed around them.
- » Patent claims are directed to the technical problem to render a three-dimensional image in real time, which is solved by a method for generating light emission data for a three-dimensional display provided with a plurality of multicolor light emitting elements arranged in three-dimensional directions.

TEAMLAB



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Graffiti Nature: Lost, Immersed and Reborn teamLab, 2018,

Interactive Digital Installation, Sound: Hideaki Takahashi (cf. JP 584846 Painting Display System)



Installation

- » a room equipped with
- » various touch screen like surfaces where their presence generate artwork images such as whales, flowers and fish
- » participants indeed feel that they walked into painting which they can create more images within.

Claim

- » ‘to provide an image display system with which it is possible to elicit the creativity or expressive power of a user’ using a image display system provided with
- » an image capturing device for scanning a physical medium on which an object is drawn and capturing image data,
- » a control device for generating an object image from the image data, and
- » a display device for displaying the object image and the claim for it features an image analysis unit with AI, and
- » AI program database.

Patents?



Title	Publication number	Publication date	Grant
Terminal Device For Position Measurement, Computer Program, And System	TW201903429 (A)	2019-01-16	Pending (first rejection)
Collection System, Program For Terminal, And Collection Method	TW201822034 (A)	2018-06-16	Pending
Three-Dimensional Display And Data Generation Method	CN106664399 (A); CN106664399 (B)	2017-05-10	Granted (CN, JP,US)
Information Provision Device	WO2017042985 (A1)	2017-03-16	Pending (JP) Non entry (DE)
Drawing Image Display System	WO2017026419 (A1)	2017-02-16	Granted (JP) Non entry (EP)
User Participation Event Special Effect System	WO2017002841 (A1)	2017-01-05	Non entry (EP)
Image-Capturing System For Combining Subject And Three-Dimensional Virtual Space In Real Time	US2016343166 (A1)	2016-11-24	Abandoned
Digital Lane Display System And Method	WO2015141803 (A1)	2015-09-24	Granted (JP) Non-entry (EP)
Stage Lighting Method And Stage Lighting System	WO2015002137 (A1)	2015-01-08	Granted (JP) Non-entry (EP)
Audience Participation Television Program Broadcasting Method And System	WO2014189146 (A1)	2014-11-27	Granted (JP) Non-entry (EP)
Digital Signage System	WO2014136517 (A1)	2014-09-12	Granted (JP) Non-entry (EP)
Image Recognition Device, Image Recognition Method, And Image Recognition Program	WO2014092189 (A1)	2014-06-19	Granted (JP) Non-entry (EP)
Hanging-Type Exhibition Instrument And Exhibition System	WO2013168216 (A1)	2013-11-14	Granted (JP) Non-entry (EP)
Mirror Device, Method For Controlling Mirror Device, And Control Program	WO2013108363 (A1)	2013-07-25	Granted (JP) Non-entry (EP)
Image Processing Method, And Image-Processing Program			

Image → **the inventive intent is to create aesthetical effect on the user participation**

Concluding Remarks

Why exclude?

- » Turner, ' ... You cannot have principle without special form, any more than you can have respiration without lungs.....'
- » No longer true - Patent law evolved as a clear and deliberate process of disembodiment
 - Digitalized disembodiment
 - Forms can exist without principles (as data)
 - Principles can exist without forms (as algorithm)
- » Why exclude aesthetical form then?
 - We do not like aesthetical progress incentivized by patent
 - We do not want patent office/technical trained examiners to examine aesthetical contributions of an invention : then who should?
- » Why? Because utilitarian objects are essentially different from aesthetical object (high art v low art?)
 - difficult to maintain hard demarcation



Thank you!

