1. 3-D electrostatic printer using rack and pinion registration system

Date: 2018-06-19 | ID: 10000010

Résumé: 3-D printing system include development stations positioned to electrostatically transfer build and support materials to an intermediate transfer surface, a transfer station adjacent the intermediate transfer surface, guides adjacent the transfer station, and platens moving on the guides. The guides are shaped to direct the platens to repeatedly pass the transfer station and come in contact with the intermediate transfer surface at the transfer station. The intermediate transfer surface transfers a layer of the build and support materials to the platens each time the platens contact the intermediate transfer surface at the transfer station to successively form layers of the build and support materials on the platens. The platens and the intermediate transfer surface include rack and pinion structures that temporarily join at the transfer station, as the platens pass the transfer station, to align the platens with the intermediate transfer surface as the platens contact the intermediate transfer surface.

2. Apparatus and method for control of three-dimensional printing

Date: 2018-06-19 | ID: 10000024

Résumé: An apparatus for controlling 3D printing includes an output determiner configured to determine, after generating a first control command to output a 3D object, whether an additional 3D object is able to be output through an output task for the 3D object, and a control command generator configured to generate a second control command to output a not-yet-output part of the 3D object and the additional 3D object if it is determined that the additional 3D object is able to be output through the output task.

3. Methods for rejuvenating an imaging member of an ink-based digital printing system

Date: 2018-06-19 | ID: 10000052

Résumé: Disclosed herein are methods for an ink-based digital printing system, comprising providing an imaging member a reimageable surface layer disposed on a structural mounting layer, the reimageable surface layer comprising a fluorosilicone elastomer and an infrared-absorbing filler comprising carbon black, and a plurality of surface defects on the reimageable surface layer, wherein the surface defects comprises carbon black exposed through the fluorosilicone elastomer of the reimageable surface layer. The method also comprises applying a coating of rejuvenating oil comprising an amino-functional organopolysiloxane to the reimageable surface layer, whereby at least a portion of the plurality of surface defects are coated by the amino-functional organopolysiloxane, thereby rejuvenating the imaging member.

4. Web displacer for a printing unit

Date: 2018-06-19 | ID: 10000053

Résumé: A printing press is provided which includes a printing unit for printing on a web. The printing unit includes a plate cylinder, a blanket cylinder, and an impression cylinder. The press further includes a web displacement bar movable between a first position in which the web displacement bar is spaced apart from a web passing between the blanket cylinder and the impression cylinder, and a second position in which the web displacement bar holds the web in contact with the impression cylinder and spaced apart from the blanket cylinder. A method of operating the press is also provided.

5. Method for operating a printing press

Date: 2018-06-19 | ID: 10000055

Résumé: A method of operating a sheet-fed printing press includes storing various print jobs and/or associated setting values and process steps in a memory device to set up the printing press upon a job change. A computer implements or suggests settings or process steps of the printing press for a print job based on the job data of a print job and/or as a result of inputs by the operator. Before or immediately after a print job is completed, the computer generates a query requesting inputs that determine if the same print job requires further passes and if so, which passes are required and, based on the information input therein, implements only those settings on the printing press and/or initiates or suggests only those process steps that are necessary for the subsequent pass of the sheets that have already been printed.

6. Screen printing apparatus and paste kneading method

Date: 2018-06-19 | ID: 10000056

Résumé: A screen printing apparatus includes a pair of clampers that clamp a substrate, a mask plate contacted to the substrate, a pair of squeegees provided above the mask plate vertically, and a squeegee controller that selectively controls one of the pair of squeegees to move in the horizontal direction in abutment against the mask plate so that the selected one of the pair of squeegees slides on the mask plate.

7. Controlling nozzles in a print head

Date: 2018-06-19 | ID: 10000057

Résumé: Certain examples described herein relate to printing systems and methods of operating the same. In an example of a printing system, a nozzle diagnostic mechanism obtains information relating to a condition of a first nozzle set of a print head following a first period of an established printing operation, and a nozzle compensator receives information relating to the condition of the first nozzle set from the nozzle diagnostic mechanism. Based on the received information, the nozzle compensator then causes a second nozzle set of the print head to be operated in place of the first nozzle set of the print head during a second period of the established printing operation. In an example of a method of operating a printing system, status information

that relates to a condition of a first nozzle set of a print head is determined during a print production operation. A second nozzle set of the print head is then caused, based on the status information determined, to be operated in place of the first nozzle set to continue the print production operation.

8. Printing apparatus and transmission cable

Date: 2018-06-19 | ID: 10000059

Résumé: A printing apparatus including a voltage signal generation circuit configured to generate a plurality of voltage signals including a first voltage signal and a second voltage signal; and at least one transmission cable configured to transmit the plurality of voltage signals, the transmission cable including a first tubular conductor including a hollow core and configured to transmit the first voltage signal, a second tubular conductor disposed over an outer circumference of the first tubular conductor with a first insulator between the outer circumference of the first tubular conductor and an inner circumference of the second tubular conductor and being in a constant-voltage applied state, and a third tubular conductor disposed over an outer circumference of the second tubular conductor with a second insulator between the outer circumference of the second tubular conductor and an inner circumference of the third tubular conductor and configured to transmit the second voltage signal.

9. Inkjet printing system having dynamically controlled ink reservoir

Date: 2018-06-19 | ID: 10000065

Résumé: An inkjet printing system includes an ink reservoir defining a longitudinal axis, an ink-receiving chamber and a control chamber. A control fluid source delivers a control fluid across a range of pressure levels to the control chamber, and an orientation sensor determines an orientation of the longitudinal axis of the ink reservoir and generates an orientation signal. A processor is operably coupled to the control fluid source and the orientation sensor, the processor being programmed to infer an angle of the longitudinal axis relative to the vertical reference axis based on the orientation signal from the orientation sensor, determine a desired pressure for the control chamber based, at least in part, on the inferred angle of the longitudinal axis, and control the control fluid source to adjust the actual pressure level in the control chamber to the desired pressure for the control chamber.

10. Multi-drop inkjet printing apparatus

Date: 2018-06-19 | ID: 10000068

Résumé: A controller changes a droplet number larger than a second maximum droplet number among droplet numbers in first droplet data for each ink color to the second maximum droplet number. The controller, for each of certain pixels with a droplet number of black decreased to the second maximum droplet

number, performs at least one of a first processing or a second processing. The first processing includes distributing a droplet number subtracted to decrease the droplet number of black to pixels surrounding the certain pixel in the first droplet data for black. The second processing includes adding the subtracted droplet number to a droplet number for the certain pixel in the first droplet data for a color other than black.

11. Printer and printer control method

Date: 2018-06-19 | ID: 10000070

Résumé: According to one embodiment, a thermal head is provided opposite to a platen roller. A ribbon transport unit transports an ink ribbon between the thermal head and the platen roller. A transport unit transports a sheet carrying a label between the thermal head and the platen roller. A clamping mechanism clamps the ink ribbon, a printing area of the label and the sheet in the thermal head and the platen roller. An acquisition unit acquires first print data to be printed on a first label and second print data to be printed on a second label. A non-printing area specifying unit specifies a non-printing area on the sheet, based on the first print data and the second print data. The control unit separates the ink ribbon and the sheet when it is transported between the thermal head and the platen roller, and stops the transport of the ink ribbon.

12. Ribbon feeding apparatus, and tape printing apparatus equipped with the same

Date: 2018-06-19 | ID: 10000071

Résumé: An apparatus includes: a delivering-side gear train that transmits motive power to a delivering-side drive shaft; an winding-side gear train that transmits motive power to an winding-side drive shaft; a second clutch mechanism that connects the drive motor and the delivering-side gear train to each other in accordance with reverse rotation of the drive motor and disconnects the drive motor and the delivering-side gear train from each other in accordance with forward rotation of the drive motor; and a first clutch mechanism that is provided upstream of the second clutch mechanism, connects the drive motor and the winding-side gear train to each other in accordance with the forward rotation of the drive motor, and disconnects the drive motor and the winding-side gear train from each other in accordance with the reverse rotation of the drive motor.

13. Printer and printing jig

Date: 2018-06-19 | ID: 10000072

Résumé: A printer includes a table, a print head, a detector, and a controller. The controller includes a storage to store initial print data including information of reference position marks, a reader to acquire, using the detector, positional information of position detection marks, a print data generator to modify the initial print data such that the reference position marks each coincide with an associated one of the position detection

marks acquired by the reader, thus generating actual print data; and a printing controller to perform printing in accordance with the actual print data.

14. Apparatus and method for printing on a curved glass surface

Date: 2018-06-19 | ID: 10000073

Résumé: Embodiments of the invention are directed to systems and methods for printing on a convex or concave glass surface and for an apparatus for holding the one or more work pieces for printing. The invention operatively couples one or more curved pieces in a mounting fixture, wherein each of the one or more curved pieces comprise a convex surface or a concave surface. Furthermore, the invention accesses a flattened image of the convex outer surface or the concave inner surface of one or more generally curved pieces and disposes pigment on the convex surface or the concave surface of the one or more curved pieces according to the flattened image. Further embodiments may be directed towards printing on curved pieces such as glass eyes.

15. Multilayer imaging with a high-gloss clear ink layer

Date: 2018-06-19 | ID: 10000075

Résumé: Various embodiments concern inkjet printing systems designed for multilayer imaging with a high-gloss clear ink layer. More specifically, the inkjet printing systems are designed so that clear, curable inks are provided additional time to level out before being cured. The settling process enables the inkjet printing systems to produce multilayer images having high gloss values. For example, a bracket could be attached to a curing assembly that prevents radiation from striking a certain portion of the substrate onto which clear ink has recently been deposited. As another example, an inactive array of light-emitting diodes may be disposed in line with the print head(s) responsible for depositing clear ink. Moreover, various embodiments also allow for true multilayer printing of a color coat and a high-gloss clear coat in a single step (e.g., by arranging print heads into rows within a printer carriage).

16. Printing device including holder supporting platen roller through bearings

Date: 2018-06-19 | ID: 10000079

Résumé: A printing device includes a platen roller, a pair of bearings, and a holder including a pair of fitting portions to which the bearings are fitted. The bearings rotatably support a rotational shaft of the platen roller. Each bearing includes a small-diameter portion, a large-diameter portion coaxially connected to the small-diameter portion, and a protrusion provided at an outer circumferential surface of the small-diameter portion. The larger-diameter portion has a peripheral surface and an end face connecting the peripheral surface to the outer circumferential surface. Each fitting portion includes: a receiving portion configured to

receive the small-diameter portion; an opening to which the protrusion is fitted; and a receiving surface configured to contact the end face of the large-diameter portion from outward in an axial direction of the rotational shaft. At least one of the end face and the receiving surface includes a recessed portion.

17. Thermosensitive recording medium

Date: 2018-06-19 | ID: 10000083

Résumé: A thermosensitive recording medium is provided that is excellent in heat discoloration resistance in the blank portions and in bar code readability. It also has excellent water resistance and printing (recording) run-ability. The thermosensitive recording medium includes a support, a thermosensitive recording layer installed on the support, and a protective layer on the thermosensitive recording layer. The thermosensitive recording layer contains two kinds of electron accepting color developing agents, a sulfonic acid compound and a diphenyl sulfone compound. Both the thermosensitive recording layer and the protective layer contain crosslinking agents, and at least one, and preferably both, of the thermosensitive recording layer and the protective layer contain an ammonium zirconium carbonate as the crosslinking agent.

18. Device and method for transferring flowable printing substances onto a printing material

Date: 2018-06-19 | ID: 10000085

Résumé: A printer's form for transferring a flowable printing substance onto a printing material to be printed on includes a body having a surface, which surface has a plurality of openings, a plurality of cavities in the body, which cavities end in the openings of the surface of the body and contain gas, wherein each cavity is bounded by a wall, which adjoins the opening and surrounds the cavity, and devices associated with each cavity for producing an overpressure in the cavity in question. At least parts of the surface of the body and/or the wall surfaces of the walls of at least some cavities include a first wall region, which is near the opening and which is composed of a surface that can be wetted with the printing substance.

19. Method and apparatus for parking lot metering using activation codes

Date: 2018-06-19 | ID: 10000128

Résumé: Embodiments of the present invention allow multi-space meters and gated parking systems to separately manage and control electric vehicle charging stations located in conjunction with parking spaces. Control is implemented by the meters or other management systems providing codes, for example by printing them on a parking pass or receipt. When entered into the electric vehicle charging station, the code initiates a predetermined interval of charging, or an interval of charging selected by the patron during a transaction with the meter. The code is typically a multi-digit number, and may be encrypted to resist fraud. Data representative of the receipt, including the code, may be made available from an online server and delivered

to a parking patron's smartphone or other portable device, whereby parking and vehicle charging may be obtained without first visiting a parking management kiosk and then returning to the vehicle to initiate charging.

20. Self-repair structures and methods for making the same

Date: 2018-06-19 | ID: 10000299

Résumé: Methods and apparatuses are disclosed relating to multilayer 3D textile composite materials containing self-healing resins for use as protective structures on stationary objects, and moving objects including, without limitation, vehicles including spacecraft and aircraft.

21. Air vortex assisted sheet flipping device

Date: 2018-06-19 | ID: 10000353

Résumé: A sheet flipping device includes a receiving member for receiving a sheet, a flipping volume being the volume which in operation is defined by the flipping movement of the sheet, and a flipping element for flipping the sheet around an axis of rotation within the flipping volume onto the receiving member. The sheet flipping device further includes an air vortex ring generator having an air vortex ring exit nozzle defining a translational direction of a generated air vortex ring when the generated vortex ring is in operation generated from the air vortex ring exit nozzle. The air vortex ring generator is mounted such that in operation the sheet is urged onto the receiving member by the air vortex ring during the flipping motion of the sheet through the flipping volume. A sheet stacking device and a printing apparatus include the sheet flipping device.

22. Photo-curable ink composition

Date: 2018-06-19 | ID: 10000648

Résumé: A photo-curable ink composition including an acrylic polymer or copolymer, a vinyl ester component, a multifunctional monomer, a photoinitiator and a pigment. Also disclosed herein is a method for forming a printed article and an ink-jet ink printing system using said photo-curable ink composition.

23. Printing ink dispersions comprising discrete carbon nanotubes

Date: 2018-06-19 | ID: 10000653

Résumé: This present invention relates to oxidized, discrete carbon nanotubes in dispersions, especially for use in printing inks. The dispersions can include materials such as elastomers, thermosets and thermoplastics or aqueous dispersions of open-ended carbon nanotubes with additives. A further feature of this invention relates to the development of a dispersion of oxidized, discrete carbon nanotubes that are electrically conductive.

24. Hair extension drying apparatus

Date: 2018-06-19 | ID: 10000887

Résumé: A hair extension drying apparatus that comprises of a pedestal having a left, a right, a front, and a rear side. A column that is attached to the pedestal. A platform that that has a front and a rear side, the front side of the platform defines a vertical wall has a top and a bottom side, the top side of the vertical wall has a swivel, and the platform is attached to the column. A 3d L-shaped top that attaches to the swivel so that the vertical wall of the platform is flush with the 3d L-shaped top, the L-shaped top has a top and a bottom, the bottom side of the 3d L-shaped top defines a centrally positioned vertical wall that defines an aperture. A pair of springs, each spring is secured to the platform and the 3d L-shaped top so that the springs are aligned parallel to the front side of the platform, the springs are positioned at a location that is adjacent to the rear side of the platform. A line that is attached to the aperture of the centrally positioned vertical wall. And, a pedal that has a pedal swivel that is secured to the base and that attaches to the line so that pedal is always in an upward position toward the rear side of the pedestal.

25. Applique to provide a design on a fabric

Date: 2018-06-19 | ID: 10000888

Résumé: An appliqué of the invention comprises a disposable carrier film onto which a release layer and PU inks are printed using layering techniques. The ink layers can be multicolored and each color is applied sequentially using a conventional screen-printing method. A back-up, a lacquer layer, and an adhesive layer are printed in sequence over the ink layers. The ink includes reflective particles providing the optical effect of a 3-dimensional appliqué. The artwork is created by overlapping design layers to controlled specification sequences. The ink, because of the additives, creates a desired color tone, and this may be enhanced by layering of the ink in an overlapping region. Thus, there are three main regions, namely a central region with reflective ink, a shoulder region with overlapping matt and reflective inks and an outer region with only matt ink.

26. Beautification and privacy fence panel system and uses thereof

Date: 2018-06-19 | ID: 10000943

Résumé: An interlocking plastic fence panel system is described herein that improves the appearance, provides privacy and acts as a wind screen for preexisting chain link fencing. The complementary edges of the panels allow two adjacent panels to be positively joined such that displacement of the panels away from one another is prevented. The interlocking panels are attached with fasteners and can positioned vertically, horizontally, diagonally or any varying angel in between. A decorative texture and or printing can be applied

to the surface to enhance the appearance. For example, wood grain texture and printed imagery or advertisements.

27. Custom printed lamp shade

Date: 2018-06-19 | ID: 10001255

Résumé: The present invention generally concerns a custom lampshade with a digital print. More specifically, the lamp shade includes an end cap that joins with printing substrates capable of passing light. At least one end cap is used to shape and support a substrate having a digital image printed on at least one of its surfaces. The end cap has a center aperture with a diameter sized to accept a threaded portion of a shade rest or a diameter that is sized to accept a lamp socket. The end cap has an outer channel sized to accept the edges of a transparent substrate material. In another embodiment, the end cap is devoid of an outer channel, but is joined about its outer diameter with a translucent substrate material via an adhesive. When the lamp shade is used, a light source illuminates the digital image printed on either substrate.

28. Using 3D computed tomography to analyze shaped charge explosives

Date: 2018-06-19 | ID: 10001447

Résumé: A method may include positioning at least one calibration disk in a computed tomography (CT) scanner and positioning a pellet in the CT scanner. The at least one calibration disk and the pellet may both be made of a same powder exhibiting a known density. The method may further include scanning the at least one calibration disk and the pellet using the CT scanner to obtain one or more CT images of the pellet and the at least one calibration disk, and comparing a density of the pellet with the known density of the at least one calibration disk based on the one or more CT images.

29. 3D determination of cell chirality

Date: 2018-06-19 | ID: 10001472

Résumé: Described herein is a method for determining chirality of a cell. The method includes culturing a cell on a base layer having a cell growth material. The method includes forming a top layer on the base layer after the cell has attached to the base layer, the top layer having a cell growth material. The base layer and the top layer form a graded 3D substrate. The intrinsic bias of the cell is determined from the directionality of spontaneous cell rotation.

30. Retroreflector display system for generating floating image effects

Date: 2018-06-19 | ID: 10001654

Résumé: A display system is provided that combines the use of a display element with a beamsplitter and at

least one retroreflector to provide an image (2D or 3D depending upon the output image from the display element) that appears to be floating in space some distance from the beamsplitter. For example, light that is bounced off/reflected and/or that is transmitted through the beamsplitter may be reflected from the reflective surface of the retroreflector toward the beamsplitter. The beamsplitter directs this light, through reflection or transmission, into a viewing space such that the 2D or 3D image can be viewed by a viewer as it appears to float a distance from the nearest surface of the beamsplitter and, typically, some distance above the ground/floor upon which viewers are walking. The floating image may be relatively bright so that it is viewable in low and brighter light conditions.

31. Liquid crystal grating, method of manufacturing the same and display apparatus

Date: 2018-06-19 | ID: 10001666

Résumé: The disclosure discloses a liquid crystal grating and a method of manufacturing the same and a display apparatus, and belongs to the field of display apparatus. The liquid crystal grating comprises a polymer network layer, which comprises liquid crystal and a polymer network allowing the liquid crystal to arrange in a preset manner by the anchoring effect. The polymer network is a polymer network formed by the polymerization of a reactive monomer and a photoinitiator. The polymer network layer may further comprise a copolymer used for entangling the polymer network and adhering the polymer network to the first transparent electrode. The liquid crystal grating may be used in naked-eye 3D display.

32. Developing sections for digital printing presses, controllers and methods

Date: 2018-06-19 | ID: 10001729

Résumé: A developing section for a digital printing press includes a controller to control a development unit such that a configuration of the development unit is to be in a first state or a second state based on a determination by the controller comparing a location of a portion of the surface of a photo imaging member presented to the development unit with a location of a transition between an image portion and a portion of the surface of the photo imaging member not in the image portion.

33. Image forming apparatus

Date: 2018-06-19 | ID: 10001739

Résumé: An image forming apparatus with a duplex printing function may include a closeable and openable portion. In one example, the portion may correspond to a cover of the image forming apparatus. The cover may include guiding portions configured to define a return path for duplex printing. In another example, the portion may correspond to a document reading unit including an outer casing. A portion of the outer casing may be configured to guide a recording sheet that is conveyed out of a housing of the image forming

apparatus by a switchback roller. In one example, the switchback roller may convey a recording sheet to a position above an upper surface of the outer casing.

34. Mapping type three-dimensional interaction apparatus and method

Date: 2018-06-19 | ID: 10001841

Résumé: Provided are a three-dimensional (3D) interaction apparatus and method for providing a user interaction service for a 3D image. The 3D interaction apparatus includes a memory including computer-executable instructions, a processor configured to read and execute the computer-executable instructions, an action calculator configured to calculate 3D action information corresponding to an action of a user, a mapping information calculator configured to calculate a manipulation position in a coordinate system of the 3D image matching each of coordinate values of the 3D action information, based on the 3D action information and 3D information of each of features of the 3D image, and an interaction controller configured to, when an arbitrary image processing request based on an action of a user is made for the calculated manipulation position, perform a corresponding image processing operation and display a 3D image obtained through the performed image processing operation.

35. 3D silhouette sensing system

Date: 2018-06-19 | ID: 10001845

Résumé: A 3D silhouette sensing system is described which comprises a stereo camera and a light source. In an embodiment, a 3D sensing module triggers the capture of pairs of images by the stereo camera at the same time that the light source illuminates the scene. A series of pairs of images may be captured at a predefined frame rate. Each pair of images is then analyzed to track both a retroreflector in the scene, which can be moved relative to the stereo camera, and an object which is between the retroreflector and the stereo camera and therefore partially occludes the retroreflector. In processing the image pairs, silhouettes are extracted for each of the retroreflector and the object and these are used to generate a 3D contour for each of the retroreflector and object.

36. Information processing apparatus, method for controlling the same, and storage medium to identify a function of a register printing apparatus based on printing apparatus type and to display a print screen based on identified function

Date: 2018-06-19 | ID: 10001954

Résumé: An information processing apparatus displays a print setting screen based on configuration setting information of a selected device type. The printing setting information set via the print setting screen is used

along with print data to generate a print job that is sent to a selected printer.

37. Method of handling a print job submitted to a cloud printing service, and associated user credentials, for processing by an authenticated printing system and system for performing the method

Date: 2018-06-19 | ID: 10001955

Résumé: Due to different formats for print jobs, in particular different means of identifying users, it is a problem how to handle a print job submitted to a cloud printing service, in which a user is identified by first user credentials, for processing by an authenticated printing system for which the user is identified by second user credentials. This problem is solved by a method comprising the steps of: i. obtaining the print job from the cloud printing service, the print job comprising print job metadata comprising the first user credentials, ii. obtaining the second user credentials based on the first user credentials, iii, adding the second user credentials to the metadata, and iv. forwarding at least the print job metadata comprising the second user credentials, to the authenticated printing system for the processing. A system for performing the method is also provided.

38. Management apparatus, control method for the management apparatus, and storage medium

Date: 2018-06-19 | ID: 10001958

Résumé: Sorting criteria for separating a printing job and a post-processing job included in an input job ticket are registered in a management apparatus that communicates with a specific device. With this configuration, the printing job of an input job ticket is analyzed on a basis of the registered sorting criteria, and separation into the printing job that should be processed by a printing device and the post-processing job that should be processed by a post-processing device is performed.

39. User interface for redirection of print jobs

Date: 2018-06-19 | ID: 10001959

Résumé: The present disclosure is directed to a method and user interface for redirecting print jobs. The method involves receiving a notification indicating that execution of a print job at a first printing device failed. The method also involves displaying a network printing device map on a display unit in response to receiving the notification. The network printing device map is a graphical representation of a network topology of a plurality of printing devices within a local network. The method further involves receiving an input gesture indicative of a selection of a second printing device of the plurality of printing devices with which to execute

the print job. Additionally, the method involves causing the first printing device to transmit the print job to the second printing device upon receiving the input gesture.

40. Method for interactive catalog for 3D objects within the 2D environment

Date: 2018-06-19 | ID: 10002208

Résumé: Example systems and methods for virtual visualization of a three-dimensional (3D) model of an object in a two-dimensional (2D) environment. The method may include providing an interactive catalog associated with the 3D model of the object while positioning the 3D model of the object onto the 2D environment. In one aspect, the method may include price and product detail information associated with the 3D model of the object.

41. Post-disaster assessment systems and methods

Date: 2018-06-19 | ID: 10002339

Résumé: A disaster assessment system is presented. The disaster assessment system generates one or more impact reports detailing the nature of how a disaster has impacted a building site based on sensor data associated with the building site that is collected after the disaster. According to one aspect of the inventive subject matter, the disaster assessment system includes a sensor platform, a pre-disaster database, a historic disaster database, and an impact assessment engine. The sensor platform obtains sensor data reflecting a building site before, during, and/or after an event. The impact assessment engine derives a pre-event 3D model based on sensor data collected by the sensor platform before the event, and derives a post-event 3D model based on sensor data collected by the sensor platform after the event. The impact assessment engine then generates the impact reports based on a difference between the pre-event 3D model and the post-event 3D model.

42. Infrared driven item recommendations

Date: 2018-06-19 | ID: 10002377

Résumé: Techniques for detecting dimensions of an object from a three dimensional (3D) image may be provided. Dimensions of an object may be determined based upon a received 3D image and calibration information for calibrating a dimension related to the 3D image. The calibration information may be utilized for calibrating aspect ratios of the 3D image. In an example, a recommended item may be identified and presented to the user based on the determined dimensions of the object.

43. Method and apparatus for enhancing 3D model resolution

Date: 2018-06-19 | ID: 10002407

Résumé: Systems and methods of enhancing the resolution or restoring details associated with high resolution images into a filtered digital surface model (DSM) for location-based applications and analyses. The disclosed methods include mapping the changing gray scale values (intensity) from the images to changes in elevation in the DSM using a regression over a local neighborhood of pixels. Further, the disclosed methods do not rely on information about the sensor illumination geometry, and are extendable to be able to utilize any types of images. Additionally, the disclosed embodiments are sensor agnostic. That is, the disclosed methods can be applied on any type of images collected by any type of sensor.

44. Image processing system and method to reconstruct a three-dimensional (3D) anatomical surface

Date: 2018-06-19 | ID: 10002424

Résumé: Various aspects of an image-processing system and method to reconstruct a three-dimensional (3D) anatomical surface of an anatomical portion are disclosed herein. The system includes an image-processing device configured to receive a plurality of stereo images of the anatomical portion. A first set of key points with a point density greater than a threshold value is identified. A second set of key points is determined based on filtration of one or more outlier key points from the identified first set of key points. A 3D anatomical surface of the anatomical portion is reconstructed based on disparity of one or more matched key points in the determined second set of key points and a smoothing operation performed on the disparity.

45. Locating a feature for robotic guidance

Date: 2018-06-19 | ID: 10002431

Résumé: Aspects herein use a feature detection system to visually identify a feature on a component. The feature detection system includes at least two cameras that capture images of the feature from different angles or perspectives. From these images, the system generates a 3D point cloud of the components in the images. Instead of projecting the boundaries of features onto the point cloud directly, the aspects herein identify predefined geometric shapes in the 3D point cloud. The system then projects pixel locations of the feature's boundaries onto the identified geometric shapes in the point cloud. Doing so yields the 3D coordinates of the feature which then can be used by a robot to perform a manufacturing process.

46. Method and electronic device of identifying redundant data

Date: 2018-06-19 | ID: 10002437

Résumé: An electronic device and method determines redundant data by obtaining a reference data patch and a comparative data patch, selecting at least one reference data point from the reference 3D data patch and at least one comparative data point from the comparative 3D data patch, and combining the reference

data point and the data points in the reference 3D data patch which are adjacent to a pixel coordinate of the reference data point to form a triangular patch. A determination is made whether a distance between the reference data point and the comparative data point in a pair of nearest points is greater than a second distance threshold to determine the redundant data.

47. Placement of augmented reality objects using a guide marker

Date: 2018-06-19 | ID: 10002442

Résumé: In some implementations, a system may include a camera, a display, one or more memories, and one or more processors communicatively coupled to the one or more memories. The system may output a guide marker for presentation on the display. The guide marker may be superimposed on an image being captured by the camera and presented on the display. The system may determine three-dimensional (3D) coordinates of an intersection point associated with the guide marker. The intersection point may be a point where a projection of the guide marker into 3D space intersects with a horizontal plane identified in the image. The system may determine two-dimensional (2D) coordinates for presentation of an augmented reality object on the display based on the 3D coordinates of the intersection point. The system may superimpose a representation of the augmented reality object on the image based on the 2D coordinates.

48. System and method for resolving artifacts in four-dimensional angiographic data

Date: 2018-06-19 | ID: 10002445

Résumé: A system and method are provided for medical imaging that includes acquiring, during a common imaging acquisition process, rotational, x-ray volume image data and x-ray tomosynthesis image data from a subject. The method includes reconstructing a time-resolved three-dimensional (3D) image volume from the rotational, x-ray volume image data and producing a four-dimensional (4D) image series of the subject with resolved overlapping features by selectively combining the time-resolved 3D image volume and the x-ray tomosynthesis imaging data.

49. Creation of bounding boxes on a 3D modeled assembly

Date: 2018-06-19 | ID: 10002465

Résumé: A computer-implemented method for creating a set of bounding boxes on a three-dimensional modeled assembly in a three-dimensional scene. The method comprises providing three-dimensional modeled objects forming a three-dimensional modeled assembly in a three-dimensional scene; computing a main bounding box encompassing the three-dimensional modeled assembly, creating a set of three-dimensional modeled objects that meet at least one property of the three-dimensional modeled assembly, computing two or more bounding boxes encompassed by the main bounding box, one of the two

or more bounding boxes comprising the three-dimensional modeled objects of the set.

50. Method, apparatus for display compensation and display device

Date: 2018-06-19 | ID: 10002574

Résumé: A display compensation method is applied to a shutter 3D display device including a display panel and a backlight module, wherein the backlight module includes a first light source and a second light source, the display panel includes a plurality of first display regions, the backlight module includes a plurality of first backlight regions corresponding to the plurality of first display regions respectively; the display compensation method includes: turning on the first light source of the first backlight region; acquiring the brightness of the backlight module under a condition that the first light source is turned on; determining whether the brightness is within a preset brightness range; turning on the second light source of the first backlight region if the brightness is within the preset brightness range, so as to perform a display brightness compensation for a displaying picture.

51. Wireless charging device for an electronic device

Date: 2018-06-19 | ID: 10002709

Résumé: A method of making a wireless charging device for an electronic device includes printing a decoration layer on a surface of a glass or glass-ceramic substrate using a non-conductive ink. A coil is printed on the decoration layer, and an electromagnetic interference absorber layer is applied over the printed coil.

52. Vapor phase etching of hafnia and zirconia

Date: 2018-06-19 | ID: 10002772

Résumé: A method is described for vapor phase etching of oxide material including at least one of hafnia (HfO_2) and zirconia (ZrO_2), in the absence of plasma exposure of the oxide material. The method involves contacting the oxide material with an etching medium including at least one of phosphorus chloride and tungsten chloride under conditions producing a removable fluid reaction product, and removing the removable fluid reaction product. The etching process may be controllably carried out by use of pressure swings, temperature swings, and/or modulation of partial pressure of Hf or Zr chloride in the reaction, e.g., to achieve precision etch removal in the manufacture of semiconductor devices such as 3D NAND, sub-20 nm DRAMs, and finFETs.

53. Staircase encapsulation in 3D NAND fabrication

Date: 2018-06-19 | ID: 10002787

Résumé: Methods and apparatuses for depositing an encapsulation layer over a staircase structure during fabrication of a 3D NAND structure to prevent degradation of an oxide-oxide interface and to prevent punchthrough of a wordline are provided. The encapsulation layer is a carbon-containing conformal film deposited over a staircase structure of alternating oxide and nitride layers prior to depositing oxide over the staircase structure.

54. Method for remapping a packaged extracted die with 3D printed bond connections

Date: 2018-06-19 | ID: 10002846

Résumé: A method is provided. The method includes removing an extracted die including an original ball bond from a previous packaged integrated circuit, bonding the extracted die to an interposer to create a remapped extracted die, 3D printing one or more first bond connections between one or more original bond pads of the extracted die and one or more first bond pads of the interposer, securing the remapped extracted die to a package base, and 3D printing one or more second bond connections between one or more second bond pads of the interposer and one or more package leads or downbonds of the package base. The one or more first and second bond connections conform to the shapes and surfaces of the extracted die, the interposer, and the package base.

55. 3D semiconductor structure and device

Date: 2018-06-19 | ID: 10002865

Résumé: A 3D structure, the structure including: a first stratum overlaid by a second stratum, the second stratum is less than two microns thick, where the first stratum includes an array of memory cells including at least four rows of memory cells, each of the rows is controlled by a bit-line, where the array of memory cells includes a plurality of columns of memory cells, each of the columns is controlled by a word-line, and where the second stratum includes memory control circuits directly connected to the bit-lines and the word-lines, where the second stratum includes a first layer including first transistors and a second layer including second transistors, where the first layer includes a first bus, the first bus interconnecting a plurality of first logic units, where the second layer includes a second bus, the second bus interconnecting a plurality of second logic units.

56. Three-dimensional vertical one-time-programmable memory

Date: 2018-06-19 | ID: 10002872

Résumé: The present invention discloses a three-dimensional vertical one-time-programmable memory (3D-OTPV). It comprises a plurality of vertical OTP strings formed side-by-side on a substrate circuit. Each OTP string comprises a plurality of vertically stacked OTP cells. Each OTP cell comprises an antifuse layer.

The horizontal address lines and the vertical address lines comprise oppositely-doped semiconductor materials.

57. Three-dimensional semiconductor devices and fabricating methods thereof

Date: 2018-06-19 | ID: 10002877

Résumé: A three-dimensional (3D) semiconductor memory device includes a CMOS circuit structure including a plurality of column blocks each comprising a plurality of page buffer circuits, and a lower wiring structure and a memory structure sequentially stacked over the CMOS circuit structure. The memory structure overlaps a first circuit region of the CMOS circuit structure and does not overlap a second circuit region of the CMOS circuit structure, and the plurality of column blocks are contained within the first circuit region of the CMOS circuit structure.

58. Semiconductor devices having 3D channels, and methods of fabricating semiconductor devices having 3D channels

Date: 2018-06-19 | ID: 10002943

Résumé: A semiconductor device includes a substrate including first to third fins aligned in a first direction, a first trench arranged between the first fin and the second fin, and a second trench arranged between the second fin and the third fin. The semiconductor device further includes a first field insulating film arranged in the first trench, a second field insulating film formed in the second trench, a first dummy gate arranged on the first field insulating film and a second dummy gate at least partly arranged on the second field insulating film. A lower surface of the second field insulating film is arranged to be lower than a lower surface of the first field insulating film.

59. Stretchable printed battery and methods of making

Date: 2018-06-19 | ID: 10003087

Résumé: A stretchable battery and the method of manufacturing the same. The stretchable battery can be manufactured by using a printing process. The construction of the stretchable battery can comprise a first layer of an elastomer film, a first current collector layer, a layer of cathode, a separating layer, a layer of anode, and a second current collector layer. Metal traces can be used to couple with the first and/or the second current collector layers.

60. Image forming apparatus, control method, and non-transitory recording medium which adjusts timing of print enable signal according to atmospheric pressure

Date: 2018-06-19 | ID: 10003714

Résumé: An image forming apparatus includes an acquiring unit configured to acquire atmosphere pressure in the installation place of the image forming apparatus, photoconductors, light sources configured to radiate laser light, and a polygon mirror configured to be rotatable. The polygon mirror exposes the photoconductors by reflecting the laser light toward the photoconductors while rotating. The image forming apparatus further includes a control device configured to control rotation of the polygon mirror. The control device outputs an enable signal for allowing the image forming apparatus to perform printing, if rotation of the polygon mirror is stabilized after start of the rotation, and advances the timing of outputting the enable signal as the atmosphere pressure increases.

61. Image processing method and image processing device for gray output signal

Date: 2018-06-19 | ID: 10003721

Résumé: An image processing method comprising: converting an RGB input signal to a CMYK signal; converting the RGB input signal to a common color signal including lightness; generating a first Gray signal including a Gray value substituted for CMY values forming gray in the CMYK signal; generating a second Gray signal including a Gray value corresponding to a K value greater than a threshold in the CMYK signal; generating a Gray output signal in a CMYKGray output signal indicating color material amounts of cyan (C), magenta (M), yellow (Y), black (K), and gray (Gray) for printing by multiplying the generated first Gray signal and the generated second Gray signal respectively by coefficients corresponding to the lightness in the common color signal and then synthesizing the first Gray signal and the second Gray signal.

62. Image processing device, method, computer-readable medium and 3D image display

Date: 2018-06-19 | ID: 10003782

Résumé: A device according to embodiments may comprise an acquisition unit, an arrangement unit, a calculating unit, and a processing unit. The acquisition unit may acquire candidate vectors from among corresponding vectors which have been calculated for each candidate block around the target block. The arrangement unit may arrange particles around each candidate block indicated by each of the acquired candidate vectors while using the target block as an origination, and arrange particle vectors while using the target block as an origination. The calculating unit may calculate a correlation between a pixel value of the target block and a pixel value of each block defined by each of the particles, and give a weight depending on the calculated correlation to each of the particle vectors. The processing unit may obtain the corresponding vector for the target block based on the weight calculated for each of the particle vectors.

63. Method and system of 3D image capture with dynamic cameras

Date: 2018-06-19 | ID: 10003786

Résumé: Techniques related to 3D image capture with dynamic cameras.

64. 3D image frame display system and its method

Date: 2018-06-19 | ID: 10003788

Résumé: A 3D image frame display system comprises a liquid crystal panel for alternately displaying a plurality of left-eye frames and a plurality of right-eye frames; a backlight module providing light to the liquid crystal panel when being turned on; and a pair of shutter glasses including a left lens and a right lens, wherein the left lens or right lens is turned on for passing through the light and turned off for shielding the light from the backlight module for corresponding to the left-eye frames or the right-eye frames; wherein, in a time period for forming one of the left-eye frames or one of the right-eye frames, the left lens or the right lens is not turned on earlier than the backlight module, and the left lens or the right lens is not turned off later than the backlight module.

65. Practical two-frame 3D+2D TV

Date: 2018-06-19 | ID: 10003789

Résumé: Our inventive method enables stereoscopic 3D displays to be watched by 3D and 2D viewers simultaneously. Ghosted images observed on traditional 3D displays can be eliminated for viewers without stereoscopic glasses while 3D perception is preserved for viewers with glasses. A preferred method for displaying an image on a 3D+2D television comprises displaying a composite image (L+wN), comprising a left (L) image and a weighted image (wN), for a first period of time; and displaying a right (R) image for a second period of time. The display of wN partially cancels out the perception of R to mitigate ghosting for viewers not wearing 3D eyeglasses. In the illustrative embodiment, wN is a weighted negative version of R.

66. Method of adapting 3D content to an observer wearing prescription glasses

Date: 2018-06-19 | ID: 10003790

Résumé: The invention consists in a method of and a device for adapting 3D content to an observer wearing prescription glasses. The method comprises the step ofproviding information about prescription glasses of the observer;calculating a value representative of the optical deviation created by the glasses from the provided information, for a given direction;estimating a depth adjustment value as a function of the calculated value andmodifying the depth of the 3D content according to the estimated depth adjustment value.

67. Heating wire arrangement for ceramic heater

Date: 2018-06-19 | ID: 10004113

Résumé: Provided is a heating wire arrangement for a ceramic heater, which is an arrangement of a heating wire on a ceramic substrate in a ceramic heater and emits heat. The heating wire arrangement for the ceramic heater includes a heating wire that is a metal wire member extending in a longitudinal direction and is two-dimensionally arranged on a virtual two-dimensional (2D) plane that is substantially parallel to a top surface of the ceramic substrate.Thus, a uniform heat density may be maintained and a rapid temperature ramp-up may be enabled, unlike a conventional heating wire of a three-dimensional (3D) type.

68. X-ray imaging device and X-ray imaging method

Date: 2018-06-26 | ID: 10004468

Résumé: An X-ray imaging device and an X-ray imaging method for obtaining 3D X-ray images of an entire field of view (FOV). The device includes an X-ray source for radiating X-rays to a part of an FOV and an X-ray sensor for detecting the X-rays, which have passed through the part of the FOV. The X-ray sensor has a width narrower than the radius of a smallest circle including a cross section perpendicular to the longitudinal direction of the FOV. A rotating arm supports the X-ray source and the X-ray sensor to face each other with the FOV therebetween. The rotating arm rotates and moves about an axis of rotation between the X-ray source and the X-ray sensor so that the X-rays are radiated to the entire area of the FOV in various directions of the FOV.

69. Facial mask apparatus and method of making

Date: 2018-06-26 | ID: 10004866

Résumé: A face mask for extended wear by a user including a customized, contoured facial mask portion constructed and configured to cover and matingly contact a corresponding contoured surface area of a human face, preferably formed by 3D printing methods and materials.

70. Coated mat of inorganic fibers, and functional decorative layers, manufactured therefrom, in floor, ceiling and wall coverings

Date: 2018-06-26 | ID: 10005102

Résumé: A method for manufacturing a mat of inorganic fibers including the manufacture or supply of a mat of inorganic fibers having two major surfaces, which is strengthened with a chemical binder, or by means of a hydrodynamic method, coating of a first major surface of the mat by means of the application of an aqueous solid dispersion on one of the two sides of the mat, drying the coated mat, printing the coated mat by means of rotary printing, digital printing, screen printing, or offset printing on the first major surface of the coating, optional application of a protective layer onto the first major surface, application of a binder, at least partial drying and at least partial crosslinking of the mat to which binder has been applied, and rolling up of the

obtained material web, or cutting to size as sheets.

71. Systems and methods for improved 3D printing

Date: 2018-06-26 | ID: 10005126

Résumé: A system for fabricating an object includes an extruder for one or more deposition materials. The extruder has at least one nozzle with a nozzle tip that includes an exit orifice and has a width that is equal to or larger than a width of the exit orifice. The system also includes a controller coupled with the extruder, the controller configured to apply a correction factor that has been calculated for a path of the nozzle based on a slope of a surface of an object to be fabricated. The correction factor for a positive slope is different from that for a negative slope. The extruder is configured to cause movement of the nozzle along the path to deposit material on the slope of the surface of the object, and the correction factor removes differences in thickness of the deposited material caused by the slope in relation to the path.

72. Cationic polymerizable compositions and methods of use thereof

Date: 2018-06-26 | ID: 10005236

Résumé: An inkjet printing method and inkjet compositions are disclosed. The method includes selectively depositing by inkjet printing, layer by layer, a first composition and a second composition onto a receiving media from different dispensers to form polymerizable deposited layers. The first composition includes one or more free-radical polymerizable compounds and a cationic photoinitiator and is devoid of compounds able to undergo cationic photopolymerization within the first composition. The second composition includes one or more cationic polymerizable compounds and is devoid of cationic photoinitiators. At least one of the compositions includes a radical photoinitiator. The method further includes exposing the deposited layers to actinic radiation to initiate polymerization of the free-radical polymerizable compounds and the cationic polymerizable compounds within the deposited layers.

73. Printing base and inkjet printing method

Date: 2018-06-26 | ID: 10005273

Résumé: A printing base comprises: a carrying base, an extension base, a vacuum pump and a gas injection valve; the extension base is located at the periphery of the carrying base; the surface of the carrying base has at least one absorbing hole for absorbing the substrate, and the surface of the extension base has at least one injecting hole. By adding a extension base at the periphery of the carrying base, the invention can avoid the provision of test area at the periphery of the display area on the substrate, and increase the area of the display area, and in turn reduce the bezel width of the liquid crystal display panel.

74. Printing apparatus, printing method, and non-transitory computer readable medium for storing program

Date: 2018-06-26 | ID: 10005289

Résumé: A printing apparatus has a plurality of nozzles capable of discharging dark ink and light ink that are of the same type color; the plurality of nozzles includes preceding nozzles that discharge the ink onto the printing medium before the ink discharge of the other nozzles, and succeeding nozzles that discharge the ink onto the printing medium after the ink discharge of the preceding nozzles, and if the amount of the dark ink discharged on the printing target region is larger than a predetermined amount, the printing apparatus discharges a smaller amount of the light ink than the amount of the discharged dark ink onto the printing target region from the plurality of nozzles so that the amount of the light ink discharged from the succeeding nozzles is larger than the amount of the light ink discharged from the preceding nozzles.

75. Laser assembly for a laser printer

Date: 2018-06-26 | ID: 10005290

Résumé: An example laser assembly for a laser printer may include a plurality of lasers to emit respective photons; a prism to redirect the respective laser beams emitted from the plurality of lasers toward a collimator lens of the laser printer to generate a photon beam; and one or more processors to: determine a timing schedule for individually activating the plurality of lasers based on a resolution setting of the laser printer, and when printing at a resolution corresponding to the resolution setting, control activation of each of the plurality of lasers to emit the respective photons according to the timing schedule to form the photon beam.

76. Printing apparatus, control method therefor and storage medium

Date: 2018-06-26 | ID: 10005293

Résumé: A printing apparatus includes a feeding roller to feed a sheet, a conveyance roller conveys the sheet, a printing head prints on the sheet, a reversing path that reverses the sheet from a first surface to a second surface, and a control unit that controls feeding of a preceding sheet and a succeeding sheet fed next to the preceding sheet. The control unit starts feeding of the succeeding sheet when a trailing edge of the preceding sheet, which was reversed by the reversing path, reaches a predetermined position and feeds the succeeding sheet so that a distance between the trailing edge of the preceding sheet and a leading edge of the succeeding sheet is within a predetermined range.

77. Two component ink jettable primer and incorporation of adhesion promoter to the ink for printing onto 3D objects

Date: 2018-06-26 | ID: 10005294

Résumé: Provided is a surface treatment method, including: jetting a first component of a primer composition over a substrate, wherein the first component includes a crosslinking agent; jetting a second component of the primer composition over the substrate, wherein the second component includes a crosslinking activator; and mixing the first component and the second component to form a primer layer, wherein the jetting of the first component and the second component is from at least one printhead.

78. Printing apparatus including therein sheet holder

Date: 2018-06-26 | ID: 10005296

Résumé: A printing apparatus includes a first supporting portion, a second supporting portion, and an adjusting mechanism. The adjusting mechanism includes a first rack, a second rack, a pinion gear, and a third supporting portion configured to movably support the first and second racks and configured to rotatably support the pinion gear. The third supporting portion includes first to fourth ribs. The first and second racks are respectively movable in first and second areas in an axial direction. The first area and the second area define one end and another end. The first rib and the fourth rib are positioned close to the another end, and the second rib and the third rib are positioned close to the one end.

79. Printer and method of printing

Date: 2018-06-26 | ID: 10005297

Résumé: A printer comprises a printing assembly for printing an image on a print media in a print zone; a cutting assembly for cutting the print media along a contour in a cut zone; wherein the print zone and the cut zone are distinct from one another, one of the zones being downstream of the respective other zone in a print media advance direction; a control unit controlling the printhead assembly and the cutting assembly to perform printing and cutting operations during a single print media feed. A method of printing, using said printer, comprises feeding the print media through the cut zone and through the print zone, in any order; and simultaneously printing an image and cutting a contour while the print media is being fed through the cut zone and through the print zone.

80. Double-paper-roll printing device

Date: 2018-06-26 | ID: 10005298

Résumé: A double-paper-roll printing device includes an installation frame for installing the following components and paper rolls. A first paper roll and a second paper roll are installed on the installation frame through a paper roll supporting shaft. Paper tapes of the first paper roll and the second paper roll are selectively fed to a printing component through paper passages. The first paper roll and the second paper roll

are selectively fed to the printing component through a first paper passage and a second paper passage that are mutually independent. The first paper passage and the second paper passage are mutually superposed. The tail end of the first paper passage and the tail end of the second paper passage form an intersecting end, and paper tape heads of the paper rolls enter the printing component through the intersecting end.

81. System for detecting inoperative inkjets in three-dimensional object printing using a profilometer and predetermined test pattern printing

Date: 2018-06-26 | ID: 10005303

Résumé: A printer detects inoperative inkjets during printing of three-dimensional objects. The printer includes an area where a printhead ejects material in a predetermined pattern and a profilometer is operated to measure the ejected material in the area. The measurements are used to identify inoperative inkjets or inkjets that operate errantly.

82. Removable covering paint scheme of layers arranged on a heat-sensitive carrier, thermal printer, and method for thermal printing such a carrier

Date: 2018-06-26 | ID: 10005307

Résumé: This invention relates to a removable multilayered aqueous flexo covering paint scheme of layers arranged on a heat sensitive carrier (1) provided by a heat sensitive layer (2) to be colored by applying heat, and a coat of lacquer (3) containing 70% acrylate oligomer, 22% acrylate monomer, 5% photo-initiator and 3% silicone is arranged on the heat sensitive layer (2); a disperse parting layer (4) containing 20-35% soot paste, 25% aqueous acrylate emulsion, 6% calcined kaolin, 1% antifoam agent and spread improver, 3% c rheological modifier and 45% water is arranged on the coat of lacquer (3); and a covering paint layer (5) containing carbon nanotubes functionalized by hydroxyl, carbonyl and carboxy groups is arranged on the disperse parting layer (4). A method and apparatus for thermal printing of a carrier (1) preprinted by the removable multilayered aqueous flexo covering paint scheme of layers and provided by a heat sensitive layer (2) to be colored by applying heat is also disclosed.

83. Methods and apparatus for handheld tool

Date: 2018-06-26 | ID: 10005312

Résumé: In exemplary implementations of this invention, a computer-assisted, handheld machining tool allows even an inexperienced user to carve a complex 3D object, while maintaining artistic freedom to modify the sculpture from an initial CAD design. The tool prevents the user from unintentionally removing material from a volume defined by the CAD design. It does so by slowing or halting spindle rotation as the bit

approaches or penetrates the protected volume. The user can override this protective feature. The tool may operate in at least three interaction modes: (i) a static mode in which a static CAD model is used, where the computer assists by preventing the user from damaging the static model; (ii) a dynamic mode where the computer dynamically modifies the CAD model during the sculpting process; and (iii) an autonomous mode where the computer can operate independently of the user, for tasks such as semi-automatic texture rendering.

84. Method of producing three-dimensional structural surfaces

Date: 2018-06-26 | ID: 10005314

Résumé: The invention relates to a method of producing three-dimensional structural surfaces based on synthetic resin-impregnated materials applied to the surface, in particular of wood-based panels. The method is characterized in that before the impregnation, at the stage of pattern printing, a mixture is applied to the decor paper, consisting of printing ink, whether with pigment or not, and a swelling agent in the form of microspheres, being encapsulated gas bubbles of sizes ranging from 2 pm to 180 pm, increasing its volume under the influence of rising temperature, wherein the mixture of the ink and the swelling agent contains from 0.3% to 45% by weight of the swelling agent, and after exiting the printing press and after the impregnation, the decor paper with the formed final pattern with a coded three-dimensional structure is pressed onto the surface, in particular of a wood-based panel, using a heated press plate with any working surface.

85. Labelling device, labelling system and method for affixing a label to a product

Date: 2018-06-26 | ID: 10005582

Résumé: The invention relates to a labelling device (1), in particular price labelling device, for providing a product (2) with a label (3), with at least one scale (4) for weighing the product (2), with at least one handling system (5) for moving the product (2) and with at least one printer (6) comprising a label outlet (6.1) for printing and outputting labels (3). In order to reduce the complexity, the invention proposes that the handling system (5) can be moved from a product pickup position (I), in which the product (2) can be picked up by the handling system (5), to a first label acceptance position (II), which is located adjacent to the label outlet (6.1) of the printer (6) and in which a first label (3) can be transferred onto the product (2). Furthermore, the invention relates to a labelling system (11) with multiple such labelling devices (1) and to a method for providing a product (2) with a label (3).

86. Active energy ray-curable composition, active energy ray-curable printing ink using same, and printed matter

Date: 2018-06-26 | ID: 10005872

Résumé: The present invention provides an active energy ray-curable composition exhibiting high curability and having excellent offset printability when used for a printing ink, an active energy ray-curable printing ink having both excellent curability and offset printability, and a printed matter using the same. An active energy ray-curable composition includes a urethane (meth)acrylate resin (A) and a polymerization initiator (B), wherein the urethane (meth)acrylate resin (A) is produced by using an aromatic polyisocyanate (a), a hydroxyl group-containing mono(meth)acrylate (b), and a polyol (c) as essential reaction raw materials so that the ratio [(b)/(a)] of the number of moles (b) of hydroxyl groups contained in the hydroxyl group-containing mono(meth)acrylate (b) to the number of moles (a) of isocyanate groups contained in the aromatic polyisocyanate (a) is within a range of 0.99 to 0.40, and the urethane (meth)acrylate resin (A) has a (meth)acryloyl group concentration within a range of 1.5 to 4.0 mmol/g.

87. Curable composition for printed wiring board, and cured coating and printed wiring board using same

Date: 2018-06-26 | ID: 10005911

Résumé: Provided is a curable composition for a printed wiring board, which composition exhibits high physical strength as a coating film in terms of solder heat resistance, pencil hardness and the like and in which the components contained therein are not likely to precipitate in long-term storage even when the composition is configured to have a low viscosity and thereby made applicable to ink-jet printing, spin-coating and the like. The curable composition for a printed wiring board is characterized by comprising (A) a filler having a specific gravity of 3 or less, (B) a hydroxyl group-containing (meth)acrylate compound and (C) a photopolymerization initiator. The (A) filler having a specific gravity of 3 or less is preferably an inorganic filler.

88. Active ray-curable composition, and active ray-curable inkjet printing ink composition and active ray-curable adhesive composition using the same

Date: 2018-06-26 | ID: 10005922

Résumé: An active ray-curable composition characterized by containing a photobase generator, a double bond-containing compound, and a -dicarbonyl compound.

89. Method and apparatus for measuring biofilm thickness and topology

Date: 2018-06-26 | ID: 10005999

Résumé: An apparatus and method of measuring biofilm and biological activity on a surface is disclosed. The apparatus includes a biofilm, which includes one or more microorganisms, grown on a substrate. A viewing window is placed on a surface of the biofilm and a gas bubble is introduced between the viewing window and

the surface of the biofilm. The space between the substrate and the viewing window may be enclosed in a casing that has an inlet and an outlet, forming a flow cell. A microscope system, such as a white light interferometer, captures data of the biofilm in situ and non-destructively. The 3D images of biofilm surface have high resolution while maintaining a large field of view. The apparatuses and methods will be useful for fundamental studies of biofilms, biomedical and environmental screening, and many other applications in biology and the life sciences.

90. Method of assembling a 3D tissue culturing scaffold

Date: 2018-06-26 | ID: 10006002

Résumé: A continuous device for culturing mammalian cells in a three-dimensional structure for the transplantation or implantation in vivo is described. The culturing device comprises (a) a scaffold formed by a matrix of interconnected growth surfaces spaced at regular intervals and (b) a fluid distribution means at the inlet and the exit of the growth areas. The device is particularly useful for culturing bone cells for dental implants or bone reconstruction.

91. Secure 3D printer and 3D printer management network

Date: 2018-06-26 | ID: 10006225

Résumé: A printer management system includes one or more printing devices having a printing area for printing according to a digital file, an access area through which a user may access the printing area, and a locking mechanism configured to lock the access area preventing access to the printing area. A management server is communicatively coupled to the one or more printing devices over a communication network and is configured to receive a print request from one or more user devices or one of the one or more printing devices to print the digital file, transmit the digital file to one of the one or more printing devices, and transmit commands to lock and unlock the locking mechanism of the one or more printing devices. In one embodiment the management system is configured to update a printing status of each of the one or more printing devices.

92. Measurement device and printing apparatus

Date: 2018-06-26 | ID: 10006854

Résumé: A spectrometer includes a light source that radiates illumination light, and a measurement unit that measures measurement light in which illumination light is reflected by a medium. In a case where an illumination region that is a region in which the medium is irradiated with illumination light is smaller than a measurement region that is a region of the medium measurable by the measurement unit and in which the movement of the medium in the direction is within a range of an acceptable fluctuation amount, the illumination region is included in the measurement region.

93. Method of configuring planar transducer arrays for broadband signal processing by 3D beamforming and signal processing systems using said method, in particular an acoustic camera

Date: 2018-06-26 | ID: 10006998

Résumé: A method of configuring planar transducer arrays for broadband signal processing by 3D beamforming, wherein a superdirective beamforming technique for low-frequency signal components is combined with a sparse and aperiodic array pattern for high-frequency components in a predetermined frequency range, and wherein the positions of the individual transducers at the aperture of the array and the FIR filter coefficients are further optimized in parallel, by a hybrid iterative process including an analytical calculus for determining the FIR filter coefficients and a stochastic calculus for determining the transducer positions at the aperture of the planar transducer arrays, by minimization of a cost function.

94. Three-dimensional (3D) photonic chip-to-fiber interposer

Date: 2018-06-26 | ID: 10007061

Résumé: A method of fabricating an optical coupling device, comprising forming a waveguide mask layer on a substrate platform, wherein the waveguide mask layer comprises an array of openings comprising a first end and a second end opposite to the first end, immersing the substrate platform into a salt melt comprising ions to form an array of waveguides in the substrate platform through an ion diffusion process, and controlling a rate of immersion such that a diffusion depth of the ions varies as a function of a distance in a direction from the first end to the second end, wherein the array of waveguides extends in the direction from the first end to the second end.

95. Illumination device for a microscope or an optical 3D surface measuring apparatus

Date: 2018-06-26 | ID: 10007101

Résumé: An illumination device for a microscope or an optical 3D surface measuring apparatus, more particularly according to the principle of focus variation. The illumination device includes LEDs arranged in a planar fashion, and an illumination optical unit for imaging the illumination spectrum onto an object to be examined. The illumination optical unit includes an arrangement of converging lenses and one Fresnel lens, and the light beams emitted by the LEDs firstly impinge on the converging lenses and then impinge in a parallel-directed manner on the Fresnel lens. The Fresnel lens is oriented in reflective arrangement such that lens vertices of a prism structure are arranged at a light exit side of the Fresnel lens, facing away from the converging lenses. The converging lenses are formed by annular segments, and adjacent annular segments adjoin one another in a planar fashion at a segment side surface.

96. 3D localization microscopy and 4D localization microscopy and tracking methods and systems

Date: 2018-06-26 | ID: 10007103

Résumé: A 3D localization microscopy system, 4D localization microscopy system, or an emitter tracking system arranged to cause a phase difference between light passing to or from one part of the objective relative to light passing to or from another part of the objective, to produce a point emitter image which comprises two lobes, a separation between which is related to the position of the emitter relative to the objective of the imaging system, and in the 4D system a further property of the image or of the light to or from the objective is related to another location independent property of the emitter.

97. Three-dimensional display substrate, its Manufacturing method and three-dimensional display device

Date: 2018-06-26 | ID: 10007122

Résumé: The present disclosure provides a 3D display substrate, its manufacturing method and a 3D display device. The 3D display substrate includes a base substrate, a color filter layer arranged on the base substrate, and an optical structure layer arranged on the base substrate and at a light-exiting side of the color filter layer. The optical structure layer includes a first light-transmitting layer and a second light-transmitting layer having different refractive indices. An interface between the first light-transmitting layer and the second light-transmitting layer is of a concave-convex structure, so as to enable one of the first light-transmitting layer and the second light-transmitting layer to form a lens array structure for 3D display.

98. Three-dimensional printing apparatus, method for three-dimensional printing, and computer-readable storage medium

Date: 2018-06-26 | ID: 10007253

Résumé: When first cross-sectional image data representing a target model corresponding to a shape of a three-dimensional printing object, and second cross-sectional image data representing both of the target model and a support model corresponding to a shape of a member assisting the creation of the three-dimensional printing object, are recognized to match each other by at least a predetermined ratio, the second cross-sectional image data is stored in a storage as third cross-sectional image data. In contrast, when the first cross-sectional image data and the second cross-sectional image data are recognized not to match each other by at least the predetermined ratio, synthesis data of the first cross-sectional image data and the second cross-sectional image data is stored in the storage medium as the third cross-sectional image data. The three-dimensional printing object is created based on the third cross-sectional image data.

99. Apparatus, system, and method for mobile, low-cost headset for 3D point of gaze estimation

Date: 2018-06-26 | ID: 10007336

Résumé: An apparatus, system, and method for a mobile, low-cost headset for 3D point of gaze estimation. A point of gaze apparatus may include an eye tracking camera configured to track the movements of a user's eye and a scene camera configured to create a three-dimensional image and a two-dimensional image in the direction of the user's gaze. The point of gaze apparatus may include an image processing module configured to identify a point of gaze of the user and identify an object located at the user's point of gaze by using information from the eye tracking camera and the scene camera.

100. Method and system for controlling virtual camera in virtual 3D space and computer-readable recording medium

Date: 2018-06-26 | ID: 10007348

Résumé: The present invention relates to a method and a system for controlling a virtual camera in a virtual 3D space and a computer-readable recording medium. According to one embodiment of the present invention, provided is the system for controlling the virtual camera in the virtual 3D space, comprising: a user interface module for providing a user interface so as to receive inputted control data of the virtual camera; and a camera control module for establishing a movement surface of the virtual camera and controlling properties of the virtual camera according to the control data, wherein the properties of the virtual camera includes at least some of position, view, visual field, and movement track of the virtual camera, wherein the position is limited to the movement surface or to a surrounding area thereof.