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(54) Title: SYSTEMS AND METHODS FOR PRECISION INKJET PRINTING

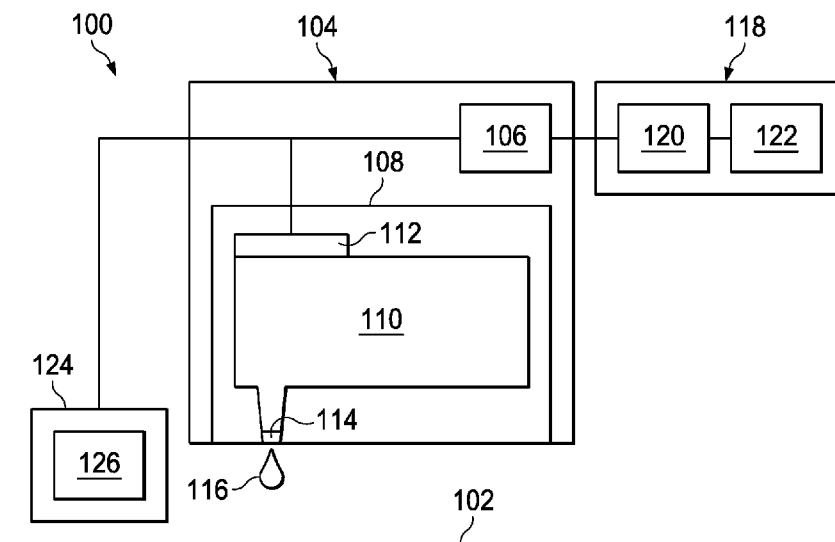


FIG. 1

(57) Abstract: Systems and methods for precision inkjet printing are disclosed. A method determining an actuation parameter associated with a pressure waveform. Based on the pressure waveform, the method also includes actuating a print head to eject a droplet from a nozzle and acquiring an image of the droplet. The method further includes processing the acquired image to estimate a volume of the droplet and based on the estimated volume of the droplet and a target volume, adjusting the acquisition parameter.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

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- *as to the identity of the inventor (Rule 4.17(i))*
- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

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A. CLASSIFICATION OF SUBJECT MATTER**B41J 29/393(2006.01)i, B41J 2/14(2006.01)i, B41J 2/145(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B41J 29/393; H01L 51/00; B41J 2/135; B05C 5/02; B41J 2/07; B41J 29/38; B41J 2/01; B41J 2/14; B41J 2/145

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: inkjet, fluid, droplet, volume, target, nozzle, velocity, image, fault, error

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004-049466 A2 (CAMBRIDGE DISPLAY TECHNOLOGY LIMITED) 10 June 2004 See page 8, lines 9-19, page 10, lines 28-32, page 17, lines 1-2, page 21, lines 7-9, claims 1, 4-8, and figures 6, 9.	1-9, 11-20, 24-27
Y		10, 21-23
Y	US 2011-0050803 A1 (WU et al.) 03 March 2011 See abstract and claim 19.	10
Y	JP 2015-168084 A (SEIKO EPSON CORP.) 28 September 2015 See abstract and figure 3.	21
Y	WO 2016-004125 A2 (KATEEVA, INC.) 07 January 2016 See abstract and claim 1.	22, 23
A	US 2013-0033536 A1 (SAWASE, HIROSHI) 07 February 2013 See claims 1-3 and figure 5.	1-27

 Further documents are listed in the continuation of Box C. See patent family annex.

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/US2017/022054

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