

## Title (en)

Imaging apparatus and method adapted to control ink droplet volume and void formation

## Title (de)

Bilderzeugungsgerät und angepasstes Verfahren zur Regelung des Volumens von Tintentröpfchen und der Bläschenerzeugung

## Title (fr)

Appareil d'imagerie et methode adaptée pour contrôler le volume des gouttes d'encre et la formation de bulles

## Publication

**EP 0867284 A3 19990825 (EN)**

## Application

**EP 98200819 A 19980316**

## Priority

US 82635797 A 19970326

## Abstract (en)

[origin: EP0867284A2] Imaging apparatus and method adapted to control ink droplet volume and void formation. The apparatus (10) includes an ink jet print head (45) having a nozzle (110) for ejecting an ink droplet (150) therefrom. A heater element (130) is in heat transfer communication with the ink droplet for variably supplying heat energy to the ink droplet, so that the volume of the ink droplet is controlled as the heat energy is variably supplied to the ink droplet. A controller (40) is connected to the heater element for variably controlling the heat energy supplied to the ink droplet. The controller variably controls the heat energy by variably controlling a plurality of voltage pulses sequentially supplied to the heater element. Moreover, in order to reduce the potential for void formation in the ink droplet, the pulses are spaced-apart by a predetermined delay interval. Suitable control of ink droplet volume and delay interval between pulses results in uniform print density and "gray-scaling" of each dot or pixel in the output image and also precludes void formation. <IMAGE>

## IPC 1-7

**B41J 2/05**; **B41J 2/14**; **B41J 2/205**

## IPC 8 full level

**B41J 2/01** (2006.01); **B41J 2/04** (2006.01); **B41J 2/05** (2006.01); **B41J 2/14** (2006.01); **B41J 2/205** (2006.01); **B41J 2/21** (2006.01)

## CPC (source: EP)

**B41J 2/0458** (2013.01); **B41J 2/04588** (2013.01); **B41J 2/0459** (2013.01); **B41J 2/04591** (2013.01); **B41J 2/04593** (2013.01); **B41J 2/04598** (2013.01); **B41J 2/14137** (2013.01); **B41J 2/14451** (2013.01); **B41J 2/2128** (2013.01)

## Citation (search report)

- [A] EP 0609997 A2 19940810 - HEWLETT PACKARD CO [US]
- [A] EP 0649746 A1 19950426 - HEWLETT PACKARD CO [US]
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- [A] EP 0288044 A2 19881026 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [A] WO 9632289 A1 19961017 - EASTMAN KODAK CO [US], et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 007, no. 085 (M - 206) 8 April 1983 (1983-04-08)
- [A] PATENT ABSTRACTS OF JAPAN vol. 017, no. 694 (M - 1531) 17 December 1993 (1993-12-17)

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US10654290B2; CN109421373A; EP1307347A4; GB2448119A; GB2448119B; US8398196B2; US7556358B2; WO2019037431A1

## Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

## DOCDB simple family (publication)

**EP 0867284 A2 19980930**; **EP 0867284 A3 19990825**; JP H10264370 A 19981006

## DOCDB simple family (application)

**EP 98200819 A 19980316**; JP 7686798 A 19980325