

Title (en)

Nozzle drive control system and method for ink jet printing.

Title (de)

Düsenantriebssteuerung und Tintenstrahldruckverfahren.

Title (fr)

Système de commande de buses et procédé d'impression par jet d'encre.

Publication

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Application

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Priority

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Abstract (en)

A method of, and a control circuit for, determining the exciting voltage to be applied to the nozzle of an ink jet printer to break a stream of ink into droplets for printing includes the steps of slowly increasing the exciting voltage from a minimum value and detecting and recording the value C(H) at which droplet formation first occurs closest to the nozzle. The exciting voltage for printing is estimated by applying electrical test patterns (Figure 6) to the ink droplets such that the patterns will vary in phase relative to droplet timing whereby only some of the test patterns will successfully charge the droplets. After that, those droplets which have been successfully charged are detected and the value C(H) determined from the change in the sequence of detected charge patterns. The exciting voltage for printing is estimated according to the formula  $V(\text{est}) = C(H) - E$ , where E is a voltage related to the performance on the ink. <IMAGE>

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