Title (en)

METHOD AND APPARATUS FOR DIRECTLY TRANSFERRING DEVELOPED IMAGES FROM A PHOTOCONDUCTIVE DRUM TO A PRINT MEDIUM

Publication

EP 0549867 A3 19940720 (EN)

Application

EP 92118751 A 19921102

Priority

US 80202891 A 19911203

Abstract (en)

[origin: EP0549867A2] Method and apparatus for electrophotographically transferring a developed color image on the surface of a photoconductive drum (10) directly to an adjacent print media (30). The print media (30) is operative to pass between the one abutting surface location on the photoconductive drum (10) and an adjacent surface location on a transfer roller (28) which is connected to receive a DC bias voltage (42). Once a composite color image has been developed on the surface of the photoconductive drum (10), this surface is illuminated with light (76) within a chosen wavelength range and intensity to thereby cause hole-electron pairs (88) within a layer (90) of the photoconductive drum (10) to recombine and thereby reduce the net voltage across the photoconductive surface layer or layers (78, 86, 90) to a level on the order of about thirty (30) volts (Fig. 2C). In this manner, the DC bias voltage (42) applied to the direct transfer roller (28) can be made larger than otherwise possible,thereby increasing the maximum achievable electrostatic field strength between the surface of the transfer roller (28) and the photoconductive drum (10). This feature of increasing the electrostatic field strength across the print medium (30) improves image transfer fidelity and print quality during the electrophotographic printing process. <IMAGE>

IPC 1-7

G03G 15/16; G03G 15/01

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G03G 15/01 (2006.01); **G03G 15/16** (2006.01)

CPC (source: EP)

G03G 15/0131 (2013.01); **G03G 15/167** (2013.01); **G03G 15/169** (2013.01)

Citation (search report)

- [A] US 4897333 A 19900130 - MATSUSHITA KOUJI [JP]
- [A] US 4853736 A 19890801 - GOTO KOJI [JP], et al
- [A] US 4959695 A 19900925 - NISHIMURA KATSUHIKO [JP], et al

Cited by

US5650253A; US5916718A; EP0666519A3; CN111722503A; JP2016153853A; US7592117B2; US7773916B2; US7920810B2

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