

Kodak's Stream Inkjet Technology and the Future of Digital Printing

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Abstract

The adoption of digital print continues to expand due in large part to the improvements in existing technologies as well as the development of new technologies that offer increasing levels of productivity, image quality, and economy. Eastman Kodak Company, a recognized leader in conventional and digital printing technologies, provides unified workflow solutions for a large number of diverse applications. In the area of inkjet printing, Kodak continues to pioneer ultra-high productivity inkjet technology for applications including, but not limited to, commercial, transactional, direct mail, packaging, and book publishing. Recent advancements in the ability to precisely control the instabilities in thermally stimulated microjets, coupled with advancements in MEMS technology, computer modeling of complex microfluidic systems, ink technology, and ink-substrate interactions, enabled the development and subsequent commercialization of a new continuous inkjet technology. This technology offers extremely high productivity with high image

quality on a wide variety of substrates while maintaining a low total ownership cost. This technology, referred to as "KODAK Stream Inkjet Technology (or "Stream")," forms the basis of a technology platform that is highly extensible, allowing participation in a broad range of markets that can effectively utilize high-speed digital print production. This paper will discuss the opportunities as well as the challenges of digital print and describe how Stream technology will play a significant role in this transformation.

Author Biography

Dr. James M. Chwalek is a Director of Research and Development for the Graphic Inkjet Platform Center at Eastman Kodak Company, where he is responsible for the development and commercialization of novel high-speed inkjet writing system technology. He has developed a number of notable and innovative technologies in the areas of MEMS and inkjet. He has authored over 25 technical papers in his areas of expertise and has had 65 U.S. patents issued to date.