

# Inkjet Printing Technology Solutions for the 21st Century

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## Abstract

*Eastman Kodak Company is a recognized leader in conventional and digital printing technologies and is a provider of 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, transaction, direct mail, packaging, and book publishing. Kodak is currently working toward commercializing a novel inkjet technology that offers extremely high productivity with high image quality and excellent reliability at a low total ownership cost. This extensible technology, referred to as "Stream," forms the basis of a technology platform that expands participation in markets that rely on high-speed digital print production. The technology has inherent advantages in key areas such as productivity, image quality, and ink latitude, which is due to the fundamental physics of efficient droplet generation and control. In addition, the parallel developing maturity of ancillary systems technologies serves to optimize this elegant method of printing directly onto the substrate with an extremely high-speed stream of high-velocity ink droplets. In this paper, we describe the details of Stream inkjet technology including the printhead and droplet generation and control. We also highlight the challenging technology requirements of various commercial markets including productivity, image quality, cost, and ink-printhead and ink-substrate compatibility. The discussion will take a holistic view of systems and workflow solutions.*

## Author Biography

*James M. Chwalek is a Director of Research and Development for the Graphics Inkjet Platform Center in the Eastman Kodak Company, where he is responsible for the development and commercialization of novel high-speed inkjet writing system technology. He received his Ph.D. degree in Electrical Engineering from the University of Michigan. He has authored over 25 technical papers in his areas of expertise and has had 58 U.S. patents issued to date.*