

# Edgeline Inkjet Drying Technology

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## Abstract

*The HP CM8060 MFP with Edgeline technology is the result of significant innovations in many key areas. This presentation speaks to the key design challenges overcome in creating an image on the page and getting it dry at suite average throughputs of 60 ppm black and 50 ppm color. Our goal was to WOW the customer with exceptional image quality, reliability, and total cost of ownership. These objectives put significant burdens on the drying system. The final solution required tremendous collaboration between ink chemists, imaging scientists, hardware designers and firmware engineers.*

*Breakthroughs in the ink domain include a proprietary bonding agent enabling adhesion of the ink to the paper without significant penetration into the paper. This was key for creating brilliant images that dry quickly. Additionally, varying the sequence of drying and laying down ink interacted with the speed at which the image dried.*

*While developing the ink, different drying technologies were investigated. The concepts included microwave energy, convective drying, high velocity air, radiant drying, conductive drying, UV curing, and multiple combinations of these concepts.*

*Once the basic technology building blocks were identified, creating a user friendly solution was a significant challenge. Getting the system ready to print and getting the first page quickly on a 120 volt outlet was a challenge. The hardware design is a key element in a drying system that operates efficiently in the first few seconds of startup for virtually every job.*

*The technical details of these topics are explored further in the "Edgeline Inkjet Drying Technology" presentation.*

## Author Biography

*Vance Stephens has been at HP and in Vancouver for over 20 years, with the last 12 managing mechanical development in HP's R&D group. Most recently, he has been managing the mechanical development of the Edgeline technology. Stephens started his career working in manufacturing and helped bring the original Deskjet to market. He also played a strong role as HP entered the fax market. He received a BSME from Brigham Young University.*

*Steve Rasmussen has been at HP for over 25 years. Virtually all of that time has been spent developing new inkjet printers as a member of R&D. Rasmussen played a key role in design of the original Deskjet print and has continued to innovate new designs ever since. He is currently the Chief Edgeline Mechanical Architect and is responsible the mechanical architecture of next generation concepts. In this same role Rasmussen made significant contributions in the design of the CM8060. He received a BSME from Iowa State University and a MSME from Stanford University.*