

# The Pagemaster

Ryan Heise gives you an early look at the U of A Bookstore's shiny new toy, and how it's changing the face of the publishing industry.



**T** ODD ANDERSON STANDS AT THE END of an automated assembly line waiting for another paperback book to slide through the slot of a clear, polycarbonate box. A copy of *Flatland: A Romance of Many Dimensions*, an 1884 novella by Edwin Abbott Abbott, is currently being trimmed to perfect dimensions by a large, pneumatic cutting blade.

"I can't believe we pulled this off," Anderson, director of the U of A Bookstore, says to me over whispered bursts of hydraulics. With the distinct smell of laser printers hanging in the air, the perfectly bound soft-cover book slides into the hands of a fellow employee, and a look of satisfaction beams from Anderson's face.

Situated along the north wall on the lower level of the Bookstore is the \$140 000 (US) Espresso Book Machine (EBM)—a monolithic yet clean-looking device consisting of four black-and-white laser printers, a single colour laser printer, and a series of belts, cogs, hydraulics, and electronics in clear cases. It's as complex as it sounds, but it closer resembles a microcosm of Fordist mass production than a Rube Goldberg device. All you need to know is that it can churn out a perfect, 550-page book in two minutes flat.



PHOTOS BY MIKE OTTO

## HOW IT'S DONE

Though the EBM is fairly complex, the process of making a book is quite simple, with each part performing a single task on an automated assembly line.



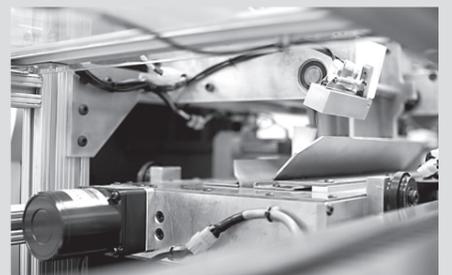
**1** From a computer terminal, users first select what they want to print. The size of each book is stored in each file's metadata—there's very little setup from the user. While the interface is currently somewhat clumsy, a web-based front end will soon be in place, allowing anyone to easily purchase a one-off copy.



**2** The computer sends the job to the EBM, and one of the four printers goes to work printing off the book block. Meanwhile, a colour laser printer prints a cover on heavier paper. With four black-and-white printers, the EBM can work on four different books at one time, but as Anderson points out, "You're as slow as your cover machine." Still, even with only one colour cover printer, the EBM can crank out a book about every two minutes.



**3** Once the book block is complete, it's picked up by a belt-driven shuttle and shaken so each page lines up. Once the block is in the shuttle, the printer can begin a new job.



**4** The shuttle then passes the spine edge of the book block through a rotary saw, roughing up its edge to allow for a better application of glue.