

## ADVANCED SUN AND STORAGETEK SOLUTIONS PRAGATI OFFSET PVT. LTD.

### The Customer

Based in Hyderabad, India, Pragati Offset is a printing solutions provider serving large corporate customers. The company prints materials ranging from annual reports and marketing collateral to packaging and presentation folders. It serves clients across India, the United States, Europe, and Japan.

### Burning disk at 60 GB a day

Pragati's pre-press team begins with high-resolution image scans. They retouch these images as needed and lay them out with text and other graphics using a desktop publishing application. They translate this document into PostScript language (or PDF) format. Using raster image processor applications, they rasterise the PostScript document and make any needed last-minute changes. Then, they generate screen digital film (1-bit TIFF) for each color (cyan, magenta, yellow, black and special colors if needed) for Pragati's computer-to-plate printing system.

"These files average about 100 megabytes after compression," said Ramakrishna P. Kodali, director of IT and pre-press. "And with our staff completing around 35 projects a day, they require 14 gigabytes per day of digital film data storage alone, apart from raster and desktop application data."

Kodali explained that Pragati's pre-press and printing business generates large volumes of three primary types of data.

1. Desktop application data, including application files, images, vector graphics, etc. prepared on Apple Macs and Windows PCs
2. Rasterised data, sent to different devices such as proofers, imagesetters and computer-to-plate printing systems (This data, based on Rip Once Output Many (ROOM), is generated and processed on an IBM RS 6000 server with 432 gigabytes RAID using Creo Brisque workflow software and an IBM Intel Server with 350 gigabytes RAID using Esko Graphics BackStage SCOPE workflow software.)
3. Screened digital film used to generate images on computer-to-plate imaging systems, then archived for repeat imaging to maintain 100% data integrity.

## Key highlights

### Company:

Pragati Offset Private Limited

### Industry

Printing

### Customer Environment

- Sun Enterprise™ 250 Server
- Sun StorEdge™ array
- StorageTek L40 tape library
- StorageTek Application Storage Manager® (ASM) software
- LTO Ultrium Generation 1 tape drives
- Heterogeneous operating systems: IBM AIX, Solaris™ operating system, SGI IRIX, RedHat Linux, Windows 2000, Apple Macs

### Business Challenges:

- Manage huge volumes of data cost-effectively
- Automate and accelerate data back-up and archiving
- Increase storage productivity

### Business Solutions:

- ILM strategy reduces total cost of ownership
- Value-added services improve customer acquisition and retention
- High-performance systems accelerate back-ups
- Advanced data management solution simplifies handling of terabyte-sized data volumes

### Business Results:

- Improved reliability and performance, met I/O-intensive pre-press application needs for reliability and performance
- Streamlined, unified storage and backup operations increase storage productivity
- Accelerated content retrieval for improved staff productivity

With an eye toward meeting Pragati's growing storage needs at a reasonable cost per terabyte, Kodali began looking for vendors that could help streamline the data storage and retrieval processes while providing value-added services to boost the performance of printing applications. He found the ideal solution from Sun Microsystems™ and StorageTek™.

### The big-picture solution

At its facility in Hyderabad, Pragati has a Sun Enterprise™ 250 server that runs the firm's high-end pre-press application, XiNet FullPress OPI server. The company uses a Sun StorEdge™ array to support its production environment along with Apple XRAIDs. They have a StorageTek L40 tape library configured with two LTO Ultrium Generation 1 tape drives and 40 LTO tape slots providing up to 8 terabytes of compressed storage capacity. To simplify administration and automate information lifecycle management processes, the company installed StorageTek's Application Storage Manager® (ASM) software.

Print production data remains on the Sun StorEdge™ array for about three weeks and is then migrated to the L40 via ASM pre-defined policies. IT staff archive all application data (DTP files, images, logos, graphic elements) and pre-press data (RIP data and CtP plate data) on StorageTek devices with a mirror copy on IBM Tivoli-based LTO tape drives.

"The Sun-StorageTek solution meets our production environment, data backup, archival and retrieval needs," said Kodali. "We can easily maintain multiple copies of terabytes of data and meet our customers' content repurposing needs."

### Better control over customer data

"We leverage the L40's robotics to more easily administer our data," explained Kodali. "It helps us manage the growth in data that we're experiencing and also provides a reliable solution to both archive and retrieve data."

According to Kodali, with the high volume of print jobs over time, their clients used to lose track of their print files. "Now, with StorageTek ASM software, our employees and customers can track and inventory what files are where and retrieve them quickly. It's a very popular feature that helps us retain customers and gives us a competitive edge in the global marketplace."

"Together, the ASM-L40 library solution met our need to more quickly respond to clients who need to repurpose their project data," said Kodali. "We have about 6 terabytes of customer data on the L40 currently, and we still have room for about two more. Such large capacity led to us offering a free print job repository to our customers, another competitive advantage for us."

### Happy customers: a very pretty picture

The robotic library and ASM automation helped Pragati manage its storage in a more cost-effective manner. Moreover, the 8-terabyte capacity of the L40 tape library helps Pragati make better use of valuable floor space in its data center.

The high reliability of Sun servers further helps Pragati by helping to ensure business and protecting production revenues. "We host our mission-critical applications on Sun servers because they're reliable," stated Kodali.

Perhaps the greatest financial benefits stem from Pragati's ability to better meet the needs of its corporate customers, thereby increasing their loyalty to the company. "With the access to our data center and repository services, our customers are happy and can count on Pragati to adequately manage their brand and information assets like images, logos, text, etc.," says Kodali. "This keeps them happy and coming back."

### Picture-perfect performance

According to Kodali, the solution offered by Sun and StorageTek allow Pragati to meet the data availability needs of customers while meeting internal goals of reducing the cost of managing and storing vast amounts of data. “We’re able to maintain production data for three weeks on enterprise disk including a Sun StoreEdge Array,” says Kodali. “Then we migrate it automatically via our ASM software to the StorageTek L40 library for archival purposes. This solution provided the only viable alternative to large amounts of expensive disk space.”

The L40 implementation upgraded Pragati’s tape drive technology from DLT drives to LTO drives which provided gains in storage capacity and speed. LTO Generation 1 tape drives store up to 100 gigabytes of native data per cartridge, and up to 200 gigabytes with data compression. That compares to just 35 to 70 gigabytes for DLT tapes.

“Desktop, rasterised and digital film data require a great deal of storage,” said Kodali. “Storing the data appropriately across all stages of production helps us be more efficient while maintaining data integrity for repeat jobs.”

Managing Pragati’s data flow in production and ILM processes has never been easier. “The L40 library makes use of automated technology that requires little administrator intervention,” said Kodali. “What we love about the ASM application is that after we preconfigured the policies, the data has been managed automatically.”

In the company’s production environment, Kodali notes that the performance of Sun servers also met a vital Pragati requirement. “Our OPI Server application is very I/O- and CPU-intensive. The Sun E250 server provides the reliability and performance we count on to meet our uptime and project deadline requirements.”

### About Pragati Offset Private Limited

Pragati Offset Private Limited was established in 1962 as a commercial offset printing solutions provider in Hyderabad, India. The company has since evolved to become a one-stop service provider that addresses the printing requirements of customers in India, the United States, Europe, and Japan. Pragati uses IT extensively for its diversified customer base, with customized solutions ranging from annual reports, marketing collaterals, packaging and presentation folders. The company’s operations are backed by an extensive management information system and a network of computers spread across pre-press, press and post-press equipment and connected to a central database.

“The combined Sun-StorageTek solution delivers the reliability and performance we need to give our printing company a competitive edge. The hardware/software combination helped us reduce our total cost of ownership while implementing an ILM strategy.”

### Mr. Ramakrishna P. Kodali

Director of IT and Pre-press  
Pragati Offset Private Limited

