

# FAST LEARNER



## Mahidol University Elevates Accuracy Cuts Costs with Objet 3D Printer

*"We are now able to reach the level of precision and reliability we need for surgical models."*

— Saranat Raibhu, Mahidol University

*Objet Eden 3D Printer, Mahidol University produces highly accurate, detailed prototypes more quickly than before and at a lower cost.*

The Industrial Service Center at Mahidol University, Bangkok, Thailand, conducts research and provides technological services to university departments and external industries. Part of the department of engineering, the service center delivers highly accurate models and prototypes quickly and with a limited budget.

The service center is required to provide highly precise models of human skulls and other organs, to facilitate learning and research around complex surgical procedures and dental implants.

To handle the diverse requirements for high accuracy and fast turnaround times, Mahidol University purchased an Objet Eden260V 3D Printer. The compact, office-friendly 3D printer offers high resolution and a choice of high speed and high quality printing modes, as well as support for multiple model materials with different properties. The Objet Eden260V provides maximum flexibility to achieve the quality required by the university within limited time frames.

### High-Quality Models at Reduced Costs

"Prior to purchasing the Objet Eden260V, we evaluated three competitive products," says Saranat Raibhu, assistant professor. "At an academic institute, budget is naturally a key consideration – both in terms of initial investment and ongoing maintenance and material costs. We found the Objet Eden260V provides us with greater versatility, superior accuracy and reliability – all at a lower cost."

The Objet Eden260V 3D Printer, based on Objet's innovative PolyJet technology, provides an easy-to-use, fast and clean solution for building precise anatomical models. Models produced on the Objet Eden260V have extremely fine details and an outstanding surface finish – ensuring the high degree of accuracy required by the university.

### At a Glance

#### Challenges

- Facilitate medical and dental learning and academic research
- Provide accurate, reliable models for commercial research projects
- Generate highly accurate 3D anatomical models
- Minimize operational cost of 3D printing

#### Solution

- Objet Eden260V™ 3D Printer

#### Results

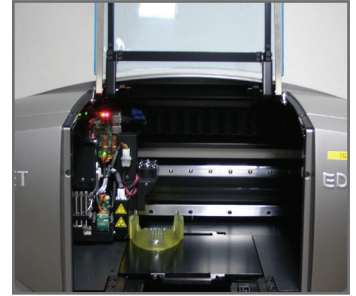
- 50 percent savings in model fabrication turnaround time
- 30 percent savings in model build costs
- Enhanced prototype reliability
- 90 percent decrease in 3D printer maintenance cost

The Objet Eden260V has dramatically reduced the service center's overall costs. According to Raibhu, direct build costs dropped by 30 percent, and printer maintenance costs dropped by 90 percent.

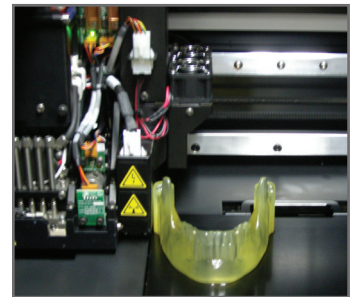
### Time Savings Across the Board

Time is always tight, with multiple student and faculty research projects often running in parallel. In addition, the university has ongoing commitments to provide 3D printing services as part of development contracts with technological and industrial companies. The efficient printing capabilities of the Objet Eden260V have reduced model build time by 50 percent over the engineering faculty's previous 3D printer. This enables faster insight and feedback on design concepts and ensures that the single printer can meet the varied needs of the department.

Raibhu noted that the Objet 3D Printer gets the model right, every time. "The machine and the printer process are more reliable than we had been used to," he said. "We now have zero need for re-builds due to machine or part failure during the build process."



*The university selected the Objet Eden260V for its dental models and other uses because of its versatility, accuracy and low cost.*



*Build time for dental models like this has been reduced 50 percent compared to the university's previous 3D printer.*

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