Plan for Expending FY 2006-07 IT-ICC Funds
Mechanical Engineering Department

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1 Executive Summary

“MEnet” supports two student computing labs and provides network services used by graduate and undergraduate students. The two MEnet open computing labs are located in rooms ME 10 and ME 472. In addition, MEnet supports many laboratory workstations, electronic media devices such as projectors and cameras, and wireless networking. The network servers are housed in room ME 155 and the systems staff resides in room ME 152.

The Mechanical Engineering Department invests heavily in the support of MEnet. MEnet is staffed by 3.5 full-time equivalent systems managers. The Department provides an additional maintenance budget to augment ITlabs support. Instructional equipment monies are used to augment IT-ICC funds for hardware and software. In addition, individual researchers contribute equipment and staff salary support.

Economy of scale is realized by combining most of the departmental computing resources in the MEnet labs rather than supporting small computing labs for individual researchers. Thus, resources are pooled to maximize accessibility to all users. “Specialized” labs, which are not open to all graduate students eligible to use MEnet, do exist in Mechanical Engineering, but they are not supported by ITlabs funds. MEnet is viewed as an essential resource to provide instructional and research computing to the Department.

2 Line Item Descriptions

A budget proposal for utilizing $63,600 in IT-ICC funds within MEnet for the 2006-2007 fiscal year is included in Section 4. Each line item is explained below.
2.1 Student Seat Upgrades

The student labs within MEnet house approximately 35 workstations. Our goal is to replace these machines on a four year cycle, consistent with the IT-ICC open labs. Several seats in ME 10 and ME 472 will require replacing this year, so $22,600 is budgeted.

2.2 Server Upgrades

All MEnet machines are supported from networked file servers. We budget $5,000 for server replacement and associated disk expansion. The cost of servers are typically split between IT-ICC and departmental funds.

2.3 Network Upgrades

A total of $9,000 is budgeted for network upgrades. $7,000 is reserved for upgrading a network switch. Approximately $2,000 is needed to maintain an uninterruptible power supply.

2.4 Backup System Support

$8,000 is budgeted for supporting and expanding the MEnet back-up system. About $3,500 is needed to maintain “Legato” software for the back-up system; this is 25% of the total annual cost. About $4,500 is budgeted for back-up media. These items are typically cost-shared with the Mechanical and Aeronautical Engineering departments.

2.5 Document & Presentation Facilities

$15,000 is budgeted for this category. We plan on installing two high-capacity color printers in the open labs this fiscal year at a cost of about $6,000 each. This will carry through a plan to replace the open lab printers which was delayed from last year. We reserve $3,000 for upgrading digital documentation equipment in the check-out pool.

2.6 Software Support

$5,000 is budgeted for software and hardware support for FY 2006-07. MEnet must renew several important instructional software licenses annually. While several pieces of instructional software have been moved to an Instructional Equipment Request, several needs remain on this budget. First, the departmental license for ANSYS is expense, so it is cost-shared among several budgets. We must also maintain the operating system software for Sun machines which are accessible to students. Several recurring licenses to maintain network security are cost-shared with this budget.
3 Summary

MEnet has successfully supported computing in the Mechanical Engineering Department by pooling computational resources for instructional and research usage as a basic policy. As a result, MEnet now serves over 600 active graduate, undergraduate and faculty accounts. IT-ICC provides funding critical to maintaining the equipment base of MEnet. This year’s budget proposes support for: seat replacement; server upgrades; network upgrades; backup support; document & presentation facilities; and software support. These items are all essential to MEnet’s continued operation.

4 Proposed Itemized Budget

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Budgeted</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seat upgrades</td>
<td>$22,600</td>
<td>Replace outdated seats in open labs; replace laptops in checkout pool</td>
</tr>
<tr>
<td>2</td>
<td>Server upgrades</td>
<td>$5,000</td>
<td>Maintain &amp; expand server and disk capacity</td>
</tr>
<tr>
<td>3</td>
<td>Network upgrades</td>
<td>$9,000</td>
<td>Upgrade switches, UPS maintenance</td>
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<tr>
<td>4</td>
<td>Backup system support</td>
<td>$7,000</td>
<td>25% Legato Networker; add semi-automated mass storage system</td>
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<tr>
<td>5</td>
<td>Document &amp; presentation facilities</td>
<td>$15,000</td>
<td>Add two high-capacity color printers; add 3 scanners; add DVD burner; add DVD recorder</td>
</tr>
<tr>
<td>6</td>
<td>Software support</td>
<td>$5,000</td>
<td>Various software contracts; software augmented by Instructional Equipment funds</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>$63,600</strong></td>
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