

## A *Laboratory and Computer Facilities*

### 1 Overview

The Computer Science Department is committed to providing high-quality computing facilities for use by computer science faculty, students, and administrative personnel. The facilities are operated by an excellent, customer-oriented technical staff who are not only responsible for the installation and maintenance of the systems, but who are also dedicated to assist faculty and students in the development of software systems for research projects. The staff periodically attends training courses and workshops to complete certifications and upgrade their skills. CS is also a certified warranty and repair center for Dell computers. The facilities staff includes a director, facilities manager, network engineer, hardware engineer, five system administrators, and several student assistants.

### 2 General Facilities

General computing facilities are available for both administrative activities (such as the preparation of research reports and technical publications) and research needs that are not supported by other dedicated equipment. The main server systems are multi-core multiprocessors with large main memories and large disk arrays for storage. Personal workstations and laptops from a variety of vendors are used by faculty, staff, and students throughout the department.

### 3 Educational Facilities

The Computer Science department operates eight instructional laboratories in two buildings. These labs are used for both undergraduate and graduate computer science courses and include over 200 Intel- and Sun SPARC-based workstations. Supported operating systems include Windows 7, Linux, Solaris x86, and Solaris SPARC. Two labs are collaboration team project labs dedicated to group learning with the assistance of interactive SMARTboard technology. A later section lists equipment owned and maintained by ITaP but used by computer science students.

### 4 I/O Equipment

The department operates both special-purpose output devices as well as general output equipment, including more than 70 laser printers, color printers, color scanners, multi-functional printer/scanner/copier/fax machines, video projectors, digital video recording and editing capabilities as well as phone conferencing and a variation of video conferencing equipment. The CS department provides video conferencing in dedicated locations as well as mobile video conferencing stations. Recently the CS department has added a new state of the art Cisco Telepresence video conference room.

### 5 Networking Services

The department is strongly committed to state-of-the-art networking technology to provide access to and communication among its systems, as well as to those elsewhere on campus and throughout the world. Our departmental infrastructure supports gigabit per second data rates to the desktop

throughout our two buildings using over 65 Ethernet VLAN-capable switches from Force10, Cisco Systems, and Dell. Wiring in the new Lawson Computer Science Building is based on Panduit augmented CAT6 data cable and patch panels, capable of 10 gigabit per second speeds. This network infrastructure is biconnected to the campus backbone by two 1 gigabit per second redundant fiber links. The campus is connected to multiple high speed Internet backbones, including Abilene/Internet2 and I-Light. DSL, cable, and cellular data services are widely used for remote access.

## 6 Information Technology at Purdue (ITaP) Facilities

In addition to the facilities described above, students and faculty have access to computing systems owned and operated by ITaP. General instructional facilities operated by ITaP include large Sun SPARC servers and several Sun and Intel workstation laboratories. In addition, ITaP provides systems for use in courses taught by the CS Department. These systems include UNIX-based Sun SPARC stations for undergraduate computer science courses and Microsoft Windows-based Intel personal computers for use in an introductory course for non-majors (CS 110). Departmental research projects make use of other facilities provided by ITaP. These include a large IBM SP cluster and the Envision Center for Data Perceptualization.

## 7 Computing Facilities Staff

The department employs seven full time technical staff and three administrative staff (some with other responsibilities) who support the operation of the departmental computing facilities. The working environment is good, with very little turnover in staff. The job roles, names, and number of years with the department are given in Table I.E.1.

<b>Role</b>	<b>Name (Years in CS at Purdue)</b>
Facilities Director	Tim Korb (29)
Facilities Manager	Ron Castongia (13)
Windows Systems Administration	Melanie Church (3) Students:
Hardware and Network Engineers	Brian Board (15), Mike Motuliak (8)
UNIX and Network Administration	Daniel Trinkle (25)
UNIX Systems Administration	Charles Fultz (11), Steven Plite (11)
Webmaster/Oracle DBA	Nick Hirschberg (11)

**Table I.E.1: Computing Facilities Staff**