

**AN INVENTORY OF INFORMATION SYSTEMS  
AT UCF**

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## **ABSTRACT**

This Technical Report is part of a systems analysis of student services at UCF. Providing comprehensive, accurate, and timely information about and for students is an important service that UCF supports. This report provides an inventory of the databases, information systems, and applications that are either used by students or are used to service students. Each element in this inventory is briefly described along with who has access and the manner in which it is accessed. Future reports will examine the relationships among the databases as well as how and how well information (related to students) is being managed, communicated, and updated at UCF in order to identify areas for improvement.

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# **AN INVENTORY OF INFORMATION SYSTEMS**

## **1.0 INTRODUCTION AND SCOPE**

The University of Central Florida currently serves a diverse student body population of 28,000 students. One of its primary objectives has been and continues to be to improve the quality of institutional services. Several offices (e.g., Office of Student Affairs, and Quality Initiatives) have administered surveys to obtain an index of student satisfaction. Their findings show a high student approval rating with respect to most academic issues, in contrast to a lower approval rating with respect to those issues generally classified as “student services.” The Quality Initiatives office has worked closely with the process owners to improve their processes. This approach has helped to enhance communication and understanding within various organizational functions and improve processes. There is a need, however, to identify and address systemic issues that cross organizational boundaries that involve multiple process owners.

The University, as part of its Strategic Planning Initiative, has provided funding to support the University’s Customer Focus for the 21st Century (UCF 21) project to address this need for a systems level study of student services. The primary goals of the UCF 21 project are to: 1) develop a systems level view of student services and their interactions by documenting all critical student service processes and their interrelationships; 2) identify systems level improvement opportunities, including re-engineering; 3) recommend changes and/or in-depth studies; and 4) develop implementation plans for changes and /or in-depth studies.

As part of the UCF 21 Project, there is a need to determine how and how well information (related to students) is being managed, communicated, and updated at UCF. Part of the systems analysis is to gain an understanding of all of the means of communication and information storage and retrieval used at the University. This report provides an inventory of the electronic communication and information systems related to students. Section 2 provides an overview of the information systems and the process used to create this inventory of information systems. Each of the identified electronic forms of communication and information is briefly described in Section 3 along with information about access and usage. Several databases for which no details were available were identified during the development of this inventory. These are briefly listed in Section 4 followed by conclusions in Section 5.

## **2.0 OVERVIEW OF INFORMATION AT UCF**

### **2.1 Introduction**

This report provides an inventory of databases, information systems, and software packages that are either used by students or used to service students. Though many were found through the discovery process, this list may not be comprehensive.

The listing of information systems is alphabetical by name. Each entry includes a brief description of the system, its access and usage, and in some cases, future plans for the system. Nearly all entries were validated; however, some were not. In all cases, a significant attempt was made to ensure the accuracy of the information in this report.

## **2.2 Method Used to Develop the Inventory**

An initial list of information systems was received from the Institutional Research and Planning Support Department from work they had previously done with enterprise systems. This list provided a starting point in identifying the information systems. Based on this list, individual department heads were contacted by telephone to set up appointments for interviews. A UCF 21 analyst met with the department contact who was either the director of the department or the primary computer systems analyst working in the department.

At each interview, the analyst explained the UCF 21 project and the purpose of gathering the information used in this report. The department representative then explained what systems are in use, what functions they provide, what interfaces exist and who uses the systems. In most cases, the interviews were conducted in person, in some other cases by telephone.

Following the interview, the analyst wrote up a brief summary for each system. The summary included a description which covered: (a) functions, computers used, and some historical information about the system; (b) the access methods; and (c) the usage. The latter two categories describe the computer resources or equipment needed to access the databases and the permissions to use the databases, respectively. In some cases, future plans for a system were also included in this report when relevant. Because of the ongoing implementation of the PeopleSoft Student Information System, many existing systems are scheduled to be replaced. These changes were mentioned as futures.

Each of the brief summaries developed through the interview process was faxed to the original contact person for validation. Corrections were made when necessary and then the summary was included in this report. In a few cases, validation was not explicit and these are clearly indicated in the report.

After the summaries were completed, the interrelationships among the databases were plotted in a spreadsheet. These interrelationships correspond directly to existing software interfaces between the systems described in this inventory. These interfaces are critical to sharing information between various departments and relate directly to the accuracy and timeliness of information.

An overview of the findings obtained during the discovery of these systems is included in this section of the report. The details of each system are provided in section 3.0.

## **2.3 An Overview of the Mix of Information Systems at UCF**

There are over thirty-five known databases, electronic communication, and information systems used on a regular basis at UCF. Only the student database is used universally throughout the campus. All other systems are “departmental” or specific to certain organizational divisions. This is important when considering the flow

of information between and among divisions or departments. Though the student database is relied upon for common information needs, it is somewhat limited, and is dated. Its limited capabilities have, in part, contributed to the development of the large number of “departmental” systems. The age of the student database has also contributed to the costs of making changes and improvements, as well as a reluctance to invest in it further. Consequently, the student database is in the process of being replaced with a new PeopleSoft student information system that will use current technology.

The departmental systems are a mixture of purchased software packages and small database applications programmed by staff or student assistants. Most were intended for use only by the department despite occasional need for sharing with other departments. Typical sharing occurs through printed reports or “telephone inquiries” where the receiving department calls for specific facts from the department that manages the data. In most cases, this separation is appropriate given the cost of interfaces and the infrequent need for them. An example of a departmental system is the Medical Manager used by Student Health Services.

The divisional systems span several departments. For example the Schedule 25 system is used by all the colleges for scheduling classrooms. These systems are managed centrally by Computer Services. Figure 1 illustrates the various “classes” of databases managed and maintained at UCF.

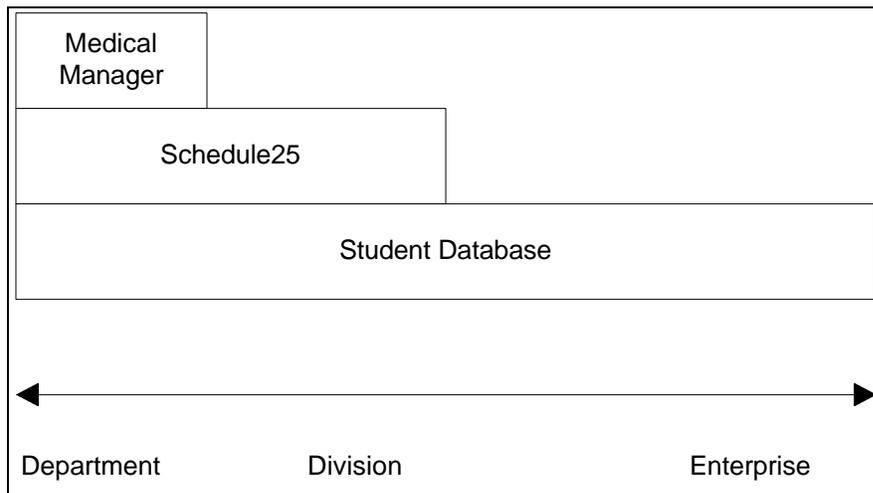


Figure 1. Graphical Illustration of “Classes” of Databases

Applications and information systems are accessed through PCs or terminals. The student database and all host based databases run on mainframe computers either located on campus or at the Northwest Regional Data Center (NWRDC). Terminals and PCs running terminal emulation software are used to access the host programs. Additionally, database linkages are available for running queries against these databases. These linkages use local PC databases to store data from the host during the queries (see Figure 2). Web, kiosk, and other devices use copies of database files for inquiry and updates.

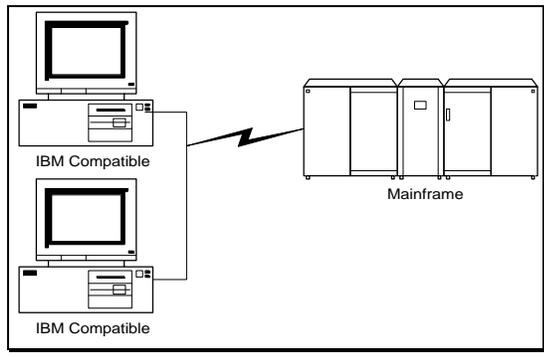


Figure 2. Graphical Depiction of Mainframe to IBM Terminals

Several systems, especially divisional ones, run on “minis” such as the AS/400 or on Unix servers (see Figure 3). These support terminal emulation from PCs and some client/server applications from PC workstations. Examples include the registration and cashing applications which run on an AS/400.

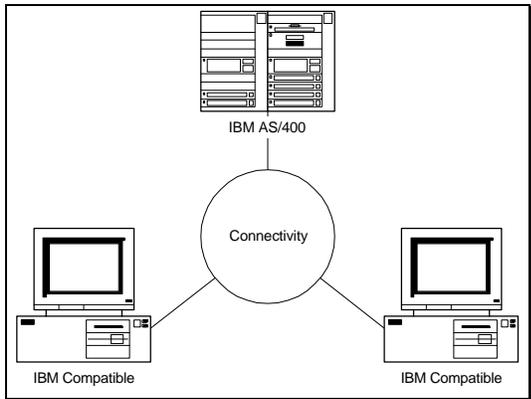


Figure 3. Graphical Depiction of Minis Configuration

Many more packages and applications run on PCs. The PCs are usually connected to a file server for sharing database information within the department (see Figure 4). These PC applications may be written in a database access language such as Clipper or FoxPro. Examples include the foundation scholarships and the batch certification used by the VA office.

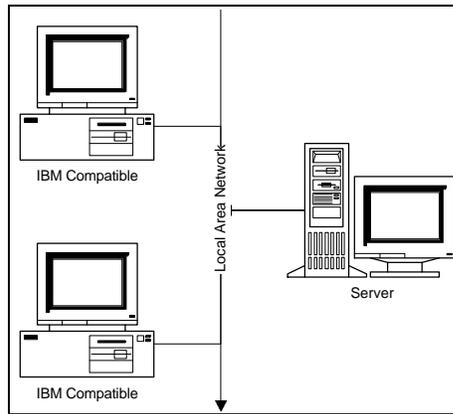


Figure 4. Graphical Depiction of PC Applications

The nature of the information systems environment at UCF leads to costly support because of integration of several different platforms. However, this is not unusual in the state of the industry today. The superior platforms continue to be supported with availability of software applications and components. Many large businesses have a mixture of mainframes, minis (including AS/400s and Unix servers), local area network servers, and PC workstations. The size of the database, number of users, and performance needs dictate which platform to use. Additionally, many packages only run on one platform thus decisions about platforms are driven by availability of software which is driven by business needs. Despite this fact of life, support and integration are still difficult to manage.

## 2.4 Interrelationships through Interfaces

Interfaces exist between the various databases and information systems. Both batch downloads and batch uploads were the types of interfaces encountered. Nearly all interfaces found were to and from the student database. The matrix in Figure 5 shows the relationships between systems by the existence of electronic interfaces. The following codes describe the interrelationships.

S - Real time screen scraping

D - Download managed by Computer Services

I - Integrated

D & U - View student account status and Upload to post receivables

U - Upload nightly; managed by Computer Services





### **3.0 ELECTRONIC FORMS OF COMMUNICATION AND INFORMATION**

#### **3.1 The 800# Commercial Registration System**

Description:

This system provides telephone registration to students outside of the local calling area. It is provided by a third party company. The system pays for itself through advertising revenues.

Access:

Access is through any telephone for registration. No other access is provided. The interface between this system and the registration system is through screen scraping. Thus the registration system just considers this system like any other user.

Usage:

The students are the only users of the system via the telephone.

#### **3.2 Air Force ROTC Cadet Programs**

Description:

The ROTC program makes use of several Air Force databases. However, these are only accessible by the ROTC detachment. There are no automated interfaces between UCF systems and the Air Force systems; all data used in both is keyed into each system separately.

The Air Force ROTC detachment tracks ROTC students within the UCF Student database for grades, transfer credits and SAT scores among other items. The Air Force databases are used to track graduation dates, tuition, payments, GPA, physical fitness standards, and other pertinent information.

#### **3.3 Alumni Database**

Description:

This database contains 150,000 constituents, both alumni and donors. The constituents are solicited periodically for donations to the UCF Foundation. Additionally, news and events of interest to alumni and donors are mailed to them through labels printed from the system.

This package is made by JSI Fundraising in Williamsburg, VA. The database management software used by the package is Millenium SQL 6.5. The package runs on an NT network.

Access:

The application is PC based and runs on an NT network.

Usage:

Approximately 50 users use the system from the following locations: the downtown community office, the Foundation office, the Alumni office, Public Relations and the Constituent Relations office.

### **3.4 Badging System**

#### Description:

The All Campus Card office has a badging system for storing and printing photographs on badges. The badges are issued to students, faculty, and staff.

Computer Services downloads pertinent student information from the student database to the badging system. This information includes the 16 digit ISO student number that is printed on the badges.

#### Access:

The badging system is housed in the All Campus Card office. It is accessible through a PC program on one of their PCs.

#### Usage:

The system is used by the All Campus Card staff.

#### Futures:

Many opportunities exist to expand the use of the All Campus Card. Possibilities include local ATM banking, long distance calling card, voice mail, additional vending access.

### **3.5 CARE Resume Expert System**

#### Description:

This package is used for recording and distributing resumes. It provides wizards for creating resumes and tips for improving resumes. The resulting database of resumes is available for Career Resource Center Staff to search.

#### Access:

The package is available only on the designated PCs in the Career Resource Services.

#### Usage:

The package is used by students and alumni. The Career Resource Center staff performs searches according to employer requests.

### **3.6 Cashiering**

#### Description:

The cashiering program runs on the AS/400 along with registration. It is integrated with the registration program so that student registration records showing costs are accessible by the cashiering program to determine tuition and fees.

The cashiering system does not print invoices but does print receipts for students.

The cashiering screens also include an accounts receivable menu to show additional fees such as library fines and ID card fees.

An interface exists between cashiering and accounts receivable so that paid accounts are recorded in student accounts.

Access:

Access is available through PCs running 5250 emulation.

Usage:

Only the cashier tellers use this system.

### **3.7 CLAST Testing System**

Description:

This package is an electronic version of the CLAST exams. This provides an online option to taking the state exams.

The testing system runs on PCs on a LAN.

Access:

The testing system is only available in the Counseling and Testing Center.

Usage:

Students are the primary users of the CLAST testing system.

### **3.8 Clipper Batch Certification**

Description:

This program is used to certify Veterans benefits for eligible students. It runs a complex algorithm against inputs such as enrollment status, degree program, GPA and other criteria in determining certification benefits.

Extracts of pertinent data are made from the Student database and downloaded into the Clipper database. This program is a custom program for the Veterans Services department.

Access:

This program is only available in the Veterans Services department. It runs on their PCs.

Usage:

This program is used by the Veterans Services staff.

Futures:

This may be rewritten in the Delphi programming tool.

### **3.9 Computer Laboratories**

Description:

The university Computer Services department provides computer labs. These labs contain dozens of PCs and Macs with office automation software and with printers. Each workstation also includes a WWW browser and internet access.

Each lab has an Assistant Lab Manager and one or two Consultants working there. The library is the exception to this as they only have the Assistant Lab Manager during the day (8-5,M-F) and one Consultant working otherwise. Each person is given a userID when they first enroll in UCF. This userID is theirs permanently as long as they are a student here at UCF. All students can use any computer lab that is open for business.

Access:

Access is through four labs located around the campus. They are in Computer Center II, rooms 104 and 113 which are open 24 hours except Friday and Saturday when they close at 6:00 p.m. They are in Education room 326A which is open 8:00 a.m. to midnight Monday through Friday and weekends during the day. The Library lobby location is open during library hours. The fourth location is the Magruder Business Administration building, room 148 which has the same hours as the Computer Center II location.

Students may also dial-in from home to access their email on Pegasus or connect to the Internet free of charge.

Computer Accounts, located in Computer Center II, room 102, deals with all types of computer access. You can get forms, submit forms for accounts to be generated, pick up completed computer accounts, password problems, and anything related to computer accounts information and access. Faculty may pick up the "Using Pegasus Mail Server" for free but students can purchase it in the Computer Store or the bookstore on campus.

Students may have passwords reset and multiple network connections cleared by seeing a Consultant on duty and presenting their photo ID. All other computer account problems, they should see the person in Computer Accounts.

Usage:

The labs and computers are available to enrolled students or those students within one semester after graduation.

Faculty and adjuncts may also use the computer lab. They are also given userIDs when they first sign their contracts and are theirs permanently as long as they are employed here at UCF.

Staff members must request a computer account since they are not automatically generated.

Computer labs may also be reserved by a faculty member if there is a computer lab in their building. For instance, if faculty members are from the College of Education, then they can reserve the EDU 326A computer lab and no other lab is available to them. If the faculty are from Arts & Sciences, they can reserve Phillips Hall 310 computer lab through the Computer Science department. If a faculty member needs a computer lab and there is no lab in their building, then they may try to schedule the Sprint Learning Center lab in the Library through Carol Hinshaw. Computer labs can not be reserved to hold normal class hours for the entire semester in the computer lab, only a few classes for a semester.

### **3.10 Directalk**

Description:

The Directalk system makes personal financial aid information available to students via the telephone. It provides status information about application processing and awards.

Access:

Access is through a local telephone call with student identifier and pin code.

Usage:

Students are the users of the system.

### **3.11 EMAS**

Description:

EMAS stands for enrollment management admission system. It is used for the admissions process. It is a package that was purchased from the USA Group in Denver, CO. Several other universities use it as well.

The system tracks prospects, inquiries, applicants, and enrollees. It tracks all communications with these persons whether via postal mail, email, telephone calls, or web inquiries. The system has an automated workflow that distributes the handling of the contacts based on rules that are predefined by the management in the Admissions office.

Additionally the system provides telecounseling functions. Specifically, it will dial contacts' telephone numbers, connect the telecounselor, prompt the telecounselor with pertinent follow up information and record the results of the contact call.

Data from the EMAS system is uploaded nightly to the student database on the mainframe. This is a one way interface.

Access:

Access is through a PC program. Data and reports from this system are also available.

Usage:

The Undergraduate Admissions office staff are the users of this system. The Colleges and some other departments such as Housing, make use of this data for their planning purposes.

Futures:

This system is planned for replacement with the implementation of the PeopleSoft Student Administration system.

### **3.12 Fellowship Database**

Description:

This database is used to track fellowships awarded to graduate students. It was written in MS Access and is maintained by the Office of Graduate Studies. Information

from the database is sent electronically via email to the Financial Aid office on an ad hoc basis. It is also used for reporting requirements.

Access:

The database is currently accessed on PCs located in the Office of Graduate Studies.

Usage:

The Office of Graduate Studies tracks the fellowships and shares information from the database with the Financial Aid office for disbursements.

Futures:

It is hoped that this function will be provided in PeopleSoft.

### **3.13 Financial Aid System**

Description:

The system is comprised of a database and several programs that process financial aid functions.

The system was originally developed about 15 years ago by SSDS, the software development organization of the State University System (SUS). A consortium meets periodically to identify and prioritize improvements to the system. It is currently not used by all ten state universities. UCF uses more functionality of the system than most of the other members of the SUS.

It runs at the Northwest Regional Data Center on the mainframe.

The Computer Services department downloads appropriate data into the system on a nightly basis. The source of the data is the Student Database.

Access:

It is primarily available through CICS transactions in IBM 3270 terminals or emulation screens. Some of the data may be viewed or changed through the Directtalk, the Kiosks or Polaris.

Usage:

The staff of the Financial Assistance Office are the primary users of the system. Students have "read-only" access to their financial aid information via Directtalk, Kiosks, or Polaris.

Futures:

This system may be partially or totally replaced by the planned implementation of the PeopleSoft Student Administration system.

### **3.14 Foundation Scholarships**

Description:

This custom developed database tracks available and awarded privately funded scholarships administered through the UCF Foundation. The database tracks the dollar amount of the award, the criteria for eligibility, the donor, the academic area and student financial aid information.

The awards are issued by the Financial Aid Office through existing Financial Aid systems. The applicable portion of the database is downloaded nightly from the Financial Aid system to the Foundation Scholarship database.

Access:

The software is accessed via PCs on the Foundation LAN.

Usage:

Currently two people use the database: one from the Foundation office and one from the Financial Aid office.

Futures:

Presently there are plans to make the database available to about 20-30 people from the Foundation office and the Colleges.

### **3.15 Graduate Student Admissions System**

Description:

This new system tracks admitted graduate students. It was written in Visual Basic by the Office of Graduate Studies. It also uses Clientsoft and Access/Shadow. An interface with the mainframe has been developed but is not in use. Another interface with the web server has been designed but not yet developed.

Access:

This system runs on PCs located in the Office of Graduate Studies.

Usage:

One program assistant from Graduate Studies uses the database. It is maintained by the computer specialist in the department.

Futures:

This function will be replaced by PeopleSoft.

### **3.16 Graduate Student Database**

Description:

The graduate student database is an extension of the existing student database.

Access:

Access is through CICS transactions on IBM 3270 terminals.

Usage:

Numerous departments have access to the graduate student database. Specifically, the Graduate Admissions office, the Colleges, and the departments use and access the database.

### **3.17 Graduate Student Inquiry Database**

#### Description:

This database tracks prospects and their inquiries for graduate programs at UCF. It also triggers mailing of applications to prospects. It was written in MS Access and is maintained by the Office of Graduate Studies.

#### Access:

The inquiry forms are accessible from the web server and also on PCs located in the Office of Graduate Studies. The inquiries are also viewable by the departments.

#### Usage:

The Office of Graduate Studies and the Departments use it for correspondence and for planning purposes.

#### Futures:

This system will be replaced by PeopleSoft.

### **3.18 Graduate Studies Web Site**

#### Description:

This web site contains important information for existing graduate students such as the catalog and thesis requirements. It contains a "frequently asked questions" or FAQ section. It also has an online inquiry application and fellowship application for prospects to download and complete.

#### Access:

The web site is accessed through the World Wide Web on the Internet.

#### Usage:

Graduate students and graduate prospects are the primary users of the site.

### **3.19 Housing System**

#### Description:

This PC database application was custom written for the Housing department. It was written in Paradox and provides tracking of students living in residence halls, a matching algorithm for matching roommates and room assignments based on certain criteria.

There are no interfaces to external systems. Data entry is performed by the Housing department.

#### Access:

Access is through PCs located in the Housing department.

#### Usage:

The system is used only by the Housing department. Reports and labels of relevant records are sent to other departments such as First Year Advising and Food Service.

Futures:

Plans to replace the system next year are underway. A package called Cyborg is being evaluated because of its matching algorithm. Information from the replacement system will be made available to users of the new PeopleSoft system through a read-only interface.

**3.20 I-20**

Description:

This system prints forms needed for VISAs and other immigration requirements. It uses an extract from the student database of all international students.

Access:

The package is available on PCs in International Student Services.

Usage:

Used by the International Student Services staff.

**3.21 IMAX Document Imaging**

Description:

The IMAX system is for storing documents electronically. This is used by the Legal Services department for storing and indexing legal documents in support of cases worked on by the Legal staff.

Access:

Access is available with the IMAX client software running on MacIntosh computers.

Usage:

Only certain members of the Legal Services department has access to the electronic documents and the software to display them.

**3.22 Immunization Compliance File**

Description:

The file is used to track immunization history for students and to remove account holds.

Access:

The file is accessed on the mainframe at the Northwest Regional Data Center and on the AS/400 through the university's backbone.

Usage:

The file is used by the immunization staff in the Student Health Center.

### **3.23 Kiosk**

Description:

The kiosks on campus provide individual and general information in convenient locations. The information content includes financial aid information, holds, grade reports, and lists of clubs and organizations on campus. The kiosks are personal computers housed in protective cabinets with a touch screen user interface.

Access:

Access is through convenient locations at kiosk stations. The stations are made of PCs secured in locked cabinets with a touch screen user interface.

Usage:

Primarily used by students, visitors may also retrieve general information.

### **3.24 Knightlink**

Description:

This system maintains a list of available job postings.

Access:

Access is through a local telephone call.

Usage:

The telephone based service is used by students and alumni. Employers use the system to post available positions.

### **3.25 Laboratory System**

Description:

This system is used to track laboratory orders and charges for patients using the Student Health Center.

Currently there is no interface with the Medical Manager system. Charges are thus tracked in both the lab system and in Medical Manager. The patient record information is tracked in both separately, as well.

Access:

Access is through a PC located in the laboratory.

Usage:

The system is used by the subcontracted laboratory company working on site in the Student Health Center.

### **3.26 Library Accounting System**

#### Description:

This package/system tracks all checked out library materials. An upload from the All Campus Card is done periodically. Uploads from the library accounting system to the Student Accounts system are completed regularly as well for billing library fines to students.

#### Access:

Checking material in and out is accomplished through a xxx screen. All materials and all identification cards are barcoded so that input into the system is done primarily with laser barcode scanners.

#### Usage:

The library staff use the system. However, it maintains a list of all students, faculty, staff and some members of the public that are eligible to check out materials.

### **3.27 Library Instruction Classes**

#### Description:

The UCF library offers instruction classes on how to use the resources of the library. These classes are taught in the Sprint Learning Center on PCs located in the center.

### **3.28 Medical Manager**

#### Description:

This package system is used for scheduling health center appointments, scheduling medical personnel, and tracking student health records. It records treatments (procedures), patient history and patient demographics. Also, it tracks patient accounts and health insurance claims.

Additionally, the system provides statistics on diagnoses, procedures, and productivity.

It runs on a SCO Unix server.

The accounts receivable information is uploaded to the Student Accounts system at the NWRDC on a nightly basis. Student Accounts handles the statements, holds, and collections for Student Health Services. Currently there is no interface from the student database. Newly enrolled student information is captured at the first visit to the Student Health office.

#### Access:

Access is through PCs located in the Health Center.

#### Usage:

The system is used by the Student Health Services staff.

### **3.29 NOTIS Library System**

#### Description:

This system contains the online catalog for the library. It also maintains overdue books and book bills. Overdue fines are calculated automatically. A weekly electronic interface records the fine in the Student Accounts system as well. The system also allows for manually entered bills for lost books.

This system is maintained by the State University System consortium which is managed by the Florida Center for Library Automation. It runs on the mainframe at the Northeast Regional Data Center.

#### Access:

The library uses PCs which run 3270 emulation to access the mainframe. Additionally the WebLuis interface is also available on the PCs through the World Wide Web and browser software.

#### Usage:

The library staff has access to all of the functions system. The card catalog is available to the library users.

### **3.30 Orientation Database**

#### Description:

The Orientation office uses an application developed in Microsoft Access to track correspondence with Orientation participants, assign Orientation sessions and inform other organizational units of students' orientation status.

The database was developed by a member of the staff and is maintained in Orientation.

Data from the Student Database is downloaded from the mainframe and imported into the MS Access database on the Orientation LAN. Selection of students depends on their admitted status.

#### Access:

Primarily the database is available only in the Orientation office on the LAN. Access to data from other departments is through printed reports and/or diskettes with subsets of the data.

#### Usage:

The Orientation office uses the database. Reports and printed lists, output from the system, are used by the Registrar's office, Health Services, the Colleges, the Advising Centers, the All Campus Card office, and Academic Development & Retention. The First Year Advising Office uses data extracted from the database.

### **3.31 Petition/Appeals Database**

#### Description:

This database tracks exceptions to university policies as granted to graduate students. It was written in MS Access and is maintained by the Office of Graduate Studies.

Access:

It is currently accessed on PCs in the Office of Graduate Studies. Plans are underway to make the database available on the web site

Usage:

The information is used by the departments and the graduate studies.

Futures:

It is hoped that this function will be provided in PeopleSoft.

### **3.32 Pin Code File**

Description:

Many systems depend on the pin code file. It is used for validating students in conjunction with the student identifier. It is four digits in length and is maintained on the mainframe host.

Access:

Access to look up or to change the pin code is available through the kiosks, Polaris, or the Financial Aid phone system.

Usage:

Students use the pin code file each time they retrieve their personal records or when they make changes to their pin code. However, some of these updates may not be made in "real time", thus there may be a delay between a change made and its use on a separate system.

### **3.33 Polaris**

Description:

This system provides web-based registration and individual record information, including financial aid status.

Access:

The only method of access to the Polaris system is through the World Wide Web.

Usage:

Polaris is primarily used by students. The student's pin code is required to access personal records.

### **3.34 ProPharm**

Description:

This package describes side effects, drug interactions, and precautions of prescription drugs. It also tracks dispensation of pharmaceuticals to students.

It runs on a SCO Unix server.

A two way interface between ProPharm and Medical Manager exists. Patient records are sent from the Medical Manager to ProPharm. Charges recorded in ProPharm are sent back to Medical Manager.

Access:

Access is through PCs located in the Health Center.

Usage:

The package is used by the pharmacist at the Student Health Center pharmacy.

### **3.35 Reference, Research and Publications**

Description:

Many UCF library references, research materials and publications are available electronically. Several systems which are partially or fully integrated that provide these resources are LUIS, WebLUIS, CSA, the CD-ROM LAN, and Dialog@CARL.

The entire card catalog for UCF as well as card catalogs for other state universities are available through LUIS. LUIS is also the access mechanism for dozens of online indexes, some of which include abstracts.

Other electronic indexes are available through the CD-ROM LAN in the library.

Other access methods include CSA, the Cambridge Scientific Abstracts, Nexus/Lexis online search system, the Orlando Sentinel, Dialog@CARL, and First Search. These systems use their own search interfaces and communications such that most are currently not available on LUIS.

Access:

The LUIS system is the primary method of accessing the electronic sources. LUIS terminals are located throughout the library facility. Additionally, LUIS may be accessed via the World Wide Web, through the Pegasus host, and through the Northwest Regional Data Center host. LUIS additionally provides an email interface whereby results may be electronically mailed to an Internet email address for future use.

The CD-ROM LAN and other methods are available in the library on PCs that run proprietary software to access the sources.

Usage:

The systems are primarily used by students, faculty, alumni and in some cases, the general public.

Futures:

The CD-ROM LAN will be accessible from locations throughout the campus other than in the library.

New indexes are added regularly to available electronic sources on LUIS, the CD-ROM LAN and the other methods.

### **3.36 Registration**

#### Description:

A registration software package is used for registration processing. It is housed on an IBM AS/400 using the DB/2 database. This package is also used by several other of the state universities. It interfaces with the SASS system (which also runs on the AS/400) to verify pre- and co-requisites, and degree requirements.

The master schedule is downloaded to the registration system each term. Student records of those students eligible to enroll are downloaded to the registration system as well.

#### Access:

The Registrar's staff uses 5250 emulation or some other AS/400 emulation to access the registration system online. Students access registration through other indirect methods. The indirect access methods are convenience oriented: web access via Polaris, telephone, or by 800 number. The 800 number service is listed separately but uses a screen scraping interface. The other access methods use a direct database interface.

#### Usage:

The registration system is accessed by the Registrar department for registration records and processing.

The Colleges access the registration system to process registrations.

Enrolled students also use the system to complete their registration via one of the above convenience methods.

### **3.37 SASS**

#### Description:

SASS stands for student academic support services. The SASS system is a product of the Board of Regents. Its use is to document students' course of study (program) and progress made. It contains pre- and co-requisites, core courses, electives, completed and transferred credits.

The system itself gets input from the student data course file and the student database. It has a matching algorithm which applies the requirements of the student's program. There are no interfaces back to the student database.

It was requested by the Florida Student Government Association in the early 1980s. Thereafter the Florida Legislature made it a requirement for the state universities.

The SASS system runs on an AS/400 along with the registration system and cashiering system. It was leased from the University of Miami, Ohio.

#### Access

The system is available through the AS/400 from PCs via either 5250 terminal emulation or similar method. Additionally, screens were developed to provide student access through Polaris.

Usage:

Students use the SASS audit forms for planning their course schedule and to get their registration pin code. Advisors use the forms for helping students plan their course schedules. The Enrollment office accumulates the SASS data for reporting annually to the Board of Regents.

The SASS Office uses the system to compare the degree requirements to the completed course work to complete audits of student program requirements. The Colleges use the system to manage pre- and co-requisites and degree program requirements.

Futures:

This system will continue to be used even after the PeopleSoft implementation. An interface will exist between the PeopleSoft system and the SASS system.

### **3.38 SCHED 25 System**

Description:

The SCHED 25 system is a package for scheduling classrooms according to the course offerings in a semester. It makes use of the facility space available through a download of the Space File.

This package runs on an IBM RS/6000 computer.

Access:

Available through PCs.

Usage:

The package is used by the Colleges.

Futures:

With the implementation of the PeopleSoft Student Administration, an interface for this package is planned.

### **3.39 Space File**

Description:

The space file is the central repository for all facility space for classes and seminars.

Access:

The space file is on the mainframe at the Northwest Regional Data Center. It is available through CICS transactions on any IBM 3270 terminal.

Usage:

It is used by the Colleges.

### **3.40 State Advising System**

Description:

This is a planned system; it does not exist currently. The Board of Regents is sponsoring this system.

It will include a statewide network where any student in the State University System can peruse each University's degree program requirements. Additionally, courses taken at a state community college will be shown with their equivalent courses in the degree program listing so students researching a state university can see where their community college credits best apply.

### **3.41 Student Accounts (Accounts Receivable)**

Description:

The student accounts system runs on the mainframe at the Northwest Regional Data Center. It applies fees and tracks each student's account and receipts. It is the primary accounts receivable system for the university.

An interface exists between the student database and the student accounts system. This interface takes a subset of the student database, based on enrollment. Additionally, the cashier system's resulting transactions are uploaded to the student accounts system daily.

The Florida Prepaid system, linked via FIRN, Florida Information Regional Network, provides some input into the system. This is accomplished through an electronic billing process to the Florida Prepaid system.

Other interfaces include a file received from Student Health for medical fees, a file upload from the library accounting system to record fines on the student account, an upload through a gateway from the Housing system for each term's residence fees, and VA and Third Party files for payment.

The All Campus Card system does not currently have an upload interface to record ID card fees. Fees for other special programs offered by Colleges (i.e. for seminars) are handled by the organization that provides the program. Fees for meal programs are handled directly by Marriott.

Access:

Access is through CICS transactions and 3270 emulation screens. Interfaces are via files submitted to Computer Services.

Usage:

The Student Accounts department has primary access. All campus departments have access to view student account information.

### **3.42 Student Database**

Description:

The student database at UCF is used to record students' admission status, test scores, personal data, terms, course, grades and registration data. It is the central information system used in all activities at UCF.

The student database master file is located at the Northwest Regional Data Center in Tallahassee, Florida. An online copy of the student database is also housed there for all daily user access. Each evening the changes made to the online data are uploaded to the master file where extensive editing takes place. Exceptions are handled thereafter.

#### Access:

The primary method of access of the student database is through the online copy of the database. It is accessible through IBM 3270 host access screens via CICS transactions. These character based screens make use of codes and coded fields descriptions to save space on the screens.

The student database master file is located at the Northwest Regional Data Center in Tallahassee, Florida. An online copy of the student database is also housed there for all daily user access. This online version is accessible through IBM 3270 host access screens via CICS transactions. Each evening the changes made to the online data are uploaded to the master file where extensive editing takes place. Exceptions are handled thereafter, usually the next day.

Another method of accessing the student database is through an ODBC query tool called ShadowDirect. This tool downloads a portion of the student database to database on a PC workstation for use by an individual user. This is used for querying the database without impacting other online users.

The next method is through a predefined interface maintained by Computer Services. These interfaces query for certain records, format the data to specific layouts, and in a primarily batch mode update a remote system.

One final method of access is through Computer Services. Computer Services has predefined queries that will generate reports, labels, and other media of student records.

#### Usage:

The organizational units responsible for maintaining the bulk of the student database are admissions, registration, and the individual colleges. Some other units responsible for portions of the data are health services, handicapped services, international student services, veterans affairs, the SASS office and the honors coordinator. These units are typically responsible for one or two fields of the database.

The Institutional Research and Planning Support department conducts the data administration on the student database. Any changes to the data structures, types, or codes is coordinated through their office.

Nearly all organizational units have some need for records from the student database. These units will use one of the methods above to access those records. Examples of departments/units using the student database are: the Student Affairs Division, the Registrar's office, and the All Campus Card office.

#### Futures:

With the implementation of the PeopleSoft Student Administration, this database will be replaced.

### **3.43 Thesis/Dissertation Database**

Description:

This database tracks the status of completion of thesis and dissertation requirements. It was written in MS Access and is maintained by the Office of Graduate Studies.

There are no electronic interfaces.

Access:

This database runs on PCs located in the Office of Graduate Studies.

Usage:

It is used by the Office of Graduate Studies staff.

Futures:

It is hoped that this function will be provided in PeopleSoft.

### **3.44 UCF Web Site**

Description:

UCF offers a WWW site that contains general and contact information.

The Undergraduate Admissions office maintains an online application form on the web site. This site handles other correspondence with the admissions office as well.

Access:

Access is through any web browser anywhere in the world with Internet access.

Usage:

Anyone may use the site, browse pages, and inquire and/or send email. There are no restrictions.

### 3.45 Other

The following is a list of other systems, packages, and databases that were mentioned during the course of the research for this report but for which no detailed information was found during the discovery process. Possible reasons for the lack of information may include

- The information system or database is no longer used,
- Business departments are not responsible for maintaining the system,
- The system does not exist, or
- The system is not relevant to student services.

***Satisfactory Academic Progress***

***Intent/Graduate Files***

***Short Term Loan System***

***Student Loan Counseling System***

***Athletic Database***

***Master Schedule***

***Curriculum File Database***

***Admission File***

***Holds File***

***Proposal Tracking System***

***Funded Sponsored Projects Tracking System***

***Greek Housing Roster***

## 4.0 CONCLUSIONS

The current information environment at UCF is complicated at best. Information about and for students is stored on many different computer machines and platforms. Platforms include mainframes, AS/400s, Unix servers, LAN file servers and individual PCs. Mainframes are located both at the Northwest Regional Data Center in Tallahassee and across the UCF Orlando campus.

Application software for maintaining databases is also quite varied. Some mainframe applications are several years old, while other applications are new. Many are purchased packages and others are custom developed. Some development is managed by departments and programmed by student assistants. The result of the application environment is a lack of data standards and lack of a common data language. However, on the positive side, there is a centralized office for managing the data dictionary for the student database.

Almost everyone in business offices/departments has access to the student database. The student database is the center of information flow throughout UCF's operations. Departments which provide vertical services use the student database either directly or through an interface between their application software and the student database.

Most interfaces are downloads of subsets of the student database. An example of a subset would include only enrolled students. Processing of those student records occurs in the vertical system. Some interfaces occur periodically: once each evening, or once per semester. Others occur as needed. Interfaces to share student data between systems are numerous.

Though not addressed directly in the research for this report, experience tells us that maintaining and supporting all of these interfaces and systems is quite complex, expensive, and error prone. However, many organizations operate this way.

UCF is taking positive steps to modernize and centralize student information through the PeopleSoft implementation project initiated in 1997 and planned through 1999. The PeopleSoft system is a package which includes a set of databases and software modules that support a university setting such as UCF's. Though it is an "off-the-shelf" package, the system allows for extensive customizations for specific UCF needs. The student database will be replaced by the new system as will several other vertical systems in use currently. The result will be integrated databases and modules that use a common data language. However, the course of implementation will require more interfaces to be developed and maintained. These interfaces will have to translate data between the old and the new.

Some departmental and divisional systems will continue to be used after the implementation of PeopleSoft is complete. Some specialized functions are not part of the new package nor would one expect them to be. UCF will continue to have difficulty in accessing departmental data from these vertical systems outside of the department that maintains them. But the number of data access paths and the security needed to maintain them should decrease once PeopleSoft is completed.

UCF's information architecture shows its evolution over time: A few old but solid, centralized components with a variety of appendages surrounding them. Though this is normal, it is not desirable for real time information sharing. The steps UCF is taking will alleviate some of this problem.