Appendix C

Development Paradigms and Staffing, Make versus Buy Alternatives.

“Buy” Alternative

Vendor supplied “enterprise wide” systems (like PeopleSoft’s and SCT’s student information systems) are designed to provide very broad levels of functionality across multiple operational units. These systems also attempt to “empower” end users of the system (students, advisors, etc.) by providing these users with direct access (typically via the web) to transaction processing and reporting functionality. For example, both PeopleSoft and SCT provide web based registration, access to grades, etc. via their systems. Moreover, both vendors allow control of key processes to be placed directly in the hands of business / operational staff. The “auto admit” process is an example of this capability. The “rules” for admitting students are entered into the database directly by business / operational staff, without direct technical (programmer) support. Under this development paradigm, the role of the programmer is also changed. While system customizations certainly continue, the programmer is typically performing these customizations with vendor supplied tools that facilitate more rapid development of new functionality. A challenge for both software vendors and consumers of this software (like UCR) is to perform these customizations in such a fashion that they do not greatly inhibit future upgrades of the vendor supplied software.

The technology staffing request supporting the “buy” alternative reflects the development paradigm noted above. Deployment of the system will rely on end users (students) increasing the amount of “self service” activities (via the web) while business operational staff will assume increased direct control of many events/ processes that heretofore required programmer intervention. The SIS Planning Group therefore recommends four technical staff be hired to support the “buy alternative”: a technical project manager, a SIS developer, a database administrator, and a portal administrator.

Under the “buy” alternative, the entire technical staff supporting the campus student system would be as follows:

SIS Project Manager (New Hire)
SIS Technical Lead (Existing Employee)
SIS Database Administrator (New Hire)
SIS Portal Manager (New Hire)

SIS Application Developer (New Hire)
SIS Financial Aid Programmer (Existing Employee)
SIS Admissions Programmer (Existing Employee)
SIS Business Services Programmer (Existing Employee)
SIS Registrar Programmer (Existing Employee)
“Make” Alternative

The existing campus student system has served UCR well, but it must be upgraded to meet the realities of campus growth. Under the “make” alternative, UCR would contract with SCT to migrate SIS data to a relational database and to create a data warehouse. Additional functionality (such as providing additional web self-service capabilities, creating an advising module, implementing selective admissions, etc.) would be provided by C&C programming staff. Therefore, compared to the “buy” alternative, additional programmers will be hired to provide required SIS functionality. Specifically, the SIS Planning Group recommends hiring a developer for each functional area, in addition to the project manager, database administrator, and portal administrator mentioned in the “buy” alternative.

The resulting programming infrastructure would be as follows:

SIS Project Manager (New Hire)
SIS Technical Lead (Existing Employee)
SIS Database Administrator (New Hire)
SIS Portal Manager (New Hire)

SIS Financial Aid, Production Support (Existing Employee), Development (New Hire)
SIS Admissions, Production Support (Existing Employee), Development (New Hire)
SIS Business Services, Production Support (Existing Employee), Development (New Hire)
SIS Registrar, Production Support (Existing Employee), Development (New Hire)