

## **The Assessment and Item Management System: A Distributable Resource for UNC System Institutions**

### **Overview**

This proposal describes the University of North Carolina at Chapel Hill School of Medicine's (UNCCH SOM) new Assessment and Item Management System (AIMS) and concomitant plans to make the system available to other schools in the UNC system. The AIMS, developed by the Office of Educational Development (OED), is a networked test item management and test development system that contains an Access data base and a Visual Basic interface. Piloted during the 2000-01 academic year, the AIMS will be available for use in all of the courses within the first and second years of the medical curriculum. Other institutions within the UNC System will be given the system to install on their respective servers during the summer of 2001. OED will conduct two annual user workshops in Chapel Hill and will provide both on-line (via the OED web site) and written user documentation. Specifically, this proposal requests support for a dedicated server (\$10,956) and two IBM workstations (\$3,650) to facilitate OED's implementation, continuing development, and management of the AIMS.

### **System Objectives**

The goal of the AIMS is to (a) ensure the development of quality (reliable and valid) assessment instruments, (b) promote integration of curriculum content within assessment instruments by providing secured access to curriculum-wide test items, and (c) promote self-directed learning by providing faculty with an efficient tool for development of valid self-assessment instruments for their students' use. Specific objectives for the AIMS are to:

1. Provide the SOM with a test item management system that will accommodate both on-line and paper instruments for formative, summative and self-assessment,
2. Provide a system that can be expanded and revised by the SOM,
3. Facilitate communication about and integration of content across and within courses, and
4. Provide secured management of and access to test items authored by SOM course faculty.

Developed by the UNC-SOM Office of Educational Development, the AIMS contains the following features:

- Web-based self-assessment exams with individualized performance profiles and answer justifications
- Three-level content structure for item categorization
- Standardized instructions for objective item formats (single best answer, extended matching, matching, and true false)
- Storage of essay questions and ideal responses
- Storage of images for both on-line and paper assessment tools
- Electronic performance profiles for paper and on-line administrations
- Types of data maintained for each test item:
  - Immediate and cumulative statistics
  - Author
  - Key response
  - Item type
  - Descriptive statistics
  - Cumulative

- Immediate (single administration)
- Date last used
- Date created
- Referenced learning objective
- Frequency distribution for options
- Secured access
  - Reader access to all items
  - Editing capability to authored items only

**Rationale**

A review of commercial test management systems 18 months ago identified only one product that provided a significant portion of the characteristics and capabilities of the AIMS. At that time, the commercial product was twelve thousand dollars for an annual pilot license and one thousand dollars annually for each faculty member who wanted to access the system. Any change to the system required full programming costs to be absorbed by the user and the enhancement belonged to the vendor. OED has elected to develop a system that can be distributed and revised as necessary. OED is now completing its work on the AIMS and will transition to this new system this summer.

The previous test management system used in the SOM was developed in collaboration with an external agency that maintains ownership of the system. Development of the AIMS benefits from OED’s 15 years of experience co-developing and managing the former system and—more importantly—provides the opportunity for the SOM to own a system that can be distributed for implementation at other schools within the UNC System.

**Potential for Distribution and Collaboration**

- Following completion of the pilot year (2000-01), the UNCCH SOM will make the AIMS available to other schools for local implementation.
- Each school can install the AIMS on a local server and OED will provide two orientation/user workshops per year
- Written in Access, local users can adjust reports and system characteristics as desired
- OED will provide subsequent system updates to users at minimal cost

**Request and Justification for Funding**

<b>Item</b>	<b>Amount</b>
Compaq Proliant 1600 Server: Dedicated server to reside in OED to provide secured operation for on-line assessment, secured test item development and management, and test maintenance and production.	\$10,956
IBM Pentium III 667 for AIMS development: IBM workstation requested to support continuous development of the AIMS	2,150
IBM Pentium III 600 for AIMS management: IBM workstation requested to support continuous management of the AIMS	1,500
<b>Total</b>	<b>\$14,606</b>

