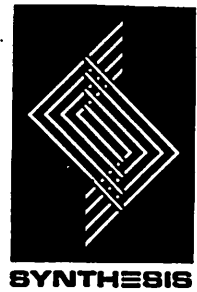


Standards Study Meeting

May 5-6, 1995

Stanford University
Stanford, California



Come to help set future directions for on-line publishing through NEEDS

- Electronic Publishing—Copyright Issues/Intellectual Property
- Quality Assurance—Peer Review
- Electronic Publishing—Recognition and Remuneration
- Update on NSF Coalitions
- Live Demonstrations and Hands-on Experience

What is NEEDS and the Standards Study group?

The National Engineering Education Delivery System (NEEDS) is an entirely new courseware development and distribution system which will provide widespread, rapid, electronic access to a large number of diverse instructional modules. The NEEDS project has been initiated by the NSF Synthesis Coalition and its eight member educational institutions:

Cal Poly University

Cornell University

Hampton University

Iowa State University

Southern University

Stanford University

Tuskegee University

University of California—Berkeley

NSF's Charge to Synthesis Coalition for NEEDS

*Considerable coordination effort must be expended to implement the NEEDS distribution system with proper regard for the standards issues . . . This effort will be formalized through a special Standards Study Project. This study will consist of:

Conducting a series of annual symposia . . . attended by representatives of the Coalition for Networked Information (CNI), the information technology sector, courseware developers, research librarians, etc., to

1. Clearly identify the technologies we will require for NEEDS
2. Clearly identify the problem areas in information storage, retrieval, transfer, and manipulation which presently suffer from inadequate standards
3. Inform us of the status of upcoming technologies and standards
4. Suggest effective courses of action to allow NEEDS to develop in concert with emerging technologies and standards.

Establishing continuous liaison between the NREN/CNI, the Project will have co-directors, Professor David Martin of Iowa State University and John Saylor of Cornell University.

The first formal document produced by the group, is available on the World Wide Web at <http://needs.iastate.edu/standards>. This document deals with recommended standards and practices relative to the evolution of NEEDS. In it are described the initial architectural specifications to build NEEDS.

To RSVP and receive more information on the upcoming Standards Study Meeting, contact Janet Renze at jlrenze@iastate.edu or (515) 294-6639.

Agenda

NEEDS Standards Study Advisory Group Meeting

05/04/95-05/06/95

Hartley Conference Room, Mitchell Building, Stanford Campus

Meeting called by:

Attendees: List Attached

Agenda topics—Friday

Intellectual Property Discussions

12:30 p.m. Arrive at Harley Conference Room, Mitchell Building

1:00–2:30 p.m. Welcome; Introductions; Update on NSF Coalitions; Update on NEEDS David Martin, John Saylor, Lynn Preston

2:30–2:45 Break

2:45–3:30 Quality Assurance—Peer Review Alice Agogino

3:30–5:30 Electronic Publishing—Intellectual Property, Recognition and Renumeration, Copyright Issues Don Payne

Agenda topics—Saturday

Technology Discussions

8:00 a.m. Continental Breakfast

8:30 Security (access/authorization) and Gateways (repository/redirection)

10:30 HTML Future/SGML Tools

12 noon Lunch Discussion

1:00 p.m. Library Cataloging Concerns (forms/handling of URIs)

3:00 Indirection Server

4:30 Conclusion

Catalog Information Form (NEEDS)

You must complete this section. Your submission of this form warrants that you hold the rights necessary to authorize access and to specify the terms of use and reproduction for the materials referenced. You may be held responsible for violations of copyright resulting from misrepresentations here.

American Physical Society

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Attendees:

Agogino, Alice	University of California Berkeley
Aldrich, Jeff	Stanford University
Anderson, A. Wayne	John Wiley & Sons
Eibeck, Pam	University of California Berkeley
Genalo, Larry	Iowa State University
Lynch, Clifford	University of California Library Automation
Martin, Dave	Iowa State University
Marchino, Tom	Iowa State University
Payne, Don	Iowa State University
Preston, Cecilia	University of California Library Automation
Preston, Lynn	NSF
Saylor, John	Cornell University
Sircar, Joy	University of Maryland
Toye, George	Stanford University
Waddell, Jay	Cal Poly
Wood, Bill	University of California Berkeley
Muramatsu, Brandon	University of California Berkeley

Quality Assessment Procedures for the NEEDS Database

Pam Eibeck, Jeff Huston, Dave Martin, Adebisi Oladipupo
Committee on Quality of Courseware¹

1. Introduction

This report to the SYNTHESIS Board of Directors is a summary of recommendations for Quality Assessment services that should be available for the NEEDS database, its users and its authors. The underlying objectives of these recommendations are:

1. to assist potential users in finding high quality and appropriate courseware for their instructional requirements;
2. to assist authors in producing high quality courseware through workshops and availability of templates;
3. to provide recognition to authors of high quality courseware;
4. and to promote the use of the NEEDS database.

This report will first define courseware, then discuss the recommended peer review process, propose other metrics of quality of courseware we can include on the NEEDS database, and close with recommendations of methods to obtain external recognition of quality courseware on NEEDS.

2. Description of Courseware

Courseware is computer-based educational material that assists students in their learning process. Courseware can be used in lectures, during recitation sections, as a self-paced tutorial, as reference material for the student, or as an exercise for the student to perform alone or in a group.

2.1. Classification of Courseware

Courseware that is available on the NEEDS database are classified into four major levels based upon complexity and purpose. These four levels of classification are defined as 1) Elements, 2) Collections, 3) Courseware Modules, and 4) Curricular Units. Classification can be further subdivided within each level. A description of each level together with examples is given below.

Elements - An Element is described and assessable only as a single entity. Examples of an element include a portrait of a scientist, a photograph of a bridge, or an audio clip.

Collections - A Collection provides links between individual elements that are related in a coherent fashion or theme. A Collection provides a greater level of description than elements and has a logical structure but is not considered to be pedagogical resource material (pedagogical resource educational material is considered to be a coherent linked set of related elements, with some description of the elements). Examples of a collection include a set of portraits of scientists, a set of bridge photographs, or a set of Mozart audio clips.

¹ The membership of this committee has been in constant flux. This report reflects the contributions of many people, including Heshmat Aglan, Alice Agogino, Mike Berard, Geri Gay, Frank Huband (ASEE), Tony Ingrassia, Larry Leifer, Cliff Robichaud (Wiley & Sons).

Courseware Modules - A Courseware Module provides a coherent educational theme and/or concept (digital material logically structured to convey at least 1 educational theme and/or concept). Ideally, courseware modules include an "Instructors Guide" and include an abstract. This level can be sub-divided into Sequential Courseware Modules and Non-sequential Courseware Modules. Examples include a discussion of Newton's Second Law, solution of a dynamics problem, or a vibrations laboratory experiment, all individually contained in a linear non-interactive presentation (sequential courseware module) or all grouped together in a hyper-linked interactive presentation (non-sequential courseware module).

Curricular Units - A Curricular Unit is composed of a logical collection of Courseware Modules to convey a complete unit of curricular material. A curricular unit could be material from a traditional existing course or it could be material that spans across several existing courses or material that forms a new course. This level could be sub-divided into Disciplinary Curricular Units and Multidisciplinary Curricular Units. Examples include curricular units on dynamics or the multidisciplinary design of a wheelchair. As with the Courseware Module, the Curricular Units should include an "Instructor's Guide" and an abstract.

2.2. Characteristics of Quality Courseware on NEEDS

Quality courseware on the NEEDS database includes courseware that is an effective computer-based instructional tool, and that is easy for a new user to evaluate, download and adopt for use in his/her classroom.

Quality computer-based instructional courseware should contain accurate engineering content, take advantage of multiple media for presentation of material, provide interactivity and hyperlinks, have an effective user interface and navigation scheme, include an instructors guide, and ideally operate on multiple platforms. We highly encourage courseware to be pedagogically linked to the SYNTHESIS philosophy of engineering education which seeks to give students hands-on experiences, team work, open-ended problems, practice at communications skills, and an understanding of the engineering process in the context of society at large.

2.3. Assisting Authors in Creating Quality Courseware

In order to promote the development of excellent courseware, authors need examples of high quality courseware to guide them as they begin the development process.

A multimedia document should be created that provides examples of acceptable user interfaces, effective use of sound, animation, and video images, samples of pedagogically effective presentations of material (such as providing multiple levels of depth), references to examples of excellent courseware currently used in academics, references to scholarly publications concerning computer-based instruction, and advice on copyright issues that concern authors of courseware.

The development of templates for sample types of courseware (e.g. case-studies, self-paced tutorials, simulations, etc.) should be done to shorten courseware development time and effort.

In addition, at least one training workshop per year should be to educate faculty about current authoring environments, techniques for sound and video digitization, sources of copyright-free sound or video clips, the production of high quality graphics, and pedagogical methods used in successful courseware.

Not only will these efforts assist current SYNTHESIS participants in creating quality courseware, but they will also encourage greater participation in SYNTHESIS by faculty currently unaware of the methods for producing multimedia courseware.

3. The Premier Designation on the NEEDS Database

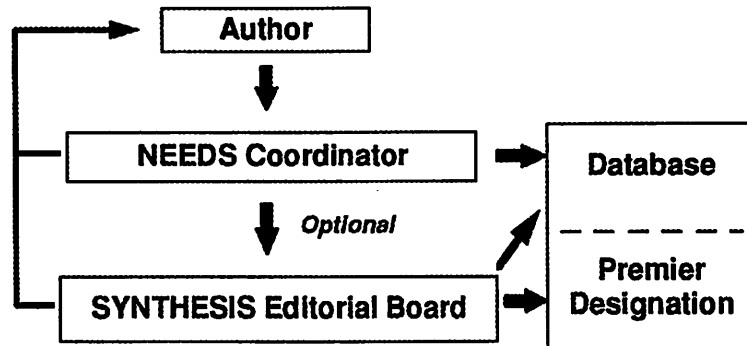
In order to recognize high quality courseware on the NEEDS database, a Premier designation will be assigned to courseware that has been approved by a peer-review process. Users of the NEEDS database will be able to limit their search to Premier courseware if they desire. Courseware Elements and Collections will be reviewed for 1) functionality, and 2) professional appearance. Courseware Modules and Curricular Units will be reviewed for 1) content quality, 2) pedagogical effectiveness, 3) professional appearance, and 4) functionality.

We have chosen to retain non-peer-reviewed material on the NEEDS database since this will provide a large repository of courseware elements, collections, modules and units that can either be used “as-is” or modified as appropriate for the intended academic application. (For a discussion of copyright restrictions on the modification of material on NEEDS, see the document: “Copyright Issues Regarding Courseware on the NEEDS Database”.) The non-reviewed materials on the database will provide a function similar to that of “free-ware” in the computer-program domain, in which users may find a diversity of quality and usefulness in the material available. In spite of the disparity in quality we expect on NEEDS, it is important to keep this source of “pioneering” courseware available to foster the creativity for the next generation of courseware.

3.1. Submission of Courseware to the NEEDS Database

Authors will submit courseware for inclusion in the NEEDS Database through the NEEDS Coordinator, and will have the option of requesting their courseware be considered for Premier designation. All courseware submitted to the NEEDS Database will be reviewed for functionality by the NEEDS Coordinator and then either returned to the author for modification if the courseware was not functional or placed on the NEEDS database. If the author has requested, the courseware will also be sent on to the NEEDS Editorial Board for peer review for the Premier designation. If the courseware does not qualify for the Premier status, based on the peer evaluations, it will still remain on the NEEDS database. The chart below gives an indication of the flow of courseware when submitted to the NEEDS database.

Review of SYNTHESIS Courseware



3.2. Peer-Review Process

The peer-review process will be modeled after that of the profession publications. A NEEDS Editorial Board will control the process. The review process will follow the following steps:

1. The NEEDS Editor will verify the courseware contains the minimal requirements for consideration for the Premier designation, such as containing an instructors guide. (Note the courseware was already reviewed for functionality and professional appearance by the NEEDS Coordinator.)
2. The courseware is then passed to an Associate Editor with expertise in the courseware's technical area who solicits reviews from individuals both internal and external to Synthesis concerning the courseware's content and pedagogy.
3. The reviewers will complete a questionnaire (such as that attached to this report) rating the courseware in a number of categories and give both an overall rating and a written review.
4. The proposed courseware will be rated according to one of three categories: a) accept as is , b) revise as noted, or c) reject.
5. Once the courseware is accepted, it is given the Premier designation. The author is sent the written reviews and will be given the option to have this review appended to the courseware's bibliographic record.

All courseware should undergo three reviews, with at least one reviewer an expert in the technical area addressed by the courseware, one reviewer an expert in computer-based instruction pedagogy, and one reviewer a potential student-user.

3.3. Editorial Board

The Synthesis Editorial Board will be composed of 1) a NEEDS Editor, 2) four to five Associate Editors, 3) pedagogue, 4) the NEEDS Coordinator, and 5) an administrator. The NEEDS Editor and Associate Editors should be engineering instructors with experience using and/or developing computer-based instruction. The position of the Editor and Associate Editors should be temporary appointments, with a recommended time of two years.

Responsibilities of each member of the Editorial Board would be as follows:

NEEDS Editor: All courseware requested for peer-review pass through this person. The Editor verifies the courseware contains all pre-requisites for peer-review and then assigns

the courseware to a specific Associate Editor to coordinate the actual review. The NEEDS Editor will also be responsible to stay well informed of methods and people associated with digitally-based peer review systems nationally, to maintain a database of reviewers and to accumulate a large source of reviewers for NEEDS courseware. S/he will coordinate with the relevant Associate Editor in making the final decision regarding acceptance or rejection of the courseware for Premier status. The NEEDS Editor will also manage the User Kiosk (see below), arrange for comparative reviews, and be responsible for promoting the Premier courseware and the authors.

Associate Editors: Associate Editors will provide the technical expertise required to review digitally-based instructional material in different engineering fields. They will be responsible to find the reviewers for the courseware. The Associate Editor, in communication with the NEEDS Editor, would make the final written recommendation regarding the acceptance or rejection of the courseware for Premier designation.

Pedagogue: The pedagogue will verify that the pedagogical effectiveness of courseware is considered during the review. The pedagogue will play an active role in coordinating the workshops to educate NEEDS authors in pedagogical theory (see section entitled "Assisting Authors in Creating Quality Courseware"). The pedagogue will also provide suggested reviewers of courseware with expertise in computer-based instruction pedagogy.

NEEDS Coordinator: The NEEDS Coordinator will be the source of courseware for review, and will provide the link between the Editorial Board and the day-to-day operations of the NEEDS Database.

Administrator: The Administrator will provide administrative assistance to the NEEDS Editor. This would include maintenance of the reviewer database, track progress of courseware under review, etc. The administrator could either be a 25% position at the NEEDS Editor's location, or be part of the NEEDS Administrators responsibilities (i.e. the NEEDS Coordinators assistant.)

3.4. Review Criteria

The first efforts of the Editorial Board will be to establish review criteria and standards that will be applied during the peer review process. We plan to work from evaluation criteria suggested by Huston, et al². (A copy of the questionnaire from this reference is included at the end of this report.)

A workshop should be held in the near future with a pool of people experienced in the development and use of digital courseware in engineering education. The group should evaluate an assortment of courseware and establish review criteria that account for both the general quality of the courseware and the extent to which it incorporates the Synthesis philosophy of teaching engineering. In addition, the group should establish standards that need to be met in order for NEEDS courseware to receive the Premier designation.

4. Other Courseware Quality Indicators

As the NEEDS Database matures and grows, mechanisms need to be available that will assist the user in assessing the usefulness of a particular item without having to download the courseware. In addition to the Premier designation discussed above, the following mechanisms are recommended to improve the user's ability to assess items on the NEEDS database.

²Huston, J.C., C. Hiemcke, J.C. Gillette, and R.M. Johnson, "Evaluating the Quality of Engineering Courseware", presented at the Sixth Annual TBEEC Conference, Gutlinberg, TN, Nov. 19,20, 1994.

4.1. User Kiosk

The User Kiosk will be a forum to permit users to post comments for future users of NEEDS database regarding the courseware on NEEDS. The purpose of this forum is to provide an opportunity for informal advice to be shared among NEEDS users. Examples of appropriate comments would include:

- “I found the XYZ courseware to be very popular in my Introduction to Engineering class. Check it out!”
- “Be careful of a glitch in ABC courseware. When you click on the NEXT button the program freezes.”
- “If you are considering courseware for a thermo course, try DEF and GHI courseware. DEF is good because it goes into depth regarding the First Law, but it has a weak user interface. GHI has nice video clips of equipment, but is superficial regarding theory.”
- “Stay away from courseware authored in Toolbox. It is a bear to modify later.”

This forum would be monitored by the NEEDS Editor to insure only constructive comments are included. Authors will be free to protest any comments regarding their courseware and it will be removed from the forum. This is not an environment for “flame wars” or personal attacks, but rather, for constructive advice. Comments could be viewed linearly, or be searched by key words. Comments that are specific to a particular piece of courseware will be attached to the courseware’s bibliographic record.

4.2. Comparative Reviews

The NEEDS Editor will solicit comparative reviews of similar courseware as the NEEDS database becomes more populated. These reviews will assist potential users in choosing the most appropriate courseware for their instructional needs. The reviews will be available on-line, and be sent for publication in print media.

5. External Recognition of Quality Courseware

The SYNTHESIS Coalition must be proactive to insure that high quality courseware receive recognition outside of the NEEDS user community to assist the author in his/her promotion case, and to advertise NEEDS to a larger academic community.

SYNTHESIS, and the Editorial Board specifically, must be aggressive in encouraging Coalition schools to treat the development of educational courseware as a scholarly activity. When courseware has been granted Premier designation, that courseware should be considered “peer reviewed” for the purposes of faculty promotion and tenure decisions. The NEEDS Editor should write a personal letter to the author’s Chair and Dean, notifying them that their employee has created original scholarly work, praising the quality of the courseware, and including some comments from the reviewers. The SYNTHESIS Editor should regularly submit (or recommend authors submit) instructional courseware to award competitions.

The Editor should form a close relationship with professional engineering societies, such as ASEE, ASME and IEEE. The Editor should request that summaries of recently accepted Premier courseware and comparative reviews of NEEDS courseware be published at regular intervals in publications such as ASEE’s *Prism*.

Appendix: Courseware Quality Questionnaire

PART A: Author Supplied Information

Information About the Courseware:

Courseware Title:
Courseware Publisher:
Courseware Authors:
Publication Date:
Version number:

Copyright Information:

Has copyright clearance been obtained for media elements used in the courseware?
Has authors' copyright preference (restrictive, freeware, or limited freeware version) been stated?

Suggested Grade Level/Target Audience (Mark all that apply):

K 1 2 3 4 5 6 7 8 9 10 11 12
Community College
Fresh Soph Jr Sr
Master
Ph.D.
Professional

Type of Courseware:

Authoring System
Classroom Management
Demonstration
Drill/Practice
Educational Game
Game
Laboratory/Experiment
Problem-Solving, Logic
Simulation, Animation
Testing (Quiz, Exam)
Tutorial

Statements of Objectives:

Statement of Objectives to the Instructor:
Initial Instruction
Remedial Instruction
Guided Practice
Independent Practice/Exploration
Enrichment/Extension
Statement of Target Audience
Statement of Fit into Curriculum
Statement of Objectives to the Student
Statement of Prerequisite Skills
Statement of Required Materials (Notes, Workbooks)

Please use the following rating scheme for the following parts:

Good	Poor
5 4 3 2 1	
High	Low
True	False

PART B: Catalog Effectiveness, Ease of Installation, Availability of Documentation

- Is it easy to locate the courseware using the search mechanism (e.g., search by title, keyword, subject)?
- Are the file transfer (downloading, retrieval) instructions clear and correct?
- Are the file decompression instructions clear and correct?
- Do the files transfer without problems?
- Do the files decompress without problems?
- Is it clear from the catalog entry or from text files how documentation (manuals, student handouts) could be obtained?
- Is it easy to obtain the documentation (manuals, student handouts, etc.)?
- Are the installation instructions clear and correct?
- Are the system requirements stated correctly (e.g., computer type and speed, RAM size, compressed and uncompressed file size, operating system type and version, necessary drives, necessary video and sound cards, etc.)?
- Are the necessary peripherals (speakers, videodisk player, CD-ROM, joystick, VCR, TV monitor, etc.) specified correctly?
- Does the courseware start up without complications?

PART C: Quality of Screen Design and Level of Technical (Multimedia) Sophistication

- Use and quality of text.
- Use and quality of still computer graphics (drawings, paintings).
- Use and quality of still photographs and scans.
- Use and quality of music.
- Use and quality of voice.
- Use and quality of digital motion video.
- Use and quality of special effects (transitions, etc.).
- Use and quality of artistic animations.
- Use and quality of numerically-driven animations.
- Use and quality of user response tracking (management system).
- Use and quality of prompting for user input (interactivity).
- Use and quality of feedback to user input (interactivity).
- Use and quality of hyperlinking (nonlinear programming, random jumps between information items).
- Ability to turn music/voice on and off.
- Ability to control audio volume.
- Availability of text equivalent of the voice clips.
- User control over the animations (user input of variables, control of playback speed, etc.).
- Proper and consistent use of color.
- Proper and consistent use of proportion (relative size, orientation, and location of objects on the screen).

- Proper and consistent use of type (styles, fonts, sizes, colors, emphases, etc.).
- Quality of the interface design (the "feel" of the interface).
- Speed of execution of the courseware on the specified computer.
- Ability to exit and to resume from that point at a later time.
- Menu for navigation (random access to the different segments of the courseware).
- User option to skip instructions in case they are already known to the user.
- Suitable amount of information per screen.

PART D: Satisfaction with Courseware Performance

- Did the catalog entry (especially the abstract) accurately describe the courseware's contents?
- Is the courseware appropriate for the intended audience?
- Were the instructional objectives met as advertised?
- Has a formative evaluation indicated the advertised improvement in student learning?
- Did the courseware perform flawlessly (no bugs)?
- Was product support available as advertised?
- Is the courseware worth its price?
- Is the time required by the instructor to prepare for using the courseware in class acceptable?
- Is the time required by students to learn the content acceptable?
- Would a textbook accomplish the same purpose as the courseware?
- Would a video cassette player accomplish the same purpose as the courseware?

PART E: Courseware Content Quality

- Is the technical information correct and complete?
- Does the courseware indicate the relationship of specific topics to the fundamentals?
- Is the subject put into perspective with regard to other disciplines?
Is the information multidisciplinary in nature?
- Does the courseware encourage responsible engineering by addressing issues such as ethics, safety, the law, social impact and concerns, environmental impact, etc.?
- Does the courseware encourage realistic engineering solutions by addressing issues such as cost and feasibility of production, market analyses, time constraints, etc.?
- Does the courseware motivate potential engineers through actual industrial examples, case histories, and role models?
- Does the courseware have proper spelling, punctuation, and grammar?
- Is the courseware free of violence, advertisements, and stereotypes?

PART F: Courseware's Pedagogical Strategy

- Is the student's attention gained initially?
- Is the student informed about the objectives of the courseware?
- Is the student informed of all prerequisite skills?
- Is there a pretest to determine existing skills and learning readiness?

- Is new information presented in a clear and motivating manner?
- Is there embedded testing within the presentation of new information?
- Are student actions (such as choosing a certain path through the courseware) recorded to identify strengths and weaknesses of the courseware and/or the student?
- Do student responses to on-line questions elicit prompt, constructive, and respectful feedback?
- Can the student control the skill level of the feedback and of problems?
- In the case of lengthy courseware, are there periodic summaries and review exercises?
- After the information is presented, is there post-testing to evaluate student learning (mastery of courseware objectives) and to grade students (performance assessment)?

PART G: Accommodation of Multiple Learning Styles

- Is on-line help available and of good quality?
- Is remedial material available on-line?
- Can the courseware be used as a tutorial by students working without supervision?
- Can students use the courseware to explore and learn independently, and to have their performance evaluated at the same time?
- Are there multiple paths through the information to address different learning styles and interests?
- Are several media used to present each information item and to reach both visual and verbal learners?
- Are graphics, animations, and video sequences used to aid in visualization?
- Are there different exam styles to reduce test anxiety and to cater to a wider variety of learners?
- Are group assignments and projects available in addition to individual ones (to encourage communication, cooperative learning, and team work)?
- Is there sufficient interactivity for participatory learning?
- Are there open-ended multidisciplinary design problems (to encourage creativity and critical thinking, to illustrate the need for scheduling and compromise, to encourage multidisciplinary awareness and sensitivity, etc.)?
- Is there a textbook to accompany the courseware?
- Is there a student workbook?
- Are there student handouts and/or worksheets?
- Are games geared toward learning rather than winning or destroying?

PART H: Instructional Design Documentation, Instructor's Manual

- Is there a statement of instructional goals, which consist of statements of the instructional problem and of why the computer is needed to fill that weak spot?
- Is there a statement of student characteristics (identification of intended audience, statement of students' assumed background)?
- Is there a statement of instructional objectives: what will the student gain from the courseware?
- Are there recommendations on the instructional setting:

- Should students work individually, in small groups, at home, in the classroom, or in a laboratory?
- Are there content maps showing the different information items contained in the courseware and how they interrelate?
 - Are there support materials to help with implementation:
 - How might the instructor structure the course to accommodate the courseware effectively?
 - How can student learning be enhanced?
 - How can the courseware help the instructor in assessing student performance?
 - Are there suggested follow-up activities can help students in further grasping and retaining the principles presented with the courseware?
 - Is there information on past assessment (field testing):
 - How has the courseware been evaluated by its developers?
 - What changes were made during local alpha-testing?
 - What were the reviews and changes that resulted from beta-testing at other schools?
 - Are there samples of instructors' and students' feedback?
 - What was the impact of the courseware on student learning, especially on student performance on standard tests?

PART I: Student Reference Guide

- Does the student reference guide look appealing?
- Is it written in a clear and friendly style?
- Are there clear instructions and illustrations on how to get started?
- Is there a full index?

PART J: Instructor's Reference Guide

- Does the instructor's reference guide look appealing?
- Is it written in a clear and friendly style?
- Are there clear instructions and illustrations on how to get started?
- Is there a full index?
- Are there clear instructions on how the user response tracking (student management) system can be used to monitor student progress and to administer homework and tests?
- Are there clear instructions on where and how to obtain product support?

STANDARDS STUDY May 5, 1995

Distributors vs. Publishers

wants: simple statements to public
formal + informal re:

- intellectual property rights

Jay Woodell

John Saylor

Jeff Aldrich

re: \in Jolysthesari

paper vs media/soft versions + ownership

Alise - all disciplines see need for multimedia courseware
transition plan w/ engineering as a model for other
disciplines

NEEDS - who are customers?

* Coalitions home page (set at specs)

Computational + Numerical Analysis \rightarrow Physics

Tom Marchino?

<http://uces.ameslab.gov/uces/>

* connect to ~~Internet~~ Other Educational Sites

Quality issues are very important, needs some help

"rethink, replace, reward"

interested in peer review / content editorial work

Dave + Johns take on NEEDS

Quality + organizational aspects being worked on

Cataloger

Operations

evolution from UT100 → WWW client

"assume client has web browser + has ability to connect w/ web"

Dave wants "formal statement"

"all parts function"

Procd (1/3 in Jff, 2/3 in Houston)

"weakest" in effective search tools

agents to work on behalf of people (future/forward-looking)

Dave thinks Bob + Ari's interest in production (C/W studios)
vs. Distribution (us) ← content developers

Copyright

as create it you own it

if incorporate others' work, need to get permission
or put up w/ caveat that
need to get permission

★ ★ Liability protection statement on the Database

have suggested copyright material

Dave - "not be able to survive by putting
stars on it, thinks that just by putting
it up it is "published"

author needs to understand "non-exclusive" rights

* set min standards for clw
4 to the page
title,
author
copyright statement
index / table of contents
contact

* Quality have a semi-separate synthesis stamp of
approval
~~have~~ allow possibility of multiple reviewers

* Tell Brad that talked at Pare, Jay W., John S.
about cataloging + subject headings
"Dave says pick 1 + go"

* Suggestion: automatically mail to author of # of hits
suggestion: invite user to register
(with disclaimers of no sale)
eg for reviewer personnel

Code for copyright info / disclaimer

How does permissions + contract relate to
submissions [directly into database
through cataloger
↳ premiere

How do we get income for the operation?

Have icons w/ types of service available

STANDARDS STUDY May 6, 1995

synthesis.org

Net Info Discovery + Retrieval (NIDR)

don't develop browser client, use someone else's browser (Netscape)

- Mosaic 2.0 (includes Panorama SGML viewer)
- UIC to put up its databases w/ 239.50

Wayne: Wiley now looking @ Acrobat
for math texts

testing PDF, PS, SGML

Cliff sees: SGML as a way to manage data long term
can deliver in different ways over time

Dave: controlled means of transferring data

Cliff: Marc records are horrible thing
use it as an interchange format
doesn't mean need to store them in MARC!

Cliff: relational database limited, someone must have to recognize
the structure
lose semantics

seems like SGML is the interchange format of choice
(DTD = document type definition)

seems like we can use the ^{SGML/MARC} DTD can get our MARC
records into out of NOTIS

Cliff: possible future work in bibliographic Acid
may look at total redesign

SECURITY + ACCESS

★ look into "authentication" files and how to do passwords + login
node filter

It seems like to do security must consider scalability

test pruning structures + authentication access

Cliff: LC would require more enhancement
more "nicer" languages

Ball: start at LC for breadth

then take in Inspec + ET where appropriate

★ ~~also~~ keep LC @ high level
+ then start negotiation w/ others

Links to look at

whole document (download)

image

launch into WEB version

extended abstract

← can have multiple analysis
fields

* suggest
write authority list for file types
zip, sea, ps, au, wav

bring ^{elements} images up to top level
and search over them at top level of
database

have the user able to select the types to
take a look at it: c/w element
curriculum units
collections
modules

Suggestion for novice / expert level

* who does query interface — where are queries served from
who does catalog interface — where is catalog interface served from
where does catalog info sit
what does catalog take on

how flexible should the interface be / how user-configurable
programmable from outside cgi server

gets to letting users write own terms into our
database

to do for May
have the user stuff
ready to go...

look e PC version
of netscape what
are the file types

Database Interface

~~*~~ Here Tony give NEED
*emo @
Cal Poly

Dave: if have subject headings available
should have listing of available subject
headings

have 2 levels nonical agent

~~*~~ update the WATS result to return that
subject returned no result, try to
do keyword search instead
term does not match subject heading

- a) try as keyword
- b) browse subject heading

* Cliff: suggest have disinterested 3rd party
come in and evaluate interface

Cliff:

may get too much noise if promote all descriptors
into from element to collection

rank
promote terms

George: argues for unified interface
want choice

Home page: pick main cases (CIW~~F~~, Collection, Element)
get query page

in user study check ~~if~~ what users want
to search both or search each one separately

* | modc op examples of multiple searches

| contact Dave M. re. what he wants to show
at Cal Poly

needs.ia.state.edu/cif.html
~~incoming~~

AUTHORITY FILES

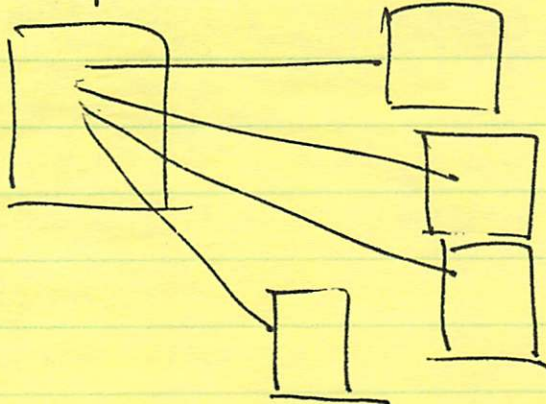
Place,
Name of Publisher
↑ audience
system req ~~George~~ by Tues

↓
Access: restricted: URL
unrestricted:

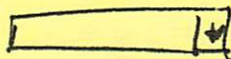
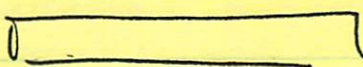
need to have listing of
what is actually required

telnet
http://locis.loc.gov:23

mock up what I was talking about



supplemental descriptive info (summaries, user id,



URL of author

URL of CIW

URL of image 1

URL of image 2

#1 Query @ same time

Clw

Clw:

biblio Query results

Elements

Images:

~~new image~~ collections:

elements:

⋮

get ~~new~~ query +
Needs homepage
to needs.me

take biblio km

~~retain~~ retain look

try have response messages be clearer
what to do w/ WANS # means (search quality)

Still wants less vertical size

#2 ~~ATM~~ To

separate @ top
clw + collection
Image

(same as current, clean up look)

#3? same as #1 w/
data types

#4 Short Form / long Form

prioritize records in SGML which records
to clean up

Bill converts SGML → HTML

To DO

MAY 12	REVISION (INCLUDING BACK END) OF SUBMISSION FORM	DAVE
MAY 9	PUBLISHER, AUDIENCE AUTHORITY	BGM
MAY 9	SYS REG	GEORGE
MAY 9 10	^(BGM) Same true look and feel	BGM, ROBERT

