NEEDS — The National Engineering Education Delivery System
Today and in the Future

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Agenda

- Vision
- Action Agenda and Digital Libraries Initiative - Phase 2
- Premier Award
- Cataloging
- Intercoalitions Workshop Idea
Vision

Develop a global digital library and community of learners in Science, Mathematics, Engineering and Technology Education (SMETE).

To do this we build upon our experience with NEEDS — the National Engineering Education Delivery System — as the foundation for the SMETE Digital Library coupled with on-going research.
Achieving our Vision

NEEDS

Digital Library Research

Engineering Content And New Services

Science and Math Content

SMETE Digital Library

Develop a global digital library and community of learners in Science, Mathematics, Engineering and Technology Education (SMETE).
Goals

• Provide a service to the engineering education community
• Grow and evolve NEEDS as the foundation for an on-line engineering education community
• Expand courseware review and evaluation efforts
• Serve as a bridge to the development of a SMET Digital National Library
Expanding NEEDS Services to develop the Foundation for an On-line Community

- **User and Author Services**
  - User reviews of courseware
  - User-provided links to related information
  - On-line discussion
  - Adoption/Adaptation Usage statistics for the author

- **NEEDS Services**
  - Extended Usage Tracking
  - User Registration and Profiles
New Services Available from Catalog Records

- Affiliations
- Discussion
- Peer Review
- User Review
- Feature Review
- Awards
- Support Materials
Using NEEDS as the Foundation for a Test-bed SMETE Digital Library

- Develop a test-bed SMETE Digital Library using NEEDS as a foundation
  - Partnership with the University of California System
- Begin development of a SMETE on-line user community
- Evaluate the test-bed SMETe Digital Library
Digital Library Research

- Develop a controlled vocabulary for SMET education
- Apply this Controlled Vocabulary as metadata for organizing, indexing and retrieving educational materials stored in NEEDS (as a test-bed SMET Digital Library)
- Use courseware in NEEDS and the Controlled Vocabulary to structure discussion among our community of learners
Premier Award Criteria

- **Engineering Content**
  - Is the content error free?
- **Software Design**
  - Is it well designed and usable?
- **Instructional Design**
  - Will students learn from the courseware?

We recognize that all the categories are interwoven.
Premier Courseware of 1998 - Preview

- **Della Steam Plant**
  - By P. K. Raju and Chetan Sankar at Auburn University

- **MDSolids**
  - By Timothy Philpot at Murray State University

- **SEVE-UNH**
  - Robert M. Henry at the University of New Hampshire

**Distribution**

2000 CD-ROMs

To be announced at an Awards Luncheon sponsored by John Wiley & Sons
Premier Courseware of 1997

- Virtual Disk Drive Design Studio
- Drill Dissection and Bicycle Dissection
- Mars Navigator

Distribution - 3000 CD-ROMs
100 Copies to Authors
650 Copies to FIE `97 Participants
300 Copies to Engineering Deans
400 Copies to ASEE `98 Participants
200 Copies to ICEE `98 Participants
200 Copies to FIE `98 Participants

See http://www.needs.org/premier/1997/ for more info
Cataloging Courseware

• Cataloging Update
  • 94 items added under Action Agenda
  • 51 items in process

• Coalitions Information
  • Best contact person
  • Use of logo
Intercoalitions Workshop Idea

"Effective uses of Educational Technology to Improve Student Learning in Engineering Education"

Spring 2000?