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## NEEDS HOME PAGE

The NEEDS home page is the centralized portal and jumping-off point to a wide range of features and services.

- Updated regularly with news and information.
- Read in-depth feature articles on courseware—COMING SOON!

## NEEDS INFORMATION

Looking for information about NEEDS? Want to find out the latest system advances? See something on the NEEDS Home Page and want to look it up again? Then check out NEEDS Information to find out about the NEEDS Project.

- Read about NEEDS' Background.
- Find answers to Frequently Asked Questions.
- Read Papers and view Presentations about NEEDS.
- Find Past Home Page Features.

## SEARCH DATABASE

Having problems with a particular class topic? Looking for courseware? Developing courseware and want to see other examples? Need a particular movie or image to use in your courseware or class? This is where you'd go to search for courseware and multimedia elements in the NEEDS Database.

- Find and download Courseware and other resources.
- Find and download multimedia elements to sample the content of courseware prior to downloading the entire package, or incorporate elements into your own courseware (with permission of the original author).

Search the NEEDS Database for Courseware

Title:

Author:

Subject/Heading:

Keywords:

Collection:

Platform:

Search Reset

See the other side for a sample record.

## ADD COURSEWARE

Developed courseware that you'd like to distribute? Seen quality courseware you'd like others to be aware of? Anyone can add courseware to NEEDS for widespread distribution and dissemination through our self-cataloging system. Fill out a few simple on-line forms and your courseware will be searchable through NEEDS in no time!

- Add courseware and multimedia elements to NEEDS.

## COURSEWARE REVIEWS

Looking for quality courseware? Looking for exceptional courseware? Want to find out what others think about particular courseware? Stop by the Courseware Reviews section or access the reviews buttons at the bottom of each courseware record.

- Premier Award for Excellence in Engineering Education Courseware
- User Reviews of Courseware—COMING SOON!
- Peer Reviews of Courseware—COMING SOON!

## What is NEEDS?

NEEDS is an infrastructure that supports the development, use, and re-use of instructional technology. Since 1994, NEEDS has provided a World Wide Web based service that provides access to a variety of services to support technology enabled learning. It uses powerful computing tools built on open international standards to employ and contribute to the global information network. This nation-wide distributed system is designed for scalability and reliability.

## What is Courseware?

We accept a broad definition of courseware and often use it interchangeably with instructional technology. Courseware is any computer-based educational material that can be used to assist students in their learning process. Courseware can be used in lectures, during recitation sections, as self-paced study, as reference material, or as exercises for the learner to perform alone or in a group.

The *Premier Award for Excellence in Engineering Education Courseware* recognizes high-quality, non-commercial courseware designed to enhance engineering education.

### Premier Award Criteria

The criteria are divided into three major categories that can be used to differentiate instructional courseware. *Engineering Content*: Accuracy of content, Organization of content, and Consistency with learning objectives. *Software Design*: Engagement, User interface and navigation, and Technical reliability. *Instructional Design*: Interactivity, Cognition/conceptual change, Content, Multimedia use, and Instructional use/adaptability.



# Select features of a NEEDS record

## COURSEWARE DESCRIPTION

Once a user browses a record, NEEDS provides a wide range of features and services for each record. The NEEDS catalog record provides a brief description of the courseware. The catalog record also supports modern features not part of most online public access catalog systems. Users can search for related courseware by the same author or publisher, and can perform recursive searches over subject headings to find courseware in NEEDS that are similar to the record being browsed.

## NEW FEATURES

NEEDS is developing new features focused at adding support mechanisms to foster the development of a community of engineering educators. This community-based support for courseware is designed to help users evaluate whether they should adopt or adapt a particular piece of courseware.

User Reviews and Support Materials will provide a wealth of community-based support for courseware. User Reviews will include information such as the user's experience with the courseware and how user employed the courseware. The Support Materials will extend the catalog record by providing user-defined links to related information.

Discussion tools will transform the static courseware record into a dynamic, living entity. We can support threaded discussion for each courseware module or discussions around concepts (e.g., multimedia supported dissection and design activities). We may even host Web-based conferences and chat sessions with invited speakers.

Peer Reviews will be academic journal-type reviews that evaluate the courseware around four basic questions:

1. Is the content error-free?
2. Are the target audience and educational goals consistent with courseware content?
3. Can an instructor other than the author use the courseware?
4. Should the courseware be endorsed?

Feature Reviews will be commissioned reviews written by recognized experts and well-known engineering educators, they will be very similar to book reviews found in major newspapers and journals.

Through the Awards section, users will be able to find out what awards and honors the courseware has received. One of the many awards possible is the *Premier Award for Excellence in Engineering Education Courseware*.

See the other side for more information on the Premier Award.

Through the Affiliations section, users will be able to learn more about the Affiliated developers, sponsors, or publishers of the courseware.

## DOWNLOADING COURSEWARE

NEEDS supports downloading and linking to courseware in the Database. From each courseware record, you will have the option of downloading the different platforms of courseware (our most popular are WWW, PC and Mac). In addition, NEEDS supports redundant, distributed archive servers that allow you to have your choice of download locations.

**Title:** Mattel Color Spin: A Multimedia Case Study in Engineering Design  
**Authors:** Agostino, Alice M. Varma, Paul  
**Publisher:** University of California at Berkeley (01/1993)  
**Courseware Series/Collection:** University of California Multimedia Case Studies of Design in Industry  
**Version:** 0.75  
**Summary:** Mattel's color spin toy, acquired from a Japanese vendor, was redesigned using for manufacturability principles. This case study includes footage from plant visits and interviews with Mattel executives to discuss manufacturability analysis, part reduction, materials and processes used, and the role of teams. Instructions for obtaining the complete program are provided.  
**Audience:** Under Class  
**Subject Headings:**  
 Companies and products  
 Concurrent engineering  
 Design  
 Engineering design -- Case studies  
 Industrial design coordination  
 Toys -- Design and construction

**Platforms and Minimum Requirements:**  
**Macintosh**  
 Download Courseware  
 Hard Drive Space: Download: 3.3 MB  
**WWW**

**Browse Multimedia Elements**  
 Browse multimedia elements using the NEEDS Image Navigator

SUPPORT MATERIALS | DISCUSSION | USER REVIEW | PEER REVIEW | FEATURE REVIEW | AWARDS | AFFILIATION

[NEEDS | Search | Reviews | Catalog | Other | NSI Coalitions | Synthesis]

**NEEDS**  
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Locations are ranked by reliability. If you encounter difficulties, please select one of the alternate download locations (if available).

For more information contact:

Brandon Muramatsu, NEEDS Project Director, at mura@needs.org, (510) 643-1817, or www.needs.org