

2006 Premier Award for Excellence in Engineering Education Courseware



WILEY

www.wiley.com



www.needs.org

autodesk®

www.autodesk.com

Microsoft
Research

research.microsoft.com

 **The MathWorks**

www.mathworks.com

P

Premier Award

NEEDS—A Digital Library for Engineering Education at www.needs.org

The screenshot displays the NEEDS website interface. On the left is a vertical navigation menu with the following items: About NEEDS, Search, Community (with sub-items NSF Coalitions and Archive), Workspace, and Premier Award. At the top center is a search bar labeled 'Search for Learning Resources'. Below it is a breadcrumb trail: 'Home > Community > Engineering Education'. On the right side, there are links for 'HELP | REGISTER | LOG IN' and a 'WELCOME!' message. The main content area features a large central banner titled 'THE ENGINEER OF 2020' with the subtitle 'VISIONS OF ENGINEERING IN THE NEW CENTURY'. The banner includes an image of a hand reaching up towards a glowing point in a blue and purple sky, with the text 'NATIONAL ACADEMY OF ENGINEERING OF THE NATIONAL ACADEMIES' at the bottom. To the left of the banner is a smaller image of a person standing next to an aircraft. Below this image is a paragraph of text: '...have made possible... dreaming now of... Aeronautical engine... way since the first... of a minute and then... flight and then ha... Aviation continues... Rocket and Space... aspects of the co... use, these resources are at your command. We invite you to put them to good use, to educate and inspire the next engineering hero, the engineer who introduces principles or processes that make possible the next famous aeronautical feat.'

ENGINEERING HEROES

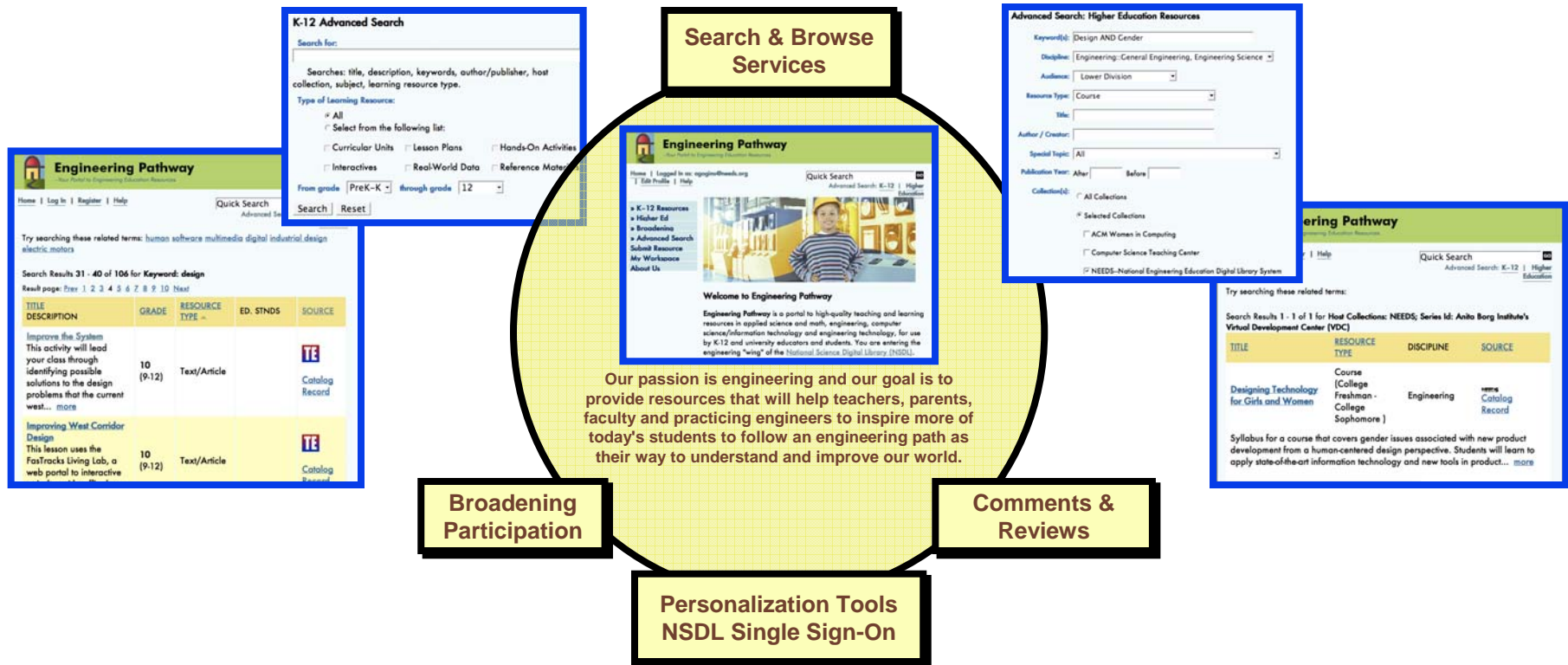
- George Cayley**
His "On Aerial Navigation" helped get flight off the ground
- Octave Chanute**
Engineering mentor to two bicycle builders named Orville and Wilbur
- Sheila Widnall**
Former Secretary of the Air Force, all 'round ace, amazing woman
- Kelly Johnson**
Senior engineer at Lockheed had "no equal in modern design"

Quality Review of Courseware on NEEDS

- **Establish Credibility of NEEDS as a Source of Quality Educational Material**
- **Enhance Recognition of Scholarly and Creative Effort of Courseware Developers**
 - **Peer/Expert Review of Courseware**
 - ***Premier Award for Excellence in Engineering Education Courseware***

Engineering Pathway: A Comprehensive Digital Library for K-Gray Engineering Education

Community, Search, Browse, Catalog, Personalize and Review
www.engineeringpathway.org



The Engineering Pathway is the engineering "wing" of the National Science Digital Library (NSDL).



The Premier Award for Excellence in Engineering Education Courseware

- **An international competition to identify and reward the authors of high-quality, non-commercial courseware designed to enhance engineering education**
 - *The Premier Award is about the entire experience of using the courseware by learners, not just the courseware itself*
- **A dissemination system to distribute the Premier Courseware (via CD's, ASEE Prism ads, presentations at FIE and ASEE)**



Premier Award Criteria

- **Instructional Design**
 - Does it enhance learning?
 - Includes focus on learning objectives
- **Software Design**
 - Is it well designed and usable?
- **Engineering Content**
 - Is the content appropriate and well presented?

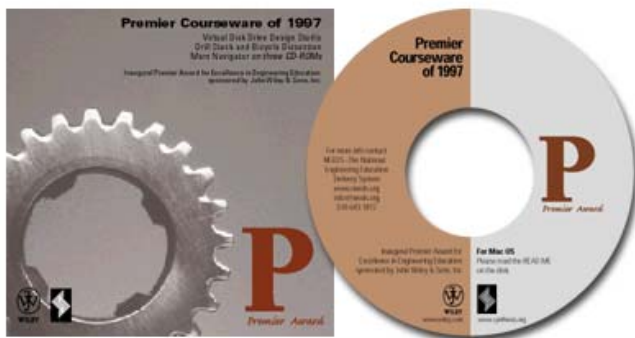
Judging and Review Process

- **Convene judging panel**
 - **Professors/content experts, instructional designers, students, publishers**
- **Review supporting materials in the submission packet**
 - **Author supplied responses to criteria**
 - **Evidence of student learning and evaluation**
 - **Testimonials**
- **Evaluate and test the courseware**



Premier Courseware of 1997 and 1998

- Virtual Disk Drive Design Studio
- Drill Dissection and Bicycle Dissection
- Mars Navigator
- Della Steam Plant
- MDSolids
- Structural Engineering Visual Encyclopedia - UNH



3,850 CD-ROMs Distributed



1,950 CD-ROMs Distributed



For more info or to receive copies go to www.needs.org/premier/

Premier Courseware of 1999 and 2000

- Engineering Graphics
- Cracking Dams
- Project Links
- West Point Bridge Designer



1,800 CD-ROMs Distributed



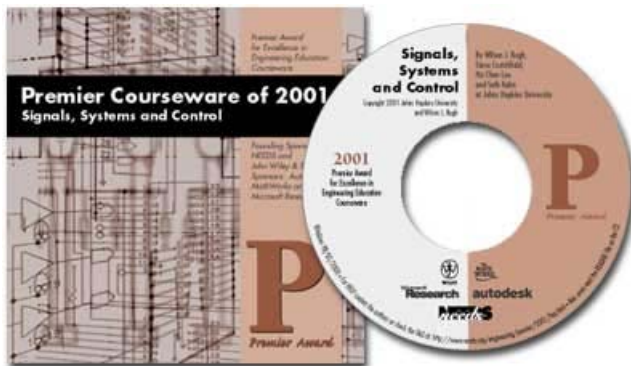
1,800 CD-ROMs Distributed



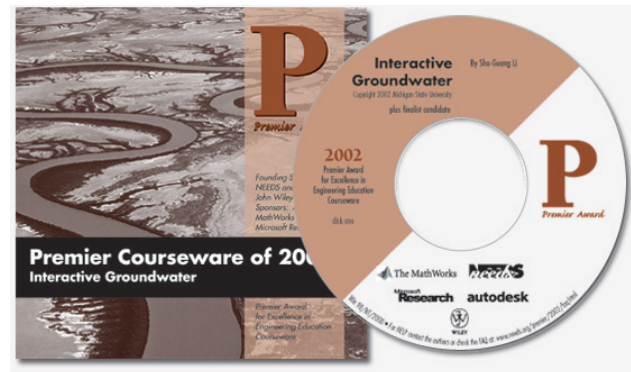
For more info or to receive copies go to www.needs.org/premier/

Premier Courseware of 2001 and 2002

- Demonstrations in Signals, Systems and Control
- Interactive Groundwater



1,800 CD-ROMs Distributed



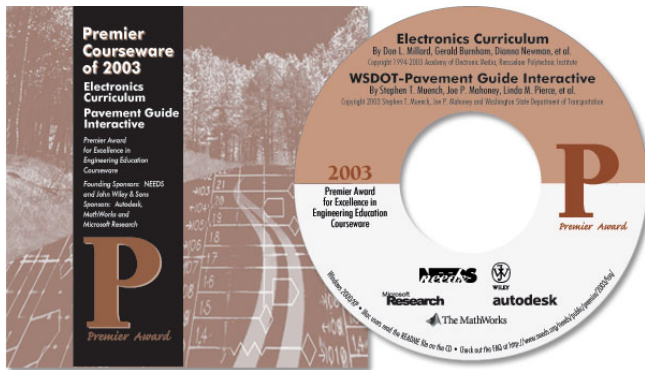
1,500 CD-ROMs Distributed



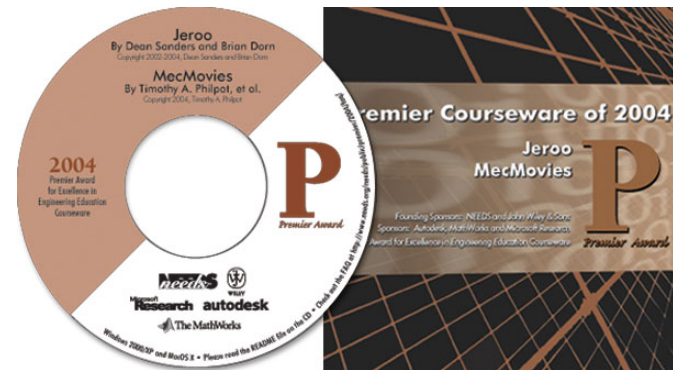
For more info or to receive copies go to www.needs.org/premier/

Premier Courseware of 2003 and 2004

- Electronics Curriculum
- Pavement Guide Interactive
- Jeroo
- MecMovies



1,500 CD-ROMs Distributed



2,000 CD-ROMs Distributed

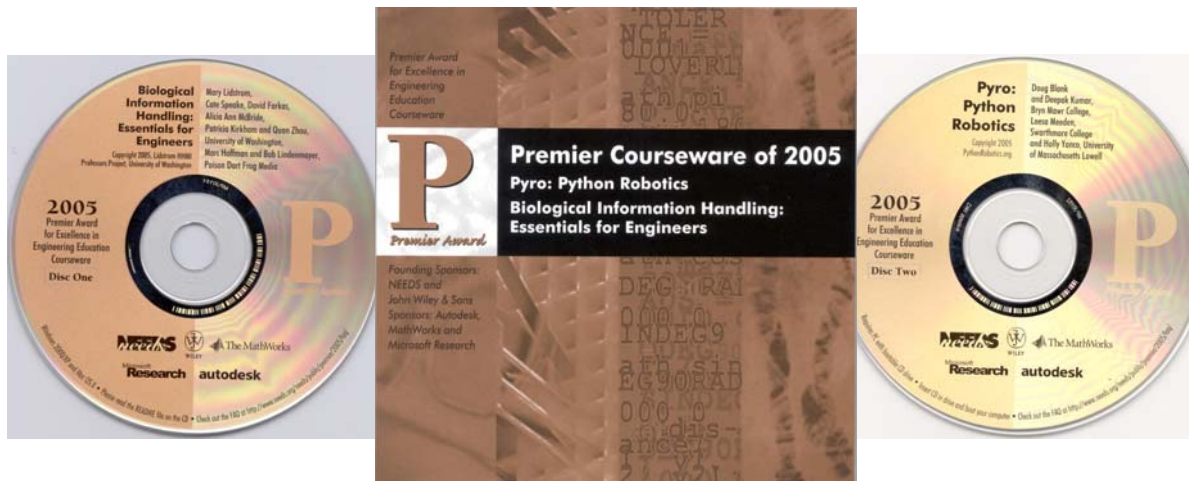


For more info or to receive copies go to www.needs.org/premier/

Premier Courseware of 2005

- **Pyro: Python Robotics**
- **Biological Information Handling: Essentials for Engineers**

20,600 printed so far including today's winner

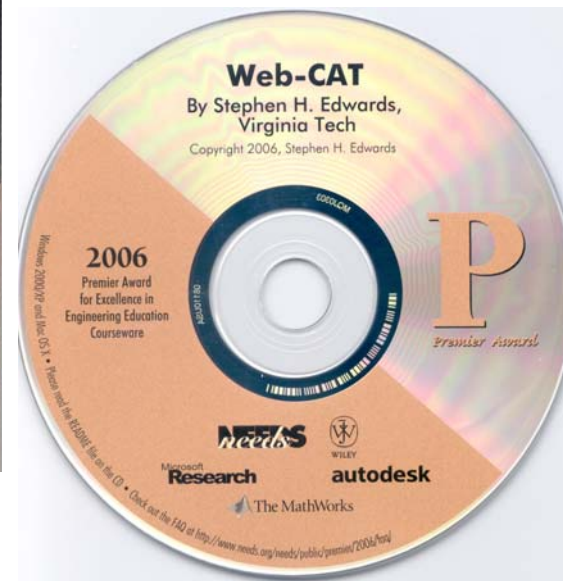
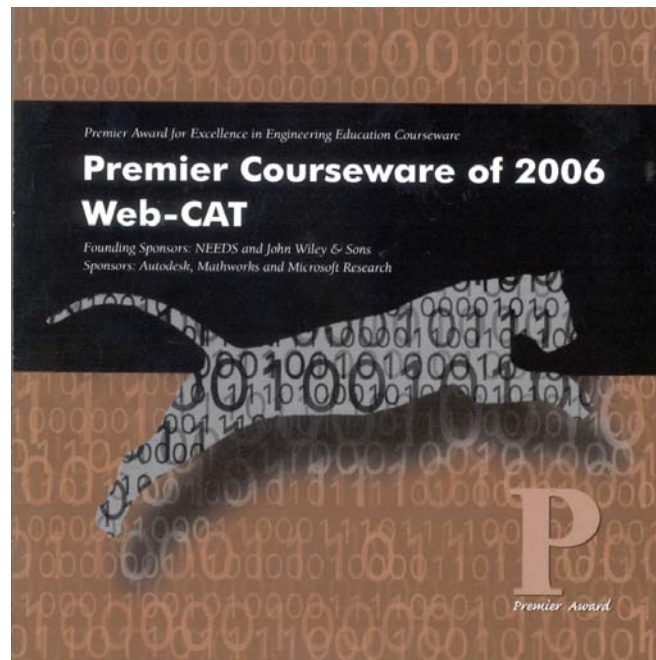


2,400 CD-ROMs Distributed



For more info or to receive copies go to www.needs.org/premier/

Presenting the Premier Courseware of 2006...



Premier Courseware of 2006

- **Wec-CAT: Web-based Center for Automated Testing**
 - **Stephen Edwards, Virginia Tech**



Additional Copies available
email premier@needs.org



A Digital Library for Engineering Education

NEEDS - a digital library with links to online learning materials in engineering and related areas of science and math - is partnering with [TeachEngineering](#) in the development of [Engineering Pathway](#), your portal to the most comprehensive collection of resources for all types of engineering education.

NEEDS is pleased to highlight the Premier Award for Excellence in Engineering Education Courseware. Read more below... we invite you to add your comments on the courseware and find out how to enter next year's competition.

Premier Courseware of 2006



One entry was named the Premier Courseware of 2006 this year at the Frontiers in Education Conference:

[Web-based Center for Automated Testing \(Web-CAT\)](#), by Stephen H. Edwards of Virginia Tech. [Please comment on the 2006 Premier Courseware resource!](#)

Please visit our [Premier Courseware of 2006](#) page for more information.

Premier Award 2007 Submissions

Submission Deadline:
July 13, 2007, 5 p.m. PT



We welcome your submissions for the 2007 Premier Award. The Premier Award competition is open to a wide range of submissions of "high-quality, non-commercial courseware designed to enhance engineering education."

Please visit our [2007 Premier Award Submission](#) page for more information.

You don't have to be a Premier Award entrant for your courseware or other learning resource to be cataloged in our Digital Library; we welcome all submissions of new learning resources. If you would like to add a resource to the NEEDS Digital Library, simply [register](#) if you haven't already, as you will need your User ID and Password, and... [submit your resource!](#)

Premier Award for Excellence in Engineering Education

- **Call for Submissions...**

2007 Premier Award

Due Friday, July 13, 2007



WILEY

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Microsoft
Research

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 **The MathWorks**

www.mathworks.com