The Educational Activities Board and Region 10

A Presentation to the Region 10 Committee

Hanoi, Vietnam

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IEEE Educational Activities

28 February 2009

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Purpose

- To remind the leadership of Region 10 of the services and programs that the Educational Activities Board provides
- To review what has happened recently and what is planned in Region 10
- To invite requests for additional events and for assistance, especially in the area of accreditation and the Teacher In Service Program

Educational Activities Board

- One of the six (6) major Boards of IEEE
- Responsible for IEEE's activities in pre-university, university-level and post-university (continuing) education
  - Including accreditation
- 15 Board members
- Approximately 100 committee members
  - Approximately 1000 volunteers
- Staff support of 18
  - Educational Activities Department

EAB: SMALL
BUT POWERFUL

The Teacher in Service Program

“Engineering in the Classroom”

The Teacher In Service Program (TISP)

- A program that trains IEEE volunteers to work with pre-university teachers

- Based on approved Lesson Plans
  - Prepared by IEEE volunteers
  - Tested in classrooms
  - Associated with Education Standards
  - Designed to highlight engineering design principles
  - The cost is less than $100 for a class of 30

How does it work?

- Volunteers of an IEEE Section organize a TISP training event
- EAB provides logistical support and instructors
- Volunteers gather for a day and a half of training
  - With teachers and school administrators
- Volunteers spread the program in their school districts

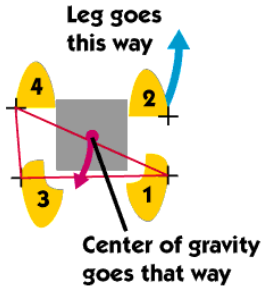
Sample Lesson Plans

- Build a better candy bag

- Build and sail a ship
- Rotational Equilibrium
  - (build a mobile)

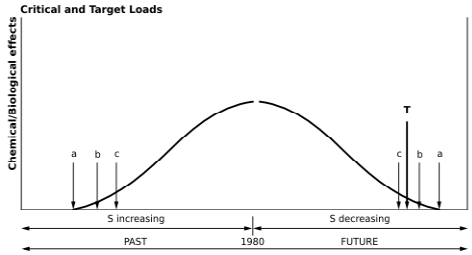
Most Requested Files: Lesson Plans

- **Build a robot arm**



- **Cracking the Code (bar codes)**

- **Critical Load (Civil Engineering)**



Teacher In-Service Program Presentations

- To date, over 70 TISP presentations have been conducted by IEEE volunteers
- TISP presentations have reached over 1600 pre-university educators
  - This reach represents more than 180,000 students

TISP activities in Region 10

- A TISP training session in Putrajaya, Malaysia with more than 80 participants (9/2006)
  - One of the best attended TISP sessions
    - Build a Better Candy Bag
    - Build Your Own Robot Arm
- Planning activity toward a session in Shenzhen, China

2006-2007

- Boston
- Indianapolis
- Putrajaya, Malaysia
- Cape Town
- Lima, Peru
- Rio de Janeiro
- Baltimore
- Dallas

2008-2009

- Los Angeles
- San Francisco
- Cordoba (Argentina)
- Port of Spain
- Shenzhen
- Montreal
- Montevideo
- Bogota
- San Juan, PR

How can Region 10 participate further?

- Help promote the Shenzhen event
- Identify locations for TISP events in 2010
- Identify location for TISP student branch event in 2010

106 students participated in TISP in Peru in 2007

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www.TryEngineering.org

- IEEE's pre-university education portal
  - For students, parents, teachers and school counselors
- A joint project of IEEE, IBM, and the New York Hall of Science
  - Non-IEEE investment of approximately $1.5M
- US/Canada version was launched on June 2006
- Six versions in other languages have since been launched
  - Chinese, Japanese, Spanish, German, French, and Russian

Languages

中文	Chinese
Deutsch	German
Español	Spanish
Français	French
邦人	Japanese
р у с с к и й	Russian

Main features of TryEngineering

Life of An Engineer	Lesson Plans
Become an Engineer	Ask an Expert
Find a University (in 25 countries)	Play Games
Opportunities for Students	

Countries of Users: English Version

- US (70%)
- India (5%)
- China (3.3%)
- Canada
- United Kingdom
- Austria
- Australia
- Malaysia
- Germany
- Japan
- Thailand
- South Africa
- Korea
- Brazil

Close to 4 million hits in 2008!

How R10 can participate further?

- Provide interviews for the portal:
  - Of engineers
  - Of students
- Provide material to the newsletter which highlights events in Region 10
- Add opportunities for students in Region 10 Sections

University Level Activities

Accreditation in Region 10

Key Activities

- Providing help to accrediting bodies in formation
  - Including training of evaluators
- Providing help to groups that want to start new accrediting bodies
- Education about accreditation

Accreditation Workshop: Beijing 2006

Meeting on Accreditation:

Ministry of Education, Beijing 2007

Accreditation Workshop: Beijing 2007

In R9: Arequipa, December 2007
Program Evaluator Training

How R10 can participate further?

- Identify other countries/regions where IEEE volunteers wish to build, revamp, or re-vitalize an accrediting body

- Identify needs for education about accreditation in Region 10
  - We may want to consider an accreditation workshop in R10 in 2010 or 2011
  - The last one in R10 was in Bangkok in 2004

A new IEEE portal on all aspects of academic accreditation

Accreditation.org

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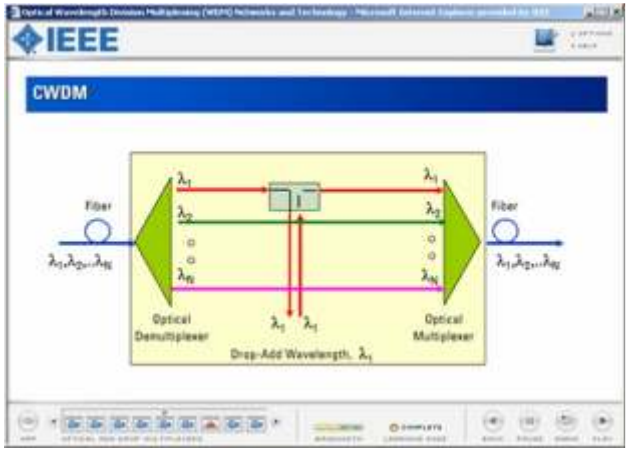
Continuing Education

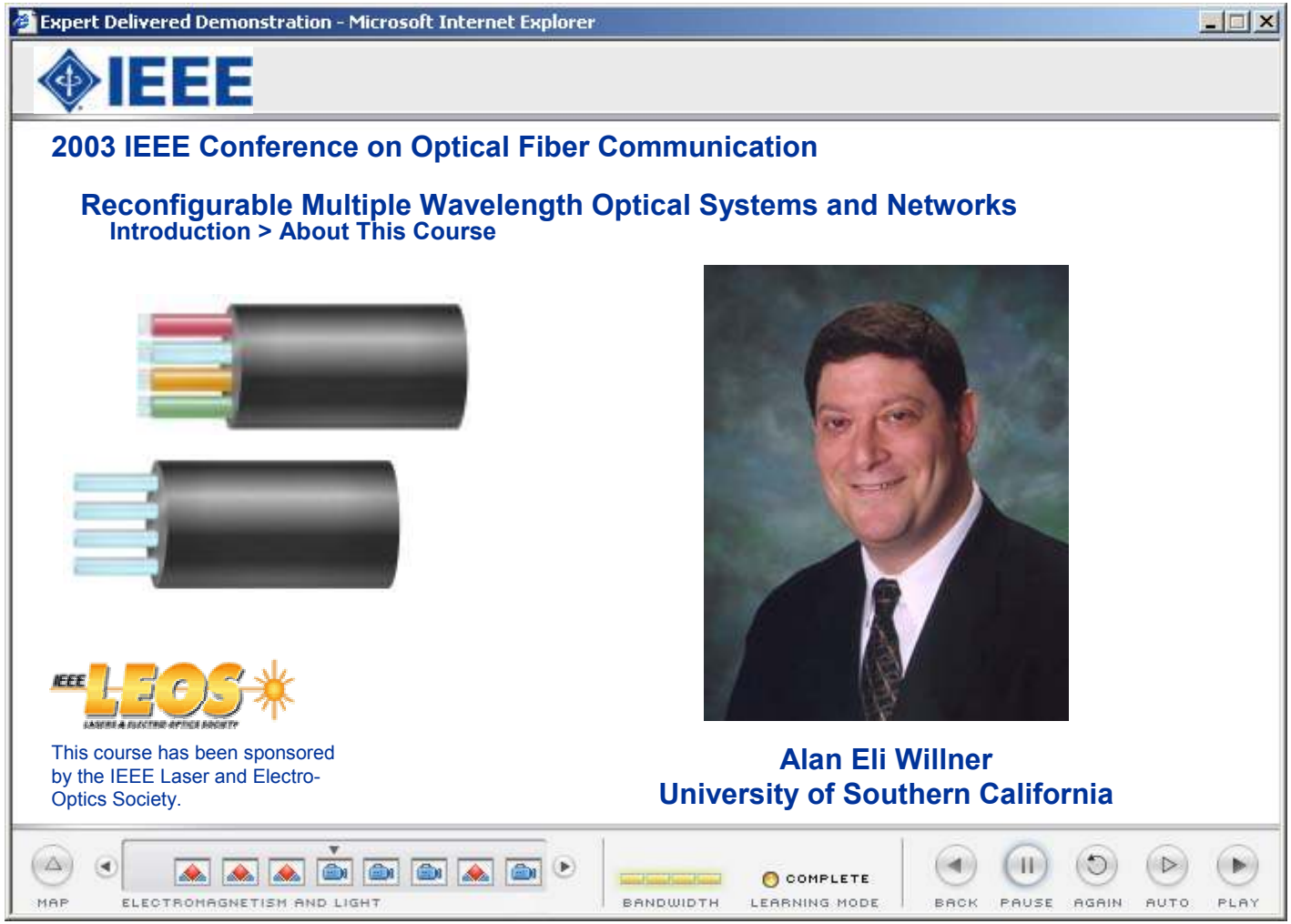
Expert Now IEEE



- The best of IEEE's educational content delivered in one-hour long online learning modules
  - Approximately 100 modules are included in the current version

- The latest information on emerging technologies and seminal works
  - Presented at the best of IEEE's conference tutorials, short courses and workshops

Optical Fiber Communication



- A master of ceremony approach to introducing the presenter
  - Establishes the presenter as the expert of the content (SME)
  - Begins the presentation in a professional manner
- The course objectives are introduced by the Expert
  - Establish the presence of the expert
  - Establishes the mastery of the content

Selected Titles

SOCIETY	SME	TOPIC
Communications Society	Kai Siwiak	UWB Radio Technology
Computer Society	Dwight Borses	Wireless Sensor Networks
Electron Devices Society	John Cressler	RF Devices & Circuits
Engineering Management Society	Mike Aucoin	Transition to Management
Industry Applications Society	Eric Perrson	Inverter Power Stage Design for Appliance Motor Drives
Lasers & Electro-Optics Society	Ira Jacobs Joe Campbell	Introduction to Fiber Optics Optoelectronic Devices for Fiber Optics
Power Electronics Society	David Middlebrook	Design-Oriented Feedback and Analysis
Reliability Society	Wayne Ellis	Effects of Reliability Mechanisms on VLSI Circuit Functionality
Solid-State Cirucuits	Arya Behzad	Wireless-LAN Radio Design

In addition to their availability for corporations…

- The library modules are available to the membership for rental

- The library modules are available for Sections for educational activities
  - First trial run was in Singapore

How can Region 10 get involved

- Use modules in Section and Chapter meetings
  - Module is projected with Q/A and comments by a local expert
  - This model was tried in 10 different sections, and appears to be successful

2006 Expert Now Event in Singapore

- September 2006
- 137 participants
- Program included:
  - Presentation of three IEEE Expert Now courses accompanied by local expert speakers on chosen topics
  - Membership drive
  - Professional networking opportunity

Summary: Ongoing Activities

- Accreditation activities in China
- TISP in Malaysia and China
- TryEngineering.org used widely in Region 10
- Expert Now was tested in Singapore

Summary: Calls for Action (1)

- Recruit participants for the TISP session in Shenzhen, China
- Identify additional needs for TISP in R10
- Identify groups in R10 that need assistance with accreditation

Summary: Calls for Action (2)

- Arrange for R10 Sections to use Expert Now modules for Section and Chapter meetings

- Participate in TryEngineering.org
  - Stories for the newsletter
  - Engineers and students for interviews
  - Add opportunities for students in R10 sections

Questions or comments?

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