Optics-Ed Fall 2002 Meeting

An examination of grass-roots needs and entities to leverage for maximum return on effort and longevity.

> December 19th, 2002 - 7PM Oak Grove High School, Room S4 285 Blossom Hill Road, San Jose

bob.dahlgren@ieee.org

OpticsEd5. ppt

Agenda

- Welcome & Introductions
- Administrative Matters
- Formation of Organization
- 2003 Officer Election
- Old Business
- New Business
- Adjourn

Welcome

- Thank you for coming to the meeting!
- Please introduce yourself and sign in.
- Your participation and feedback are highly valued don't be shy.
- Be courteous, please silence cell phones.
- Participatory process no one dominates.
- Parliamentary procedure based on "Robert's Rules of Order"

Administrative Matters

- Chairman's report
- Treasurer's report
- Web/email report
- Other liaison reports
- Operating rules
- Motion to adopt agenda
- Motion to adopt last meeting minutes

Chairman's Report

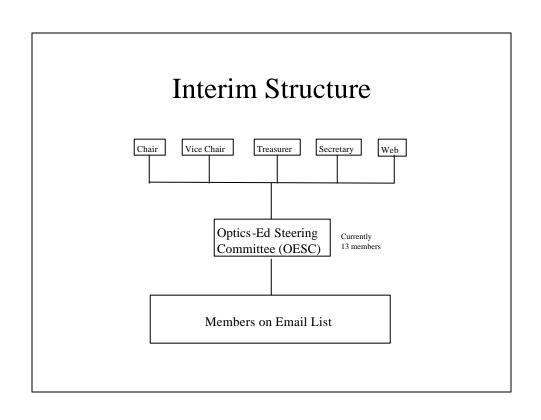
Who We Are

- Technical societies and associations
- K-12 science teachers
- 3rd-party facilitators
- Manufacturers of kits and materials
- Grass-roots science workshops
- University and government programs
- Local Corporations
- Science museums

East S.J. schools need resource:

What we are

- An informal group of people
- Operating as an *ad hoc* organization
- Operating with ad hoc rules
- No legal standing of our own
- Not recognizable by external entities



OESC Make-up

OESC MEMBER	MEMBER REP	BRINGS TO TABLE
California Science Teacher's Association	Richard Filson	Promotion of Projects to STEM teachers
The Exploratorium	Paul Doherty	Review of Projects for safety, ergonomics, etc.
SJ East Side Union High School District	Heidi Black	Input from 400+ science teachers
IEEE Santa Clara Valley K12 Committee	David Fong	Assistance with funding, web site
IEEE SCV Laser & Electro-Optics Society	Bob Dahlgren	Leadership, technical review

Lawrence Livermore National Laboratory	Dick Farnsworth	Technical review, kits, training
The Optical Society of Northern California	Paul Griffiths	Leadership, technical review
IPC	Edwin El-Kareh	Vision, fundraising experience.
Resource Area for Teachers (RAFT)	Paul Grossi	Meeting/training space, circulation of kits, etc.
Schmahl Science	Belinda Schmahl	Focus groups, testing of projects
San Jose City College	Sydney Sukuta	Post-secondary perspective
San Jose State University	Dan Walker	Training space, college of ed perspective
Silicon Valley Engineering Council	Cliff Monroe	Promotion, linkages

Mission Statement

• Help to generate the wonder and excitement of optics for students in school and beyond.

Tagline

• Recruiting young minds to the 'Order of Photonics Wizards'

Operational Mission Statement

- Create a framework for interaction that leverages existing local resources in such a way to create a sustainable, low maintenance K-12 optics outreach program that is scalable, durable, flexible, and affordable.
- Explore, develop, and support members of the community that want to be part of a science outreach program.
- Coordinate with local industry and other local STEM organizations in reaching out to our educators in order to meet their needs.
- Coordinate with meta-organizations such as professional societies, foundations, and government agencies for support, content, and best practices.

Desirable Outcomes

- Create an optics outreach program (OP) that creates excitement in Middle and High School teachers and students which leads to an increase in STEM studies.
- Encourage K-12 studies Science Technology Engineering and Mathematics (STEM).
- Attract historically under-represented groups to STEM.
- Prime the education pipeline for post-secondary schools.
- Build connections & linkages between local OP entities, creating a framework for interaction.
 - Teachers, students, parents, and other users of content
 - Prof. societies, volunteers, content, and other resources
 - Foundations, programs, distributors, and facilitators
- Organize competitions, optics activities, science fair prizes.

Progress Since Last Meeting

- Optics-Ed Steering Committee formed.
- Identified local players with resources for distribution, focus groups, evaluation, and promotion who joined OESC.
- Interim officers and philosophy adopted.
- Adopted draft mission statement.
- OESC email reflector established.
- Updated the Web site.
- Funding for kits never materialized from industry.
- Still looking for real funding.

Progress Since Last Meeting

- 2 judges for 3/2/2002 Sciencepalooza.
- David Fong established K-12 Fund within the IEEE Foundation, which is a 501(c)3 foundation.
 - Permits tax-deductible donations
- \$520 donated to K-12 Fund, earmarked for Project #2002-1 Radio Shack Account.
- Radio Shack account established and endowed.
- Flow chart and forms created, for teachers to apply for Radio Shack "NanoGrant" maximum \$10.00
- Officers have discussed membership, bylaws and structure with LEOS, OSA and CPO executives.

Treasurer's Report

Treasurer's Report

- David Fong (acting)
- Inflows
 - Donation \$100 from LEOS 2/26/02
 - Donation \$100 from SVP 2/26/02
 - Donation \$20 from David Fong 3/17/02
 - Donation \$200 from IEEE Santa Clara Valley 12/6/02
 - Donation \$100 from LEOS 11/26/02
- Outflows
 - Disbursed \$220 to Radio Shack account 5/13/02
 - Disbursed \$200 to Radio Shack account 12/6/02

Web/Email List Report

Email List

- IEEE majordomo account.
- Currently 96 members
- Edwin El-Kareh currently maintains list.
- Purpose of list is to permit dissemination of Optics-Ed announcements, and to facilitate dialog.
- Subject to IEEE "Acceptable Use Practices"
- ❖ optics-ed@ieee.org

To Join Email List

- Send an email to majordomo@majordomo.ieee.org
- With
 subscribe optics-ed
 end
 or
 subscribe optics-ed your@addr.com
 end
 in the body of the message

Web Site

- Piggybacking off of local IEEE hosting.
- Bob Dahlgren set up html-based page and is acting webmaster.
- Purpose of site is to catalog Optics-Ed info, and serve as pointers to key web sites.
- www.ewh.ieee.org/r6/scv/k-12/optics.html

WELCOME TO THE SILICON VALLEY OPTICS EDUCATION WEB SITE



courtesy

The Santa Clara Valley Chapter of the IEEE Lasers & Electro-Optics Society (LEOS)



and

The Optical Society of Northern California (OSNC)

This well sits is to facilitate the dissertination of optics and photonics information; for teachers, volunteers, demon, ecience museums, science education facilitaters, and policy makers.

Optics-Ed Steering Committee

5/7/2000 Presentation

2/21/2002 Presentation

3/26/2002 Presentation

Optics Education Reflector

Teacher's Workshop at Photonics West

sey free k17 Reflector

IEEE K-12 Website

IEEE Procollege Education

Optics Education Resources

OSA Option for Kids

Bense send feedback, magestud resources, notices, and information to

SUBMIT AN ADDITION

Tax-deductable docutions, such as cash, equipment, stock can be sent to SUBMIT A DONATION

OPTICS ED STEERING COMMITTEE

Below are the members of the Optics-Ed Stearing Committee and their representatives:

California Science Teacher's Association	Richard Filson
The Explorazonam	Paul Doherty
San Jose Burt Side High School District	Heidi Black
The IEEE Sunta Clara Valley IEEE K-12 Education Committee	David Fong
Santa Clara Valley chapter of IEEE/LEOS	Bob Dahlgren
Lescosci Levermon National Laboratory	Dick Famoworth
The Optical Society of Northern California	Paul On flidss
The Perham Foundation	Edwin El-Kursh
Resource Area for Teachers	Pant Grosse
Schmidt Science	Belinda Schmild
Sm. Jose City College	Sydney Sukuta
Sun Jose State University	Dan Walker
Schein Valley Engineering Cosneil	Cliff Menroe

To send an omail to the committee Click Here

OLD BUSINESS

(Organization)

Motions

- No bylaws or structure are in place
- Operating under interim rules
- Motions numbered e.g. 2002A
 - Formation
 - Agenda
 - Minutes
 - Web Site

Interim Voting Rules

- Parliamentary procedure based upon "Robert's Rules of Order"
- Optics-Ed steering committee (OESC) members have voting rights.
- Non-OESC members contribute to discussion and participate in straw polls.
- Absent OESC members may provide absentee ballot(s) or a proxy statement to the secretary prior to the meeting.
- Simple majority of eligible voters to pass motion.

Motion 2002A

• Motion to form Optics-Ed.

(simple motion)

Moved: Dahlgren Seconded: Griffiths

For <u>5</u> Against <u>0</u> Abstain <u>0</u> Pass <u>X</u> Fail ___

Motion 2002B

• Motion to adopt agenda issued on 12/19/2002.

(see full text)

Moved: Dahlgren Seconded: Griffiths

For <u>5</u> Against <u>0</u> Abstain <u>0</u> Pass <u>X</u> Fail ___

Motion 2002C

 Motion to approve February meeting minutes issued on 12/17/2002

(see full text)

Moved: Dahlgren Seconded: Griffiths

For <u>5</u> Against <u>0</u> Abstain <u>0</u> Pass <u>X</u> Fail ____

Motion 2002D

- Motion to adopt email lists and content on WWW site
- Comment: Repair broken links
- Friendly Amendment: the URL is www.ewh.ieee.org/r6/scv/k-12/optics.html

Moved: El-Kareh Seconded: Dahlgren

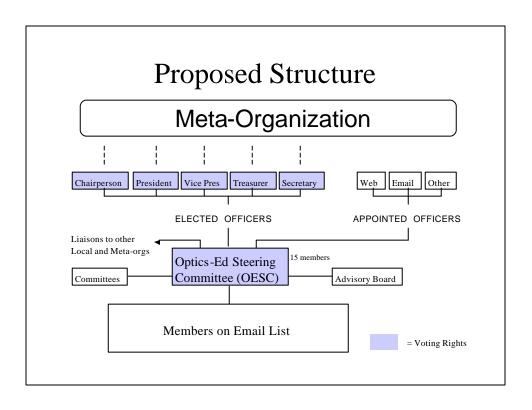
For <u>5</u> Against <u>0</u> Abstain <u>0</u> Pass <u>X</u> Fail ____

Old Business

- Motions to establish Optics-Ed and OESC
- If bylaws are not ready:
 - Motions to establish/instruct bylaws committee
 - Election of 2003 interim officers
- If bylaws are ready:
 - OESC votes on bylaws
 - If approved, elect officers
- Call for additional OESC members

Need for bylaws

- Provides organizational structure
- Defines membership
- Defines steering committee, officers, terms
- Defines who can vote
- Provides operating guidelines
- Provides legitimacy and protection
- Enables future growth



Proposed Membership Definition

- Open membership
- "Involvement" in science education
- Requirement of a valid email address
- Agrees to IEEE "acceptable use" policy
- No attendance requirement
- No dues
- Members cannot vote on motions
- Members may participate in straw polls, etc.
- Membership may be revoked by OESC or officer

Proposed OESC Definition

- Fifteen members (currently 13)
- Led by a Chairperson
- Members nominated by a current OESC member
- Requirement to be "active" in the group
- "Grandfather" in current members staggered
 - 1/3 for 1 year initial term, starting in 2003
 - 1/3 for 2 year initial term, starting in 2003
 - 1/3 for 3 year initial term, starting in 2003
- After that, 3-year terms for OESC members

Responsibilities of OESC

- Runs the organization
- Controls the money
- Listen to membership
- Vote on motions
- Vote on elected officers
- Assign appointed officers
- Form an advisory board
- Form committees

OESC Organization Diversity

- Nominees for the OESC must declare whom they represent, along with any conflicts and affiliations with current OESC members.
- No more than four (4) OESC members shall represent the same entity, company, or whollyowned subsidiary.
- Nominees not accepted unless 5th person agrees to resign at the end of their term.
- In case of acquisition, 5th person abstains.
- Officers and OESC members can be removed.

Responsibilities of Officers

- Elected officers are subset of the OESC.
- It is preferable that elected officers are also members of a meta-organization.
- Responsible for oversight of the OESC.
- Ensures IRS rules are adhered to.
- Ensures Cal rules are adhered to.
- Ensures meta-organization's rules are adhered to.
- Elected officers vs. appointed officers

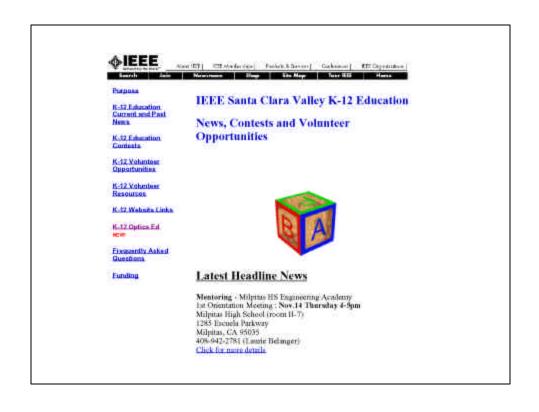
Other Issues

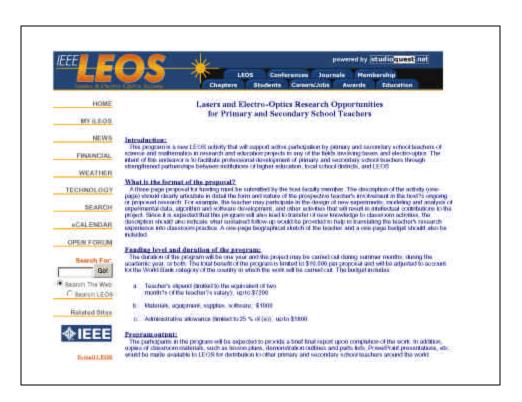
- Definition of quorum?
- Currently 2 annual meetings
 - Fixed dates in February and August.
- How to submit and vote on motions?
- Non-voting advisory board for luminaries.
- How to dovetail into a meta-organization?

Meta-Organizations

(Web Page Snapshots)

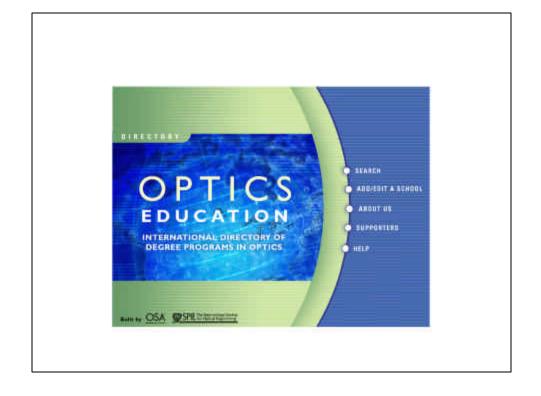


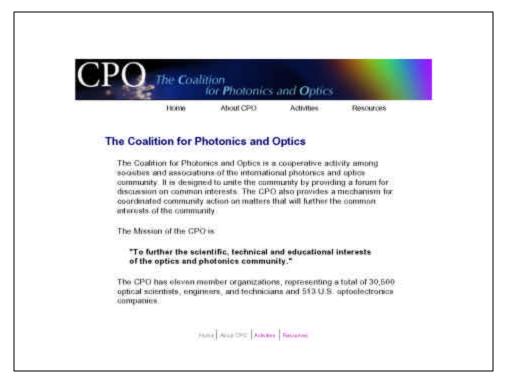












What Meta-Organizations Can Do

- Provides legitimacy, structure, bylaws template, etc.
- Provide liability protection for officers and OESC.
- Provide staff support to supplement volunteers.
- Provide web site, 501(c)3, mail drop, email reflector.
- Create master lists for nationwide resources.
- Generate/improve high-quality content for teachers.
- Share best practices from other OPs.
- Coordinate our OP with other OPs.
- Career push to parents and councilors.
- Get CEOs to push volunteerism.

Motion 2002E

- Motion to form organizing committee, chaired by Edwin El-Kareh.
- Prepare resolution of formation and bylaws.
- Drafts by 2/1/03, for voting at next meeting.
- Bylaws consistent with previous slides and other input from members to the degree possible, and TBD meta-organization.

Moved: Dahlgren Seconded: Black

For <u>5</u> Against <u>0</u> Abstain <u>0</u> Pass <u>X</u> Fail ____

2003 Officer Elections

Current Officer List

- Chairperson Robert Dahlgren
- Vice-Chairperson Paul Griffiths
- Treasurer OPEN
- Secretary Paul Grossi
- List Owner Edwin El-Kareh
- Webmaster OPEN
- Promotion OPEN
- Membership OPEN
- Resources OPEN
- Fundraising OPEN

Motion 2002F

- Motion to require only Chair, Vice-Chair, Treasurer, and Secretary be *elected officers*.
 - Webmaster, Email list manager, Promotion,
 Membership, Resources, and Fundraising positions
 would become *appointed officer* positions.
 - The OESC can now accept volunteers from the general membership and appoint them to officer positions.
 - The OESC create or delete committees, working groups, and appointed officer positions.

Moved: Dahl	gren		Seconded:	Sukuta		
For <u>5</u> Ag	ainst <u>0</u>	Abstain .	0	Pass .	X	Fail

2003 OESC Officer Slate

- Nominated Chairperson Paul Griffiths
- Nominated Chairperson _____
- Nominated Vice-Chair Edwin El-Kareh
- Nominated Vice-Chair _____
- Nominated Treasurer David Fong
- Nominated Treasurer _____
- Nominated Secretary Heidi Black
- Nominated Secretary _____

Officer Elections

- Nominations accepted at or prior to meeting.
- For each office
 - Nominees must be an OESC member and accept the nomination
 - Nominees may make statement
 - Nominees leave room during voting
- Voting by OESC members present
- One person one vote (no Chicago rules)
- Secretary tallies and announces result

2003 Elected Officer Results

- Chairperson Paul Griffiths
- Vice-Chair Edwin El-Kareh
- Treasurer David Fong
- Secretary Heidi Black

2003 Appointed Officer Results

(Contact Cathy Werle at SJCC about student)

- Nominated Webmaster _____
- Nominated Email-List Manager _____
- Nominated Promotion Manager _____
- Nominated Membership Manager _______
- Nominated Resources Manager _________
- Nominated Fundraising Manager _____

NEW BUSINESS

(Old Projects)

New Business

- Motion for Optics-Ed mail address
- Motions on projects #2002-1
 - Authorize and announce Science NanoGrant
- Motions on projects #2002-2
 - Close out this project
- Motions on projects #2002-3
 - Authorize resource book
- Motion to submit manuscript to ETOP'03
- Motion to endorse www.OpticsForKids.com

Mailing Address

• IEEE has regional office in Mountain View, that collects mail for the local chapters. For example

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IEEE Santa Clara Valley LEOS Chapter
c/o IEEE-SFBAC
540 University Avenue, #150
Palo Alto, CA 94301
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• IEEE provides this as a free service to chapters who request it

Motion 2002G

 Motion to authorize the Chairman to contact Marilyn Turner at the IEEE SFBAC (650-327-6622), to inquire about the use of mail forwarding for Optics-Ed.

Moved: Fong					Seconded:	Sukut	a			
For _	5_	Against	0	Abstain	0		Pass	X	Fail	

Project #2002-1 – Consumables

- Problem
 - STEM teachers often spend their own cash on consumables such as batteries.
- Solution
 - Radio Shack account, endowed with donations.
 - Teachers may request items, \$10 maximum, until account is exhausted.
 - Optics-Ed rep procures items and distributes.
- Needs
 - Donations to IEEE Foundation \rightarrow K-12 Fund

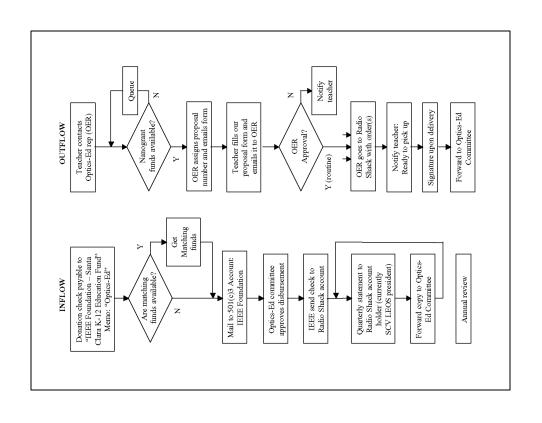
Motion 2002H

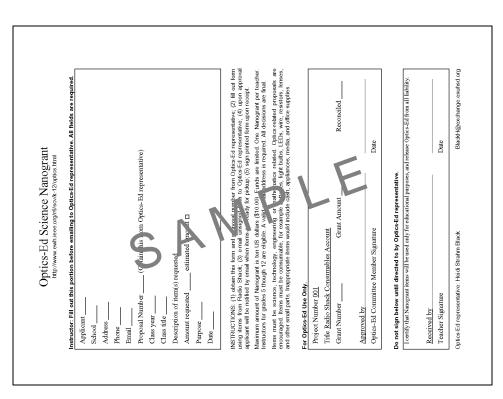
• Motion to authorize Project #2002-1

(see previous slide)

Moved: El-Kareh Seconded: Sukuta

For <u>5</u> Against <u>0</u> Abstain <u>0</u> Pass <u>X</u> Fail ___





Motion 2002I

• Motion to approve NanoGrant form and flow chart for Project #2002-1, and authorizes Heidi Black to be the interface ("Optics-Ed representative") to the teachers.

(see previous slides)

• Friendly Amendment: Limit to public schools, add catalog number, and questionnaire.

Moved: Fong Seconded: Sukuta

For <u>5</u> Against <u>0</u> Abstain <u>0</u> Pass <u>X</u> Fail ____

Motion 2002J

 Motion to disburse \$420 from 501(c)3 fund to Radio Shack, and announcement of project #2002-1, entitled "Optics-Ed Science NanoGrant"

Moved: El-Kareh						Seconded:	Fong			
For	4	Against	0	Abstain	1		Pass	X	Fail	

Project #2002-2 – Optics Kits

- Problem
 - Schools lack science equipment for optics.
- Solution
 - Study how optics is integrated into curricula and standards, and review and approve the optics kits.
 - Procure optics kits and donate to RAFT, who *circulates* kits to middle and high schools, and maintains kits.
 - Exploratorium will review kit materials.
 - Schmahl Science volunteered to be focus group.
 - Kit manufacturer will donate training materials.
 - Volunteers secured to provide required teacher training.
 - Lesson plans on www.OpticsForKids.com
- Funding from JDSU for kits did not materialize.

Motion 2002K

- Motion to close Project #2002-2 Optic Kits.
- Comment
 - Optics-Ed is free to re-authorize this project again when sufficient funding is received, or can be applied for.

Moved: Dahlgren						Seconded:	El-Ka	reh		
For	5	Against	0	Abstain	0		Pass	X	Fail	

Project #2002-3 – Resource Book

- Problem
 - STEM teachers and other consumers are often unaware of local (often free) resources.
- Solution
 - Generate resource booklet
 - Distribute to teachers
 - Mirror booklet on www
- Needs
 - Editor, chapter contributors
 - Help from National societies

Resource Book Contents

- Master Resource List for Teachers
 - Optics kits and equipment available.
 - Class lesson plans incorporating optics.
 - WWW sites, VHS, CD-Roms for content.
 - Career info for kids and councilors.
 - Volunteers, tours, speakers, mentors, etc.
 - Awards, funds, grants, recognition.
 - Optics workshops, boot camps, fairs, etc.
 - Essential books.
 - Training for teachers.

Resource Book Contents

- Living lists, maintained at local level
 - List of local teachers, schools, and projects, and what are their needs to encourage STEM.
 - List of local distributors, non-profits, OPs and what type of content and equipment is available.
 - List of local volunteer opportunities and companies that encourage volunteerism, tours, lectures, etc.
- Living lists, maintained at national level
 - Aggregated best practices for OPs.
 - Content for instructors, students, parents.
 - Pointers to navigate to the above local web sites.
 - Lesson plans meeting science education standards.

Motion 2002L

• Motion to authorize Project #2002-3

(see previous slides)

• Friendly Amendment: Add disclaimer

Moved: Dahlgren					Seconded:	Black				
For	5	Against	0	Abstain	0		Dace	Y	Fail	

Invited Paper

- Education Training in Optics and Photonics.
- ETOP series has been occurring since 1989.
- Tucson, Arizona, October 6-8, 2003
- Co-located this time with OSA Annual
- 10/29/2002 email from Jason Briggs (OSA) inviting us to present at ETOP'03
 - A paper on our vision and local activities
 - A paper on our perspective on how the national societies can facilitate outreach programs

www.ETOPonline.org



Motion 2002M

- Motion to form an ad-hoc committee, chaired by Sydney Sukuta, and authorize the submission of one or more presentations to ETOP'03 for consideration.
- Comment
 - Optics-Ed can't cover travel/registration costs.
 - Deadline for submission of title and abstract to the OSA will be before next OESC meeting.

Moved: I	El-Kareh	Seconded: Sukuta					
For	Against	Abstain		Pass	Fail		

Optics For Kids Website

- OSA has created a great website.
- Lots of content for students and parents.
- Lesson plans for teachers.

www.OpticsForKids.com



Motion 2002N

 Motion to endorse www.OpticsForKids.com

(see previous slides)

• Motion withdrawn for lack of a Second.

Moved _			Seconded		
For	Against	Abstain		Pass	Fail

Conclusion

- Call for new projects
- Call for committee members
- Next meeting
 - Thursday, February 20TH, 2003
- Review action items
- Adjourn