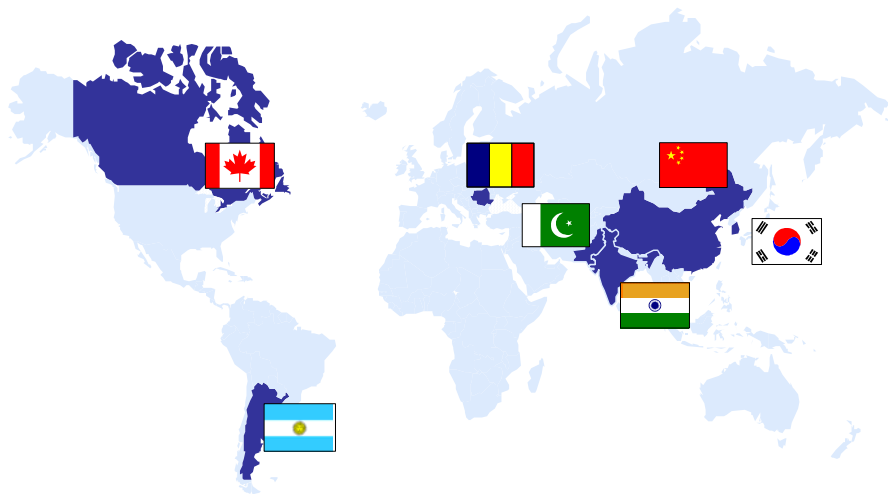


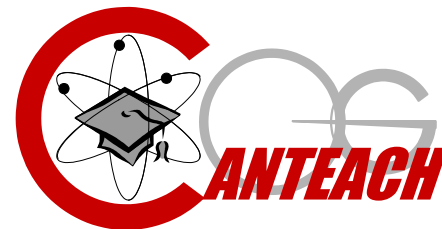


# Canada's Nuclear Knowledge Portal: Preservation and Dissemination of Nuclear Technical Knowledge

Presented to IAEA Technical Meeting L1-TM-26483  
Vienna, Austria, 2004.10.04-06



*Bill Garland*  
*Academic Director*





# Nuclear Knowledge Portal

- In Canada, we have been pursuing this for years in a relatively uncoordinated but co-operative way.
  - CANTEACH – an open CANDU document repository (2001)
  - UNENE – a nuclear centre of excellence (2002)
  - NUCENG – an university based portal and repository (1998)
  - CNS – a society of nuclear individuals (conferences, bulletin, ...) (1979)
  - COG – an industrial consortium of operators and designers (1984). Sponsors CANTEACH and member of UNENE



# Target Audience

- **Mission** To preserve technical knowledge of CANDU nuclear-electric generating system for use by present and future members of the CANDU community
- **Mission** To train Highly Qualified Personnel
- Thus target audience is primarily at the level of the working professional

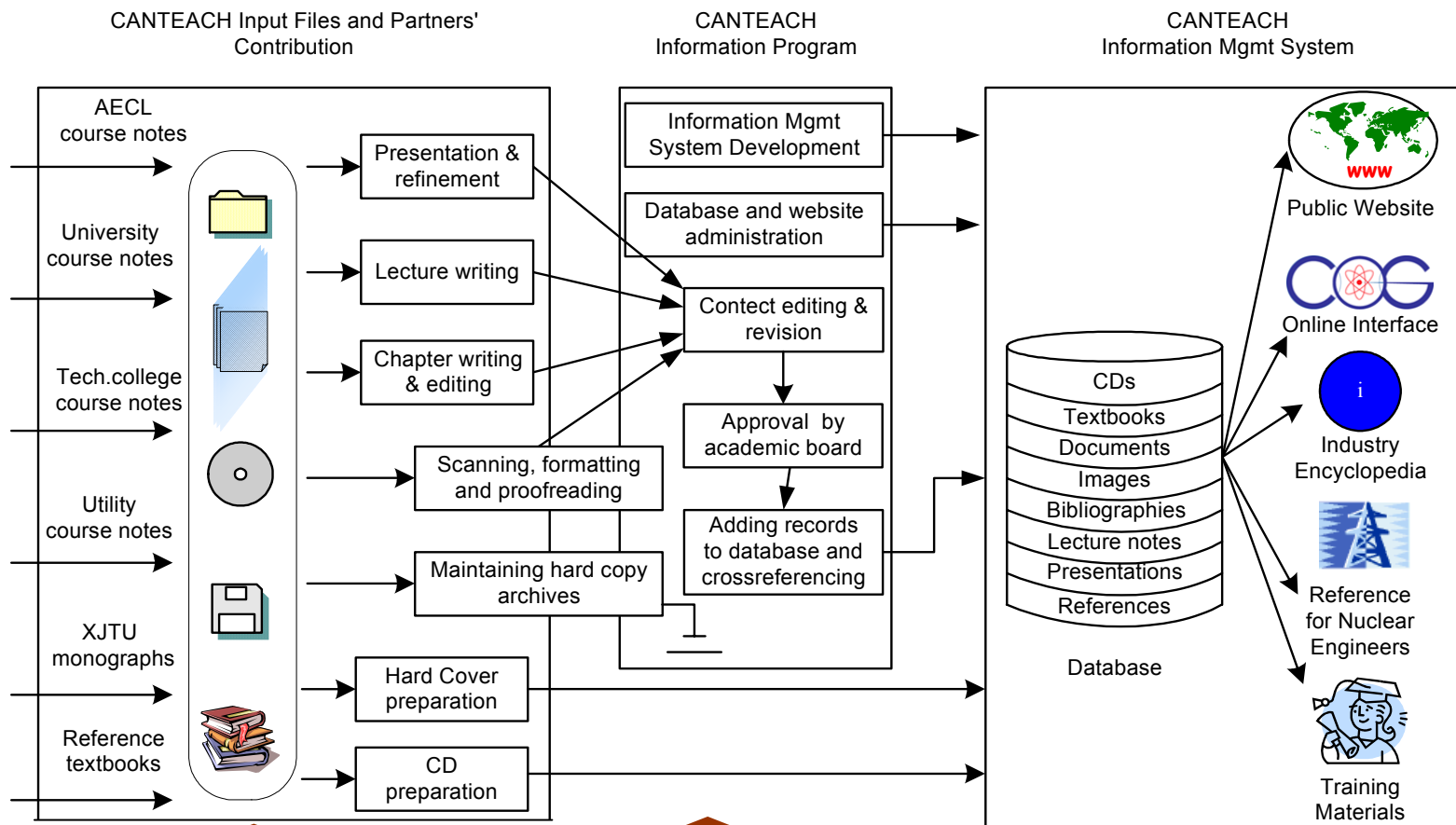


# Tech Staff - Who Can Benefit?

- **School grad** – very numerous, keen and inclined toward “new trends”
- **Support staff** – large number, relatively low skill levels
- **Technicians** – large number, excellent, narrow skills + some experts
- **Engineers** – medium number, professional level + some experts
- **Scientists** – small number, highly educated, mostly expert skills
- **Managers** – medium number, broad experience + some experts
- **Regulators** – small number, broad education & experience + some experts
- **Legislators** – small number, mostly generalists
- **Educators** – university and college professors
- **Population uncaring** – very numerous, ranging from expert to unaware or



# CANTEACH



**Dan Meneley**  
Project Director

2004.10.04-06



**Bill Garland**  
Academic Director

Nuclear Knowledge Portal

**Malcolm Lightfoot**  
Project Administration



# CANTEACH Web Site Tour

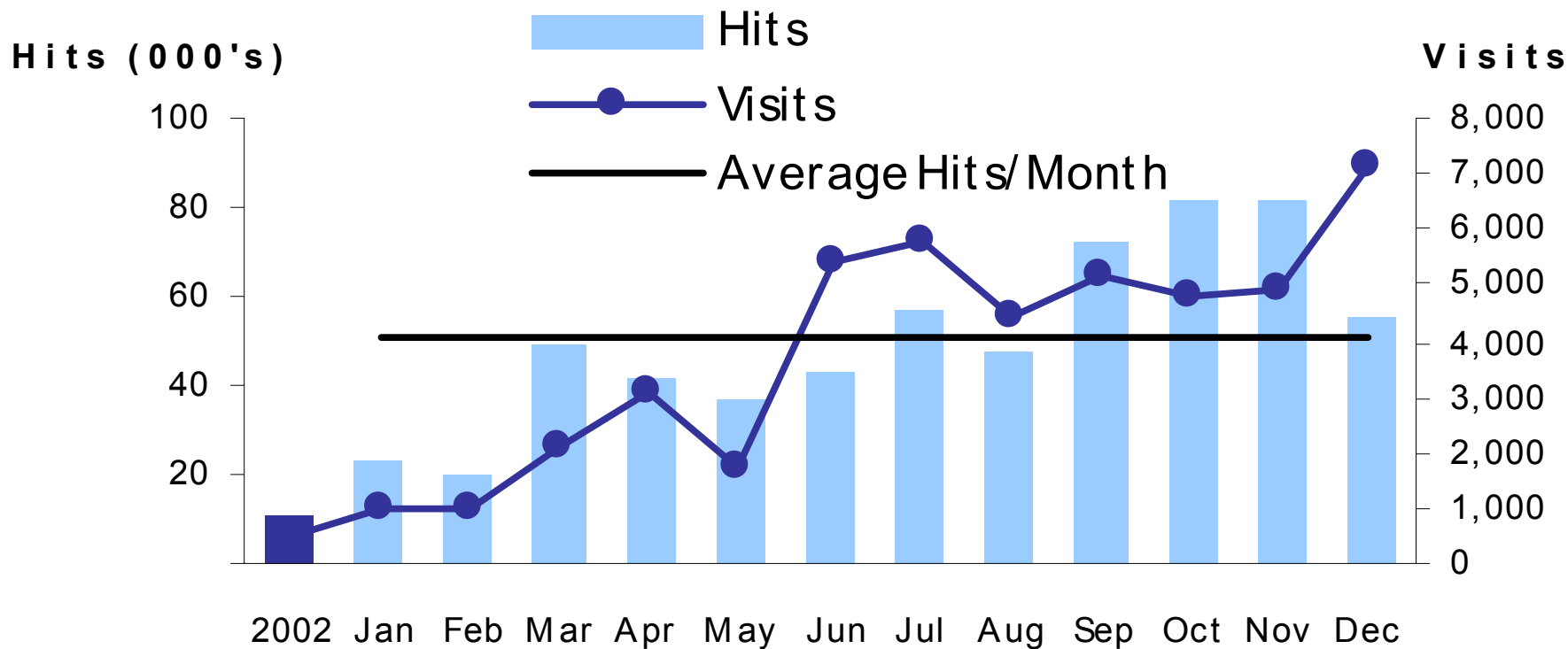
<http://canteach.candu.org>

The screenshot displays the CANTEACH website interface. At the top left is the COG logo with the text "CANTEACH" in red. To the right is a search bar with a "Search" button. Below the logo is a navigation menu: "Home ♦ What's New ♦ CANTEACH Project ♦ Library ♦ Help". A tagline reads "The most comprehensive educational and reference library on CANDU technology". A central banner says "Welcome to CANTEACH Project" and "Find out what CANTEACH is". The main content area is a grid of boxes: "Concept Map Library" (See the bigger picture of how technical information on CANDUs is organized), "CANDU Systems and Components" (Information organized by BSI, components, etc.), "Site Map" (with a globe icon), "Help Desk" (with a red question mark icon), "Teacher's Lounge" (Introduction to CANDU, Bibliography, Who's Who, Links), "Documents Library" (Browse, search and download documents, with a stack of books icon), "Image Library" (Browse, search and download images), "New Arrivals" (with a green exclamation mark icon), and "Index" (with a stack of books icon). A footer bar at the bottom says "CANTEACH Library".



"Strength Through Cooperation"

# Is it working?





# Is it working?

**“...This great CANTEACH concept is a pleasant surprise....I am a regular visitor to CANTEACH website. It is wonderful to have such a rich source of information on CANDU technologies....I have gone through the website and the rich information given in there. There is only one word to describe it: FABULOUS. ...”**

**S. Ravishankar, Training Officer, Nuclear Training Centre,  
Madras Atomic Power Station, Kalpakkam, INDIA.**





# Is it working?

**“... As for CANTEACH, it is a fabulous site that made my 4th year undergraduate project much easier to complete. ...”**

**Lee Rehorn, student, University of Western Ontario,  
Department of Electrical and Computer Engineering**



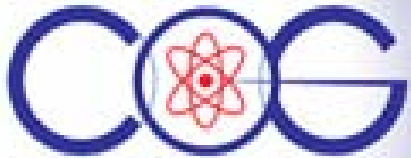
# Is it working?

**“CANTEACH? What’s that?”**

**- said by far too many people**



- CANTEACH is about info. Low budget (\$150k/yr)
- UNENE is about delivery (\$3M/yr).
- UNENE generates Highly Qualified Personnel.
- Hope to make CANTEACH the repository for UNENE.



"Strength Through Cooperation"

# UNENE Web Site Tour

<http://www.unene.com>

HOME

**UNENE**  
University Network of Excellence in Nuclear Engineering ...

Excellence in Nuclear Engineering

The University Network of Excellence in Nuclear Engineering (UNENE) is an alliance of universities, nuclear power utilities, research and regulatory agencies for the support and development of nuclear education, research and development capability in Canadian universities. UNENE was established as a not-for-profit corporation by the Government of Canada with Letters Patent issued July 22, 2002.

**Objectives**

The main purpose of UNENE is to assure a sustainable supply of qualified nuclear engineers and scientists to meet the current and future needs of the Canadian nuclear industry through university education, university-based training and by encouraging young people to choose nuclear careers. The primary means of doing this are to establish new nuclear professorships in six Ontario universities and to enhance funding for nuclear research in selected universities in order to retain and sustain nuclear capability in the universities, now in danger of being lost. The Network will organize and deliver through its universities educational programs appropriate to students planning to enter the industry and to those already employed.

**To find out more about UNENE sponsored research and educational programs...**

[CLICK HERE TO ENTER THE SITE](#)




- CANTEACH is about info.
- UNENE is about delivery.
- NucEng is about students.
  - Courses
  - Who's Who
  - Careers
  - Links
  - Forums and List servers



"Strength Through Cooperation"

# NucEng Web Site Tour

<http://nuceng.mcmaster.ca>

 Nuc Eng
<a href="#">Home</a>
<a href="#">--Help</a>
<a href="#">--FAQ</a>
<a href="#">--Career</a>
<a href="#">--Downloads</a>
<a href="#">--Univ Comm</a>
<a href="#">--MNR</a>
<a href="#">--CANNUC</a>
<a href="#">--Humour</a>
<a href="#">Announce</a>
<a href="#">Nuc Ed</a>
<a href="#">--Who's Who</a>
<a href="#">--Nuclist</a>
<a href="#">--Nuc Dip</a>
<a href="#">--UNENE</a>
<a href="#">--CANTEACH</a>
<a href="#">--CNS</a>
<a href="#">Research</a>
<a href="#">--Interests</a>
<a href="#">--Students</a>
<a href="#">--Publications</a>
<a href="#">--H2O Prop.</a>
<a href="#">--D2O Prop.</a>
<a href="#">Courses</a>
<a href="#">--EP3D3</a>
<a href="#">--EP4D3</a>
<a href="#">--EP6D3</a>
<a href="#">--EP4U4</a>
<a href="#">--EP6E3</a>
<a href="#">--EP712</a>
<a href="#">--EP714</a>
<a href="#">--EP716</a>
<a href="#">--EP718</a>
<a href="#">--EP704</a>
<a href="#">--SNER</a>
<a href="#">--Nucintro</a>

[Home](#)  
[Page](#)

## Nuclear Engineering (Bill Garland), Department of [Engineering Physics](#),

[McMaster University](#)

Nuclear Engineering home url: <http://nuceng.mcmaster.ca>



This page updated on 09/17/2004 12:35:58

[FAQ](#) | [What's \*\*NEW\*\*](#)  
[Help](#) | [Search & Site Map](#)

### Hello, hello! Wot's this, then?

This is a site for students and others interested in Nuclear Engineering as it relates to the program in the Department of Engineering Physics, McMaster University. Enjoy. Listen to a [short introduction](#) to the site (950kb swf file). (download the required [flash player](#)).

- [Help](#) - Have a quick look to get oriented and to find helpful tips on using this site, including how to [contact me](#). Suggestions and comments are welcome. But before you do, check out the site [FAQ](#) page. Perhaps your question has already been answered.
- [FAQ](#) - Frequently asked questions for this site.
- [Careers](#) page - links to full-time and summer career and job information, including at our own reactor - *Jobs, jobs, jobs!!! Now contains articles relating to supply and demand.*
- [Downloads](#) Related to the Nuclear Industry.
- Canadian Nuclear Society [Universities Committee](#) - a committee devoted to assist in the coordination the activities of Canadian universities with nuclear programs, including the CNS Student conferences.
- [McMaster Nuclear Reactor](#) (tours available) - *You haven't lived until you have seen the light! [See the movie](#) - Hey Barry, you're famous!*
- [CANNUC Discussion Forum](#) - This site was started in the hope of promoting discussion regarding "all things Nuclear". Students and employees are invited to get connected via this discussion / posting board - *setup by Rob Pasuta of the McMaster Nuclear Reactor - Go Rob!*
- [Humour](#) - Take a break from work.
- Looking for general nuclear info, courses, links, technical reports, etc.? Check out the links below.

### Announcements



- CANTEACH is about info.
- UNENE is about delivery.
- NucEng is about students.
- CNS is about professionals as individuals.
  - Seminar type courses
  - Conferences
  - Fellowship and contacts
  - Forums and List servers



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# CNS Web Site Tour

<http://www.cns-snc.ca>

[en français]

[Home](#)

**25th Birthday!**

[Branches](#)

[Bulletin](#)

[Conferences & Courses](#)

[Contact us](#)

[Council](#)

[Education](#)

[Event Calendar](#)

[Honours & Awards](#)

[Jobs](#)

[Media](#)

[Member C.V.s](#)

[Membership](#)

[News](#)

[Nuclear History](#)

[Nuclear Links](#)

[Publications](#)

**6th International Conference on Simulation Methods in Nuclear Engineering**

CANADIAN NUCLEAR SOCIETY  
SOCIÉTÉ NUCLÉAIRE CANADIENNE

- **About the CNS**
- **Activities**
- **Publications**
- **CNS Membership**
- **Contact Us**

This web site links to several files in PDF format. Adobe's Acrobat Reader can be downloaded free:

This web site is maintained by the [CNS Internet Committee](#). Please forward any website-related comments to our [webmaster](#). You are visitor number 48,804 since January 23, 2001.

[à la version française]





- CANTEACH is about info.
- UNENE is about delivery.
- NucEng is about students.
- CNS is about professionals as individuals.
- COG is about industrial partnerships in R&D
  - Shared R&D cost
  - Shared R&D facilities
  - Creation of and access to closed information databases



"Strength Through Cooperation"

# COG Web Site Tour

[www.candu.org](http://www.candu.org)

CANDU Owners Group Inc.



"Strength Through Co-operation"

La force dans la coopération

협조를 통한 상호 이익

Forta prin cooperare

Sólides a través de la cooperación 携手并进

[Home](#) ♦ [Corporate Info](#) ♦ [Projects](#) ♦ [Resource Centre](#) ♦ [Help](#) ♦ [Contact Us](#)



[How does a CANDU Reactor work?](#)

Last updated  
<January 9, 2004>

The CANDU Owners Group Inc. (COG) is a not-for-profit organization dedicated to providing programs for cooperation, mutual assistance and exchange of information for the successful support, development, operation, maintenance and economics of CANDU technology. All CANDU Operators in the world are members of COG.



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480 University Ave., Suite 200, Toronto, ON, M5G 1V2, Phone: +1 416 595-1888; Fax: +1 416 595-1022; E-mail: [coq@candu.org](mailto:coq@candu.org)



# Future Direction

- Promote the Portal as a resource and worthwhile project to contribute material and enrich content
- Develop web-enabled document management system for collected material
- Produce "combined best" course versions in each topic area
- Driving force for success is the cooperation of partners
  - ◆ Voluntary contributions (knowledge harvesting)
  - ◆ No attempt to assess "exchange value"



# What we all can do to help?

- Spread the word on the Portal
- Contribute writers, identify internal champions to sniff out the why's of reactor design
- Donate material such as training material in the fundamentals area
- Generate a simple list of the design features and an explanation of why that feature was chosen
- The Portal is best viewed as a process that yields knowledge for those involved in the process



*"Strength Through Cooperation"*

# Do we need a portal?

# YES!



*"Strength Through Cooperation"*

End

