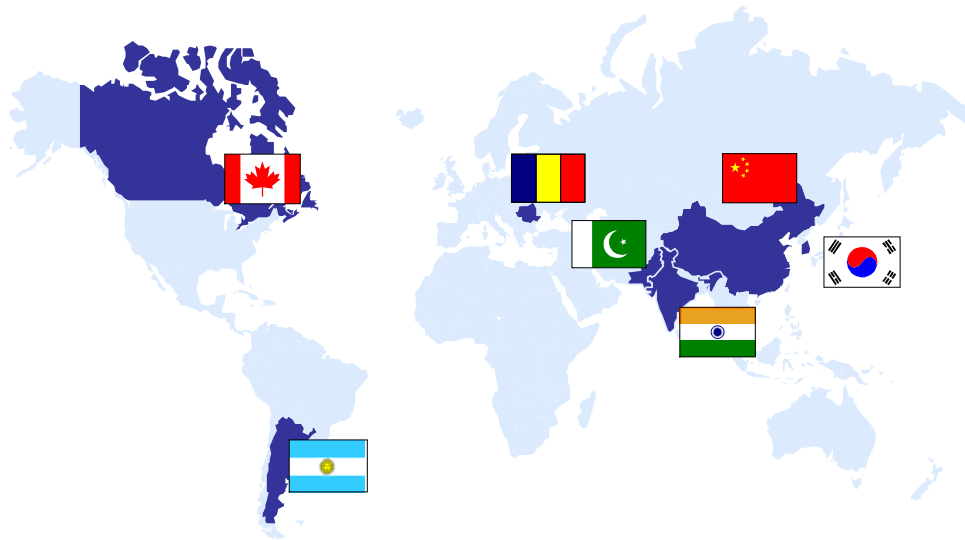


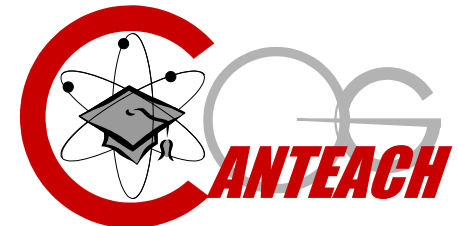
# The CANTEACH Project

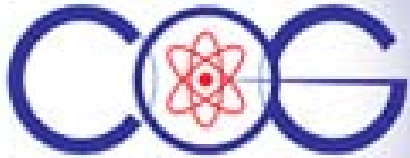
## Preservation and Dissemination of CANDU Technical Knowledge

Presented to AECL R&D Advisory Panel



*Bill Garland*  
*Academic Director*





# What is CANTEACH?

## **Mission**

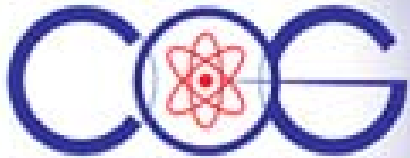
To preserve technical knowledge of CANDU nuclear-electric generating system for use by present and future members of the CANDU community

## **Objectives**

- Provide a permanent record of CANDU technology
- Provide a source of education and training material
- Share existing documentation before it is lost

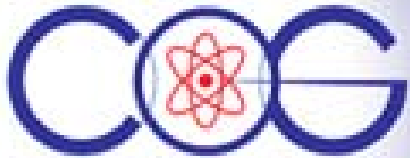
## **The project will:**

- Record what we know about CANDU plants
- Capture and leverage existing CANDU technology information
- Document why CANDU stations are designed this way



# Why do we need CANTEACH?

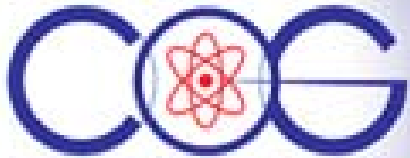
- A central repository is needed to:
  - ◆ Provide consistent and complete record of CANDU development
  - ◆ Capture design legacy and evolution
  - ◆ Manage shared documentation contributed by partners
- CANTEACH Project aims to resolve several issues:
  - ◆ Large amounts of information available at CANDU plants and AECL lack consistency
  - ◆ Individual institutions duplicate and recreate already existing documentation due to lack of communication with each other
  - ◆ Experienced and highly knowledgeable people leave the workforce taking their expertise and accumulated notes with them



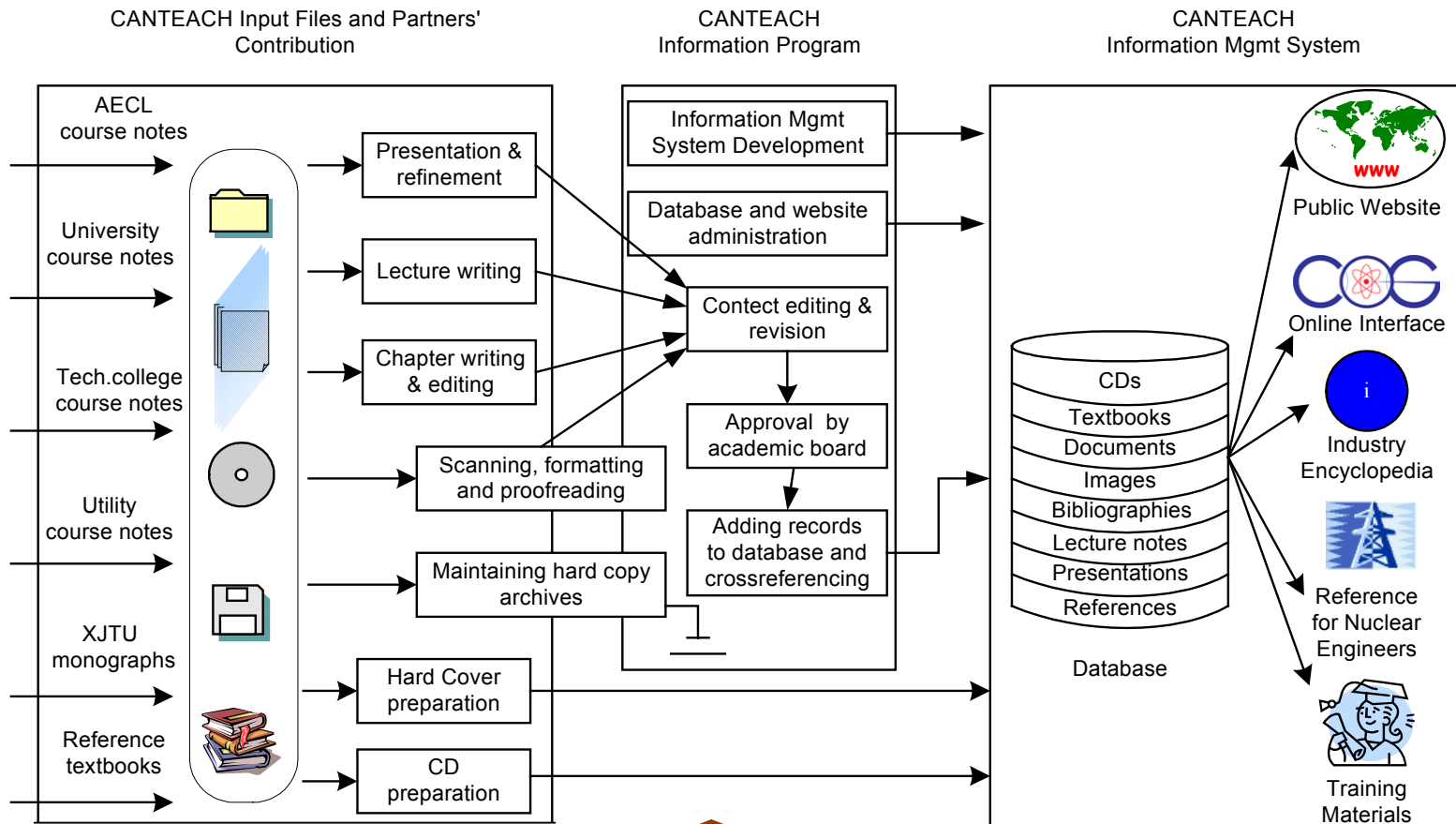
# How does the project work?

## Four step process

1. **Elicit** documentation
2. **Store** it in document management database
3. **Categorize** and cross-reference records and documents
4. **Retrieve** documentation through a dedicated web server



# The process



**Dan Meneley**  
Project Director

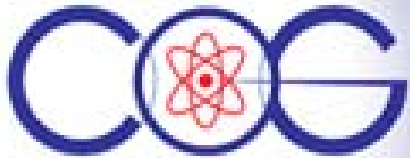
March 25, 2004



**Bill Garland**  
Academic Director

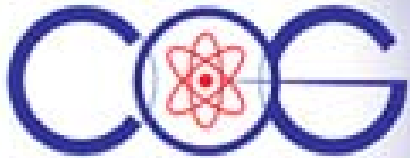
The CANTEACH Project

**Malcolm Lightfoot/Yulia Kosarenko**  
Project Administration



# Benefits

- Teachers can obtain introductory material that can be used in entirety or as content for teaching modules
- Institution training staff can find anything from a single figure up to a complete academic course for preparing lectures
- Industry professionals may use images or descriptive words for preparation of technical documents
- University professors will find detailed description of CANDU systems and processes available to download and copy into lecture notes
- Available links provide an even larger inventory of choice material gathered in many diverse locations
- Senior Managers can derive cost savings in the training area by avoiding duplication of module development



# CANTEACH Web Site Tour

<http://canteach.candu.org/>

**COG ANTEACH**  
The most comprehensive educational and reference library on CANDU technology

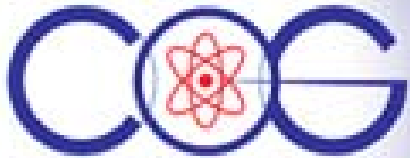
Home ♦ What's New ♦ CANTEACH Project ♦ Library ♦ Help

Search

Welcome to CANTEACH Project  
Find out what CANTEACH is

<b>Concept Map Library</b> See the bigger picture of how technical information on CANDUs is organized	<b>Site Map</b> 	<b>Help Desk</b>	<b>Teacher's Lounge</b> Introduction to CANDU Bibliography Who's Who Links
<b>CANDU Systems and Components</b> Information organized by BSI, components, etc.	<b>Documents Library</b> Browse, search and download documents 	<b>Image Library</b> Browse, search and download images	
<b>New Arrivals</b>	<b>Index</b>		

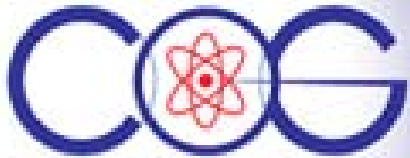
CANTEACH Library



# Current Status

- Phase 1: info gathering phase to capture the whys, not just the design descriptions.
- Phase 2: rationalize material, removing redundancies, extracting images from existing docs, etc.
- Phase 3: would be writing new material
- We are in the process of setting up a keyword database.





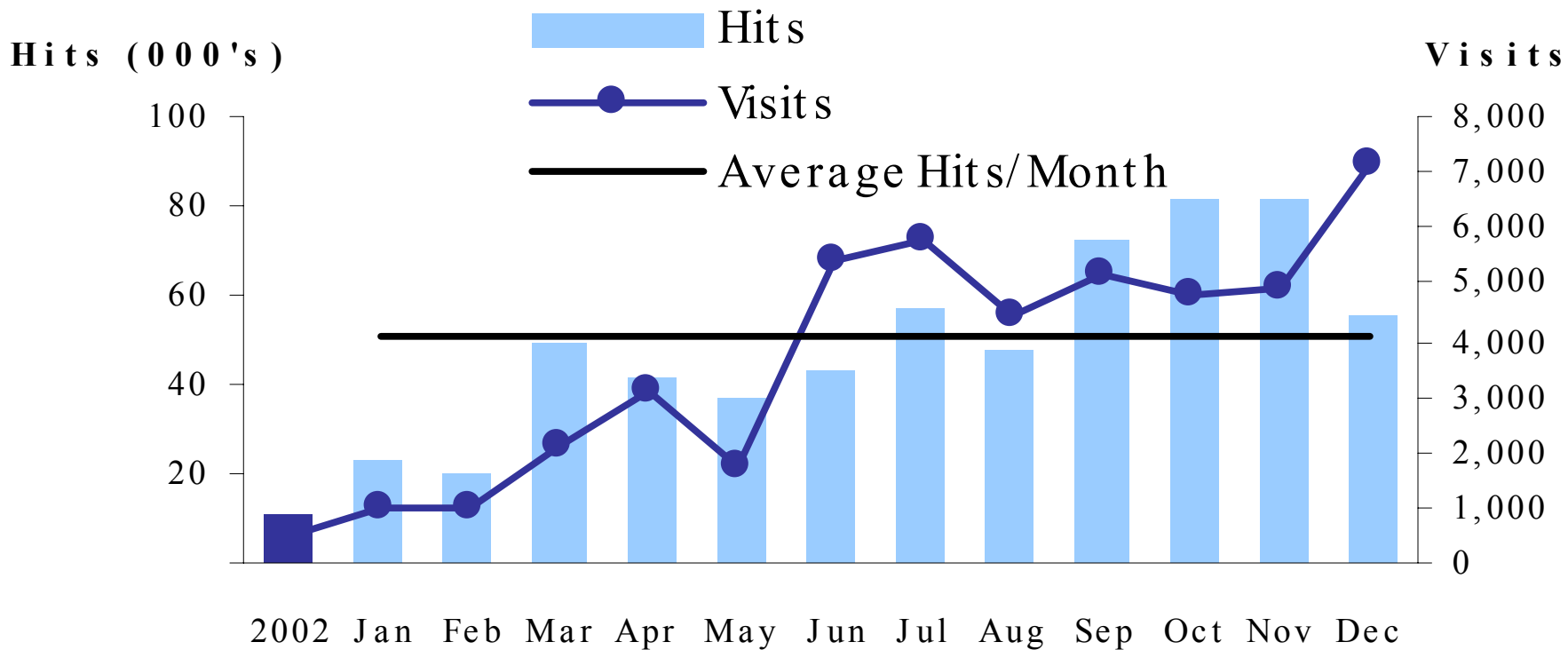
# What's New?

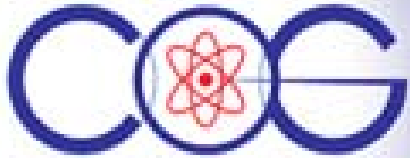
- CNSC course notes
- OPG course notes
- Dan Meneley's course notes
- NB Power "Green Book"
- Chulalongkorn series
- Keyword database to come next



"Strength Through Cooperation"

# Is it working?



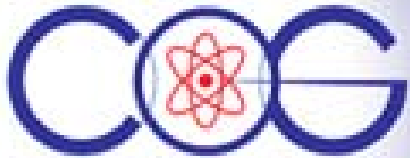


# Is it working?

**Most requested documents based on the number of hits for the last 4 months:**

- **CNSC Basic Instrumentation and Control Course**
- **CNSC Electrical Course**
- **Introduction to Reactor Physics by Ben Rouben**
- **Fundamentals of Power Reactors by CNSC (1993)**
- **Chemistry Control Requirements for Generic CANDU Power Stations by Stu Groom**

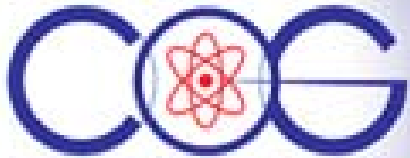
....more



# Is it working?

**Most requested documents based on the number of hits for the last 4 months:**

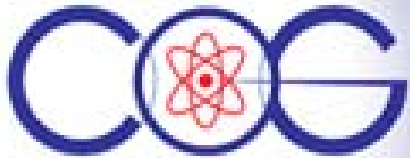
- **Qinshan CANDU Project Construction Experiences by Ken Petrunik**
- **How and Why is CANDU designed the way it is by Bill Garland**
- **Radiation Protection ("Green Book") by Jan Burnham**
- **What is RTD by RdF Corporation**



# 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. ...”**

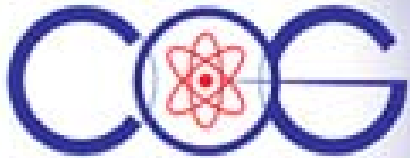
**S. Ravishankar, Training Officer, Nuclear Training Centre,  
Madras Atomic Power Station, Kalpakkam, INDIA.**



# Is it working?

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

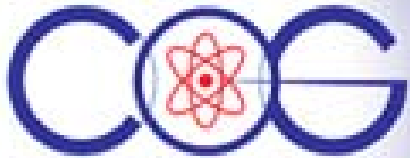
**Lee Rehorn, student, University of Western Ontario,  
Department of Electrical and Computer Engineering**



# Is it working?

**"...First, let me congratulate you on an interesting and useful website. ..."**

**Vijay K. Sood, Ph.D., ing, FEIC, Engineering Institute of Canada, Chair, Technical Professional Development Committee, Managing Editor, IEEE Canadian Review**



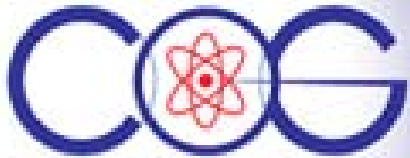
# Is it working?

**“... The web site  
canteach.candu.org is very  
interesting and well done. ...”**

**Pierre Saverot, Senior  
Consultant, JAI Corporation,  
2750 Prosperity Avenue, Suite  
220-B**

**Fairfax, VA 22031- USA**

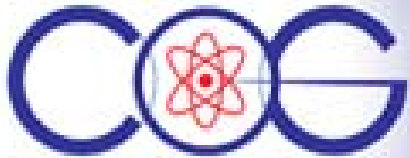




# Is it working?

**“... I had a look at the  
CANTEACH web pages and  
enjoyed reading some of the  
papers and articles. That is  
quite a unique and impressive  
resource. ...”**

**Bob Lyon, IAEA.**



# Is it working?

**“I found very interesting the whole idea behind CANTEACH, I would like to find money in order to be able to translate some of the information already available. People are reluctant to use information when it is not in Spanish.”**

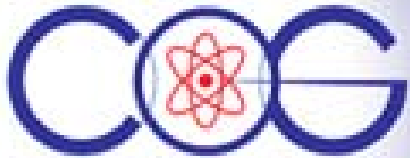
**Maximo Rudelli, Argentina**



# Is it working?

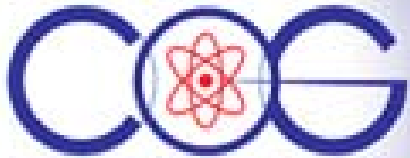
**“CANTEACH? What’s that?”**

**- said by far too many people**



# UNENE interactions

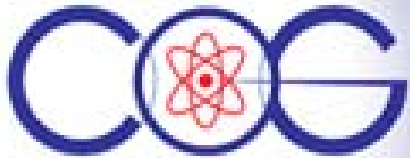
- CANTEACH is about info. UNENE is about delivery.
- UNENE generates HQP.
- CANTEACH people sit on the UNENE EAC.
- Hope to make CANTEACH the repository for UNENE.



# Future Direction

- Promote CANTEACH 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"

**YOUR CONTRIBUTIONS ARE APPRECIATED**



# What can AECL do to help?

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



*"Strength Through Cooperation"*

End

