Pulp & Paper Centre
at the University of Toronto

A Case History

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The Pulp & Paper Centre

• Founded in 1987
  - To facilitate collaboration with the pulp and paper industry
  - To stimulate university research related to pulp and paper
  - To strengthen university teaching related to pulp and paper
Seventeen years later…

• Successful research partnerships with industry, students and faculty
  - Support from 32 companies from 7 countries, NSERC and other funding agencies
  - ~160 researchers (46 supervising faculty, 56 graduate students, 17 undergraduate thesis students, 25 undergraduate summer students and 15 associated staff)

• Value-added student development programs to enhance skills in research, communication and teamwork

• Significant contribution to the technological advancement of the pulp and paper industry
  Internationally recognized institution
Graduate Student Enrollment
1987-2004

Number of Students

Year

Number of Students

Year

10
20
30
40
50
60

0 10 20 30 40 50 60

87 89 91 93 95 97 99 01 03 05

0
Challenges

• Attract faculty interest and involvement
• Attract good students
• Attract industry support
  - Satisfy short-term industry needs while maintaining university interests
Challenges (cont’d)

• Produce skilled/experienced students
• Acquire needed information
  - In the form that the industry can use to improve processes, reduce operating costs and product variability, and increase productivity
Direction

- Continue to educate skilled/experienced students
- Focus on industrially relevant research
- Establish closer partnership with industry through
  - Company visits
  - Graduate student internship program
  - Plant design projects
  - Field studies in consortium research
The Research Consortium

Methodology

• Participation in prioritizing and planning program
• First recipients of results
• Exceptional leverage of partner dollars (20 to 50X)
• Advantage with respect to intellectual property
• All partners equal
• First look at talented students, prospective employees
• Special relationships with investigators
Increasing the Focus of Research
Consortia -
Clearer Questions to be Answered

• Why is this research needed?
• What are the deliverables?
• Who will benefit?
• What is the economic impact?
• What? Who? When? How much?
Current Research Groups

Energy & Chemical Recovery
Prof. H.N. Tran

Environment
Prof. D.G. Allen

Surface Science of Paper
Profs. D.W. Reeve and R. Farnood

Wood Composites & Microfibres
Profs. M. Sain and N. Yan
Current Research Consortia

• Fibre Recovery and Microfibre Production Technology (2005?)
About the Group

- Established in 1987
- Successfully conducted 6 research consortia
  - 4 RB, 1 LK and 1 RB/LK
  - 3 years
- 32 companies from 5 countries
- NSERC and other funding agencies
- Focus on applied research and well-educated students
Objectives

• Obtain FUNDAMENTAL information on evaporator, recovery boiler, causticizing plant and lime kiln operations

• Use the information to develop viable technologies and control strategies for increasing the chemical and energy efficiency in the kraft process
Why Academic Research?

• Fresh people
• Fresh ideas
• Great facilities
• Great leverage
• Effective Partnership
Thank You!

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