## TECHNICAL PROGRAM

### Monday 7 May 2007

#### Conference Opening
Central Rooms B & C
Welcome – Geoff Covey, Appita President
Conference Opening - Invitation extended to the Hon Peter Beattie, MP, Premier of Queensland
Keynote Address – Invitation extended to Visy Pulp & Paper
Presentation of 2006 Appita L R Benjamin Medal

#### Exhibition Opening
Ken Price, Chairman, Appita Suppliers Committee

### Session A

**Meeting Room 6**
**Surface properties**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100</td>
<td>Improved barrier properties of double dispersion coated liner</td>
<td>Christian Kugge, Barbara Johnson, Ensis Papro, Australia</td>
</tr>
<tr>
<td>1130</td>
<td>Relationships between ink jet print quality and paper formation</td>
<td>Steven Loffler, Vanessa Dusting, Nafty Vanderhoek, Ensis Papro, Australia</td>
</tr>
<tr>
<td>1200</td>
<td>Surface modification of paper: The effect of plasma treatment on sizing properties</td>
<td>Matthias Hilder, Steven Loffler, Gerard Murray, Warwick Ravery, Wei Shen, Nafty Vanderhoek, Ensis Papro, Australia</td>
</tr>
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</table>

### Session B

**Meeting Room 7**
**Pulping and bleaching**

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<tr>
<td>1100</td>
<td>Ball milling for fines generation</td>
<td>Nicola Dooley, John Richardson, Ensis Papro, New Zealand</td>
</tr>
<tr>
<td>1130</td>
<td>A novel new non-silicate stabiliser for the efficient bleaching of mechanical pulps</td>
<td>Rod Seccombe, Russell Crowe, Solvay, Belgium</td>
</tr>
<tr>
<td>1200</td>
<td>Surface modification of paper: The effect of plasma treatment on sizing properties</td>
<td>Rohan Wilks, Project Advance: Australian Paper Maryvale pulp mill upgrade, Ensis Papro, Australia</td>
</tr>
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### Session C

**Meeting Room 8**
**Management**

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<tbody>
<tr>
<td>1100</td>
<td>Will trends in the paper industry over the past 100 years predict the future of the industry in the next hundred years?</td>
<td>Dennis Shore, Geoff Covey, Reg Harvey, Covey Consulting, Australia</td>
</tr>
<tr>
<td>1130</td>
<td>The next 100 years – challenges and opportunities for the forest industry</td>
<td>Geoff Covey, Dennis Shore, Reg Harvey, Covey Consulting, Australia</td>
</tr>
<tr>
<td>1200</td>
<td>Commercialisation of new products using pilot trials</td>
<td>Torbjorn Wahlstrom, C-G Salomonsen, The Packaging Greenhouse AB, Sweden</td>
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#### Lunch

### Session D

**Meeting Room 9**
**Chemical pulping and recovery**

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<tbody>
<tr>
<td>1300</td>
<td>Impregnation of finely divided wood materials from Scots pine</td>
<td>Risto Korpinen, Risto Holiholm, Solvay, Belgium</td>
</tr>
<tr>
<td>1400</td>
<td>Image analysis technology opens a new perspective on paper formation</td>
<td>Matthew Bennet, Merv Ovgost, Ken Steel, Honeywell Automation and Control, Solutions, Finland</td>
</tr>
<tr>
<td>1430</td>
<td>Non-contact profilometry as a tool for surface characterisation</td>
<td>Markka Mustonen, Russell Hodges, Joe Laczlo, Ensis Papro, Australia</td>
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### Papermaking

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<td>Paper machine design for improving sheet stability and runnability through the dryer section</td>
<td>Gisacarlo Gianlorenzi, PMT Italia, Italy</td>
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<tr>
<td>1600</td>
<td>Leading fabric technology – Forming a quality sheet for life</td>
<td>Carl Taylor, APPI Monash University, Australia</td>
</tr>
<tr>
<td>1630</td>
<td>Rebuild of packaging grade Bel-bonds</td>
<td>Vaughn Wildfong, Jean-Marc Boudreau, John Foils, USA</td>
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### Environment Group Seminar
**Convener: Roberto Miotti**
**Program in preparation**

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### Fluid mechanics and forming

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<td>Do laboratory wet-end formers ‘deliver the goods’? A critique of two locally-developed devices</td>
<td>Geoff Covey, Roger Canty, Abo Akademi University, Finland</td>
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### Afternoon tea

#### Evening

After session drinks in the Exhibition (5.00 – 6.00 pm)
Welcome Function at SeaWorld

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The Appita Asia Symposium • Non-wood fibre – 2010 and beyond: Prospects for non-wood paper production in Asia Pacific will be held in conjunction with the Conference on TUESDAY 8 MAY.

A separate fee will be payable and Symposium Delegates will have catering breaks in the Exhibition.
### Session A: Meeting Room 6

**0900**  
**Title:** Reeling and winding optimization  
**Presenter:** Martin Atkins, Michael Walters  
**University of Waikato, New Zealand**

**1000**  
**Title:** Numerical simulations of pressure pulses produced by a solid core pressure screen rotor  
**Presenter:** Antti Laaksonen, Sean Delpe, James A Olson, Carl Ollivier-Gooch  
**University of British Columbia, Canada**

### Session B: Meeting Room 7

**0900**  
**Title:** Factors influencing the attenuation of an ultrasonic signal in a dynamically wetting paper sheet  
**Presenters:** J.J. Pawlak, Y. J Lee, O Rojas, J Showyorski  
**University of New South Wales, Australia**

**0930**  
**Title:** Latest developments in stock pumping  
**Presenter:** David Armstrong  
**Pressur Pumps, Australia**

### Industry Innovations: Meeting Room 8

**0900**  
**Title:** Heat and moisture transport in paper and paperboard subjected to a temperature pulse in a hot roll nip  
**Presenters:** Banduru Ramarao, Sergiy Lavrykov  
**State University of New York, USA**

**1000**  
**Title:** Finalist to be advised  
**Presenter:** Ken Price  
**Papquip, Australia**

### International Paper Physics Conference: Meeting Room 5

**0900**  
**Title:** Performance studies of delamination  
**Presenters:** M. Schopp, T. Beuermann, H. Schubel, G. Garbe, U. Schimpf, B. Jahnke  
**University of Heidelberg, Germany**

**1000**  
**Title:** Improved production and improved quality on paper machines by the use of advanced moisture gauges  
**Presenters:** Paul Austin, Keith Waters  
**University of Waikato, New Zealand**

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**Wednesday 9 May 2007**

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<tr>
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<th>Session</th>
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<td>Meeting Room 7</td>
<td>Latest developments in stock pumping</td>
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<td>Meeting Room 8</td>
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<tr>
<td>1030</td>
<td>Morning tea</td>
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<tr>
<td>1100</td>
<td>Appita TechTalk</td>
<td>Winding and finishing</td>
<td>Consulting engineering</td>
</tr>
<tr>
<td>1130</td>
<td>Appita TechTalk</td>
<td>Process control</td>
<td>Papermaking</td>
</tr>
<tr>
<td>1200</td>
<td>Appita TechTalk</td>
<td></td>
<td>Paper and printing I</td>
</tr>
<tr>
<td>1500</td>
<td>Afternoon tea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1530</td>
<td>Stock preparation</td>
<td>Additives/Process control</td>
<td>Water Management</td>
</tr>
<tr>
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<td>Stock preparation</td>
<td></td>
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<tr>
<td>1630</td>
<td>Stock preparation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1700</td>
<td>Evening</td>
<td>Annual Dinner at Movie World</td>
<td></td>
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</table>
Thursday 10 May 2007

International Paper Physics Conference
Meeting Room 5

Paper mechanical properties III

0900  The influence of grammage on tensile properties of paper
Bill Sampson, Steve Fannon

0930  An investigation of strength variations in paper containing a sharp notch
Håkon Nordhagen, Øyvind Gregersen

1000  Effects of buckling and crack propagation in paper - A stochastic modeling experiment
Bjorn Skjotterup, Torbjørn Helle, Alex Hansen

1030  Morning tea

1100  Stripping of corrugated board in half-tone flexo post-printing
Martin Holmwall, Tetru Uesaka

1130  The effect of fibre orientation streaks on out-of-plane instabilities in paper
Artur Kulackenko, Tetru Uesaka

1200  Paper wrinkling arising from the application and drying of water-based inks
Douglas Coffin, Ranjit Maharajan, Reddy Mulaka

1230  Lunch

1330  A new method for the measurement of longitudinal fibre flexibility
Nava Navasarjan1, John Richardson1, Alan Dickson2, Richard Blakie3, Ashok Parbhoo3

1400  A new mechanical treatment of softwood chemical pulp before refining
Khalil El-Sharkawy1, Sanna Haavisto2, Hamu Paulapuro3

1430  Evaluation of Wet Fiber Flexibility by Confocal Laser Scanning Microscopy and Image Analysis
Dongbo Yan, Kecheng Li

1500  Afternoon tea

Board mechanical properties II

1530  Effect of relative humidity cycle start point and amplitude on the mechnano-surprise creep of containerboard
Christfer Fellers, Joel Panek

1600  Transverse shear measurement for corrugated board and its significance
Roman Popil1, Douglas Coffin2, Charles Heburger3

1630  Mechanical properties of paper and their relation to packaging performance
Lars Henriksson1, Christfer Fellers1, Gregger Stabell2, Ronald Bredeno1

1700  International Paper Physics Conference Dinner at Crowne Plaza Hotel

Poster Papers
A poster session will be held in the Exhibition hall from 3:30 to 5:30 pm on Tuesday 8 May. Authors of poster papers will be available to discuss their presentations and answer questions.

- New annual plant (Industrial Grass) as raw material for pulp and paper industry
  J Lele1, A Herndi2, A Rab1, A Vag1, J Janowczyk1, B Brochier4
  1Agricultural Research Institute, Hungary 2North Carolina State University, USA

- Dimensional stability of eucalypt pulp and paper. The effect of fiber wall thickness distribution of the raw material
  J V Pulkkinen1, J Alttamaa1
  1Helsinki University of Technology, Finland

- Biaxial testing equipment for paper material
  A Harrysson1, U Nyman1, M Rizviitmaa1
  1Lund University, Sweden

- A computational fluid dynamics modeling and experimental study of the mixing process for the dispersion of synthetic fibres in wet-lay forming.
  M K Ramaasubramian1, D Skjellerup1, S R Loewen1
  1North Carolina State University, USA 2University of Manchester, UK

- Floc size evolution in sudden pipe contraction
  J Salmela1, J Salmela2
  1VTT Technical Research Centre, Finland 2Lund University, Sweden

- Measurement of the dimensional stability of cellulose microfibrils
  J M Lee1, J Pawlak1
  1North Carolina State University, USA

- Theoretical determination of CFS paper runnability on a sheet feeding press
  P Diaz
  1North Carolina State University, USA

- Slack edges: causes and cures
  S R Loewen1
  1LSZ PaperTech Inc., Canada

- Full-field strain analysis of two-sided cardboard
  J M Condie1, D W Vetus
  1USDA Forest Service Forest Products Laboratory, USA

- Effect of refining on bleached and unbleached kraft pulp rheology
  S Haavisto1, K Salminen1, P Ratikkinen1, M Kanaja2
  1Ensis Paper, New Zealand 2University of Canterbury, New Zealand

- Measurements of surface topography of free jet
  A Karpponen1, P Seliotti1, J Houn1, J Salmela1, P Janss1, M Aawikin1
  1Helsinki University of Technology, Finland 2VTT Technical Research Centre, Finland

- Effect of tree growth rate on papermaking fibre properties
  J Zhu, D Vukson, T Scott, G Myers
  1USDA Forest Service Forest Products Laboratory, USA

- Paper as a viscoelastic material: comparison between different theories
  J Sorvari1, M Malinen1, J Hjelmstedt1
  1University of Kuopio, Finland

- Observations on the microfibril angle of Finnish papermaking fibres
  A Vainio, M Servo1, H Paulapuro2
  1Helsinki University of Technology, Finland 2STFI-Packforsk, Sweden

- Further improvements on the modelling of dewatering and retention in fourdrinier and hybrid formers
  Y Lobosco1, K Samuelsson1, T Wahlström1
  1PaperPlat, Sweden 2Packaging Greenhouse AB, Sweden

- Explaining picking tendency by local formation analysis
  G Chinga, K Syverud
  1Paper and Fibre Research Institute, Norway

- Considerations of fibre network density and x-strength
  O Joostemo1, R Wahlin
  1KCL, Finland

- Cohesive crack modelling of paper materials
  P Måkalà1, S Oland1
  1STFI-Packforsk AB, Sweden 2KTH, Sweden

- Evaluation of compressive properties of corrugated fibeboard with microfibrillate
  H-J Youn, H-L Lee, J-Y Kim, S-M Chin, J-Y Kim
  1Seoul National University, Korea

- Improvement of strain and elastic modulus of linerboard to prevent score crack
  H-J Youn, H-L Lee, S-M Chin, J-Y Choi, J-Y Kim
  1Seoul National University, Korea

- A new instrument for measurement of out-of-plane dimensional stability of paperboard
  M F C Liscomia1, M Nilsson2, J Cochrane3
  1Georgia Institute of Technology, USA 2Miami University, USA 3Weyerhaeuser Company, USA

- Experimental determination of the biaxial mechanical properties of paper and board and the according mathematical description
  E G Welp1, E Wolf2, V Niebuhr3
  1Ruhr University, Germany 2Lund University, Sweden 3J M Deunichland GmbH

- Application of the advanced complete paper material description in sheet slitting processes
  E G Welp1, E Wolf2, V Niebuhr3
  1Ruhr University, Germany 2Lund University, Sweden 3J M Deunichland GmbH

- Measure of diffusive and directional reflectance of light: Contribution of modelling of multi-scattering of light
  J-P Block, J Silly
  1Laboratory of Pulp and Paper Science & Graphic Arts, France

- Mechanism of paper strength development by the addition of dry strength resin - Effect of application method
  I Mihara, T Yauchshci
  1Graduate School of Agriculture, Japan

- Paper friction at different relative humidities
  N Kashiwahina, J Sato, T Yamauchi
  1Graduate School of Agriculture, Japan

- Do you waste seal water?
  U Launonen, T Hultala
  1UPL Pty Ltd, Australia

- The influence of network structure on compression strength of linerboard
  G K Mishra1, K Hodgson2, M Nachas2
  1Asian Institute of Technology, Thailand 2University of Washington, USA

Revised 31 January 2007