Overview

• Key Issues
• Composite Materials
• Composite Lumber Developments
  ▸ Vintorg
  ▸ Timtek
• Conclusions
Key Issues

- Variable resource of declining quality
  - Juvenile core
  - Stability
  - Stiffness
- Rotation age
- Low / zero profit operations

Composite Materials

- Advantages:
  - Tailored properties
  - Predictable, consistent properties
  - Low value feed-stocks
  - Higher value product
Common Examples

- Reconstituted products
  - Particleboard
  - Hardboard
  - MDF
  - OSB
- Veneer-based
  - Plywood
  - LVL

Composite Lumber - Parallam
Composite Building Products

Composite Lumber from Low Value Feed-stocks
## Examples

- Oriented Strand Lumber (OSL)
  - ‘Thick OSB’
  - Commercial product (US)
- Vintorg
- Scrimber
- TimTek

## Vintorg

- Australian innovation
  - P. Vinden / G. Torgovnikov
  - CRC Wood Innovations
- Resin impregnated microwave dried lumber
- Refractory species (Eucalypts)
- Technically proven at pilot scale
**Auaustralian innovation**
- John Coleman, CSIRO (1975)

**The challenge:**
- Value-added options for small roundwood

**The solution:**
- Scrimming of whole logs
- Foamed tannin adhesive
- Steam hot pressing
- Softwoods & hardwoods
The Joint Forces of CSIRO & Scion

Commercialisation

- South Australia
- Scale-up challenges
- Ownership changes
- Georgia Pacific
  - Largely solved most key issues
  - Strategic decision to exit

TimTek

- Scrimber revisited
- US / Australian initiative
- R&D program at Mississippi SU, Starkville
- US$2M+ State funding since 2003
  - State priority to find new value added uses for plantation pine
## TimTek

- Process improvements
- Log steaming / soaking
- PF adhesive
- New steam pressing technology

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**FI Clinics 2006**

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**FI Clinics 2006**
150+ beams produced to date

Testing by APA – The Engineered Wood Association

Product meets required performance criteria
TimTek Commercialisation

- Shuqualak Lumber Company
- License to build 2 line plant
- Meridian, Ms
- Construction commences March 2006
- Operational 2008

Summary

- A range of potential value-added composite options
- Issues
  - Capital requirements
  - Immature technology
  - Markets / Building codes
  - Adhesive constraints?
Questions?