

University of Southern Queensland

Business-to-business communication and the requirements for an ontology for the Australian Timber and Wood Products Industry.

**A dissertation submitted by
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Executive Summary

The purpose of this thesis is to describe business-to-business communication and the characteristics of an open standard for electronic communication within the Australian timber and wood products industry. The current issues, future goals and strategies for using business-to-business communication identified by respondents in a questionnaire are discussed.

The study addresses these questions, by using a self-administered questionnaire which was constructed and mailed to 2000 organisations. The questionnaire was used to ascertain a base-line of information systems' use in the Australian timber and wood products industry, and to establish how to make successful the introduction of a more accessible means for system to system interoperation between organisations.

A prototype domain specific ontology was engineered using content analysis of a representative timber and wood product organisation product listing. A visual representation of the ontology modelled using unified modelling language is presented. The formal specification of the ontology was constructed using an ontology editor, Protégé.

The outcomes of the questionnaire include that the industry has a small number of large enterprises and a large proportion of small to medium enterprises. Computer and Internet use in the industry is comparable to that in other Australian industry sectors. For both intrabrand and business-to-business the established communication modes of postal service, telephone and facsimile are those most frequently used. However where advanced information technology modes exist, it is used extensively. Use of electronic data interchange is now used mostly by organisations employing over 100 employees, whereas supply chain management use is limited. Small to medium enterprises have failed to adopt an information systems strategy plan, while organisations employing over 100 do have plans in place. Attitudes toward information technology, business-to-business communication and information systems security are dependent upon organisational size while compliance to information systems' standards was not. Barriers to adoption of technology specific communication identified in the study are location, lack of resources, organisational size and a lack of planning.

Drivers to increase the bandwagon effect in the industry are education and the availability of a simple low-cost complete package to demystify technology intensive electronic business-to-business communication. For the ontology to proceed to a standard a collaborative effort must be made by industry partners to reach consensus on an acceptable standard.

CERTIFICATION OF DISSERTATION

I certify that the ideas, experimental work, results, analyses, software and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

Signature of Candidate

Date

ENDORSEMENT

Signature of Supervisor/s

Date

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