Thesis Structure
Format

• The hypothesis, work and thesis relationship
  – Presentation
  – Workshop
• Thesis chapters
  – Literature review
  – Method
  – Results and Discussion
  – Introduction
  – Conclusions and Further Work
The hypothesis, work and thesis relationship

• The question you investigate determines the work you have to do
• The way you do the work determines the data you obtain
• These results of your work define what you can report and suggest in your thesis
Typical thesis structure

• Introduction
  – Context, why work important
• Literature Review
  – What has been done before
• Method
  – Work done to test hypothesis
• Results and Discussion
  – Vital determinant of thesis grade
• Conclusions and Further Work
Evidence of Nothing

• Is NOT nothing for evidence!
• Half Full or Half Empty?
• Whatever you find out
  – Codify it
  – Reflect on what learnt
  – Why did it not work?
The hypothesis, work and thesis relationship

• Is it possible to build a simple, easy to use message centre that sits on top of Windows?

• What has to be investigated?
  – Lit Review

  – Work / Method
The hypothesis, work and thesis relationship

• Is it possible to build a simple message centre (in X using Y) that sits on top of Windows 2000?
  – Possible to do work to establish answer to this question
  – Method must establish that work will reasonably provide evidence to support or deny hypothesis
The hypothesis, work and thesis relationship

• Data collected by method should allow reasonable observation
  – Tabulate and quantify test results and characteristics

<table>
<thead>
<tr>
<th>Approach</th>
<th>Worked/10</th>
<th>Average Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>4</td>
<td>Slow</td>
</tr>
</tbody>
</table>
The hypothesis, work and thesis relationship

• Will the use of algorithm X allow a computer program to identify the same iceberg in a satellite image?
  – What will you look for in the literature review?
  – What will you need to do the work
  – How might the hypothesis be refined?
Thesis Chapters

• Literature Review
  – Presents previous published work related to:
    • each aspect of your hypothesis
      – Balance amount according to importance
      – Eg. Genetic Algorithms, Neural Net structures, Stock Index characteristics
    • the methods you intend to use to test your hypothesis
      – Survey / questionnaire design and method of use
Thesis Chapters

• Literature Review Contents
  – Consistent level of prior knowledge (references)
  – Explain work that has been done before, how tested and evaluated and why needs to be developed / improved
  • Not just your bright idea and your evaluation standards*
Thesis Chapters

• Method
  – The approach used to test the hypothesis
  – Validity of methods established in Lit Review
    • May need to add extra references to explain particular quirks in your approach
  – Difficult to avoid recital of ‘what you did’
    • Can hint at some of the results in so far as they influence what you then did
  – Sequential and / or by topic
Thesis Chapters

• Results and Discussion
  – Have this in mind as you read for and write literature review
  – Be systematic in recording your results
  – Stop development and testing to allow time for reflection - what have you found out?
  – You WILL have discovered something interesting!
Thesis Chapters

• Introduction
  – Hardest to write as seems either too little or too much
  – Helps examiner answer question about importance and relevance of work
  – Set out overall context and how this (small) piece of work fits in and contributes
  – Explain what trying to establish
Thesis Chapters

• Conclusion and further work
  – Short summary
    • Set out to establish X but found Y
    • Maybe if used Q, better results
    • Need to see if Y still holds in circumstance Z
    • Questions over the use of R still remain in regard to ...
  – Other interesting comments
    • Should be positive!
Thesis Chapters

• Help from
  – Previous theses as recommended
  – Your supervisor
  – Study Skills Centre
    • Heather Smiegel or David Waters
  – Peter Vamplew
    • Peter.Vamplew@utas.edu.au or phone extension 2932
  – Jacky Hartnett
    • J.Hartnett@utas.edu.au or phone extension 3392