



SWANSEA METROPOLITAN UNIVERSITY

PRIFYSGOL FETROPOLITAN ABERTAWE

Technical Report Writing

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Technical Reports

Contents

- Introduction
- Objectives
- Format of report
- Writing of report
- Illustrating the report
- Finishing the report
- Summary

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- A good report is easy to recognise – it is precise, informative and well organised
- Reading it should be enjoyable – style is accurate, fluent and concise with well presented diagrams
- It should meet the needs of the reader (customer?)

The reader is the most important person

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Objectives

- Consider **why** you are writing the report
 - Who is it for?
 - What does the reader already know about the subject?
 - Why do they need this report?
 - What information do you need to convey to them?
 - What response are you expecting to the report?
 - What do you need to include to ensure this response?
- It is useful to write these objectives out and then appraise your report after it is written
- Does it meet the objectives?

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Format of Report

- Gather your material for report and put it in 3 categories
 - (1) Obviously important material which *must* go into report as it is completely relevant to objectives
 - (2) Borderline information – useful as background or relevant to some readers, might amplify some material from category (1)
 - (3) Information which is interesting (or not) but not relevant to objectives of report
- Use category (1) as main body of report
- Use category (2) as Appendices
- Re-appraise category (3) to check nothing important is discarded

Technical Reports

Format of Report

- Beginning and end
 - Every report needs one!
 - This is not necessarily the start of the work
 - Your reader's knowledge level may require more background or historical information to be included
- Appendices
 - Are more important than they seem
 - Are used to remove from main text any information not needed by majority of readers (e.g. Detailed calculations in appendix, graph showing results in main report)
- Short reports are easier to read!

Keep the report as short as possible

Technical Reports

Format of Report

- Sections and sub-sections
 - Break up the report - space on the page helps ease of reading
 - Major sections should start on **new** page
 - Each section must be **clearly identifiable**
 - Title Page
 - Abstract / Summary
 - Table of Contents
 - Introduction
 - Theory / Research
 - Procedure / Methodology
 - Results
 - Analysis
 - Discussion / Evaluation
 - Conclusions / Recommendations
 - References
 - Appendices

Technical Reports

Format of Report

- Numbering system
- Decimal notation is easiest to follow:

1. MAIN HEADING

1.1 Lesser Heading

1.1.1 Small Heading

- Up to four levels (1.1.1.1)
- In Appendices, if divided into sections, use Appendix letter prefix. E.g.

B1 Main Heading

B1.1 Lesser Heading etc

Technical Reports

Format of Report

- **Organise report for the convenience of reader**
- **References**
 - Very important – all non-original work **must** be referenced!
 - Do not copy large chunks of text from other sources. References should emphasize to your points, your report should not simply be a collection of quotes.
 - You need to consider the suitability of your sources – Don't use Wikipedia/wisegeek.com etc
 - Use **Harvard** Referencing
 - Reference in text as (name, date) e.g. (Tudor, 2010)
 - Details are given in full in References section, in an alphabetical list

All references should be correct in all details

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Writing of Report

- Style is **formal**
 - Third person – e.g. “the engine was connected to the dynamometer”
 - Not “we put the engine on the dyno”

The writing should be accurate and concise

- Accuracy is the responsibility of the writer
- Get someone to proof read it – spell checking is good but not enough
 - e.g. Correct use of their, there etc
 - Wrong words spelt correctly (now, not etc)

Technical Reports

Writing of Report

- Punctuation
 - matters! It helps accurate reading and can change meaning
 - e.g. “The engines, which were in perfect running order, had been tested previously”
 - Or “The engines which were in perfect running order had been tested previously”
- Plenty of books available covering punctuation rules
- Sentences
 - Short sentences convey facts well
 - Information which needs considering can benefit from a longer sentence to slow the reader down
 - No-one likes sentences which are very long!!

Technical Reports

Writing of Report

- Paragraphs
 - Break up text
 - Large blocks of text are hard to read
 - Should have a consistent subject
- Brevity
 - Reports shouldn't be longer than necessary
 - People's time is important to them

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Illustrating the Report

- Diagrams are tables, graphs, charts, photographs, line drawings etc
- i.e. Any non-verbal illustrative material
- Essential part of a technical report
- Convey large amounts of information more clearly than text

The right diagram with the right labels should be in the right place for the reader

- Tables
 - Title above table
 - Units (and powers of ten) in column labels
 - Appropriate accuracy

Table 1: Power and Torque Readings

Test	Peak Power (kW)	Peak Torque (Nm)
1	31.2	102.8
2	30.7	110.4

- Graphs
 - Clearly labelled (with units)
 - Scales identified
 - If graphs to be compared, then the scales must be the same
 - Use of symbols, line colours etc to distinguish between data
 - Title below graph
- Photographs and line drawings
 - Must be clear
 - Title below image

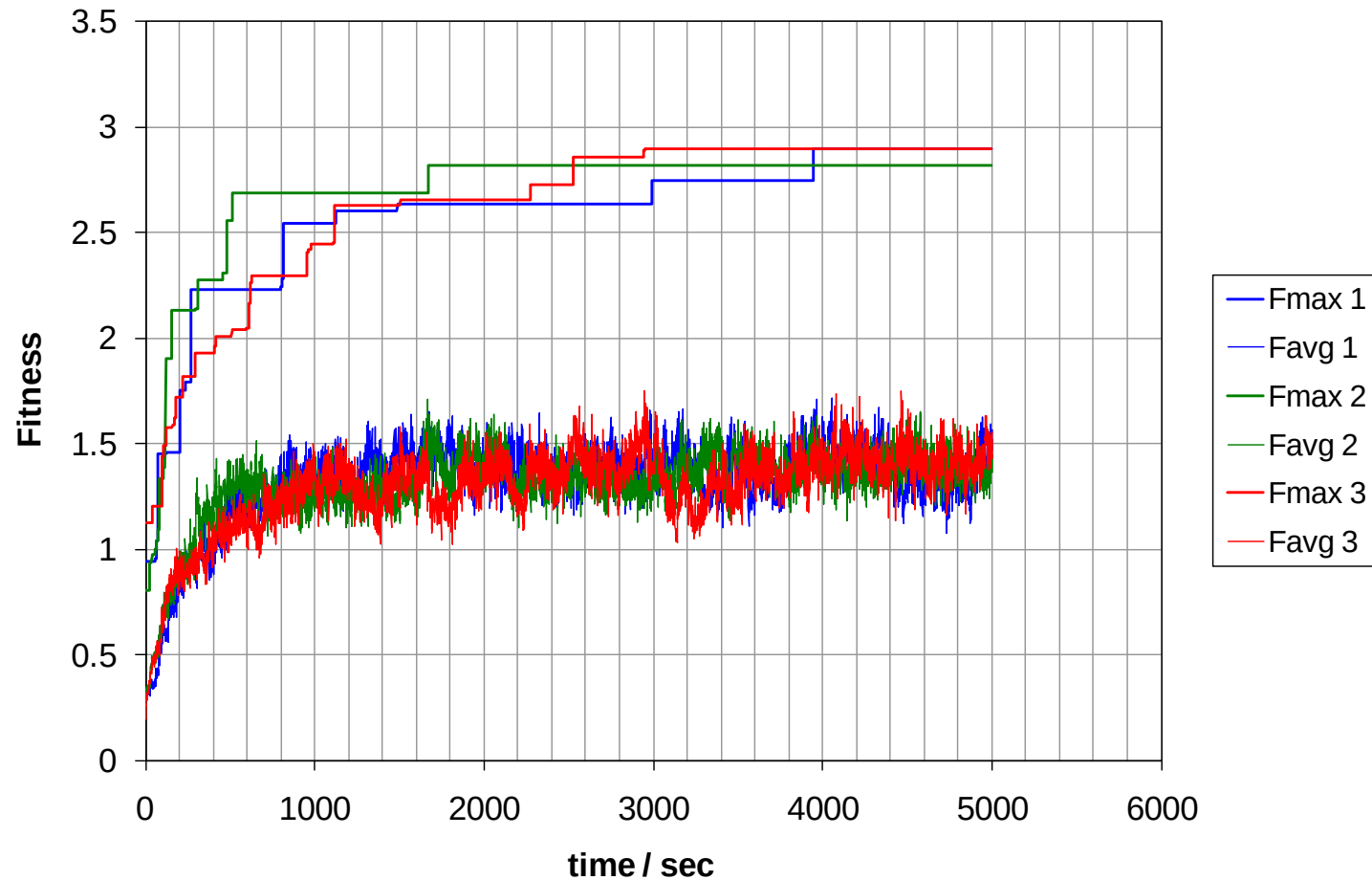


Figure 1: Algorithm Results



- Positioning
 - Some reports put all the figures at the end
 - This is hard to follow and frustrating for the reader
 - Much better to put your figures in the main report body at appropriate points
 - Easier to follow
- Numbering
 - All diagrams must be numbered
 - Easiest to do within section, e.g. Figure 7.1, 7.2, etc
 - Must be referenced within the text, e.g. “The results of the experiment are shown in Figure 3.2”

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- The final part of the report to be written is the abstract (even though it is usually shown at the beginning of the report)
 - This is usually the hardest part to write!!
 - The summary gives the general “feel” of the report
 - What it contains
 - What its main findings are
 - Should be reasonably short (<120 words for a typical engineering report)
 - Enables the potential reader to quickly become aware of the reports contents and determine if it’s worth reading!

Abstracts give and overview of the whole picture

Finishing the report

- Presentation is easy to get right, but can make all the difference to the reader!
- Firstly, check your report carefully. If possible get someone else to help too.
- Leave it at least 48 hours before you check the report
- Check calculations carefully

Technical Reports

Finishing the report

- Presentation
 - 1.5x or double line spacing
 - Use a clear roman (e.g. Times New Roman) or sans serif (e.g. Arial) font – *Fancy fonts make things quite difficult to read*
 - Use **11 point** text size (unless otherwise specified)
 - Clear title page with Title, Authors Name, Date, Organisation
- Avoid overcrowded pages
- Consider your binding method (especially when setting the left hand margin)
- A staple in the top left corner is ideal. Please **DO NOT USE POLYPOCKETS** or Fancy Folders

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Technical Reports Summary

- The reader is the most important person
- Keep the report as short as possible
- Organise report for the convenience of reader
- All references should be correct in all details
- : The writing should be accurate and concise
- The right diagram with the right labels should be in the right place for the reader
- Abstracts give an overview of the whole picture