

Open-Source Tools for Effective Writing

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Tools We will See

- FreeMind (freemind.sf.net)
 - brain-storming, organization tool
- GNUPlot (gnuplot.info)
 - mathematical plots/graphs
- LyX (lyx.org)
 - a rock-solid *document* processor



The Writing Process

- Purpose
- Ideas (brain-storming)
- Focus
- Research
- Write



The Need for Useful Tools

- Computers serve Humans
- *You* needn't do mundane, repetitive tasks
 - “Word Processing”
 - hand-drawn mathematical plots
 - aesthetic arrangements
- Focus on *content* of your work, not its *appearance*

Organization with FreeMind

- Each “mind-map” has its own central topic
- Automatic layout & positioning
- Hierarchical structure of ideas



Plotting with GNUPlot

- Command-Line interface
 - plot # 2-D plots
 - splot # 3-D plots
 - set *variable* value
 - unset *variable*
 - save '*file_name*'
 - load '*file_name*'
 - Generates graphical output in many formats
 - set terminal *mode* # mode is post eps, gif, etc.
 - set output '*file_name*'
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Document Processing with LyX

- “encourages an approach to writing based on the structure of your documents, not their appearance.”
- Layout performed by LaTeX
 - Used by professionals for over 15 years, it *works*



Labels, Figures, and References

- Labels mark locations within the document to which you can refer
- Figures are generally visual aids: pictures, plots, etc.
- References are proper citations to sources
 - quotations
 - ideas
- Citation styles
 - IEEE
 - others

Complete Demonstration

- Brain-Storming
 - Generating plots
 - Writing a document
 - Labels
 - Figures
 - References
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