## Insanely Great: Filters and Pipes

## Steven Bellenot

Mathematics Florida State University
bellenot@math.fsu.edu
http://www.math.fsu.edu/~bellenot/class/f02/web/great.pdf

Mathematics and the Web - Nov 13, 2002

## What is a filter?

Is -I | more

## What is a filter?

Is -I | more
du -sk * | sort -nr

## What is a filter?

Is -I | more
du -sk * | sort -nr
grep '[Ee]rror' make.out | wc

## What is a filter?

- Is -I | more
du -sk * | sort -nr
grep '[Ee]rror' make.out | wc
sort * |uniq -c|sort -nr


## What is a filter?

Reads input from stdin

## What is a filter?

Reads input from stdin
Writes output to stdout

## What is a filter?

Reads input from stdin
Writes output to stdout
Errors to stderr

## What is a filter?

Reads input from stdin
Writes output to stdout
Errors to stderr
Pipes instead of temp files

## What is a filter?

Reads input from stdin
Writes output to stdout
Errors to stderr
Pipes instead of temp files
filter1 < input | filter2 | filter3 > output

## Sample filters

sort - sorts lines alphabetically

## Sample filters

sort - sorts lines alphabetically
sed - stream editor - s/old/new/

## Sample filters

sort - sorts lines alphabetically
sed - stream editor - s/old/new/
tr [:upper:] [:lower:]

## Sample filters

sort - sorts lines alphabetically
sed - stream editor - s/old/new/
tr [:upper:] [:lower:]
uniq - removes duplicate lines

## Sample filters

sort - sorts lines alphabetically
sed - stream editor - s/old/new/
tr [:upper:] [:lower:]
uniq - removes duplicate lines
grep - matches regular expressions

## Netpbm

## Netpbm

pbm (Black and White) pgm ppm pnm

## Netpbm

pbm (Black and White) pgm ppm pnm
From anything to std formats and back

## Netpbm

pbm (Black and White) pgm ppm pnm
From anything to std formats and back
Transformations, scale, convolute, crop

## Netpbm

pbm (Black and White) pgm ppm pnm
From anything to std formats and back
Transformations, scale, convolute, crop
latex2html

## Netpbm

pbm (Black and White) pgm ppm pnm
From anything to std formats and back
Transformations, scale, convolute, crop

- latex2html

