13. Elementary filters

```
• From the tarball airnav.tar.gz
■ grep
      o grep Belgium lands
      o grep belgium lands
      o grep -i belgium lands
      o grep -i niger
      o grep -i -w niger
      o grep -i -c niger
      o grep -i -v belgium
      o grep -i -w london */*
      o grep -i -w -l london */*
• dirname, basename
      o dirname CA/apt.txt
      o dirname /usr/bin/ls
      o basename CA/apt.txt
      o basename CA/apt.txt.txt
awk
      o awk -F: '{print $2}' apt.txt
      o awk -F: '{print "ICAO", $1, $2}' apt.txt
      o awk -F: '{printf "ICAO %4s %20s\n", $1, $2}' apt.txt
      o awk -F: '{ if(!$1) printf "%20s\n", $2}' apt.txt
      o awk -F: '{ printf "%20s: %2d\n", $2, length($2);}' apt.txt
     o awk -F: '{ printf "%-20s: %2d\n", $2, length($2);}' apt.txt
• tr
      o see man tr ...!
sort
      o sort apt.txt
      o sort-t:-k3,3 apt.txt
      o sort -t: -k 3,3n apt.txt
• head, tail
      o head -n
      o tail-n
      o tail-f (=-tail--follow=descriptor)
      o tail-F (=-tail--follow=name)
xargs
      o xargs-nn
      o xargs-ln
            echo a b c d e f g h I j | xargs -n2 echo | xargs -l1 echo
```

o xargs -I replace-str

14. Advanced filters

- cat lands.txt | tr "[:lower:]" "[:upper:]" | sort -n
- cat */apt.txt | sort -t: -k7,7n | tail -5
- grep -l -i london */apt.txt \|

xargs -ll -i{} sh -c "mail -v -s {} alain.ninane@uclouvain.be < {}"</pre>

15. More filters

- Editors
 - o Discussion about editors
 - dd, ex, vi, emacs, nemacs, pico
 - o Stream editors
 - sed -e '/brolle/d' < file_in > file_out
 - sed -e 's/regex1/exptr2/' < file_in > file_out
 - sed -e 's/regex1/exptr2/g' < file_in > file_out
- cat vs tac (on modern linux system)
 - o fileO
 - 11 mai
 - 12 mai
 - o filel
 - 5 mai
 - 10 mai
 - o cat fileO file1
 - o cat file1 file0
 - o cat file*
 - o cat file[01]
 - o cat file[10]
 - o tac file*
 - o tac file* | tac