

Pour compiler :
fsmcompile -iA.syms <A.txt >A.fsm

Pour afficher :
fsmprint -iA.syms <A.fsm

Pour redessiner les automates de multiplication :
fsmcompile -iA.syms <Z_mull.txt >A.fsm; fsmdeterminize A.fsm >B.fsm;
fsmminimize B.fsm >A.fsm; fsmdraw -iA.syms <A.fsm | dot -Tpdf >Z_mull.pdf
//fsmdeterminize 1,3_mul3.fsm >B.fsm; fsmminimize B.fsm >A.fsm; fsmdraw -
iA.syms <A.fsm | dot -Tpdf >1,3_mul3.pdf

Pour détermineriser :
fsmdeterminize A.fsm >B.fsm

Pour dessiner :
fsmdraw -iA.syms <A.fsa | dot -Tpdf >A.pdf

//suite à faire pour obtenir l'automate des mots non réduits
fsmcompile -iA.syms <A.txt >A.fsm
fsmdeterminize A.fsm >B.fsm
fsmminimize B.fsm >C.fsm
fsmprint -iA.syms <C.fsm >C.txt
//

(wrong) fsmcompile -iA.syms <A.stxt >A.fsa
(right) fsmcompile -iA.syms -FA.fsa <A.stxt
(wrong) fsmconcat A.fsa B.fsa C.fsa D.fsa >ABCD.fsa
(right) fsmconcat -FABCD.fsa A.fsa B.fsa C.fsa D.fsa
<http://speechresearcher.blogspot.com/2006/03/bad-fsm-header.html>

manuel

NAMES

fsmcompile, fsmprint, fsmdraw, fsmunion, fsmconcat, fsmclosure,
fsmreverse, fsminvert, fsmproject,
fsmintersect, fsmcompose, fsmdifference, fsmconnect,
fsmdeterminize, fsmpush, fsmminimize, fsmencode,
fsmquantize, fsmequiv, fsmrmepsilon, fsm synchronize,
fsmepsnormalize, fsmbestpath, fsmprune, fsmcon-
vert, fsmarcsort, fsmtopsort, fsminfo - finite-state machine
utilities

SYNOPSIS

fsmcompile [-i symbols] [-o symbols] [-S symbols] [-t] [-
f fsmclass] [-s semiring] [file
]

fsmprint [-i symbols] [-o symbols] [-s symbols] [-l] [fsm
]

fsmdraw [-i symbols] [-o symbols] [-s symbols] [-w x] [-
h y] [-f font] [-F n] [-lpv]
[fsm]

fsmunion [fsm1 ...]

fsmconcat [fsm1 ...]

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fsmclosure [ -p ] [ fsm ]

fsmreverse [ fsm ]

fsminvert [ fsm ]

fsmproject [ -io12 ] [ fsm ]

fsmintersect [ -c cthresh ] [ -n nthresh ] [ -ld ] fsm1 fsm2 [
fsm3 ...]

fsmcompose [ -c cthresh ] [ -n nthresh ] [ -ld ] fsm1 fsm2 [ fsm3
...]

fsmdifference [ -c cthresh ] [ -n nthresh ] [ -ld ] fsm1 fsm2

fsmconnect [ -t ] [ fsm ]

fsmdeterminize [ -c cthresh ] [ -n nthresh ] [ fsm ]

fsmpush [ -clifr1kd ] [ fsm ]

fsmminimize [ fsm ]

fsmencode [ -cld ] fsm key

fsmquantize [ fsm ]

fsmequiv [ -v ] fsm1 fsm2

fsmrmepsilon [ -c cthresh ] [ -n nthresh ] [ -ld ] [ fsm ]

fsm synchronize [ -c cthresh ] [ -n nthresh ] [ -d ] [ fsm ]

fsmepsnormalize [ -c cthresh ] [ -n nthresh ] [ -io12d ] [ fsm ]

fsmbestpath [ -n nbest ] [ -c cthresh ] [ -N nthresh ] [ -u ] [
fsm ]

fsmprune [ -c cthresh ] [ -n nthresh ] [ fsm ]

fsmconvert [ -f fsmclass ] [ -s semiring ] [ fsm ]

fsmarcsort [ -ioc ] [ fsm ]

fsmtopsort [ -tie ] [ fsm ]

fsminfo [ -nptcvP -q width -b quantile1 -e quantile2 ] [ fsm ]

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DESCRIPTION

These commands construct, display, combine, minimize and search weighted finite-state machines (FSMs). Two types of machines are supported, acceptors and transducers. See fsmaccess(3) for definitions of the components of an FSM: state, start state, arc (transition), input symbol, output symbol, arc cost, final cost and final state.

Except as described for the commands that compile, print and display FSMs, all the commands take as input one or more binary-encoded FSMs and send to standard output one binary-encoded FSM. For commands that take one input FSM, the FSM can be given as standard input or on a file specified as a command-line argument. For commands that take more than one FSM, all inputs are specified by command-line arguments. A command-line argument of ``-' specifies that the corresponding FSM will be provided on standard input. A command-line argument of -? will print usage information.

FSM COMPILATION AND DISPLAY

fsmcompile takes input representing an FSM from file file or standard input, and sends to standard output its binary encoding. The input should be the textual representation of an FSM (see fsm(5)).

FSM states, input symbols and output symbols are represented in the input by non-negative numbers, unless the options -S symbols, -i symbols, -o symbols are used. These options allow state, input symbols and output symbols, respectively, to be given textual names, where symbols files give the translation from those names and numbers (see fsm(5)). The input should be an acceptor, unless the -t option is given, in which case it should be a transducer. The -f option specifies the FSM representation class (see fsmclass(3)); by default, it is FSMBasicClass. The -s option specifies the cost semiring (see fsmcost(3)); by default, it is SMRTropical. Note fsmcompile will internally renumber the states from 0 to the number of states minus 1.

fsmprint prints the input FSM on standard output using same textual format as fsmcompile accepts as input (see fsm(5)). States, input symbols and output symbols are printed in numeric form, unless the options -s symbols, -i symbols, -o symbols are used to provide textual names for states, input symbols and output symbols, respectively (see fsm(5)). Note that the states may be renumbered by fsmcompile or other operations. With the -l option, additional information is output that when read by fsmcompile preserves the state potentials, the FSM representation class, the cost semiring, and whether it is an acceptor or transducer.

fsmdraw sends to standard output a dot(1) graph representation of the input FSM (The command dot -Tps can be used to convert from dot format to PostScript.) States, input symbols and output symbols are displayed in numeric form, unless the options -s symbols, -i symbols, -o symbols are used to provide textual names for states, input symbols and output symbols, respectively (see fsm(5)). The options

-w x and -h x set the page width and height (in inches), -f fontname sets the font name (default is Times-Roman), -F n sets the font size (in points), -p use portrait mode (default is landscape), and -v displays vertically (i.e., top-to-bottom; default is left-to-right). Note that the states may have been renumbered by fsmcompile or other operations.

FSM CONSTRUCTION AND COMBINATION

fsmunion returns the union of one or more input FSMs.

fsmconcat returns the concatenation of one or more input FSMs, in the order specified by the command-line arguments.