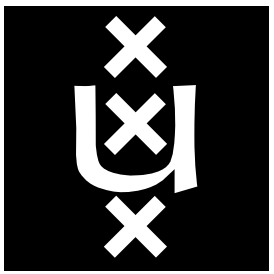
Computer Aided Language Engineering (CALE)
Part I – Debugging BNF



Alex Sellink
Chris Verhoef

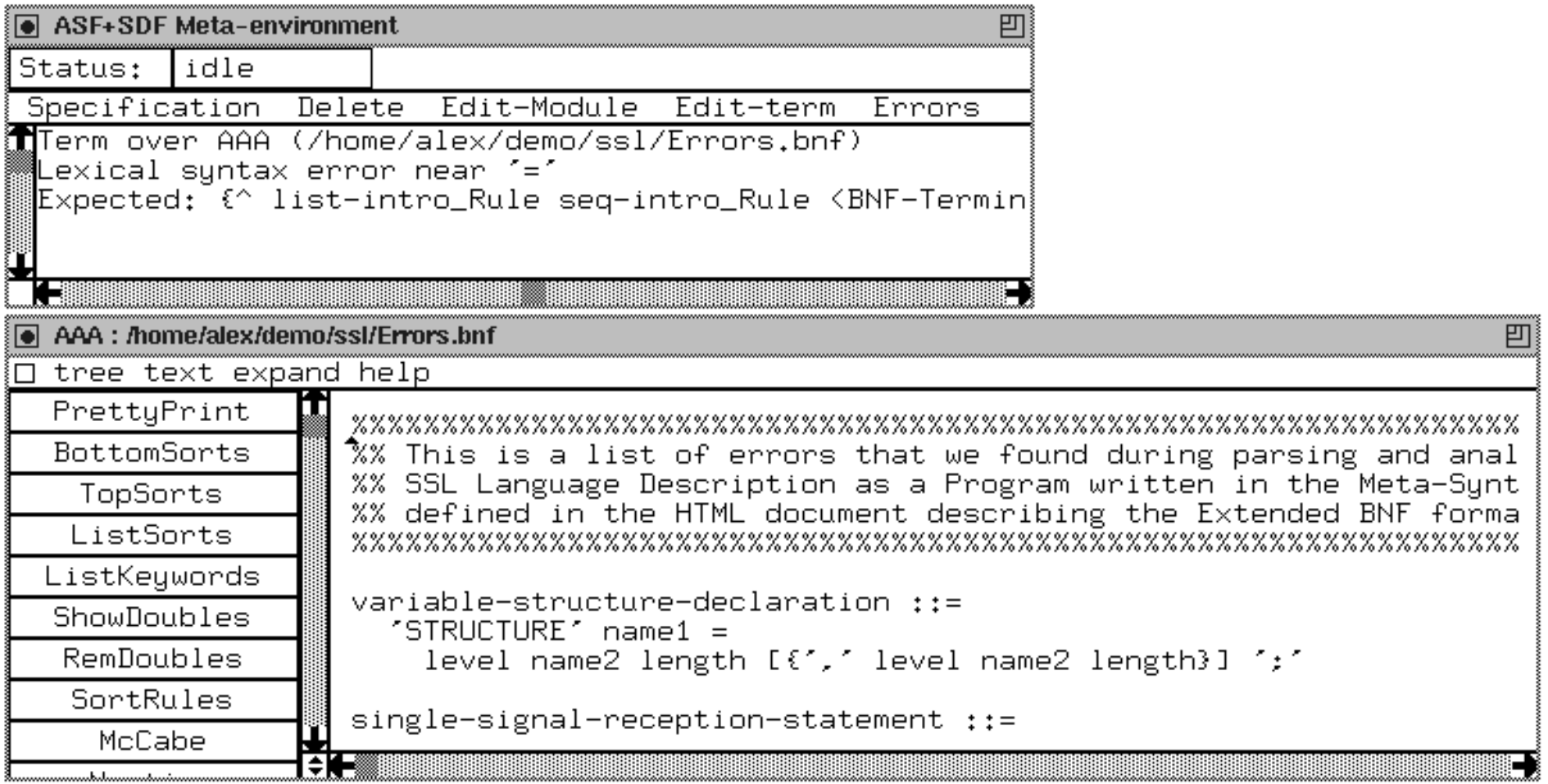
overview

- motivation
- CALE tools: parser, and elementary tools

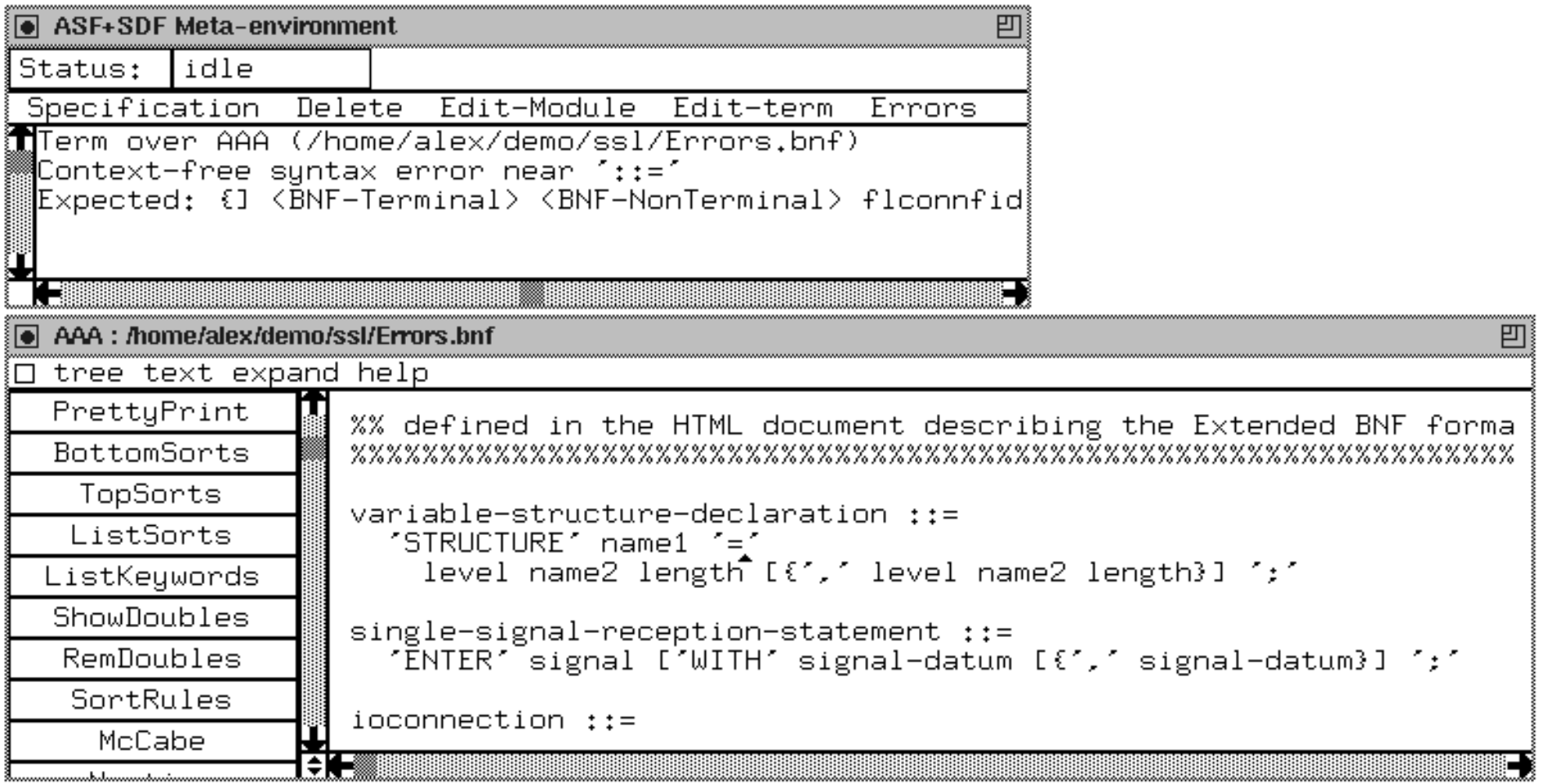
motivation

- formal text should be checked
- BNF program: parse and compile

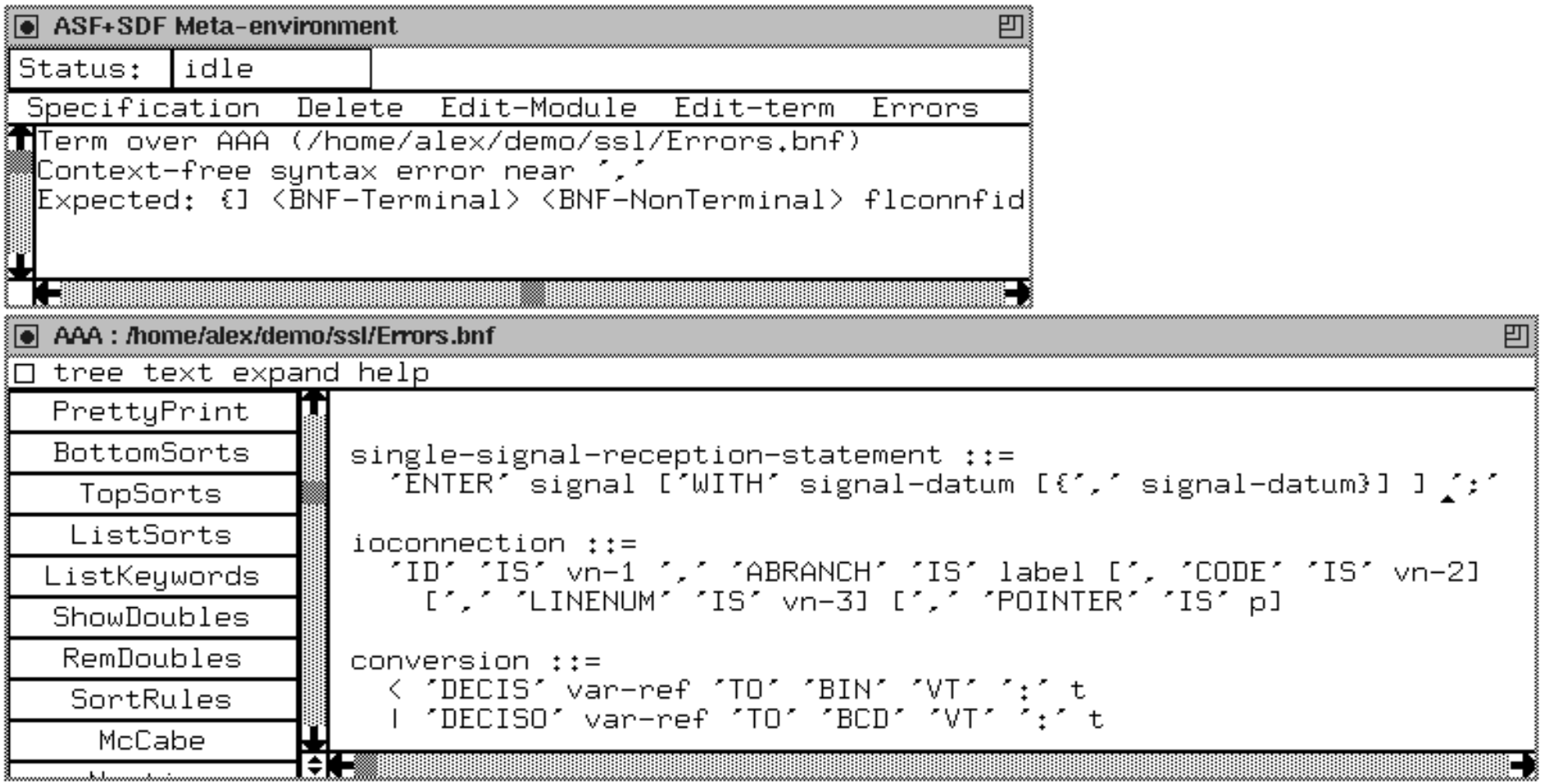
quotes missing



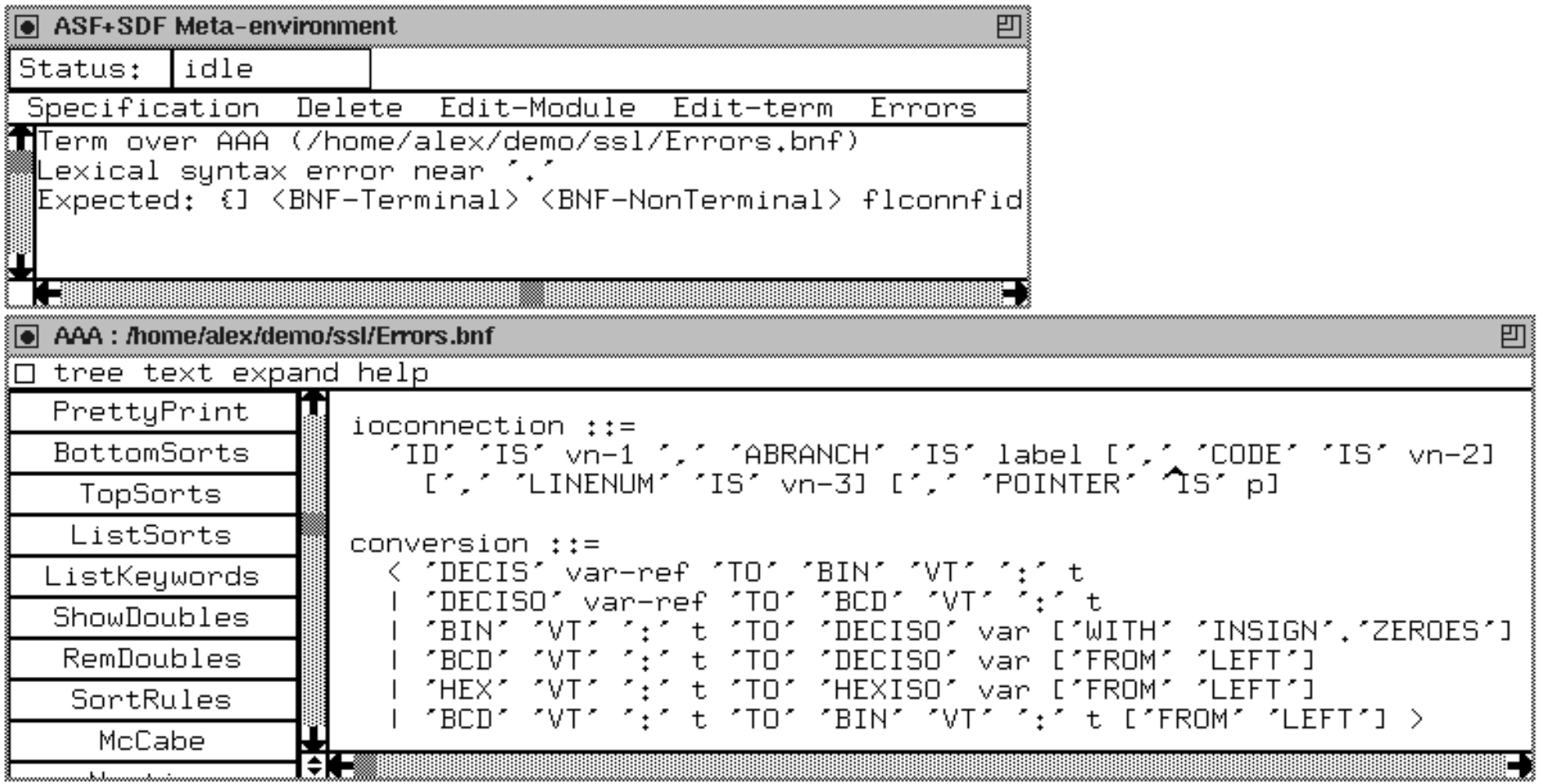
text bracket missing



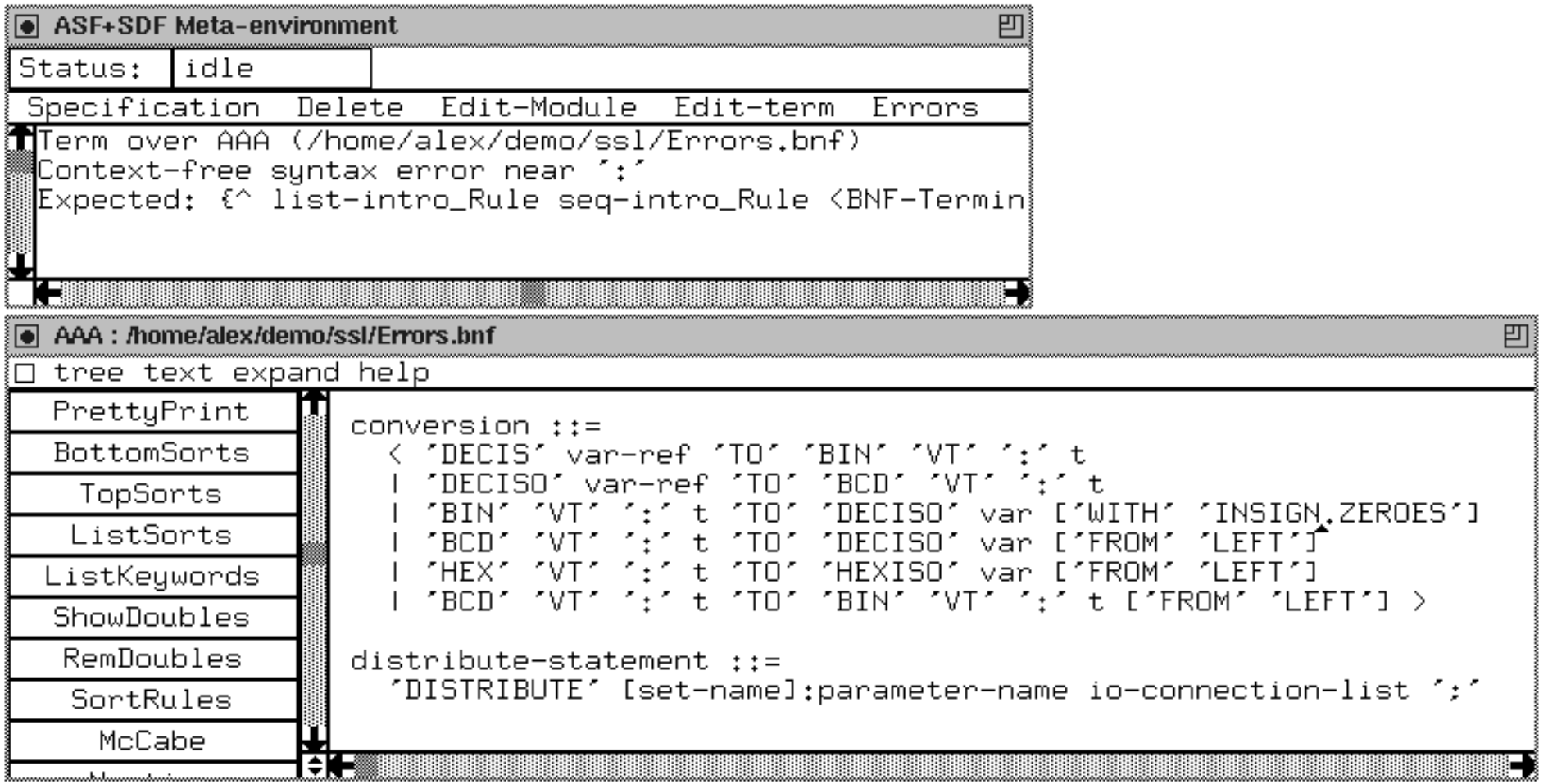
one quote missing



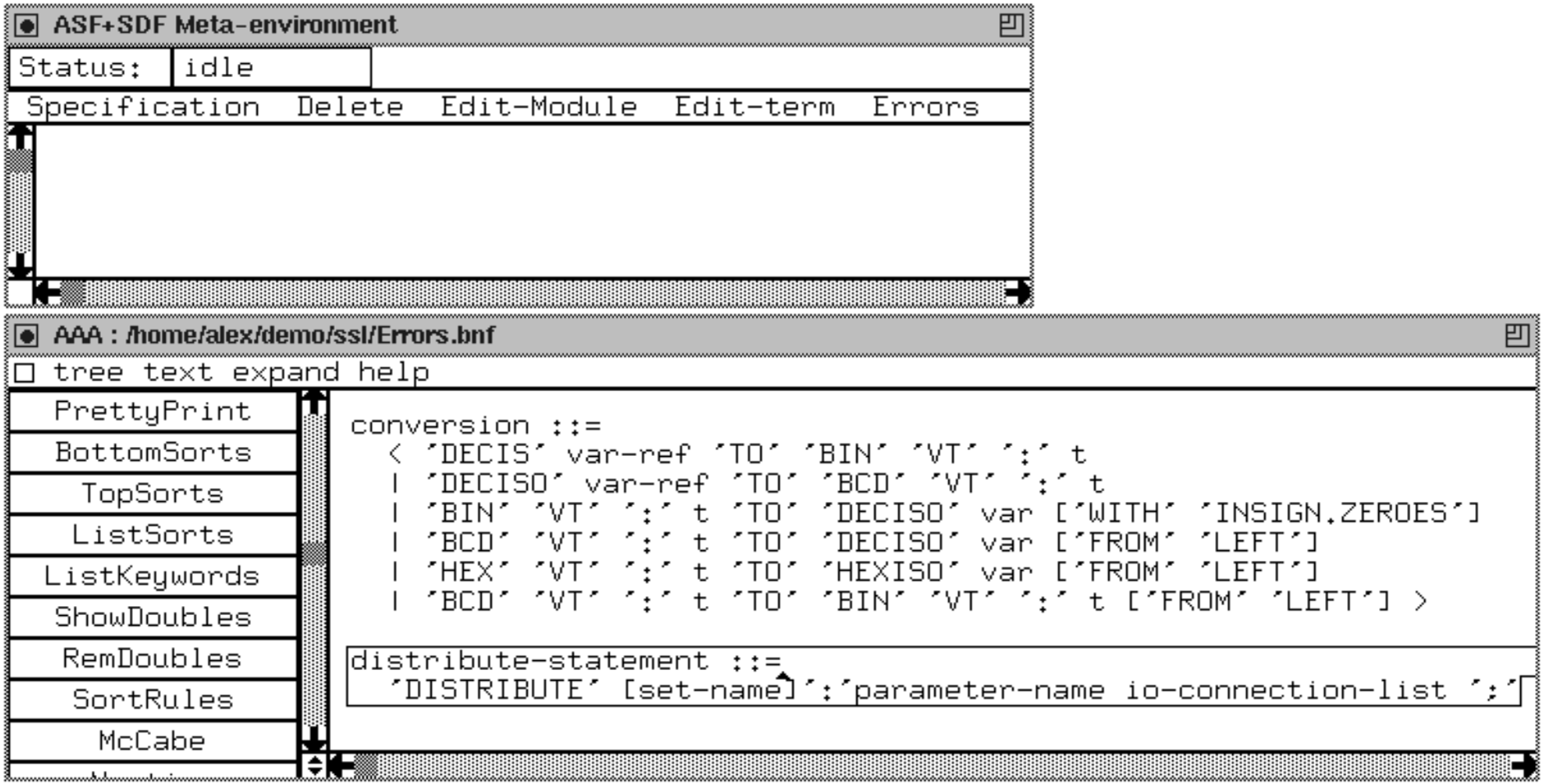
too many quotes?



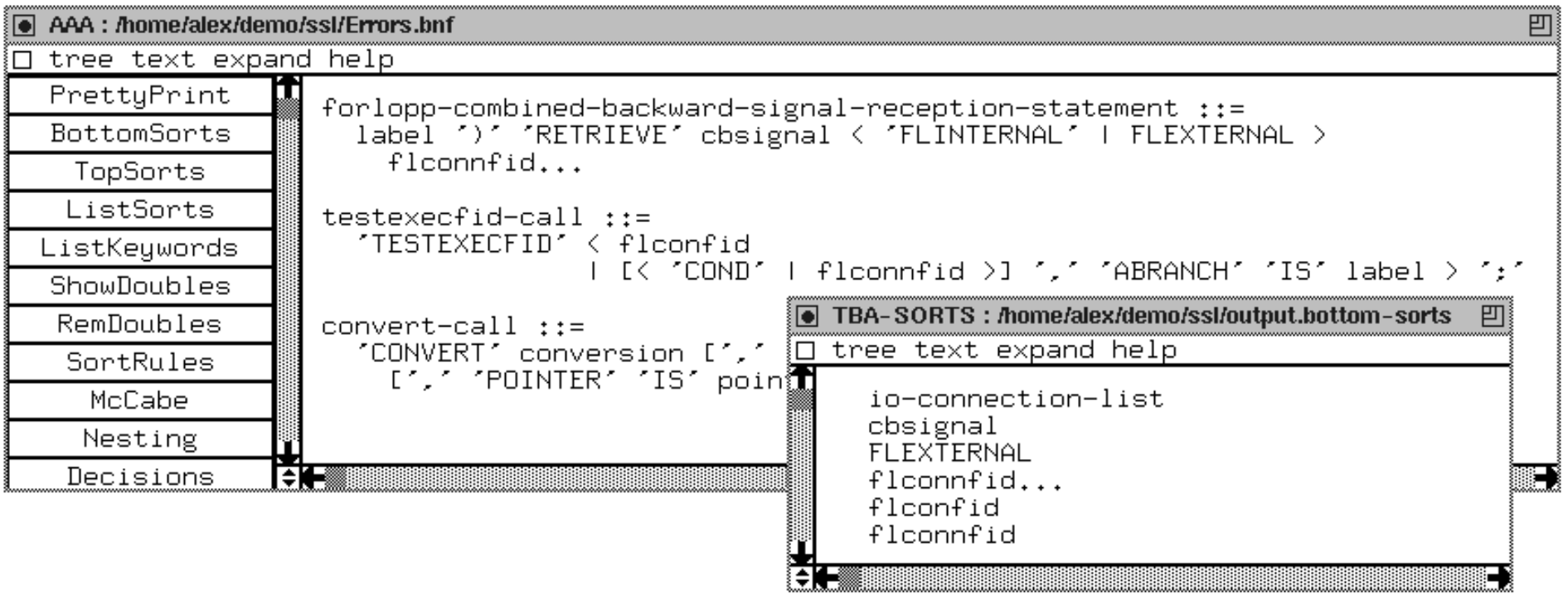
quotes missing



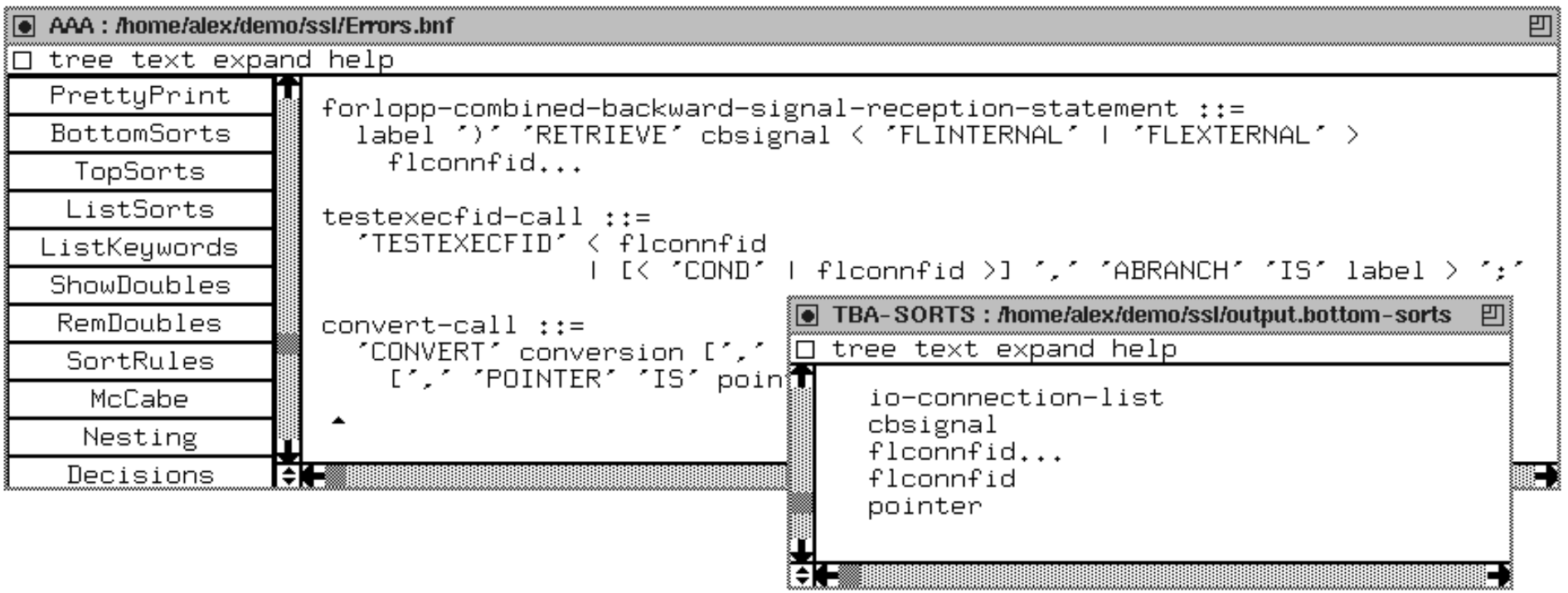
it parses!


ASF+SDF Meta-environment
Status: idle
Specification Delete Edit-Module Edit-term Errors
AAA : /home/alex/demo/ssl/Errors.bnf
tree text expand help
PrettyPrint
BottomSorts
TopSorts
ListSorts
ListKeywords
ShowDoubles
RemDoubles
SortRules
McCabe
conversion ::=
< 'DECIS' var-ref 'TO' 'BIN' 'VT' ':' t
| 'DECISO' var-ref 'TO' 'BCD' 'VT' ':' t
| 'BIN' 'VT' ':' t 'TO' 'DECISO' var ['WITH' 'INSIGN.ZEROES']
| 'BCD' 'VT' ':' t 'TO' 'DECISO' var ['FROM' 'LEFT']
| 'HEX' 'VT' ':' t 'TO' 'HEXISO' var ['FROM' 'LEFT']
| 'BCD' 'VT' ':' t 'TO' 'BIN' 'VT' ':' t ['FROM' 'LEFT'] >
distribute-statement ::=
'DISTRIBUTE' [set-name]':'parameter-name io-connection-list ';'

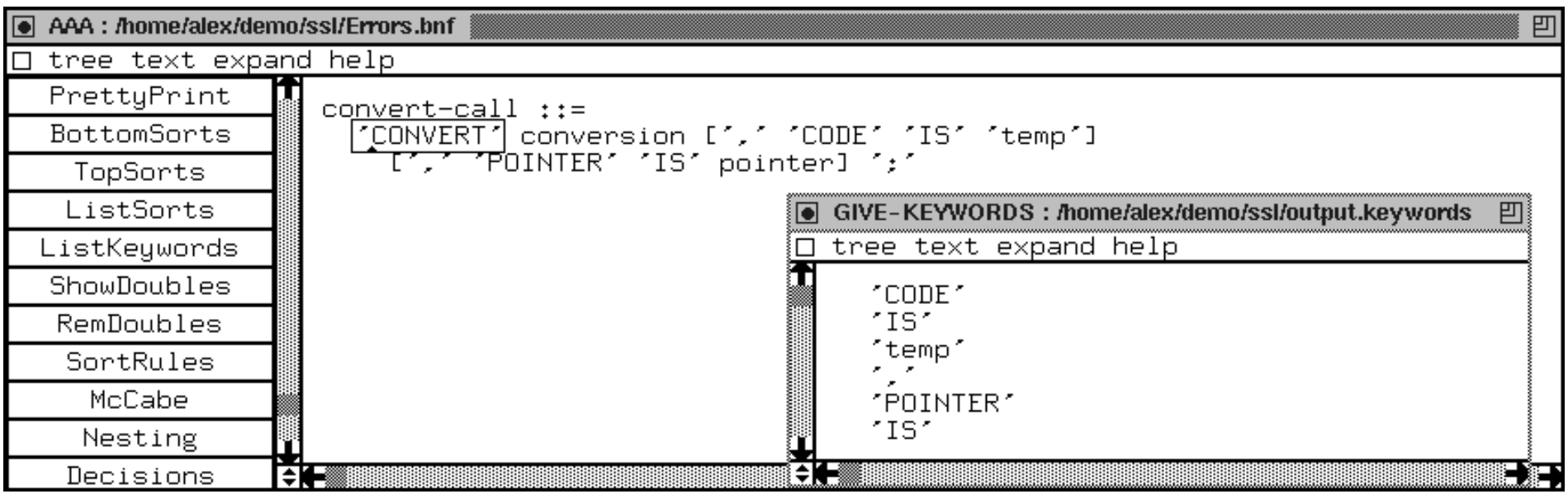
semantic errors



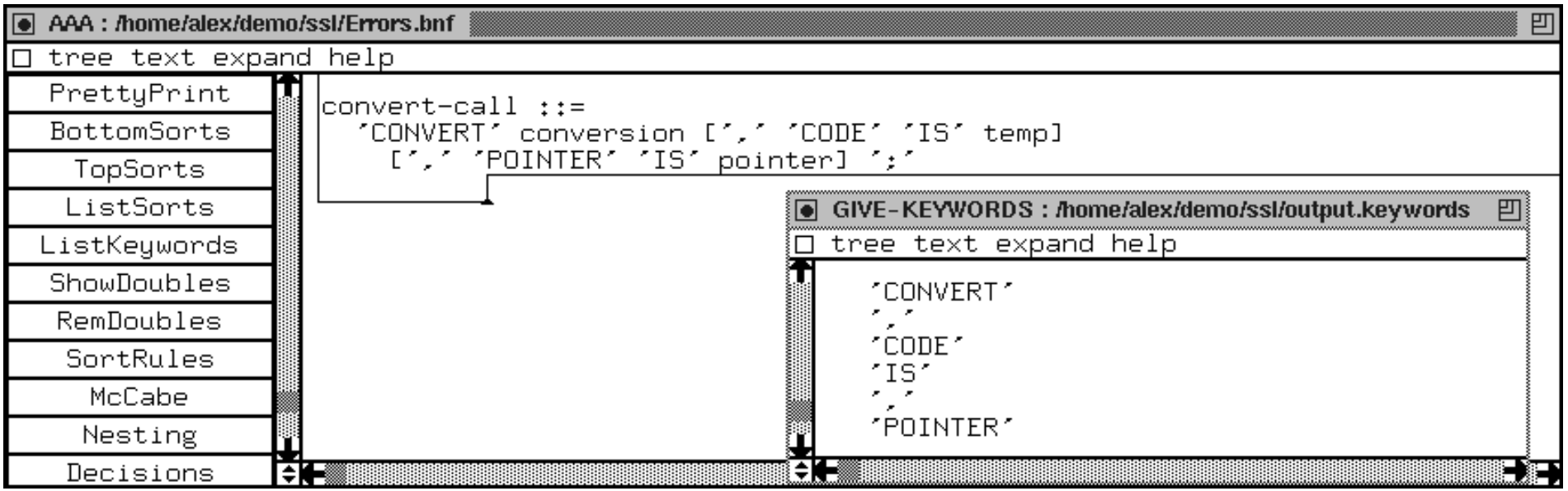
repaired


AAA : /home/alex/demo/ssl/Errors.bnf
tree text expand help
PrettyPrint
BottomSorts
TopSorts
ListSorts
ListKeywords
ShowDoubles
RemDoubles
SortRules
McCabe
Nesting
Decisions
forlopp-combined-backward-signal-reception-statement ::=
label ')' 'RETRIEVE' cbsignal < 'FLINTERNAL' | 'FLEXTERNAL' >
flconnfid...
testexecfid-call ::=
'TESTEXECFID' < flconnfid
| [< 'COND' | flconnfid >] ',' 'ABRANCH' 'IS' label > ';'
convert-call ::=
'CONVERT' conversion [','
[',' 'POINTER' 'IS' poin
TBA-SORTS : /home/alex/demo/ssl/output.bottom-sorts
tree text expand help
io-connection-list
cbsignal
flconnfid...
flconnfid
pointer

more semantic errors



free of errors?



we need to compile the language description and feed it programs!

the end