NAME

net2net - convert database circuit view streams

SYNOPSIS

net2net [-cilntv] cell

OPTIONS

-c   Do not add *coordinates* attribute.

-i   Do not change *instance* names.

-l   Do not add the *lay* attribute.

-n   Enable *number* cd messages.

-t   Enable *times* found RC messages.

-v   Enable *verbose* messages.

DESCRIPTION

The *net2net* program can be used to convert the circuit description made by the *space2(1ICD)* layout to circuit extractor into the general format used by the netlist tools.

To use the converted streams, you must change the stream names into the circuit view. For example, move "netsub" into "netsub_" and "mc" into "mc_" (to keep them). And then move "mc2" into "mc" and "net2" into "net".

Stream "netcd" contains on line 1 the highest cd number used and on line 2 the node count (inclusive nodes SUB and GND). Stream "netcd" can also contain a list of cd numbers of node groups which must be merged.

NOTES

Some netlist tools can read also the new database circuit description. For example *xsls* and *xspice* can netlist, but can not sort out duplicate RC entries. The *xspf* and *xspef* programs can also completely use the new format. Note that the new circuit description format is more compact. Note that the new "mc2" stream is more compact, because it use shorter instance names and it has no duplicate RC entries.

EXAMPLES

```
% space2 -rCv switchbox4
   ...
extraction statistics for layout switchbox4:
   capacitances      : 21984
   resistances       : 638
   nodes             : 470
   mos transistors   : 144
   substrate nodes   : 15
   ...
space2: --- Finished ---

% net2net -v switchbox4
net2net: converting nethead/netsub/mc into net2/mc2
net2net: reading nethead and netsub
net2net: reading mc
net2net: writing mc2
net2net: writing net2
net2net: cap: 21984 instances found, 7989 written
net2net: res: 638 instances found, 638 written
net2net: 7224 capacitors
```

```
net2net: 336 capacitors to net SUB
net2net: 428 capacitors to net GND
net2net: 623 resistors
net2net: 15 resistors to net SUB
net2net: 144 gates found
net2net: 470 nodes found, 470 written
net2net: ready

% ls -l circuit/switchbox4
total 1052
-rw-r--r-- 1 simon space      0 Jul 15 14:40 flat
-rw-r--r-- 1 simon space 605063 Jul 15 14:40 mc
-rw-r--r-- 1 simon space 223813 Jul 15 14:41 mc2
-rw-r--r-- 1 simon space 205082 Jul 15 14:41 net2
-rw-r--r-- 1 simon space     25 Jul 15 14:40 netcd
-rw-r--r-- 1 simon space   5961 Jul 15 14:40 nethead
-rw-r--r-- 1 simon space   6086 Jul 15 14:40 netsub
-rw-r--r-- 1 simon space    167 Jul 15 14:40 term

% space2 -r I8051_ALL
% net2net -cl I8051_ALL
net2net: warning: net GND not found
net2net: cap: 0 instances found, 0 written
net2net: res: 2316207 instances found, 2316207 written
net2net: 2309887 resistors
net2net: 6320 resistors to net SUB
net2net: 123809 gates found
net2net: 788420 nodes found, 788420 written

% ls -l circuit/I8051_ALL
total 232172
-rw-r--r-- 1 simon space        0 Jul 15 14:51 flat
-rw-r--r-- 1 simon space 75118509 Jul 15 15:01 mc
-rw-r--r-- 1 simon space 58077006 Jul 15 15:03 mc2
-rw-r--r-- 1 simon space 82626016 Jul 15 15:03 net2
-rw-r--r-- 1 simon space       25 Jul 15 15:01 netcd
-rw-r--r-- 1 simon space 15111663 Jul 15 15:01 nethead
-rw-r--r-- 1 simon space  6536438 Jul 15 15:01 netsub
-rw-r--r-- 1 simon space     1084 Jul 15 14:51 term
```

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FILES

input:
   circuit/*cell*/netcd
   circuit/*cell*/nethead
   circuit/*cell*/netsub
   circuit/*cell*/mc
output:
   circuit/*cell*/net2
   circuit/*cell*/mc2

SEE ALSO

space2(1ICD), xsls(1ICD), xspf(1ICD), xspef(1ICD).