Orcad Capture 9.2 Netlist Formats

In this paper I'll examine the netlist formats available through OrCad Capture version 9.2 and attempt to identify those that are useful for PCB layout. This version of OrCad is somewhat dated, with executables dating from 1998 to 2001, but is still quite popular and in wide use. None the less, CAD formats change almost daily so consider this as a snapshot of formats ca. 2000CE.

The first step was to create a simple schematic with a few parts and visibly named nets. Next, as shown in the properties form, easily recognized values were added to the default title block.
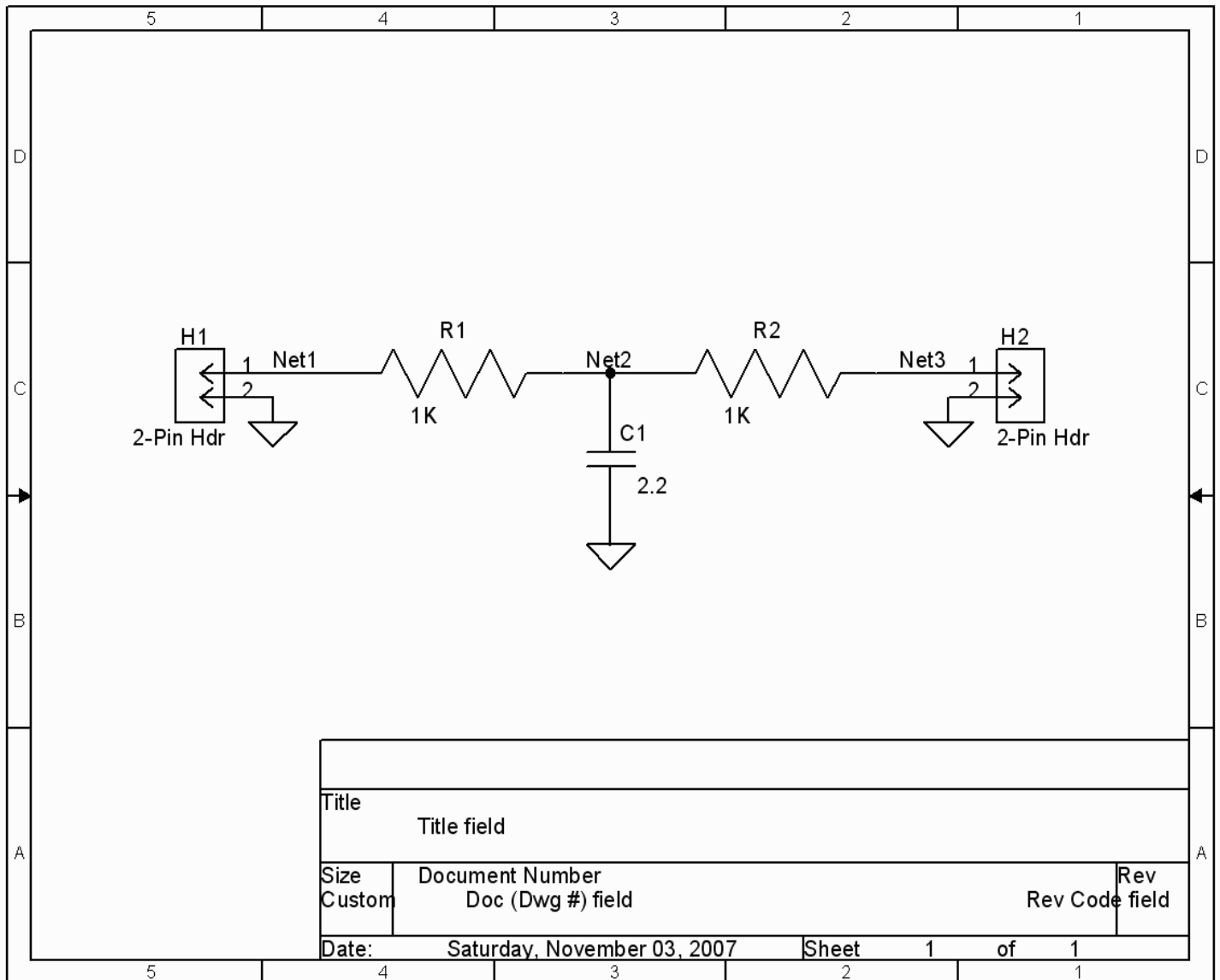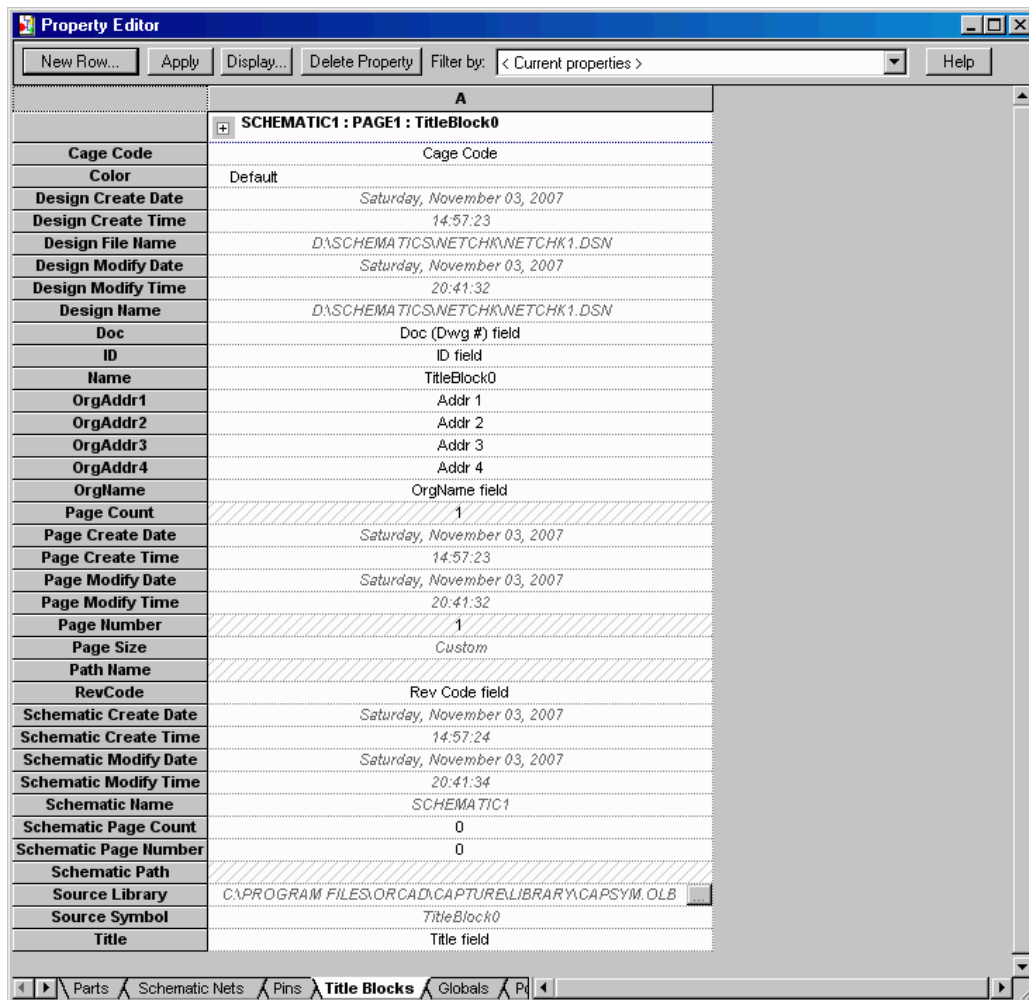
Fig 1: Example schematic

	A
	⊞ SCHEMATIC1 : PAGE1 : TitleBlock0
Cage Code	Cage Code
Color	Default
Design Create Date	Saturday, November 03, 2007
Design Create Time	14:57:23
Design File Name	D:\SCHEMATICS\NETCHK\NETCHK1.DSN
Design Modify Date	Saturday, November 03, 2007
Design Modify Time	20:41:32
Design Name	D:\SCHEMATICS\NETCHK\NETCHK1.DSN
Doc	Doc (Dwg #) field
ID	ID field
Name	TitleBlock0
OrgAddr1	Addr 1
OrgAddr2	Addr 2
OrgAddr3	Addr 3
OrgAddr4	Addr 4
OrgName	OrgName field
Page Count	1
Page Create Date	Saturday, November 03, 2007
Page Create Time	14:57:23
Page Modify Date	Saturday, November 03, 2007
Page Modify Time	20:41:32
Page Number	1
Page Size	Custom
Path Name	
RevCode	Rev Code field
Schematic Create Date	Saturday, November 03, 2007
Schematic Create Time	14:57:24
Schematic Modify Date	Saturday, November 03, 2007
Schematic Modify Time	20:41:34
Schematic Name	SCHEMATIC1
Schematic Page Count	0
Schematic Page Number	0
Schematic Path	
Source Library	C:\PROGRAM FILES\ORCAD\CAPTURE\LIBRARY\CAPSYM.OLB
Source Symbol	TitleBlock0
Title	Title field

And last, some attributes, the "MFG" and "Digikey" fields, were added to the components.

	A	B	C	D	E
	⊞ SCHEMATIC1 : PAGE1 : C1	⊞ SCHEMATIC1 : PAGE1 : H1	⊞ SCHEMATIC1 : PAGE1 : H2	⊞ SCHEMATIC1 : PAGE1 : R1	⊞ SCHEMATIC1 : PAGE1 : R2
Color	Default	Default	Default	Default	Default
Designator					
Digikey PN	xxx-CT	xxx-CT	xxx-CT	xxx-CT	xxx-CT
Digikey Price	$0.00 /25	$0.00 /25	$0.00 /25	$0.00 /25	$0.00 /25
Graphic	CapSmall.Normal	2-Pin Hdr.Normal	2-Pin Hdr.Normal	Res small.Normal	Res small.Normal
ID					
Implementation					
Implementation Path					
Implementation Type	<none>	<none>	<none>	<none>	<none>
MFG	xxx	xxx	xxx	xxx	xxx
MFGs PN	000000	000000	000000	000000	000000
Name	I00276	I00022	I00434	I00138	I00173
Part Reference	C1	H1	H2	R1	R2
PCB Footprint	CK06	2x1Hdr100mil	2x1Hdr100mil	QuarterWatComp	QuarterWatComp
Power Pins Visible	☐	☐	☐	☐	☐
Primitive	DEFAULT	DEFAULT	DEFAULT	DEFAULT	DEFAULT
Reference	C1	H1	H2	R1	R2
Source Library	D:\SCHEMATICS\NETCHK\T	D:\SCHEMATICS\NETCHK\T	D:\SCHEMATICS\NETCHK\T	D:\SCHEMATICS\NETCHK\T	D:\SCHEMATICS\NETCHK\T
Source Package	CapSmall	2-Pin Hdr	2-Pin Hdr	Res small	Res small
Source Part	CapSmall.Normal	2-Pin Hdr.Normal	2-Pin Hdr.Normal	Res small.Normal	Res small.Normal
Value	2.2	2-Pin Hdr	2-Pin Hdr	1K	1K

Fig 3: Component Properties

At this point, netlists were generated for all forty formats available on the *Other* tab and the results examined.
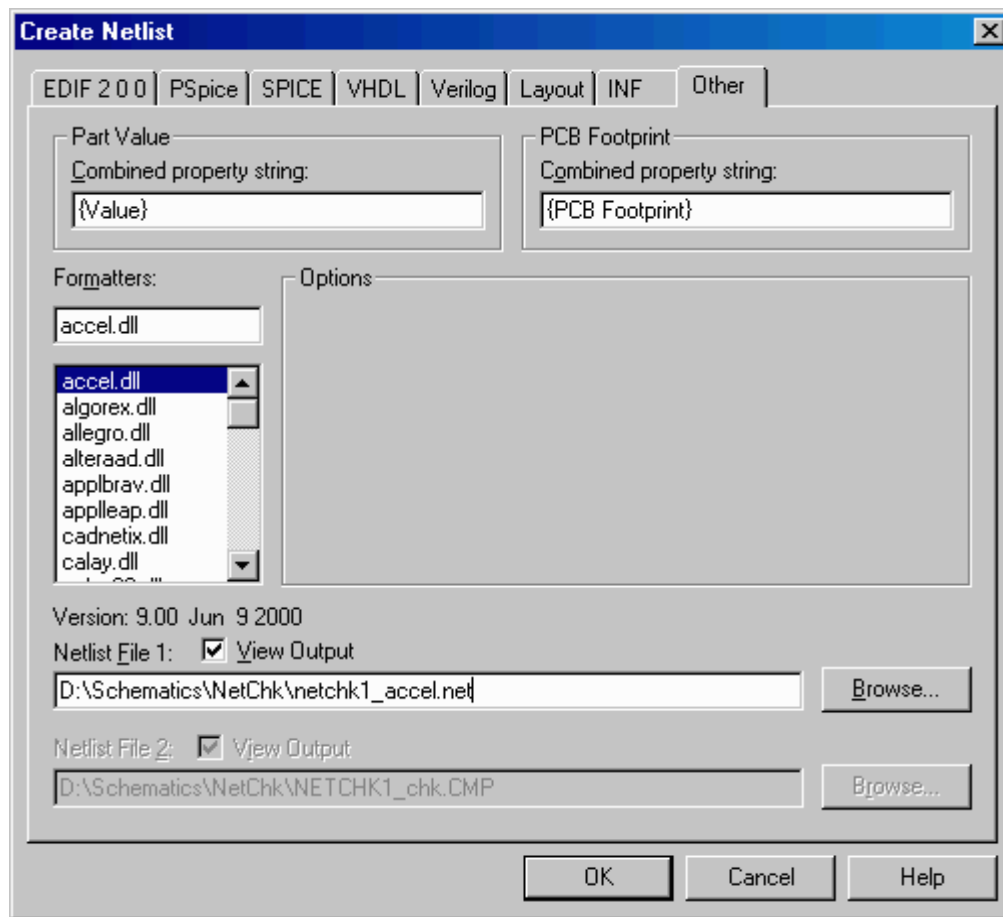

Fig 4: Create Netlist form

All netlists were found to be plain text and fell into three general format categories: *Partlist-Netlist*, *Annotated Partlist* and *Netlist with Embedded Footprints*. Most are useful for basic PCB creation. A few produced net listings but failed in some way to provide any usable footprint data.

The most common *Partlist-Netlist* format contains two list. The parts list section associates a footprint to a reference designation and may include additional part related data like the component value while the net listing section enumerates the nodes connected to each net. This format is further divided into the single file form containing both lists and the two file form where the lists is placed into separate files.

The *Annotated Partlist* form lists each part along with its footprint, reference designation and, in some cases, additional part related data and each part includes a pin list with each pins associated net.

The *Netlist with Embedded Footprints* form is nearly the converse. It's a net listing where the associated node includes its footprint. Only two of this form were found and neither included any additional component information.

The table below summarizes the format investigation. The background color of the format name indicates whether or not the format is applicable to PCB work with green meaning easily applied, yellow works too but not as easily and red is NA. Those formats that contain correct footprint and net list data *and* include the component value are checked under the *Preferred Format* column. The **Cadstar RINF** format earned two checks here because of the additional component data available.

Netlist Formats Available with OrCad Capture 9.2

#	Format name	Preferred Format	General Format					Component value	Title block info in hdr	Comments
			Partlist Netlist	Partlist in separate file	Annotated partlist	Footprints in netlist	Netlist Only No Partlist			
1	Accel	+	X					X	X	Only Doc # field used in first line
2	Algorex				X					
3	Allegro	+	X					X		Format identical to Telesis
4	Alteraad				X				X	Footprint name lost, uses "SYM 1", "SYM 2", ...Same as Inteladf
5	Applbrav		X							
6	Applleap				X					
7	Cadnetix	+	X					X		Format identical to Scicards
8	Calay	+		X				X		Part list format identical to Calay90
9	Calay90	+		X				X		Net list nearly the same as Calay
10	Case				X					
11	Cbds		X							
12	Compvisn						X			Net list only, no footprint data
13	Dump	+	X					X	X	Generic data listing, components listed four times
14	Edif	+	X					X	X	Verbose, some fields have limited character values
15	Eedesign		X							Net names lost, replaced by N001, N002, ...
16	Future	+	X					X	X	Will use pin name unless "Use pin numbers" checked
17	Hilo				X				X	Pin reference by order, no pin numbers
18	Integra		X							Clean and simple but no value
19	Inteladf				X			X	X	Footprint name lost, uses "SYM 1", "SYM 2", ... Same as Alteraad
20	Mentor	+		X				X		
21	Multiwir						X			Net list only, no footprint data
22	Ohdlnet				X					No footprint name listed, almost same as Pldnet
23	Pads2k		X							Format matches Padspcb except for first line
24	Padspcb		X							Format matches Pads2k except for first line
25	Pcad				X					
26	Pcadnlt	+	X					X	X	
27	Pcbii	+			X			X	X	Use "Ignore length check" or names are limited to 8 chars
28	Pdump				X			X		Failed to complete netlist...
29	Pldnet				X			X		No footprint name listed, almost same as Ohdlnet
30	Protel2	+	X					X		Verbose, many unused component fields
31	Racalred	+		X				X	X	
32	Rinf	++	X					X	X	"Part attributes" option adds **Value** and many other attributes
33	Scicards	+	X					X		Format identical to Cadnetix
34	Spice			X				X	X	Component file lists node names and numbers, no footprints
35	Tango	+	X					X	X	
36	Telesis	+	X					X		Format identical to Allegro
37	Vectron			X						
38	Vstmodel				X			X		Nets in pin order, no pin numbers
39	Winboard	+			X			X	X	
40	Wirelist	+	X					X	X	Value listed both in parts list and netlist... dumb

Fig 5: Format summary

Format Details

The following pages contain the net list samples used

Accel

```
(netlist "Doc (Dwg #) field"
  (compinst "C1"
    (patternName "CK06")
    (compvalue "2.2"))
  (compinst "H1"
    (patternName "2x1Hdr100mil")
    (compvalue "2-Pin Hdr"))
  (compinst "H2"
    (patternName "2x1Hdr100mil")
    (compvalue "2-Pin Hdr"))
  (compinst "R1"
    (patternName "QuarterWatComp")
    (compvalue "1K"))
  (compinst "R2"
    (patternName "QuarterWatComp")
    (compvalue "1K"))
  (net "GND"
    (node "C1" "1")
    (node "H2" "2")
    (node "H1" "2"))
  (net "NET1"
    (node "H1" "1")
    (node "R1" "1"))
  (net "NET2"
    (node "R1" "2")
    (node "C1" "2")
    (node "R2" "1"))
  (net "NET3"
    (node "R2" "2")
    (node "H2" "1")))
```

Algorex

```
GND
        C1 (CK06)-1,
        H2 (2x1Hdr100mil)-2,
        H1 (2x1Hdr100mil)-2
NET1
        H1 (2x1Hdr100mil)-1,
        R1 (QuarterWatComp)-1
NET2
        R1 (QuarterWatComp)-2,
        C1 (CK06)-2,
        R2 (QuarterWatComp)-1
NET3
        R2 (QuarterWatComp)-2,
        H2 (2x1Hdr100mil)-1
```

Allegro

```
$PACKAGES
CK06! 2.2; C1
2x1Hdr100mil! 2-Pin Hdr; H1
2x1Hdr100mil! 2-Pin Hdr; H2
QuarterWatComp! 1K; R1
QuarterWatComp! 1K; R2
$NETS
GND;  C1.1 H2.2 H1.2
NET1;  H1.1 R1.1
NET2;  R1.2 C1.2 R2.1
NET3;  R2.2 H2.1
$END
```

Alteraad

```
Title field                        Revised: Saturday, November 03, 2007
Doc (Dwg #) field                  Revision: Rev Code field
OrgName field
Addr 1
Addr 2
Addr 3
Addr 4

OPTIONS:Addr 3
PART:Addr 4

INPUTS:

OUTPUTS:

NETWORK:
2.2(GND,NET2) % SYM 1 %
2-Pin Hdr(NET1,GND) % SYM 2 %
2-Pin Hdr(NET3,GND) % SYM 3 %
1K(NET1,NET2) % SYM 4 %
1K(NET2,NET3) % SYM 5 %

EQUATIONS:
END$
```

Applbrav

```
*** Desig CK06
C1
*** Desig 2x1Hdr100mil
H1
*** Desig 2x1Hdr100mil
H2
*** Desig QuarterWatComp
R1
*** Desig QuarterWatComp
R2
*** NET GND
C1 1
H2 2
H1 2
*** NET NET1
H1 1
R1 1
*** NET NET2
R1 2
C1 2
R2 1
*** NET NET3
R2 2
H2 1
```

Applleap

```
*** NET GND
C1 1 CK06
H2 2 2x1Hdr100mil
H1 2 2x1Hdr100mil
*** NET NET1
H1 1 2x1Hdr100mil
R1 1 QuarterWatComp
*** NET NET2
R1 2 QuarterWatComp
C1 2 CK06
R2 1 QuarterWatComp
*** NET NET3
R2 2 QuarterWatComp
H2 1 2x1Hdr100mil
```

Cadnetix

```
PARTS LIST

2.2                CK06            C1
2-Pin Hdr          2x1Hdr100mil    H1
2-Pin Hdr          2x1Hdr100mil    H2
1K                 QuarterWatComp  R1
1K                 QuarterWatComp  R2
EOS
NET LIST

NODENAME GND                $
    C1        1  H2          2  H1          2
NODENAME NET1               $
    H1        1  R1          1
NODENAME NET2               $
    R1        2  C1          2  R2          1
NODENAME NET3               $
    R2        2  H2          1
EOS
```

Calay

Parts list file:

```
2.2                C1              CK06              000      000      0
2-Pin Hdr          H1              2x1Hdr100mil      000      000      0
2-Pin Hdr          H2              2x1Hdr100mil      000      000      0
1K                 R1              QuarterWatComp    000      000      0
1K                 R2              QuarterWatComp    000      000      0
```

Net list file:

```
/GND      C1(1) H2(2) H1(2);
/NET1     H1(1) R1(1);
/NET2     R1(2) C1(2) R2(1);
/NET3     R2(2) H2(1);
```

Calay90

Parts list file:

```
2.2                C1              CK06            000   000   0
2-Pin Hdr          H1              2x1Hdr100mil    000   000   0
2-Pin Hdr          H2              2x1Hdr100mil    000   000   0
1K                 R1              QuarterWatComp  000   000   0
1K                 R2              QuarterWatComp  000   000   0
```

Net list file:

```
GND     C1('1) H2('2) H1('2);
NET1    H1('1) R1('1);
NET2    R1('2) C1('2) R2('1);
NET3    R2('2) H2('1);
```

Case

```
ASSERTIONS=OFF;VERSION=400;LOCATION=LOC;
 [SIZE=1;TIMES=1;LOC=(C1);PLOC=C1;SHAPE=CK06]
 1=GND;
 2=NET2;
 ;
 [SIZE=1;TIMES=1;LOC=(H1);PLOC=H1;SHAPE=2x1Hdr100mil]
 1=NET1;
 2=GND;
 ;
 [SIZE=1;TIMES=1;LOC=(H2);PLOC=H2;SHAPE=2x1Hdr100mil]
 1=NET3;
 2=GND;
 ;
 [SIZE=1;TIMES=1;LOC=(R1);PLOC=R1;SHAPE=QuarterWatComp]
 1=NET1;
 2=NET2;
 ;
 [SIZE=1;TIMES=1;LOC=(R2);PLOC=R2;SHAPE=QuarterWatComp]
 1=NET2;
 2=NET3;
 ;
;
```

Cbds

```
.SEARCH P,C
.DD  C1 CK06
.DD  H1 2x1Hdr100mil
.DD  H2 2x1Hdr100mil
.DD  R1 QuarterWatComp
.DD  R2 QuarterWatComp
.S,GND,C1,1,H2,2,H1,2
.S,NET1,H1,1,R1,1
.S,NET2,R1,2,C1,2,R2,1
.S,NET3,R2,2,H2,1
```

Compvisn

```
0001 GND            C1-1  H2-2  H1-2
0002 NET1           H1-1  R1-1
0003 NET2           R1-2  C1-2  R2-1
0004 NET3           R2-2  H2-1
```

Dump

```
--------------- Title Block Information -------------
0/1 A
Saturday, November 03, 2007 Doc (Dwg #) field Rev Code field
Title field
OrgName field
Addr 1
Addr 2
Addr 3
Addr 4

--------------------- Parts -------------------------
D:\SCHEMATICS\NETCHK\TESTLIB.OLB
     H1     2-Pin Hdr     <2x1Hdr100mil>
     H2     2-Pin Hdr     <2x1Hdr100mil>
     R1     1K     <QuarterWatComp>
     R2     1K     <QuarterWatComp>
     C1     2.2     <CK06>

H1        2-Pin Hdr
ModuleName: 2x1Hdr100mil
00000016
     <> <> <> <> <> <> <> <>
H2        2-Pin Hdr
ModuleName: 2x1Hdr100mil
000001B2
     <> <> <> <> <> <> <> <>
R1        1K
ModuleName: QuarterWatComp
0000008A
     <> <> <> <> <> <> <> <>
R2        1K
ModuleName: QuarterWatComp
000000AD
     <> <> <> <> <> <> <> <>
C1        2.2
ModuleName: CK06
00000114
     <> <> <> <> <> <> <> <>


---------- Parts Sorted by Reference Number -----------
D:\SCHEMATICS\NETCHK\TESTLIB.OLB
     H1     2-Pin Hdr     <2x1Hdr100mil>
     H2     2-Pin Hdr     <2x1Hdr100mil>
     R1     1K     <QuarterWatComp>
     R2     1K     <QuarterWatComp>
     C1     2.2     <CK06>
```

```
H1        2-Pin Hdr
ModuleName: 2x1Hdr100mil
00000016
    <> <> <> <> <> <> <> <>
H2        2-Pin Hdr
ModuleName: 2x1Hdr100mil
000001B2
    <> <> <> <> <> <> <> <>
R1        1K
ModuleName: QuarterWatComp
0000008A
    <> <> <> <> <> <> <> <>
R2        1K
ModuleName: QuarterWatComp
000000AD
    <> <> <> <> <> <> <> <>
C1        2.2
ModuleName: CK06
00000114
    <> <> <> <> <> <> <> <>

---------------------- Nets --------------------------
Power - GND
Reference   PinNumber   PinName      PartName     Module        PinType

C1          1           Pin1         2.2          CK06          Passive
H2          2           Pin2         2-Pin Hdr    2x1Hdr100m    Passive
H1          2           Pin2         2-Pin Hdr    2x1Hdr100m    Passive
----- NET END -----

Label -  NET1 0
Reference   PinNumber   PinName      PartName     Module        PinType

H1          1           Pin1         2-Pin Hdr    2x1Hdr100m    Passive
R1          1           Pin1         1K           QuarterWat    Passive
----- NET END -----

Label -  NET2 0
Reference   PinNumber   PinName      PartName     Module        PinType

R1          2           Pin2         1K           QuarterWat    Passive
C1          2           Pin2         2.2          CK06          Passive
R2          1           Pin1         1K           QuarterWat    Passive
----- NET END -----

Label -  NET3 0
Reference   PinNumber   PinName      PartName     Module        PinType

R2          2           Pin2         1K           QuarterWat    Passive
H2          1           Pin1         2-Pin Hdr    2x1Hdr100m    Passive
----- NET END -----

***** END NETS *****
```

Edif

```
(edif &NETCHK1
 (edifVersion 2 0 0)
 (edifLevel 0)
 (keywordMap (keywordLevel 0))
 (status
  (written
   (timeStamp 0 0 0 0 0 0)
   (program "EDIF.DLL")
   (comment "Original data from OrCAD CAPTURE schematic"))
  (comment "Title field")
  (comment "Saturday, November 03, 2007")
  (comment "Doc (Dwg #) field")
  (comment "Rev Code field")
  (comment "OrgName field")
  (comment "Addr 1")
  (comment "Addr 2")
  (comment "Addr 3")
  (comment "Addr 4"))
 (library MAIN_LIB
  (edifLevel 0)
  (technology
   (numberDefinition
    (scale 1 1 (unit distance))))
  (cell &NETCHK1
   (cellType generic)
   (view NetlistView
    (viewType netlist)
    (interface)
    (contents
     (instance &C1
      (viewRef NetlistView
       (cellRef &CapSmall
        (libraryRef OrCAD_LIB)))
      (property PartValue (string "2.2"))
      (property ModuleValue (string "CK06"))
      (property TimeStampValue (string "00000114")))
     (instance &H1
      (viewRef NetlistView
       (cellRef &2MINUSPin_Hdr
        (libraryRef OrCAD_LIB)))
      (property PartValue (string "2-Pin Hdr"))
      (property ModuleValue (string "2x1Hdr100mil"))
      (property TimeStampValue (string "00000016")))
     (instance &H2
      (viewRef NetlistView
       (cellRef &2MINUSPin_Hdr
        (libraryRef OrCAD_LIB)))
      (property PartValue (string "2-Pin Hdr"))
      (property ModuleValue (string "2x1Hdr100mil"))
      (property TimeStampValue (string "000001B2")))
     (instance &R1
      (viewRef NetlistView
```

```
      (cellRef &Res_small
        (libraryRef OrCAD_LIB)))
     (property PartValue (string "1K"))
     (property ModuleValue (string "QuarterWatComp"))
     (property TimeStampValue (string "0000008A")))
    (instance &R2
     (viewRef NetlistView
      (cellRef &Res_small
        (libraryRef OrCAD_LIB)))
     (property PartValue (string "1K"))
     (property ModuleValue (string "QuarterWatComp"))
     (property TimeStampValue (string "000000AD")))
    (net &GND
     (joined
      (portRef &1 (instanceRef &C1))
      (portRef &2 (instanceRef &H2))
      (portRef &2 (instanceRef &H1))))
    (net &NET1
     (joined
      (portRef &1 (instanceRef &H1))
      (portRef &1 (instanceRef &R1))))
    (net &NET2
     (joined
      (portRef &2 (instanceRef &R1))
      (portRef &2 (instanceRef &C1))
      (portRef &1 (instanceRef &R2))))
    (net &NET3
     (joined
      (portRef &2 (instanceRef &R2))
      (portRef &1 (instanceRef &H2))))))))))
 (design &NETCHK1
  (cellRef &NETCHK1
   (libraryRef MAIN_LIB))))
```

Eedesign

```
(PATH,OrCAD()
(COMPONENTS
C1        ,CK06
H1        ,2x1Hdr100mil
H2        ,2x1Hdr100mil
R1        ,QuarterWatComp
R2        ,QuarterWatComp
)
(NODES
(UN001
C1        , 1
H2        , 2
H1        , 2
)
(UN002
H1        , 1
R1        , 1
)
(UN003
R1        , 2
C1        , 2
R2        , 1
)
(UN004
R2        , 2
H2        , 1
)
)
),OrCAD
```

Future

```
NETLIST,2
(DRAWING,ORCAD.NET,1-1
DATA,50,Title field
DATA,51,Doc (Dwg #) field
DATA,52,Rev Code field
DATA,54,Saturday, November 03, 2007
)
(SYM,1-1,1
DATA,2,C1
DATA,3,2.2
DATA,4,CK06
DATA,23,Pin1
DATA,23,Pin2
)
(SYM,1-1,2
DATA,2,H1
DATA,3,2-Pin Hdr
DATA,4,2x1Hdr100mil
DATA,23,Pin1
DATA,23,Pin2
)
(SYM,1-1,3
DATA,2,H2
DATA,3,2-Pin Hdr
DATA,4,2x1Hdr100mil
DATA,23,Pin1
DATA,23,Pin2
)
(SYM,1-1,4
DATA,2,R1
DATA,3,1K
DATA,4,QuarterWatComp
DATA,23,Pin1
DATA,23,Pin2
)
(SYM,1-1,5
DATA,2,R2
DATA,3,1K
DATA,4,QuarterWatComp
DATA,23,Pin1
DATA,23,Pin2
)
(SIG,,GND,1-1,5,GND
PIN,1-1,1,C1,23,1
PIN,1-1,3,H2,23,2
PIN,1-1,2,H1,23,2
)
(SIG,,NET1,1-1,5,NET1
PIN,1-1,2,H1,23,1
PIN,1-1,4,R1,23,1
)
(SIG,,NET2,1-1,5,NET2
PIN,1-1,4,R1,23,2
PIN,1-1,1,C1,23,2
PIN,1-1,5,R2,23,1
)
(SIG,,NET3,1-1,5,NET3
PIN,1-1,5,R2,23,2
PIN,1-1,3,H2,23,1
)
```

Hilo

```
** Title field                    Revised: Saturday, November 03, 2007
** Doc field                      Revision: Rev Code field
** OrgName field
** Addr 1
** Addr 2
** Addr 3
** Addr 4
CCT ORCAD (
** Please put your circuit interface definition here
        );
CK06
C1 (
     GND,
     NET2
     );


2x1Hdr100mil
H1 (
     NET1,
     GND
     );


2x1Hdr100mil
H2 (
     NET3,
     GND
     );


QuarterWatComp
R1 (
     NET1,
     NET2
     );


QuarterWatComp
R2 (
     NET2,
     NET3
     );



.
```

Integra

```
%PART
CK06            C1
2x1Hdr100mil    H1
2x1Hdr100mil    H2
QuarterWatComp  R1
QuarterWatComp  R2
%NET
GND                     C1-1 H2-2 H1-2
NET1                    H1-1 R1-1
NET2                    R1-2 C1-2 R2-1
NET3                    R2-2 H2-1
$
```

Inteladf

```
Title field                                    Revised: Saturday, November 03, 2007
Doc (Dwg #) field                              Revision: Rev Code field
OrgName field
Addr 1
Addr 2
Addr 3
Addr 4

OPTIONS:Addr 3
PART:Addr 4

INPUTS:

OUTPUTS:

NETWORK:
2.2(GND,NET2) % SYM 1 %
2-Pin Hdr(NET1,GND) % SYM 2 %
2-Pin Hdr(NET3,GND) % SYM 3 %
1K(NET1,NET2) % SYM 4 %
1K(NET2,NET3) % SYM 5 %

EQUATIONS:
END$
```

Mentor

Parts list file:

```
# OrCAD Formatted Netlist for MENTOR Board Station V6
# Reference          .... Value Field      Module Field
C1                   PART 2.2              CK06
H1                   PART 2-Pin Hdr        2x1Hdr100mil
H2                   PART 2-Pin Hdr        2x1Hdr100mil
R1                   PART 1K               QuarterWatComp
R2                   PART 1K               QuarterWatComp
```

Net list file:

```
NET 'GND' C1-1 H2-2 H1-2
NET 'NET1' H1-1 R1-1
NET 'NET2' R1-2 C1-2 R2-1
NET 'NET3' R2-2 H2-1
```

Multiwir

GND	C1	1
GND	H2	2
GND	H1	2
NET1	H1	1
NET1	R1	1
NET2	R1	2
NET2	C1	2
NET2	R2	1
NET3	R2	2
NET3	H2	1
-1		

Ohdlnet

```
|| Title field                          Revised: Saturday, November 03, 2007
|| Doc field                            Revision: Rev Code field
|| OrgName field
|| Addr 1
|| Addr 2
|| Addr 3
|| Addr 4
||
|
|  Netlist:
|  {
|   _2.2 (GND,NET2)   | C1
|   _2-Pin Hdr (NET1,GND)   | H1
|   _2-Pin Hdr (NET3,GND)   | H2
|   _1K (NET1,NET2)   | R1
|   _1K (NET2,NET3)   | R2
|  }
```

Pads2k

```
*PADS2000*
*PART*
C1      CK06
H1      2x1Hdr100mil
H2      2x1Hdr100mil
R1      QuarterWatComp
R2      QuarterWatComp

*NET*
*SIGNAL* GND
C1.1 H2.2 H1.2
*SIGNAL* NET1
H1.1 R1.1
*SIGNAL* NET2
R1.2 C1.2 R2.1
*SIGNAL* NET3
R2.2 H2.1
*END*
```

Padspcb

```
*PADS-PCB*
*PART*
C1      CK06
H1      2x1Hdr100mil
H2      2x1Hdr100mil
R1      QuarterWatComp
R2      QuarterWatComp

*NET*
*SIGNAL* GND
C1.1 H2.2 H1.2
*SIGNAL* NET1
H1.1 R1.1
*SIGNAL* NET2
R1.2 C1.2 R2.1
*SIGNAL* NET3
R2.2 H2.1
*END*
```

Pcad

```
{COMPONENT ORCAD.PCB
 {ENVIRONMENT LAYS.PCB}
  {PDIFvrev 1.30}
  {DETAIL
   {SUBCOMP
{I CK06.PRT C1
{CN
    1 GND
    2 NET2
}
}
{I 2x1Hdr100mil.PRT H1
{CN
    1 NET1
    2 GND
}
}
{I 2x1Hdr100mil.PRT H2
{CN
    1 NET3
    2 GND
}
}
{I QuarterWatComp.PRT R1
{CN
    1 NET1
    2 NET2
}
}
{I QuarterWatComp.PRT R2
{CN
    1 NET2
    2 NET3
}
}
}
}
}
```

Pcadnlt

```
% Title field                              Revised: Saturday, November 03, 2007
% Doc (Dwg #) field                        Revision: Rev Code field
% OrgName field
% Addr 1
% Addr 2
% Addr 3
% Addr 4
BOARD = ORCAD.PCB;

PARTS
CK06            = C1;   % 2.2
2x1Hdr100mil    = H1,   % 2-Pin Hdr
                  H2;   % 2-Pin Hdr
QuarterWatComp  = R1,   % 1K
                  R2;   % 1K

NETS

GND  = C1/1 H2/2 H1/2 ;
NET1 = H1/1 R1/1 ;
NET2 = R1/2 C1/2 R2/1 ;
NET3 = R2/2 H2/1 ;
```

Pcbii

```
( { OrCAD/PCB II Netlist Format
Title field                                  Revised: Saturday, November 03, 2007
Doc field                                    Revision: Rev Code field
OrgName field
Addr 1
Addr 2
Addr 3
Addr 4

Time Stamp - }
 ( 00000114 CK06 C1 2.2
  ( 1 GND )
  ( 2 NET2 )
 )
 ( 00000016 2x1Hdr100mil H1 2-Pin Hdr
  ( 1 NET1 )
  ( 2 GND )
 )
 ( 000001B2 2x1Hdr100mil H2 2-Pin Hdr
  ( 1 NET3 )
  ( 2 GND )
 )
 ( 0000008A QuarterWatComp R1 1K
  ( 1 NET1 )
  ( 2 NET2 )
 )
 ( 000000AD QuarterWatComp R2 1K
  ( 1 NET2 )
  ( 2 NET3 )
 )
)
```

Pdump

```
----------------- Node List -----------------
Node Is:
Supply Node - 1 Node Name - GND
Node Is:
Label Node - 2 Node Name - NET1
Node Is:
Label Node - 3 Node Name - NET2
Node Is:
Label Node - 4 Node Name - NET3


C1      2.2      00000114
Reference PinNumber PinName   PartName  Module    PinType
-----------------------------------------------------------
Node Is:
Supply Node - 1 Node Name - GND
C1         1          Pin1      2.2       CK06      Passive
Node Is:
Label Node - 3 Node Name - NET2
C1         2          Pin2      2.2       CK06      Passive
--------- END PART ---------


H1      2-Pin Hdr      00000016
Reference PinNumber PinName   PartName  Module    PinType
-----------------------------------------------------------
Node Is:
Label Node - 2 Node Name - NET1
H1         1          Pin1      2-Pin Hdr 2x1Hdr100mPassive
Node Is:
Supply Node - 1 Node Name - GND
H1         2          Pin2      2-Pin Hdr 2x1Hdr100mPassive
--------- END PART ---------

Empty Node for : H2     2-Pin Hdr      000001B2

Empty Node for : R1      1K       0000008A

Empty Node for : R2      1K       000000AD
```

Pldnet

```
|| Title field                            Revised: Saturday, November 03, 2007
|| Doc field                              Revision: Rev Code field
|| OrgName field
|| Addr 1
|| Addr 2
|| Addr 3
|| Addr 4
||
| Netlist:
|            ->
|
|  {
|   _2.2 (GND,NET2)   | C1
|   _2-Pin Hdr (NET1,GND)  | H1
|   _2-Pin Hdr (NET3,GND)  | H2
|   _1K (NET1,NET2)   | R1
|   _1K (NET2,NET3)   | R2
|  }
```

Protel2

```
PROTEL NETLIST 2.0
[
DESIGNATOR
C1
FOOTPRINT
CK06
PARTTYPE
2.2
DESCRIPTION

Part Field 1
*
Part Field 2
*
.
.
Part Field 16
*
LIBRARYFIELD1
.
.
LIBRARYFIELD8

]
[
DESIGNATOR
H1
FOOTPRINT
2x1Hdr100mil
PARTTYPE
2-Pin Hdr
DESCRIPTION

Part Field 1
.
.
LIBRARYFIELD8

]
[
DESIGNATOR
H2
FOOTPRINT
2x1Hdr100mil
PARTTYPE
2-Pin Hdr
DESCRIPTION

Part Field 1
.
.
LIBRARYFIELD8
```

```
]
[
DESIGNATOR
R1
FOOTPRINT
QuarterWatComp
PARTTYPE
1K
DESCRIPTION

Part Field 1
.
.
LIBRARYFIELD8

]
[
DESIGNATOR
R2
FOOTPRINT
QuarterWatComp
PARTTYPE
1K
DESCRIPTION

Part Field 1
.
.
LIBRARYFIELD8

]
(
GND
C1-1 2.2-Pin1 PASSIVE
H2-2 2-Pin Hdr-Pin2 PASSIVE
H1-2 2-Pin Hdr-Pin2 PASSIVE
)
(
NET1
H1-1 2-Pin Hdr-Pin1 PASSIVE
R1-1 1K-Pin1 PASSIVE
)
(
NET2
R1-2 1K-Pin2 PASSIVE
C1-2 2.2-Pin2 PASSIVE
R2-1 1K-Pin1 PASSIVE
)
(
NET3
R2-2 1K-Pin2 PASSIVE
H2-1 2-Pin Hdr-Pin1 PASSIVE
)
```

Racalred

Parts list file:

```
.PCB
.REM Title field                            Revised: Saturday, November 03, 2007
.REM Doc (Dwg #) field                      Revision: Rev Code field
.REM OrgName field
.REM Addr 1
.REM Addr 2
.REM Addr 3
.REM Addr 4
.COM
.REF

.REM 2.2
C1    CK06
.REM 2-Pin Hdr
H1    2x1Hdr100mil
.REM 2-Pin Hdr
H2    2x1Hdr100mil
.REM 1K
R1    QuarterWatComp
.REM 1K
R2    QuarterWatComp
.EOD
```

Net list file:

```
.PCB
.REM Title field                            Revised: Saturday, November 03, 2007
.REM Doc (Dwg #) field                      Revision: Rev Code field
.REM OrgName field
.REM Addr 1
.REM Addr 2
.REM Addr 3
.REM Addr 4
.CON
.COD 2

.REM GND
C1 1 H2 2 H1 2
.REM NET1
H1 1 R1 1
.REM NET2
R1 2 C1 2 R2 1
.REM NET3
R2 2 H2 1
.EOD
```

Rinf

```
.HEA
.APP "Cadstar RINF Output - Version 2.3"
.UNI INCH 1000.0 in
.TYP FULL
.JOB "NETCHK1"

.ADD_COM C1 "CK06"
.ATT_COM C1 "Digikey PN" "xxx-CT"
.ATT_COM C1 "PCB Footprint" "CK06"
.ATT_COM C1 "MFGs PN" "000000"
.ATT_COM C1 "timestamp" "00000114"
.ATT_COM C1 "Digikey Price" "$0.00 /25"
.ATT_COM C1 "Source Package" "CapSmall"
.ATT_COM C1 "MFG" "xxx"
.ATT_COM C1 "Value" "2.2"
.ADD_COM H1 "2x1Hdr100mil"
.ATT_COM H1 "Digikey PN" "xxx-CT"
.ATT_COM H1 "PCB Footprint" "2x1Hdr100mil"
.ATT_COM H1 "MFGs PN" "000000"
.ATT_COM H1 "timestamp" "00000016"
.ATT_COM H1 "Digikey Price" "$0.00 /25"
.ATT_COM H1 "Source Package" "2-Pin Hdr"
.ATT_COM H1 "MFG" "xxx"
.ATT_COM H1 "Value" "2-Pin Hdr"
.ADD_COM H2 "2x1Hdr100mil"
.ATT_COM H2 "Digikey PN" "xxx-CT"
.ATT_COM H2 "PCB Footprint" "2x1Hdr100mil"
.ATT_COM H2 "MFGs PN" "000000"
.ATT_COM H2 "timestamp" "000001B2"
.ATT_COM H2 "Digikey Price" "$0.00 /25"
.ATT_COM H2 "Source Package" "2-Pin Hdr"
.ATT_COM H2 "MFG" "xxx"
.ATT_COM H2 "Value" "2-Pin Hdr"
.ADD_COM R1 "QuarterWatComp"
.ATT_COM R1 "Digikey PN" "xxx-CT"
.ATT_COM R1 "PCB Footprint" "QuarterWatComp"
.ATT_COM R1 "MFGs PN" "000000"
.ATT_COM R1 "timestamp" "0000008A"
.ATT_COM R1 "Digikey Price" "$0.00 /25"
.ATT_COM R1 "Source Package" "Res small"
.ATT_COM R1 "MFG" "xxx"
.ATT_COM R1 "Value" "1K"
.ADD_COM R2 "QuarterWatComp"
.ATT_COM R2 "Digikey PN" "xxx-CT"
.ATT_COM R2 "PCB Footprint" "QuarterWatComp"
.ATT_COM R2 "MFGs PN" "000000"
.ATT_COM R2 "timestamp" "000000AD"
.ATT_COM R2 "Digikey Price" "$0.00 /25"
.ATT_COM R2 "Source Package" "Res small"
.ATT_COM R2 "MFG" "xxx"
.ATT_COM R2 "Value" "1K"
```

```
.ADD_TER  C1 1 "GND"
.TER      H2 2
          H1 2

.ADD_TER  H1 1 "NET1"
.TER      R1 1

.ADD_TER  R1 2 "NET2"
.TER      C1 2
          R2 1

.ADD_TER  R2 2 "NET3"
.TER      H2 1

.END
```

Scicards

```
PARTS LIST

2.2              CK06            C1
2-Pin Hdr        2x1Hdr100mil    H1
2-Pin Hdr        2x1Hdr100mil    H2
1K               QuarterWatComp  R1
1K               QuarterWatComp  R2
EOS
NET LIST

NODENAME GND              $
    C1        1 H2           2 H1           2
NODENAME NET1             $
    H1        1 R1           1
NODENAME NET2             $
    R1        2 C1           2 R2           1
NODENAME NET3             $
    R2        2 H2           1
EOS
```

Spice

Parts list file:

```
    0 GND
10002 NET1
10003 NET2
10004 NET3
```

Net list file:

```
* Title field                      Revised: Saturday, November 03, 2007
* Doc (Dwg #) field                 Revision: Rev Code field
* OrgName field
* Addr 1
* Addr 2
* Addr 3
* Addr 4
C1 0 NET2 2.2
H1 NET1 0 2-Pin Hdr
H2 NET3 0 2-Pin Hdr
R1 NET1 NET2 1K
R2 NET2 NET3 1K
.END
```

Tango

OrgName field
Addr 1
Addr 2
Addr 3
Addr 4

```
[
C1
CK06
2.2


]
[
H1
2x1Hdr100mil
2-Pin Hdr


]
[
H2
2x1Hdr100mil
2-Pin Hdr


]
[
R1
QuarterWatComp
1K


]
[
R2
QuarterWatComp
1K


]
(
GND
C1,1
H2,2
```

```
H1,2
)
(
NET1
H1,1
R1,1
)
(
NET2
R1,2
C1,2
R2,1
)
(
NET3
R2,2
H2,1
)
```

Telesis

```
$PACKAGES
CK06! 2.2; C1
2x1Hdr100mil! 2-Pin Hdr; H1
2x1Hdr100mil! 2-Pin Hdr; H2
QuarterWatComp! 1K; R1
QuarterWatComp! 1K; R2
$NETS
GND;  C1.1 H2.2 H1.2
NET1;  H1.1 R1.1
NET2;  R1.2 C1.2 R2.1
NET3;  R2.2 H2.1
$END
```

Vectron

Parts list file:

```
C1        CK06
H1        2x1Hdr100mil
H2        2x1Hdr100mil
R1        QuarterWatComp
R2        QuarterWatComp
```

Net list file:

```
*GND       C1 1 H2 2 H1 2
*NET1      H1 1 R1 1
*NET2      R1 2 C1 2 R2 1
*NET3      R2 2 H2 1
```

Vstmodel

```
2.2(GND,NET2);C1
2-Pin Hdr(NET1,GND);H1
2-Pin Hdr(NET3,GND);H2
1K(NET1,NET2);R1
1K(NET2,NET3);R2
%
```

Winboard

```
WINBOARD 1.01
`I "ORCAD CAPTURE 7.20";
`F "D:\SCHEMATICS\NETCHK\NETCHK1.SCH";
`T "Title field";
`S "Saturday, November 03, 2007";
`C "Doc (Dwg #) field";
`R "Rev Code field";
`C "OrgName field";
`C "Addr 1";
`C "Addr 2";
`C "Addr 3";
`C "Addr 4";


`M CK06,,2.2,00000114,C1,C,GR1
(1 GND PA A1)
(2 NET2 PA A1)
;
`M 2x1Hdr100mil,,2-Pin Hdr,00000016,H1,C,GR1
(1 NET1 PA A1)
(2 GND PA A1)
;
`M 2x1Hdr100mil,,2-Pin Hdr,000001B2,H2,C,GR1
(1 NET3 PA A1)
(2 GND PA A1)
;
`M QuarterWatComp,,1K,0000008A,R1,C,GR1
(1 NET1 PA A1)
(2 NET2 PA A1)
;
`M QuarterWatComp,,1K,000000AD,R2,C,GR1
(1 NET2 PA A1)
(2 NET3 PA A1)
;
```

Wirelist

```
Title field                          Revised: Saturday, November 03, 2007
Doc (Dwg #) field                     Revision: Rev Code field
OrgName field
Addr 1
Addr 2
Addr 3
Addr 4
<<< Component List >>>
2.2                        C1        CK06
2-Pin Hdr                  H1        2x1Hdr100mil
2-Pin Hdr                  H2        2x1Hdr100mil
1K                         R1        QuarterWatComp
1K                         R2        QuarterWatComp


<<< Wire List >>>
```

NODE	REFERENCE	PIN #	PIN NAME	PIN TYPE	PART VALUE
[00001]	GND				
	C1	1	Pin1	Passive	2.2
	H2	2	Pin2	Passive	2-Pin Hdr
	H1	2	Pin2	Passive	2-Pin Hdr
[00002]	NET1				
	H1	1	Pin1	Passive	2-Pin Hdr
	R1	1	Pin1	Passive	1K
[00003]	NET2				
	R1	2	Pin2	Passive	1K
	C1	2	Pin2	Passive	2.2
	R2	1	Pin1	Passive	1K
[00004]	NET3				
	R2	2	Pin2	Passive	1K
	H2	1	Pin1	Passive	2-Pin Hdr