

```

8  entity Filetest2 is
9  end Filetest2;

10
11 architecture Behavioral of Filetest2 is
12     SUBTYPE Dataformat IS std_logic_vector(1 to 9);
13     TYPE Stimuli IS FILE OF Dataformat;
14     SHARED VARIABLE bv : Dataformat := (others => '1'); -- "111111111"

15
16     FILE udfil: Stimuli OPEN WRITE_MODE is "d:\Std_logic_vector_1to9.bin";
17 begin
18     PROCESS
19         VARIABLE i: integer := 0;
20     begin
21         WHILE (i<16) LOOP
22             WRITE(udfil,bv);
23             bv := bv+1;
24             i := i +1;
25             wait for 25 ns;
26         END LOOP;
27         bv := "UX01ZWLH-";
28         WRITE(udfil,bv);
29         FILE_CLOSE( udfil);
30         WAIT; -- Forever
31     end process;
32
33 end Behavioral;

```

Note: D6 C9 CA D3 AB A7 A8 0D 0A indicates that this file made by the VHDL simulator. What's stored afterwards depend on the datatypes. No documentation to be found – so you will have to figure out ourself – The program WinHex usefull

WinHex - [Std\_logic\_vector\_1to9.bin]

File Edit Search Position View Tools Specialist Options Window Help

outfile3.bin outfile4.bin text1.txt file1.txt Std\_logic\_vector\_1to9.bin

Offset	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
00000000	D6	C9	CA	D3	AB	A7	A8	0D	0A	03	03	03	03	03	03	03	ÖÉË
00000010	03	03	02	02	02	02	02	02	02	02	02	02	02	02	02	02	...
00000020	02	02	02	03	02	02	02	02	02	02	02	03	02	02	02	02	...
00000030	02	02	02	02	03	03	02	02	02	02	02	02	03	02	02	02	...
00000040	02	02	02	02	02	03	02	03	02	02	02	02	02	02	03	03	...
00000050	02	02	02	02	02	02	02	03	03	03	02	02	02	02	02	03	...
00000060	02	02	02	02	02	02	02	02	03	02	02	03	02	02	02	02	...
00000070	02	03	02	03	02	02	02	02	02	02	03	02	03	03	02	02	...
00000080	02	02	02	03	03	02	02	02	02	02	02	02	03	03	02	03	...
00000090	02	02	02	02	02	03	03	03	02	00	01	02	03	04	05	06	...
000000A0	07	08															...

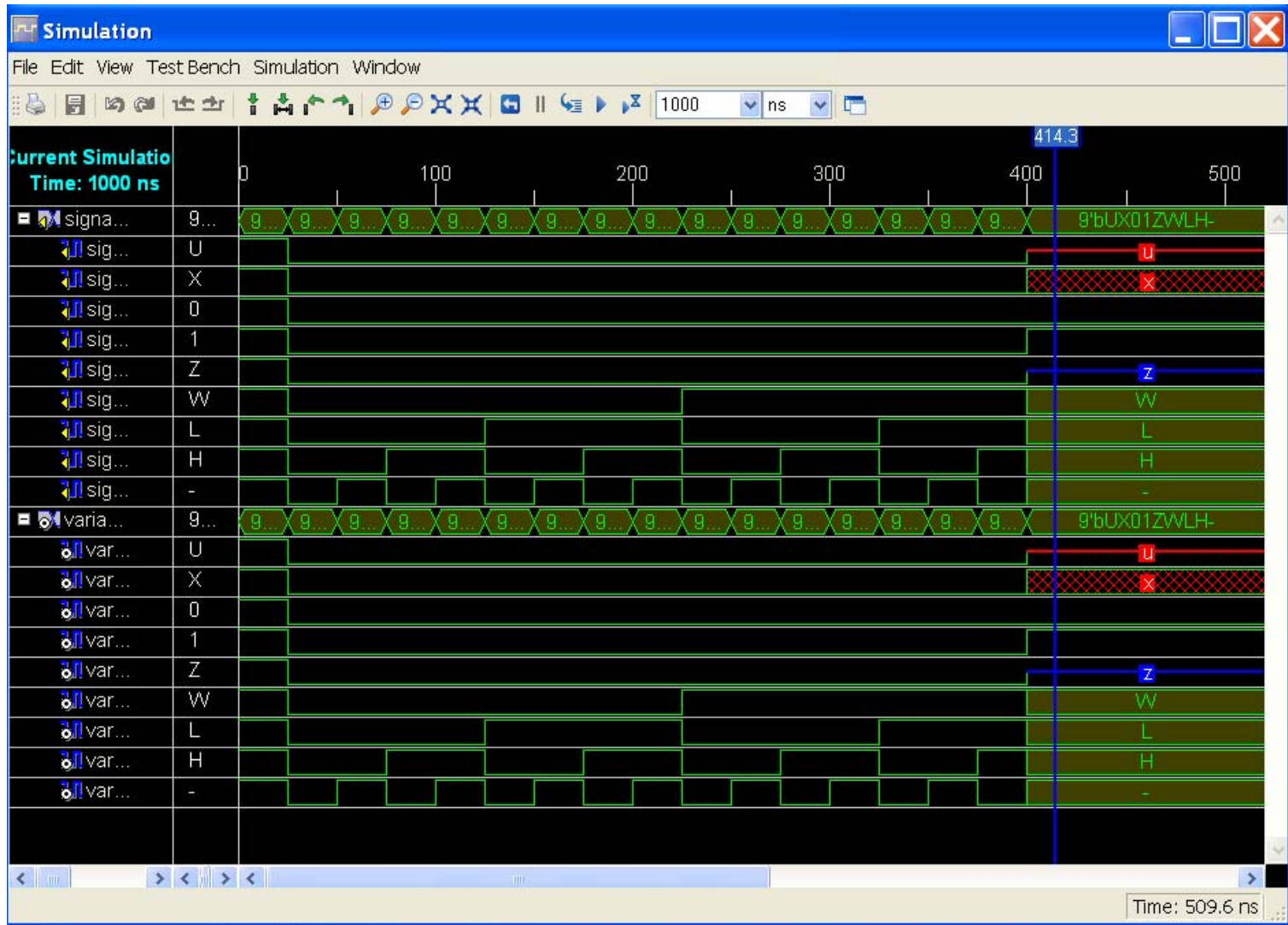
File size: 162 B (162 bytes)  
DOS name: STD\_LO~1.BIN  
Default Edit Mode: original  
State: original  
Undo level: 0  
Undo reverses: n/a

UX01ZWLH-

```

8  entity Filetest2_b is
9      port( Signal_data: out std_logic_vector(1 to 9));
10 end Filetest2_b;
11
12 architecture Behavioral of Filetest2_b is
13     SUBTYPE      Dataformat      IS std_logic_vector(1 to 9);
14     TYPE         Stimuli         IS FILE OF Dataformat;
15     SHARED VARIABLE Variable_data: std_logic_vector(1 to 9);
16
17     FILE infil: Stimuli OPEN READ_MODE is "d:\Std_logic_vector_1to9.bin";
18 begin
19     PROCESS
20         VARIABLE bv : Dataformat := (others => '1');
21     begin
22         while not ENDFILE(infil) loop
23             READ (infil,bv);
24             Signal_data  <= bv;
25             Variable_data := bv;
26             wait for 25 ns;
27         end loop;
28         WAIT; -- Forever
29     end process;
30
31 end Behavioral;

```



```

1 use IEEE.STD_LOGIC_1164.ALL;
2 use IEEE.STD_LOGIC_ARITH.ALL;
3 use IEEE.STD_LOGIC_SIGNED.ALL;
4
5 entity Filetest4 is
6 end Filetest4;
7
8 architecture Behavioral of Filetest4 is
9     SUBTYPE Dataformat IS integer;
10    TYPE Stimuli IS FILE OF Dataformat;
11    CONSTANT Konst1: std_logic_vector( 31 downto 0) := X"01020304";
12    SHARED VARIABLE bv : Dataformat := conv_integer(Konst1);
13
14    FILE udfil: Stimuli OPEN WRITE_MODE is "d:\integer.bin";
15
16 begin
17     PROCESS
18         VARIABLE i: integer := 0;
19     begin
20         WHILE (i<16) LOOP
21             WRITE(udfil,bv);
22             bv := bv + (((64*256)+32)*256 +16)*256+1;
23             i := i + 1;
24             wait for 25 ns;
25         END LOOP;
26         FILE_CLOSE( udfil);
27         WAIT; -- Forever
28     end process;
29
30 end Behavioral;

```

X"01020304"

Offset	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
00000000	D6	C9	CA	D3	AB	A7	A8	0D	0A	01	02	03	04	41	22	13	ÖÉÉÓ«\$". . . . .A".
00000010	05	81	42	23	06	C1	62	33	07	01	82	43	08	41	A2	53	.IB#.Áb3..IC.AçS
00000020	09	81	C2	63	0A	C1	E2	73	0B	02	02	83	0C	42	22	93	.IÁc.Áás...I.B"l
00000030	0D	82	42	A3	0E	C2	62	B3	0F	02	82	C3	10	42	A2	D3	.IBÉ.Áb³..IÃ.BçÓ
00000040	11	82	C2	E3	12	C2	E2	F3	13								.IÃã.Ááó.

```

3  library IEEE;
4  use IEEE.STD_LOGIC_1164.ALL;
5  use IEEE.STD_LOGIC_ARITH.ALL;
6  use IEEE.STD_LOGIC_UNSIGNED.ALL;
7
8  entity Filetest4_b is
9      port( b3,b2,b1,b0: out integer
10          );
11 end Filetest4_b;
12
13 architecture Behavioral of Filetest4_b is
14     SUBTYPE      Dataformat      IS integer;
15     TYPE         Stimuli          IS FILE OF Dataformat;
16     SHARED VARIABLE Variable_data1: Dataformat;
17     SHARED VARIABLE Variable_data2: std_logic_vector(31 downto 0);
18
19     FILE infil: Stimuli OPEN READ_MODE is "d:\integer.bin";
20 begin
21     PROCESS
22         VARIABLE bv : Dataformat := 0;
23     begin
24         while not ENDFILE(infil) loop
25             READ (infil,bv);
26             Variable_data1 := bv;
27             Variable_data2 := conv_std_logic_vector(bv,32);
28             b3 <= conv_integer( Variable_data2(31 downto 24));
29             b2 <= conv_integer( Variable_data2(23 downto 16));
30             b1 <= conv_integer( Variable_data2(15 downto 8));
31             b0 <= conv_integer( Variable_data2( 7 downto 0));
32             wait for 25 ns;
33         end loop;
34         WAIT; -- Forever
35     end process;

```

Current Simulation Time: 1000 ns		0	30	60	90	120
b3	65	1	65	129	193	1
b2	162	2	34	66	98	130
b1	83	3	19	35	51	67
b0	9	4	5	6	7	8
varia...	32'...	32'h01020304	32'h41221305	32'h81422306	32'hC1623307	32'h01824308
varia...	110...	16909060	1092752133	-2126372090	-1050529017	25314056

Current Simulation Time: 1000 ns		120	150	180	210	
b3	65	1	65	129	193	2
b2	162	130	162	194	226	2
b1	83	67	83	99	115	131
b0	9	8	9	10	11	12
varia...	32'...	32'h01824308	32'h41A25309	32'h81C2630A	32'hC1E2730B	32'h0202830C
varia...	110...	25314056	1101157129	-2117967094	-1042124021	33719052

Current Simulation Time: 1000 ns		210	240	270	300	
b3	65	2	66	130	194	2
b2	162	2	34	66	98	130
b1	83	131	147	163	179	195
b0	9	12	13	14	15	16
varia...	32'...	32'h0202830C	32'h4222930D	32'h8242A30E	32'hC262B30F	32'h0282C310
varia...	110...	33719052	1109562125	-2109562098	-1033719025	42124048

Current Simulation Time: 1000 ns		300	330	360	390	
b3	65	194	2	66	130	194
b2	162	98	130	162	194	226
b1	83	179	195	211	227	243
b0	9	15	16	17	18	19
varia...	32'...	32'hC262B30F	32'h0282C310	32'h42A2D311	32'h82C2E312	32'hC2E2F313
varia...	110...	-1033719025	42124048	1117967121	-2101157102	-1025314029