1	Cycle	Reset	PC	Instr	(FSM)	SrcA	SrcB	ALUResult	Zero	Control Word
1	1	1	0.0	0	0	0.0	04	04	0	5010
1	2	0	04	addi 20020005	1	04	Х	Х	0	0030
Section Sect	3	0	04	addi 20020005	9	00	05	05	0	0420
Section Sect	4	0	04	addi 20020005	10	Х	Х	Х	0	0800
The color of the	5	0	04	addi 20020005	0	04	04	08	0	5010
S	6	0	08	addi 2003000c	1	0.8	Х	Х	0	0030
8	7	0	08		9	0.0	0c	0c	0	0420
10	8	0	0.8		10	Х	Х	х	0	0800
10		0			-					
11		0								
12		-								
13										
14										
15		-	1.0	00.0005	1	1.0			0	0000
16									-	
17										
18										
19										
20										
21							07	-	-	* - * -
22	20	0	14	and 00642824	7	Х	Х	Х	0	0840
23 0 18 add 00a42820 6 0.4 0.7 0b 0 0.402 24 0 18 add 00a42820 7 x x x 0 0.840 25 0 18 add 00a42820 0 18 0.4 1c 0 5010 26 0 0 1	21	0	14	and 00642824	0	14	04	18	0	5010
24 0 18 add 00a42820 7 x x x 0 0840 25 0 18 add 00a42820 0 18 04 1c 0 5010 26 0 1	22	0	18	add 00a42820	1	18	Х	Х	0	0030
24 0 18 add 00a42820 7 x x x 0 0840 25 0 18 add 00a42820 0 18 04 1c 0 5010 26 0	23	0	18	add 00a42820	6	04	07	0b	0	0402
25	24	0	18	add 00a42820	7	Х	Х	Х	0	0840
26 0		0			0				0	
27		0			1				-	
28 0										
29 0										
30										
31			-							
32										
33 0										
34 0										
35		-								
36 0	34	0								
37 0	35	0								
38 0	36	0								
39 0 30 add 00853820 1 30 x x 0 0030 41 0 30 add 00853820 6 01 0b 0c 0 0402 42 0 30 add 00853820 7 x x x 0 0840 43 0 30 add 00853820 0 30 04 34 0 5010 44 0 34 sub 00e23822 1 34 x x 0 0030 45 0 34 sub 00e23822 6 0c 05 07 0 0402 46 0 34 sub 00e23822 7 x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 sw	37	0								
40 0 30 add 00853820 1 30 x x 0 0030 41 0 30 add 00853820 6 01 0b 0c 0 0402 42 0 30 add 00853820 7 x x x 0 0840 43 0 30 add 00853820 0 30 04 34 0 5010 44 0 34 sub 00e23822 1 34 x x 0 0030 45 0 34 sub 00e23822 7 x x x 0 0840 47 0 34 sub 00e23822 7 x x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 <t< td=""><td>38</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	38	0								
40 0 30 add 00853820 1 30 x x 0 0030 41 0 30 add 00853820 6 01 0b 0c 0 0402 42 0 30 add 00853820 7 x x x 0 0840 43 0 30 add 00853820 0 30 04 34 0 5010 44 0 34 sub 00e23822 1 34 x x 0 0030 45 0 34 sub 00e23822 7 x x x 0 0840 47 0 34 sub 00e23822 7 x x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 <t< td=""><td>39</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	39	0								
41 0 30 add 00853820 6 01 0b 0c 0 0402 42 0 30 add 00853820 7 x x x 0 0840 43 0 30 add 00853820 0 30 04 34 0 5010 44 0 34 sub 00e23822 1 34 x x 0 0030 45 0 34 sub 00e23822 6 0c 05 07 0 0402 46 0 34 sub 00e23822 7 x x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 sw ac670044 1 38 x x 0 0030 50 0 38		0	3.0	add 00853820	1	3.0	×	x	0	0030
42 0 30 add 00853820 7 x x x 0 0840 43 0 30 add 00853820 0 30 04 34 0 5010 44 0 34 sub 00e23822 1 34 x x 0 0030 45 0 34 sub 00e23822 6 0c 05 07 0 0402 46 0 34 sub 00e23822 7 x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 sw ac670044 1 38 x x 0 0030 49 0 38 sw ac670044 1 38 x x x 0 0420 50 0 38 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>										
43 0 30 add 00853820 0 30 04 34 0 5010 44 0 34 sub 00e23822 1 34 x x 0 0030 45 0 34 sub 00e23822 6 0c 05 07 0 0402 46 0 34 sub 00e23822 7 x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 sw ac670044 1 38 x x 0 0030 49 0 38 sw ac670044 2 0c 44 50 0 0420 50 0 38 sw ac670044 5 x x x x 0 0510 52 0 3c <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
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45 0 34 sub 00e23822 6 0c 05 07 0 0402 46 0 34 sub 00e23822 7 x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 sw ac670044 1 38 x x 0 0030 49 0 38 sw ac670044 2 0c 44 50 0 0420 50 0 38 sw ac670044 5 x x x 0 2100 51 0 38 sw ac670044 5 x x x 0 0510 52 0 3c lw 8c020050 1 3c x x x 0 0030 54 0 3c lw<		-							-	
46 0 34 sub 00e23822 7 x x x 0 0840 47 0 34 sub 00e23822 0 34 04 38 0 5010 48 0 38 sw ac670044 1 38 x x 0 0030 49 0 38 sw ac670044 2 0c 44 50 0 0420 50 0 38 sw ac670044 5 x x x 0 2100 51 0 38 sw ac670044 0 38 04 3c 0 5010 52 0 3c lw 8c020050 1 3c x x x 0 0030 54 0 3c lw 8c020050 3 x x x x 0 0880 55 0 3c <td></td> <td>Ŭ</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>Ŭ</td> <td></td>		Ŭ			-				Ŭ	
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49 0 38 sw ac670044 2 0c 44 50 0 0420 50 0 38 sw ac670044 5 x x x 0 2100 51 0 38 sw ac670044 0 38 04 3c 0 5010 52 0 3c lw 8c020050 1 3c x x 0 0030 53 0 3c lw 8c020050 2 00 50 50 0 0420 54 0 3c lw 8c020050 3 x x x x 0 0100 55 0 3c lw 8c020050 4 x x x x 0 0880 56 0 3c lw 8c020050 0 3c 04 40 0 5010 57 0 0 <td></td>										
50 0 38 sw ac670044 5 x x x 0 2100 51 0 38 sw ac670044 0 38 04 3c 0 5010 52 0 3c lw 8c020050 1 3c x x 0 0030 53 0 3c lw 8c020050 2 00 50 50 0 0420 54 0 3c lw 8c020050 3 x x x 0 0100 55 0 3c lw 8c020050 4 x x x x 0 0880 56 0 3c lw 8c020050 0 3c 04 40 0 5010 57 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<									-	
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55 0 3c lw 8c020050 4 x x x 0 0880 56 0 3c lw 8c020050 0 3c 04 40 0 5010 57 0 <t< td=""><td></td><td></td><td>3с</td><td></td><td></td><td>00</td><td>50</td><td>50</td><td></td><td></td></t<>			3с			00	50	50		
56 0 3c lw 8c020050 0 3c 04 40 0 5010 57 0	54	0	3с	lw 8c020050	3	Х	Х	Х	0	0100
57 0 58 0 59 0 60 0 61 0	55	0	3c		4	Х	Х	Х	0	0880
58 0 59 0 60 0 61 0	56	0	3с	lw 8c020050	0	3с	04	40	0	5010
58 0 59 0 60 0 61 0	57	0								
59 0 60 0 61 0		0								
60 0 61 0					1			1	<u> </u>	1
61 0			 		+	 			 	
								 		
	62	0	-		-	-		-	-	

Table 1. Expected Instruction Trace