Table 5.1: An example of the application of the SPECK algorithm.

Comment	Set	Action	Bit	LIP	LIS	LSP	LNP
Initialize		S and I		(1,1)			
Sorting (n=2)							
Test LIP	(1,1)	to LNP	1				(1,1)
		code sign	1				(1,1)
Test I	I		0				(1,1)
Quantization		LNP to LSP				(1,1)	
Sorting (n=1)							
Test I	I	split I	1			(1,1)	
	(1,2)	to LNP	1			(1,1)	(1,2)
		code sign	0			(1,1)	(1,2)
	(2,1)	to LNP	1			(1,1)	(1,2),(2,1)
		code sign	1			(1,1)	(1,2),(2,1)
	(2,2)	to LIP	0	(2,2)		(1,1)	(1,2),(2,1)
Test I	I	split I	1	(2,2)		(1,1)	(1,2),(2,1)
Test S	(1,3,2,2)	split S	1	(2,2)		(1,1)	(1,2),(2,1)
	(1,3)	to LNP	1	(2,2)		(1,1)	(1,2),(2,1),(1,3)
		code sign	1	(2,2)		(1,1)	(1,2),(2,1),(1,3)
	(1,4)	to LNP	1	(2,2)		(1,1)	(1,2),(2,1),(1,3),(1,4)
		code sign	0	(2,2)		(1,1)	(1,2),(2,1),(1,3),(1,4)
	(2,3)	to LIP	0	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4)
	(2,4)	to LNP	1	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4)
		code sign	1	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4)
Test S	(3,1,2,2)	split S	1	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1)
	(3,1)	to LNP	1	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1)
		code sign	1	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1)
	(3,2)	to LNP	1	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)
		code sign	1	(2,2),(2,3)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)
	(4,1)	to LIP	0	(2,2),(2,3),(4,1)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)
	(4,2)	to LIP	0	(2,2),(2,3),(4,1),(4,2)		(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)
Test S	(3,3,2,2)	to LIS	0	(2,2),(2,3),(4,1),(4,2)	(3,3,2,2)	(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)
Refinement							
	(1,1)		0	(2,2),(2,3),(4,1),(4,2)	(3,3,2,2)	(1,1)	(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)
Quantization		LNP to LSP				(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	
Sorting (n=0)							
	(2,2)	to LNP	1	(2,3),(4,1),(4,2)	(3,3,2,2)	(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2)
		code sign	1	(2,3),(4,1),(4,2)	(3,3,2,2)	(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2)
	(2,3)	to LNP	1	(4,1),(4,2)	(3,3,2,2)	(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3)
		code sign	1	(4,1),(4,2)	(3,3,2,2)	(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3)
	(4,1)	to LNP	1	(4,2)	(3,3,2,2)	(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1)
		code sign	0	(4,2)	(3,3,2,2)	(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1)
	(4,2)	to LIP	0	(4,2)	(3,3,2,2)	(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1)
	(3,3,2,2)	split S	1	(4,2)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1)
	(3,3)	to LIP	0	(4,2),(3,3)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1)
	(3,4)	to LNP	1	(4,2),(3,3)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4)
		code sign	1	(4,2),(3,3)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4)
	(4,3)	to LNP	1	(4,2),(3,3)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
		code sign	0	(4,2),(3,3)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(4,4)	to LIP	0	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
Refinement							
	(1,1)		1	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(1,2)		1	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(2,1)		0	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(1,3)		0	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(1,4)		0	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(2,4)		0	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(3,1)		0	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)
	(3,2)		1	(4,2),(3,3),(4,4)		(1,1),(1,2),(2,1),(1,3),(1,4),(2,4),(3,1),(3,2)	(2,2),(2,3),(4,1),(3,4),(4,3)