

1.

2008

가

4

. 가

[1], 가

가

. 1

2

, 3

가

, 4

2.

2.1

가 가

가

가

P2P

(Ledger)

1

(Distributed

[2].



[3],

가

1.

[3]

Table 1. Comparison of Electronic Financial Transactions

		
	3 (,) 가	가
		DDoS
	DDoS	

2.2

가

가

가

가

가

가

2.2.1

가

PC

가

2.2.2

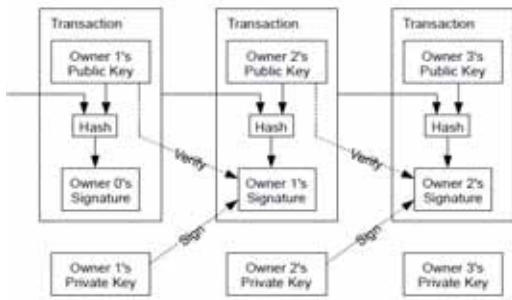
PC,

가

가 , 가 .

2.2.3

가 . 가 1



1. [1] Fig. 1. Bitcoin Transactions

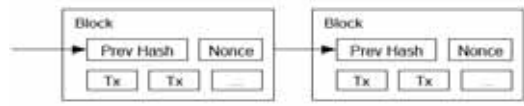
2.2.4

(mining)

2

(nonce)

(Proof of Work)



2. [1] Fig. 2. Bitcoin Blocks

2.3 가

가 1,300 [4], 가 가 가 (Coinhills) 3 118 가 .



3. 가 [5] Fig. 3. Ranking of the volume of the virtual currency exchange

3 가 3 (bithumb) 가 가 4 .



4. 가 [6]
Fig. 4. Korean virtual currency exchange BITSUM

3. 가

3.1

2
, S/W , 5가
[7].

2. [7]
Table 2. Overview of security threats when introducing financial blockchains

		가
	가	가 51%
		가
		가
		가
S/W	S/W	S/W , 가 DDoS
		DDoS , 가

		가
가		가 ,
	가	, 가 ,
		, 가

(Selfish Mining), 51% Attack

3 가
[8].

3.
Table 3. Bitcoin vulnerability and countermeasure

	X,	, ,	
51% Attack	51%	, ,	

2017 6
가 'B'
가 PC
가 [9].

3.2 가

가 가
PC,

가 가
 가
 가
 가

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(Youngseek Chung) []



- 2006
-

< >
 IoT, IoT , LED-IT , ,

(Jaesang Cha) []



- 2000 : Tohoku
- 2002 :
- 2008 :
- 2005 ~ : IT

< >
 LED , IT , ,