

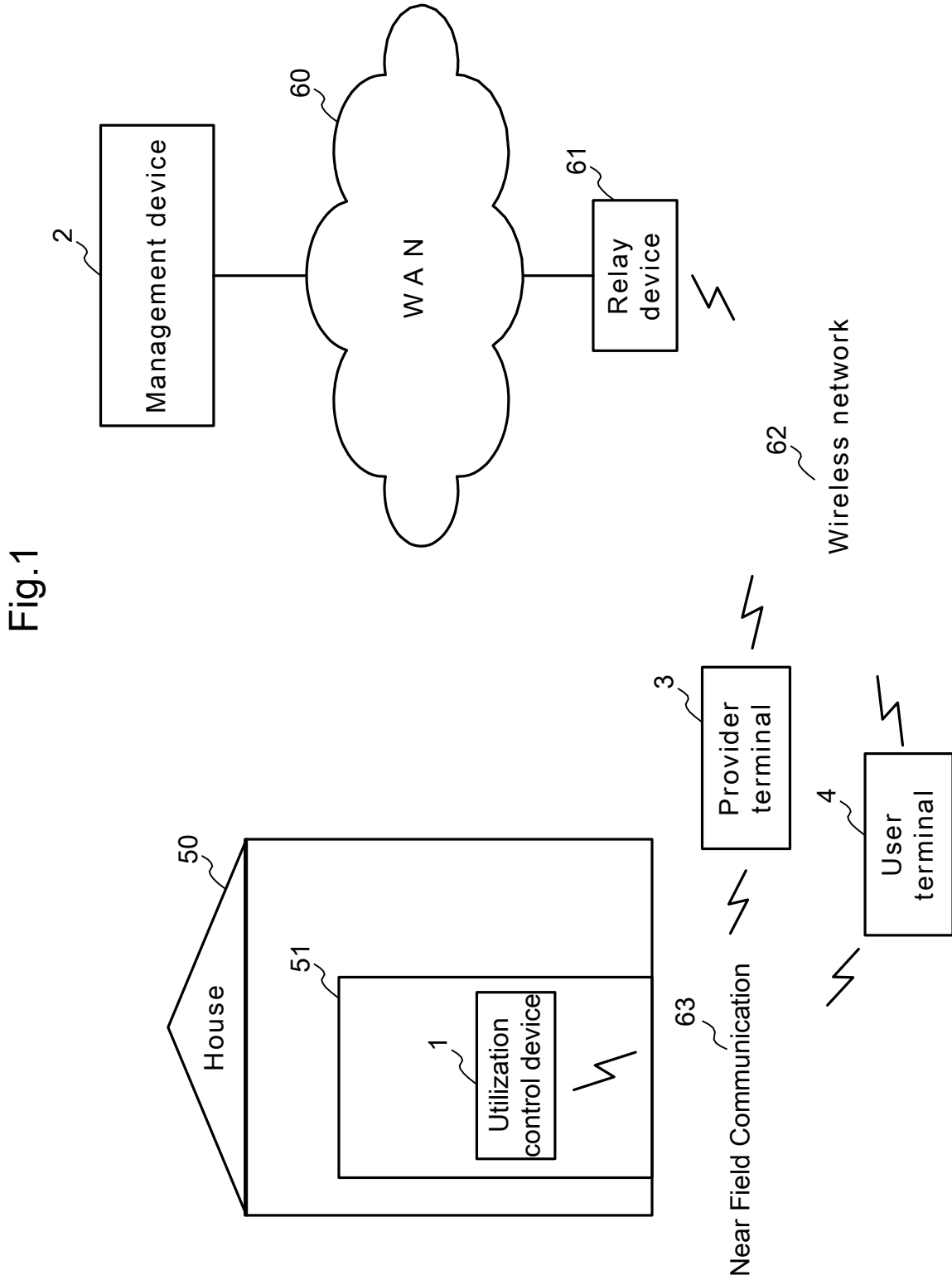


Fig.2

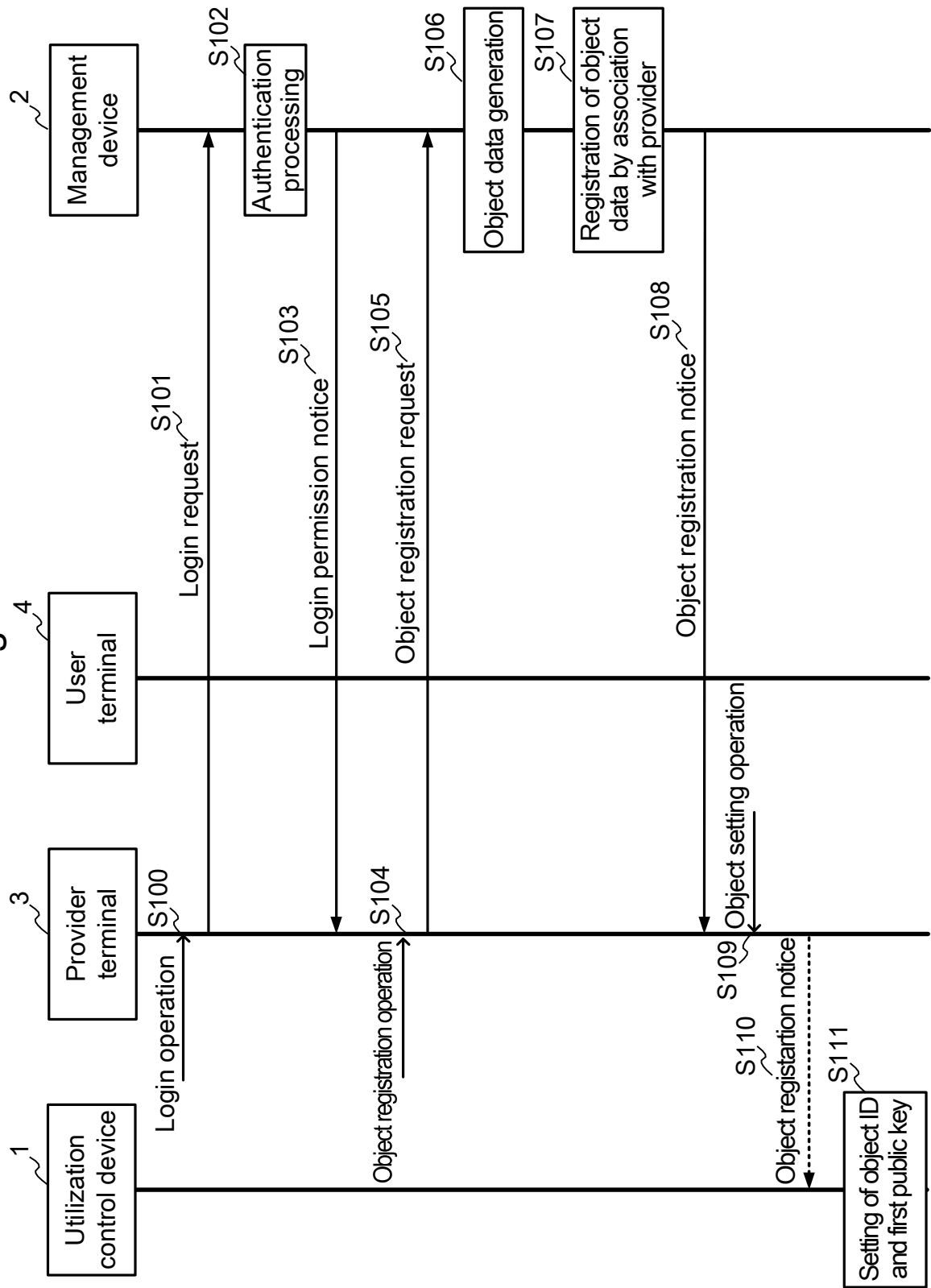
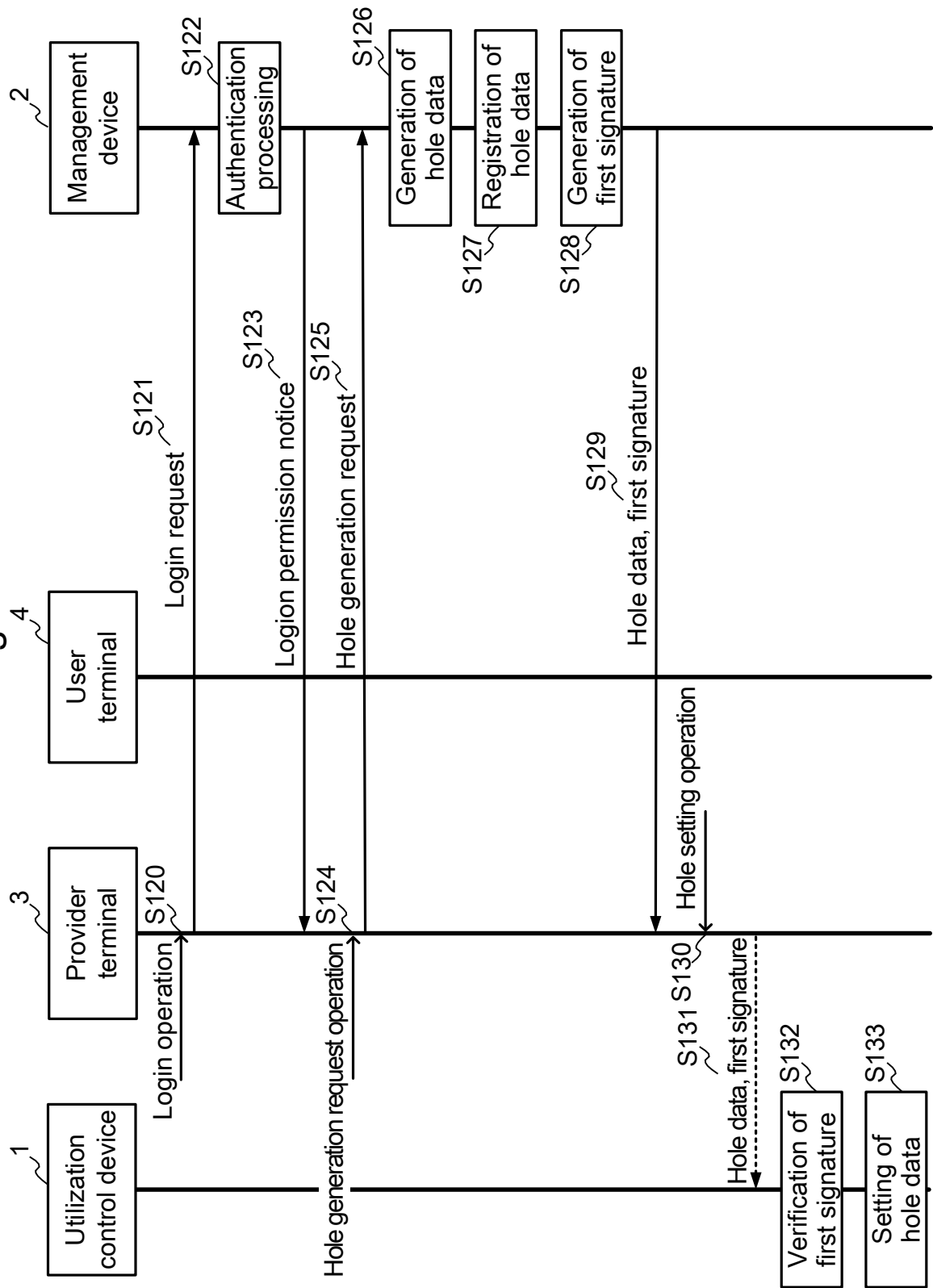
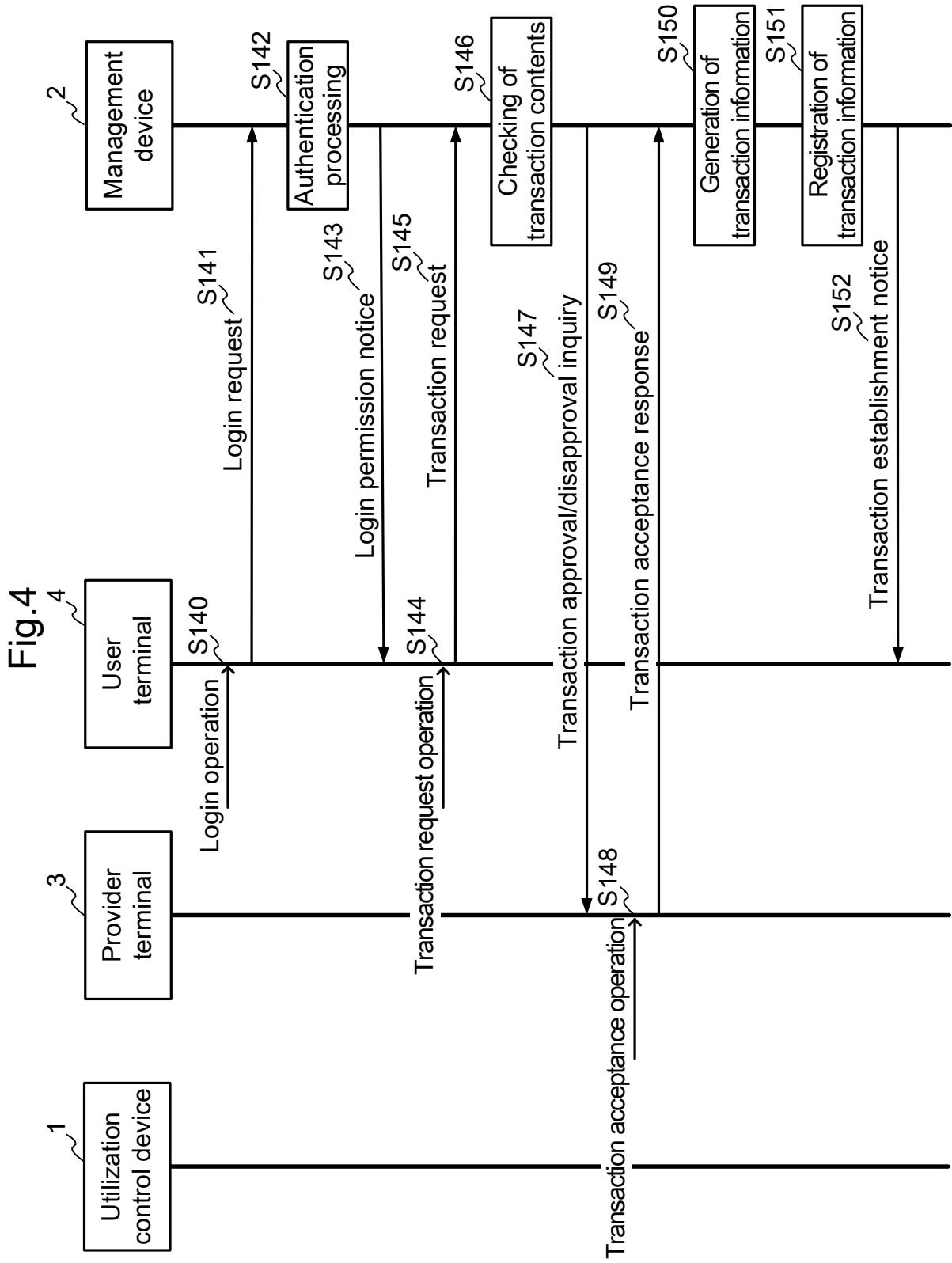


Fig.3





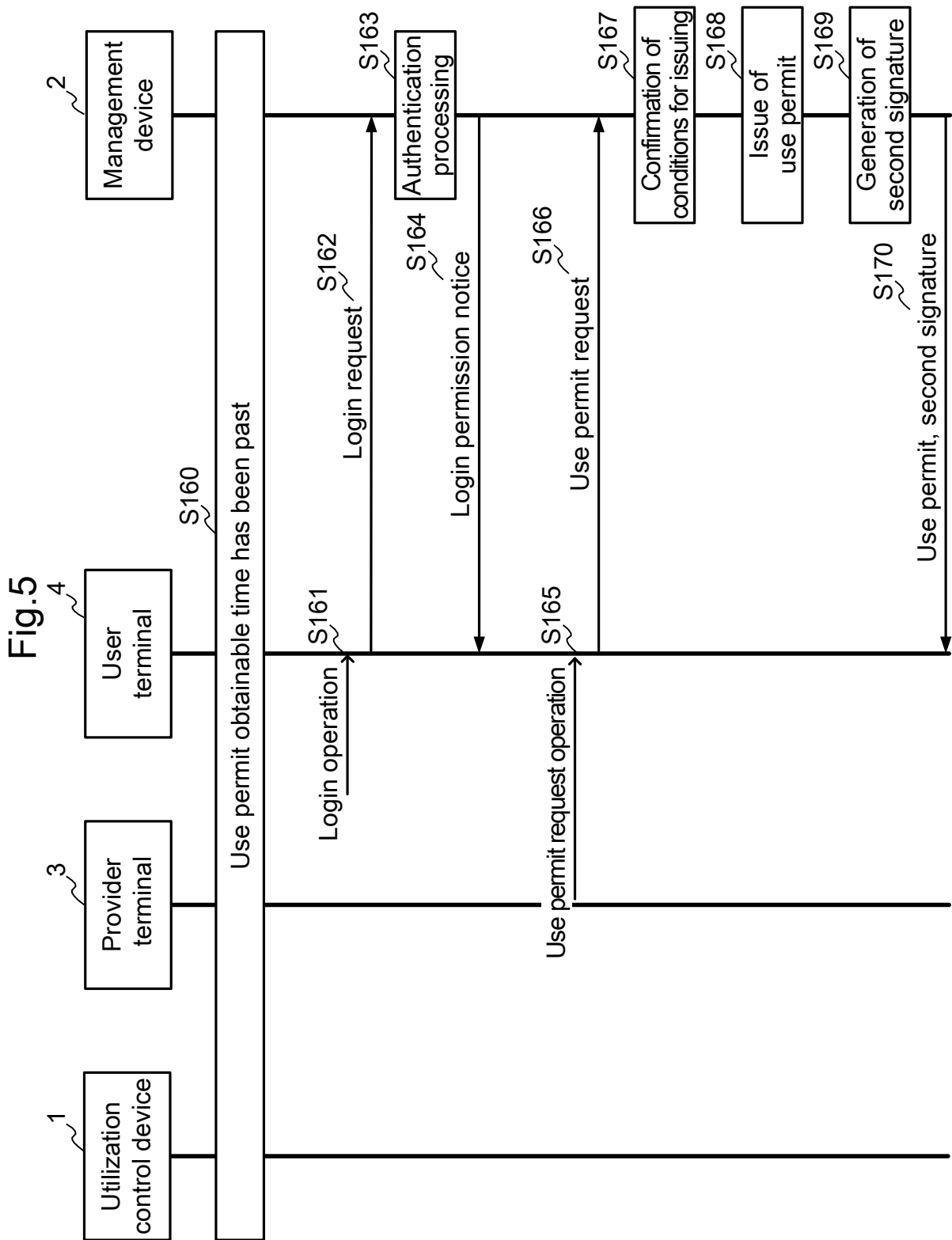


Fig.6

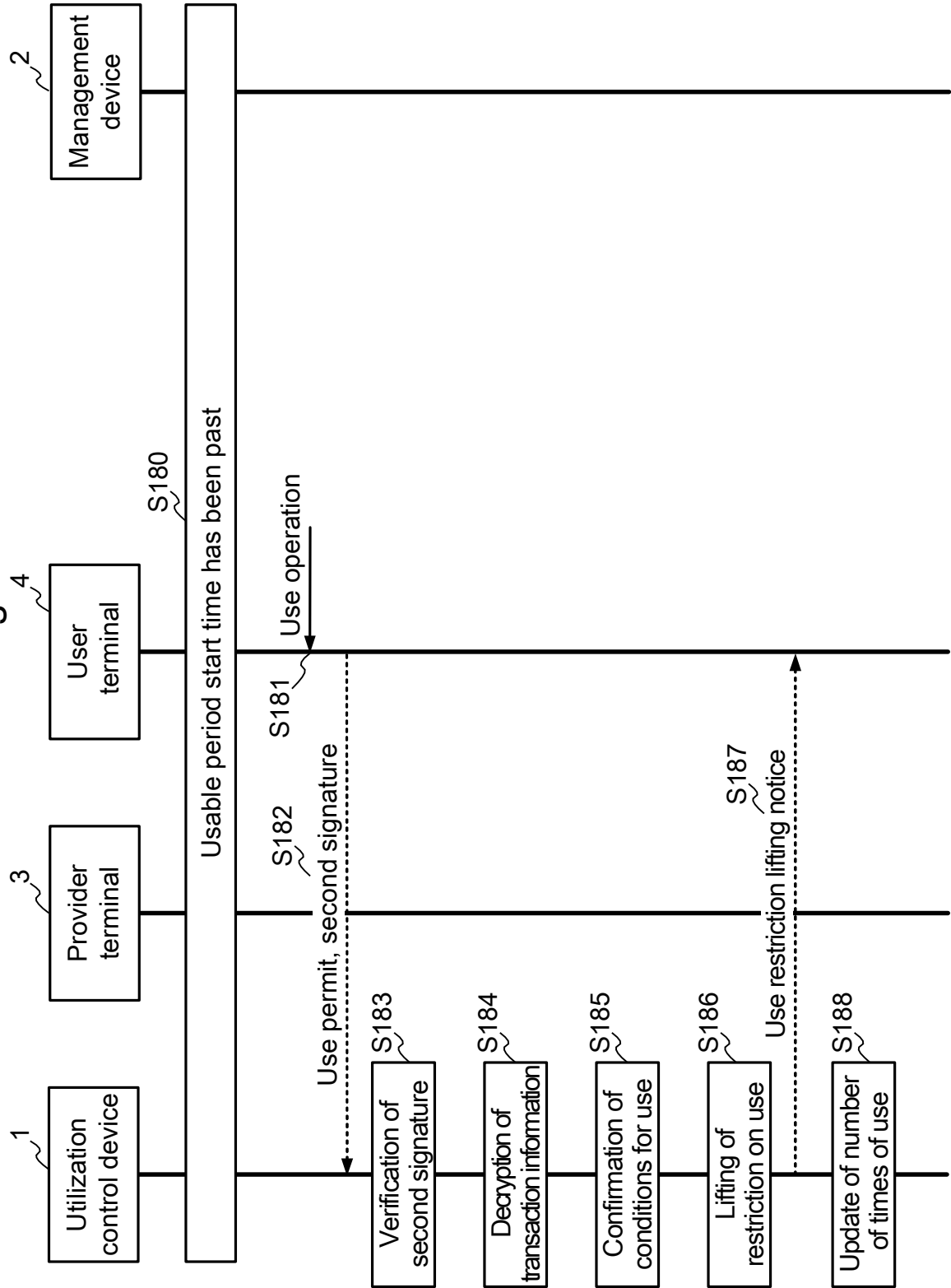


Fig.7

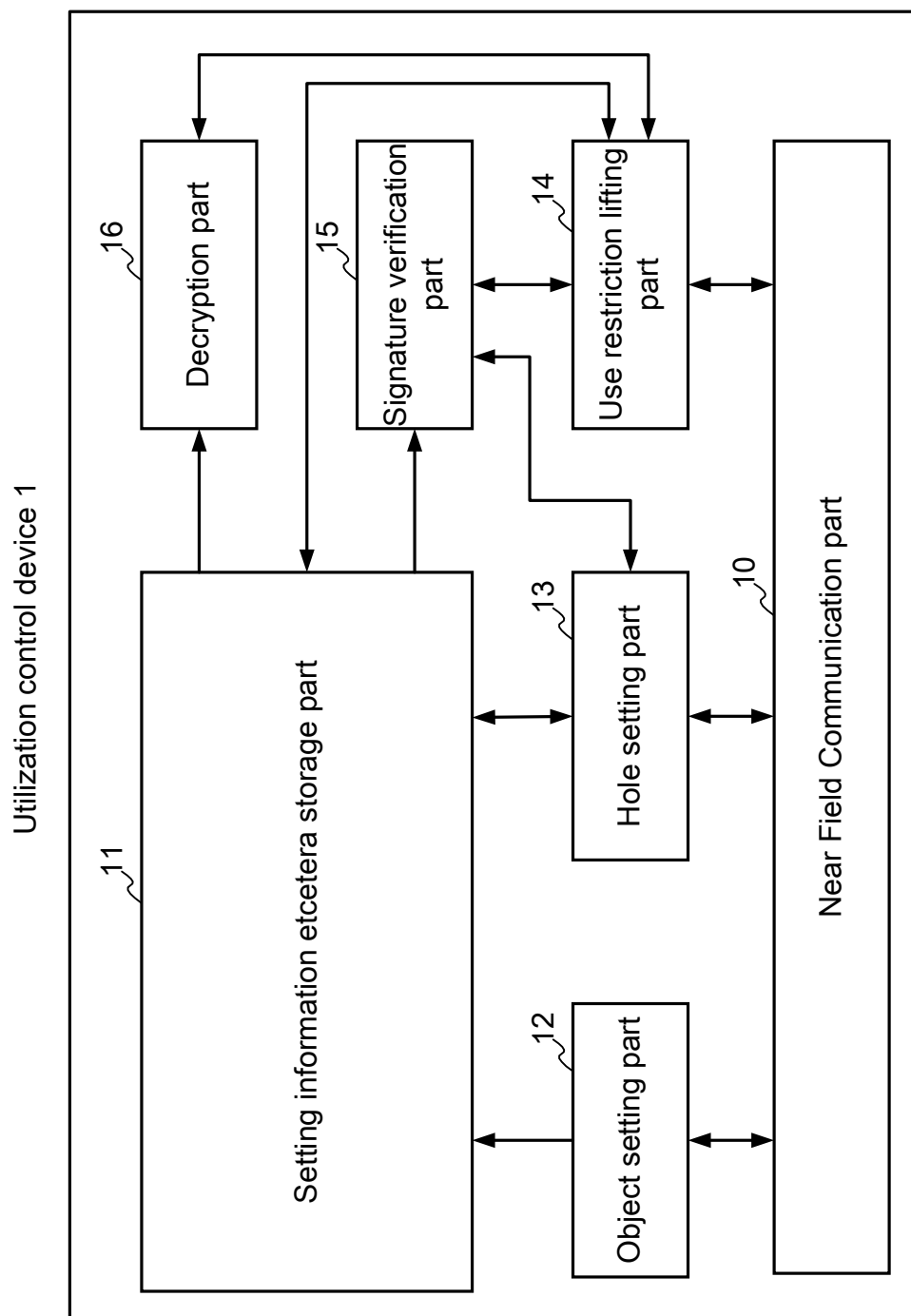


Fig.8

Utilization control device 1

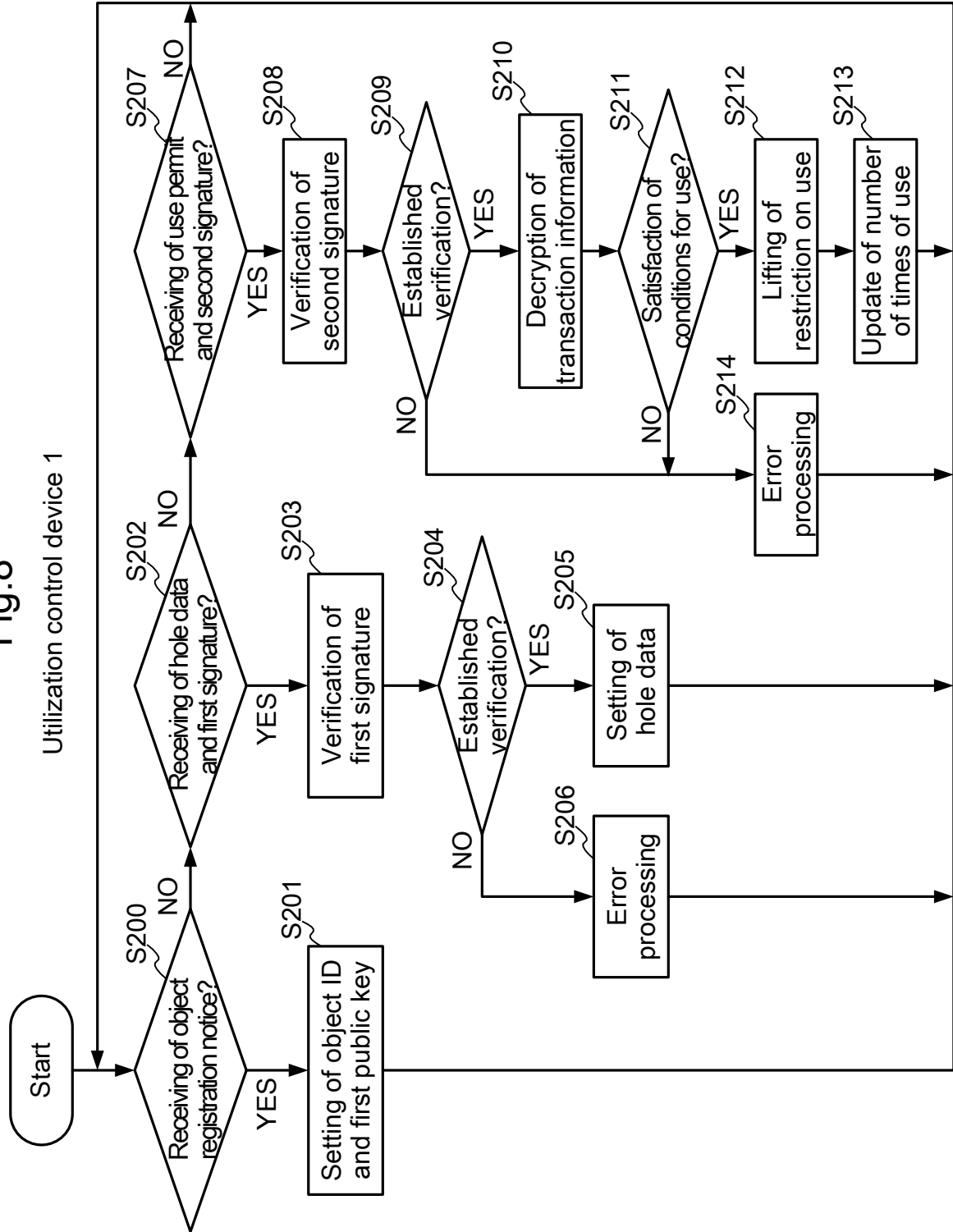


Fig.9

Management device 2

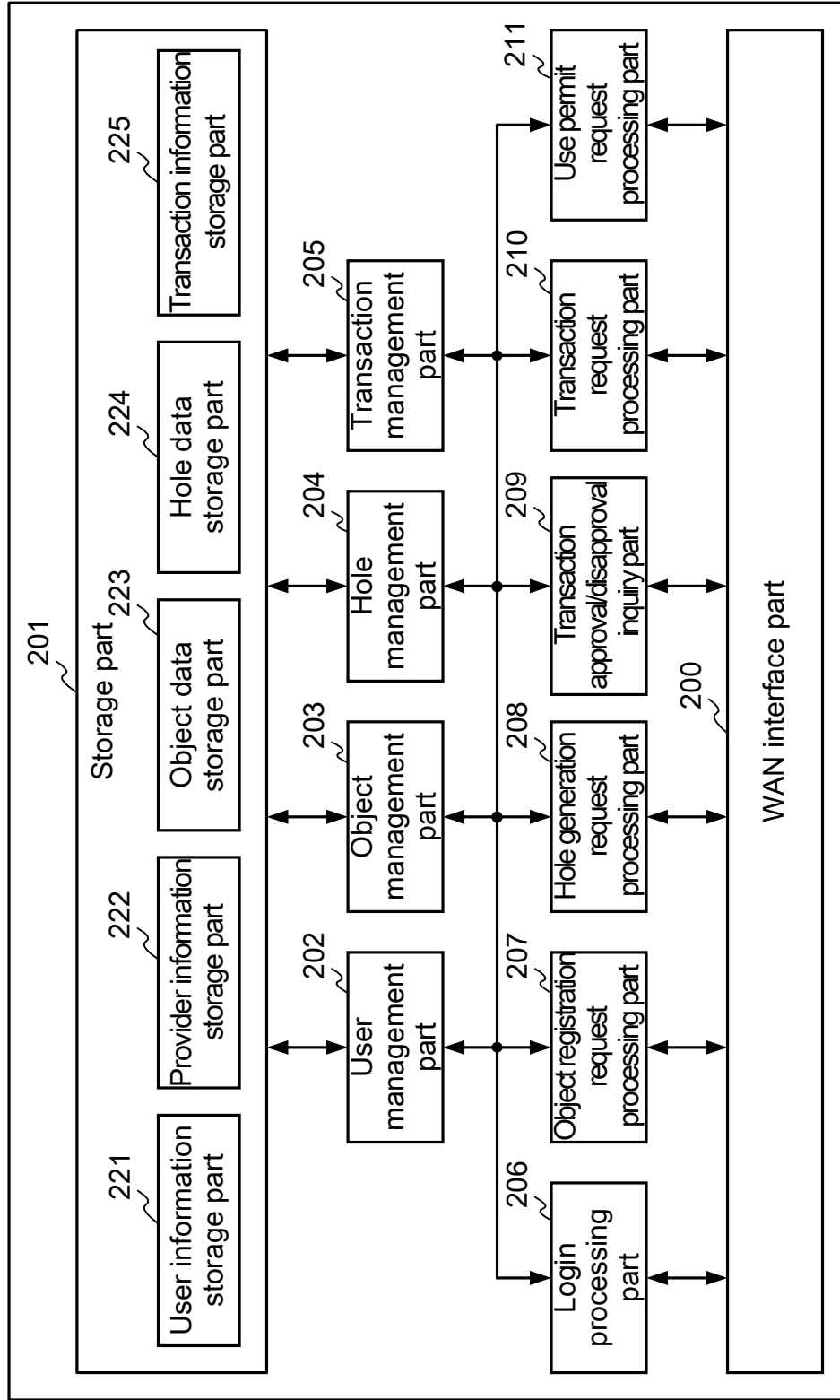


Fig.10

User information storage part 221

<u>2211</u> User ID	<u>2212</u> Password	<u>2213</u> Address information	<u>2214</u> Personal information	
A 0 0 0 1	****	*****	*****	} 2210
A 0 0 0 2	****	*****	*****	} 2210
⋮	⋮	⋮	⋮	⋮

Fig.11

Provider information storage part 222

<u>2221</u> User ID	<u>2222</u> Password	<u>2223</u> Address information	<u>2224</u> Personal information	
B 0 0 1	****	*****	*****	} 2220
B 0 0 2	****	*****	*****	
⋮	⋮	⋮	⋮	} 2220 ⋮ ⋮ ⋮ ⋮
⋮	⋮	⋮	⋮	
⋮	⋮	⋮	⋮	
⋮	⋮	⋮	⋮	

Fig.12

Object data storage part 223

Object ID	First public key	First secret key	Facility information	User ID
C 0 0 1	****	****	*****	B 0 0 5
C 0 0 2	****	****	*****	B 0 0 7
⋮	⋮	⋮	⋮	⋮

Fig.13

Hole data storage part 224

2241	2242	2243	2244	2245	
Hole ID	Second public key	Second secret key	Common key	Object ID	
E 0 0 1	****	****	****	C 0 0 1	2240
E 0 0 2	****	****	****	C 0 0 2	2240
⋮	⋮	⋮	⋮	⋮	⋮

Fig.14

Transaction information storage part 225

2256	2251	2252	2253	2254	2255	
Transaction ID	Object ID	User ID (user)	User ID (provider)	Desire information	User permit obtainable time	
D 0 0 1	C 0 0 2	A 0 0 8	B 0 0 7	Usable period start time : ***** Usable period end time : ***** Number of times of use : ****	2018/12/21 9 : 00 ~	} 2250
D 0 0 2	C 0 0 1	A 0 0 5	B 0 0 5	Usable period start time : ***** Usable period end time : ***** Number of times of use : ****	2018/12/21 11 : 00 ~	
⋮	⋮	⋮	⋮	⋮	⋮	⋮

Fig.15

Management device 2

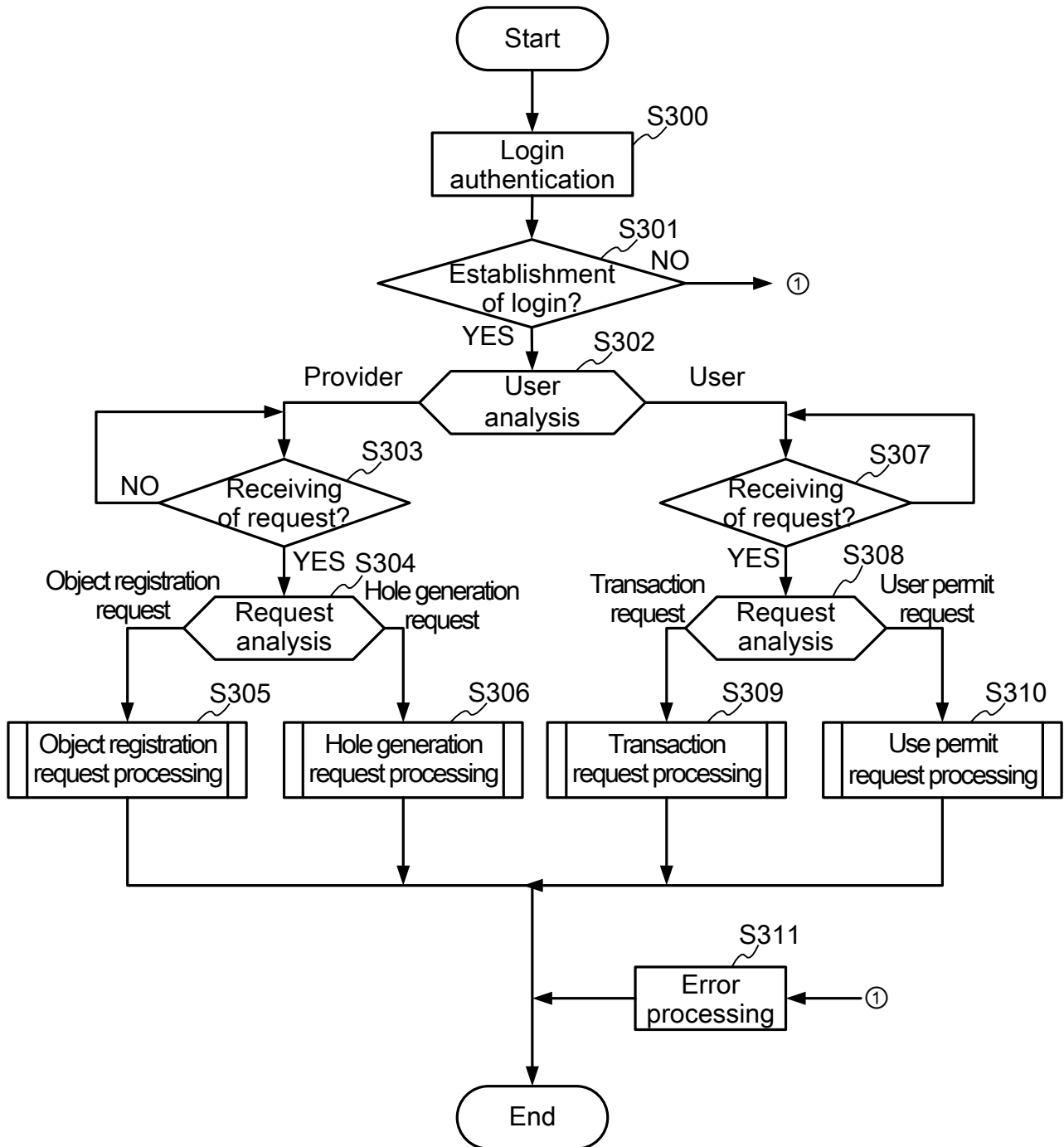


Fig.16

Object registration request processing S305

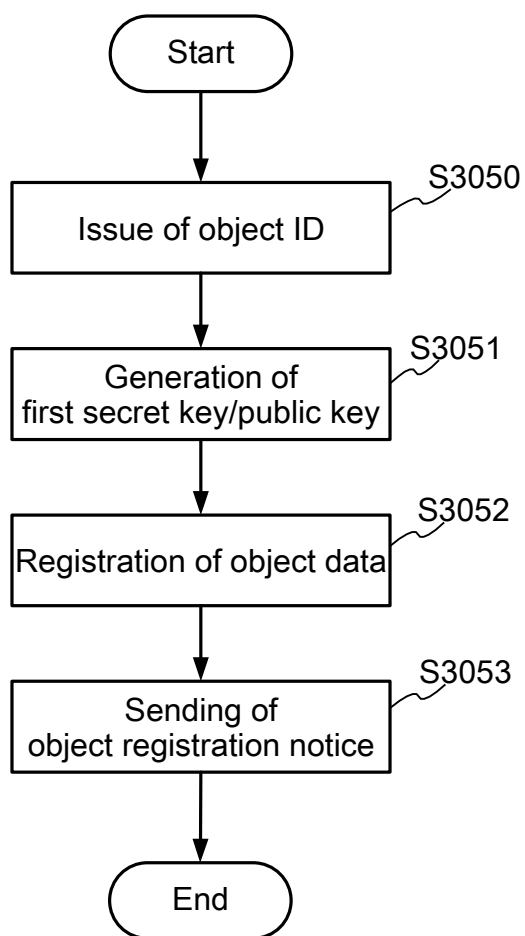


Fig.17

Hole generation request processing S306

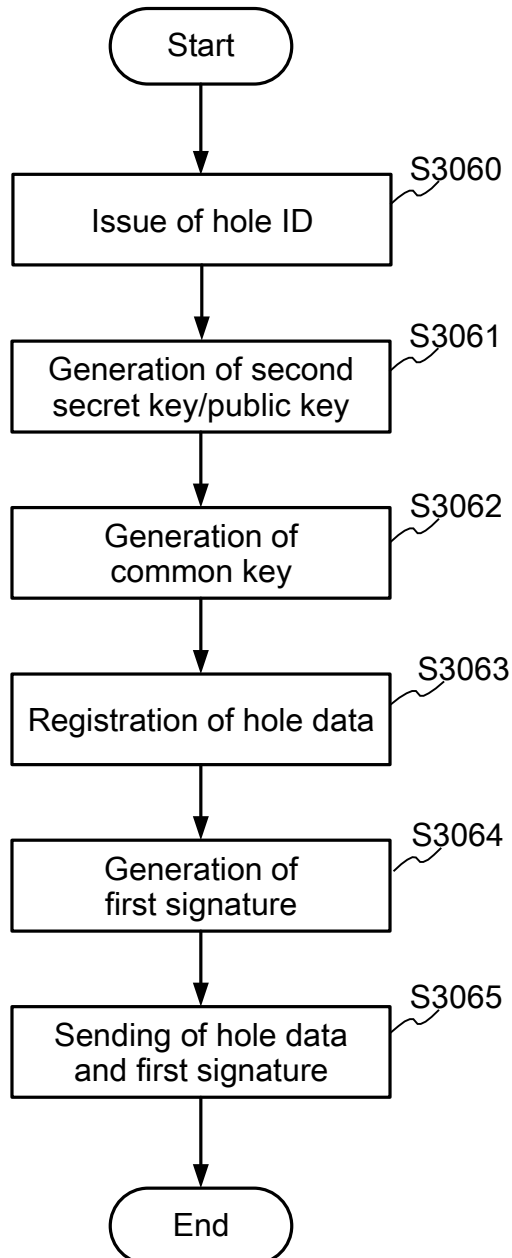


Fig.18

Transaction request processing S309

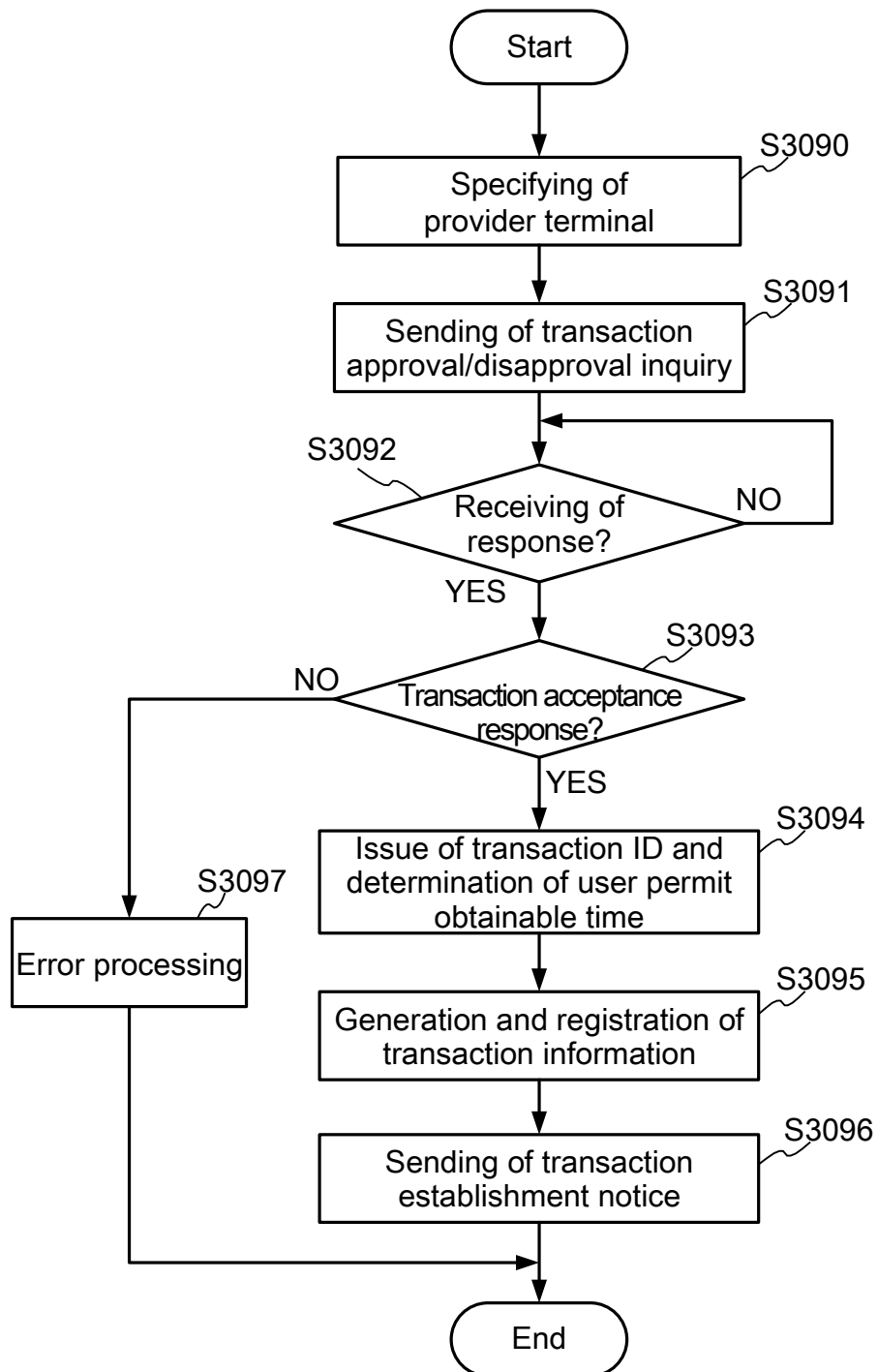


Fig.19

Use permit request processing S310

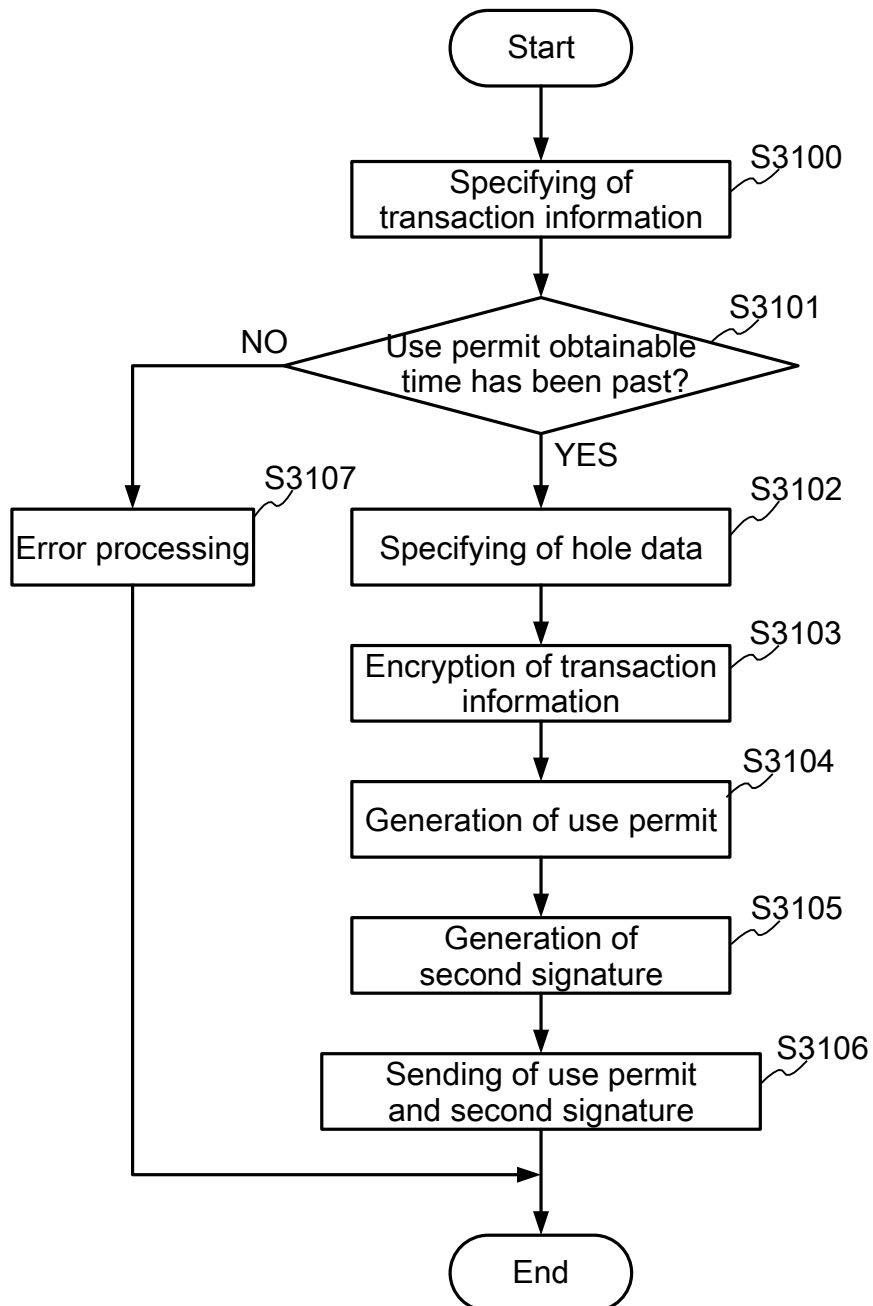


Fig.20

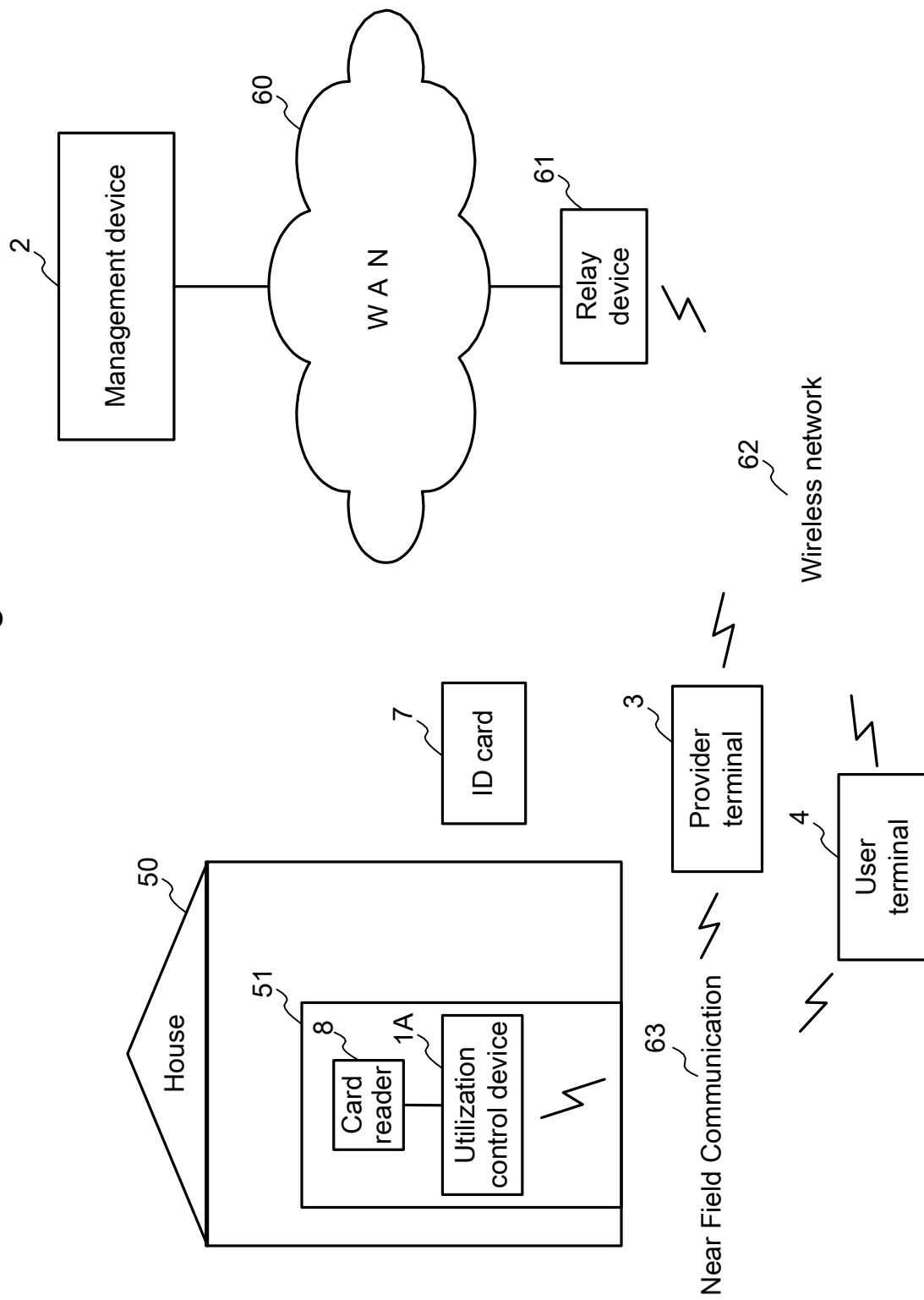


Fig.21

