

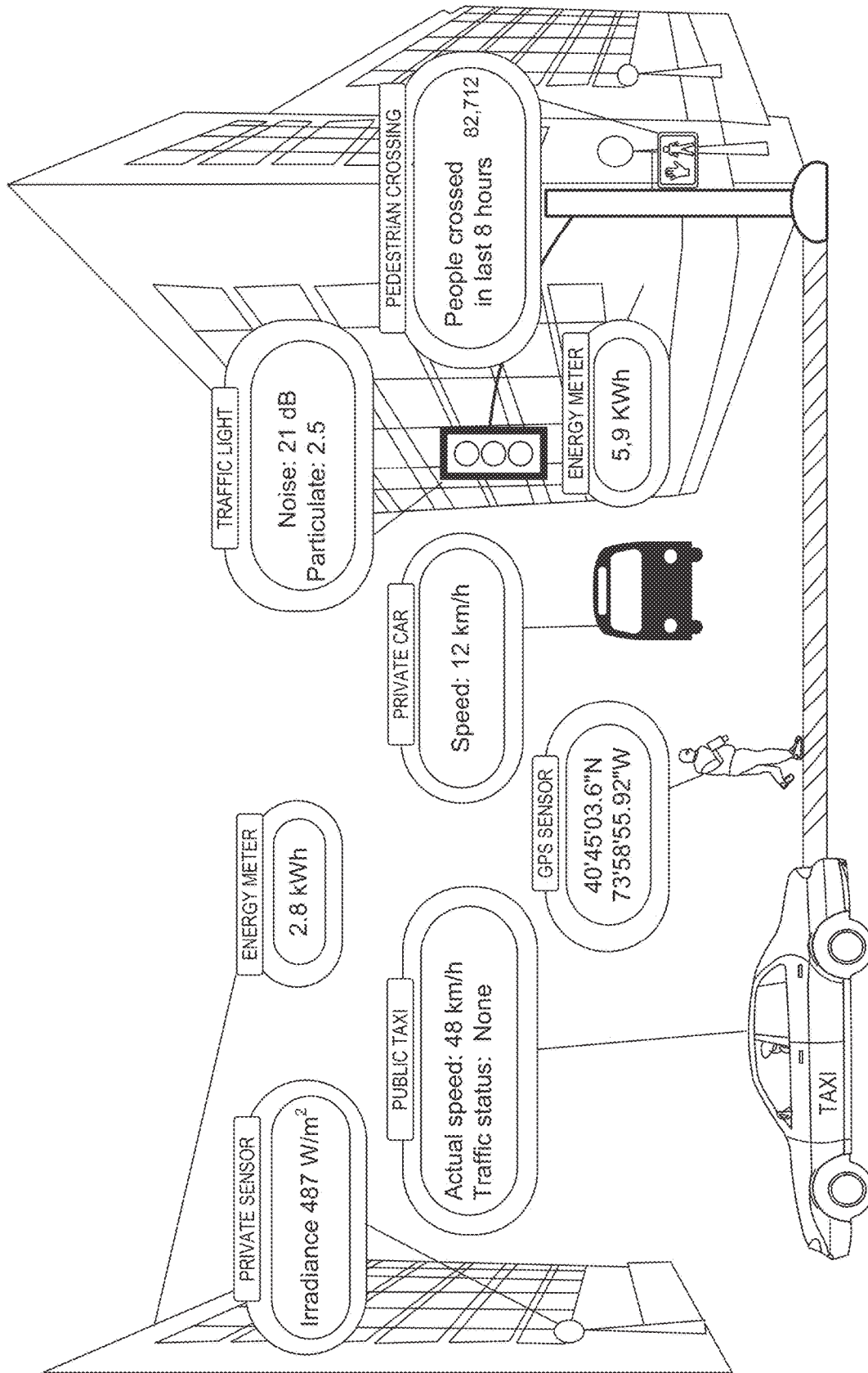


FIG. 1

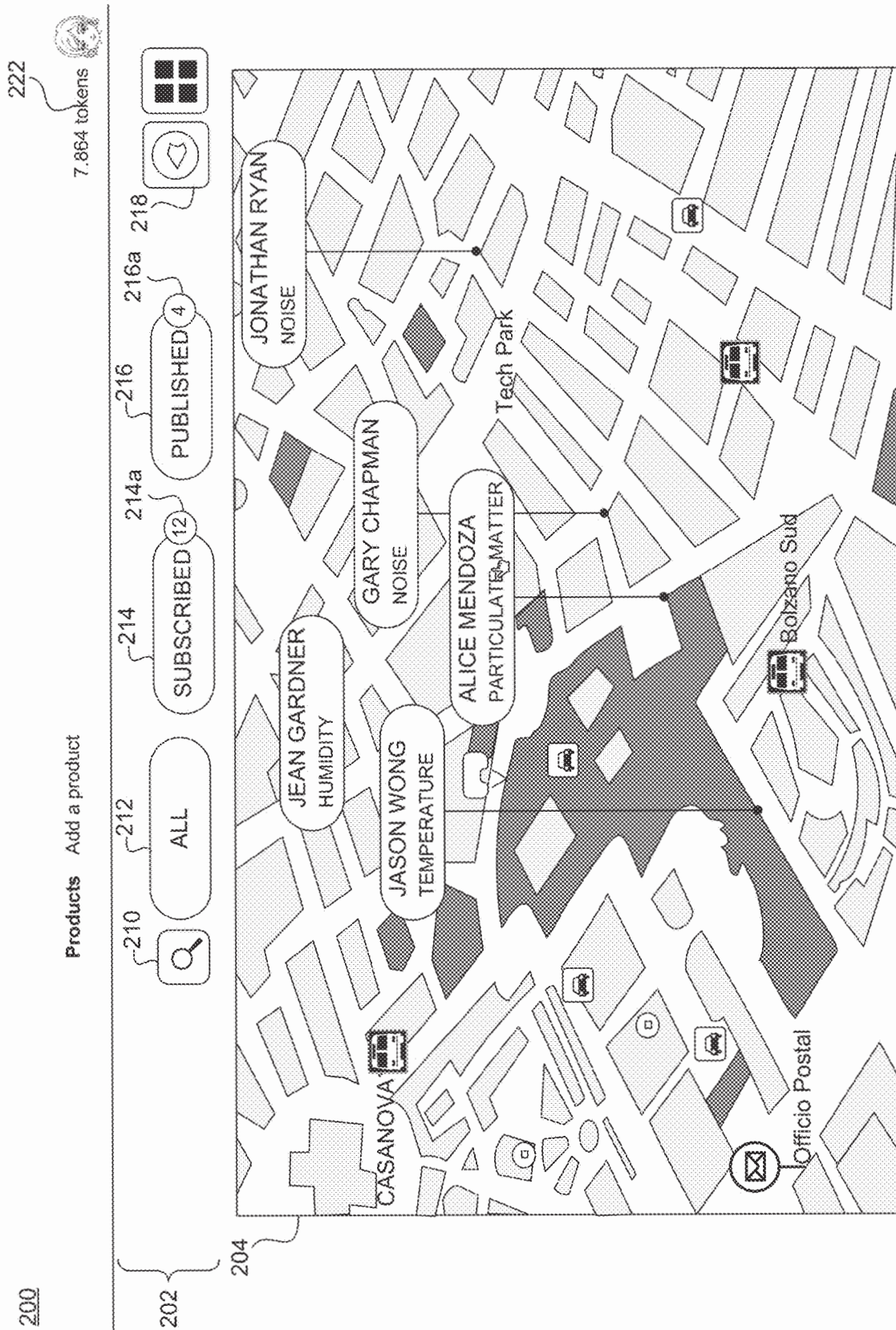


FIG. 2

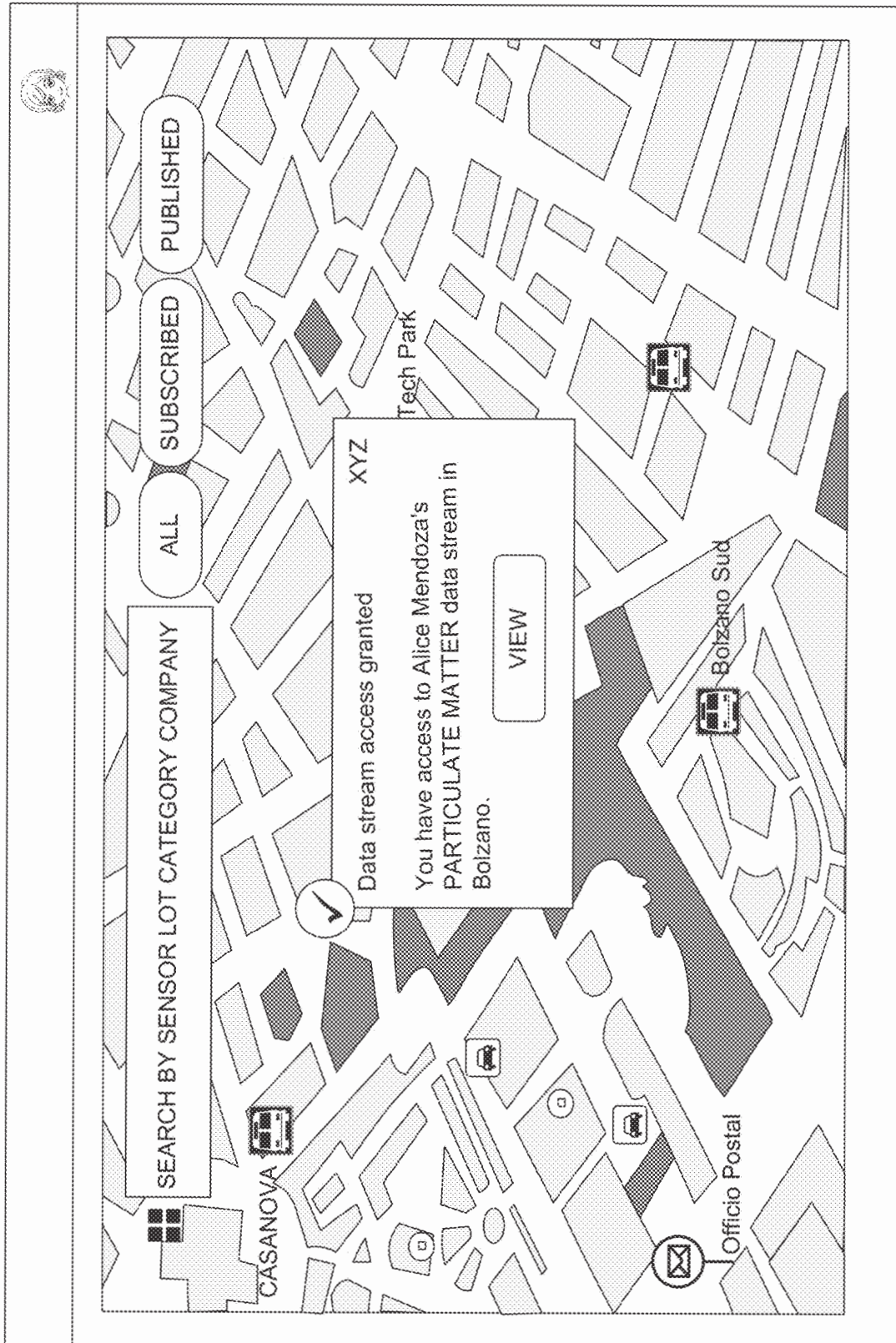


FIG. 3



← Back to the list

PARTICULATE MATTER

Located in [Bolzano](#)

Published by [Alice Mendoza](#)

☆☆☆☆

NOTES

Real time data streams from a particulate matter sensor located in the city center of Bolzano. 32 tokens per day to access my data streams.

SENSOR POSITION

STATIC

LATITUDE	LONGITUDE	HEIGHT
45.4832295	12.2032397	22 METERS

ADDRESS
VIA DEL MACELLO 36, 39100 BOLZANO (ITALY)

TEMPERATURE SENSOR
+PARTICULATE MATTER

32 TOK/DAY

10 SUBSCRIBERS

7 GRANTED

VIEW SUBSCRIBERS LIST

DOWNLOAD CONFIG. FILES

FIG. 4

[← Back to the list](#)

10 SUBSCRIBERS

☐ USER	SUBSCRIPTION DATE	STATE	
☐ ELECTRIC MOBILITY G	10 JAN 2020	☐ NOT GRANTED	GRANT ACCESS
☐ CAR MAINTENANCE R	03 JAN 2020	☒ GRANTED	REVOKE ACCESS
☐ INSURANCE G	09 DEC 2019	☒ GRANTED	REVOKE ACCESS
☐ INSURANCE F	09 DEC 2019	☐ NOT GRANTED	GRANT ACCESS
☐ HR MANAGEMENT C	09 DEC 2019	☐ NOT GRANTED	GRANT ACCESS
☐ FLEET MANAGEMENT E	06 DEC 2019	☐ NOT GRANTED	GRANT ACCESS
☐ INSURANCE E	06 DEC 2019	☒ GRANTED	REVOKE ACCESS
☐ INSURANCE D	06 DEC 2019	☒ GRANTED	REVOKE ACCESS

FIG. 5



7.864 tokens

Products Add a product

☐ USER	SUBSCRIPTION DATE	STATE	
☐ ELECTRIC MOBILITY G	10 JAN 2020	⊘ NOT GRANTED	GRANT ACCESS
☐ CAR MAINTENANCE R	03 JAN 2020	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE G	09 DEC 2019	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE F	09 DEC 2019	⊘ NOT GRANTED	GRANT ACCESS
☐ HR MANAGEMENT C	09 DEC 2019	⊘ NOT GRANTED	GRANT ACCESS
☐ FLEET MANAGEMENT E	06 DEC 2019	⊘ NOT GRANTED	GRANT ACCESS
☐ INSURANCE E	06 DEC 2019	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE D	06 DEC 2019	✓ GRANTED	REVOKE ACCESS
☐ TRAFFIC MANAGEMENT B	02 DEC 2019	✓ GRANTED	REVOKE ACCESS
☐ FLEET MANAGEMENT A	02 DEC 2019	✓ GRANTED	REVOKE ACCESS

FIG. 6



7.864 tokens

Products Add a product

☐ USER	SUBSCRIPTION DATE	STATE	
☐ ELECTRIC MOBILITY G	10 JAN 2020	✓ GRANTED	REVOKE ACCESS
☐ CAR MAINTENANCE R	03 JAN 2020	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE G	09 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE F	09 DIC 2019	⊗ NOT GRANTED	GRANT ACCESS
☐ HR MANAGEMENT C	09 DIC 2019	⊗ NOT GRANTED	GRANT ACCESS
☐ FLEET MANAGEMENT E	06 DIC 2019	⊗ NOT GRANTED	GRANT ACCESS
☐ INSURANCE E	06 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE D	06 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ TRAFFIC MANAGEMENT B	02 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ FLEET MANAGEMENT A	02 DIC 2019	✓ GRANTED	REVOKE ACCESS

FIG. 7



7.864 tokens

Products Add a product

☐ USER	SUBSCRIPTION DATE	STATE	
☐ ELECTRIC MOBILITY G	10 JAN 2020	✓ GRANTED	REVOKE ACCESS
☐ CAR MAINTENANCE R	03 JAN 2020	⊗ NOT GRANTED	GRANT ACCESS
☐ INSURANCE G	09 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE F	09 DIC 2019	⊗ NOT GRANTED	GRANT ACCESS
☐ HR MANAGEMENT C	09 DIC 2019	⊗ NOT GRANTED	GRANT ACCESS
☐ FLEET MANAGEMENT E	06 DIC 2019	⊗ NOT GRANTED	GRANT ACCESS
☐ INSURANCE E	06 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ INSURANCE D	06 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ TRAFFIC MANAGEMENT B	02 DIC 2019	✓ GRANTED	REVOKE ACCESS
☐ FLEET MANAGEMENT A	02 DIC 2019	✓ GRANTED	REVOKE ACCESS

FIG. 8

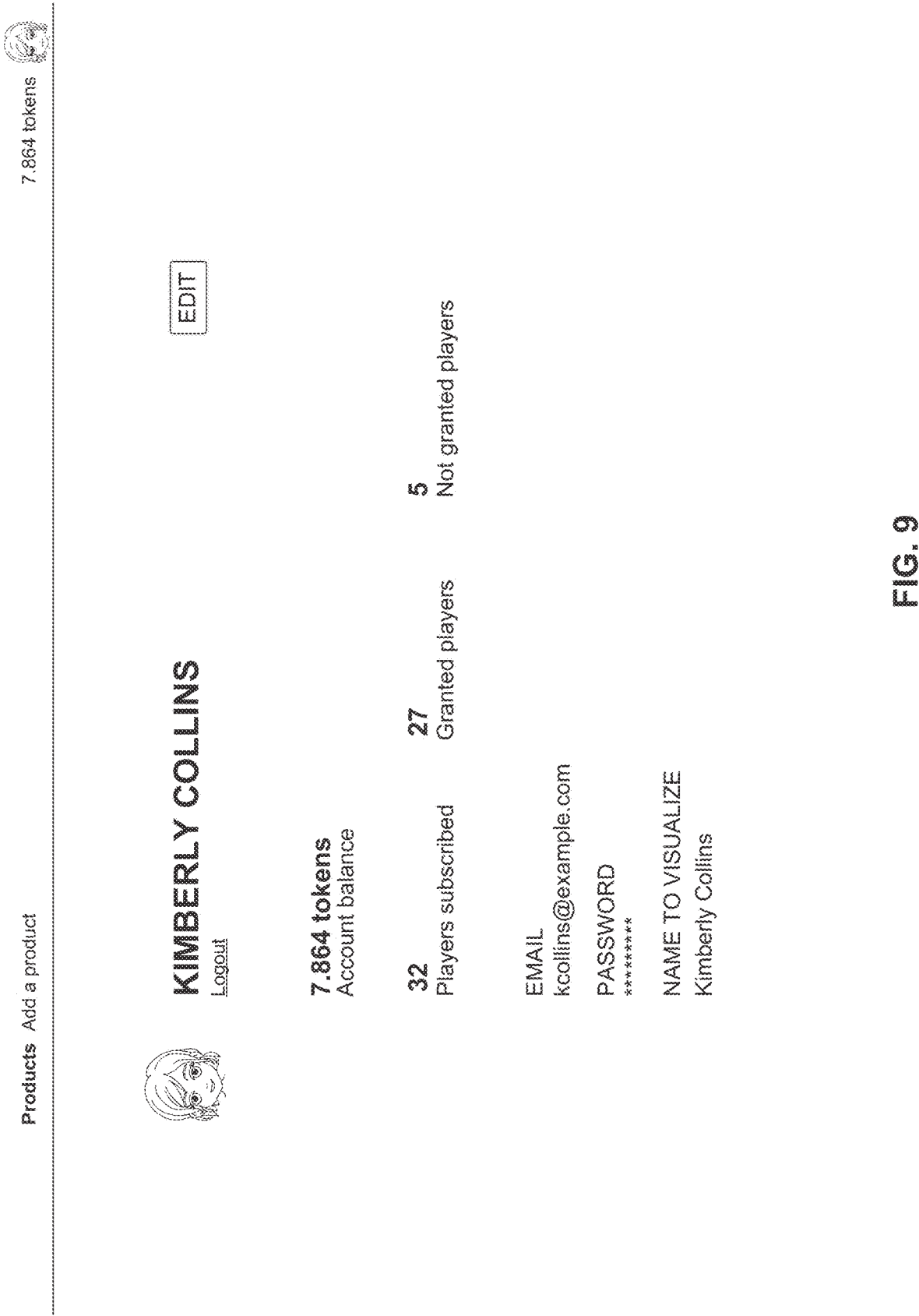


FIG. 9

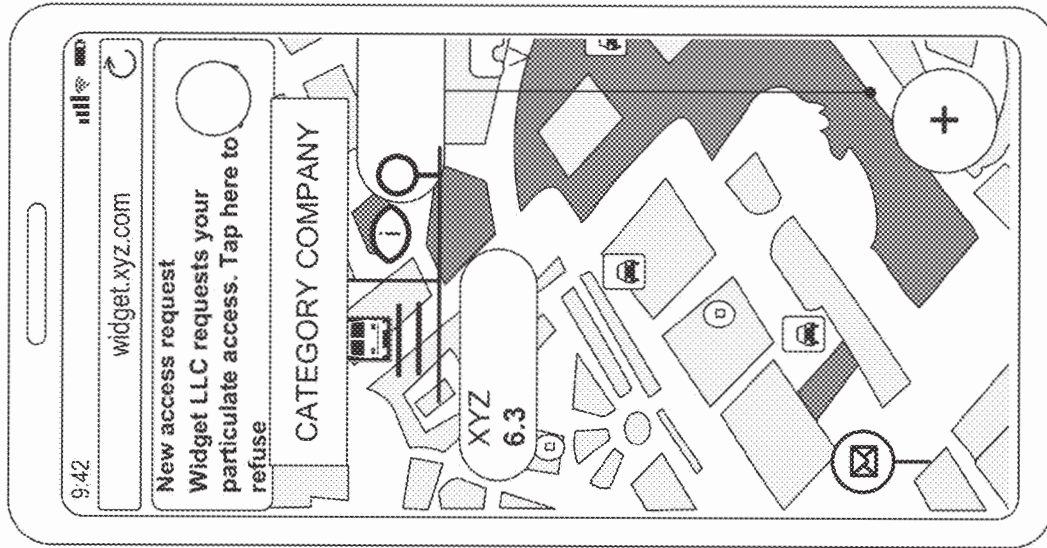


FIG. 10

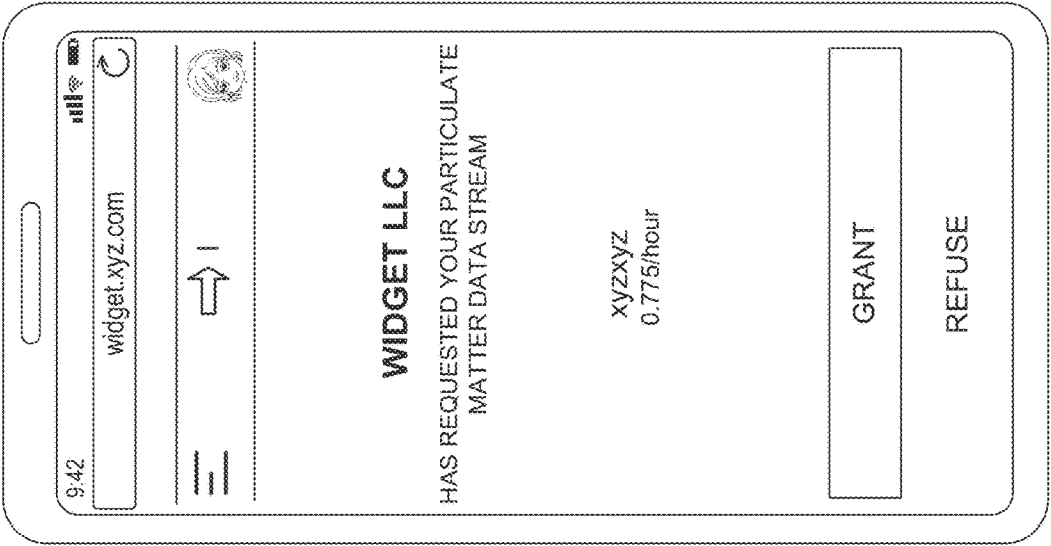


FIG. 11

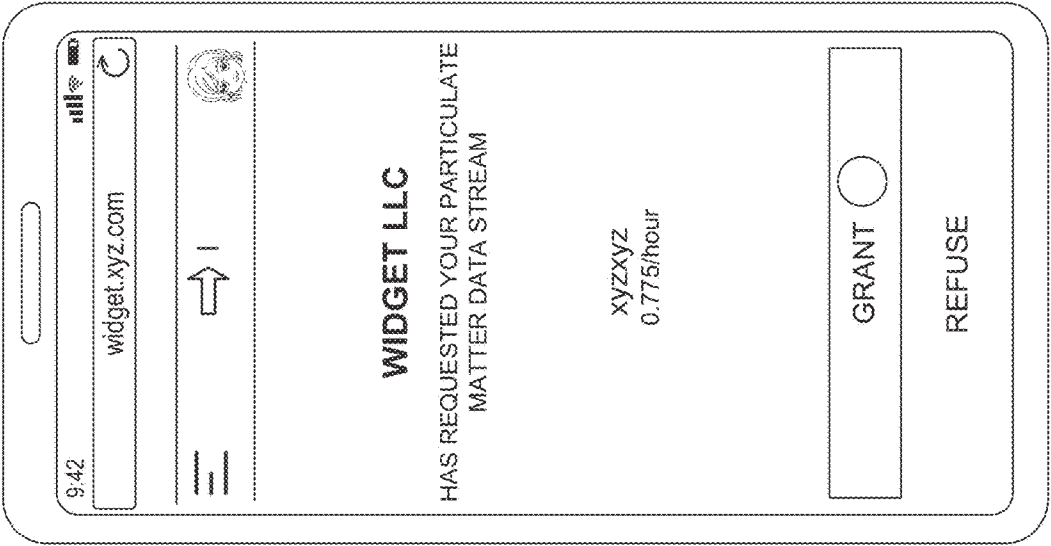


FIG. 12

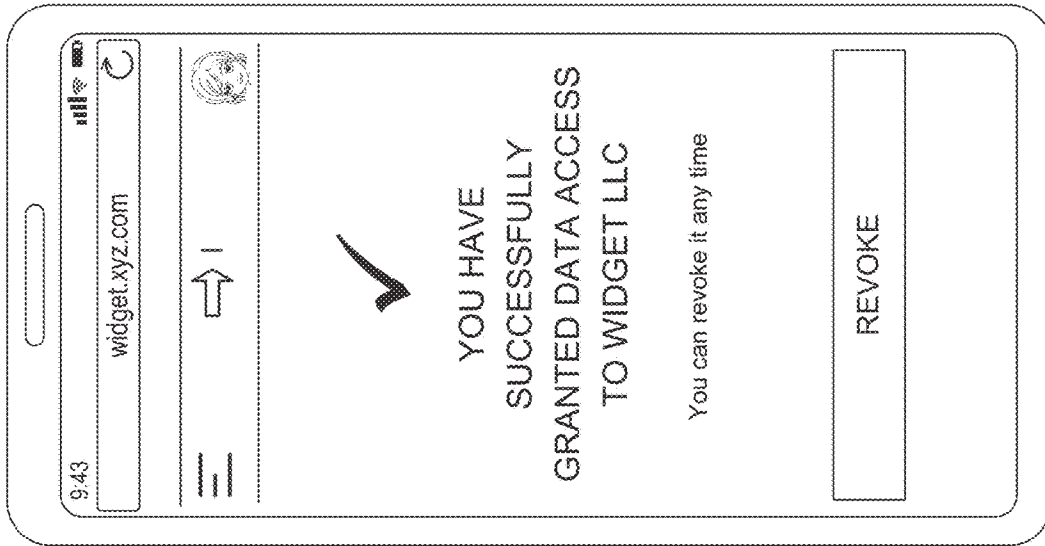


FIG. 13

GRANT & REVOKE DATA ACCESS

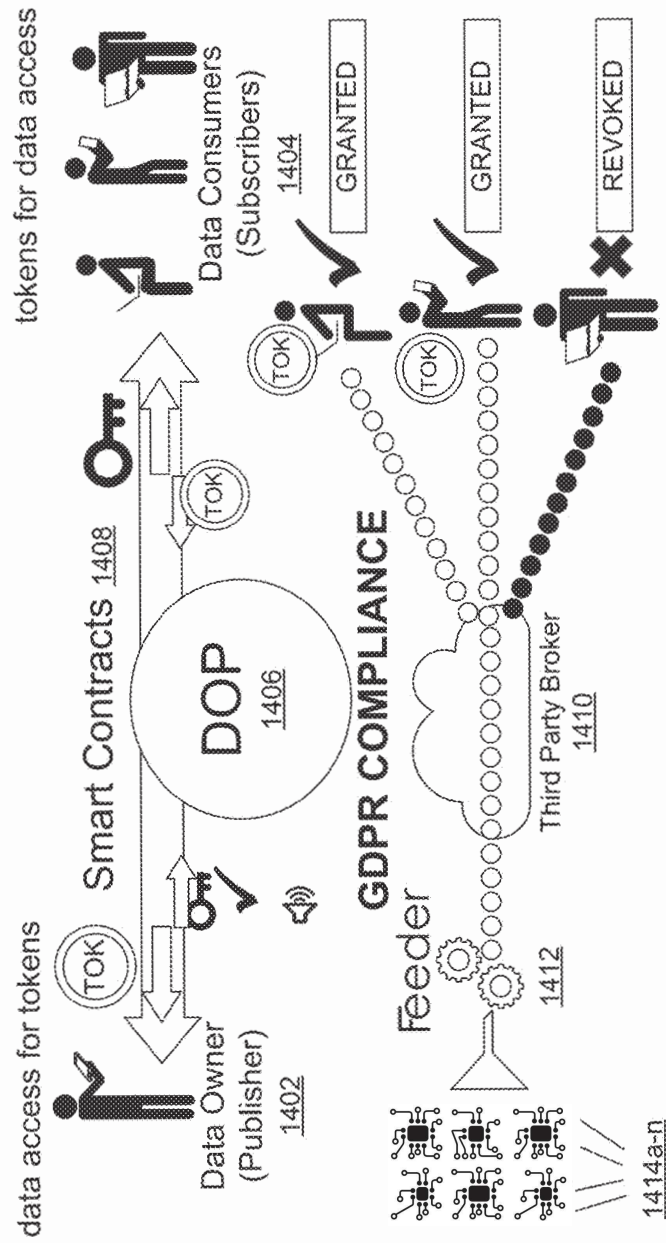


FIG. 14

1500

DATA ACCESS REQUEST

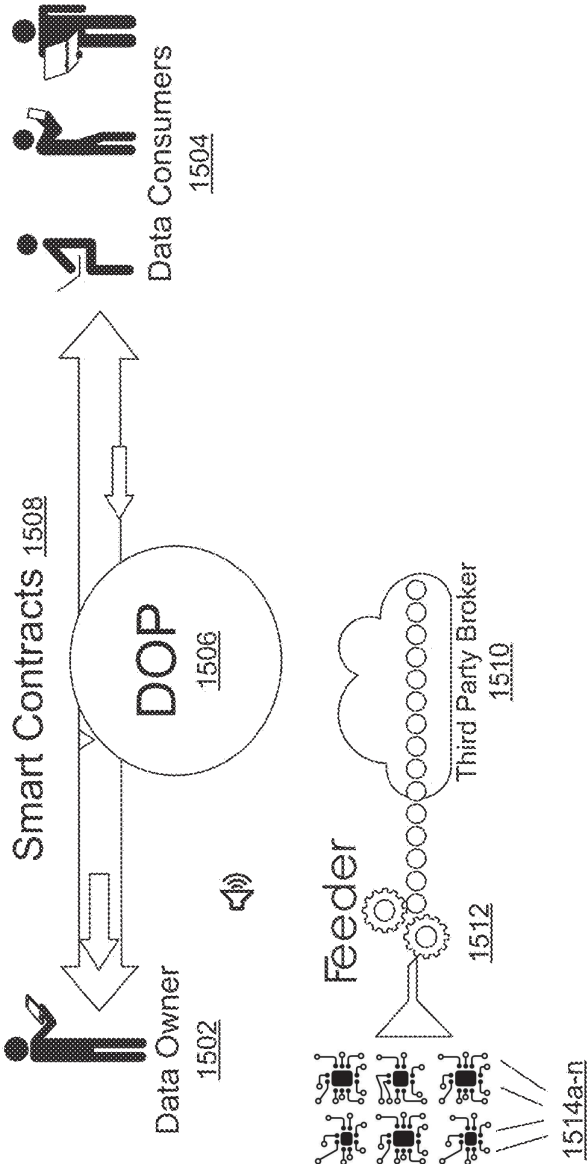


FIG. 15

GRANT DATA ACCESS

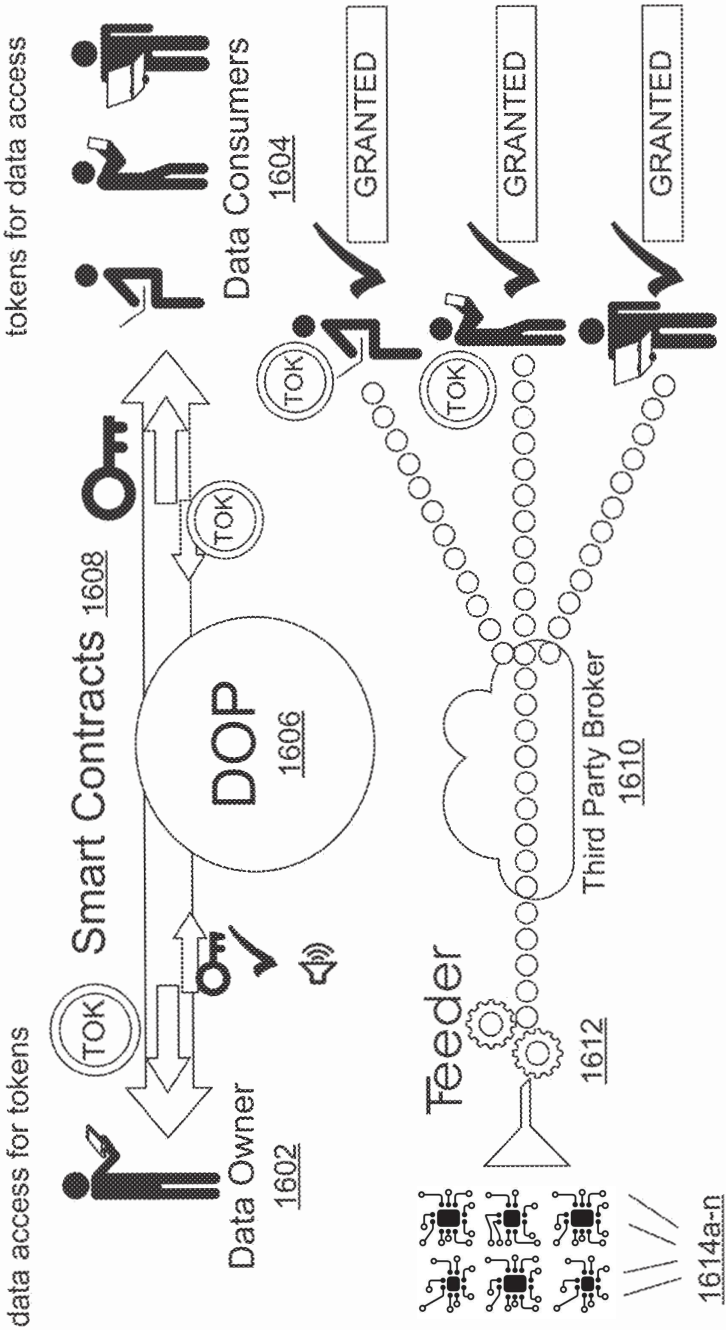
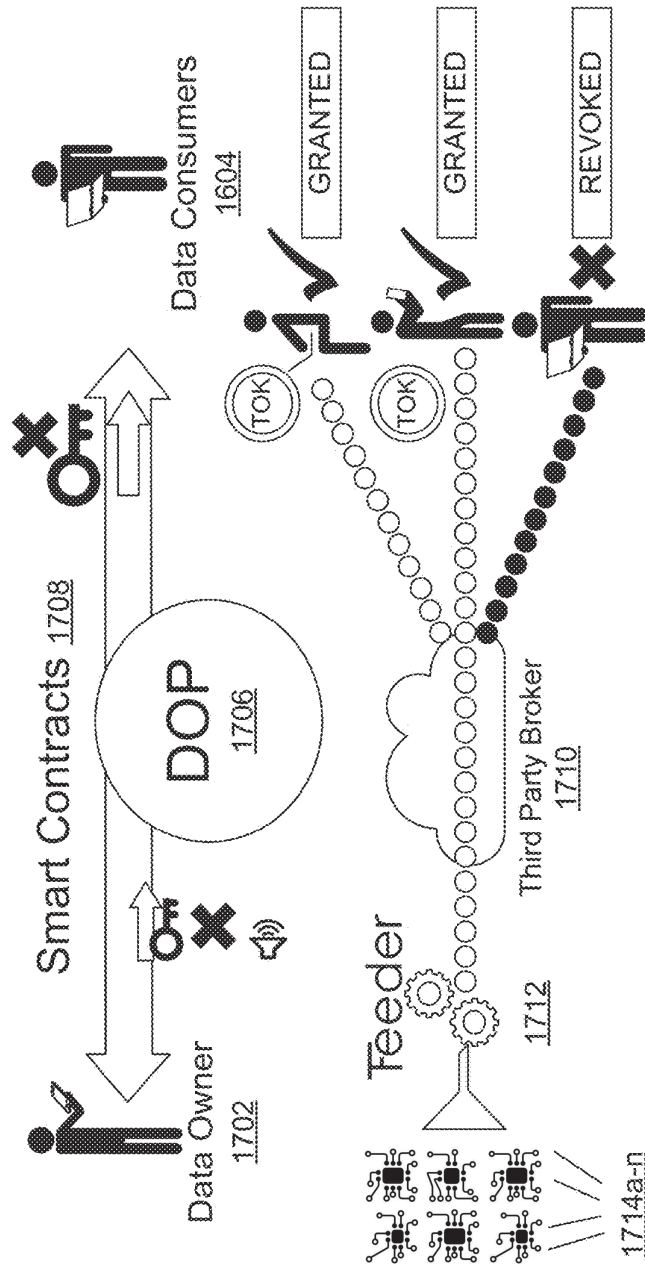


FIG. 16

AS NEEDED – REVOKE DATA ACCESS



17
1
G.
E

CAR DATA SHARING

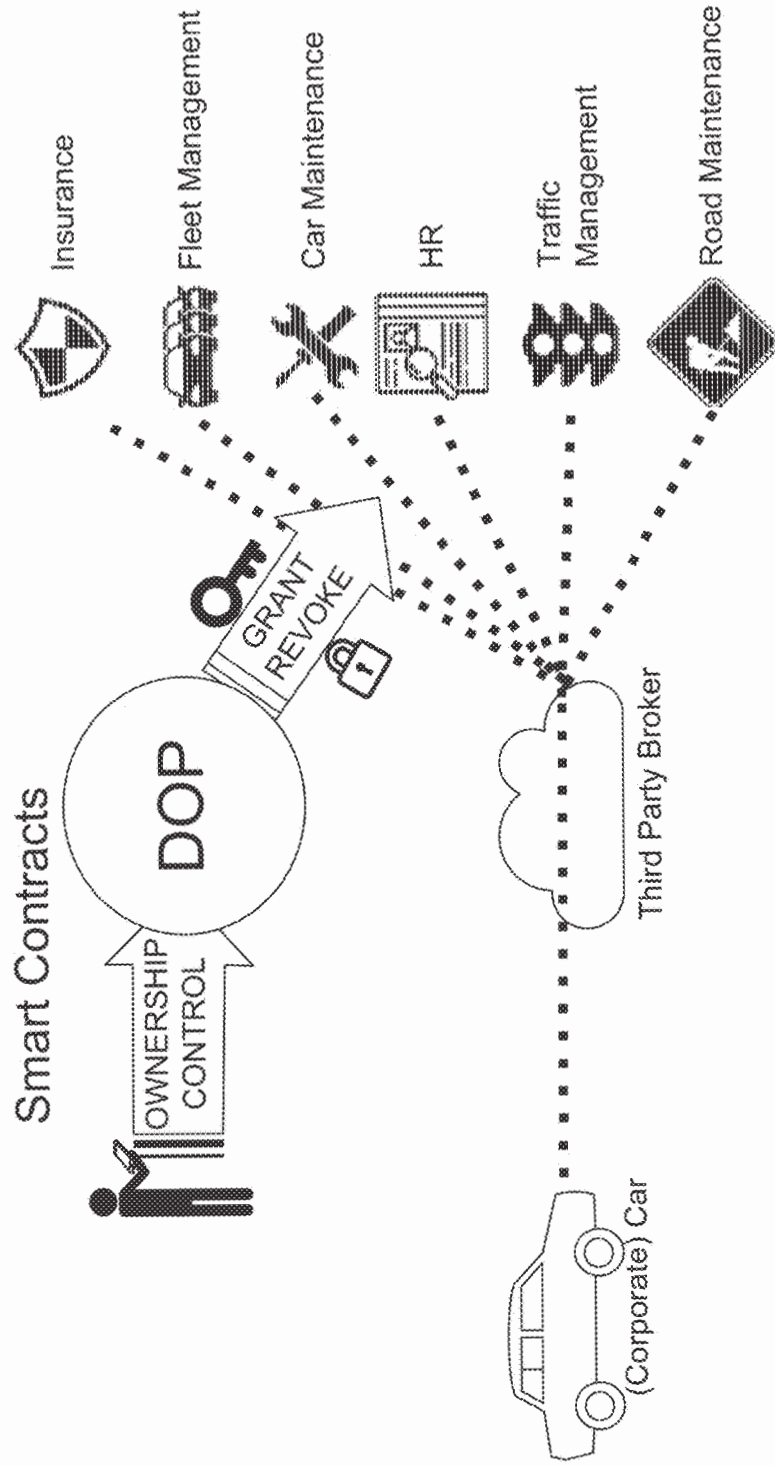


FIG. 18

ENERGY METER DATA SHARING

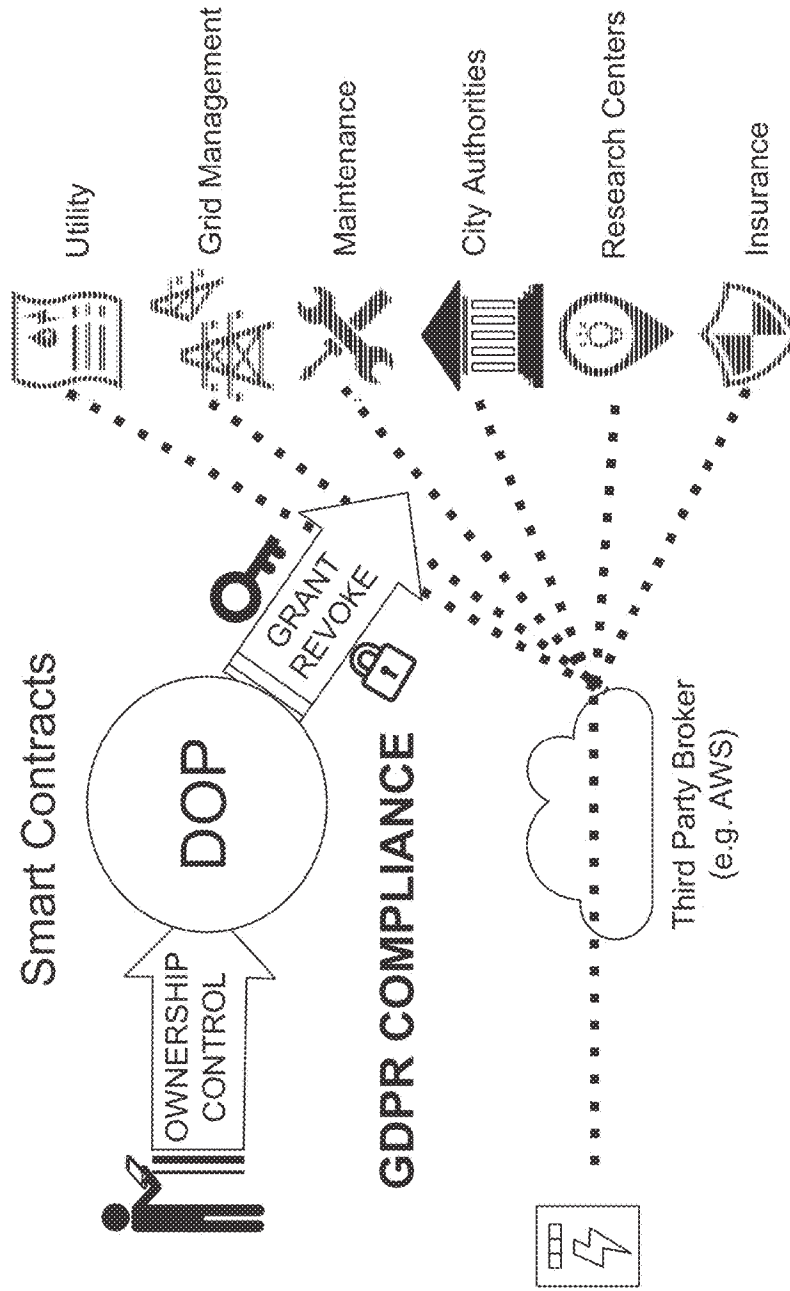


FIG. 19

ENERGY DATA SHARING

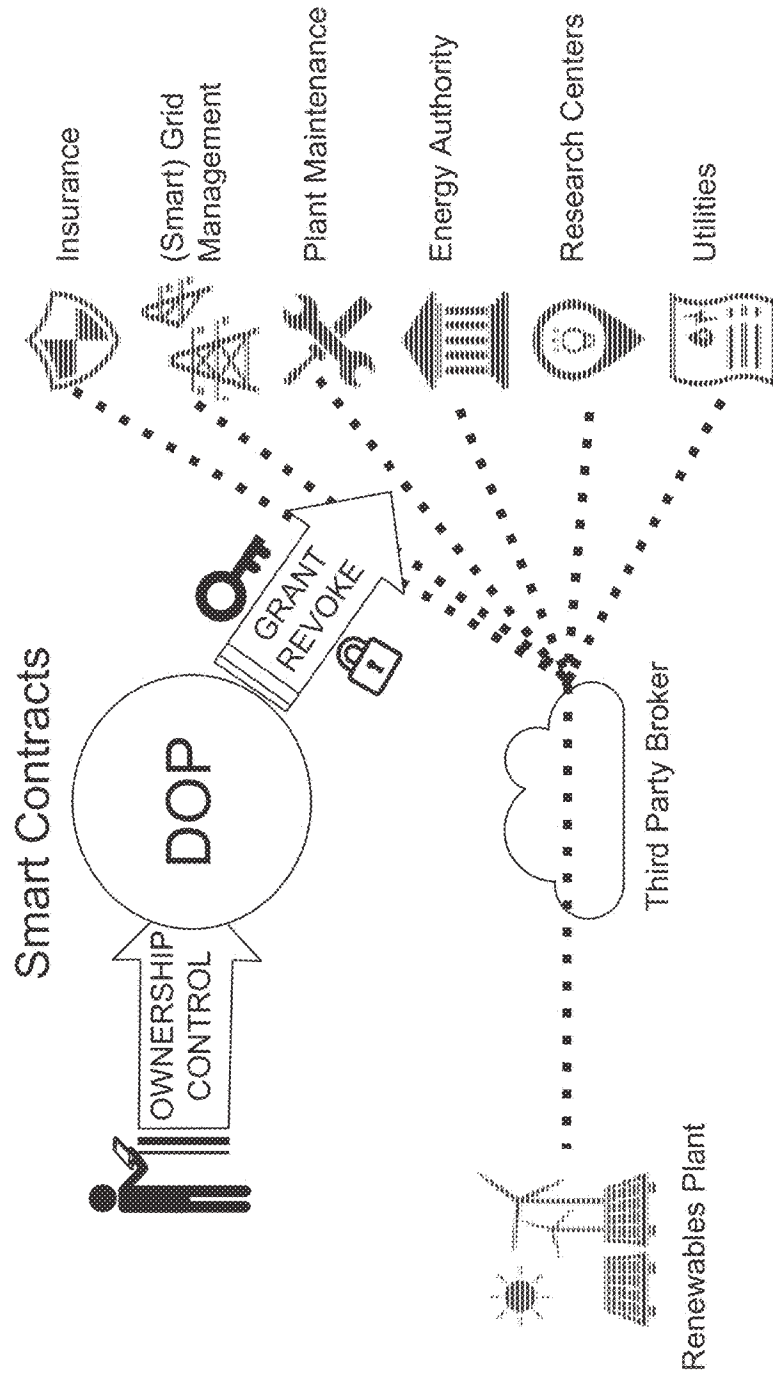


FIG. 20

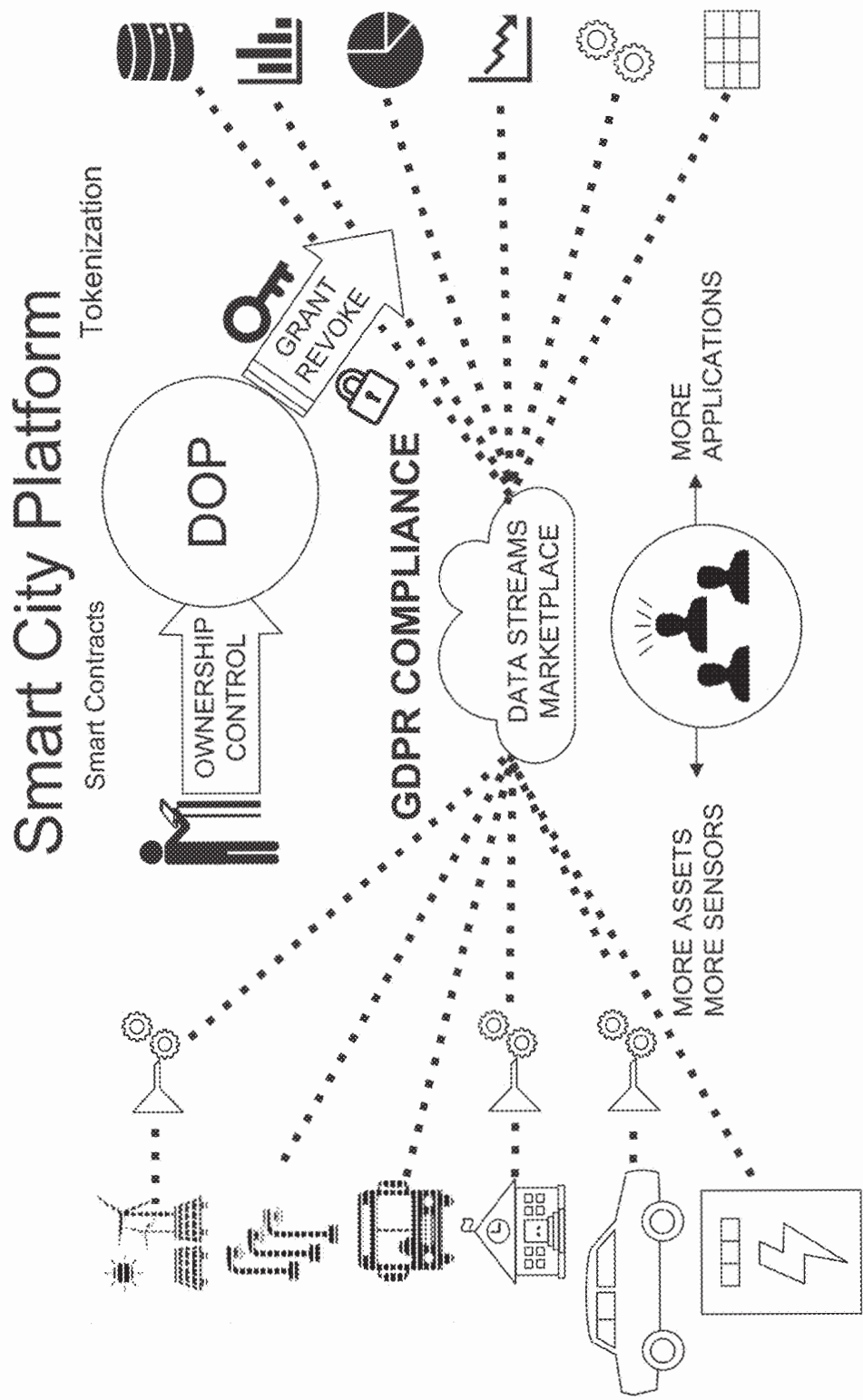
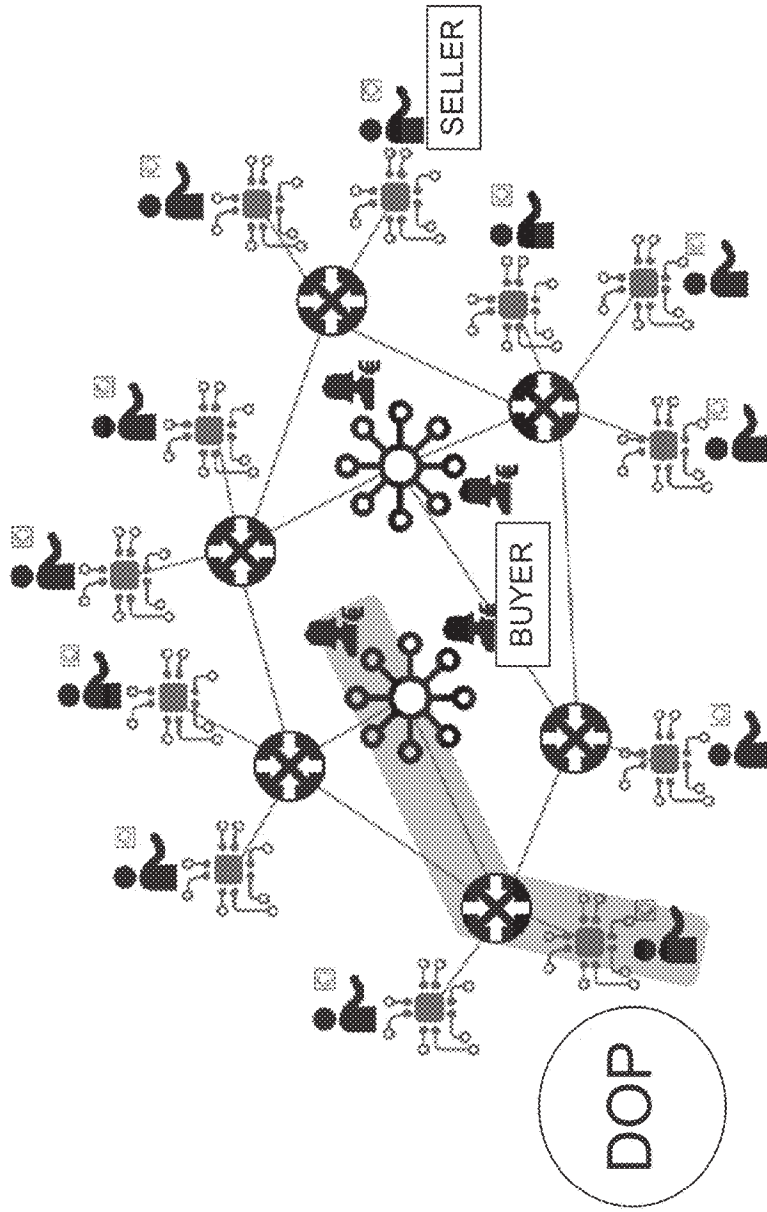


FIG. 21

DOP: AN OVERLAY NETWORK



DATA TRADING IS INDEPENDENT FROM DATA TRANSPORT

FIG. 22

DEBUG	[client]	@MSG:	1546531354409	dangraz
DEBUG	[client]	@MSG:	1546531354911	dangraz
DEBUG	[client]	@MSG:	1546531355416	dangraz
DEBUG	[client]	@MSG:	1546531355920	dangraz
DEBUG	[client]	@MSG:	1546531356428	dangraz
DEBUG	[client]	@MSG:	1546531356928	dangraz
DEBUG	[client]	@MSG:	1546531357430	dangraz
DEBUG	[client]	@MSG:	1546531357941	dangraz
DEBUG	[client]	@MSG:	1546531358441	dangraz
DEBUG	[client]	@MSG:	1546531358948	dangraz
DEBUG	[client]	@MSG:	1546531359451	dangraz
DEBUG	[client]	@MSG:	1546531359956	dangraz
DEBUG	[client]	@MSG:	1546531360463	dangraz
DEBUG	[client]	@MSG:	1546531360966	dangraz
DEBUG	[client]	@MSG:	1546531361481	dangraz
DEBUG	[client]	@MSG:	1546531361981	dangraz
DEBUG	[client]	@MSG:	1546531362496	dangraz
DEBUG	[client]	@MSG:	1546531363011	dangraz
DEBUG	[client]	@MSG:	1546531363515	dangraz
DEBUG	[client]	@MSG:	1546531364021	dangraz
DEBUG	[client]	@MSG:	1546531364529	dangraz
DEBUG	[client]	@MSG:	1546531365033	dangraz
DEBUG	[client]	@MSG:	1546531365544	dangraz
DEBUG	[client]	@MSG:	1546531366051	dangraz
DEBUG	[client]	@MSG:	1546531366552	dangraz
DEBUG	[client]	@MSG:	1546531367053	dangraz
DEBUG	[client]	@MSG:	1546531367563	dangraz
DEBUG	[client]	@MSG:	1546531368070	dangraz
DEBUG	[client]	@MSG:	1546531368576	dangraz

FIG. 23

```

[10212] 2019/01/03 17:04:54.133432 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD: [@DAT;787459;5b1d:BumHPWTcuIW/
JnxFCMsSzKvsYnk/yyMN;]

[10212] 2019/01/03 17:04:54.634427 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:54.634427 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;2f07:BumHPWTcuIUeUjZgPocFHavsYnk/yyMN;]

[10212] 2019/01/03 17:04:55.134786 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:55.134786 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;a8c6:BumHPWTcuIV7zOusiYnMqavsYnk/yyMN;]

[10212] 2019/01/03 17:04:55.638959 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:55.639957 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;dc89:BumHPWTcuIXV0EWwx6tSsavsYnk/yyMN;]

[10212] 2019/01/03 17:04:56.141111 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:56.142111 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;264c:BumHPWTcuIVua44E0IKha6vsYnk/yyMN;]

[10212] 2019/01/03 17:04:56.647031 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:56.648021 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;6270:BumHPWTcuIXOWnYX0eRHYavsYnk/yyMN;]

[10212] 2019/01/03 17:04:57.149292 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:57.149292 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;25d6:BumHPWTcuIXToJ9qEiUnVqvsYnk/yyMN;]

[10212] 2019/01/03 17:04:57.661685 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:57.662688 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;5b0a:BumHPWTcuIVM9i4+1TX+uKvsYnk/yyMN;]

[10212] 2019/01/03 17:04:58.163076 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> [PUB DOP_TOPIC 50]

[10212] 2019/01/03 17:04:58.164078 [33mTRC[0m] 127.0.0.1:49929 -- cid:1 -->> MSG_PAYLOAD:
[@DAT;787459;cb10:BumHPWTcuIXy0qLnsfagKvsYnk/yyMN;]

```

FIG. 24

```
DEBUG [KEYGET] idx:244198
DEBUG [KEYSET] idx:787459,len:48
DEBUG [KEYGET] idx:244198
DEBUG [KEYGET] idx:787459
DEBUG [KEYSET] idx:240690,len:48
DEBUG [KEYGET] idx:787459
DEBUG [KEYGET] idx:240690
DEBUG [KEYSET] idx:116683,len:48
```

FIG. 25

INFO	[01-03] 17:05:57]		Successfully sealed new block	number=70379 hash=7df6b5...0de6d1
INFO	[01-03] 17:05:57]		block reached canonical chain	number=70374 hash=7142ea...75e232
INFO	[01-03] 17:05:57]		mined potential block	number=70379 hash=7df6b5...0de6d1
INFO	[01-03] 17:05:57]		Commit new mining work	number=70380 txs=0 uncles=0 elapsed=997.6µs
INFO	[01-03] 17:06:02]		Successfully sealed new block	number=70380 hash=e3d8cb...5e9461
INFO	[01-03] 17:06:02]		block reached canonical chain	number=70375 hash=e79a36...93c799
INFO	[01-03] 17:06:02]		Commit new mining work	number=70381 txs=0 uncles=0 elapsed=997.2µs
INFO	[01-03] 17:06:02]		mined potential block	number=70380 hash=e3d8cb...5e9461
INFO	[01-03] 17:06:02]		Successfully sealed new block	number=70381 hash=4a9e07...0c226e
INFO	[01-03] 17:06:07]		block reached canonical chain	number=70376 hash=01c8c5...3ddcc3
INFO	[01-03] 17:06:07]		Commit new mining work	number=70382 txs=0 uncles=0 elapsed=997.6µs
INFO	[01-03] 17:06:07]		mined potential block	number=70381 hash=4a9e07...0c226e
INFO	[01-03] 17:06:07]		Submitted transaction	fullhash0x239d6c07138d3ef33163471df85997bf95b8478813e075
6c999575147405cfco recipient=0x31611BE40F69B50bbAB243726F5bb723793C042				
INFO	[01-03] 17:06:12]		Successfully sealed new block	number=70382 hash=66a238...910d61
INFO	[01-03] 17:06:12]		block reached canonical chain	number=70377 hash=8bcd6e...9fc7ad
INFO	[01-03] 17:06:12]		mined potential block	number=70382 hash=66a238...910d61
INFO	[01-03] 17:06:12]		Commit new mining work	number=70383 txs=1 uncles=0 elapsed=998µs
INFO	[01-03] 17:06:17]		Successfully sealed new block	number=70378 hash=977716...1caaa4
INFO	[01-03] 17:06:17]		block reached canonical chain	number=70378 hash=539da2...bc838d
INFO	[01-03] 17:06:17]		mined potential block	number=70383 hash=977716...1caaa4
INFO	[01-03] 17:06:17]		Commit new mining work	number=70384 txs=0 uncles=0 elapsed=996.1µs
INFO	[01-03] 17:06:22]		Successfully sealed new block	number=70384 hash=0543c8...3dace1
INFO	[01-03] 17:06:22]		block reached canonical chain	number=70379 hash=7df6b5...0de6d1
INFO	[01-03] 17:06:22]		mined potential block	number=70384 hash=0543c8...3dace1
INFO	[01-03] 17:06:22]		Commit new mining work	number=70385 txs=0 uncles=0 elapsed=998.3µs

FIG. 26

```

DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z+7r04INTTbT+7t7d4xKFm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z/A3ZUMkNX6ju7t7d4xKFm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z91nGe2KZTu3e7t7d4xKFm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z+sUueMuHdr107t7d4xKFm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z+HleMgoRm7207t7d4xKm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z9UcNtoVtaH7+7t7d4xkm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z8bwaf8WXhAN+7t7d4xKFm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z8YmqNI+EunJ07t7d4xKFm8
DEBUG [client] dedopify error(1)

DEBUG [client] BE19PQoS0Z+YXEPcG6q34+7t7d4xKFm8
DEBUG [client] dedopify error(1)

```

FIG. 27

```
> graz  
"0x59c0fd4a1c6c175252abca4695a7f4c53c019fb2"  
> ele  
"0x050363c5f06f98a7b7258756d1e8a74e0dd21aed"
```

FIG. 28

```
> dop.address  
"0x31611be40f69b50bbaab243726f5bb723793c042"
```

FIG. 29

Publisher Management interface

Account (EOA):	0x050363C5F06F98A7B7258756d1e8a74e0dd21aed		
Account Password:	widget		
Publisher Secret:	mypassword		
Product Address:	0x31611be40f69b50bbaab243726f5bb723793c042		
SUBSCRIBERS			
GRANT	Subscription: 0		
BALANCE/STATUS	Granted: 0		
REVOKE	Credit: 0		
CHARGE	Debit: 0		
Subscriber	Grant	Credit	Debit

FIG. 30

Subscriber Management interface

Account (EOA):

0x59c0fd4a1c6c175252abca4695a7f4c53c019fb2

Account Password:

widget

Subscriber Secret:

widget

Product Address:

0x31611be40f69b50bbaab243726f5bb723793c042

Deposit Value:

0

SUBSCRIBE
DEPOSIT
BALANCE/STATUS
UNSUBSCRIBE

Subscription:

Not Subscribed

Granted:

N/A

Credit:

N/A

Debit:

N/A

FIG. 31

Publisher Management interface

Account (EOA):

0x050363C5F06F98A7B7258756d1e8a74e0dd21aed

Account Password:

widget

Publisher Secret:

mypassword

Product Address:

0x31611be40f69b50bbaab243726f5bb723793c042

SUBSCRIBERS

Subscription:

0

GRANT

Granted:

0

BALANCE/STATUS

Credit:

0

REVOKE

Debit:

0

CHARGE

	Subscriber	Grant	Credit	Debit
☐	0x59c0fd4a1c6c175252abca4695a7f4o53c019fb2	1	5000000	0

FIG. 32

Subscriber Management interface

Account (EOA):

0x59c0fd4a1c6c175252abca4695a7f4c53c019fb2

Account Password:

widget

Subscriber Secret:

widget

Product Address:

0x31611be40f69b50bbaab243726f5bb723793c042

Deposit Value:

5000000

SUBSCRIBE

DEPOSIT

BALANCE/STATUS

UNSUBSCRIBE

Subscription:

Valid

Granted:

TRUE

Credit:

5000000

Debit:

0

FIG. 33

DEBUG [client] @MSG: 1546532327330 dangraz

DEBUG [client] 6wakt/nYWX9LZGa5LMOHjm87aXuAkVCI

DEBUG [client] @MSG: 1546532327830 dangraz

DEBUG [client] 6wakt/nYWX897qLZ7vWJnW87aXuAkVCI

DEBUG [client] @MSG: 1546532328331 dangraz

DEBUG [client] 6wakt/nYWX+AjVUsS4FSzm87aXuAkVCI

DEBUG [client] @MSG: 1546532328841 dangraz

DEBUG [client] 6wakt/nYWX+oSPLm5isCN287aXuAkVCI

DEBUG [client] @MSG: 1546532329344 dangraz

DEBUG [client] 6wakt/nYWX8KuZyldLMefm87aXuAkVCI

DEBUG [client] @MSG: 1546532329858 dangraz

DEBUG [client] 6wakt/nYWX94UNPxbWqW2287aXuAkVCI

DEBUG [client] @MSG: 1546532330367 dangraz

DEBUG [client] 6wakt/nYWX+gYBOYwlv2fG87aXuAkVCI

DEBUG [client] @MSG: 1546532330877 dangraz

DEBUG [client] 6wakt/nYWX9SqQSpz8WVm87aXuAkVCI

DEBUG [client] @MSG: 1546532331386 dangraz

DEBUG [client] 6wakt/nYWX9zFfSep4DOHm87aXuAkVCI

DEBUG [client] @MSG: 1546532331892 dangraz

FIG. 34

3500

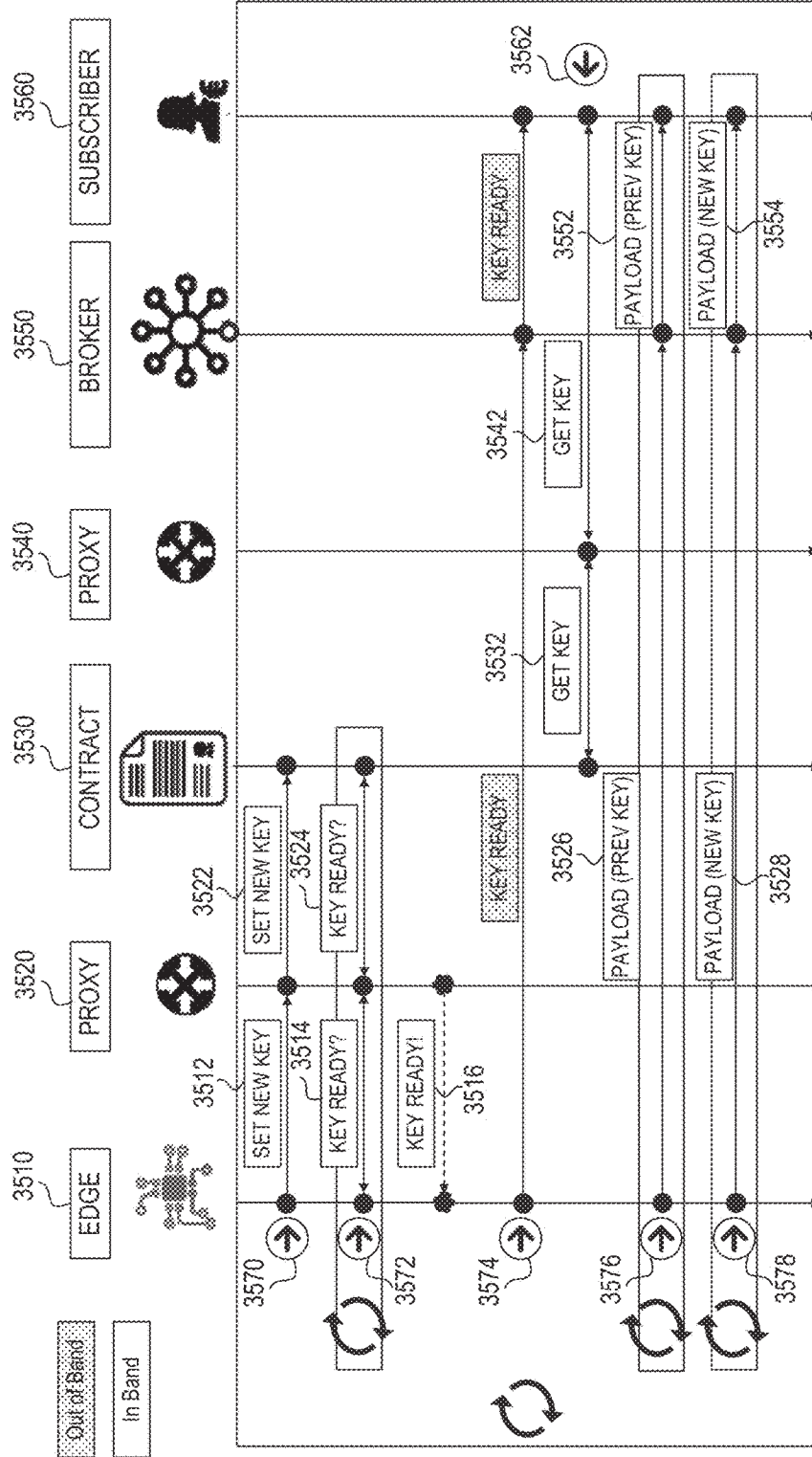


FIG. 35

3600

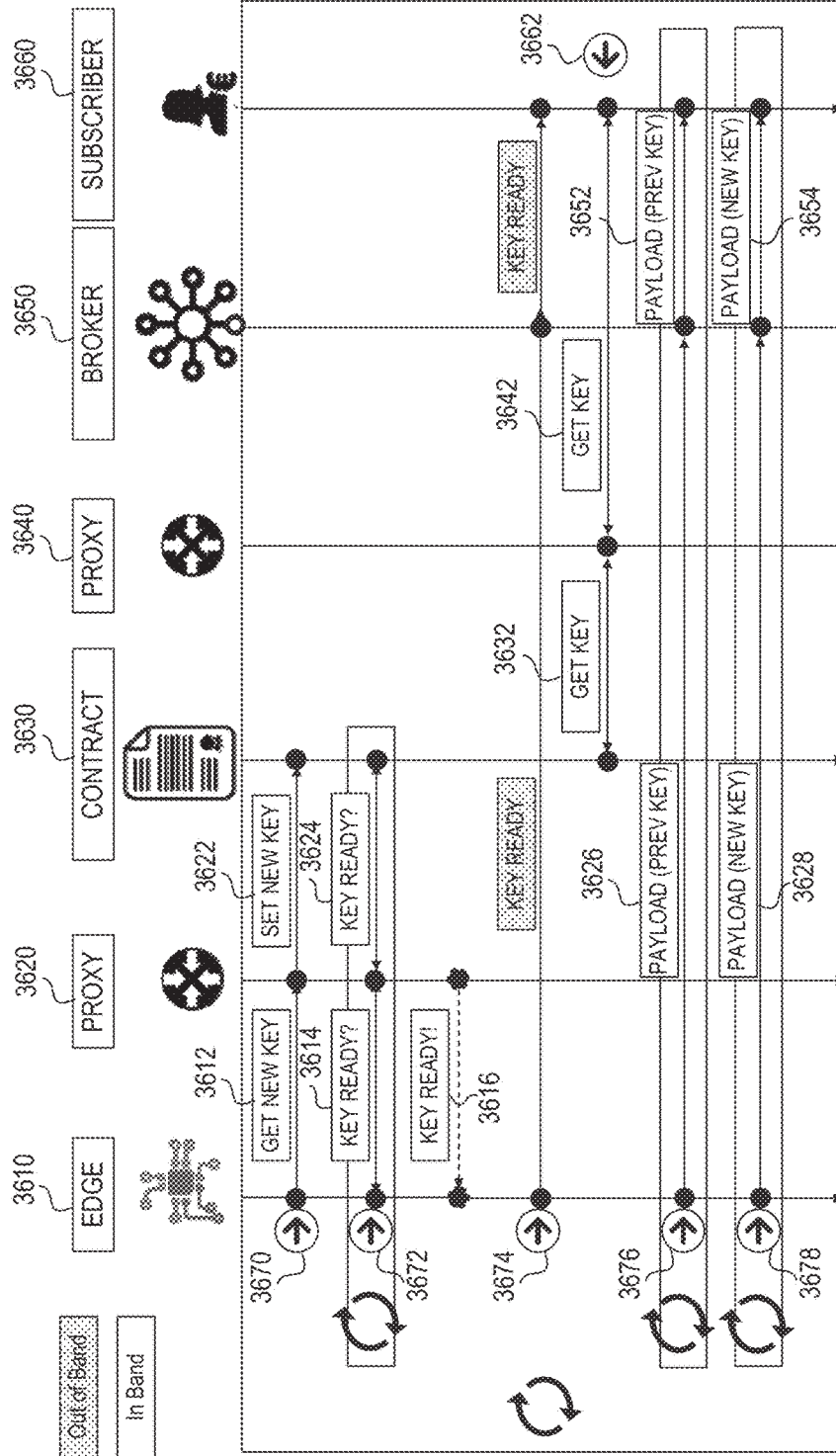


FIG. 36

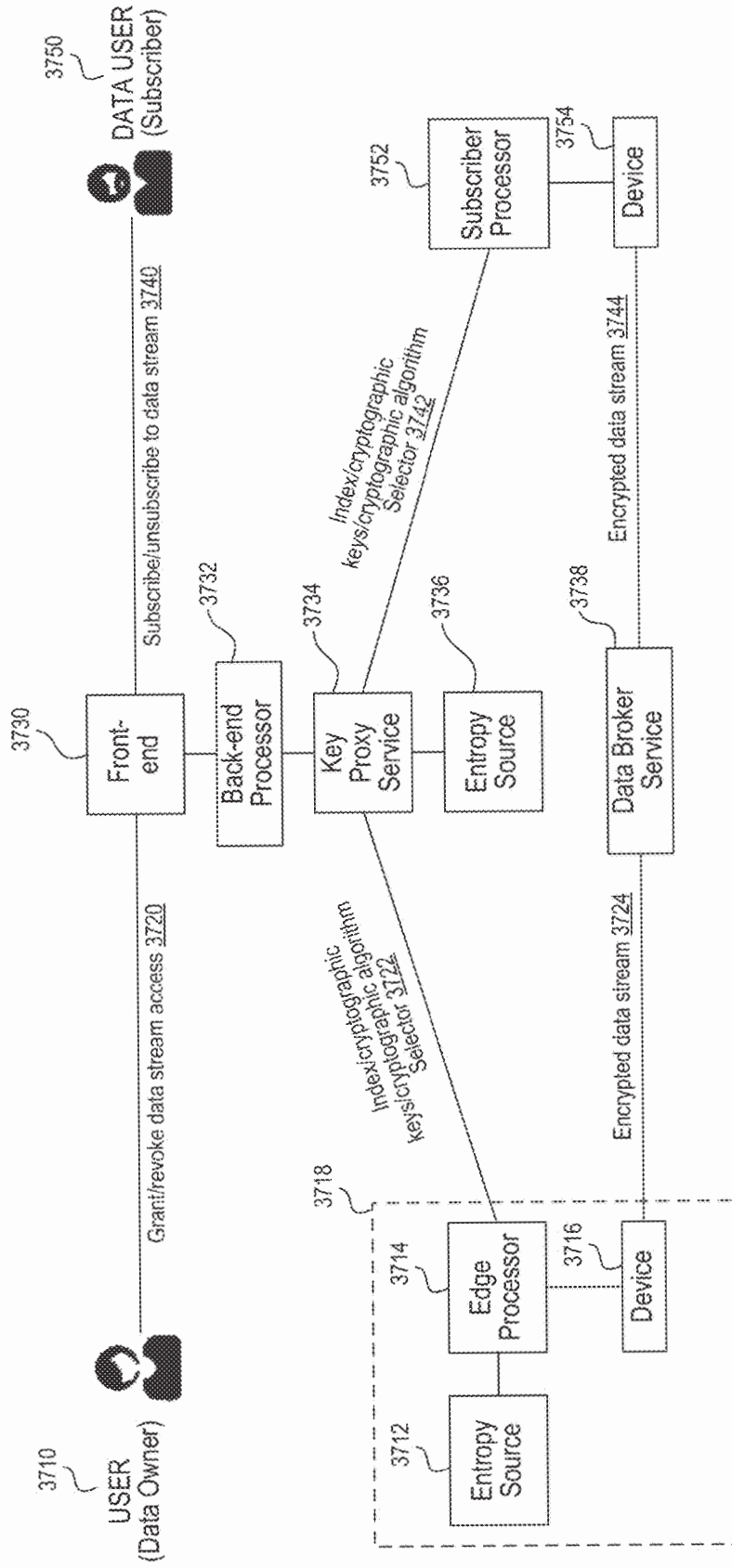


FIG. 37A

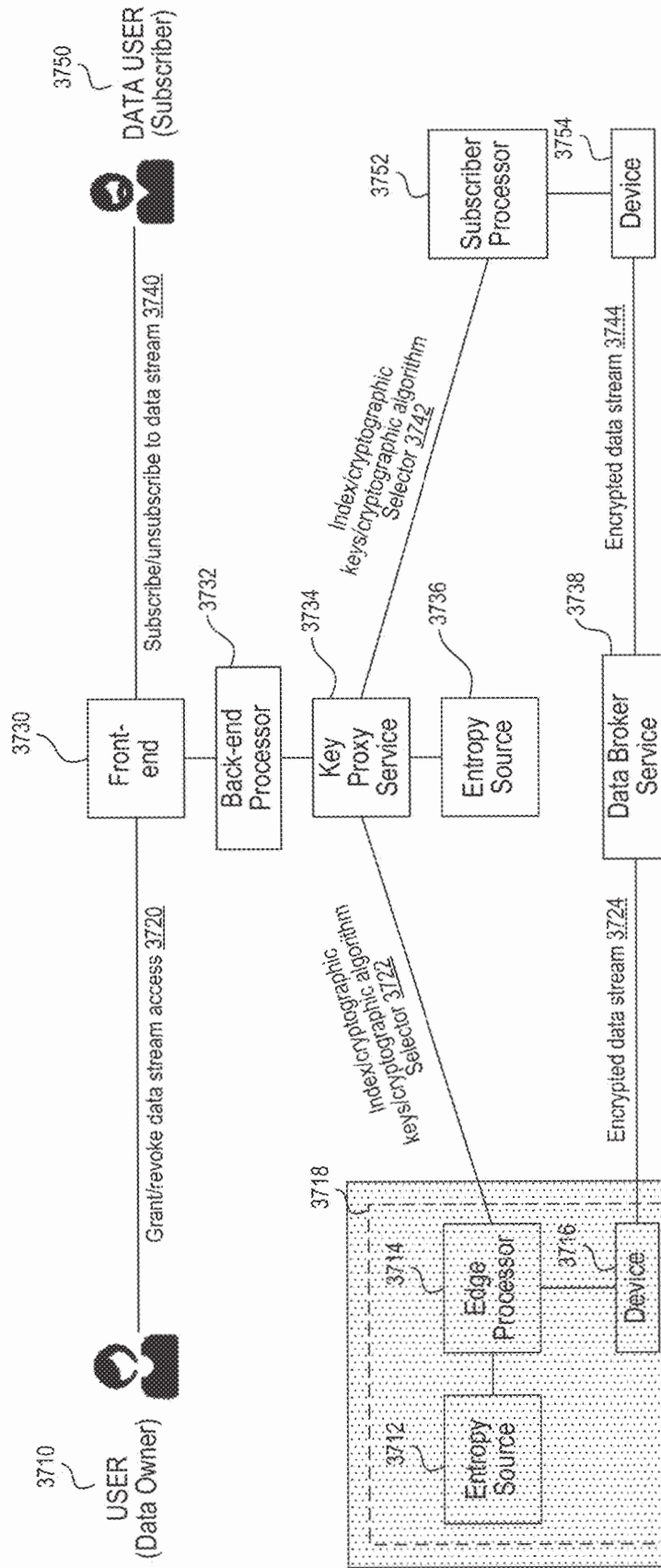


FIG. 37B

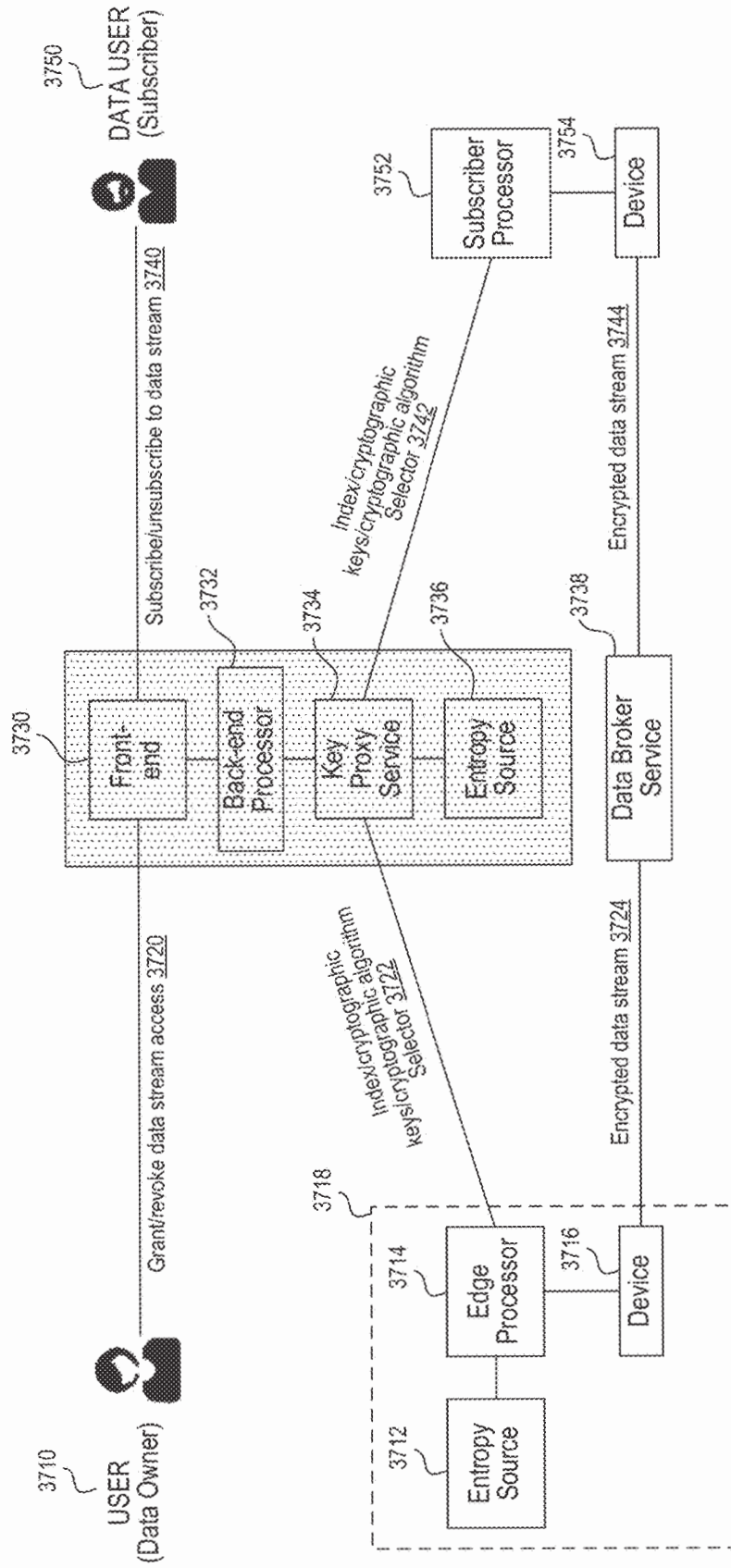


FIG. 37C

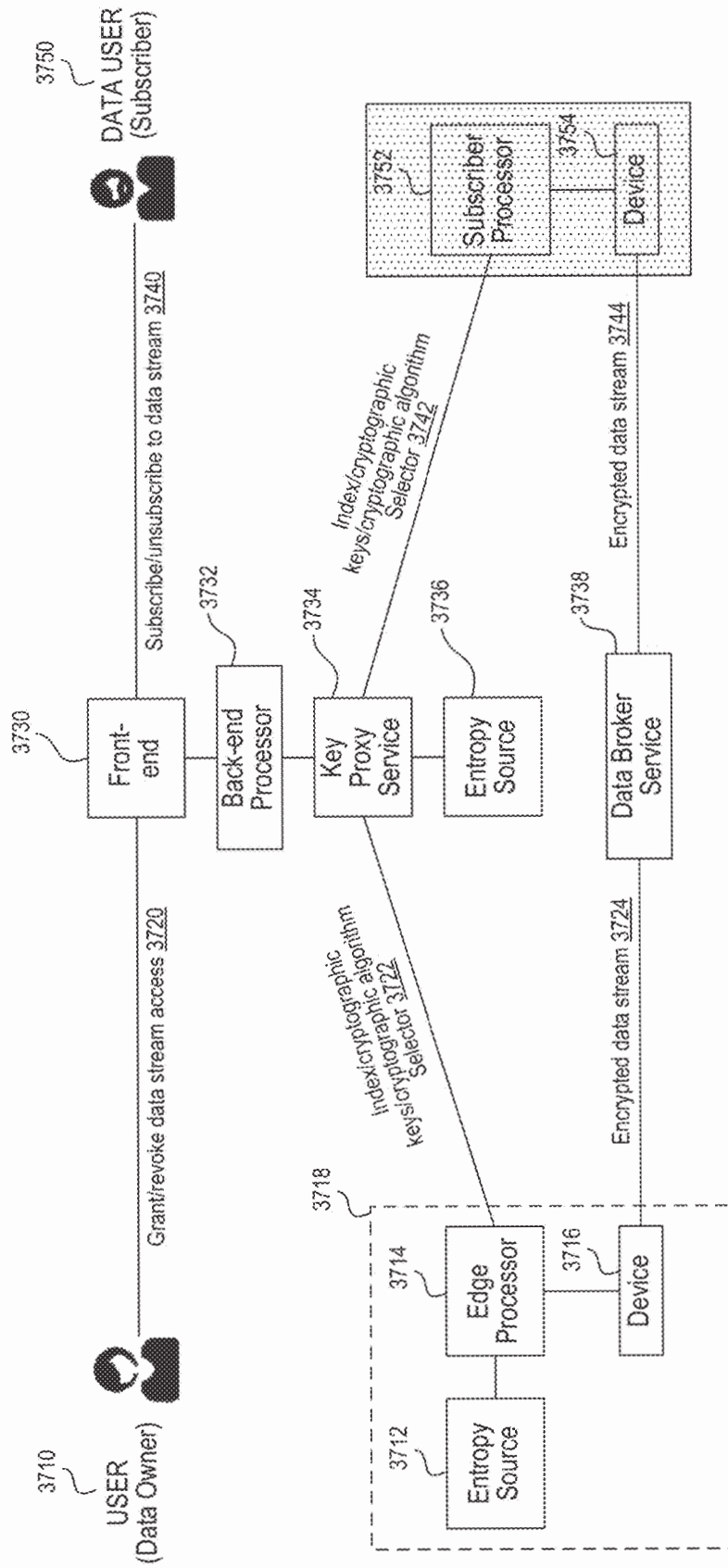


FIG. 37D

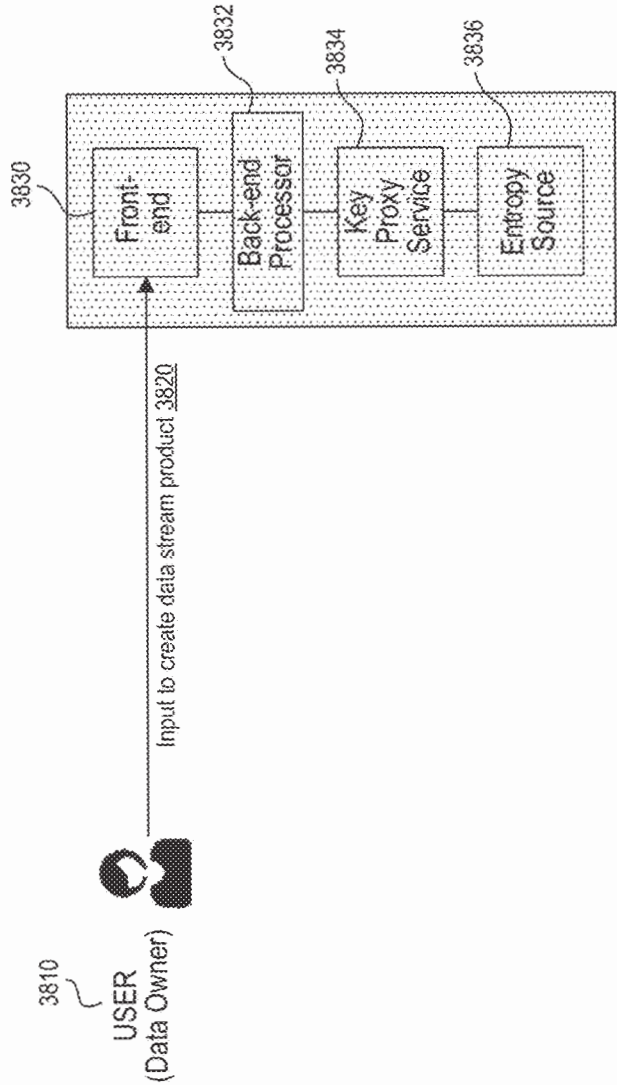


FIG. 38A

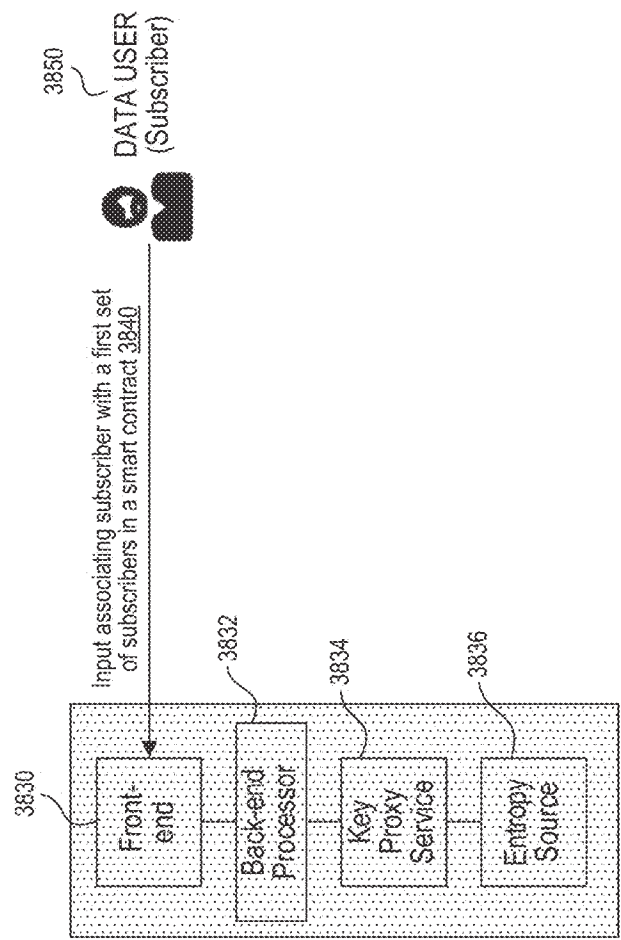


FIG. 38B

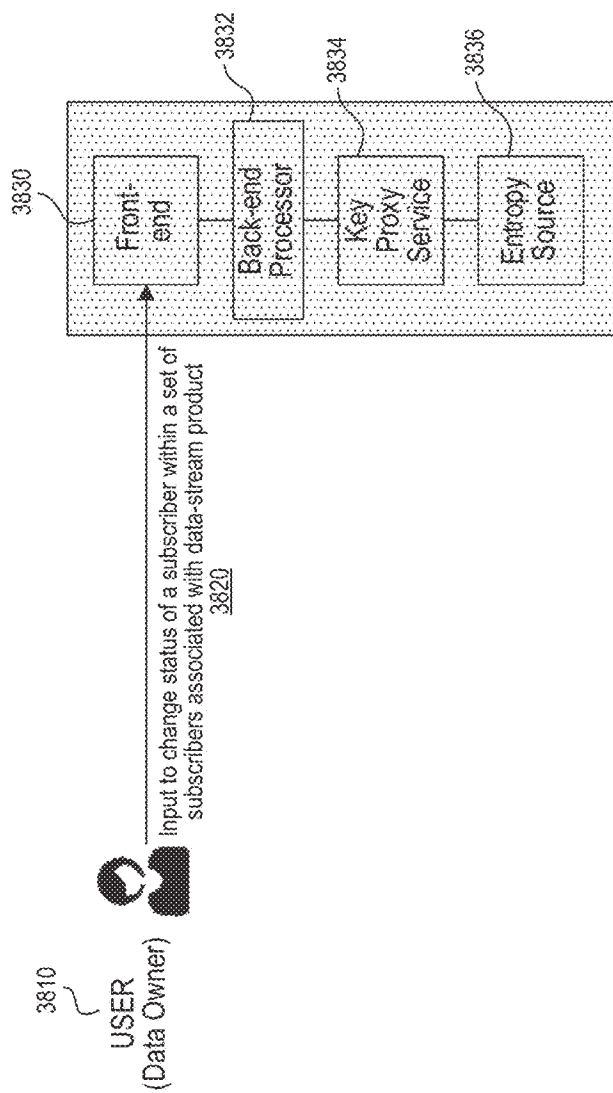


FIG. 38C

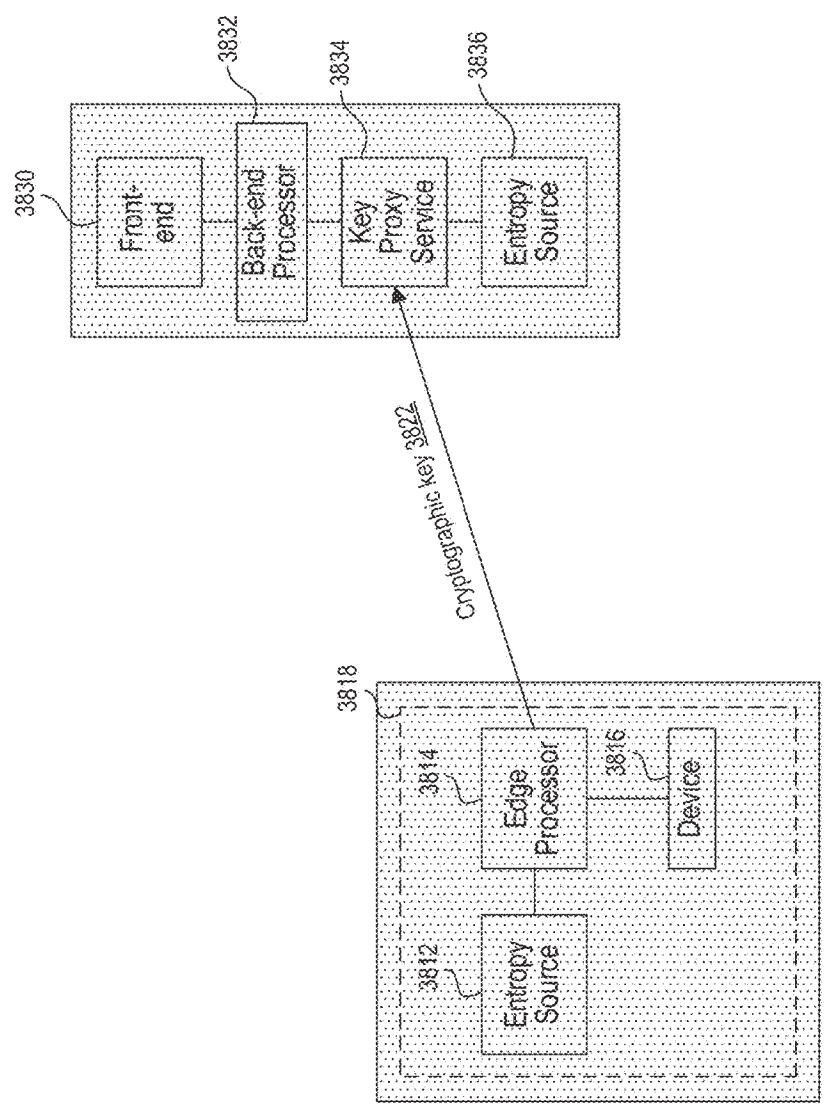


FIG. 38D

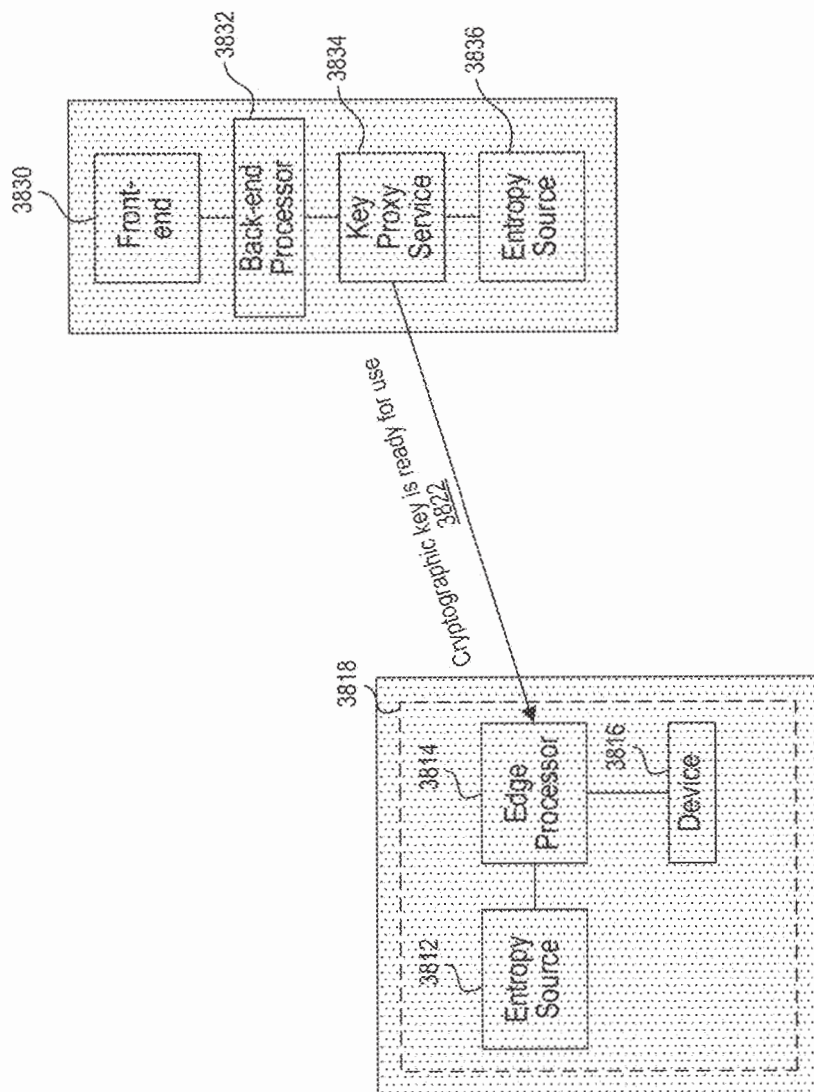


FIG. 38E

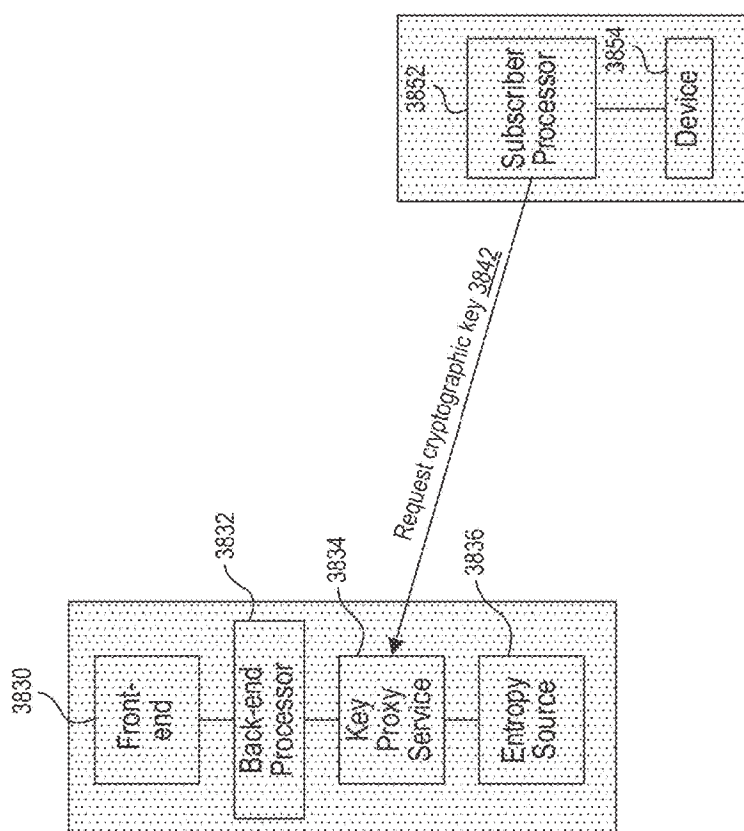


FIG. 38F

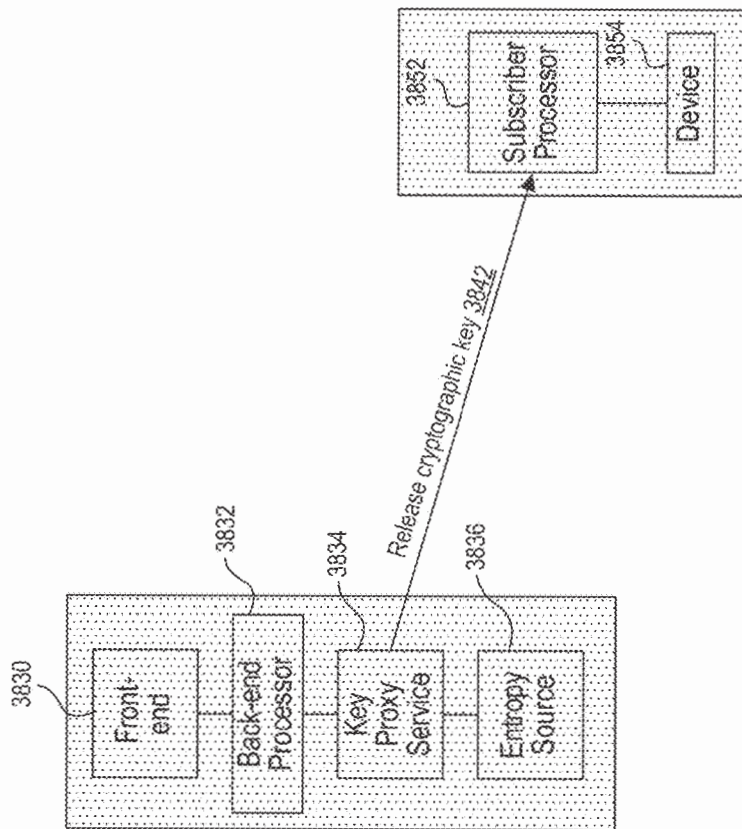


FIG. 38G

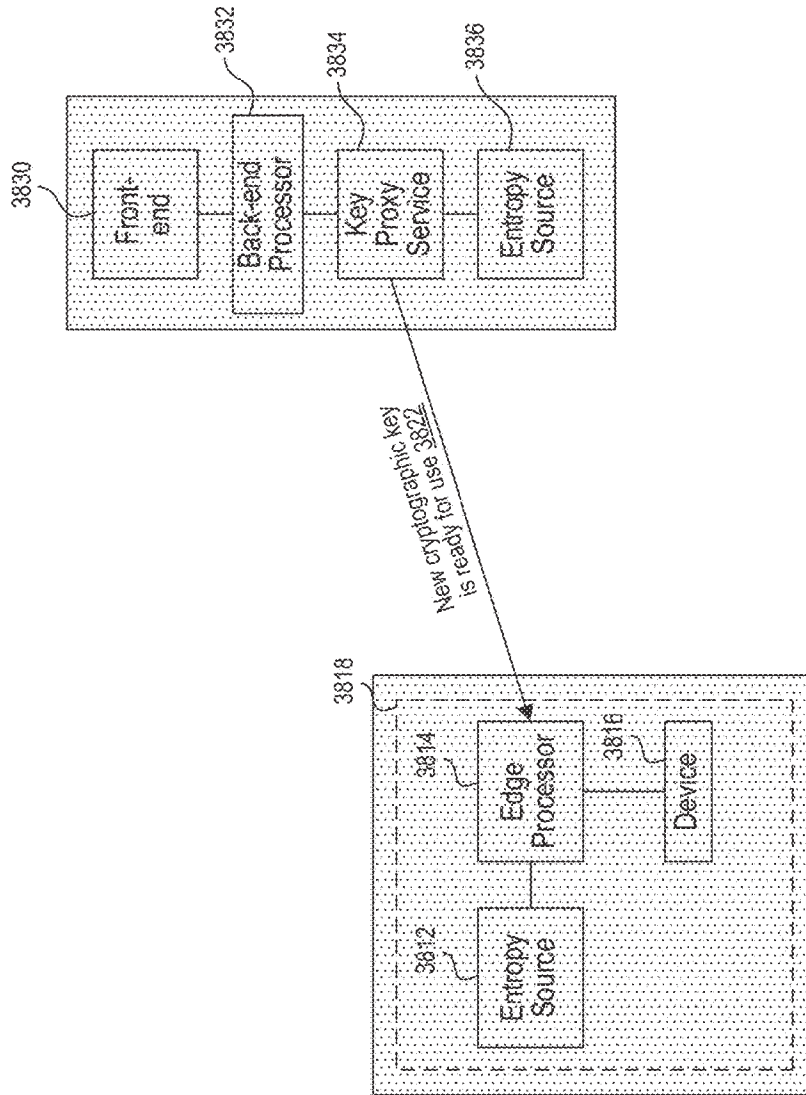


FIG. 38H

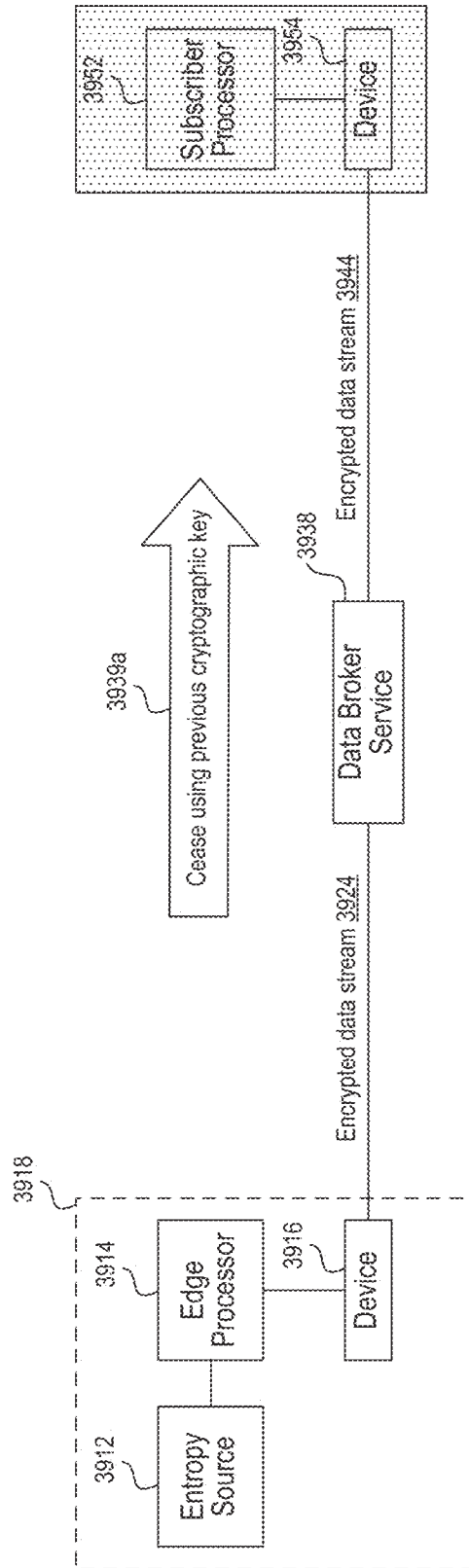


FIG. 39A

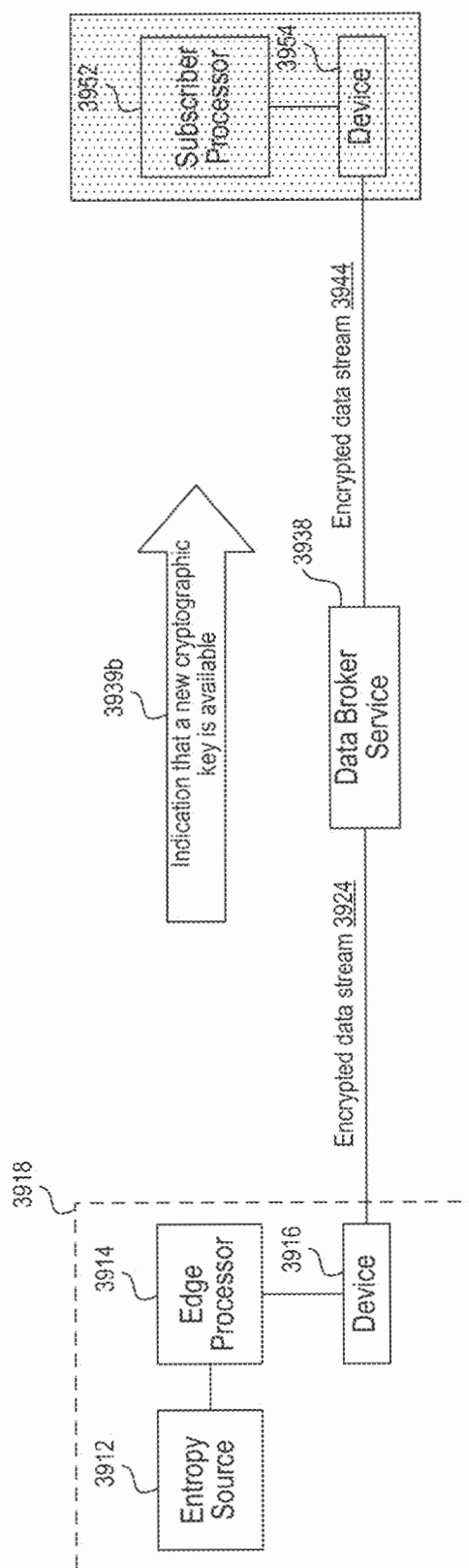


FIG. 39B

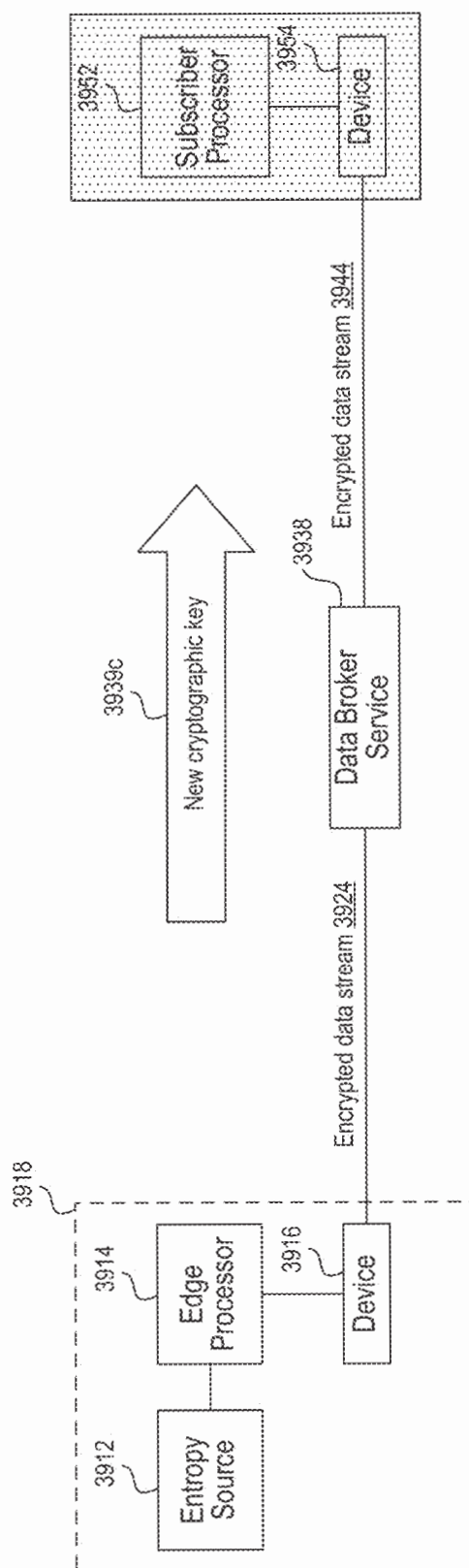


FIG. 39C

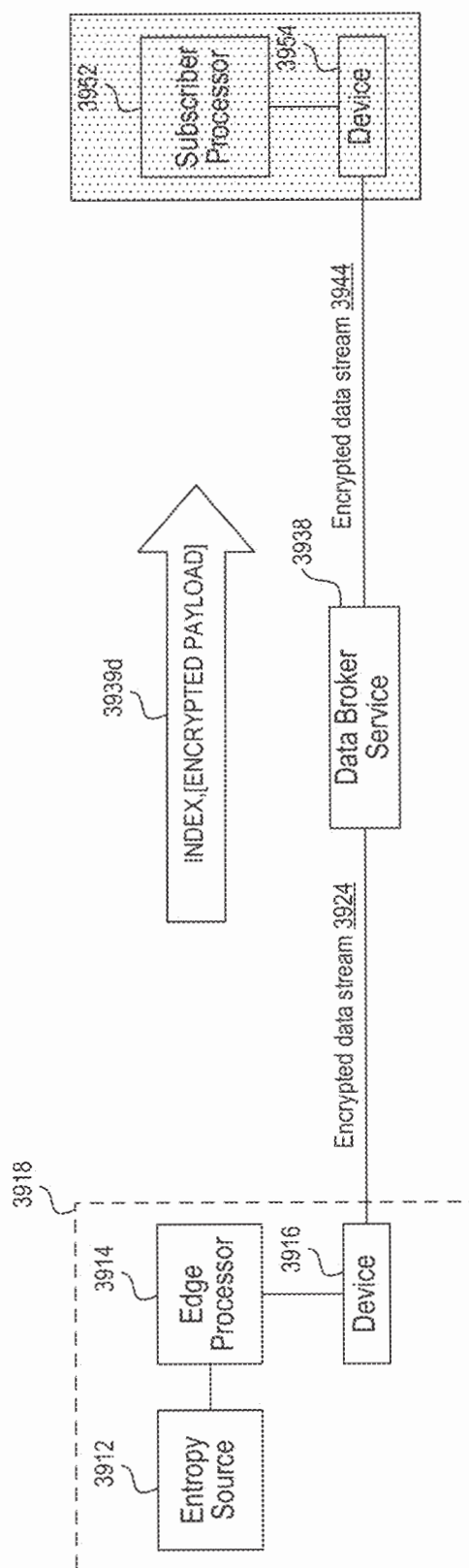


FIG. 39D

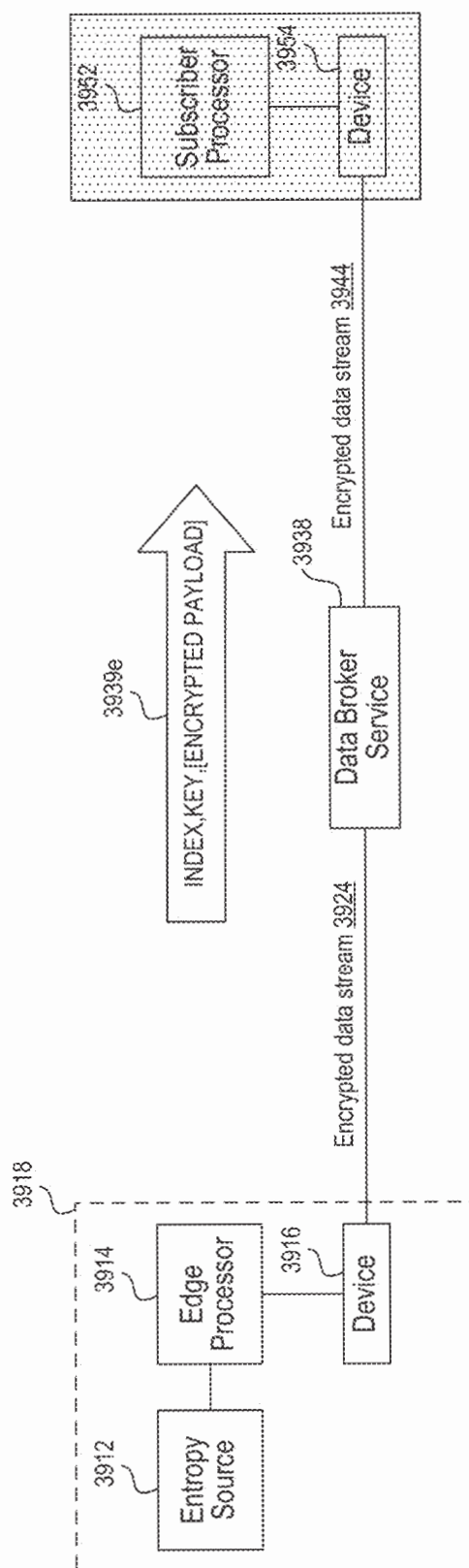


FIG. 39E

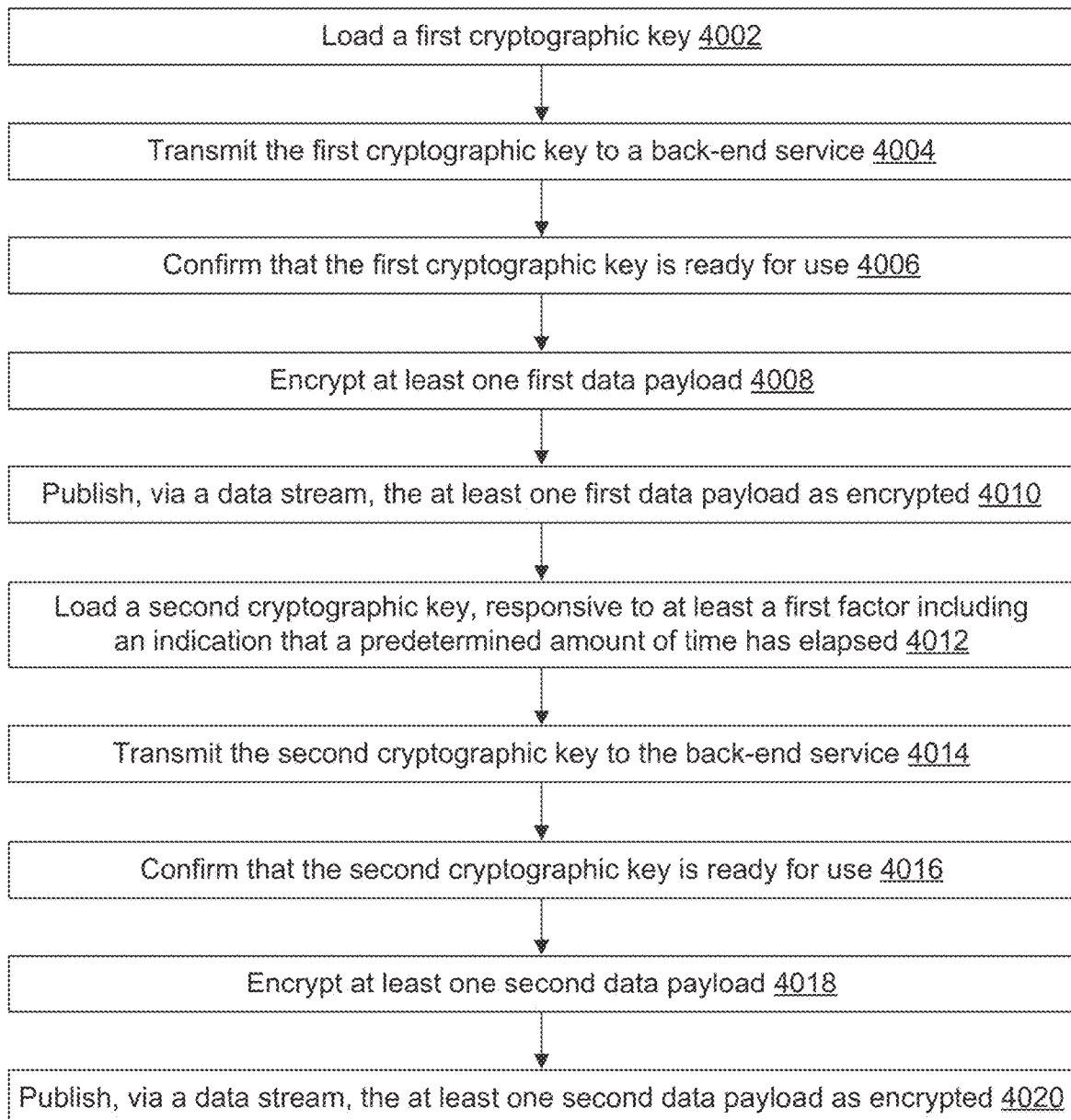


FIG. 40

4100

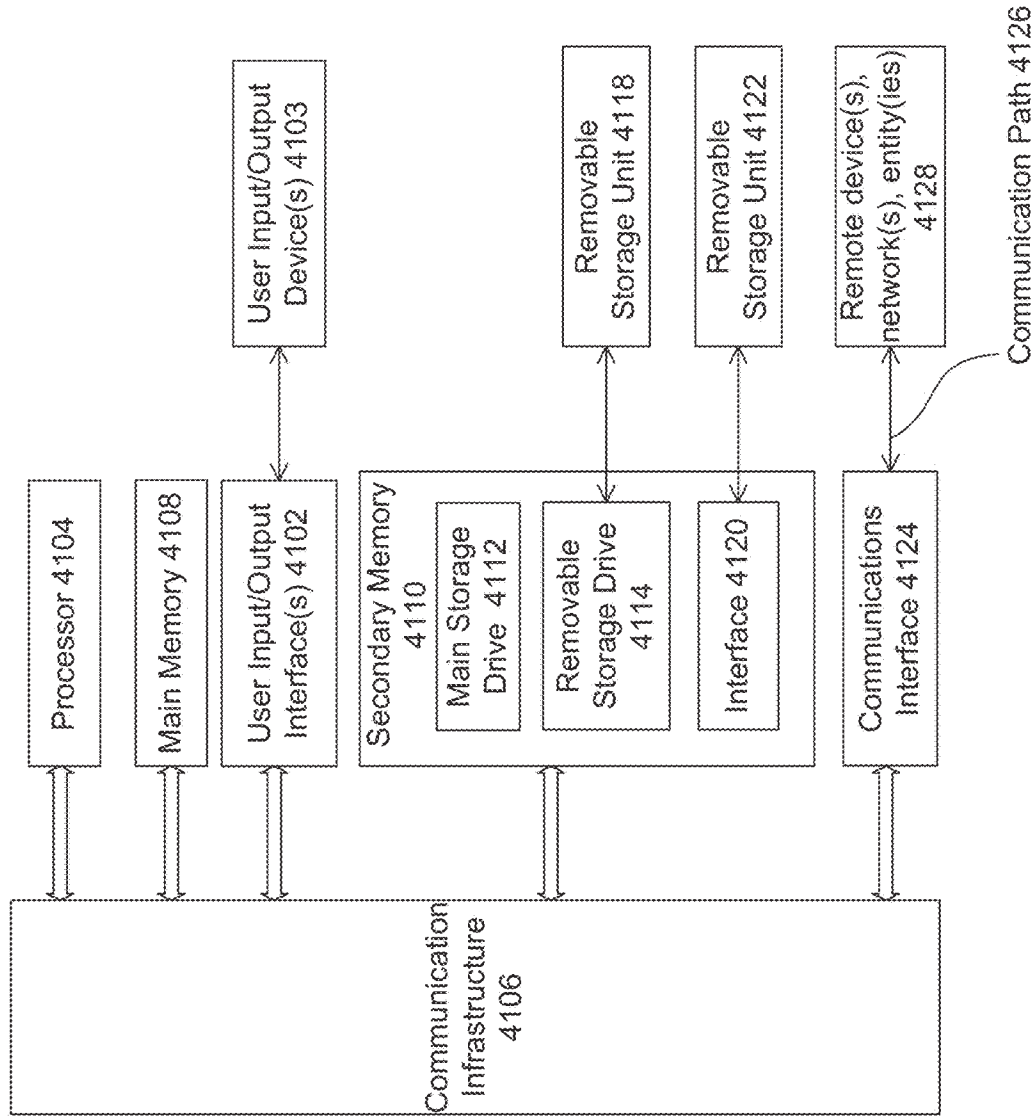


FIG. 41