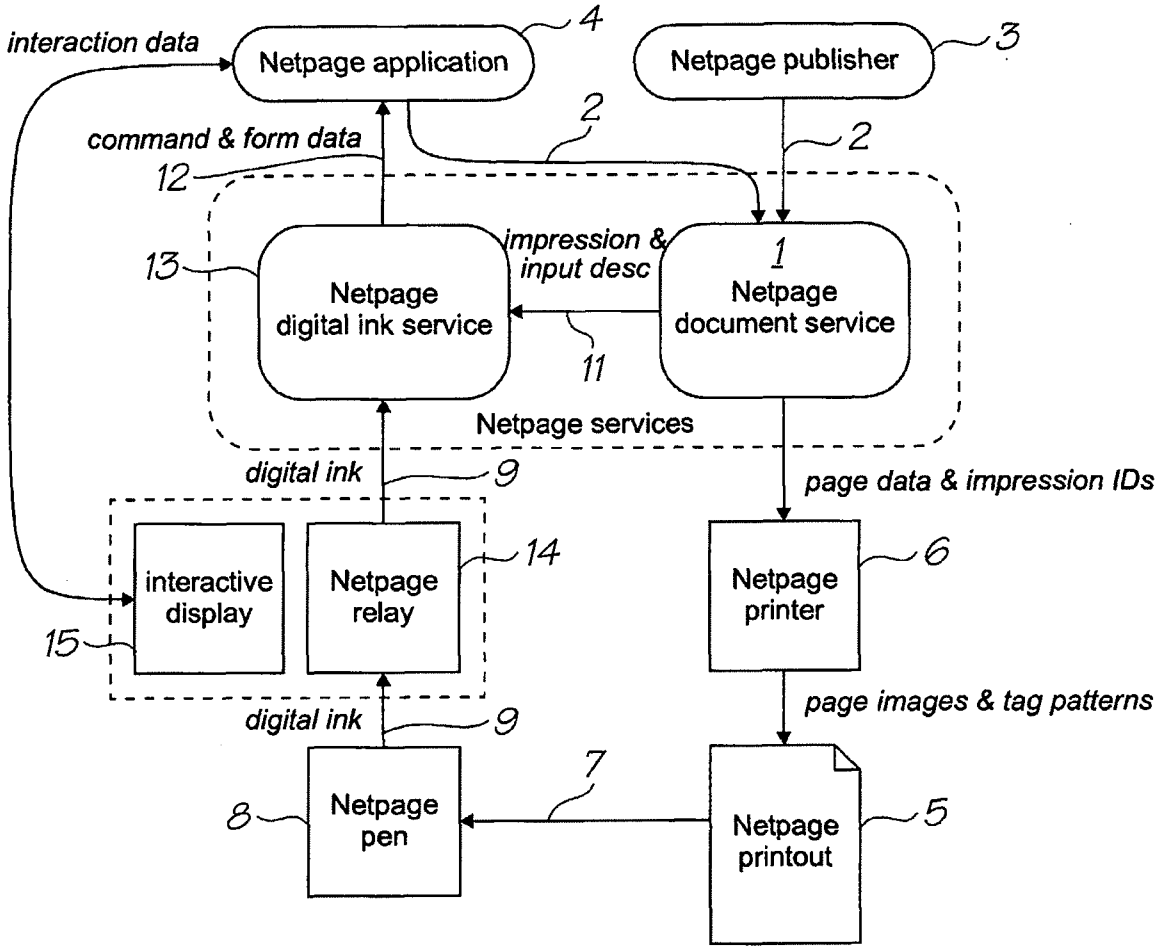
interaction data
Netpage application
4
Netpage publisher
3
command & form data
2
2
12
impression &
input desc
1
13
Netpage
digital ink service
Netpage
document service
11
Netpage services
digital ink
9
page data & impression IDs
interactive
display
Netpage
relay
14
Netpage
printer
6
15
page images & tag patterns
digital ink
9
7
8
Netpage
pen
Netpage
printout
5

FIG. 1

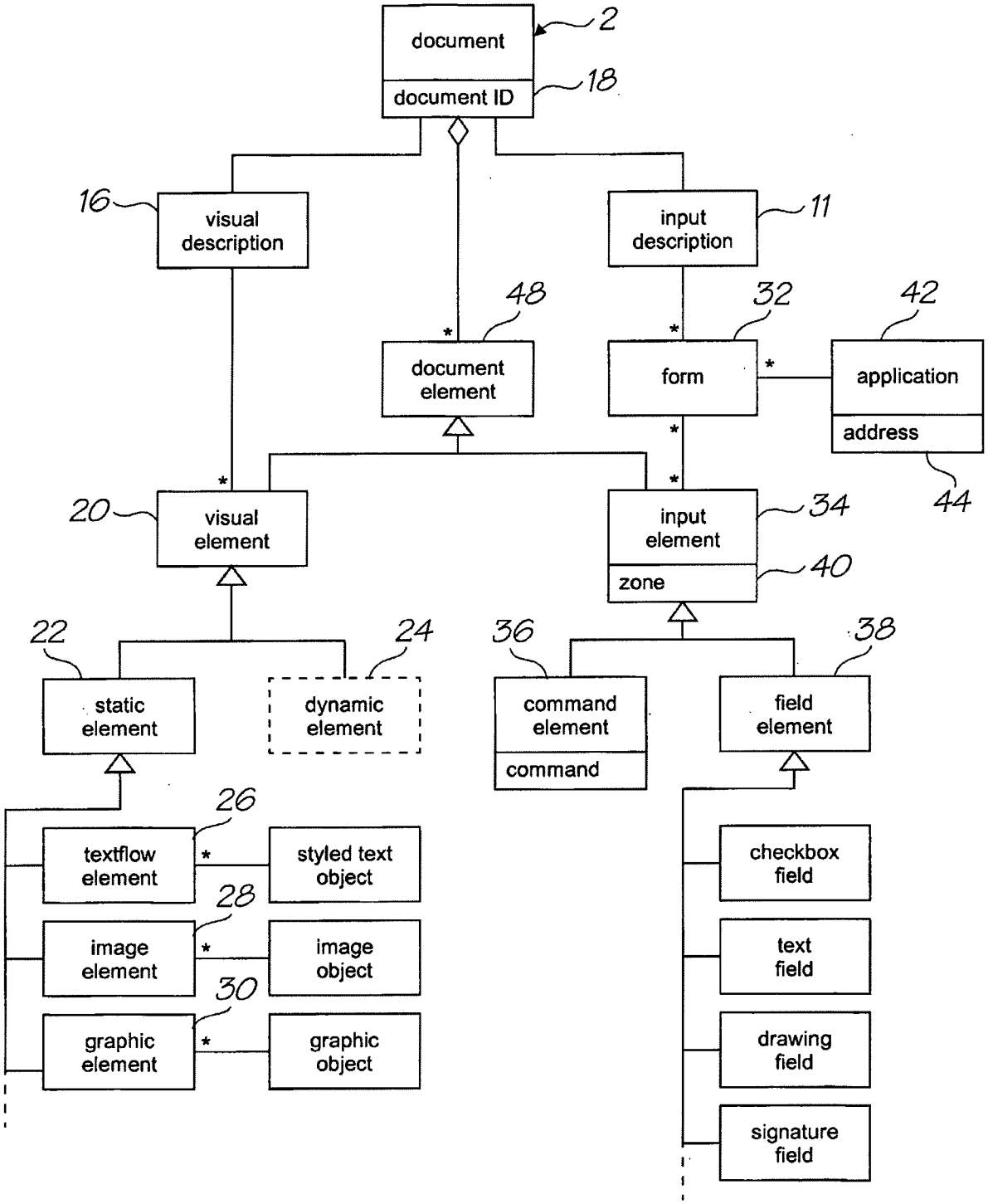
document
document ID
2
18
16
visual description
input description
11
48
32
42
document element
form
application
address
44
20
visual element
input element
34
zone
40
22
24
36
38
static element
dynamic element
command element
command
field element
26
textflow element
styled text object
28
image element
image object
30
graphic element
graphic object
checkbox field
text field
drawing field
signature field

FIG. 2

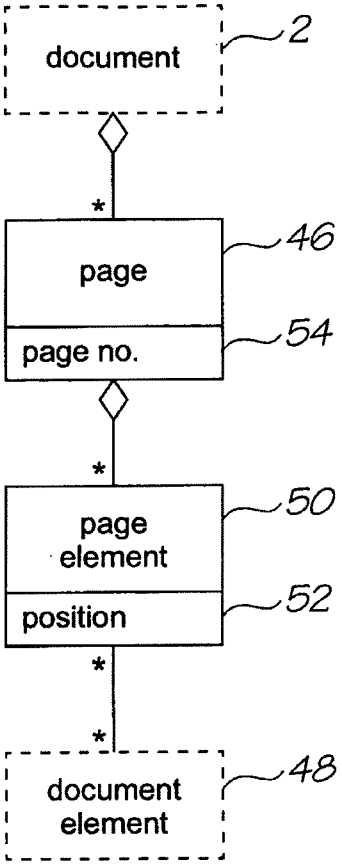
document
2
*
page
46
page no.
54
*
page element
50
position
52
*
*
document element
48

FIG. 3

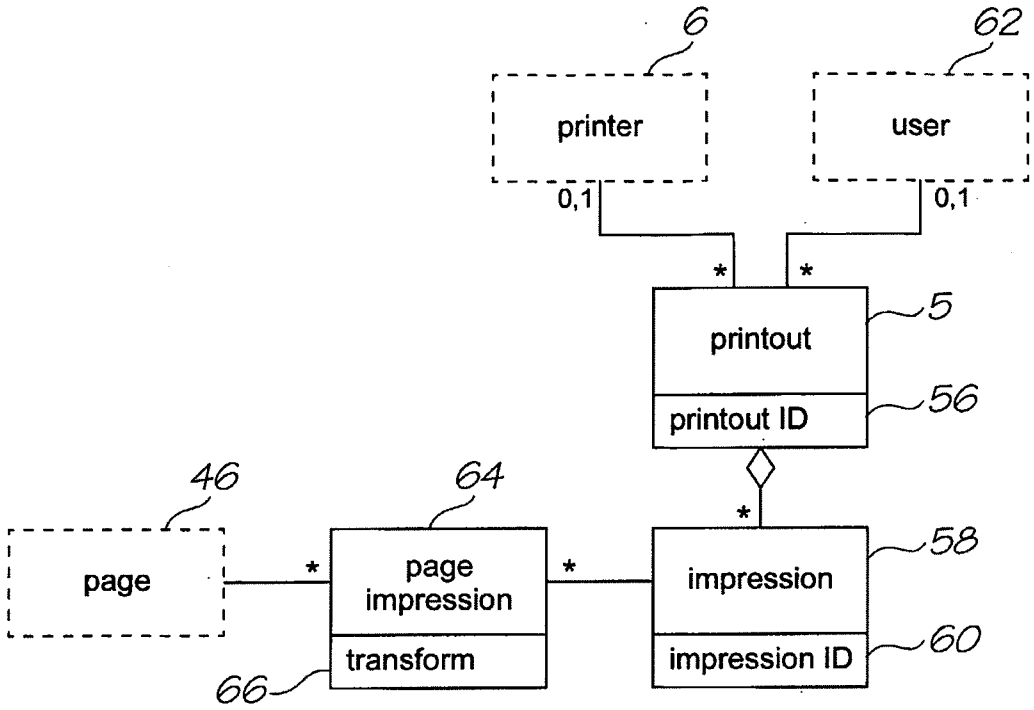
6
62
printer
user
0,1
0,1
*
*
printout
5
printout ID
56
46
64
*
page
*
page impression
*
impression
58
transform
impression ID
60
66

FIG. 4

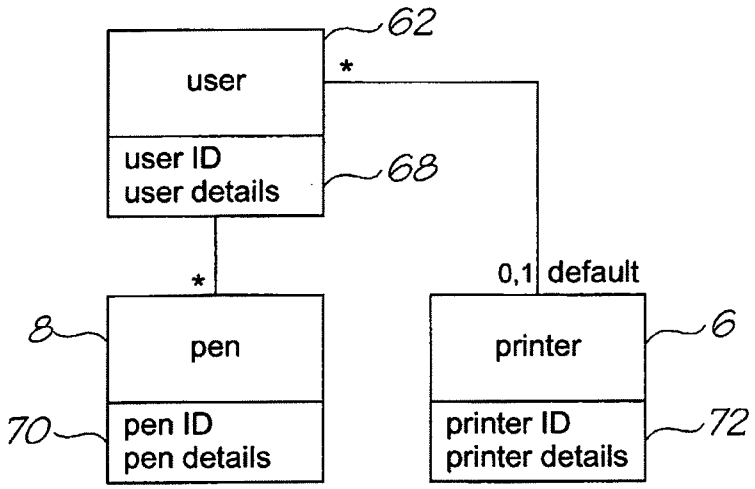
62
user
*
user ID
user details
68
*
0,1 default
8
pen
printer
6
70
pen ID
pen details
printer ID
printer details
72

FIG. 5

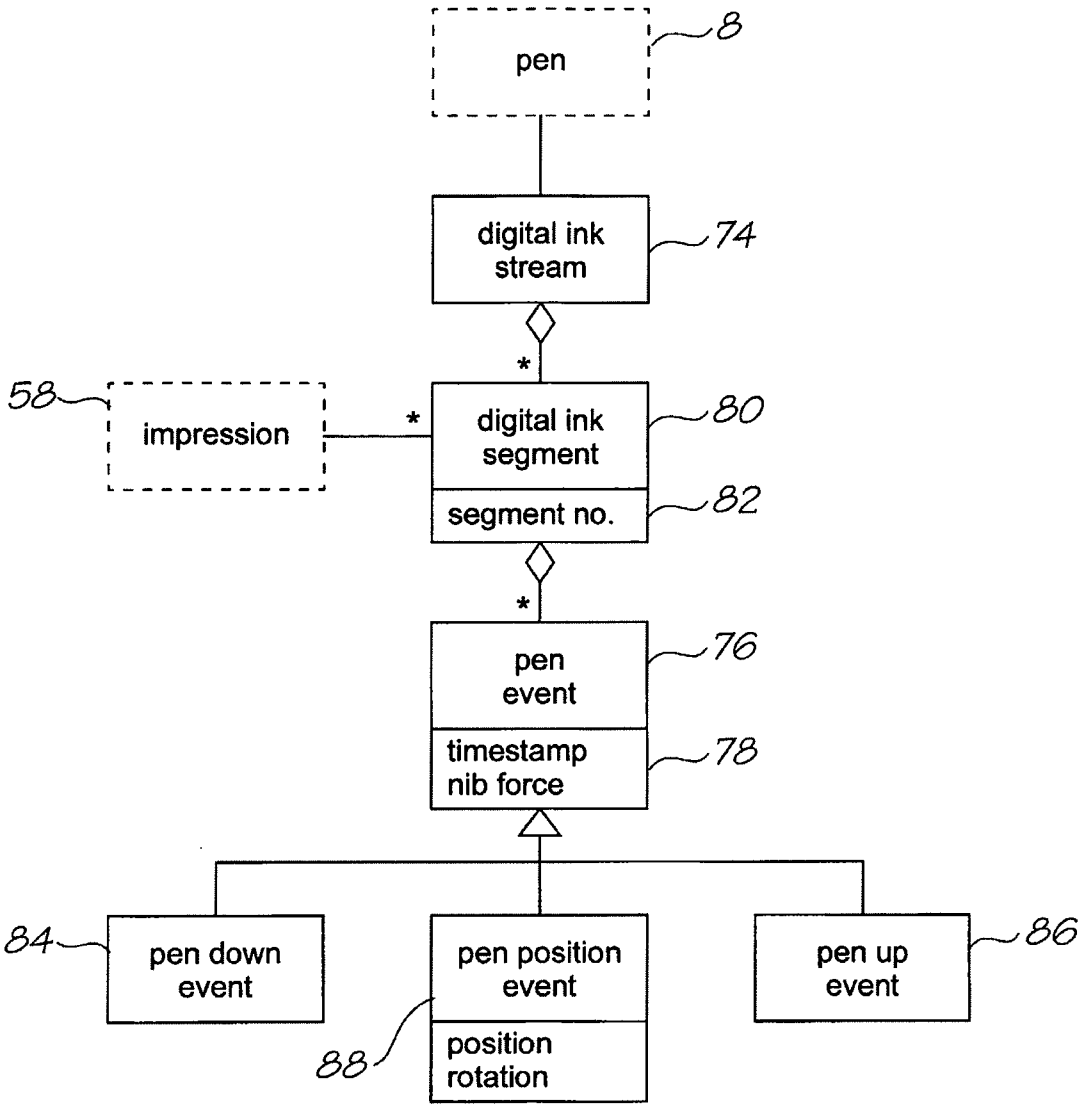
pen
8
digital ink stream
74
*
58
impression
*
digital ink segment
80
segment no.
82
*
pen event
76
timestamp nib force
78
84
pen down event
pen position event
88
position rotation
pen up event
86

FIG. 6

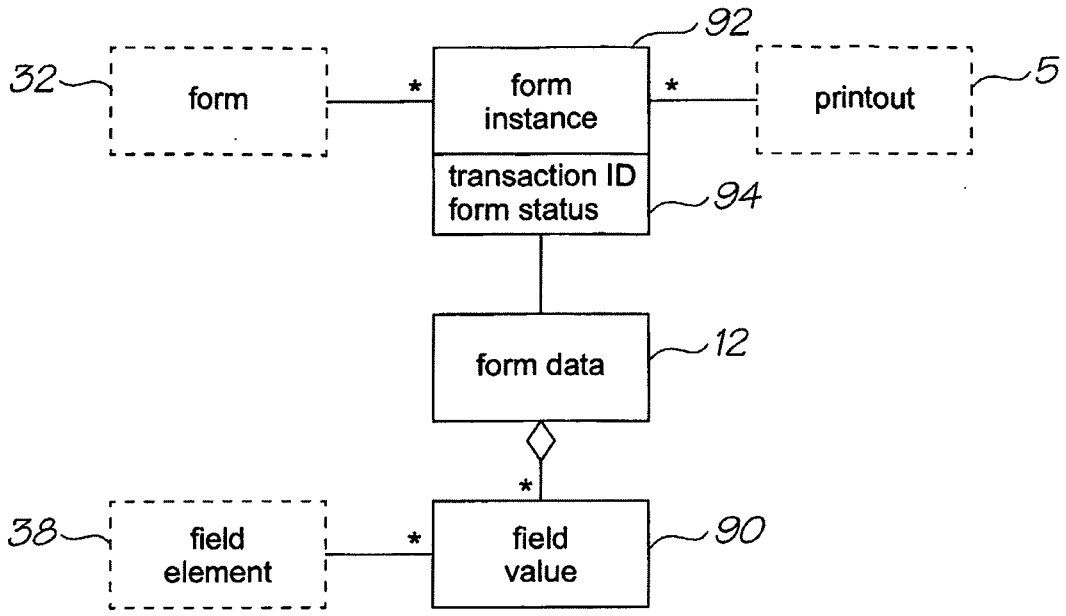
92
32
form
*
form instance
*
printout
5
transaction ID
form status
94
form data
12
*
38
field element
*
field value
90

FIG. 7

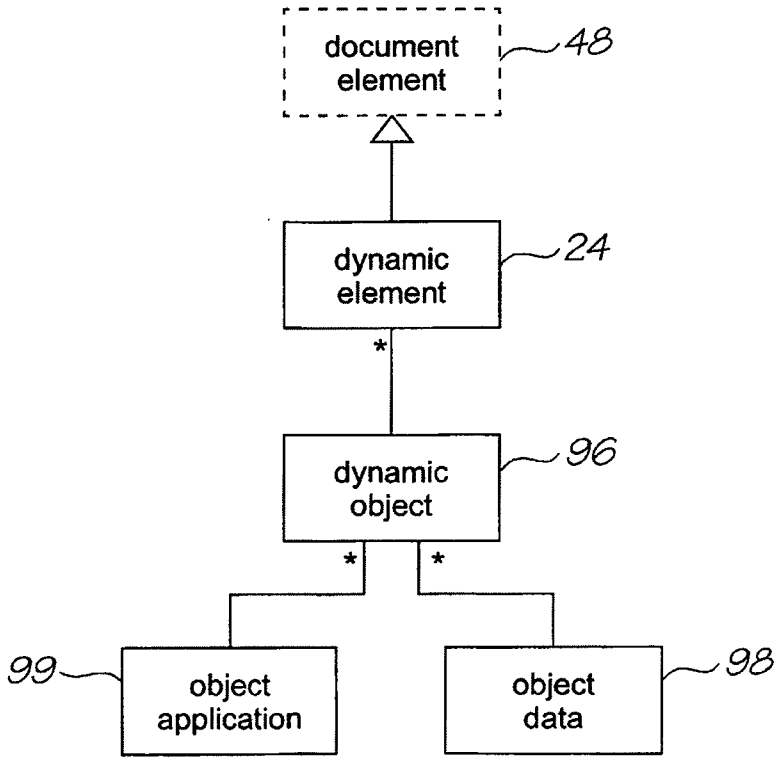
document element
48
dynamic element
24
*
dynamic object
96
*
*
99
object application
object data
98

FIG. 8

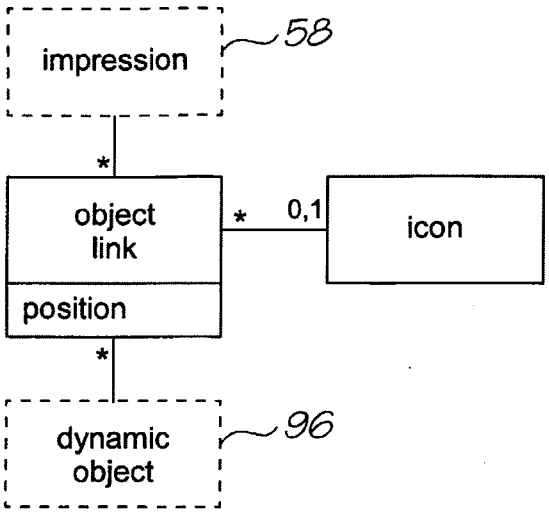
impression
58
*
object link
position
*
0,1
icon
*
dynamic object
96

FIG. 9

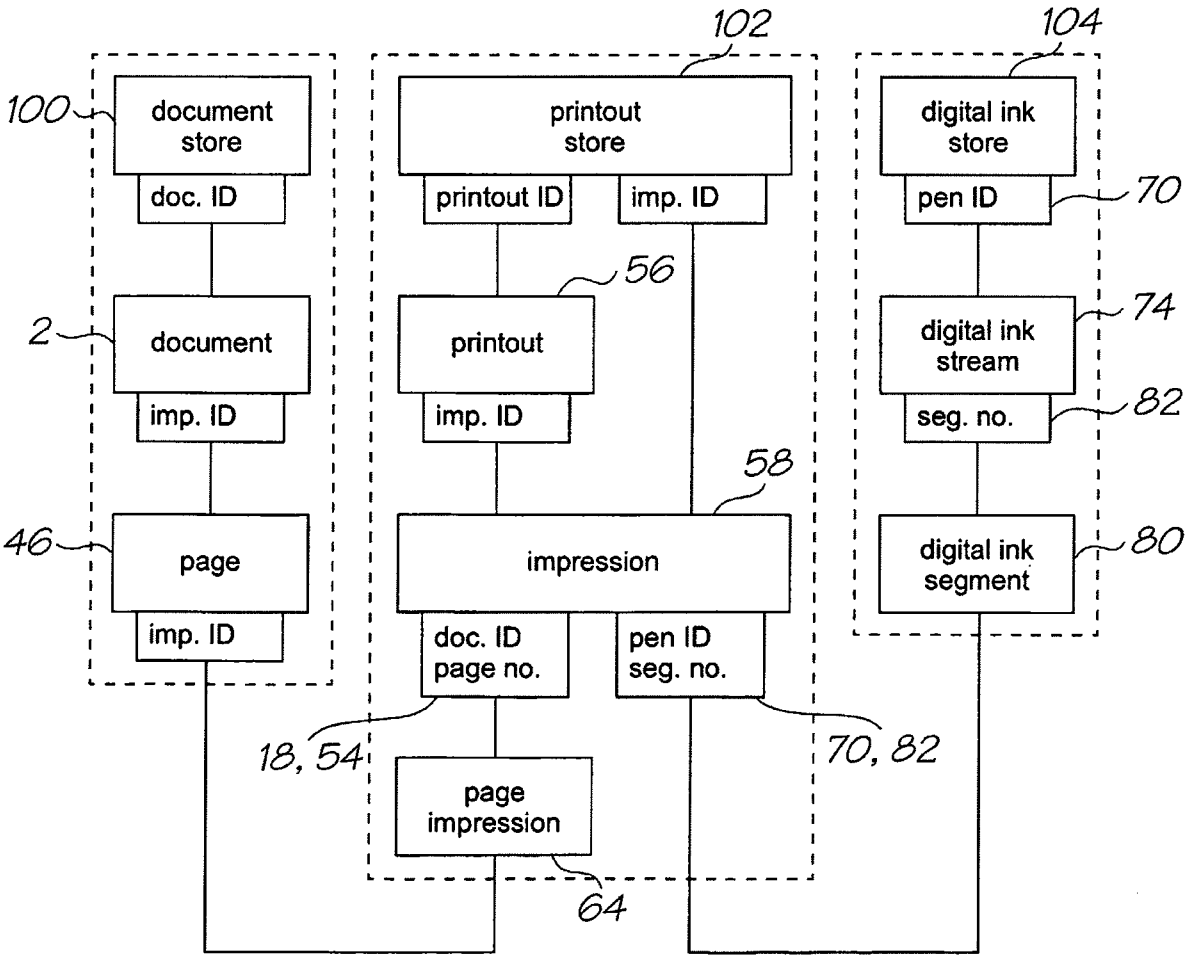
102
104
100
document store
doc. ID
printout store
printout ID
imp. ID
digital ink store
pen ID
70
56
2
document
imp. ID
printout
imp. ID
74
digital ink stream
seg. no.
82
58
46
page
imp. ID
impression
doc. ID page no.
pen ID seg. no.
digital ink segment
80
18, 54
70, 82
page impression
64

FIG. 10

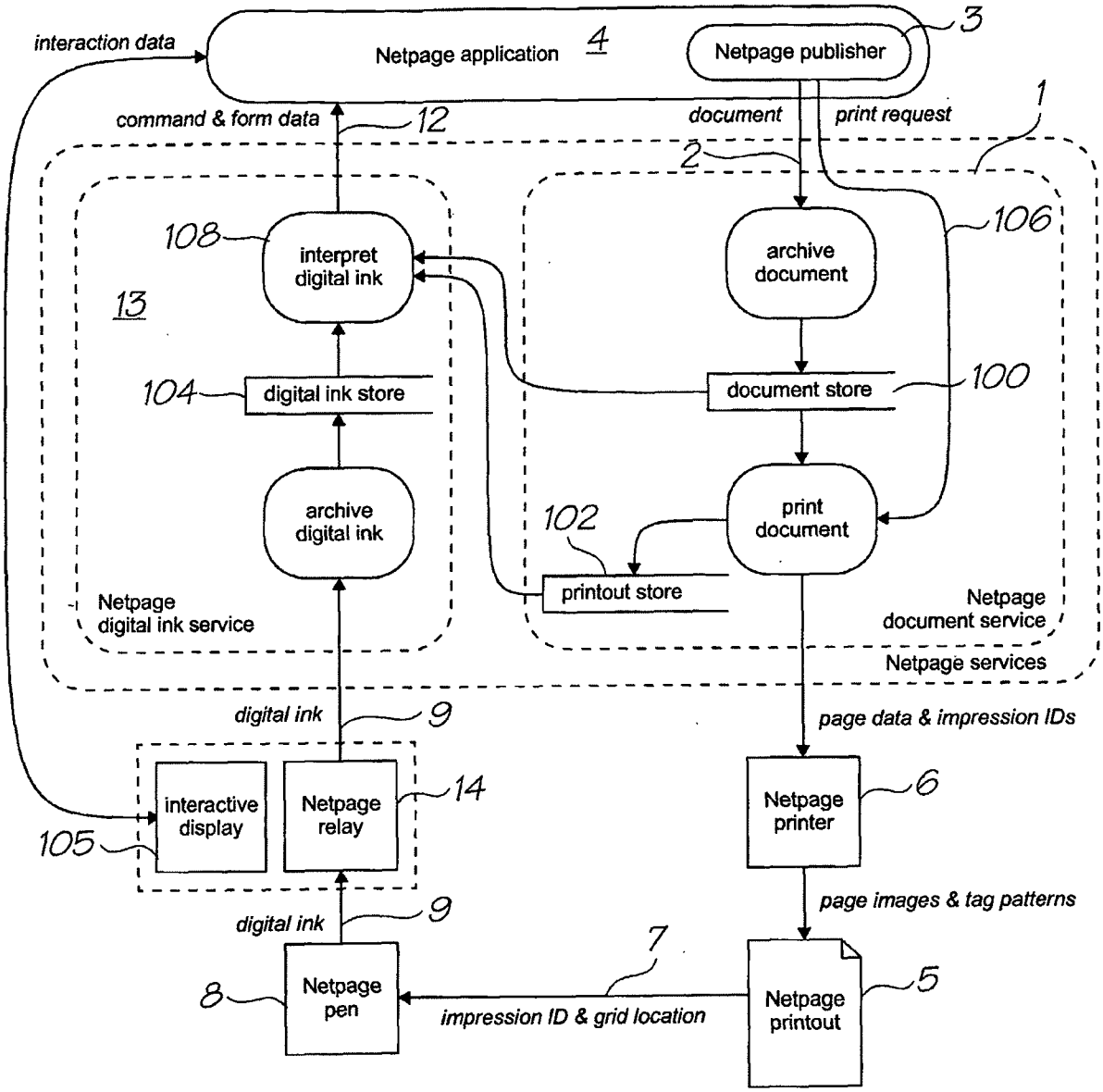
interaction data
Netpage application
4
Netpage publisher
3
command & form data
12
document
print request
1
2
108
interpret digital ink
13
archive document
106
104
digital ink store
document store
100
archive digital ink
102
print document
printout store
Netpage digital ink service
Netpage document service
Netpage services
digital ink
9
page data & impression IDs
interactive display
Netpage relay
14
Netpage printer
6
105
page images & tag patterns
digital ink
9
7
8
Netpage pen
impression ID & grid location
Netpage printout
5

FIG. 11

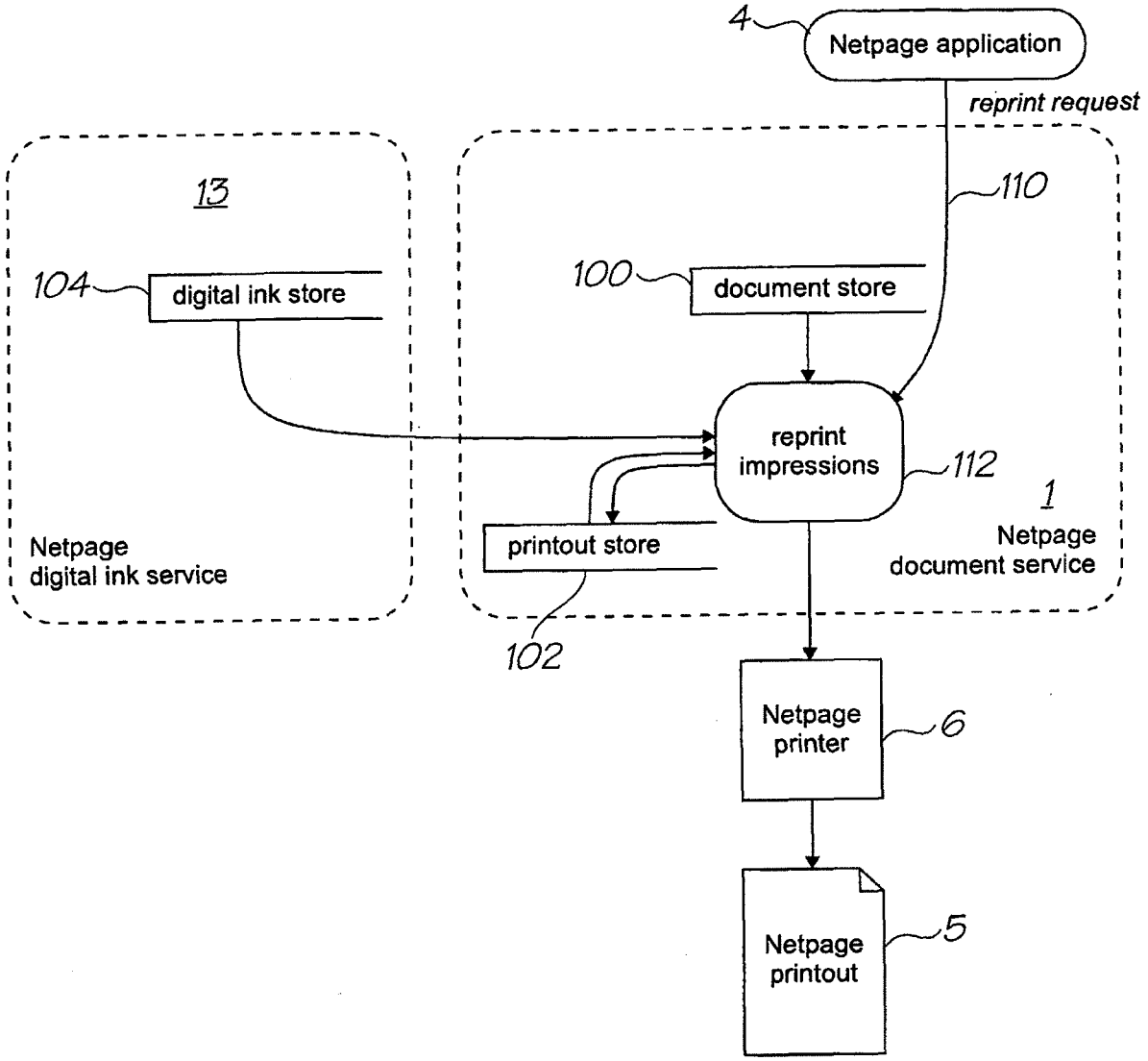
4
Netpage application
reprint request
13
110
104
digital ink store
100
document store
reprint
impressions
112
1
Netpage
document service
printout store
Netpage
digital ink service
102
Netpage
printer
6
Netpage
printout
5

FIG. 12

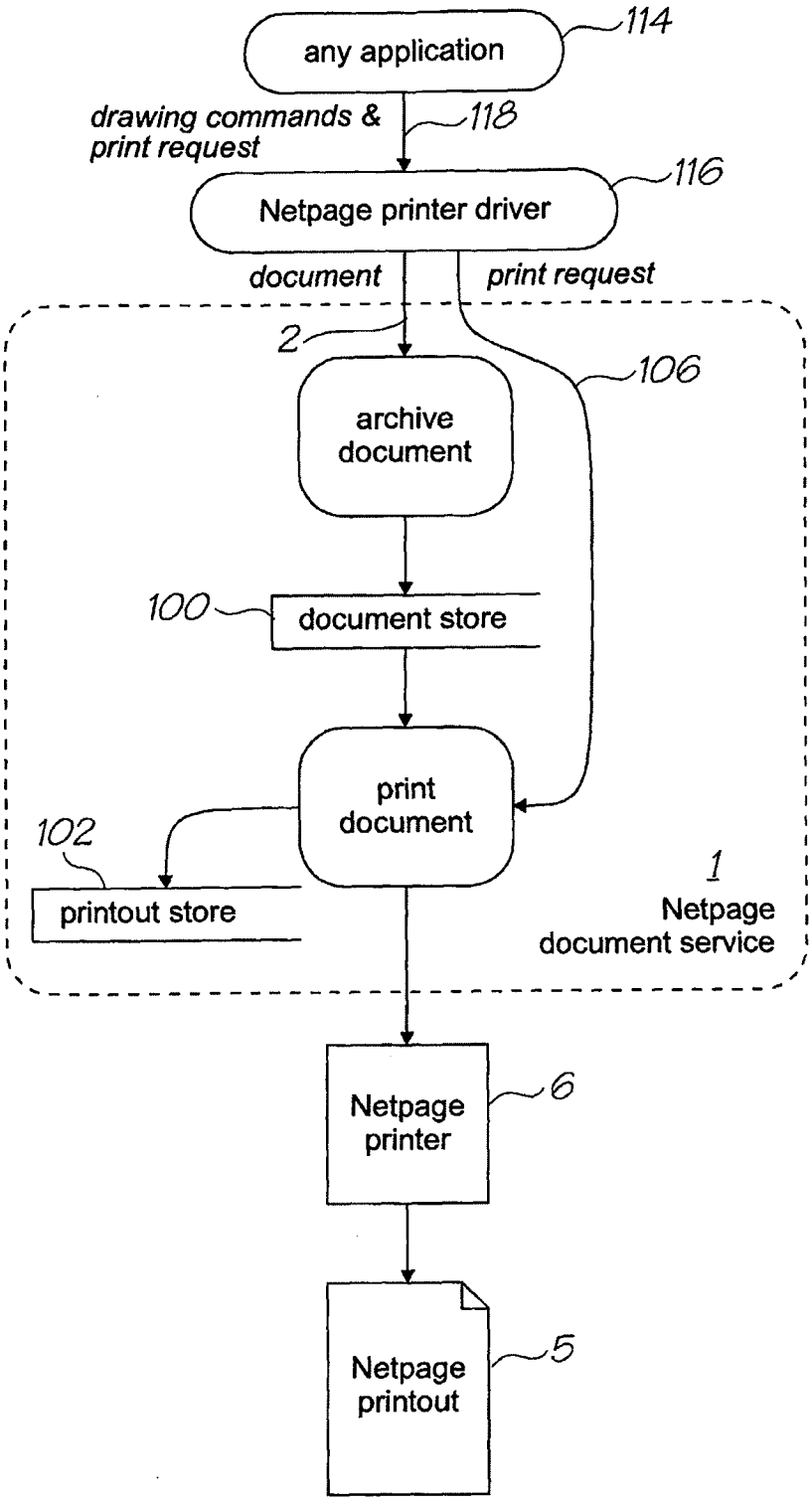
any application
114
drawing commands &
print request
118
Netpage printer driver
116
document
print request
2
106
archive
document
100
document store
print
document
102
printout store
1
Netpage
document service
Netpage
printer
6
Netpage
printout
5

FIG. 13

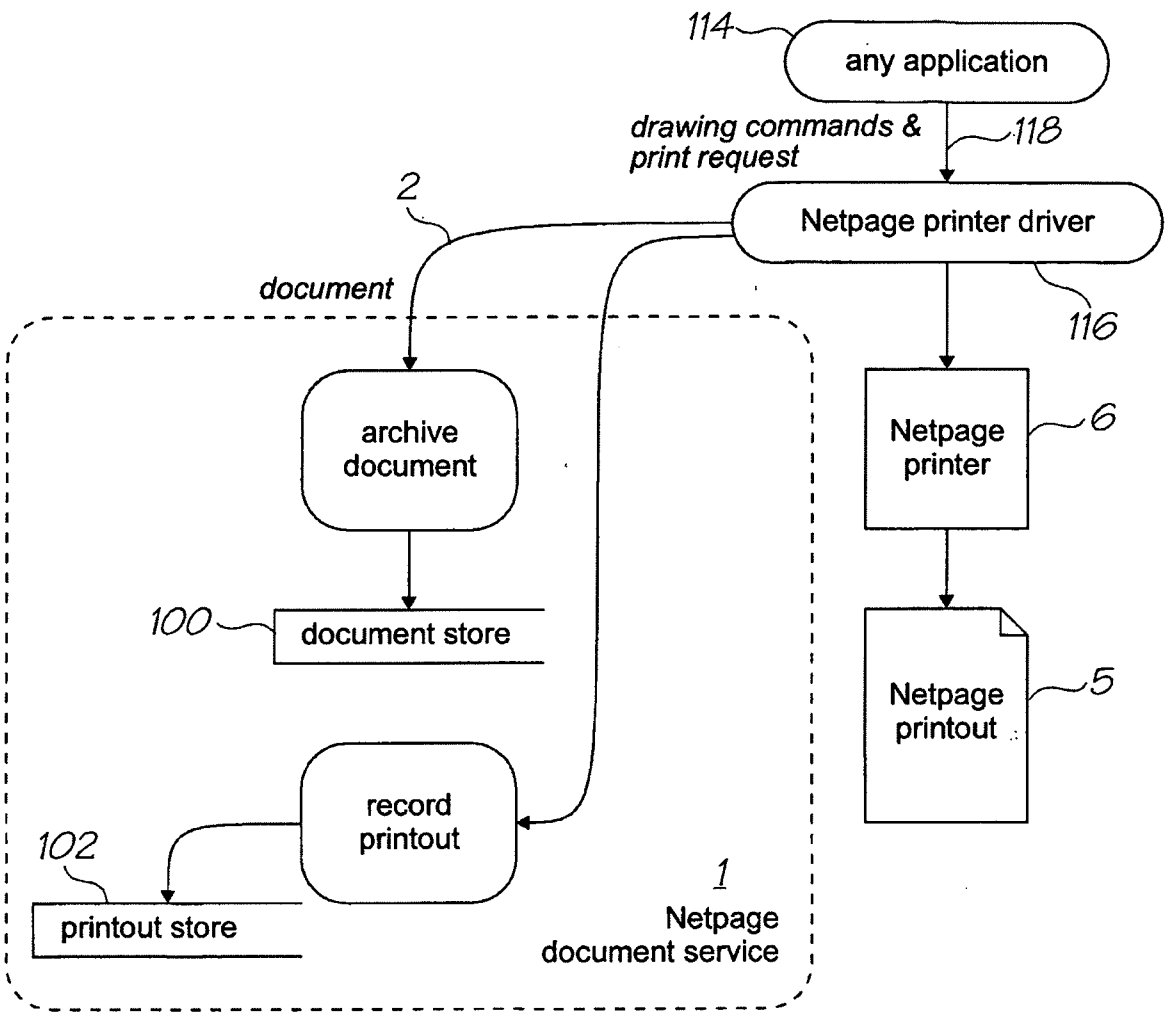
114
any application
drawing commands &
print request
118
2
Netpage printer driver
document
116
archive
document
Netpage
printer
6
100
document store
Netpage
printout
5
record
printout
102
printout store
1
Netpage
document service

FIG. 14

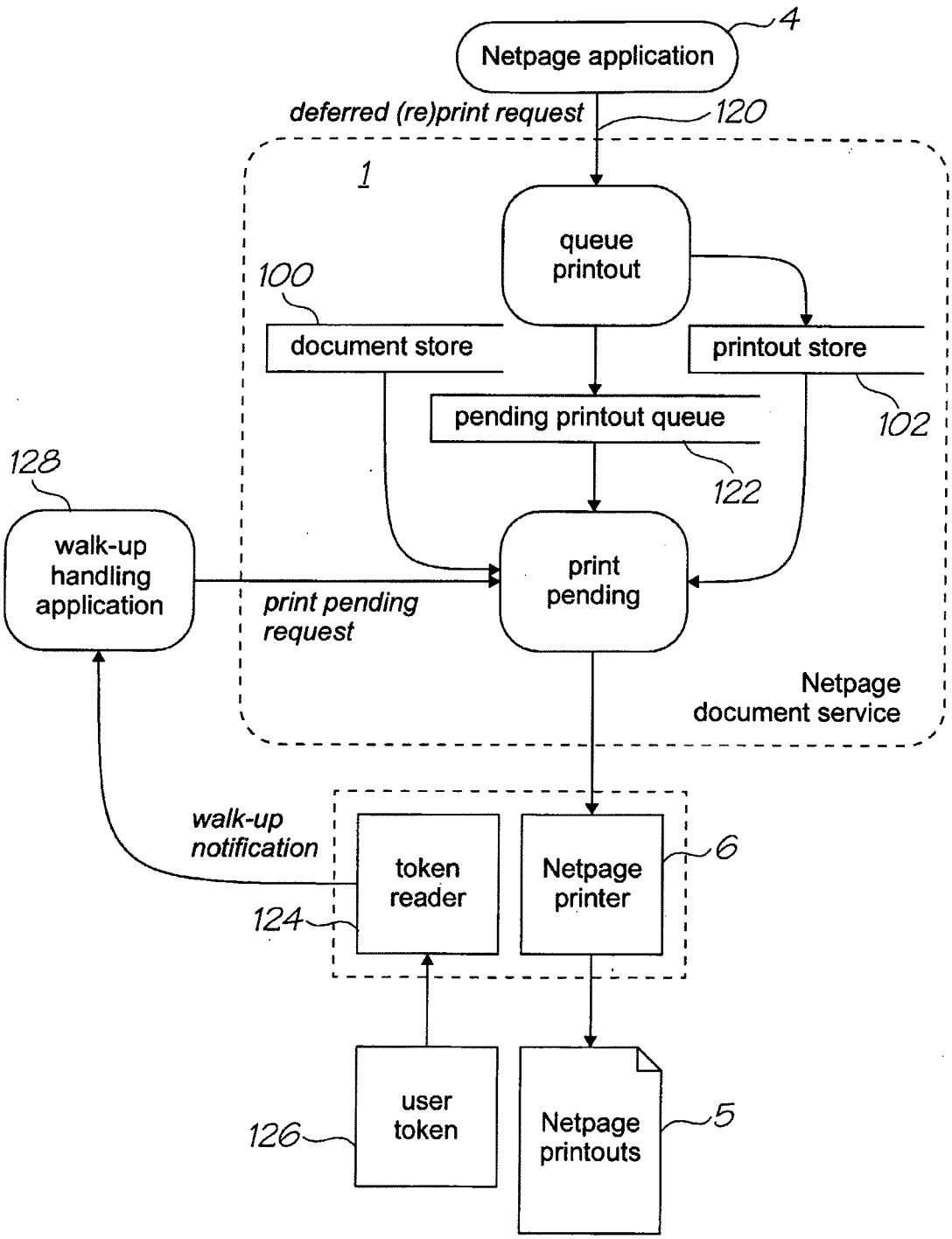
Netpage application
4
deferred (re)print request
120
1
queue printout
100
document store
printout store
pending printout queue
102
122
128
walk-up handling application
print pending
print pending request
Netpage document service
walk-up notification
token reader
Netpage printer
6
124
user token
126
Netpage printouts
5

FIG. 15

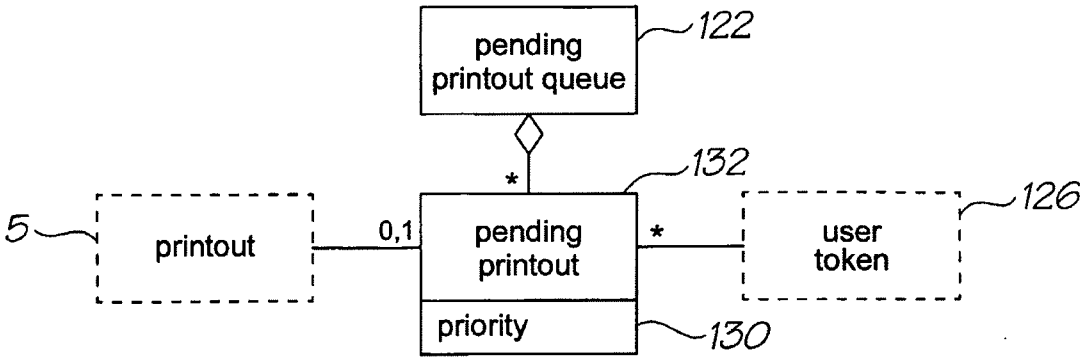
pending printout queue
122
*
132
5
printout
0,1
pending printout
*
user token
126
priority
130

FIG. 16

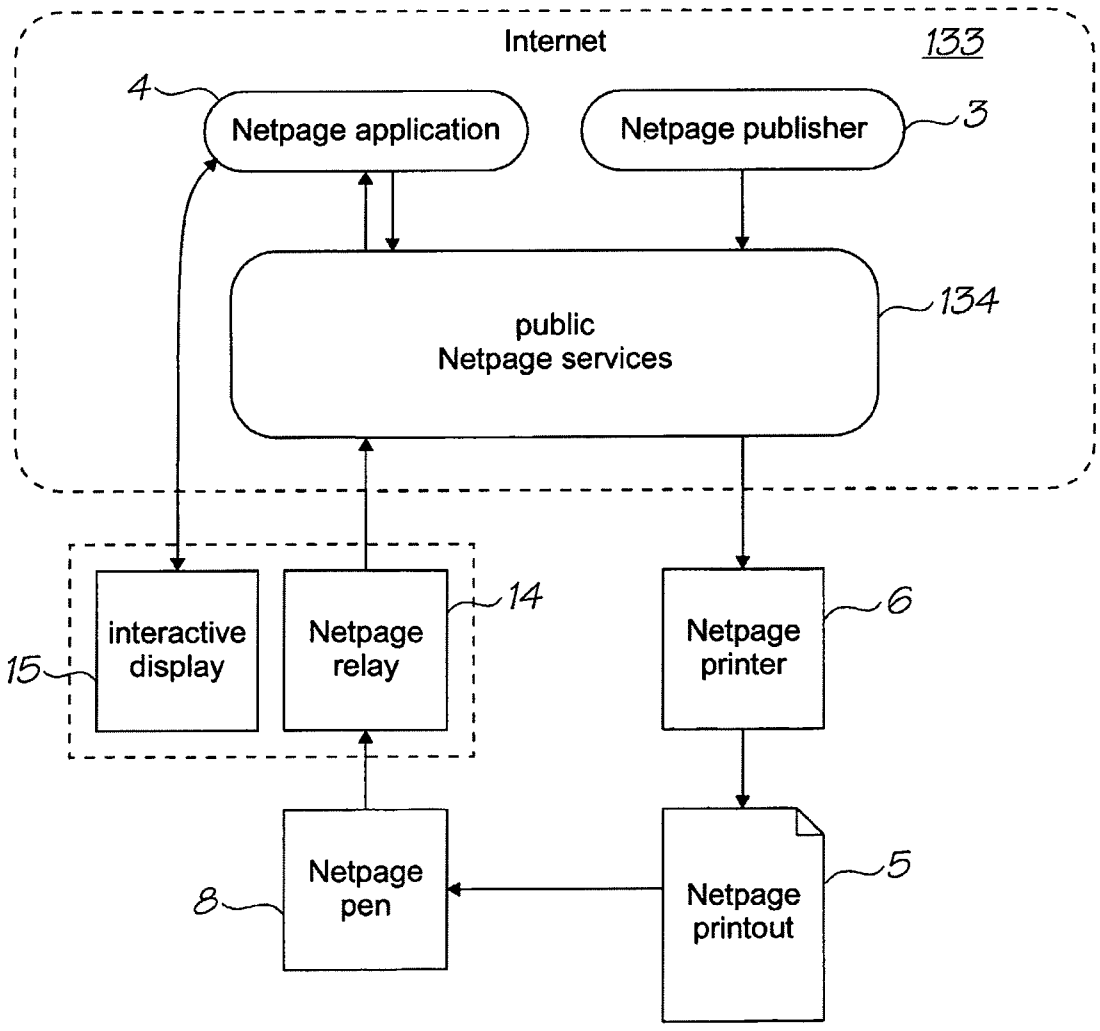
Internet
133
4
Netpage application
Netpage publisher
3
public Netpage services
134
interactive display
15
Netpage relay
14
Netpage printer
6
Netpage pen
8
Netpage printout
5

FIG. 17

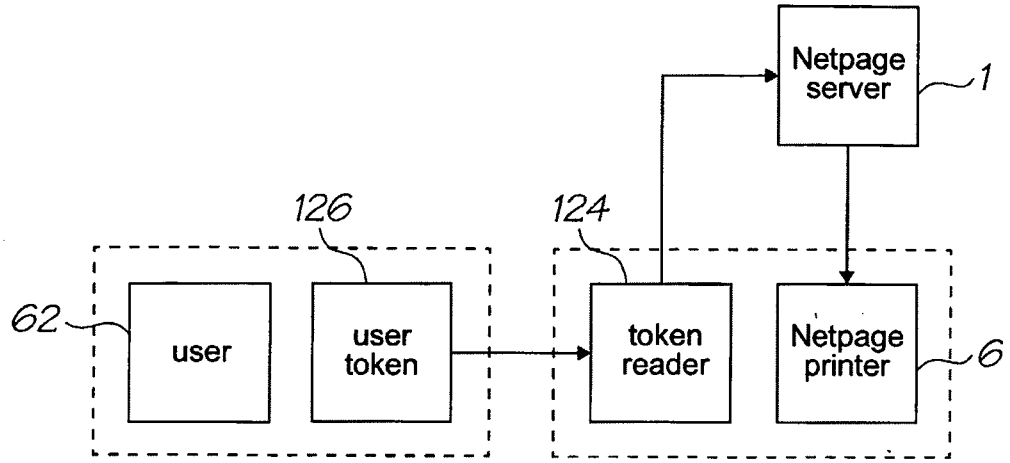
Netpage server
1
126
124
62
user
user token
token reader
Netpage printer
6

FIG. 18

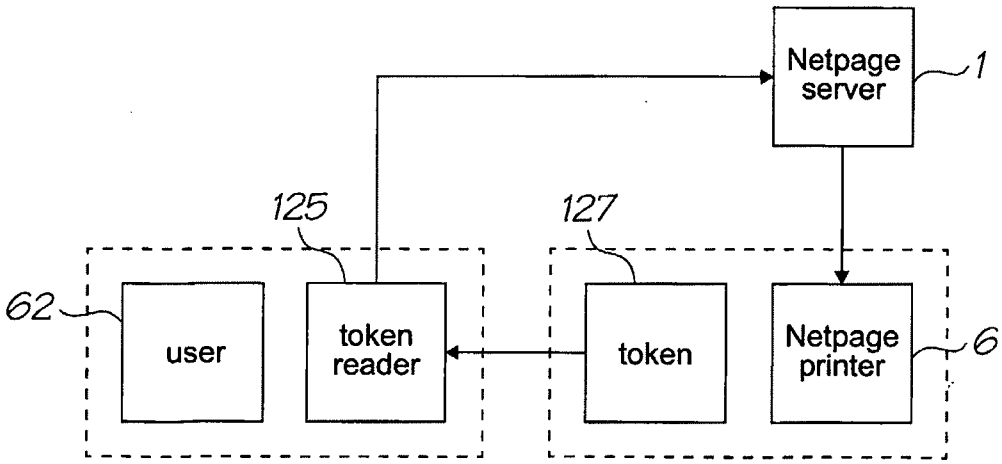
Netpage server
1
125
127
62
user
token reader
token
Netpage printer
6

FIG. 19

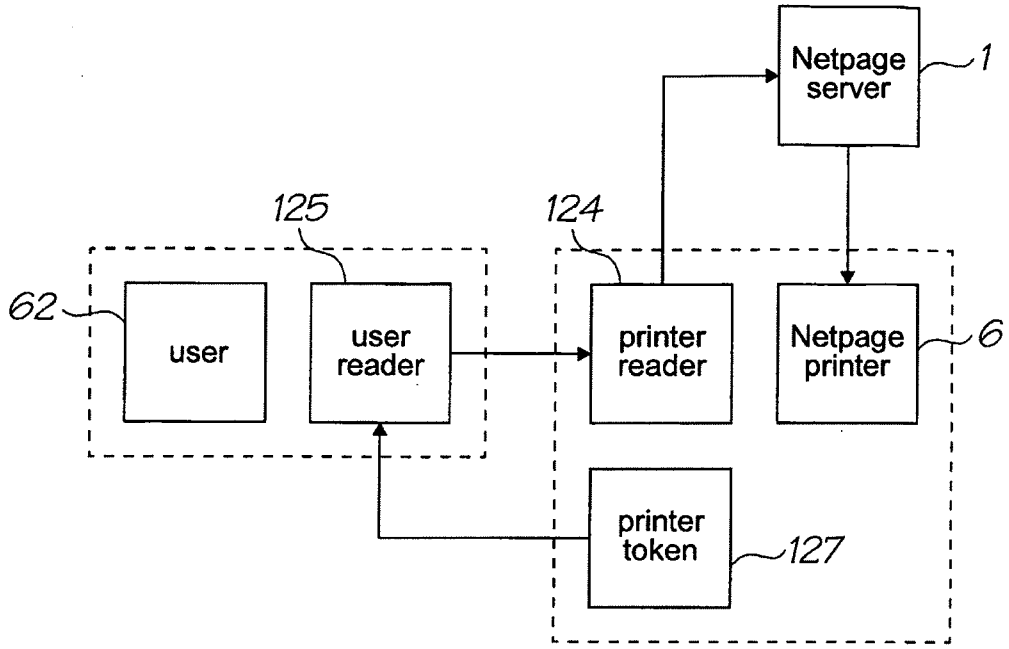
Netpage server
1
125
124
62
user
user reader
printer reader
Netpage printer
6
printer token
127

FIG. 20

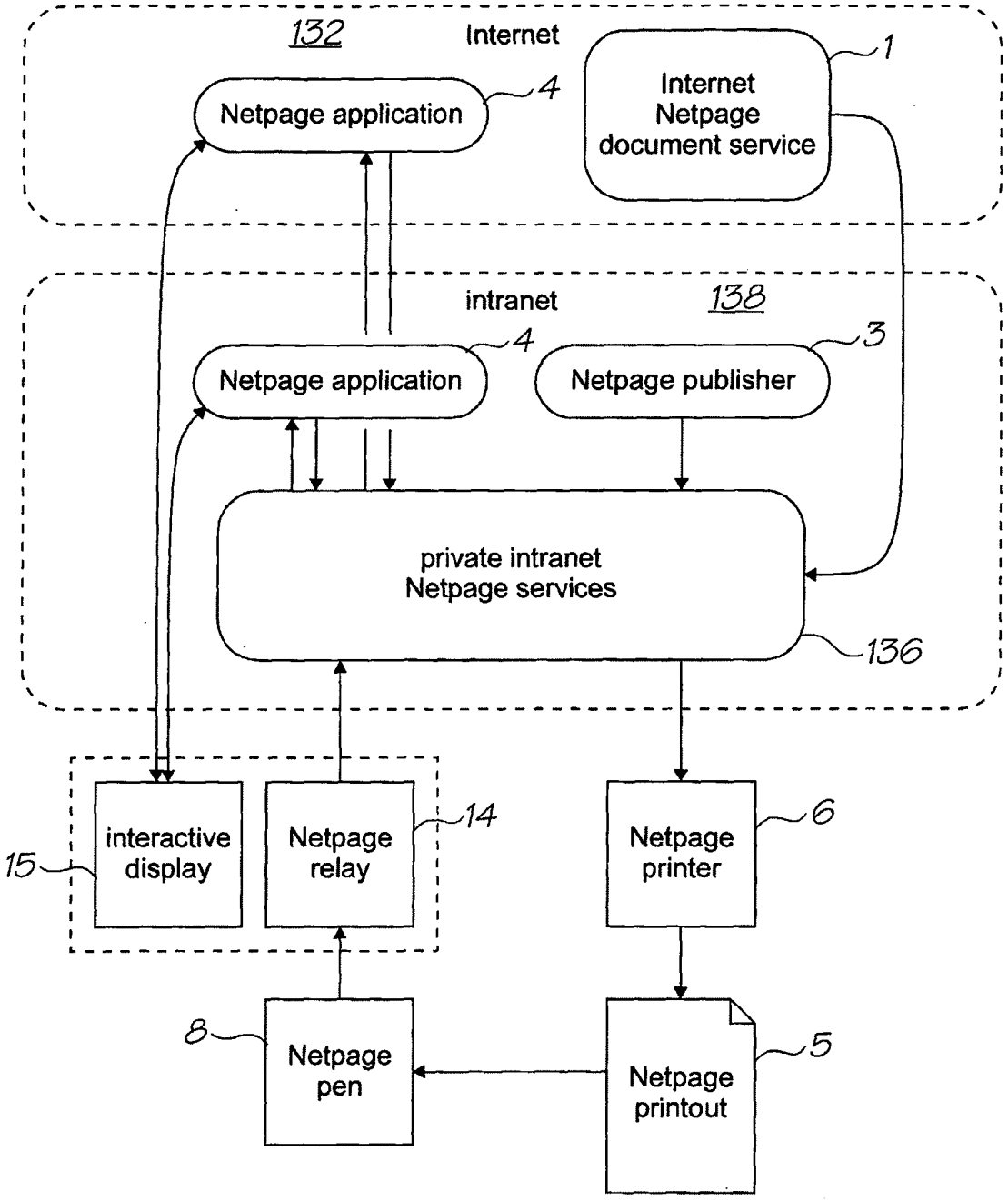
132
Internet
1
Internet Netpage document service
4
Netpage application
intranet
138
4
Netpage application
3
Netpage publisher
private intranet Netpage services
136
15
interactive display
Netpage relay
14
Netpage printer
6
8
Netpage pen
Netpage printout
5

FIG. 21

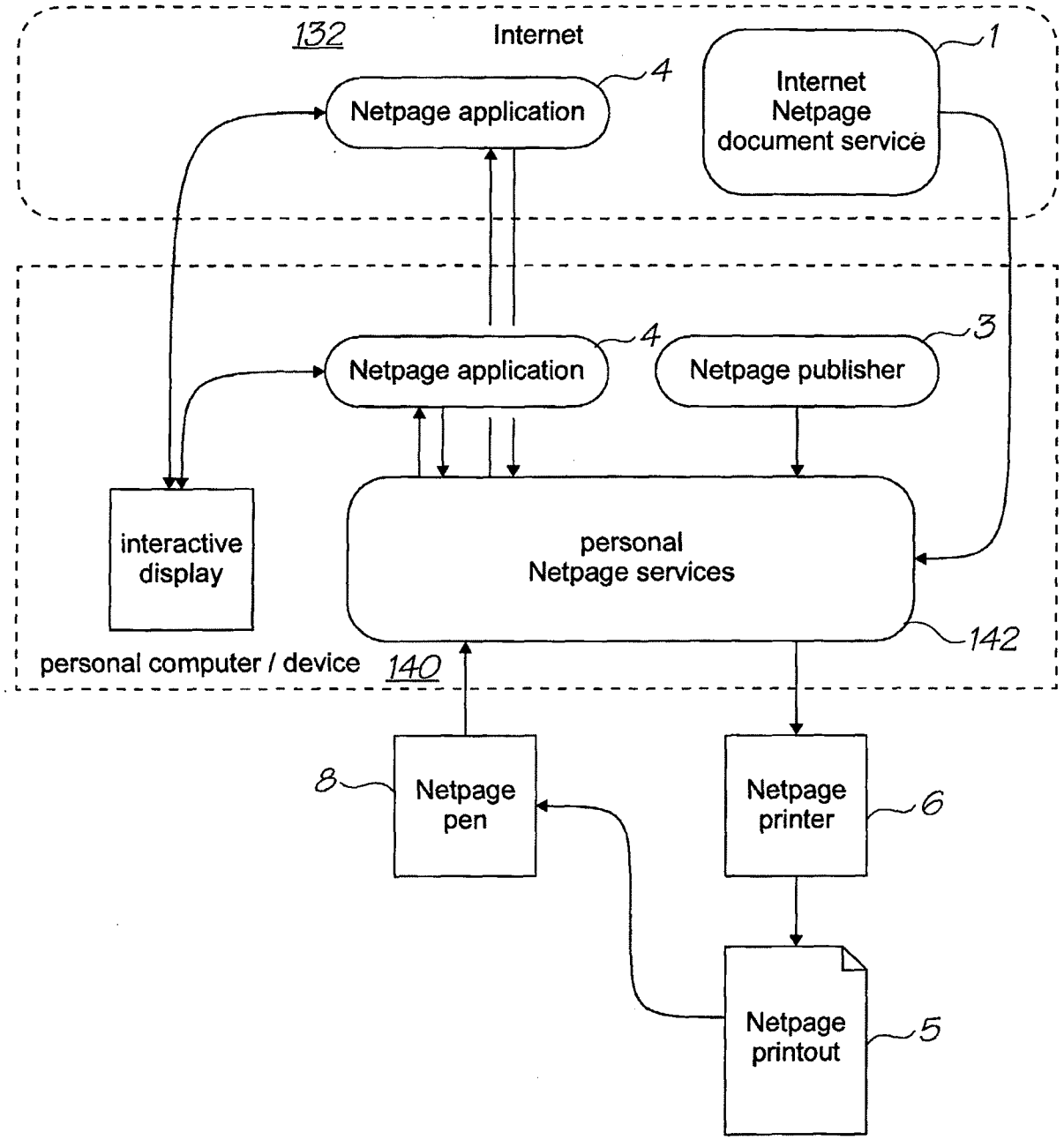
132
Internet
1
Internet Netpage document service
4
Netpage application
4
Netpage application
3
Netpage publisher
interactive display
personal Netpage services
142
personal computer / device
140
8
Netpage pen
Netpage printer
6
Netpage printout
5

FIG. 22

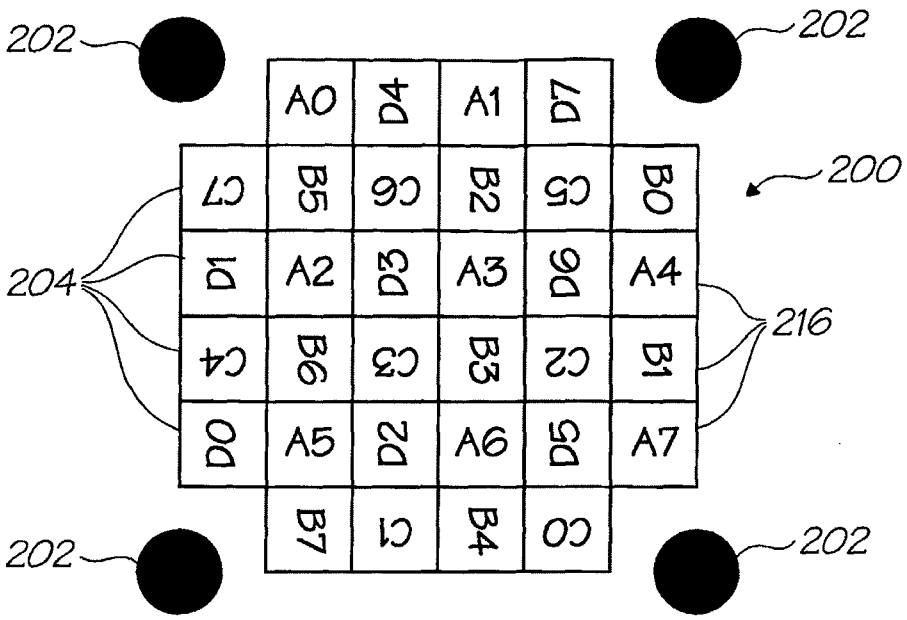
202
202
200
204
216
202
202
A0
D4
A1
D7
C7
B5
C6
B2
C5
B0
D1
A2
D3
A3
D6
A4
C4
B6
C3
B3
C2
B1
D0
A5
D2
A6
D5
A7
B7
C1
B4
C0

FIG. 23

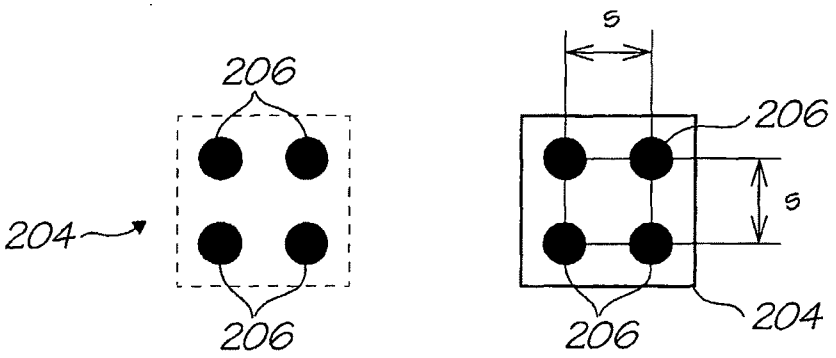
206
204
206
S
206
S
206
204

FIG. 24

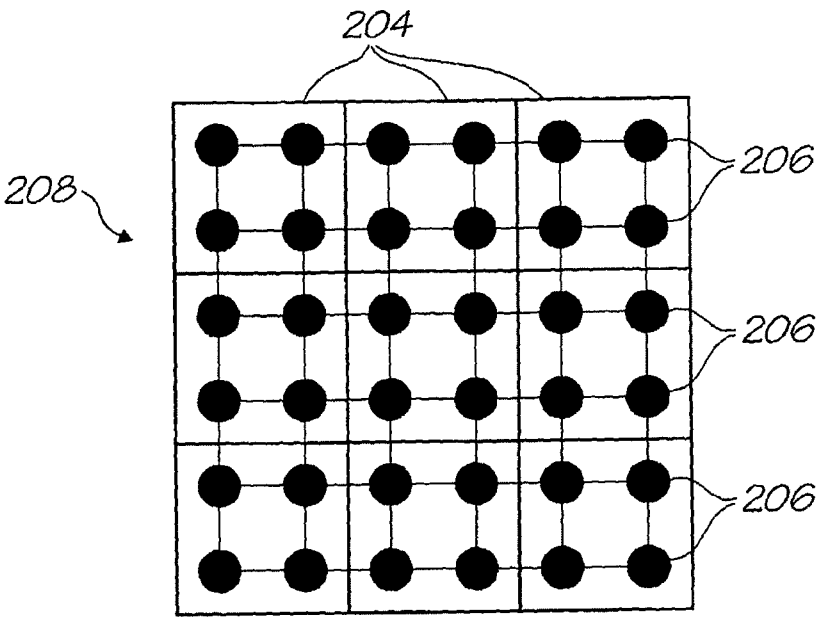

FIG. 25

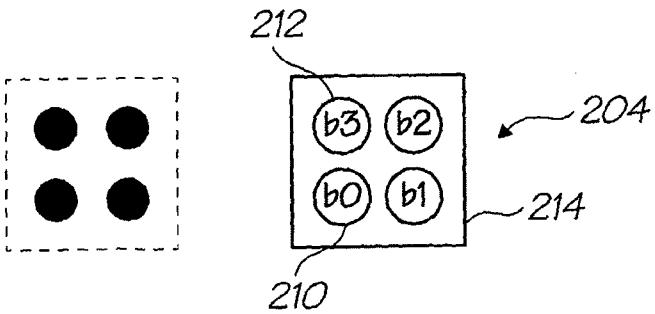

FIG. 26

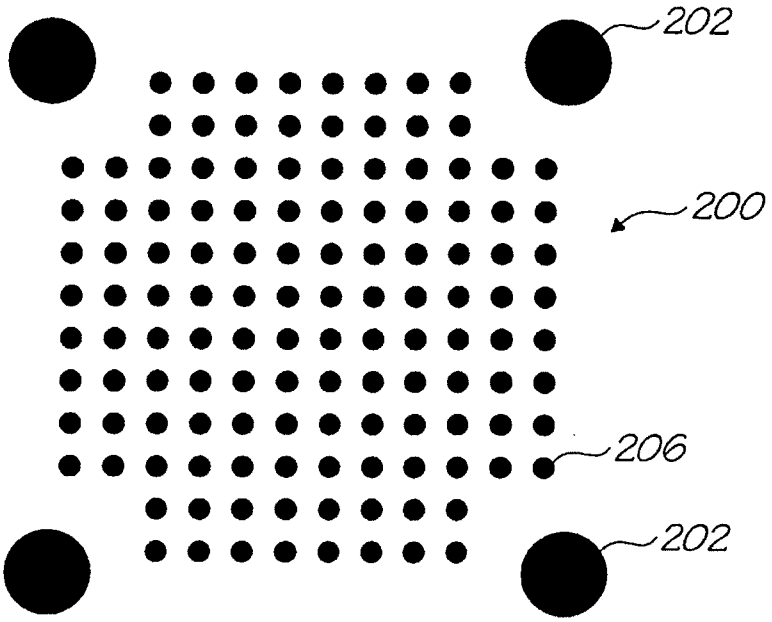

FIG. 27

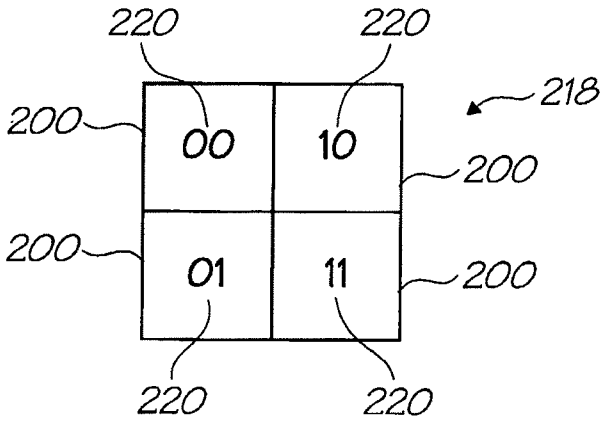

FIG. 28

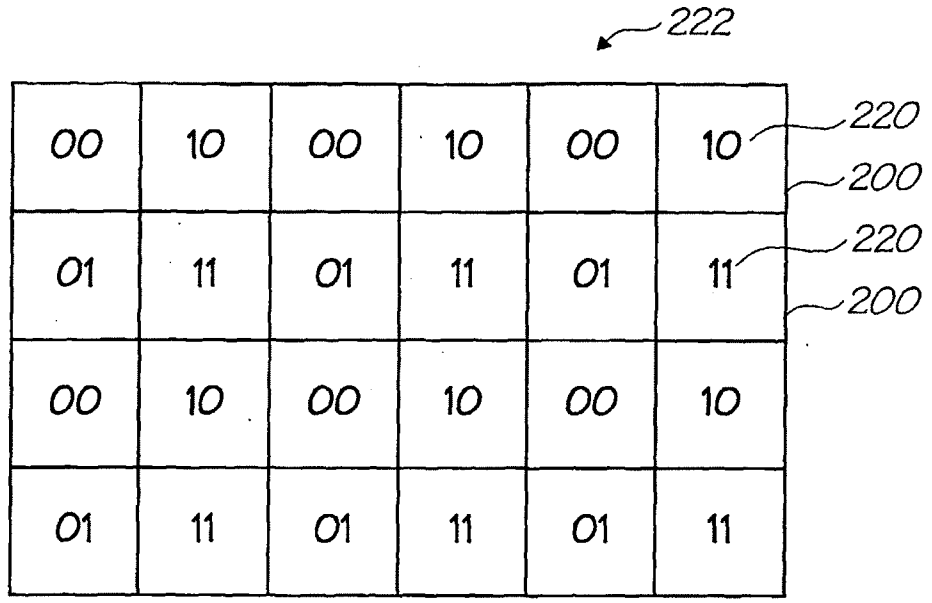
222
00
10
00
10
00
10
220
200
01
11
01
11
01
11
220
200
00
10
00
10
00
10
01
11
01
11
01
11

FIG. 29

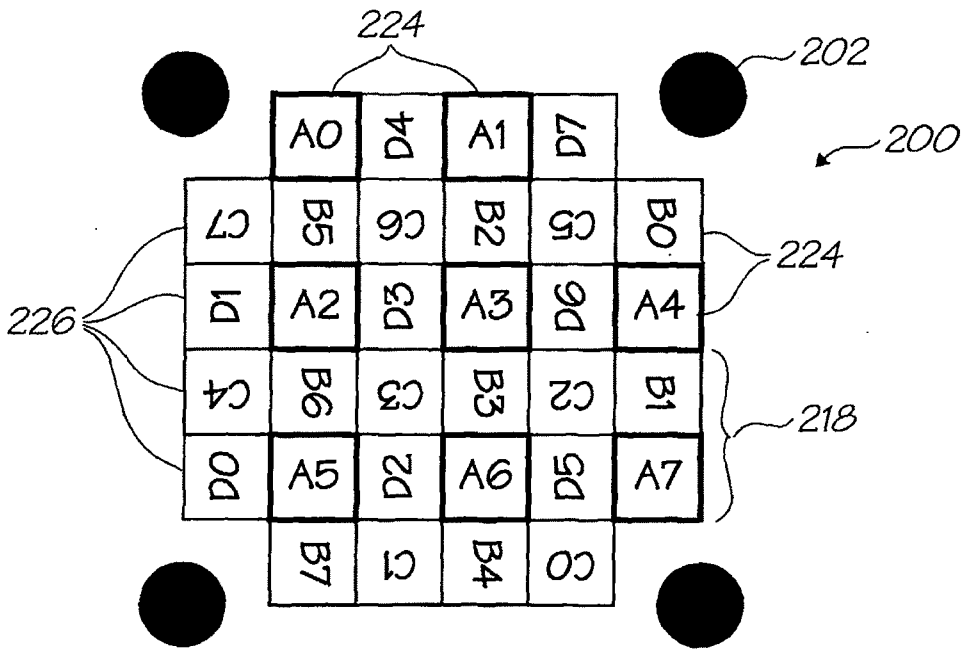
224
202
200
A0
D4
A1
D7
C7
B5
C6
B2
C5
B0
D1
A2
D3
A3
D6
A4
C4
B6
C3
B3
C2
B1
D0
A5
D2
A6
D5
A7
B7
C1
B4
C0
224
226
218

FIG. 30

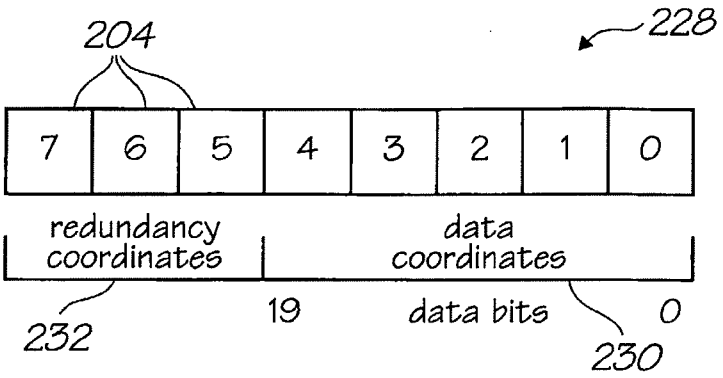
204
228
7
6
5
4
3
2
1
0
redundancy coordinates
data coordinates
19
data bits
0
232
230

FIG. 31

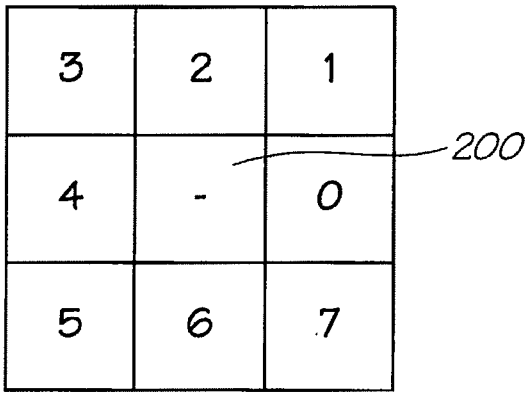
3
2
1
4
-
0
5
6
7
200

FIG. 32