FIG.1 PRIOR ART

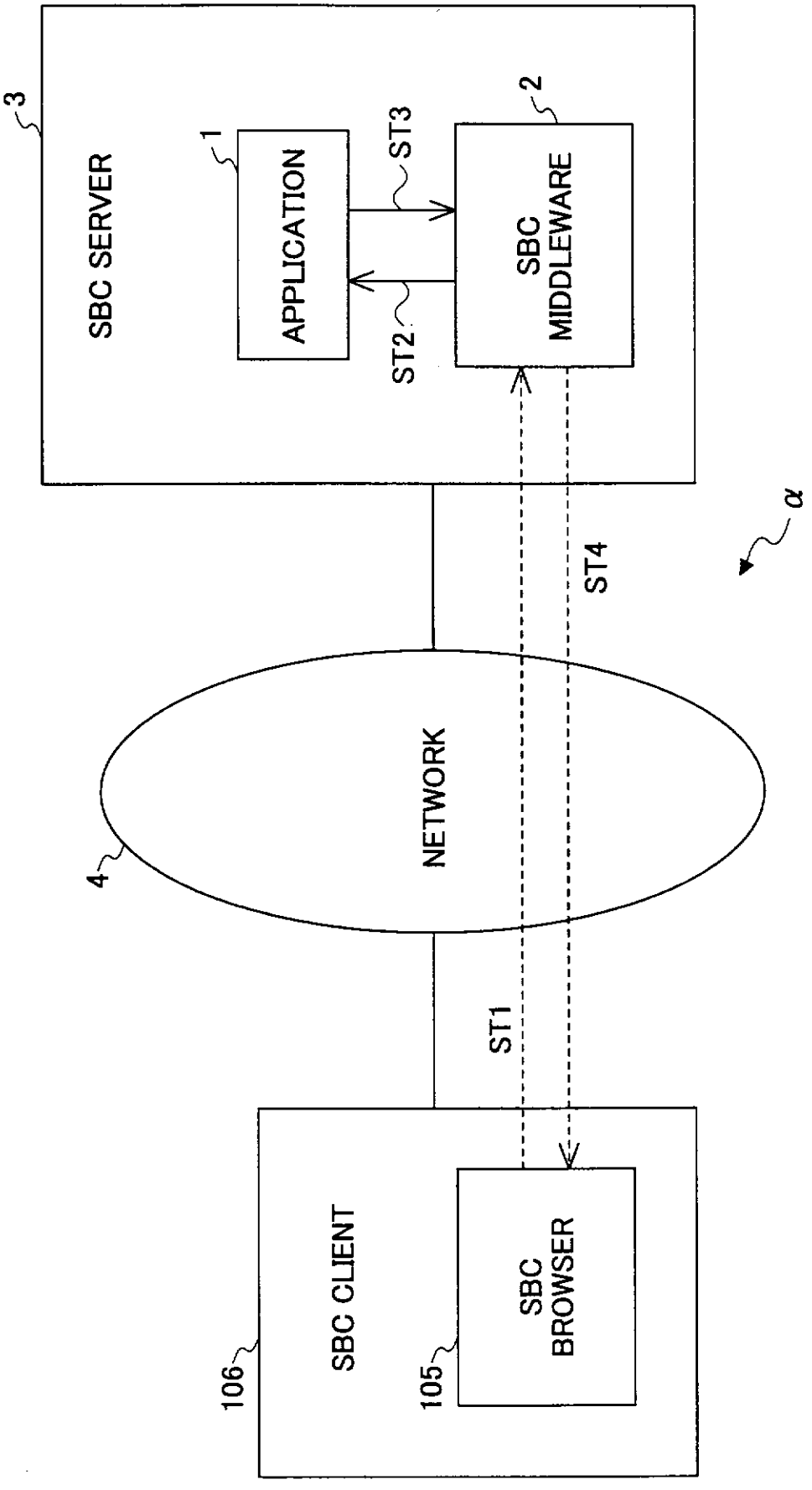


FIG.2

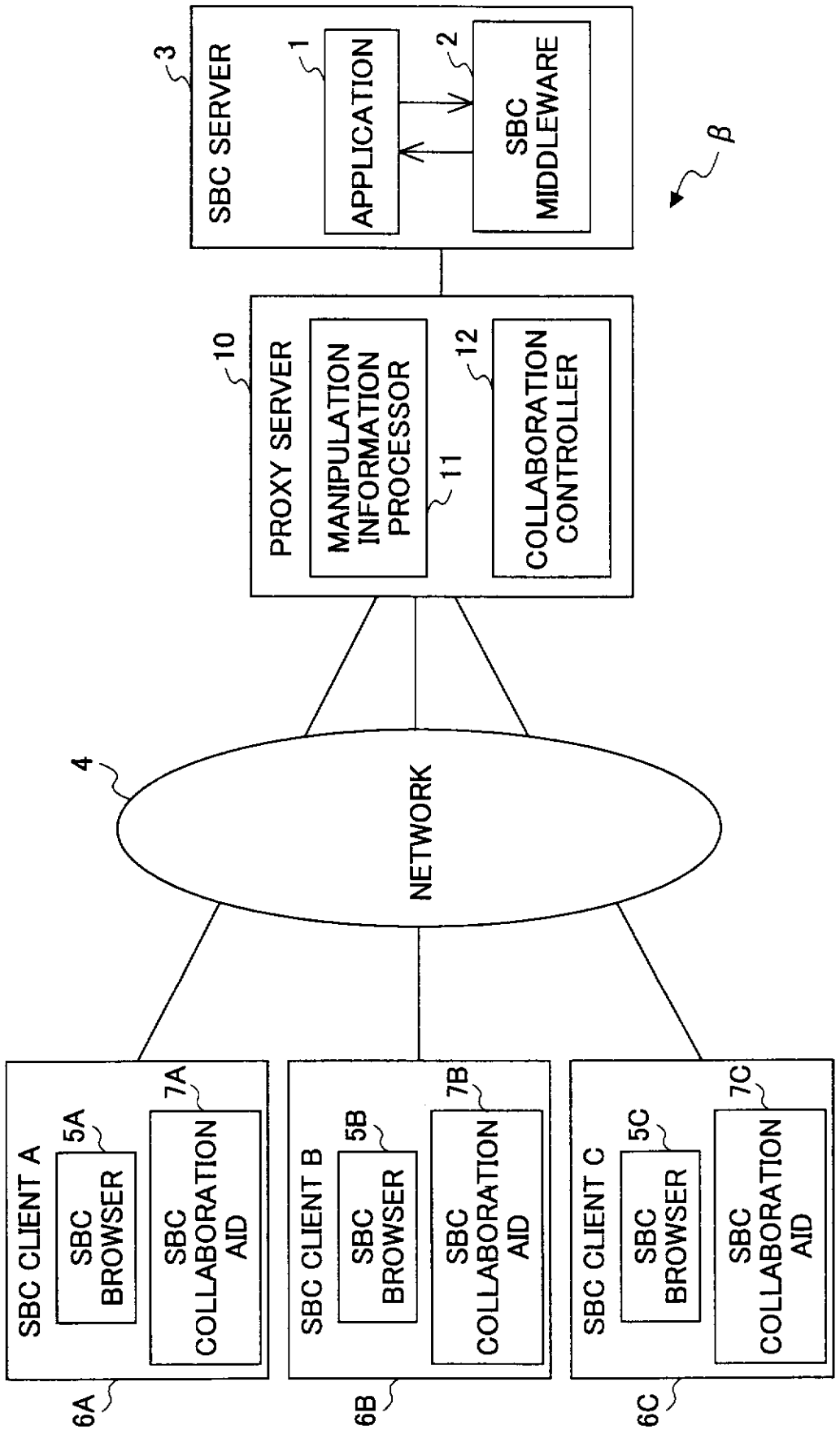

SBC SERVER
3
APPLICATION
1
SBC MIDDLEWARE
2
β
PROXY SERVER
10
MANIPULATION INFORMATION PROCESSOR
11
COLLABORATION CONTROLLER
12
NETWORK
4
SBC CLIENT A
SBC BROWSER
5A
SBC COLLABORATION AID
7A
6A
SBC CLIENT B
SBC BROWSER
5B
SBC COLLABORATION AID
7B
6B
SBC CLIENT C
SBC BROWSER
5C
SBC COLLABORATION AID
7C
6C

FIG.3

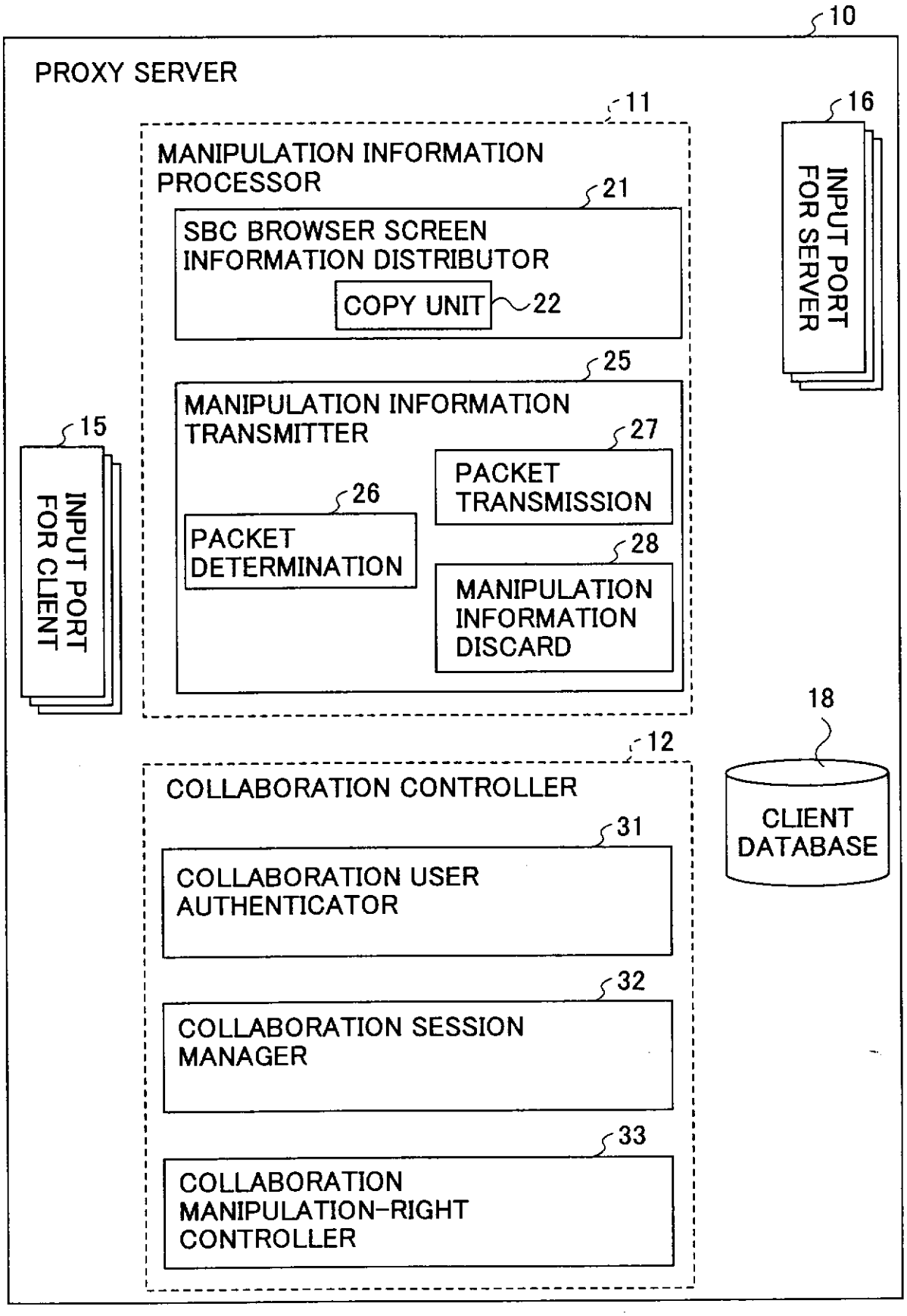

10
PROXY SERVER
11
MANIPULATION INFORMATION PROCESSOR
21
SBC BROWSER SCREEN INFORMATION DISTRIBUTOR
COPY UNIT
22
25
MANIPULATION INFORMATION TRANSMITTER
27
PACKET TRANSMISSION
26
PACKET DETERMINATION
28
MANIPULATION INFORMATION DISCARD
16
INPUT PORT FOR SERVER
15
INPUT PORT FOR CLIENT
18
CLIENT DATABASE
12
COLLABORATION CONTROLLER
31
COLLABORATION USER AUTHENTICATOR
32
COLLABORATION SESSION MANAGER
33
COLLABORATION MANIPULATION-RIGHT CONTROLLER

FIG.4

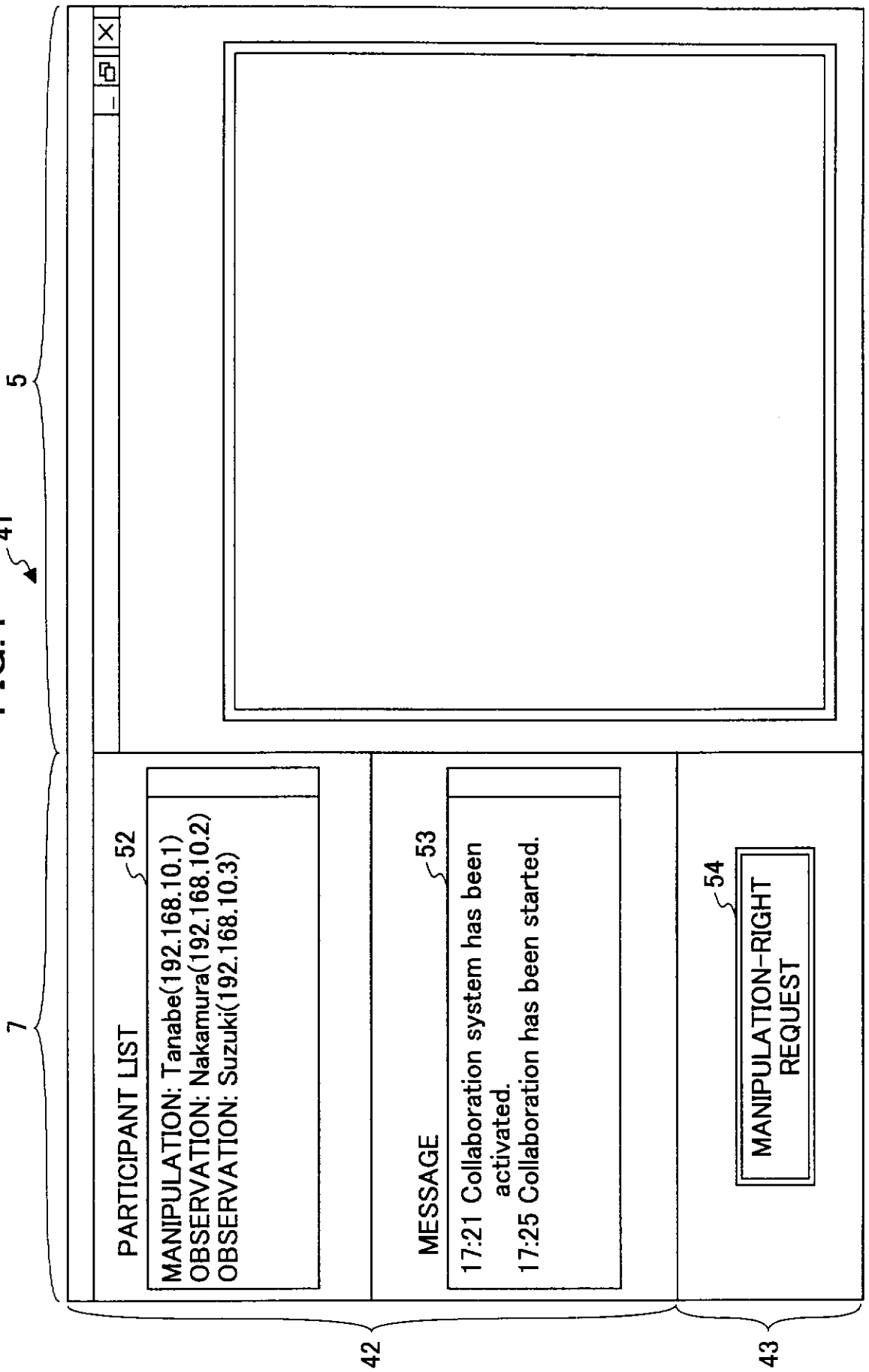

41
5
7
PARTICIPANT LIST
52
MANIPULATION: Tanabe(192.168.10.1)
OBSERVATION: Nakamura(192.168.10.2)
OBSERVATION: Suzuki(192.168.10.3)
MESSAGE
53
17:21 Collaboration system has been activated.
17:25 Collaboration has been started.
54
MANIPULATION-RIGHT REQUEST
42
43

FIG.5

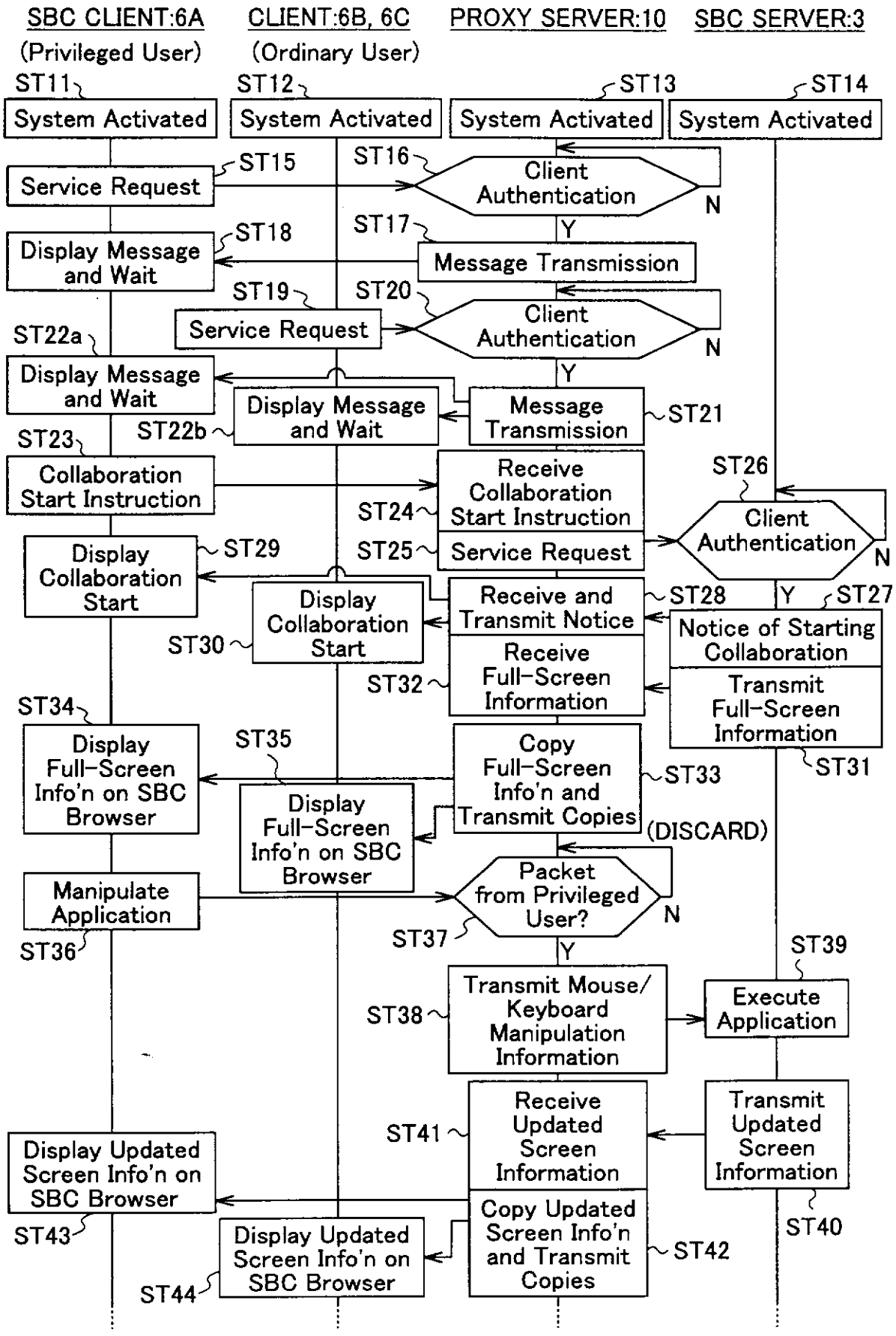

SBC CLIENT:6A
(Privileged User)
CLIENT:6B, 6C
(Ordinary User)
PROXY SERVER:10
SBC SERVER:3
ST11
System Activated
ST12
System Activated
ST13
System Activated
ST14
System Activated
ST15
Service Request
ST16
Client Authentication
N
Y
ST17
Message Transmission
ST18
Display Message and Wait
ST19
Service Request
ST20
Client Authentication
N
Y
ST22a
Display Message and Wait
ST22b
Display Message and Wait
Message Transmission
ST21
ST23
Collaboration Start Instruction
Receive Collaboration Start Instruction
ST24
ST25
Service Request
ST26
Client Authentication
N
Y
ST27
ST28
Receive and Transmit Notice
Notice of Starting Collaboration
Transmit Full-Screen Information
ST31
Display Collaboration Start
ST29
Display Collaboration Start
ST30
Receive Full-Screen Information
ST32
ST34
Display Full-Screen Info'n on SBC Browser
ST35
Display Full-Screen Info'n on SBC Browser
Copy Full-Screen Info'n and Transmit Copies
ST33
(DISCARD)
Manipulate Application
ST36
Packet from Privileged User?
N
Y
ST37
ST38
Transmit Mouse/ Keyboard Manipulation Information
ST39
Execute Application
ST40
Transmit Updated Screen Information
ST41
Receive Updated Screen Information
Display Updated Screen Info'n on SBC Browser
ST43
Display Updated Screen Info'n on SBC Browser
ST44
Copy Updated Screen Info'n and Transmit Copies
ST42

FIG.6

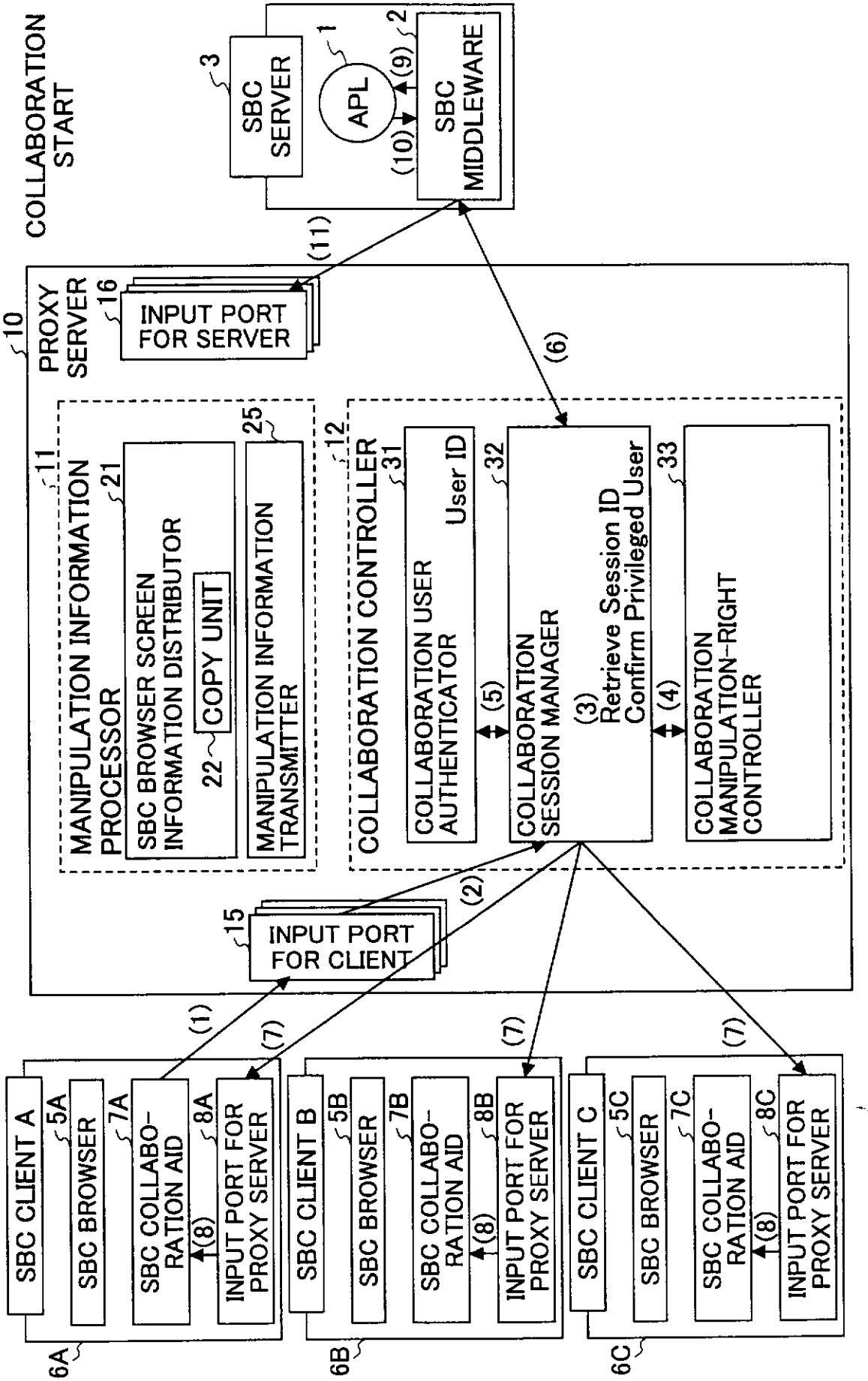

COLLABORATION START
SBC SERVER
3
APL
1
SBC MIDDLEWARE
2
(9)
(10)
(11)
PROXY SERVER
10
INPUT PORT FOR SERVER
16
(6)
MANIPULATION INFORMATION PROCESSOR
11
SBC BROWSER SCREEN INFORMATION DISTRIBUTOR
21
COPY UNIT
22
MANIPULATION INFORMATION TRANSMITTER
25
COLLABORATION CONTROLLER
12
COLLABORATION USER AUTHENTICATOR
31
User ID
(5)
COLLABORATION SESSION MANAGER
32
(3)
Retrieve Session ID
Confirm Privileged User
(4)
COLLABORATION MANIPULATION-RIGHT CONTROLLER
33
(2)
INPUT PORT FOR CLIENT
15
(1)
(7)
SBC CLIENT A
5A
SBC BROWSER
7A
SBC COLLABO-RATION AID
8A
(8)
INPUT PORT FOR PROXY SERVER
6A
SBC CLIENT B
5B
SBC BROWSER
7B
SBC COLLABO-RATION AID
8B
INPUT PORT FOR PROXY SERVER
6B
SBC CLIENT C
5C
SBC BROWSER
7C
SBC COLLABO-RATION AID
8C
INPUT PORT FOR PROXY SERVER
6C

FIG.7

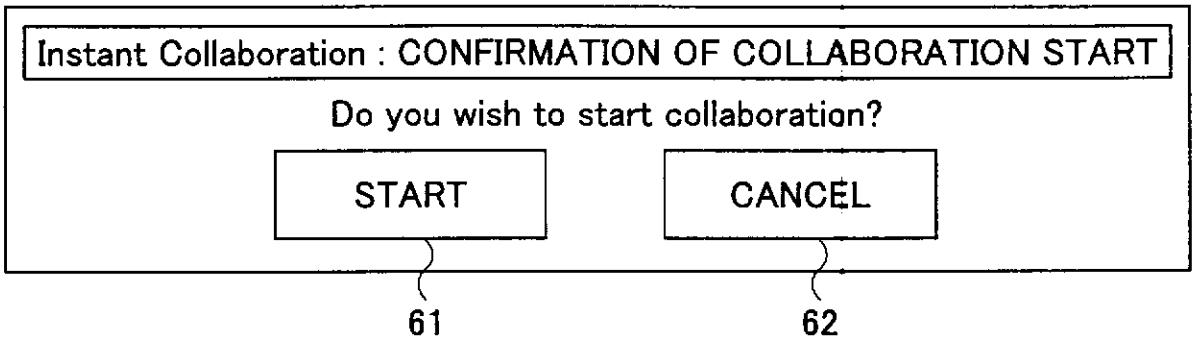

Instant Collaboration : CONFIRMATION OF COLLABORATION START
Do you wish to start collaboration?
START
CANCEL
61
62

FIG.8

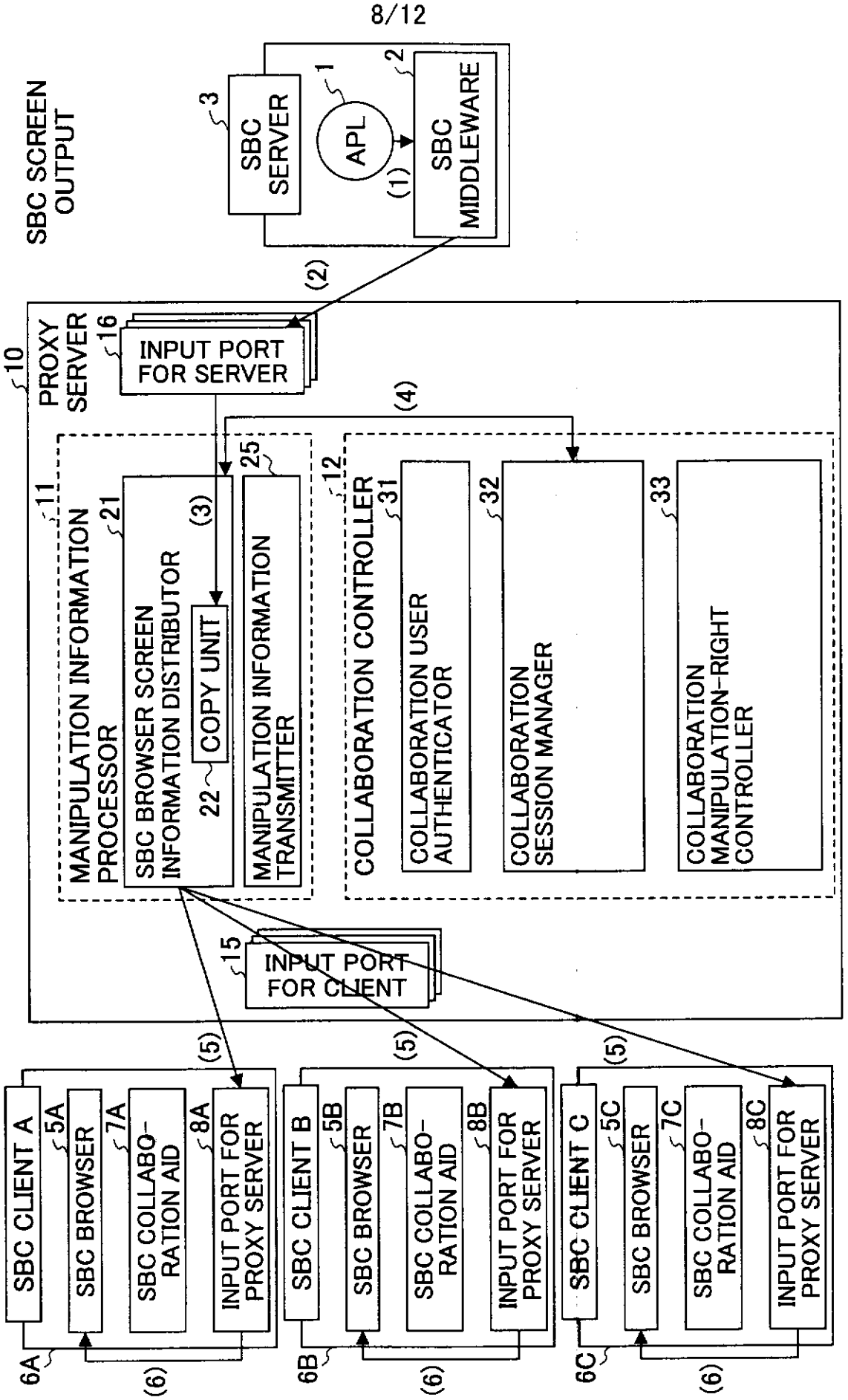

SBC SCREEN OUTPUT
SBC SERVER
3
APL
1
(1)
SBC MIDDLEWARE
2
(2)
10
PROXY SERVER
INPUT PORT FOR SERVER
16
(4)
11
MANIPULATION INFORMATION PROCESSOR
21
SBC BROWSER SCREEN INFORMATION DISTRIBUTOR
(3)
COPY UNIT
22
MANIPULATION INFORMATION TRANSMITTER
25
12
COLLABORATION CONTROLLER
31
COLLABORATION USER AUTHENTICATOR
32
COLLABORATION SESSION MANAGER
33
COLLABORATION MANIPULATION-RIGHT CONTROLLER
15
INPUT PORT FOR CLIENT
(5)
SBC CLIENT A
5A
SBC BROWSER
7A
SBC COLLABO-RATION AID
8A
INPUT PORT FOR PROXY SERVER
6A
(6)
SBC CLIENT B
5B
SBC BROWSER
7B
SBC COLLABO-RATION AID
8B
INPUT PORT FOR PROXY SERVER
6B
(6)
SBC CLIENT C
5C
SBC BROWSER
7C
SBC COLLABO-RATION AID
8C
INPUT PORT FOR PROXY SERVER
6C
(6)

FIG.9

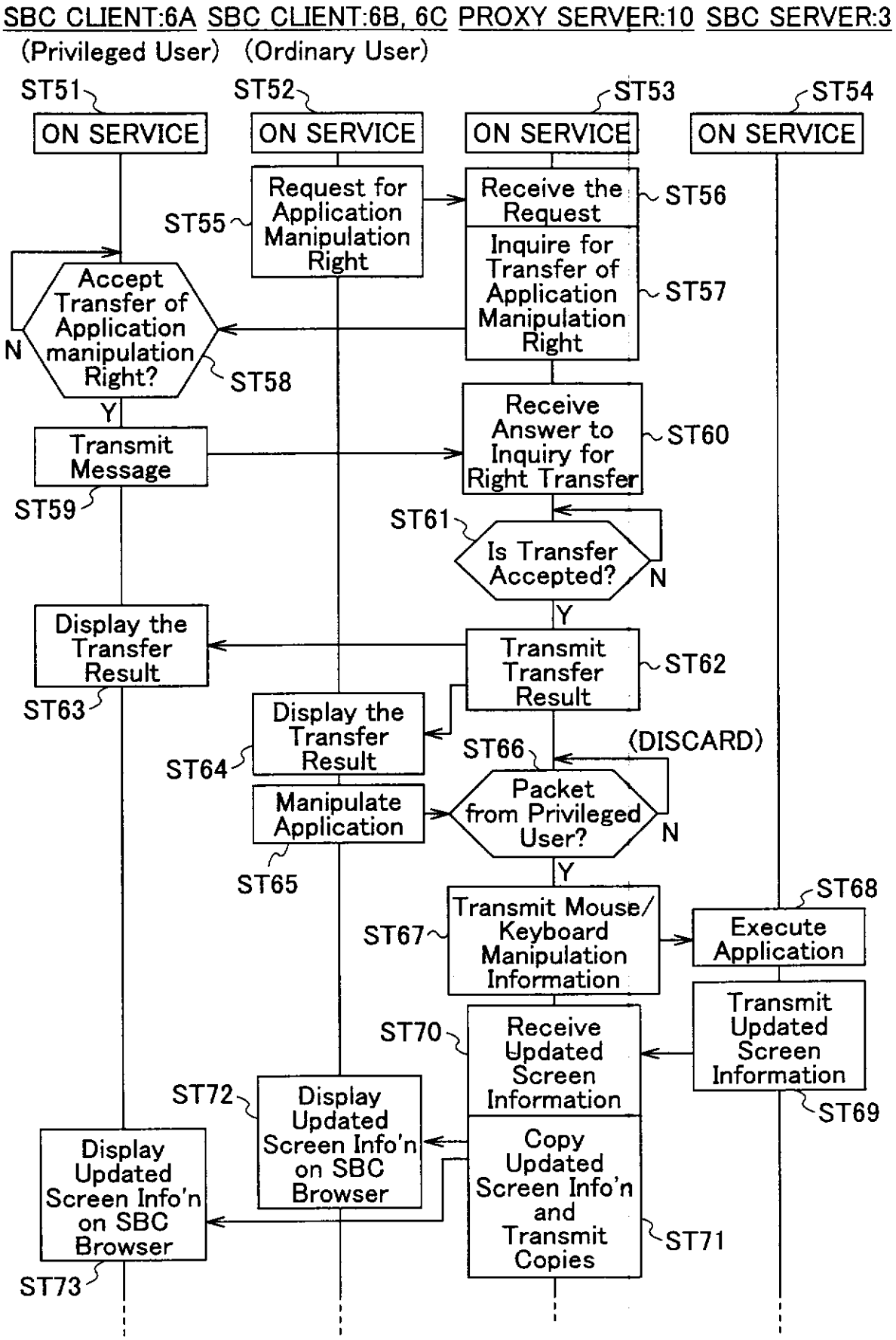

SBC CLIENT:6A
(Privileged User)
SBC CLIENT:6B, 6C
(Ordinary User)
PROXY SERVER:10
SBC SERVER:3
ST51
ON SERVICE
ST52
ON SERVICE
ST53
ON SERVICE
ST54
ON SERVICE
Request for Application Manipulation Right
ST55
Receive the Request
ST56
Inquire for Transfer of Application Manipulation Right
ST57
Accept Transfer of Application manipulation Right?
ST58
N
Y
Transmit Message
ST59
Receive Answer to Inquiry for Right Transfer
ST60
ST61
Is Transfer Accepted?
N
Y
Display the Transfer Result
ST63
Transmit Transfer Result
ST62
Display the Transfer Result
ST64
ST66
(DISCARD)
Manipulate Application
ST65
Packet from Privileged User?
N
Y
Transmit Mouse/ Keyboard Manipulation Information
ST67
ST68
Execute Application
Transmit Updated Screen Information
ST69
ST70
Receive Updated Screen Information
ST72
Display Updated Screen Info'n on SBC Browser
Copy Updated Screen Info'n and Transmit Copies
ST71
Display Updated Screen Info'n on SBC Browser
ST73

FIG.10

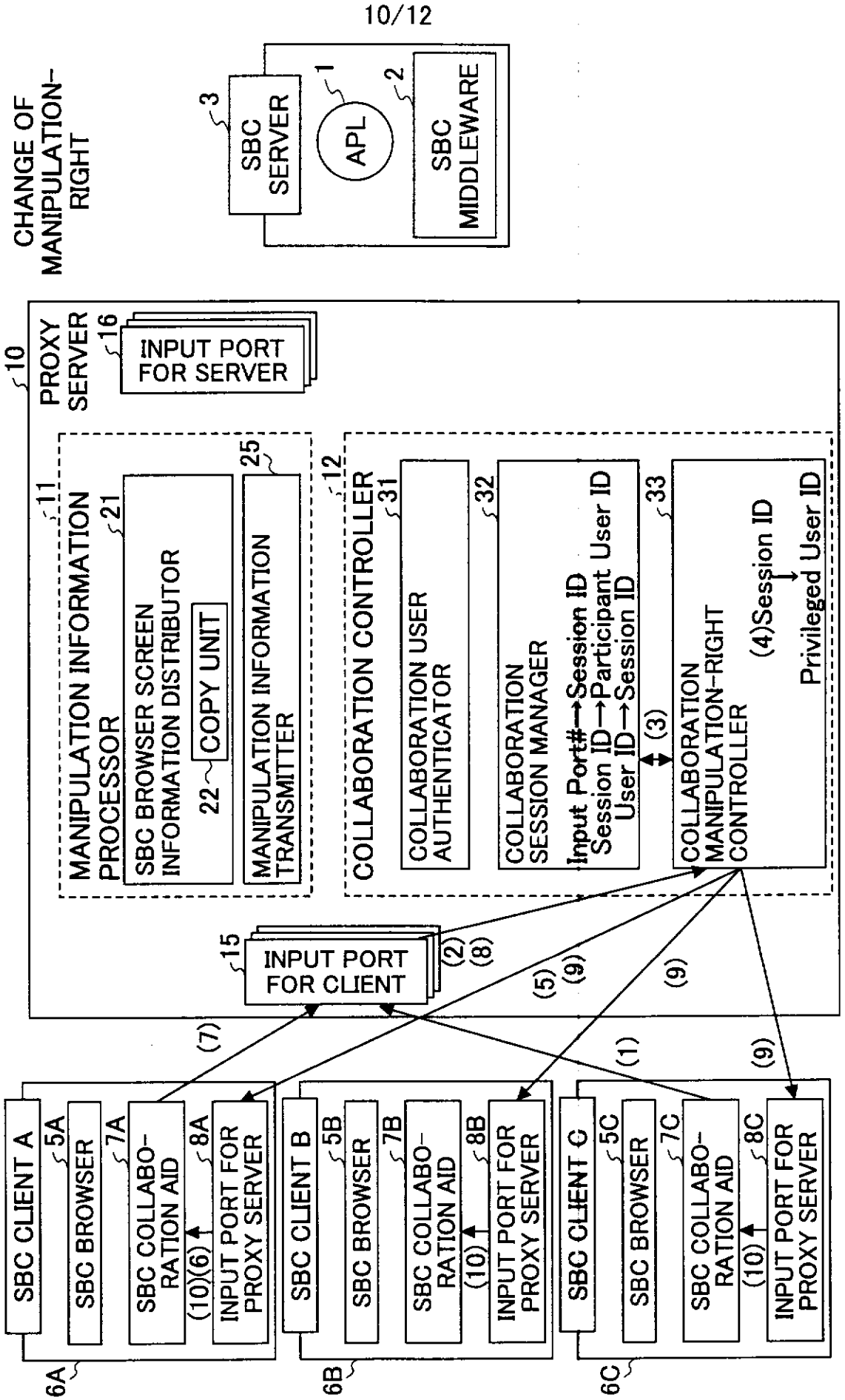

CHANGE OF MANIPULATION-RIGHT
SBC SERVER
3
APL
1
SBC MIDDLEWARE
2
10
PROXY SERVER
INPUT PORT FOR SERVER
16
MANIPULATION INFORMATION PROCESSOR
11
SBC BROWSER SCREEN INFORMATION DISTRIBUTOR
21
COPY UNIT
22
MANIPULATION INFORMATION TRANSMITTER
25
COLLABORATION CONTROLLER
12
COLLABORATION USER AUTHENTICATOR
31
COLLABORATION SESSION MANAGER
32
Input Port#→Session ID
Session ID→Participant User ID
User ID→Session ID
(3)
COLLABORATION MANIPULATION-RIGHT CONTROLLER
33
(4)Session ID
Privileged User ID
INPUT PORT FOR CLIENT
15
(2)
(8)
(5)
(9)
(9)
(7)
(1)
(9)
SBC CLIENT A
5A
SBC BROWSER
7A
SBC COLLABO-RATION AID
8A
(10)(6)
INPUT PORT FOR PROXY SERVER
6A
SBC CLIENT B
5B
SBC BROWSER
7B
SBC COLLABO-RATION AID
8B
(10)
INPUT PORT FOR PROXY SERVER
6B
SBC CLIENT C
5C
SBC BROWSER
7C
SBC COLLABO-RATION AID
8C
(10)
INPUT PORT FOR PROXY SERVER
6C

FIG.11A

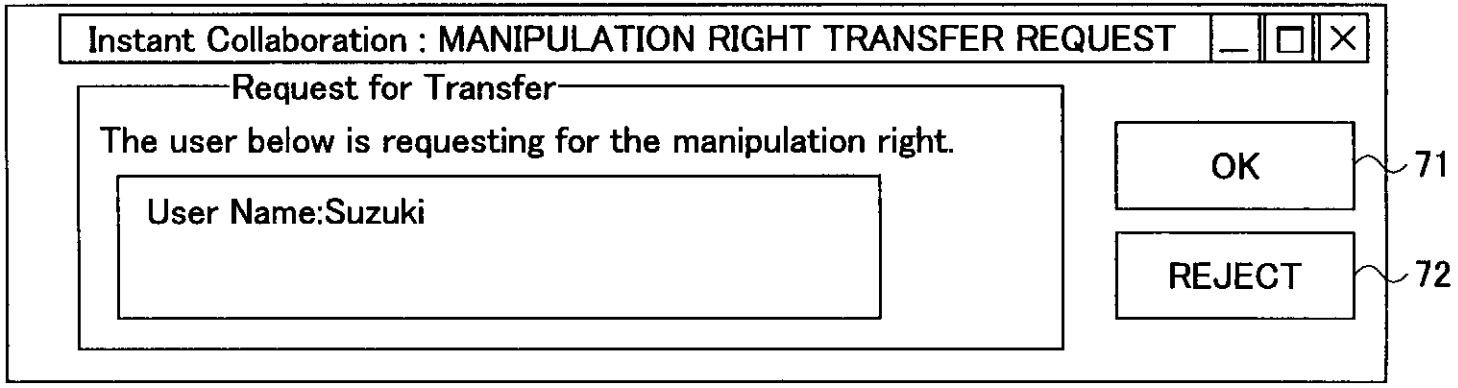
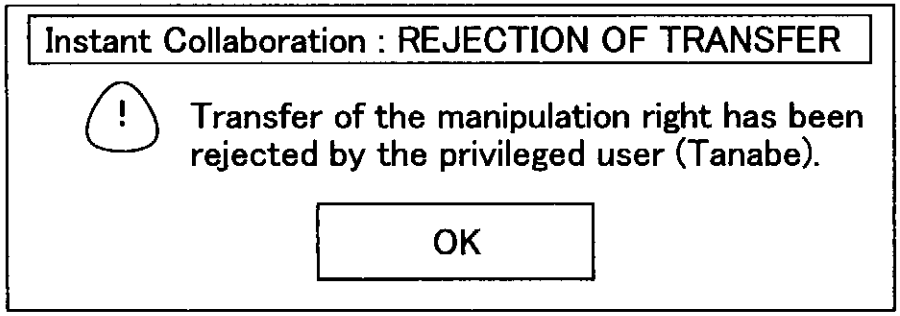


FIG.11B



14 DEC 2004

FIG.12A

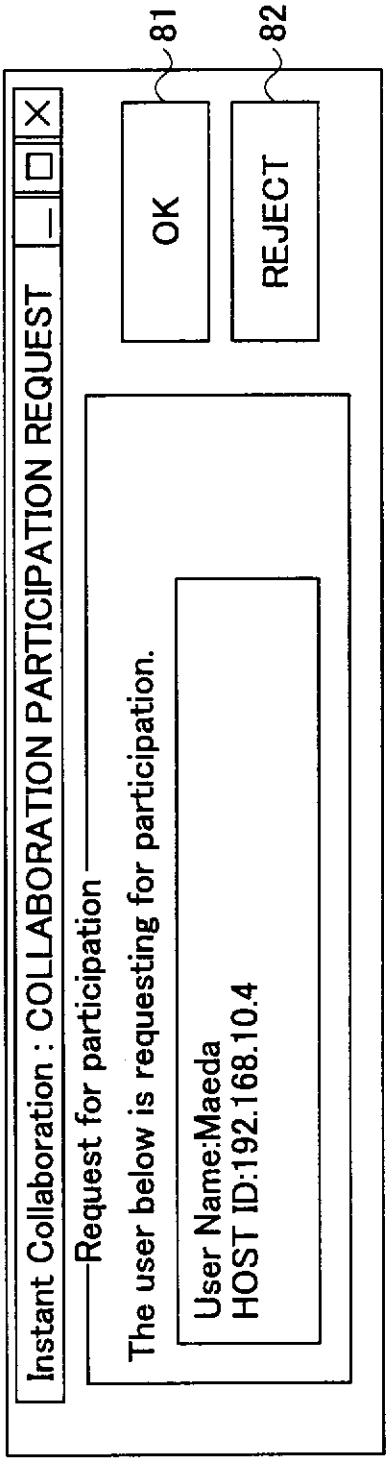


FIG.12B

