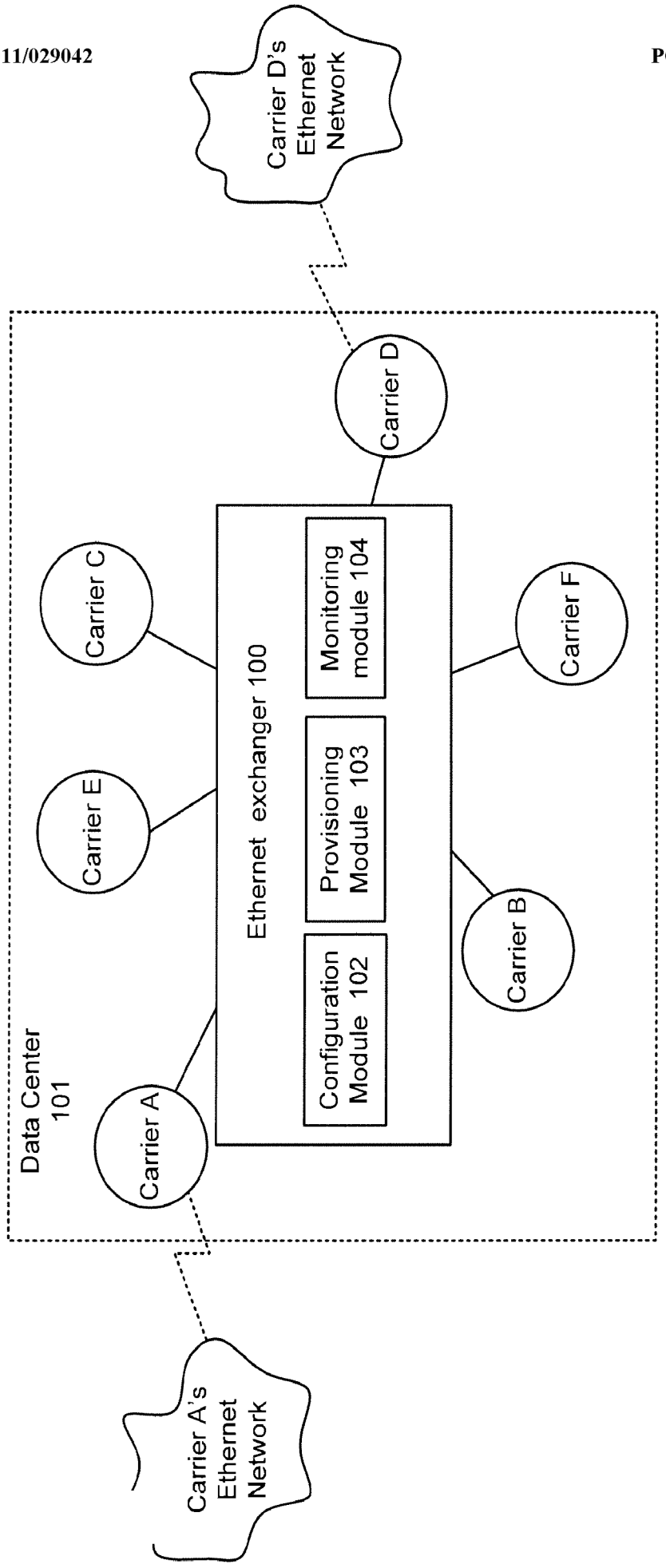

Carrier D's Ethernet Network
Data Center 101
Carrier D
Carrier C
Carrier E
Carrier A
Ethernet exchanger 100
Monitoring module 104
Provisioning Module 103
Configuration Module 102
Carrier F
Carrier B
Carrier A's Ethernet Network

FIG. 1A

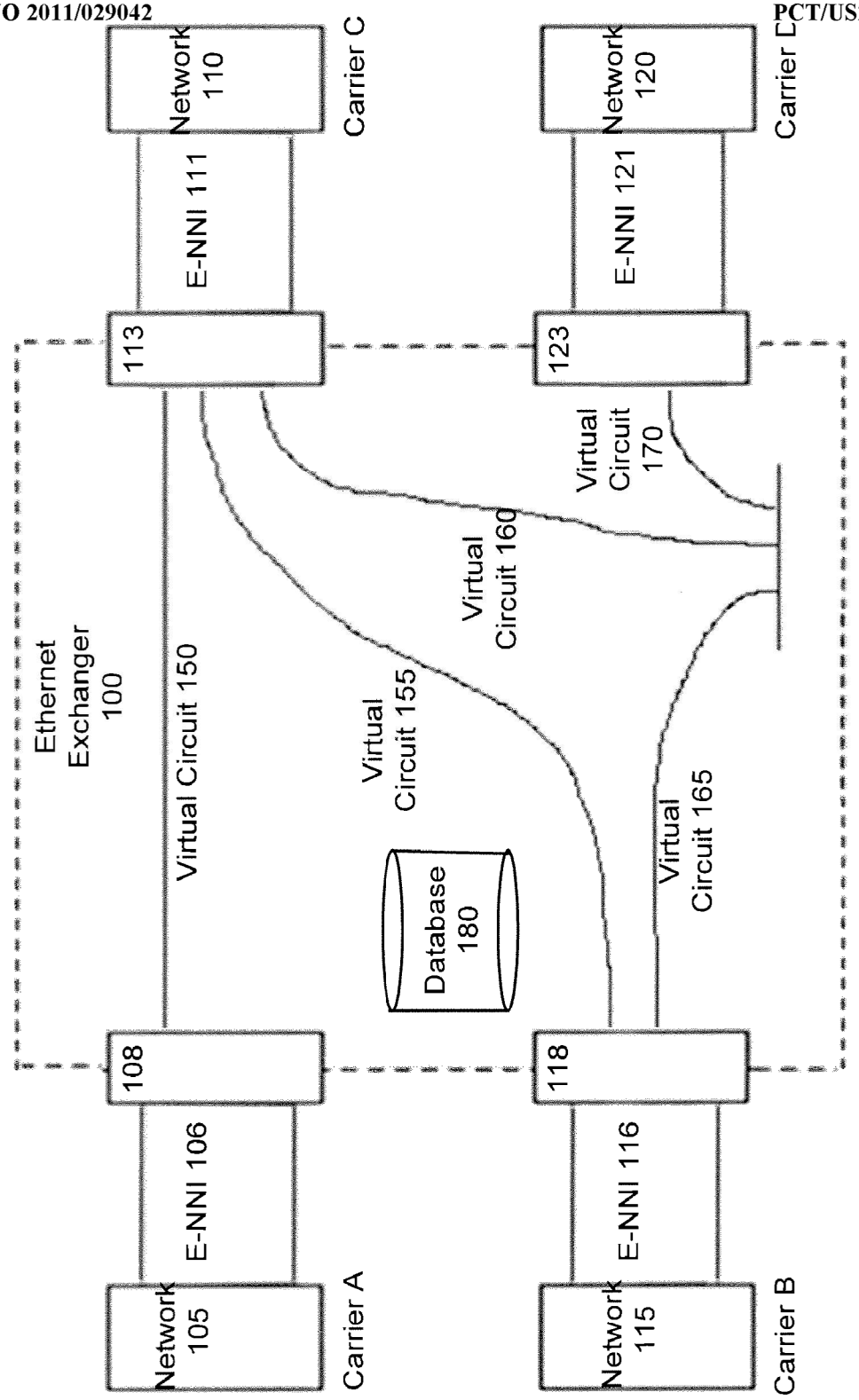

Network 110
Carrier C
Network 120
Carrier D
E-NNI 111
E-NNI 121
113
123
Virtual Circuit 170
Virtual Circuit 160
Ethernet Exchanger 100
Virtual Circuit 150
Virtual Circuit 155
Virtual Circuit 165
Database 180
108
118
E-NNI 106
E-NNI 116
Network 105
Network 115
Carrier A
Carrier B

FIG. 1B

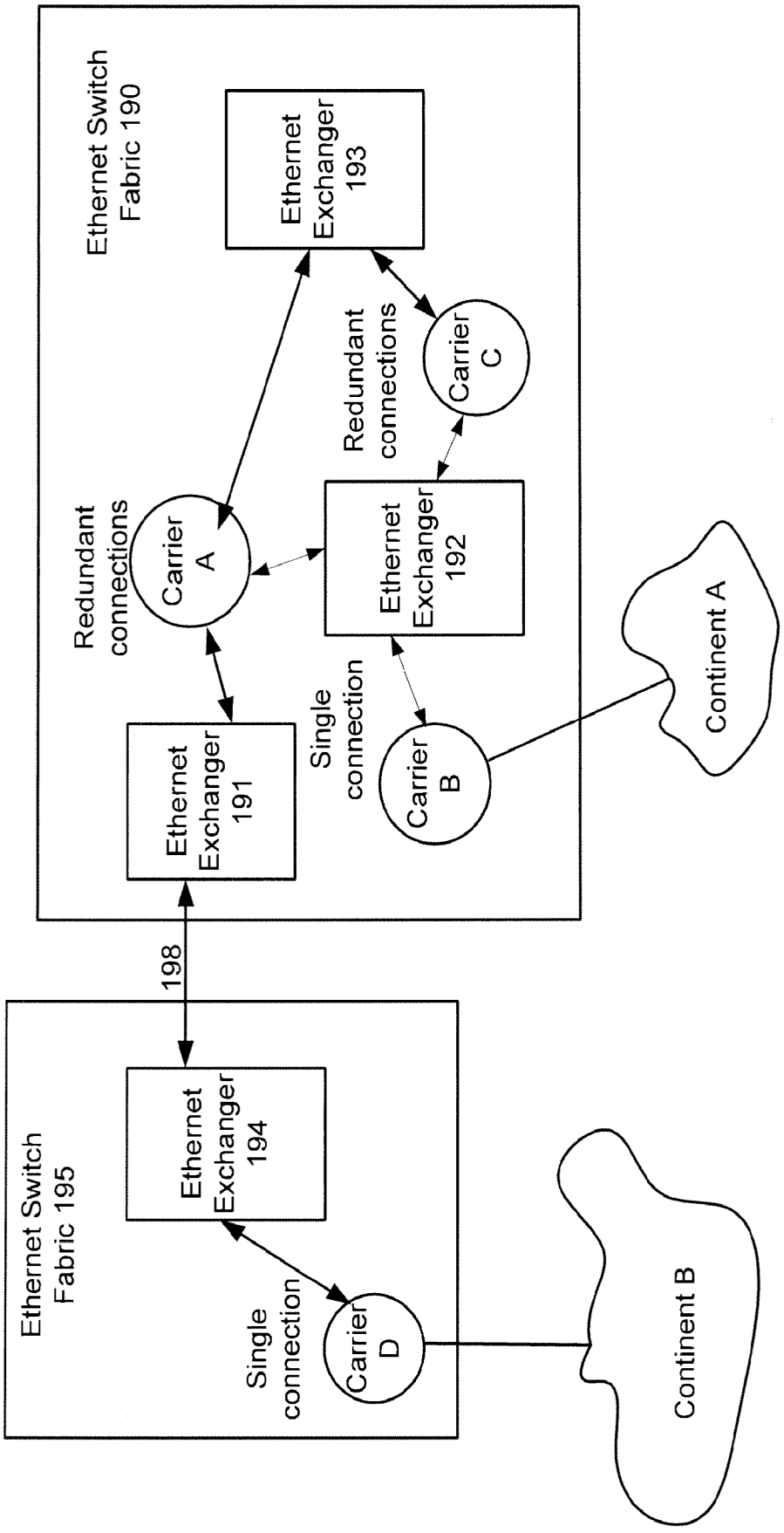

Ethernet Switch Fabric 190
Ethernet Exchanger 193
Redundant connections
Carrier C
Redundant connections
Carrier A
Ethernet Exchanger 192
Continent A
Single connection
Carrier B
Ethernet Exchanger 191
198
Ethernet Switch Fabric 195
Ethernet Exchanger 194
Single connection
Carrier D
Continent B

FIG. 1C

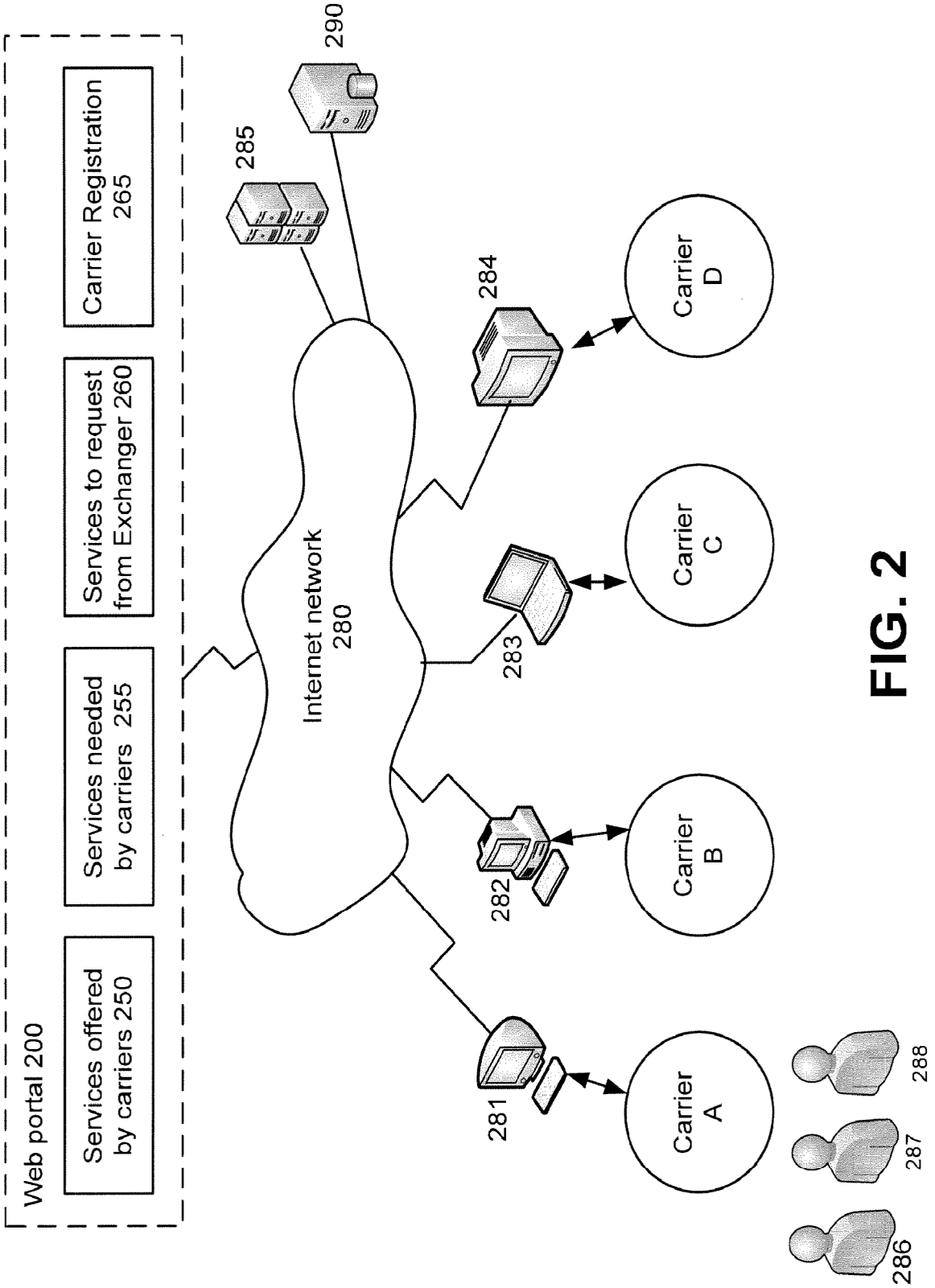
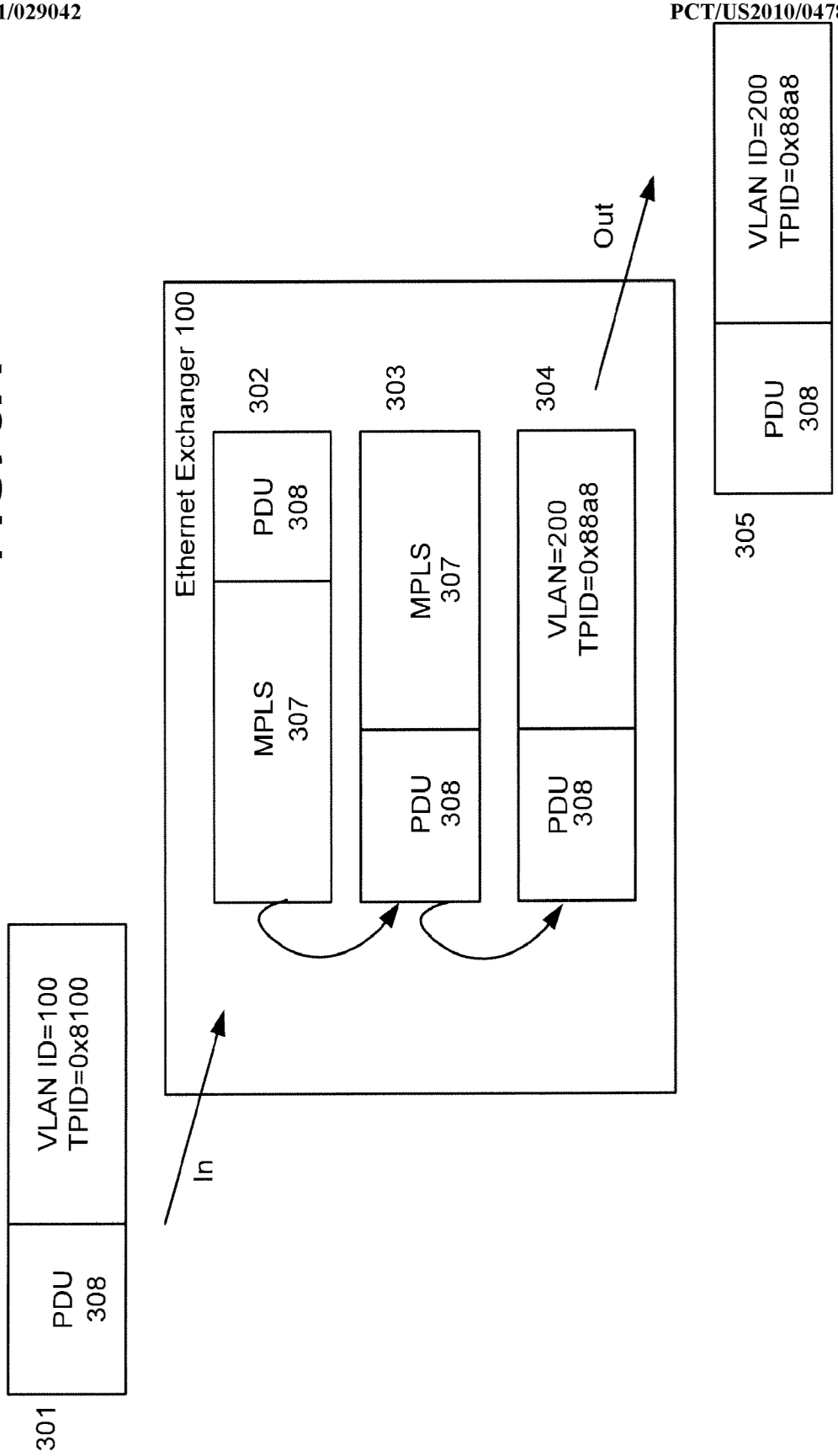

Web portal 200
Services offered by carriers 250
Services needed by carriers 255
Services to request from Exchanger 260
Carrier Registration 265
290
285
284
Carrier D
Internet network 280
283
Carrier C
282
Carrier B
281
Carrier A
288
287
286

FIG. 2

FIG. 3A


301
PDU
308
VLAN ID=100
TPID=0x8100
In
Ethernet Exchanger 100
302
PDU
308
MPLS
307
303
MPLS
307
PDU
308
304
VLAN=200
TPID=0x88a8
PDU
308
Out
305
PDU
308
VLAN ID=200
TPID=0x88a8

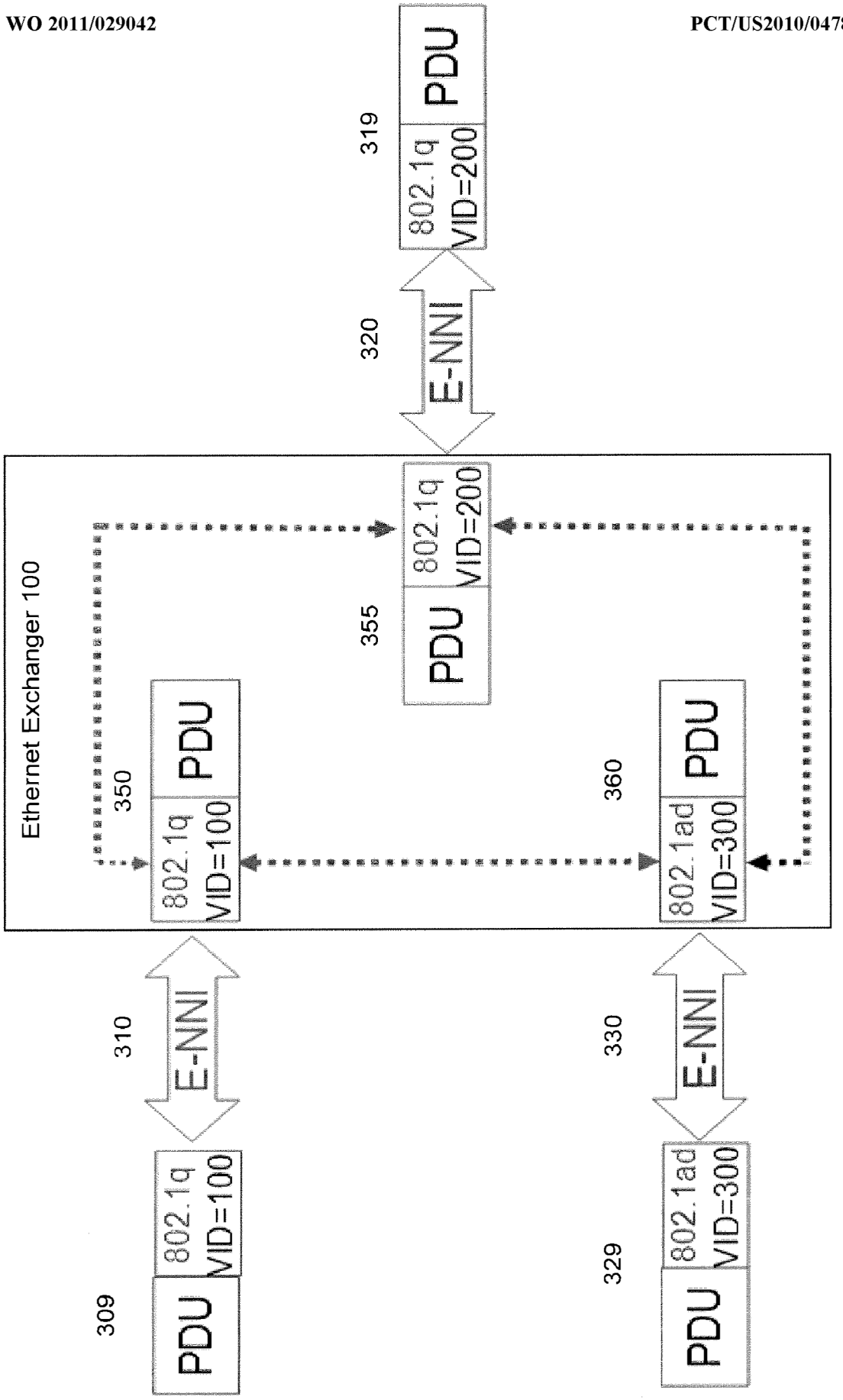

Ethernet Exchanger 100
309
PDU
802.1q VID=100
310
E-NNI
350
PDU
802.1q VID=100
355
PDU
802.1q VID=200
320
E-NNI
319
PDU
802.1q VID=200
329
PDU
802.1ad VID=300
330
E-NNI
360
PDU
802.1ad VID=300

FIG. 3B

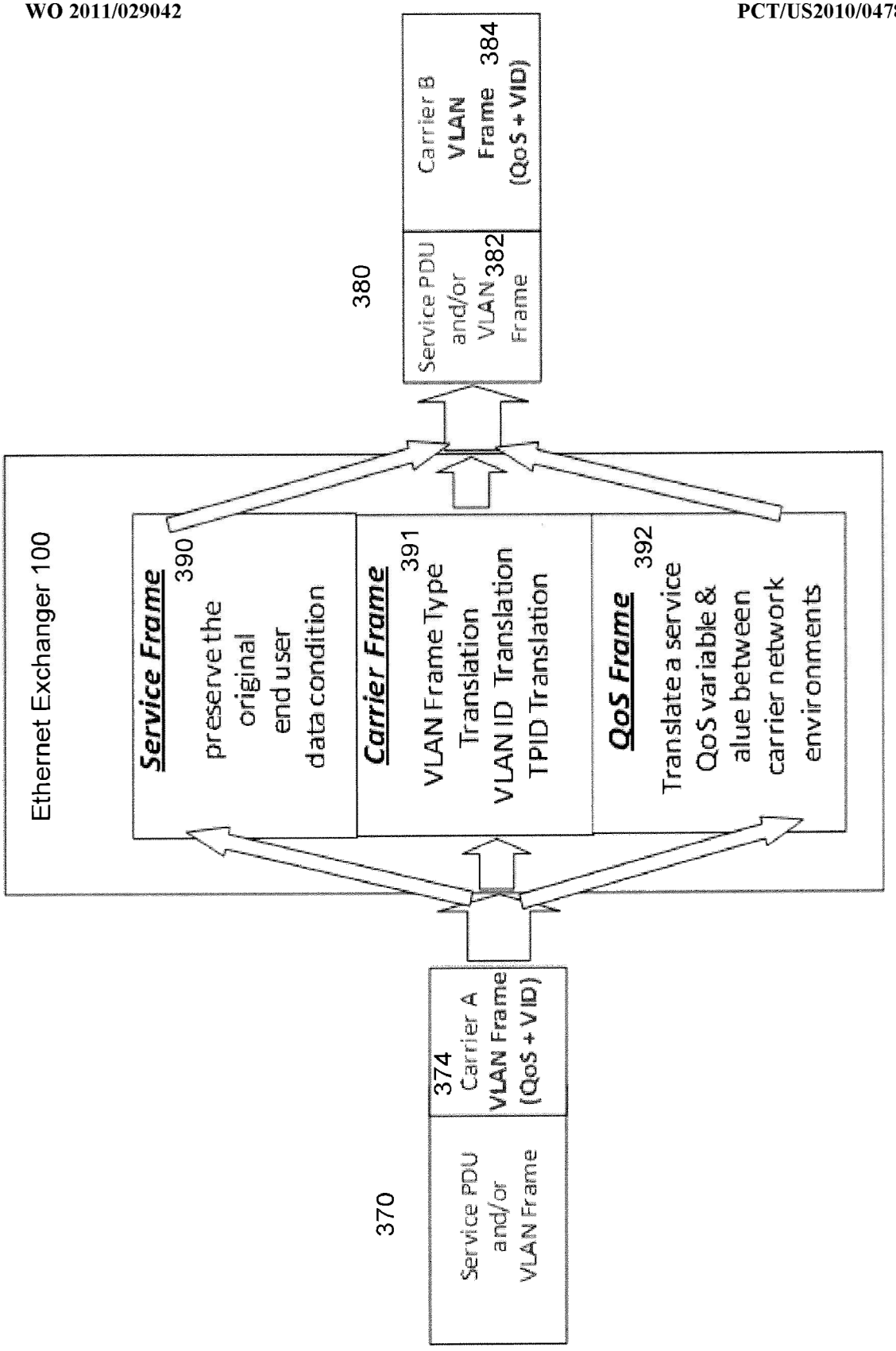

380
Service PDU and/or VLAN Frame 382
Carrier B VLAN Frame (QoS + VID) 384
Ethernet Exchanger 100
Service Frame 390
preserve the original end user data condition
Carrier Frame 391
VLAN Frame Type Translation
VLAN ID Translation
TPID Translation
QoS Frame 392
Translate a service QoS variable & alue between carrier network environments
370
Service PDU and/or VLAN Frame
374 Carrier A VLAN Frame (QoS + VID)

FIG. 3C

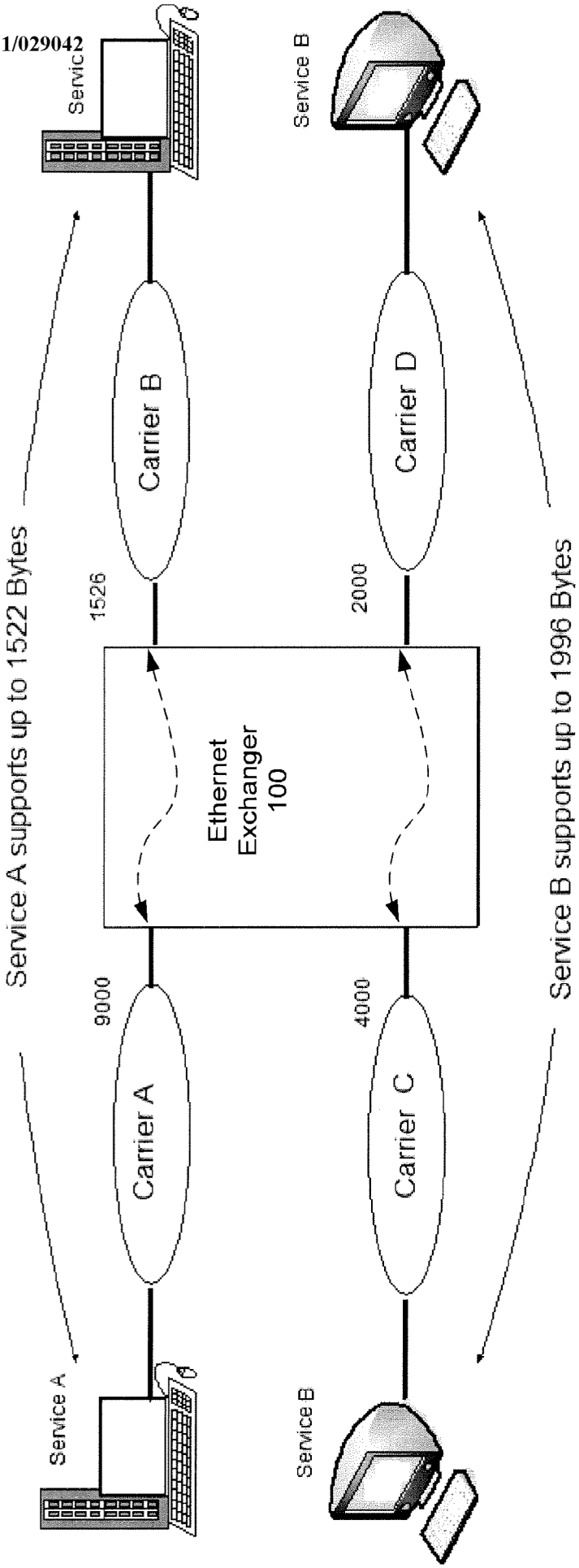

Service A supports up to 1522 Bytes
Service B supports up to 1996 Bytes
Service A
Service B
Service B
Carrier A
Carrier B
Carrier C
Carrier D
9000
1526
4000
2000
Ethernet Exchanger 100

FIG. 4

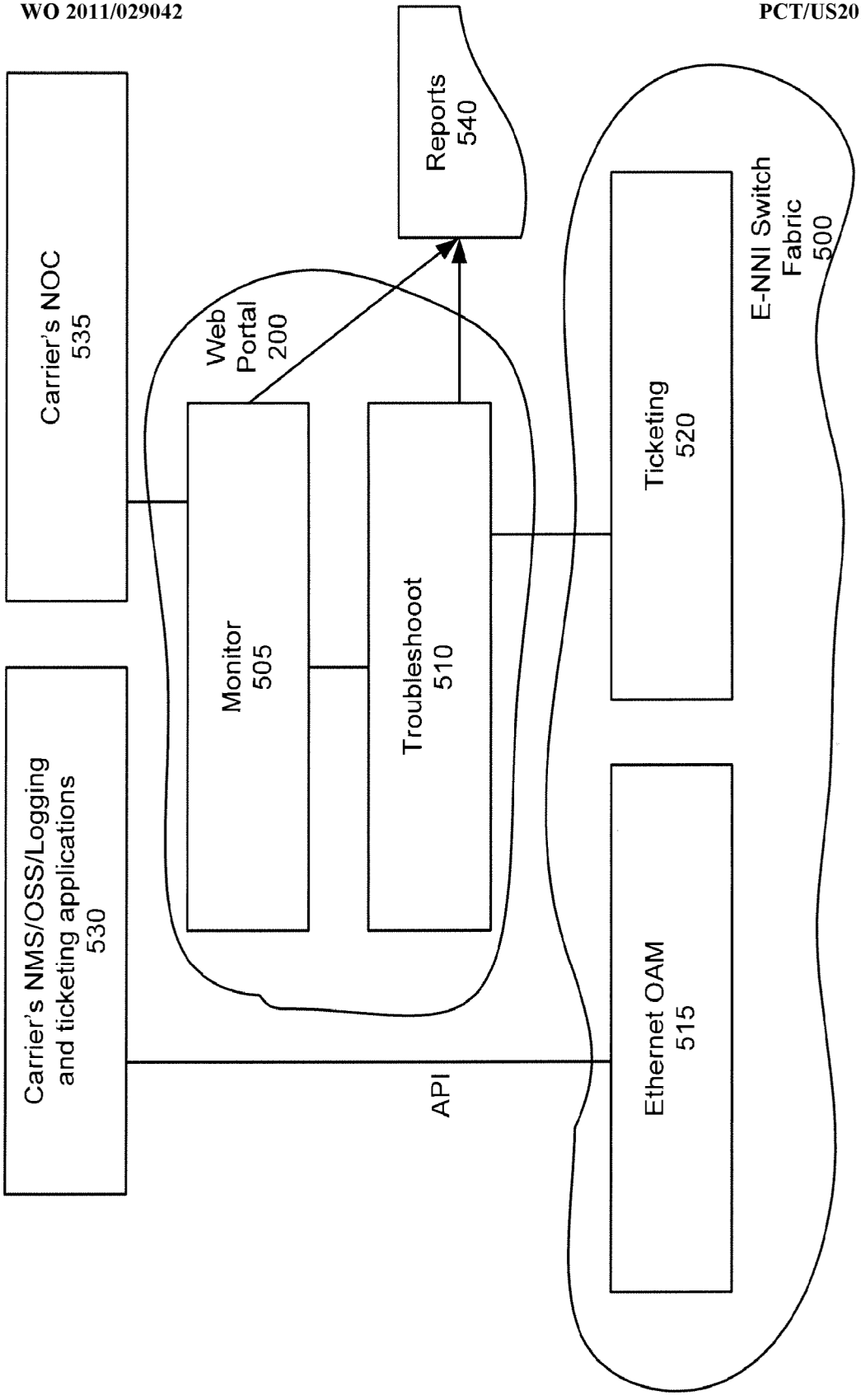
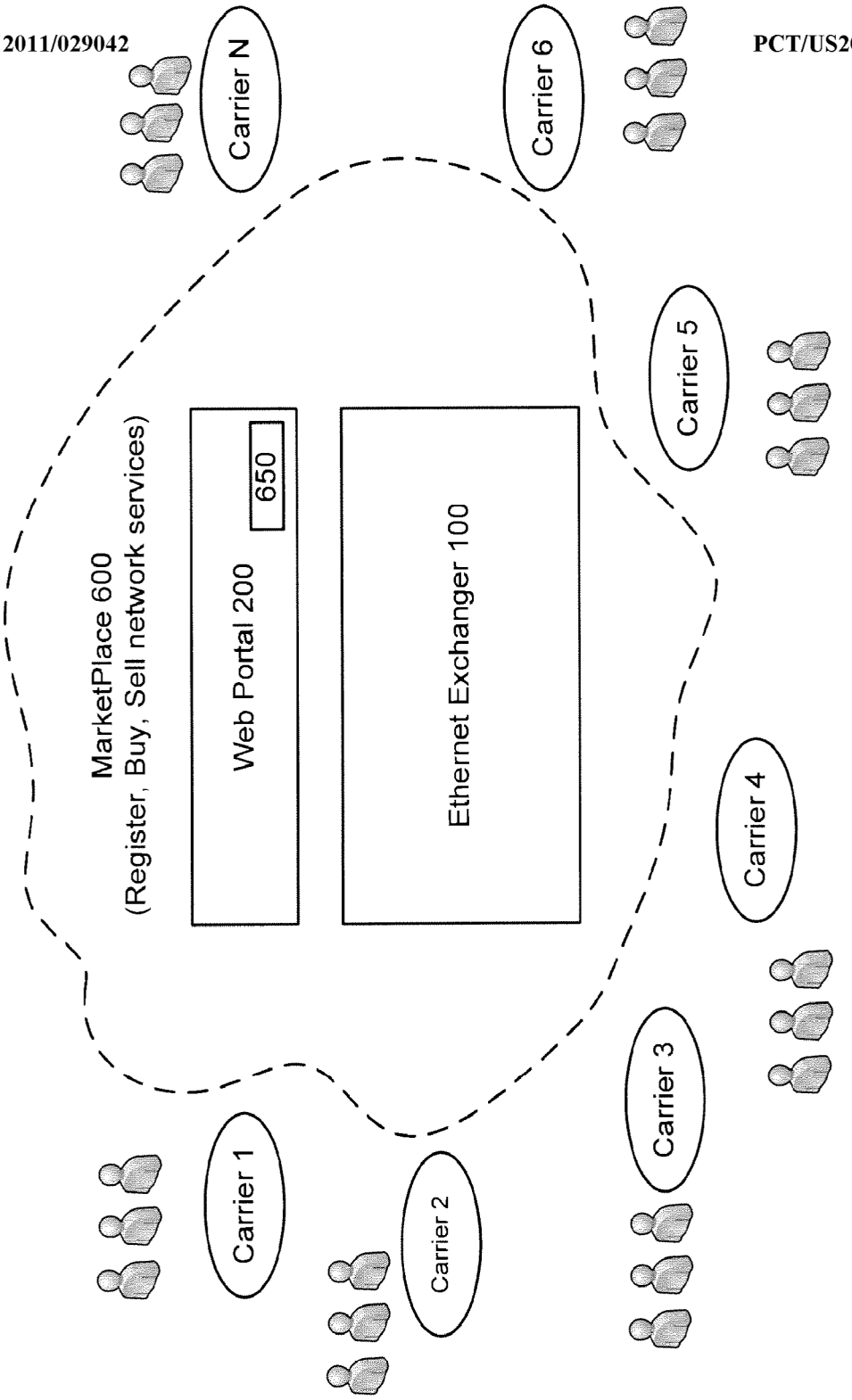

Carrier's NOC
535
Carrier's NMS/OSS/Logging and ticketing applications
530
Web Portal
200
Monitor
505
Troubleshooot
510
Reports
540
API
Ethernet OAM
515
Ticketing
520
E-NNI Switch Fabric
500

FIG. 5

FIG. 6



SUBSTITUTE SHEET (RULE 26)

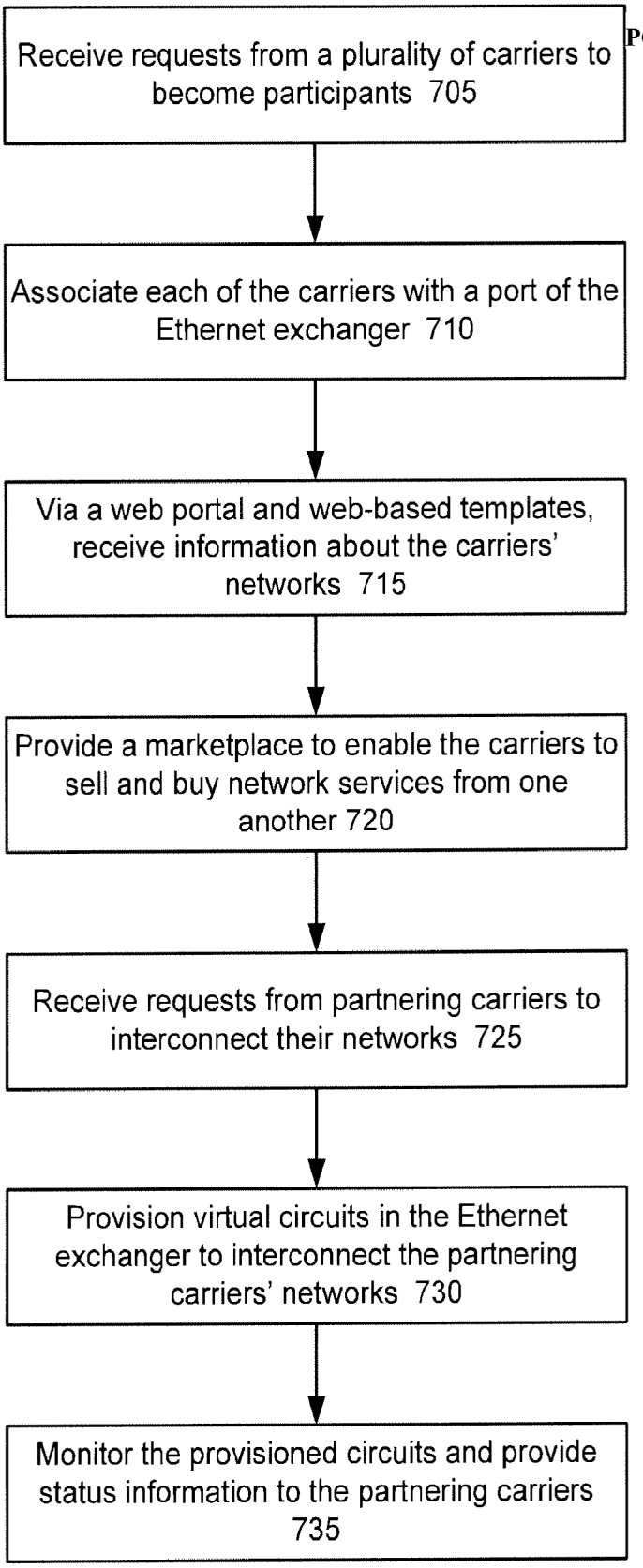

Receive requests from a plurality of carriers to become participants 705
Associate each of the carriers with a port of the Ethernet exchanger 710
Via a web portal and web-based templates, receive information about the carriers' networks 715
Provide a marketplace to enable the carriers to sell and buy network services from one another 720
Receive requests from partnering carriers to interconnect their networks 725
Provision virtual circuits in the Ethernet exchanger to interconnect the partnering carriers' networks 730
Monitor the provisioned circuits and provide status information to the partnering carriers 735

FIG. 7A

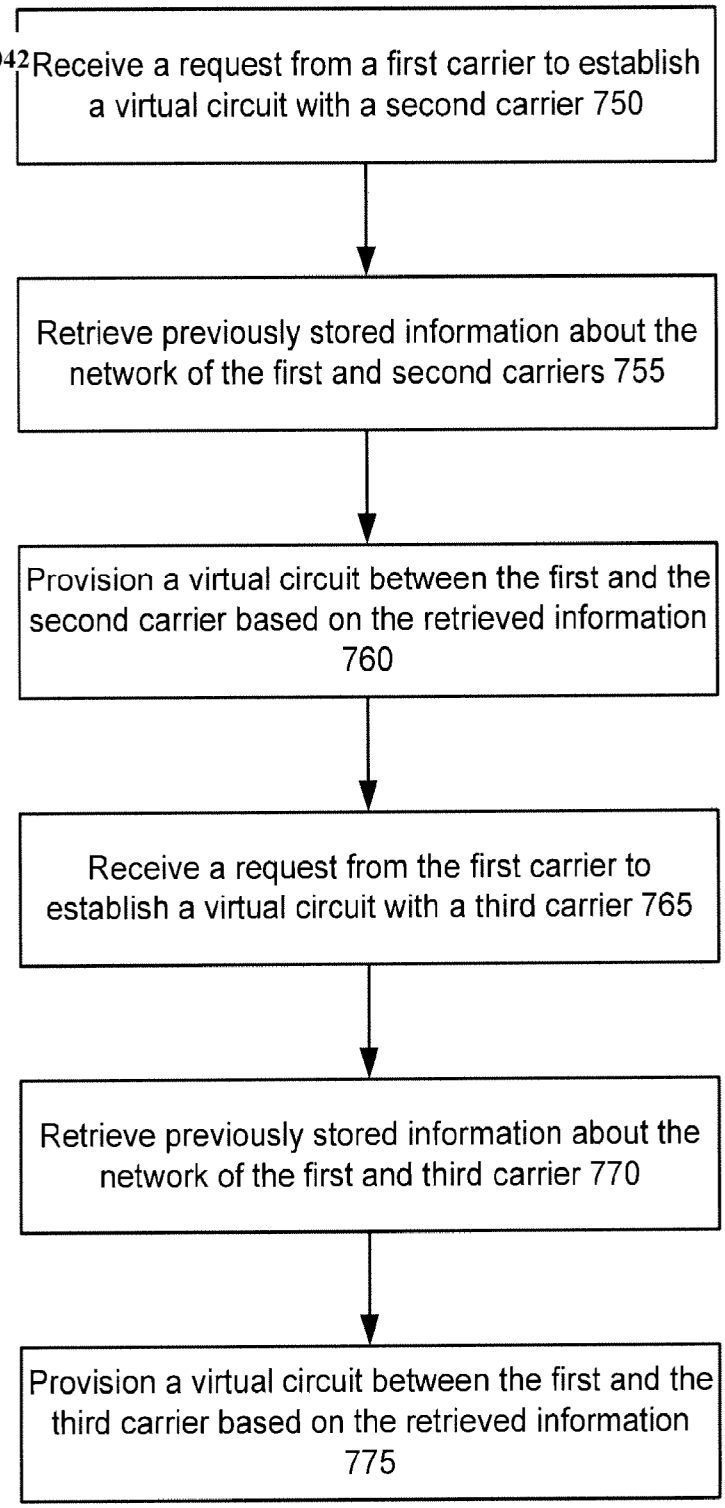

Receive a request from a first carrier to establish a virtual circuit with a second carrier 750
Retrieve previously stored information about the network of the first and second carriers 755
Provision a virtual circuit between the first and the second carrier based on the retrieved information 760
Receive a request from the first carrier to establish a virtual circuit with a third carrier 765
Retrieve previously stored information about the network of the first and third carrier 770
Provision a virtual circuit between the first and the third carrier based on the retrieved information 775

FIG. 7B

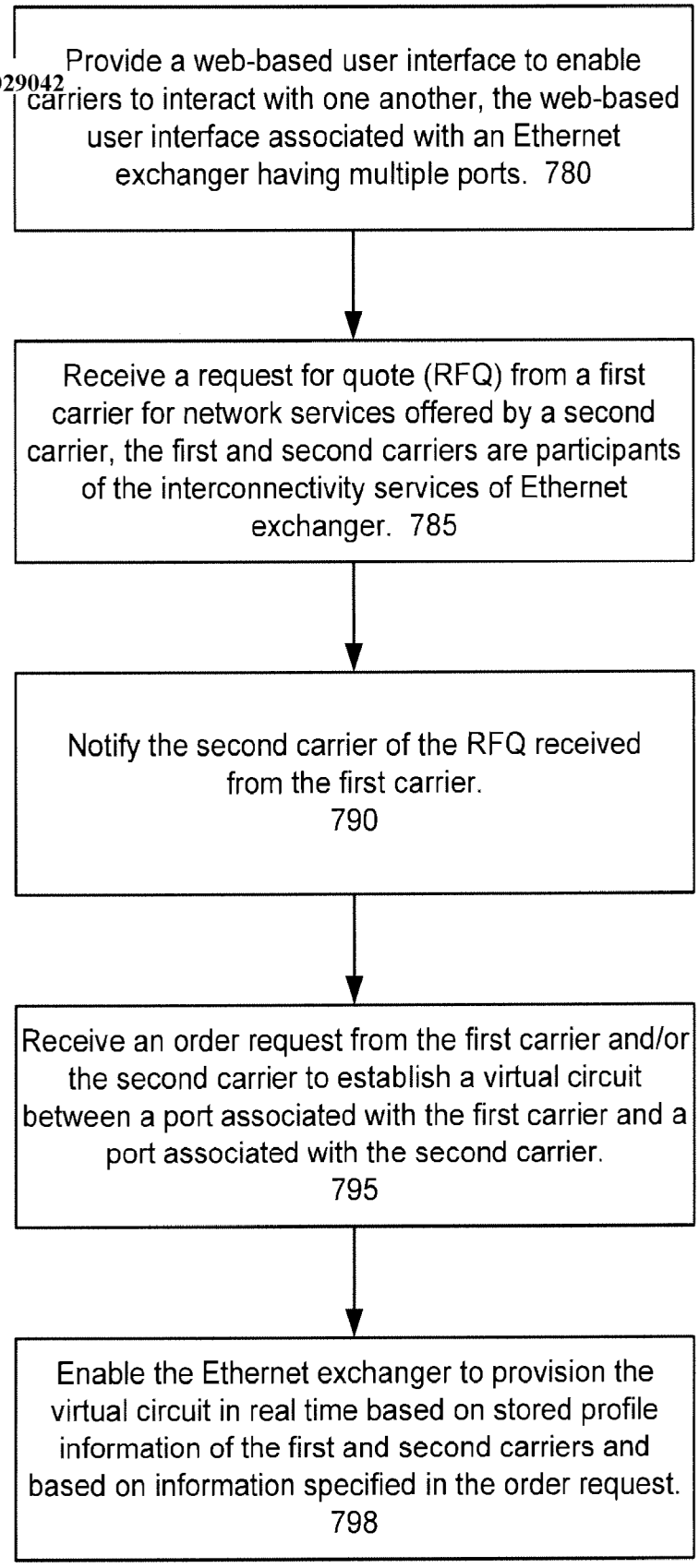

Provide a web-based user interface to enable carriers to interact with one another, the web-based user interface associated with an Ethernet exchanger having multiple ports. 780
Receive a request for quote (RFQ) from a first carrier for network services offered by a second carrier, the first and second carriers are participants of the interconnectivity services of Ethernet exchanger. 785
Notify the second carrier of the RFQ received from the first carrier. 790
Receive an order request from the first carrier and/or the second carrier to establish a virtual circuit between a port associated with the first carrier and a port associated with the second carrier. 795
Enable the Ethernet exchanger to provision the virtual circuit in real time based on stored profile information of the first and second carriers and based on information specified in the order request. 798

FIG. 7C

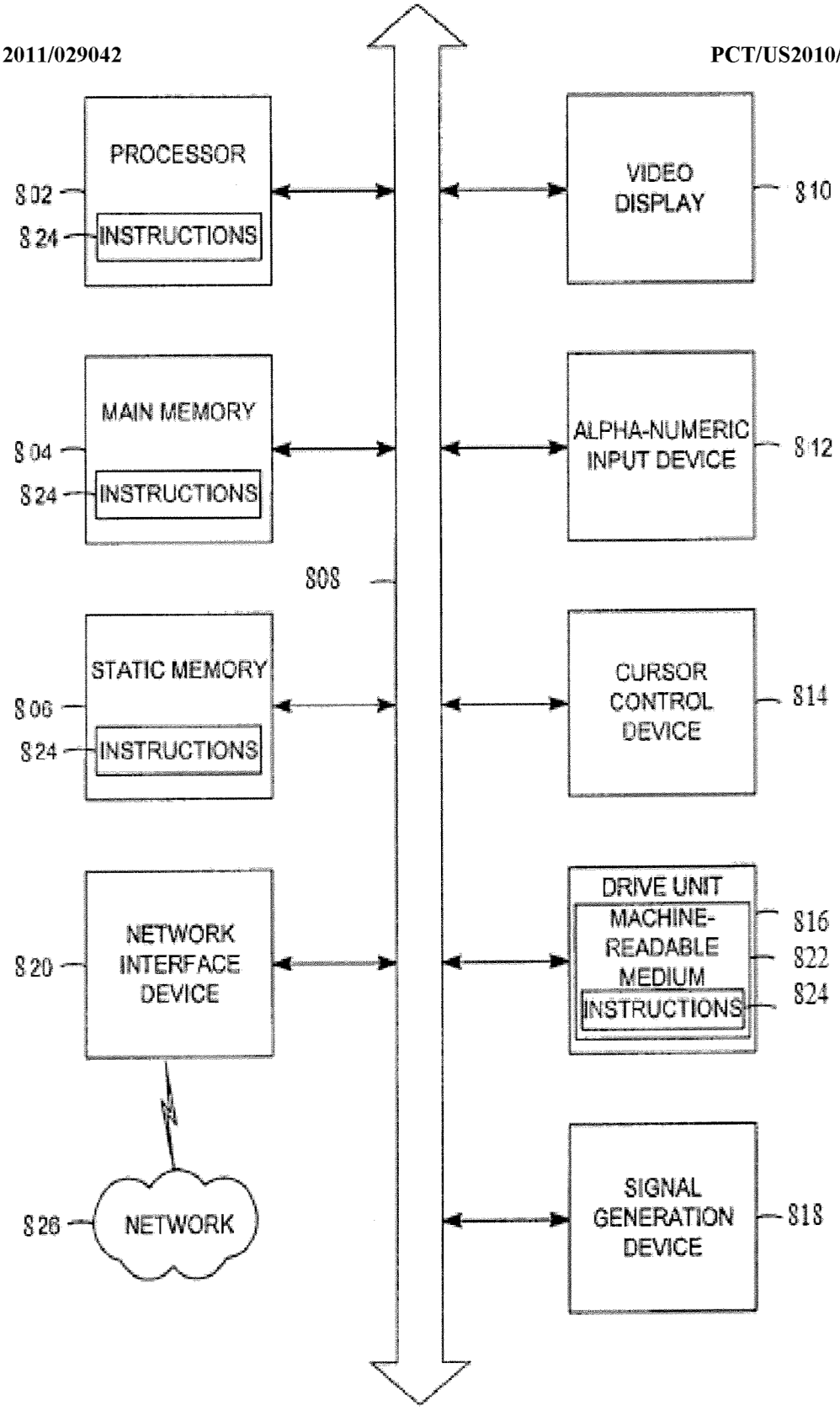
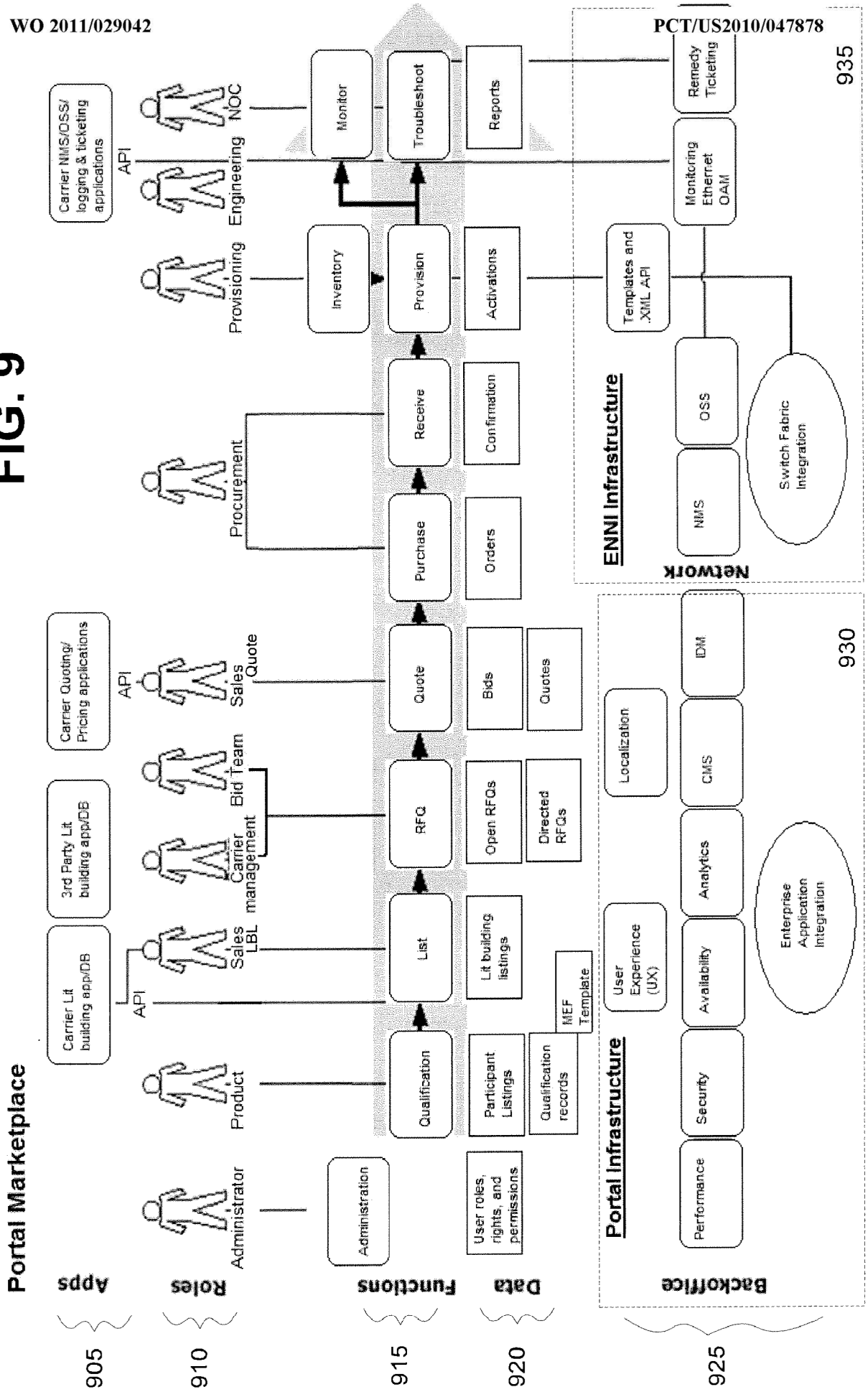

PROCESSOR
802
824
INSTRUCTIONS
MAIN MEMORY
804
824
INSTRUCTIONS
808
STATIC MEMORY
806
824
INSTRUCTIONS
NETWORK INTERFACE DEVICE
820
826
NETWORK
VIDEO DISPLAY
810
ALPHA-NUMERIC INPUT DEVICE
812
CURSOR CONTROL DEVICE
814
DRIVE UNIT
MACHINE-READABLE MEDIUM
INSTRUCTIONS
816
822
824
SIGNAL GENERATION DEVICE
818

FIG. 8

FIG. 9


Portal Marketplace
Apps
Roles
Functions
Data
Backoffice
905
910
915
920
925
930
935
Administrator
Product
Sales LBL
Carrier management
Bid Team
Sales Quote
Procurement
Provisioning
Engineering
NOC
API
Carrier Lit building app/DB
3rd Party Lit building app/DB
Carrier Quoting/ Pricing applications
Carrier NMS/OSS/ logging & ticketing applications
Administration
User roles, rights, and permissions
Qualification
Participant Listings
Qualification records
MEF Template
List
Lit building listings
RFQ
Open RFQs
Directed RFQs
Quote
Bids
Quotes
Purchase
Orders
Receive
Confirmation
Provision
Activations
Inventory
Monitor
Troubleshoot
Reports
Portal Infrastructure
User Experience (UX)
Localization
Performance
Security
Availability
Analytics
CMS
IDM
Enterprise Application Integration
ENNI Infrastructure
Network
NMS
OSS
Templates and XML API
Switch Fabric Integration
Monitoring Ethernet OAM
Remedy Ticketing

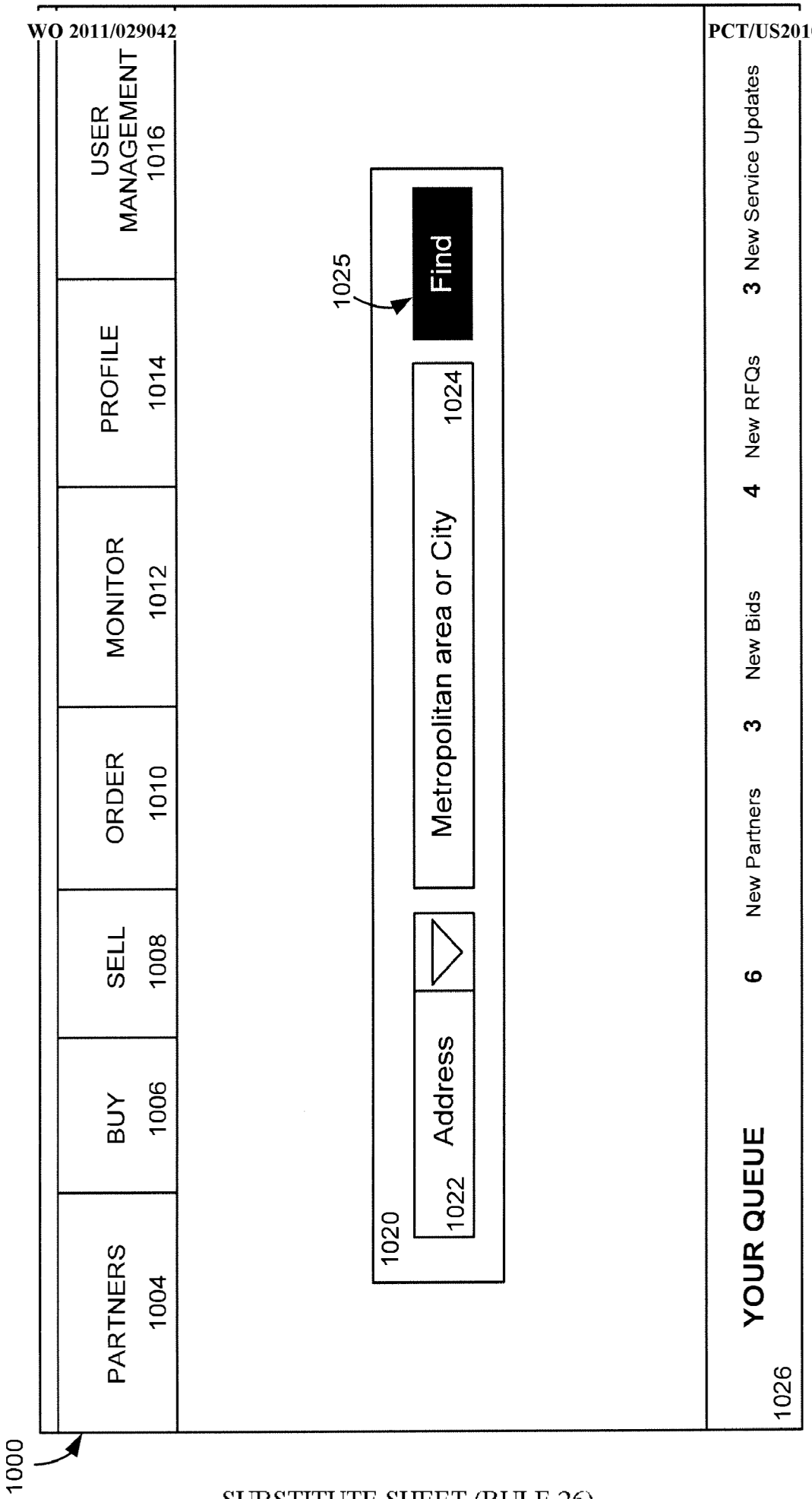

1000
PARTNERS 1004
BUY 1006
SELL 1008
ORDER 1010
MONITOR 1012
PROFILE 1014
USER MANAGEMENT 1016
1020
1022 Address
Metropolitan area or City 1024
1025
Find
YOUR QUEUE
6 New Partners
3 New Bids
4 New RFQs
3 New Service Updates
1026

FIG. 10

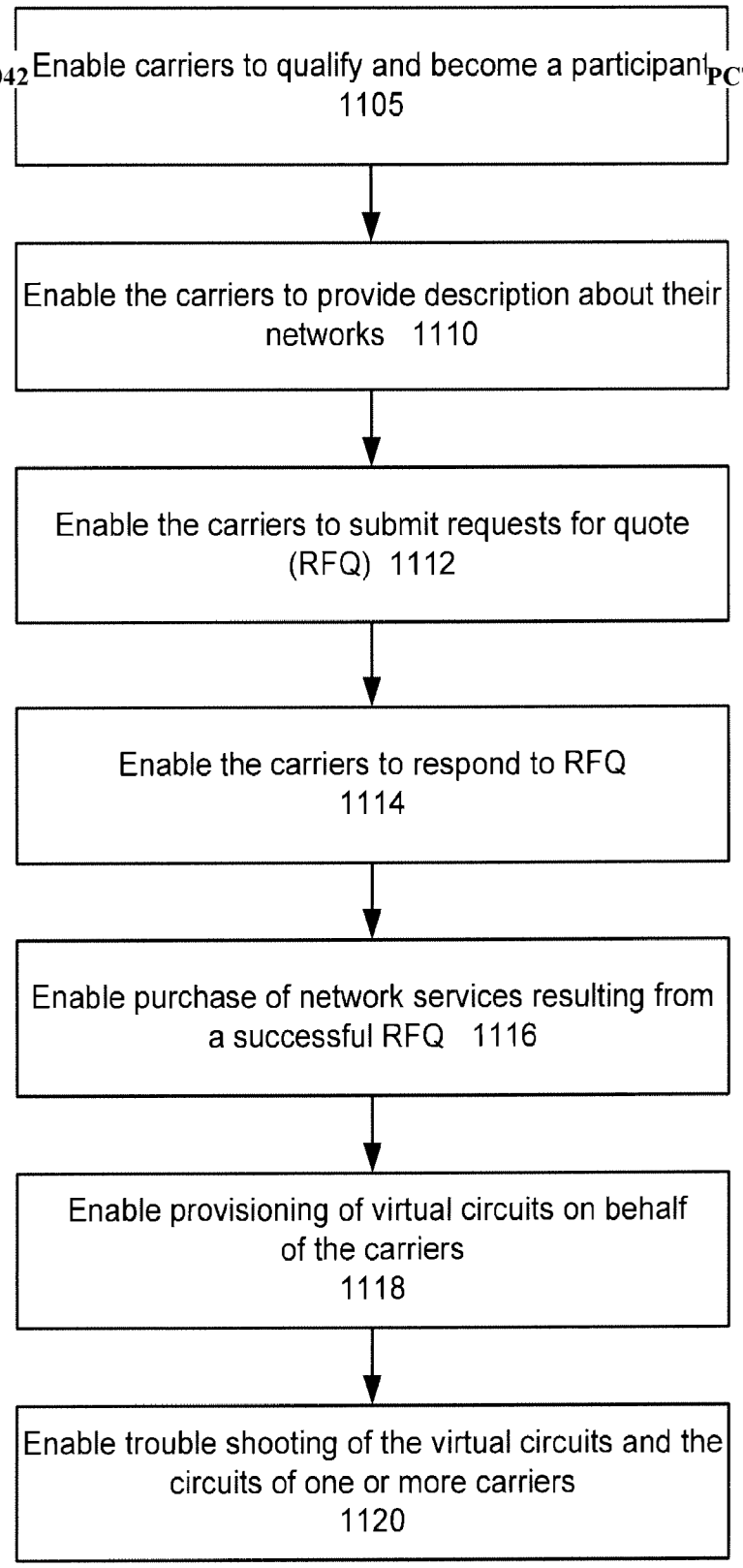

Enable carriers to qualify and become a participant 1105
Enable the carriers to provide description about their networks 1110
Enable the carriers to submit requests for quote (RFQ) 1112
Enable the carriers to respond to RFQ 1114
Enable purchase of network services resulting from a successful RFQ 1116
Enable provisioning of virtual circuits on behalf of the carriers 1118
Enable trouble shooting of the virtual circuits and the circuits of one or more carriers 1120

FIG. 11