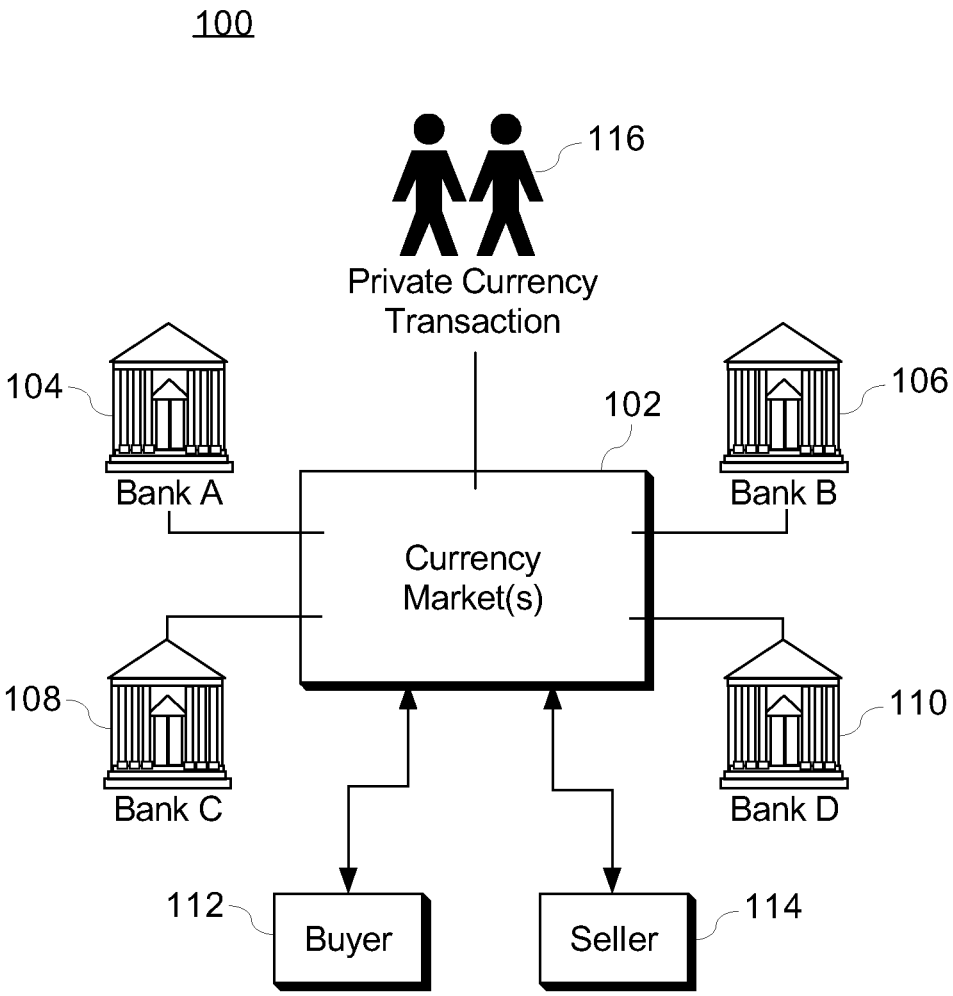

100
116
Private Currency Transaction
104
102
106
Bank A
Bank B
Currency Market(s)
108
110
Bank C
Bank D
112
Buyer
Seller
114

Figure 1

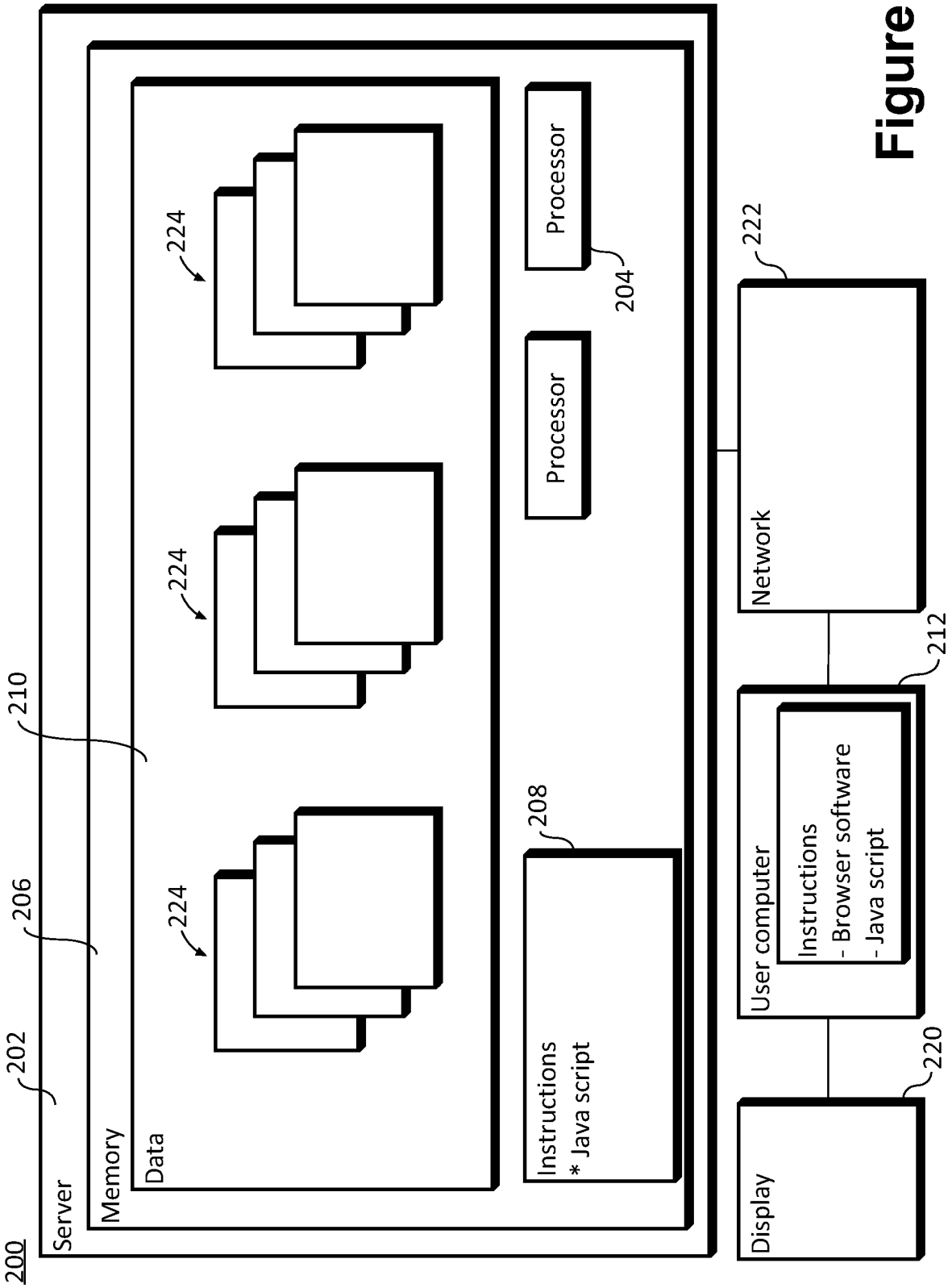

200
Server
202
Memory
206
Data
210
224
224
224
Processor
204
Processor
Instructions
* Java script
208
Network
222
User computer
212
Instructions
- Browser software
- Java script
Display
220

Figure 2a

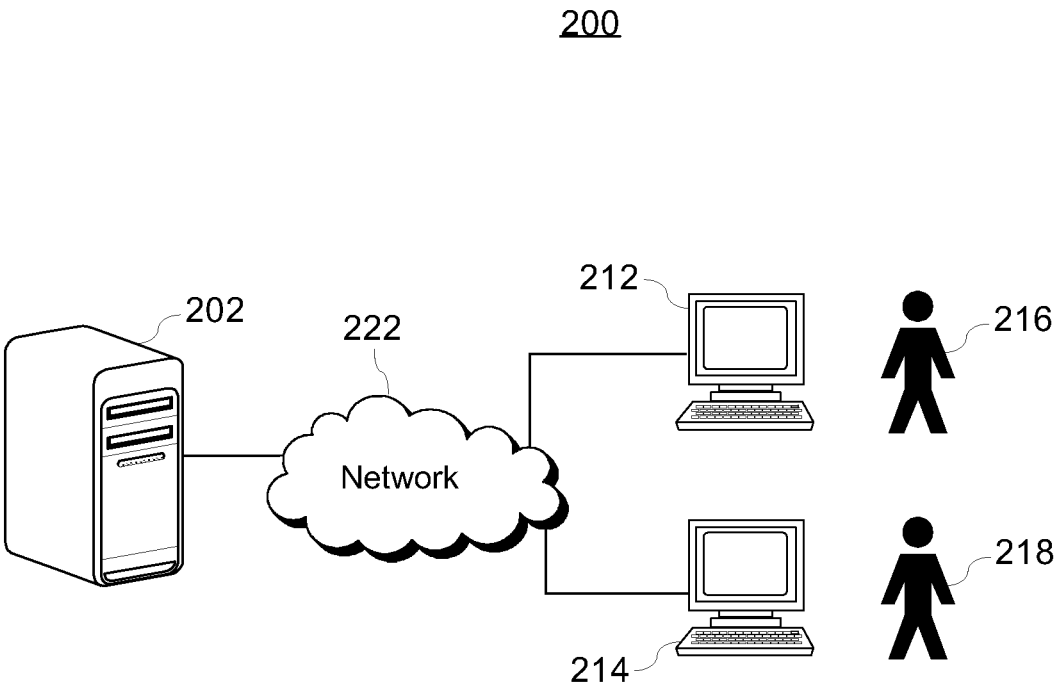


Figure 2b

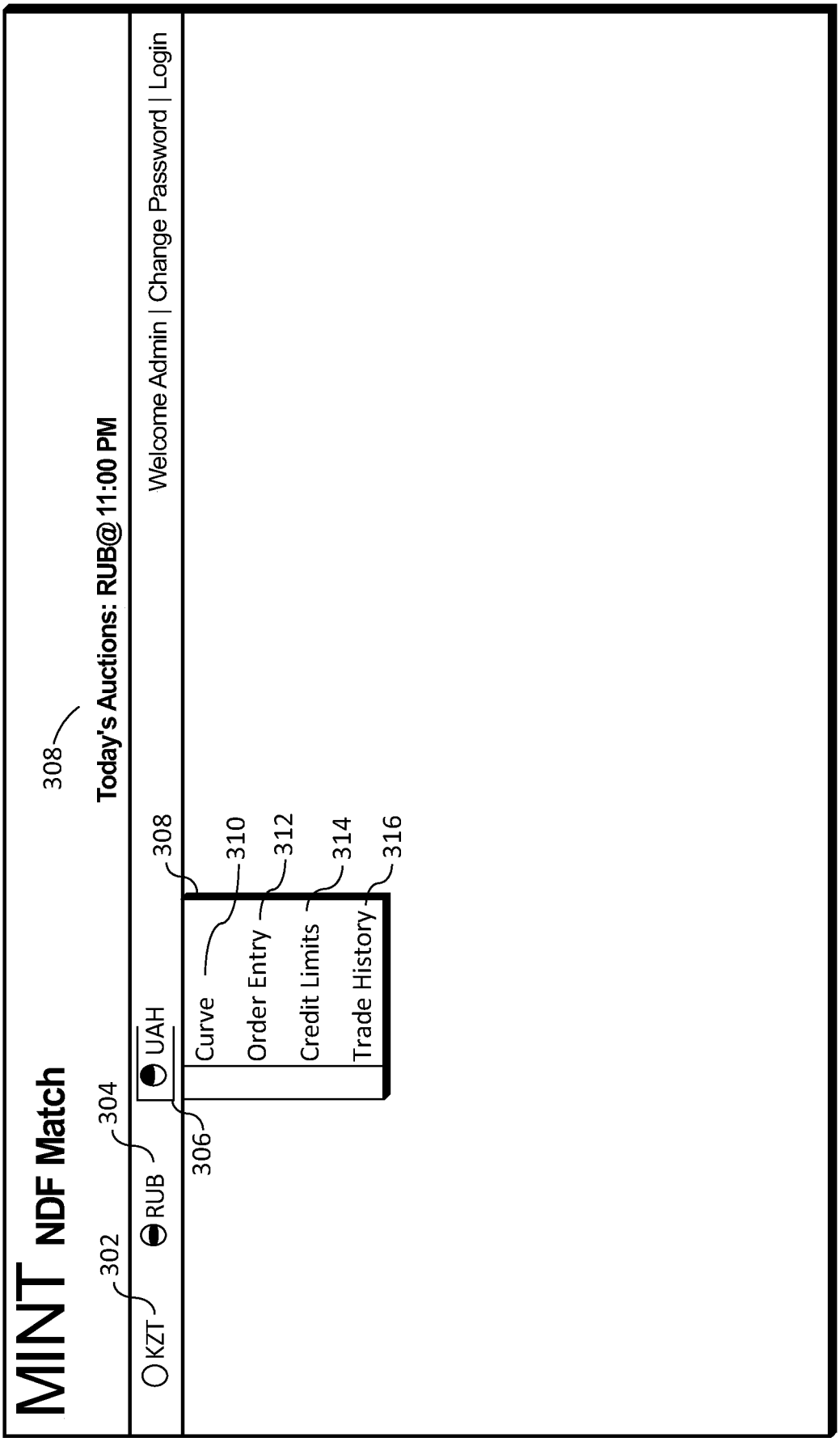

300
MINT NDF Match
302
KZT
RUB
304
UAH
306
308
Today's Auctions: RUB@11:00 PM
Welcome Admin | Change Password | Login
308
Curve
310
Order Entry
312
Credit Limits
314
Trade History
316

Figure 3a

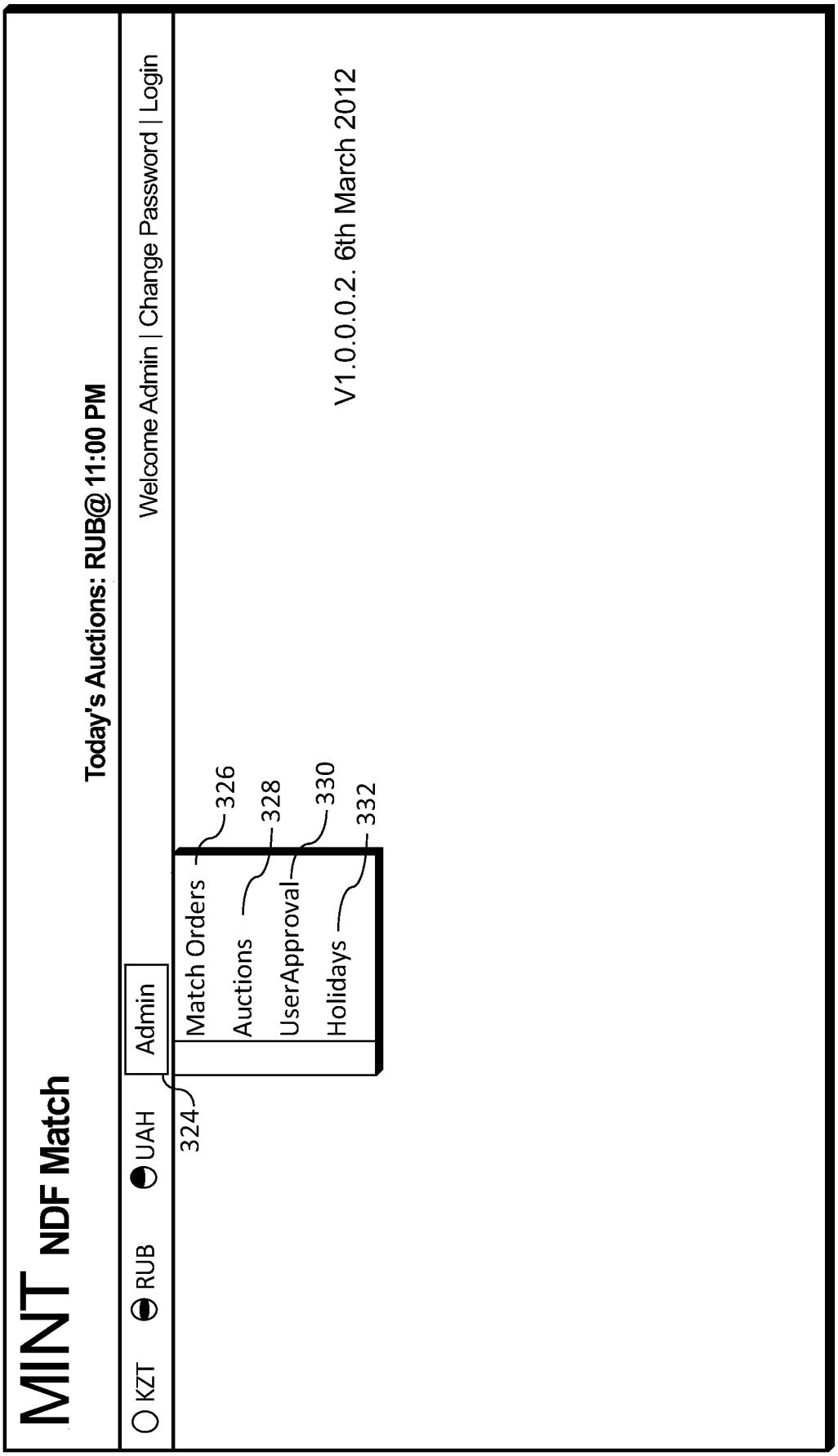

322
MINT NDF Match
Today's Auctions: RUB@ 11:00 PM
KZT
RUB
UAH
Admin
Welcome Admin | Change Password | Login
V1.0.0.0.2. 6th March 2012
324
Match Orders
Auctions
UserApproval
Holidays
326
328
330
332

Figure 3b

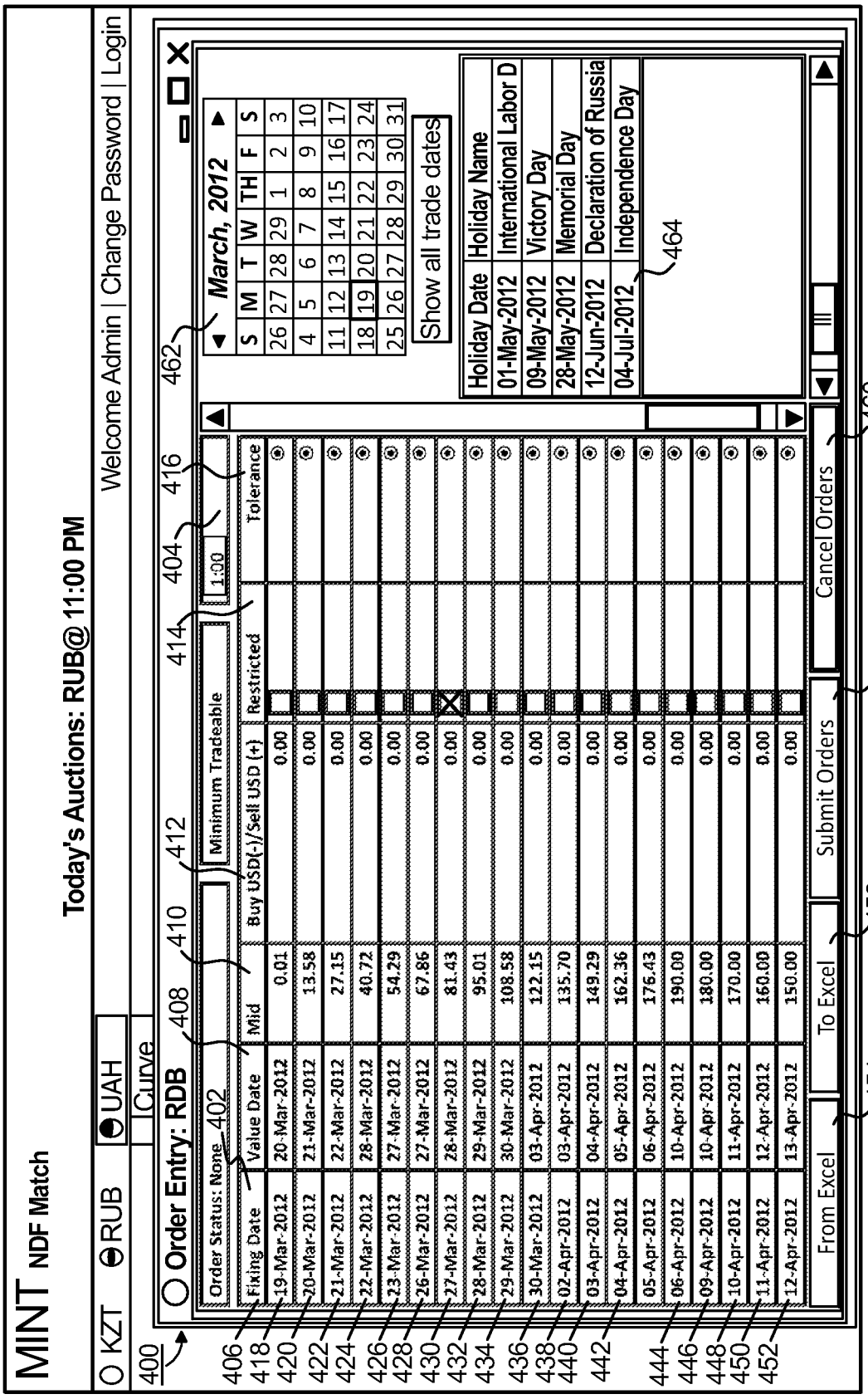
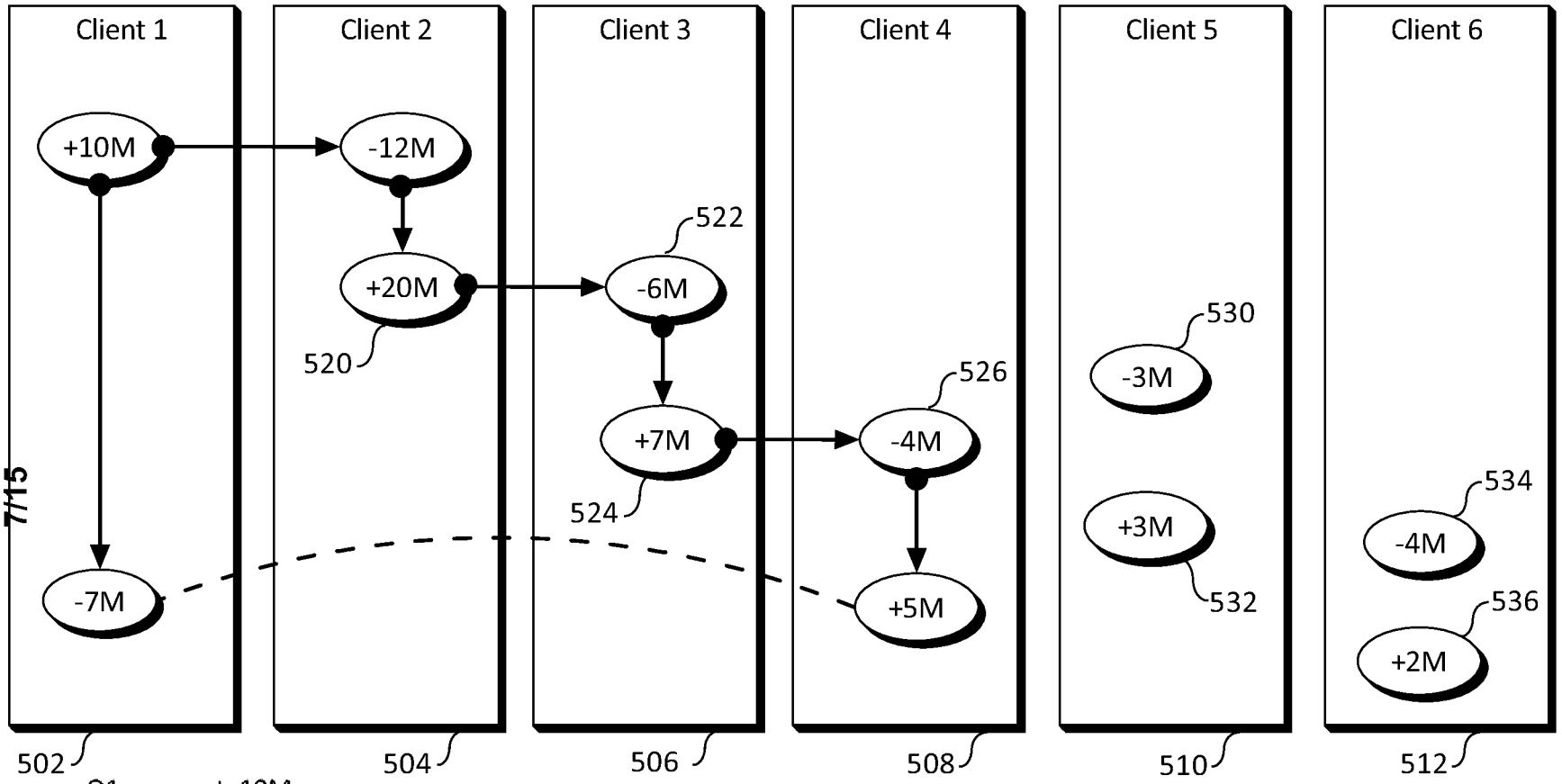

MINT NDF Match
Today's Auctions: RUB@ 11:00 PM
Welcome Admin | Change Password | Login
KZT RUB UAH
Curve
Order Entry: RDB
Order Status: None
Minimum Tradeable
1:00
March, 2012
Holiday Date
Holiday Name
01-May-2012
International Labor D
09-May-2012
Victory Day
28-May-2012
Memorial Day
12-Jun-2012
Declaration of Russia
04-Jul-2012
Independence Day
Show all trade dates
Fixing Date
Value Date
Mid
Buy USD(-)/Sell USD (+)
Restricted
Tolerance
From Excel
To Excel
Submit Orders
Cancel Orders
400
402
404
406
408
410
412
414
416
418
420
422
424
426
428
430
432
434
436
438
440
442
444
446
448
450
452
454
456
458
460
462
464

Figure 4



O1: amount 10M
S1: amount -7M

M1: amount -12M
S2: amount 20M

M2: amount -6M
S3: amount 7M

M3: amount -4M
S4: amount 5M

Amount Matched:

O1-M1: 4M
S2-M2: 4M
S3-M3: 4M
S4-S1: 4M

Total 16M

Figure 5

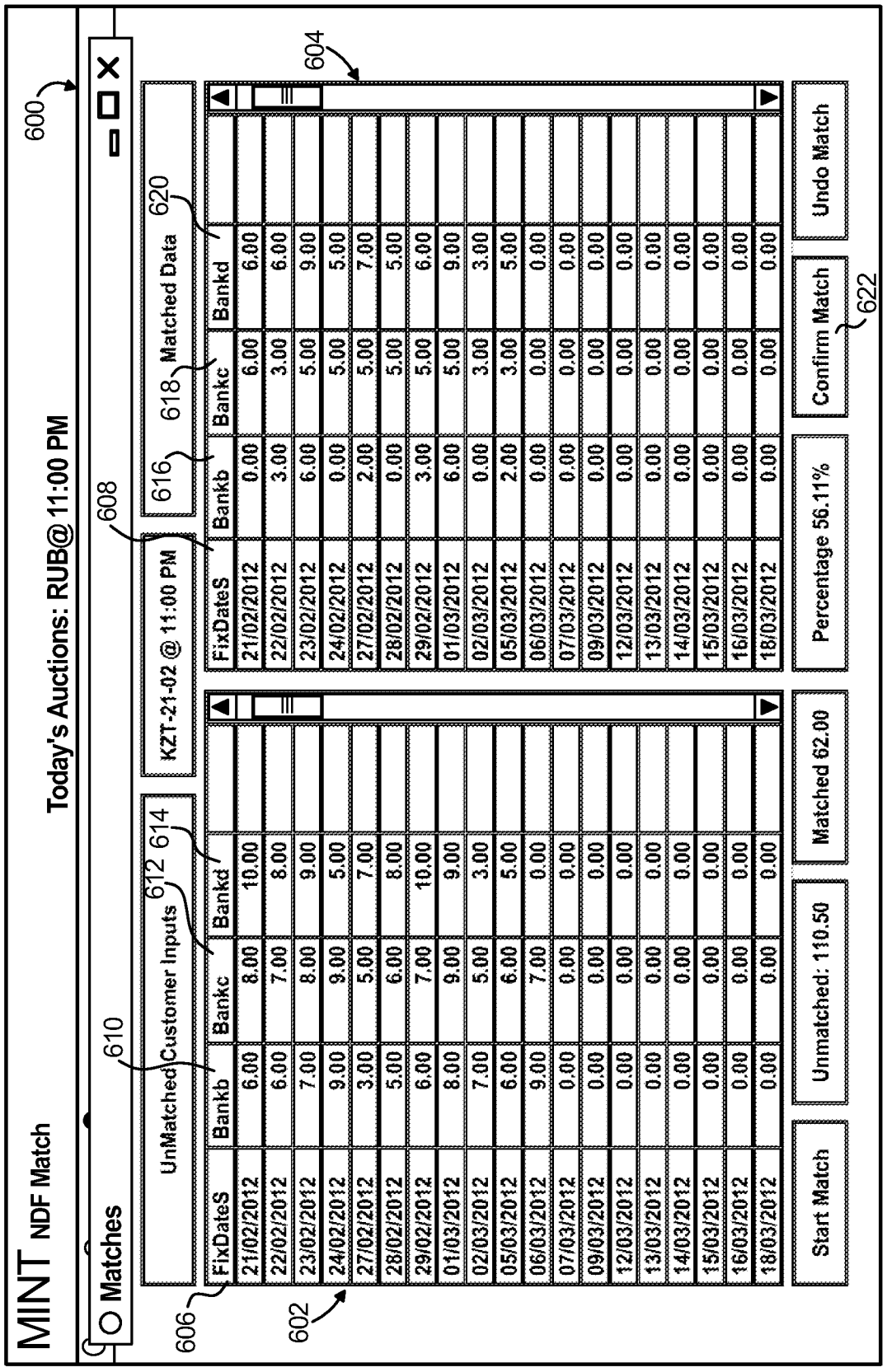

MINT NDF Match
Today's Auctions: RUB@ 11:00 PM
600
Matches
610
608
UnMatched Customer Inputs
612
614
KZT-21-02 @ 11:00 PM
616
618
Matched Data
620
604
606
602
FixDateS Bankb Bankc Bankd
21/02/2012 6.00 8.00 10.00
22/02/2012 6.00 7.00 8.00
23/02/2012 7.00 8.00 9.00
24/02/2012 9.00 9.00 5.00
27/02/2012 3.00 5.00 7.00
28/02/2012 5.00 6.00 8.00
29/02/2012 6.00 7.00 10.00
01/03/2012 8.00 9.00 9.00
02/03/2012 7.00 5.00 3.00
05/03/2012 6.00 6.00 5.00
06/03/2012 9.00 7.00 0.00
07/03/2012 0.00 0.00 0.00
09/03/2012 0.00 0.00 0.00
12/03/2012 0.00 0.00 0.00
13/03/2012 0.00 0.00 0.00
14/03/2012 0.00 0.00 0.00
15/03/2012 0.00 0.00 0.00
16/03/2012 0.00 0.00 0.00
18/03/2012 0.00 0.00 0.00
FixDateS Bankb Bankc Bankd
21/02/2012 0.00 6.00 6.00
22/02/2012 3.00 3.00 6.00
23/02/2012 6.00 5.00 9.00
24/02/2012 0.00 5.00 5.00
27/02/2012 2.00 5.00 7.00
28/02/2012 0.00 5.00 5.00
29/02/2012 3.00 5.00 6.00
01/03/2012 6.00 5.00 9.00
02/03/2012 0.00 3.00 3.00
05/03/2012 2.00 3.00 5.00
06/03/2012 0.00 0.00 0.00
07/03/2012 0.00 0.00 0.00
09/03/2012 0.00 0.00 0.00
12/03/2012 0.00 0.00 0.00
13/03/2012 0.00 0.00 0.00
14/03/2012 0.00 0.00 0.00
15/03/2012 0.00 0.00 0.00
16/03/2012 0.00 0.00 0.00
18/03/2012 0.00 0.00 0.00
Start Match
Unmatched: 110.50
Matched 62.00
Percentage 56.11%
Confirm Match
622
Undo Match

Figure 6

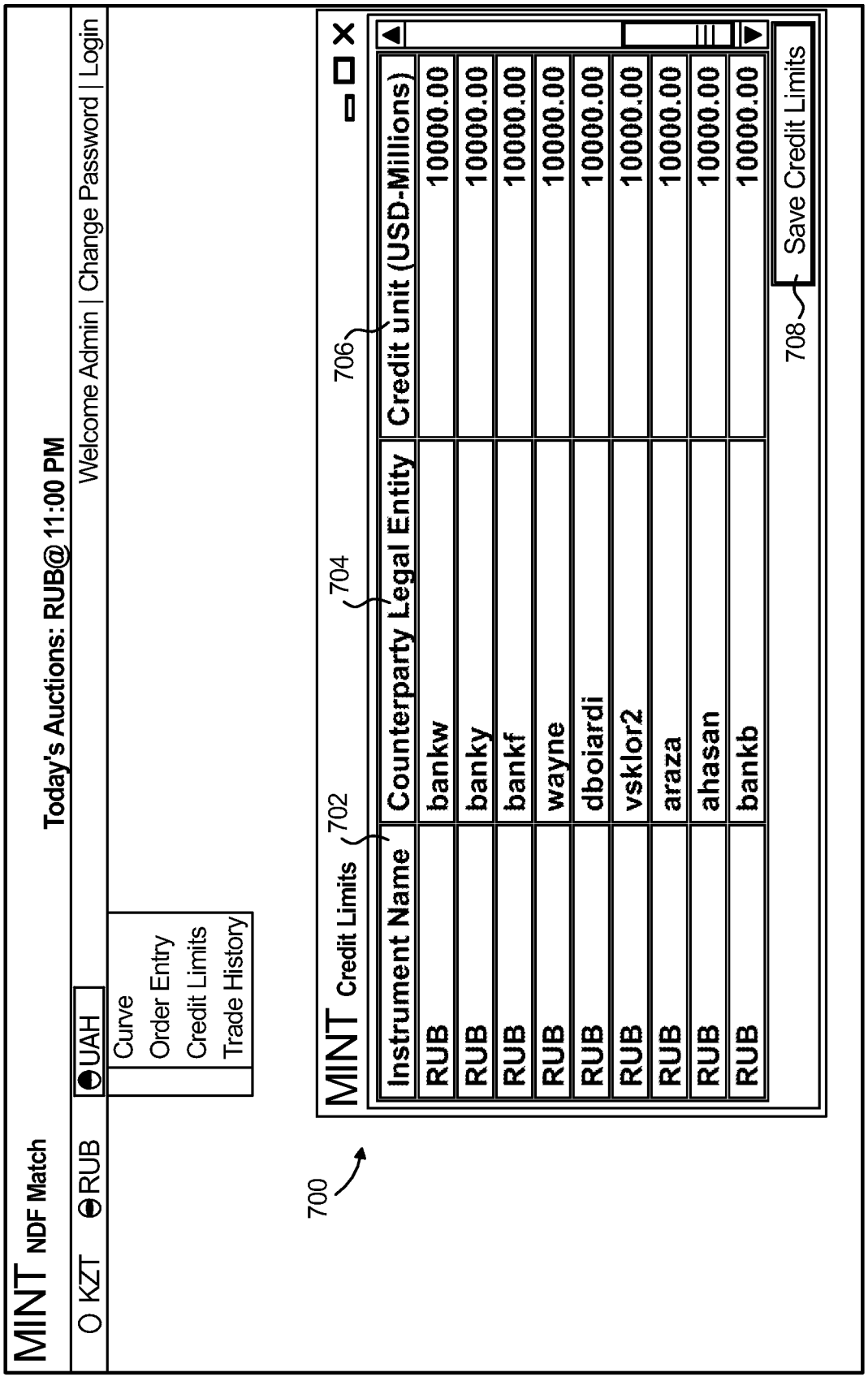

MINT NDF Match
Today's Auctions: RUB@ 11:00 PM
Welcome Admin | Change Password | Login
O KZT
RUB
UAH
Curve
Order Entry
Credit Limits
Trade History
MINT Credit Limits
700
702
704
706
708
Instrument Name
Counterparty Legal Entity
Credit unit (USD-Millions)
RUB bankw 10000.00
RUB banky 10000.00
RUB bankf 10000.00
RUB wayne 10000.00
RUB dboiardi 10000.00
RUB vsklor2 10000.00
RUB araza 10000.00
RUB ahasan 10000.00
RUB bankb 10000.00
Save Credit Limits

Figure 7

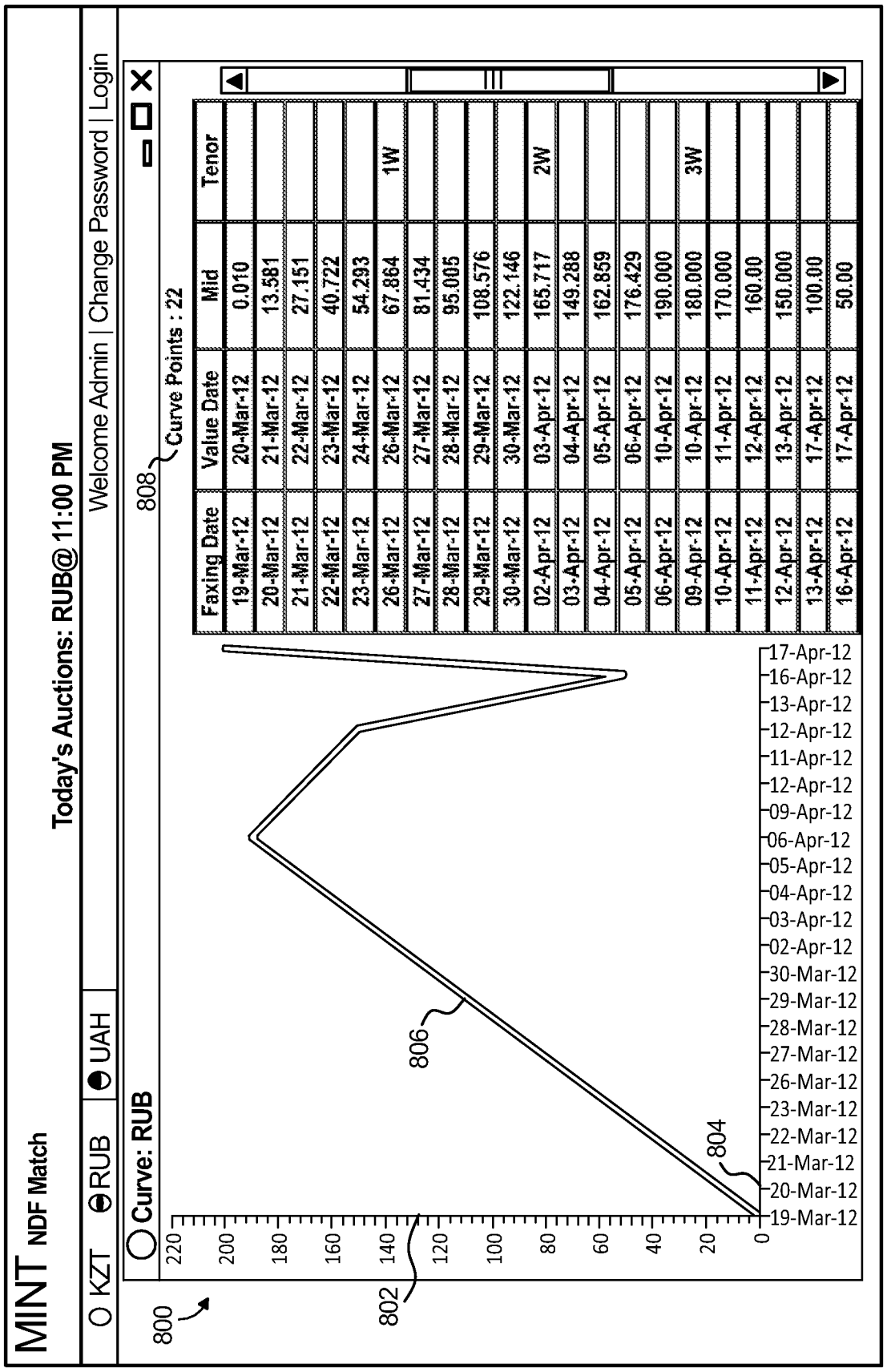

MINT NDF Match
Today's Auctions: RUB@ 11:00 PM
O KZT RUB UAH
Welcome Admin | Change Password | Login
Curve: RUB
Curve Points : 22
800
802
804
806
808
Faxing Date | Value Date | Mid | Tenor
19-Mar-12 | 20-Mar-12 | 0.010
20-Mar-12 | 21-Mar-12 | 13.581
21-Mar-12 | 22-Mar-12 | 27.151
22-Mar-12 | 23-Mar-12 | 40.722
23-Mar-12 | 24-Mar-12 | 54.293
26-Mar-12 | 26-Mar-12 | 67.864 | 1W
27-Mar-12 | 27-Mar-12 | 81.434
28-Mar-12 | 28-Mar-12 | 95.005
29-Mar-12 | 29-Mar-12 | 108.576
30-Mar-12 | 30-Mar-12 | 122.146
02-Apr-12 | 03-Apr-12 | 165.717 | 2W
03-Apr-12 | 04-Apr-12 | 149.288
04-Apr-12 | 05-Apr-12 | 162.859
05-Apr-12 | 06-Apr-12 | 176.429
06-Apr-12 | 10-Apr-12 | 190.000
09-Apr-12 | 10-Apr-12 | 180.000 | 3W
10-Apr-12 | 11-Apr-12 | 170.000
11-Apr-12 | 12-Apr-12 | 160.00
12-Apr-12 | 13-Apr-12 | 150.000
13-Apr-12 | 17-Apr-12 | 100.00
16-Apr-12 | 17-Apr-12 | 50.00
220 200 180 160 140 120 100 80 60 40 20 0
19-Mar-12 20-Mar-12 21-Mar-12 22-Mar-12 23-Mar-12 26-Mar-12 27-Mar-12 28-Mar-12 29-Mar-12 30-Mar-12 02-Apr-12 03-Apr-12 04-Apr-12 05-Apr-12 06-Apr-12 09-Apr-12 10-Apr-12 11-Apr-12 12-Apr-12 13-Apr-12 16-Apr-12 17-Apr-12

Figure 8

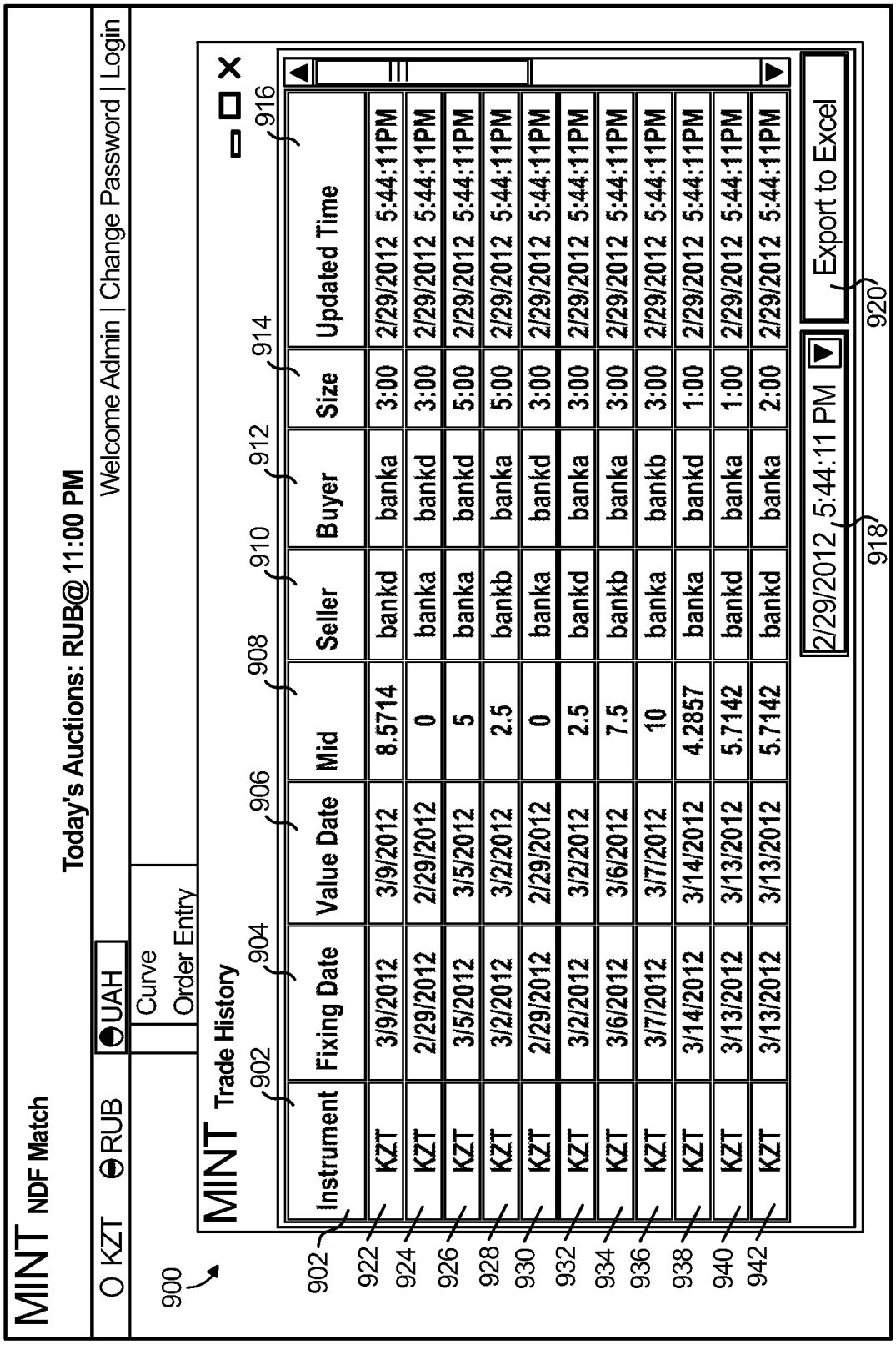

MINT NDF Match
Today's Auctions: RUB@ 11:00 PM
O KZT RUB UAH
Welcome Admin | Change Password | Login
Curve
Order Entry
900
MINT Trade History
902
904
906
908
910
912
914
916
Instrument
Fixing Date
Value Date
Mid
Seller
Buyer
Size
Updated Time
KZT 3/9/2012 3/9/2012 8.5714 bankd banka 3:00 2/29/2012 5:44:11PM
KZT 2/29/2012 2/29/2012 0 banka bankd 3:00 2/29/2012 5:44:11PM
KZT 3/5/2012 3/5/2012 5 banka bankd 5:00 2/29/2012 5:44:11PM
KZT 3/2/2012 3/2/2012 2.5 bankb banka 5:00 2/29/2012 5:44:11PM
KZT 2/29/2012 2/29/2012 0 banka bankd 3:00 2/29/2012 5:44:11PM
KZT 3/2/2012 3/2/2012 2.5 bankd banka 3:00 2/29/2012 5:44:11PM
KZT 3/6/2012 3/6/2012 7.5 bankb banka 3:00 2/29/2012 5:44:11PM
KZT 3/7/2012 3/7/2012 10 banka bankb 3:00 2/29/2012 5:44:11PM
KZT 3/14/2012 3/14/2012 4.2857 banka bankd 1:00 2/29/2012 5:44:11PM
KZT 3/13/2012 3/13/2012 5.7142 bankd banka 1:00 2/29/2012 5:44:11PM
KZT 3/13/2012 3/13/2012 5.7142 bankd banka 2:00 2/29/2012 5:44:11PM
902
922
924
926
928
930
932
934
936
938
940
942
2/29/2012 5:44:11 PM
Export to Excel
918
920

Figure 9

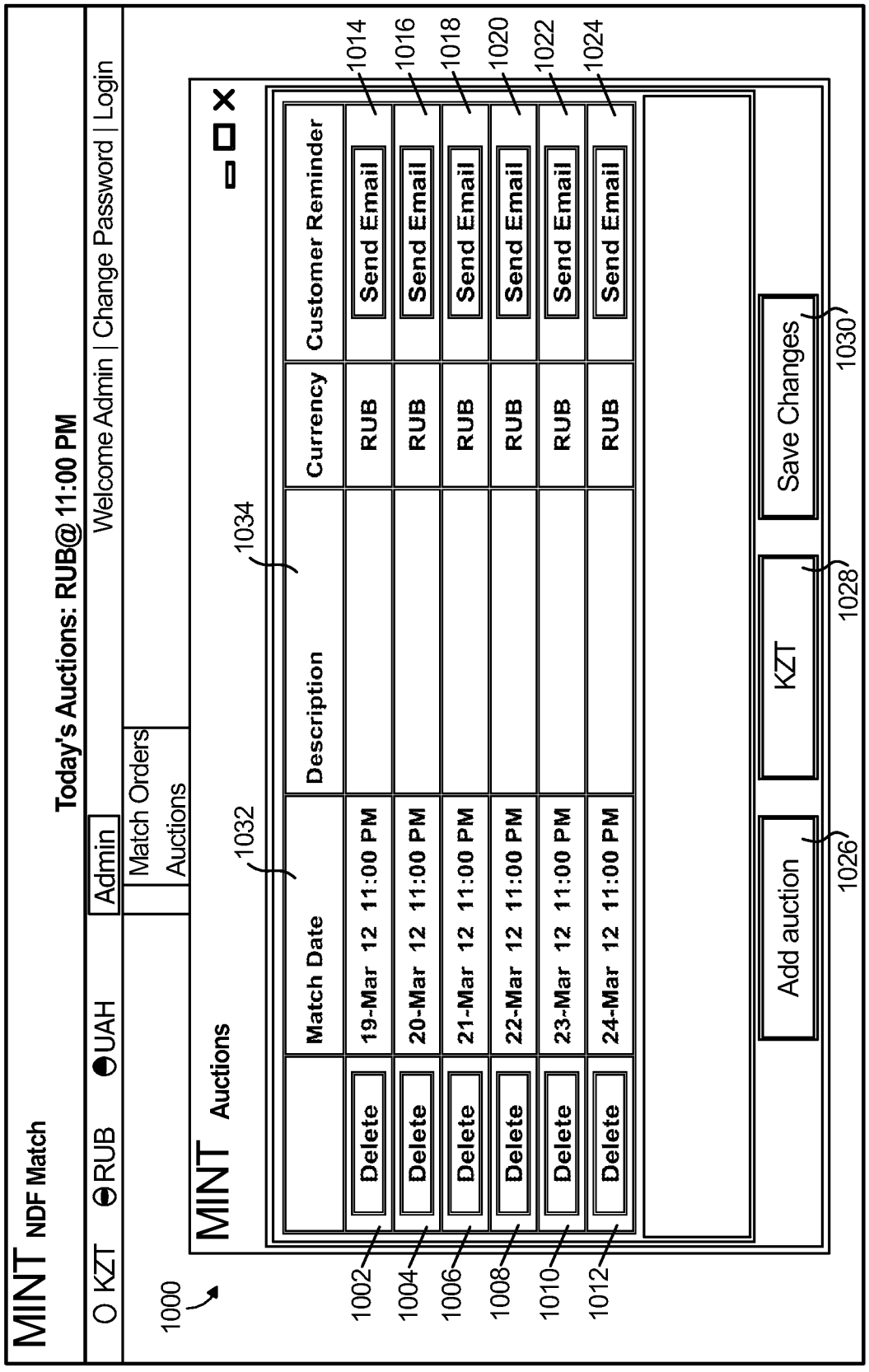
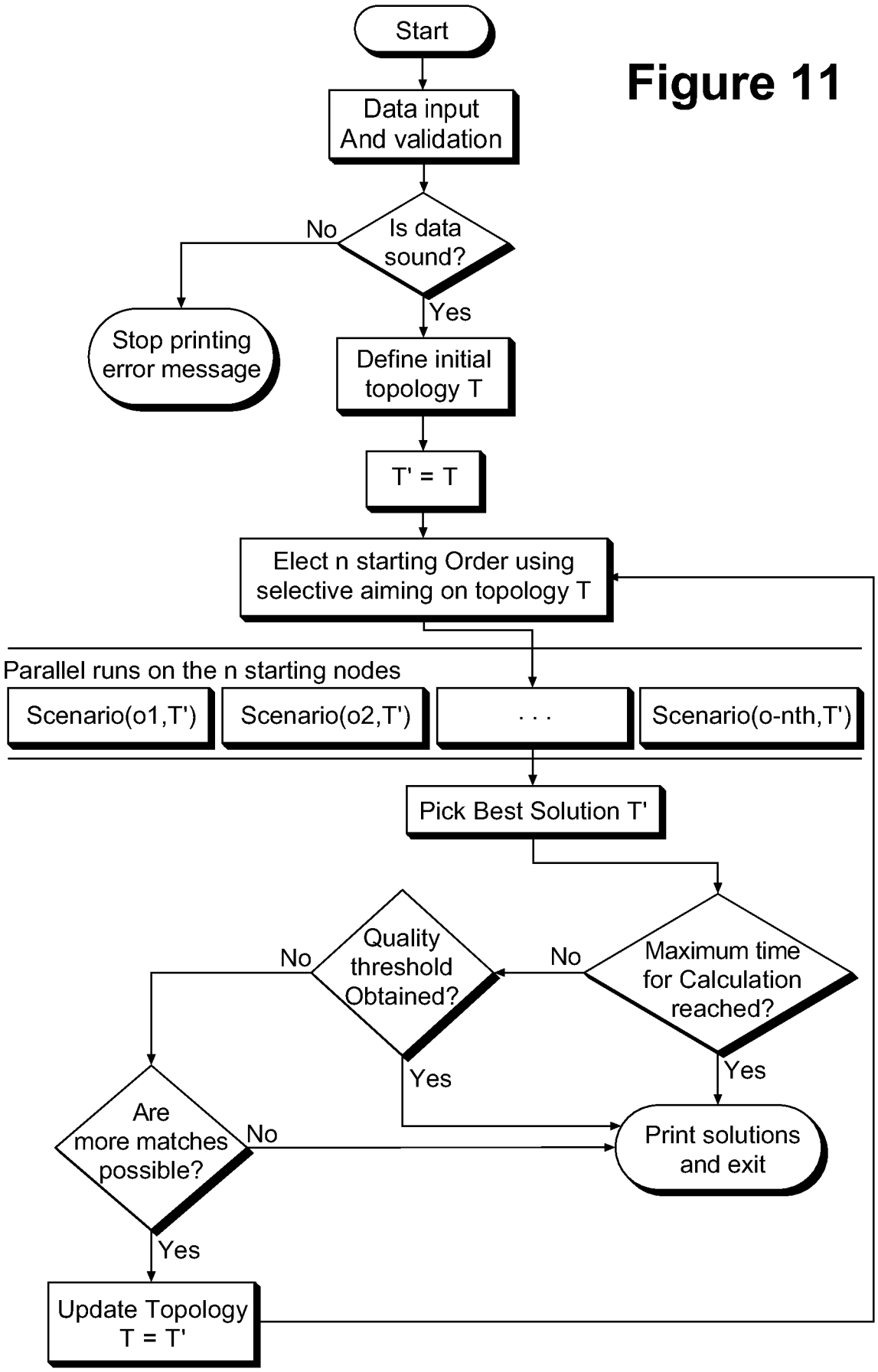

MINT NDF Match
Today's Auctions: RUB@ 11:00 PM
O KZT RUB UAH
Admin
Welcome Admin | Change Password | Login
Match Orders
Auctions
1000
MINT Auctions
1032
1034
Match Date
Description
Currency
Customer Reminder
Delete
19-Mar 12 11:00 PM
20-Mar 12 11:00 PM
21-Mar 12 11:00 PM
22-Mar 12 11:00 PM
23-Mar 12 11:00 PM
24-Mar 12 11:00 PM
RUB
Send Email
1002
1004
1006
1008
1010
1012
1014
1016
1018
1020
1022
1024
Add auction
KZT
Save Changes
1026
1028
1030

Figure 10

Figure 11


Start
Data input And validation
Is data sound?
No
Yes
Stop printing error message
Define initial topology T
T' = T
Elect n starting Order using selective aiming on topology T
Parallel runs on the n starting nodes
Scenario(o1,T')
Scenario(o2,T')
. . .
Scenario(o-nth,T')
Pick Best Solution T'
Quality threshold Obtained?
No
Maximum time for Calculation reached?
No
Yes
Yes
Are more matches possible?
No
Print solutions and exit
Yes
Update Topology T = T'

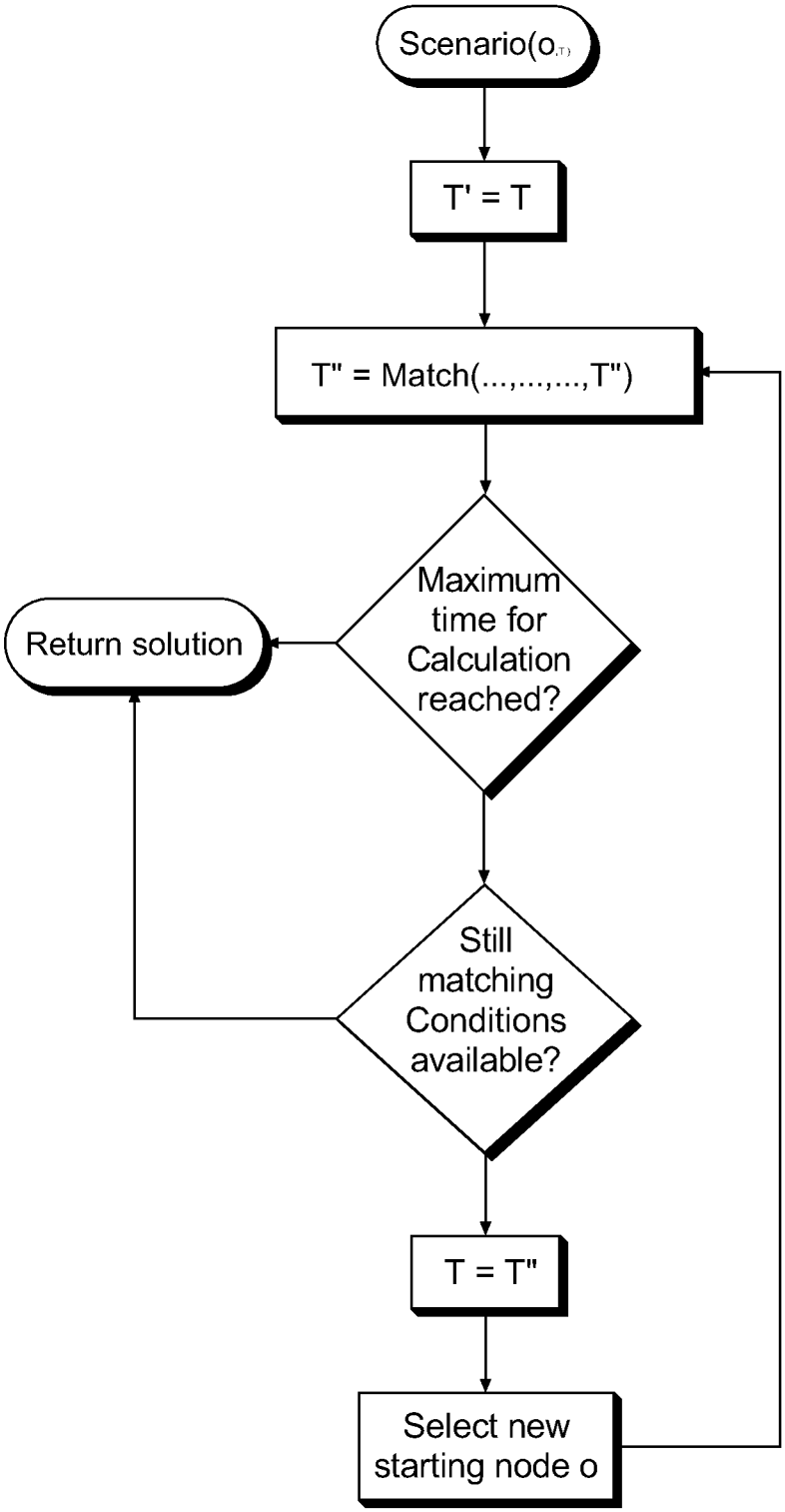

Scenario(o,T)
T' = T
T" = Match(...,...,...,T")
Maximum time for Calculation reached?
Return solution
Still matching Conditions available?
T = T"
Select new starting node o

Figure 12

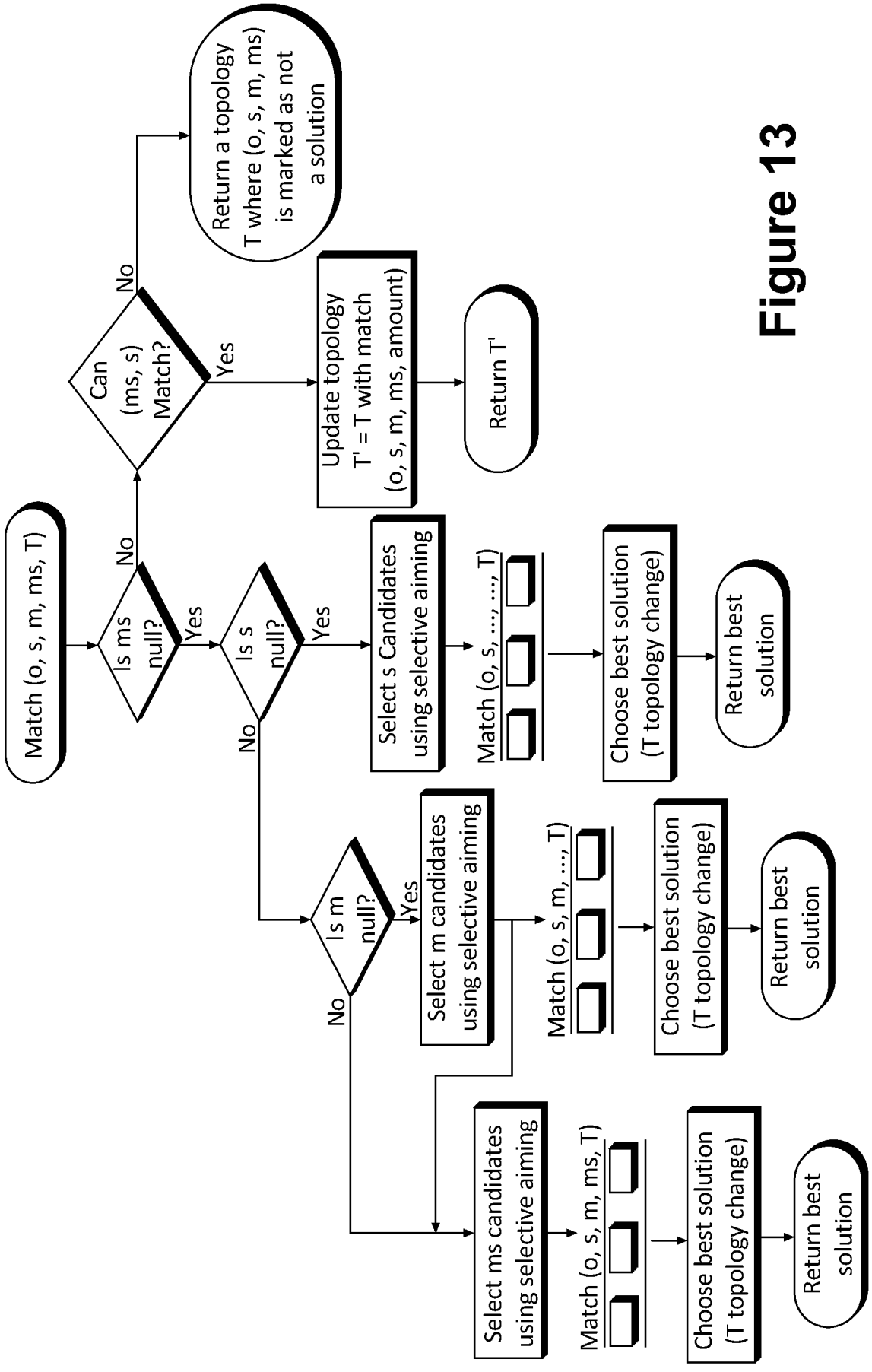

Match (o, s, m, ms, T)
Is ms null?
No
Yes
Can (ms, s) Match?
No
Yes
Return a topology T where (o, s, m, ms) is marked as not a solution
Update topology T' = T with match (o, s, m, ms, amount)
Return T'
Is s null?
No
Yes
Select s Candidates using selective aiming
Match (o, s, ..., ..., T)
Choose best solution (T topology change)
Return best solution
Is m null?
No
Yes
Select m candidates using selective aiming
Match (o, s, m, ..., T)
Choose best solution (T topology change)
Return best solution
Select ms candidates using selective aiming
Match (o, s, m, ms, T)
Choose best solution (T topology change)
Return best solution

Figure 13