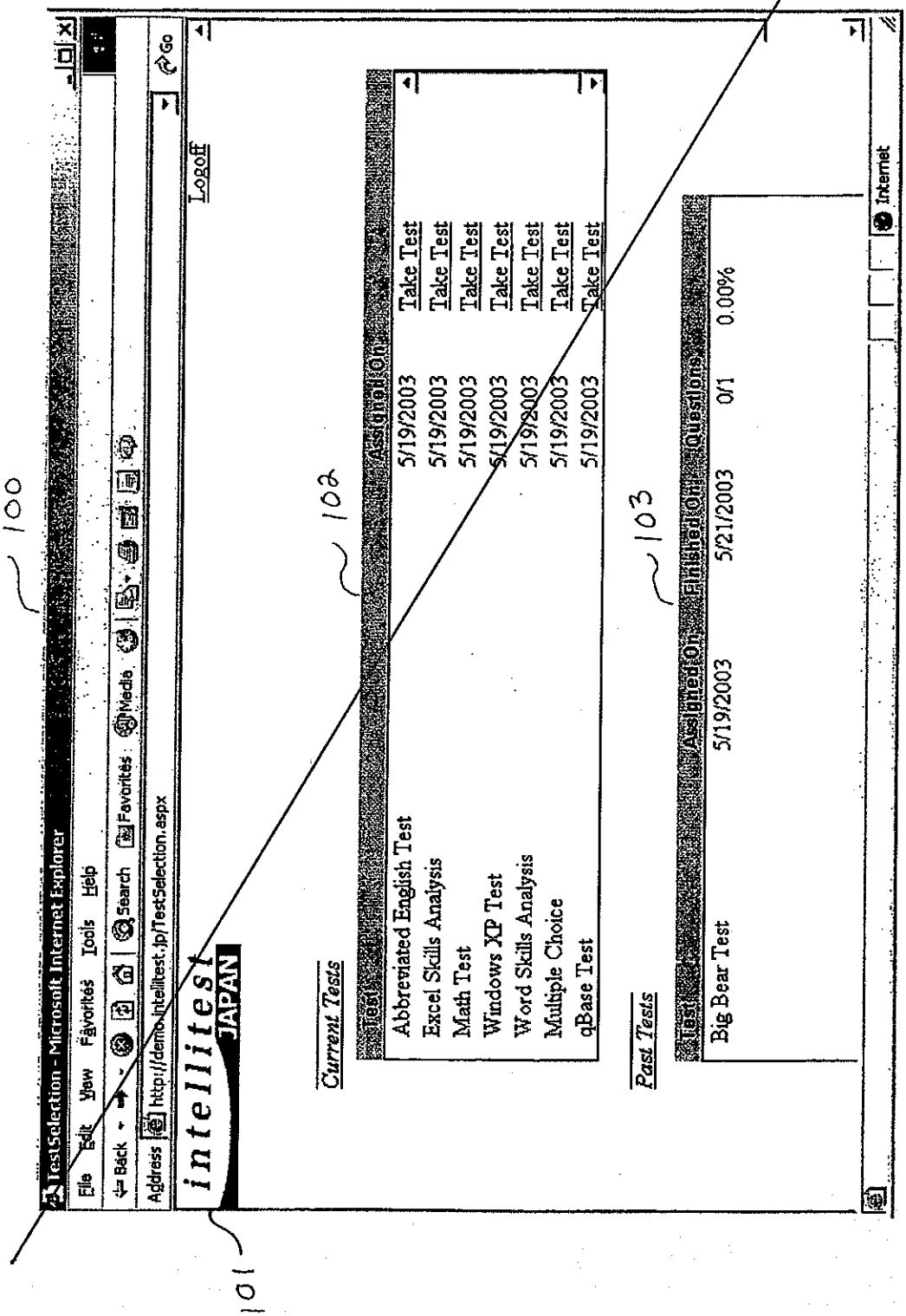
100
101
102
103
TestSelection - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intelitest.jp/TestSelection.aspx
Go
intellitest JAPAN
Logoff
Current Tests
Test
Assigned On
Abbreviated English Test 5/19/2003 Take Test
Excel Skills Analysis 5/19/2003 Take Test
Math Test 5/19/2003 Take Test
Windows XP Test 5/19/2003 Take Test
Word Skills Analysis 5/19/2003 Take Test
Multiple Choice 5/19/2003 Take Test
qBase Test 5/19/2003 Take Test
Past Tests
Test
Assigned On
Finished On
Questions
Big Bear Test 5/19/2003 5/21/2003 0/1 0.00%
Internet

FIG. 1

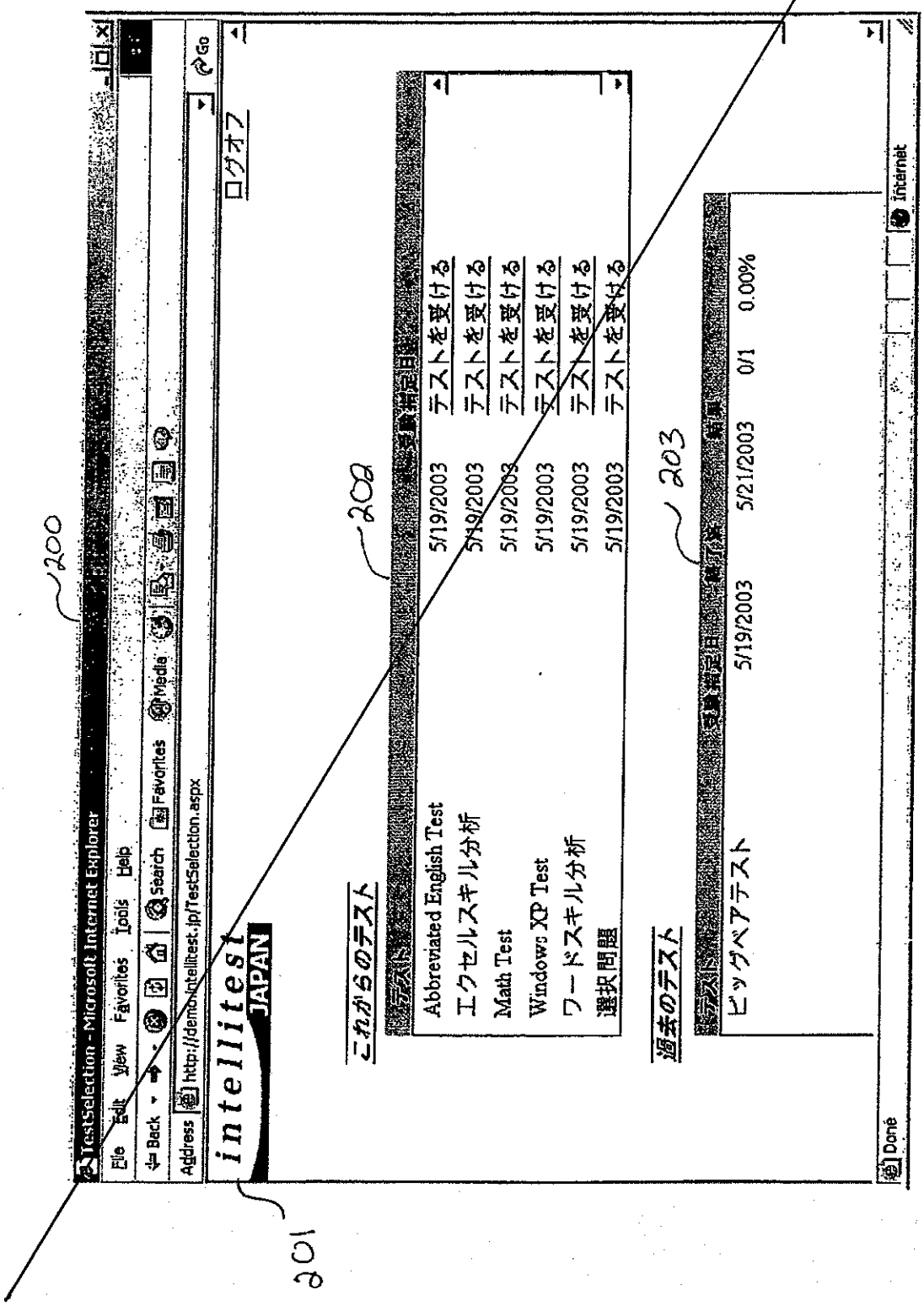
200
201
202
203
TestSelection - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intellitest.jp/TestSelection.aspx
Go
intellitest
JAPAN
ログオフ
これからのテスト
テスト
受験指定日
Abbreviated English Test 5/19/2003 テストを受ける
エクセルスキル分析 5/19/2003 テストを受ける
Math Test 5/19/2003 テストを受ける
Windows XP Test 5/19/2003 テストを受ける
ワードスキル分析 5/19/2003 テストを受ける
選択問題 5/19/2003 テストを受ける
過去のテスト
テスト
受験指定日
終了日
結果
ビッグベアテスト 5/19/2003 5/21/2003 0/1 0.00%
Done
Internet

FIG. 2

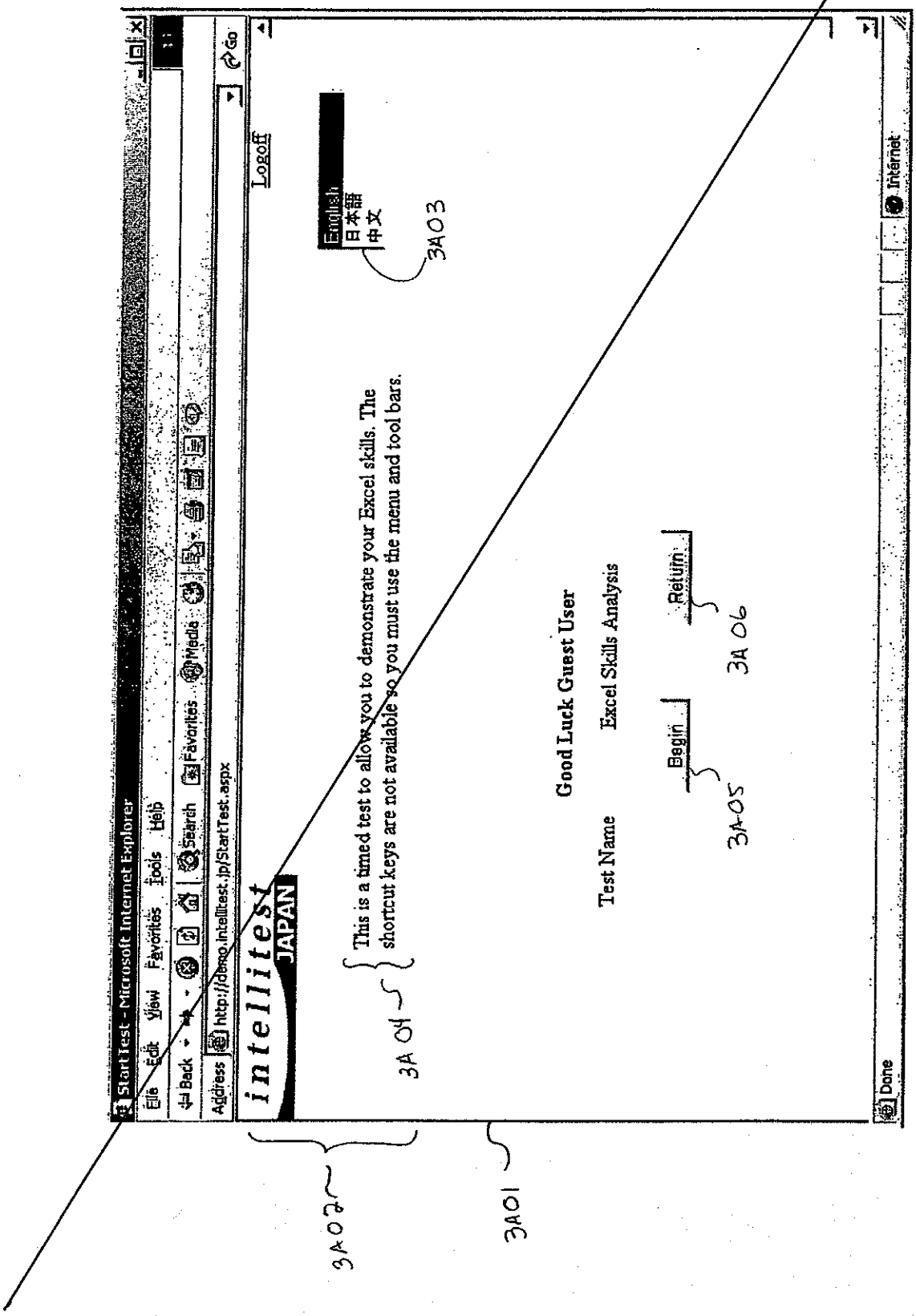
StartTest - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intellitest.jp/StartTest.aspx
Go
Logoff
English
日本語
中文
3A03
intellitest
JAPAN
This is a timed test to allow you to demonstrate your Excel skills. The shortcut keys are not available so you must use the menu and tool bars.
3A04
Good Luck Guest User
Test Name
Excel Skills Analysis
Begin
Return
3A05
3A06
Done
Internet
3A02
3A01

FIG 3A

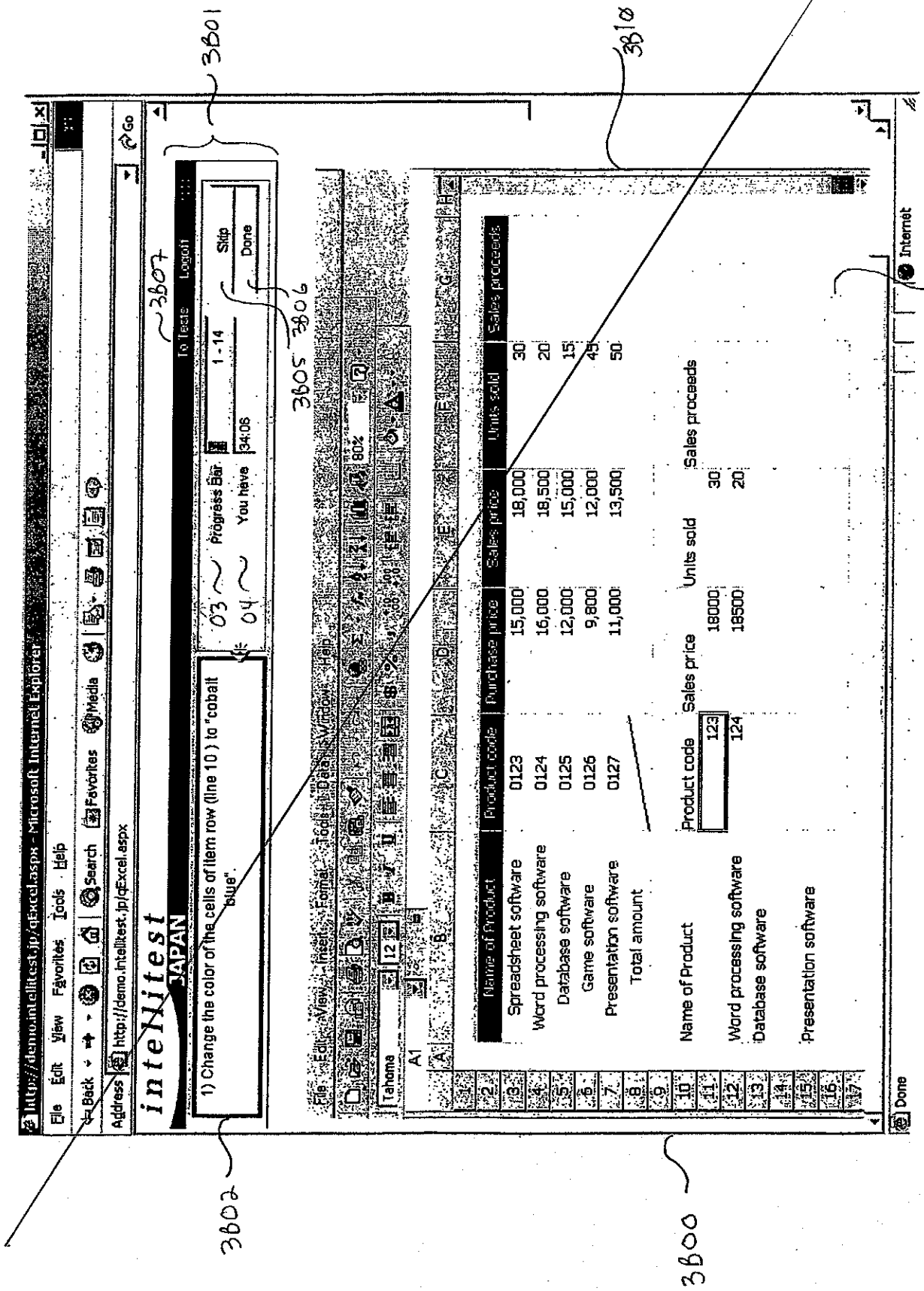
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intellitest.jp/qExcel.aspx
Go
intellitest
JAPAN
1) Change the color of the cells of item row (line 10) to "cobalt blue".
To Tests Logoff
Progress Bar 1 - 14
You have 34:06
Skip
Done
03
04
File Edit View Insert Format Tools Data Window Help
Tahoma 12
A1
Name of Product | Product code | Purchase price | Sales price | Units sold | Sales proceeds
Spreadsheet software 0123 15,000 18,000 30
Word processing software 0124 16,000 18,500 20
Database software 0125 12,000 15,000 15
Game software 0126 9,800 12,000 45
Presentation software 0127 11,000 13,500 50
Total amount
Name of Product | Product code | Sales price | Units sold | Sales proceeds
Word processing software 123 18000 30
Database software 124 18500 20
Presentation software
Done
Internet
3B01
3B02
3B05
3B06
3B07
3B10
3B20
3B00

FIG. 3B

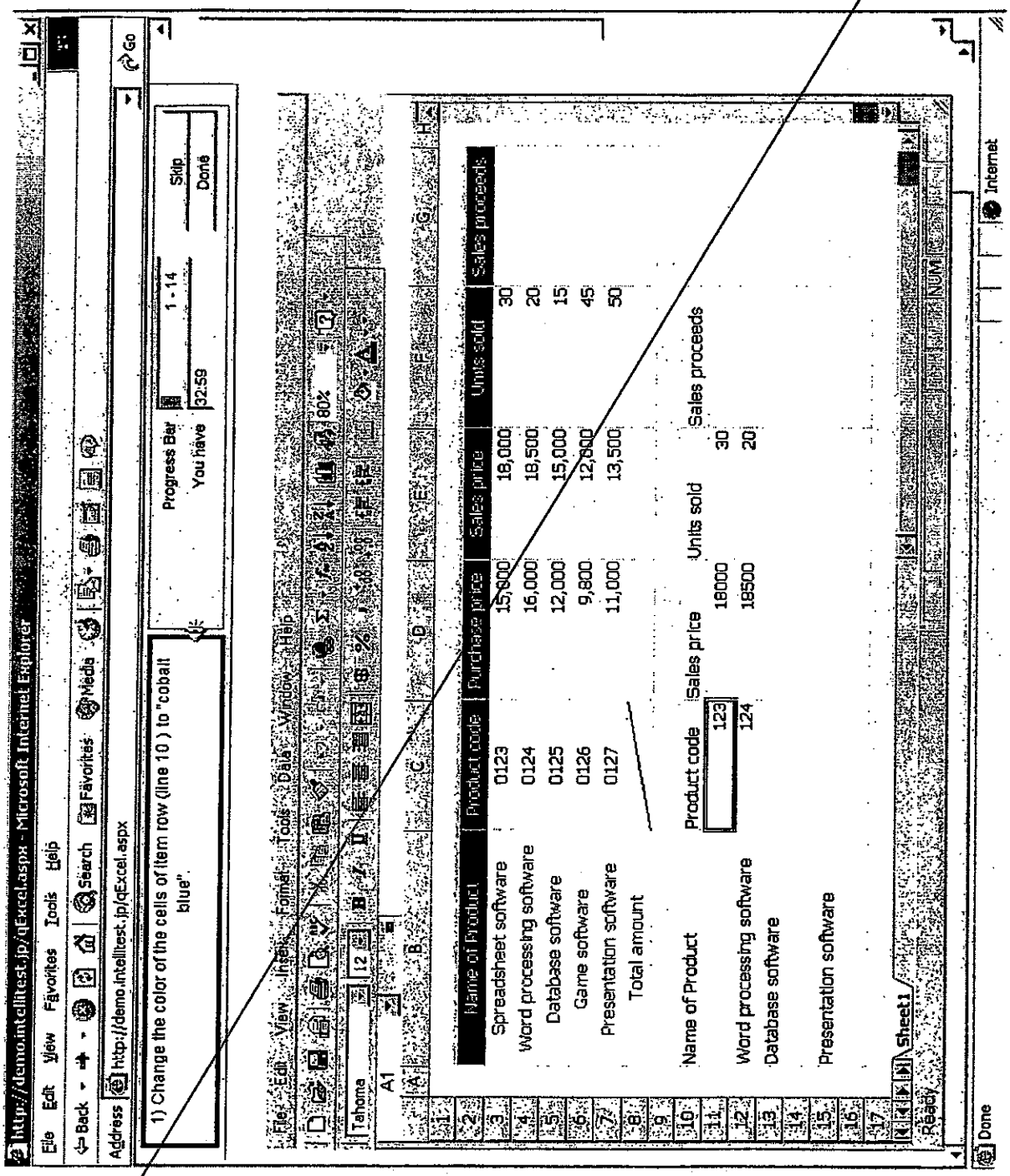
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://demo.intellitest.jp/qExcel.aspx
1) Change the color of the cells of item row (line 10) to "cobalt blue".
Progress Bar
You have
32:59
1 - 14
Skip
Done
Name of Product
Product code
Purchase price
Sales price
Units sold
Sales proceeds
Spreadsheet software 0123 15,900 18,000 30
Word processing software 0124 16,000 18,500 20
Database software 0125 12,000 15,000 15
Game software 0126 9,800 12,900 45
Presentation software 0127 11,000 13,500 50
Total amount
Name of Product
Product code
Sales price
Units sold
Sales proceeds
123 18000 30
Word processing software 124 18500 20
Database software
Presentation software
Sheet1
Ready
Done
Internet

FIG. 3C

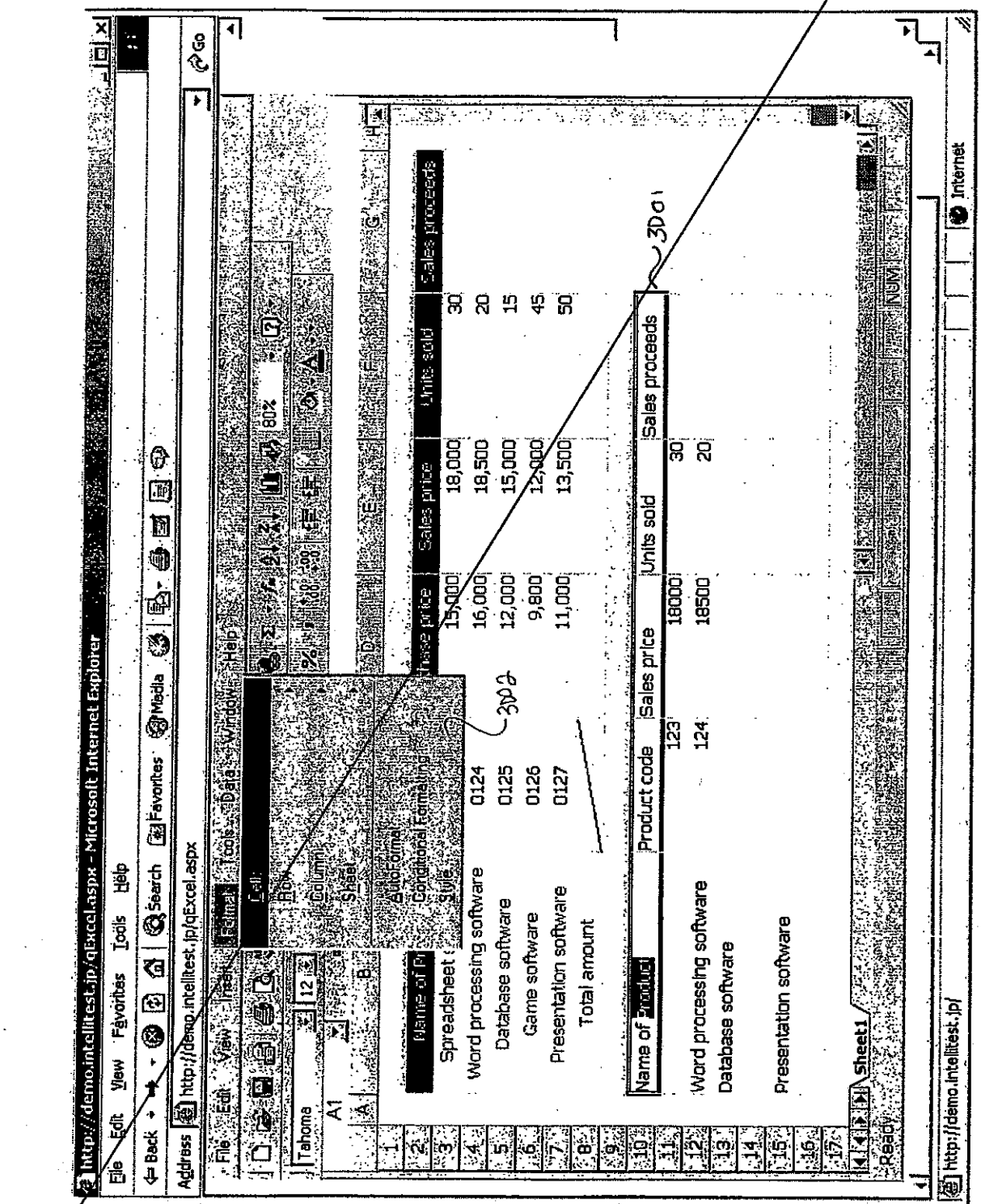
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
Address http://demo.intellitest.jp/qExcel.aspx
Name of Product
Product code
Sales price
Units sold
Sales proceeds
Spreadsheet
Word processing software 0124 18,000 30
Database software 0125 18,500 20
Game software 0126 15,000 15
Presentation software 0127 12,000 45
Total amount 13,500 50
Word processing software 123 15,000 18000 30
Database software 124 16,000 18500 20
Presentation software 12,000
9,800
11,000
Sheet1
http://demo.intellitest.jp/
Internet
202
301

FIG 3D

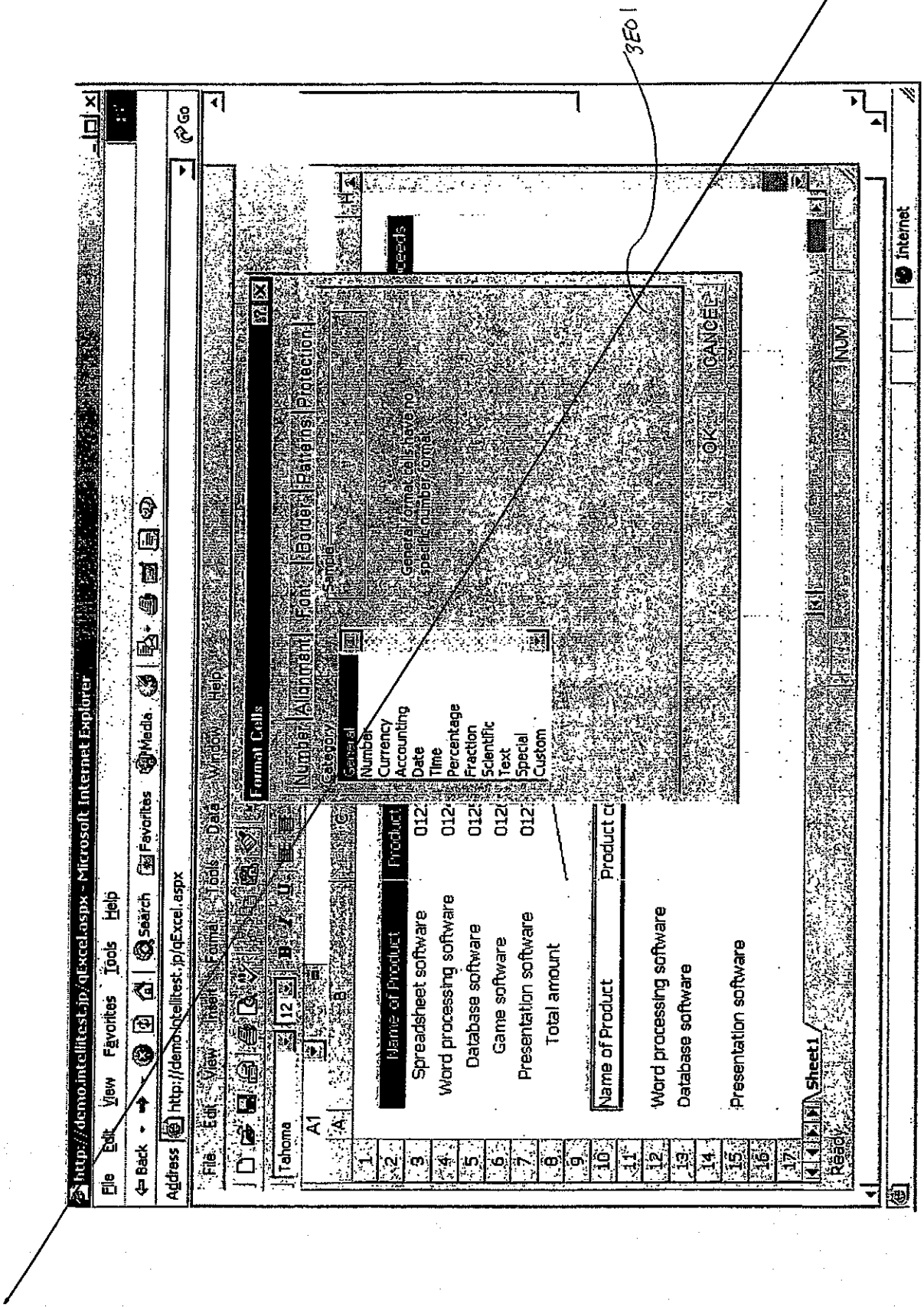
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://demo.intellitest.jp/qExcel.aspx
Format Cells
Number Alignment Font Border Patterns Protection
Category:
General
Number
Currency
Accounting
Date
Time
Percentage
Fraction
Scientific
Text
Special
Custom
OK
CANCEL
Name of Product
Spreadsheet software
Word processing software
Database software
Game software
Presentation software
Total amount
Sheet1
Ready
Internet
300

FIG 3E

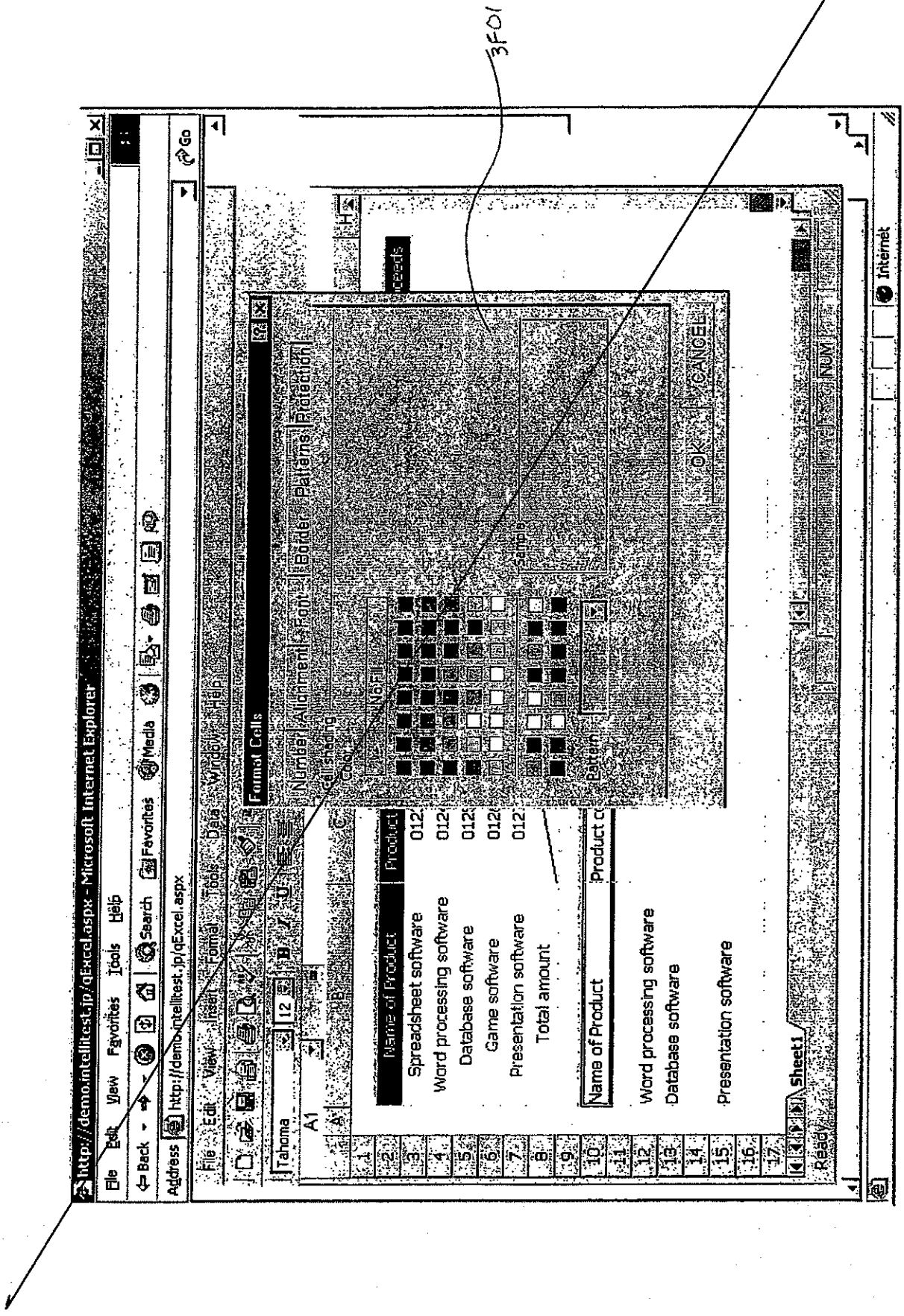
3F01
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
Format Cells
Number Alignment Font Border Patterns Protection
Name of Product
Spreadsheet software
Word processing software
Database software
Game software
Presentation software
Total amount
Sample
OK
CANCEL
Sheet1
Ready
Internet

FIG. 3F

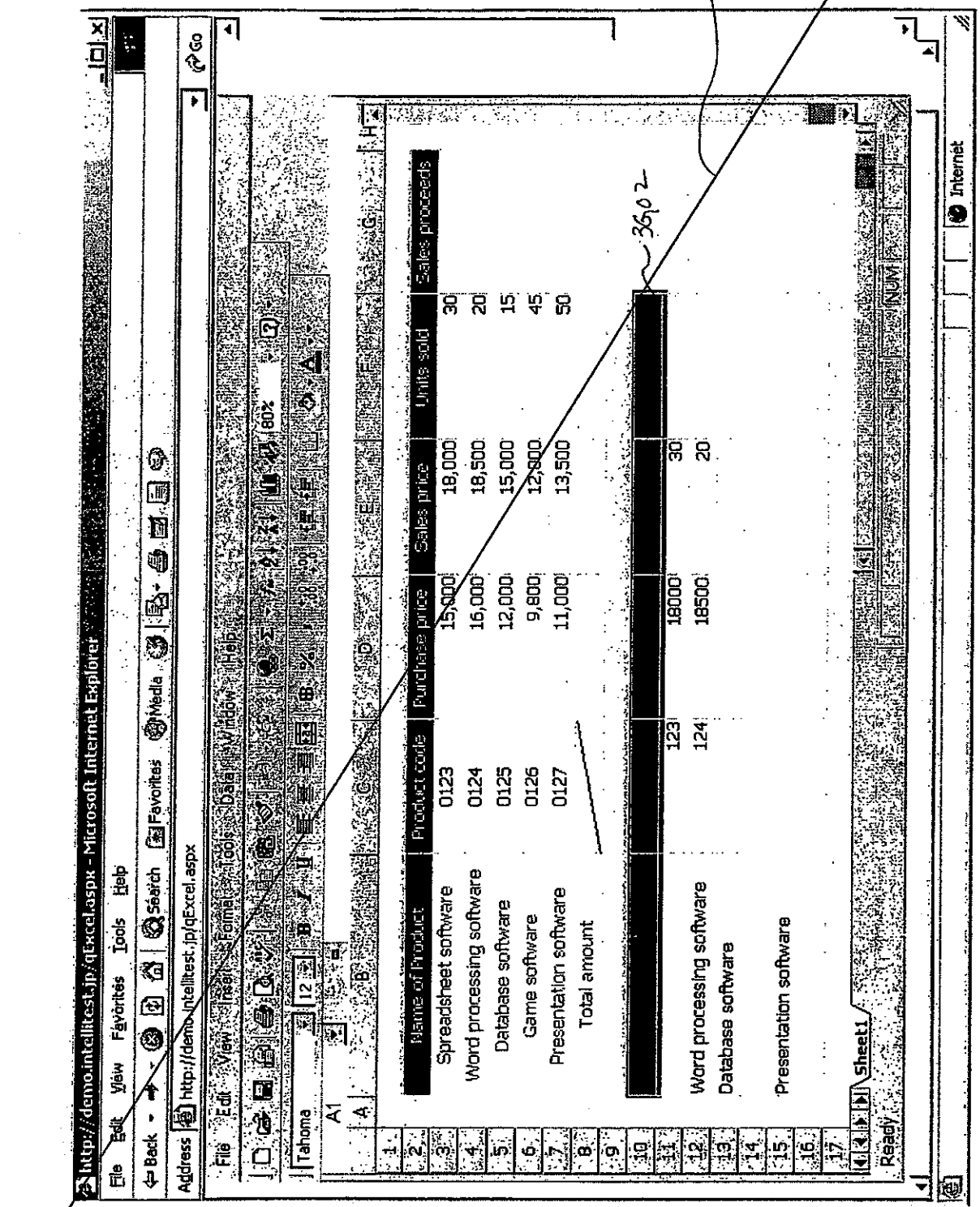
3601
3602
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
Name of Product
Product code
Purchase price
Sales price
Units sold
Sales proceeds
Spreadsheet software 0123 15,000 18,000 30
Word processing software 0124 16,000 18,500 20
Database software 0125 12,000 15,000 15
Game software 0126 9,800 12,800 45
Presentation software 0127 11,000 13,500 50
Total amount
123 18000 30
124 18500 20
Word processing software
Database software
Presentation software
Sheet1
Ready
Internet

FIG. 36

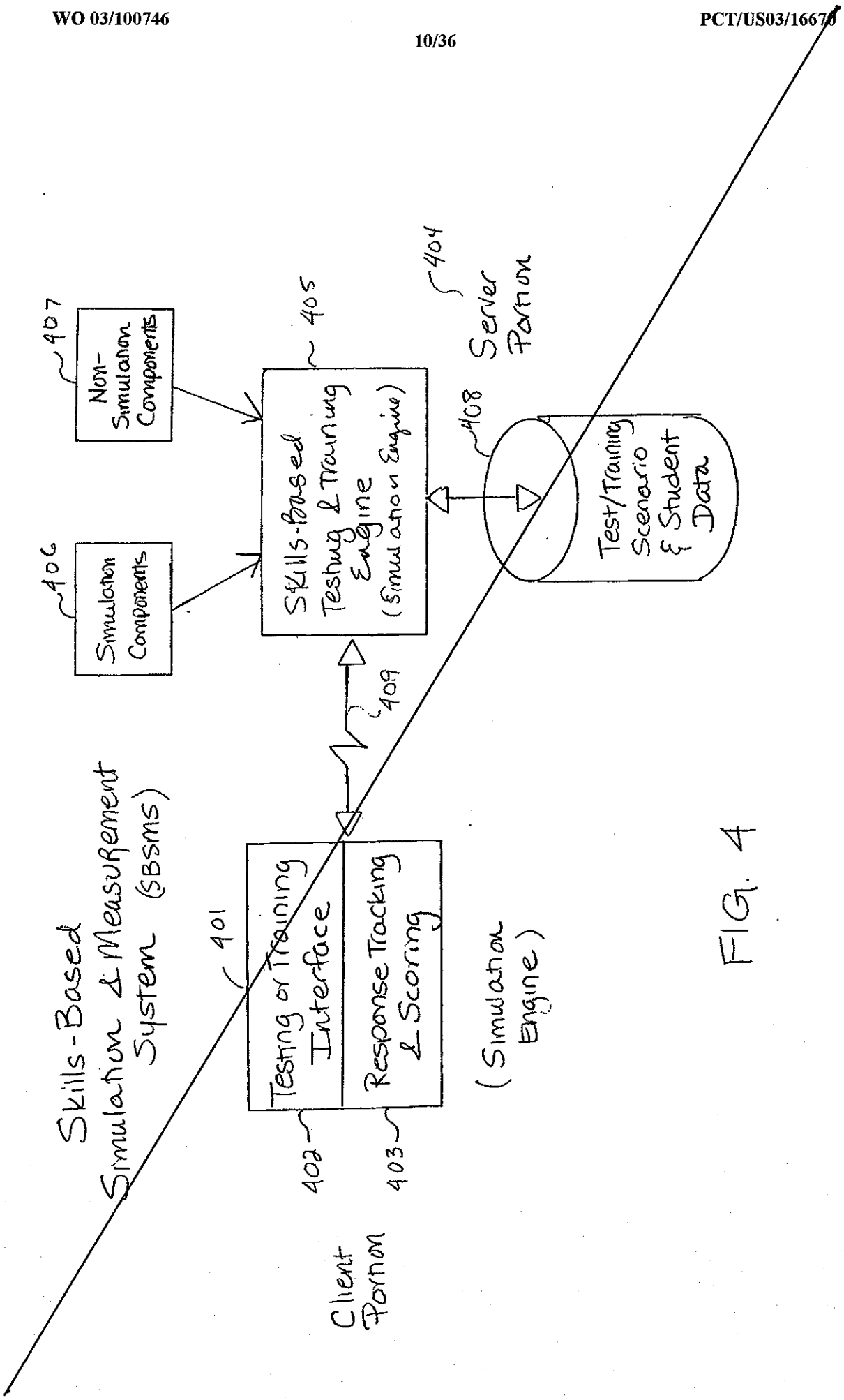
Skills-Based Simulation & Measurement System (SBSMS)
401
Testing or Training Interface
Response Tracking & Scoring
402
403
Client Portion
(Simulation Engine)
409
Skills-Based Testing & Training Engine (Simulation Engine)
405
404
Server Portion
408
Test/Training Scenario & Student Data
406
Simulation Components
407
Non-Simulation Components

FIG. 4

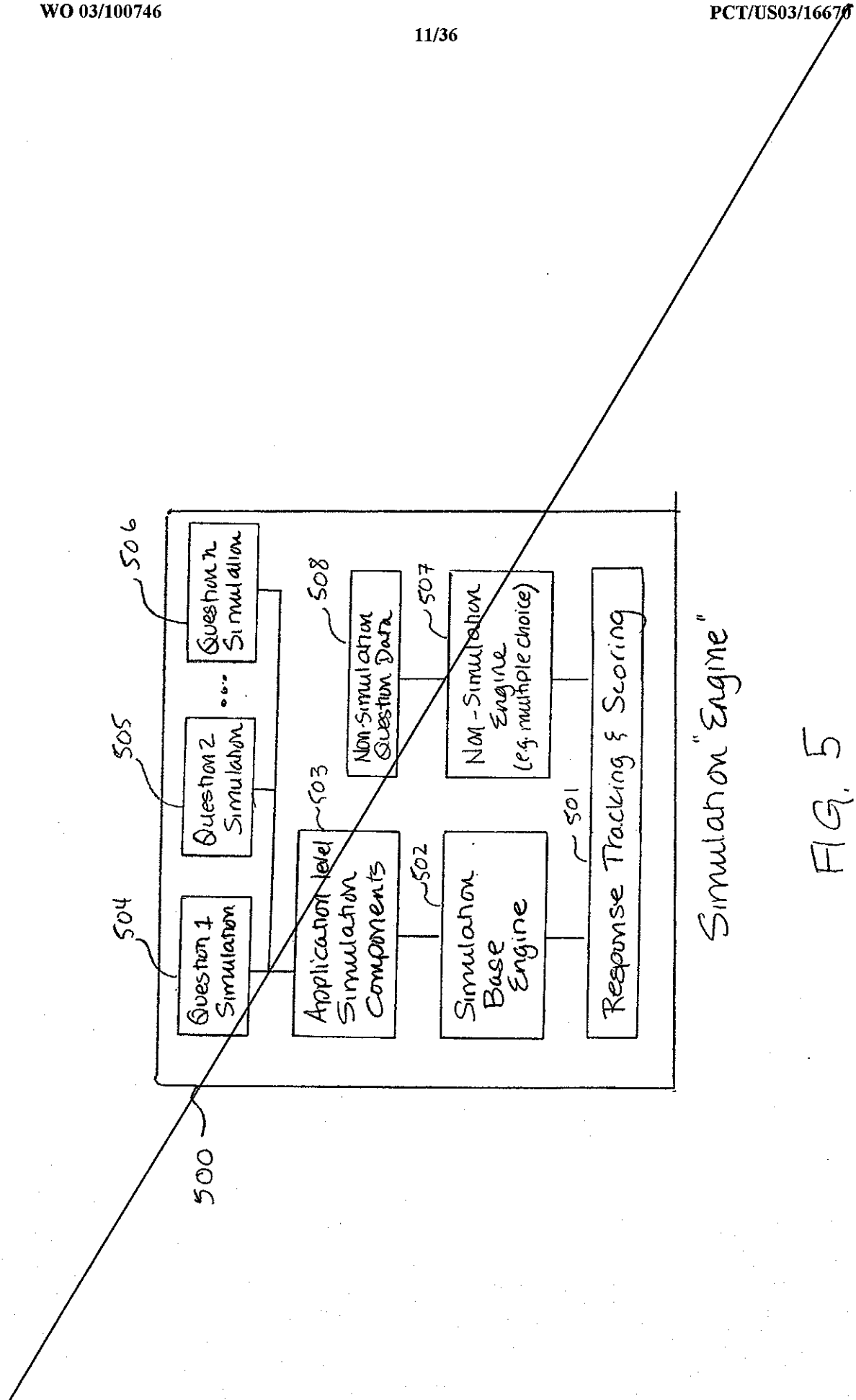
Simulation "Engine"
500
Question 1 Simulation
504
Question 2 Simulation
505
Question n Simulation
506
Application level Simulation Components
503
Simulation Base Engine
502
Response Tracking & Scoring
501
Non-Simulation Question Data
508
Non-Simulation Engine (e.g. multiple choice)
507

FIG. 5

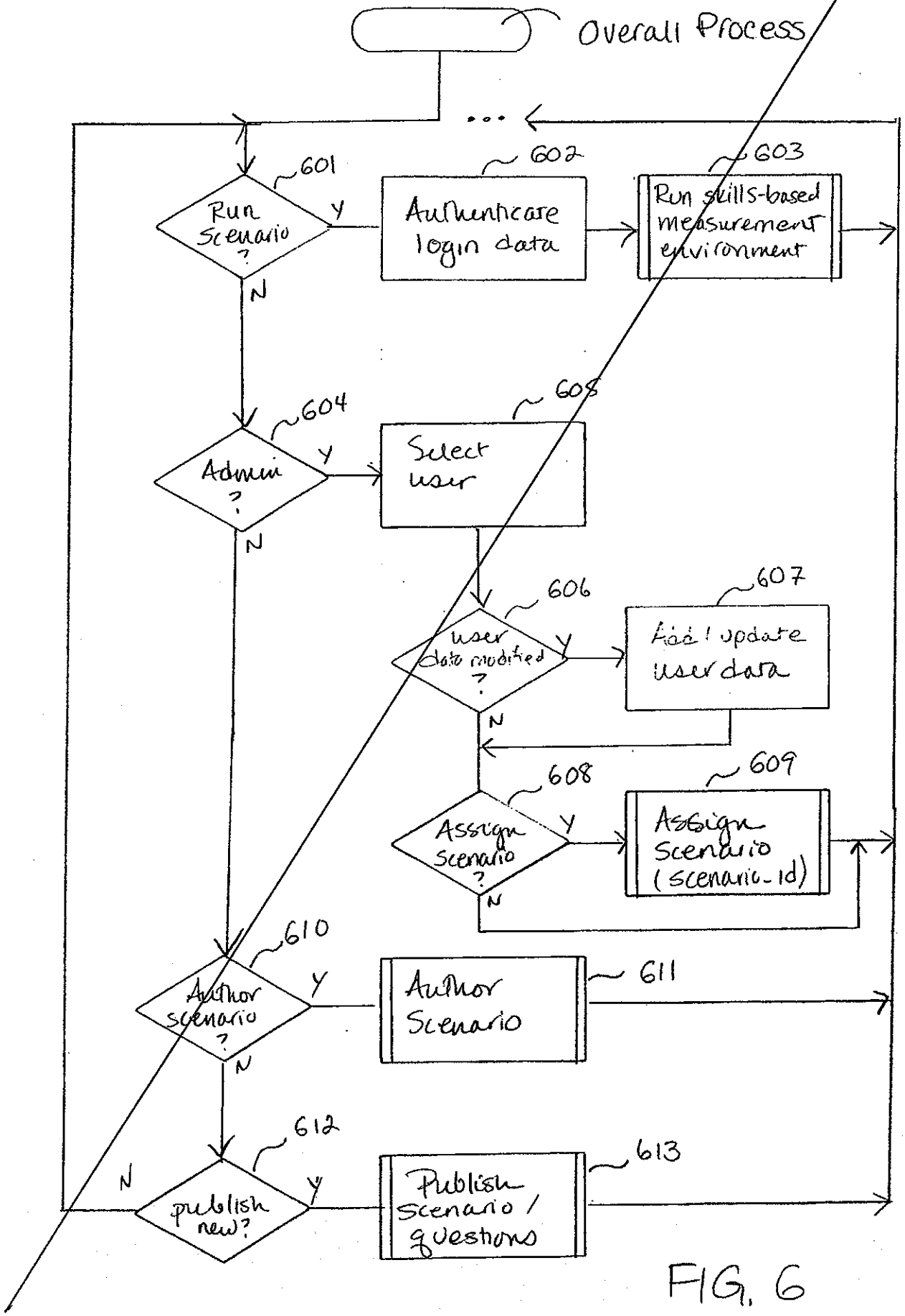
Overall Process
...
601
Run Scenario ?
Y
N
602
Authenticate login data
603
Run skills-based measurement environment
604
Admin ?
Y
N
605
Select user
606
User data modified ?
Y
N
607
Add / update user data
608
Assign Scenario ?
Y
N
609
Assign Scenario (scenario_id)
610
Author scenario ?
Y
N
611
Author Scenario
612
publish new?
N
Y
613
Publish Scenario / questions

FIG. 6

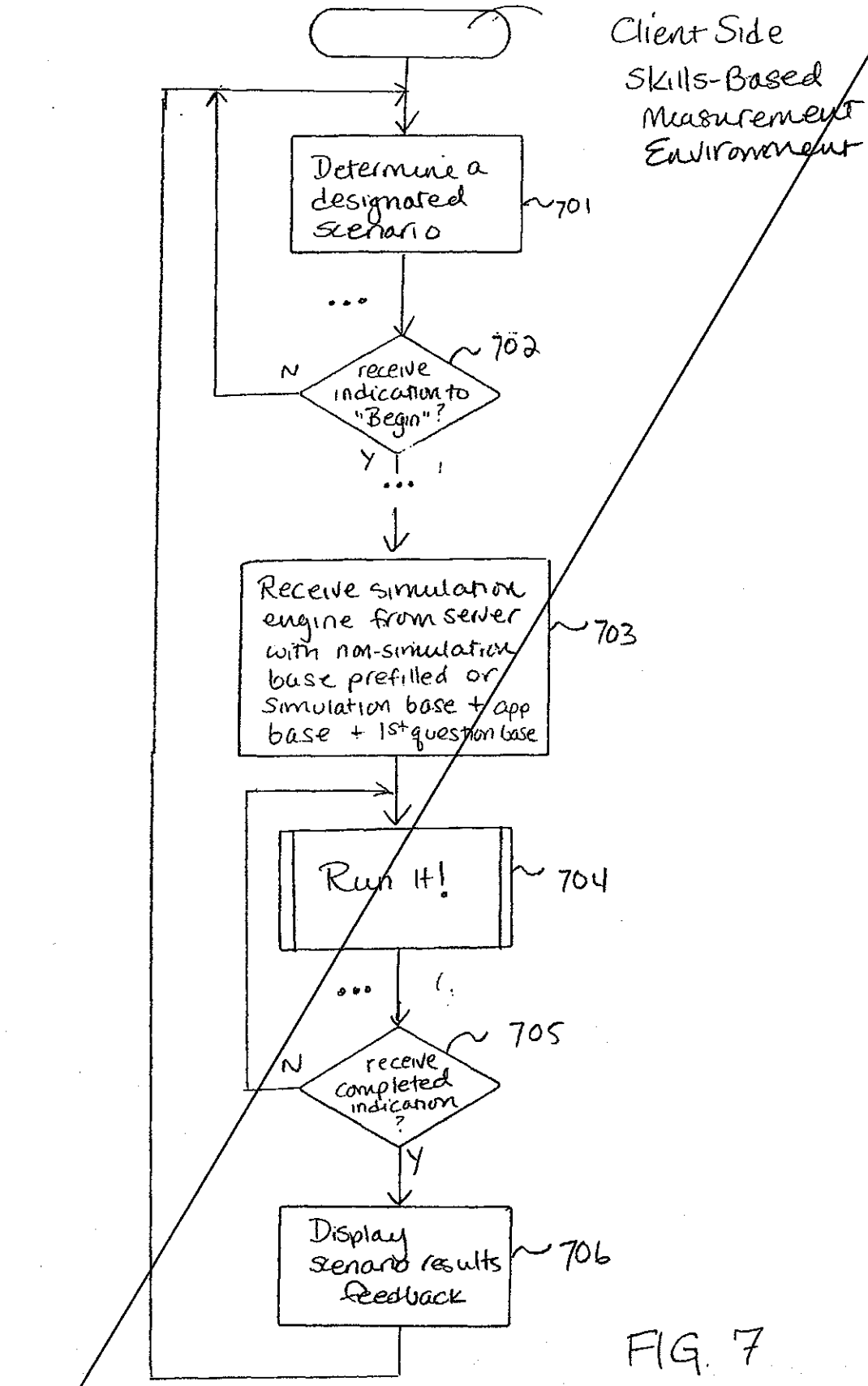
Client Side
Skills-Based
Measurement
Environment
Determine a designated scenario
701
...
receive indication to "Begin"?
702
N
Y
...
Receive simulation engine from server with non-simulation base prefilled or simulation base + app base + 1st question base
703
Run It!
704
...
receive completed indication?
705
N
Y
Display scenario results feedback
706

FIG. 7

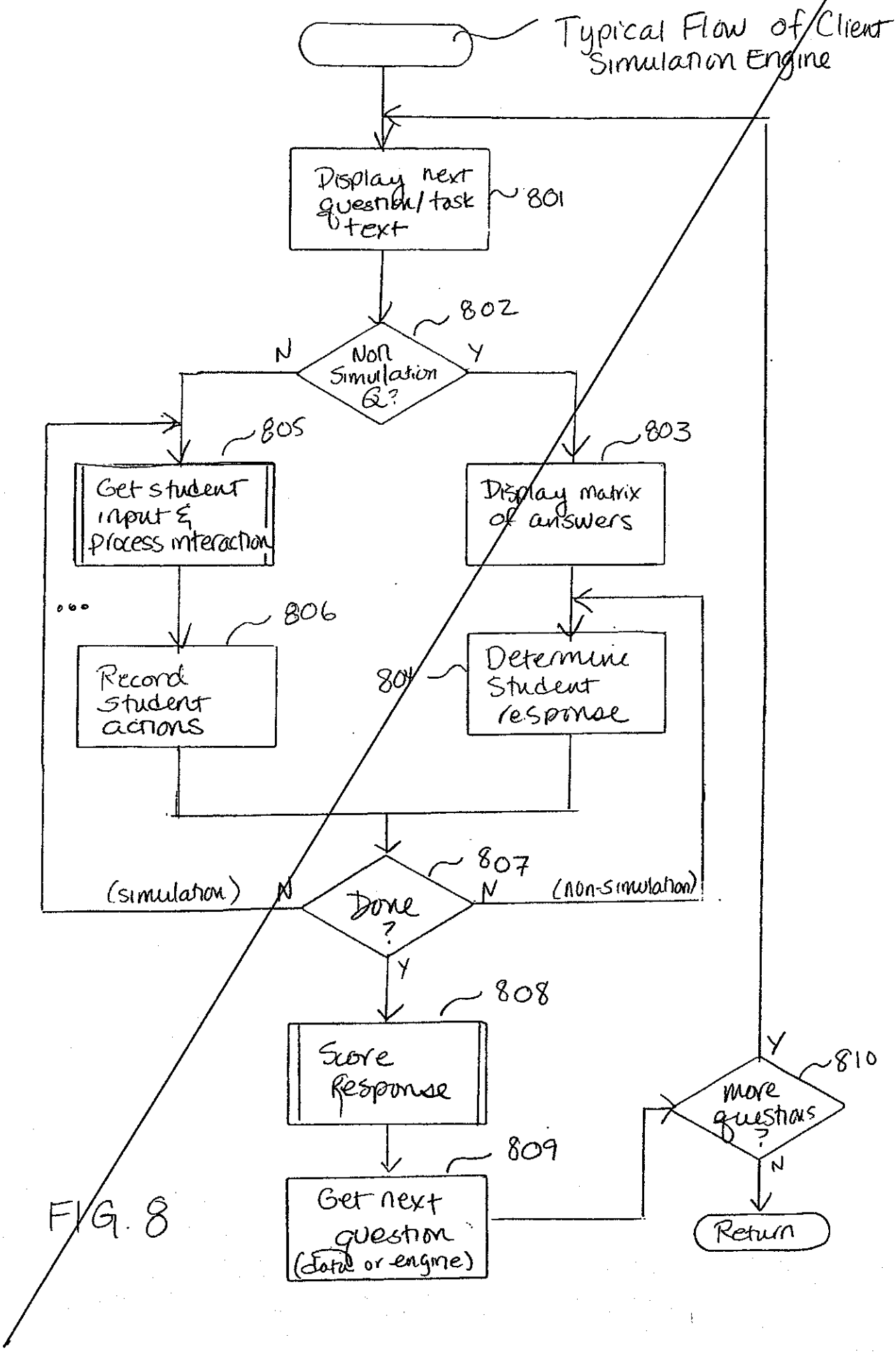
Typical Flow of Client Simulation Engine
Display next question/task text
801
802
Non Simulation Q?
N
Y
805
Get student input & process interaction
803
Display matrix of answers
806
Record student actions
804
Determine Student response
807
Done ?
(simulation)
N
(non-simulation)
Y
808
Score Response
809
Get next question (data or engine)
810
more questions ?
Y
N
Return

FIG. 8

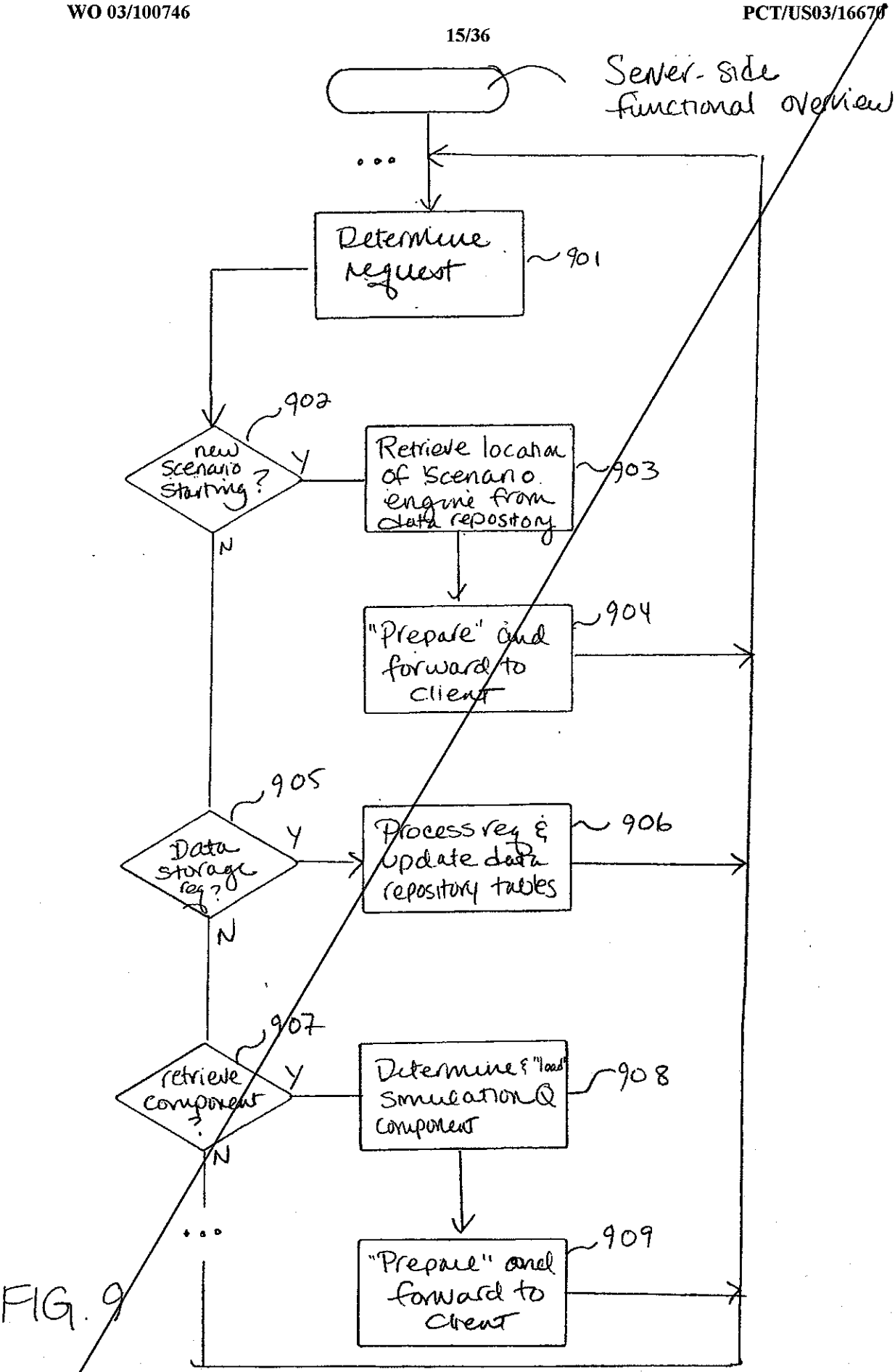
Server-side functional overview
...
Determine request
901
902
new scenario starting?
Y
N
Retrieve location of scenario engine from data repository
903
"Prepare" and forward to client
904
905
Data storage req?
Y
N
Process req & update data repository tables
906
907
retrieve component?
Y
N
Determine & "load" simulation component
908
...
"Prepare" and forward to client
909

FIG. 9

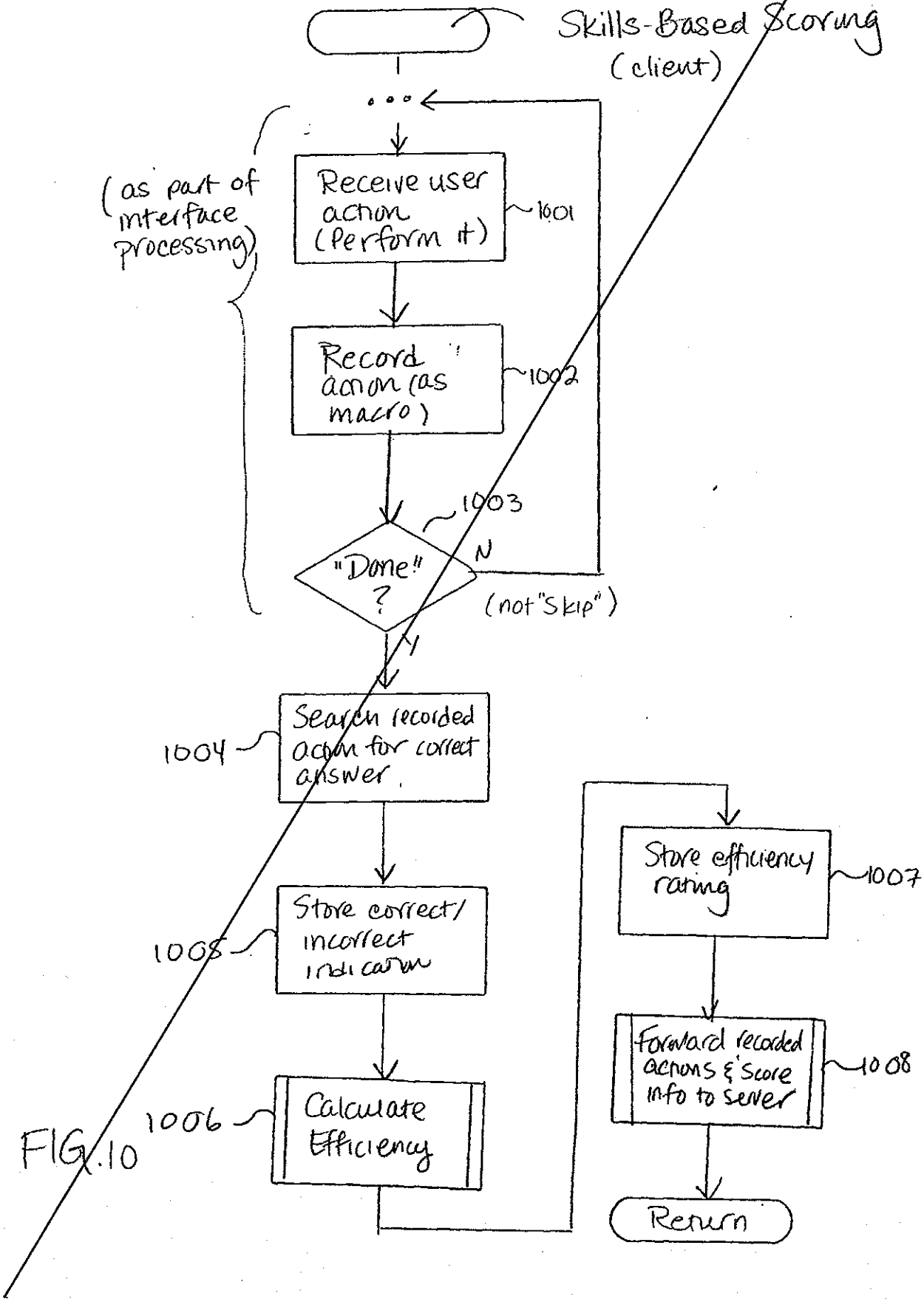
Skills-Based Scoring (client)
(as part of interface processing)
Receive user action (Perform it)
1001
Record action (as macro)
1002
1003
"Done" ?
N
(not "Skip")
Y
1004
Search recorded action for correct answer
1005
Store correct/ incorrect indication
1006
Calculate Efficiency
Store efficiency rating
1007
Forward recorded actions & score info to server
1008
Return

FIG. 10

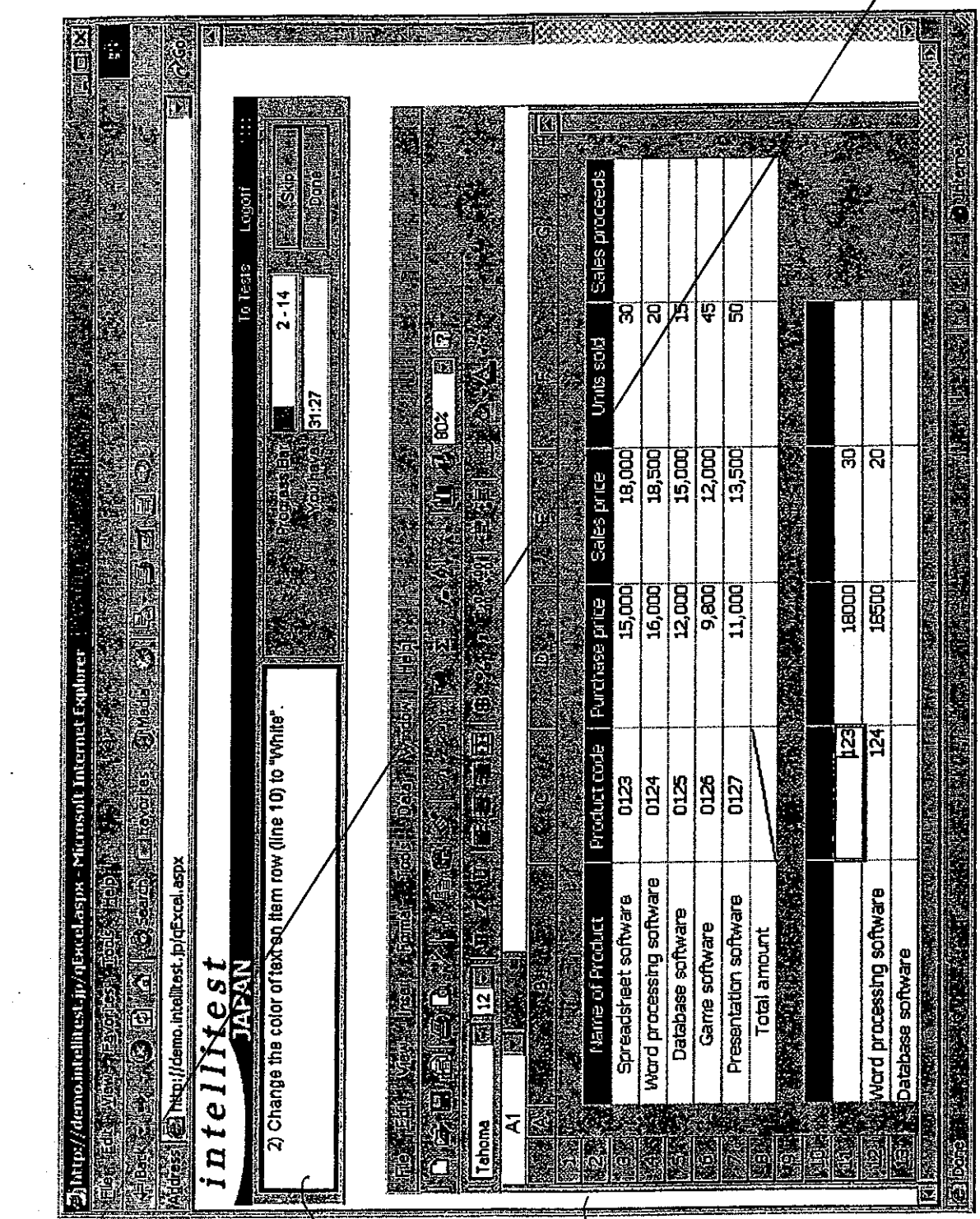
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
http://demo.intellitest.jp/qExcel.aspx
intellitest
JAPAN
To Tests
Logoff
2) Change the color of text on item row (line 10) to "White".
Progress Bar
2 - 14
Your turn
31:27
Skip
Done
Tahoma
A1
Name of Product
Product code
Purchase price
Sales price
Units sold
Sales proceeds
Spreadsheet software
0123
15,000
18,000
30
Word processing software
0124
16,000
18,500
20
Database software
0125
12,000
15,000
15
Game software
0126
9,800
12,000
45
Presentation software
0127
11,000
13,500
50
Total amount
123
18000
30
124
16500
20
Word processing software
Database software
1101
1100

FIG. 11

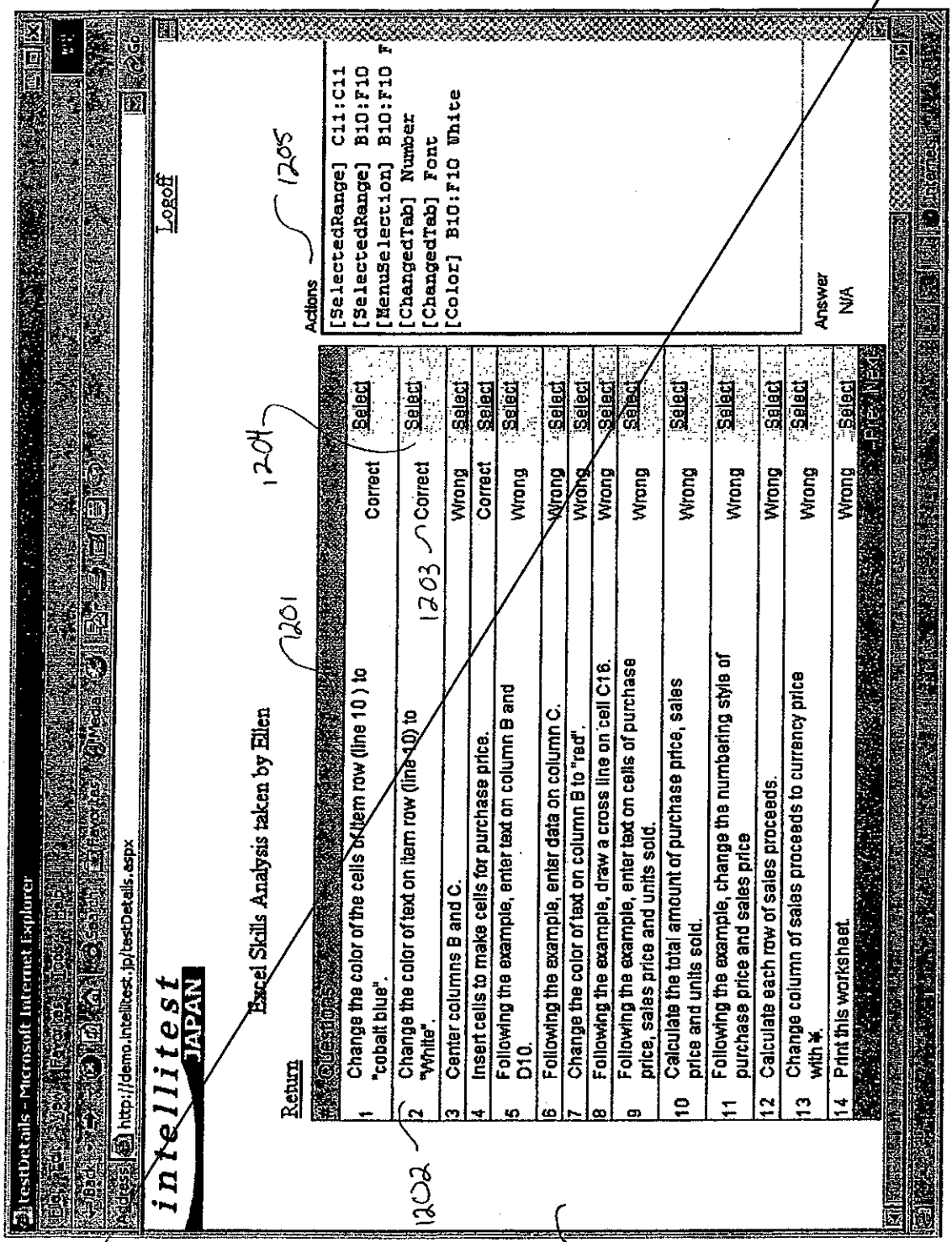
TestDetails - Microsoft Internet Explorer
http://demo.intellitest.jp/testDetails.aspx
intellitest JAPAN
Logoff
Return
Excel Skills Analysis taken by Ellen
1201
1204
1205
1203
1202
1200
Actions
[SelectedRange] C11:C11
[SelectedRange] B10:F10
[MenuSelection] B10:F10 F
[ChangedTab] Number
[ChangedTab] Font
[Color] B10:F10 White
Answer
N/A
Questions
1 Change the color of the cells of item row (line 10) to "cobalt blue". Correct Select
2 Change the color of text on item row (line 10) to "White". Correct Select
3 Center columns B and C. Wrong Select
4 Insert cells to make cells for purchase price. Correct Select
5 Following the example, enter text on column B and D10. Wrong Select
6 Following the example, enter data on column C. Wrong Select
7 Change the color of text on column B to "red". Wrong Select
8 Following the example, draw a cross line on cell C16. Wrong Select
9 Following the example, enter text on cells of purchase price, sales price and units sold. Wrong Select
10 Calculate the total amount of purchase price, sales price and units sold. Wrong Select
11 Following the example, change the numbering style of purchase price and sales price Wrong Select
12 Calculate each row of sales proceeds. Wrong Select
13 Change column of sales proceeds to currency price with ¥. Wrong Select
14 Print this worksheet. Wrong Select
PRE NEXT

FIG. 12

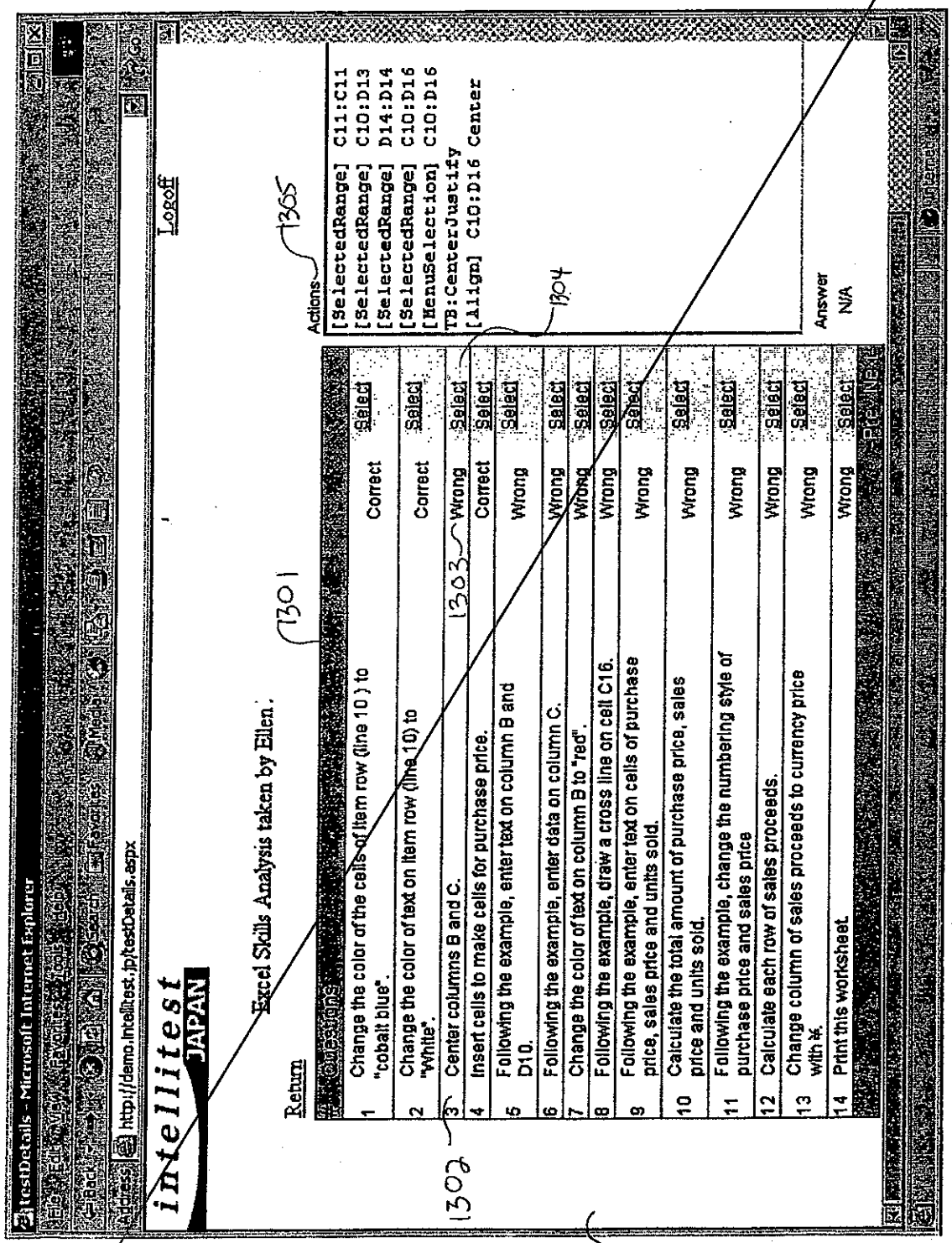
testDetails - Microsoft Internet Explorer
http://demo.intellitest.jp/testDetails.aspx
intellitest JAPAN
Logoff
Excel Skills Analysis taken by Ellen.
Return
Questions
1 Change the color of the cells of item row (line 10) to "cobalt blue". Correct Select
2 Change the color of text on item row (line 10) to "white". Correct Select
3 Center columns B and C. Wrong Select
4 Insert cells to make cells for purchase price. Correct Select
5 Following the example, enter text on column B and D10. Wrong Select
6 Following the example, enter data on column C. Wrong Select
7 Change the color of text on column B to "red". Wrong Select
8 Following the example, draw a cross line on cell C16. Wrong Select
9 Following the example, enter text on cells of purchase price, sales price and units sold. Wrong Select
10 Calculate the total amount of purchase price, sales price and units sold. Wrong Select
11 Following the example, change the numbering style of purchase price and sales price Wrong Select
12 Calculate each row of sales proceeds. Wrong Select
13 Change column of sales proceeds to currency price with ¥. Wrong Select
14 Print this worksheet. Wrong Select
Prev Next
Actions
[SelectedRange] C11:C11
[SelectedRange] C10:D13
[SelectedRange] D14:D14
[SelectedRange] C10:D16
[MenuSelection] C10:D16
TB:CenterJustify
[Align] C10:D16 Center
Answer
N/A
1300
1301
1302
1303
1304
1305

FIG. 13

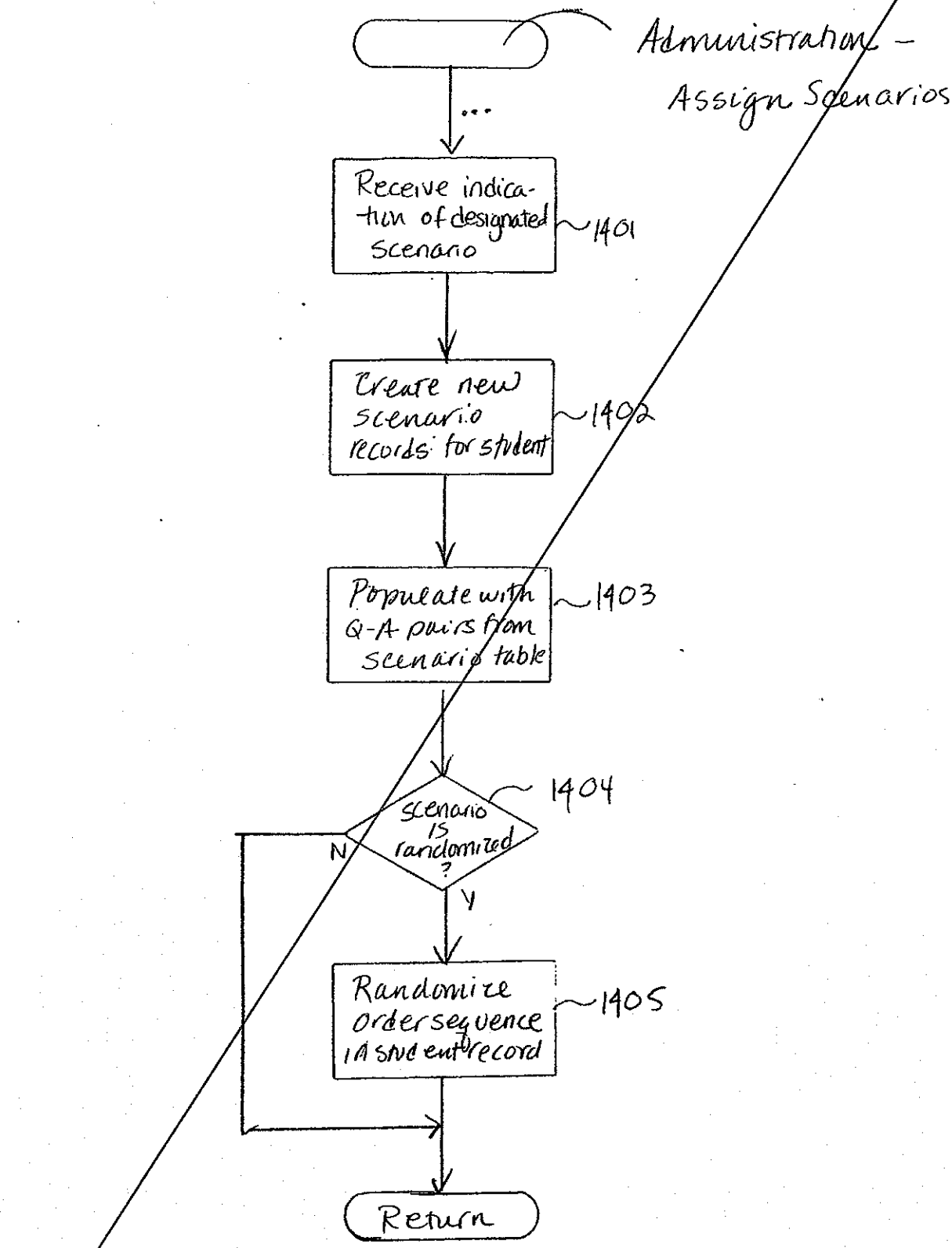
Administration - Assign Scenarios
...
Receive indication of designated scenario
1401
Create new scenario records for student
1402
Populate with Q-A pairs from scenario table
1403
Scenario is randomized ?
1404
N
Y
Randomize order sequence in student record
1405
Return

FIG 14

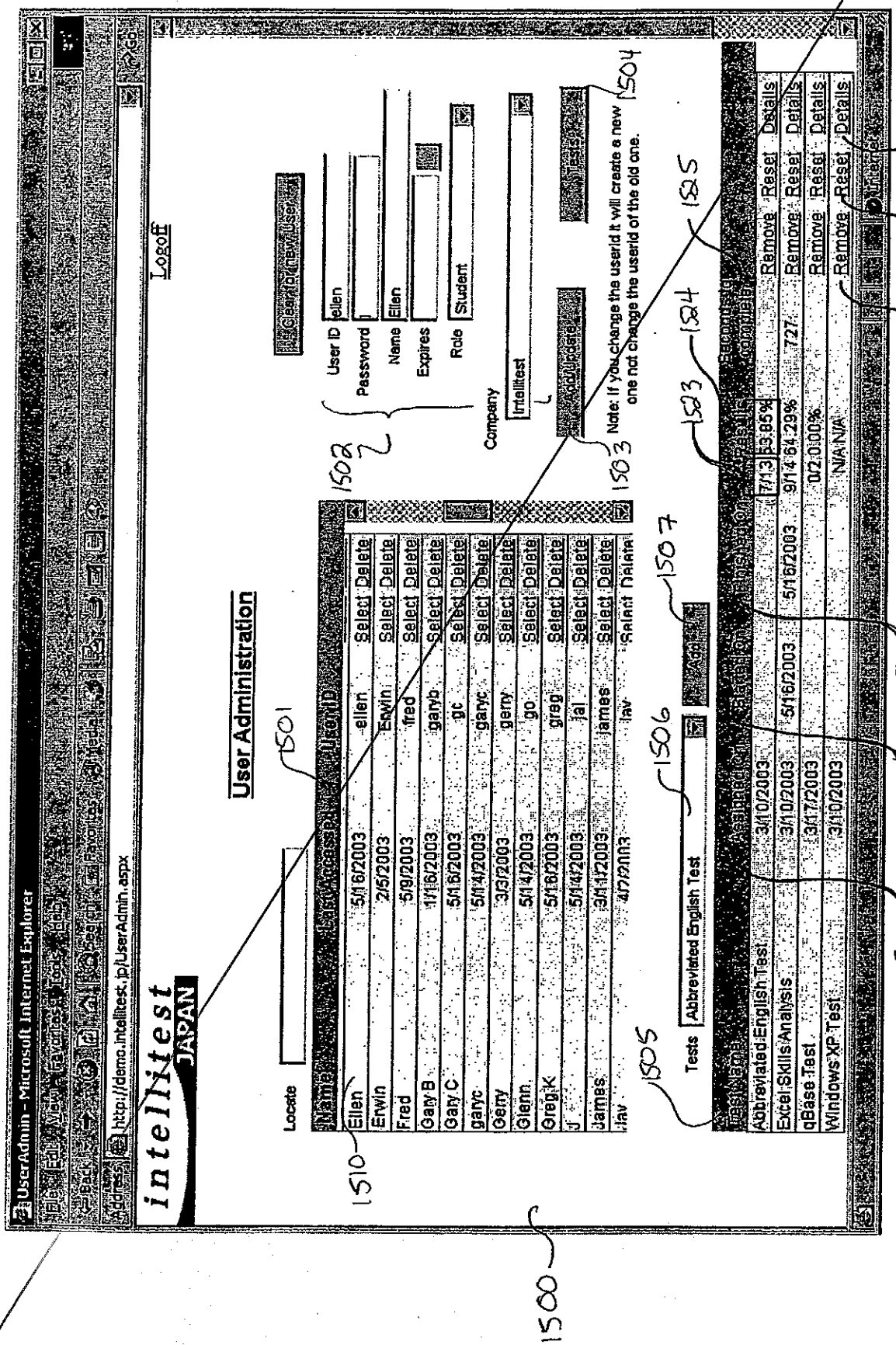
UserAdmin - Microsoft Internet Explorer
http://demo.intellitest.jp/UserAdmin.aspx
intellitest
JAPAN
Logoff
User Administration
Locate
Name
Last Accessed
User ID
Ellen 5/16/2003 ellen Select Delete
Erwin 2/5/2003 Erwin Select Delete
Fred 5/9/2003 fred Select Delete
Gary B 1/16/2003 garyb Select Delete
Gary C 5/16/2003 gc Select Delete
garyc 5/14/2003 garyc Select Delete
Gerry 3/3/2003 gerry Select Delete
Glenn 5/14/2003 go Select Delete
Greg K 5/16/2003 greg Select Delete
J 5/14/2003 jal Select Delete
James 3/11/2003 james Select Delete
Jav 4/2/2003 jav Select Delete
Clear for new User
User ID ellen
Password
Name Ellen
Expires
Role Student
Company
Intellitest
Add/Update
Tests
Note: If you change the userid it will create a new one not change the userid of the old one.
Tests
Abbreviated English Test
Add
Test Name
Assigned
Started
Finished
Result
Recommended
Abbreviated English Test 3/10/2003 7/13 53.85% Remove Reset Details
Excel Skills Analysis 3/10/2003 5/16/2003 9/14 64.29% 727 Remove Reset Details
qBase Test 3/17/2003 0/2 0.00% Remove Reset Details
Windows XP Test 3/10/2003 N/A N/A Remove Reset Details
1500
1501
1502
1503
1504
1505
1506
1507
1510
1520
1521
1522
1523
1524
1525
1526
1527
1528

FIG 15

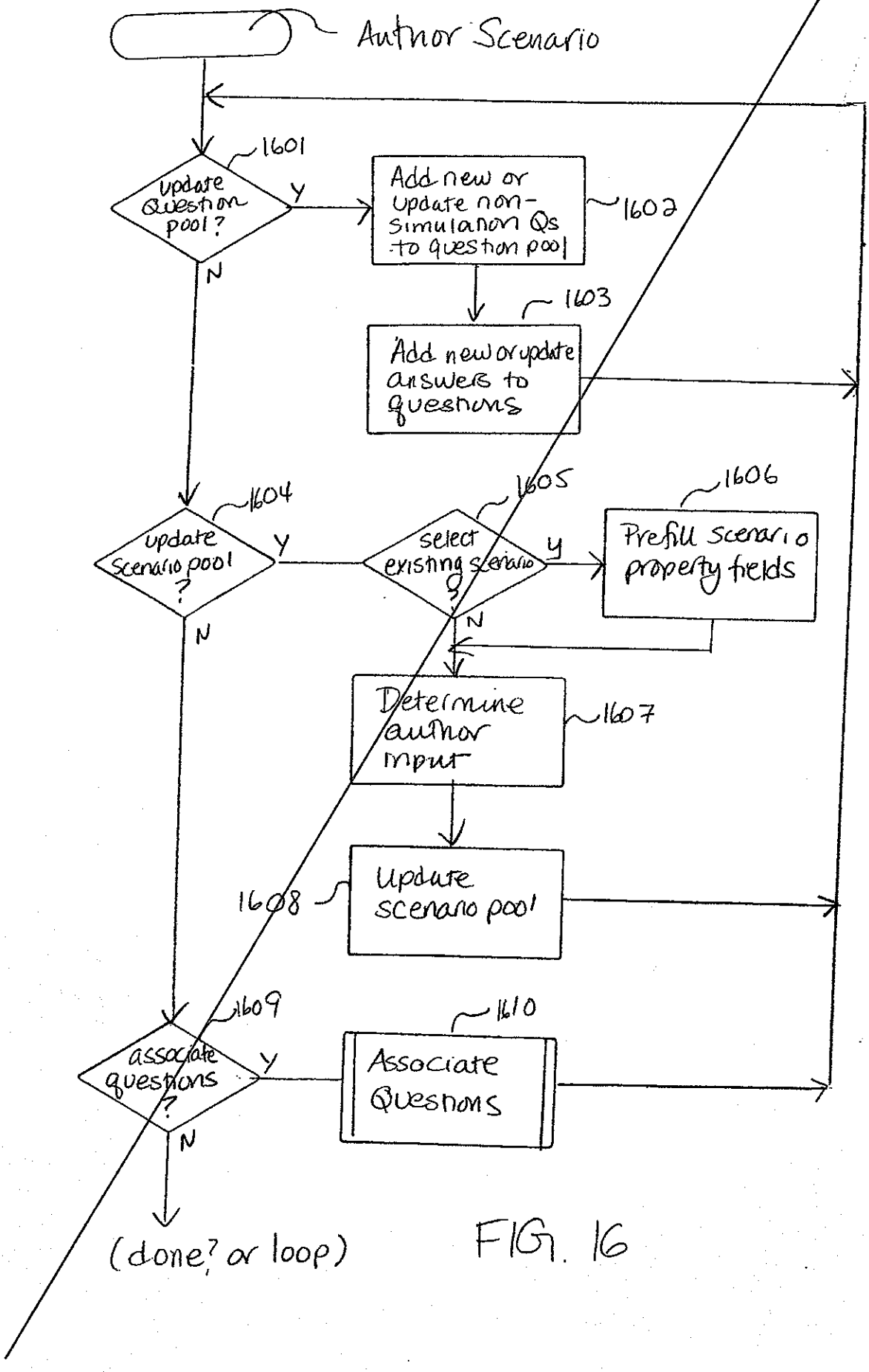
Author Scenario
1601
Update Question pool?
Y
N
Add new or update non-simulation Qs to question pool
1602
1603
Add new or update answers to questions
1604
Update Scenario pool?
Y
N
1605
select existing scenario?
Y
N
1606
Prefill scenario property fields
Determine author input
1607
1608
Update scenario pool
1609
associate questions?
Y
N
1610
Associate Questions
(done? or loop)

FIG. 16

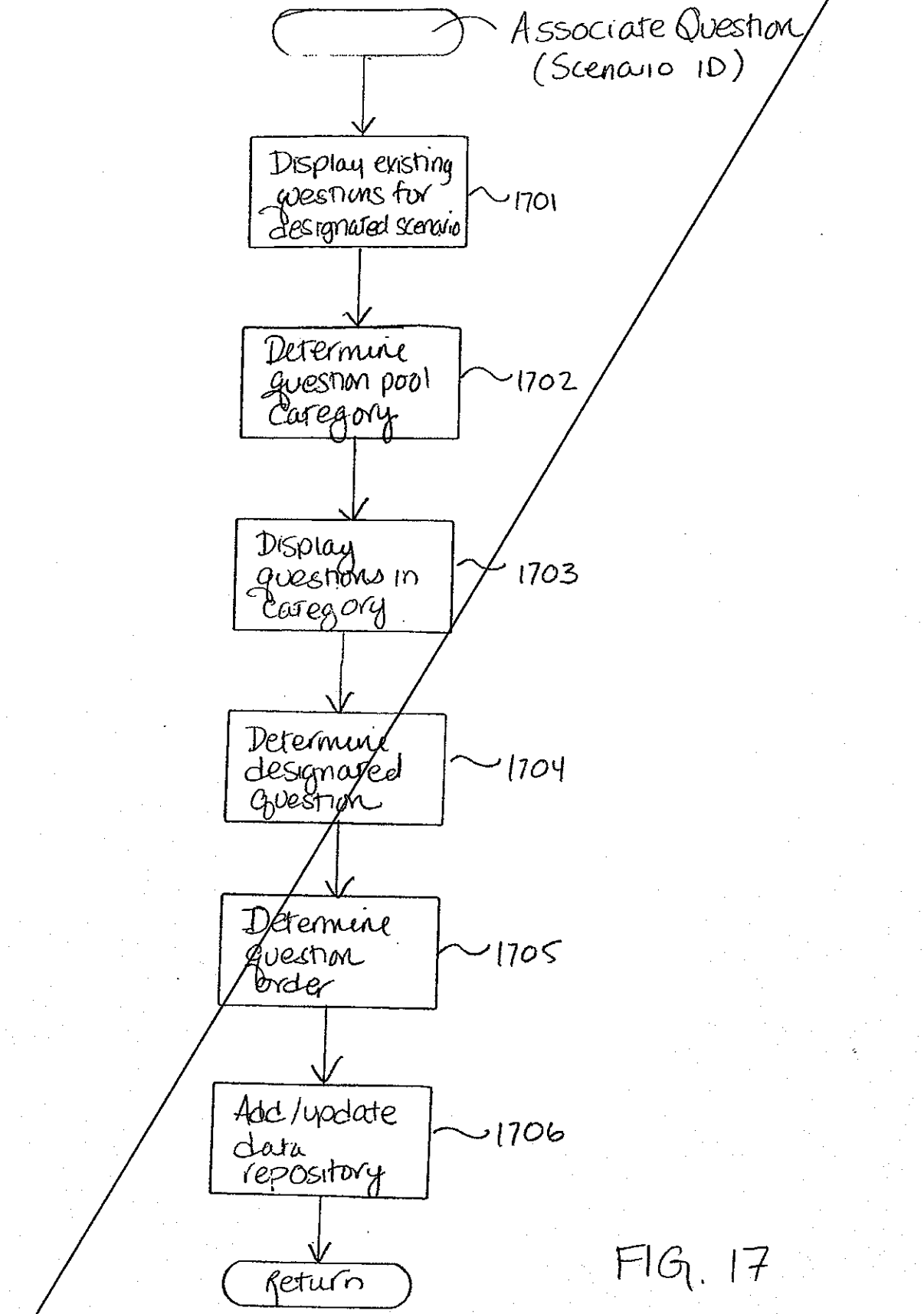
Associate Question (Scenario ID)
Display existing questions for designated scenario
1701
Determine question pool Category
1702
Display questions in Category
1703
Determine designated Question
1704
Determine Question order
1705
Add/update data repository
1706
Return

FIG. 17

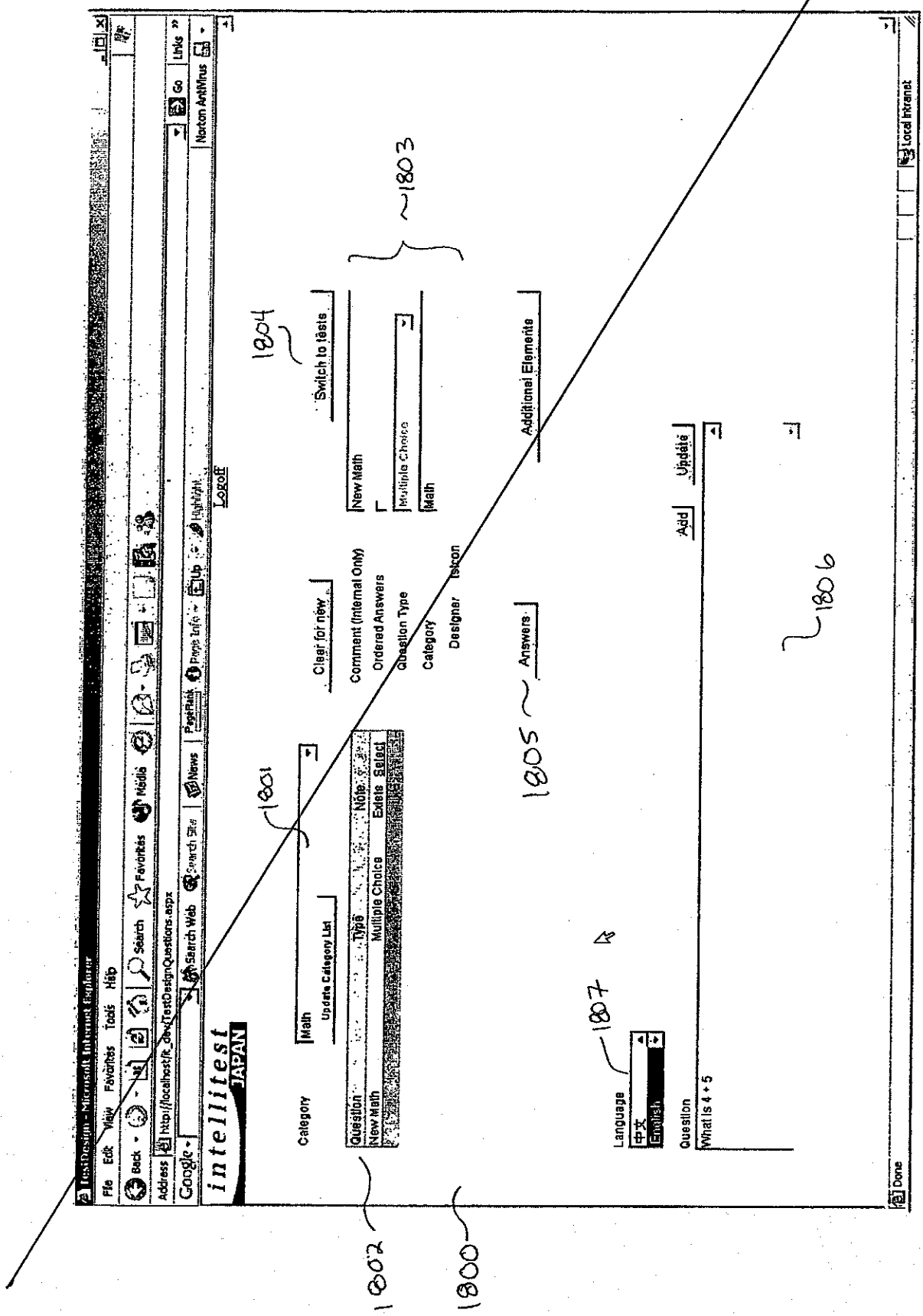
TestDesigner - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://localhost/tt_dev/TestDesignQuestions.aspx
intellitest JAPAN
Logoff
Category
Math
Update Category List
Clear for new
Switch to tests
Comment (Internal Only)
New Math
Ordered Answers
Question Type
Multiple Choice
Category
Math
Designer Icon
Additional Elements
Question Type Note
New Math Multiple Choice Delete Select
Answers
Add
Update
Language
中文
English
Question
What is 4 + 5
Done
Local Intranet
1801
1802
1803
1804
1805
1806
1807
1800

FIG. 18

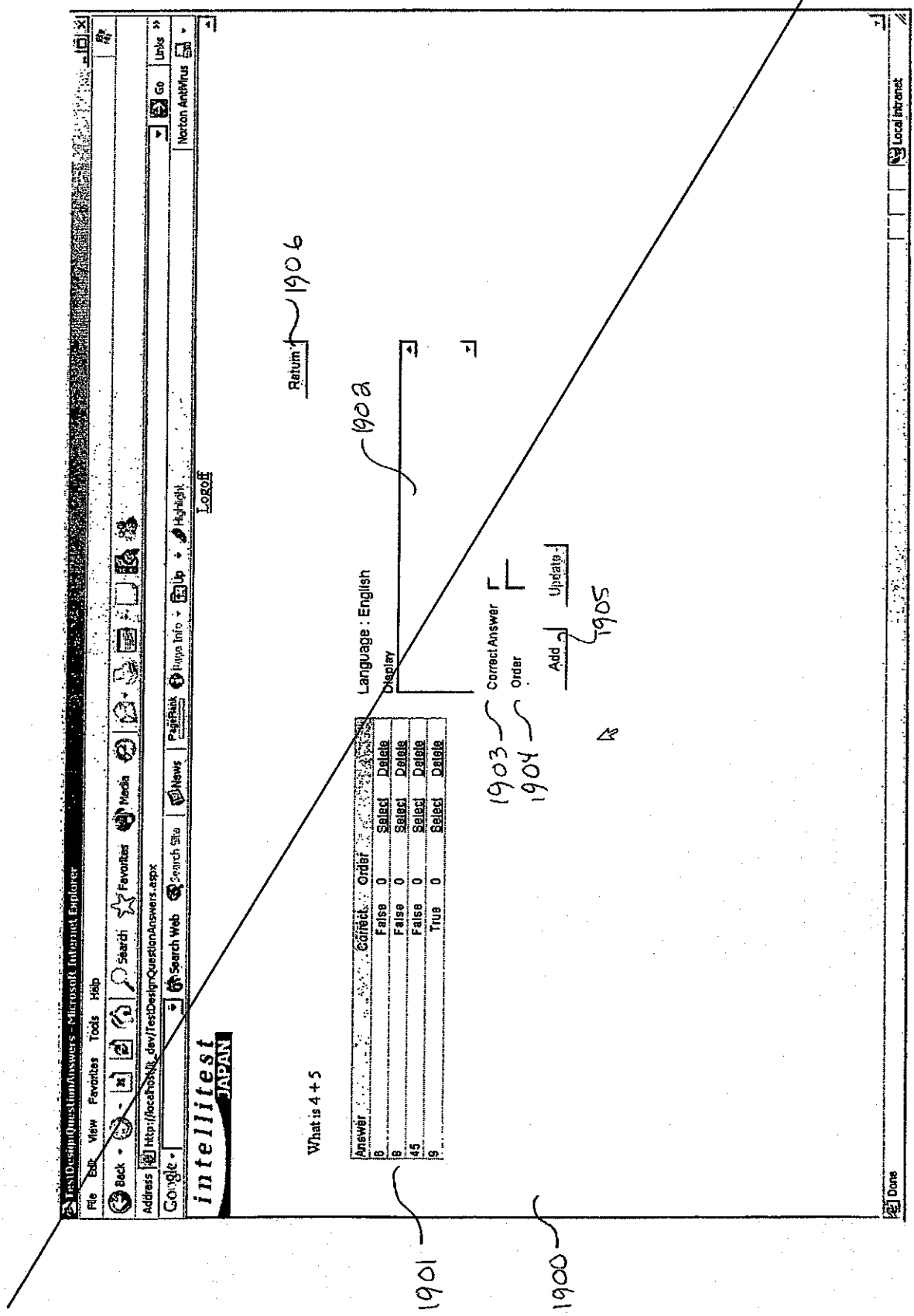
Return
1906
Logoff
Language : English
1902
Display
Answer
Correct
Order
Select
Delete
What is 4 + 5
Correct Answer
Order
1903
1904
Add
Update
1905
1901
1900

FIG. 19

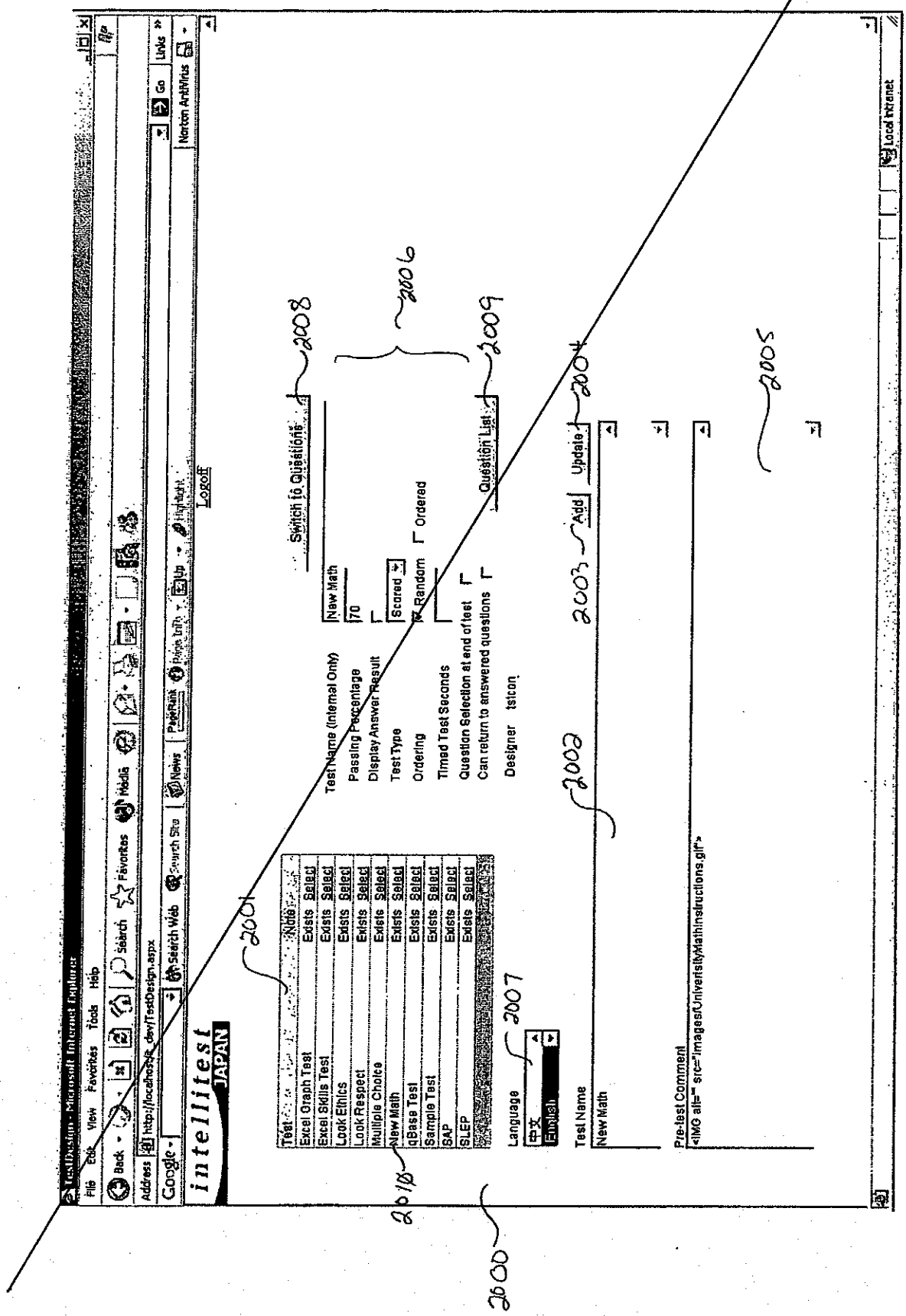
TestDesign - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://localhost/e_dev/TestDesign.aspx
Logoff
intellitest JAPAN
Excel Graph Test Exists Select
Excel Skills Test Exists Select
Look Ethics Exists Select
Look Respect Exists Select
Multiple Choice Exists Select
New Math Exists Select
qBase Test Exists Select
Sample Test Exists Select
SAP Exists Select
SLEP Exists Select
Language
Test Name
New Math
Switch to Questions
Test Name (Internal Only)
Passing Percentage
Display Answer Result
Test Type
Ordering
Timed Test Seconds
Question Selection at end of test
Can return to answered questions
Designer tsticon
New Math
70
Scored
Random
Ordered
Question List
Add
Update
Pre-test Comment
<IMG alt="" src="images/UniversityMathInstructions.gif">
Local intranet
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2000

FIG. 20

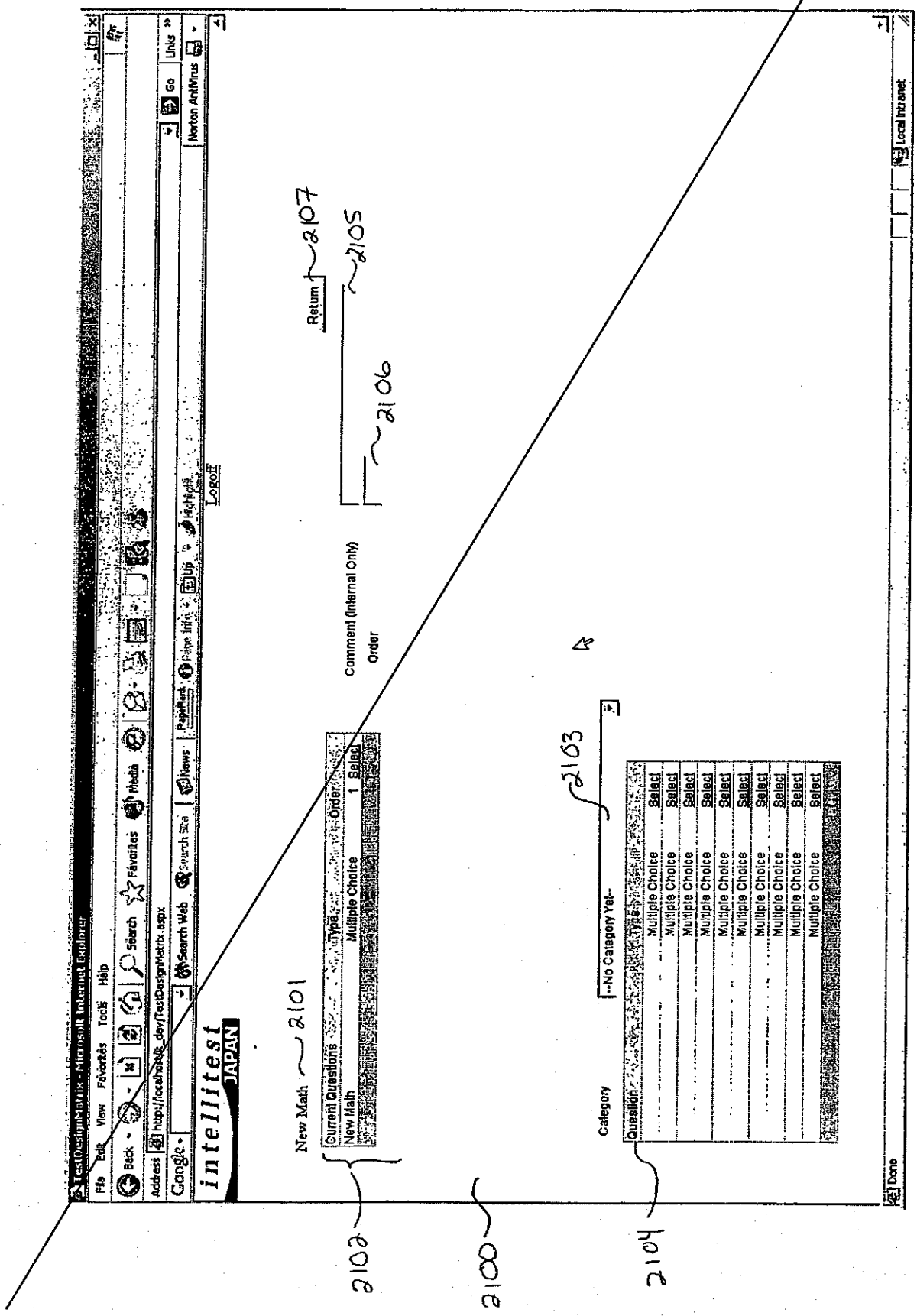
TestDesignMatrix - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://localhost/tt_dev/TestDesignMatrix.aspx
intellitest JAPAN
Logoff
New Math
Current Questions
New Math
Multiple Choice
1
Select
Comment (Internal Only)
Order
Return
Category
--No Category Yet--
Multiple Choice
Select
Done
Local Intranet
2101
2102
2100
2103
2104
2105
2106
2107

FIG. 21

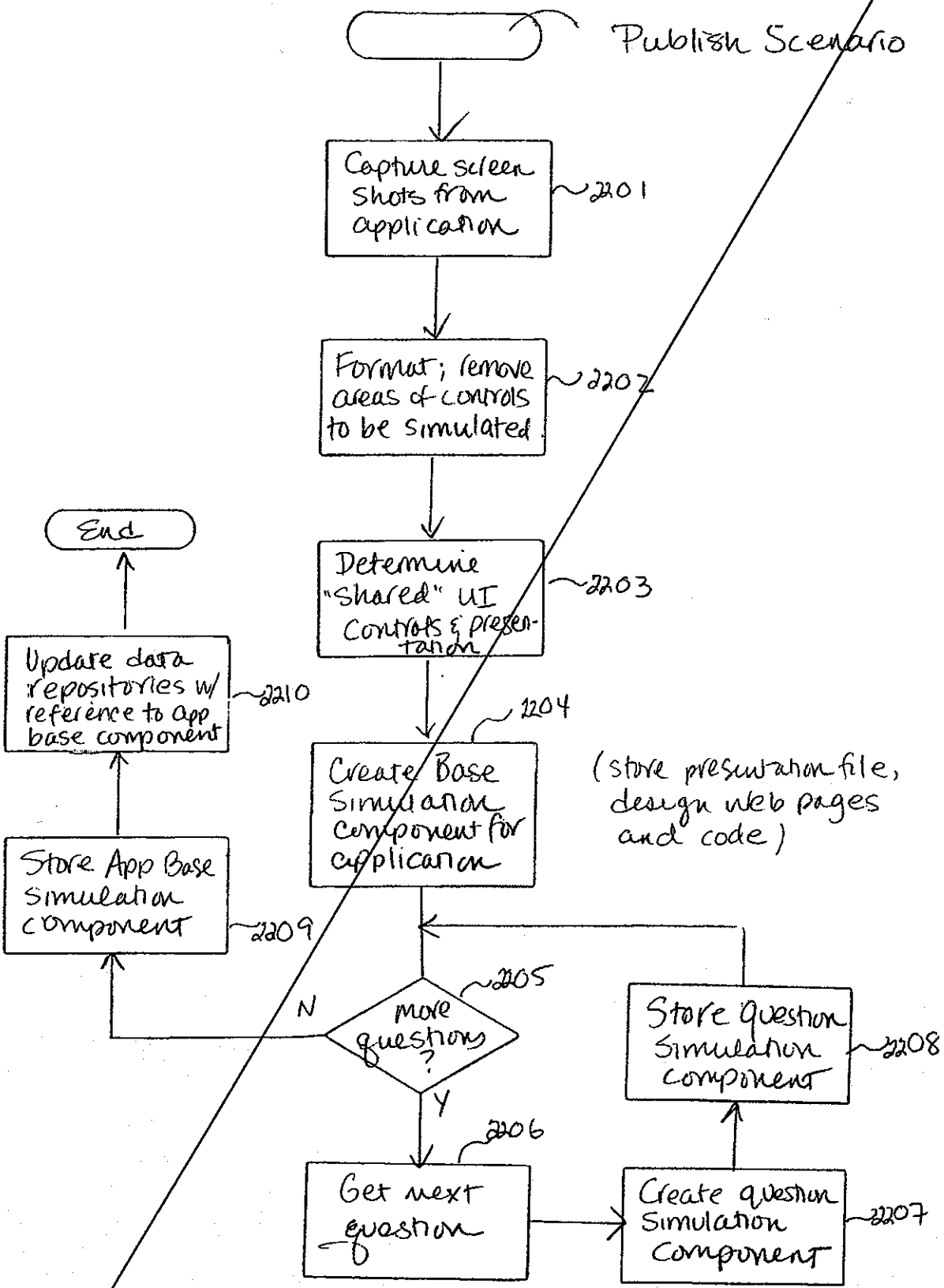
Publish Scenario
Capture screen shots from application
2201
Format; remove areas of controls to be simulated
2202
Determine "shared" UI Controls & presentation
2203
Create Base Simulation component for application
2204
(store presentation file, design web pages and code)
Store App Base Simulation component
2209
Update data repositories w/ reference to app base component
2210
End
more questions ?
2205
N
Y
Get next question
2206
Create question Simulation Component
2207
Store Question Simulation component
2208

FIG. 22

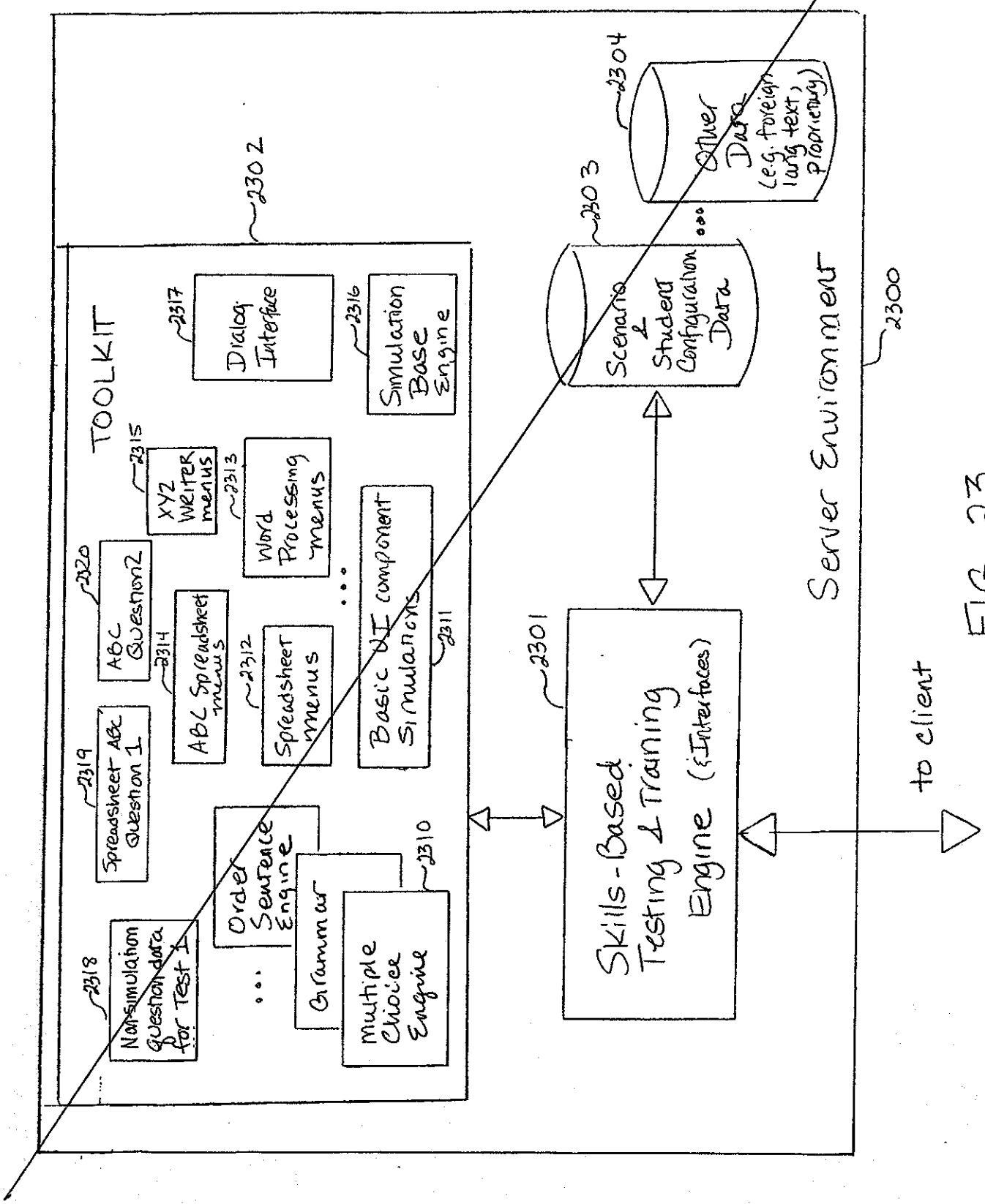
Server Environment
2300
2302
TOOLKIT
2303
Scenario & Student Configuration Data
2304
Other Data (e.g. foreign lang. text, proprietary)
2301
Skills-Based Testing & Training Engine (& Interfaces)
to client
2316
Simulation Base Engine
2317
Dialog Interface
2318
Non-simulation Question data for Test 1
2319
Spreadsheet ABC Question 1
2320
ABC Question 2
2310
Multiple Choice Engine
Grammar
Order Sentence Engine
2311
Basic UI component Simulations
2312
Spreadsheet Menus
2313
Word Processing Menus
2314
ABC Spreadsheet Menus
2315
XYZ Writer Menus

FIG. 23

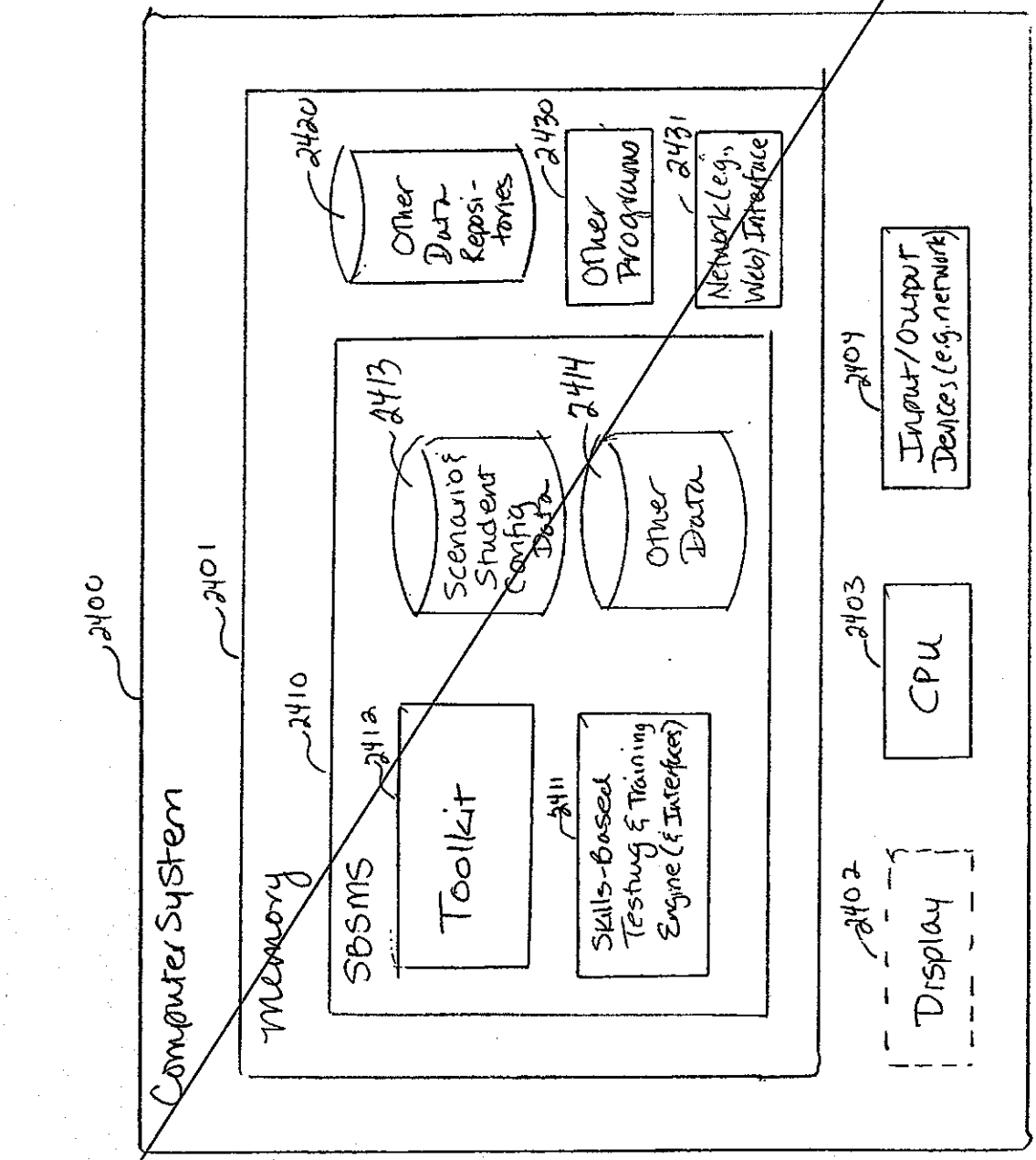
2400
Computer System
2401
Memory
2410
SBSMS
2412
Toolkit
2411
Skills-Based Testing & Training Engine (& Interfaces)
2413
Scenario & Student Config Data
2414
Other Data
2420
Other Data Reposi-tories
2430
Other Programs
2431
Network (e.g., Web) Interface
2404
Input/Output Devices (e.g. network)
2403
CPU
2402
Display

FIG. 24

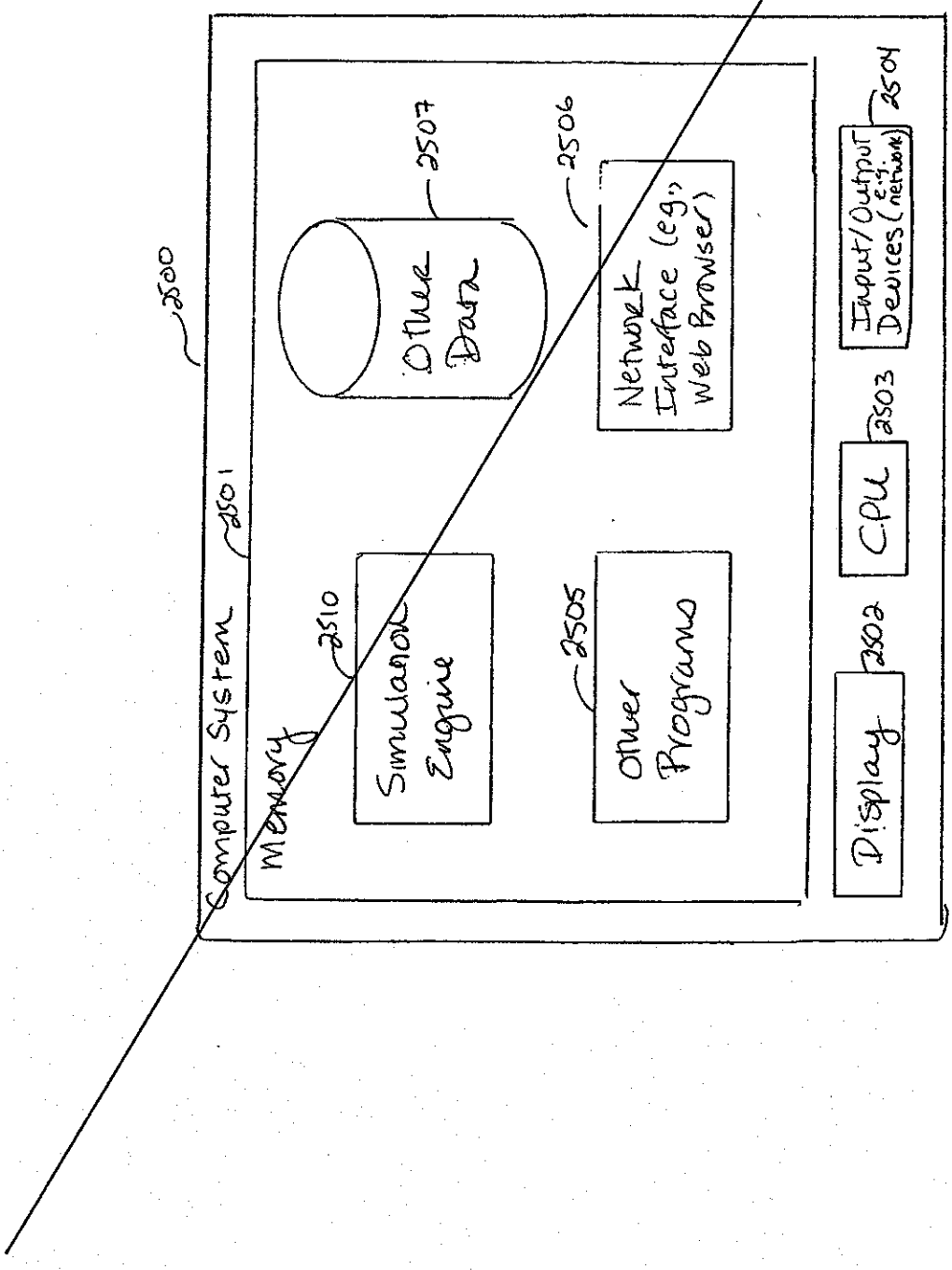
2500
Computer System
2501
Memory
2510
Simulation Engine
2505
Other Programs
2507
Other Data
2506
Network Interface (e.g., Web Browser)
Display
2502
CPU
2503
Input/Output Devices (e.g., network)
2504

FIG. 25

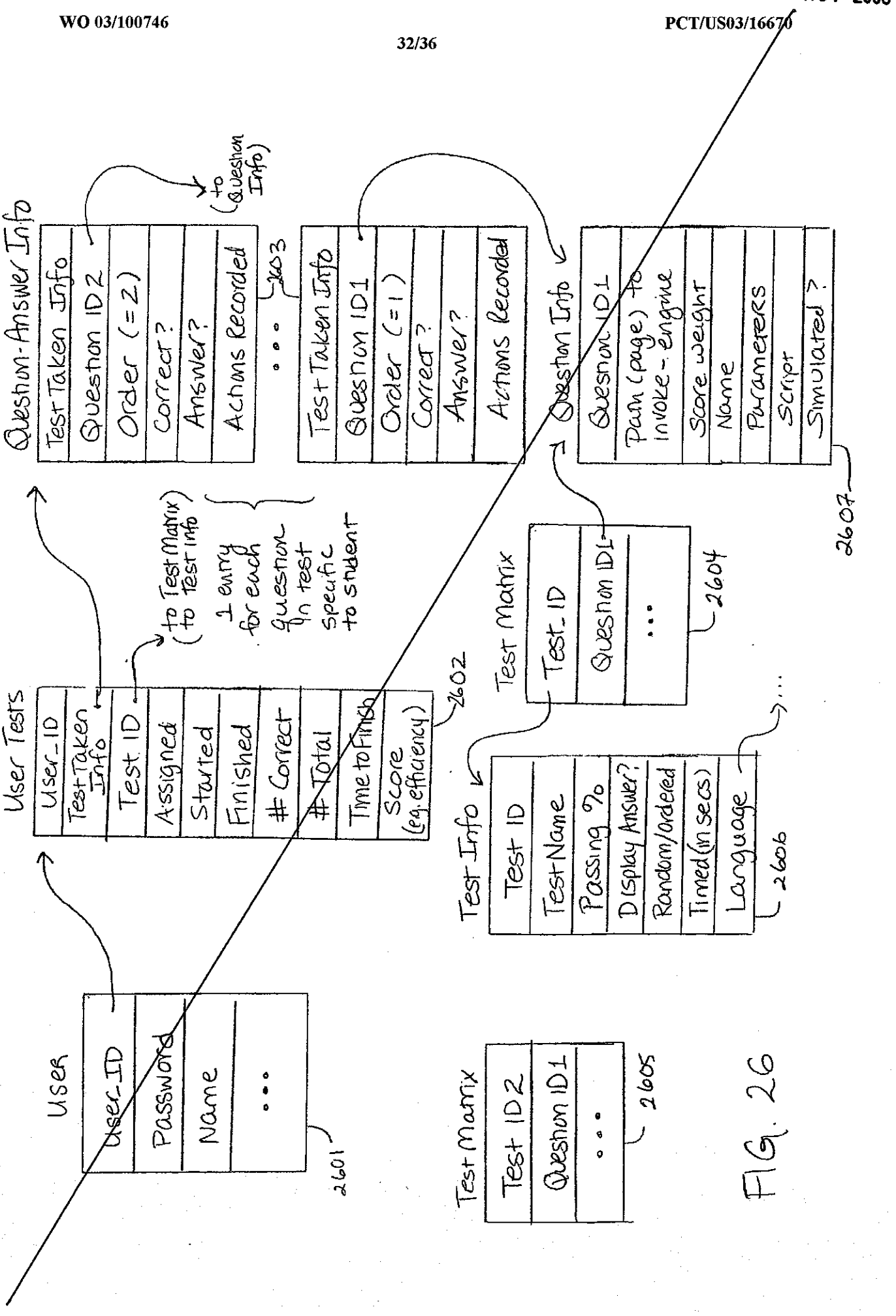
User
User_ID
Password
Name
...
2601
User Tests
User_ID
Test Taken Info
Test ID
Assigned
Started
Finished
Correct
Total
Time to Finish
Score (eg. efficiency)
2602
(to Test Matrix)
(to Test Info)
1 entry for each Question in test specific to student
Question-Answer Info
Test Taken Info
Question ID 2
Order (=2)
Correct?
Answer?
Actions Recorded
(to Question Info)
...
2603
Test Taken Info
Question ID 1
Order (=1)
Correct?
Answer?
Actions Recorded
Question Info
Question ID1
Path (page) to invoke-engine
Score weight
Name
Parameters
Script
Simulated?
2607
Test Matrix
Test_ID
Question ID1
...
2604
Test Info
Test ID
Test Name
Passing %
Display Answer?
Random/Ordered
Timed (in secs)
Language
...
2606
Test Matrix
Test ID 2
Question ID1
...
2605

FIG. 26

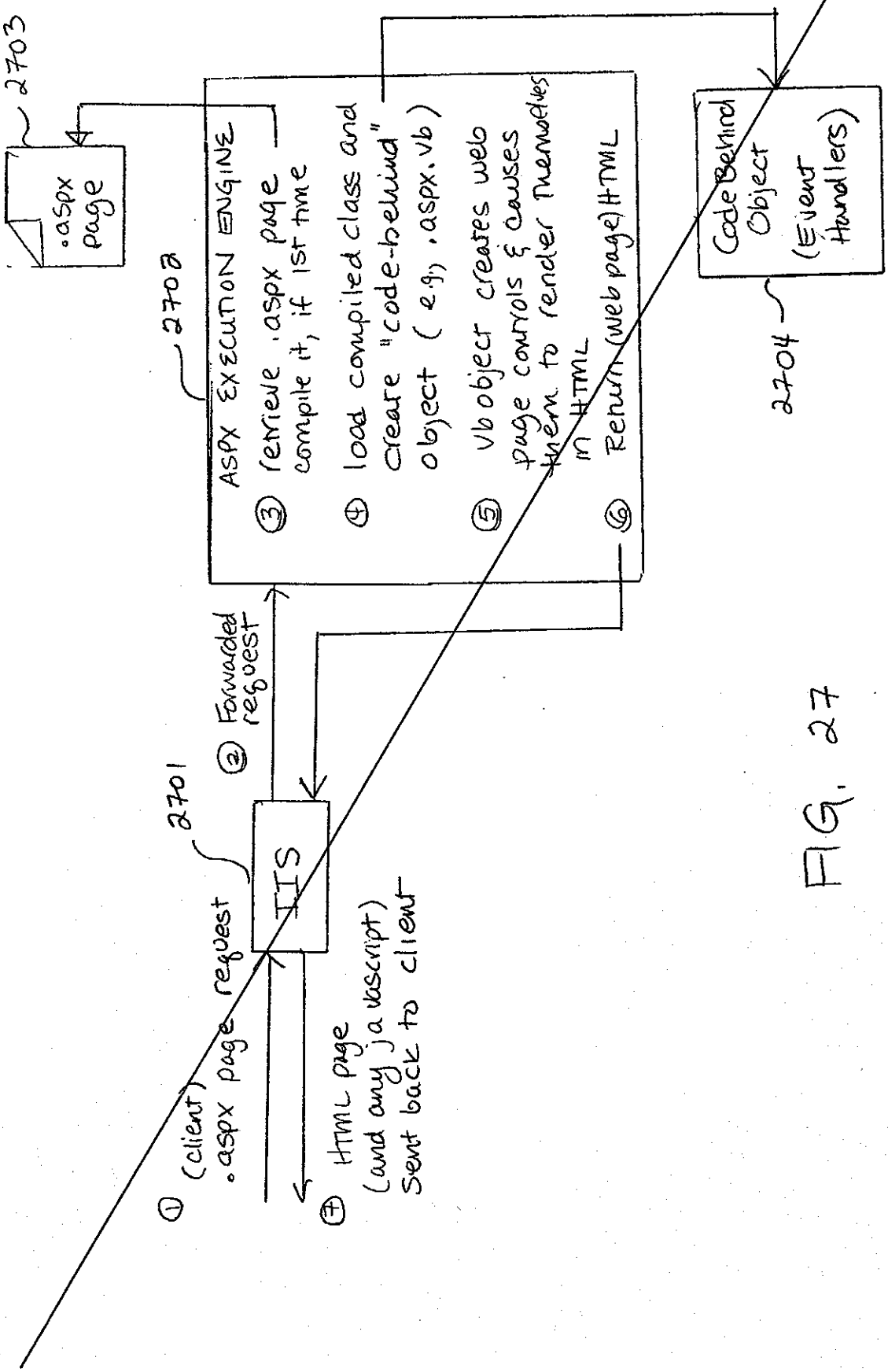
2703
.aspx page
2708
ASPX EXECUTION ENGINE
③ retrieve .aspx page compile it, if 1st time
④ load compiled class and create "code-behind" object (e.g. .aspx.vb)
⑤ VB object creates web page controls & causes them to render themselves in HTML
⑥ Return (web page) HTML
Code Behind Object (Event Handlers)
2704
② Forwarded request
2701
IIS
① (client) .aspx page request
⑦ HTML page (and any javascript) Sent back to client

FIG. 27

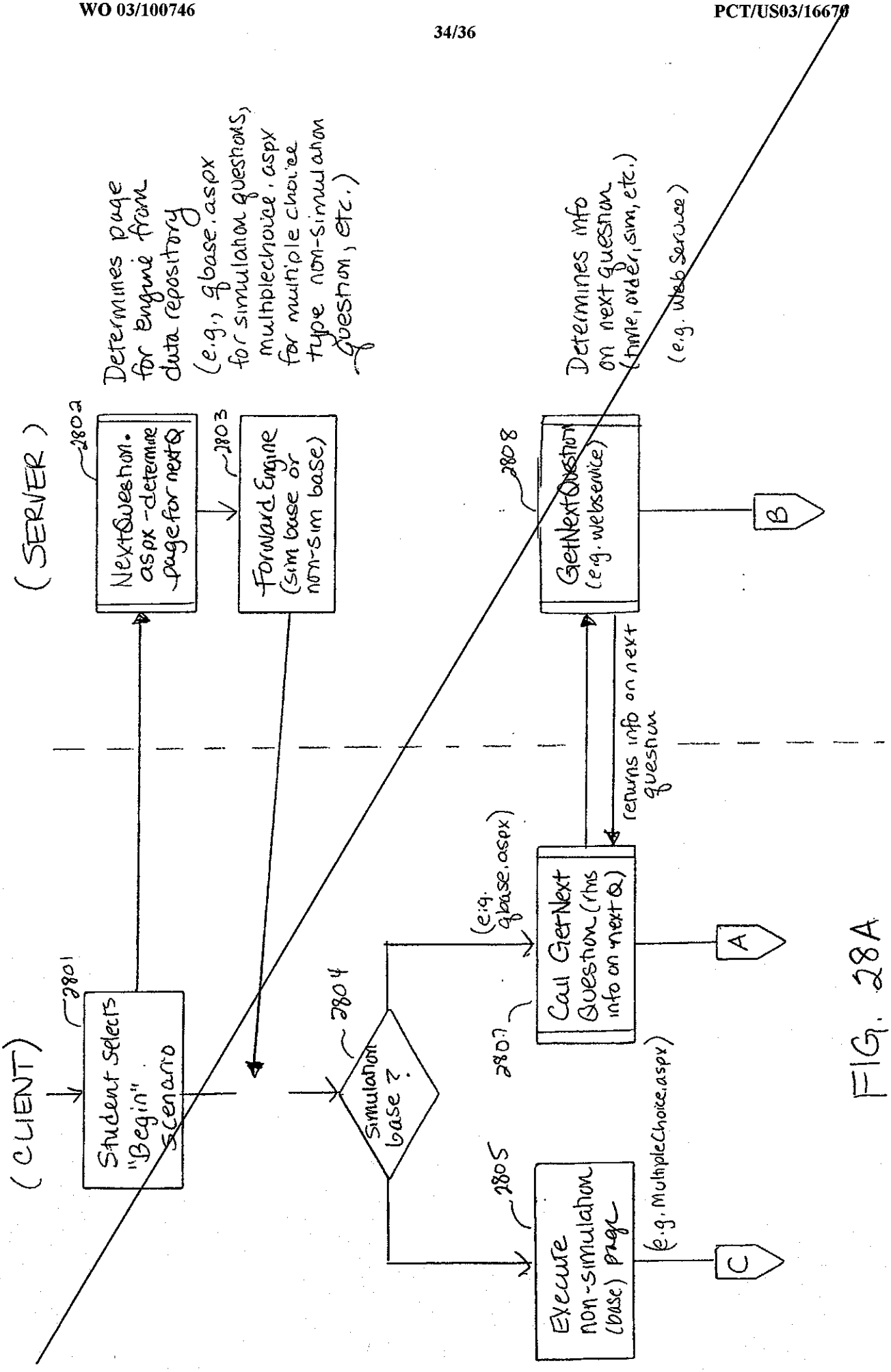
(SERVER)
(CLIENT)
Determines page for engine from data repository (e.g., qbase.aspx for simulation questions, multiplechoice.aspx for multiple choice type non-simulation question, etc.)
Determines info on next question (time, order, sim, etc.)
(e.g. Web Service)
2802
NextQuestion.aspx - determine page for nextQ
2803
Forward Engine (sim base or non-sim base)
2808
GetNextQuestion (e.g. webservice)
B
2801
Student selects "Begin" scenario
2804
Simulation base ?
(e.g. qbase.aspx)
2807
Call GetNext Question (rtns info on next Q)
returns info on next question
A
2805
Execute non-simulation (base) page
(e.g. MultipleChoice.aspx)
C

FIG. 28A

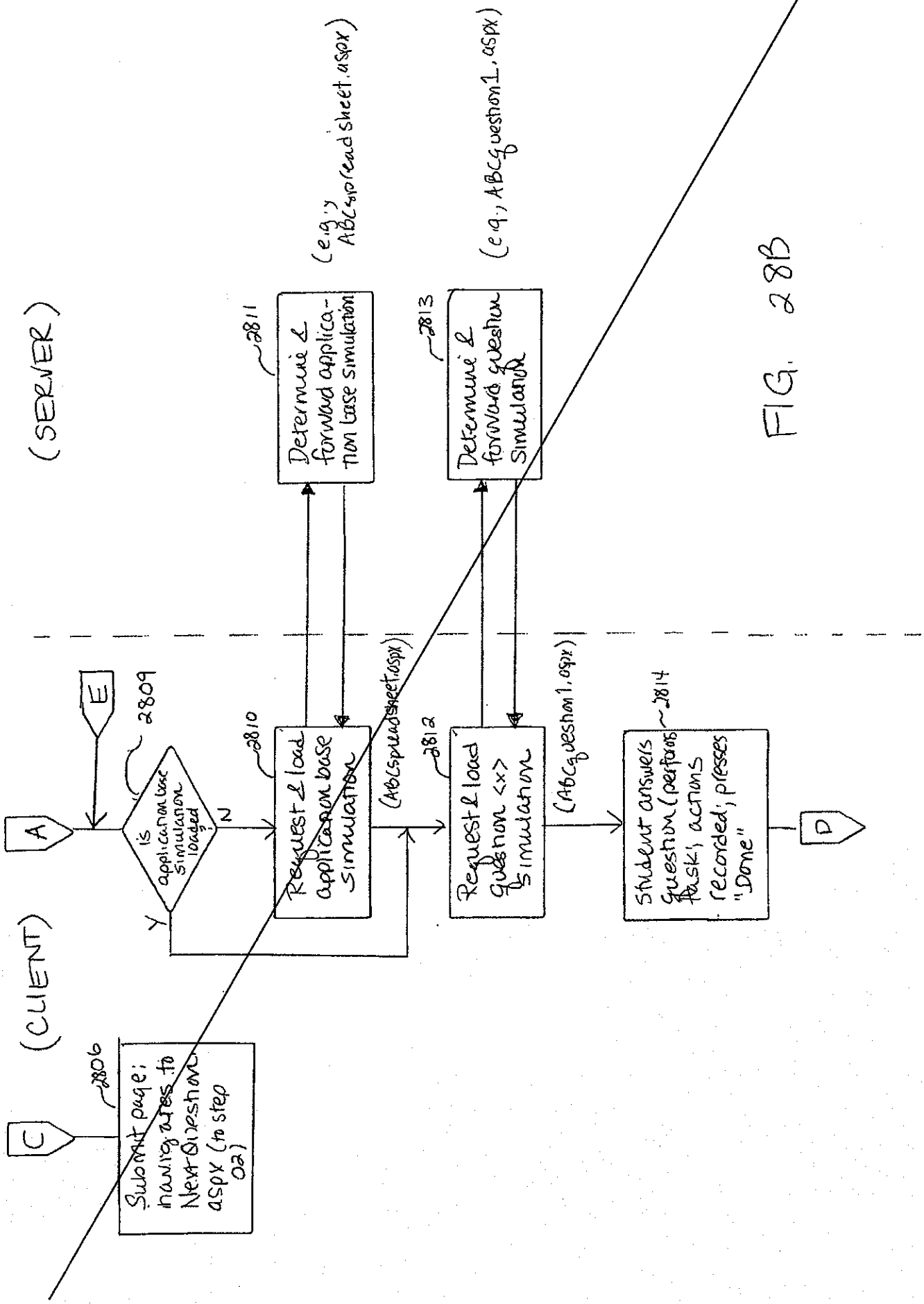
(SERVER)
(CLIENT)
A
E
2809
Is application base simulation loaded?
Y
N
2810
Request & load application base simulation
(ABCspreadsheet.aspx)
2811
Determine & forward application base simulation
(e.g., ABCspreadsheet.aspx)
2812
Request & load question <x> simulation
(ABCquestion1.aspx)
2813
Determine & forward question simulation
(e.g., ABCquestion1.aspx)
2814
Student answers question (performs task; actions recorded; presses "Done"
D
C
2806
Submit page; navigates to NextQuestion.aspx (to step 02)

FIG. 28B

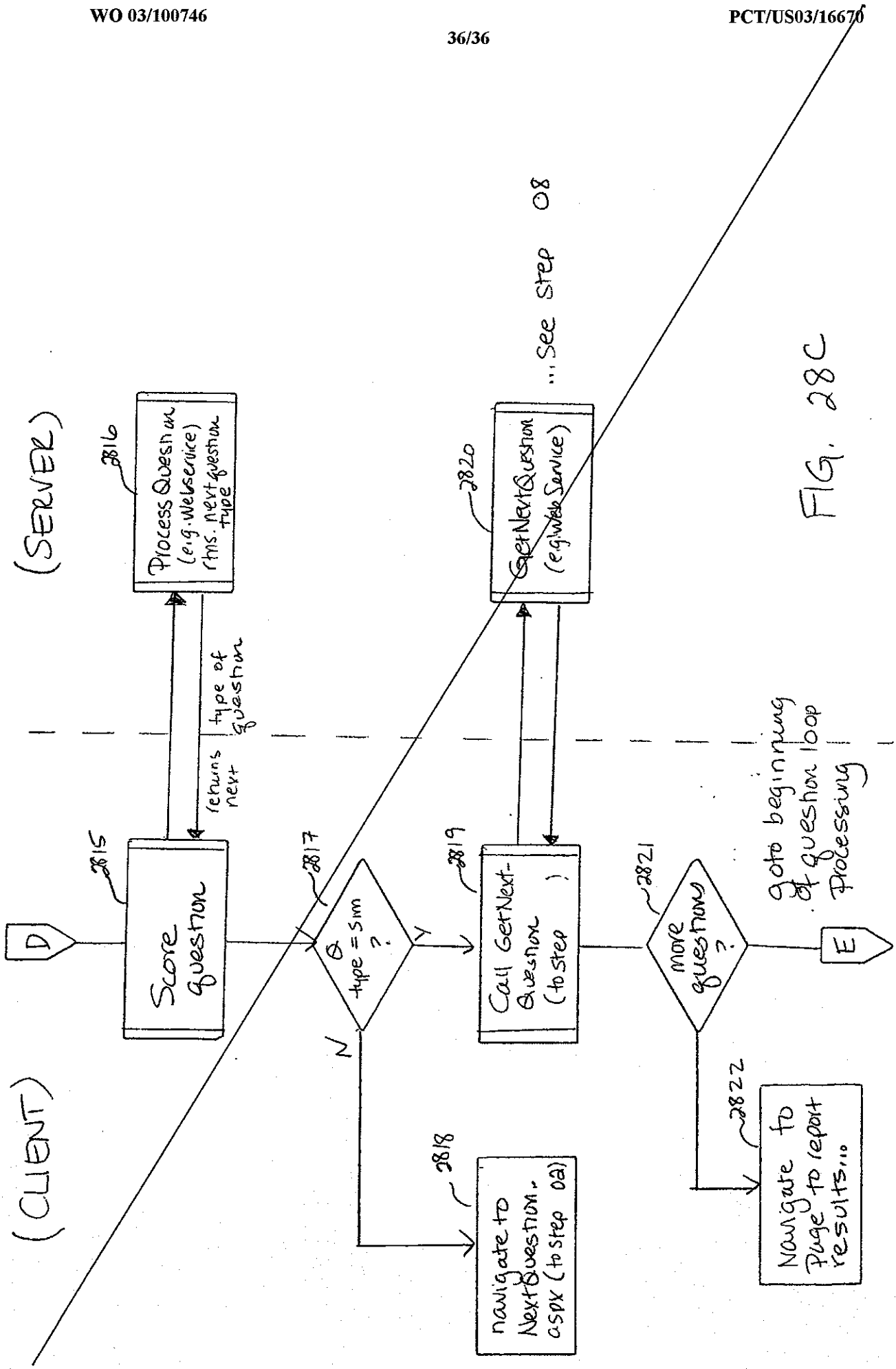
(SERVER)
(CLIENT)
2816
Process Question (e.g. Webservice) rtns. next question type
2820
GetNextQuestion (e.g. Web Service)
... See Step 08
type of question
returns next
2815
Score Question
2817
type = sim ?
Y
N
2819
Call GetNext-Question ( ) to step
2821
more questions ?
goto beginning of question loop Processing
D
E
2818
navigate to NextQuestion.aspx (to step 02)
2822
Navigate to Page to report results.

FIG. 28C

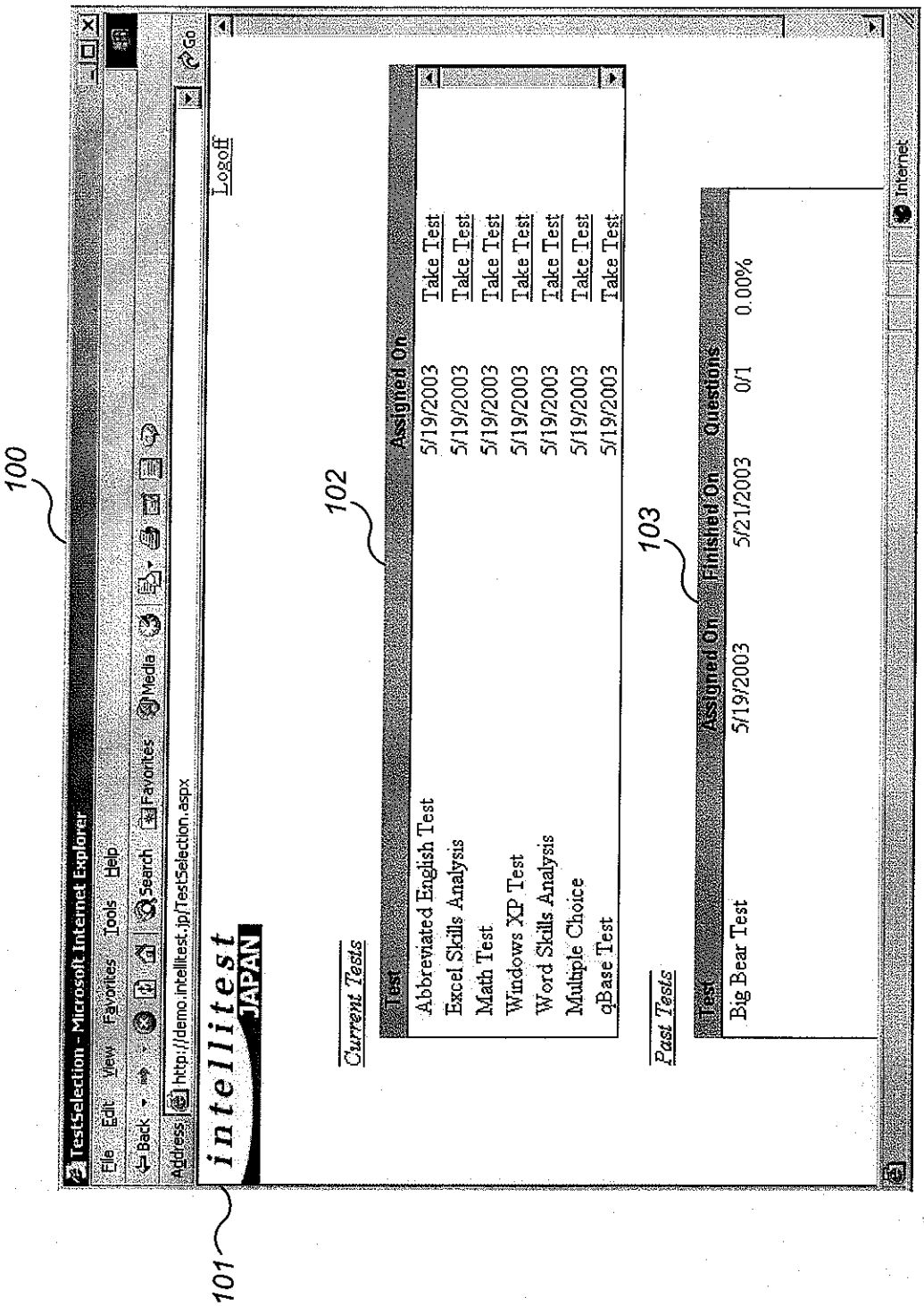
100
101
102
103
TestSelection - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intellitest.jp/TestSelection.aspx
Go
intellitest JAPAN
Logoff
Current Tests
Test
Assigned On
Abbreviated English Test 5/19/2003 Take Test
Excel Skills Analysis 5/19/2003 Take Test
Math Test 5/19/2003 Take Test
Windows XP Test 5/19/2003 Take Test
Word Skills Analysis 5/19/2003 Take Test
Multiple Choice 5/19/2003 Take Test
qBase Test 5/19/2003 Take Test
Past Tests
Test
Assigned On
Finished On
Questions
Big Bear Test 5/19/2003 5/21/2003 0/1 0.00%
Internet

Fig. 1

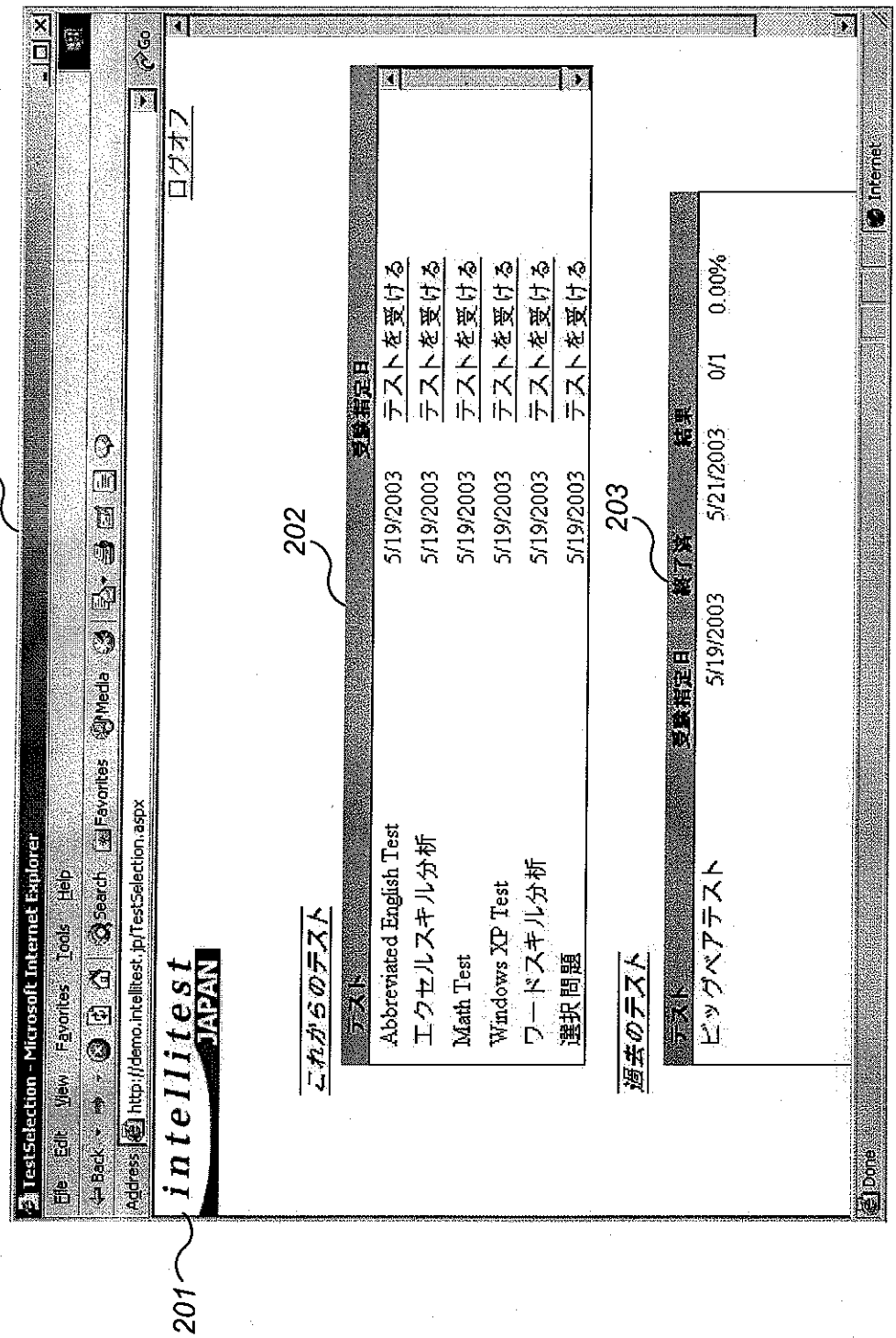
200
201
202
203
TestSelection - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intellitest.jp/TestSelection.aspx
Go
intellitest JAPAN
ログオフ
これからのテスト
テスト
受験指定日
Abbreviated English Test 5/19/2003 テストを受ける
エクセルスキル分析 5/19/2003 テストを受ける
Math Test 5/19/2003 テストを受ける
Windows XP Test 5/19/2003 テストを受ける
ワードスキル分析 5/19/2003 テストを受ける
選択問題 5/19/2003 テストを受ける
過去のテスト
テスト 受験指定日 終了済 結果
ビッグベアテスト 5/19/2003 5/21/2003 0/1 0.00%
Done
Internet

Fig. 2

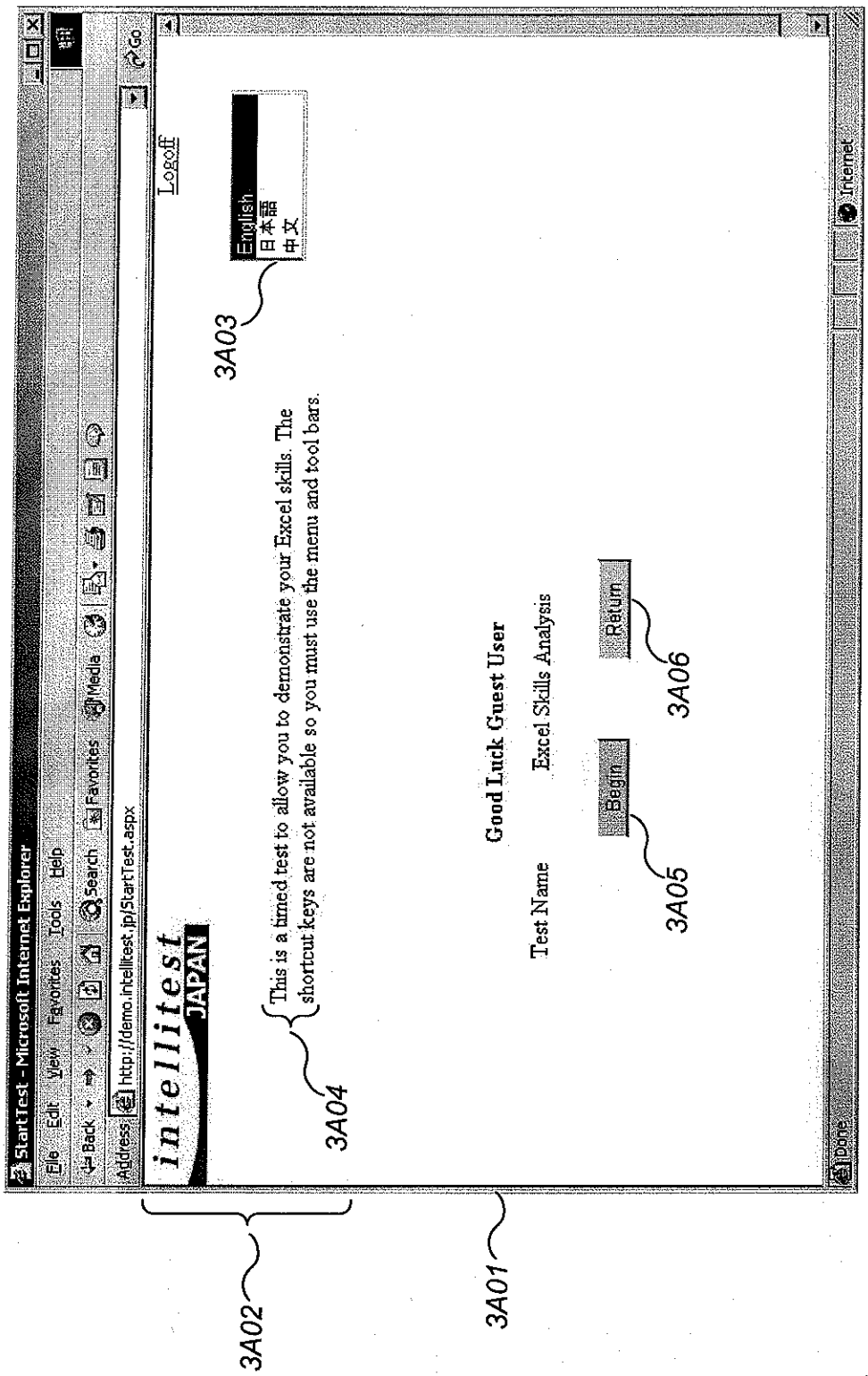
StartTest - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intellitest.jp/StartTest.aspx
Go
intellitest JAPAN
Logoff
English
日本語
中文
3A03
This is a timed test to allow you to demonstrate your Excel skills. The shortcut keys are not available so you must use the menu and tool bars.
3A04
Good Luck Guest User
Test Name
Excel Skills Analysis
Begin
Return
3A05
3A06
Done
Internet
3A02
3A01

Fig. 3A

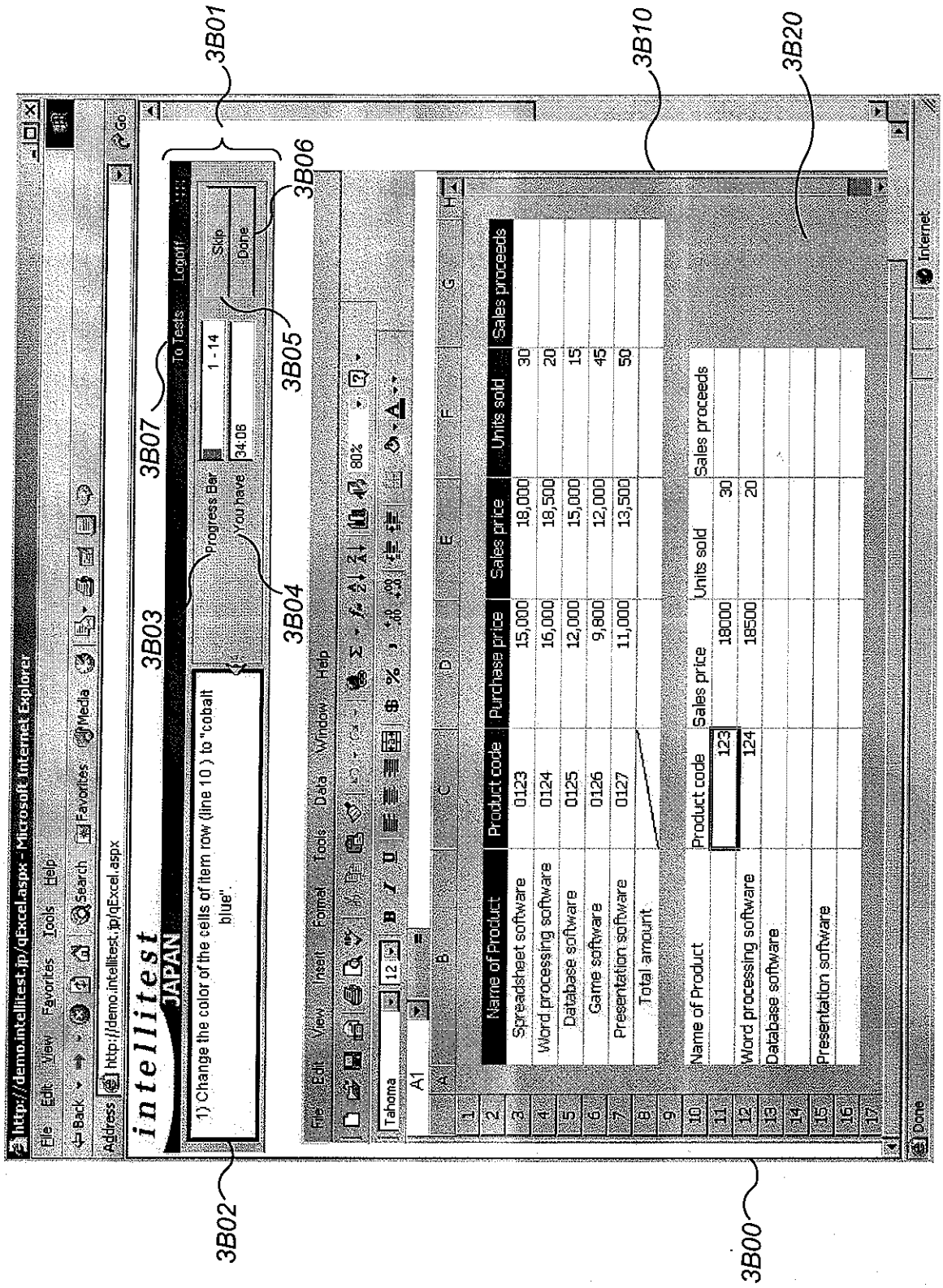
3B01
3B02
3B03
3B04
3B05
3B06
3B07
3B10
3B20
3B00
intellitest
JAPAN
1) Change the color of the cells of item row (line 10) to "cobalt blue".
Progress Bar
You have
1 - 14
34:08
Skip
Done
To Tests
Logoff
Name of Product
Product code
Purchase price
Sales price
Units sold
Sales proceeds
Spreadsheet software
Word processing software
Database software
Game software
Presentation software
Total amount

Fig. 3B

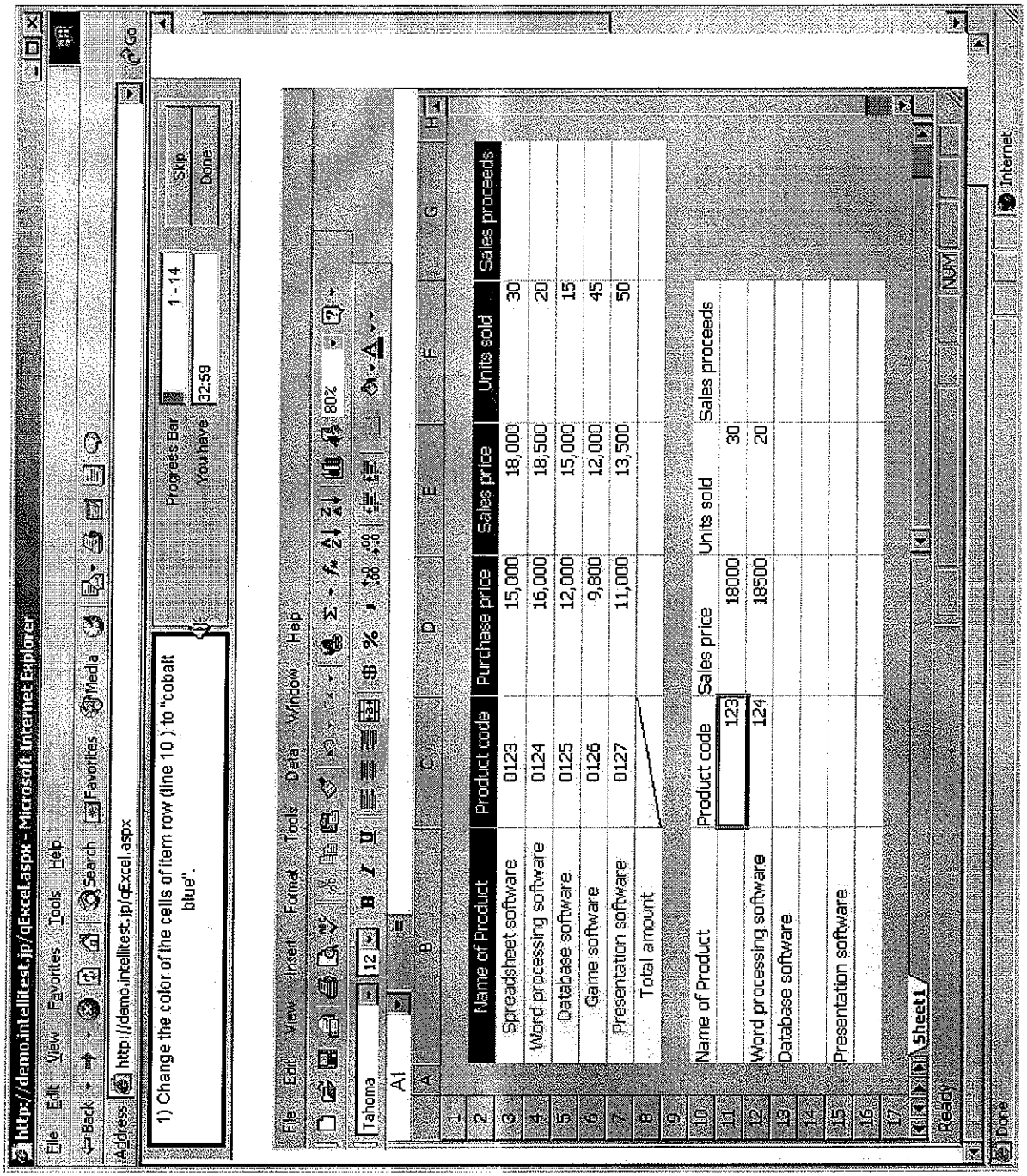
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://demo.intellitest.jp/qExcel.aspx
1) Change the color of the cells of item row (line 10) to "cobalt blue".
Progress Bar
1 - 14
You have
32-59
Skip
Done
Name of Product
Product code
Purchase price
Sales price
Units sold
Sales proceeds
Spreadsheet software 0123 15,000 18,000 30
Word processing software 0124 16,000 18,500 20
Database software 0125 12,000 15,000 15
Game software 0126 9,800 12,000 45
Presentation software 0127 11,000 13,500 50
Total amount
Name of Product
Product code
Sales price
Units sold
Sales proceeds
Word processing software 123 18000 30
Database software 124 18500 20
Presentation software
Sheet1
Ready
Done
Internet

Fig. 3C

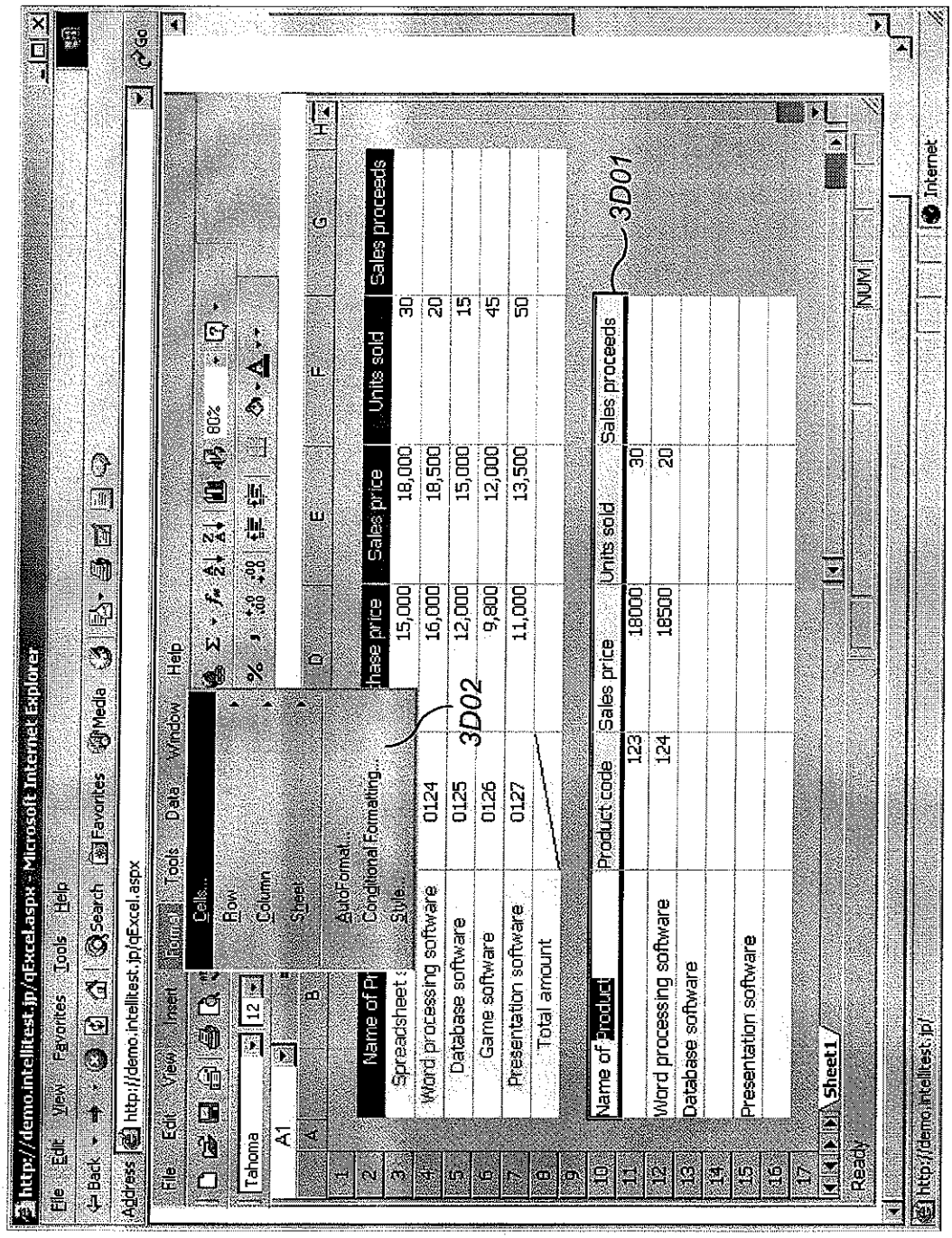
3D01
3D02
Name of Product
Product code
Sales price
Units sold
Sales proceeds
Word processing software
Database software
Game software
Presentation software
Total amount
Sheet1
Ready

Fig. 3D

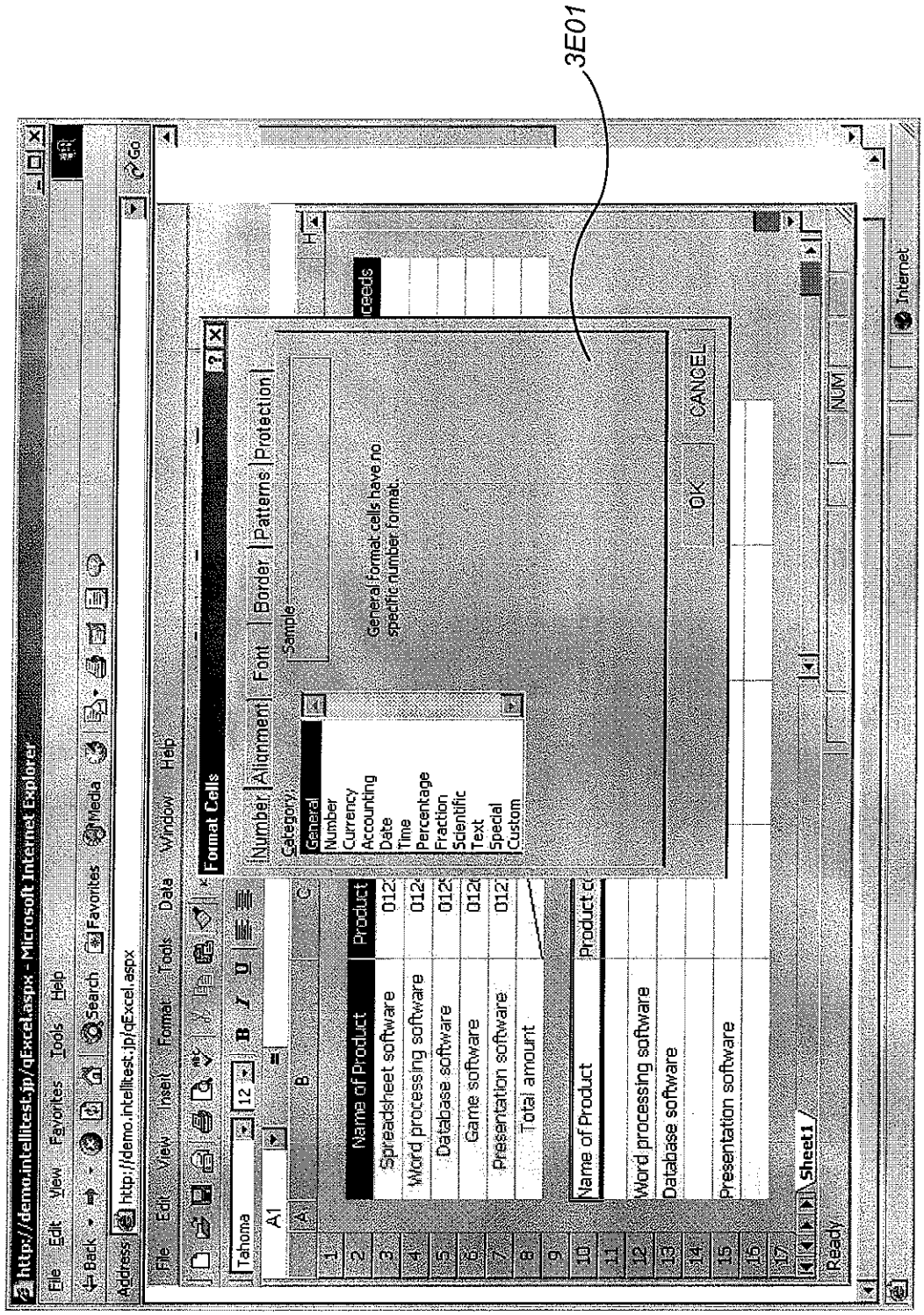
3E01
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
http://demo.intellitest.jp/qExcel.aspx
Format Cells
Number
Alignment
Font
Border
Patterns
Protection
Category:
General
Number
Currency
Accounting
Date
Time
Percentage
Fraction
Scientific
Text
Special
Custom
Sample
General format cells have no specific number format.
OK
CANCEL
Name of Product
Product c
Spreadsheet software
Word processing software
Database software
Game software
Presentation software
Total amount
Sheet1
Ready
NUM
Internet

Fig. 3E

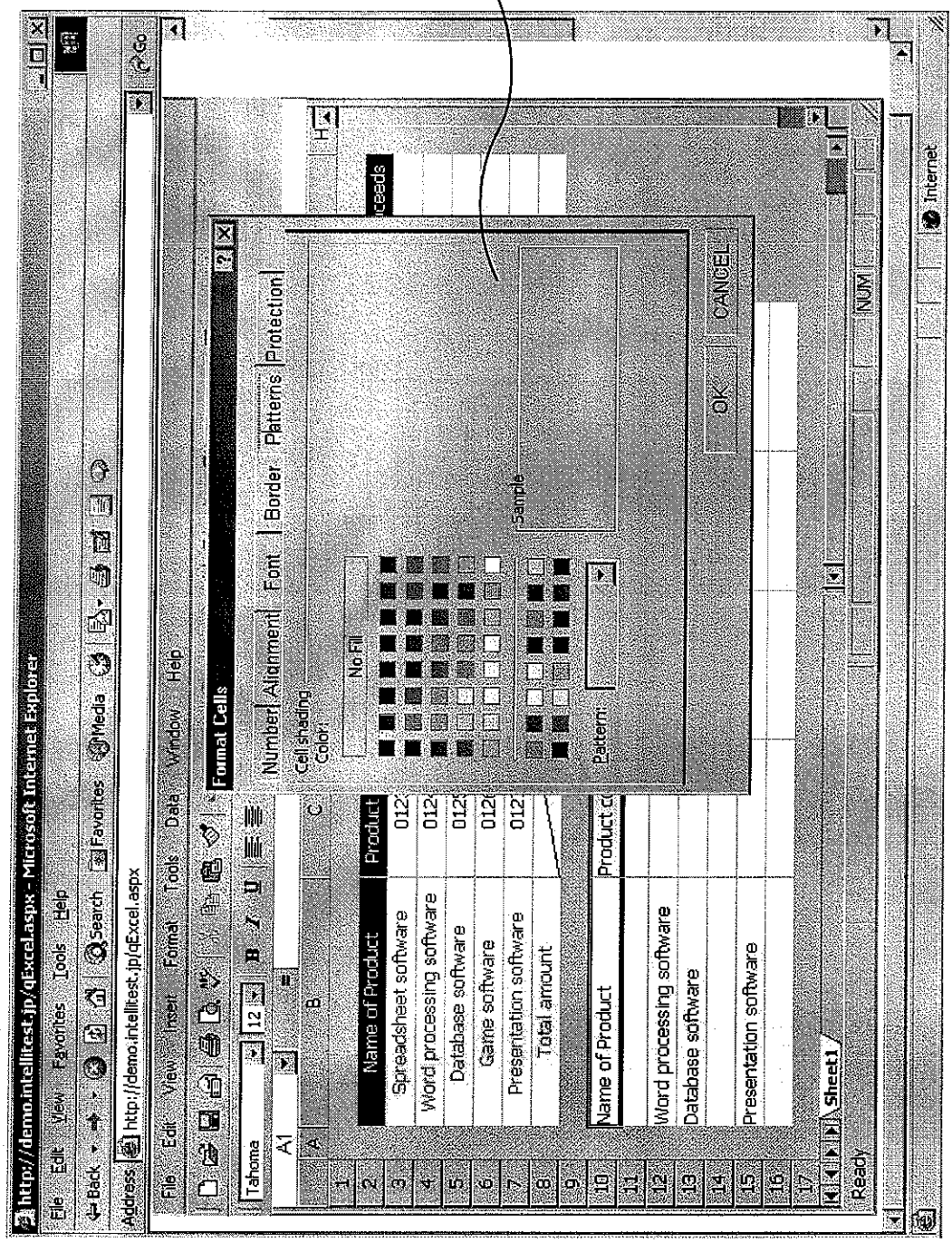
3F01
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
Format Cells
Number
Alignment
Font
Border
Patterns
Protection
Cell shading
Color:
No Fill
Pattern:
Sample
OK
CANCEL
Name of Product
Spreadsheet software
Word processing software
Database software
Game software
Presentation software
Total amount
Sheet1
Ready
Internet

Fig. 3F

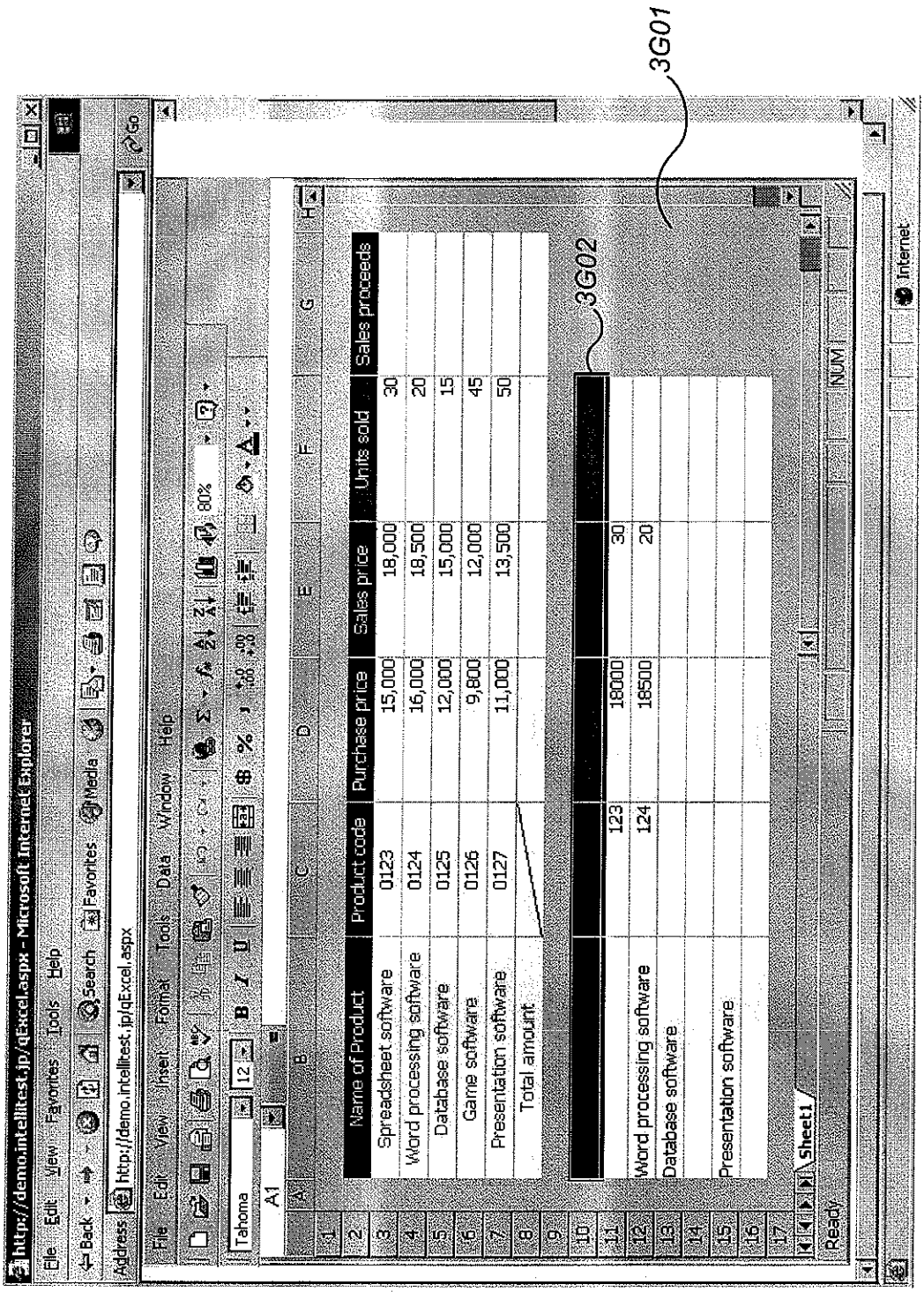
3G01
3G02
http://demo.intellitest.jp/qExcel.aspx - Microsoft Internet Explorer
http://demo.intellitest.jp/qExcel.aspx
Name of Product
Product code
Purchase price
Sales price
Units sold
Sales proceeds
Spreadsheet software
0123
15,000
18,000
30
Word processing software
0124
16,000
18,500
20
Database software
0125
12,000
15,000
15
Game software
0126
9,800
12,000
45
Presentation software
0127
11,000
13,500
50
Total amount
123
18000
30
Word processing software
124
16500
20
Database software
Presentation software
Sheet1
Ready
Internet

Fig. 3G

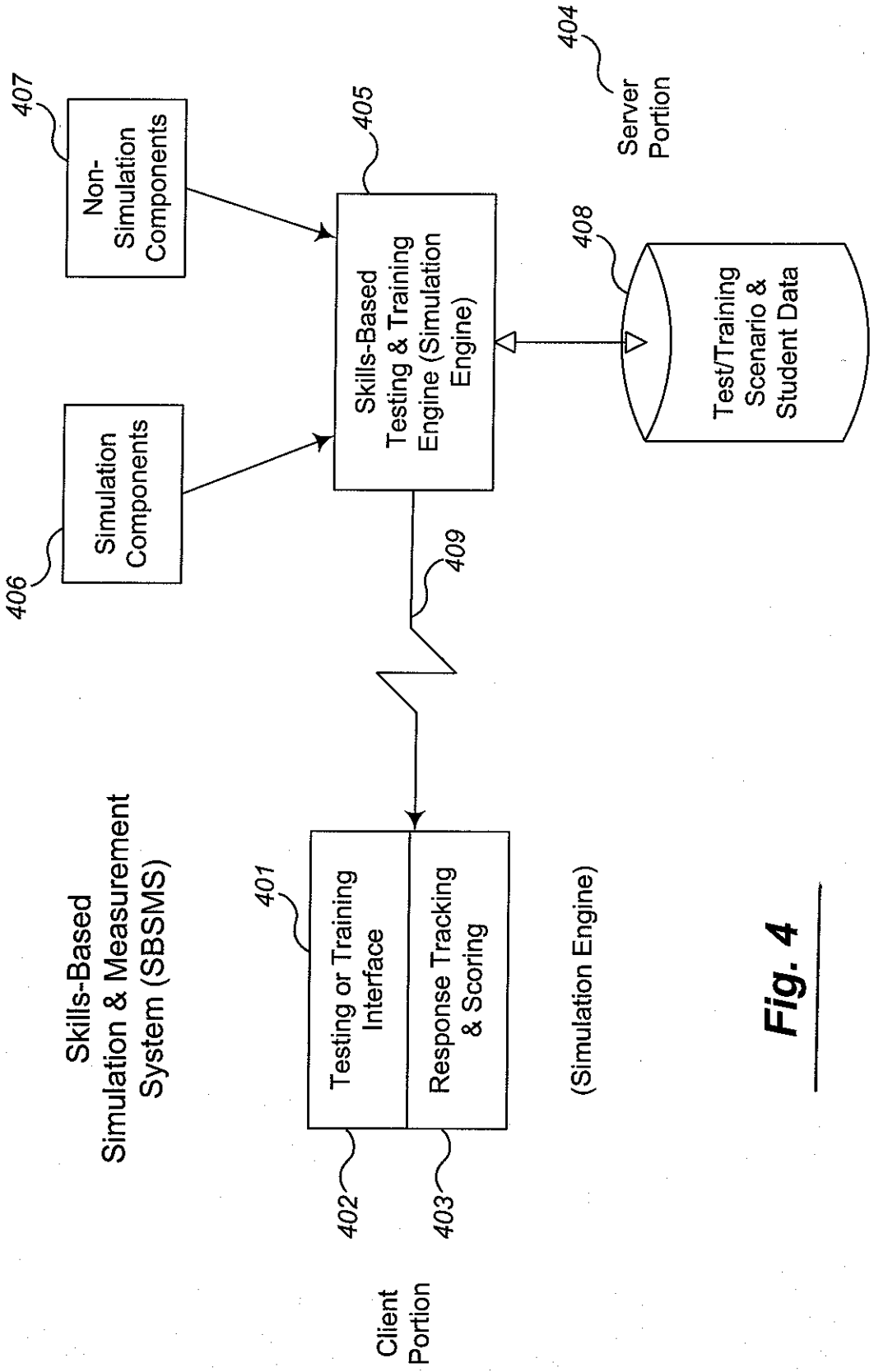
Skills-Based Simulation & Measurement System (SBSMS)
Client Portion
(Simulation Engine)
Server Portion
Testing or Training Interface
Response Tracking & Scoring
Skills-Based Testing & Training Engine (Simulation Engine)
Test/Training Scenario & Student Data
Non-Simulation Components
Simulation Components
401
402
403
404
405
406
407
408
409

Fig. 4

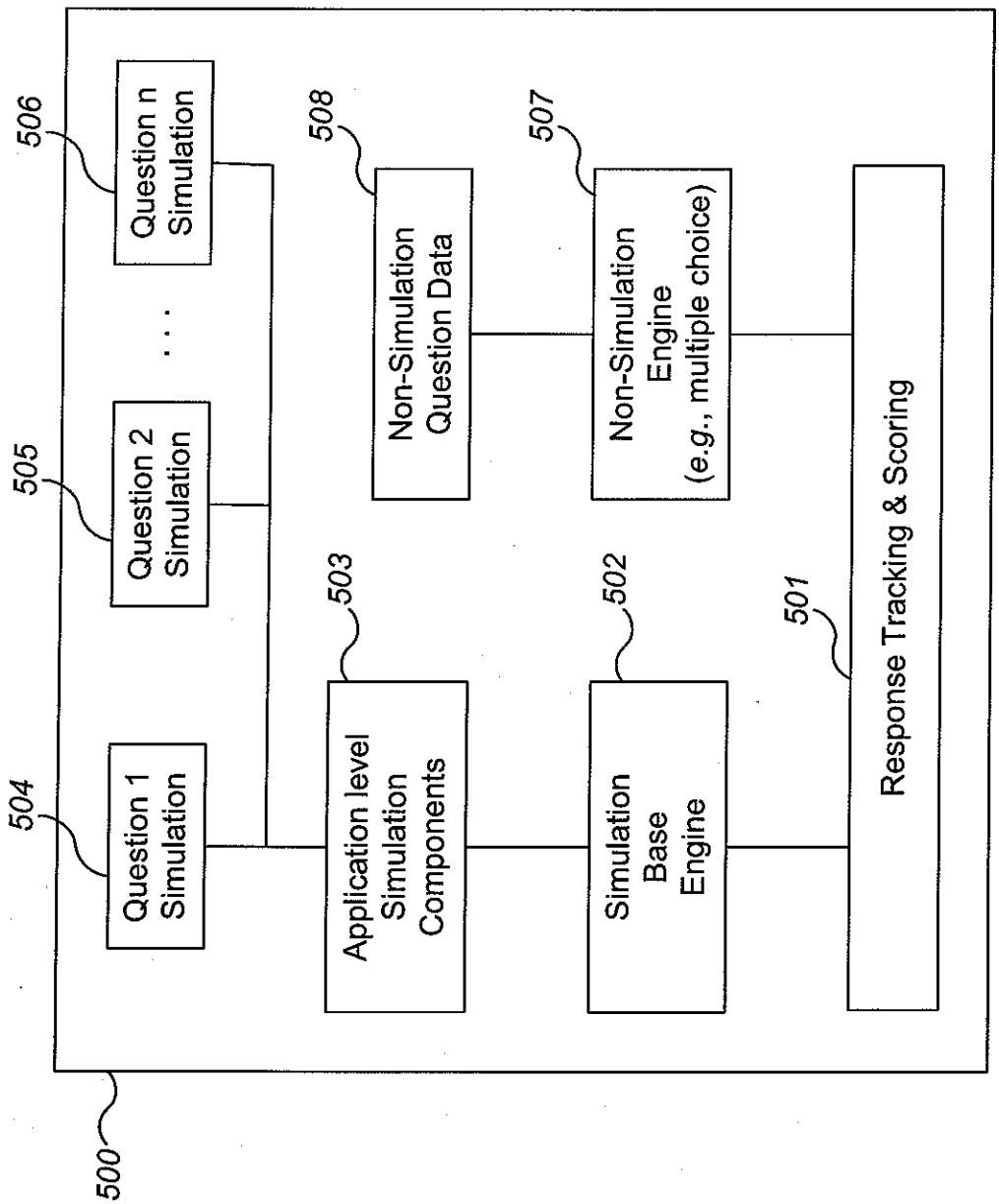
Simulation "Engine"
500
504
Question 1 Simulation
505
Question 2 Simulation
506
Question n Simulation
503
Application level Simulation Components
502
Simulation Base Engine
501
Response Tracking & Scoring
508
Non-Simulation Question Data
507
Non-Simulation Engine (e.g., multiple choice)

Fig. 5

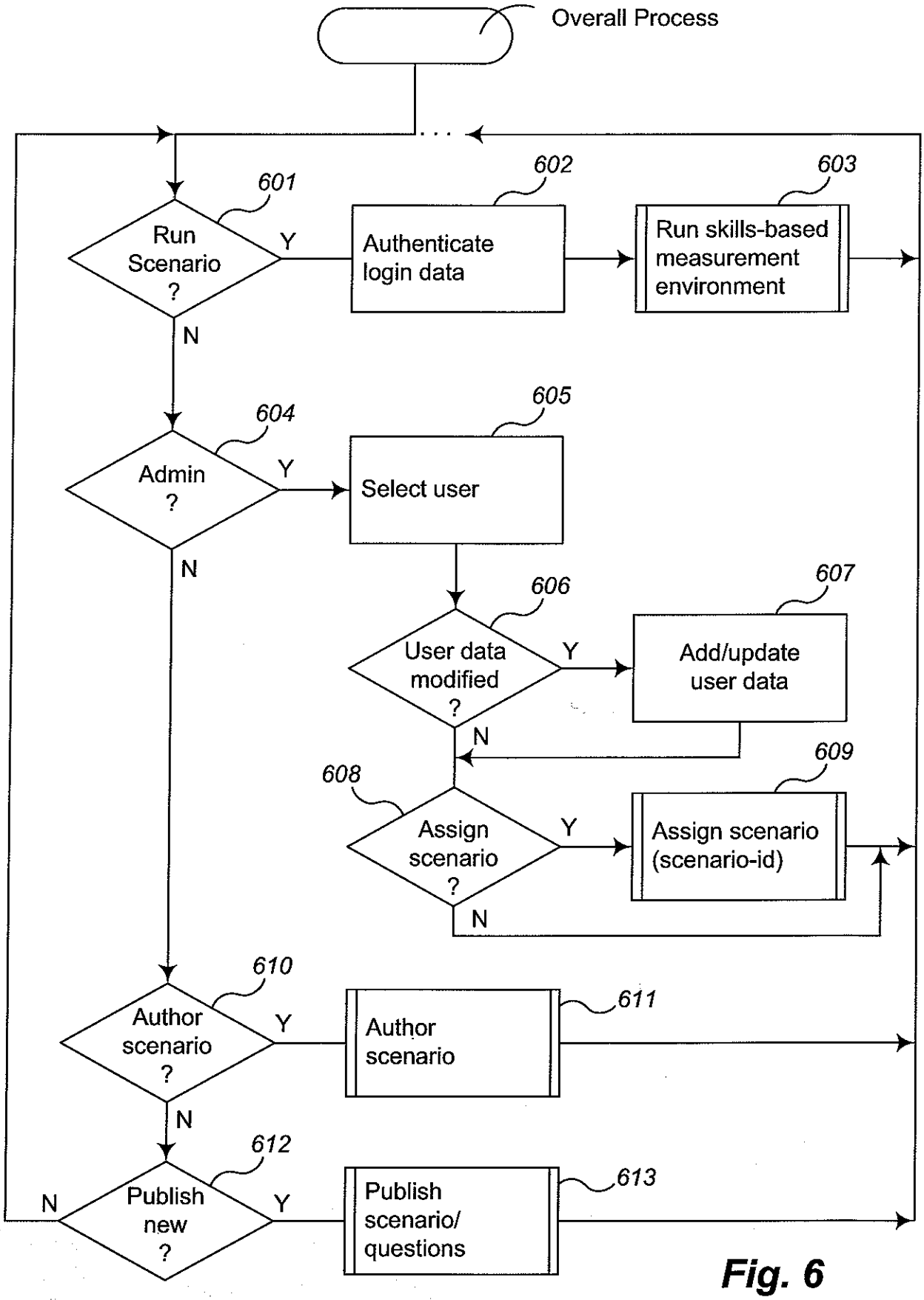
Overall Process
601
Run Scenario ?
Y
602
Authenticate login data
603
Run skills-based measurement environment
N
604
Admin ?
Y
605
Select user
N
606
User data modified ?
Y
607
Add/update user data
N
608
Assign scenario ?
Y
609
Assign scenario (scenario-id)
N
610
Author scenario ?
Y
611
Author scenario
N
612
Publish new ?
N
Y
613
Publish scenario/ questions

Fig. 6

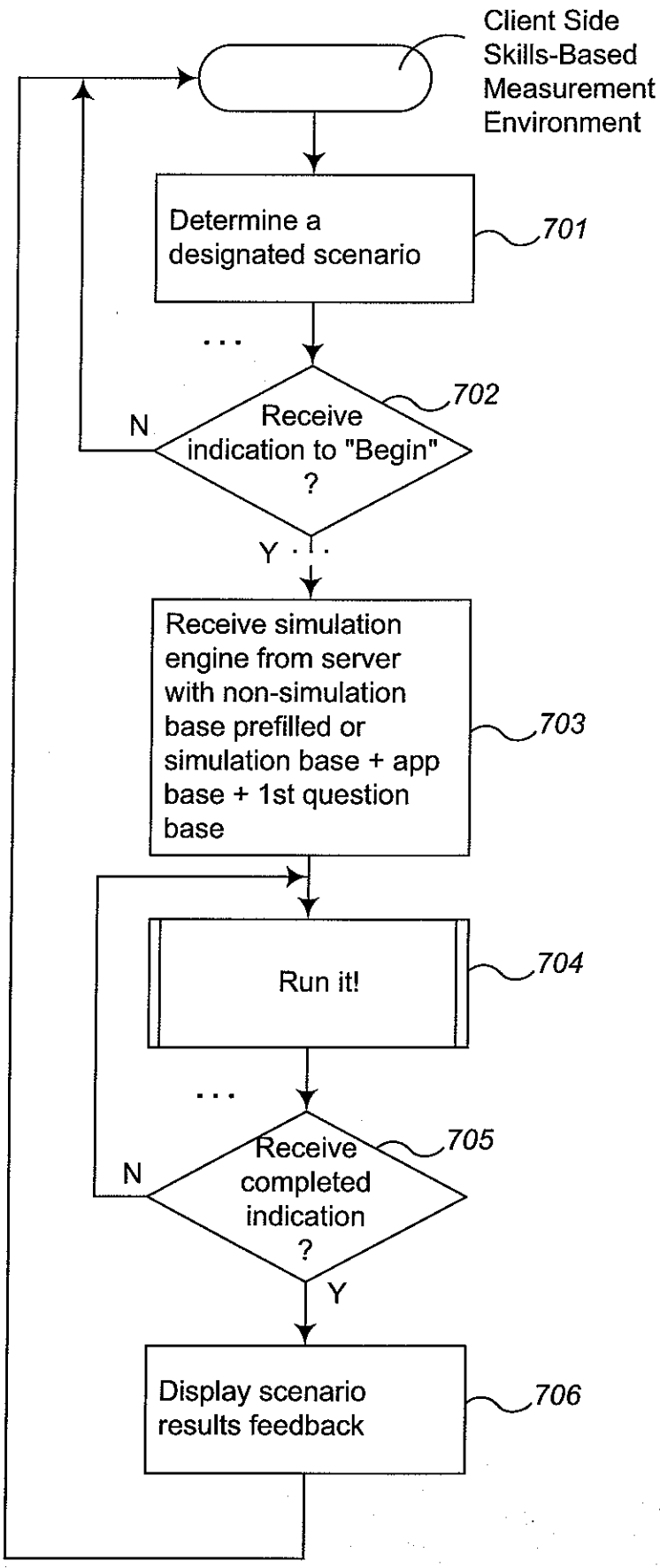
Client Side Skills-Based Measurement Environment
Determine a designated scenario
701
Receive indication to "Begin" ?
702
N
Y
Receive simulation engine from server with non-simulation base prefilled or simulation base + app base + 1st question base
703
Run it!
704
Receive completed indication ?
705
N
Y
Display scenario results feedback
706

Fig. 7

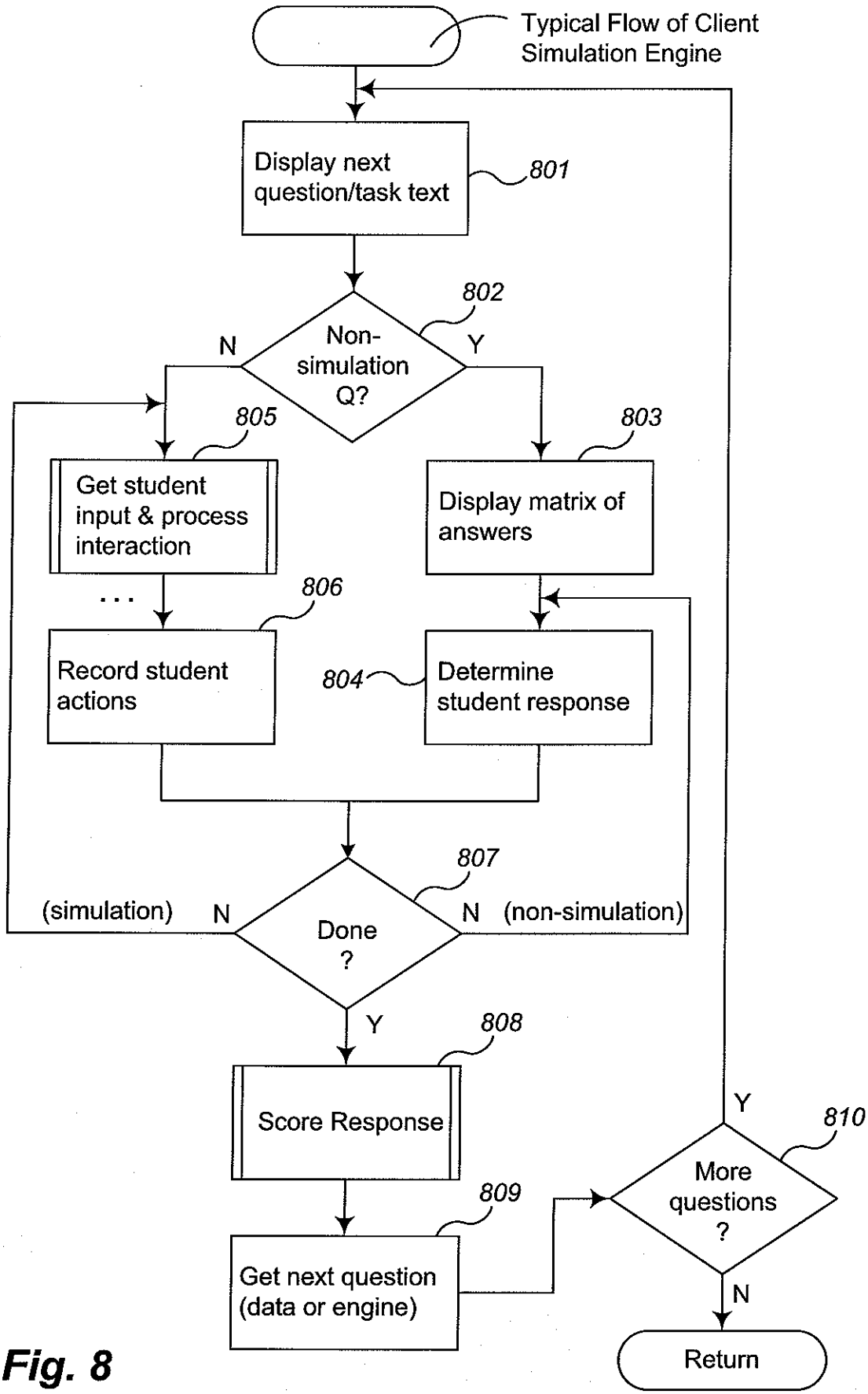
Typical Flow of Client Simulation Engine
Display next question/task text
801
802
Non-simulation Q?
N
Y
805
803
Get student input & process interaction
Display matrix of answers
...
806
Record student actions
804
Determine student response
807
(simulation)
N
Done ?
N
(non-simulation)
Y
808
Score Response
Y
810
More questions ?
809
Get next question (data or engine)
N
Return

Fig. 8

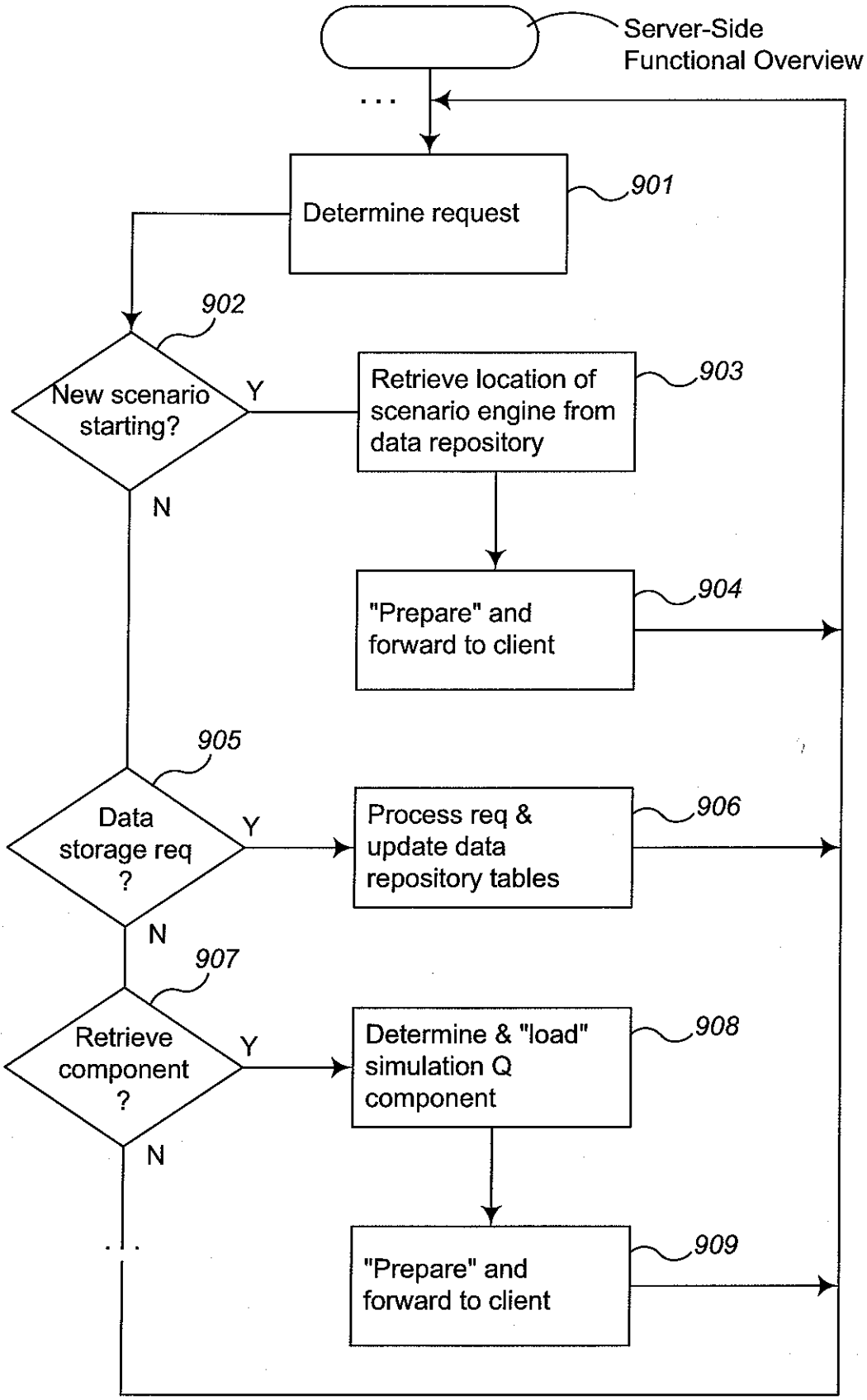
Server-Side
Functional Overview
...
Determine request
901
902
New scenario starting?
Y
N
Retrieve location of scenario engine from data repository
903
"Prepare" and forward to client
904
905
Data storage req ?
Y
N
Process req & update data repository tables
906
907
Retrieve component ?
Y
N
Determine & "load" simulation Q component
908
. . .
"Prepare" and forward to client
909

Fig. 9

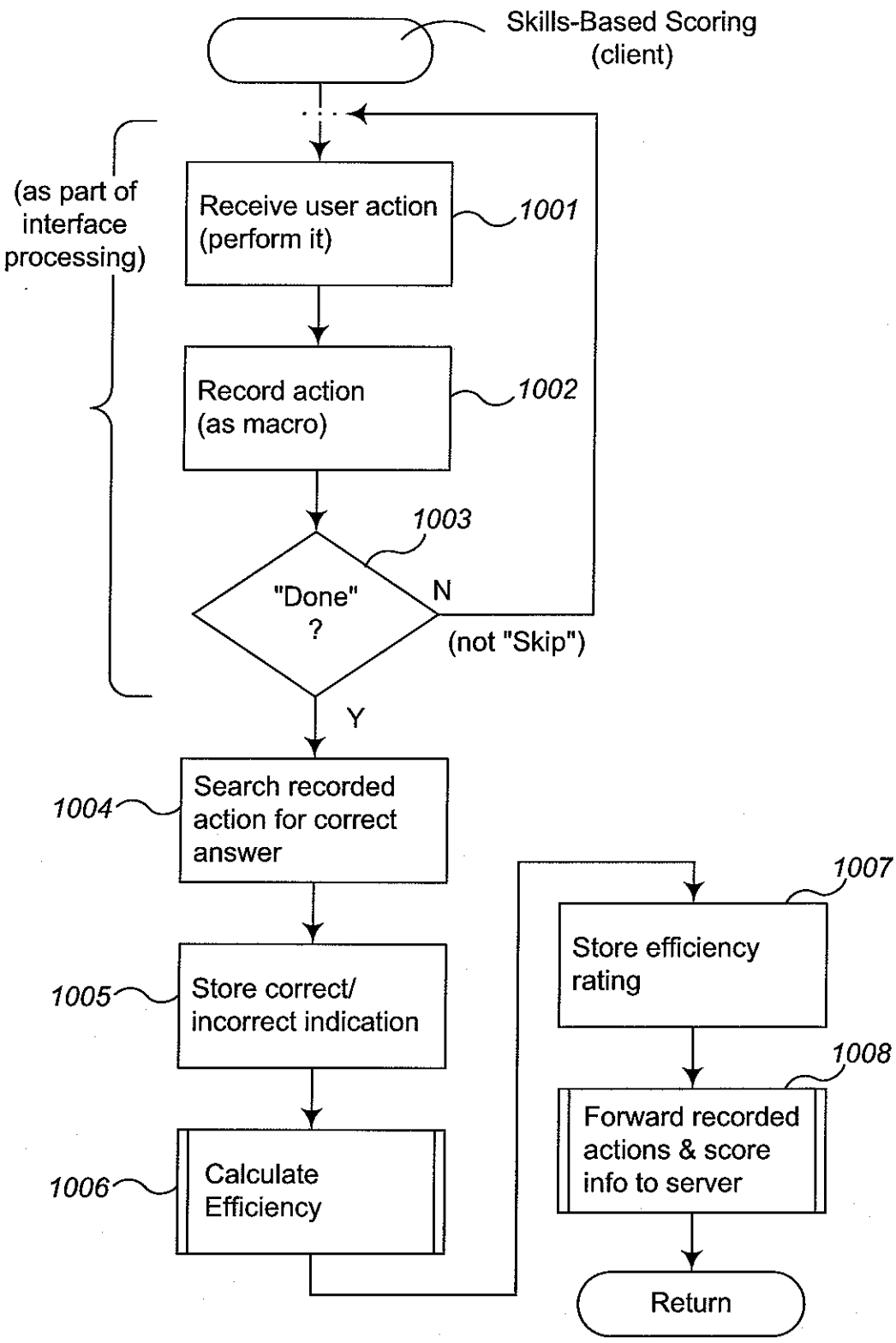
Skills-Based Scoring
(client)
(as part of
interface
processing)
Receive user action
(perform it)
1001
Record action
(as macro)
1002
1003
"Done"
?
N
(not "Skip")
Y
1004
Search recorded
action for correct
answer
1005
Store correct/
incorrect indication
1006
Calculate
Efficiency
1007
Store efficiency
rating
1008
Forward recorded
actions & score
info to server
Return

Fig. 10



Name of Product	Product Code	Purchase Price	Sales Price	Units Sold	Sales Proceeds
Spreadsheet Software	0123	15,000	18,000	30	
Word Processing Software	0124	16,000	18,500	20	
Database Software	0125	12,000	15,000	15	
Game Software	0126	9,800	12,000	45	
Presentation Software	0127	11,000	13,500	50	
Total Amount					

123	18000	30	
Word processing software	124	18500	20
Database software			

Fig. 11

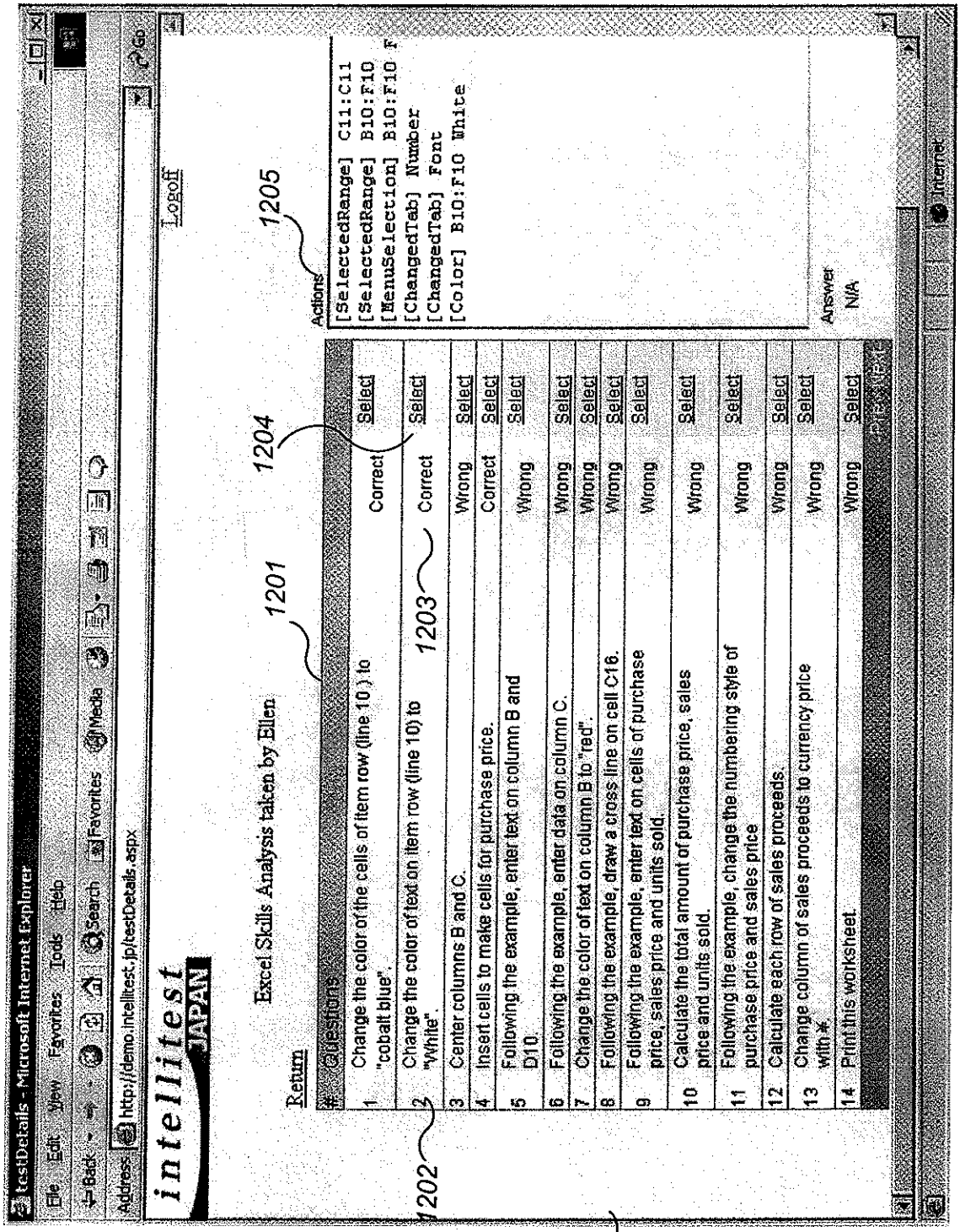
testDetails - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://demo.intellitest.jp/testDetails.aspx
intellitest JAPAN
Logoff
Excel Skills Analysis taken by Ellen
Return
1201
1202
1203
1204
1205
1200
Questions
1 Change the color of the cells of item row (line 10.) to "cobalt blue". Correct Select
2 Change the color of text on item row (line 10) to "white". Correct Select
3 Center columns B and C. Wrong Select
4 Insert cells to make cells for purchase price. Correct Select
5 Following the example, enter text on column B and D10. Wrong Select
6 Following the example, enter data on column C. Wrong Select
7 Change the color of text on column B to "red". Wrong Select
8 Following the example, draw a cross line on cell C16. Wrong Select
9 Following the example, enter text on cells of purchase price, sales price and units sold. Wrong Select
10 Calculate the total amount of purchase price, sales price and units sold. Wrong Select
11 Following the example, change the numbering style of purchase price and sales price Wrong Select
12 Calculate each row of sales proceeds. Wrong Select
13 Change column of sales proceeds to currency price with ¥ Wrong Select
14 Print this worksheet. Wrong Select
Actions
[SelectedRange] C11:C11
[SelectedRange] B10:F10
[MenuSelection] B10:F10 F
[ChangedTab] Number
[ChangedTab] Font
[Color] B10:F10 White
Answer
N/A
Internet

Fig. 12

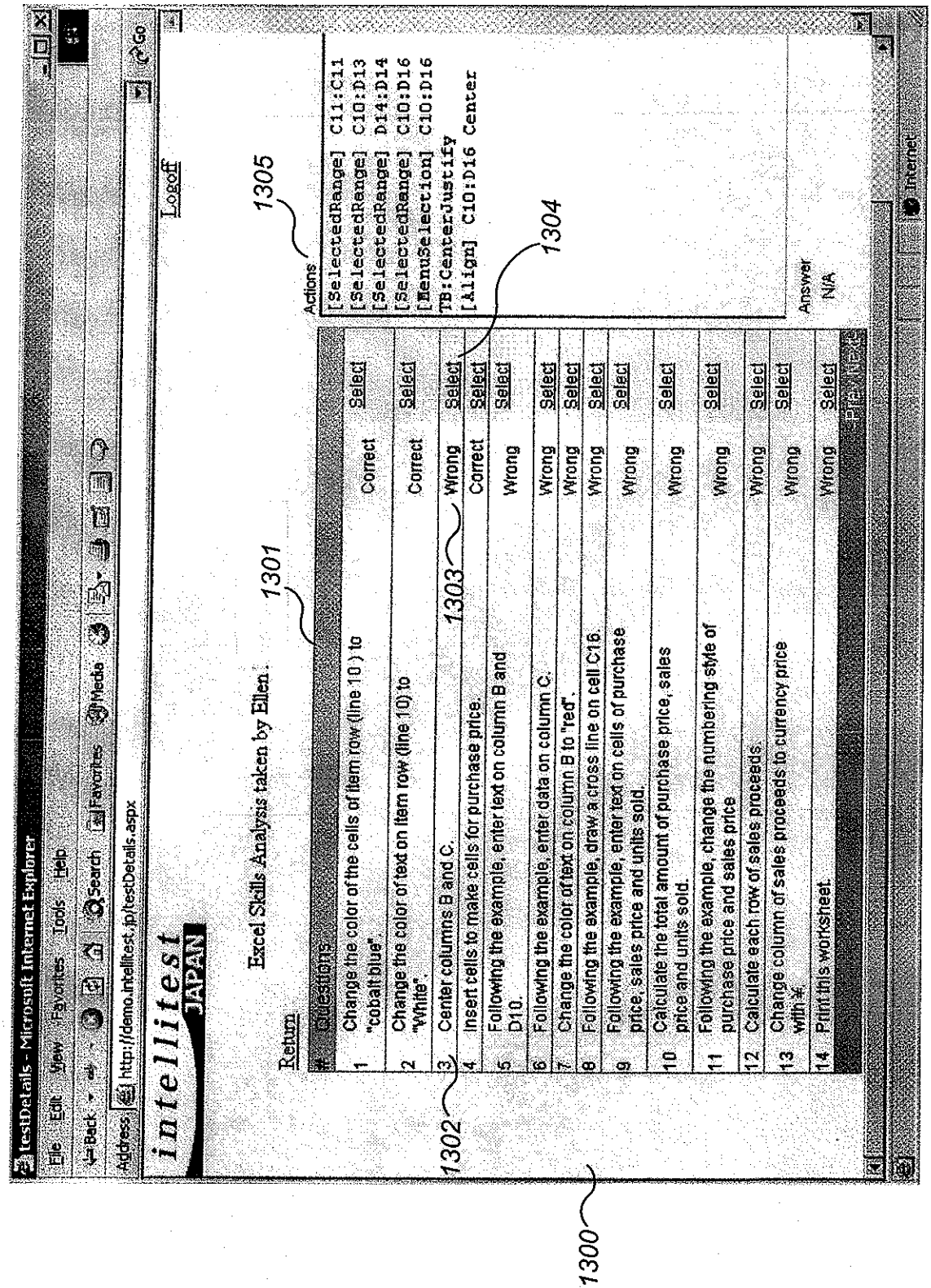
testDetails - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://demo.intellitest.jp/testDetails.aspx
intellitest JAPAN
Logoff
Excel Skills Analysis taken by Ellen.
Return
1301
1305
Actions
[SelectedRange] C11:C11
[SelectedRange] C10:D13
[SelectedRange] D14:D14
[SelectedRange] C10:D16
[MenuSelection] C10:D16
TB:CenterJustify
[Align] C10:D16 Center
1304
Answer
N/A
Questions
1 Change the color of the cells of item row (line 10) to "cobalt blue". Correct Select
2 Change the color of text on item row (line 10) to "White". Correct Select
3 Center columns B and C. Wrong Select
4 Insert cells to make cells for purchase price. Correct Select
5 Following the example, enter text on column B and D10. Wrong Select
6 Following the example, enter data on column C. Wrong Select
7 Change the color of text on column B to "red". Wrong Select
8 Following the example, draw a cross line on cell C16. Wrong Select
9 Following the example, enter text on cells of purchase price, sales price and units sold. Wrong Select
10 Calculate the total amount of purchase price, sales price and units sold. Wrong Select
11 Following the example, change the numbering style of purchase price and sales price Wrong Select
12 Calculate each row of sales proceeds. Wrong Select
13 Change column of sales proceeds to currency price with ¥ Wrong Select
14 Print this worksheet. Wrong Select
1302
1303
1300
Internet

Fig. 13

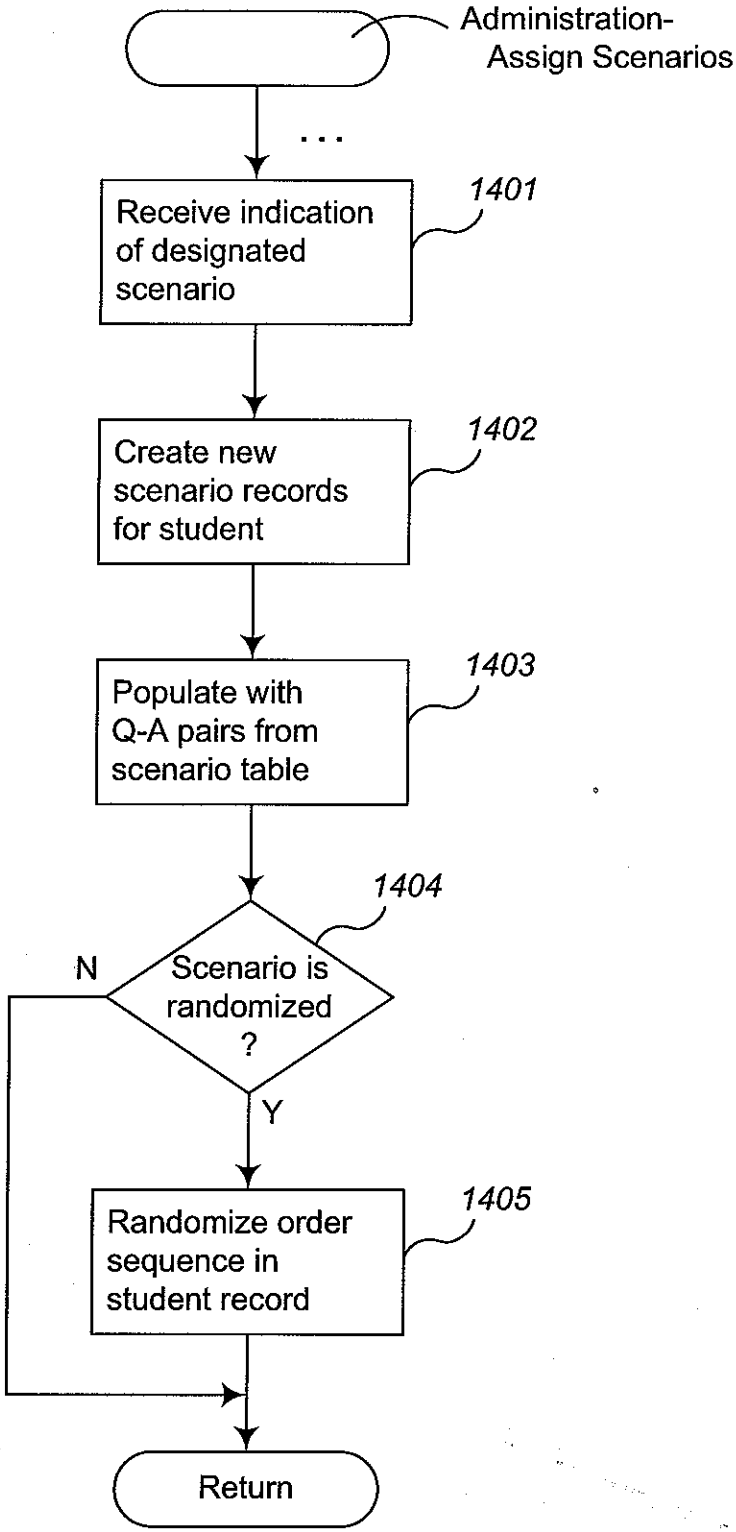
Administration-
Assign Scenarios
...
Receive indication of designated scenario
1401
Create new scenario records for student
1402
Populate with Q-A pairs from scenario table
1403
1404
Scenario is randomized ?
N
Y
Randomize order sequence in student record
1405
Return

Fig. 14

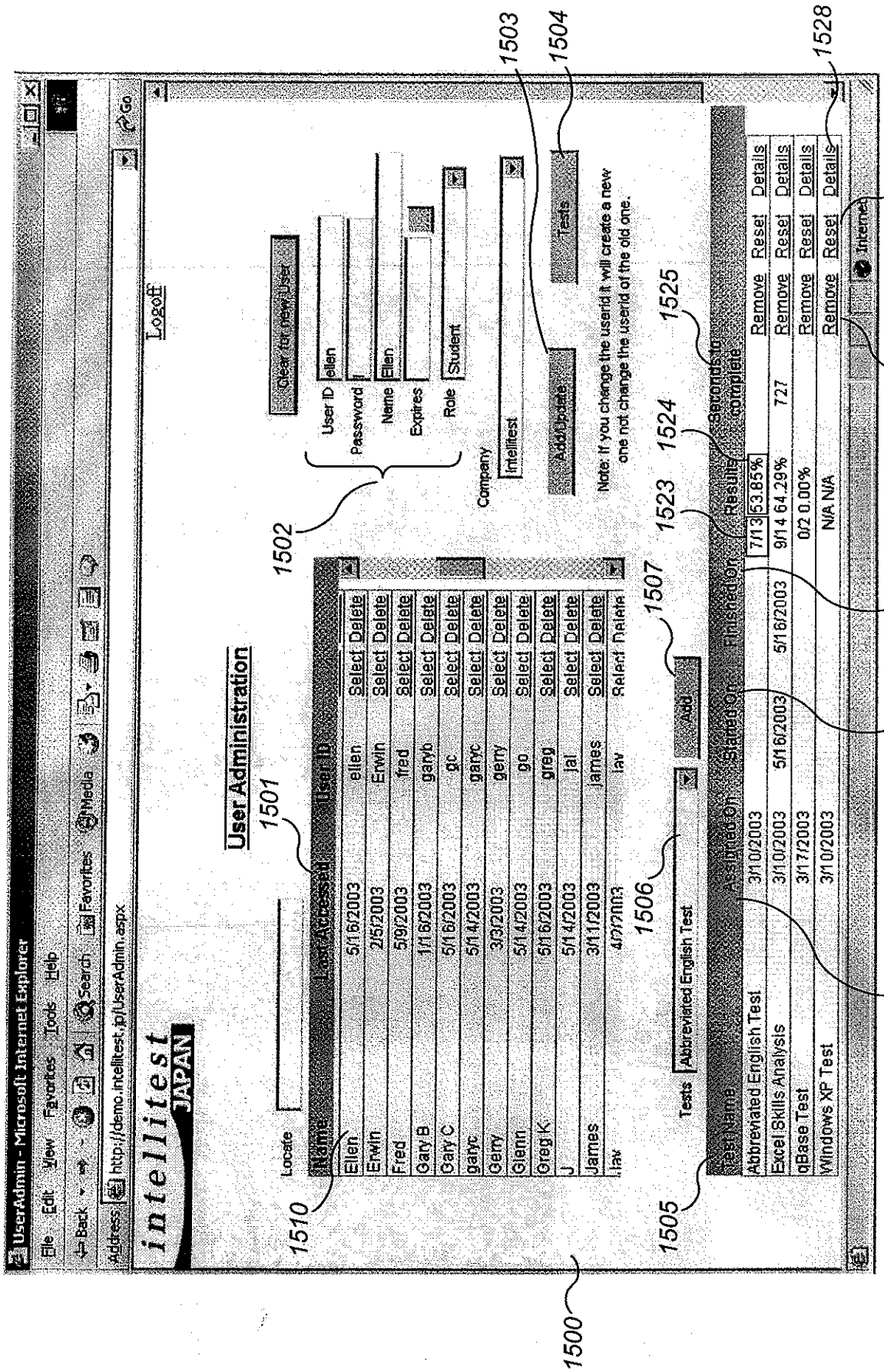
UserAdmin - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://demo.intellitest.jp/UserAdmin.aspx
intellitest JAPAN
Logoff
User Administration
Locate
Name
Last Accessed
User ID
Ellen 5/16/2003 ellen Select Delete
Erwin 2/5/2003 Erwin Select Delete
Fred 5/9/2003 fred Select Delete
Gary B 1/16/2003 garyb Select Delete
Gary C 5/16/2003 gc Select Delete
garyc 5/14/2003 garyc Select Delete
Gerry 3/3/2003 gerry Select Delete
Glenn 5/14/2003 go Select Delete
Greg K 5/16/2003 greg Select Delete
J 5/14/2003 jal Select Delete
James 3/11/2003 James Select Delete
Jay 4/7/2003 Jay Select Delete
Clear for new User
User ID ellen
Password
Name Ellen
Expires
Role Student
Company intellitest
Add/Update
Tests
Note: If you change the userid it will create a new one not change the userid of the old one.
Tests Abbreviated English Test
Add
Test Name Assigned On Started On Finished On Results Seconds to complete
Abbreviated English Test 3/10/2003 7/13 63.85% Remove Reset Details
Excel Skills Analysis 3/10/2003 5/16/2003 5/16/2003 9/14 64.29% 727 Remove Reset Details
qBase Test 3/17/2003 0/2 0.00% Remove Reset Details
Windows XP Test 3/10/2003 N/A N/A Remove Reset Details
Internet
1500
1501
1502
1503
1504
1505
1506
1507
1510
1520
1521
1522
1523
1524
1525
1526
1527
1528

Fig. 15

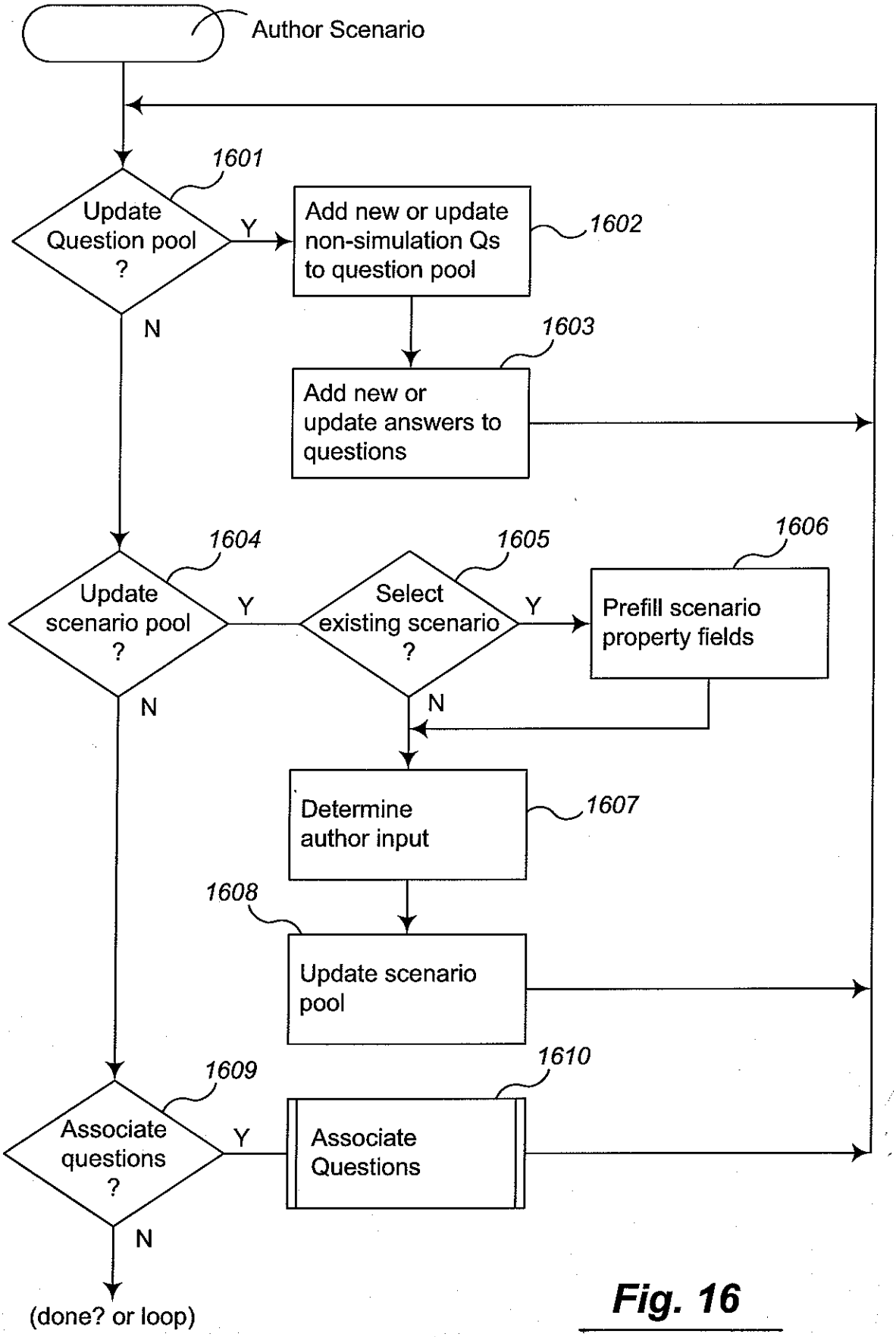
Author Scenario
1601
Update Question pool ?
Y
N
Add new or update non-simulation Qs to question pool
1602
1603
Add new or update answers to questions
1604
Update scenario pool ?
Y
N
1605
Select existing scenario ?
Y
N
1606
Prefill scenario property fields
Determine author input
1607
1608
Update scenario pool
1609
Associate questions ?
Y
N
1610
Associate Questions
(done? or loop)

Fig. 16

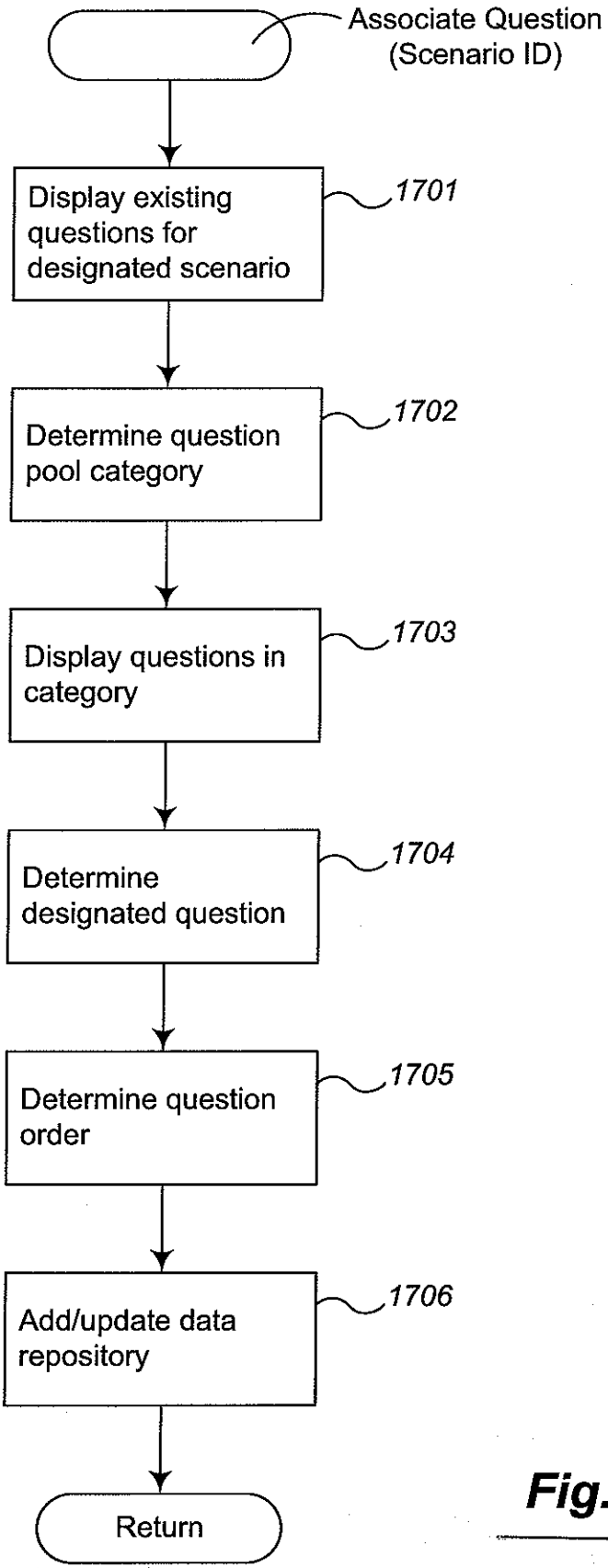
Associate Question (Scenario ID)
Display existing questions for designated scenario
1701
Determine question pool category
1702
Display questions in category
1703
Determine designated question
1704
Determine question order
1705
Add/update data repository
1706
Return

Fig. 17

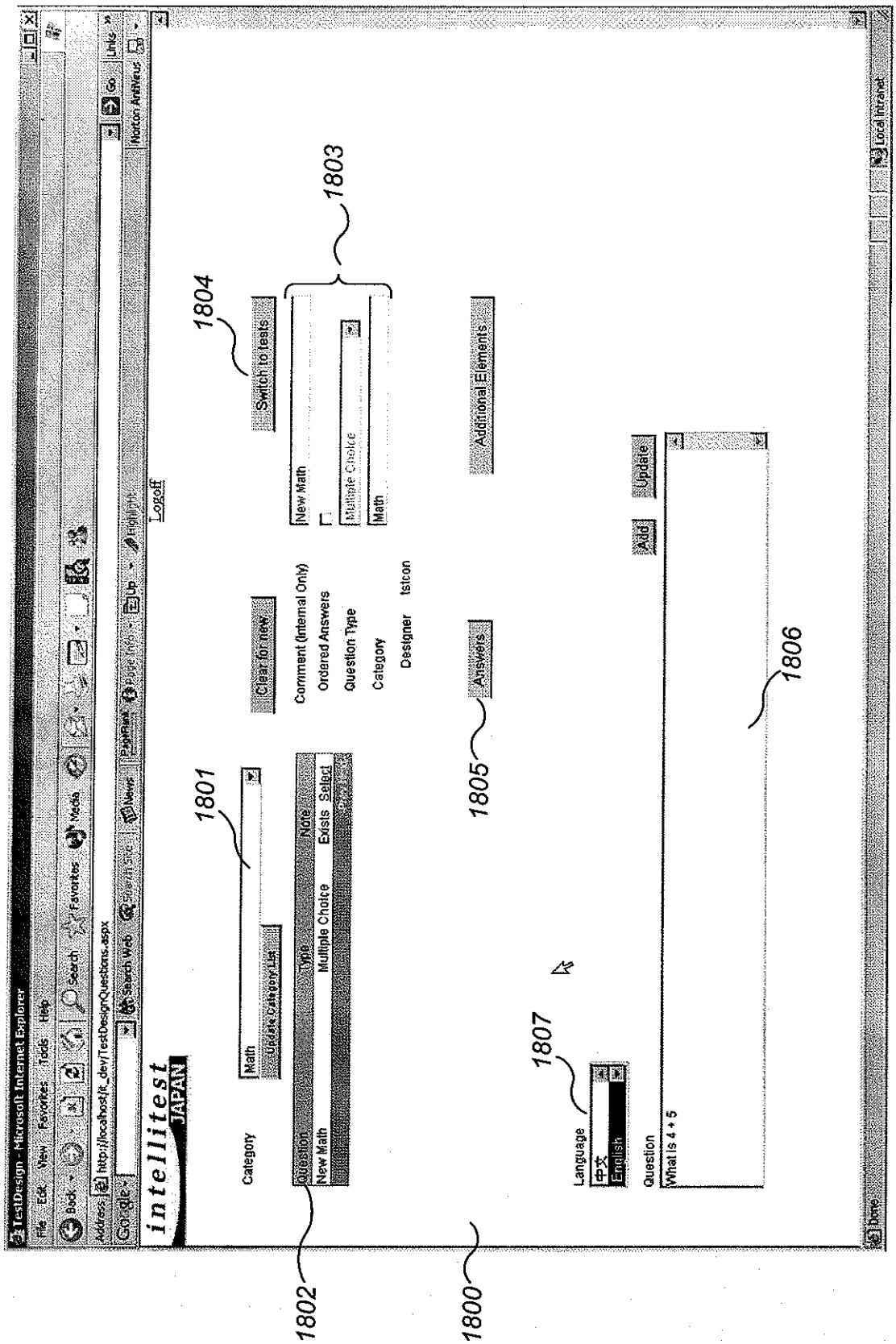
TestDesign - Microsoft Internet Explorer
intellitest JAPAN
Logoff
Category
Math
Update Category List
Clear for new
Switch to tests
Comment (Internal Only)
Ordered Answers
Question Type
Category
Designer
Istcon
New Math
Multiple Choice
Math
Question
Type
None
New Math
Multiple Choice
Exists Select
Answers
Additional Elements
Add
Update
Language
中文
English
Question
What is 4 + 5
1800
1801
1802
1803
1804
1805
1806
1807

Fig. 18

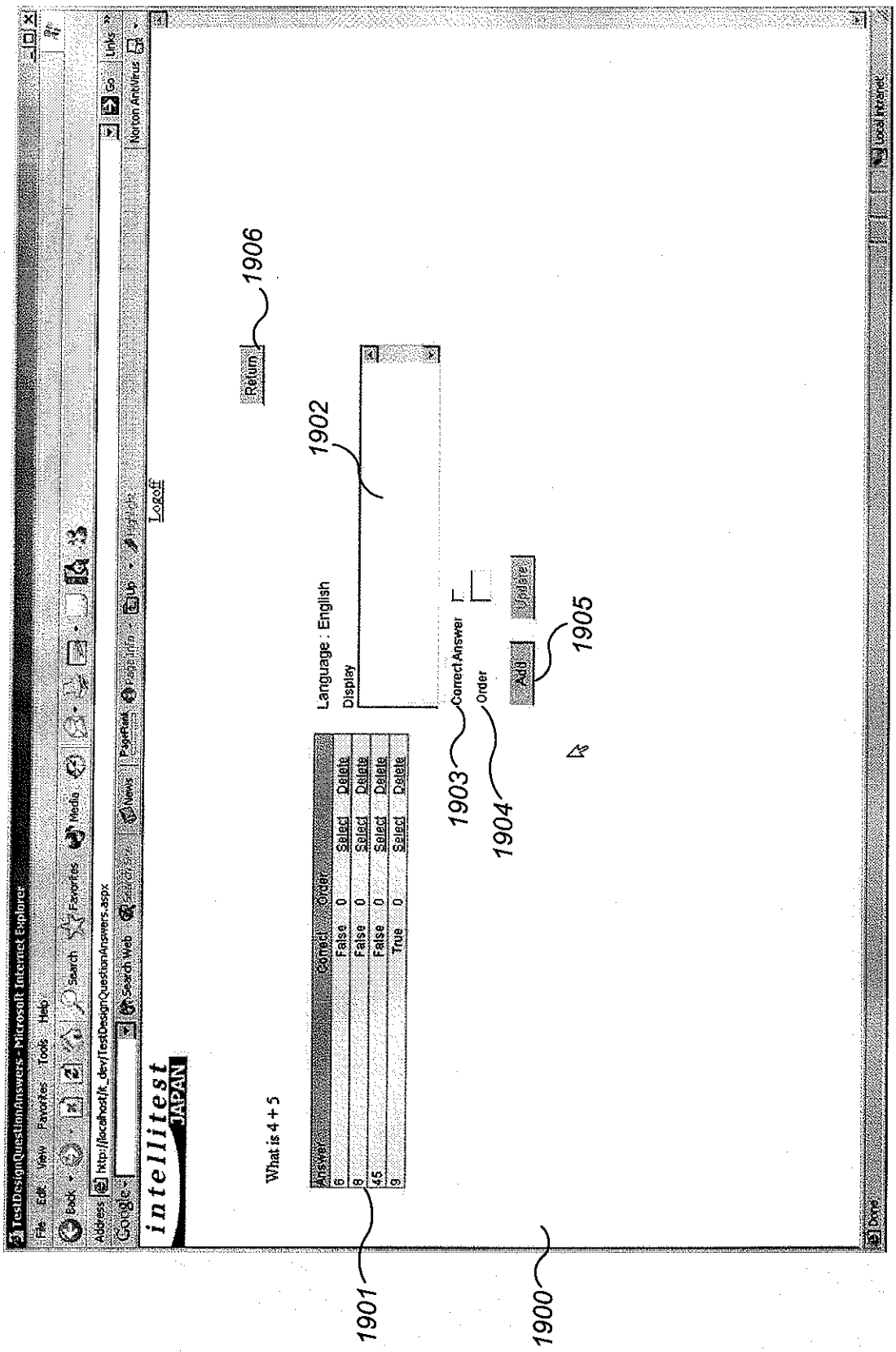
TestDesignQuestionAnswers - Microsoft Internet Explorer
intellitest
JAPAN
Logoff
What is 4 + 5
Return
Language : English
Display
Correct Answer
Order
Add
Delete
Answer
Correct
Order
6 False 0 Select Delete
8 False 0 Select Delete
45 False 0 Select Delete
9 True 0 Select Delete
1900
1901
1902
1903
1904
1905
1906

Fig. 19

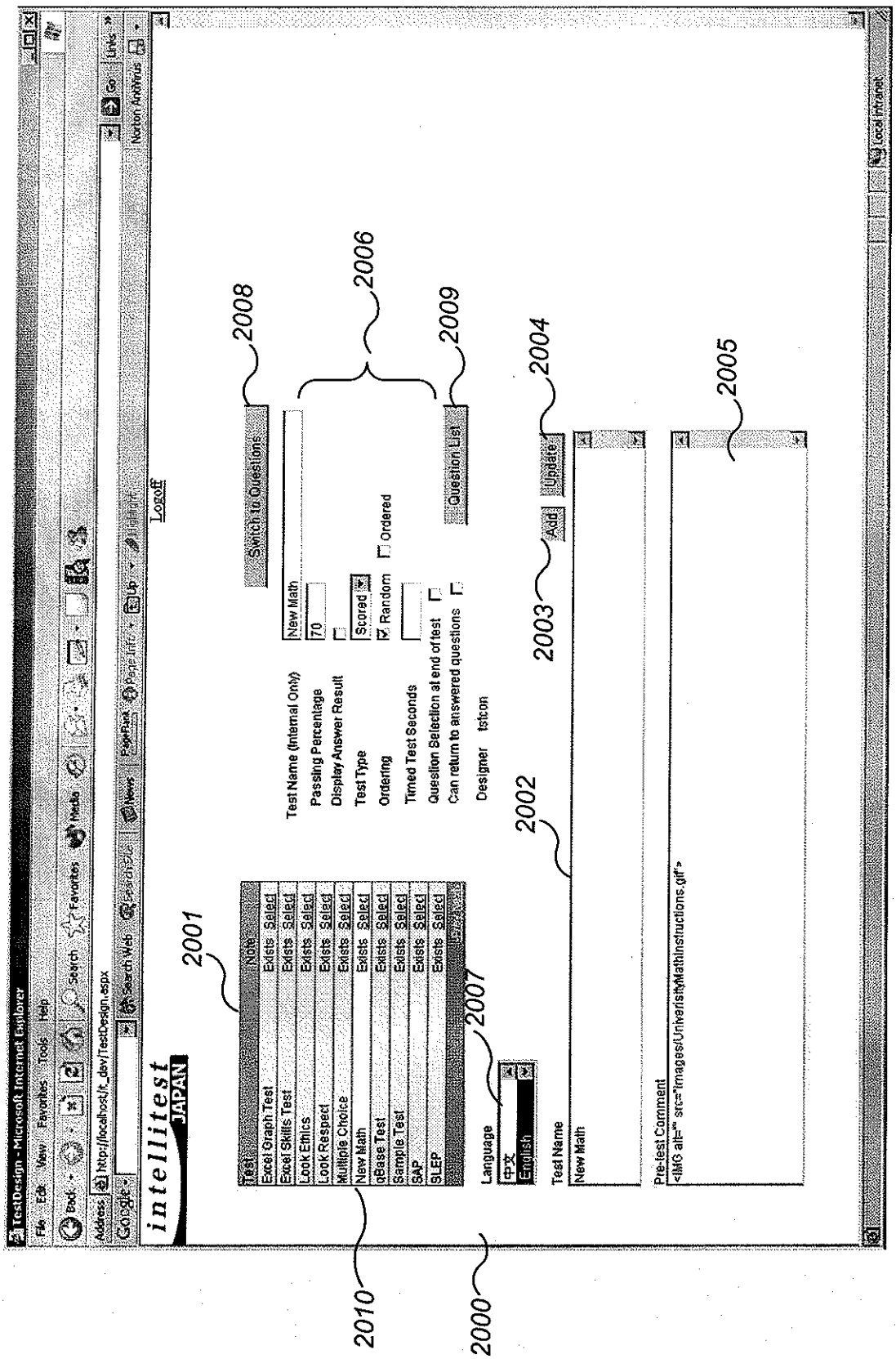
TestDesign - Microsoft Internet Explorer
intellitest
JAPAN
Logoff
Test
Excel Graph Test
Excel Skills Test
Look Ethics
Look Respect
Multiple Choice
New Math
qBase Test
Sample Test
SAP
GLEP
Exists
Select
Language
中文
English
Test Name
New Math
Test Name (Internal Only)
Passing Percentage
Display Answer Result
Test Type
Ordering
Timed Test Seconds
Question Selection at end of test
Can return to answered questions
Designer
Scored
Random
Ordered
Switch to Questions
Question List
Add
Update
Pre-test Comment
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010

Fig. 20

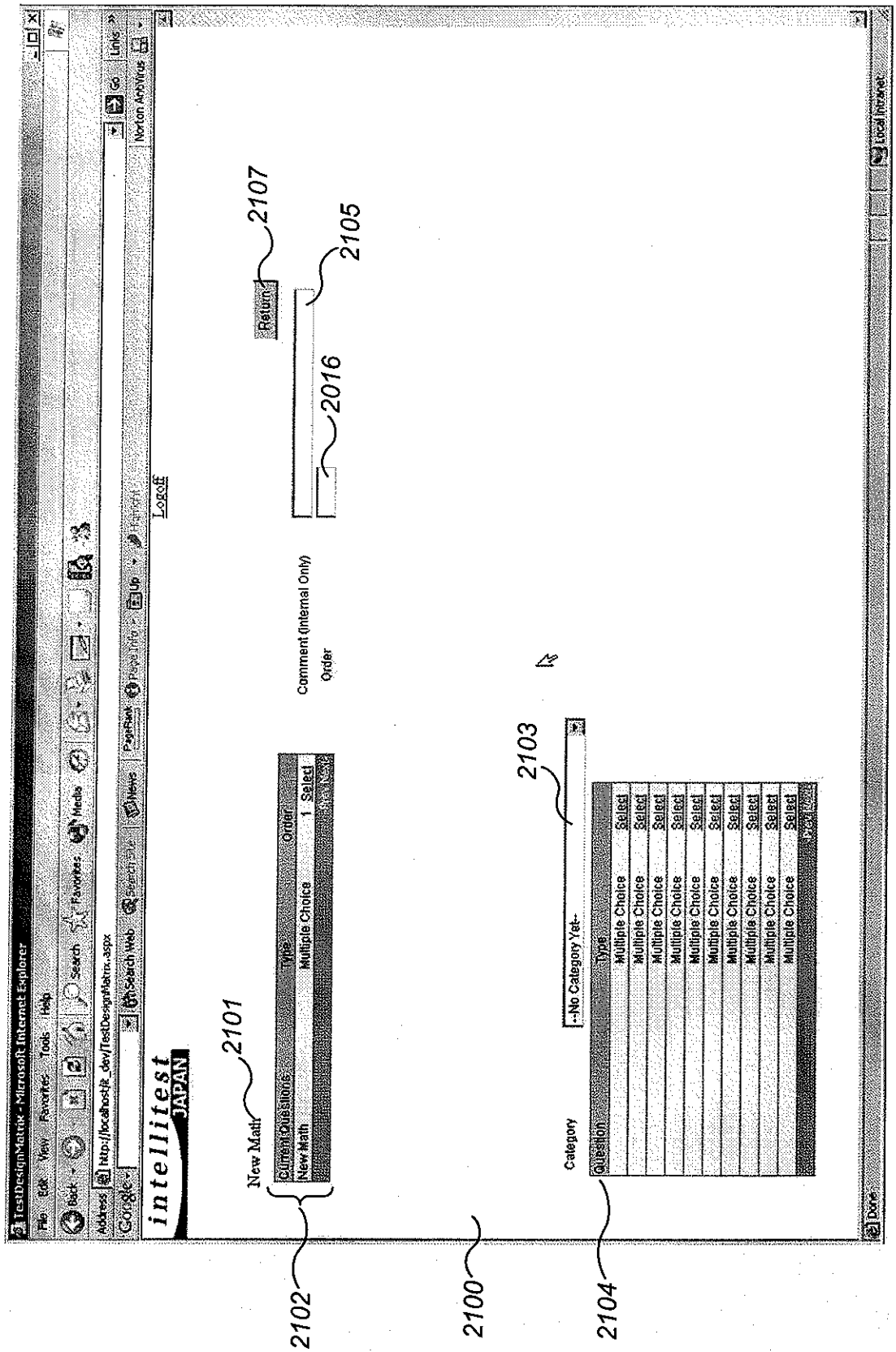
TestDesignMatrix - Microsoft Internet Explorer
intellitest JAPAN
Logoff
New Math
Current Questions: 6
New Math
Type
Order
Multiple Choice
1
Select
Comment (Internal Only)
Order
Return
Category
--No Category Yet--
Question
Type
Multiple Choice
Select
2101
2102
2100
2103
2104
2105
2107
2016

Fig. 21

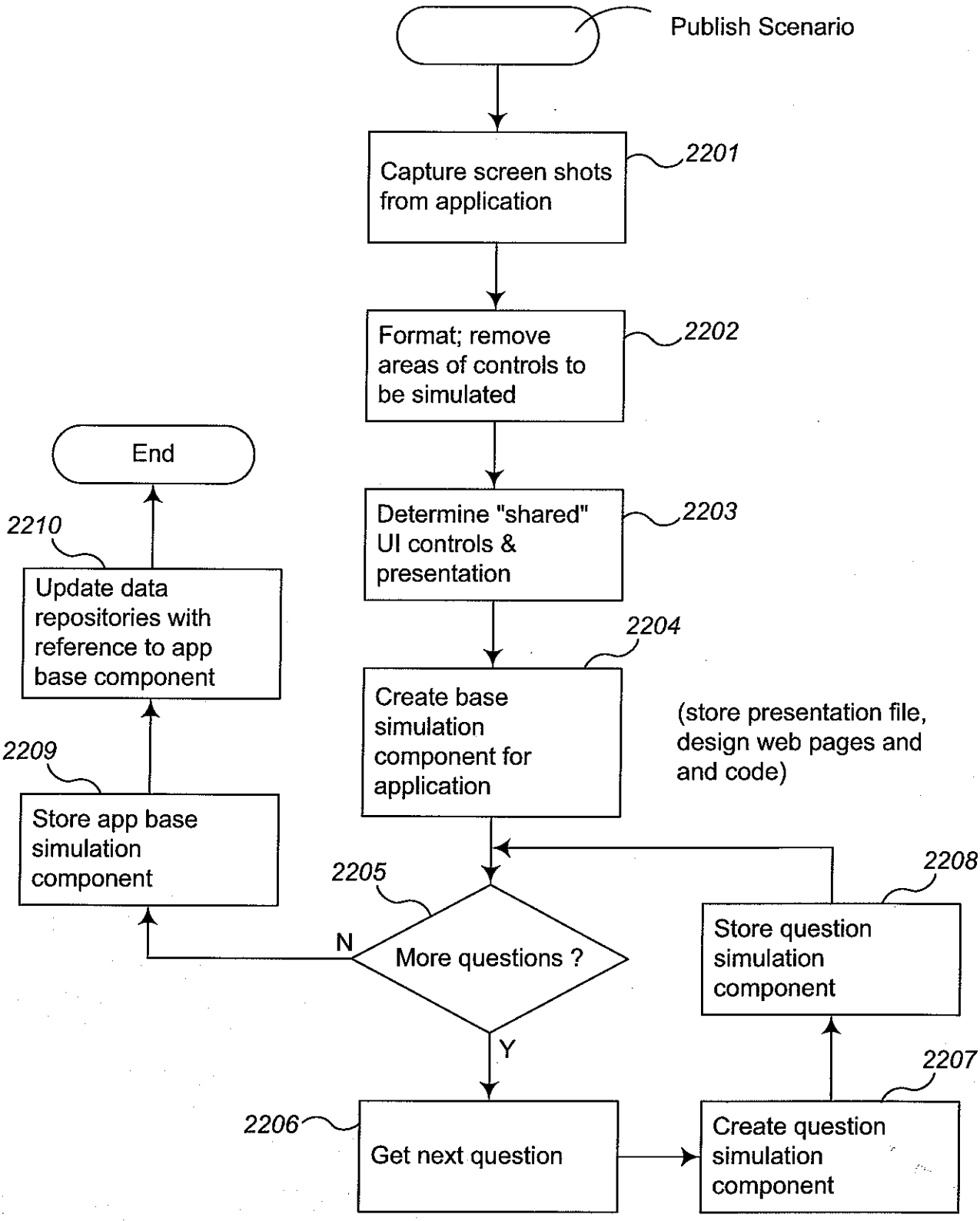
Publish Scenario
Capture screen shots from application
2201
Format; remove areas of controls to be simulated
2202
Determine "shared" UI controls & presentation
2203
Create base simulation component for application
2204
(store presentation file, design web pages and and code)
More questions ?
2205
N
Y
Store question simulation component
2208
Create question simulation component
2207
Get next question
2206
Store app base simulation component
2209
Update data repositories with reference to app base component
2210
End

Fig. 22

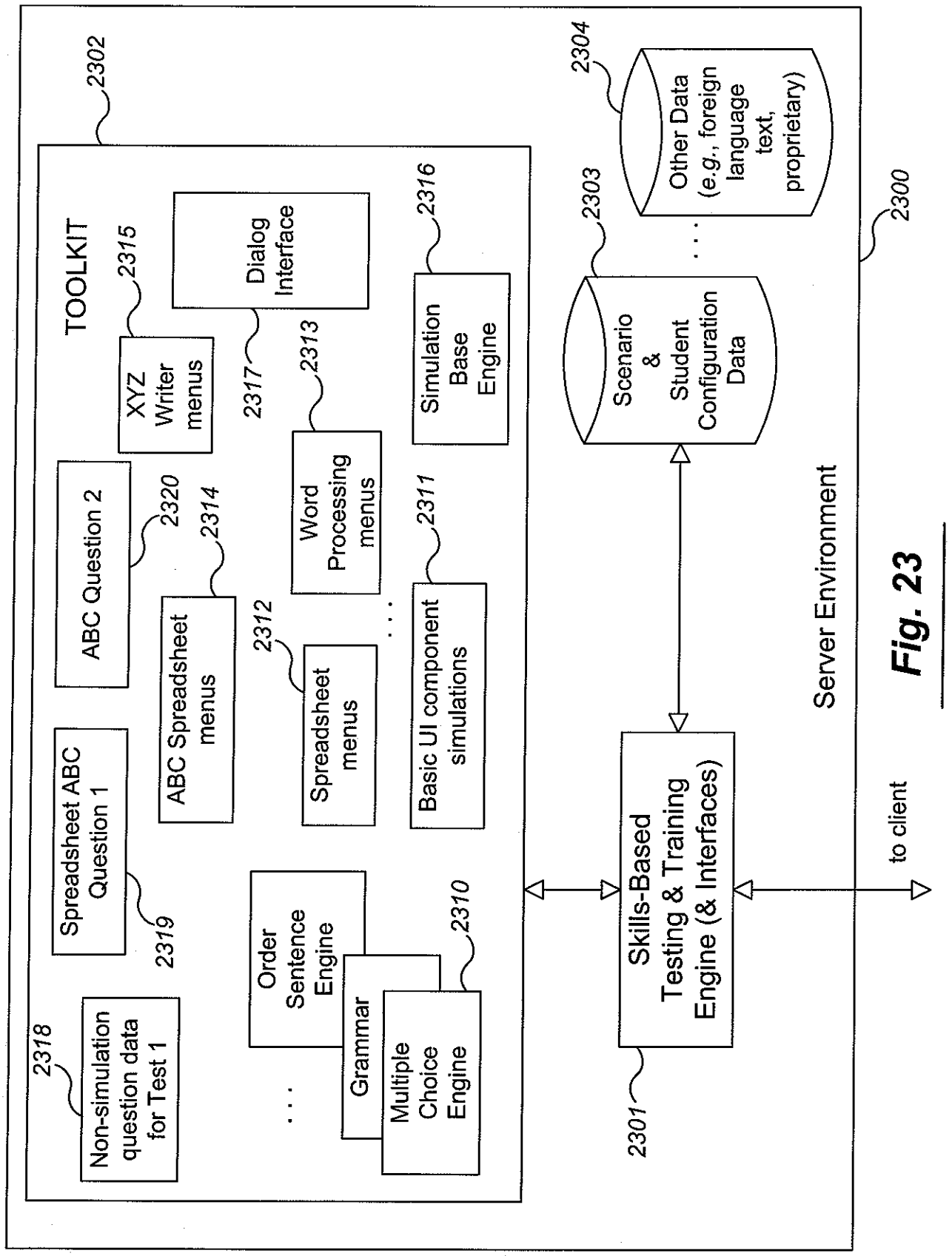
2300
Server Environment
2302
TOOLKIT
2315
XYZ Writer menus
2317
Dialog Interface
2316
Simulation Base Engine
2313
Word Processing menus
2311
Basic UI component simulations
2320
ABC Question 2
2314
ABC Spreadsheet menus
2312
Spreadsheet menus
2319
Spreadsheet ABC Question 1
2318
Non-simulation question data for Test 1
Order Sentence Engine
Grammar
Multiple Choice Engine
2310
2301
Skills-Based Testing & Training Engine (& Interfaces)
2303
Scenario & Student Configuration Data
2304
Other Data (e.g., foreign language text, proprietary)
to client

Fig. 23

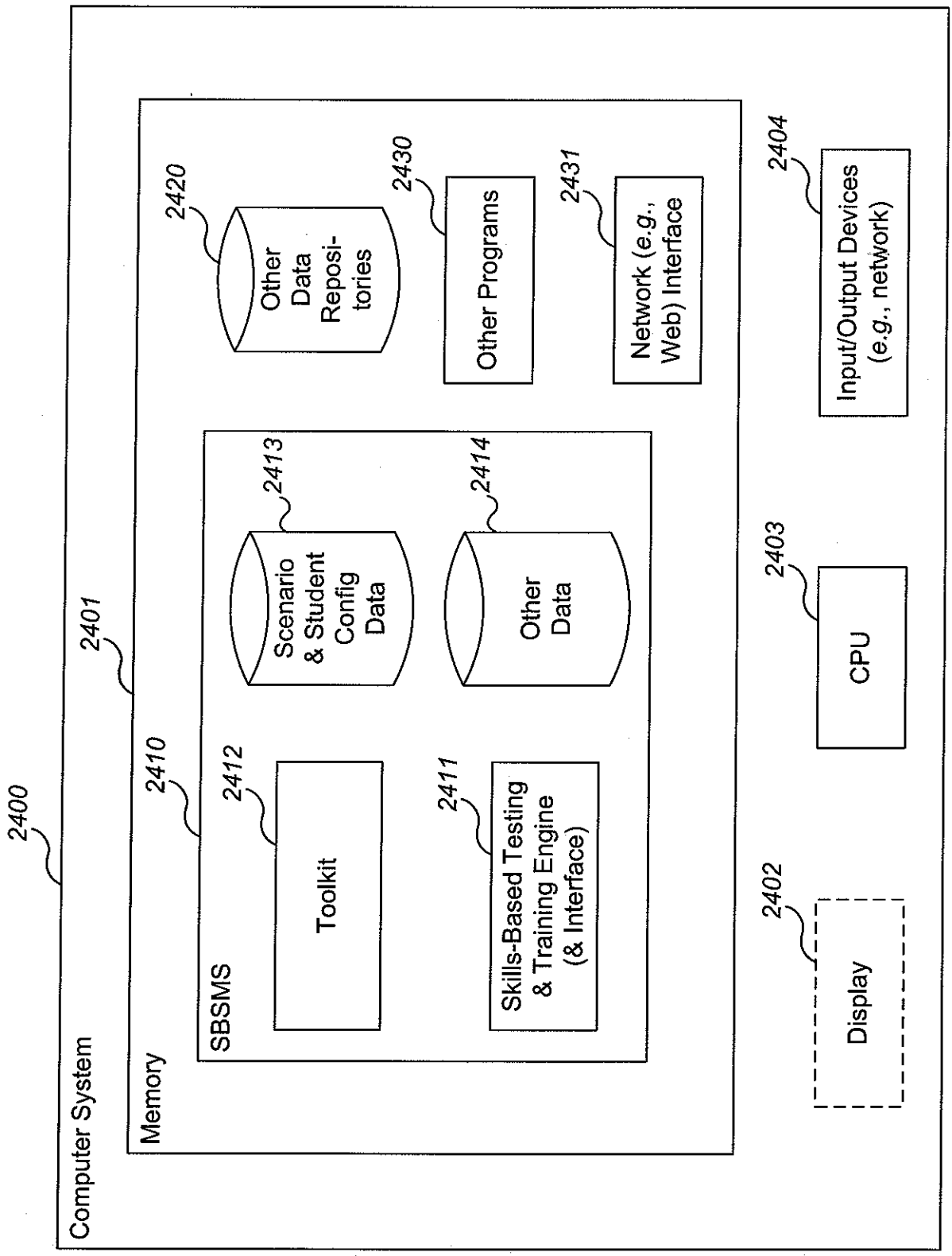
2400
Computer System
2401
Memory
2410
SBSMS
2412
Toolkit
2411
Skills-Based Testing & Training Engine (& Interface)
2413
Scenario & Student Config Data
2414
Other Data
2420
Other Data Reposi-tories
2430
Other Programs
2431
Network (e.g., Web) Interface
2402
Display
2403
CPU
2404
Input/Output Devices (e.g., network)

Fig. 24

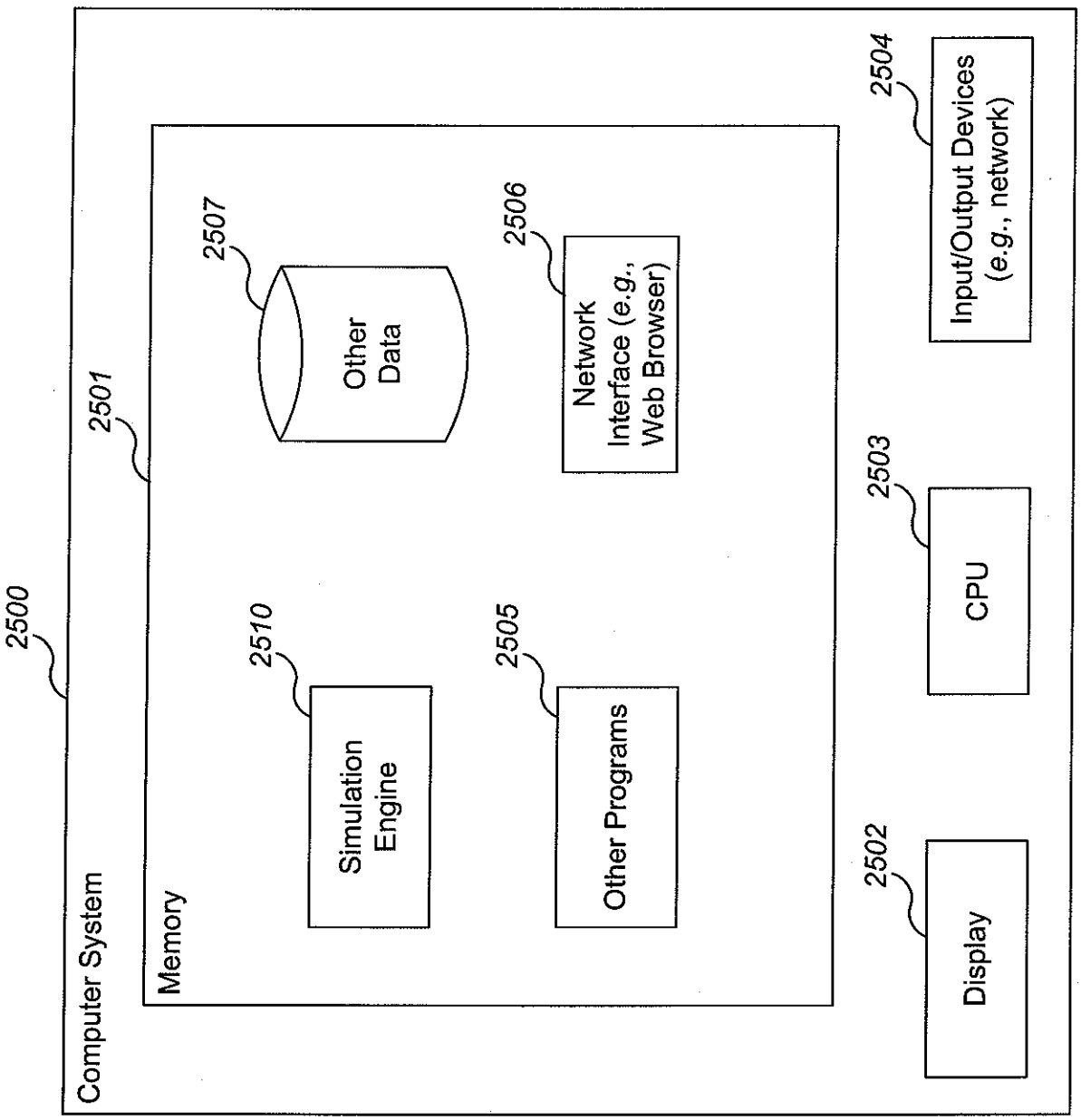
2500
Computer System
2501
Memory
2507
Other Data
2506
Network Interface (e.g., Web Browser)
2510
Simulation Engine
2505
Other Programs
2504
Input/Output Devices (e.g., network)
2503
CPU
2502
Display

Fig. 25

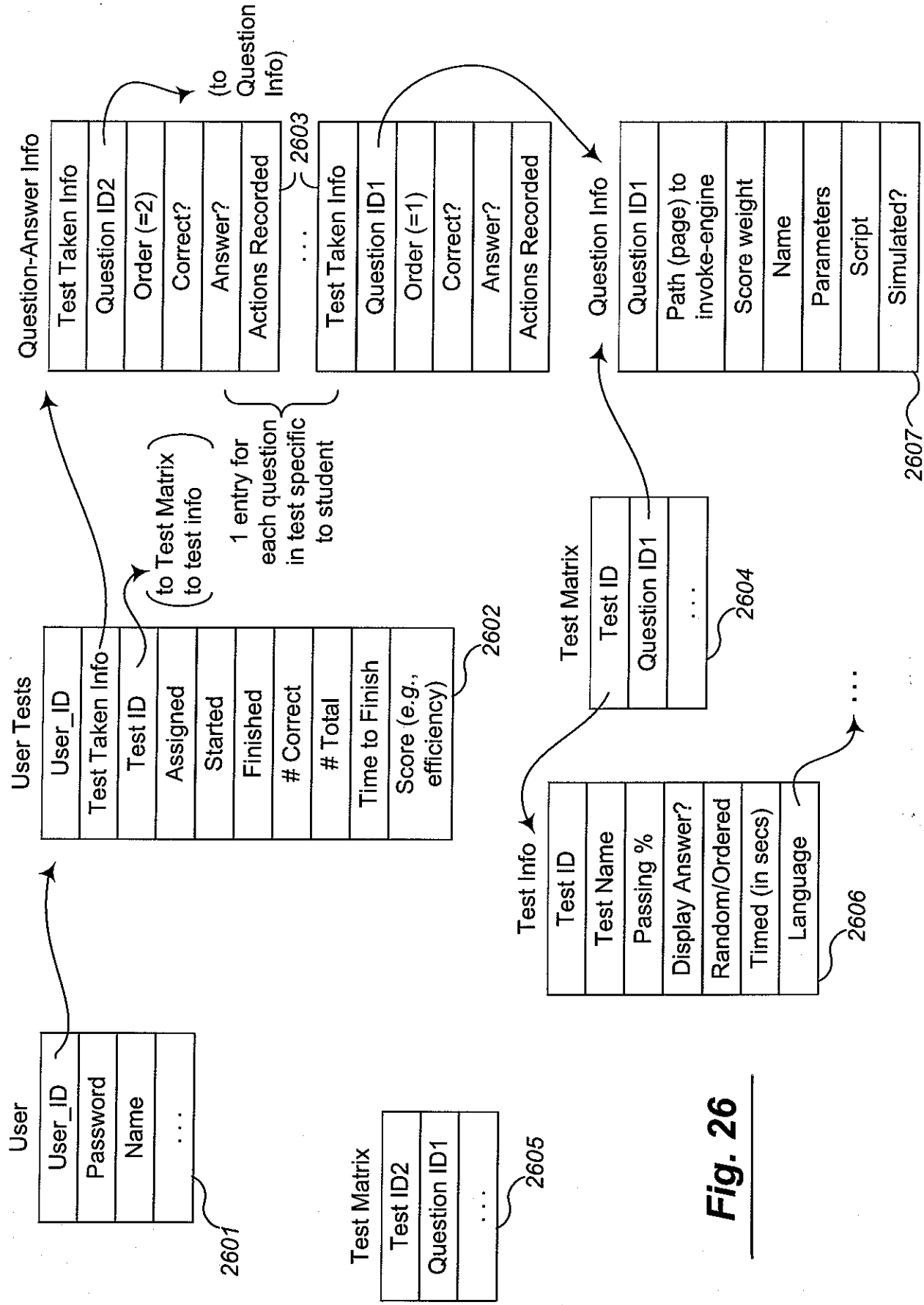
User
User_ID
Password
Name
...
2601
User Tests
User_ID
Test Taken Info
Test ID
Assigned
Started
Finished
Correct
Total
Time to Finish
Score (e.g., efficiency)
2602
(to Test Matrix to test info
1 entry for each question in test specific to student
Question-Answer Info
Test Taken Info
Question ID2
Order (=2)
Correct?
Answer?
Actions Recorded
2603
(to Question Info)
Test Taken Info
Question ID1
Order (=1)
Correct?
Answer?
Actions Recorded
Question Info
Question ID1
Path (page) to invoke-engine
Score weight
Name
Parameters
Script
Simulated?
2607
Test Matrix
Test ID
Question ID1
...
2604
Test Info
Test ID
Test Name
Passing %
Display Answer?
Random/Ordered
Timed (in secs)
Language
2606
Test Matrix
Test ID2
Question ID1
...
2605

Fig. 26

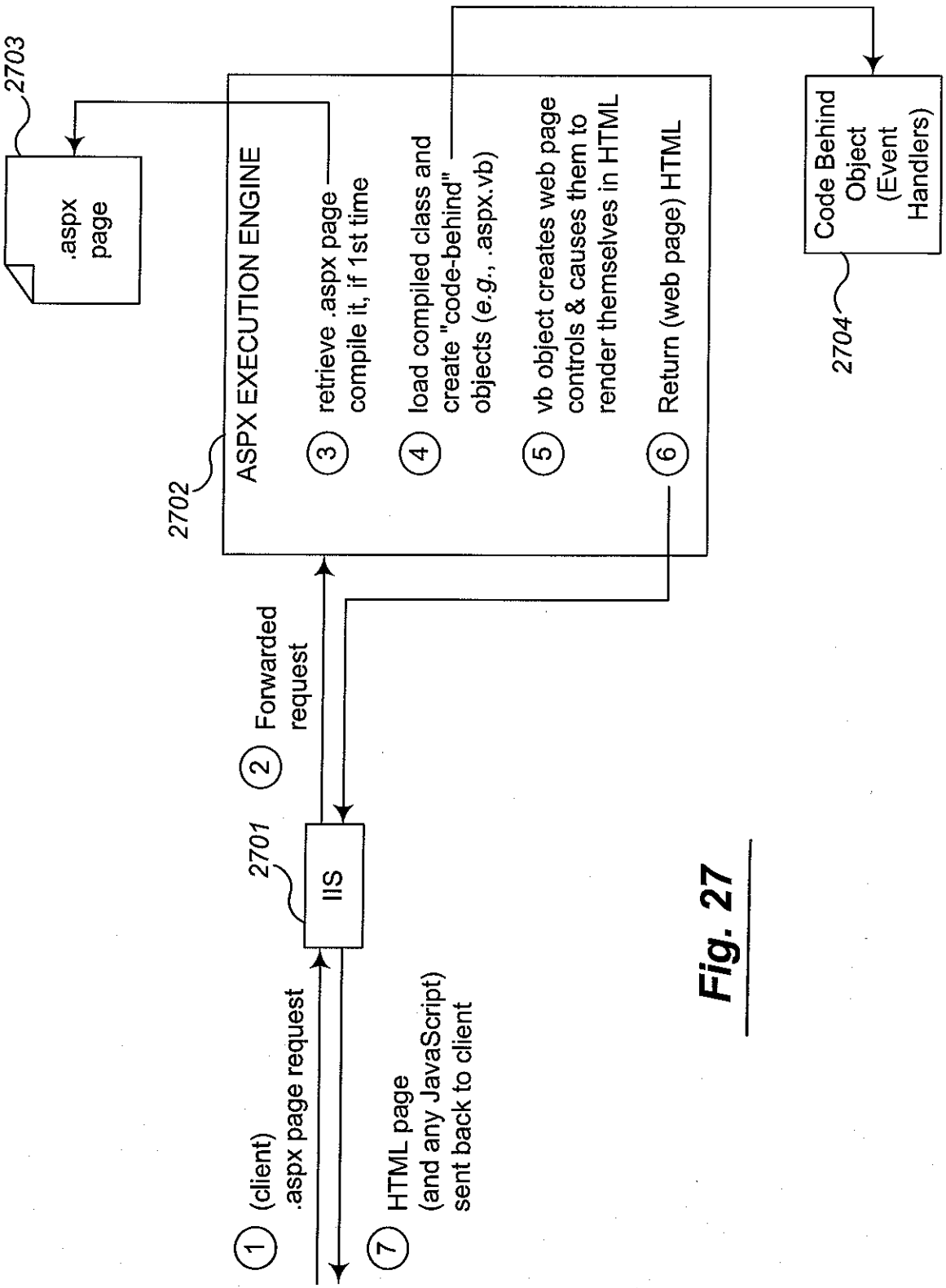
2703
.aspx page
2702
ASPX EXECUTION ENGINE
3 retrieve .aspx page compile it, if 1st time
4 load compiled class and create "code-behind" objects (e.g., .aspx.vb)
5 vb object creates web page controls & causes them to render themselves in HTML
6 Return (web page) HTML
Code Behind Object (Event Handlers)
2704
2 Forwarded request
2701
IIS
1 (client) .aspx page request
7 HTML page (and any JavaScript) sent back to client

Fig. 27

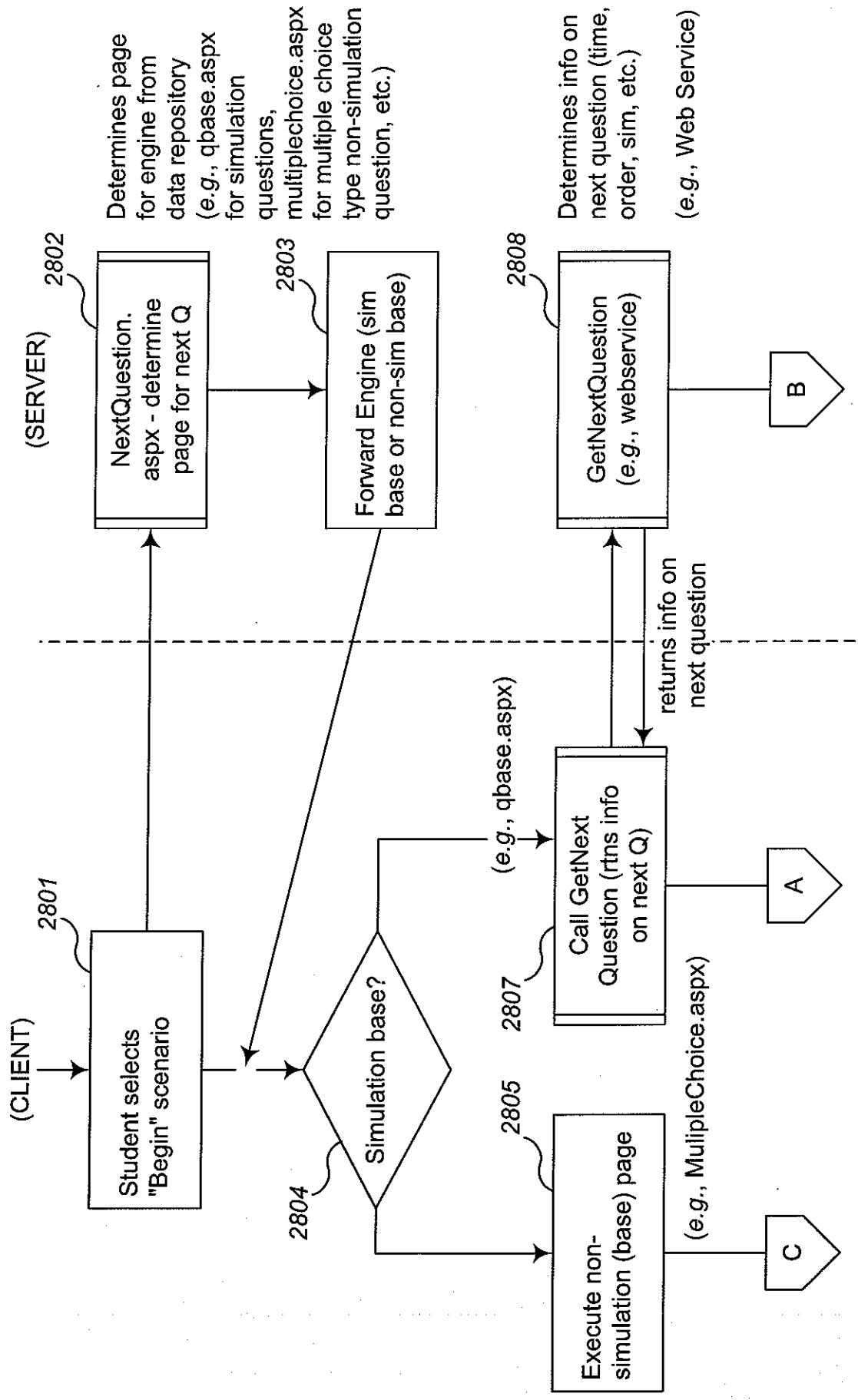
(CLIENT)
(SERVER)
2801
Student selects "Begin" scenario
2802
NextQuestion. aspx - determine page for next Q
Determines page for engine from data repository (e.g., qbase.aspx for simulation questions, multiplechoice.aspx for multiple choice type non-simulation question, etc.)
2803
Forward Engine (sim base or non-sim base)
2804
Simulation base?
(e.g., qbase.aspx)
2807
Call GetNext Question (rtns info on next Q)
2805
Execute non-simulation (base) page
(e.g., MulipleChoice.aspx)
2808
GetNextQuestion (e.g., webservice)
Determines info on next question (time, order, sim, etc.)
(e.g., Web Service)
returns info on next question
A
B
C

Fig. 28A

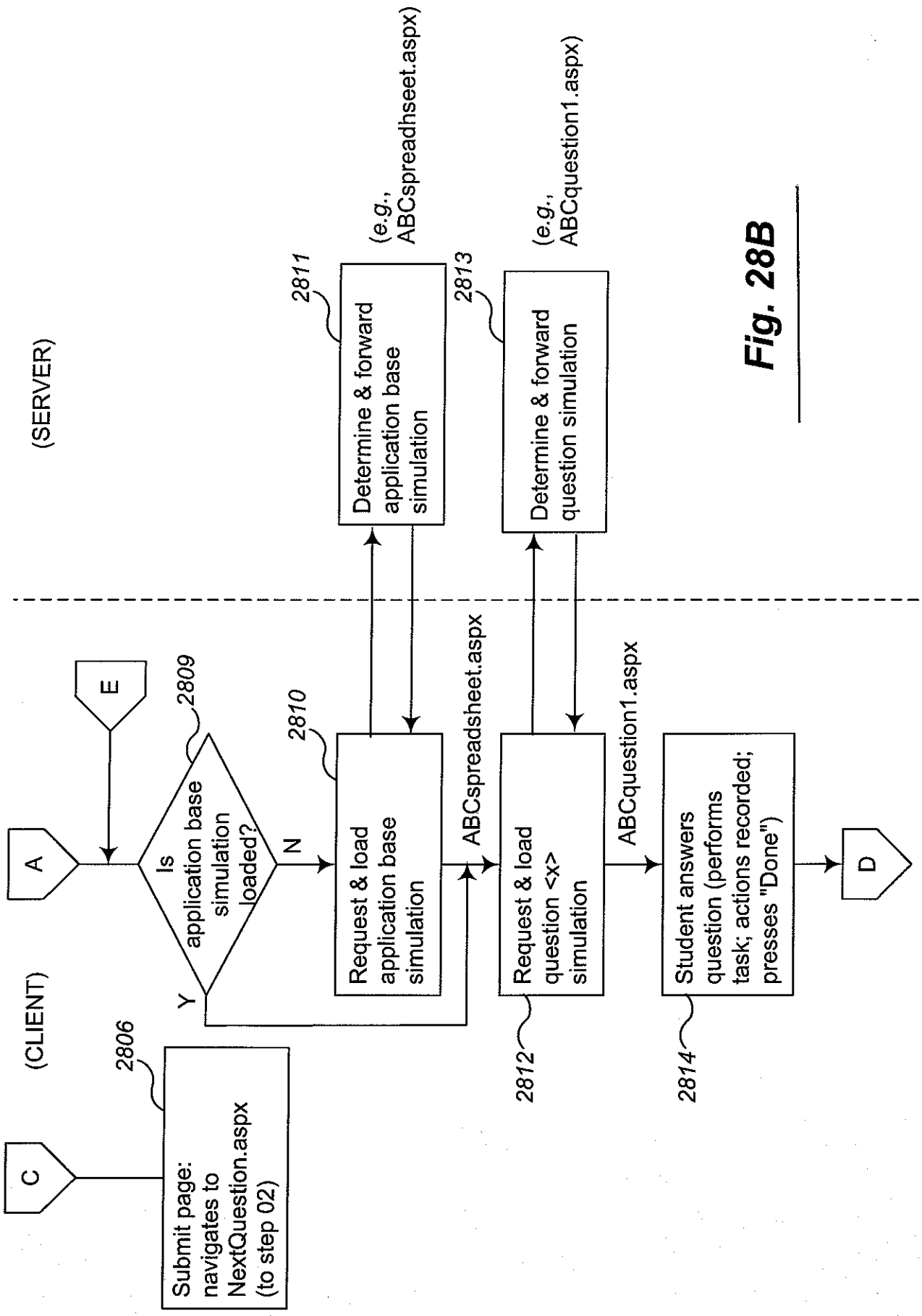
(SERVER)
(CLIENT)
2811
(e.g., ABCspreadhseet.aspx)
Determine & forward application base simulation
2813
(e.g., ABCquestion1.aspx)
Determine & forward question simulation
E
A
2809
Is application base simulation loaded?
N
Y
2810
Request & load application base simulation
ABCspreadsheet.aspx
Request & load question <x> simulation
ABCquestion1.aspx
Student answers question (performs task; actions recorded; presses "Done")
D
C
2806
Submit page: navigates to NextQuestion.aspx (to step 02)
2812
2814

Fig. 28B

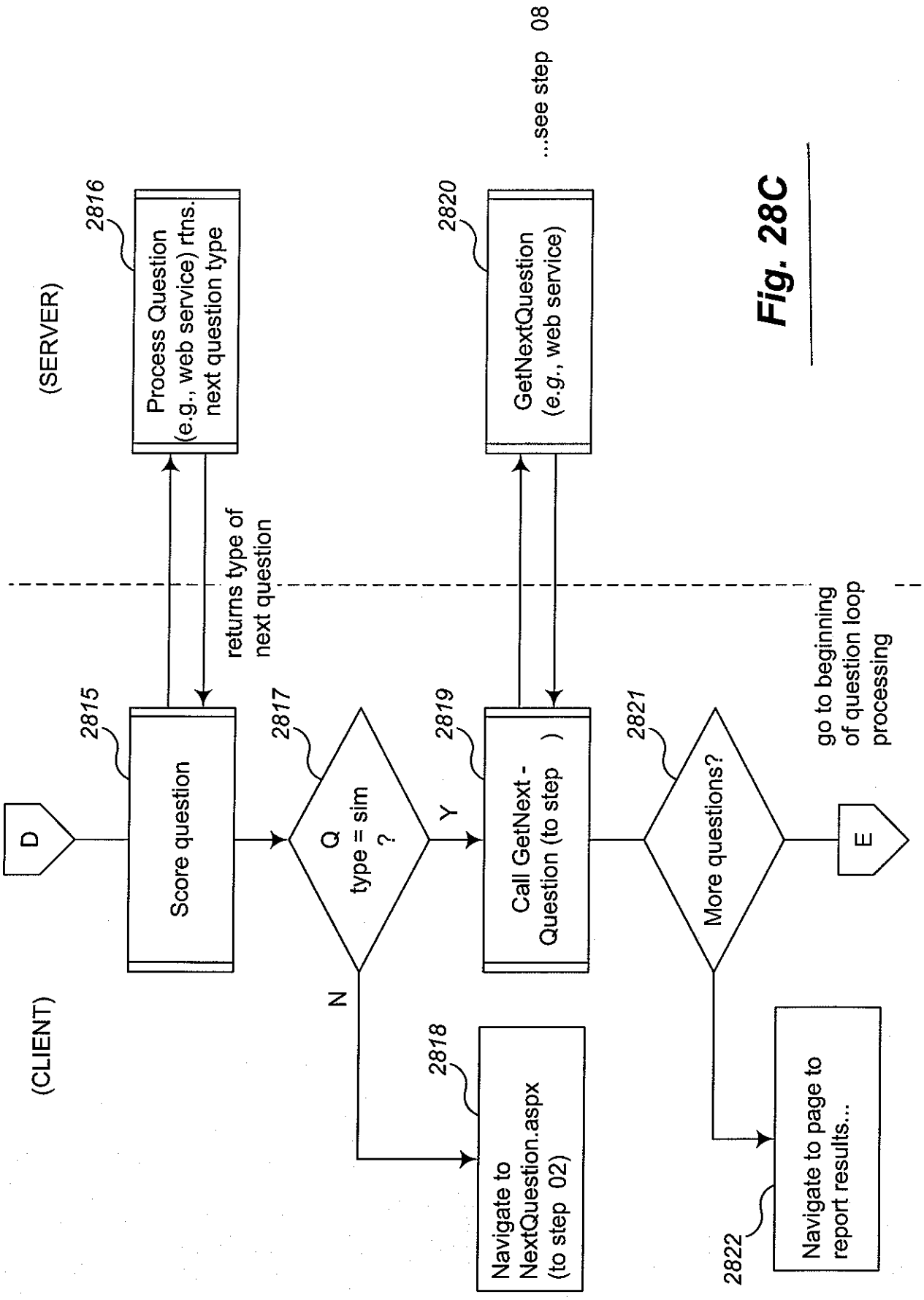
(SERVER)
(CLIENT)
2816
Process Question (e.g., web service) rtns. next question type
returns type of next question
2815
Score question
2817
Q type = sim ?
Y
N
2819
Call GetNext - Question (to step)
2820
GetNextQuestion (e.g., web service)
...see step 08
2821
More questions?
go to beginning of question loop processing
D
E
2818
Navigate to NextQuestion.aspx (to step 02)
2822
Navigate to page to report results...

Fig. 28C