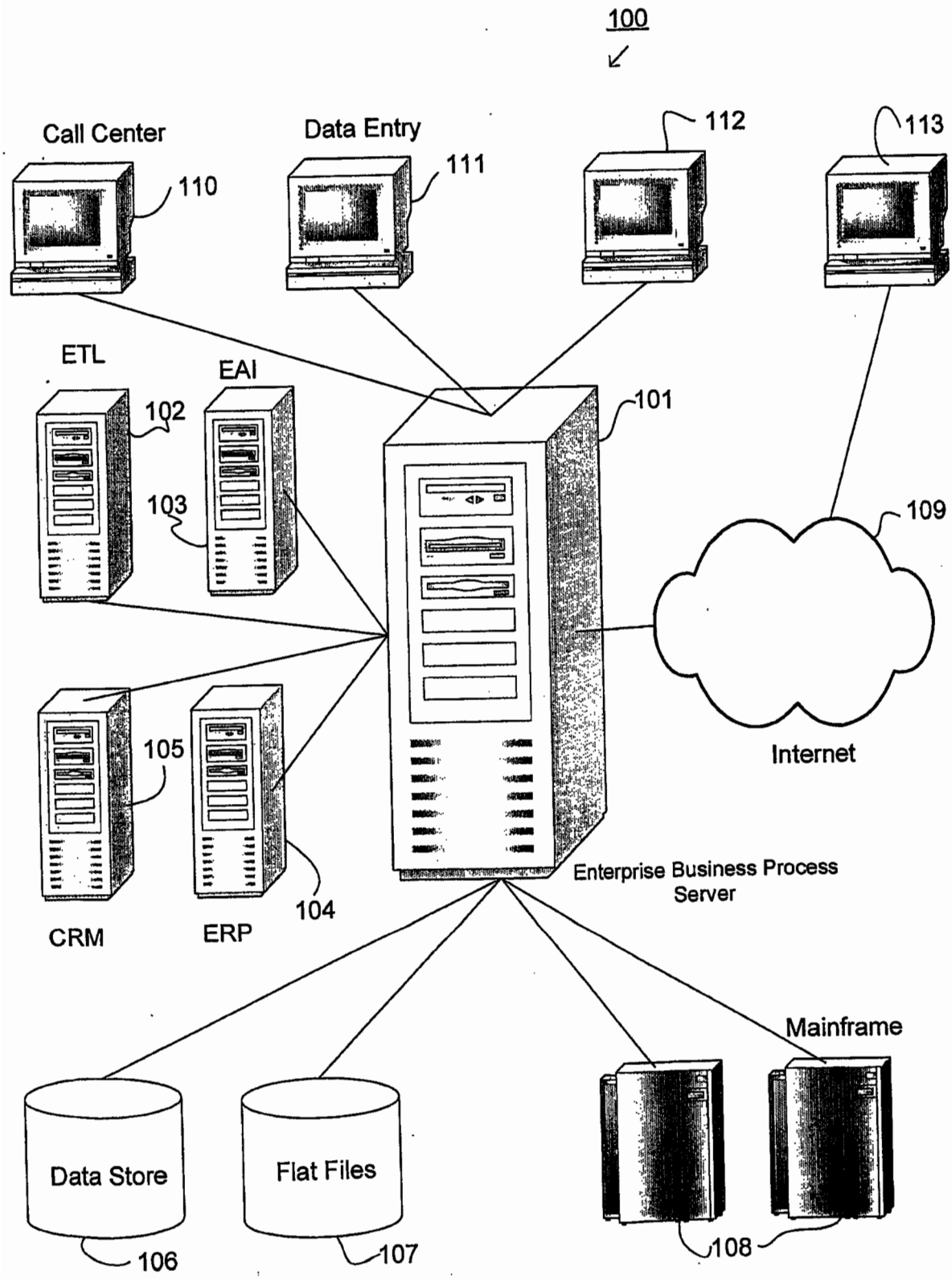

100
Call Center
110
Data Entry
111
112
113
ETL
102
EAI
103
101
109
Internet
CRM
105
ERP
104
Enterprise Business Process Server
Mainframe
Data Store
106
Flat Files
107
108

Fig. 1

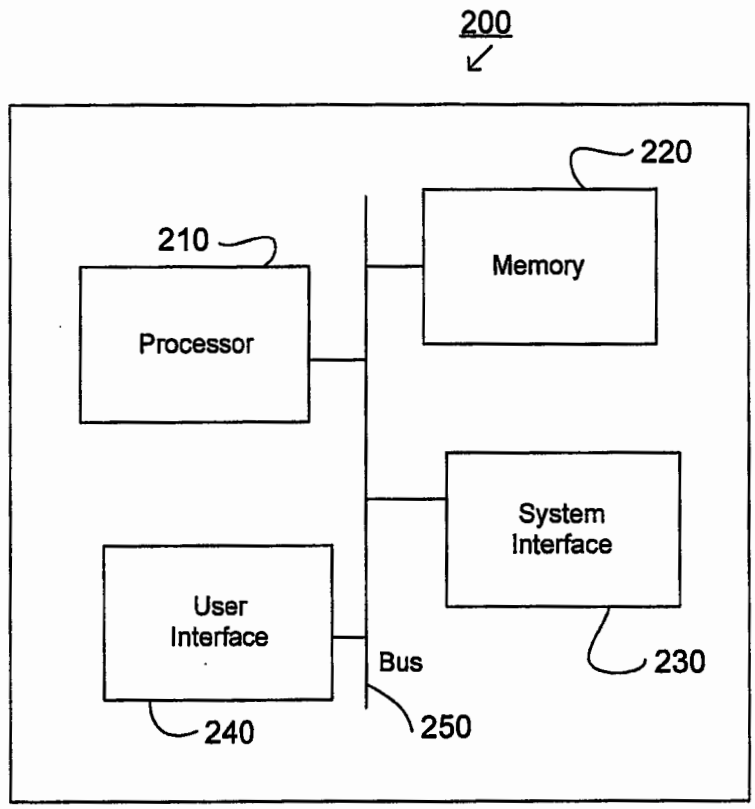

200
220
Memory
210
Processor
System
Interface
User
Interface
Bus
230
240
250

*Fig. 2*

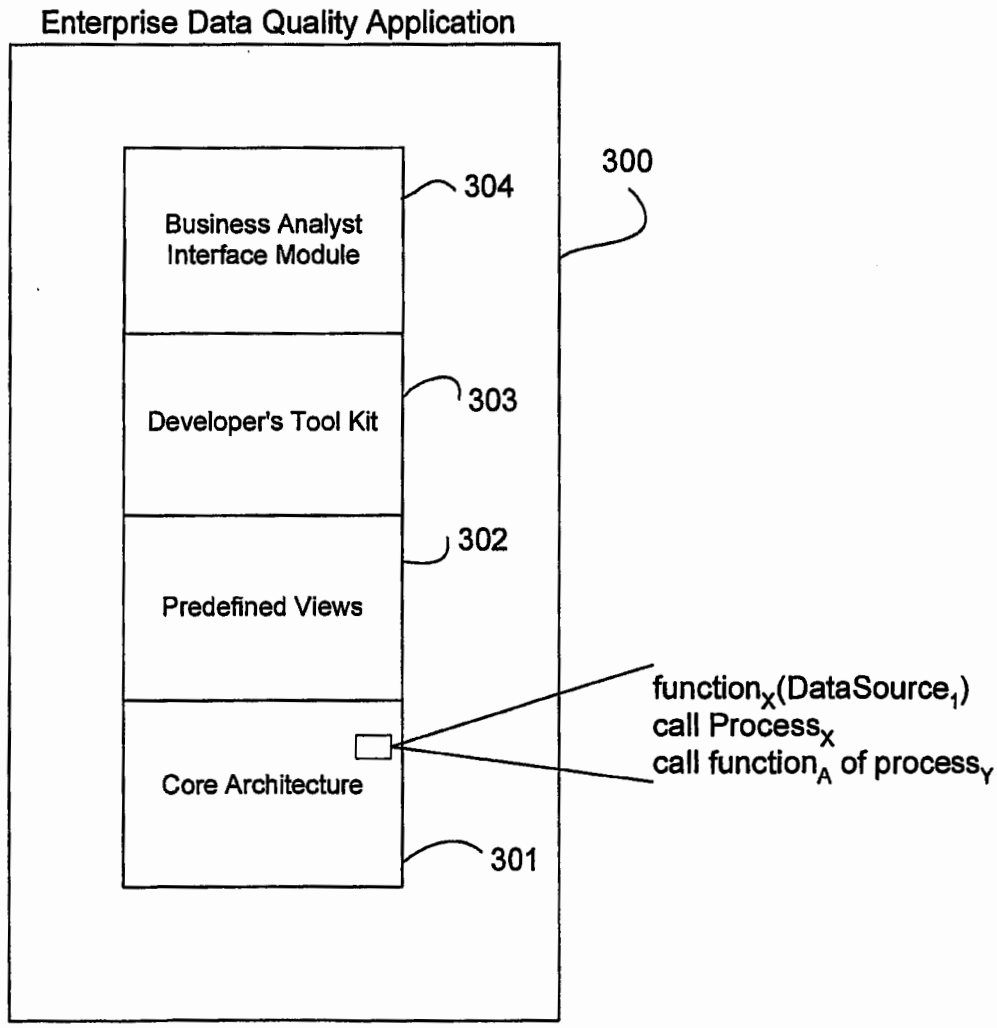

Enterprise Data Quality Application
300
Business Analyst Interface Module
304
Developer's Tool Kit
303
Predefined Views
302
Core Architecture
301
function$_X$(DataSource$_1$)
call Process$_X$
call function$_A$ of process$_Y$

*Fig. 3*

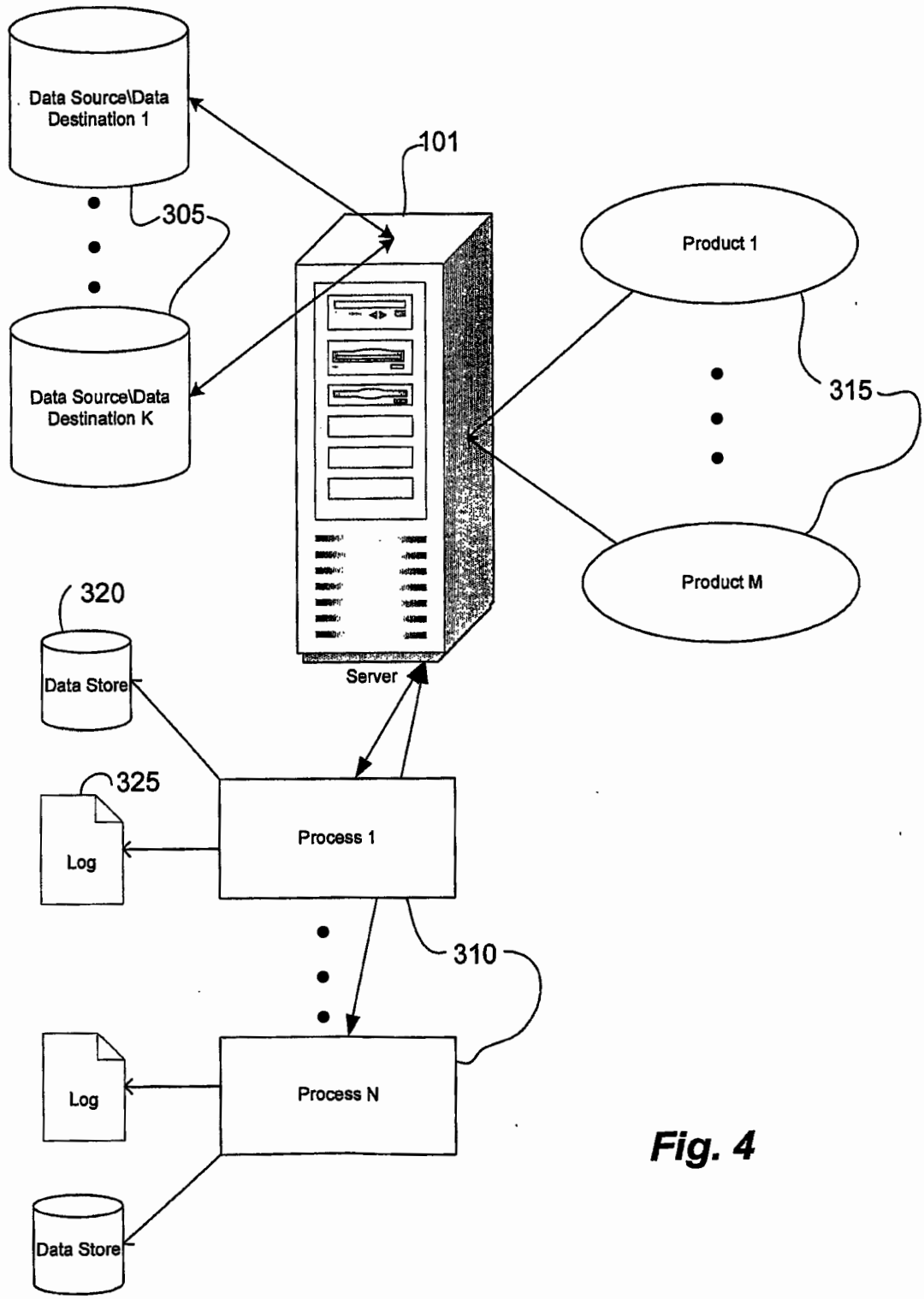
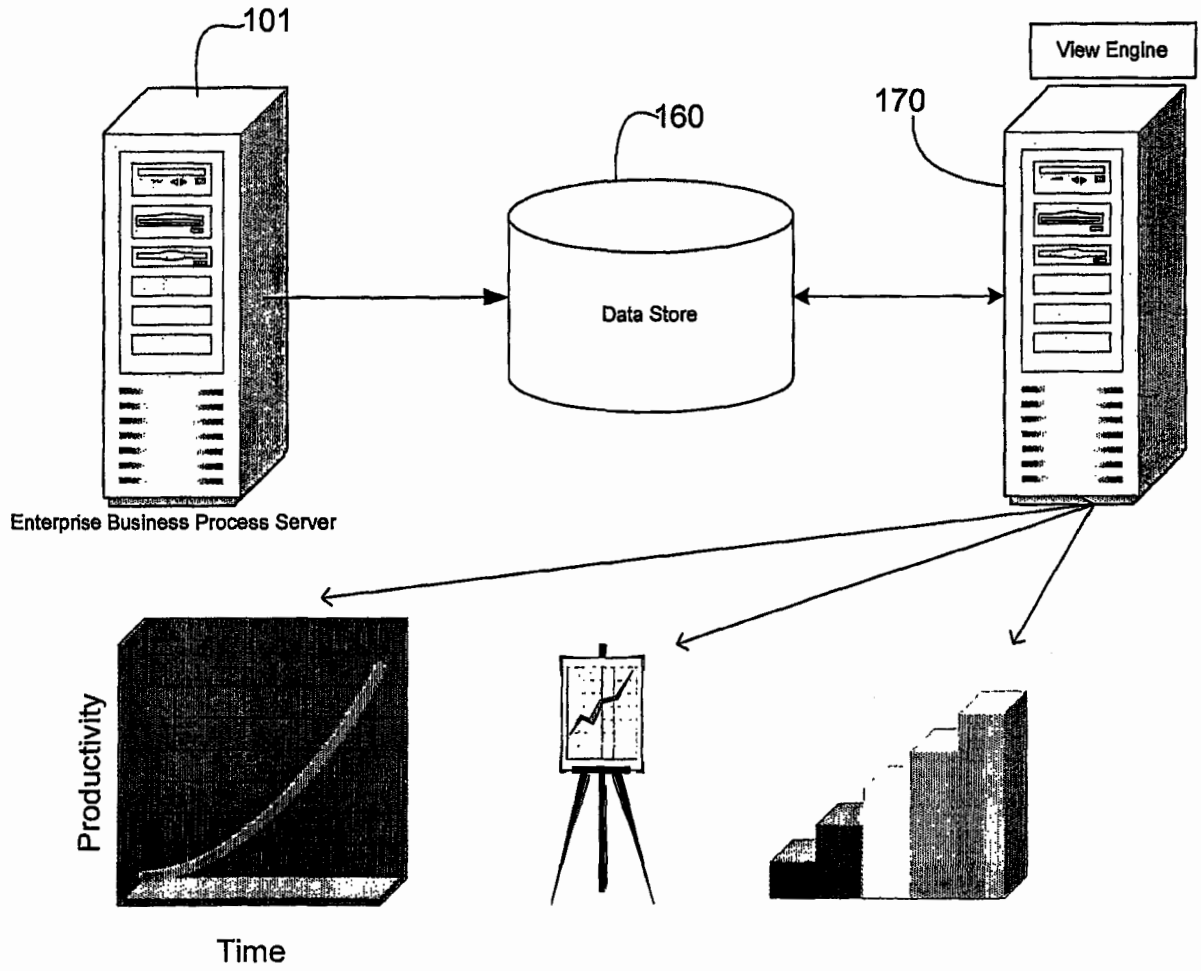

Data Source\Data Destination 1
305
Data Source\Data Destination K
101
Server
Product 1
315
Product M
320
Data Store
325
Log
Process 1
310
Log
Process N
Data Store

*Fig. 4*


101
View Engine
160
170
Data Store
Enterprise Business Process Server
Productivity
Time

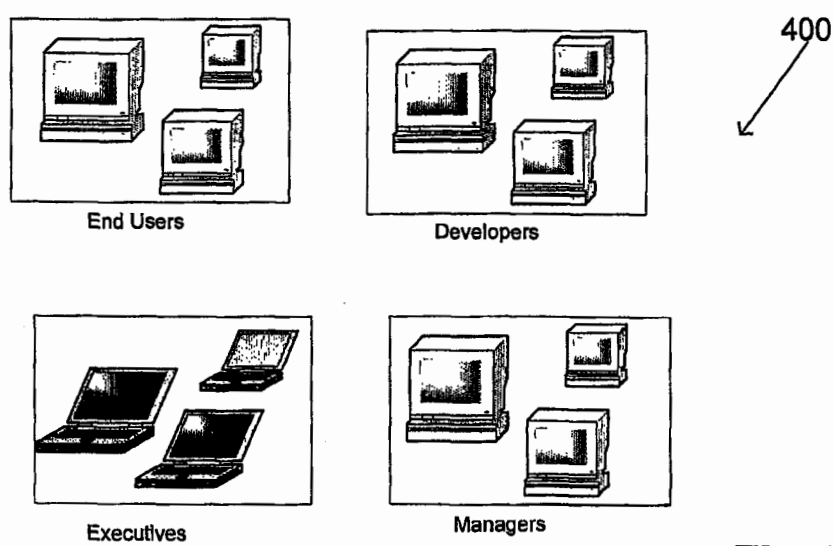
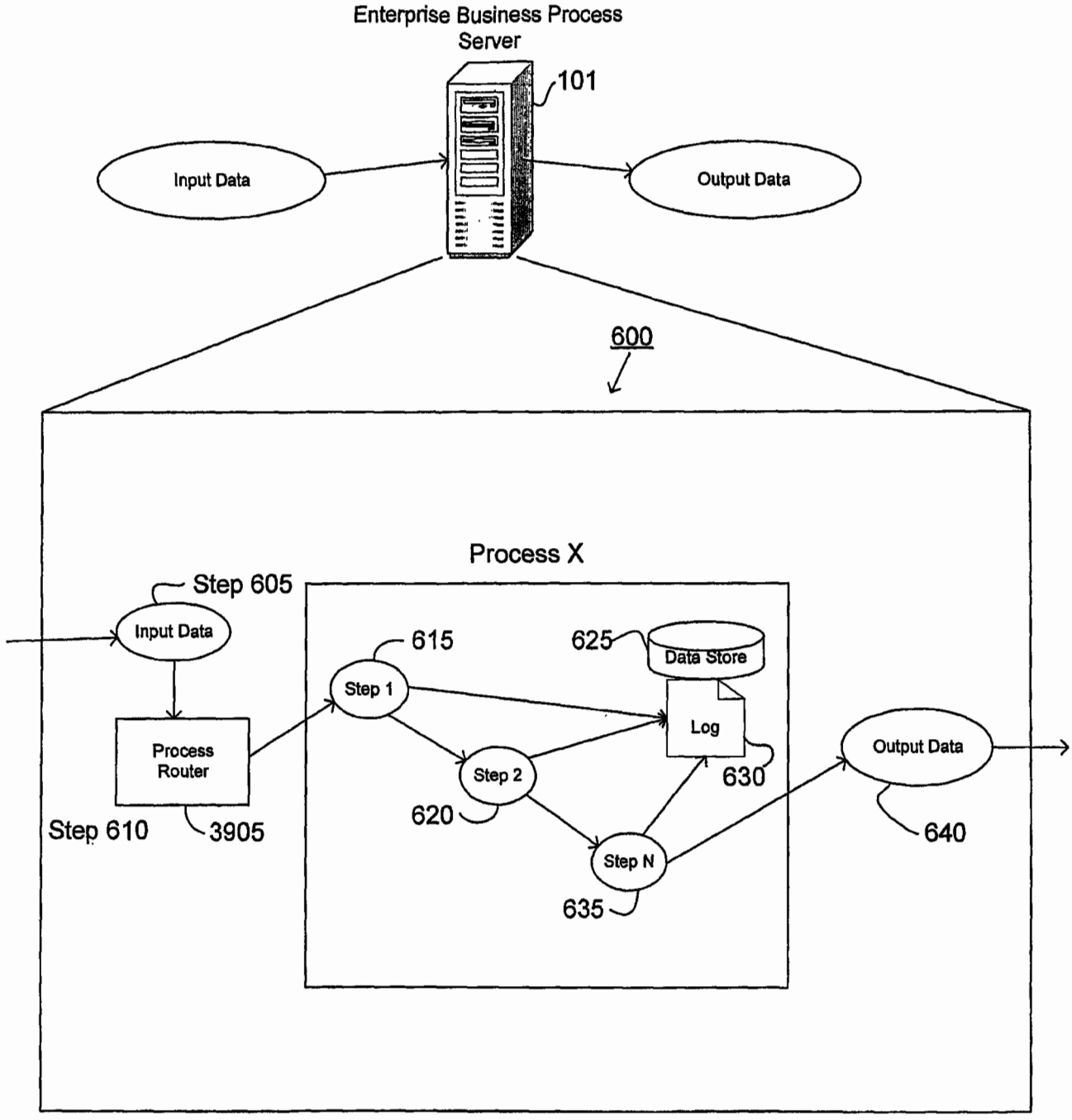

400
End Users
Developers
Executives
Managers

*Fig. 5*




1) Input Data is received by the Enterprise Business Process Server

2) Input Data is passed to the Process Router

3) Based upon the Process Id # the Process Router directs the input data to the correct process

4) Process X receives the input and passes it to each step in the process

5) After each step in a process the results of that step are logged and the data is passed to the next step

6) After the final step is complete the data is passed to the Output data structure

7) The output data is then sent to a data destination

***Fig. 6***

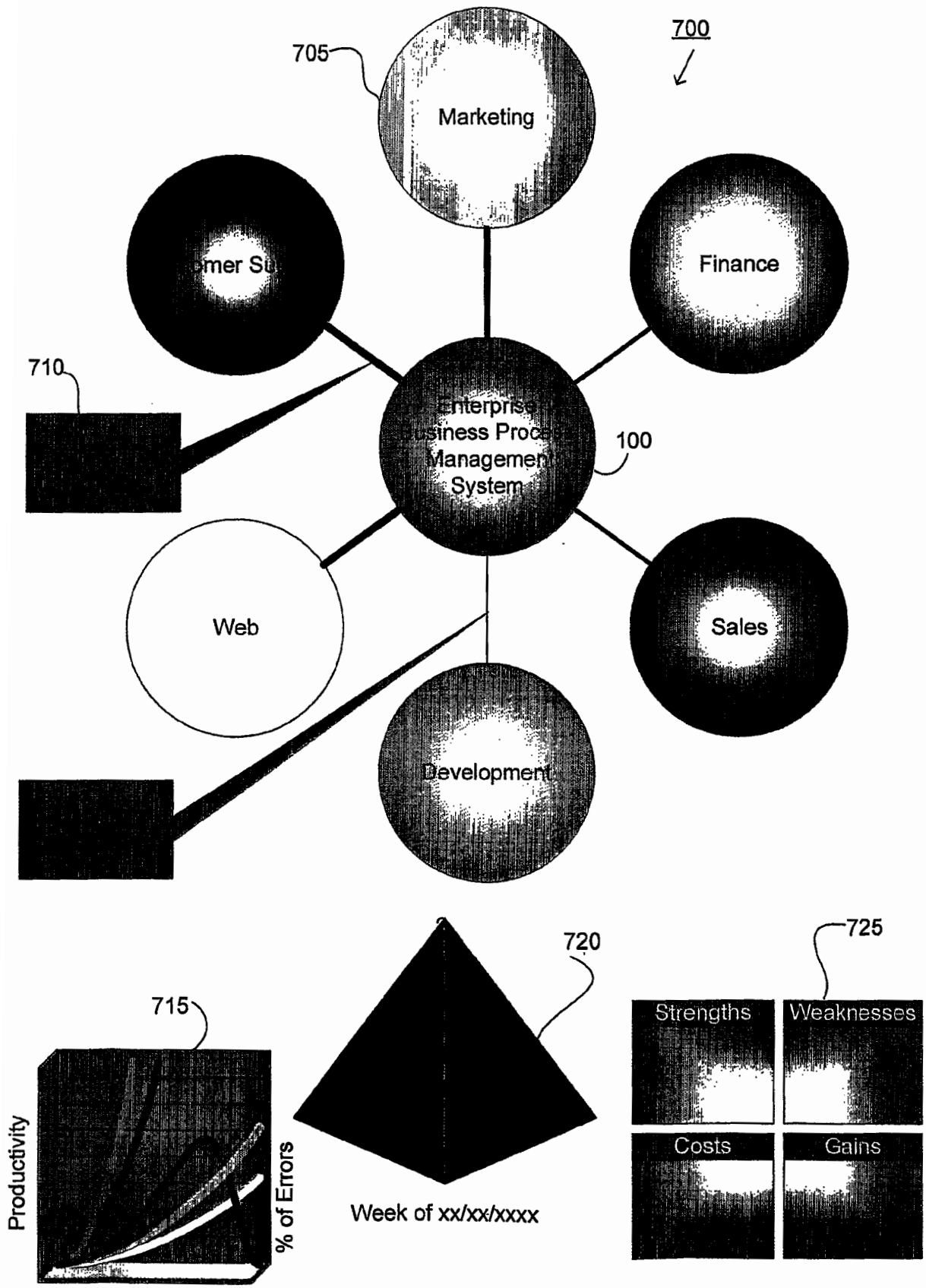

700
705
Marketing
Finance
710
Enterprise
Business Proc
Managemen
System
100
Web
Sales
Development
715
Productivity
% of Errors
Time
720
Week of xx/xx/xxxx
725
Strengths
Weaknesses
Costs
Gains

*Fig. 7*

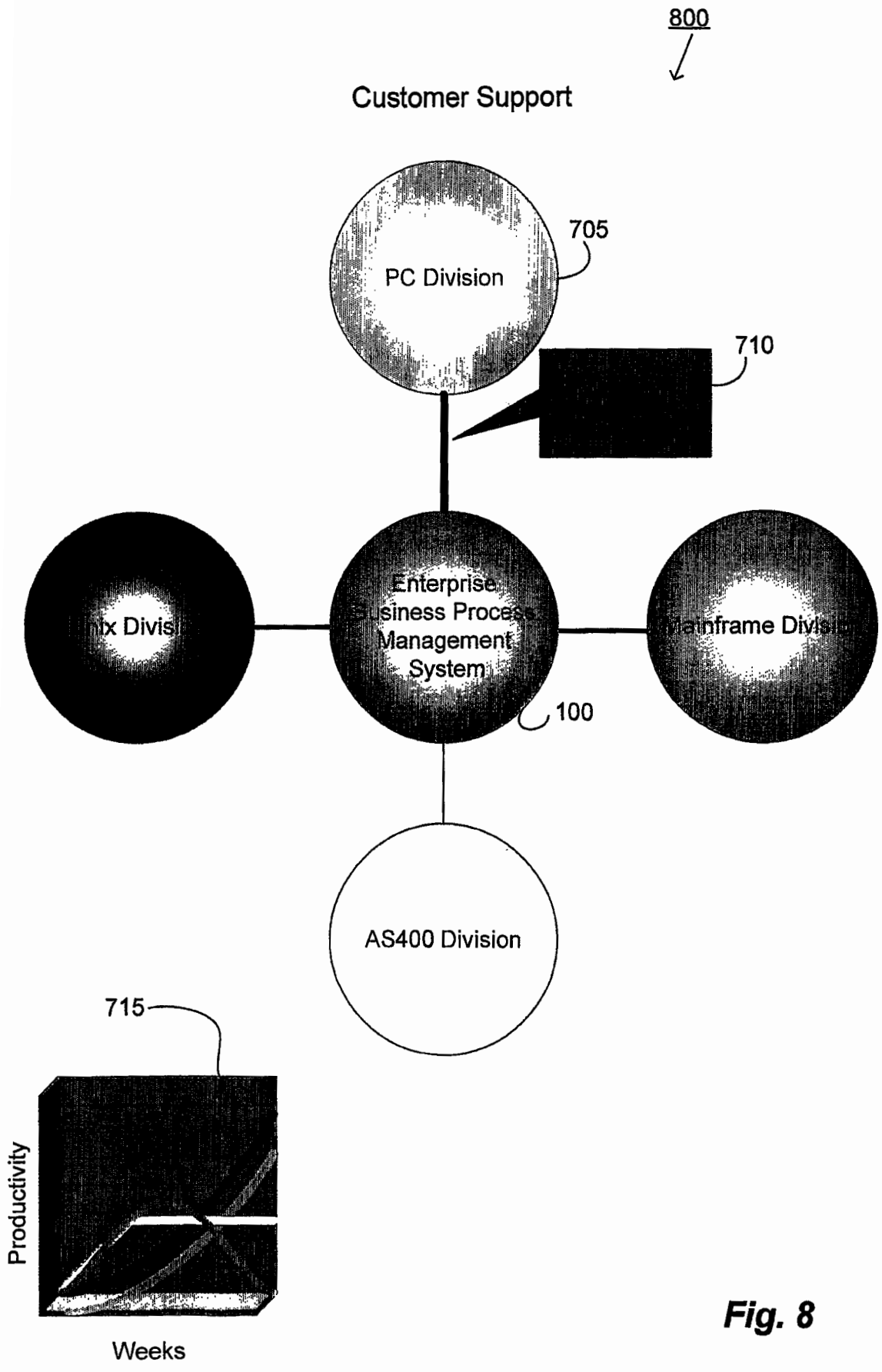

800
Customer Support
705
PC Division
710
Enterprise
Business Process
Management
System
100
AS400 Division
715
Productivity
Weeks

*Fig. 8*

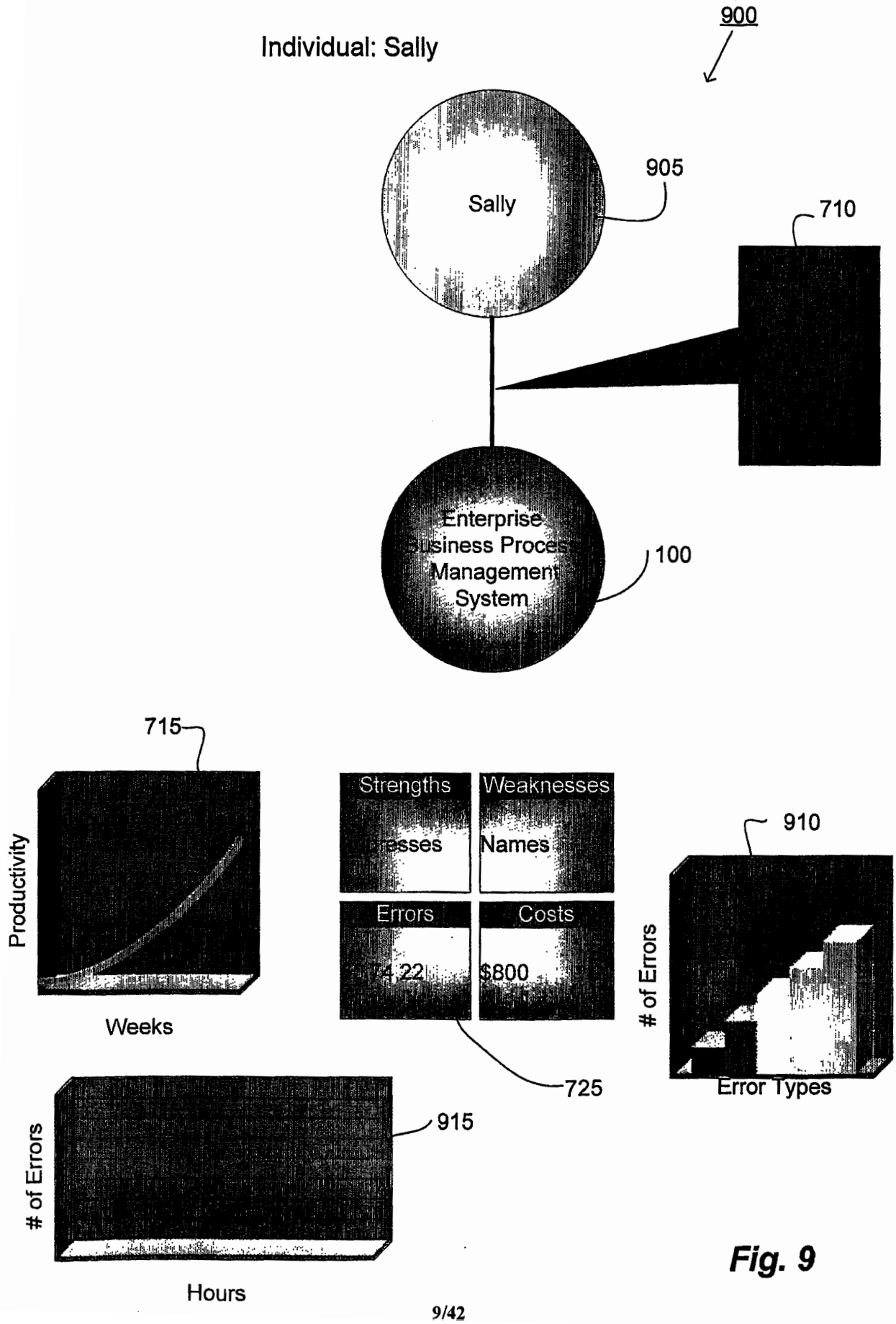

900
Individual: Sally
Sally
905
710
Enterprise Business Process Management System
100
715
Productivity
Weeks
Strengths
Weaknesses
Names
Errors
Costs
$800
725
910
# of Errors
Error Types
915
# of Errors
Hours

Fig. 9

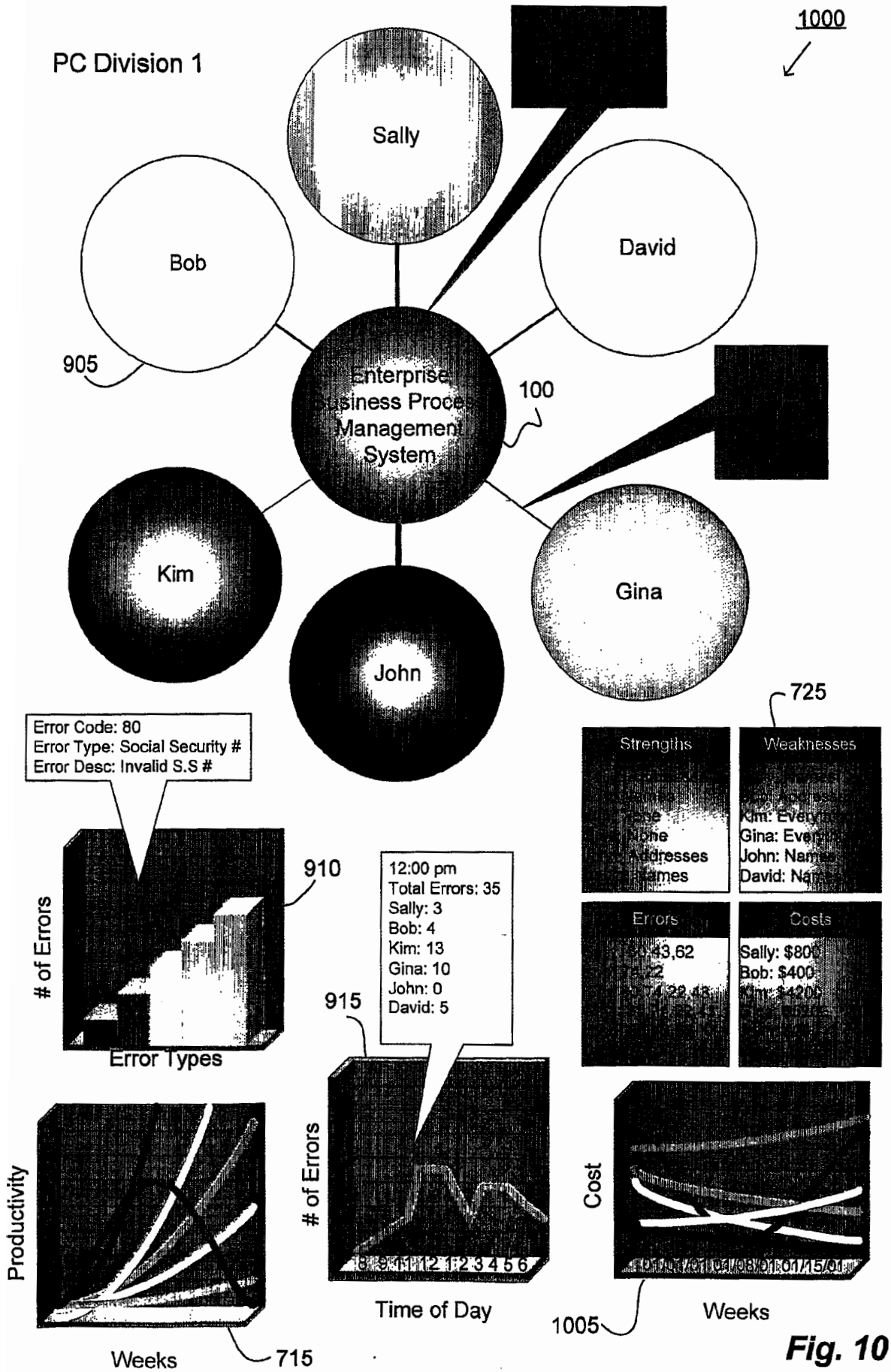

1000
PC Division 1
Sally
Bob
David
905
Enterprise Business Process Management System
100
Kim
Gina
John
725
Strengths
Weaknesses
Error Code: 80
Error Type: Social Security #
Error Desc: Invalid S.S #
# of Errors
910
Error Types
12:00 pm
Total Errors: 35
Sally: 3
Bob: 4
Kim: 13
Gina: 10
John: 0
David: 5
915
Errors
Costs
Sally: $80
Bob: $400
# of Errors
Time of Day
Cost
Productivity
Weeks
715
Weeks
1005

Fig. 10

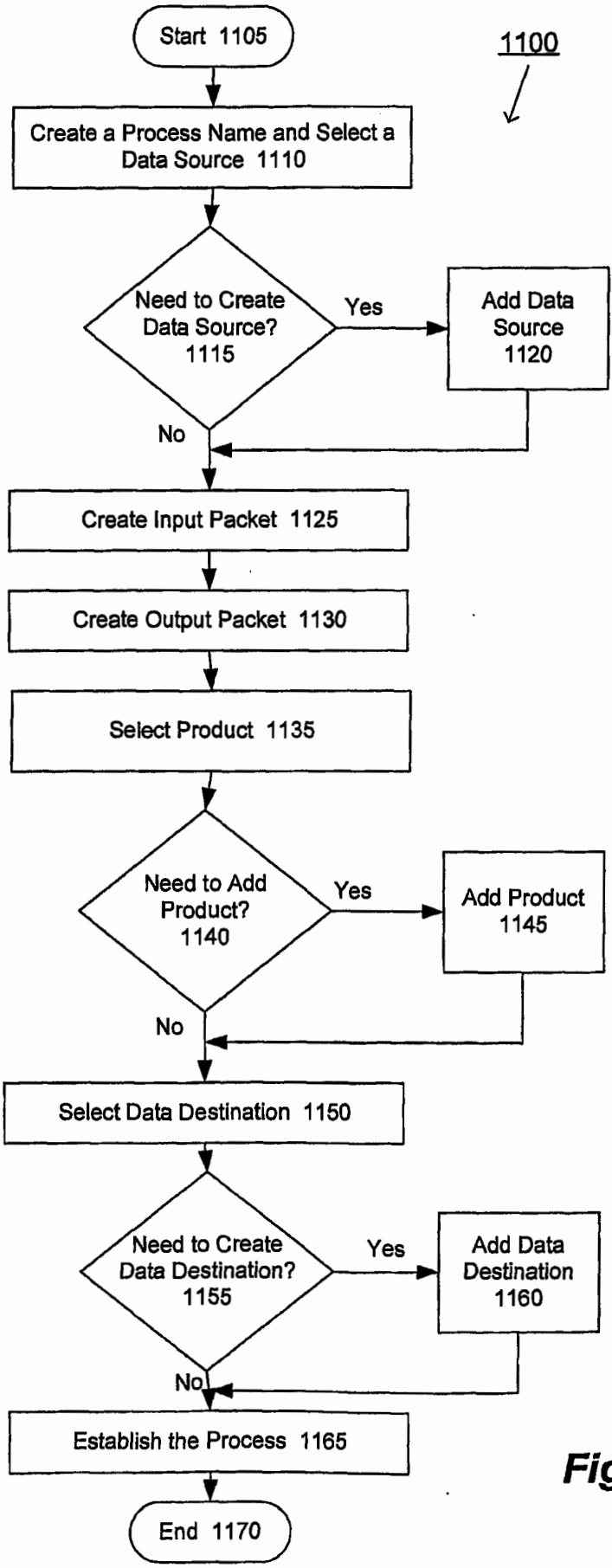

Start 1105
1100
Create a Process Name and Select a Data Source 1110
Need to Create Data Source? 1115
Yes
Add Data Source 1120
No
Create Input Packet 1125
Create Output Packet 1130
Select Product 1135
Need to Add Product? 1140
Yes
Add Product 1145
No
Select Data Destination 1150
Need to Create Data Destination? 1155
Yes
Add Data Destination 1160
No
Establish the Process 1165
End 1170

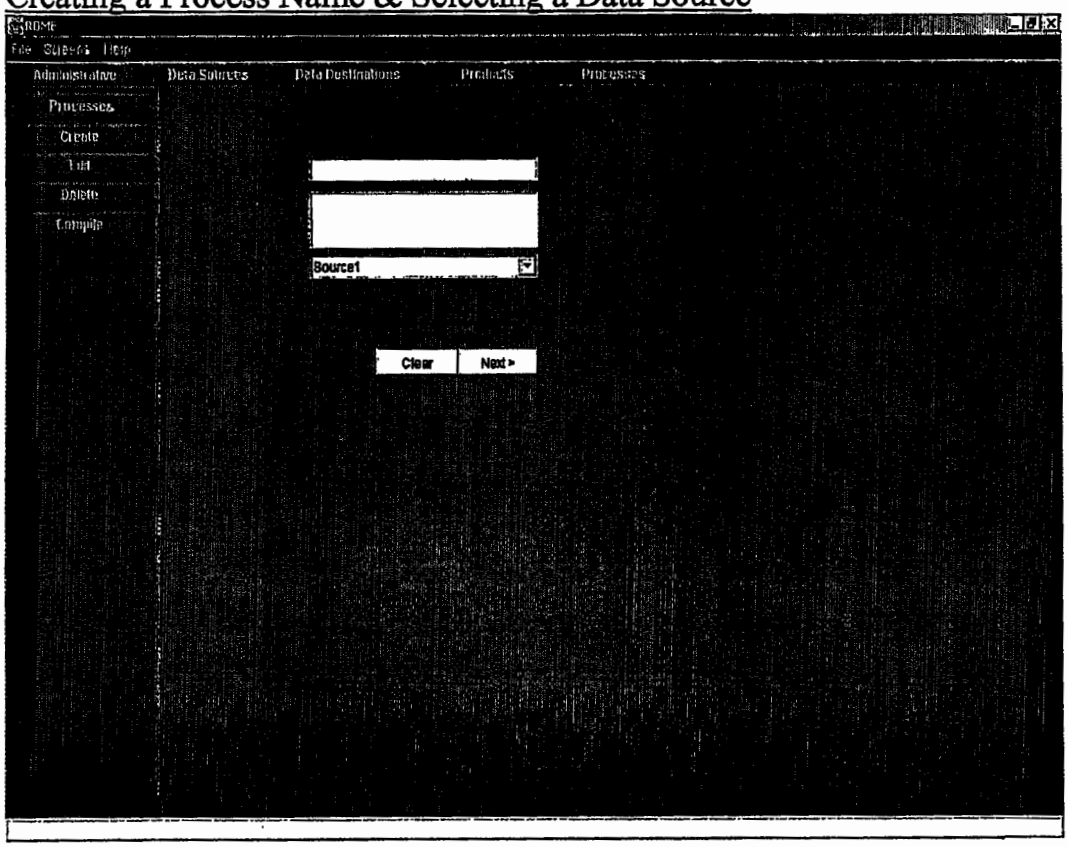
*Fig. 11*

# Processes

What are Processes? How are they used?

Creating a Process 1200

Creating a Process Name & Selecting a Data Source




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]Steps to Create a Process

1. Select **Processes -> Create** from the Menu Bar
2. Create a Process Name **(Required)**
3. Create a Description for this Process (Optional)
4. Select a Data Source for this Process **(Required)**
5. Click **Next** to continue or **Clear** to Reset

***Fig. 12***

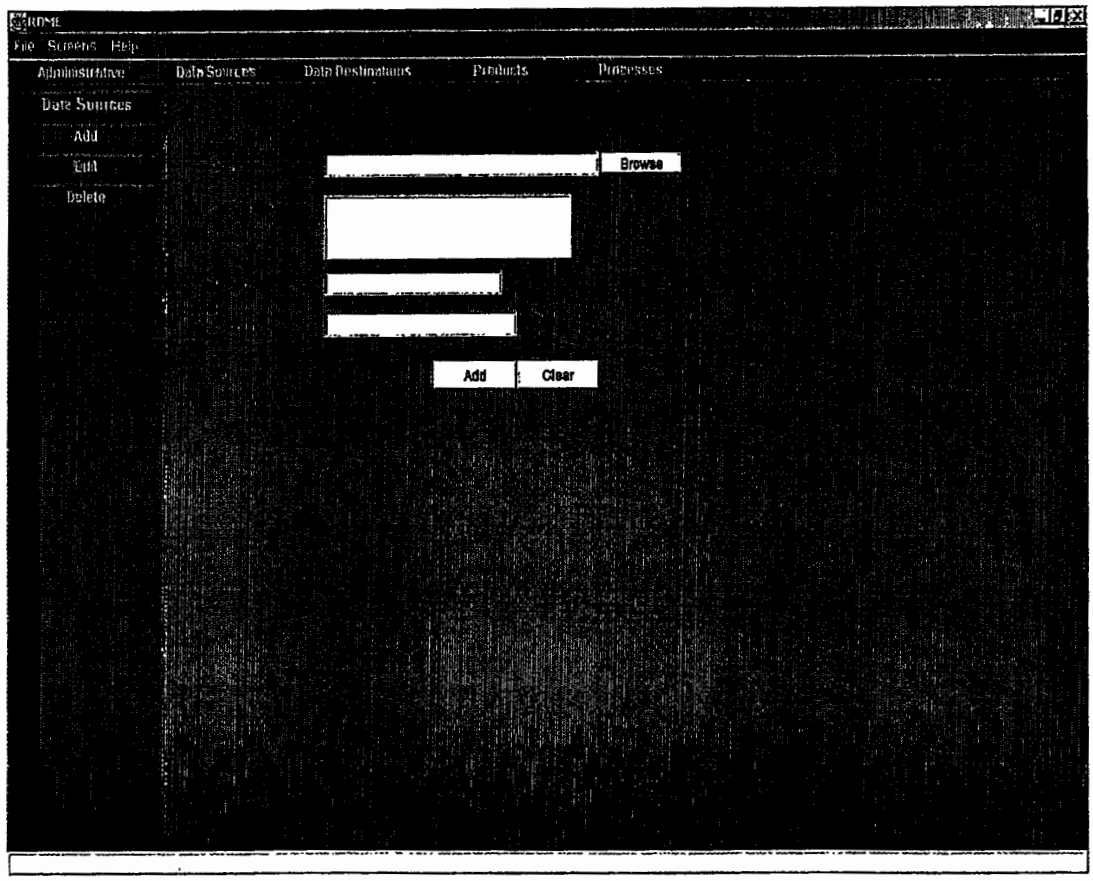
# Data Sources

Description of Data Sources

A Data Source can be Database, Application, etc.

1300

Adding a Data Source




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Steps to Create a Data Source

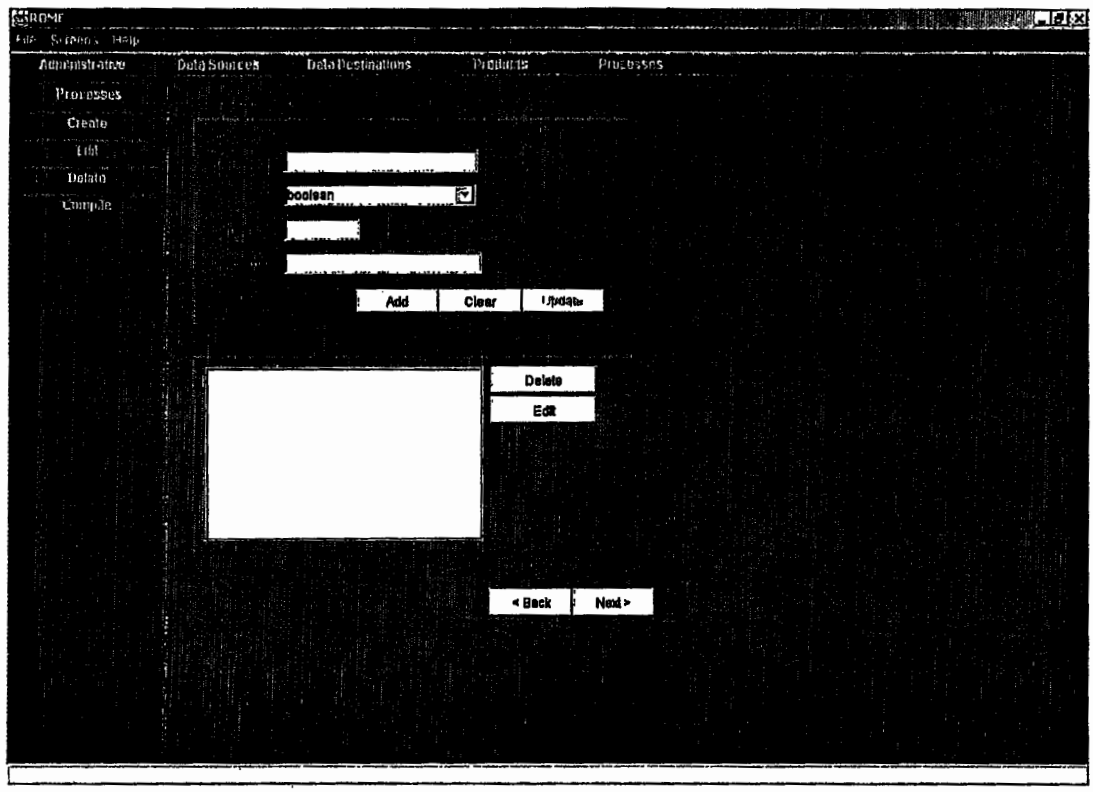
1. Select **Data Sources -> Add**
2. Create a Name for Data Source (**Required**)
3. Add a Description for the Data Source (Optional)
4. Input the IP Address of the Data Source (**Required**)
5. Add the Platform type of the Data Source (**Required**)
6. Click **Add** to add the Data Source to Enterprise Business Process Server

***Fig. 13***

## Creating an Input Packet

1400

What is an Input Packet?




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To create an Input Packet for a Process, take the following steps:

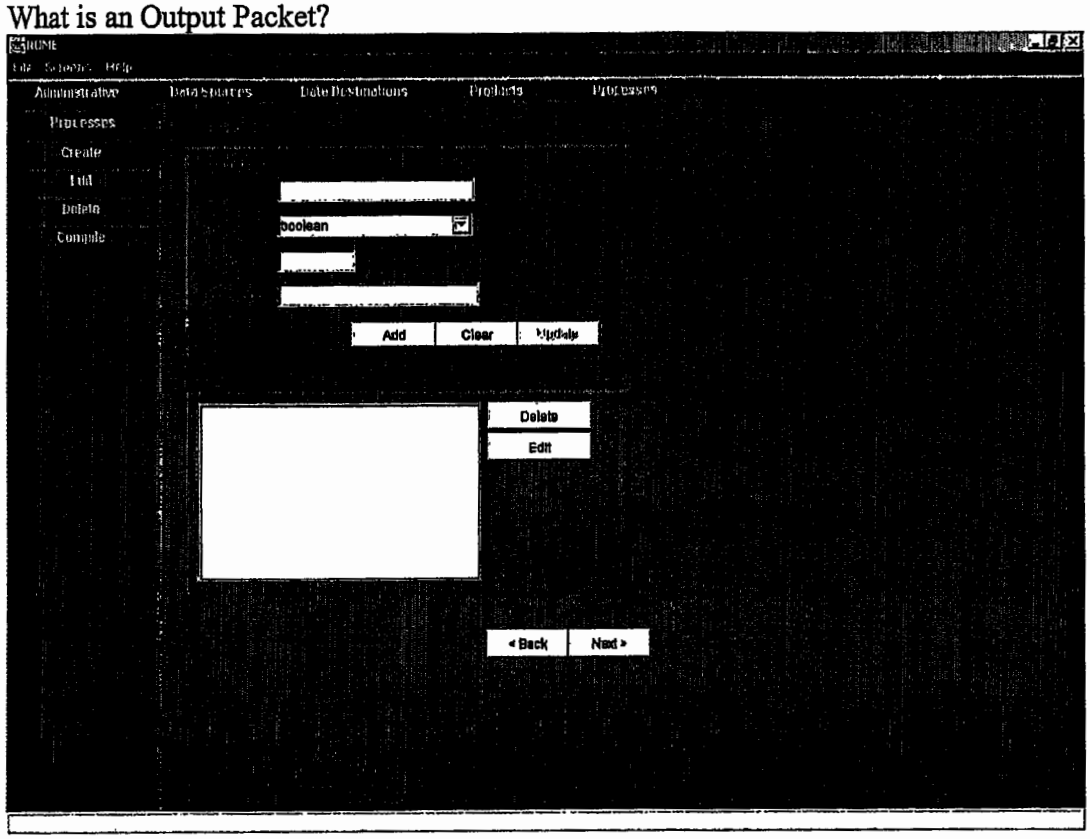
1. Make a Name for a component of the packet. All spaces are replaced with a "_" (underscore).
2. Select the Data Type for this component. The available Data Types are
   - **boolean**
   - **char**
   - **double**
   - **float**
   - **int**
   - **long**
   - **short**
3. Add a length for the component. Numerical values are only accepted.
4. An optional Description field is provided for comments
5. Click **Add** to add the component to the Input Packet

After you have created all the components for the Input Packet click Next to continue.

***Fig. 14***

Creating an Output Packet 1500

What is an Output Packet?




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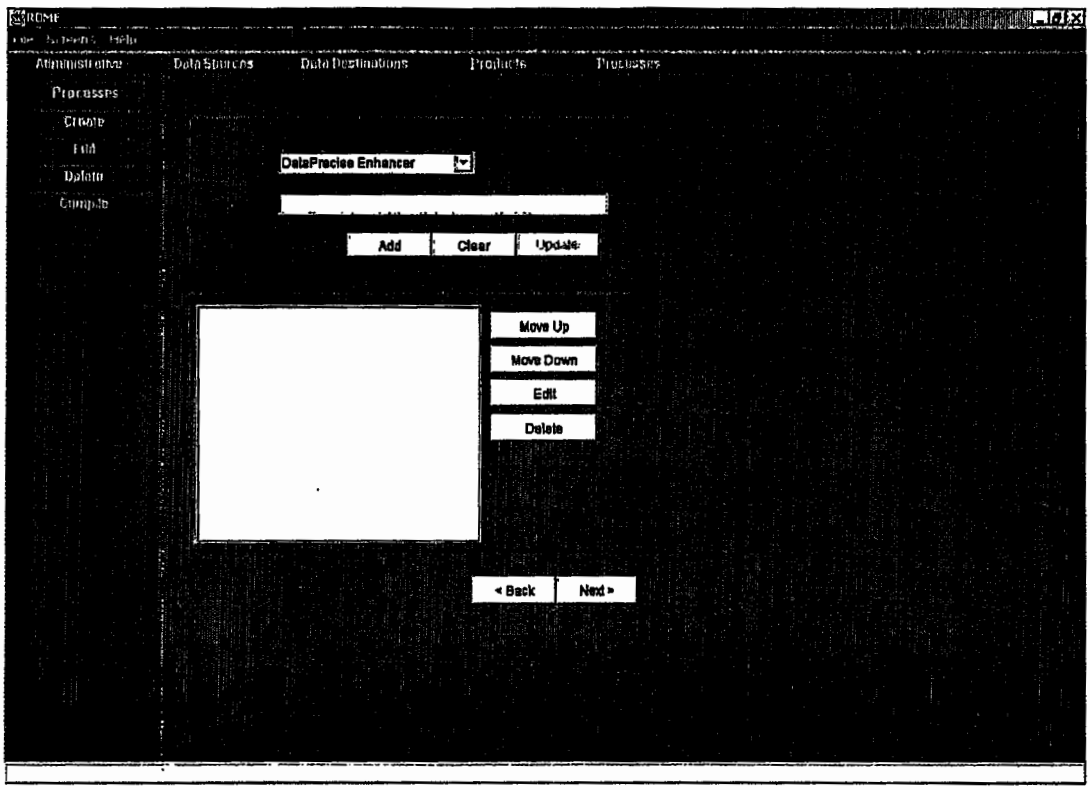
To create an Output Packet for a Process, take the following steps:

1. Make a Name for a component of the packet. All spaces are replaced with a "_" (underscore).
2. Select the Data Type for this component. The available Data Types are
   - **boolean**
   - **char**
   - **double**
   - **float**
   - **int**
   - **long**
   - **short**
3. Add a length for the component. Numerical values are only accepted.
4. An optional Description field is provided for comments
5. Click **Add** to add the component to the Output Packet

After you have created all the components for the Output Packet click Next to continue.

***Fig. 15***

Selecting the Products 1600




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To add Products to a Process take the following steps:

1. Select a Product from the list **(Required)**
2. Add a Description of what the Product does (Optional)
3. Click **Add** to add the Product the Process
4. Repeat Steps 1 – 3 until you are finished
5. Click **Next** to Continue or **Back** to return to Output Packet Creation

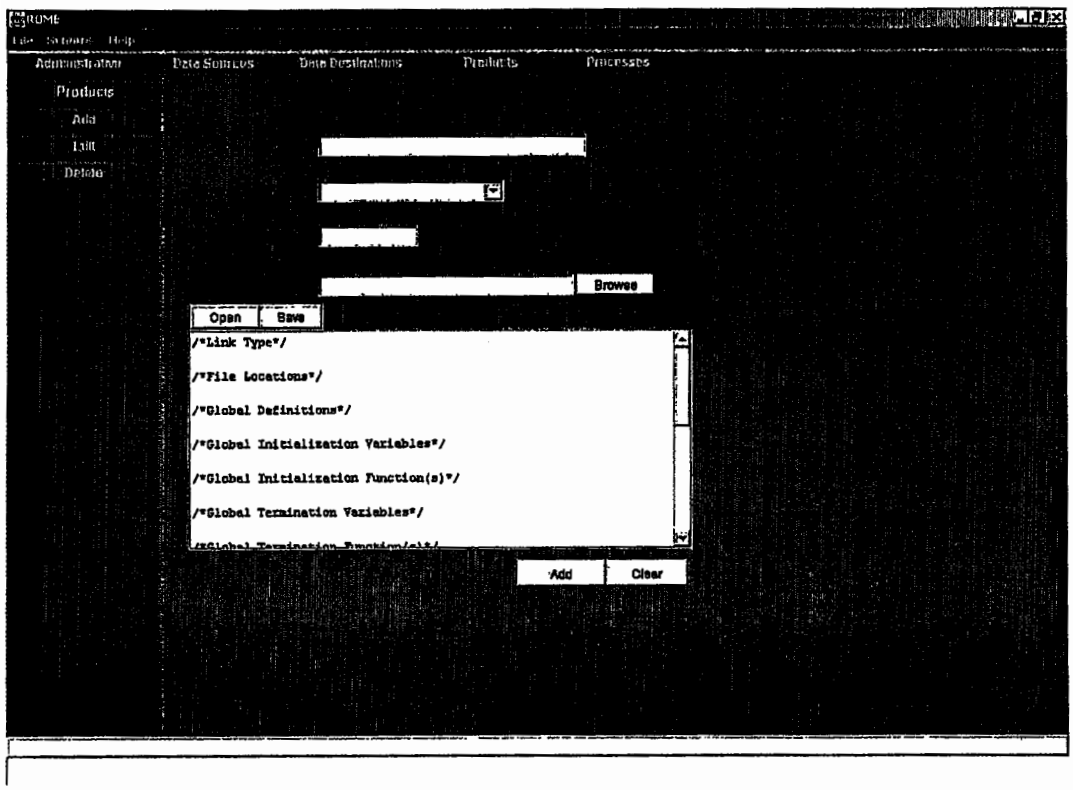
***Fig. 16***

# Products

Description of a Product

1700

Adding a Product



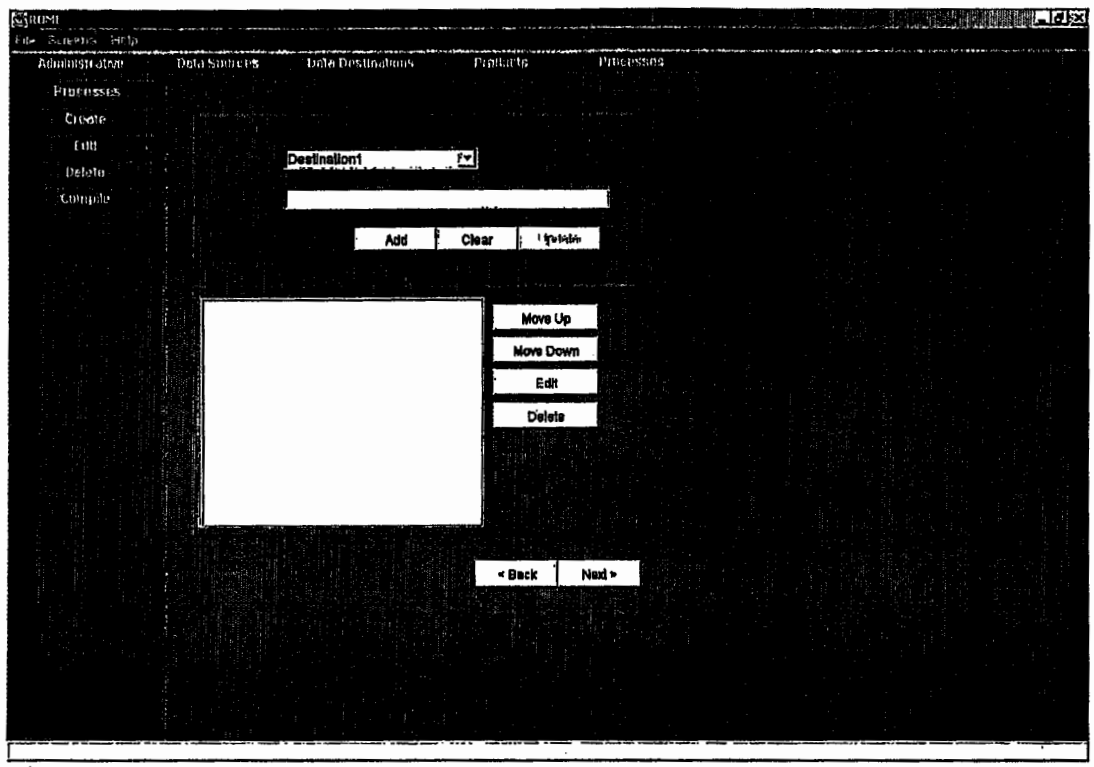

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Steps to Add a Product

1. Select **Products** ->**Add** from the Menu Bars
2. Create a Product Name **(Required)**
3. Select or Create a Product Type if it already exists **(Required)**
4. Input Version Information (Optional)
5. If you have already created a Product Template then simply click **Open** and select the Product Template file. If you have not created the Product Template file then edit the Product Template window and click **Save** to save the Product Template information to a file. **(Required)**
6. Click **Add** to add the Product to Enterprise Business Process Server

***Fig. 17***

Selecting the Data Destinations 1800




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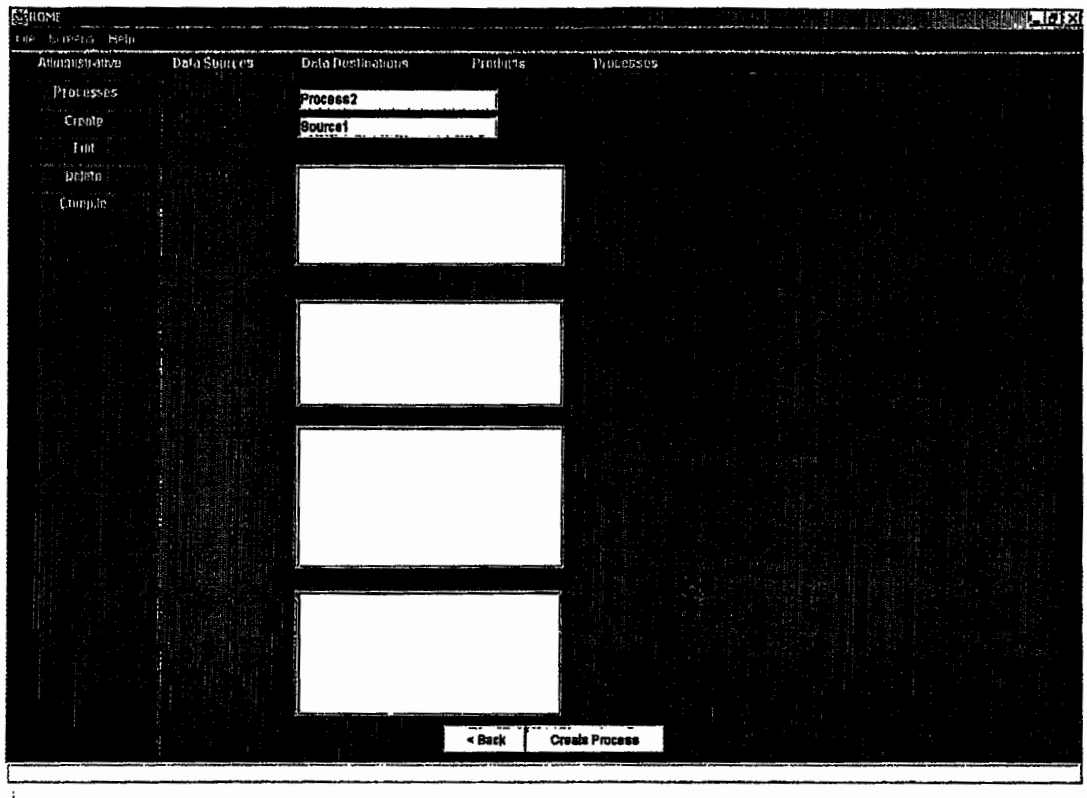
To add a Data Destination to the Process, take the following steps:

1. Select the Data Destination from the list (**Required**)
2. Add a Description of the Data Destination (Optional)
3. Click **Add** to add the Data Destination to the Process
4. Repeat steps 1 – 3 until you are finished
5. Click **Next** to Continue or **Back** to Return to Products

***Fig. 18***

Creating the Process

1900




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Review the Process to verify that the Process that you are about to create is correct. Once you have verified that the Process you are going to create is correct click **Create Process.**

***Fig. 19***

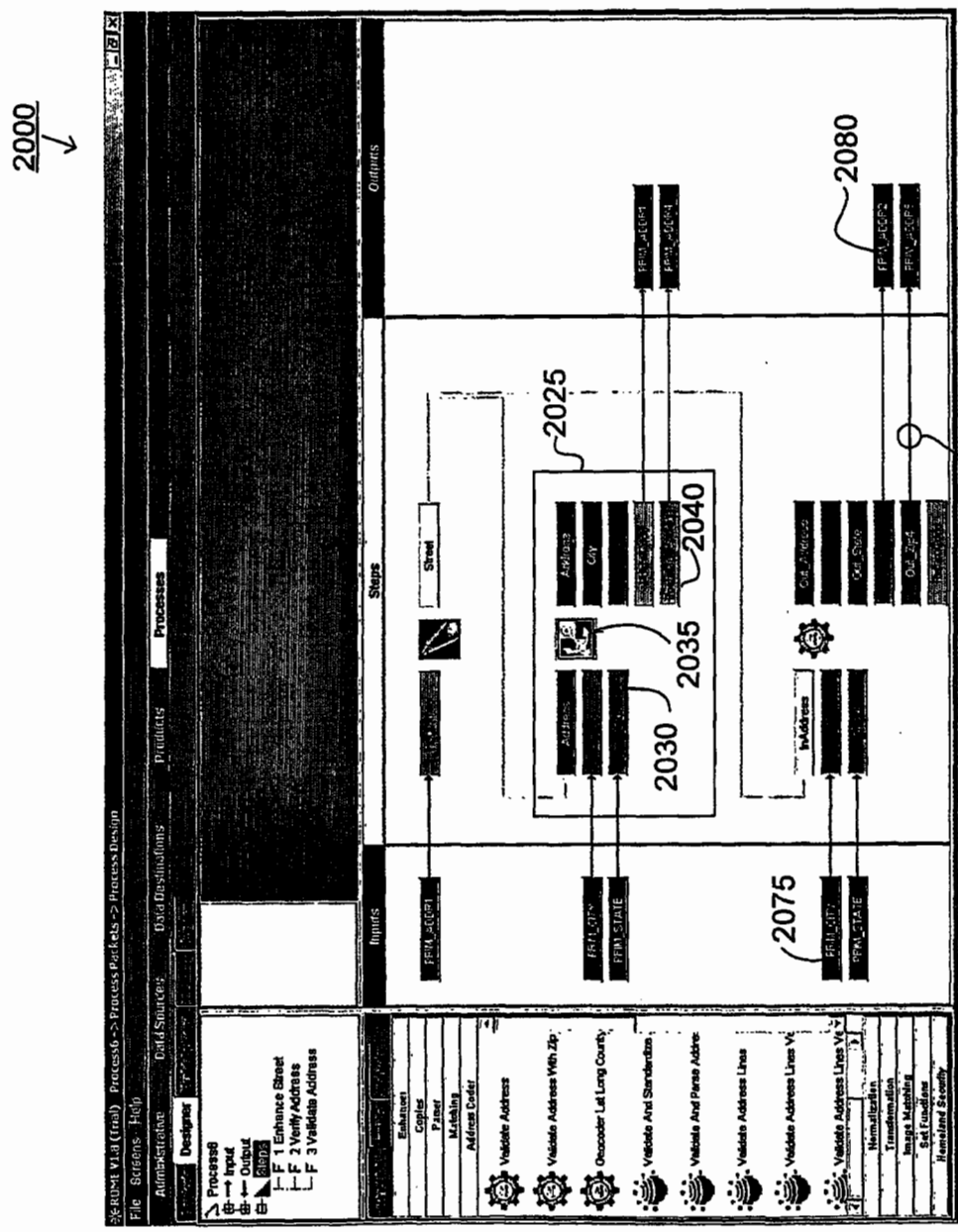

2000
2005
2010
2015
2020
2025
2030
2035
2040
2045
2075
2080
Inputs
Steps
Outputs
Processes
Products
Data Sources
Data Destinations
Street
City
Address
InAddress
Validate Address
Validate Address With Zip
Geocoder Lat Long County
Validate And Standardize
Validate And Parse Addre
Validate Address Lines
Validate Address Lines V
Validate Address Lines Vi
Enhancer
Copies
Parser
Matching
Address Order
Normalization
Transformation
Image Matching
Set Functions
Homeland Security

FIG. 20

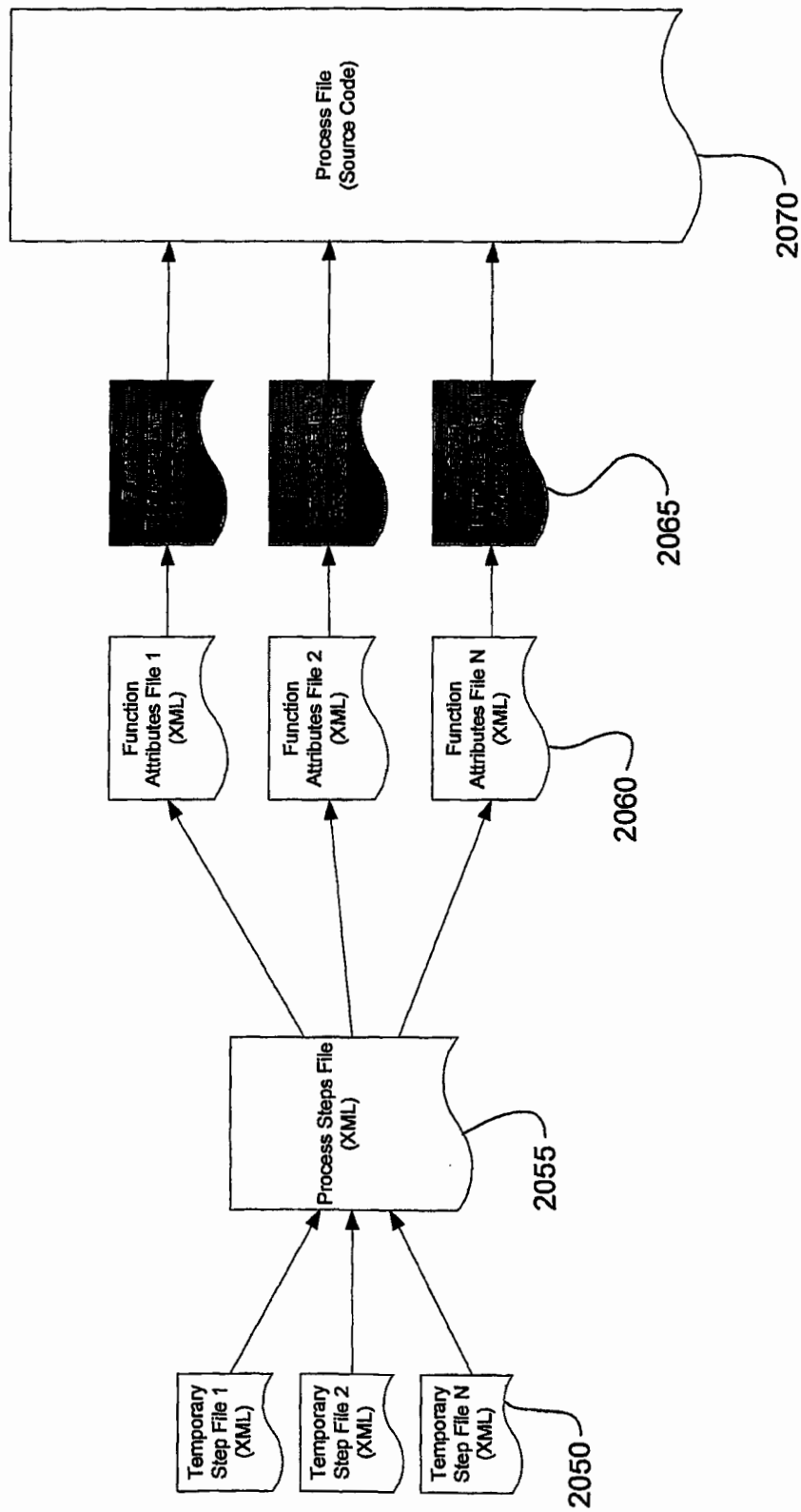

Process File (Source Code)
2070
2065
Function Attributes File 1 (XML)
Function Attributes File 2 (XML)
Function Attributes File N (XML)
2060
Process Steps File (XML)
2055
Temporary Step File 1 (XML)
Temporary Step File 2 (XML)
Temporary Step File N (XML)
2050

FIG. 21

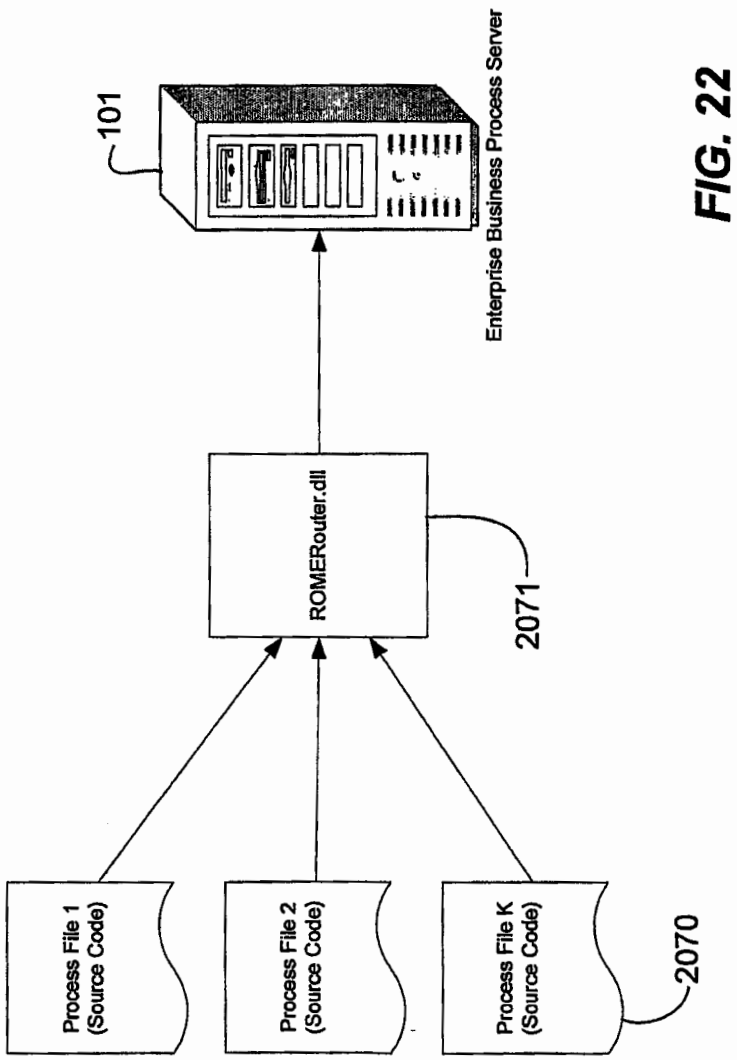

101
Enterprise Business Process Server
ROMERouter.dll
2071
Process File 1 (Source Code)
Process File 2 (Source Code)
Process File K (Source Code)
2070

FIG. 22

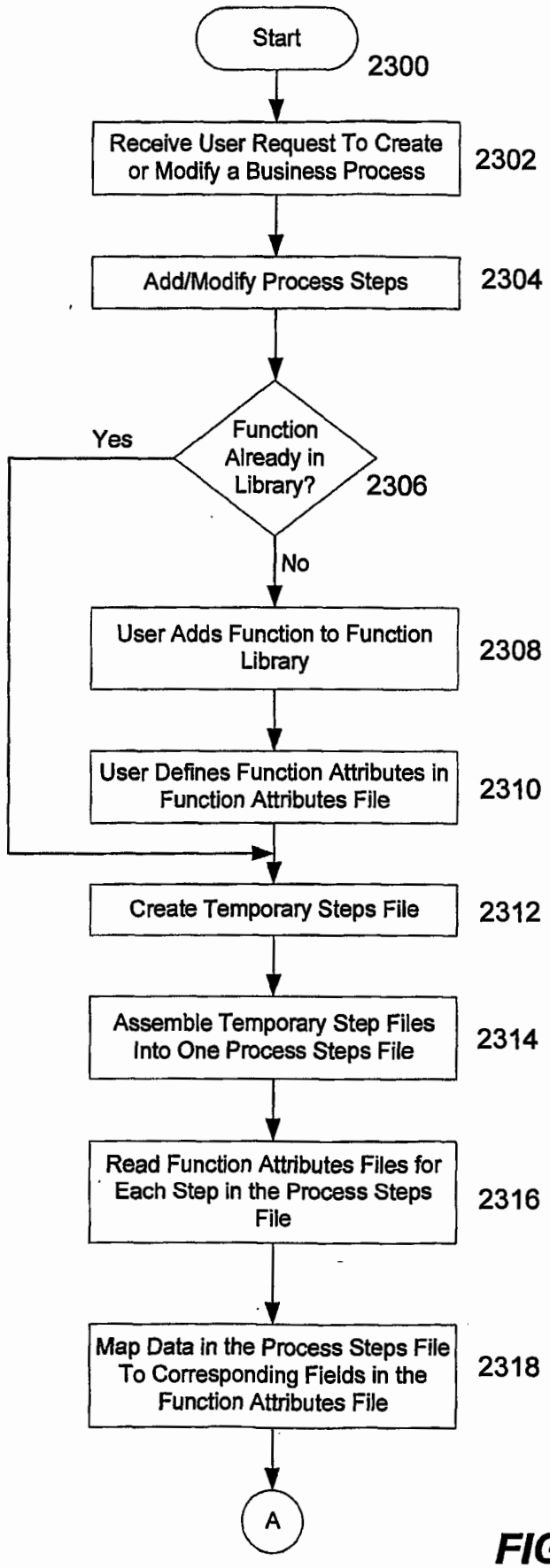

Start
2300
Receive User Request To Create or Modify a Business Process
2302
Add/Modify Process Steps
2304
Function Already in Library?
2306
Yes
No
User Adds Function to Function Library
2308
User Defines Function Attributes in Function Attributes File
2310
Create Temporary Steps File
2312
Assemble Temporary Step Files Into One Process Steps File
2314
Read Function Attributes Files for Each Step in the Process Steps File
2316
Map Data in the Process Steps File To Corresponding Fields in the Function Attributes File
2318
A

*FIG. 23a*

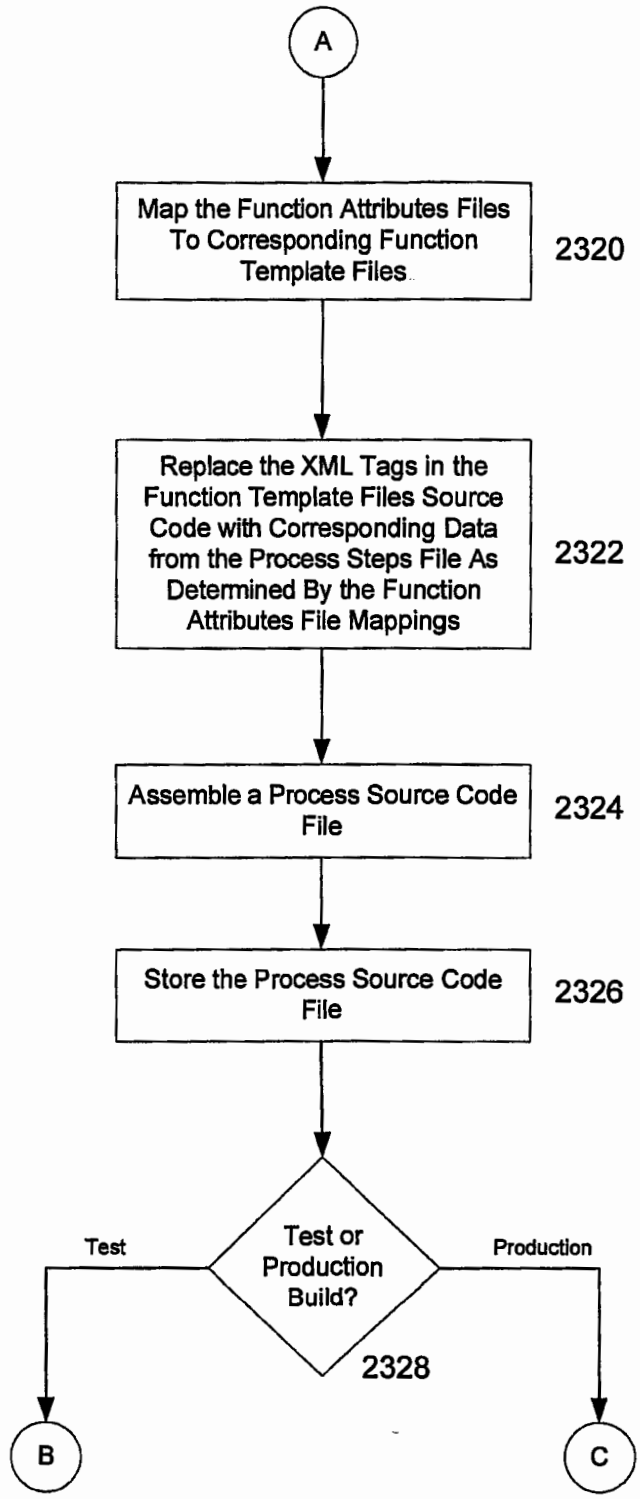

A
Map the Function Attributes Files To Corresponding Function Template Files
2320
Replace the XML Tags in the Function Template Files Source Code with Corresponding Data from the Process Steps File As Determined By the Function Attributes File Mappings
2322
Assemble a Process Source Code File
2324
Store the Process Source Code File
2326
Test or Production Build?
2328
Test
Production
B
C

FIG. 23b

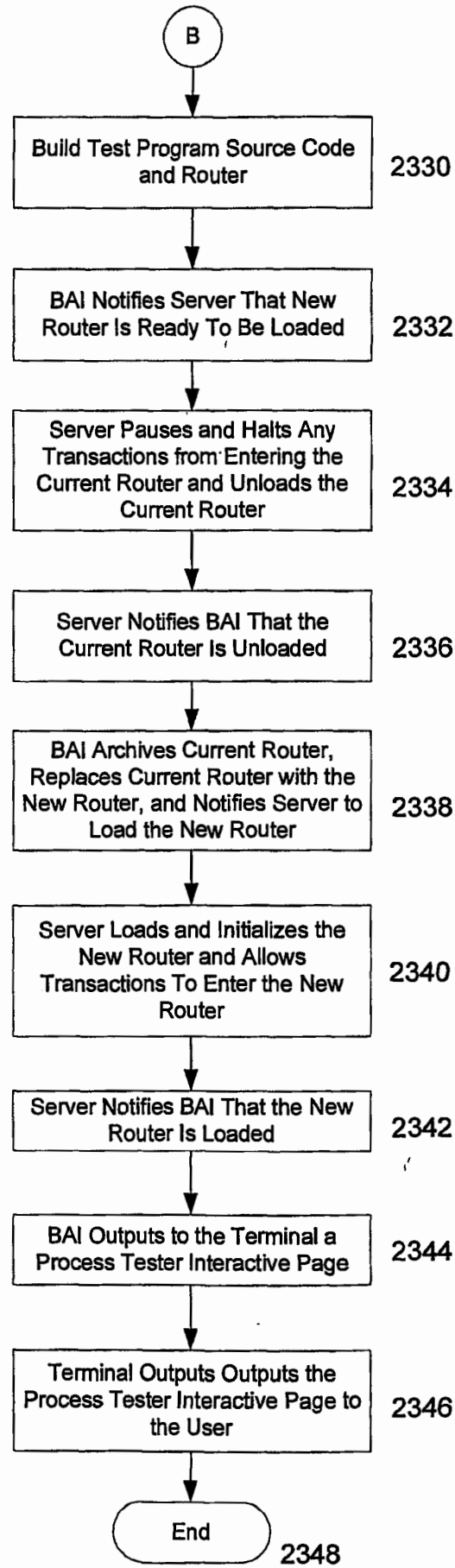

B
Build Test Program Source Code and Router
2330
BAI Notifies Server That New Router Is Ready To Be Loaded
2332
Server Pauses and Halts Any Transactions from Entering the Current Router and Unloads the Current Router
2334
Server Notifies BAI That the Current Router Is Unloaded
2336
BAI Archives Current Router, Replaces Current Router with the New Router, and Notifies Server to Load the New Router
2338
Server Loads and Initializes the New Router and Allows Transactions To Enter the New Router
2340
Server Notifies BAI That the New Router Is Loaded
2342
BAI Outputs to the Terminal a Process Tester Interactive Page
2344
Terminal Outputs Outputs the Process Tester Interactive Page to the User
2346
End
2348

FIG. 23c

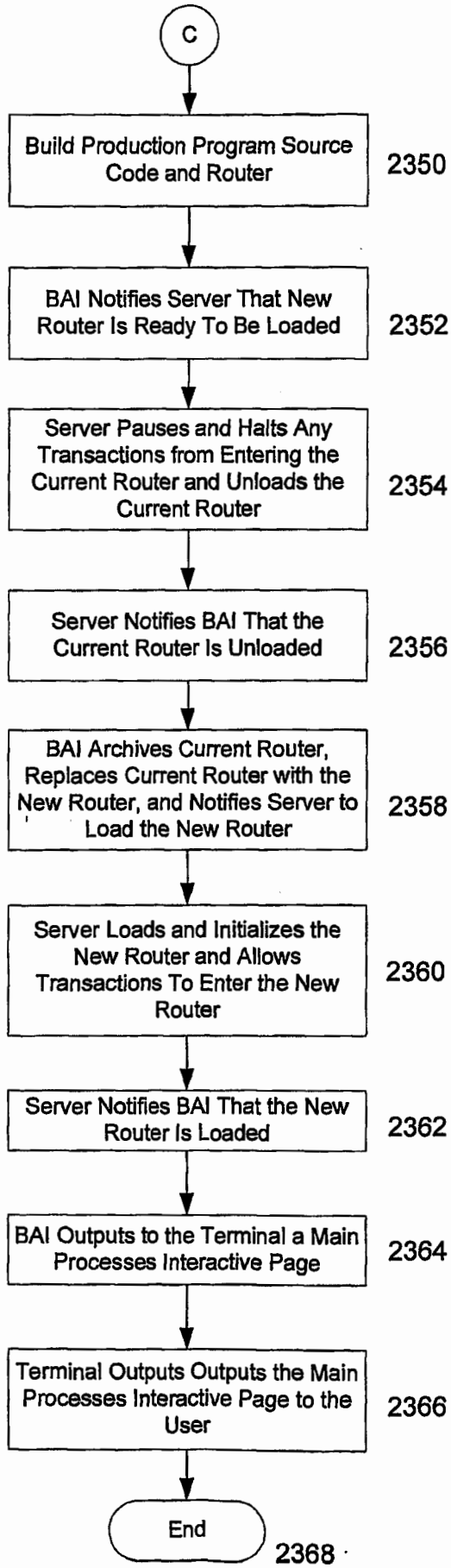

C
Build Production Program Source Code and Router
2350
BAI Notifies Server That New Router Is Ready To Be Loaded
2352
Server Pauses and Halts Any Transactions from Entering the Current Router and Unloads the Current Router
2354
Server Notifies BAI That the Current Router Is Unloaded
2356
BAI Archives Current Router, Replaces Current Router with the New Router, and Notifies Server to Load the New Router
2358
Server Loads and Initializes the New Router and Allows Transactions To Enter the New Router
2360
Server Notifies BAI That the New Router Is Loaded
2362
BAI Outputs to the Terminal a Main Processes Interactive Page
2364
Terminal Outputs Outputs the Main Processes Interactive Page to the User
2366
End
2368

FIG. 23d

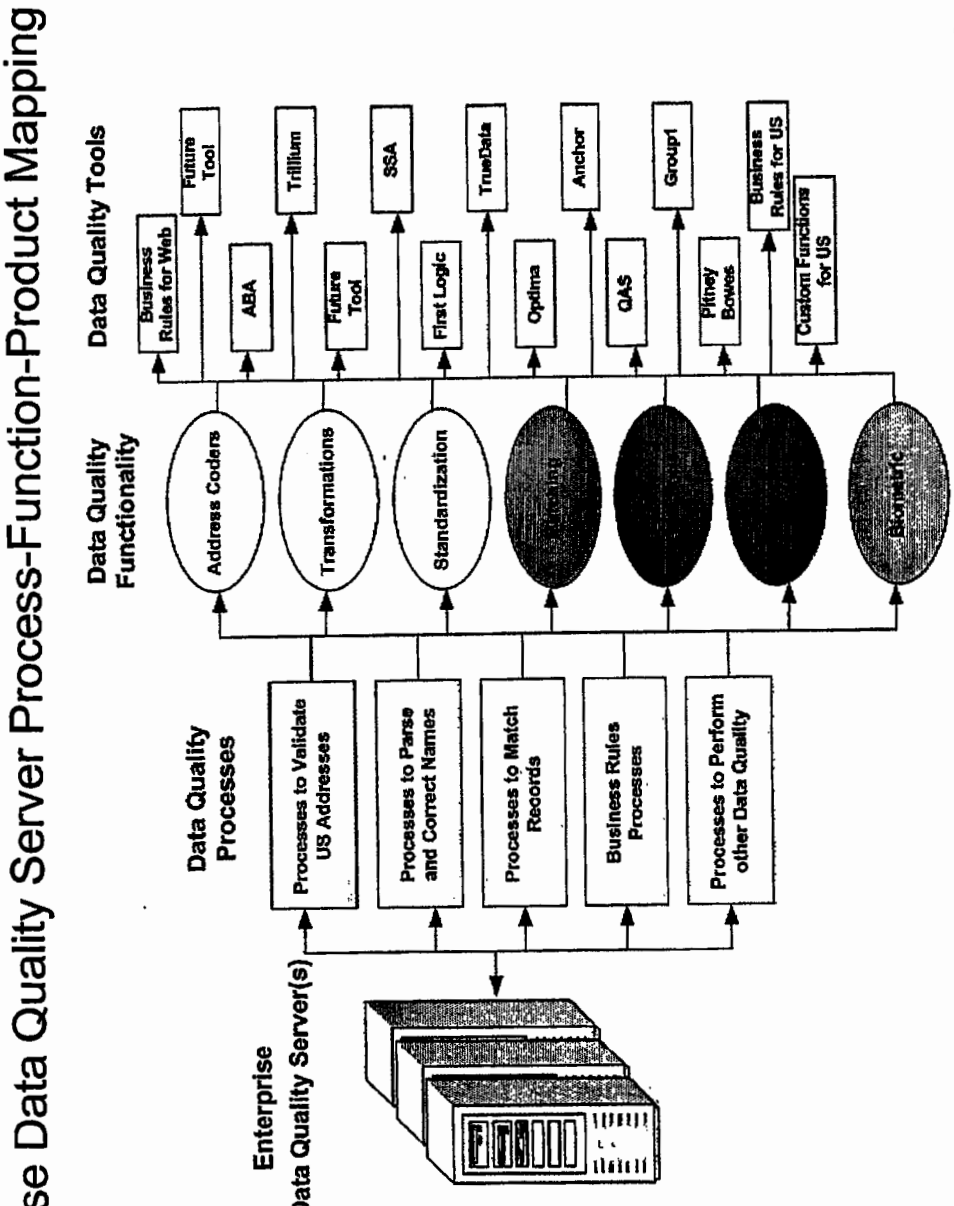
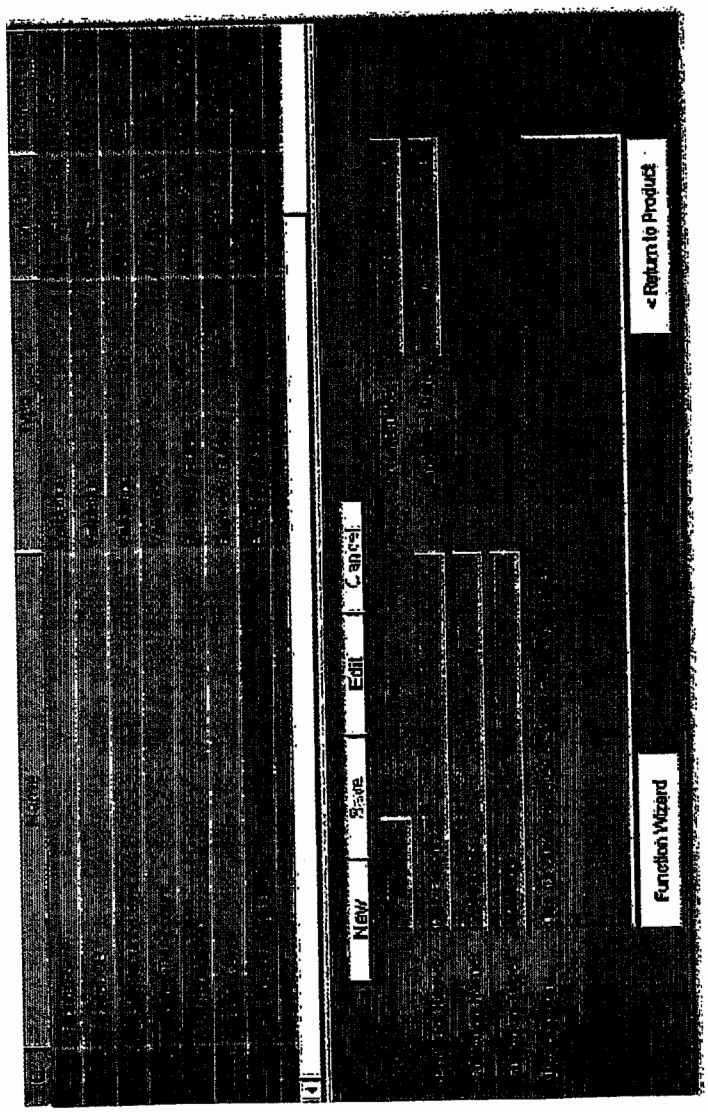

Enterprise Data Quality Server Process-Function-Product Mapping
Enterprise Data Quality Server(s)
Data Quality Processes
Processes to Validate US Addresses
Processes to Parse and Correct Names
Processes to Match Records
Business Rules Processes
Processes to Perform other Data Quality
Data Quality Functionality
Address Coders
Transformations
Standardization
Matching
Enhancement
Data Quality Tools
Business Rules for Web
Future Tool
ABA
Trillium
Future Tool
SSA
First Logic
TrueData
Optima
Anchor
QAS
Group1
Pitney Bowes
Business Rules for US
Custom Functions for US

FIG. 24

2500

Function Overview Page




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FIG. 25

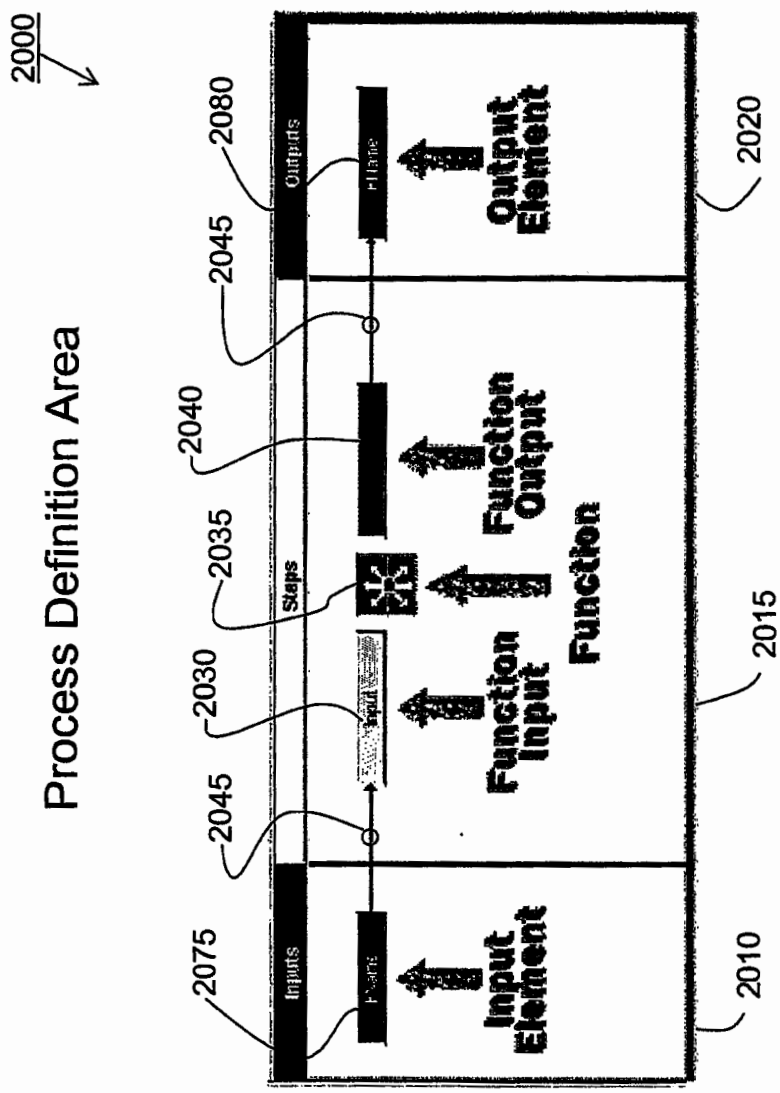



FIG. 26

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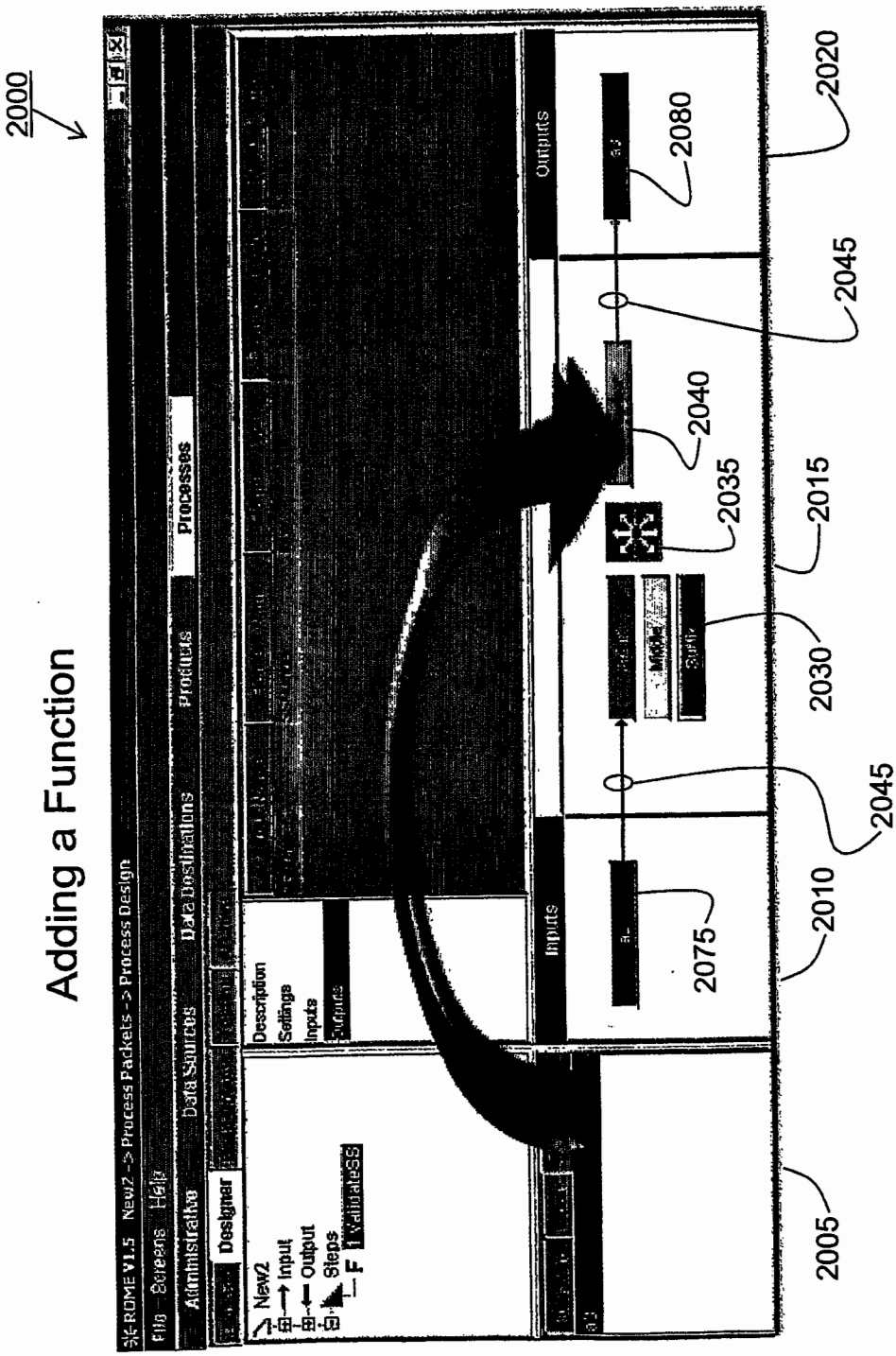



FIG. 27

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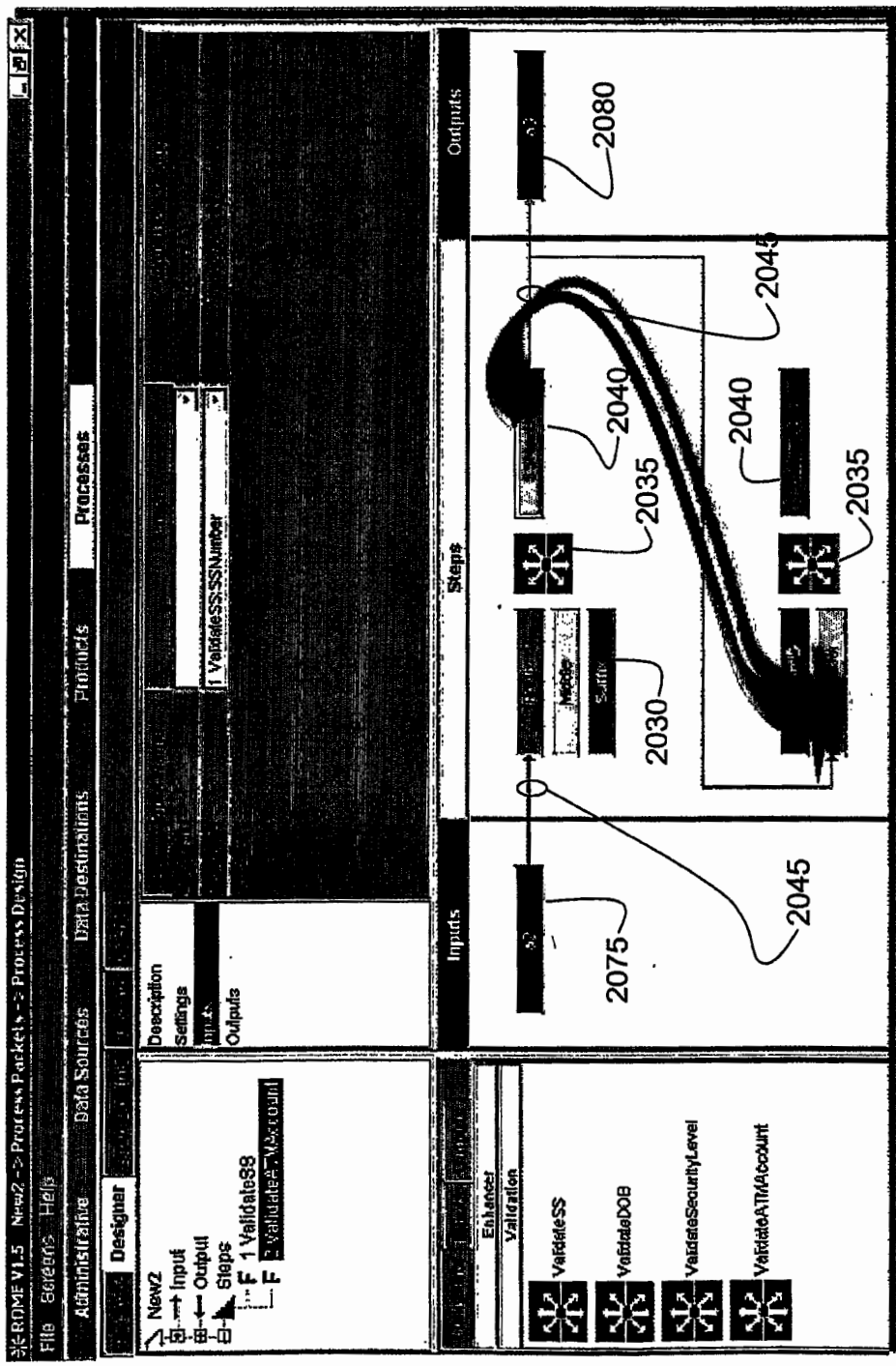
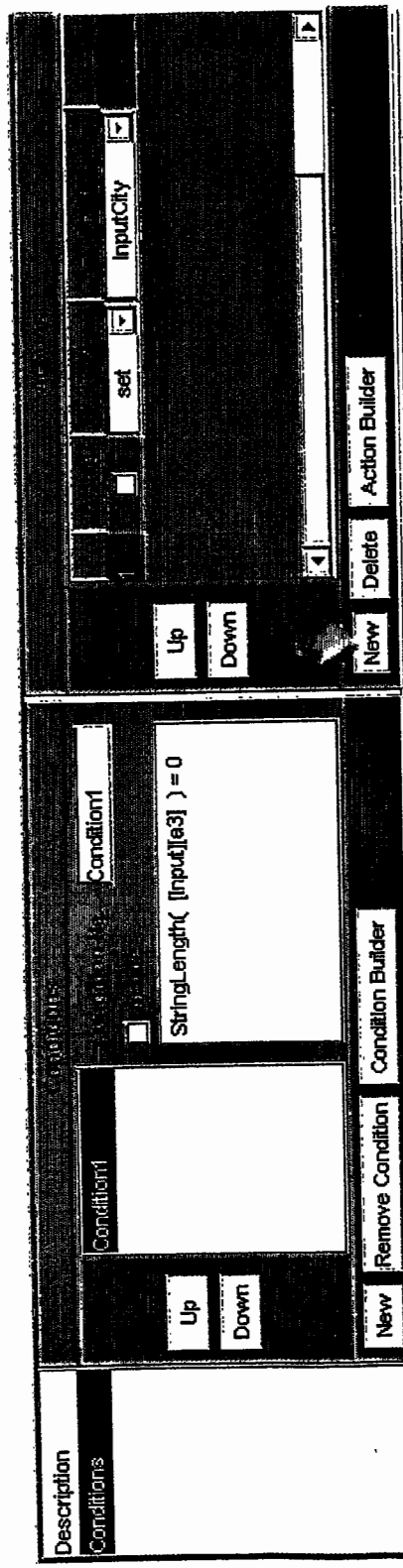



FIG. 28

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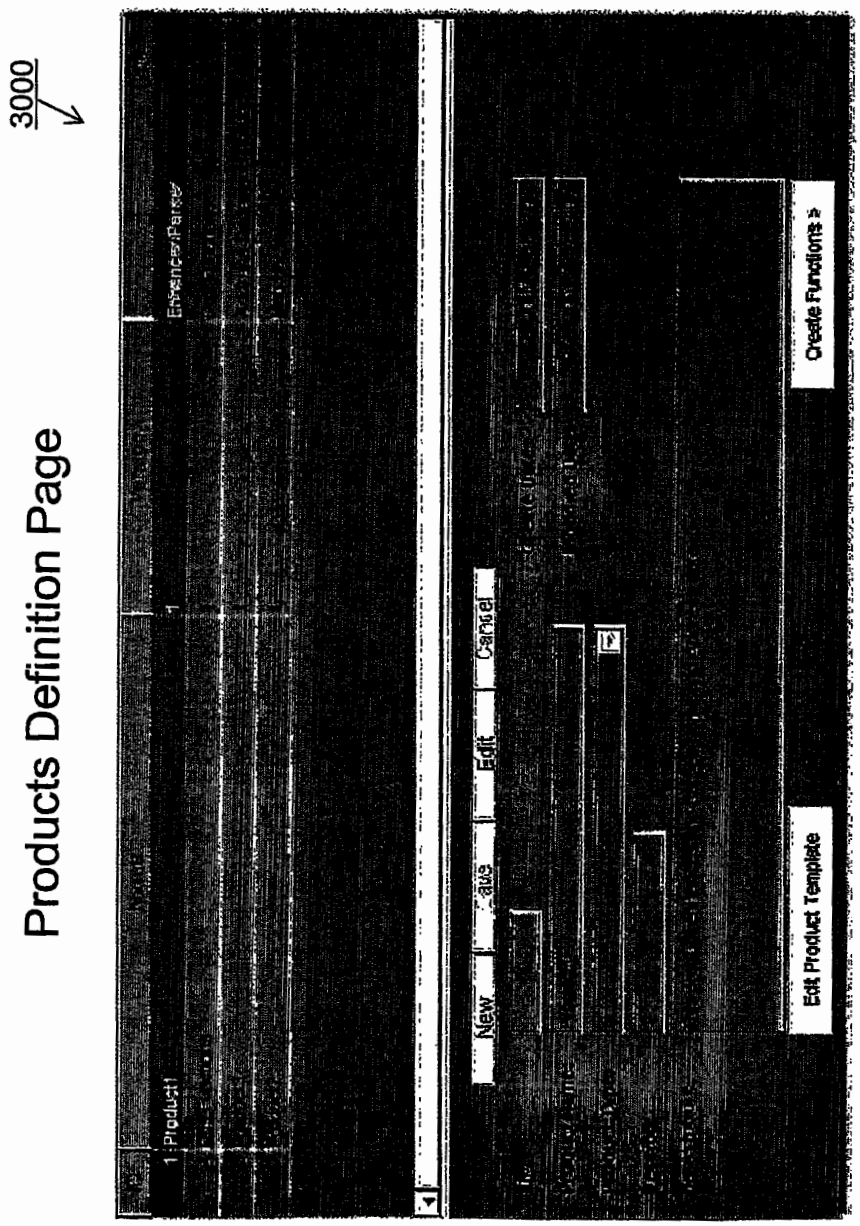
Condition Definition Page Portion

2900




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FIG. 29




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FIG. 30

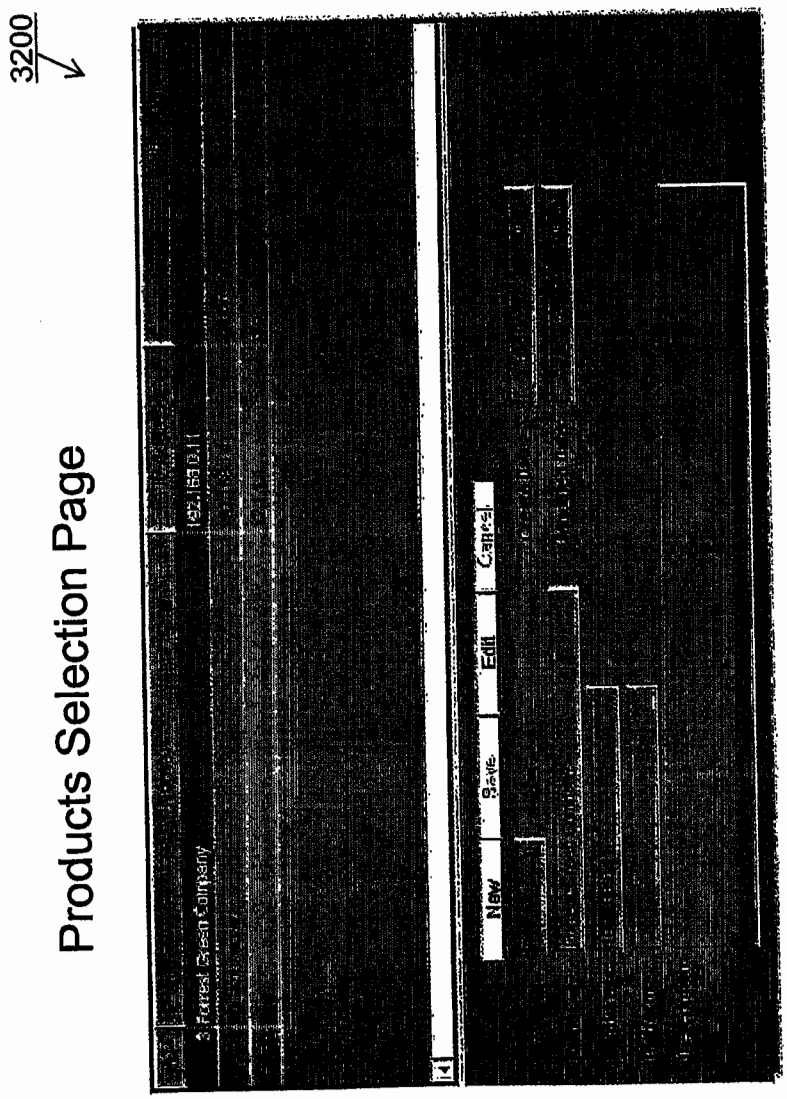
3100

Data Destination Definition Page



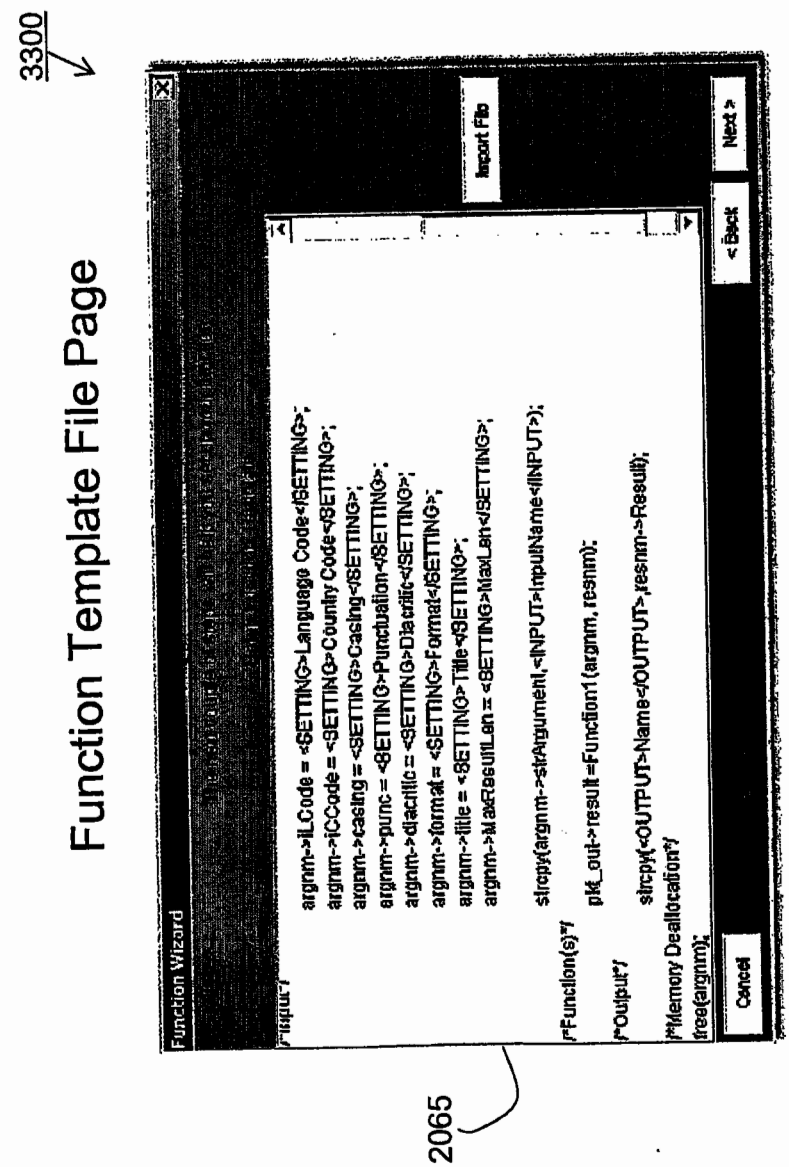

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FIG. 31




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FIG. 32




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FIG. 33

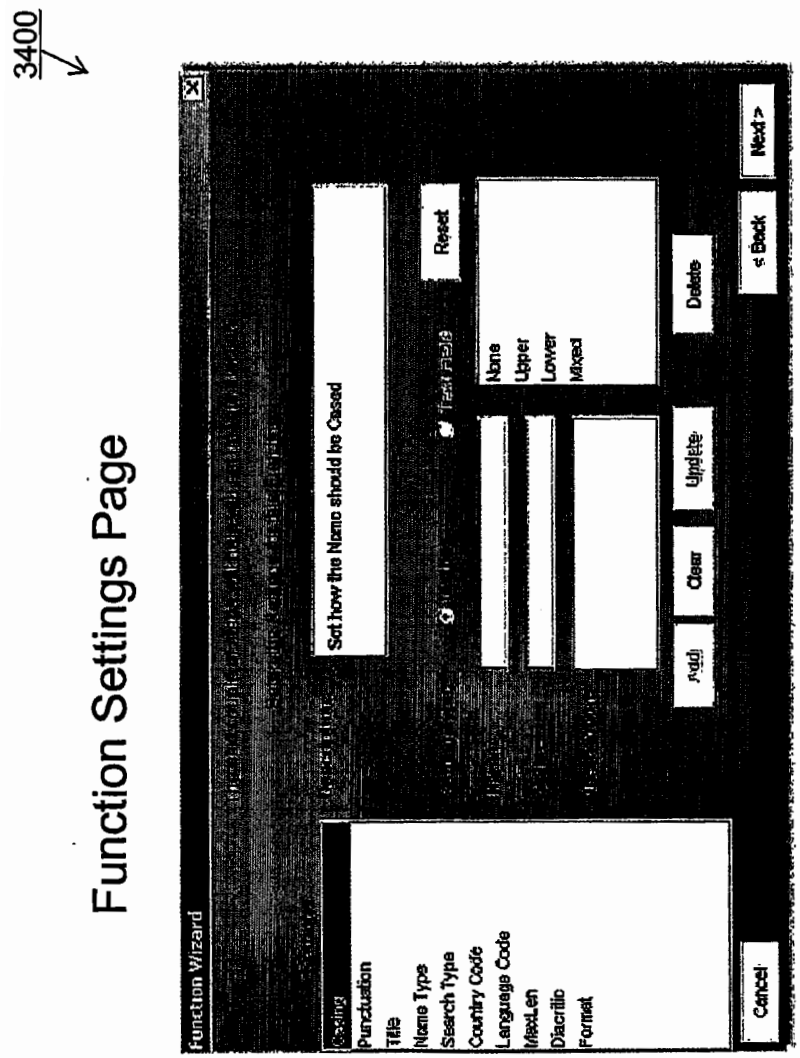



FIG. 34

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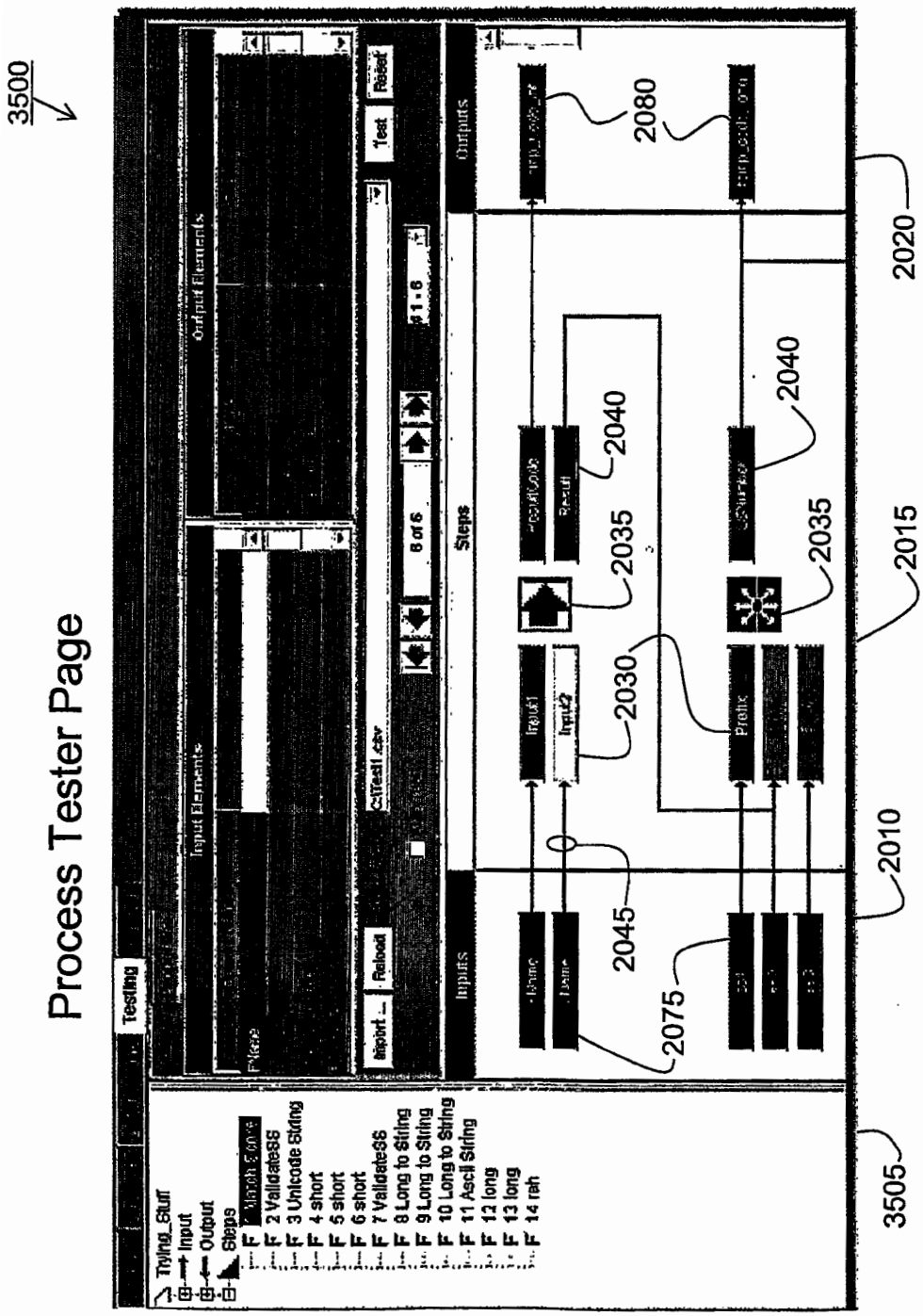



FIG. 35

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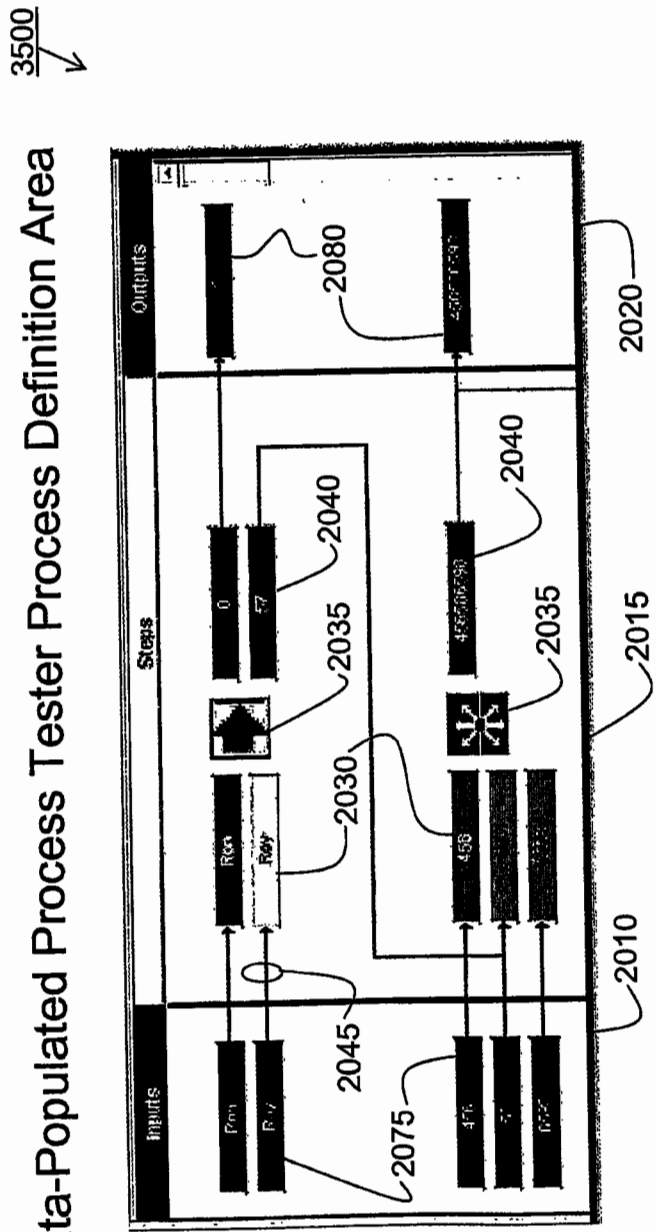
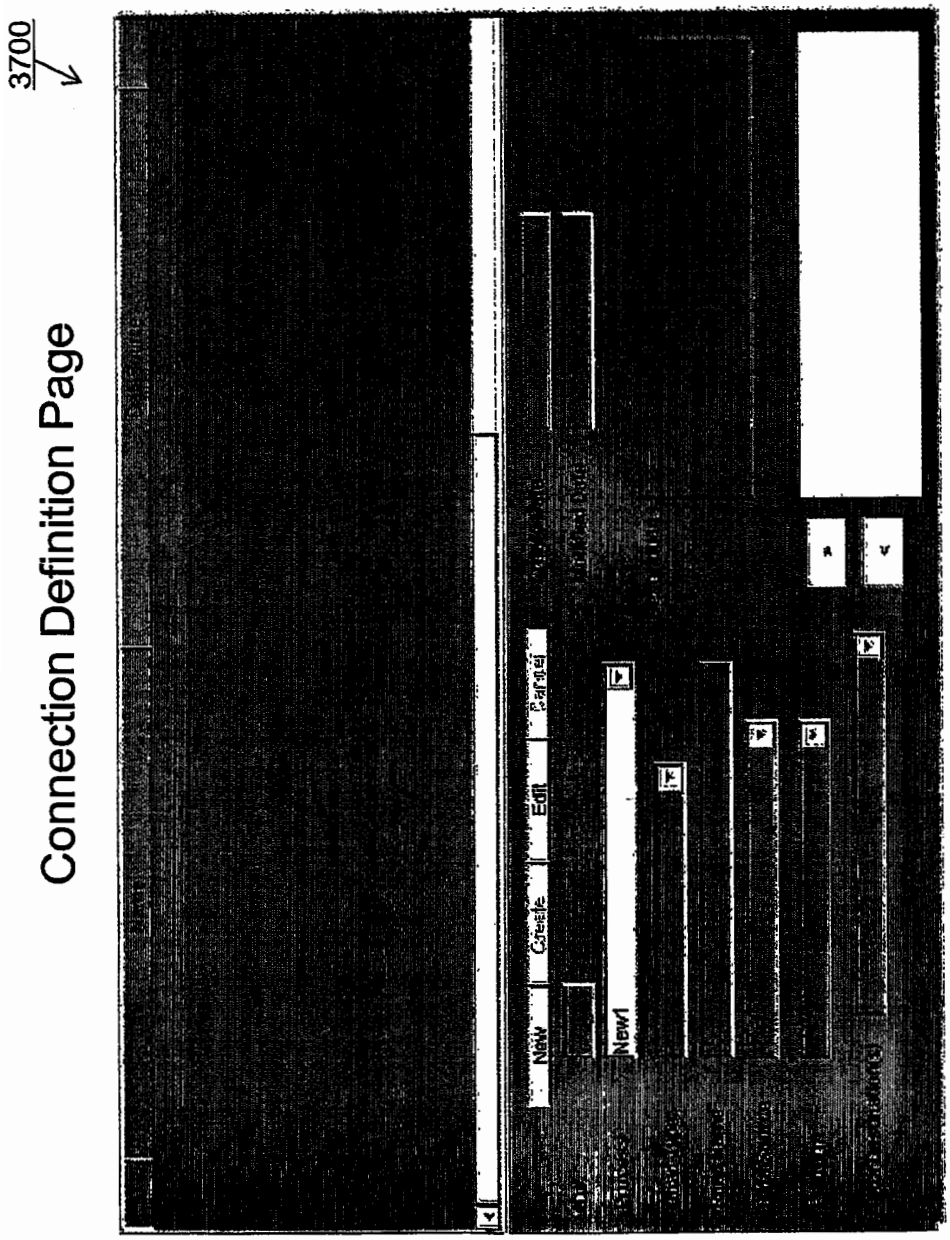



FIG. 36

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FIG. 37

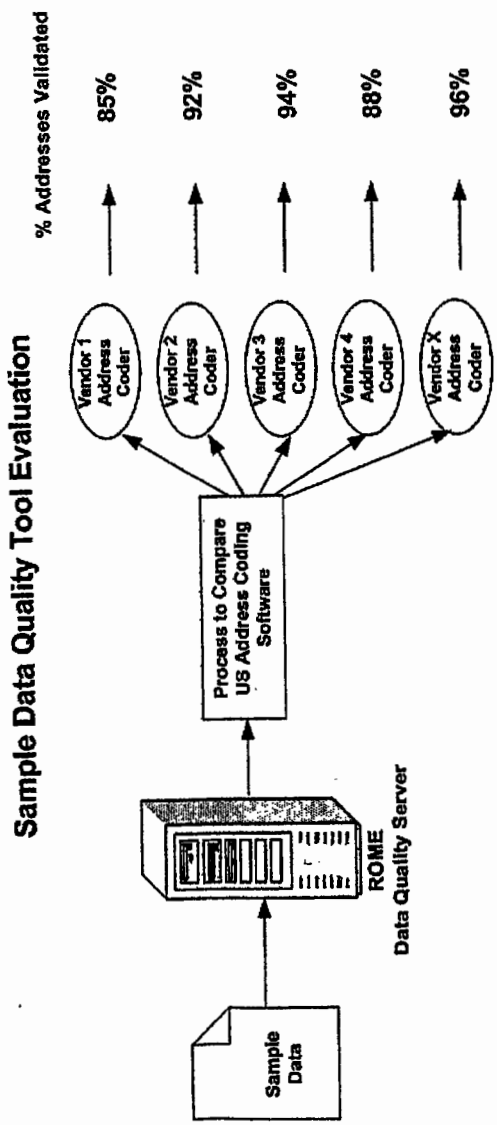

Sample Data Quality Tool Evaluation
% Addresses Validated
85%
92%
94%
88%
96%
Vendor 1 Address Coder
Vendor 2 Address Coder
Vendor 3 Address Coder
Vendor 4 Address Coder
Vendor X Address Coder
Process to Compare US Address Coding Software
ROME
Data Quality Server
Sample Data

FIG. 38

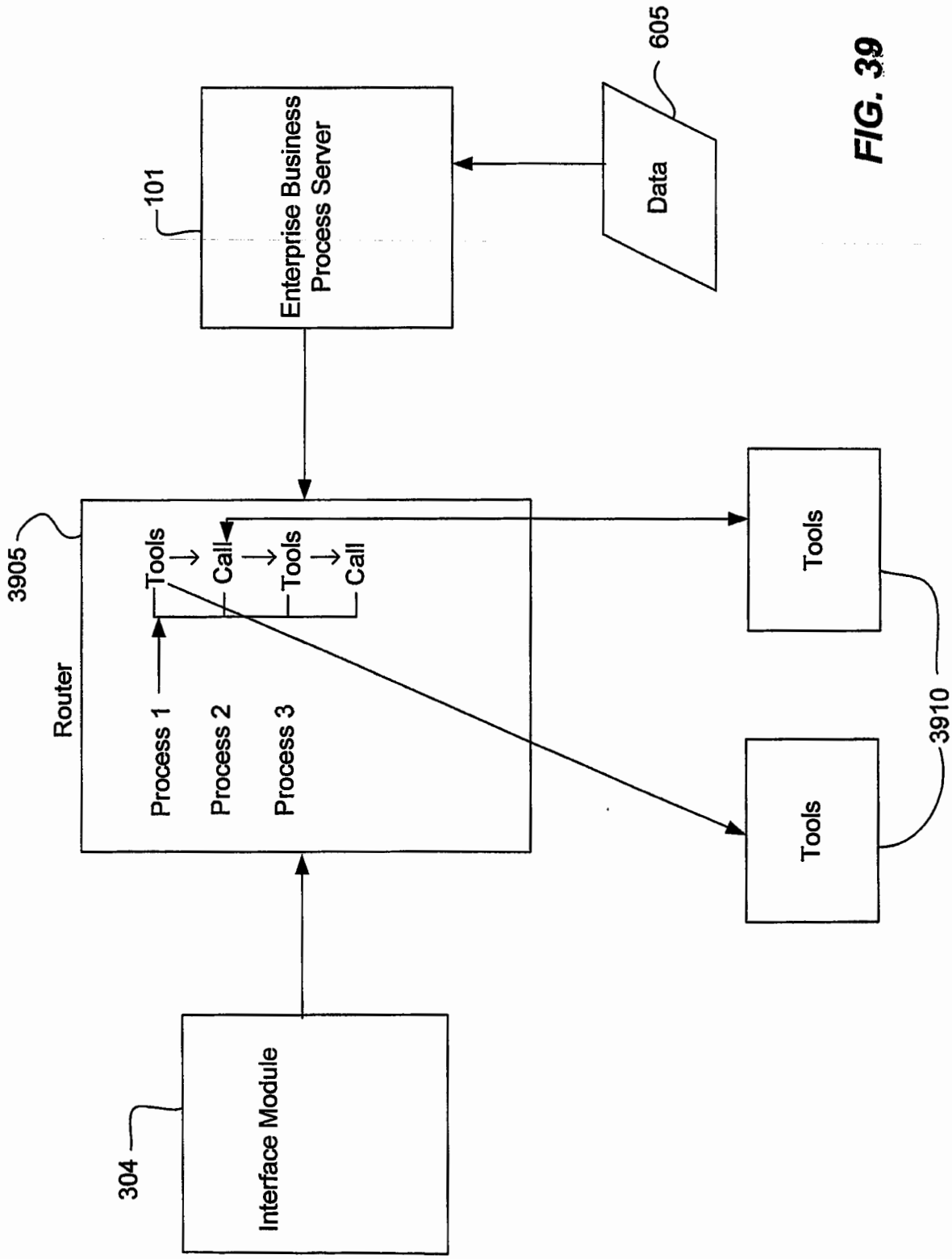

605
Data
101
Enterprise Business Process Server
3905
Router
Tools
Call
Tools
Call
Process 1
Process 2
Process 3
Tools
Tools
3910
304
Interface Module

FIG. 39