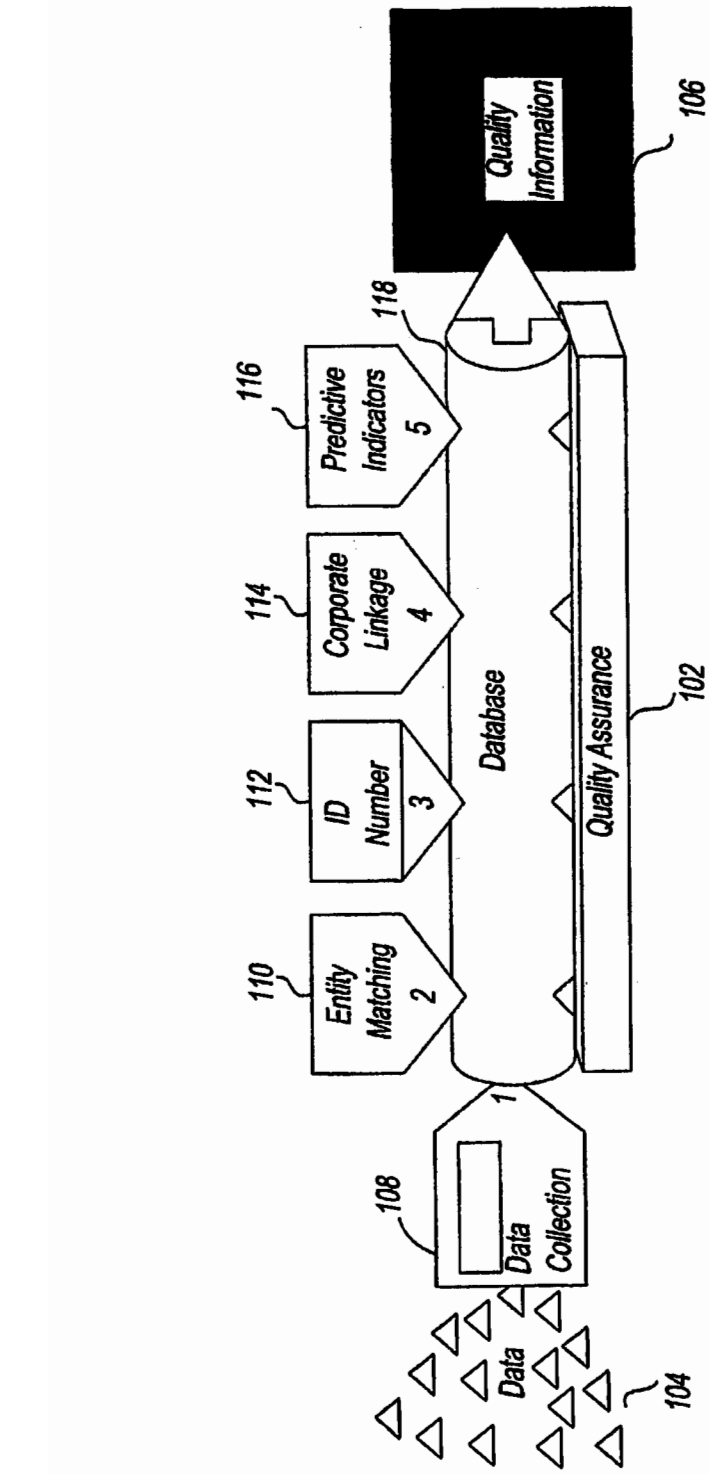

Quality Information
106
Predictive Indicators
5
116
118
Corporate Linkage
4
114
ID Number
3
112
Entity Matching
2
110
Database
Quality Assurance
102
Data Collection
1
108
Data
104

Fig. 1

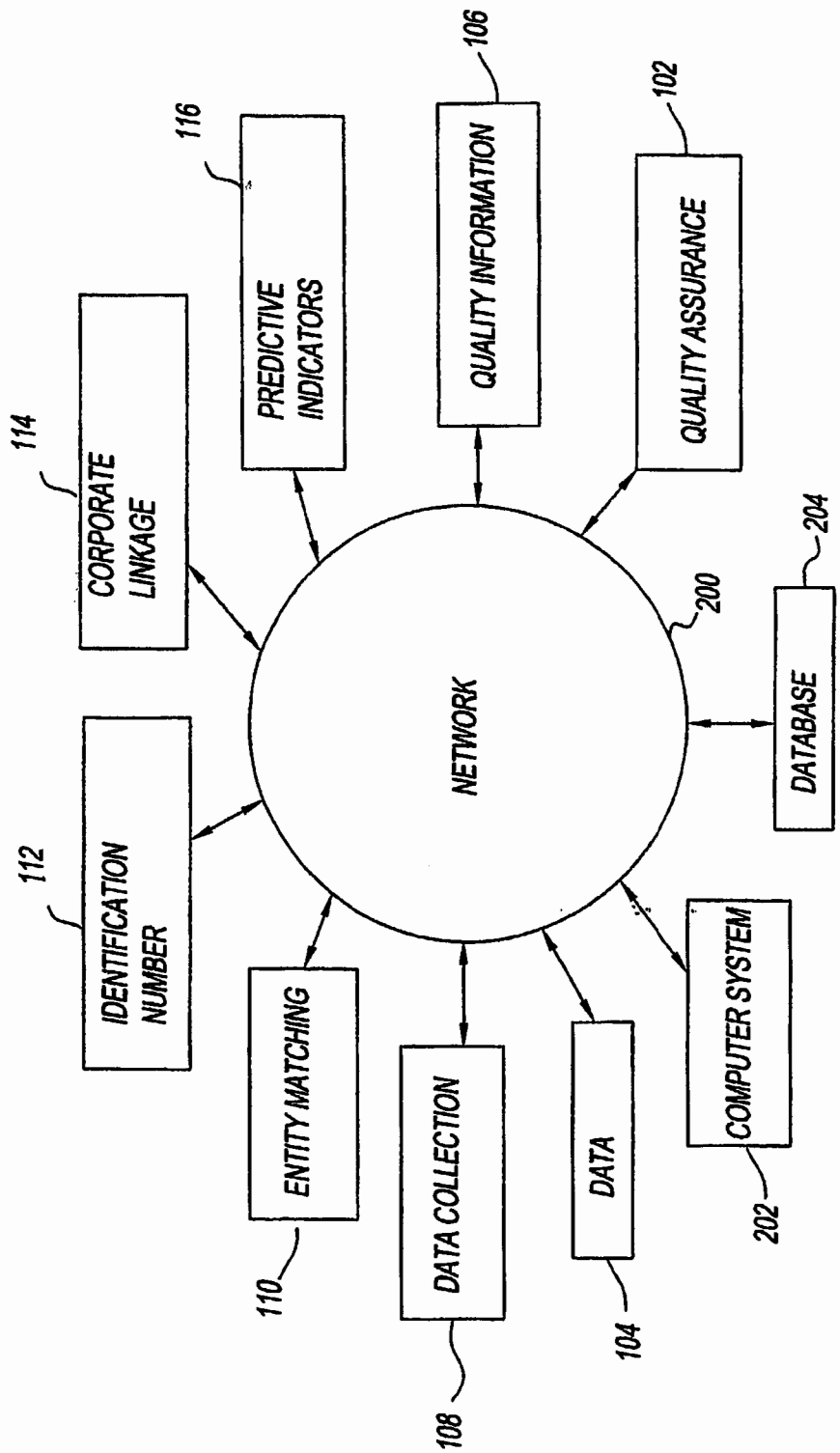

NETWORK
200
CORPORATE LINKAGE
114
PREDICTIVE INDICATORS
116
QUALITY INFORMATION
106
QUALITY ASSURANCE
102
IDENTIFICATION NUMBER
112
ENTITY MATCHING
110
DATA COLLECTION
108
DATA
104
COMPUTER SYSTEM
202
DATABASE
204

Fig. 2

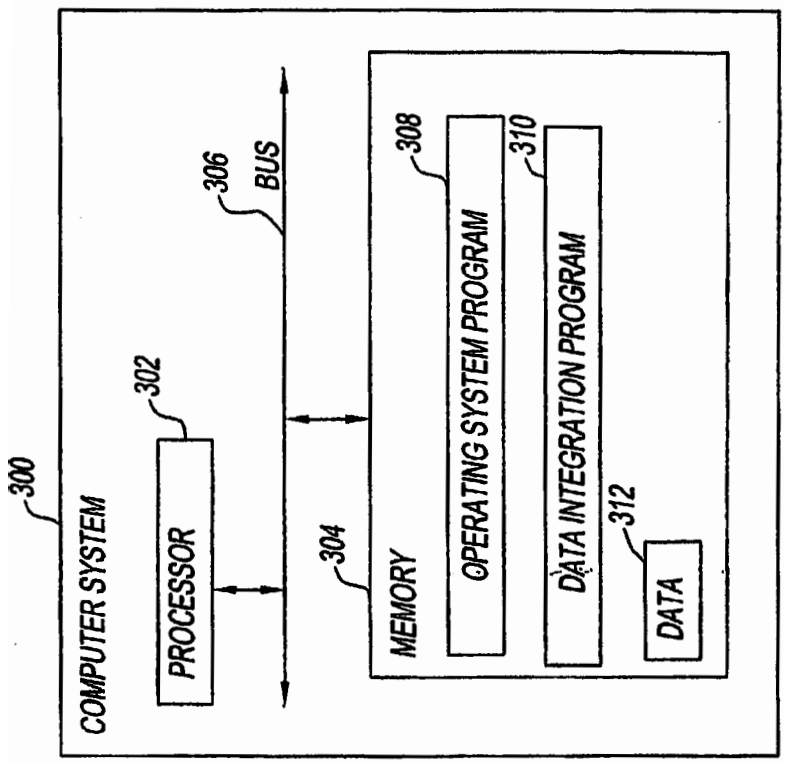

300
COMPUTER SYSTEM
302
PROCESSOR
306
BUS
304
MEMORY
308
OPERATING SYSTEM PROGRAM
310
DATA INTEGRATION PROGRAM
312
DATA

Fig. 3

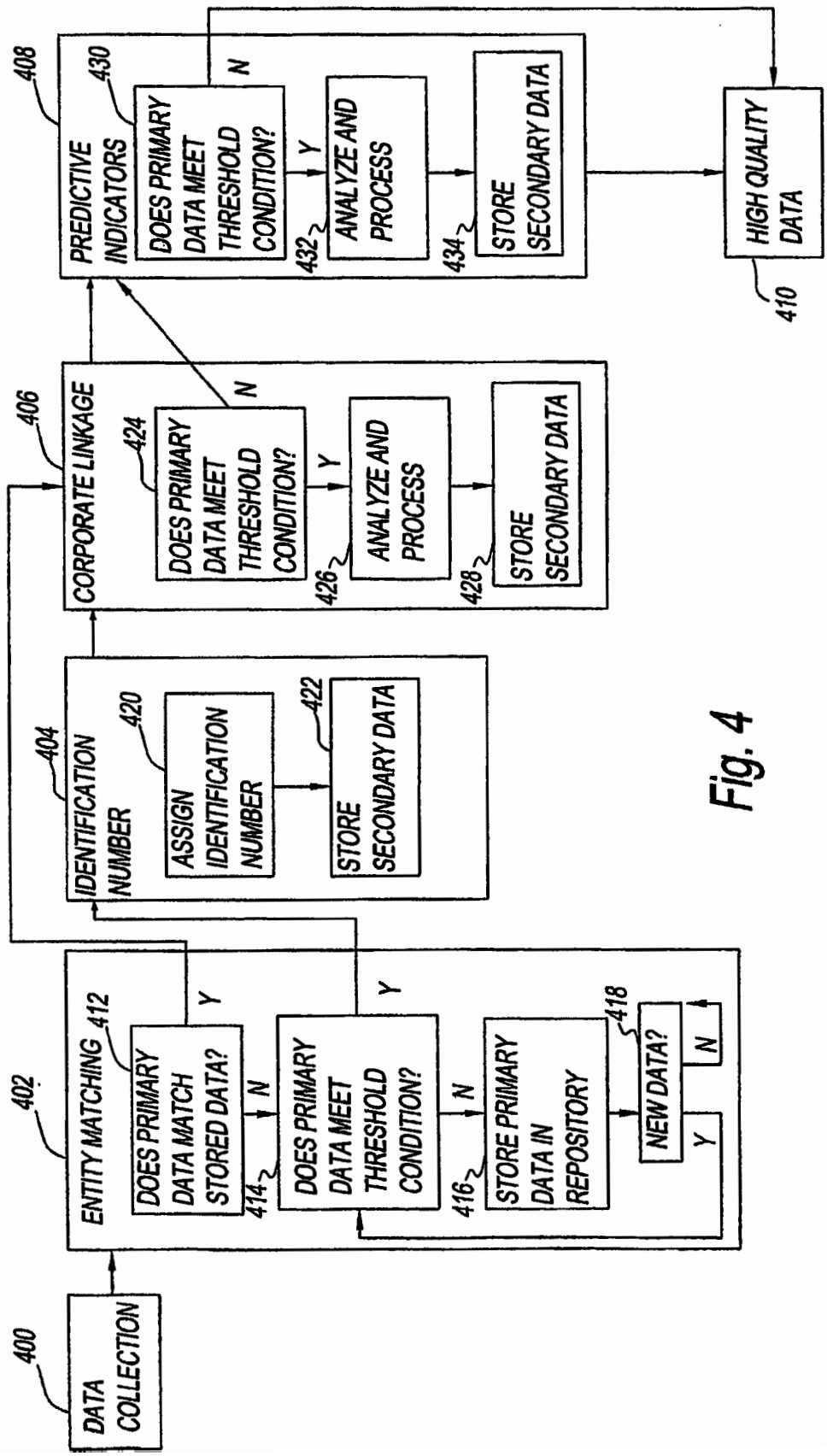

400
DATA COLLECTION
402
ENTITY MATCHING
412
DOES PRIMARY DATA MATCH STORED DATA?
Y
N
414
DOES PRIMARY DATA MEET THRESHOLD CONDITION?
Y
N
416
STORE PRIMARY DATA IN REPOSITORY
418
NEW DATA?
Y
N
404
IDENTIFICATION NUMBER
420
ASSIGN IDENTIFICATION NUMBER
422
STORE SECONDARY DATA
406
CORPORATE LINKAGE
424
DOES PRIMARY DATA MEET THRESHOLD CONDITION?
Y
N
426
ANALYZE AND PROCESS
428
STORE SECONDARY DATA
408
PREDICTIVE INDICATORS
430
DOES PRIMARY DATA MEET THRESHOLD CONDITION?
Y
N
432
ANALYZE AND PROCESS
434
STORE SECONDARY DATA
410
HIGH QUALITY DATA

Fig. 4

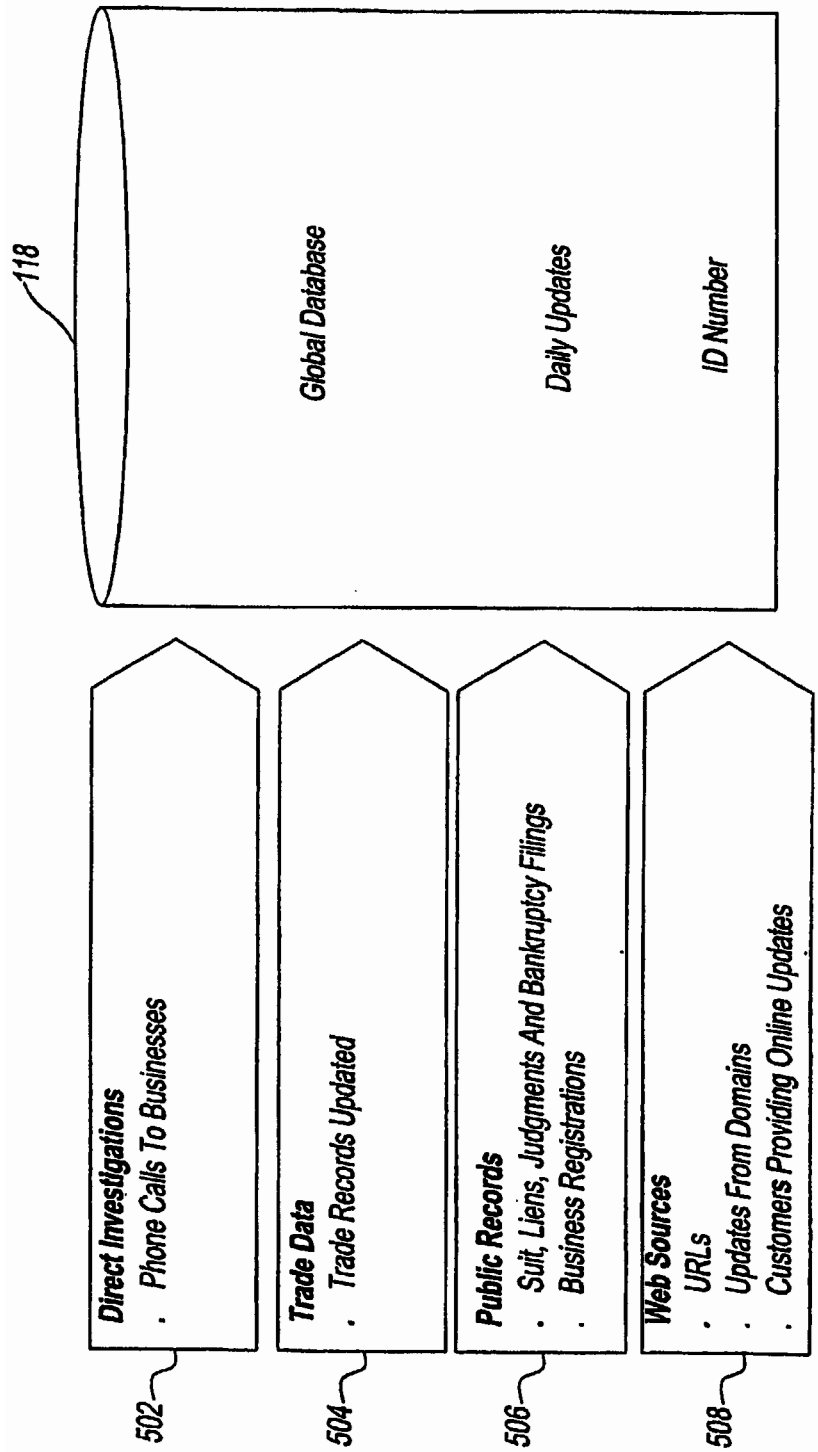

118
Global Database
Daily Updates
ID Number
Direct Investigations
. Phone Calls To Businesses
Trade Data
. Trade Records Updated
Public Records
. Suit, Liens, Judgments And Bankruptcy Filings
. Business Registrations
Web Sources
. URLs
. Updates From Domains
. Customers Providing Online Updates
502
504
506
508

Fig. 5

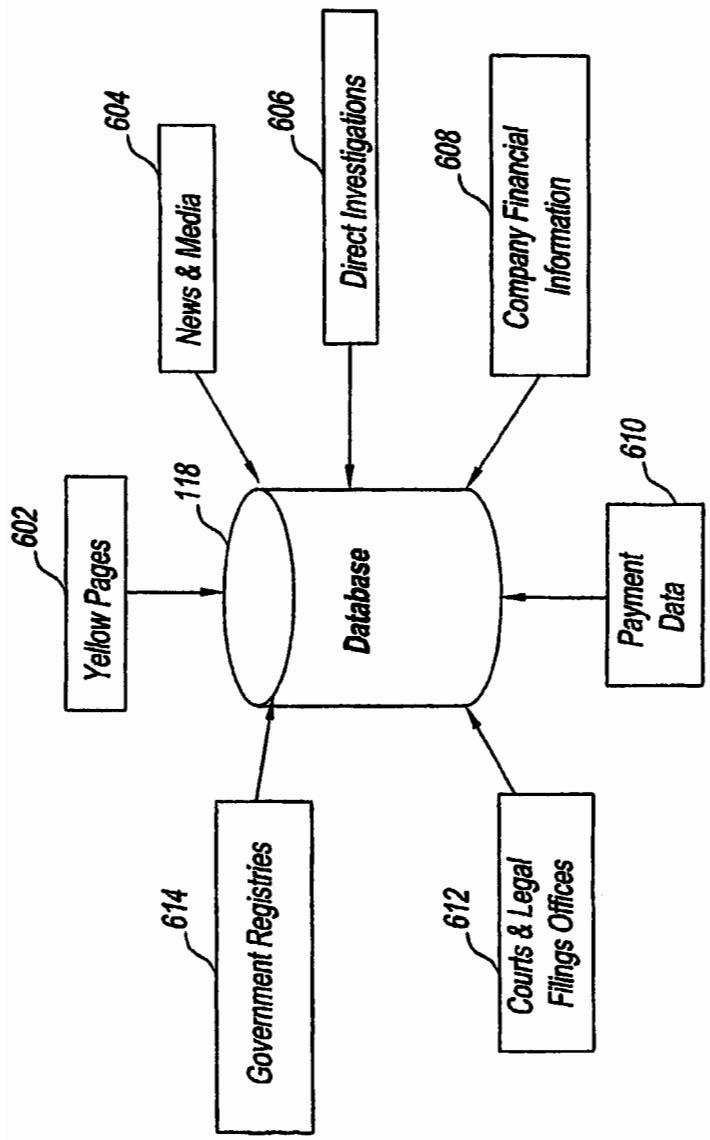

602
Yellow Pages
118
604
News & Media
606
Direct Investigations
608
Company Financial Information
610
Payment Data
Database
614
Government Registries
612
Courts & Legal Filings Offices

Fig. 6

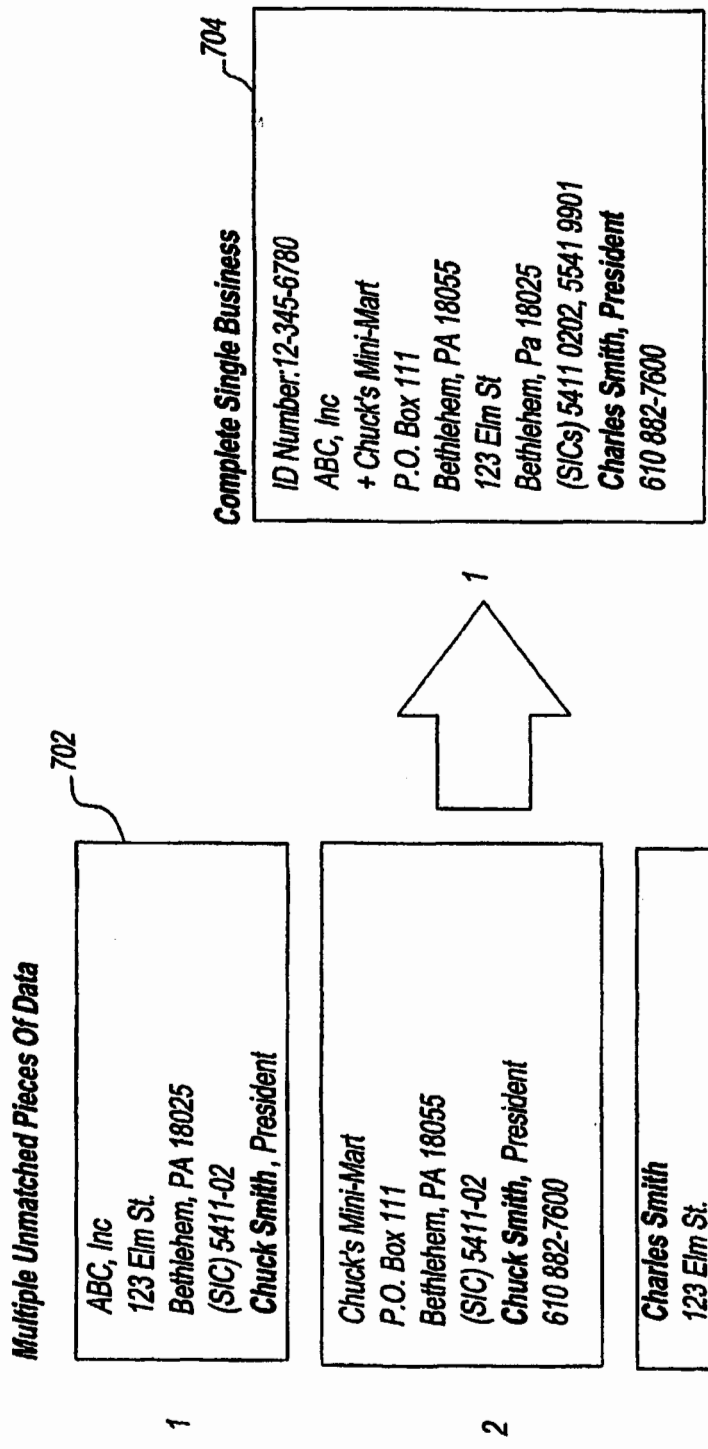

Multiple Unmatched Pieces Of Data
702
ABC, Inc
123 Elm St.
Bethlehem, PA 18025
(SIC) 5411-02
Chuck Smith, President
1
Chuck's Mini-Mart
P.O. Box 111
Bethlehem, PA 18055
(SIC) 5411-02
Chuck Smith, President
610 882-7600
2
Charles Smith
123 Elm St.
Bethlehem, PA 18025
(SIC)5541-99
215 882-7600
3
1
Complete Single Business
704
ID Number:12-345-6780
ABC, Inc
+ Chuck's Mini-Mart
P.O. Box 111
Bethlehem, PA 18055
123 Elm St
Bethlehem, Pa 18025
(SICs) 5411 0202, 5541 9901
Charles Smith, President
610 882-7600

Fig. 7


118
Existing Business
DATABASE
Matched
110
ENTITY
MATCHING
104
Data

Fig. 8

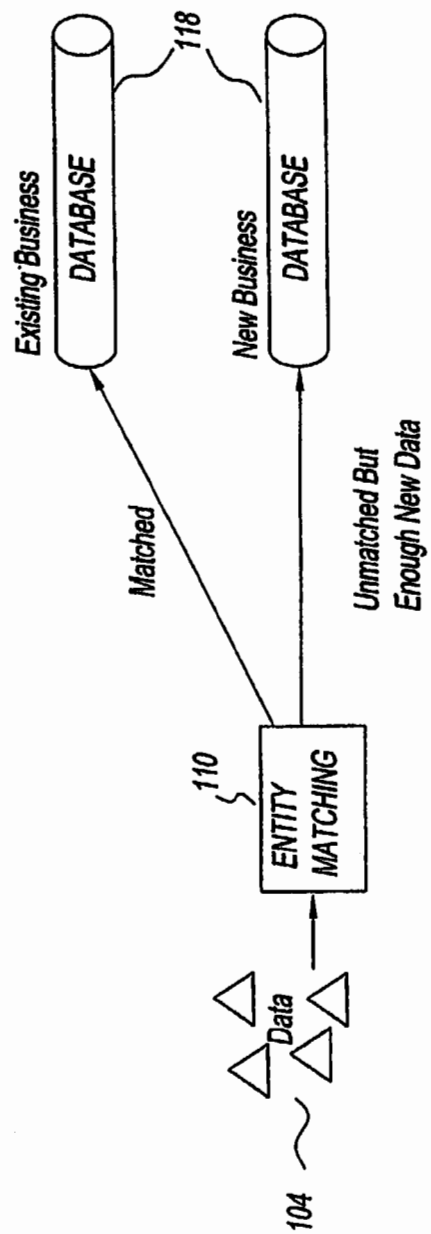

Existing Business
DATABASE
118
New Business
DATABASE
Matched
Unmatched But
Enough New Data
110
ENTITY
MATCHING
Data
104

Fig. 9

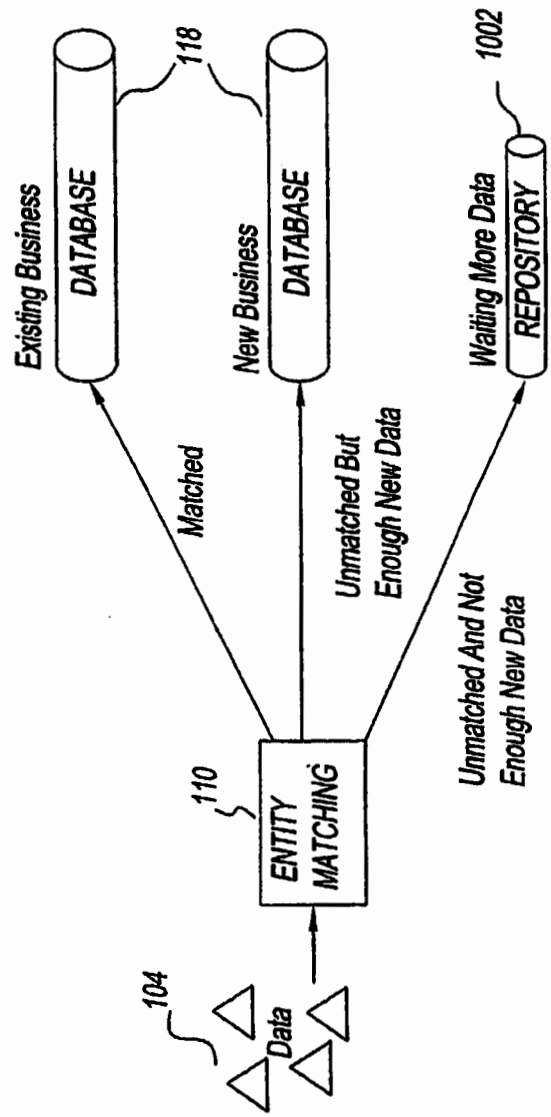

Existing Business
DATABASE
118
New Business
DATABASE
1002
Waiting More Data
REPOSITORY
Matched
Unmatched But
Enough New Data
Unmatched And Not
Enough New Data
110
ENTITY
MATCHING
104
Data

Fig. 10

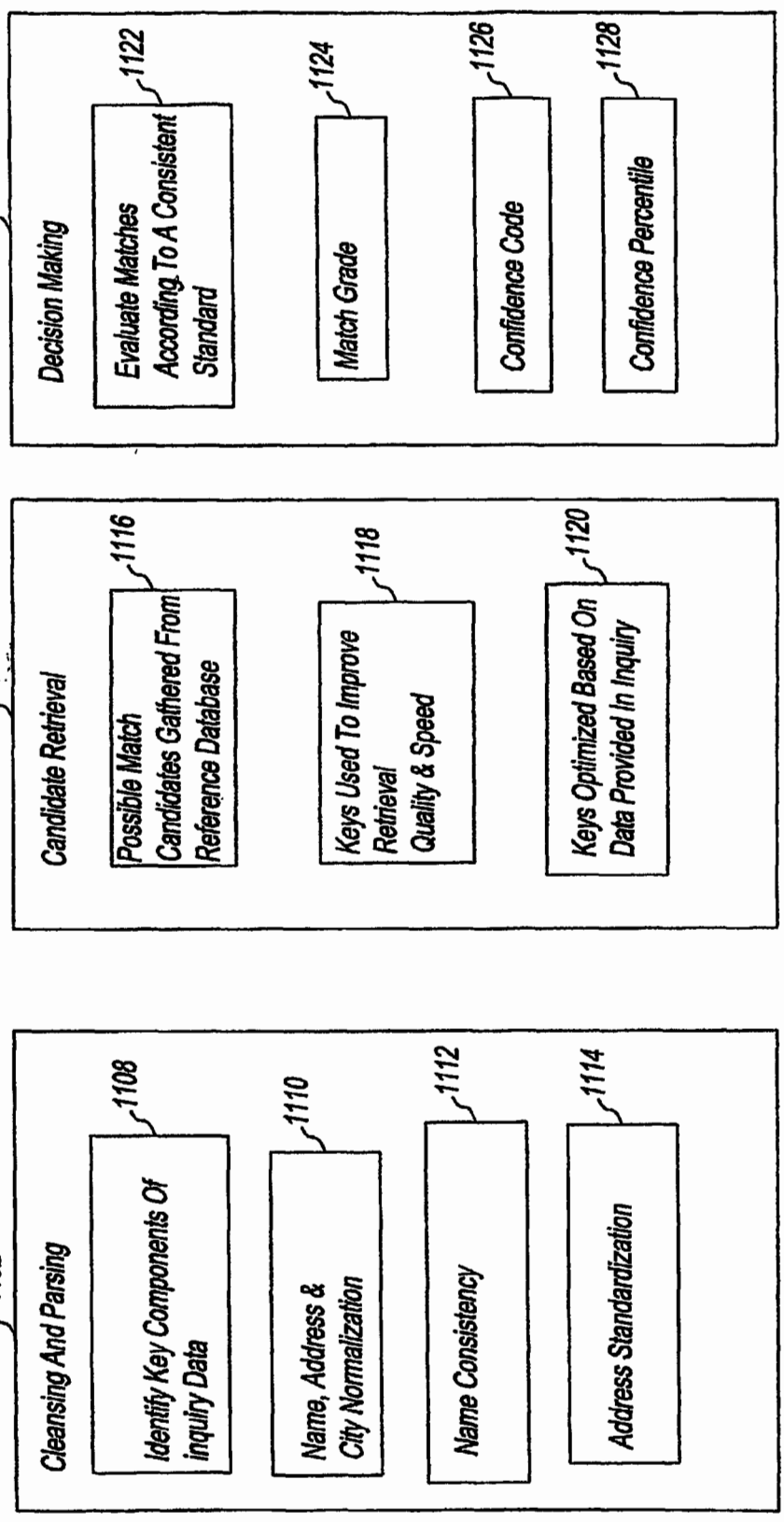

1102
Cleansing And Parsing
1108
Identify Key Components Of inquiry Data
1110
Name, Address & City Normalization
1112
Name Consistency
1114
Address Standardization
1104
Candidate Retrieval
1116
Possible Match Candidates Gathered From Reference Database
1118
Keys Used To Improve Retrieval Quality & Speed
1120
Keys Optimized Based On Data Provided In Inquiry
1106
Decision Making
1122
Evaluate Matches According To A Consistent Standard
1124
Match Grade
1126
Confidence Code
1128
Confidence Percentile

Fig. 11

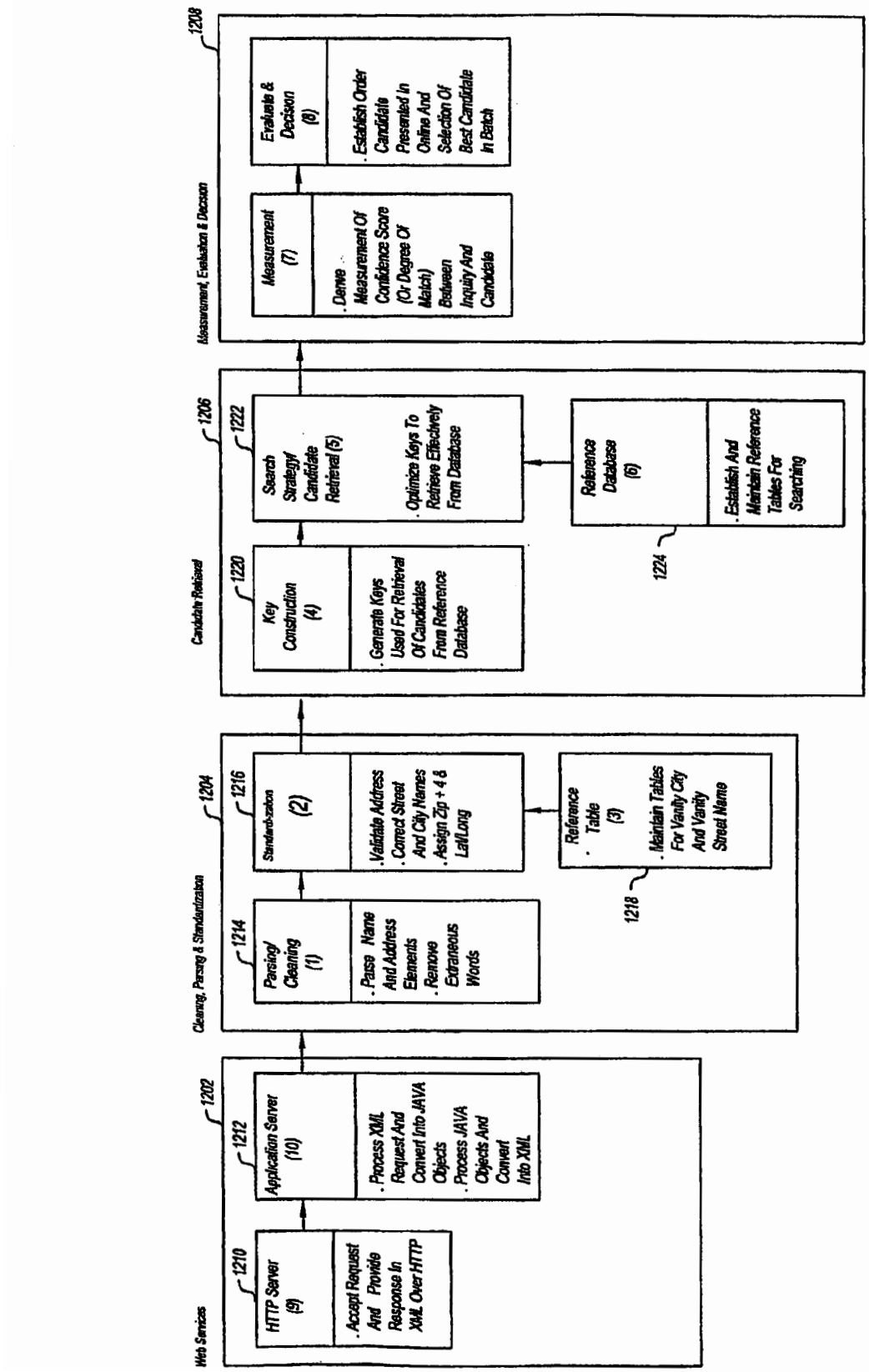

Web Services
1202
1210
HTTP Server (9)
. Accept Request And Provide Response In XML Over HTTP
1212
Application Server (10)
. Process XML Request And Convert Into JAVA Objects
. Process JAVA Objects And Convert Into XML
Cleaning, Parsing & Standardization
1204
1214
Parsing/ Cleaning (1)
. Parse Name And Address Elements
. Remove Extraneous Words
1216
Standardization (2)
. Validate Address
. Correct Street And City Names
. Assign Zip + 4 & Lat/Long
1218
Reference Table (3)
. Maintain Tables For Vanity City And Vanity Street Name
Candidate Retrieval
1206
1220
Key Construction (4)
. Generate Keys Used For Retrieval Of Candidates From Reference Database
1222
Search Strategy/ Candidate Retrieval (5)
. Optimize Keys To Retrieve Effectively From Database
1224
Reference Database (6)
. Establish And Maintain Reference Tables For Searching
Measurement, Evaluation & Decision
1208
Measurement (7)
. Derive Measurement Of Confidence Score (Or Degree Of Match) Between Inquiry And Candidate
Evaluate & Decision (8)
. Establish Order Candidate Presented In Online And Selection Of Best Candidate In Batch

Fig. 12

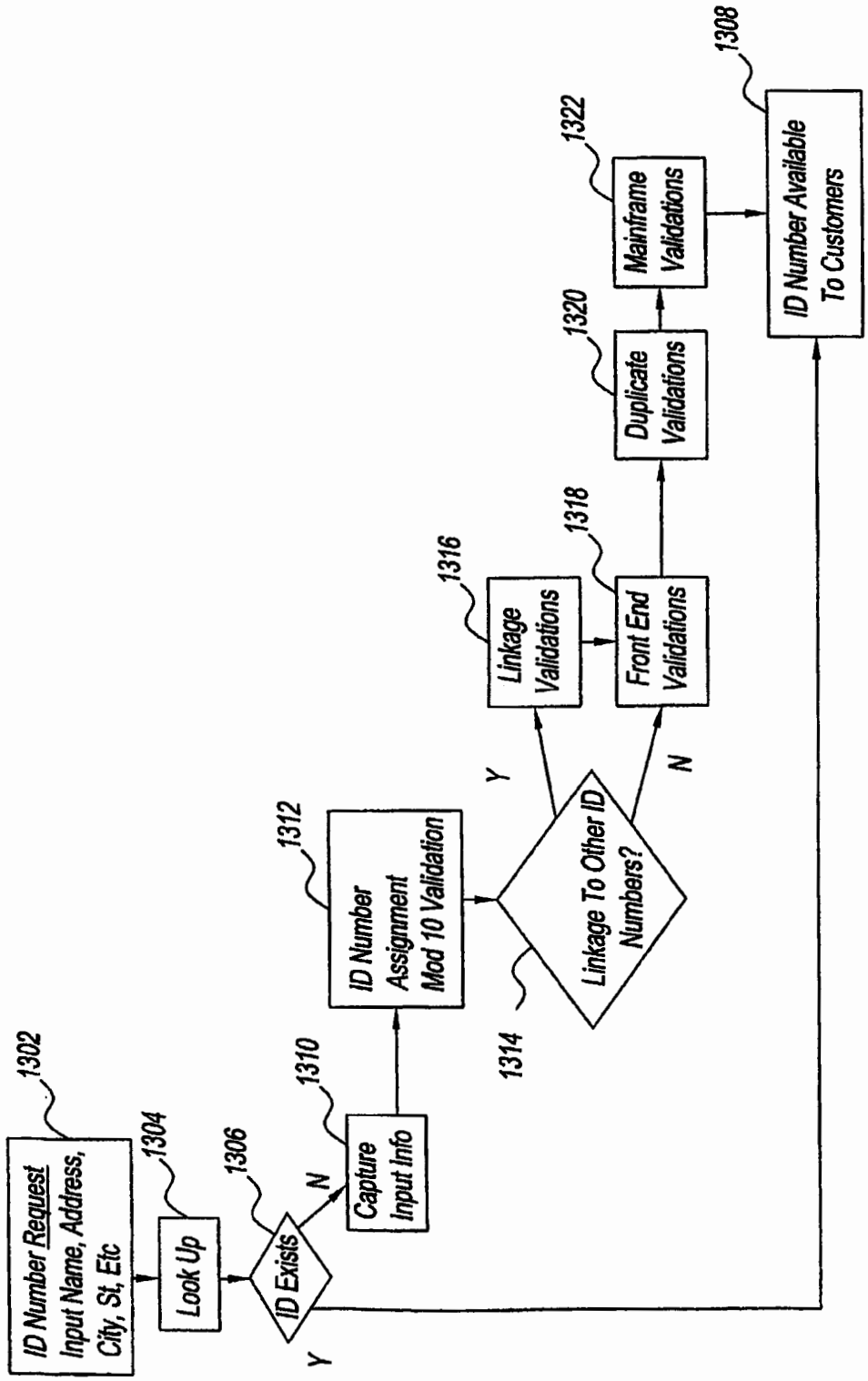

ID Number Request
Input Name, Address,
City, St, Etc
1302
Look Up
1304
ID Exists
1306
N
Y
Capture
Input Info
1310
ID Number
Assignment
Mod 10 Validation
1312
Linkage To Other ID
Numbers?
1314
Y
N
Linkage
Validations
1316
Front End
Validations
1318
Duplicate
Validations
1320
Mainframe
Validations
1322
ID Number Available
To Customers
1308

Fig. 13

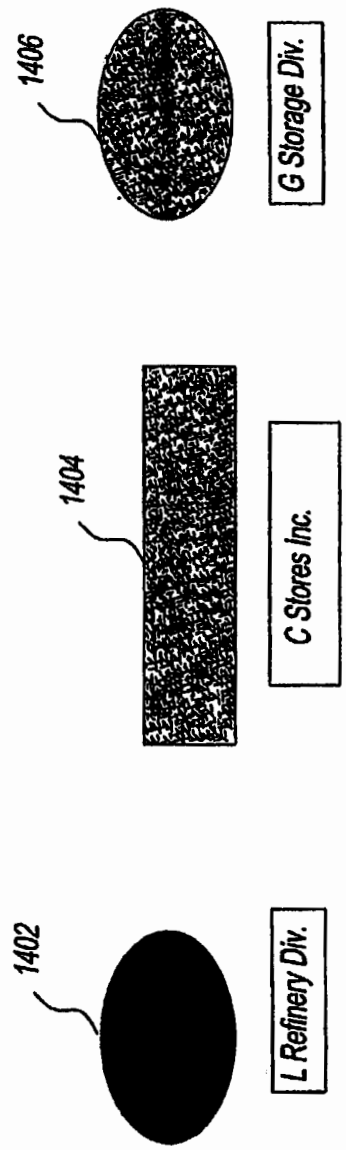


Fig. 14

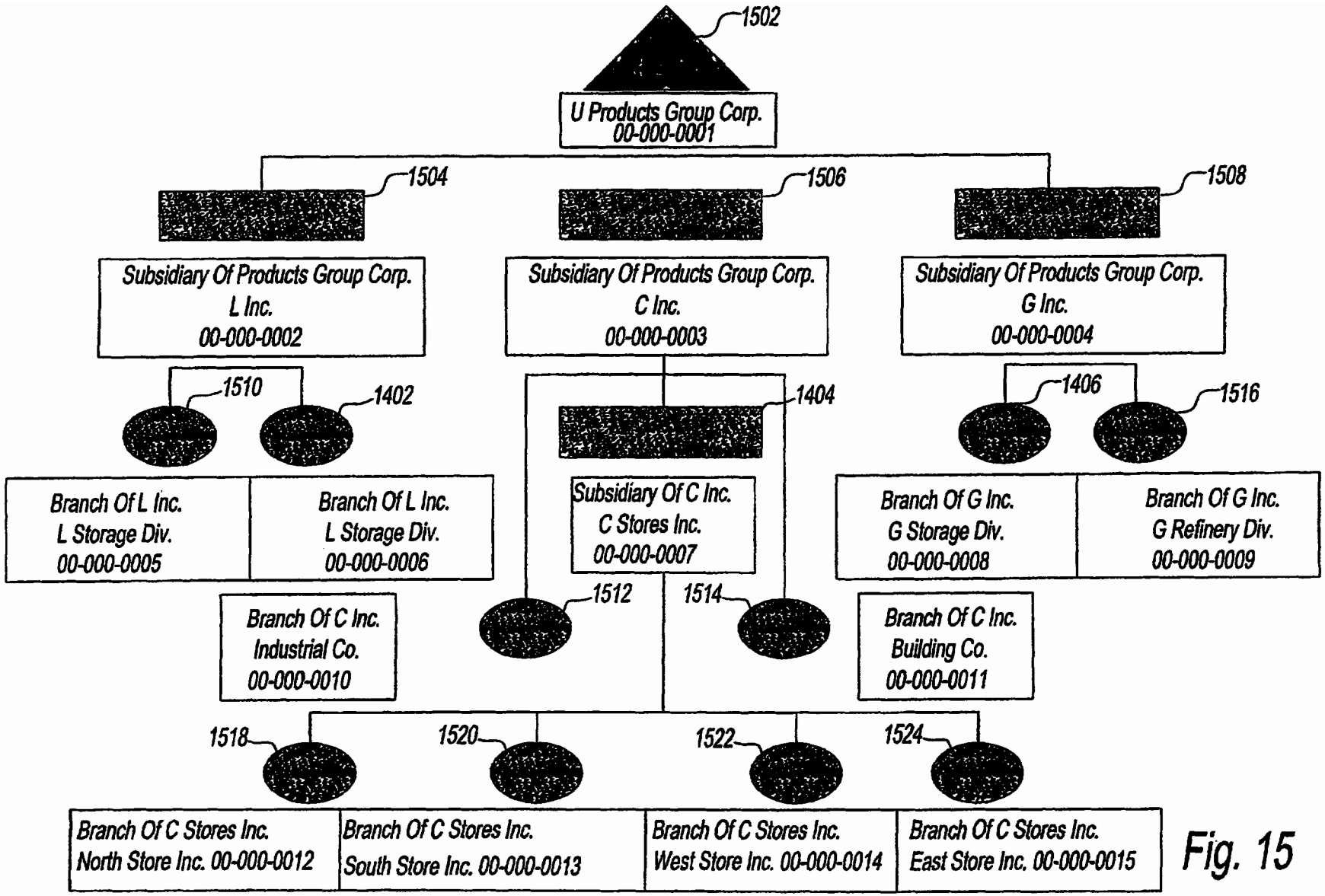

1502
U Products Group Corp.
00-000-0001
1504
1506
1508
Subsidiary Of Products Group Corp.
L Inc.
00-000-0002
Subsidiary Of Products Group Corp.
C Inc.
00-000-0003
Subsidiary Of Products Group Corp.
G Inc.
00-000-0004
1510
1402
1404
1406
1516
Branch Of L Inc.
L Storage Div.
00-000-0005
Branch Of L Inc.
L Storage Div.
00-000-0006
Subsidiary Of C Inc.
C Stores Inc.
00-000-0007
Branch Of G Inc.
G Storage Div.
00-000-0008
Branch Of G Inc.
G Refinery Div.
00-000-0009
1512
1514
Branch Of C Inc.
Industrial Co.
00-000-0010
Branch Of C Inc.
Building Co.
00-000-0011
1518
1520
1522
1524
Branch Of C Stores Inc.
North Store Inc. 00-000-0012
Branch Of C Stores Inc.
South Store Inc. 00-000-0013
Branch Of C Stores Inc.
West Store Inc. 00-000-0014
Branch Of C Stores Inc.
East Store Inc. 00-000-0015

Fig. 15

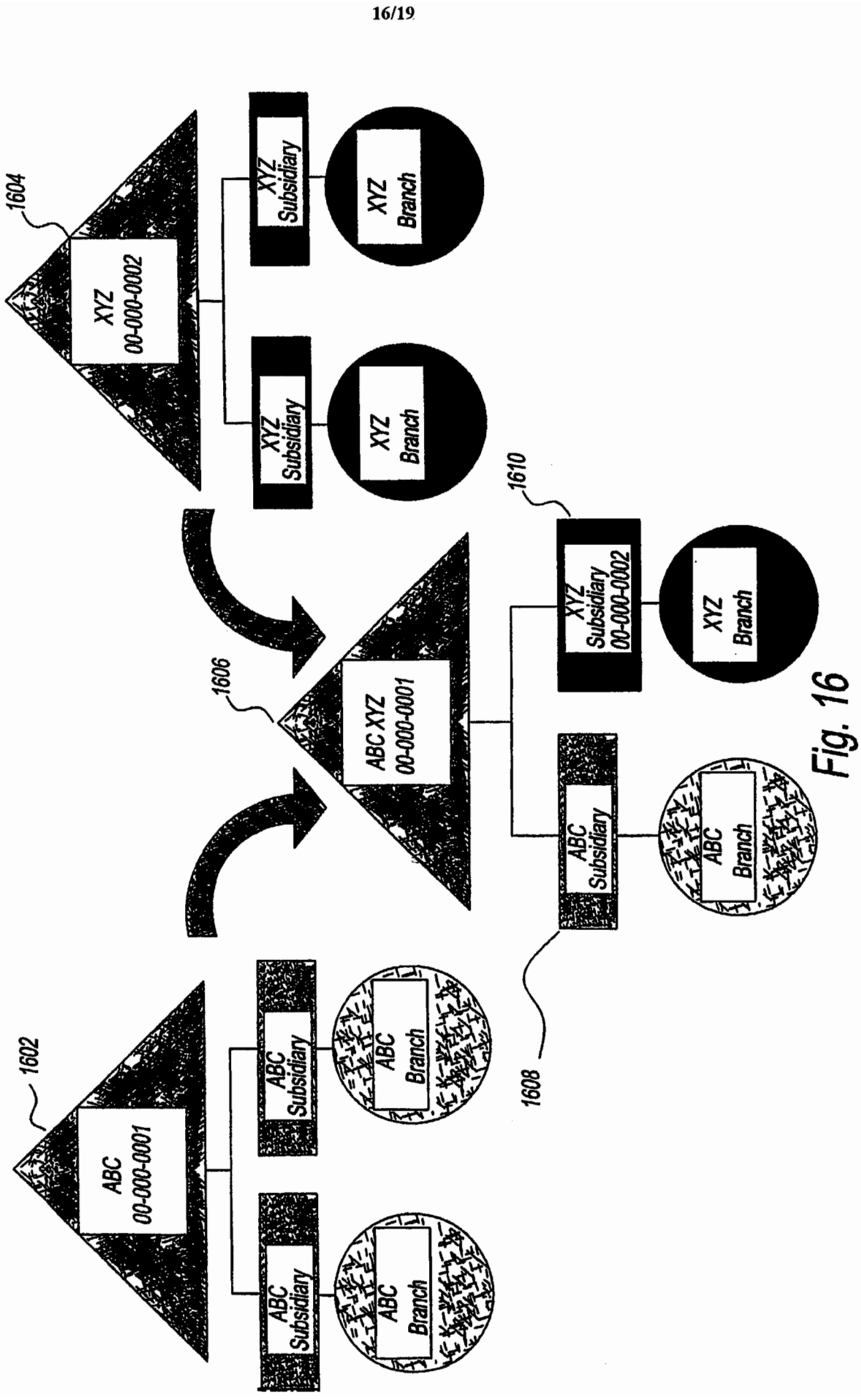

1602
ABC
00-000-0001
ABC
Subsidiary
ABC
Branch
ABC
Subsidiary
ABC
Branch
1604
XYZ
00-000-0002
XYZ
Subsidiary
XYZ
Branch
XYZ
Subsidiary
XYZ
Branch
1606
ABC XYZ
00-000-0001
1608
ABC
Subsidiary
ABC
Branch
1610
XYZ
Subsidiary
00-000-0002
XYZ
Branch

Fig. 16

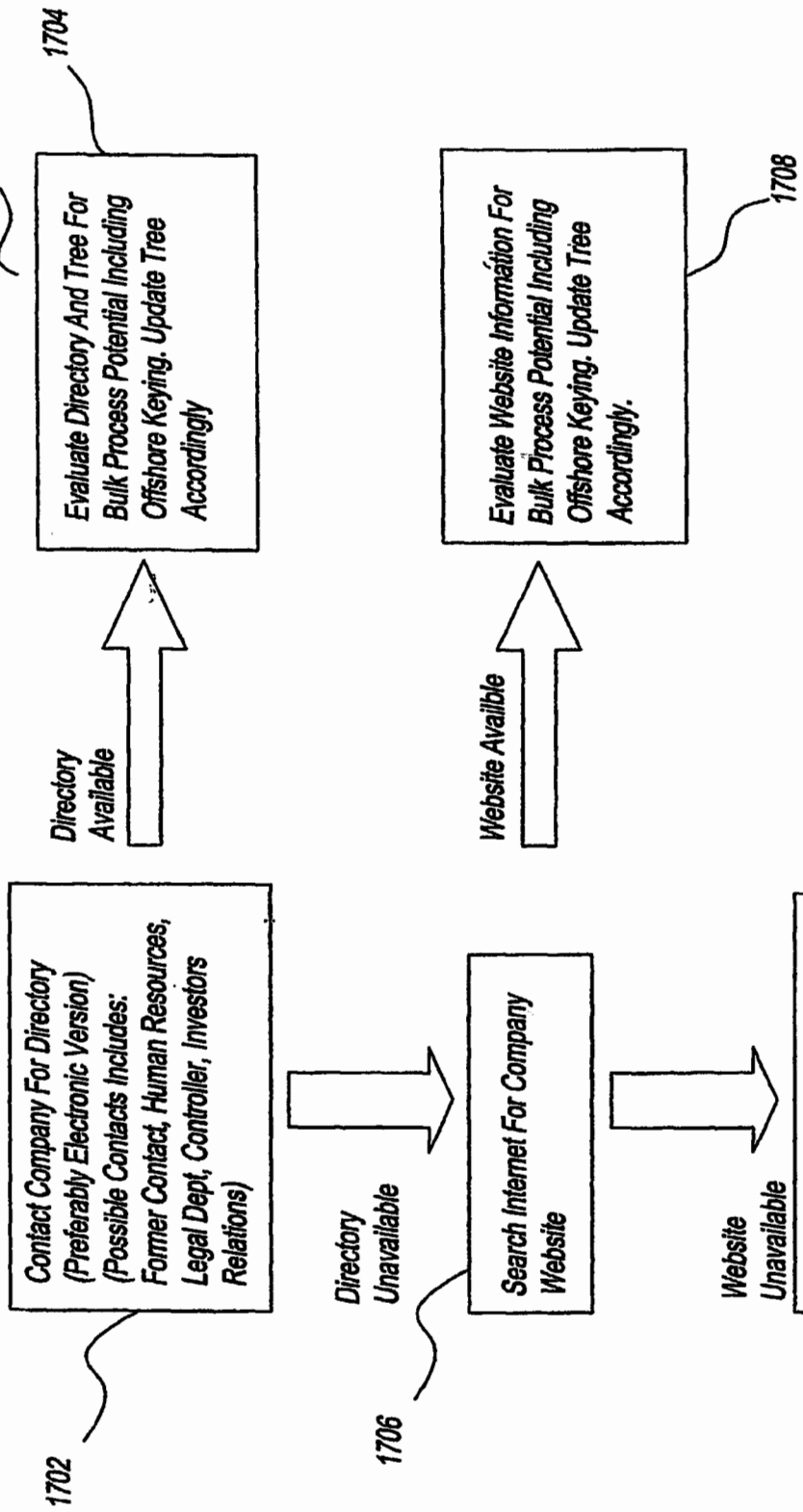

1700
1704
Evaluate Directory And Tree For Bulk Process Potential Including Offshore Keying. Update Tree Accordingly
Directory Available
Website Availble
Evaluate Website Information For Bulk Process Potential Including Offshore Keying. Update Tree Accordingly.
1708
Contact Company For Directory (Preferably Electronic Version) (Possible Contacts Includes: Former Contact, Human Resources, Legal Dept, Controller, Investors Relations)
1702
Directory Unavailable
Search Internet For Company Website
1706
Website Unavailable
If Company Is Publicly Traded, Check The Latest 10-K, Otherwise Call Subsidiaries To Verbally Verify Tree Structure. Resolve Look-A-Likes And Logoff Tree.
1710

Fig. 17

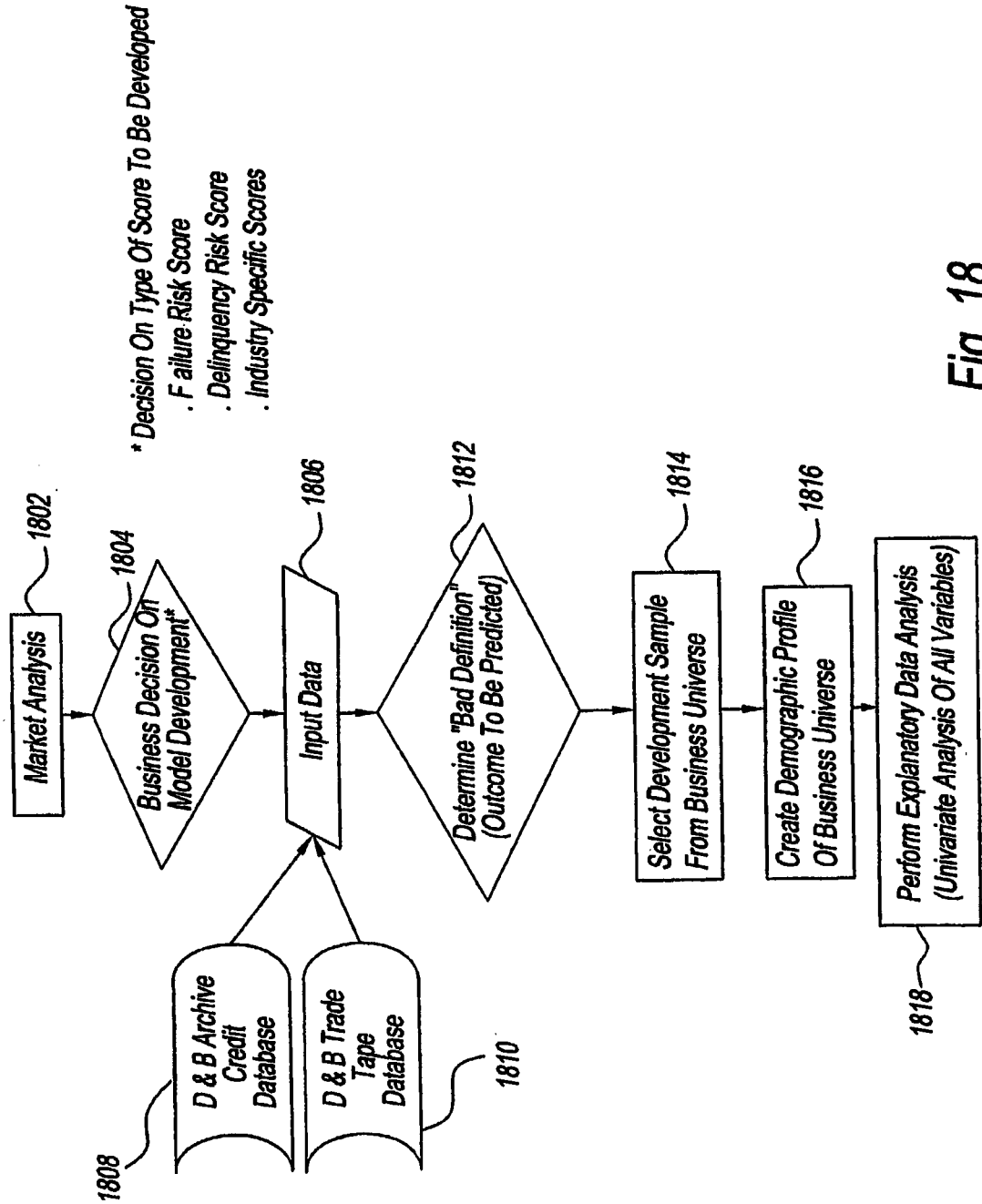

Market Analysis
1802
Business Decision On Model Development*
1804
* Decision On Type Of Score To Be Developed
. F ailure Risk Score
. Delinquency Risk Score
. Industry Specific Scores
Input Data
1806
Determine "Bad Definition" (Outcome To Be Predicted)
1812
Select Development Sample From Business Universe
1814
Create Demographic Profile Of Business Universe
1816
Perform Explanatory Data Analysis (Univariate Analysis Of All Variables)
1818
D & B Archive Credit Database
D & B Trade Tape Database
1808
1810

Fig. 18

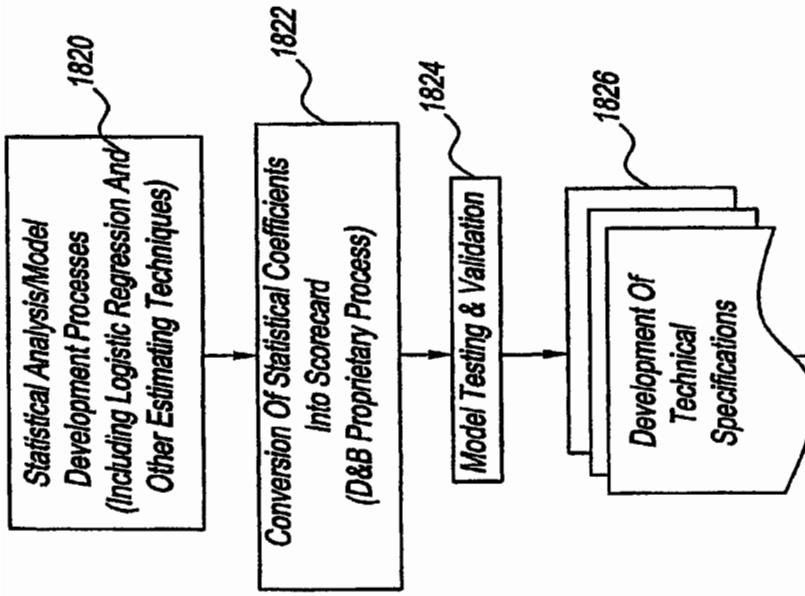

Statistical Analysis/Model Development Processes (Including Logistic Regression And Other Estimating Techniques)
1820
Conversion Of Statistical Coefficients Into Scorecard (D&B Proprietary Process)
1822
Model Testing & Validation
1824
Development Of Technical Specifications
1826
Model Implementation
1828
Implementation Testing
1830

Fig. 18B