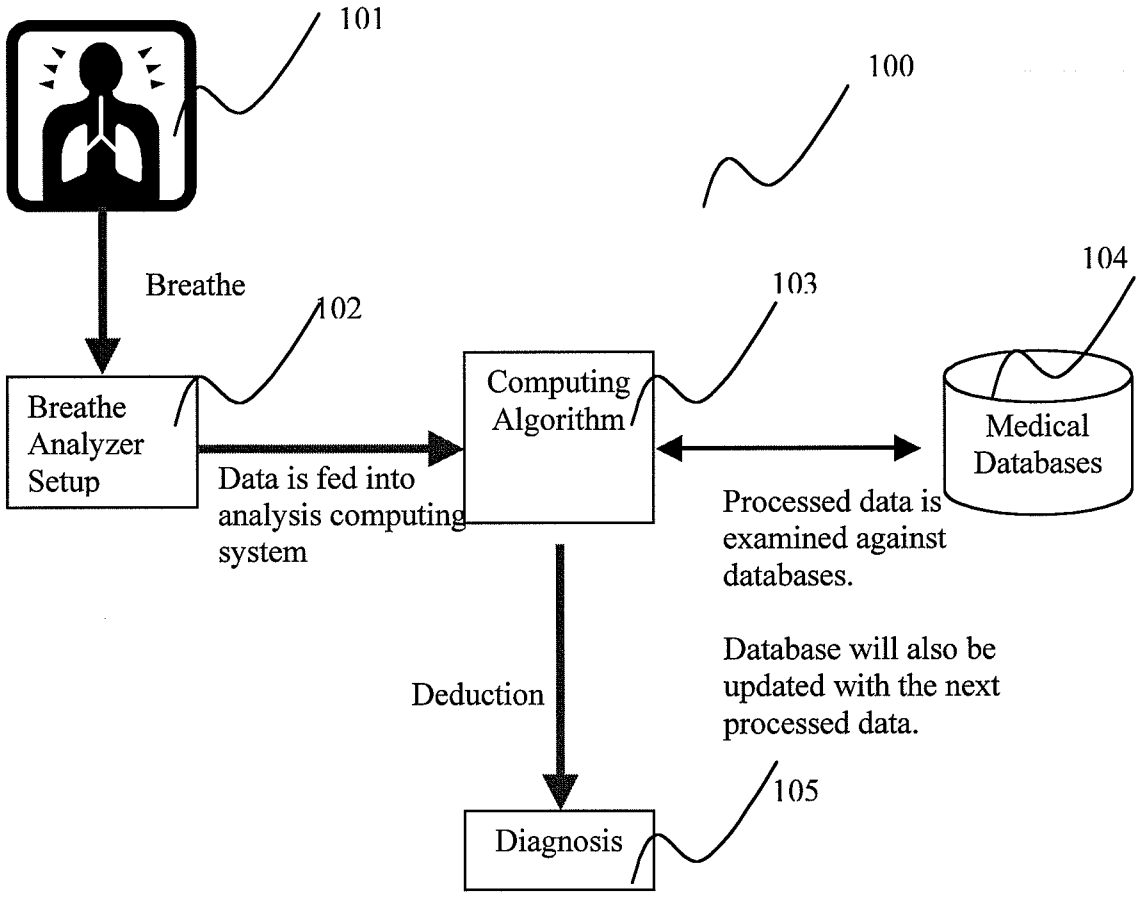

101
100
Breathe
102
103
104
Breathe Analyzer Setup
Data is fed into analysis computing system
Computing Algorithm
Medical Databases
Processed data is examined against databases.
Database will also be updated with the next processed data.
Deduction
105
Diagnosis

FIG 1

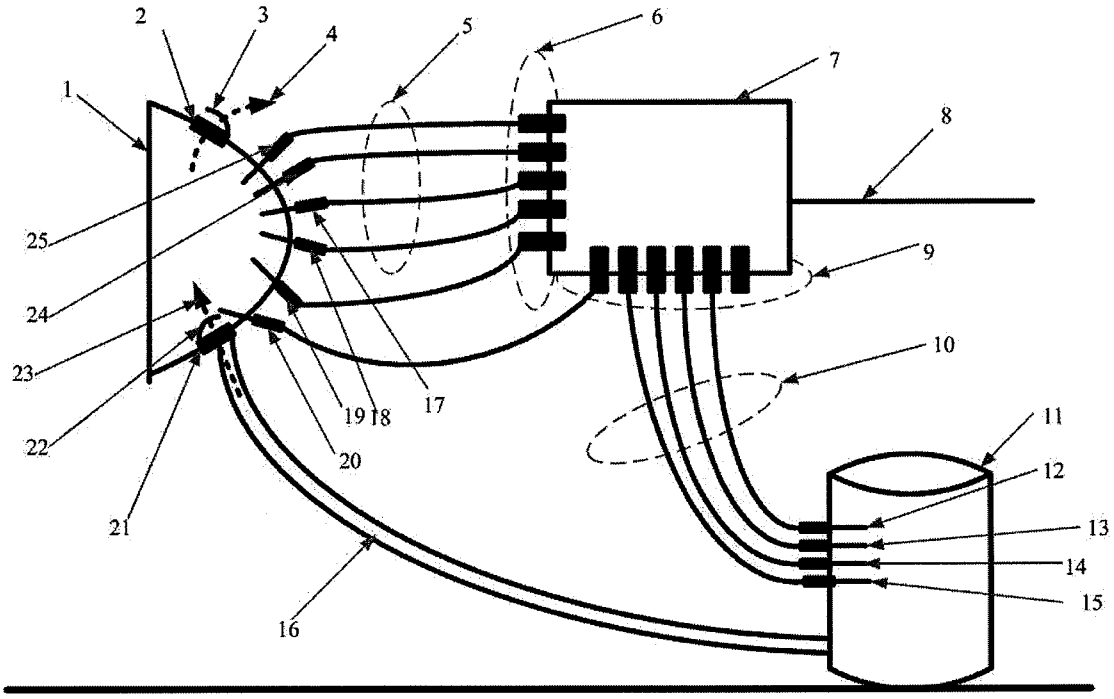


FIG 2

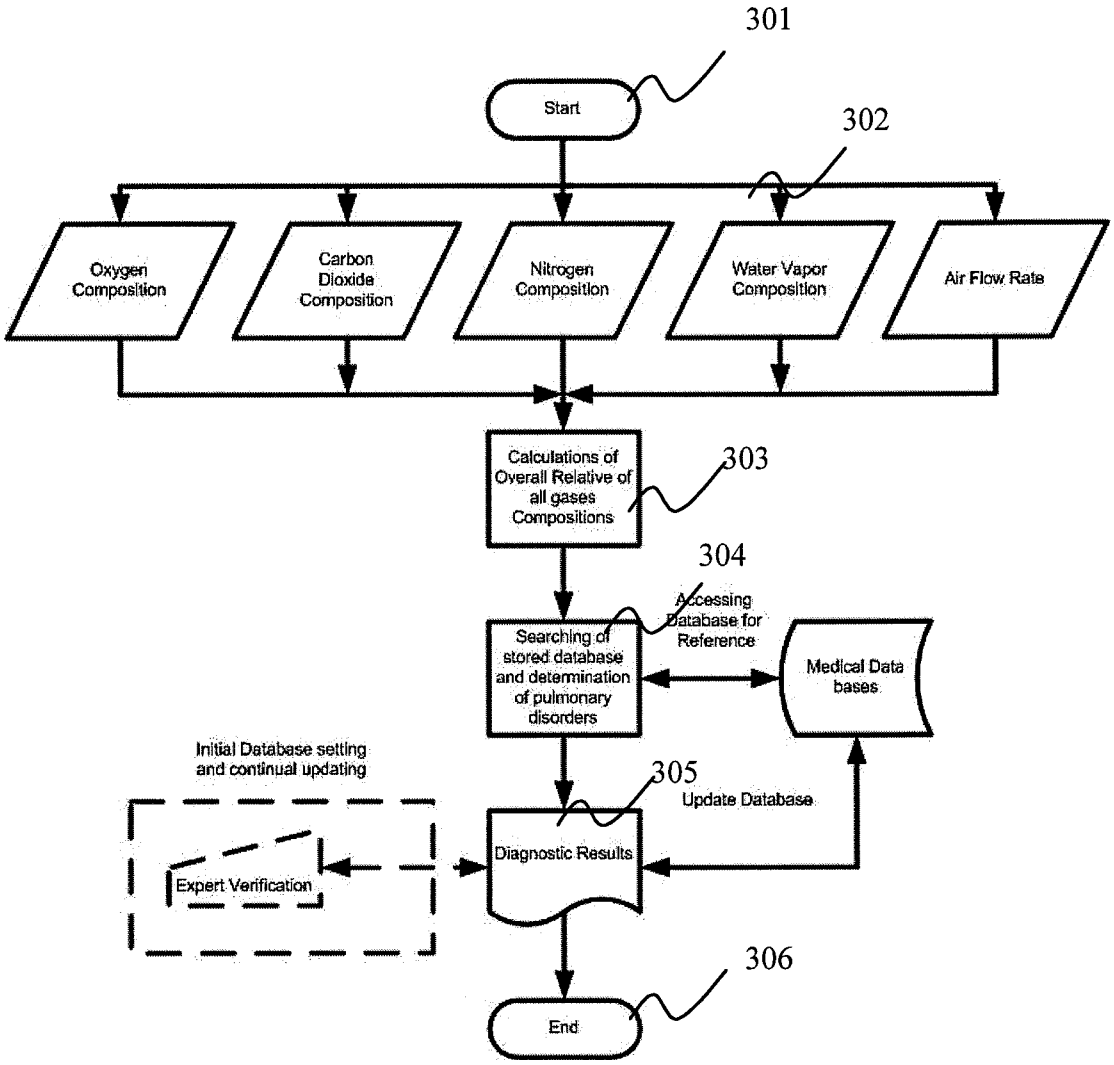

301
Start
302
Oxygen Composition
Carbon Dioxide Composition
Nitrogen Composition
Water Vapor Composition
Air Flow Rate
Calculations of Overall Relative of all gases Compositions
303
304
Accessing Database for Reference
Searching of stored database and determination of pulmonary disorders
Medical Data bases
Initial Database setting and continual updating
305
Update Database
Expert Verification
Diagnostic Results
306
End

FIG 3

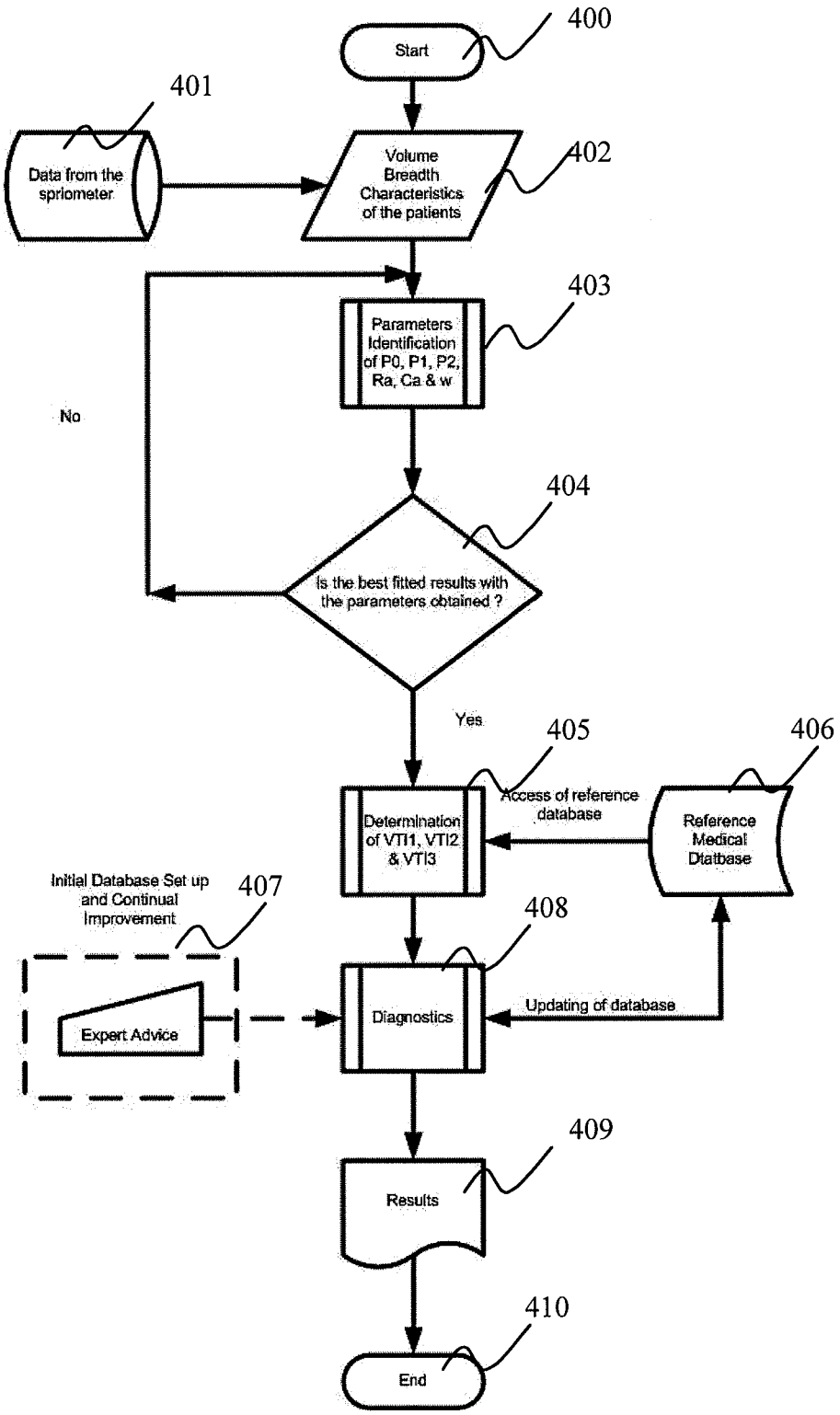

400
Start
401
Data from the spriometer
Volume Breadth Characteristics of the patients
402
403
Parameters Identification of P0, P1, P2, Ra, Ca & w
No
404
Is the best fitted results with the parameters obtained ?
Yes
405
406
Access of reference database
Determination of VTI1, VTI2 & VTI3
Reference Medical Dtatbase
Initial Database Set up and Continual Improvement
407
408
Expert Advice
Diagnostics
Updating of database
409
Results
410
End

FIG 4

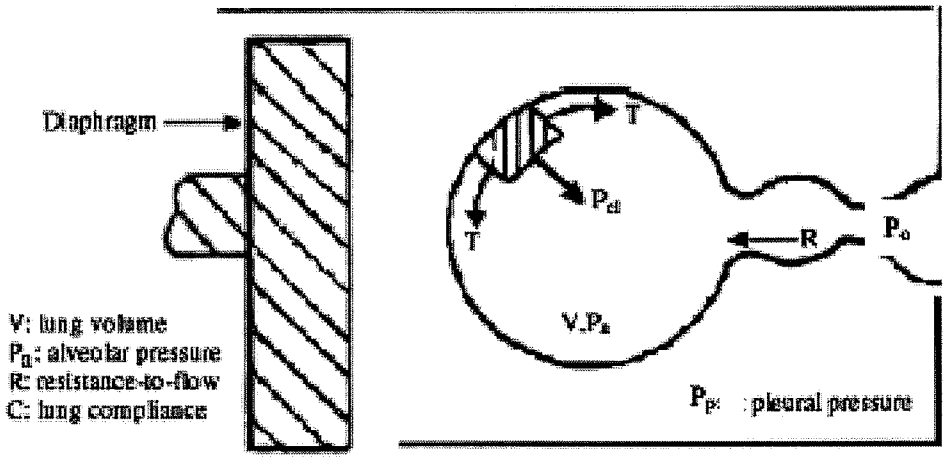

Diaphragm
T
P_{el}
T
R
P_o
V.P_a
P_p: pleural pressure
V: lung volume
P_a: alveolar pressure
R: resistance-to-flow
C: lung compliance

FIG 5a

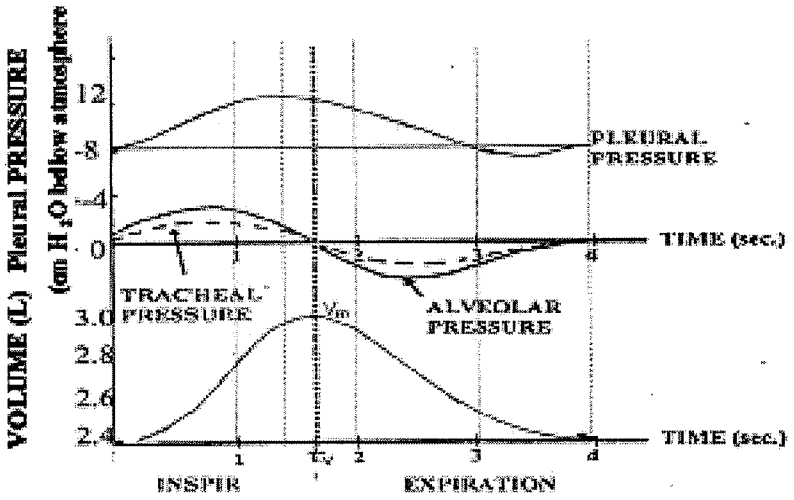

VOLUME (L) Pleural PRESSURE
(cm H_2O below atmosphere
12
-8
-4
0
3.0
2.8
2.6
2.4
PLEURAL PRESSURE
TIME (sec.)
TRACHEAL PRESSURE
ALVEOLAR PRESSURE
V_{TD}
TIME (sec.)
1
2
3
d
INSPIR
EXPIRATION

FIG 5b

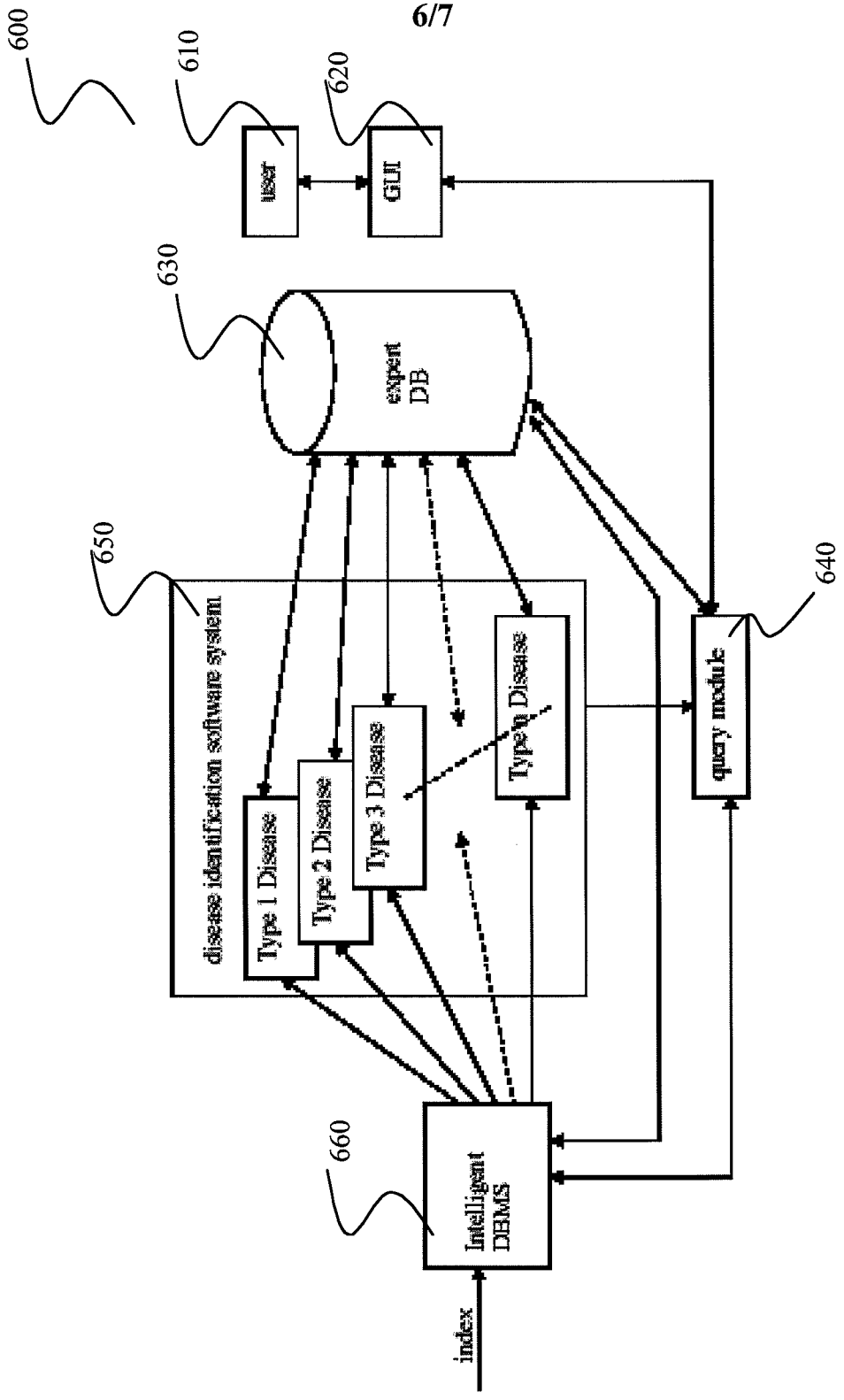

600
610
620
630
640
650
660
user
GUI
expert DB
disease identification software system
Type 1 Disease
Type 2 Disease
Type 3 Disease
Type n Disease
query module
Intelligent DBMS
index

FIG 6

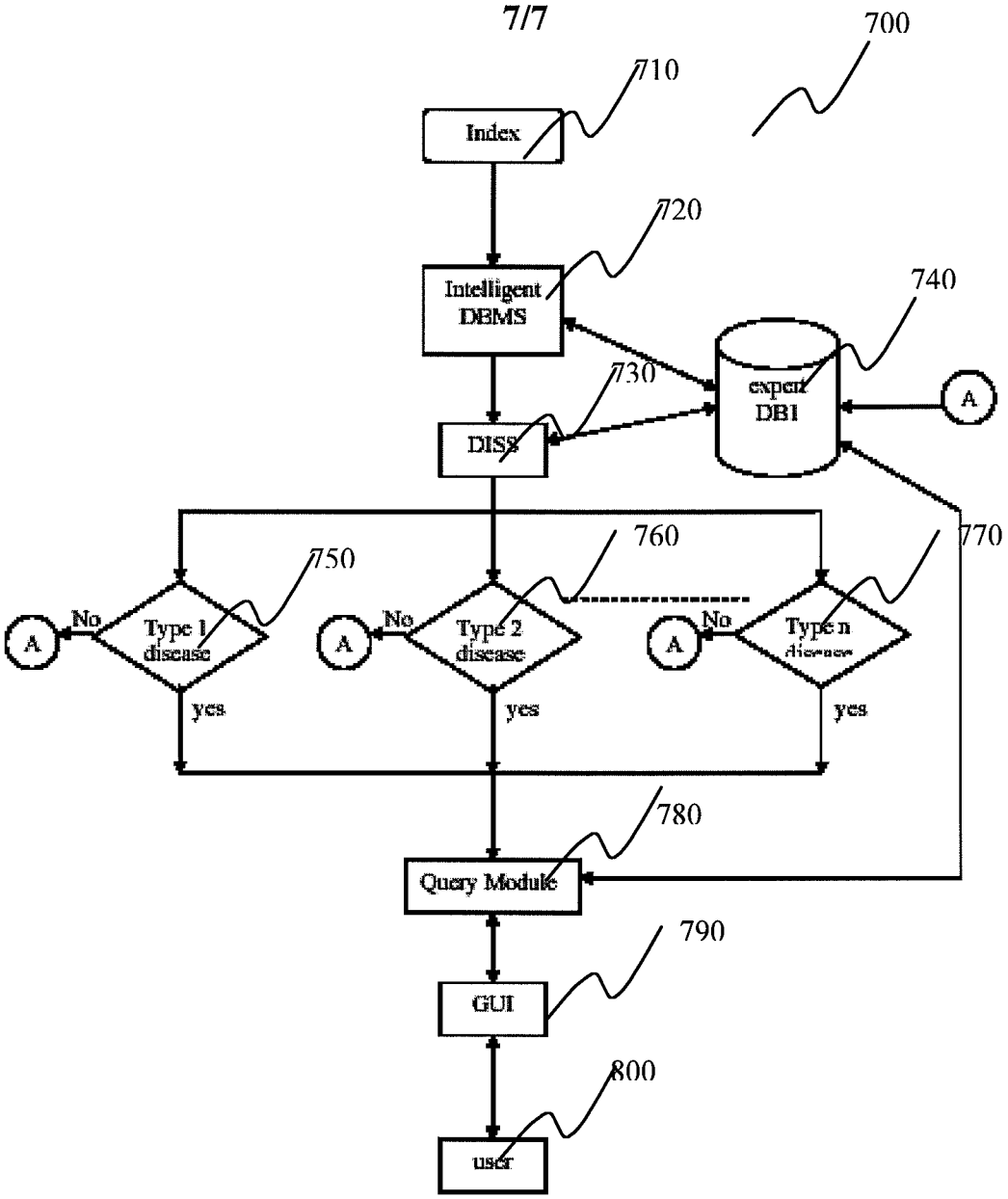

700
710
Index
720
Intelligent DBMS
740
expert DB1
730
DISS
A
760
770
750
No
Type 1 disease
Type 2 disease
Type n disease
yes
780
Query Module
790
GUI
800
user

FIG 7