INTERNAL DATA RETRIEVAL SYSTEM FOR DENTAL DIAGNOSIS AND TREATMENT INFORMATION

TECHNICAL FIELD

[0001] The present invention relates to the field of medical management systems, and in particular, to an internal data retrieval system for dental diagnosis and treatment information.

BACKGROUND

[0002] In existing dental medical management process, operation management data involved are usually in the decentralized management mode of each department. The service department needs to separately communicate with each operation management department when invoking required data at work, and invoked data need to be manually sorted out and screened before use. Therefore, this is very inconvenient to use. On this basis, in an existing internal query system, index keywords entered by service personnel cannot accurately retrieve their actual demand data, so the index keywords need to be further optimized and adjusted; for different application fields, actual adjustment modes are different; and how the retrieval performance of the dental medical management system is further optimized by optimizing the retrieval mode of the query system is an important issue to be resolved during dental medical management.

[0003] Chinese patent, with publication number TWI310165B, provides a dynamic pattern indexing method. In the patent, a dynamic index matrix is established to dynamically adjust the display color of a liquid crystal display, thereby improving the display status of the liquid crystal display. Chinese patent, with publication number CN103226559B, provides a spatial information indexing system for combined SOI objects and contents. In the patent, a map tile labeling method is established to implement a combined indexing mode based on content space.

[0004] However, the indexing mode described in the above patents is not combined with the subsequent generation mode of a structured data report, but only optimizes its retrieval function. In an actual dental medical management process, data screening and analysis need to be performed in addition to data retrieval, thereby further improving the working efficiency of the service personnel. Therefore, specific to the problems in the existing internal indexing system for dental medical management, the present invention provides an internal data retrieval system for dental diagnosis and treatment information.

SUMMARY

[0005] Specific to the above problems, an internal data retrieval system for dental diagnosis and treatment information is provided and specifically includes an operation data management module, a service data management module, and an internal retrieval module, where operation log data is generated in the operation data management module, the internal retrieval module is configured to invoke and parse the operation log data to generate standardized log data.

[0006] Preferably, in the internal retrieval module, an index database and a corresponding index parameter are established to target and expand an index keyword.

[0007] Preferably, relevant service personnel query service information on the standardized log data in the internal retrieval module; and the internal retrieval module automatically generates a service report from query result data and sends the service report to the service data management module for service promotion and use.

[0008] Preferably, the index parameter includes an index string length range, an index data attribute, and an index data type.

[0009] Preferably, the index keyword is targeted through reverse indexing, and the reverse indexing is used for targeting the index keyword in the standardized log data and a data form path corresponding to the standardized log data according to the index keyword.

[0010] Preferably, a user-defined query condition is established in the internal retrieval module, an optimization mode based on a combined index keyword is established in the user-defined query condition, and the index keyword is divided into a discrete keyword and a continuous keyword.

[0011] Specifically, in the user-defined query condition, after the standardized log data is sorted out, characteristic values based on keywords in the standardized log data are established for sorting out; when relevant service personnel need to query specified operation data, such service personnel can input the corresponding keywords and establish a plurality of retrieval modes based on sorting combination for the keywords, to quickly acquire and query the operation data.

[0012] Preferably, the discrete keyword and the continuous keyword are divided according to an association degree of attributes between a plurality of keywords.

[0013] Preferably, the discrete keyword has a weak association degree of attributes, and a parallel retrieval mode is adopted between a plurality of discrete keywords; and the continuous keyword has a strong association degree of attributes, and a combined retrieval mode is

adopted between a plurality of continuous keywords.

[0014] Preferably, an index keyword similarity deduplication calculation is established in the combined index keyword; and when the combined index keyword is searched, numbered lists of various data forms corresponding to a plurality of index keywords are integrated.

[0015] Specifically, the index keyword similarity deduplication calculation is used for screening and removing data in the retrieved repetitive data form, so as to improve the clarity of the screened data.

[0016] Preferably, for the index keyword similarity deduplication, a threshold range of the association degree of attributes between the plurality of keywords is set based on the association degree of attributes; and when the association degree of attributes between the plurality of keywords is within a specified range, it is determined that similar keywords are subjected to keyword deduplication and keyword integration.

[0017] Compared with the prior art, the present invention has the following beneficial effects:

[0018] (1) In the internal data retrieval system for dental diagnosis and treatment information according to the present invention, the internal data retrieval system is established to independently query and invoke relevant operation data in the internal system for dental diagnosis and treatment according to the actual demands of relevant service personnel during service expansion.

[0019] (2) On the basis of (1), in the internal data retrieval system for dental diagnosis and treatment information according to the present invention, a query process for the user-defined query condition is established; according to the user-defined query condition, user-defined retrieval keywords are arranged and combined to improve the query mode, so that the efficiency of data query in the internal data retrieval system is improved, and required information is quickly provided for relevant service personnel to facilitate use during the subsequent service expansion.

[0020] (3) On the basis of (2), the internal data retrieval system of the present invention can automatically sort the document content corresponding to the keywords queried by the relevant service personnel in the internal data retrieval system into a report made in a standardized format, help the relevant service personnel quickly obtain the key content of the information to be queried in a case that the relevant service personnel do not need to make secondary statistics and summary on data obtained through query, and immediately use the queried relevant service information, thus improving the availability of the data.

[0021] (4) On the basis of (3), the service report of the present invention is combined with the optimization process of the index keyword to establish the division of information importance

in the service report, thereby improving the working efficiency of the service personnel and immediately grasping the key content in the queried service data.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] FIG. 1 is a retrieval flow diagram of an internal data retrieval system for dental diagnosis and treatment information; and

[0023] FIG. 2 is a schematic flow diagram of invoking and parsing of operation log data by an internal retrieval module.

DETAILED DESCRIPTION OF EMBODIMENTS

[0024] Embodiment 1:

[0025] An internal data retrieval system for dental diagnosis and treatment information described in the embodiment is as shown in FIG. 1; and the internal data retrieval system specifically includes an operation data management module, a service data management module, and an internal retrieval module, where operation log data is generated in the operation data management module, the internal retrieval module is configured to invoke and parse the operation log data to generate standardized log data; relevant service personnel query service information on the standardized log data in the internal retrieval module; and the internal retrieval module automatically generates a service report from query result data and sends the service report to the service data management module for service promotion and use.

[0026] In one embodiment, as shown in FIG. 2, a process of invoking and parsing operation log data by the internal retrieval module includes:

[0027] S1. Establish a data preprocessing module; and respectively extract original service data from MySQL and Oracle system databases in the operation data management module through the data preprocessing module;

[0028] S2. Perform statistical calculation on the original service data to generate specified function data; convert the specified function data and the original service data into the standardized log data; and import the standardized log data into an ELK library of the internal retrieval module; and

[0029] S3. In the ELK library, perform information retrieval
on required data by the service personnel according to the user-defined query condition.

[0030] In one embodiment, the index keyword is targeted through reverse indexing, and the reverse indexing is used for targeting the index keyword in the standardized log data.

[0031] A1. A data form composed of standardized data is numbered and a numbered list is generated, and the numbered list is corresponding to the actual path of each data form;

[0032] A2. Keywords are extracted from the data form and subjected to word segmentation, and the frequencies of the keywords after word segmentation in the data form are calculated and sorted from high to low; and

[0033] A3. According to a list of related entries, the keyword is targeted, the path information corresponding to the data form is targeted according to the targeted keyword, and a standardized document formed by the corresponding standardized log data is targeted according to the path information corresponding to the data form.

[0034] In one embodiment, for the standardized log data, the sorting of the service management information in each management module is designated according to the keywords whose frequencies are sorted from high to low during the reverse indexing, so as to divide the information importance of the generated service report.