IN THE MATTER

OF

THE PATENTS ACT 1970 (As

amended)

&

THE PATENTS RULES, 2003 (As

amended)

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IN THE MATTER

OF

INDIAN PATENT APPLICATION NUMBERED

4693/CHENP/2010

DATED 27/07/2010

IN THE NAME

OF

AB INITIO TECHNOLOGY LLC

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Having address for service as -

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DECISION

1. An application for a patent bearing number 4693/CHENP/2010 was filed by the applicant "AB INITIO TECHNOLOGY LLC" on 27/07/2010 entitled "GRAPHIC REPRESENTATIONS OF DATA RELATIONSHIP ". A request for examination was filed vide RQ No. 1766/RQ-CHE/2012 dated 20/02/2012 under section 11B and rule 24B of the Patents Act, 1970 (as amended) and the Patents Rules, 2003(as amended). As per the provision under Section 11A of Patents Act, the said application was published on 04/02/2011**.** The said application was examined under sections 12 and 13 of the Patents Act, 1970 (as amended) and First Examination report was issued on 30/01/2018. In response to the First Examination Report, applicant's agent submitted its reply on 12/07/2018.

2. The reply to the First Examination Report was examined under section 13(3) and it was observed that the said patent application was not in order for grant. In order to dispose of the application, a hearing was offered to the applicant under section 14 of the Patents Act, 1970 (as amended) and accordingly the hearing was fixed on 07/01/2020 in respect of the objections which were conveyed through hearing notice dated 11/12/2019 with the following objections which were found outstanding in the application:

Objections:

Invention u/s 2(1)(j)

1. Subject matter of claims 1-27 does not constitute an invention under section 2(1)(j) of the Patents Act, 1970 (as amended) because it is not novel and inventive in view of D1 US 2007/214179 A 1 D1 discloses method and system for searching, filtering, creating, displaying, and managing entity relationships from a repository of data hierarchies through a user interface is provided. Relationships of a primary entity and its related secondary entities are retrieved and displayed in a unified view in graphical or text view. The unified view may indicate a "cross" relationship between first and second entities through another entity that connects the first and second entities, the first and second entities originating from different data hierarchies and/or data sources. Relationships of a selected secondary entity may be displayed in a unified view and entities or relationships may be updated or stored to a separate storage area. The method and system may be used within an enterprise for implementing Master Data Management or Customer Data Integration for managing data hierarchies containing customer information, human capital information, supplier information, asset information, product information, or financial information.

Non-Patentability u/s 3

Without prejudice to aforementioned objections U/S 2(1)(j), the subject matter of amended claims 1-27 which relate to a method/system/computer-readable medium for "Graphic representations of data relationships" prima facie falls within scope of clause (k), (n) of section (3) of The Patents Act 1970 (as amended).

1. Claims 1-25 are method claims executing steps as: receiving a request that identifies a first metadata item stored in the metadata management system from a user interface; retrieving at least a first configuration information set from storage that stores multiple configuration information sets; querying the metadata management system using one or more selection specifications from the first configuration information set to identify a set of one or more metadata items that are related to the first metadata item; generating a data lineage diagram indicating data lineage relationships among programs and data represented by the metadata items identified using the first configuration information set, etc., which are a set of a predefined sequences of steps used to implement an algorithm, without disclosing any functional limitations pertaining to the enablement of said features as claimed in form of method steps. Moreover, the claimed technical implementation does not go beyond a generic technical implementation as such technical considerations must go beyond merely finding a computer algorithm to carry out some procedure and the method steps as claimed herein are completed or done with the help of computer-executable instructions in form of a pre-defined sequential manner. Hence, all the above steps are done with the help of computer programs in terms of an algorithm and performed on a computing device/ system claimed in claims 26 and 27 and it is apparent that the proposed algorithmic change has no technical motivation and that its implementation is trivial in form of an algorithm. Also, the purpose of the subject-matter of amended claims is to help a user find answers to data relationship queries spanning distributed sources, whereas this method is carried out by means of a programmable computer device (see the description as originally filed).

2. The Apparatus/system claims 26 and 27 are purely functional thereby not having any inventive hardware features and hence not allowable u/s 2(1)(j) and 3(k) of The Patents Act 1970 (as amended). An apparatus and computer program product corresponding to the method claims 1-25 are also provided. All these algorithmic instructions are nothing but computer programs per se. Therefore invention claimed in said claims is not patentable

Scope

The amendment of claims 1-27 may not be allowed, should be amended as per section 10(4). The patent application may not be amended in such a way that it contains subject-matter which extends beyond the content of the application was filed under section 10(4c).

3**.** In respect of the said hearing notice, hearing was duly held on the schedule date and attended by authorized Patent Agent on 07/01/2020. The agent argued the matter in favor of the applicant and was asked to substantiate her arguments with written submissions. Consequently, hearing submissions and accompanying documents were submitted at the office on 21/01/2020. Therefore, the instant application need to be disposed off on merit based on the facts on records and the written submission of the agents of the applicants.

4. The main substantive issue for determination, apart from other requirements, raised through hearing notice was regarding whether this instant application's claimed subject matter is novel and evinces technical advancement (or inventive step) over the cited prior art under section 2(1)(j) of the Patents Act, 1970 (as amended) and whether this instant application's claimed subject matter fulfill the requirements of clause k of section 3 of the Patents Act, 1970 (as amended).

5. In response to the said hearing notice, applicant has submitted claims 1-26 that are recited hereunder as:

> 1. A method for presenting a data lineage diagram indicating relationships among metadata items (302) stored in a metadata management system (340) accessible to a computing system, the method including: receiving a request (314) that identifies a first metadata item stored in the metadata management system (340) from a user interface (300); retrieving at least a first configuration information set from storage (360) that stores multiple configuration information sets, where each configuration information set includes a plurality of selection specifications for executing queries from the computing system to select metadata items in the metadata management system (340) that are related to a given metadata item of a predetermined type, where each configuration information set in the storage (360) includes different selection specifications, and where each selection specification from the first configuration information set is associated with a different respective predetermined type; querying the metadata management system (340) using one or more selection specifications from the first configuration information set to identify a set of one or more metadata items that are related to the first metadata item; where a first selection specification from the first configuration information set is associated with a type of the first metadata item; and generating a data lineage diagram indicating data lineage relationships among programs and data represented by the metadata items identified using the first configuration information set, the data lineage diagram including nodes that correspond to the programs and data represented by the metadata items and edges that represent the data lineage relationships among the programs and data represented by the metadata items.
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> 2. The method as claimed in claim 1, wherein querying the metadata management system (340) to identify the set of one or more metadata items that are related to the first metadata item includes dynamically formulating a query using the first selection specification in response to the request, processing the query by the metadata management system (340), and receiving a query result from the metadata management system (340) identifying the set of one or more metadata items.

3. The method as claimed in claim 2, wherein the query includes at least one navigation action that navigates the metadata management system (340) to retrieve metadata items that are referenced by an attribute of the first metadata item.

4. The method as claimed in claim 2, wherein the query includes at least one navigation action that navigates the metadata management system (340) to retrieve metadata items that have an attribute referencing the first metadata item.

5. The method as claimed in claim 2, wherein processing the query by the metadata management system (340) includes navigating the metadata management system (340) recursively and returning at least some metadata items found at each of multiple steps of the recursion.

6. The method as claimed in claim 1 , further including: for each of multiple returned metadata items in the identified set, querying the metadata management system (340) to identify additional metadata items according to a selection specification from the first configuration information set that is associated with a type of the returned metadata item, wherein querying the metadata management system (340) to identify additional metadata items includes performing multiple iterations of queries, where each iteration includes identifying another set of one or more metadata items each related to at least one metadata item of a previous set of one or more metadata items from a previous iteration.

7. The method as claimed in claim 6, wherein iterations of queries are performed until no more metadata items are found that are related to any of the previous sets of one or more metadata items.

8. The method as claimed in claim 1, further including receiving from the user interface (300) a selection of a configuration file including the first configuration information set from multiple stored configuration files.

9. The method as claimed in claim 1 , wherein the first configuration information set includes a label specification associated with the type of the first metadata item for constructing a label for a node of the generated data lineage diagram representing the first metadata item.

10. The method as claimed in claim 1, wherein the first configuration information set includes a label specification associated with the type of the first metadata item for constructing a label for an edge of the generated data lineage diagram representing a relationship between the first metadata item and another metadata item.

11. The method as claimed in claim 1, wherein each predetermined type corresponds to a different portion of a dataflow graph processing system.

12. The method as claimed in claim 11, wherein at least one predetermined type corresponds to a metadata item representing a portion of a dataflow graph that includes nodes representing processing components and links representing flows of data between the processing components.

13. The method as claimed in claim 12, wherein at least one predetermined type corresponds to a metadata item representing a dataflow graph.

14. The method as claimed in claim 13, wherein at least one predetermined type corresponds to a metadata item representing a component within the dataflow graph.

15. The method as claimed in claim 11, wherein at least one predetermined type corresponds to a metadata item representing a field in a dataset.

16. The method as claimed in claim 1, wherein the first metadata item includes metadata describing stored data that corresponds to at least a portion of a dataset or an executable program.

17. The method as claimed in claim 16, wherein the stored data is stored in a first data source different from the metadata management system (340), and the generated data lineage diagram includes an edge representing a data lineage relationship between a node representing the stored data and a node representing data that corresponds to at least a portion of a dataset or an executable program stored in a second data source different from the first data source and the metadata management system (340).

18. The method as claimed in claim 16, wherein the generated data lineage diagram includes an edge representing a downstream data lineage relationship between a node representing the stored data and a node representing an entity affected by the stored data.

19. The method as claimed in claim 16, wherein the generated data lineage diagram includes an edge representing an upstream data lineage relationship between a node representing the stored data and a node representing a source from which the stored data is derived.

20. The method as claimed in claim 11, wherein at least one predetermined type corresponds to a metadata item representing a dataset.

21. The method as claimed in claim 1, wherein the selection specifications each specify at least one selection action to navigate among and select metadata items stored in the metadata management system (340).

22. The method as claimed in claim 1, further including: for each of multiple returned metadata items in the identified set, querying the metadata management system (340) to identify additional metadata items according to a selection specification from the first configuration information set that is associated with a type of the returned metadata item.

23. The method as claimed in claim 1, further including: presenting the generated data lineage diagram over the user interface (300).

24. The method as claimed in claim 1, wherein retrieving at least the first configuration information set includes retrieving the first configuration information set associated with an 24 upstream direction and a second configuration information set associated with a downstream direction.

25. The method as claimed in claim 24, wherein the data lineage diagram includes a first set of nodes upstream of a node corresponding to a program or datum represented by the first metadata item generated based on the first configuration information set, and a second set of nodes downstream of the node corresponding to a program or datum represented by the first metadata item generated based on the second configuration information set.

26. A system for presenting a data lineage diagram indicating relationships among metadata items stored in a metadata management system (340), the system including: a metadata management system (340) storing metadata items; a user interface (300) including an input interface configured to receive a request that identifies a first metadata item stored in the metadata management system (340); a storage system (360) storing multiple configuration information sets including a first configuration information set received from the storage system, where each configuration information set includes a plurality of selection specifications for executing queries from the system to select metadata items in the metadata management system (340) that are related to a given metadata item of a predetermined type, where each configuration information set in the storage system includes different selection specifications, and where each selection specification from the first configuration information set is associated with a different respective predetermined type; a metadata management system interface configured to query the metadata management system (340) using one or more selection specifications from the first configuration information set to identify a set of one or more metadata items that are related to the first metadata item, where a first selection specification from the first configuration information set that is associated with a type of the first metadata item; and a diagram generator (320) to generate a data lineage diagram indicating data lineage relationships among programs and data represented by the metadata items identified using the first configuration information set, the data lineage diagram including nodes that correspond to the programs and data represented by the metadata items and edges that represent the data lineage relationships among the programs and data represented by the metadata items 6.

6. Amended claims 1-26 are before me for consideration and the applicant/agent of the applicant has made extensive submissions and has cited various case laws. I pay particular attention to determine whether the amended claims lack novelty and inventive step and fall under section 2(1) (j) of the Patents Act, 1970 (as amended). It is observed that the following documents were cited for determining novelty and inventive step as per section 2(1) (j) of The Patent Act 1970 (as amended):

D1: US 2007/214179 A1 (Publication Date: 13/09/2007)

It is noted that the document has publication date prior to the priority of the instant application.

7. Upon due consideration of the said citations, I bring forth the analysis hereunder as:

The subject matter of claims 1-26 as claimed in instant application does not constitute an invention under section 2(1)(j) of the Patents Act, 1970 (as amended) because it is not novel and inventive step in view of following documents:

D1: US 2007/214179 A1 (Publication Date: 13/09/2007)

Applicant states that subject matter of claims provides an improved graphical representation of relationships among data items stored in a data management system. In doing so, it promotes more efficient processing of data-relationship queries. In particular, it promotes more efficient processing of those queries in which the relevant data spans multiple distributed, heterogeneous sources. However, subject matter of claims 1-26 is related to help a user find answers to data relationship queries spanning distributed sources, whereas this method is carried out by means of a computer program. Subject matter of claims does not disclose any technical feature of data usage and data retrieval. It simply discloses the manner in which data items are managed. It is mere data administration of stored data .D1 discloses method and system for searching, filtering, creating, displaying, and managing entity relationships from a repository of data hierarchies through a user interface is provided. Relationships of a primary entity and its related secondary entities are retrieved and displayed in a unified view in graphical or text view. The unified view may indicate a “cross” relationship between first and second entities through another entity that connects the first and second entities, the first and second entities originating from different data hierarchies and/or data sources. Relationships of a selected secondary entity may be displayed in a unified view and entities or relationships may be updated or stored to a separate storage area. The method and system may be used within an enterprise for implementing Master Data Management or Customer Data Integration for managing data hierarchies containing customer information, human capital information, supplier information, asset information, product information, or financial information. The hierarchy manager is implemented by software or hardware configured to perform the various steps of the methods described herein. FIG. 21 presents a computer system 2100 with which some embodiments are implemented. The computer system 2100 includes a bus 2105, a processor 2110, a system memory 2115, a read-only memory 2120, a permanent storage device 2125, input devices 2130, and output devices 2135. (Para [0126], Figure 21). Thus, in the view of features described in prior art documents D1 .The subject matter of claims 1- 26 is not novel as D1 discloses all alleged technical feature of claimed invention and subject matter of claims 1- 26 is not inventive as by combining the teachings of prior art document D1 and knowledge of person skilled in art in the same field , it would have been obvious for person skilled in the art to arrive at claimed invention. Hence, alleged invention does not constitute an invention under section 2(1)(j) of The Patents Act, 1970(as amended).

It is clearly mentioned in CRI Guidelines in point 4.2 (Page no.11) that "While determining inventive step, it is important to look at the invention as whole. It must be ensured that inventive step must be a feature which is not an excluded subject itself (here 3(k) for claims 1-26). Otherwise, the patentee by citing economic significance or technical advance in relation to any of the excluded subjects can insist upon grant of patent thereto. Therefore, the technical advance comparison should be done with the subject matter of invention and it should be found it is not related to any of the excluded subjects." Hence in view of above observations the subject-matter of claims 1-26 is not considered inventive u/s 2(1)(j) of the Act.

8. With regard to the substantive objection under the header "Non-Patentability u/s 3" of the said hearing notice, the applicant/agent of the applicant argues that the claims does not fall under clause "k" of Section 3 of the Patents Act 1970(as amended) and also the Applicant has revised the claims. The matter has been carefully considered in detail.

In view of the above, the matter has been carefully considered in detail. Without prejudice to the above said, having considered the aforesaid submission, I do not find the submission persuasive in view of following: The submission gives insights on the purpose and working of the invention. The technical effect being claimed has not been clearly elucidated by the applicant. The applicant has replied that the given invention has a technical advancement. However, Subject matter of claims 1-26 is related to help a user find answers to data relationship queries spanning distributed sources, whereas this method is carried out by means of a computer program. Subject matter of claims does not disclose any technical feature of data usage and data retrieval. It simply discloses the manner in which data items are managed. Hence, the subject matter of claims 1-26 represent a set of computer executable instructions on a general purpose computer/computing device and an program to execute the said instructions through software. It is therefore understood that the actual contribution of the invention solely lies in computer program and there is no specific hardware available in the claimed invention. All the steps of the invention are carried out by computer program only. The only hardware which is disclosed is the processor that executes program in a conventional or normal manner. Further, these computer programs do not have technical effect going beyond the "normal" interactions between the program and the hardware. Hence, all the above method steps are done with the help of computer programs in terms of an algorithm and performed on a computing device/ system claimed in claims 26 and it is apparent that the proposed algorithmic change has no technical motivation and that its implementation is trivial in form of an algorithm. Hence, subject matter of claims 1-26 relates to "computer algorithm" and falls within scope of section 3(k) of The Patents Act, 1970 (as amended).

9. Therefore, keeping in view the above facts, the submissions of the agents during hearing and subsequently through the written submissions, as well as the outstanding official requirements, instant application no. 4693/CHENP/2010 dated 27/07/2010 does not comply

with the requirements of The Patents Act, 1970 (as amended). I, therefore, hereby order that the grant of a patent for application no. **4693/CHENP/2010** is **refused** under the provisions of Section 15 of The Patents Act, 1970 (as amended).

10. This is to be noted that the aforesaid observations, and decision thereof, are based solely on the electronically uploaded documents to date.

Dated: 13/07/2020

(Raj Kumar)
Asst. Controller of Patents & Designs