

$YG_i$ .  $AsGv$  – неподвижная верхняя асимптота, представляющая собой максимальное достижимое значение параметра  $G$ .

Оптимизация проводилась по методу Монте-Карло путем генерирования наборов случайных значений нагрузок на двигатели мельниц, соединенных последовательно-параллельно, с минимизацией удельного расхода энергии на размол одной тонны волокна на один градус шоппер-Ригглера. Данные по условиям плана эксперимента получены в производственных условиях Сегежского ЦБК в 1980 г. Технические и математические возможности того времени позволили обработать полученные данные лишь частично. Но еще тогда опытно-промышленная проверка результатов позволила из 90 установленных размалывающих машин отключить 20 с сохранением качества массы, подаваемой на бумагоделательную машину.

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UDC 004.657

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### **AN ANALYTICAL REVIEW OF MODERN METHODS ALGORITHM AND SOFTWARE FOR SEMANTIC NETWORKS TRANSFORMATION INTO OBJECT RELATIONAL DATA MODELS**

Historical knowledge has various kinds of Objects as people, places, events, and they are extracted from diverse types of databases. These include open databases like the Internet and other databases of companies. Hence, there is heterogeneity in information, so there is a need of connected semantic network to resolve the problem. Such that the users can retrieve data without taking into account the diversity of databases. Some types of relationships, the conceptual graph, and types of semantic networks are recommended. The Frame based structure is suggested as enhancement solution.

Graphs are beneficial for knowledge representation, and from the theory of representation, graph query and inference algorithms can be estimated to answer questions on the graph. This strategy of graph which is utilized to describe a pattern has an ill-use if there is massive extent in the

world of knowledge representation and inference reasoning. Therefore, the design of graphs with the databases has emerged.

Let us state the principal features of a Semantic Network Model, in summary; the representation of knowledge is done by a mathematical graph, which is composed of nodes and arcs. A node represents one concept, a Relation declares the meaning of relation between the two nodes Node A and Node B with a label L, and so on, to show relations between the concepts. A set of nodes, labels and arcs denote a set of knowledge in a semantic network.

In general, Semantic networks allow us to represent knowledge about objects and relationships between objects in an intuitive way, thus the semantic nets are not intelligent. Basically, if a semantic net is built then there is No binary relation inside, the negation is not easily expressed, if there are multiple inheritance this may cause conflict, or the meaning attached to nodes may be ambiguous. This does not describe the attributes, the facts are sometimes placed inappropriately, there is lack of standards for link labels, and there is no ability to encode heuristic knowledge or rules of thumb into semantic nets; consequently it is just a solution for restricted problems and only serves for inheritance of properties, subsequently another solution must be found. Furthermore, an enhanced solution is found, the Frame solution, Frames are popular ways to represent facts in an expert system. The difference from semantic net is basically in the level of details of a node. In semantic nets the node has a name; Properties of a node are shown using other nodes and some sorts of the relationships linking them. In a frame the node itself has a structure. Basically, Semantic nets represent knowledge about a general area, whereas Frames represent related knowledge about a narrow subject.

In fact, some systems that use chaining inferences have some conflict resolution strategy; to decide which rule to fire. Instead of representing knowledge in a relatively declarative static way as a set of things that are true rule-based, systems represent knowledge as a set of rules for different situations that tell you what to do. Relational database is a way to structure data; moreover Structured Query Language is a structured method of storing data [1].

The disadvantages of such database are, lack of support from complex data such as images, and videos that are required nowadays by diverse applications and websites, the query task to obtain a piece of data becomes difficult when there are thousands of joins, and the insert of data when there are diverse of joins must be done before search and support. Consequently, a need to use object relational model, in fact object-relational model is aimed to provide relational data model with the integration of

their data types and methods, and allows users to integrate object-oriented features into it.

In summary, OODBMS is the Language of specifying the structure of an object database within two parts, first with ODL or Object Definition Language, and second with OQL Object Query Language, further ODL is in replacement of DDL or Data Definition Language in SQL. OODBMS are able of stocking complex objects that are constituted of other objects and multi valued attributes. Therefore, a consequence that a class is in replacement of relation. Furthermore, the classes encapsulate data, methods, and relationships, unlike relations that contain data only.

Take advantage of Graph knowledge representation, this approach of graph which is developed to describe shape has misused when there is huge amount of knowledge representation and inference reasoning, subsequently emerging the design of graph databases, semantic network Framework, with the other logics and produce a semantic network graph database with inference.

#### REFERENCES

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УДК 004.27

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#### **ИНТЕГРАЦИЯ МИКРОСЕРВИСОВ НА ОСНОВЕ RPC**

Правильная интеграция является наиболее важным аспектом технологии, связанной с микросервисами. При должном выполнении микросервисы сохраняют свою автономность, в то же время можно будет вносить в них изменения и выпускать их новые версии независимо от всей остальной системы. Для определения способа общения одного микросервиса с другим имеется широкое поле выбора. Поэтому здесь важно подумать о том, что необходимо получить от той технологии, на которую падет выбор.

Было выявлено 2 существенных свойства, которыми должна обладать выбранная технология: стойкость к изменениям, т.е. те правки, что вносятся в бизнес-логику микросервиса, не должны касаться уже имеющих клиентов; сохранение технологической связанности, т.е. сохранение технологической независимости API, используемое для