A Feasibility Study of Extracting E-Content for Develop using Semi Automated Semantic Matched concept with Semi Automated Ontology Maintenance

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ABSTRACT

Today number of people using web e-content, which gradually increases. When the number of user increases automatically the document content will be very slow, due to number of resources shared content is very difficult to view. Most of the researchers are involved in this area. let's this paper deals with a feasible study of semi-automated semantic matched concept with semi automated ontology maintenance. The paper suggests developing and storing of e-contents in the form of these portrayals explicitly. The paper points out clearly that it is quite possible to represent portrayal documents, which are tagged with the e-content documents for the subject 'operating system'. The proposed procedure has symbolized two portrayal concept words of 'activation' and 'demonstration' for operating system. Our proposed approach is based on literature support on concept mining that uses portrayals.

Keyword: Ontology, Semantic, E-Content, Syntax, Matching Concept

1. INTRODUCTION

E-Content:

E-content is a very power full tool of education. E-content is valuable to the learners and also helpful to teachers of all individual instruction systems; E-content is the latest method of instruction that has attracted more attention to gather with the concept of models. Education is to enrich the qualities of head, hand and heart. Education is one of the basic needs of men and women. The rule of the education is the attainment of human excellence and perfection not just in the field of knowledge or activity but life in totality. Teaching plays a vital role in formal education system

Semantic

Semantic computing is a technology to compose information content (including software) based on meaning and vocabulary shared by people and computers and thereby to design and operate information systems (i.e., artificial computing systems).(Lei Wang, 2009) Its goal is to plug the semantic gap through this common ground, to let people and computers cooperate more closely, to ground information systems on people's life world, and thereby to enrich the meaning and value of the entire life world. (Hasida, 2007) The task of semantic computing is to explain the meaning of various constituents of sentences (words or phrases) or sentences themselves in a natural language.

Matched Concept

In computer science, pattern matching is the act of checking a given sequence of tokens for the presence of the constituents of some pattern. In contrast to pattern recognition, the match usually has to be exact: "either it will or will not be a match." The patterns generally have the form of either sequences or tree structures. Uses of pattern matching include outputting the locations (if any) of a pattern within a token sequence, to output some component of the matched pattern, and to substitute the matching pattern with some other token sequence (i.e., search and replace).

2. ARCHITECTURE OF MATCHING CONCEPT

The Document classification is a big problem information science technology. The Problem is to classify the document to one or more classes or categories. The Document to be classified may be text, images and music etc. This Document Classification is categories into various levels. Initial Level Matching Concept as we had discussed in the previous section. This **Matching Concept** is Categories into **Syntax** and **Semantic** Level. Syntax is mainly focused on Grammar and Protocol of particular content in the Web. Semantics which defined in the intro section.

Semantics are Classified into two level: The matching process is often articulated into two basic steps, namely element and structure level matching (P. Shvaiko, 2005): – **Element level** matchers consider only the information at the atomic level (e. g., the information contained in elements of the schemas); – **Structure level** matchers often aggregate the results of the several element level matchers and consider also the information about the structural properties of the schemas. Element level semantic matchers return semantic relations ratherthen similarity coefficients [0..1] which are often considered as equivalence relation with certain level of plausibility or confidence

Structure Level are categorized into four level: a) Ontology b) Semantic c)Tree d) Iteration. First We Discuss about

Ontology: In computer science, (Diana,2013) ontology is a formal representation of the knowledge by a set of concepts within a domain and the relationships between those concepts. It is used to reason about the properties of that domain and may be used to describe the domain. In theory, ontology is a “formal, explicit specification of a shared conceptualization”. Ontology provides a shared vocabulary, which can be used to model a domain that is, the type of objects, and/or concepts that exist, and their properties and relations.

Semantic: Semantics is the study of the meaning of words, phrases and sentences. In semantic analysis, there is always an attempt to focus on what the words conventionally mean, rather than on what a speaker might want the words to mean on a particular occasion. This technical approach to meaning emphasizes the objective and the general. It avoids the subjective and the local. Linguistic semantics deals with the conventional meaning conveyed by the use of words and sentences of a language.

Tree Structure: A tree structure or tree diagram is a way of representing the hierarchical nature of a structure in a graphical form. It is named a "tree structure" because the classic representation resembles a tree, even though the chart is generally upside down compared to an actual tree, with the "root" at the top and the "leaves" at the bottom.A tree structure is conceptual, and appears in several forms. The structure of the folders will follow a tree structure that will assist the development and future modification of an electronic course in a systematic order.

Iteration: Each iteration is reviewed and critiqued by the software team and potential end-users; insights gained from the critique of an iteration are used to determine the next step in development. Data models or sequence diagrams, which are often used to map out iterations, keep track of what has been tried, approved, or discarded -- and eventually serve as a kind of blueprint for the final product.

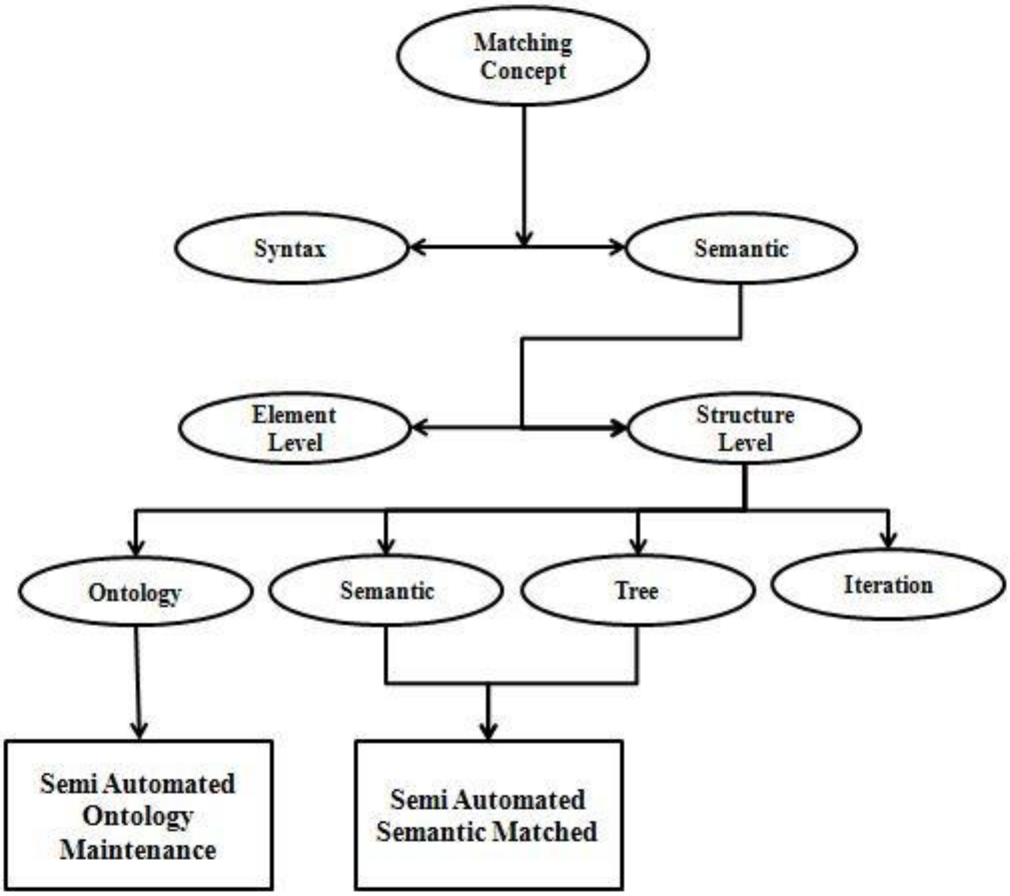

Figure 2.1: Architecture Diagram Matching Concept

As the Above Figure represent the process of Matching Concept. This Paper we are going to feasibility study of Semi-Automated Ontology Maintenance with Semi Automated Semantic Matched. From the Diagram, conclude that semi-automated ontology maintenance mainly focused on ontology whereas semi-Automated Semantic Matched focus on both Semantic and Tree Structures

3. A FEASIBLE STUDY

Definition:

Semi Automated Ontology Maintenance:

Ontology is known in knowledge representation community as "a formal and explicit specification of a shared conceptualization". A domain ontology (Yassine,2016)represents terms, specific to the domain, and their relations. It provides preliminary knowledge required for systematic information processing for navigating, recall, precision, etc. However, ontologies are continuously confronted to evolution problem. Due to the complexity of the changes to be made, a maintenance process, at least a semi-automatic one, is more and more necessary to facilitate this task and to ensure its reliability. Presently, there is still no consensus on methods and guidelines for such process. Nevertheless, texts are recognized as an essential source for ontology construction and domain knowledge.

Semi Automated Semantic Matched:

The vision of Semantic Web (Berners-Lee et al, 2001) offers the possibility of providing the meanings or semantics of web documents in a machine readable manner. However, the vast majority of 1.5 billion web documents are still in human readable format, and it is expected that this form of representation will still be the choice among content creators and developers due to its simplicity. Due to this phenomenon and the desire to make the Semantic Web vision a reality, two approaches have been proposed (van Harmelen&Fensel, 1999): either furnish information sources with annotations that provide their semantics in a machine accessible manner or write programs that extract such semantics of Web sources.

Algorithm:

Semi-Automated Ontology Maintenance:

The algorithm library supports several distinct ontology engineering tasks, which can be grouped into two task sets: First, we concentrated on algorithms for ontology extraction. This involves **algorithms** for extracting the set of concepts C , their lexical entries C_l, a taxonomic order on these concepts H_c and a set of relations R between concepts. Second, we developed algorithms for ontology maintenance. This refers particularly to algorithms for ontology reduction (also called pruning) and algorithms for ontology evolution (also called refinement). These algorithms can be used to ensure that the induced ontology faithfully reflects the application data requirements.

Semi Automated Semantic Model:

In SAS Model, the Probability of having both the Outcome O and Evidence E is: (Probability of O occurring) multiplied by the (Prob of E given that O happened). The evidence, P(Outcome or Evidence) = P(Evidence given that the Outcome) times Prob (Outcome), scaled by the P(Evidence)

Algorithm for SAS: In this algorithm, it mentions D as document, N as no of words, C as Evidence, T as outcome.

Document(C, D)
V <-ExtractVocabulary(D)
N <-Countword(D)
for each c with C do N^c<-countwordinDoc(D, C)
prior[c] <-N^c/N
text<-concatenateTextofallWordAsDoc
for each t with V
do T <-countwordOfTerm(Text, t)
for each t with V
docondprob[t][c] <-(T+1)/sum(T + 1)
return V, prior, condprob

4. COMPARISON

Semi Automated Ontology Maintenance: This System defines a common framework into which extraction and maintenance mechanisms may be easily plugged-in. In addition we provide a tight integration to a manual engineering system allowing semi-automatic bootstrapping of domain ontology.

Semi Automated Semantic Model: The main criterion is that the extraction result goes beyond the creation of structured information. It requires either the reuse of existing formal knowledge or the generation of a schema based on the source data. from both SEMA and SAS Model.

5. CONCLUSION

We Conclude that, Both SEMA Model and SAS has its own features and individuality. SEMA Model is very slow process compare to SAS Model which is mainly focused on domain based. If Number of User increases, SAS Model will provide more Efficiency and accuracy.The proposed methodology also helps in getting relevant and meaningful; words because it uses semantic classification and stored based on the knowledge base, the advantages to the user to fetch the semantic word from the e-content compare to SEMA Model.

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