# ORGANIZING ONLINE KNOWLEDGE-SIMPLY

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**ABSTRACT**: - *Knowledge Organization System (KOS) is a general term to refer tools that are used to represent knowledge structures in an organized way KOS provides a framework or scheme for storing and organizing data, information and knowledge existing in the real world .With the availability of advanced technological tools,web is transforming itself from a static interface into a more meaningful and interactive web. This new future web which the experts are planning for is known as Semantic Web. This web will have its content represented in a way which is easier for machines to process and integrate it with other information available on the web SKOS is a simple modelling language to realize the realm of semantic web. Following paper explores few facts related to KOS and SKOS.*

**KEY WORDS** – *Knowledge Organization ; SKOS OWL; Knowledge Organization System Libraries*

## Introduction

Human by instinct, have the tendency of making categories of various concepts and entities existing in real world. Libraries are vested with the responsibility of organizing formal, explicit form of knowledge and establishing tools for precise, accurate and faster retrieval of information. They have been practicing various methods of knowledge organization such as cataloguing and classification of the documents available in their library and  dependent upon

various tools such as Thesaurus, Subject heading lists to achieve standardization.

Knowledge Organization System is a general term to refer tools that are used to represent knowledge structure in an organized, standardized way. According to Hodge, G. (2000a) ,' Knowledge organization systems include classification and categorization schemes that organize materials at a general level, subject heading that provide more detailed access and authority files that that control versions of key information such as geographic names and personal names. Knowledge organization systems also include highly structured vocabularies, such as thesauri and less traditional scheme, such as semantic network and ontologies. Because knowledge organization systems are mechanisms for organizing information, they are at the heart of every library. Museum and archive. These tools are used by information professional to index large volumes of documents in order to facilitate documents retrieval and navigation.

## About KOS

KOS provides a framework or scheme for storing and organizing data, information and knowledge about the world and about thoughts about what is or is alleged to be, what could be or should be for understanding, retrieval or discovery, for reasoning, and many other purpose [Soegel,Dagobert] Ranganathan's APUPA pattern and canon of helpful sequence are all meant for knowledge organization He has also explicit defined and identified the three plans of work in designing knowledge organization system. Viz, the Idea Plane (the plane of logic and intellection),the Verbal Plane (the plane of terminology) and the National Plane (the plane of symols),however the term was never used in explicit by him [Raghavan,K.S. and Neelamghan A. (2013)]:

*Idea Plane: The work of identifying concepts that collectively constitute a domain (universe of interest),categorization of these concepts, identifying and defining the relationship (hierarchical and non-hierarchical lateral relationship) between the concepts, arranging the concepts in a logical helpful sequence;

*Verbal Plane**:** The work of labeling the concepts using terms in a natural language; and

*National Plane; The work of assigning notation to denote the concepts.

The work in the Verbal and Notational planes is primarily "Representation? Of concepts identified in the Idea Plane.

The various characteristics of KOS were enlisted by Hodged G. (2000b);

*There must be sufficient commonality between the concept expressed in a KOS and the real-world object to which that concept refers that a knowledge person could apply the system with reasonable reliability. Likewise a person seeking relevant material by using a KOS must be able to connect this or her concept with its representation in system.

Thus KOS can also be defined as semantic tools because they are essentially relations of concepts

supplied with information about their semantic relations to other concepts and symbols[Hjorland,Birger (2008) ].Some popular domain specific KOSs are

a. For libraries LCSH DDC,UDC

b-For Medical Information: MESH;UMLS

c-For Food Science and Technology AGOVOC

d-For intelligent Property: International Patent Classification Nice Classification Vienna Classification **Locarno Classification**

e-For Economics NACE; NAICS (North American Industry Classification System)

f-For Geography NUTS(Nomenclature des Unites)

About SKDOS (Simple Knowledge Organization System)

With the availability of advanced technological tools web is transforming itself from a static interface into a more meaningful and interactive web. This new future web which the experts are planning for is known as Semantic web. This web will have its content represented in a way which is easier for machines to process and integrate it with other information available on the Web. This web harness the capability of extensible Markup Language (XML) represented over a flexible platform known as RDF, which stands for Resource Description Framework.

The SKOS Core Vocabulary is a set of RDF properties and RDFS class that can be used to express the content and structure of a concept scheme as RDF graph.

SKOS is a modelling language to port KOSs TO RDF in a simple way. It does not aim to fit everything or replace existing, traditional formats such as print. It could be taken as a step stone towards the future web i.e. semantic web.

Basic Elements of SKOS

The SKOS data model identifies, labels ,documents ,links and maps concepts and aggregates concepts into concept scheme or collections through following elements;

a-Concepts: The SKOS vocabulary is based on concepts. Concepts are the units of thought such as ideas meanings or objects and events(instances or categories) and this element "Concept" is used to represent them in as SKOS model.

b.Labels and Notations A SKOS "label" is a string of UNICODE characters, optionally with language tags, that are associated with concept. SKOS' Notation" is similar to a label but the literal string has a data type like integer, float or date .It is used to represent classification codes and others strings not recognizable as words.

c-Documentation: The Documentation or Note properties provide basic information about SKOS **concepts.**

d-Semantic relations SKOS semantic relations are intended to provide ways to declare relation shines between concepts within a concept scheme. However it does not reflect the hierarchical relationship between the two existing concepts.

e-Mapping: SKOS mapping properties are intended to express matching (exact or fuzzy) of concepts from one concept scheme to another, and

by convention are used only to connect concepts from different schemes.

f-Concept Collections To represent groups of (SKOS) concepts. Collections can be nested, and can have defined URIs or not (which is known as a)

## Difference between OWL  and SKOS

OWL is a language for knowledge representation and follows precise semantics such as strict subclass super class relationship between classes SKOS, on the other hand is a language for knowledge organization SKOS focuses  on terms and how they are organized, the relationship between concepts are semantically weaker. The difference in the semantics of the these relations makes SKOS a useful alternative to OWI in a applications scenarios where a rich expressive logic is unnecessary.


SKOS plays a crucial role to establish a connection between the casually social tags (folksonomy) by non experts over the web and the rich metadata and structured knowledge provided by ontologies, in order to implement Semantic Web realm .SKOS and OWL are correlated and crosswalks can created to achieve one another.

## Conclusion-

SKOS has immense potential as it takes a layman approach to establish the connection between the static web and the dynamic web which the experts of semantic web are envisioning for. Libraries need to take an organized approach

to publish their data in SKOS format making the web more dynamic and meaningful.

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