

# A Survey on Faceted Product Search Engines

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*Abstract*— Faceted search is becoming a popular method to allow users to interactively search and widely used in online webshops and product comparison sites. This approach suffers from many issues. Faceted search is primarily helpful for approximate results. However, one of the difficulties with faceted search, especially in e-commerce, is that a large number of facets are available. In this paper, we conduct a deep study about this problem.

**Key words:** Faceted Product Search Engines, Hierarchical Faceted Metadata, Multifaceted Search

## I. INTRODUCTION

Faceted search applications require faceted data, namely the existence of facet hierarchies and the mapping of documents onto those hierarchies. One of the benefits of faceted search is that, search results are more useful and easier to find data. Automated collaborative filtering is quickly becoming a popular technique for reducing information overload, often as a technique to complement content-based information filtering systems. Select the items based on the description of items and profile of the user's performance. Content filtering tools select the right information for the right people by comparing representations of content that the user is interested in. The ability to filter items based on quality.

Developed an innovative search interface that allows non-expert users to move through large information spaces in a flexible manner. Content-oriented category metadata has become more prevalent in the last few years, and many people are interested in standards for describing content in various fields. Web directories such as Yahoo and the Open Directory Project are familiar examples of the use of metadata for navigation structures.

Dynamic Category Sets, a novel approach that addresses the vocabulary problem for faceted data. The keywords that are assigned by indexers are often at odds with those tried by searchers. Faceted search systems exhibit an interesting aspect of this problem: users do not necessarily understand an information space in terms of the same facets as the indexers who designed it. This data driven approach to discover sets of values across multiple facets that best match the query.

Hierarchical faceted metadata has been found to be a highly understandable data model for search interfaces, intermediate in complexity between hierarchy and full knowledge representation. It presents interface design recommendations for faceted navigation system. Facets refer to categories used to characterize information items in a collection.

A faceted search system presents users with key value metadata that is used for query refinement. This technique, the use of collaborative filtering and personalization to customize the search interface to each user's behavior. It is a utility based framework to evaluate the faceted interface.

## II. TECHNIQUES TO IDENTIFY FACETED PRODUCT SEARCH ENGINES

Multifaceted search is commonly used interaction paradigm in e-commerce applications, such as Web shops. Because of the large amount of possible product attributes. Web shops usually make use of static information to determine which facets should be displayed. This approach focus on automatic facet selection, with the goal of minimizing the number of steps needed to find the desired product.

Next is, a method for dynamic generation of refining categories under the ontology based semantic search systems. It specifically suggests a measure for dynamic selection of categories. Predefined and fixed categories are provided to refine results. Since fixed categories never reflect the difference of queries and search results, they often contain insensible information. It proves the validity of this approach by using some evaluative measures.

Next is, Dynamic faceted search system for discovery-driven analysis on data with both textual content and structured attributes. From a keyword query, to dynamically select a small set of "interesting" attributes and present aggregates on them to a user. An intuitive and effective way of measuring "interestingness" and a novel navigational method of setting a user's expectation. For even larger data sets, to investigate how to support dynamic faceted search in s distributed environment.

Faceted search is a popular interaction paradigm for discovery and mining applications that allows users to digest, analyze and navigate through multidimensional data. A crucial aspect of faceted search applications is selecting the list of facet values to display to the user following each query. This is the facet value selection problem. The interaction with a faceted search interface involves interleaved search and browse operations over semi-structured documents. Within this framework, current selection algorithms do not and need not explicitly consider the hierarchical relationships among facet values.

Next, Categorization in the decision making classifies decision makers' experiences about the world and provides a guide to reach a goal. This implies that dynamically providing categories reflecting the given decision context gives a great enhancement in decision quality. This study discusses the dynamic category selection under the Semantic Web environment, focusing on an implementation of a decision support system, the dynamic facet navigation system working with an ontology. Predefined fixed categories are provided to refine search results to evade use of complex queries and tedious review of search results, but they often output insensible information because of never reflecting the difference in search results.

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