



U.S. DEPARTMENT OF AGRICULTURE
COOPERATIVE STATE RESEARCH, EDUCATION, AND
EXTENSION SERVICE

Search and Query
Process Requirements Specification

Version 1.2

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Revision Page

Document Version Number	Date of Document	Comments
Search and Query Process Requirements Specification (Version 1.0)	January 29, 2008	Initial Submission
Search and Query Process Requirements Specification (Version 1.1)	January 30, 2008	Stakeholders' comments incorporated
Search and Query Process Requirements Specification (Version 1.2)	February 06, 2008	Stakeholders' and internal review comments incorporated

Search Process Requirements

The Enterprise Search process should be comprised of four distinct but inter-related sub-processes. Each process is designed to streamline the search process, to ensure the accuracy of the search results, and to maximize access to wide range of content critical to strategic and operational decision making.

Sub-Process 1: Construct the Query (ask the initial question)

Sub-Process 2: Execute the Query (get the initial results)

Sub-Process 3: Sift and Sort Through Results (analyze & pinpoint the information)

Sub-Process 4: Generate the Results (create reports, export/save the result)

Sub-Process 1: Construct the Query (ask the initial questions):

The process of constructing a query should be intuitive and cater to a diverse group of users from the very basic all the way through to highly technical power users. Whenever appropriate, the system should provide two different methods of constructing queries for each content area, each method enhanced by a range of features (such as, synonyms, sounds like, and stemming) to streamline the process.

- Basic Query
- Advanced Query

Basic Query: The process of constructing a basic query should require no prior knowledge of the content. The system should present users with a list of most commonly used search fields comprised of both standard data fields and free-form text fields. Each standard data field should be accompanied by a list of associated values for users to choose from. While users should have the option to pick one, multiple, or range of values from the list, they should also be able to enter the values directly if needed.

Advanced Query: The advanced query process should allow more experienced users to construct queries using boolean operators and proximity searching, so that users who know exactly what they want can be extremely specific with their search. By making all data fields available for use in constructing the query, the advanced query process should allow users to better define, narrow searches and deliver better result sets.

Sub-Process 2: Execute the Query

The process of executing the initial query should begin by examining the query syntax to ensure that users are immediately notified and prompted to correct any error in the query syntax. Once records that match the query criteria have been identified, the process should restrict access to the query results based on authenticated access level or permissions of the user. The query execution process should also provide the means for ranking of the results

based on a pre-determined set of criteria to ensure that the most relevant results are presented first.

Sub-Process 3: Sift and Sort Through Results

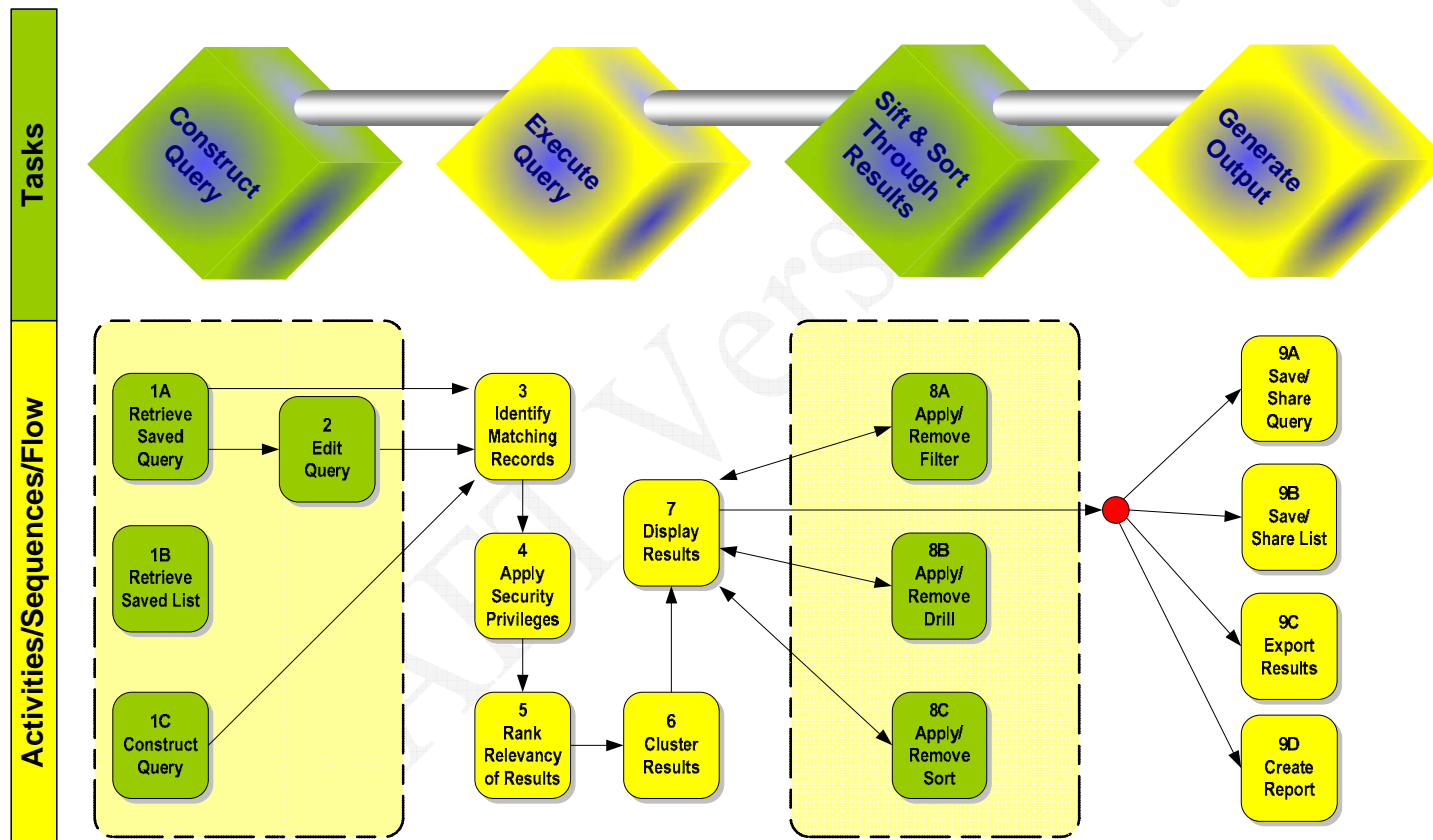
As the overall success of the query process is measured by the accuracy and efficiency of the query results, simply returning a list of records that match the query criteria will not be sufficient. The process must allow the user to pinpoint precise content. Therefore, the Sift and Sort process should include a range of features designed to streamline and continuously narrow the query through refinements based on keywords as well as structured and hierarchical filters. Furthermore, the process should allow for sorting /re-sorting the results list by dynamically generating search attributes such as the number of hits and relevancy as well as by a variety of calculated data elements.

Sub-Process 4: Generate Output

The process of generating output for the query results should allow the user to save the query as well as the results (list of selected record identifiers) within the system; to export the information to a variety of external files types (Excel, Word, PDFs) for further analysis, and to create functionally rich and visually appealing reports through the use of a library of report and chart templates.

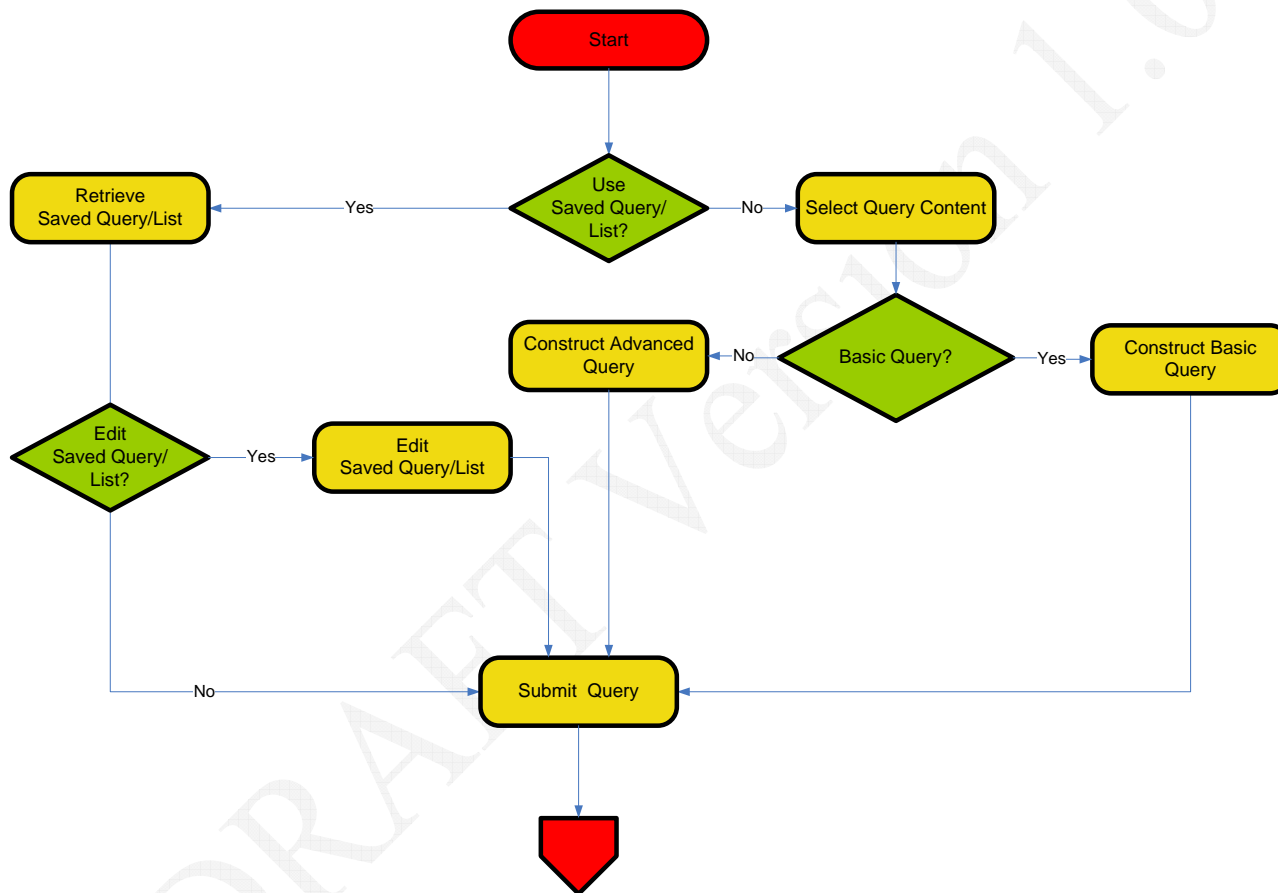
Enterprise Query System Process Model

Wednesday, February 06, 2008



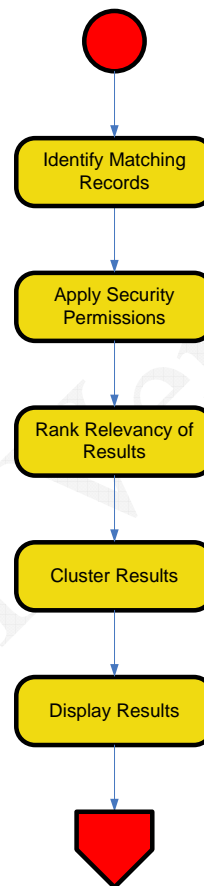
Sub-Process 1: Construct Query

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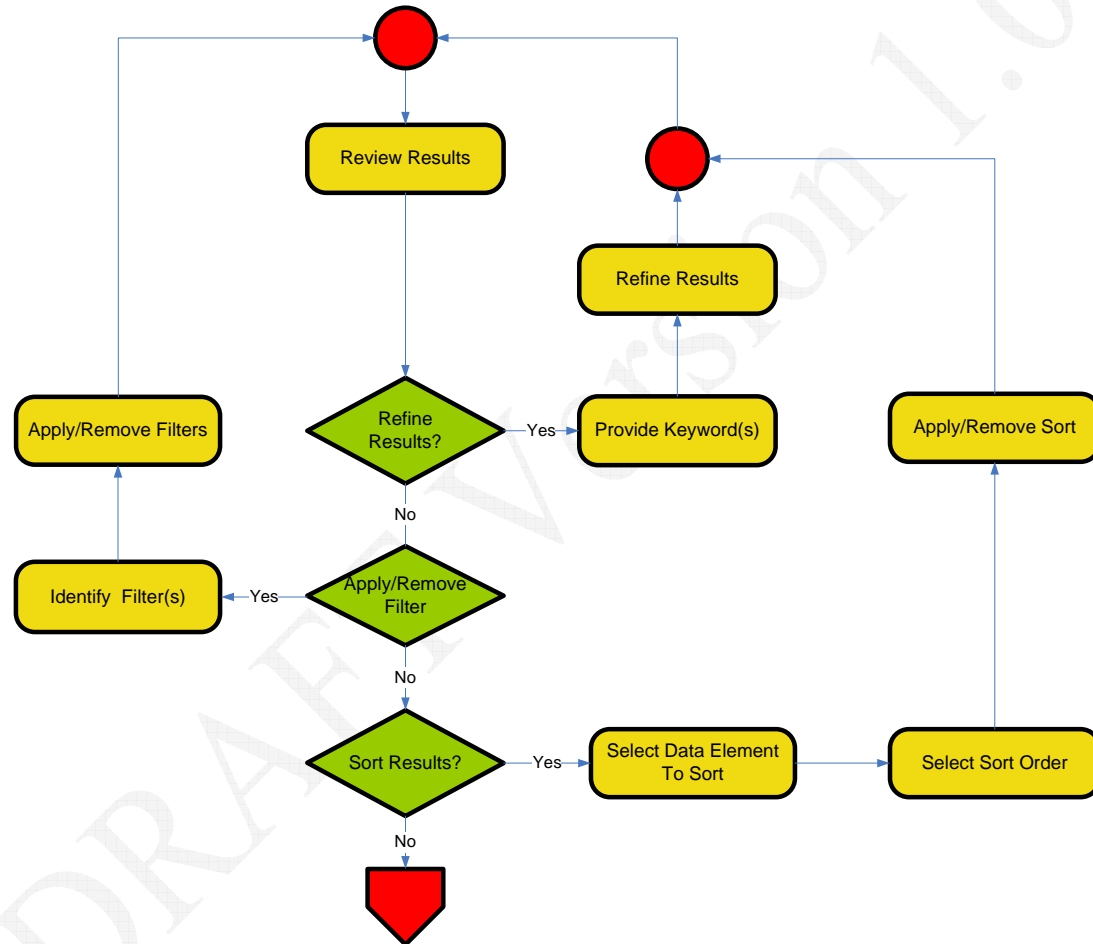
Sub-Process 2: Execute Query

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Sub-Process 3: Sift & Sort Results

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Sub-Process 3: Generate Output
Wednesday, February 06, 2008

