

SUMMIT 08



ADVANCED KNOWLEDGE BASE

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RIGHT  
NOW.

- Key Knowledge Base Ideas
- Searching
- KB Configuration & Tuning
- Open Search

- Knowledge base
  - Information available to the user
- Data mining - making KB available
  - Applications helping user to access this information



- Yahoo, Google, Ask
  - Endusers
- Data mining
  - Enterprises
  - Analysts
  - Experts

- **RN reports (Filter based)**

Direct database query - built into views engine

- product/category filtering
- Date, customer email address, ...

Most runtime selectable filters in Reports

- **Web-Like search**

Text/Index based

“Google style” search

Documents -> index

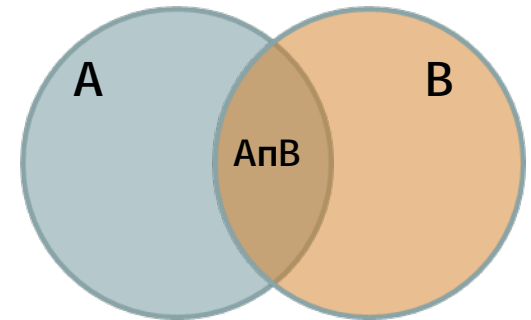
- Boosting and weight calculation

- **Navigational search**

- KB Browse

- **No Search !!**

- Get what you need without search



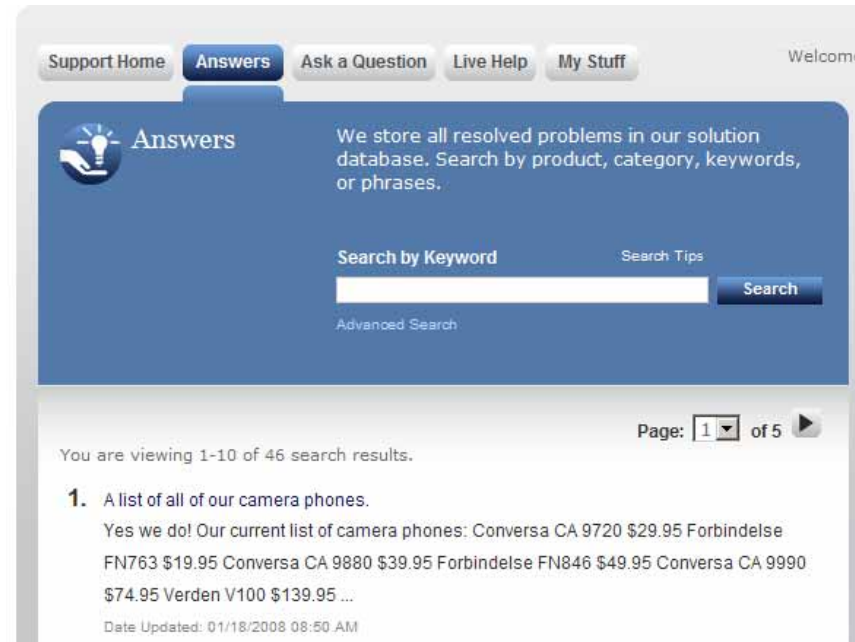
- Manipulating a series of entities in a relational database to structure a query such that it returns the desired sub-set.
- Looking for a union, intersection, compliment, etc, in one or more sets.
- Returns results only from the set(s) specified in the query.
- Typically used with highly structured data.

Traditional keyword searching  
on the internet or  
within an operating system.

User's mental model  
(Google, Yahoo, MSN)

## Attributes of Search

- Indexes the 'entire' corpus of information.
- Almost never results in a zero matches.
- User testing in Jan 08 showed that Google is expected behavior whenever the term 'Search' is placed next to a text box on the web.

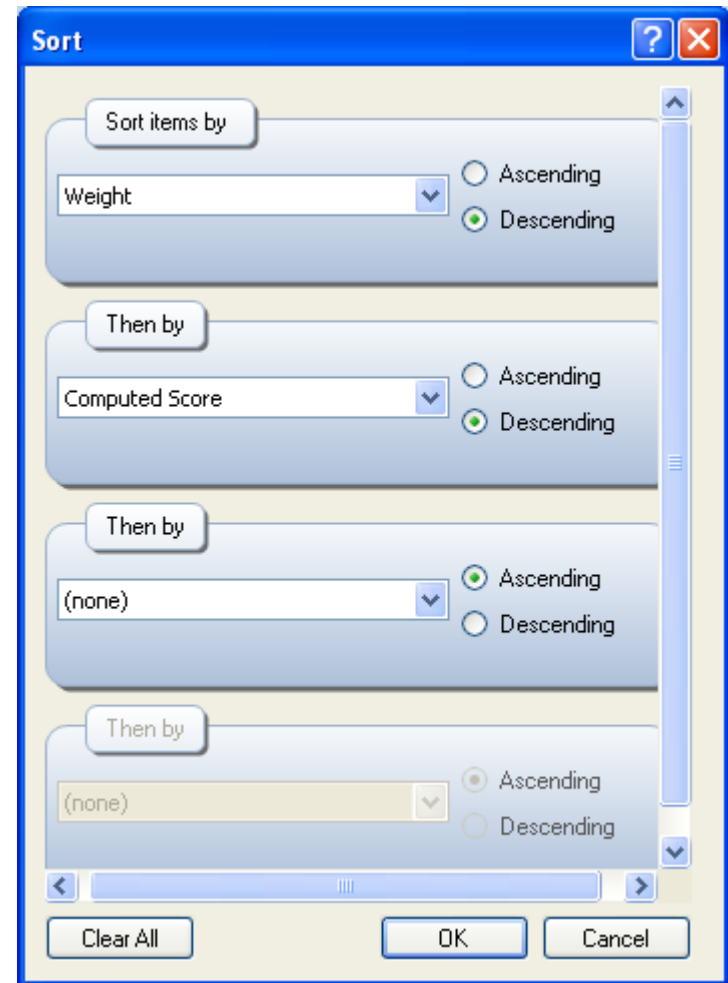
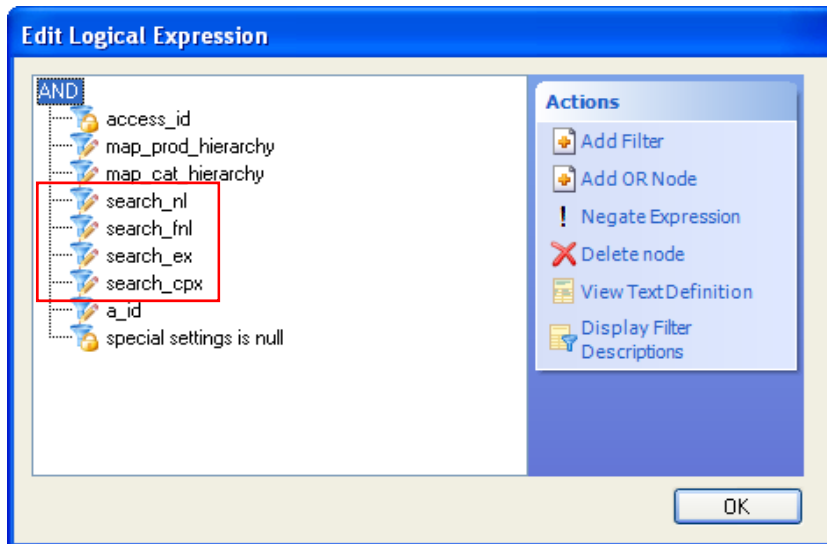


# REPORTS COMBINED WITH INDEX BASED SEARCHING

- Incident search
- Answer search pages

Filter > search\_xxx

Sort by match\_wt!!!



## User does not know how to formulate query

Support Home [Find Answers](#) Email Us My Stuff

SEARCH FOR ANSWERS

Search by Product  Search by Keyword [Search Tips](#)


All

SEARCH BY PRODUCT IMAGES

- > Mice & Trackballs
- > Keyboards & Desktops
- > Cameras
- > Harmony Remote
- > Speakers
- > Joysticks
- > Gamepads
- > Wheels
- > Gaming Console
- > Digital Pen and Paper
- > Wireless Music Systems
- > Mobile Phone Headsets
- > Headsets & Voice Access
- > iPod/MP3 Accessories
- > NuLOOQ
- > Scanners
- > Software



Support Home **Answers/FAQs** E-mail Us My Stuff/E-mails [Help](#)

Search by Keyword:  [Search Tips](#)  Powered by 

Topics	Answers in Selected Topic
<ul style="list-style-type: none"> <li>Most Popular Answers</li> <li>Fuel, Carburetor, Start, Tank, Valve (59)</li> <li>Ignition Systems, Spark Plugs, Fuel, Primer Bulb, Location Search Field (27)</li> <li><b>Spark Plugs, Ignition Systems, Armature, Magnetron Module, Gap (18)</b></li> <li>Primer Bulb, Fuel, Carburetor, Search Field, Oil (9)</li> <li>Flywheel, Cause, Muffler, Governor Blade, Spark Plug Removed (29)</li> <li>Oil, Battery, Starter, Location Search Field, Automated Maintenance (42)</li> <li>Equipment, Murray, John Deere, Considered General, Powered Products (57)</li> <li>Order, Customer Contact, Support, Service, List (59)</li> <li>Email Addresses, Password, Login, Mailing, Submit (17)</li> <li>Location Search Field, Automated Hotline, Model, Voice Recognition Technology, Repair (63)</li> </ul>	<ul style="list-style-type: none"> <li>Replacing the ignition</li> <li>Servicing the spark plug</li> <li>Engine does not appear to be producing spark</li> <li>Identifying the correct spark plug and gap Ignition System</li> <li>Points/condenser to magnetron conversion Spark verification procedure</li> <li>Ignition System Theory and Testing</li> <li>Does engine have ignition points? Electrical System</li> <li>What would cause the ignition module to fail? Walk-Behind Mower Troubleshooting</li> <li>What is the point gap on my engine? Checking Stop Switch</li> <li>What would cause the ignition module to fail? What is the spark plug torque for your engines? Snowthrower Troubleshooting</li> <li>Snow blower spark plug access</li> </ul>

# NO SEARCH!!

Fact: a large percentage of user sessions DO NOT do a search

1	<a href="#">How do I replace a lost Social Security card?</a>
2	<a href="#">When did SSA mail form SSA-1099, Benefit Statements for tax year 2007?</a>
3	<a href="#">What is the "Part B" Medicare monthly premium for 2008?</a>
4	<a href="#">I need to change or correct the name on my Social Security card. How do I do this?</a>
5	<a href="#">What are the most popular names given to babies?</a>
6	<a href="#">What are the tax, benefit and earning (COLA) amounts for 2008?</a>
7	<a href="#">When are Social Security benefits paid?</a>
8	<a href="#">What do the letters after a Social Security or Medicare number mean?</a>
9	<a href="#">How do I notify Social Security that I changed my address?</a>
10	<a href="#">What if I move after filing my Application for a SSN Card?</a>
11	<a href="#">I live outside of the U.S. How do I contact Social Security?</a>
12	<a href="#">What is a Social Security Statement?</a>
13	<a href="#">How much can I earn and still receive Social Security benefits?</a>
14	<a href="#">How do I correct my date of birth on Social Security's records?</a>
15	<a href="#">How can I calculate my own retirement benefit estimates?</a>

Users find what they are looking for without any search just by showing them the right stuff as soon as they access page.

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- Get what you need without search

- Answers

The screenshot shows a web support interface. At the top, there are navigation buttons: 'Support Home', 'Answers' (highlighted), 'Ask a Question', 'Live Help', and 'My Stuff'. A 'Welcome' message is visible on the right. The main content area has a blue header with a lightbulb icon and the word 'Answers'. Below this, a text block explains: 'We store all resolved problems in our solution database. Search by product, category, keywords, or phrases.' A search section includes a 'Search by Keyword' label, a 'Search Tips' link, a search input field, and a 'Search' button. Below the search field is a link for 'Advanced Search'. On the right side of the search area, there is a pagination control: 'Page: 1 of 5' with a dropdown arrow and a play button icon. The search results section begins with the text 'You are viewing 1-10 of 46 search results.' followed by a numbered list item: '1. A list of all of our camera phones. Yes we do! Our current list of camera phones: Conversa CA 9720 \$29.95 Forbindelse FN763 \$19.95 Conversa CA 9880 \$39.95 Forbindelse FN846 \$49.95 Conversa CA 9990 \$74.95 Verden V100 \$139.95 ...'. At the bottom of the results, it says 'Date Updated: 01/18/2008 08:50 AM'.

- Web pages
- Answers

RightNow:

## SEARCH RIGHTNOW

Search our website.

Page  of 126

You are viewing 1-15 of 1883 Results

1. - [Knowledge base software, Knowledge Management software | RightNow Technologies](#)  
-Learning Knowledge Base Email Response Management Incident Management Agent Prompting Cha  
Last Updated: 09/04/2008  
Score: 100
2. - [Knowledge Management Software | Knowledge Base Software | RightNow](#)  
. Find Out How RightNow Service™ RightNow Service is built around a self-learning knowledge base  
Last Updated: 09/04/2008  
Score: 81
3. - [Knowledge Management Software | Knowledge Base Software |](#)

Posted 2008-09-22

### Service as the New Sales

[Read Blog](#)

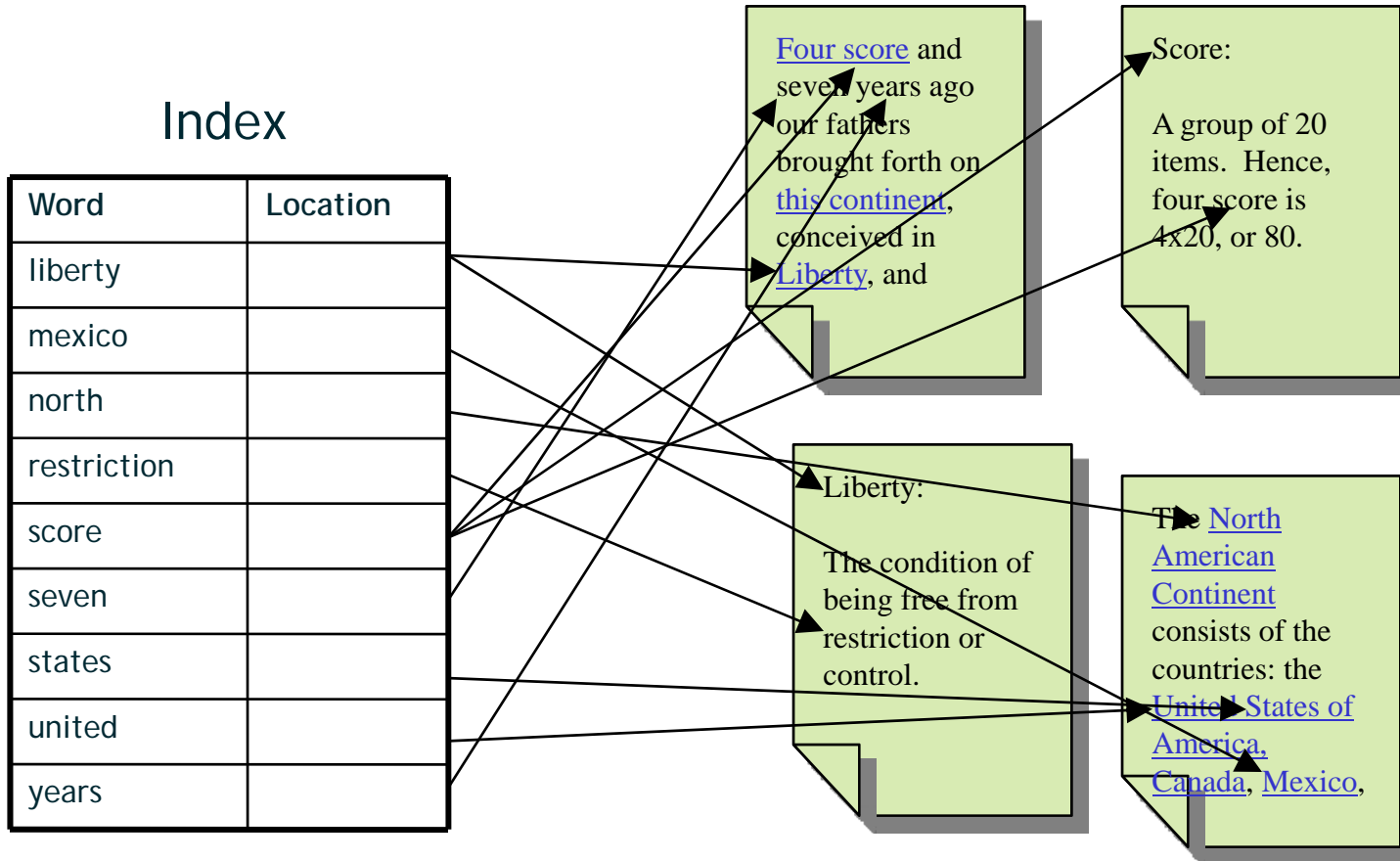
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**Greg Gianforte**,  
CEO and Founder  
RightNow

### Most Asked Questions

- ▶ [What do analysts say about RightNow?](#)
- ▶ [Is RightNow's CRM software hosted or on premise?](#)
- ▶ [What does CRM mean?](#)
- ▶ [How is RightNow's on demand CRM solution priced?](#)
- ▶ [How does RightNow's Pilot program work?](#)

# WHAT IS AN INDEX?



- User specifiable content tags to start/stop indexing for searching


This text is being indexed  
<!--stopindex-->  
this text is not being indexed  
<!--startindex-->  
And this text is again indexed

- How does a search query work?
  - Query is processed via word stemming and removal of stopwords
  - Aliases are added to the search terms (non stopwords, original form)
  - Search terms are looked up in the index
  - The total hits are gathered and sorted by document via weighting formula(s)
  - The documents' attributes (title, link, etc.) are fetched and returned to the browser
  - Post-processing algorithm may be used before display

Establishes a link between two words  
to treat them as synonyms for every search type

- FBI = Federal Bureau of Investigation
- Whiskey = Scotch


Support Home **Answers** Ask a Question Live Help My Stuff Welcome

 **Answers**

We store all resolved problems in our solution database. Search by product, category, keywords, or phrases.

Search by Keyword [Search Tips](#)

  
[Advanced Search](#)

Page:  of 5 

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Date Updated: 01/18/2008 08:50 AM

- Some words are relatively more important than others based upon location
  - Words in the Subject & Keywords field are more important than words in the body of a document or the attachments

## RightNow Configuration Options

SRCH_KEY_WEIGHT	50	Keywords
SRCH_PROD_WEIGHT	50	Product Words
SRCH_CAT_WEIGHT	50	Category Words
SRCH_SUBJ_WEIGHT	45	Subject/Title Words
SRCH_DESC_WEIGHT	30	Question Words
SRCH_BODY_WEIGHT	4	Answer Words
SRCH_ATTACH_WEIGHT	4	File-Attach. Words

Set these to be the same across interfaces!

- Do the search results contain ALL words in the search text or just SOME words?
  - All major Internet search engines use AND
  - We use OR by default with a heavy multi-word weight bias .. “AND-like ordering”
  - Why do we use OR? AND does not work well for small documents sets (under 10,000 answers).
  - Why does AND perform badly on small document sets? It’s too easy for a user to construct a query with no search results.

- Dynamic Truncation Bias (Answers)
  - Truncate Search Results to those most scoring best
    - RNT UI: SEARCH\_RESULT\_LIMITING - natural breaks
    - RNT UI: ANS\_SRCH\_THRESHOLD - break by weight
    - RNT UI: ANS\_SRCH\_SUB\_THRESHOLD - avoid 0 results
- Concept-biased Search
  - Focus Search results based upon matching of query to existing KB learned topics
    - RNT UI: SEARCH\_RELEVANCE\_FOCUS (Answers)
    - RNT UI: SA\_NL\_MATCH\_THRESHOLD (SmartAssistant)


# EXTERNAL DOCUMENTS SEARCH


- Web pages
- Answers

RightNow:

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Search our website.

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Last Updated: 09/04/2008  
Score: 100 
2.  - [Knowledge Management Software | Knowledge Base Software | RightNow](#)  
. Find Out How RightNow Service™ RightNow Service is built around a self-learning knowledge base  
Last Updated: 09/04/2008  
Score: 81 
3.  - [Knowledge Management Software | Knowledge Base Software |](#)

Posted 2008-09-22

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- No much of content control
  - spider
  - uses only externally available content
- Not much tuning control
  - Title and body weight
    - SRCH\_KEY\_WEIGHT            Meta+ products, categories
    - SRCH\_SUBJ\_WEIGHT        Title
    - SRCH\_DESC\_WEIGHT        Text
  - HtDig with Clucene
- File Attachment Size
  - FATTACH\_MAX\_SIZE Core Engine

- Good content
- Contextual content
  
- Administrators
- Users + AI

- Good descriptive titles
- Category and product organization
- Concise information (generic vs. specific)
- Consistency

- Users ranking helpfulness - explicitly
- Ants leaving pheromone trail - implicit ranking
  
- Related answers
- Answers solved counts

Short, long term solved counts

Common-> Knowledge Base -> Answer search:

SA\_SOLVED\_WEIGH\_PREF – long term or short term preference

SA\_AGE\_FREQ

SA\_SHORT\_TERM\_AGE\_FREQ

- Sitemaps
- Syndication Widget
- OpenSearch
- Topic/Adwords
- Place on top
- Related Answers
- SmartAssistant

billing address Search x

powered by Google™

▼ Web 

## [WikiAnswers - What is a \*\*billing address\*\*](#)

Credit and Debit Cards question: What is a **billing address**? A **billing address** is where you would like the bill for a purchase you made sent to.

[wiki.answers.com](http://wiki.answers.com)

## [What's a \*\*billing address\*\*? - Yahoo! Answers](#)

What is the **billing address**? When you order somet...

[answers.yahoo.com](http://answers.yahoo.com)

## [IMPORTANT - Your \*\*Billing Address\*\*](#)

Visa, Mastercard, & Discover require **Billing Address** Verification prior to processing. For security reasons, we only ship to the VERIFIED **billing address** OR ...

[www.teddygirl.com](http://www.teddygirl.com)

## [Billing Address - NIU - Office of the Bursar](#)

Information about the **billing address** on student statements.

[www.niu.edu](http://www.niu.edu)

1 2 3 4 5 6 7 8 [More results »](#)

- [How do I change my address?](#)
- [How do I order see my bill on line?](#)
- [When will I receive my monthly phone bill?](#)
- [How do I check my bill on the web site](#)
- [How do I roll-over the remaining minutes from one month to the other?](#)

billing address Search  
Advanced Search

You are viewing 1-7 of 7 Results

1. [How do I change my address?](#)  
To change your **address**, simply log onto the Global Wireless Customer area. Enter your wireless phone number and password to access your account. Click My Profile to change your personal information...  
Date Updated: 12/31/1999
2. [How do I order see my bill on line?](#)  
Register at [www.globalwireless.com/billing](http://www.globalwireless.com/billing) and see all the bills in real time.  
Date Updated: 12/31/1999
3. [When will I receive my monthly phone bill?](#)  
All Global Wireless customers receive their phone bill at the beginning of the month.  
Date Updated: 12/31/1999
4. [How do I check my bill on the web site](#)  
1. Go to the [www.globalwireless.com](http://www.globalwireless.com) 2. Click register and provide the necessary data 3. Click on the 'Show my bill' button  
Date Updated: 12/31/1999
5. [How do I roll-over the remaining minutes from one month to the other?](#)  
The minutes will roll over automatically if you have the IS340 and IS 450 contracts (see on the lower left corner of your bill for the contract ID). Otherwise, you need to call [globalservice](http://globalservice) and...  
Date Updated: 12/31/1999

# THANK YOU

**RIGHT**  
**NOW.**

- Questions?