TalentOne Candidate Sourcing

System Security/Authentication

[private labelled domain] ?uid=d8bcaaf57cab5985685262dcf3bee2a55 [page/response information]

System looks internal Vanity URL is used

Only ones who know system is being driven by a vendor is management

Usernames and passwords can be easily shared. Creates a artificial step - click in newsletter? Authenticate first. Best to get user to the results as fast as possible

Each user assigned a "key that allows him/her access to the system

This key is changed at intervals and users are asked to use the new key
Users deleted if emailed newsletter bounces back to server
Users phased out slowly if they do not activate their new key

Reminded up to 3 times that key is about to expire
Click link in email to receive new key
No click? Assume you do not use system anymore

Step One: Enter a search query

START HERE

~ 40 unique greetings are catalogued and greetings are randomly generated

Can also "casually" greet the user by name

There is an admin console to override the first greeting for every user in a 24 hour period
This allows Valentine's greeting to be programmed for 2/14
Note: This custom greeting appears to each user only on first use and only on 2/14

Users often need to understand and trust a solution in order to be able to implement it effectively

Happy Valentine's Day! We hope you "love" these search results today!

.Net, portal, developer SEARCH

Users better trust, justify, and modify solutions that they help construct than automatically generated solutions
Users can steer an interactive algorithm based on their preferences and knowledge of real world constraints

Candidate Ontologies

These are inadequate differentiator terms
This query is not specific and precise

Poor recall

Poor sequencing

Developer has been tagged by T1 as a common term and will be ignored in conversation with user. But term will be used for the actual search results (while highlighted in resumes, not very valuable)

Because I entered the term "portal" into my query, T1 now suspects you may be interested in SharePoint

Based on the search query terms
A domain is automatically activated
This will limit the search results to only technology

What happens if there is more than one domain? (Marketing and Technology)

Technology
Domain

.Net Development

Same with .Net - about to ask if you would like to narrow to .Net developers

portal server

portal

This is a special case
Portal alone is ambiguous
But the phrase "portal server" is useful

caml

sharepoint

SharePoint

sps

stsadmin

cms

adfs

front page

master pages

.net

Classes
Note: There can be hundreds of classes

We will highlight both attributes (used for query process) and clues (common words)

Many of these attributes will not resonate with users, like ADFS (but critical for recall!)

Attributes
Again, SharePoint (class) alone can have hundreds of attributes (although not likely)

Clues can belong to more than one Class (like .Net in SharePoint)

BUT it is highly recommended that attributes are unique to each class

We can ask user to choose domain

Choose Domain

marketing, specialist, portal

For 90% of the clients, domain is set in advance. "We" are looking for marketing professionals with technology knowledge

Clues on the other hand are worthless
Do not help with recall
Simply too common (like portal or SharePoint)

Why even have clues?
Because these are the terms that will be entered by users during the query process
A clue's role is to be a listener

Will be highlighted though and used for precision

These are 'extremely' high value terms that help us form an accurate clue

Attributes drive the entire T1 system

And then (cross reference to) add the "attributes" to the query (step two)

Ontology (Cheat Sheet)!

Domain	Class	Attribute	Clue

This is the backbone of the taxonomy... will drive the conversations

Auto Taxonomy Builder

Domain — Will be set by client (e.g. Technology Company)
Can also be set by metadata in original resume database

There can also be more than one domain set for a client (e.g. Technology or Marketing)

Saved Searches — Not ideal, but subject matter experts can be used to create the initial classes - through saved searches

This may not even be recruiters? Could be actual hiring teams creating...

Class

Position Title Analysis

Analyze thousands of IT resume titles to determine which are the most popular

Sample of popular titles from a title search of 1,000 resumes

Project Manager
Technical Support
Systems Administrator
System Analyst
Support Specialist
Help Desk
Business Analyst
Network Administrator
Quality Assurance
System Administrator
Software Engineer
Customer Service
Computer Technician
Systems Engineer
Programmer Analyst
Sharepoint Developer
etc...

Administrator may decide where there is overlap and deactivate/combine titles?

Great way to inventory skills of each candidate!

These become the "capabilities" activated in step 2 of a search (if Step 1 results are too broad)

Can also decide some are not relevant

Attribute

All of these are terms associated with Sharepoint developer

adfs
ado
ajax
asp
authentication
bdc
c#
caml
catalog
cms
collaboration
collection
configuration
content
content editor
content type
css
custom view
data view
definition
designer
document
document library
ecs
enterprise
event
extranet
farm
form
framework
front page
handler
iis
infopath
intranet
isa
item
layout
libraries
list
list template
master
master pages
mcts
module
moss
my site
navigation
object
page layout
parts
portal
portal server
rollout
site collection
site definition
site template
sp2
spd
sps
sql
sss
ssp
stsadm
stsadm
studio
template
tuning
type
vb.net
wcm
web part
web part
wss

We must ask... which of these terms (+1000s more) bring back nearly perfect sharepoint "recall"

not portal, but portal server

adfs
caml
content type
data view
document library
infopath
list template
master pages
moss
portal server
site collection
site definition
site template
spd
sps
stsadm
web part
wss

But many terms are too popular

And some terms fit more than one class

site has ambiguous, but some phrases containing site good

Clue

SharePoint

Creating a class on SharePoint Development, but not using SharePoint as an attribute. Why?

Sharepoint "User" and not what we are seeking

Typical Resume Bullet:
Documentation through sharepoint and TechWiki, all critical changes that are being applied in the systems environment.

design
intranet
portal
reports
requirements
Sharepoint
software developer
sql server
visual basic

Only material terms are used for recall and precision

Candidate resume has enough of the "key" concepts? Become member of Sharepoint class

Recall

Precision

Probably most surprising this is SharePoint is never used for recall OR precision, but highlighted anyway

Candidate "rank" within class also determined only by material terms - no clues are used

Resume Parser (XML generated for each candidate)

By matching zip code to geo data

Calculated

Markets (CBSA)
Leadership
Diversity
Employer Size
Employer Industry
Employment Metrics

Determined using special classes and attributes

e.g. do you go from job to job or stay one place

Can set expiration time for resumes
i.e. After 90 days, candidate can be added again

Resume Date

Email Address Required

Note: Resumes are parsed from fully-formatted text and presented to recruiter in same format

Note: Candidates will post multiple resumes with different email addresses

Are there two David Gossetts? Do they have the same email address? Are they both in T3 area code? Are they both in 770027
Yes... considered a dupe
Use more than one, in case data is missing from resume

Contact Info

Candidate Information

Resume De-Duping

Languages

Location

Competencies

Achievements

Skills

Certifications

Security Clearance

Volunteerism
Associations
Interests
Military

Personal

Education

Honors

Degree Types

Major

Schools

Attendance Dates

Employment

VISA
Position Type
Organization
Travel
Years Experience
Compensation
Occupation

Can get approximate candidate age

Parsed data used to create filters

Calculating relationships between parsed fields endless
e.g. Does college major match current occupation?

Can support global candidate filters

Step Two: What capability are you looking for?

I have queried three terms, but this returns too many results... (20K+)
I really need to further limit my result

Am I interested more in software development or SharePoint?

Total Resumes: 641,000 | .net: 14,898 | SharePoint: 4,230

Add my 3 word search criteria

Add SharePoint class

Just adding SharePoint class reduces search recall by 71% (and took < second to click)

May have further reduced recall by another 50% by adding .Net Development class

Happy Valentine's Day! We hope you "love" these search results today!

.Net, portal, developer SEARCH

What's really interesting is none of these query terms are even attributes. All are "clues" and therefore not useful to driving recall

Yes, we will use them for precision, but need a lot of help (very common!)

As soon as user hits search, candidate resumes are displayed

It's not the goal to make the user want to have a conversation (you search, here are results)

Your search returned a lot of results. Would you like to limit your search to a capability?

.Net Development, SharePoint, TIBCO, DotNetNuke, Content Management, Intranet Administration

These "capabilities" are really classes that have been activated based on the original query. T1 detected that portal and .Net belong to these classes

Some clients may choose to not show all Classes, e.g. Microsoft may be only interested in SharePoint and not other portal technologies

Search Results

.Net Development, SharePoint, TIBCO, DotNetNuke, Content Management, Intranet Administration

.Net Development
+ .net portal developer
SharePoint

What if I wanted to add two classes at one time?

Can take the intersection of two different classes and then add the original search terms

Beware though - intersections can be very small!

If never added "SharePoint" class to our search query, Janaki probably would not have been in 1st page of results

If not for adding SharePoint (class), this may have been top resume

Seems like this candidate implements app within portal environments?

Recall/Precision clearly driven by .Net query term

Aquaslogic? I was wanting a SharePoint person?

The user may choose SharePoint as the capability - this is huge!

By "activating" the SharePoint class, I just reduced the recall by 71% (and significantly improved the results)

What happens when you choose SharePoint during step two?

adfs
caml
content type
data view
document library
infopath
list template
master pages
moss
portal server
site collection
site definition
site template
spd
sps
stsadm
web part
wss

There may be 100 attributes or 10 attributes, depending on recall performance for class

Congrats Janaki! You are a member of the SharePoint Class
Not only a member of class, but graded as 4 1/2 stars in this class

But remember, just because Janaki is a 4.5 star SharePoint candidate does not mean he is a top candidate for our current query

In other words, does Janaki also have .Net, portal and developer?

Example section of a resume

We are looking for patterns between attributes and each resume

Even though SharePoint is not used to identify SharePoint resumes, terms we have chosen work very well together

System can be trained to find new attributes
For example, web from web part + content from content type can form new attribute "web content" - note this is optional

A 'jespensity' of attributes like these leave no doubt of this candidate's capability

And again, this candidate has been identified as a SharePoint developer without ever using the term "SharePoint" in the class definition

Also, source from job boards

career builder
Yahoo hotjobs
monster
Dice
(FACTORY JOBS)
etc...

+ specialty job boards

Scan all resumes for each class' attributes

Resume Database
600,000+ Resumes

T1 scans 600K+ resumes against thousands of different classes (24/7)

Yes! But because of the actual search criteria, Janaki could drop from "Top 1%" spot (SharePoint Class) to "Top 5%" because of specific criteria
But he is still (overall) a very qualified candidate

Interactive optimization leverages user's skills in areas in which people currently outperform computers

When user selects capability, it's represented as a hastag in main search query area
Users learn this and can activate via query

Why all this work for a step used less than 25% of time
Because it's these searches that have the greatest tendency to fail and create a dissatisfied user

Really only for poorly written "Initial" queries

Step 2 may only activate for ~50% of searches
Step 3 should be less than 25% of the time

There may be a way (future) to detect query term is also a capability and prompt user while querying

Step One: .net, portal, developer, sharepoint

It's super cold out there. This is a great day to search for candidates!

Users can get overwhelmed quickly
Google has perfected the "search bar" interface
Talent One follows this same format

Google

Recruiter has a "fundamentals" view that reports everything the recruiter needs to be aware of 24/7

Dashboard will be most popular tool below in Talent One

Therefore, it is key that T1 dashboard not be "home page", but a link off the home page

And you cannot "search" for candidates from dashboard

Step Three: Add some additional terms to query

3 Steps can be overwhelming
But you don't see the three steps at one time
You may only see the first step and not 2 and 3

Very Google-like first step... just enter some query terms...

Talent One

"Light-hearted" and conversational greetings are super important
We need to build human/computer trust

Step One: It's super cold out there. This is a great day to search for candidates!

Step Two: Your search returned a ton of candidates (20,000+). Would be better to add a capability.

Step Three: Results 1 - 10 of 5,831

Communicate directly with developers/admins

Twitter-like feed of all enhancements to T1
Changes color when something new is posted (user-specific)

Because there are only 110 total resumes, will deactivate step 2 and 3

May even suggest criteria limit if needed (Not enough recall)

Human interaction significantly improves the performance of search algorithms

If there are too many results (8,000+) T1 will show and recommend user selects a capability (step two)

Step two is fully automated
Classes that get shown are computed based on query terms entered

Step Two: Your search returned a ton of candidates (20,000+). Would be better to add a capability.

Recommended step two

Important! User never has to use Step 2. Can just go straight to results

But users will learn over time that using Step 2/3 brings much better results and use more often

How is it possible to assign stars to a search?

Isn't search based on relevance (query dependent)?

Stars only display when a capability is selected

Stars represent "grade" based on capability subset

Cart | Filters

Results 1 to 1 of 1,000

Most Viewed Candidates:

Like AdSense, displays most visited resumes, based on current search query

Note: A search relevance score is more important than stars (can have 3 star below 4 star)

Filters can also include competitors, company alumni, etc. Single click and the search results only display diverse candidates or alumni, etc.

Filters can include anything parsed from the resumes

Parsed data used to help generate parts of the Talent Summary

User can manage cart
Check off candidates and clicking button (e.g. selective dates)

Users can check off candidates in both results views and within a resume

Add Resumes To Cart

User can act on resumes in 1 of 3 ways

Denotes candidate uploaded resume to career site

SUBMITTED

DIVERSITY
Label's help the users quickly identify key aspects of each candidate.

Even calculated fields

Instantly grade any resume
Grades used to tune algorithms

GRADE

Once acted on, cart empties

Talent Summary (Top of each resume)

Every resume is formatted differently. Hard to scan it for qualifications. T1 reports top qualities at top of resume for quick review

DOWNLOAD/EMAIL (4) | GRADE | PREVIOUS | NEXT

Key Capabilities:
Consulting
SharePoint
Quality Assurance
Project Management
Data Migration
Business Requirements
SQL Server

Bachelors | Specialty Degree | Masters Degree | PhD

Abstract (52.6 %)
Concrete (47.4 %)

Indifferent (99.7 %)
Extraversion (0.3 %)

Score Driven By:
mentions
sharepoint
developer
moss
portal
caml
.net

Specialty degree depends on client
e.g. Computer Science or similar

By listing the top keywords found in resume, can see very strong in SharePoint, but not in .Net

And note, search terms always represented in this list + top terms from capability selection

Possible to automatically generate a text summary of why this candidate is of high value to company

Know candidate is strong in SharePoint, but what other areas get graded high

This is very important. Talent One will make associations (non-obvious) between resumes
This needs to be communicated to the user

For example, it may be that female candidates from Booz Allen are very successful (company does a great job promoting women)

Visual cue on what is special about this candidate. Recruiters begin to recognize symbols quickly

Irene Chew Resume

Experience in Development of Features for deploying web parts, workflows, custom menus, content types, site templates in Sharepoint server. Experience in Backup and restore and migrating from Sharepoint server server 2003 to MOSS 2007. Worked on Active Directory integration with SPS 2003 and MOSS 2007. Worked with Silver light for UI Applications. Knowledge of Web Business Connectivity Services, SQL in Sharepoint 2010 and MOSS 2007.

Myers-Briggs Analysis (Based on resume text)

Visual Cues
Intuition (N)
Sensing (S)
Introversion (I)
Extraversion (E)
Thinking (T)
Feeling (F)
Perceiving (P)
Judging (J)

The darker highlight is for your search terms and additional terms (step 3)
The lighter highlight is additional terms that drive the SharePoint class

CA Symantec
SIM Modules
Response eDiscovery
Antivirus Malware
Application Security Inc
Free Rocks We Security
Mobile Security
Migration Security Engineer Lead
Information Security Analyst

Why (also) do a tag cloud of entities extracted
Click in tag cloud and term highlights in difference color

Could do two clouds and stack... entities and keywords

This gets pretty complicated, but the user never see the "back-end" processes

One color highlight for all terms specified by the user

What about CAML (from step 3)
It can either be a light or dark highlight
Client can choose how to implement

A lighter color for terms that are driven by class definitions

Why is keyword "SharePoint" highlighted?
It's not an attribute within the class
But user's will expect it to be highlighted

After all, the user agreed (checked box) to activate the SharePoint class

User is now searching within their own custom designed taxonomy!

Recruiter Communication Tools

Talent One Dashboard

Recruiter's "Home Page"

"Super" aggregation
Lists every candidate recruiter should be aware of and why

Candidates You Need To Know

John Doe: company alumni
Jane Doe: 5 star candidate in marketing
Tom Smith: Acted upon by 5 other recruiters
Dave Jones: New candidate from search done yesterday
Mary Thomas: 4.5 Star Diversity - (IBM, Sandy Springs)
Frank Young: 4 Star, Sharepoint at Accenture
etc...

Additional Reports

Ranks

Report top diversity candidates and why + more detail on resume page

Track all 4/5 star competitor resumes in your areas of interest and report them here

Again, totally personalized. Only deliver to David what David is currently recruiting

Talent One Newsletter

Week of February 21, 2011 — Prepared by David Gossett

Opening message from Recruiting Leadership

Opening message also a good place to announce new T1 features

Candidates David Gossett Needs to Know

Pulled directly from the dashboard

SharePoint Services

List of most popular candidates in your specific interest areas (your searches)

This becomes very important
One thing to search and get top relevance
It's another to "track" a capability
Need a way to judge each candidate to next

Communications automatically tune based on user's current recruiting needs

How do we determine the value of candidates once "outside" search interface?

+3 Deviations
+2
+1
Average

Measure "distance" from average within that capability
(5 stars = 3 deviations above avg)

Scores are normalized

Look at the value of the resume within the capability to grade

We do not show below 1 deviation from average (no 1 star section)

How do we know to include SharePoint Services (not a saved search)?
We keep a running count of capabilities activated by user
If user clicks SharePoint as step two more often, added to newsletter

All emails are highly personalized

Talent One Alert

Special Alert: Prepared for David Gossett

On 2/16, you saved a new search called SharePoint Developer II
Talent One pulled resumes for this capability overnight
5 additional candidates were identified

Day after a search is saved, T1 will alert user of any new, high qualified candidates

This is highly customized to the specific user, will not be viewed as spam and encourage user to create and save more searches

Any search can be saved by user and later used as a "Step 2" filter

If you save this search, Talent One will look for more candidates overnight and alert you in the morning

David Gossett's Reports \ SharePoint Developer II | SAVE

Important! We can setup up all the capabilities thought to be needed, but user's will always know best.

Important to stress that this is user's custom report
Will only be seen by the user who creates it

Not only can a user save a search, but it becomes a new "class" in Talent One and can be selected in future searches.

David Gossett Domain

SharePoint Developer II Class

sharepoint class
moss
caml
developer
sps
portal
.net
attributes

Step One: It's super cold out there. This is a great day to search for candidates!

Step Two: Your search returned a ton of candidates (20,000+). We will be better to add a capability.

Database, development, SPS, MOSS, Architect

Recommended step two

Detailed Report Widgets

Overnights (in your recruiting areas)

SharePoint Developer II: Jane Doe | Bobby Smith | Curt Jones
Eric Gibson | Mary Thompson
etc...

Only show top ~10 or so candidates in each area

Most Frequently Viewed (in your recruiting areas)

Can also be "acted on" resumes
Candidates emailed by other recruiters in user's areas of interest

Diverse Candidates (in your recruiting areas)

This may be driven as a firm-wide initiative

Management may require recruiters to view every diverse candidate resume and dismiss the candidate (to make sure it's been reviewed)

In the areas you recruit, what candidates are most popular with fellow recruiters? Maybe worth a 2nd look

Tag Cloud

What are other recruiter's searching for?

active algorithms architect architecture automation center cmm consultant data debug design developer director directory engineer enterprise framework manager marketing mcse net .net ecm news room service services sharepoint soa software sql strategy support system test tier visualstudio windows ...

Clouds/Popular searches drive job board pull criteria

Click on algorithms and get a more detailed cloud

agile algorithms amazon analytics backbone blackbeat c# c++ client cms computer crm data development design developer engineer erp ews flex java multi multithread net remote patterns research sql science scrum shopping software structures test thread ...

Or see what other users are searching for and run any of the same searches

algorithm, machine learning, dataset
search: c#,c++,algorithms,data structures,software developer,software engineer,software programmer
c++,c#,algorithms,data structures,amazon
c++,c#,algorithms,data structures,indian institute of technology
C++,C#,algorithms,data structures,multithread,computer science,test
C#,C++,computer science,algorithms,multithread,software develop,design,thejiang
C#,test,compilers,debug,algorithms,multithread
C#,+,software,develop,design,algorithms,data structures,computer science
C#,.net,Saas,WSS,packaged,shipped,algorithms,data structures,wcm,agile,USA
C#,C++,intel,software,develop,design,algorithms
"web services", "computer science", c++, c#, algorithms, patents

Can list previous searches by usage (e.g. 86 times) or by the # actions generated (i.e. emailed candidate, etc.)

Alumni

New Company Alumni (in your recruiting areas)

Boomerangs more loyal and come up to speed quicker

Monitor user's areas of interest (e.g. saved searches) for any new alumni that appear

4 and 5 Star Alumni (last 7 days)

List of very best alumni who just appeared in T1

Current Company Employees (last 7 days)

This is optional report! Could be popular with HR management

Can monitor current employees who are considering a career change
May be able to re-deploy to new position

Competitors

Competitor Resumes (in your areas of interest)

Top Competitor Resumes (system-wide)

Usage Metrics

Candidate's Identified: You | Average

Based on your activity, we have identified 23 new candidates this week

The average company-wide is 200 new resumes per recruiter

Tells recruiter he/she is running behind!

Resumes Viewed: You | Average

User gets constant feedback on how their T1 usage compares to other users - gets competitive

Also shows management has robust metrics and is paying close attention

Example gauges - maybe 20+ measures to choose from

This becomes a new class in the taxonomy and all new resumes are evaluated against this class

If using job boards for sourcing, user's criteria will be used for overnight pulls

Captures user search terms as attributes (step 1)
Captures checked off terms as attributes (step 3)
Captures capability class chosen (step 2)

PROJ:	TalentOne Sourcing
DRAW:	David Gossett
DATE:	March 18, 2011
CONT:	713.681.6500
SPEC:	Blackbaud
SIZE:	36" x 72"
SHEET:	1 of 1
NOTE:	Version 1: February 25, 2011 Version 2: February 28, 2011

DEVELOPMENT USE ONLY