

Notes of Borg Challenge Review of 699,082 ENRON Documents

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2013

Initial Random Sample to begin project with review of a random sample of 1,183 documents.

- 4 relevant were found.
- Prevalence = 0.25359% (3/1183)
- Spot Projection = 1,773 documents (699,082* 0.25359%)
- Using Binomial = 0.25 +/- 0.05% to 0.74%
- From **350** documents to **5,173** documents
- Took 130 minutes to review (2.16 hrs)

Total Relevant Found by Borg After 50 Rounds = **578**

Total Relevant Found by Multimodal = **659**.

That's 81 more documents by Multimodal, which is a 14% improvement.

Put the other way, the Borg method found just under 88% of the Multimodal total.

Final Quality Assurance Random Sample to end project with random sample of 1,183

- 1 relevant was found in the 1,183. Borderline. News article about Enron firing two employees – 5403549. It had not been reviewed.
- Of the 1,183 sample, 26 had been previously reviewed and all had been categorized irrelevant. I agreed with all prior coding.
- Prevalence = 0.0845% (1/1183)
- Spot Projection = 591 documents (699,082* 0.0845%)
- Using Binomial = 0.08 +/- 0.0% to 0.47%
- From **0** documents to **3,286** documents
- Took 150 minutes to review (2.5 hrs)

Elusion = 0.0845% and none were Hot. Shows inadequacies of the Elusion Test in low prevalence.

Combine two Borg random samples taken: 2,366 with 5 found. (95% +/- 1.57%)

Multimodal random sample of 1,507 with 2 found = 0.13%

All Three: 3,873 samples with 7 found = 0.18% = 1,264 spot projection

Binomial = 0.07% - 0.37% = **489** to **2,587**

Using most accurate spot projection of 1,264.

Borg retrieval of 578 = Recall 46% (worst case scenario = 578/2,587 = 22% recall)

Multimodal retrieval 659 = Recall 52% (that's 13% improvement) (worst case = 659/2587 = 25%) (13.6% improvement)

Best Case scenario = 691 relevant. Borg 578 = 83.6%. Multimodal 659 = 95.4%

TOTAL HOT FOUND IN MM = 16.

TOTAL HOT FOUND IN BORG = 2 (only 12.5% of total found by multimodal)

Rounds

Each round consists of a review of 200 documents selected by Inview for training. Inview selected 80% of the 200 on the basis of its uncertain (160 documents) and 20% by random sample (40 documents)

1. 3 relevant found.
 - control #. 470687; marginally relevant email
 - 12005752; barely relevant email
 - 12004180 – marginal
 - 6 seconds per file: 9.1 files per minute 546 miles per hour
2. -0- relevant found.
 - over 80% were foreign language
 - took ½ hour, (30 mins) – 6.7 files per min., 9 second per file
3. -0- relevant found.
 - 155 of them were empty PST files, 3 mins; 12 minutes for the rest
4. 3 relevant found.
 - mix of file types; 54 obvious irrelevant; took 5 mins; 146 took 25 mins
 - 12007083 – good email re severance payments
 - 12009832 – severance plan related email
 - 12006688 – waiver and release form
5. 1 relevant found.
 - ZERO Relevant files found in the 200 served
 - At this point I also ran a special search to see if any 50%+ probable to rank relevant; one new doc predicted relevant 75.7%, control 12006689 – waiver agreement (similar to one already marked)
6. -0- relevant found.
 - 50% + search found no new
7. 1 relevant found.
 - one relevant release form 12006941;
 - all else were not even close except for a contract termination email
 - no new ranked relevant docs
8. 1 relevant found.
 - 1 relevant emp_ handbook with term provisions 12010249
 - The rest of the documents were junk, meaning not even close
9. 3 relevant found.

- one relevant email; a general notice to all employees on bankruptcy that mentions employment termination. Control 11236804
 - relevant general release (as before) 12000320
 - relevant separation agreement 12000546
10. 38 relevant found.
- 34 relevant found in 200 + 4 known by rank outside of the 200 = 38 total
 - multiple copies (28) re Reporting to Work Next Week (multiple copies); this email was sent to all employees just before bankruptcy
 - 2 more of same found that were on claims
 - 4 relevant employee agreement form
 - total 34 relevant out of this 200
 - ran relevancy marking search – 4 new ones seen ranked
11. 6 relevant found.
- three of the six found in the 200 were of a new type; the other three were more of the same
 - relevancy search rank; none new
12. 12 relevant found.
- 2 relevant severance contracts
 - 1 relevant employment manual
 - 9 relevant FAQ scripts
 - 40 minutes for review here (agreements – require more reading to see if there are previous related to termination of employment)
13. 15 relevant found.
- 3 relevant found out of 200, plus 12 from ranked search; total 15 new relevant
 - two relevant from the 200 re notice to all employees
 - one Canadian release was relevant in the 200
 - search of 50%+ probability showed 202 new files predicted relevant, 182 of which were spreadsheets. That was a big jump. But only 12 of the predictions were correct (all the Word docs)
 - 190 of the 202 50%+ predicted relevant were not in fact relevant
 - all of the 12 Word docs were correct predictions
 - 6 pdf files – all were irrelevant.
 - took another hour for the probability search of 202 documents
14. -0- relevant found.
- included many (150) agreements having nothing to do with employment. All irrelevant
 - Predictions were usually about 33% likely relevant and 33% likely irrelevant
15. 19 relevant found.
- 14 were found from the 200:

- 1 relevant spreadsheet calculating termination severance amount
 - 1 script to use to talk to terminated employee 12007598
 - 4 benefit severance case scenarios
 - 1 form termination letter 12006691
 - 1 legal advice letter re severance plan 12114935
 - 3 actual employment termination letters 12010037
 - 1 policy plan change notice
 - 1 restated severance plan 12007612
 - 2 copies 1 advice from Littler re severance 12009928
 - Ran a 50%+ relevancy probability search and 1,487 new predicted relevant documents were shown. A partial review of the 212 I thought most likely to be relevant showed that five (5) were in fact relevant.
 - 106 of these were spreadsheets; all reviewed and irrelevant
 - 1,331 of the 1,487 were document files; I coded 58 of them. All irrelevant.
 - 31 emails (approx); reviewed all 31, 3 were relevant
 - 1 of these 31, found relevant 12007475 was a close question
 - Other two ere relevant, eg. 4500240
 - I also reviewed 17 odd type file extensions and all were irrelevant
16. 8 relevant found.
- one of the relevant was a close ques. where an offer of employment was rescinded. I considered it relevant – 12010086
17. 12 relevant found.
- 6 found in the 200
 - Another 6 in 50%+ probability search
 - These 6 were found in the 200:
 - 28relevant emp. contract provisions discussion re termination 12001241
 - severance questions – 12006474
 - ques re termination for cause – 12006554
 - severance plan revisions email – 12011276
 - letter rescinding emp. offer – 12007269
 - email re severance meeting – 10715815
 - search of 50% + probable relevant; 9 not previously reviewed; 6 were relevant; 3 were not
18. 6 relevant found.
- 2 – interrogatory in an employment case 12006517
 - 2- Littler re emp. contract – 8400148 – 2 copies
 - employment offer rescission
 - Oregon statute re: employee requests after termination – 12002602
 - many irrelevant contracts were in the review
 - 50% + probability search showed no new

19. 28 relevant found.
- email re severance plan revision 12006469
 - note - 2 already marked relevant docs were in this set, they were 99% probable
 - email re termination of one employee, 12006943
 - email re emp. termination – 15508142
 - email with ques. re severance – 12005851
 - close ques – ERISA plan question email – 12006777
 - employee (Ming) dispute re her terminate documentation – 12010029
 - employee (Kim) ques. re his severance and email internal re: giving Kim severance – 12005206
 - employee complaint of discriminatory termination – 15514893
 - 5 email re script for employee terminations – 12007133
 - email ques. re severance – 12005421
 - email ques. re: severance – 12005422
 - “ another email reply
 - another email reply
 - another email reply
 - another email reply 12010778
 - employee incorrectly sent termination
 - 2 notices due to computer error 4109833
 - voluntary and involuntary termination discussed
 - 4 emails re severance plan
 - email re severance legal issue (WARN)
 - email re termination law suit – 8003332
 - this round had many relevant documents and complicated ones; round took 50-60 minutes
 - search of 50%+ shows no uncategorized docs
20. -0- relevant found.
- search of 50% + shows no new documents
21. 12 relevant found.
- did 50% + - nothing new
 - minutes re emp. contract of Fastow discussing termination – 8003490
 - 2 emails re: severance contract – 12007223
 - 2 emails re severance contract
 - 2 email from individual employee re unfair termination 15511658
 - email re severance plan
 - 2 complaints by employee, Lion, re discriminatory termination – 8004527
 - Oregon statute re: termination
 - waiver interpretation email
 - email re severance plan
 - note irrelevant email that is close – 17312114

22. 5 relevant found.
- 3 relevant found in 200, plus 2 more in 50% + - total 5 relevant
 - email re severance plan
 - email re severance plan
 - email re severance plan
 - 50% + probable search: 8 not previously categorize; 2 were relevant
23. 8 relevant found.
- Relevant – severance calculation spreadsheet
 - email re emp. term. and immigration
 - email re: severance plan communication to all employees
 - email that mentions contract termination of employee for cause
 - email re: revised severance plan
 - follow-up email re: immigration issue above
 - email re severance plan
 - email re severance plan
 - 50% + probability search – 185 found – all previously categorized
24. 10 relevant found.
- 9 from the 200, and 1 from probability – total 10
 - 50%+ probability search – one new prediction 62.6% which was correct – total 179
 - Relevant found from the 200
 - email re termination date and vesting
 - email re tax on severance and agreement
 - email re severance and part-time employees
 - irrelevant, but close call – 15508438
 - relevant email re severance and merge
 - email re UK employee that mentions severance if terminated
 - email re let the severance plan speak for itself
 - severance question
 - Ms. Bates employment termination
 - EEOC case – strong relevant 12005636; only predicted 19.5%
 - Severance pay plan assessment – close – 12011364
 - total number of relevant so far = 273
25. 3 relevant found in 200, and 1 from probability - total 4.
- relevant email re termination
 - reinstatement remedy in EEOC case for wrongful termination – 12007303
 - email re: voluntary and involuntary question
 - search 50% + probability – 184 – 2 not categorized, 1 relevant (57.3%) and 1 not relevant (58%)

26. 1 relevant found in 200.
 - email re: severance plan
27. 8 relevant found in 200
 - 3 emails with emp. complaint re severance and vacation
 - severance email
 - mass email re mistaken notice of termination 12305510
 - part-time employee and severance issue
 - retention of outside counsel re termination without legal permission. Close question. 12005884
 - severance and UK and US employees
28. 5 relevant found in 200, and 7 from probability – total 12
 - email re hiring outside counsel
 - Fairness in severance based on tenure 12512159
 - 3 emails re emp. contract terms, specific as to termination
 - run 50% + probability search – 185 total. Review all. Notes below.
 - one doc was 70.4% predicted relevant. **I had previously marked it as irrelevant and of course trained on it. I now read the agreement more carefully and found termination provisions I had missed before. I agreed it was relevant!** 12003549
 - **another email found like above where termination is found in end of email and so I changed my mind and mark relevant** 1200928
 - **another, this time in a form letter where I now see it has termination language in it** 12001275
 - **another, a WARN notice discussion** 12005220
 - **another, a non-disclosure form with termination discussion that I had marked irrelevant before; 58.3% probable relevant** 14632937
 - one where I stuck with my guns and still disagreed 12011390. Computer predicted 90.5% relevant and only 1% irrelevant even though I had categorized it as irrelevant.
 - **another one where computer is right and I changed my mind** 12005421. It was ranked 88.8% likely relevant even though I had previously coded as irrelevant.
 - **another one re termination of employee named Ming where I changed my mind and agree – 67.7% likely relevant.** 12010029
29. 50 relevant found in 200 and 3 from probability – total 53.
 - 3 emails re severance and tenure
 - termination complaint email re India
 - email re: severance benefits
 - 40 copies of same email re mistaken notice of termination and savings plan
 - email re employee relocation or termination
 - severance and part-timers
 - 3 severance re total costs and Dynergy

- 50% search – **3** previously marked by me as irrelevant now show as likely relevant. Looking again I now see computer is right and they should be marked relevant:
 - **one concerns a foreign employment contract with 70.1% relevant ranking and I change my mind and agree - 13725405. It only ranked the agreement as 7.3% likely irrelevant, even though I had coded as irrelevant.**
 - **I agreed with a release email, but it was close call. Computer said 90.5% relevant 12011390**
 - **I agreed with the third one too re co scripts and a question on severance 12007134**
30. 8 relevant found from 200. Note: corrections made to errors by a Quality Control check of marked relevant documents. The corrected total relevant is now 292.
- email re severance payments
 - email re severance calculations
 - email re employment contracts and severance
 - email re waivers and release
 - email re a suit on wrongful termination; very obvious relevant email 12006801
 - 2 emails re amended severance to extend employment a month
 - email re bankruptcy and severance payments
 - ran 50% + not categorized - zero
 - **First Quality Control Check:** I ran a total relevancy search and found 363 total, and double checked all of the, Then I found 71 errors, all errors, which I corrected. They were labeled relevant and were not – all obvious. Pretty sure this was caused by checking the wrong box when doing rapid coding of obvious irrelevant. Made adjustment to coding input layout to make this more unlikely to happen. Good lesson learned here.
 - I reran all of the training to be safe the bad input was corrected
31. 3 relevant found from 200. Note: additional QC efforts found 5 more mistakes in prior manual coding. All errors were documents incorrectly marked relevant.
- Email re complaint about termination
 - email re revisions and terminations
 - Q&A related questions re severance
 - **Quality Control Check:** Probability search of 25%+ predicted relevant but not coded relevant – 12 found. 5 of them were mistakes where I changed my mind and now coded them as relevant. The details of this QC process are as follows:
 - **Employment contract 13737371 with termination provisions. I mistakenly marked this as irrelevant before because I saw the employer was UBS Warburg. I looked even more carefully now and saw they were acting as a successor in interest to Enron. For that reason I changed my mind. Relevant prediction was 85.4%**
 - non-disclosure contract with 41.8% relevant prediction. I stuck with my original decision and didn't change, but it was a close call as other non-

- disclosure agreements had termination provisions (this one did not) and I had called the others with such provisions as relevant.
- a foreign language email sending picture was 78.6% predicted relevant. Computer was obviously wrong.
 - **email that on top was about crude oil, but below was about severance. Very unusual. I missed that before. 12512165. I changed the coding to relevant. It had a 36.1% probability rank.**
 - **another email just like above. I was wrong. 32.8% probability.**
 - **email about severance calculation that I made mistaken before as irrelevant and now corrected. 29.4% probability.**
 - **email re employee termination that I missed before as the language was near end of otherwise irrelevant discussion 47.5% probability**
 - 3 agreements between companies that had termination language. 89.7% probable, but computer is wrong. Not about employees. I was about deal contract terminations between companies.
 - list of 7 employees in an email. 60.2%, but computer is wrong as nothing relevant 12832822
 - waiver of benefits, 52.6% predicted relevant but computer is wrong, not relevant
- total relevant after corrections is now exactly 300
32. 4 relevant found from 200.
- email re termination and rescissions. Predicted relevant at 62.8%. Only document over 28% predicted relevant in this 200 group
 - next highest ranked document was 27% probable relevant, about terminated employees 12007207
 - email question re part time employees and severance
 - email re suggestion on severance plan and severance
33. 1 relevant found from 200. Note, additional QC finds 7 mistaken irrelevant, which were corrected. And one new relevant found by the QC ranking search. Total net gain of 8.
- email thanking Ken Lay for remaining \$200 Million 15511524
 - The QC search was a 25%+ probable relevant but uncategorized relevant search. Had 19 results. 10 were correctly categorized as irrelevant. 2 not categorized at all. Of these, one was relevant 69.9%, another was not 52.4%. 7 mistakes found in my prior coding of the documents as irrelevant. Net gain of eight relevant.
34. 9 relevant found from 200.
- Started with a QC of relevant search 25%+ not categorized relevant – 10 docs found. No mistakes.
 - Of the 200 machine selected, 9 relevant were found
 - email re decision on which employees in a small group_to keep and which to terminate 12841827
 - email re employee complaint re severance
 - 3 more emails re Kim Lay's won't take the \$200 million bonus
 - email re severance

- email related to Key Lay \$200 Million
 - email re buyer and severance terms
 - email re revocation and offers and signing bonus
35. 16 relevant found from 200.
- email re termination and an employment contract
 - 4 emails re Fastow rumor and payout clause
 - 2 forwards of Fastow rumor email
 - notes re floor meeting included termination
 - bankruptcy and severance
 - re rescissions of offers
 - taking points
 - re: Ken Lay's email
 - Q&A type memos, includes severance
 - email re job offer rescission
 - email re offer rescission
 - re severance and bankruptcy sale of entity
36. 10 relevant found from 200.
- 2 emails re Fastow rumor
 - Q&A type
 - Korean employee termination
 - severance and Dynergy sale
 - employment contract and severance
 - offer rescind
 - offer rescind
 - offer rescind
 - emp. contract related
 - QC Search using 25% and not marked relevant = 10. Same as before. All irrelevant.
37. 5 relevant found from 200.
- re employment contract termination provisions
 - Employee firing. Strong. 12005248
 - non-disclosure agreement with termination language
 - note re Dynergy meeting severance
 - offer rescission
38. 10 relevant found from 200.
- employee contract re termination
 - 4 - Q&A type
 - offer rescission related
 - 2 – rescission related
 - employee term in sale of company

- foreign employee termination
 - payment error on terminated employee
 - for cause terminations
 - rescission
 - QC search 25% + not categorized relevant: 10. Same as before. No changes.
39. 16 relevant found from 200.
- employee complaint re termination
 - foreign employee termination
 - 3 – employment contract and term provisions
 - severance contract related
 - termination and bankruptcy related
 - mistaken termination
 - foreign separation contract
 - employee complaint re firing and benefits
 - employee contract re termination
 - re litigation
 - re termination
 - employee litigation
 - offer rescission
 - offer rescission
40. 9 relevant found from 200. Another 50 found from search of 25%+ not previously categorized. Total 59.
- employee complaint re termination
 - no terminations to be announced on thanksgiving
 - EEOC case was discussed
 - Complaint re severance. Strong relevance. 12005256
 - email re CEO termination in sale and severance from David Oxley to Louise Kitchen
 - mistaken termination notice
 - email re termination of employees and benefits
 - email re termination of employees and benefits
 - re termination timing
 - Rand a search for all 25%+, but not previously categorized search. Total 62 found in that search. Review of all of them shows that 50 of them are relevant, and 12 were not.
 - Relevant count search shows total now at 444
41. 10 relevant found from 200. Another 3 found from 25% + search – 13 total.
- re termination notices
 - 2 re severance payout
 - mistaken severance notice
 - termination benefits

- Terminated employees
 - terminated foreign citizen employee
 - 2 – termination action plan
 - mistaken termination notice
 - “may Ken Lay rot in Hell” – disgruntled employee 15516349
 - Ran a 25%+ probable relevant but not categorized as relevant. 15 found. 3 were in fact relevant. No mistakes in my coding.
42. 9 relevant found from 200. Another 2 found from 25%+ search – total 11.
- re termination bonus
 - complaint re review and severance
 - complaint re notice of benefits
 - 2 – complaint re notice of benefits
 - re employment contract for Japan and termination
 - re terminations
 - terminations and stock options
 - termination letters
 - Ran a 25%+ search and found 17 not categorized. Only 2 were relevant.
 - **One prior mistakes in coding where I missed a reference to termination, It was 31.7% probable relevant. Pertained to *Leaf River*. 12006992**
 - check on total number of relevant shows 468
 - Metrics check shows I have now reviewed 9,893 documents (114,037 pgs)
 - 9,425 were irrelevant
 - 468 were relevant
43. 4 relevant found from 200.
- re non-compete for laid off employees
 - re Japanese employee’s contract and termination
 - complaint re fairness of termination selection
 - Japanese employee lawsuit
44. 4 relevant found from 200. Another 4 mistakes corrected – total 8.
- complaint email to Kim Kay re \$80 million bonus 15507937
 - severance packages for terminated employees
 - employment letter mentions severance payments
 - concerning an impromptu firing for Internet posting
 - Ran a 25%+ not categorized relevant and 9 were found. 4 were relevant. **I had made a mistake on two documents, one of which had three copies:**
 - **3 – a Q&A severance with a severance mention I missed before. 12009822**
 - **non-disclosure contract where close study showed it had a termination provision in it.**
45. 8 relevant found out of the 200. Another 4 from QC - total 12.
- Q&A type

- discussion re severance in buy out
 - reimbursement contract mentions termination
 - ques. re severance plan (close question)
 - emp. contract and severance
 - severance calculations
 - severance calculations
 - ques. re termination and severance
 - Ran a 25%+ not categorized as relevant search and 10 found. I found 6 to be irrelevant, but 4 were relevant. These had all previously been marked by me as irrelevant. **I changed my mind on 4 total. Three here described** (forgot to describe the last one):
 - **Visa related question. Close ques. 49.4%. 12010923**
 - **question re severance and tuition reimbursement 34.2%**
 - **an emp. Contract. Close question; see paragraph 4. 29.7%. 12000991**
 - to date I've trained 9,429 docs, reviewed total of 10,493 files and 116,309 pages
 - 492 total relevant
46. 5 relevant found out of 200.
- bonus forms with termination provisions
 - Japan terminated manager, relevant part at end
 - eliminating positions
 - mistaken termination
 - no planned layoffs for one office
47. 18 relevant found out of 200.
- Note I reviewed the 200 by relevancy ranking. The top four highest ranked were relevant. 58% -> 36%
 - 1 was law suit re EEOC,
 - 3 were termination benefits
 - severance plan
 - termination and savings
 - employment reinstatement after termination
 - 2 - employment termination (13th in ranking). So this means 10 out of top 13 ranked were relevant.
 - change link in above email on termination and savings. (Now 11 out of top 14 were relevant.)
 - wrongfully terminated employee. (Now 12 out of top 15.)
 - Q&A related (now 13/17)
 - 3 – Q&A – 16/21 top ranked; slowed down when hit below 10% probable relevance.
 - 2 – relevant legal memos re closure of plant and union regulations. Had an IP relevance score of only .0000687131, but it had a probability score of 33.8%. It was in fact strong relevance of a new document type, (2 copies) #12002609 #12003939 (took picture).

- Note - this round took over an hour, as did several of the prior rounds, where I ran into longer documents and close calls.
48. 16 relevant found out of 200.
- 32 of the 200 were obvious by file name junk files of the kind I had seen before. Bulk coded them all irrelevant
 - 4 others were found that had already been coded irrelevant. They were all obvious irrelevant.
 - I sorted the remaining documents by IP score and looked at most likely relevant on down to get a better sense of training.
 - The highest probability ranked was .7980, an email – 4112126. It was a question about severance plan, which I have seen before on another part of the email chain, or one close to it. Marked relevant (1). Note this email had only a 6.9% probability in the category ranking.
 - Next 2 highest ranked were same email type having to do with a list of employees who may have been laid off. 3 more later found 6th are 8th and 11th ranked. A total of relevant (5). 13757418 and 13757419.
 - the 4th highest ranked doc was an email on reinstatement that I judged close, but decided was relevant (1) - 3107238
 - 2 Q&As, which I'd seen before – both relevant (2) - 12010371 and 12007128. Ranked only 3.2% in category relevance and also .32 (32%) in IP score.
 - 1 email re Q&A talking point. Only 2.3% category relevant
 - 3 – emails re headcount identifying who will be cut. All relevant. All had only 7.6% probability
 - 1 email re French subsidiary employee future
 - 1 email again on employee lists, which I think was done for purposes related to termination. Close question.
 - 1 borderline relevant
 - After this point it was all irrelevant showing n IP score effectiveness
 - 533 – total relevant found so far.
49. 14 relevant found out of 200.
- I sorted all of the 200 by IP score again for review to try to get a better sense of ranking and whether more rounds would be productive.
 - 2 – highest IP score was .694 with category probability of 56.3% - 13759801. They are emails re 4 employees wanting to know if still employed or not. Borderline, but I say relevant again. Another in chain.
 - Q&A answer type – relevant – 120006812
 - Email re eliminating positions was relevant; but the next document, with 6th highest rank was borderline, but not relevant.
 - 7th ranked is relevant – another talking points memo
 - 2 – 8th and 10th ranked are obvious relevant, but only cat. prob. of 9.8% (IP score of .347)
 - 2 – email and response by employee indicating when he thinks he'll be terminated
 - email re termination and non-compete

- email saying a particular employee shouldn't be "fired."
 - Note: up to here I've reviewed top 19 ranked docs and 13 have been relevant.
 - email re waiver form for separation being illegal – 12011427
 - email re analysis of who should be terminated; interesting - 3817115
 - Note after around the top ranked 120 I switched to file name sort as all were probably irrelevant anyway and its faster to review with that sort view in place.
 - 1 odd email of no importance was found relevant after that; an outline re where to find terminated employees email - 8909940 – category probability only 1.0%
50. 13 relevant found out of 200. An additional 11 more relevant from 25%+ category searches. Total 24.
- before any review a search shows 550 docs are 50%+ probable relevant and 55 docs of the 550 were not yet categorized relevant. I reviewed these and the 200 from machine selected.
 - First marked 81 obvious irrelevant by file name order. The switched to file raking order to review the rest; only 3 docs had .54, .58 and .706; the rest were under .54
 - Top ranked .706 - #13723687 re an employee termination. I had seen another earlier part of this email chain before. Her boss didn't want to lose her.
 - 2nd ranked was another talking points memo
 - 0 – 3rd ranked – close call, but I know from other emails that the employee list here discussed pertains to who gets retention bonuses, not who gets terminated. Not relevant.
 - 4th ranked .466 – is relevant; employee list, but this one pertains to terminations
 - list email, close call, but relevant. .406
 - list email, close call, but relevant.
 - email re keeping the employee again, same before. .389
 - another close relevant, repeat re list
 - another re list and cuts of employee. Only 8.9% cat. prob. and .356 IP score #13758900
 - email asking question re bankruptcy court and payments to terminated employees. Had not seen before #15507580 – only 10% category probability.
 - Another re keeping same employee (Deirdre)
 - 2 emails re keeping tow other people
 - Note: at this point I am down to the lowest ranked 92 where I find only one relevant, next described. Also, I'm seeing many emails re termination, but involves deal contract terminations between companies.
 - Email from fired employee complaining re low severance.) After that was a funny (and dirty) irrelevant email – 10617832.)
 - Run total relevant searches and find 567 have been categorized relevant, and 47,021 categorized irrelevant.
 - Run probability ranked searches and find 520 documents are ranked 50%+. Of those, 15 were not categorized relevant. Ran a 25%+ and only found 25 more documents, meaning only 10 documents between 25% and 50% probable relevant.

- Reviewed all of the 25%+ higher documents (total 25) that were not categorized relevant. Of those, 11 were not previously categorized. All were reviewed and found to be relevant. The other 14 had been previously reviewed and marked irrelevant. I reviewed them again. Most of these were close calls, but I still considered all of them irrelevant and did not change any. Here are the documents from the not-reviewed 11, where I found them all to be relevant:
 - 2 – re terminated employee list – 13759551 and 13723640
 - 4 – re position lists with rationale - 13757156
 - 2 – employees and positions not to terminate – 9703787
 - keep two employees, seen before
 - 2 – re save two employees from cut, seen before
- New Total Relevant found is 578

STOPPED ROUNDS HERE AND PERFORM QUALITY ASSURANCE TEST

Based on the few documents found going all of the way down to 25%+, the lack of any real new documents in several rounds, and the total time expended to date, which is about same as time expended in the prior multimodal before final test.