

ICAIL 2013 Workshop on Standards for Using Predictive Coding, Machine Learning  
and Other Advanced Search and Review Methods in E-Discovery  
(DESI V Workshop)

June 14, 2013, *Consiglio Nazionale delle Ricerche*, Rome, Italy

# The Challenge and Promise of Predictive Coding for Privilege

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# Overview

## Impact

- Why does finding privilege matter?

## Privilege

- Why is it hard to find?

## Test

- Encouraging results

# The Three Goals of eDiscovery document review

1. Disposition of Documents
2. Protection of Information
3. Construction of Knowledge

# Predictive Coding and the 3 Goals



## Disposition

- Optimize for efficiency
- Manageable recall



## Protection

- Highest recall required
- Highest stakes



## Construction

- Lowest prevalence
- Richest Context

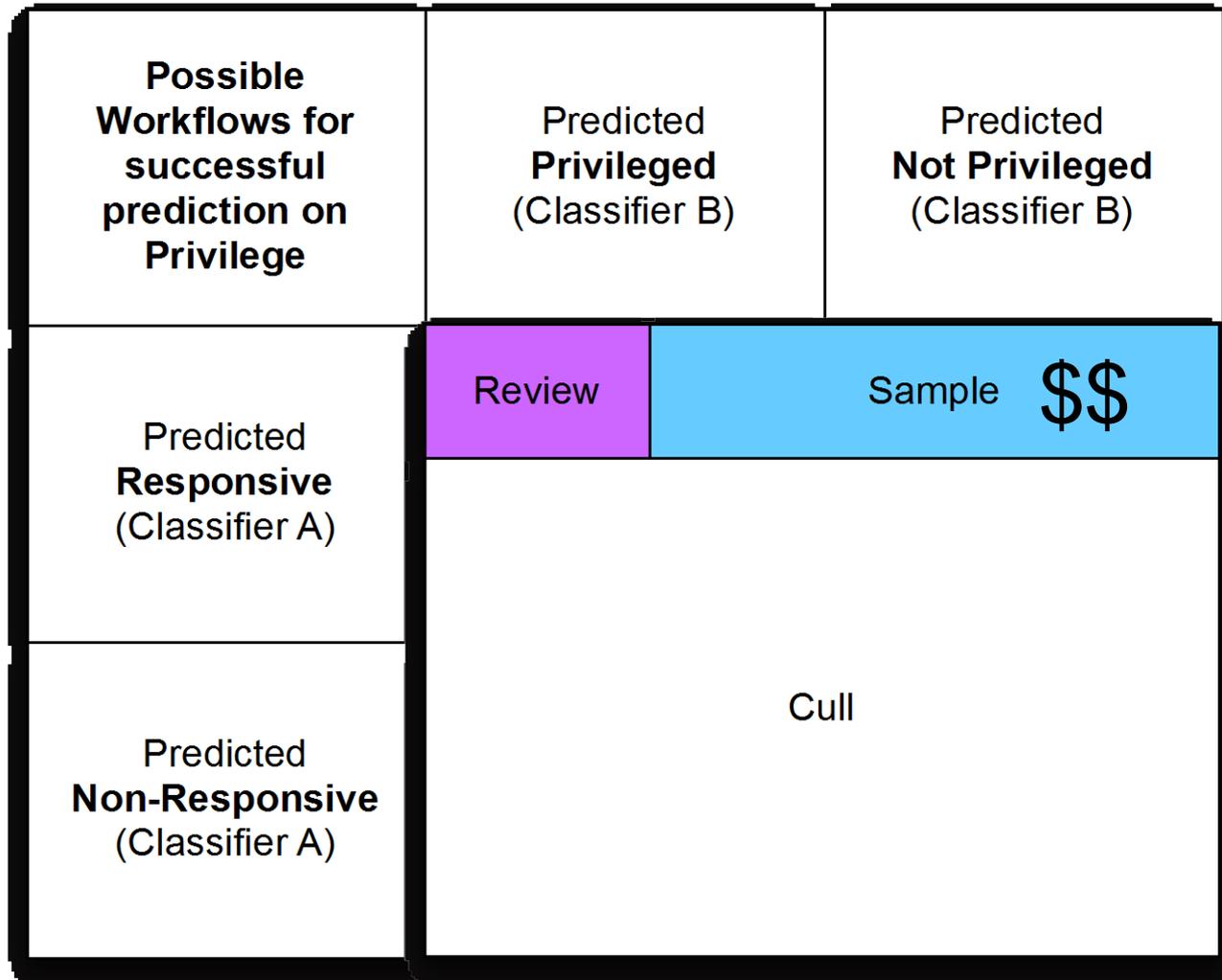
# Full Review of the Producing Population

<b>Most Common Workflows</b>	All Docs
Predicted <b>Responsive</b> (Single Classifier)	Workstream 2: Attorney Review
Predicted <b>Non-Responsive</b> (Single Classifier)	Workstream 1: Cull

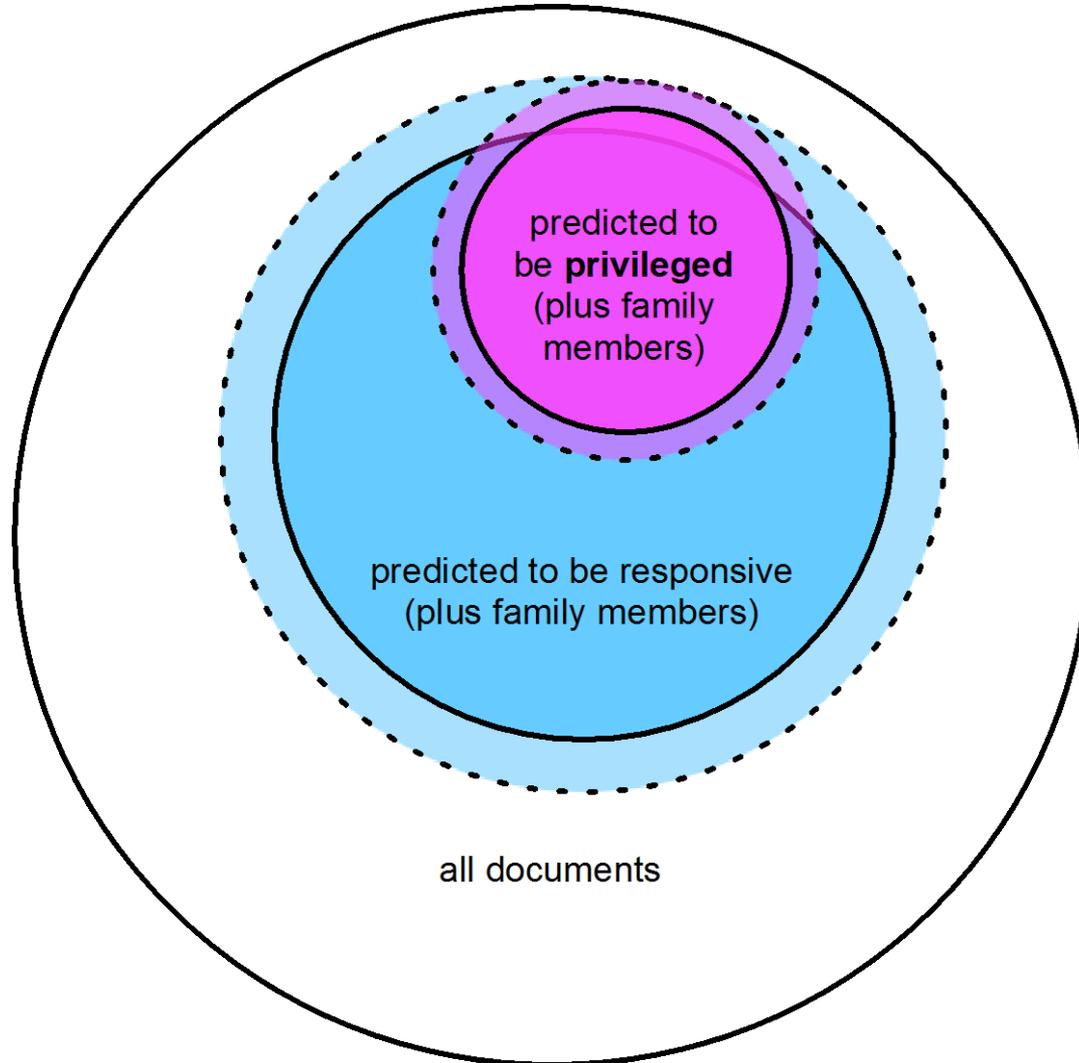
# What if we can detect privilege reliably?

Possible Workflows for successful prediction on Privilege	Predicted Privileged (Classifier B)	Predicted Not Privileged (Classifier B)
Predicted Responsive (Classifier A)	Workstream 3: Attorney Review	Workstream 2: Sample
Predicted Non-Responsive (Classifier A)	Workstream 1: Cull	

# What if we can detect privilege reliably?



# Footnote about family members



# Privileged information is rare and precious

- Stakes are high: Disclosure may lead to significant disadvantage
- Privileged documents are rare
  - 2.7% Prevalence (over 51 matters)
  - Anecdotally:
    - 0.5% Prevalence
    - Improves to 5% with Boolean searches

# Knowing it when you see it

- **“Privileged and confidential” no indicator**
- **Legal advice (or request for it) hard to identify**
- **Sender and Recipient matter, but how is complex**
  - **Disclosure to third parties varies by privilege type**
  - **Non-attorneys within the client organization**
  - **Role of in-house lawyers**
  - **Joint-Defense agreements**
- **Facts not apparent in the text of the document may affect privilege.**

# Substance of Privilege implies prediction strategy

1.

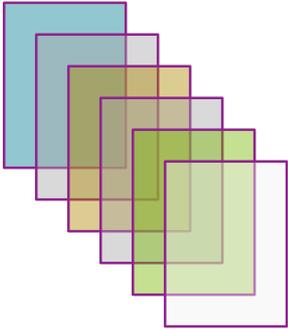
Run predictions for  
all documents **privileged at creation**

2.

Review  
for  
**Waiver**

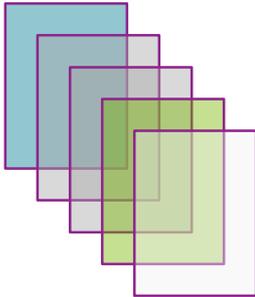
# Porfiau / PFA workflow

Documents deemed Privileged  
by the Review Team



PFA

Contracts,  
Drafts of



Text Cleansing  
(scripts)

# A Simple Privileged Email (Enron)

FROM: barshk@gtlaw.com  
RECEIVED: Mon, 29 Oct 2001 09:00:40  
TO: kay.mann@enron.com, ben.jacoby@enron.com, steven.krimsky@enron.com, dave.kellermeyer@enron.com  
CC: reetzr@gtlaw.com  
BCC: reetzr@gtlaw.com  
SUBJECT: DEP's Notice of Change of Position in Pompano Beach Proceeding

UPDATE--DEP recently issued a Notice of Change of Agency Position (Notice of Change) in the Pompano Beach proceeding in which DEP advised all of the parties and the administrative law judge that it was intending to modify the previously issued intent to issue relative to six issues.

The primary two conditions that DEP is modifying its position concern the NOx emission limits during distillate fuel use and a reduction in the number of hours that the facility can operate on distillate fuel use. Specifically on the first issue, DEP intends to limit the facility to 36 ppmvd for NOx rather than the previously issued limitation of 42 ppmvd. On the second issue, DEP proposes to reduce the number of hours of diesel fuel use from 1000 hours to 500 hours per year after 2004.

The other issues raised in the Notice of Change include : startup and shutdown conditions; emergency equipment; other minor sources; and the VOC emission limit. I have discussed the Notice of Change with Dave Kellermeyer and he, in turn, is going to discuss the Notice in detail with Scott Osbourn. We have some questions on certain of the issues raised in the Notice of Change, which we will need to clarify with DEP.

I will circulate the Notice of Change to you in the next few minutes if you have not already seen it. In addition, we intend to respond to the Notice with a pleading that sets forth : i) our intention to object and present evidence in opposition to certain of the permit changes proposed by DEP, and ii) our desire for expedited discovery with respect to the textual permit language now proposed by DEP. Kay, we will be sending you that draft pleading today for your review and comment. We would like to file the pleading by tomorrow if possible.

Debbie and Steve, if you have any questions on this matter prior to your meeting tomorrow, please contact me. I will be here in the office all day.

Thanks--Kerri

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# High-Quality Text Strings

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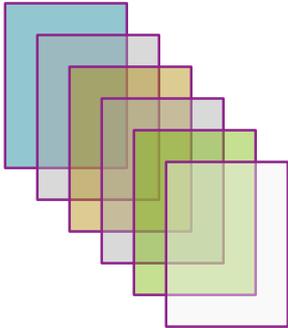
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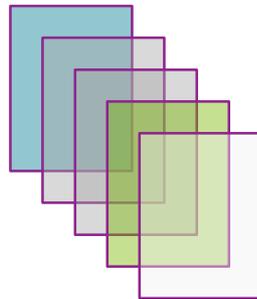
# Porfiau / PFA workflow

Documents deemed Privileged  
by the Review Team



PFA

Contracts,  
Drafts of



Text Cleansing  
(scripts)

Identification of  
candidate text  
strings

204	0.3	SUBJECT: DEP's Notice of Change of Position in Pompano Beach Proceeding
205	0.6	UPDATE--DEP recently issued a Notice of Change of Agency Position
206	0.74	will circulate the Notice of Change to you in the next few minutes if you
207	0.34	Change) in the Pompano Beach proceeding in which DEP advised all of the parties and the administrative law judge t
208	0.75	The primary two conditions that DEP is modifying its position concern the NOx emission limits during distillate fuel
209	0.79	change include : startup and shutdown conditions; emergency equipment; other minor sources; and the VOC emission limit. I have discussed the Notice of Change with Dave Kellermeyer and he, in turn, is going to discuss the Notice in detail with Scott Osbourn. We have some questions on certain of
210	0.2	the issues raised in the Notice of Change
211	0.15	which we will need to clarify with DEP.
212	0.64	will circulate the Notice of Change to you in the next few minutes if you
213	0.74	have not already seen it. In addition, we intend to respond to the Notice with a pleading that sets forth : i) our intention to object and present evidence in opposition to certain of the permit changes proposed by DEP, and ii) our desire for
214	0.59	the issues raised in the Notice of Change, whi
215	0.8	ch we will need to clarify with DEP.
216	0.61	will circulate the Notice of Change to you in the next few minutes if you
217	0.54	have not already seen it. In addition, we intend to respond to the Notice with a pleading that sets forth : i) our intention to object and present evidence in opposition to certain of the permit changes proposed by DEP, and ii) our desire for
218	0.77	change include : startup and shutdown conditions; emergency equipment; other minor sources; and the VOC emission limit. I have discussed the Notice of Change with Dave Kellermeyer and he, in turn, is going to discuss the Notice in detail with Scott Osbourn. We have some questions on certain of
219	0.43	the issues raised in the Notice of Change
220	0.23	which we will need to clarify with DEP.
221	0.78	will circulate the Notice of Change to you in the next few minutes if you
222	0.3	have not already seen it. In addition, we intend to respond to the Notice with a pleading that sets forth : i) our intention to object and present evidence in opposition to certain of the permit changes proposed by DEP, and ii) our desire for
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238	0.23	omorrow if possible.
239	0.78	Debbie and Steve, if you have any questions on this matter prio
240	0.3	to your meeting tomorrow, please contact
241	0.6	me. I will be here in the office all day.

SME review...

Coding/assessment and/or changes to selected strings...

Retraining

# Results (two closed Canadian cases)

pre-adjustment

## Lawyer / Manual Review

	Coded Privileged	Coded Non Privileged	
Privileged (LR)	239	255	
Non Privileged	369	874	
			1737

Recall	48%
Precision	39%
F1	43%

post-adjustment

## Lawyer / Manual Review

	Coded Privileged	Coded Non Privileged	
Privileged (LR)	239	170	
Non Privileged	369	874	
			1652

Recall	58%
Precision	39%
F1	47%

## Porfiau

	Coded Privileged	Coded Non Privileged	
Privileged (LR)	444	50	
Non Privileged	616	627	
			1737

Recall	90%
Precision	42%
F1	57%

## Porfiau

	Coded Privileged	Coded Non Privileged	
Privileged (LR)	370	39	
Non Privileged	616	627	
			1652

Recall	90%
Precision	38%
F1	53%



*cutting through complexity*

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