



LEX MACHINA

Applying Big Data to the Law



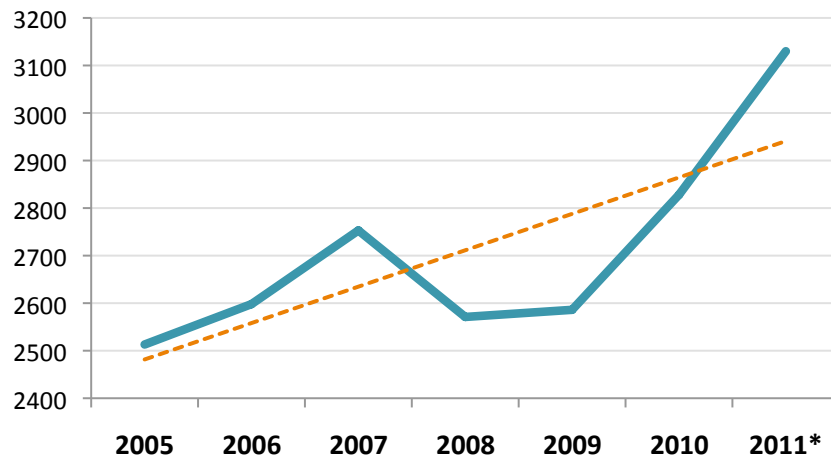
NY Business Data Meetup

Lex Machina highlights

- Based on 5 years and \$5M of research funded by Stanford, Intel, Oracle, SAP, Apple, Cisco, Qualcomm, Genentech, Microsoft, among others
- We utilized many years, \$Ms, and the best CS & legal brains at Stanford to adapt new technology to the law
 - NLP & Machine Learning algorithms
 - Modern search technology
 - Expert data coding
- First beachhead market is IP litigation data & analytics
- Customers today include top tier tech companies & law firms

Need in IP: System drowning in raw data

Patent Case Filings: 2005-2011*



Millions of data facets (2000-present)

- 112,225 IP litigation cases
- 37,449 litigating parties
- 5,820,690 case events

Inconsistent, unreliable & dirty data

- Court data is entered manually
- Arcane legalese prevents automation
- No single repository of data

Corporations are under attack

- Top tech companies have about 100 open cases
- Patent portfolios include tens of thousands of patents

Cases are complex

- Cutting-edge technology
- Multiple defendants
- 2 years to trial
- Intricate statutory framework

Judicial system is unpredictable

- 500+ district court judges
- 94 districts in 11 circuits
- Case law is constantly evolving

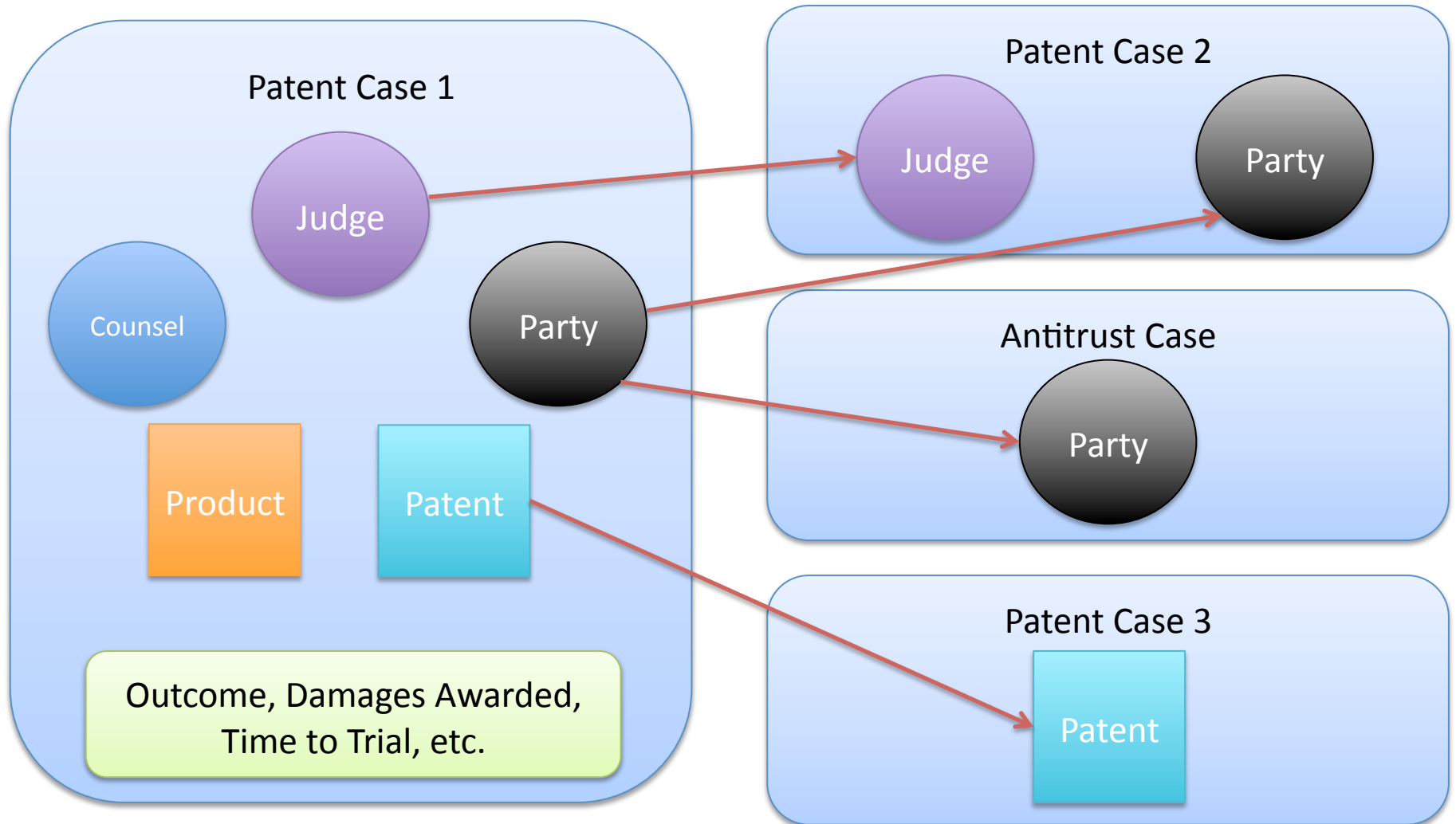
LMI tech refines legal data & makes it actionable

CAPTURE	CLEAN, CODE, TAG	DELIVER
Comprehensive & Timely Data Collection	Proprietary Data Organization, Classification & Coding	Concise & Actionable Information
<ul style="list-style-type: none">▪ Daily crawls of 100+ public & government data sources▪ Frequent downloads of material court documents	<ul style="list-style-type: none">▪ Customized OCR & NLP algorithms▪ Proprietary data classification language & technology▪ Expert outcome coding	<ul style="list-style-type: none">▪ SaaS Data Service▪ Data Feeds▪ Packaged Solutions/ Reports▪ Corporate Dashboards▪ Attorney Pitch Product▪ Insurance Risk Modeling▪ IP Valuation Tools

Market needs for actionable legal data

Law Firm	Corporate	Financial
Get the Case <i>\$M in revenue</i>	Avoid Litigation <i>\$Ms in savings</i>	Model Risk <i>patent lit insurance</i>
Win the Case <i>repeat business</i>	Decide Strategy <i>GC, Board & CFO decisions</i>	Predict Outcomes <i>hedge funds investing in lit</i>

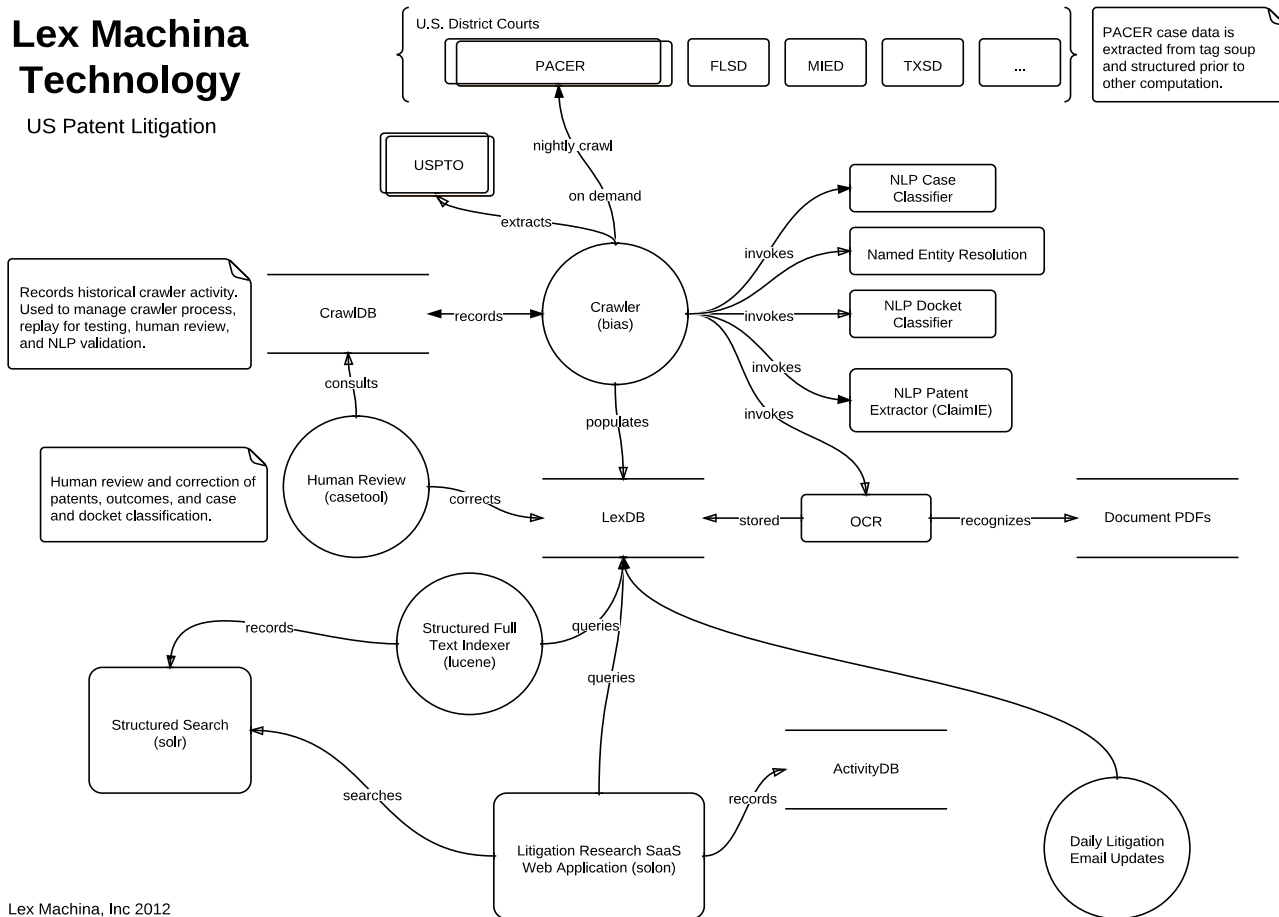
Big Picture: Mapping Litigation



The Technology: Big Data for the Law

Lex Machina Technology

US Patent Litigation

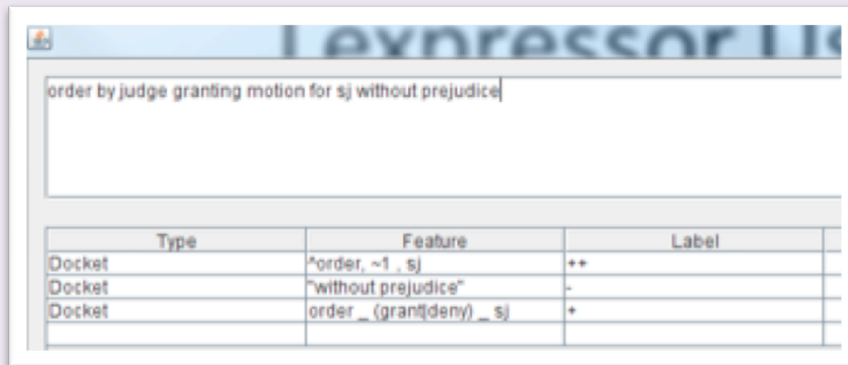


Lex Machina, Inc 2012

Lexpressions

Lexpressions

A proprietary language and tool-set designed for classifying legal text and extracting key case events.



The screenshot shows a software window titled "Lexpressions UI". The main text area contains the sentence: "order by judge granting motion for sj without prejudice". Below this is a table with three columns: Type, Feature, and Label.

Type	Feature	Label
Docket	^order, ~1 . sj	++
Docket	"without prejudice"	-
Docket	order _ (grant deny) _ sj	+

- Improve current data extraction processes for current product offerings
- Make data extraction processes more efficient and flexible when entering new markets
- Enhance data offering by extracting patent outcomes, accused products, damages, and injunction data

Recd

All Cases » Intuitive Surgical, Et Al v. Computer Motion Inc.

Intuitive Surgical, Et Al v. Computer Motion Inc.
 U.S. District Court for the District of Delaware
 Case No: 1:01-cv-00203-SLR

Outcome Summary

PI, C
 T&J
 PI, LS

Infringement Claimant Win (on trial [jury verdict] AND [bench findings] [enforceable {no prosecution laches}]), followed by I.S. (merger of IC and ID. (see http://www.secinfo.com/drcnd.214p.htm)) (Computer Motion Inc. for \$4,400,000)
 Judge Sue L. Robinson

View/Post Comments

Parties

- Computer Motion Inc. (Defendant, Counter-claimant)
- International Business Machines Corporation (Plaintiff, Counter-defendant)
- Intuitive Surgical Inc. (Plaintiff, Counter-defendant)

Counsel

- Fish & Richardson, P.C. Intuitive Surgical Inc.
- Richards, Layton & Finger International Business Machines Corporation
- Young, Conaway, Stargatt & Taylor Computer Motion Inc.

Computer Motion Inc. (Defendant, Counter-claimant)
 International Business Machines Corporation (Plaintiff, Counter-defendant)

ORDER denying as premature without prejudice the motion for summary judgment filed by Computer Motion Inc. re: Injunction

Order re: Injunction

Order Claim Construction Order

Pleading Int/Counterclaim Answer

Pleading Complaint/Counterclaim

400 2/11/2003 resolved [350-1] motion for Permanent Injunction (signed by Judge Sue L. Robinson) copies to: cnsi. (rld) (Entered: 02/11/2003)

238 7/12/2002 MEMORANDUM ORDER construing disputed claim language in U.S. Patent No. 6,111,111 (filed by Intuitive Surgical, Inc.) copies to: cnsi (fmt) (Entered: 07/15/2002)

11 5/17/2001 ANSWER to complaint and COUNTERCLAIM by Computer Motion Inc. (Computer Motion Inc.; Ingersoll); jury demand against Intuitive Surgical, IBM (rld) (Entered: 05/23/2001)

1 3/30/2001 COMPLAINT filed; Mag consent notice to pltf. FILING FEE \$ 150.00 RECEIPT # 130327 (am) (Entered: 04/02/2001)

Intl Business Machine, International Business Machines Corp., IBM

RICHARDS, LAYTON AND FINGER, Richards Layton et al, etc.

Entity resolution (cluster mentions of same entity)

Outcome detection (the only manual process)

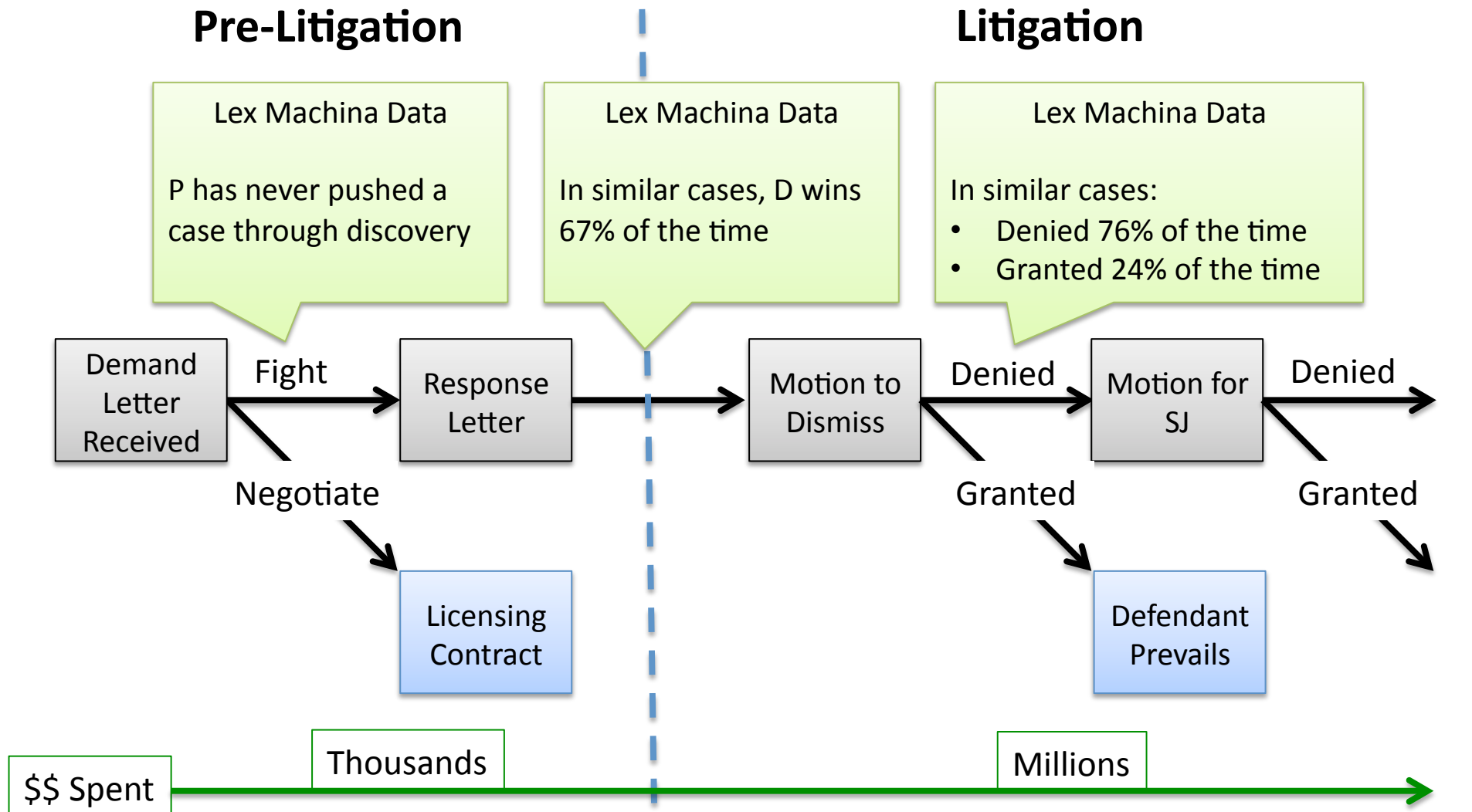
Legal State Modeling (identify case events: 10 types)

Claim Extraction (extracts claim info: type, object)

Patent X is invalid

Defendant infringes Patent X

A Data Driven Legal Decision Tree



Appendix

Predictive Modeling: Filing & Outcome Prediction

filing prediction

outcome prediction

Litigation Threat	Likelihood of Filing	Likely Court	Prelim Injunction	Likely Outcome	Likely Phase	Damages	Costs	Perm Injunction	Time to Termination
Threat 1	90%	DED	20%	C Win	Trial	\$100M-150M	\$70K-\$75K	90%	910 days
Threat 2	70%	EDTX	5%	Consent Judgment	SJ	\$200K-250K	\$0K	70%	1,200 days
Threat 3	58%	CAND	78%	Stay	Discovery	\$0K	\$0K	0%	600 days
Threat 4	55%	EDTX	0%	Settlement	Trial	\$0K	\$0K	0%	1,300 days
Threat 5	49%	DED	80%	Default Judgment	Discovery	\$10K - \$15K	\$0K	3%	150 days
Threat 6	14%	DED	0%	CD Win	SJ	\$0K	\$20K-25K	0%	389 days
Threat 7	0%	NYSJ	0%	Dismissal	SJ/CCO	\$300K-350K	\$0K	0%	150 days