### INTRAFIND



### **CONTRACT ANALYZER Smart Legal Tech Software for Analyzing Contracts**

Franz Kögl, CEO, IntraFind Software AG,

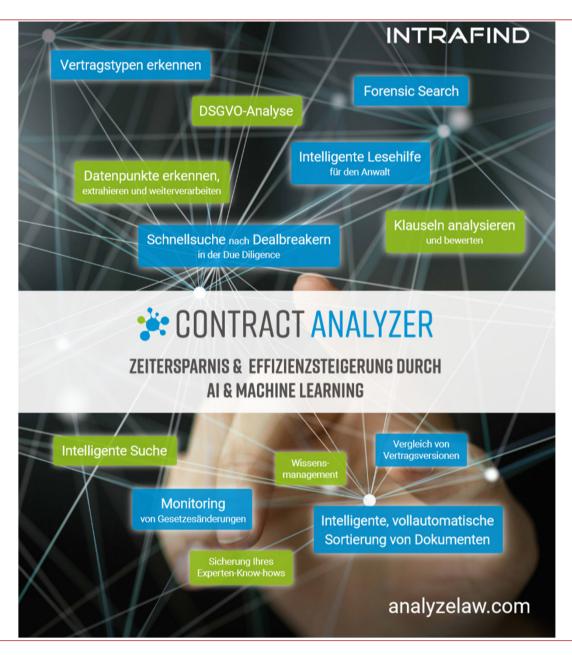


## Gartner

"By 2020, 15% of the simple, billable law work will be done by Smart Machines."

#### A wide range of topics







### **CONTRACT ANALYZER**

The Contract Analyzer decomposes contracts and documents, extracts information, sorts it and provides the output as specified – regardless of data sources and formats.

#### **Smart Contract Analyzer**



#### **Key Functions:**

#### Machine Learning:

automatic decision-making using programming rules and manual training sets by adapting the programming based on the training process and feedback of the user

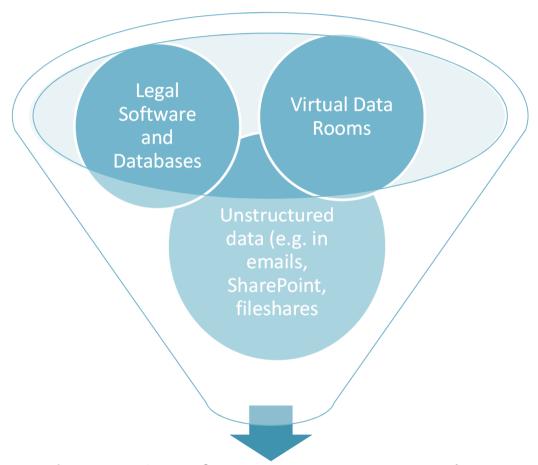
#### Document Automation:

rule-based drafting of due diligence reports (or parts thereof) by using predefined tables and formats

#### **▶** Technology Assisted Review:

Keyword and concept search



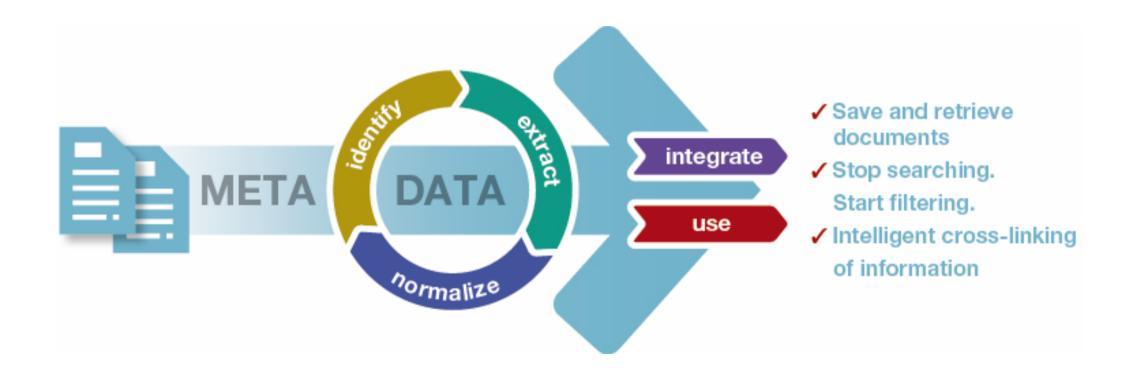


**Recognition** and **Extraction** of contracting parties, values, time data...

every piece of information needed (in lease contracts: 120 data points!) ... up to clauses

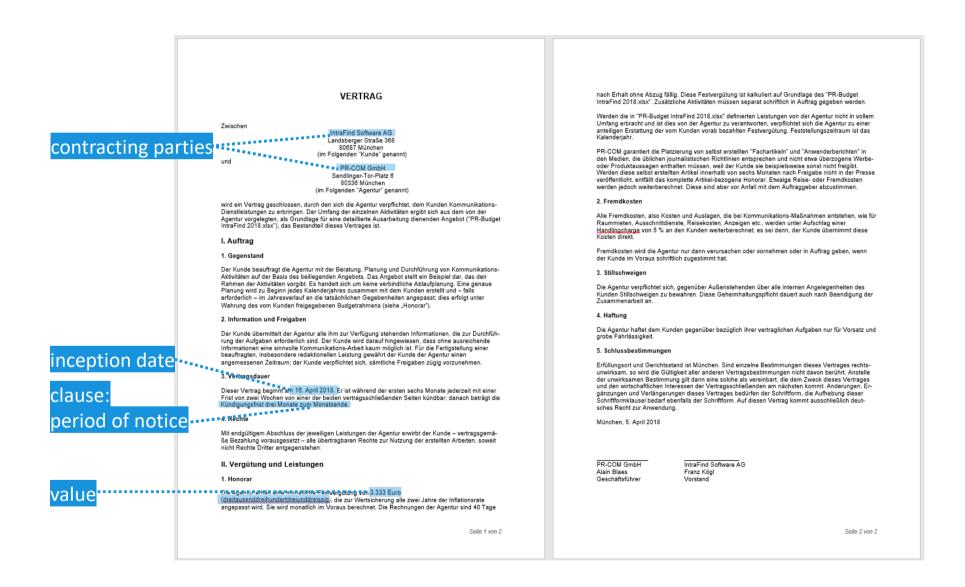
#### **Detecting meta data and clauses**





#### **Automated contract analysis – how it works**

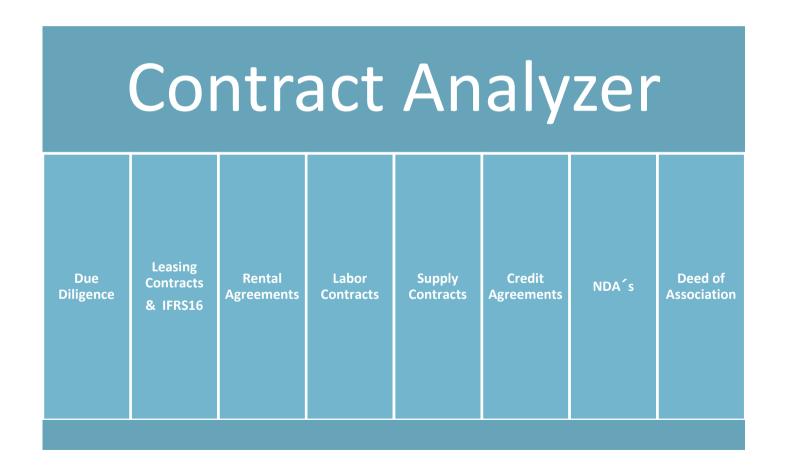




#### Al-driven app: contract analysis

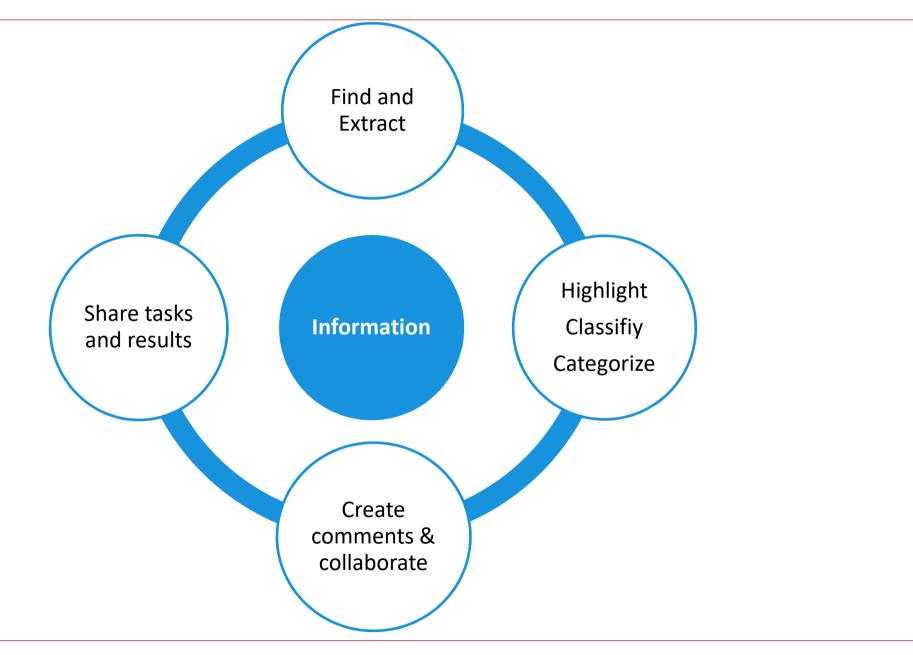


- Complete application for law firms and corporate legal departments
- As complete application (preferred SaaS) or as backend component



### **Contract Analyzer – structure information**





#### **Contract Analyzer – under the hood**



### Contract Analyzer

Quick analysis & document- and clause-based editing

Linguistics

Semantic similarity & equivalence

Crosslingual search

Machine Learning

Semantic Search

Deep text understanding

Context Linking

OCR & layout analysis

#### Full technology stack for Cognitive Analytics and Al



#### IntraFind Content Analytics Suite for Artificial Intelligence

**f(x)** Machine Learning / Statistical Analysis

Deep Learning
Support Vector Machine (SVM)
Clustering



**Named Entity Recognition** 



Linguistics

Grammar Morphology Syntactical Parsing



**Ontologies & Graph Databases** 

#### Not everything needs to be AI



#### **Basic work first:**

- Crucial: good OCR & text converters, gaining information out of layout
- Recognition of sentences & paragraphs

#### Then:

- Regular expressions and pattern recognition
- Linguistics .....
- Rule-based recognition with so called "local grammars"
- ▶ Different Machine Learning methods not everything works well with "Deep Learning"

#### Deep Text Understanding:

- Analysis of Predicate-Argument Structures
- Semantic Equivalence

Al



### **USE CASES**

## Automated classification of documents and assignment to predefined topics / sorting



Unstructured or wrong structured documents

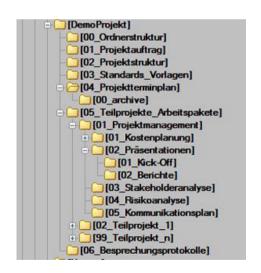


Machine Learning
Supervised Learning

User feedback improves level of accuracy –



Automated filing of documents in folders



#### Semantic comparison of clauses and documents



17.9. If Tenant shall, however, fail to remove any of its property from the Premises before the expiration or earlier termination of this contract, then Landlord may remove the same in any manner that he/she shall choose and store them without being liable to Tenant for loss thereof or damage thereto, and Tenant shall pay Landlord, upon demand, any costs and expenses incurred due to such removal and storage or otherwise Landlord may, without notice to Tenant and at its sole option, sell such property or any portion thereof at private sale and without legal process for such price as Landlord may obtain and apply the proceeds thereof against any (a) amounts due by Tenant to Landlord under this contract and (b) any expenses incident to the removal, storage and sale of such personal property.

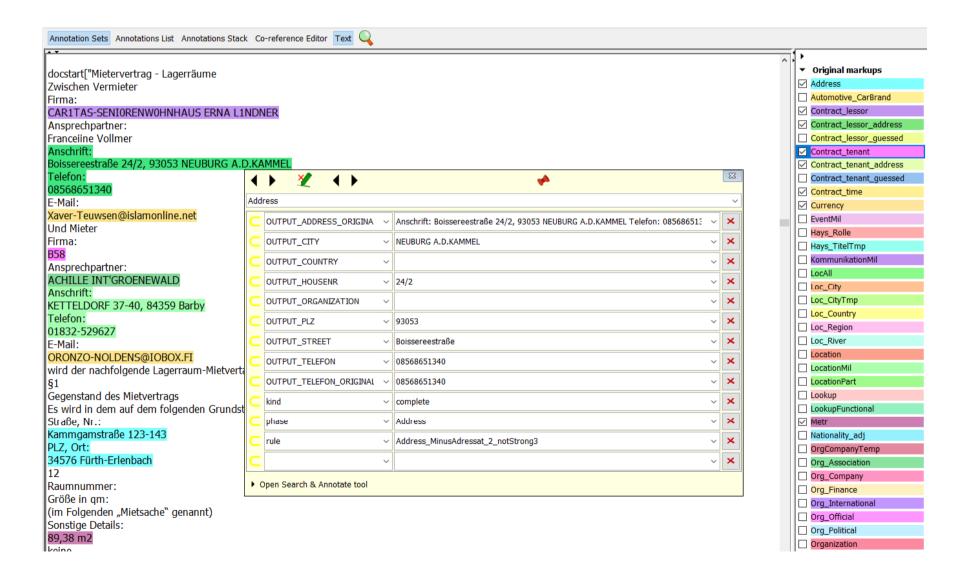
17.8. If Tenant shall fail to remove any of its property (including any furniture existing in the Premises as of the Execution Date) from the Premises prior to the expiration or earlier termination of this Lease, then Landlord may, at its option, remove the same in any manner that Landlord shall choose and store such effects without liability to Tenant for loss thereof or damage thereto, and Tenant shall pay Landlord, upon demand, any costs and expenses incurred due to such removal and storage or Landlord may, at its sole option and without notice to Tenant, sell such property or any portion thereof at private sale and without legal process for such price as Landlord may obtain and apply the proceeds of such sale against any (a) amounts due by Tenant to Landlord under this Lease and (b) any expenses incident to the removal, storage and sale of such personal property.

#### **Semantic Equivalence:**

> 10 methods to check whether two texts have the same meaning

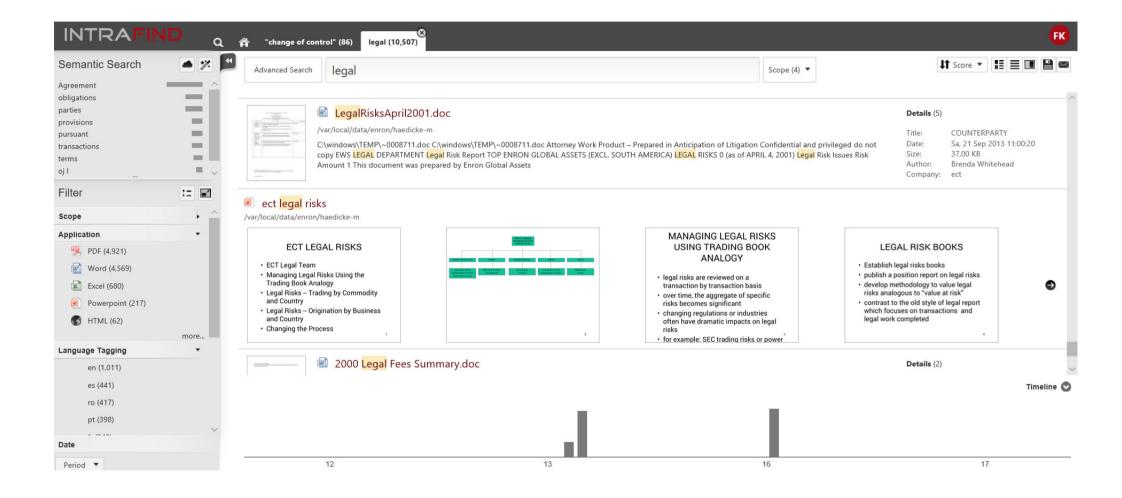
## Recognition of data points within a rental contract developers sight





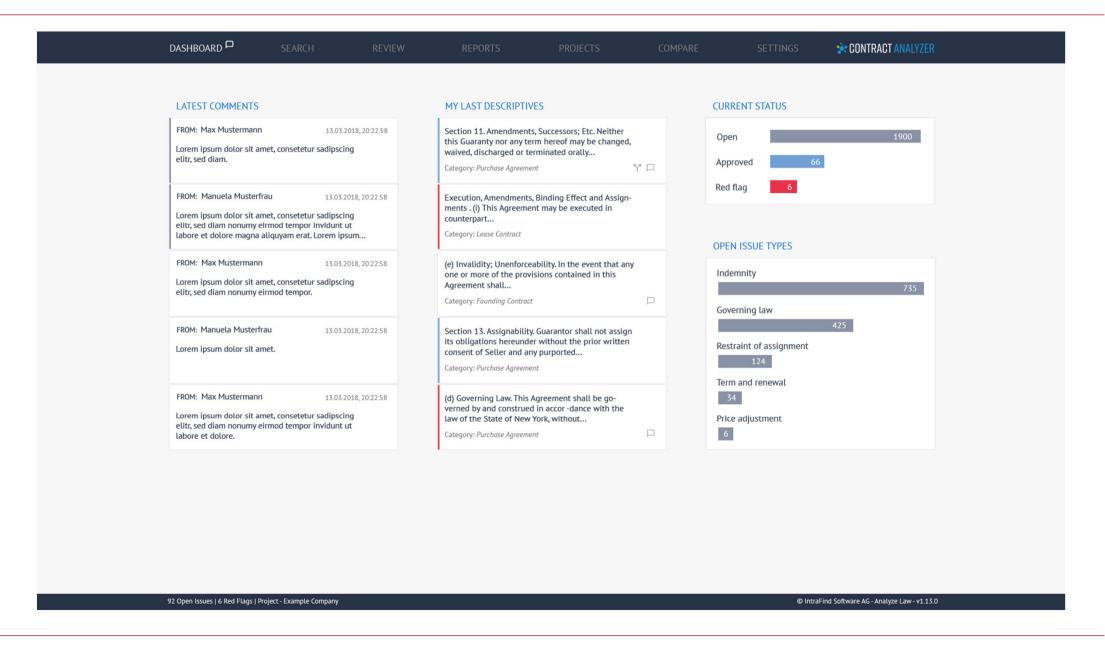
### **Contract Analyzer: quick check (search-driven)**





#### **Contract Analyzer: dashboard**





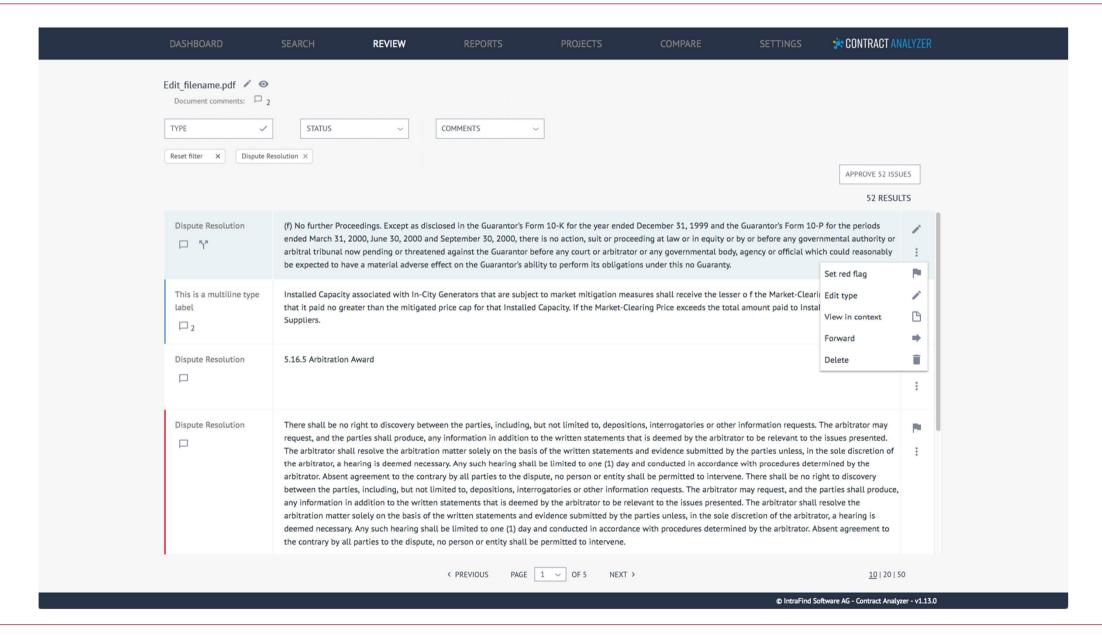
# **Contract Analyzer:** intelligent search for documents and/or clauses



|  | DASHBOARD                             | SEARCH  | REVIEW  | REPORTS  | PROJECTS   | COMPARE  | SETTINGS                       | CONTRACT ANALYZER                             |
|--|---------------------------------------|---|---|--|--|--|--------------------------------|---|
|  | Searchterm                            |   |   |  |  |  |                                | Q   |
|  | Show filter 🗸                         |   |   |  |  |  |                                | 2146 RESULTS                                  |
|  | -1- 404983_4.DC<br>tion ("Enron"), TH | IE CHASE MANHATTAN BA   |   | ng corporation and FLEET N                                 | er 28, 2000 between ENRON<br>ATIONAL BANK, AS TRUST ADI  |  | PARTIES PROJECT CATEGORY       | -<br>TestProject1<br>Shareholder's Resolution |
|  | from and agains                       | s to indemnify and save<br>t any and all losses, <mark>da</mark>            | mages, expenses, liabilit                           | ies, claims or demands, i                                  | ective officers, directors, e<br>ncluding attorney's fees, (c<br>to Bidder's breach of any o                       | ollectively, the "Dama-                          | PARTIES<br>PROJECT<br>CATEGORY | -<br>TestProject1<br>Shareholder's Resolution |
|  | imposed or levie                      | Taxes. Seller shall be reed by any federal, state                           | or local governmental a                             | gency on the energy solo                                   | excise, ad valorem, and ar<br>and delivered hereunder<br>v sale, use, excise, ad valo                              | up to the delivery of                            | PARTIES PROJECT CATEGORY       | -<br>TestProject1<br>Shareholder's Resolution |
|  | the delivery of t                     | ention of Title. Lessor s<br>he Equipment to Lesso                          | ee hereunder. Section 4.                            | _  | d ownership of the Equip<br>lark Equipment. On or be<br>ease Supplementat.   |  | PARTIES PROJECT CATEGORY       | -<br>TestProject1<br>Shareholder's Resolution |
|  | agents, from and<br>the "Damages")    | s to indemnify and sav<br>d against any and all lo<br>whatsoever suffered o | osses, damages, expense<br>r incurred by such parti | es, liabilities, claims or d<br>es resulting, arising from | spective officers, director<br>emands, including attorn<br>oor relating to Bidder's bi<br>se Damages resulting fro | ey's fees, (collectively,<br>reach of any of its | PARTIES<br>PROJECT<br>CATEGORY | -<br>TestProject1<br>Shareholder's Resolution |
|  |                                       |   | •   | PREVIOUS GO TO PA  | GE 42 V OF 234   | NEXT >   |                                | <u>10</u>   20   50                           |
|  | 92 Open Issues   6 Red Flags          | Project - Example Company   |   |  |  |  | © Intra                        | Find Software AG - Analyze Law - v1.13.0      |

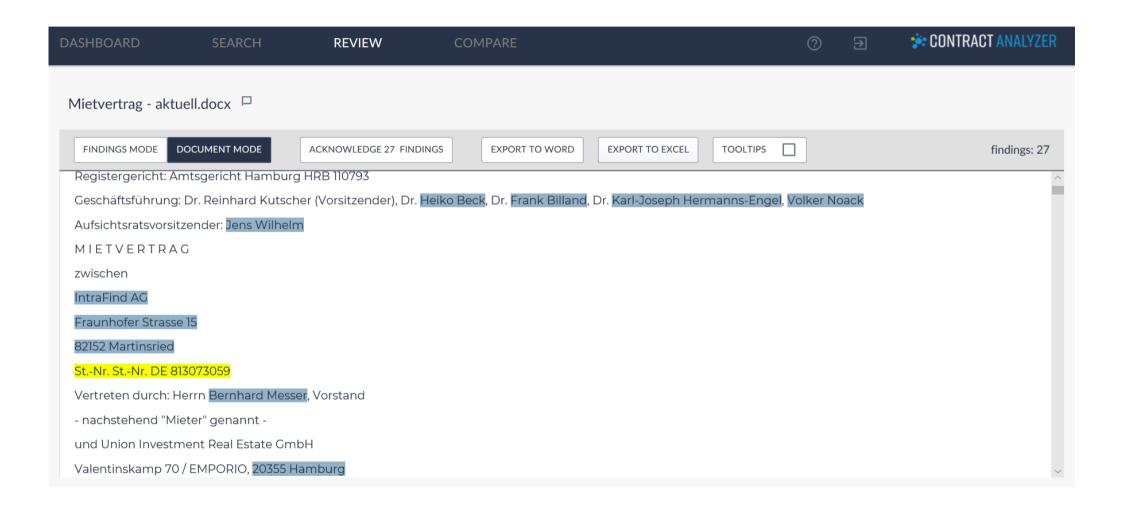
## Contract Analyzer: clause-based view, check and evaluate





#### Intelligent reading aid





# Contract Analyzer: create comments and forward / delegate to colleagues



| DASHBOARD                            | SEARCH REVIE  | W REPORTS   | PROJECTS  | COMPARE   | SETTINGS   | CONTRACT ANALY                  | ŒR   |
|--------------------------------------|---|---|---|---|--|---------------------------------|------|
| Edit_filename.pdf                    | STATUS  | COMMENTS  | V   |   |  | APPROVE 52 ISSUES 52 RESULTS    |      |
| Dispute Resolution  ☐ 5 <sup>x</sup> | ended March 31, 2000, June 30 arbitral tribunal now pending o   | ept as disclosed in the Guarantor',<br>, 2000 and September 30, 2000,<br>or threatened against the Guarant<br>adverse effect on the Guarantor's   | there is no action, suit or proc<br>or before any court or arbitrat                               | eeding at law or in equity o<br>or or any governmental boo    | or by or before any govern<br>dy, agency or official which | mental authority or             |      |
| This is a multiline type label       | Installed Capacity associated with In-City Generators that are subject to market mitigation measures shall receive the lesser of the Market-Clearing Price or the price that it paid no greater than the mitigated price cap for that Installed Capacity. If the Market-Clearing Price exceeds the total amount paid to Installed Capacity Suppliers.  FROM: Max Mustermann  12.04.2018, 10:54:13  Short message. |   |   |   |  |                                 |      |
|                                      | dolore magna aliquyam erat,<br>clita kasd gubergren, no sea<br>consetetur sadipscing elitr, so  | consetetur sadipscing elitr, sed d<br>sed diam voluptua. At vero eos e<br>takimata sanctus est Lorem ipsur<br>ed diam nonumy eirmod tempor<br>os et accusam et justo duo dolore<br>psum dolor sit amet. | et accusam et justo duo dolore<br>n dolor sit amet. Lorem ipsum<br>invidunt ut labore et dolore m | s et ea rebum. Stet<br>dolor sit amet,<br>agna aliquyam erat, |  |                                 |      |
|                                      |   | < PREVIOUS PA   | GE 1 V OF 5 NEXT  | >   |  | <u>10</u>   20   50             |      |
|                                      |   |   |   |   | © IntraFind Soft   | ware AG - Contract Analyzer - v | 1130 |

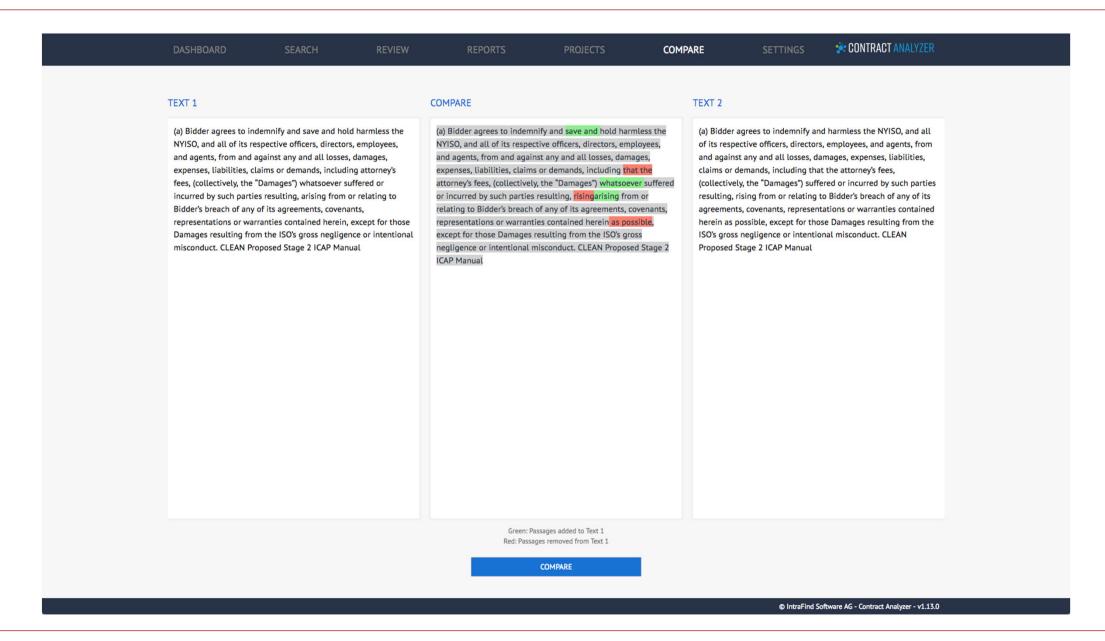
# **Contract Analyzer:** compare clause with pattern clause



| DASHBOARD                      | SEARCH REVIEW   | REPORTS   | PROJECTS   | COMPARE  | SETTINGS   | ** CONTRACT ANALYZER  |
|--------------------------------|---|---|--|--|--|---|
| Edit_filename.pdf              | STATUS ~  | COMMENTS  |  |  |  | APPROVE 52 ISSUES   |
| Dispute Resolution             | (f) No further Proceedings. Except as di ended March 31, 2000, June 30, 2000 a arbitral tribunal now pending or threat be expected to have a material adverse Default text:  (f) No Proceedings. Except as disclosed March 31, 2000, June 30, 2000 and Septribunal now pending or threatened agexpected to have a material adverse effects. | and September 30, 2000, there is a sened against the Guarantor before effect on the Guarantor's ability in the Guarantor's Form 10-K for stember 30, 2000, there is no activalist the Guarantor before any co | no action, suit or proceed<br>e any court or arbitrator of<br>to perform its obligations<br>the year ended Decembe<br>on, suit or proceeding at l<br>urt or arbitrator or any go | ing at law or in equity or<br>or any governmental body<br>or under this no Guaranty.<br>or 31, 1999 and the Guara<br>law or in equity or by or b<br>overnmental body, agency | by or before any govern<br>, agency or official which<br>ntor's Form 13-Q for the<br>pefore any governmental | nental authority or a could reasonably  periods ended authority or arbitral |
| This is a multiline type label | Installed Capacity associated with In-C that it paid no greater than the mitigat Suppliers.   | The same was some as all surrows  | personal designation of the second second  |  |  |   |
| Dispute Resolution             | 5.16.5 Arbitration Award  |   |  |  |  | /   |
| Dispute Resolution □           | There shall be no right to discovery bet request, and the parties shall produce, The arbitrator shall resolve the arbitrat the arbitrator, a hearing is deemed necessity.   | any information in addition to the ion matter solely on the basis of t  | e written statements that<br>the written statements ar   | is deemed by the arbitra<br>nd evidence submitted by   | tor to be relevant to the the parties unless, in the   | issues presented.   |
|                                |   | < PREVIOUS PAGE 1   | ✓ OF 5 NEXT >  |  |  | 10   20   50  |
|                                |   |   |  |  | © IntraFind Soft   | ware AG - Contract Analyzer - v1.13.0                                       |

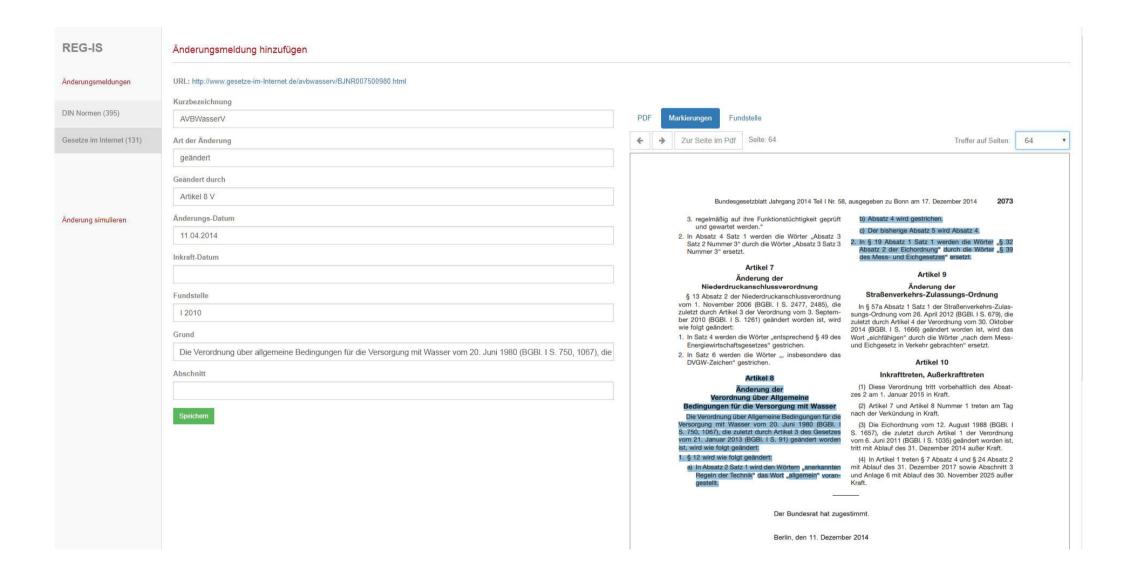
## Contract Analyzer: compare clauses and immediately recognize changes





## **Contract Analyzer: learning by manual annotations and corrections**





#### Doc2Data



| Änderungsmeldungen        | Änderung analysieren   |  |
|---------------------------|--|--|
| DIN Normen (391)          | URL: http://www.bgbl.de/xaver/bgbl/start.xav?startbk=Bundesanzeiger_BGBl&jum | pTo=bgbl117s3465.pdf   |
| Gesetze im Internet (105) | Kurzbezeichnung  |  |
|                           | DepV   | PDF Markierungen Fundstelle Synopse  |
|                           | Art der Änderung   | Vergleiche Versionen vom "26.06.2018 12:45" und "26.06.2018 12:46"   |
|                           | geändert   | Verordnung über Deponien und Langzeitlager (Deponieverordnung - DepV) Verordnungzur  ↑   |
| Crawler Status            | Geändert durch   | Neuordnung der KlärschlammverwertungVom 27. September 2017Auf Grund des § 8 Absatz 2 Satz 1 Nummer 2 in Verbindung mit § 67 des Kreislaufwirtschaftsgesetzes vom 24. Februar   |
|                           | Artikel 2 V  | 2012 (BGBl. I S. 212) unter Wahrung der Rechte des Bundestages, d e s§1 1A b s a t z2S a t z1N u m m e r1u n d3b i s5a u c h in Verbindung mit Satz 2, des § 11 Absatz 3 Satz 1 Nummer   |
|                           | Änderungs-Datum  | 1 bis 3 und 4 in Verbindung mit § 10 Ab-satz 2 Nummer 1 Buchstabe a und b, Nummer 5 bis 7 auch in Verbindung mit § 10 Absatz 3 und des § 11 Absatz 3 Satz 2 Nummer 1 des   |
|                           | 26.09.2017   | Kreislaufwirtschafts-gesetzes vom 24. Februar 2012 (BGBI. I S. 212) so-wie des § 12 Absatz 7 Nummer 1 bis 7 und des § 52 Absatz 1 Satz 2 Nummer 7 des Kreislaufwirtschafts-gesetzes  |
|                           | Inkraft-Datum  | vom 24. Februar 2012 (BGBI. I S. 212) verordnet die Bundesregierung nach Anhörung der beteiligten Kreise: Artikel 1 Verordnung über die Verwertung von Klärschlamm, Klärschlammgemisch und Klärschlammkompost (Klärschlammverordnung   |
|                           | Fundstelle   | AbfKlärV)InhaltsübersichtTeil 1Allgemeine Vorschriften§ 1 Anwendungsbereich § 2 Begriffsbestimmungen §3Kreislaufwirtschaft von Klärschlamm, Klärschlammgemisch und KlärschlammkompostTeil 2A n f o r d e r u n g e na nd i eV e r w e r t u n g von Klärschlamm, Klärschlammgemisch und Klärschlammkompost auf und in BödenAbschnitt |
|                           | I 3465   | 1Untersuchungspflichten§ 4 Bodenbezogene Untersuchungspflichten§ 5   |
|                           | Grund  | Klärschlammbezogene Untersuchungspflichten § 6 Beschränkte KlärschlammuntersuchungAbschnitt 2Grenzwerte; Seuchen- und Phytohygiene§ 7 Bodenbezogene Grenzwerte § 8 Klärschlammbezogene Grenzwerte § 9 Rückstellprobe § 10  |
|                           |  | Analysefehler und Messtoleranzen 8 11 Anforderungen an die Seuchen- und die  |

#### Contract Analyzer: display information and results



- Red Flag Report
- Time required by each editor
- Topics of each editor

Excel lists

- Word files
- Integrated email functionality

Create reports



Export and send data



### Roadmap: not only smart reading support, but also able to execute simple check tasks



#### **Example:**

Regulatories / check for B2C limitation of liability

#### Your clause

Der Anbieter haftet im Rahmen dieses Vertrages dem Grunde nach nur für Schäden, (a) die der Anbieter oder seine gesetzlichen Vertreter oder Erfüllungsgehilfen vorsätzlich oder grob fahrlässig herbeigeführt haben bzw. die (b) aus der Verletzung des Lebens, des Körpers oder der Gesundheit durch eine Pflichtverletzung des Anbieters oder eines seiner gesetzlichen Vertreter oder Erfüllungsgehilfen entstanden sind. Der Anbieter haftet ferner, (c) wenn der Schaden durch die Verletzung einer Verpflichtung des Anbieters entstanden ist, deren Erfüllung die ordnungsgemäße Durchführung des Vertrages überhaupt erst ermöglicht und auf deren Einhaltung der Kunde regelmäßig vertraut und vertrauen darf (Kardinalpflicht).

Der Anbieter haftet in den Fällen des Absatzes 1, Buchstaben (a) und (b) der Höhe nach unbegrenzt. Im Übrigen ist der Schadensersatzanspruch auf den vorhersehbaren, vertragstypischen Schaden begrenzt.

In anderen als den in Absatz 1 genannten Fällen ist die Haftung des Anbieters unabhängig vom Rechtsgrund ausgeschlossen.

Soweit eine Haftung aus der Übernahme einer Garantie oder wegen arglistiger Täuschung in Betracht kommt, bleibt sie von den vorstehenden Haftungsregelungen unberührt.

#### Regulatory framework

Regel 1: Die Haftung für Vorsatz darf nicht ausgeschlossen sein. (§ 276 Abs. 3 BGB)



Regel 2: Die Haftung für grobe Fahrlässigkeit darf in AGB nicht ausgeschlossen sein. (§ 309 Nr. 7 b)



Regel 3: Die Haftung im Bereich der Produkthaftung darf nicht ausgeschlossen werden (§ 14 ProdHG)



Regel 4: "Kardinalspflichten" müssen umschreiben sein als "Pflichten, deren Erfüllung die ordnungsgemäße Durchführung des Vertrages überhaupt erst ermöglicht und auf deren Einhaltung der Kunde regelmäßig vertraut und vertrauen darf". (BGH VIII ZR 121/04)



Regel 5: Die Haftung für die Verletzung von Leben, 🗸 Körper oder Gesundheit darf nicht begrenzt werden. (§ 309 Nr. 7 a) BGB)



Regel 6: Die Haftung für arglistige Täuschung darf nicht ausgeschlossen sein.



#### Gestaltungsspielraum:

Regel a): Im Bereich der leicht fahrlässigen Verletzung von "Kardinalspflichten" darf die Haftung summenmäßig begrenzt sein. (BGH VII ZF 

✓ 166/79)



Regel b): Im Bereich der leicht fahrlässigen Verletzung (außer bei Kardinalspflichten) darf die 🗸 Haftung ausgeschlossen werden.



Regel c): Die Haftungsbegrenzung kann auch auf die persönliche Haftung gesetzlicher Vertreter oder Erfüllungsgehilfen erstreckt werden.



Check further clause ✓



### VISIT us at booth #20!

#### **CONTACT**



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