Patentcloud Quality Insights Annotation Report

ArcherDX, Inc. et al v. QIAGEN Sciences, LLC et al

DDE-1-18-cv-01019

Focus on: U.S. Pat. No. 10,450,597

Filing date: Jul. 10, 2018

Table of contents

Click on a page number to read

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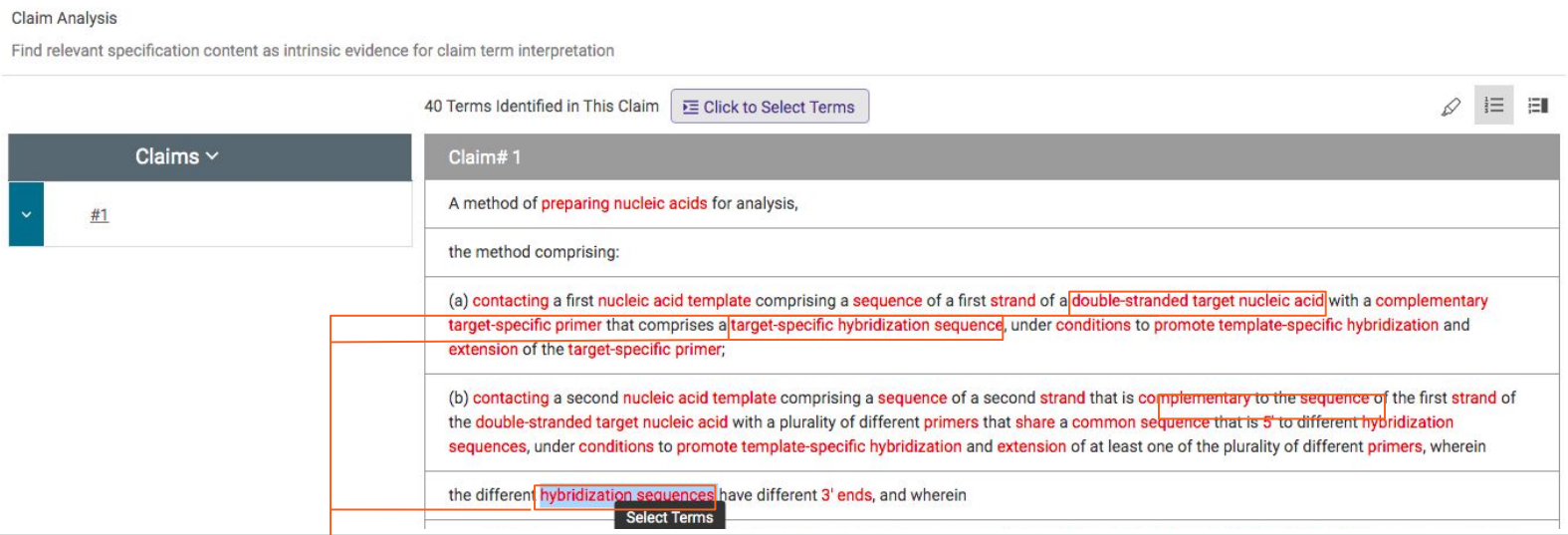
Map claims to specification and file wrapper

Map claims to specification - ‘597

Which claim terms are or are not in the specification?

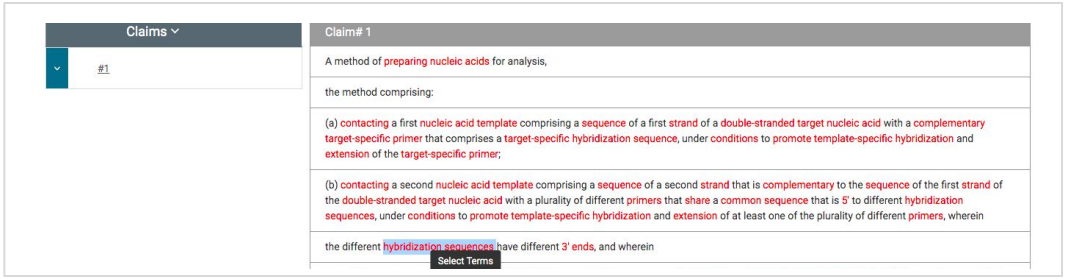


Claim Analysis **finds** these terms in the spec: ”**double-stranded target nucleic acid**”, **“target-specific hybridization sequence“,** “**hybridization sequences**”, as well as other terms that are highlighted in red.

Source: Quality Insights

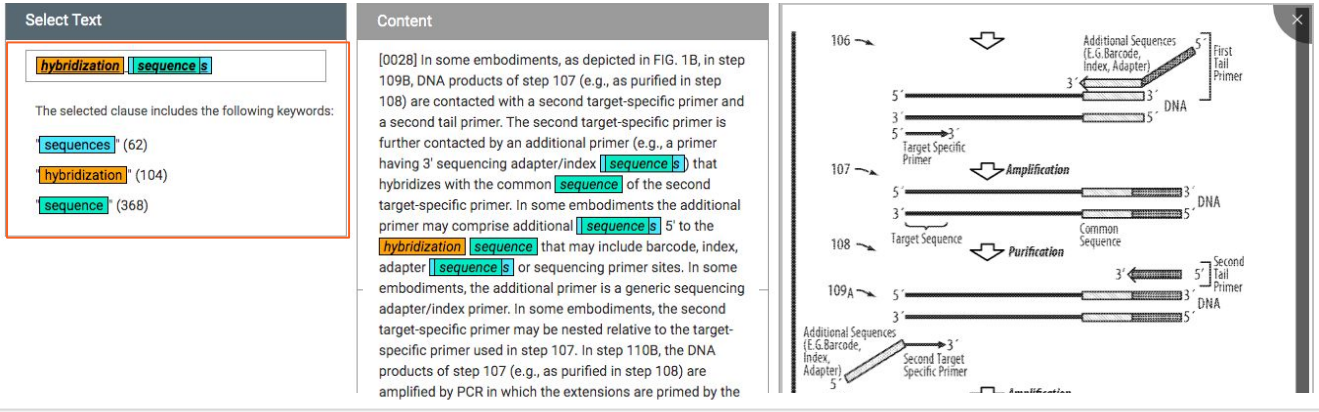
Map claims to specification - ‘597

Which claim terms are or are not in the specification?



Review the selected claim element and see how it is defined in the patent specification and related figures.

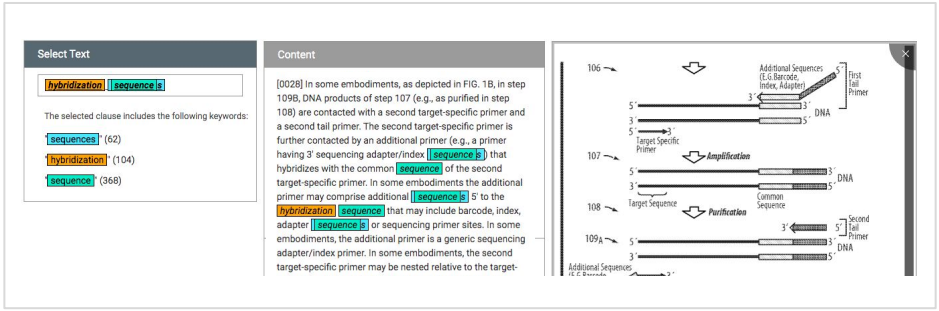
Selected elements of ‘597 Claim 1 | Selected elements of Claim ‘597 in Spec | Figures of ‘597



Source: Quality Insights

Map claims to specification and Complaint - ‘597

Does the allegedly infringing product element fall within or outside the patent’s scope?

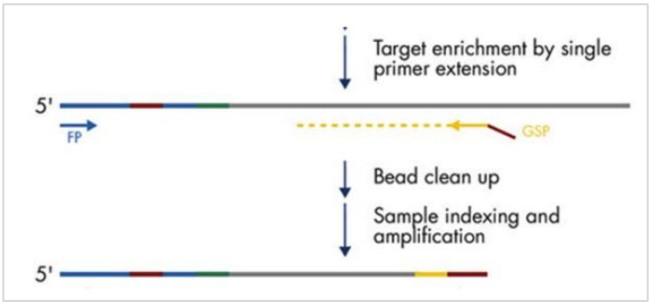


With the claim scope interpretation from ***Claim Analysis***, verify your findings against the complaint.

Answer the question:

Does the alleged Invention element fall within or outside the patent’s scope?

sequence that is characteristic of the at least one of the plurality of different primers” as recited in at least claim 1 of the ’597 Patent. QIAGEN Sciences, QIAGEN LLC, QIAGEN Gaithersburg, QIAGEN GmbH, and QIAGEN N.V. instruct End-users to perform this claim element in, at least, the following aspect of QIAseq kits’ workflow and associated instructions (including those instructions contained within the QIAseq Kits):

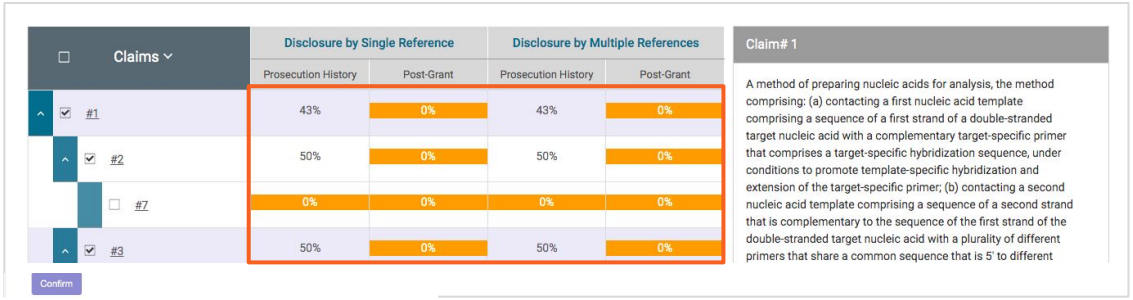


Source: Quality Insights

Map claims to the file wrapper - ‘597

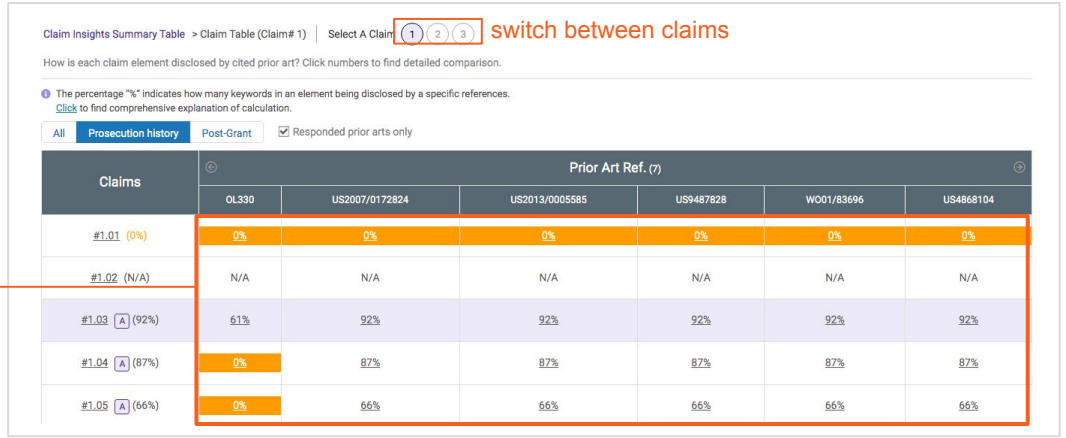
Which claim terms are in the file wrapper(i.e. examiner’s opinion) ?

Disclosure Rate by Prior Art



Review how the asserted claims were disclosed by the prior art found by the examiner during prosecution and post-grant proceedings.

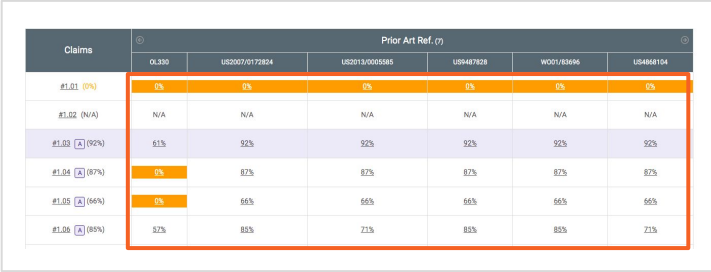
A higher percentage means more claim elements were disclosed by the prior art.



Source: Quality Insights

Map claims terms to the file wrapper - ‘597

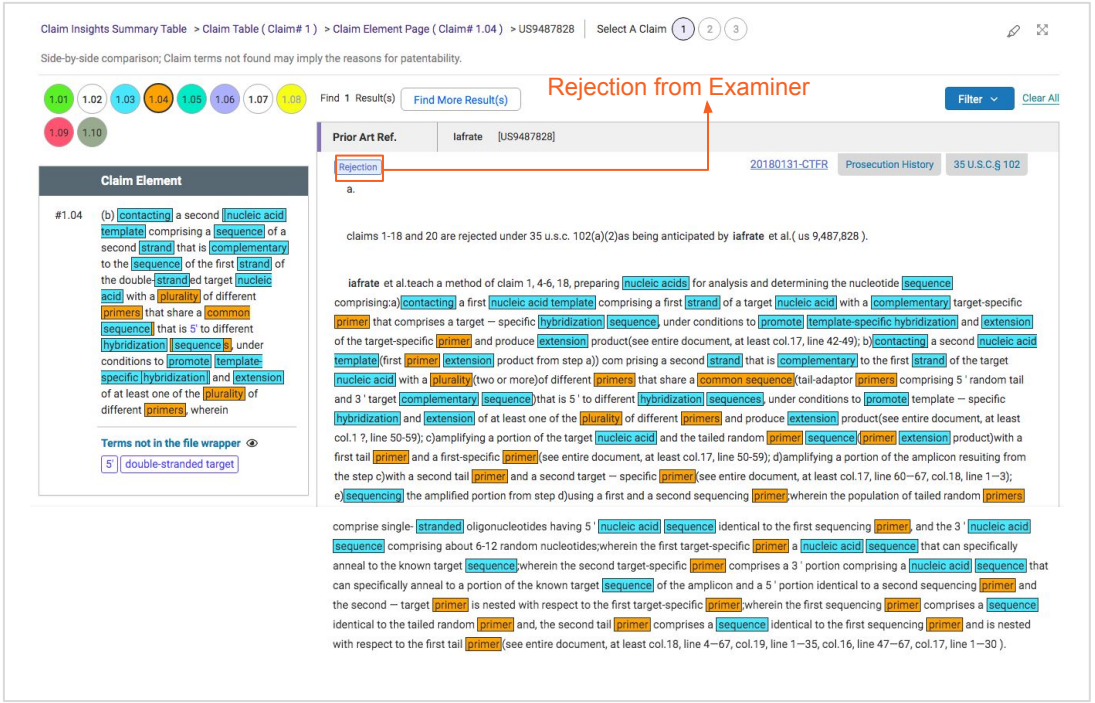
Why was this patent granted? Which claims were amended and how did the scope change?



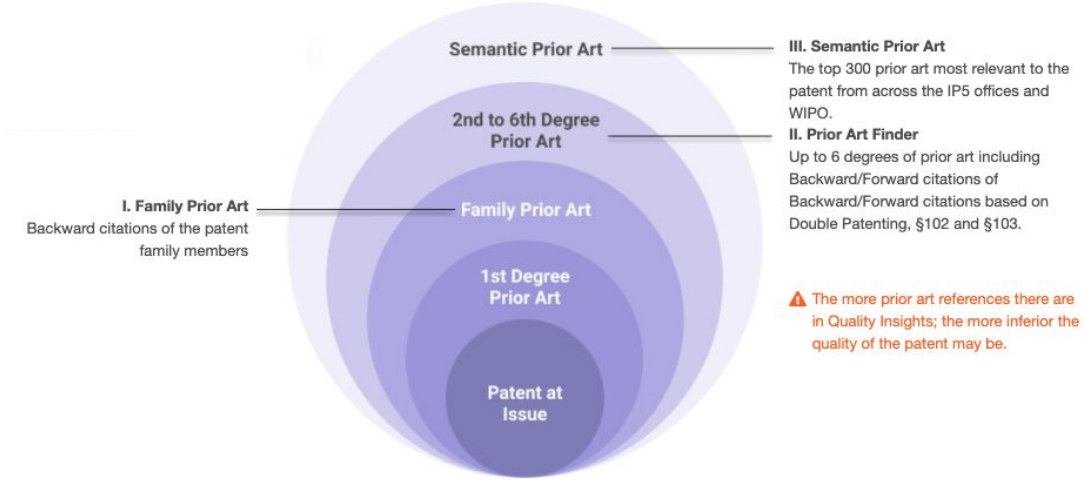
All of the limitations of this asserted claim element in ‘597 were 92% known by Iafrate (US9487828).

Answer the questions:

Why was this patent granted?



How does Quality Insights generate prior art?



Source: Quality Insights

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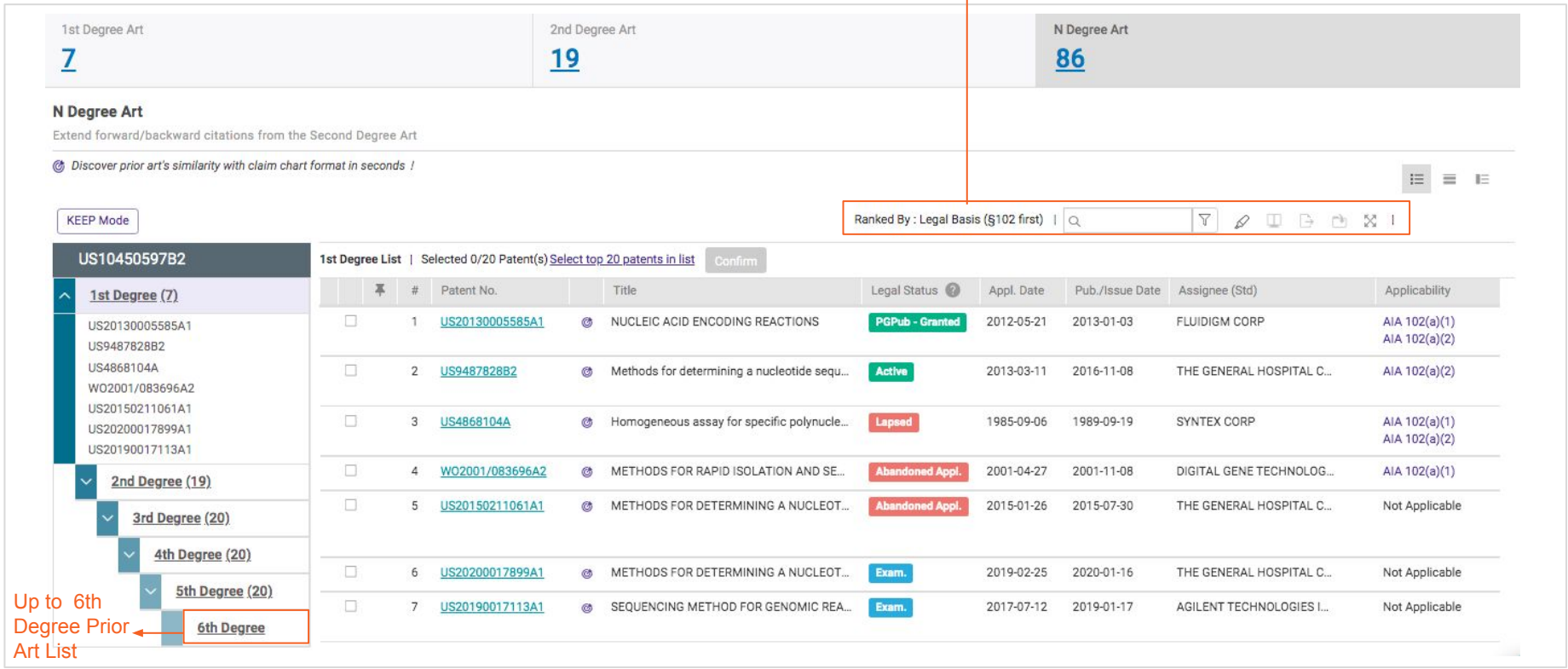
Prior Art Finder

Prior Art Finder for ‘597

Review cited and citing patents of ‘597 from the first to the sixth degree

Filter by:
- Applicability
- Legal Basis (§102 or §103)
- Patent Office
- Legal Status



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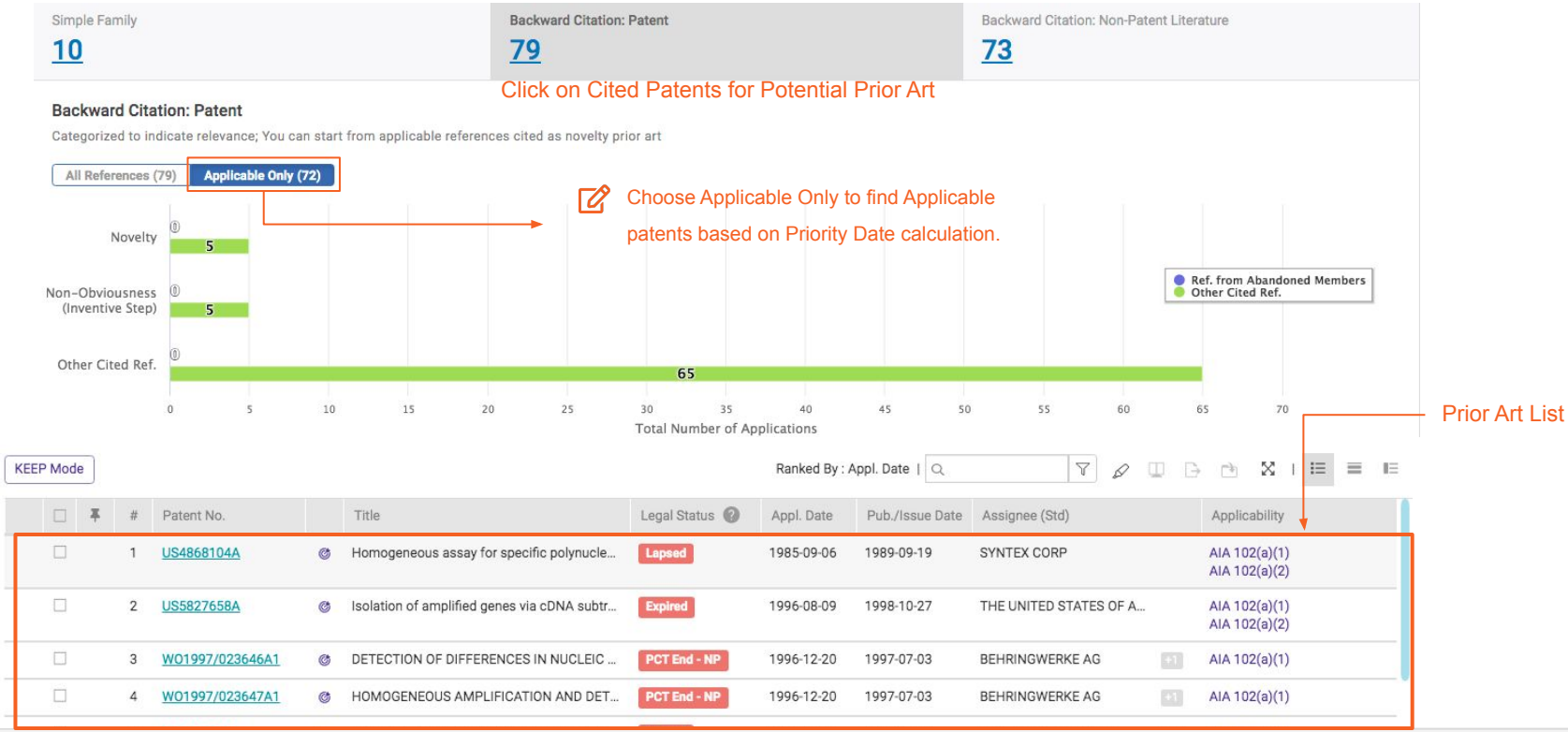
Family Prior Art

Family Prior Art of ‘597

Review prior art cited by and cited against the family counterparts when available



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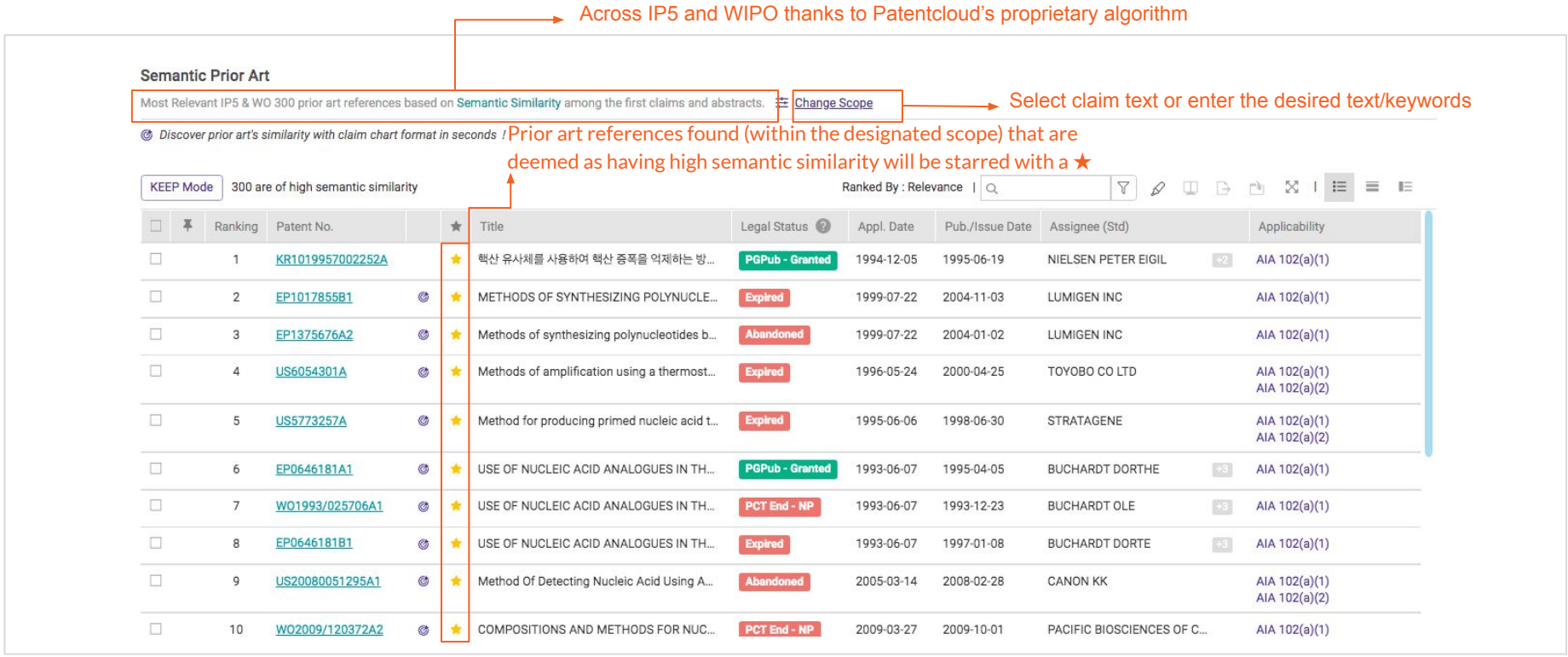
Semantic Prior Art

Semantic Prior Art of ‘597

Review potential prior art ranked by concept similarity

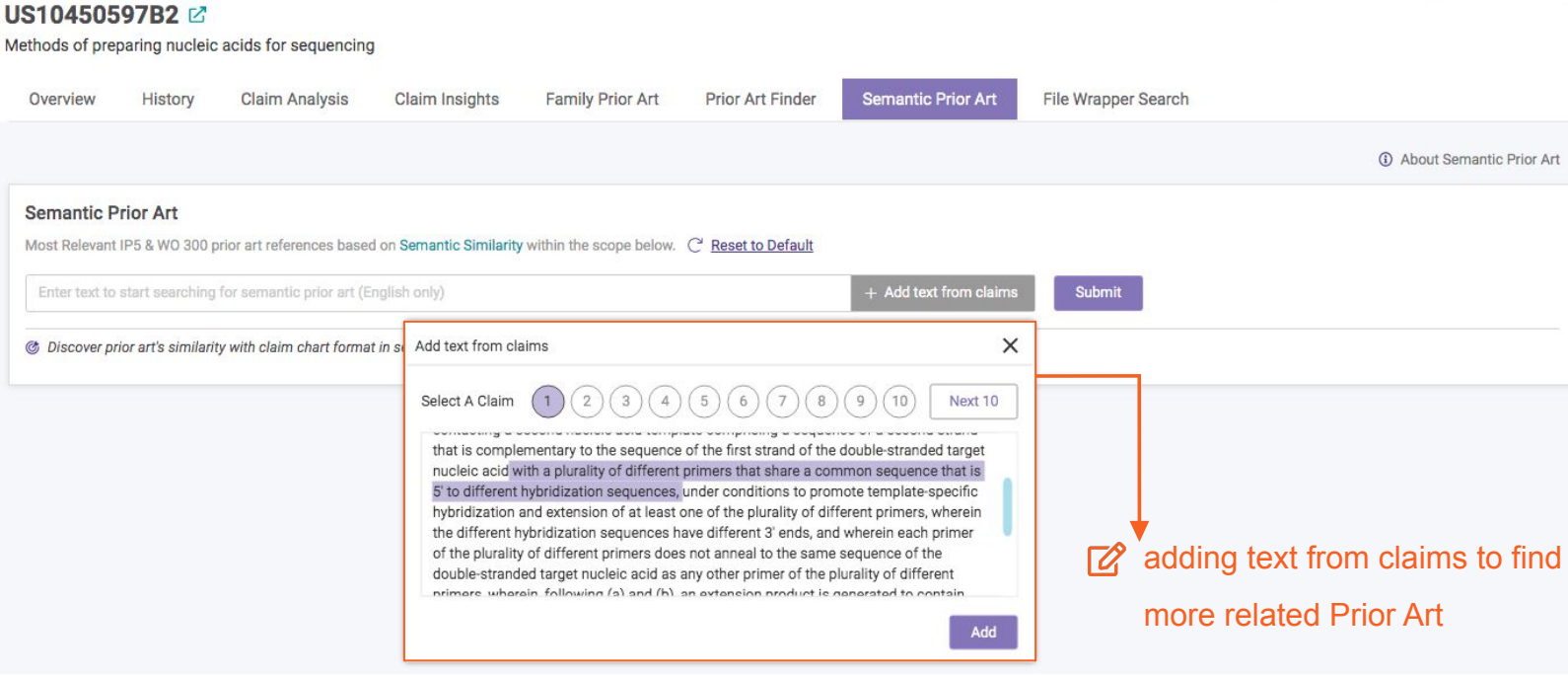


Ranking	Patent No.	Title	Legal Status	Appl. Date	Pub./Issue Date	Assignee (Std)	Applicability
1	KR1019957002252A	핵산 유사체를 사용하여 핵산 증폭을 억제하는 방...	PGPub - Granted	1994-12-05	1995-06-19	NIELSEN PETER EIGIL +2	AIA 102(a)(1)
2	EP1017855B1	METHODS OF SYNTHESIZING POLYNUCLE...	Expired	1999-07-22	2004-11-03	LUMIGEN INC	AIA 102(a)(1)
3	EP1375676A2	Methods of synthesizing polynucleotides b...	Abandoned	1999-07-22	2004-01-02	LUMIGEN INC	AIA 102(a)(1)
4	US6054301A	Methods of amplification using a thermost...	Expired	1996-05-24	2000-04-25	TOYOBO CO LTD	AIA 102(a)(1) AIA 102(a)(2)
5	US5773257A	Method for producing primed nucleic acid t...	Expired	1995-06-06	1998-06-30	STRATAGENE	AIA 102(a)(1) AIA 102(a)(2)
6	EP0646181A1	USE OF NUCLEIC ACID ANALOGUES IN TH...	PGPub - Granted	1993-06-07	1995-04-05	BUCHARDT DORTHE +3	AIA 102(a)(1)
7	WO1993/025706A1	USE OF NUCLEIC ACID ANALOGUES IN TH...	PCT End - NP	1993-06-07	1993-12-23	BUCHARDT OLE +3	AIA 102(a)(1)
8	EP0646181B1	USE OF NUCLEIC ACID ANALOGUES IN TH...	Expired	1993-06-07	1997-01-08	BUCHARDT DORTE +3	AIA 102(a)(1)
9	US20080051295A1	Method Of Detecting Nucleic Acid Using A...	Abandoned	2005-03-14	2008-02-28	CANON KK	AIA 102(a)(1) AIA 102(a)(2)
10	WO2009/120372A2	COMPOSITIONS AND METHODS FOR NUC...	PCT End - NP	2009-03-27	2009-10-01	PACIFIC BIOSCIENCES OF C...	AIA 102(a)(1)

Source: Quality Insights

Semantic Prior Art of ‘597

Review potential prior art ranked by concept similarity



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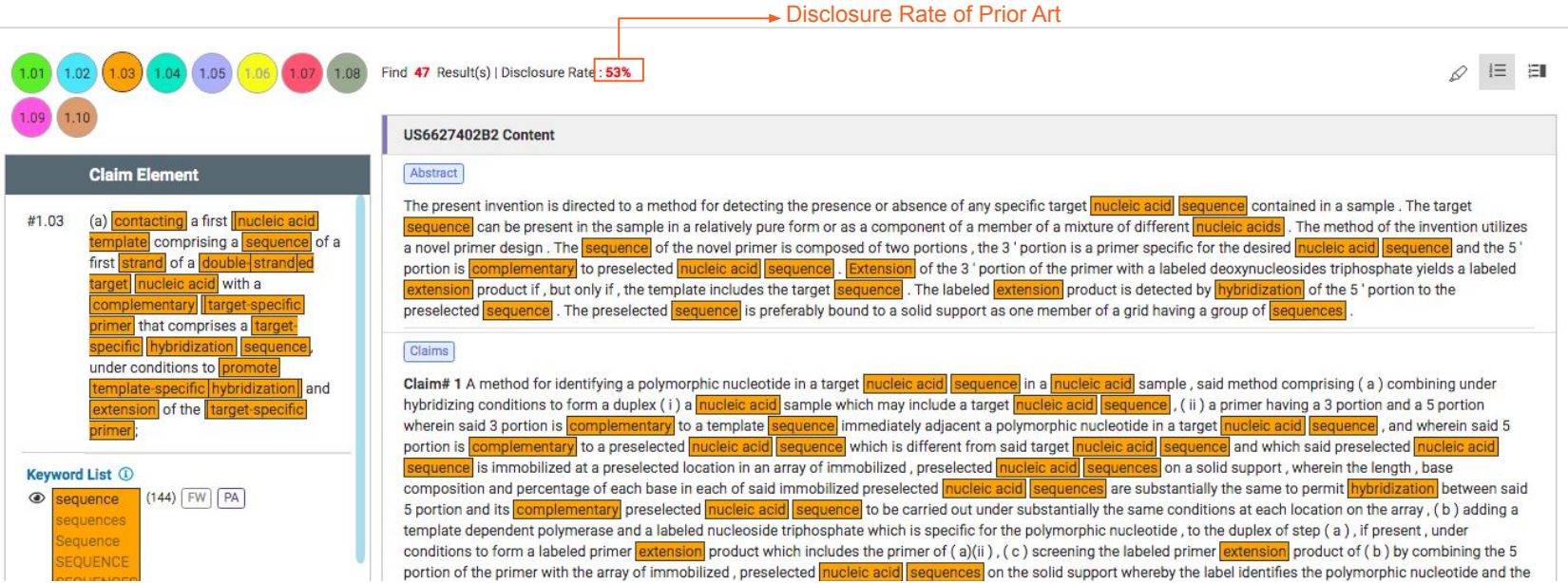
Comparison tools

Prior Art Comparison (claim chart format)

What does this prior art say about the critical elements?



Answer the question:

What does this prior art say about the Claim elements: "nucleic acid sequence" ?

Discover prior art similarity with keywords (includes keyword stemming) mapped to the selected prior art reference Abstract, Claims, and Specification.

Source: Quality Insights

Prior Art Comparison (sample output)

	Claim	Claim-Term Interpretation	Semantic Prior Art - '402	3rd Degree Citation Prior Art - B
1	A method of preparing nucleic acids for analysis, the method comprising:	Refer to Claim Analysis results	N/A	……
	(a) contacting a first nucleic acid template comprising a sequence of a first strand of a double-stranded target nucleic acid with a complementary target-specific primer that comprises a target-specific hybridization sequence, under conditions to promote template-specific hybridization and extension of the target-specific primer;	……	53%	……
	(b) contacting a second nucleic acid template comprising a sequence of a second strand that is complementary to the sequence of the first strand of the double-stranded target nucleic acid with a plurality of different primers that share a common sequence that is 5′ to different hybridization sequences, under conditions to promote template-specific hybridization and extension of at least one of the plurality of different primers,	…...	60%	
	wherein the different hybridization sequences have different 3′ ends,…….	…...	…...	……
	and ii) a primer that specifically anneals to the complement of the target-specific hybridization sequence.	…...	66%	…...

System-identified keywords and key phrases (highlighting of other keywords is available)

Results from claim to specification and file wrapper mapping

Results from prior art comparison by claim element

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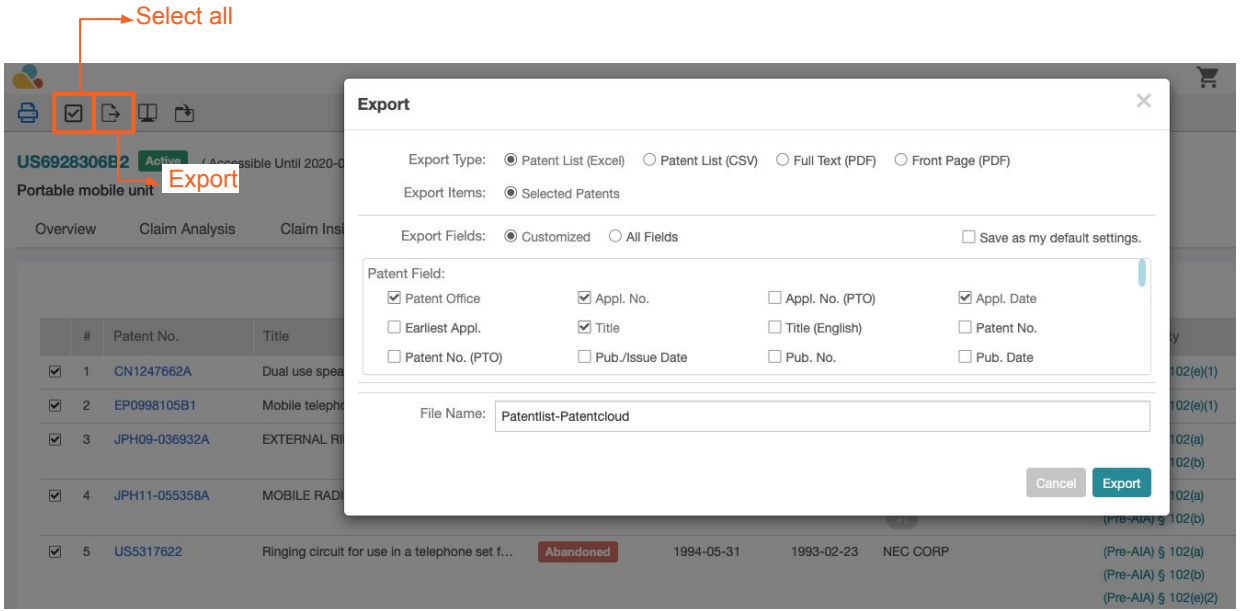
Prior Art downloads

Prior Art downloads



Download patent data in Excel or PDF format for Family Prior Art, Second Degree Prior Art, and/or Semantic Prior Art.

Source: Quality Insights

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Prosecution and PTAB History Key Events

Key Events - ‘597

1 Prosecution & 0 Post-Grant

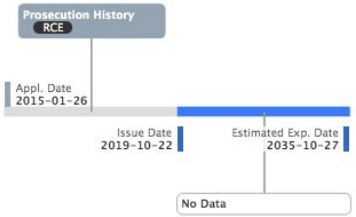
Event History	Family Status	Prior Art Status
1	10 Applications	454 Applications / 74 NPL References

# of Family Counterparts and Legal Status

# of Highly Relevant Prior Art References

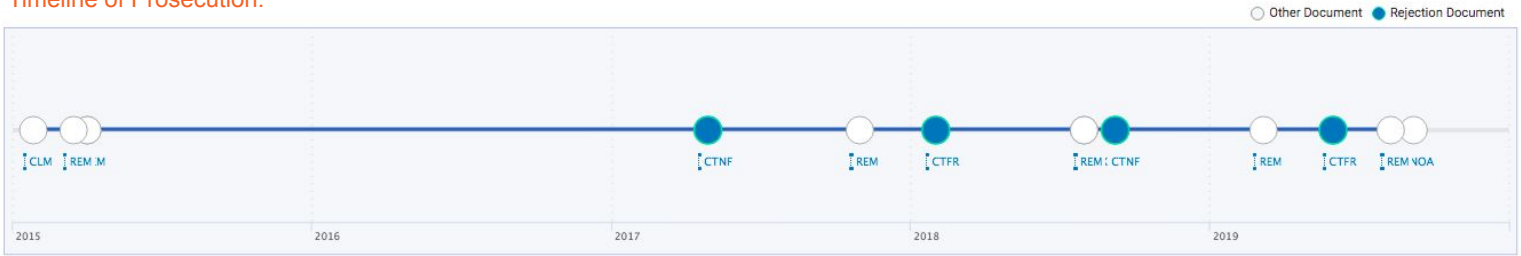
Event History | 1 Prosecution History / 0 Post-Grant

Validity challenges to a patent in its prosecution history and post-grant events



Legend	
Document Code	**Document Description**
CTFR	Final rejection
CTNF	Non-final rejection
CLM	Claims
REM	Remarks

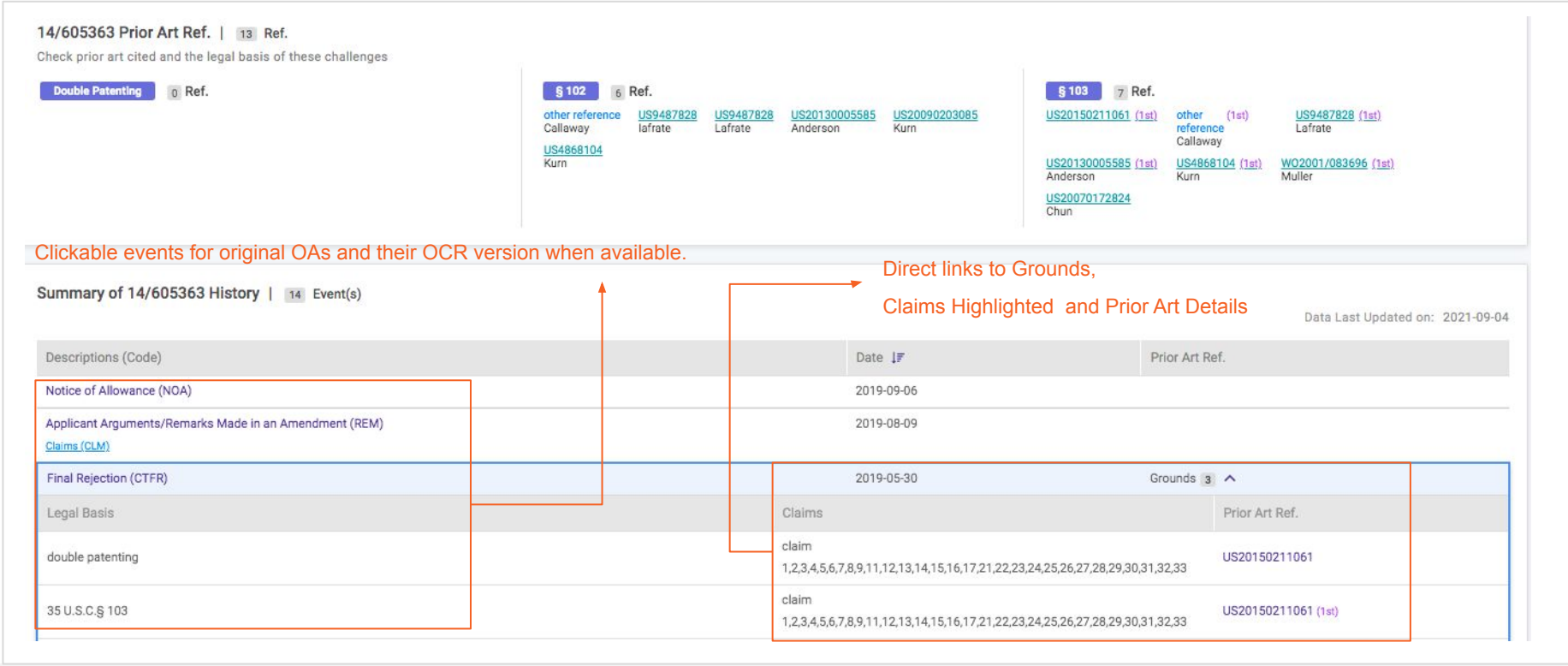
Timeline of Prosecution:



Source: Quality Insights

Key Events - ‘597

Prosecution History



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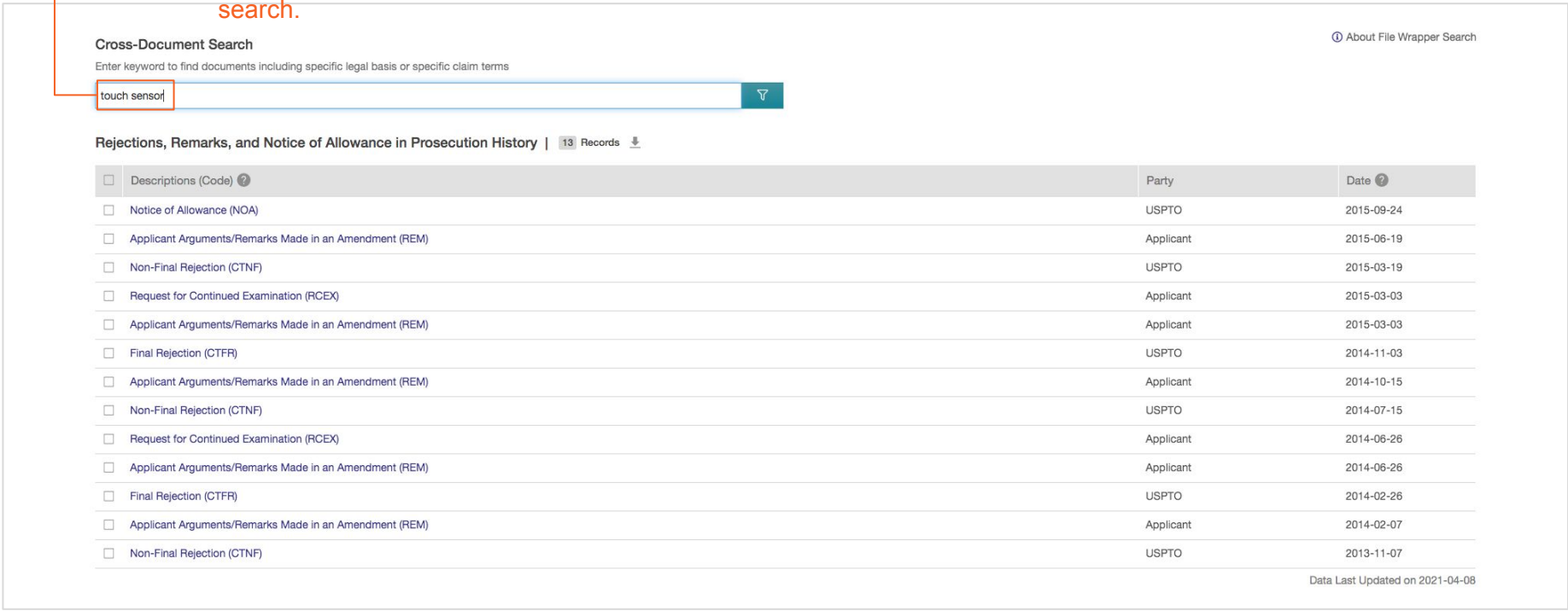
Prosecution and PTAB History Search

Patent File Wrapper Search

Directly discover details in the prosecution history and post-grant proceeding across all documents via a keyword search.



Cross-Document Search

Enter keyword to find documents including specific legal basis or specific claim terms

touch sensor

About File Wrapper Search

Rejections, Remarks, and Notice of Allowance in Prosecution History | 13 Records

Descriptions (Code)	Party	Date
Notice of Allowance (NOA)	USPTO	2015-09-24
Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-06-19
Non-Final Rejection (CTNF)	USPTO	2015-03-19
Request for Continued Examination (RCEX)	Applicant	2015-03-03
Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-03-03
Final Rejection (CTFR)	USPTO	2014-11-03
Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-10-15
Non-Final Rejection (CTNF)	USPTO	2014-07-15
Request for Continued Examination (RCEX)	Applicant	2014-06-26
Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-06-26
Final Rejection (CTFR)	USPTO	2014-02-26
Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-02-07
Non-Final Rejection (CTNF)	USPTO	2013-11-07

Data Last Updated on 2021-04-08

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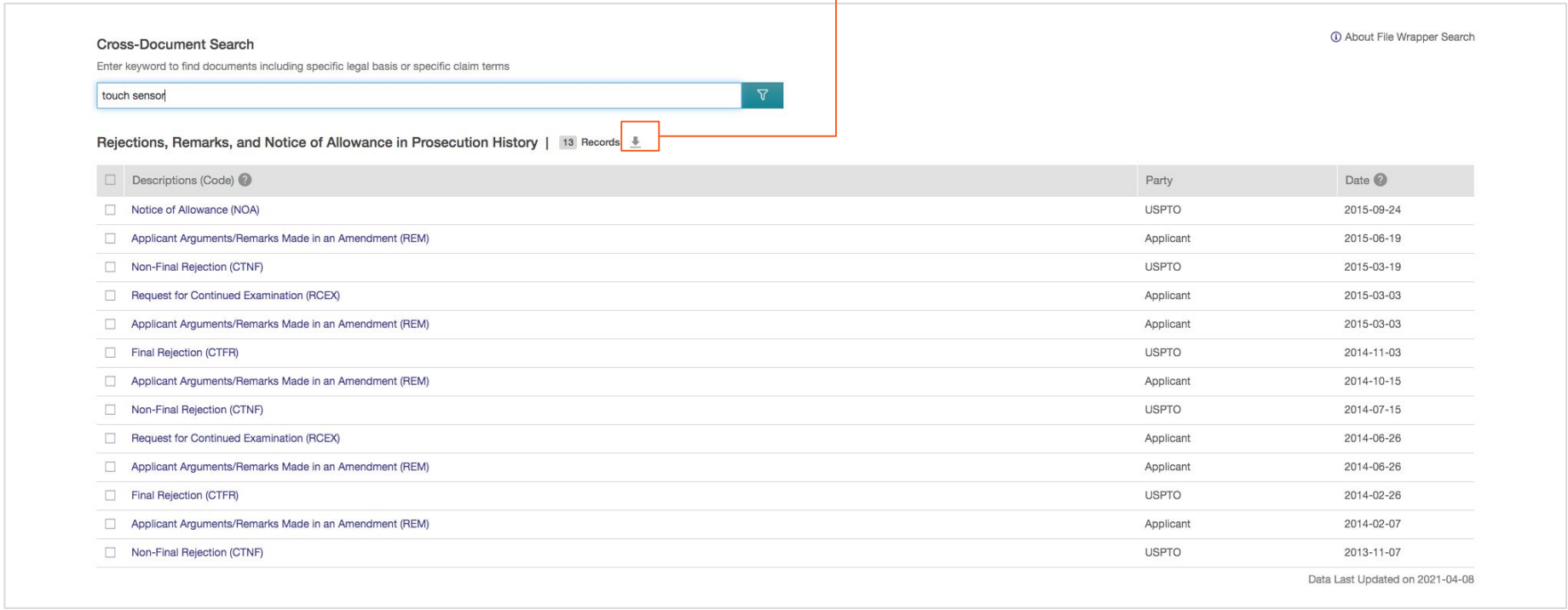
Prosecution and PTAB History PDF Downloads

PDF Downloads

Download the complete set or just part of the PDF files in the File Wrapper Search.



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Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-10-15
Non-Final Rejection (CTNF)	USPTO	2014-07-15
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Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-06-26
Final Rejection (CTFR)	USPTO	2014-02-26
Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-02-07
Non-Final Rejection (CTNF)	USPTO	2013-11-07

Data Last Updated on 2021-04-08

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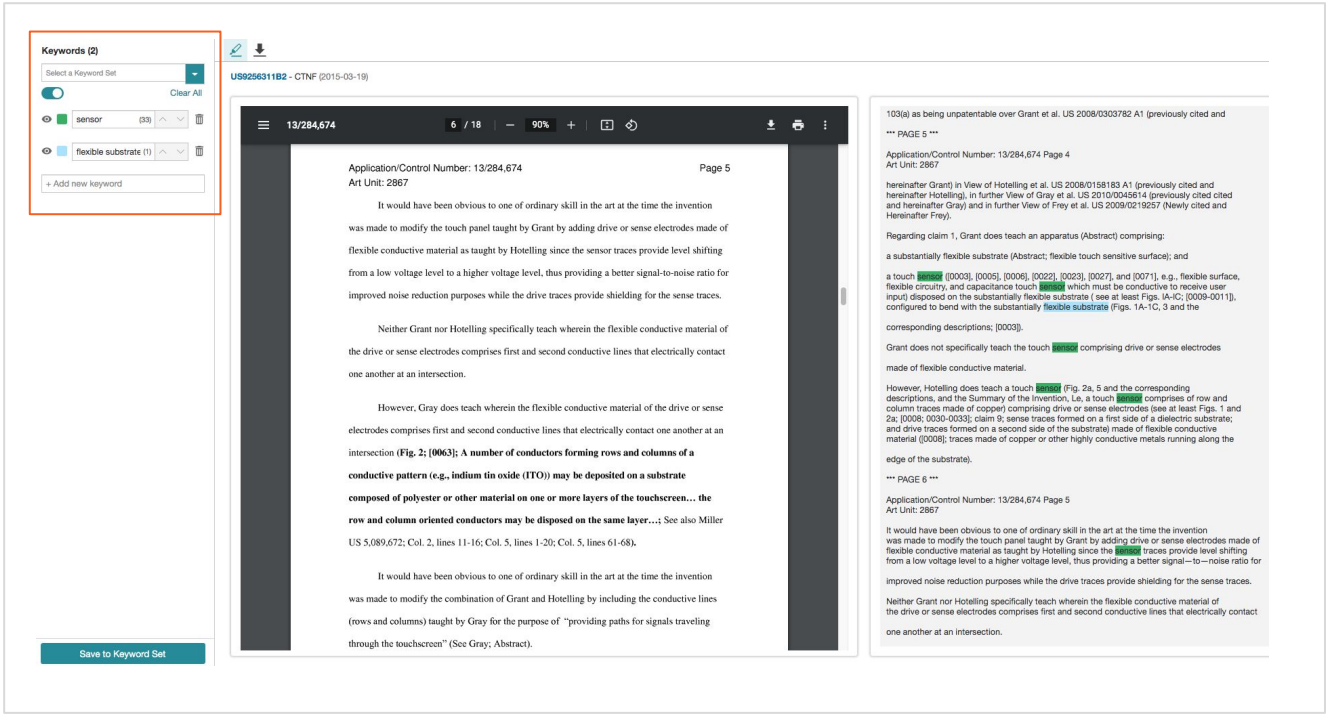
Prosecution and PTAB History Side-by-side PDF and OCR

Side by Side: PDF & OCR

Conduct a keyword search in a single document to identify the claim scope quickly and easily. You can even search additional claim terms within rejections.



Source: Quality Insights

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QI is a Game Changer

- Take control of a patent at issue with its comprehensive Overview
- Discover claim construction issues and define the claim scope
- Find more relevant prior art references
- Save time to increase productivity for a pitch and win