

# APEX STANDARDS

## Claim Chart API - SEP-TS Section Anchoring & Technical Clause Mapping – Specifications & Terms Overview

Ver Nov 2024

### Guidance for Inventors & Large SEP Portfolio Analysis

The Claim Chart API serves two key purposes:

1. **For Inventors & R&D Teams:** Helping inventors **test the waters** by determining which **technical standards are relevant** to their inventive ideas and what options exist for SEP strategy. This ensures early-stage innovations align with industry standards before filing.
2. **For Large SEP Portfolio Managers:** Providing an automated, systematic approach to **analyze and manage large SEP portfolios** across various technical fields. It assists in **data-driven decision-making** for patent maintenance, abandonment, filing, and licensing negotiations, rather than relying on **limited personal experiences or unavailable R&D inventors**.

### Scenarios Addressed

- **Inventors & R&D Professionals:** Need to identify relevant standards to **align innovations early with SEP landscapes**.
- **Portfolio Managers:**  
Portfolio managers require efficient tools to **identify and prioritize patents with SEP (Standard Essential Patent) potential**. A **clear, data-driven, and scientifically backed selection process**—one that establishes *prima facie* evidence of essentiality mapping as a *sine qua non* and, *ipso facto*, confirms non-essentiality in cases of incomplete mapping—is key to **developing and expanding a well-managed SEP portfolio**.  
Key decision areas include:
  - **Patent Selection & Prioritization** – Identifying patents with the highest potential for standard essentiality.
  - **Renewal & Abandonment Strategy** – Evaluating patents at maintenance decision points (4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup>-year cycles) as part of systematic patent lifecycle management. Key factors include cost-effectiveness, core relevance to corporate operations, revenue impact, competitive positioning, and alignment with long-term SEP strategy to determine whether to renew, abandon, or adjust filing strategies.
  - **Filing Strategy** – Determining whether to file as provisional, home-country only, or multi-jurisdiction families, based on justified multi-market potential.
- **Licensing Negotiation & Litigation:** Companies receiving **licensing offer letters** and facing large SEP portfolios must **assess strength and essentiality** of over-declared and over-asserted patents under time constraints.
- **Tech Implementers:** Manufacturers implementing **standard-compliant technologies** require a systematic method to evaluate **licensing risk exposure** and claim validity.

### Objectives

To provide a **complete and systematic SEP analysis tool**, eliminating inefficiencies caused by:

- **Limited internal expertise** on specific IPR matters.
- **Difficulties in interviewing R&D inventors** due to workload constraints.
- **Challenges in portfolio decision-making** (keeping, abandoning, filing new applications).
- **Unstructured responses** to large-scale licensing negotiations.

### Included Standards

The API supports mapping against a wide range of industry standards:

- |                              |                              |                                 |
|------------------------------|------------------------------|---------------------------------|
| • 3GPP TS                    | • e-Health / IEEE 11073      | • Industry 4.0 Standards        |
| • ASTM F04 / Medical Devices | • e-Health / ITU-T H.800s    | • IoT oneM2M                    |
| • ASTM F38 / UAV Drones      | • Wi-Fi 6/6E (IEEE 802.11ax) | • JEDEC Semiconductors          |
| • AOMedia AV1, VP9 Codecs    | • Wi-Fi 7 (IEEE 802.11be)    | • Open RAN (O-RAN)              |
| • ITU-T H.265 (HEVC)         | • IEEE P1857 / AV Coding     | • Passive Optical Network (PON) |
| • ITU-T H.266 (VVC)          | • IEEE P1872 / Robotics      | • Qi Wireless Charging          |
| • e-Health / ETSI TR 103 477 | • IEEE P2048 / AR & VR       | • SAE EV Charging Standards     |

## Strategic Considerations in SEP & Cross-Licensing

Mapping Indicator	Key Scenario	Definition	Strategic Use	Impact on Cross-Licensing	Implications in Negotiation
<b>+1 Positive Mapping favoring Essentiality</b>	An inventor or portfolio manager with incomplete knowledge about standards.	Confirms <b>strong mapping</b> between the patent claim and the standard.	Boosts <b>licensor</b> position by demonstrating SEP coverage.	Increases the <b>perceived value of the SEP portfolio</b> , justifying higher royalties.	Enhances <b>bargaining power</b> in cross-licensing deals. Provides <b>evidence of standard-essentiality</b> for enforcement.
<b>-1 Negative Mapping Against Essentiality</b>	A portfolio manager needing to challenge unfamiliar SEPs under time constraints.	Indicates evidence of <b>incomplete feature mapping</b> or discrepancies, while offering <b>mandatory/optional feature clarification</b> .	Boosts <b>licensee</b> position by challenging SEP claims.	Reduces the <b>counterparty's effective SEP portfolio size</b> , lowering royalties.	Weakens the counterparty's claims, making it easier to <b>negotiate reduced fees</b> or defend against infringement claims.

## Client Input Specification

The API requires specific inputs to generate feature mapping between wording terms from claim elements and corresponding terms from relevant standards' technical clauses, with each term mapping assigned a confidence score. Beyond term-level mapping (see example inputs and outputs on [Page 3](#)), an aggregated score is provided to evaluate the patent's alignment with a technical standard.

Our clients then utilize these term mappings as foundational building blocks for constructing production- or litigation-grade expert claim charts, a separate specialized service also provided by Apex Standards.

Variable Name	Description	Requirement	Strategic Consideration
<b>intent</b>	Indictive Direction of Mapping: <b>+1 (Positive Essentiality)</b> – Strong mapping with the standard. <b>-1 (Negating Essentiality)</b> – Incomplete or low-quality mapping.	<b>Required</b>	Defines position in <b>cross-licensing and SEP disputes</b> .
<b>patno</b>	Patent number (granted or pending).	<b>At least one of patno or emphasized_text must be provided.</b>	Direct linkage to <b>existing SEP databases and legal records</b> .
<b>emphasized_text</b>	Claim element(s) or specific feature(s), a claim snippet to focus on, or initial draft claims for analysis.	<b>At least one of patno or emphasized_text must be provided.</b>	Ensures <b>targeted technical mapping</b> to relevant standard sections.
<b>spec</b>	Intended technical standard (if known).	Optional	Enhances <b>precision and relevance</b> in essentiality analysis.
<b>section</b>	Specific standard section for mapping (if known).	Optional	Narrows down <b>key technical clauses</b> for targeted mapping.
<b>priority_date</b>	Filters essentiality assessments to <b>standards published on or after this date</b> .	Optional	Prevents mapping to earlier standards that could be used as prior art against the patent or its inventive concepts.

## Remarks

### 1. Customizable API Input

The API can be configured to accept client-specific inputs, including but not limited to **inventor comments, inventor-suggested mappings, and other client-provided annotations**. This customization allows for greater flexibility to align with client requirements, such as:

- **Inclusion** of specific known or believed relevant technical standards to focus the mapping process.
- **Exclusion** of certain clauses that the client deems irrelevant.

These modifications enable a more tailored approach to feature mapping, ensuring the API meets specific analytical needs.

### 2. Complimentary Evaluation Trial

A **complimentary evaluation trial** is available for client-provided input **before API key channel configuration**. Clients may submit an **Excel file** containing up to **10 patent-standard combinations**, formatted in accordance with the header structure specified in the **input specification table**.

- This evaluation trial is **offered at no cost and with no commitment**, and clients are **under no obligation to purchase additional services**.
- An **NDA template** is available upon request before initiating the evaluation.

This risk-free trial enables clients to evaluate the API's suitability before entering a formal service agreement.

## Contact Information

For any questions, clarifications, or requests for additional information, clients may contact Apex Standards using the following details:

**Website:** [www.apexstandards.com](http://www.apexstandards.com)

**Email:** [support@apexstandards.com](mailto:support@apexstandards.com)

# APEX STANDARDS

GPT AI-Assisted Standard Essential Patent Evaluation API

Fact Sheet  
SEP Evaluation API  
2 October 2023

Portfolio Managers of a vast number of patents often grapple with the complexities brought by the sheer volume of these patents, their spread across multiple jurisdictions, a potential deficiency in subject-matter expertise, and the absence of concrete information to validate standard essentiality claims. Complicating matters further, during SEP declarations, entities might strategically choose not to pinpoint the "Illustrative Specific Part of the Standard (Section Clause)". Addressing these challenges, Apex Standards integrates its carefully curated SEP, TS Section, and TDoc databases with its most advanced domain-specific GPT. This synergy enables an AI-driven SEP evaluation that sheds maximum light on the subject, aiding portfolio managers in essentiality evaluation, anchoring, prioritization, verification, and validation.

**Apex Standards SEP-TS-Section Evaluation API** stands as a robust tool for patent evaluations in relation to specific standards. It offers an automated and structured approach to input data in a JSON format, demonstrating flexibility in accommodating claim text strings customized to fulfill research needs and subsequent licensing tasks. The API also provides capabilities to denote specific "specs" and extrapolate "spec\_versions", ensuring that they remain pertinent to the relevant standards. Its output is thorough, highlighting specific sections and revealing key term mappings with similarity scores. This nuanced analysis, combined with explanations, equips users for more accurate future validations.

[www.apexstandards.com](http://www.apexstandards.com)

Work Item / Standard no.	Title	Version/Edition	Illustrative specific part of the Standard (e.g Section)
TS 38.214			

  

External ID	Application Number	Publication Number	Title	Applicant/holder	Country of Registration
US2021160916 A1	US2021160916 A1	US2021160916 A1	TECHNIQUES AND APPARATUS FOR IMPROVING NEW RADIO COVERAGE	QUALCOMM INC	US UNITED STATES

**Fig 1.** On the ETSI IPR Declaration Website, Qualcomm has declared a patent family, led by US2021160916 A1, as essential to the standard TS 38.214 under 5G Release 17. Notably, details regarding the specific part of the standard (e.g., section) and its version/edition were not provided.

```
{
  "patent": "US2021160916A1",
  "emphasized_text": "",
  "spec": "38.214",
  "spec_version": "17.1.0",
  "spec_section": "",
  "priority_date": "2017-09-09"
}
```

**Fig 2.** To call the SEP Evaluation API, we form a JSON input. In this scenario, our key data is the patent number US2021160916 A1. The API can also accept claim texts: if the researcher initiating the API call has specific text to focus on (like a particular claim of interest, or a newly drafted claim for essentiality testing), it can be input under "emphasized\_text". For this example, we'll leave it blank as a starting point. The "spec" is set to "38.214", as indicated by Qualcomm. Based on the detail "5G Release 17", we try "spec\_version" as "17.1.0", but this can also be entered with an asterisk "17.\*". If a researcher pre-identifies a relevant section of the standard for comparison, perhaps after discussing with the inventor, it can be provided under "spec\_section". Regarding "priority\_date", we found that while US20210160916 A1 was filed on 2018-09-07, it claims an earlier priority from PCT/CN2017/101015 (published as WO2019047152A1) with a priority date of 2017-09-08. To ensure we search standards after this date, we adjust it one day later, to "2017-09-09".

```
1- [
2
3- {
4
5   "spec": "TS 38.214",
6   "version": "17.1.0",
7   "release_date": "2022-05-04",
8   "filename": "ts_138214v170100p.pdf",
9   "section": "6.1.1.1 Codebook based UL transmission",
10  "similar_term_mappings": [
11    {"term_claim": "transmission", "term_tech_clause": "uplink
12     codebook", "similarity_score": 0.87},
13    {"term_claim": "decode", "term_tech_clause": "SRS resource",
14     "similarity_score": 0.79},
15    {"term_claim": "repetitions", "term_tech_clause": "retransmission",
16     "similarity_score": 0.83},
17    {"term_claim": "acknowledgment", "term_tech_clause": "response",
18     "similarity_score": 0.76},
19    {"term_claim": "user equipment", "term_tech_clause": "UE",
20     "similarity_score": 0.94},
21    {"term_claim": "attempting", "term_tech_clause": "trying",
22     "similarity_score": 0.81},
23    {"term_claim": "selectively", "term_tech_clause": "conditionally",
24     "similarity_score": 0.78}
25  ],
26  "explanation_of_similarity": "Details on UL transmission with reference
27   to codebooks."
28 },
29 {
30
31  "spec": "TS 38.214",
32  "version": "17.1.0",
33  "release_date": "2022-05-04",
34  "filename": "ts_138214v170100p.pdf",
35  "section": "6.1.2.3.1 Transport Block repetition for uplink
36   transmissions",
37  "similar_term_mappings": [
38    {"term_claim": "transmission", "term_tech_clause": "uplink
39     transmissions", "similarity_score": 0.95},
40    {"term_claim": "repetitions", "term_tech_clause": "repetition Type
41     A", "similarity_score": 0.88},
42    {"term_claim": "decode", "term_tech_clause": "interpretation",
43     "similarity_score": 0.77},
44    {"term_claim": "acknowledgment", "term_tech_clause": "confirmation",
45     "similarity_score": 0.84},
46    {"term_claim": "user equipment", "term_tech_clause": "UE",
47     "similarity_score": 0.92},
48    {"term_claim": "grant", "term_tech_clause": "permission",
49     "similarity_score": 0.80},
50    {"term_claim": "attempting", "term_tech_clause": "effort",
51     "similarity_score": 0.79},
52    {"term_claim": "selectively", "term_tech_clause": "by choice",
53     "similarity_score": 0.76}
54  ],
55  "explanation_of_similarity": "Procedures for transport block repetition
56   in uplink transmissions."
57 },
58 {
59
60  "spec": "TS 38.214",
61  "version": "17.1.0",
62  "release_date": "2022-05-04",
63  "filename": "ts_138214v170100p.pdf",
64  "section": "6.1.2.3.3 Transport Block repetition for uplink
65   transmissions",
66  "similar_term_mappings": [
67    {"term_claim": "transmission", "term_tech_clause": "uplink
68     transmissions", "similarity_score": 0.96},
69    {"term_claim": "repetitions", "term_tech_clause": "Transport Block
70     repetition", "similarity_score": 0.90},
71    {"term_claim": "decode", "term_tech_clause": "interpret",
72     "similarity_score": 0.78},
73    {"term_claim": "acknowledgment", "term_tech_clause": "validation",
74     "similarity_score": 0.75},
75    {"term_claim": "user equipment", "term_tech_clause": "UE",
76     "similarity_score": 0.93},
77    {"term_claim": "grant", "term_tech_clause": "authorization",
78     "similarity_score": 0.82},
79    {"term_claim": "attempting", "term_tech_clause": "trying",
80     "similarity_score": 0.88},
81    {"term_claim": "selectively", "term_tech_clause": "preferentially",
82     "similarity_score": 0.77}
83  ],
84  "explanation_of_similarity": "Describes transport block repetition
85   methods for uplink transmissions."
86 }
87 ]
```

**Fig 3.** The API returns a JSON output with three key results tied to TS 38.214 Ver. 17.1.0, specifically Sections 6.1.1.1, 6.1.2.3.1, and 6.1.2.3.3. To enhance clarity, the API details term mapping, essential for future validation and claim charting. For instance, in Section 6.1.2.3.3, the patent's term "transmission" correlates with "uplink transmissions" from the technical clause. The similarity score here is a notable 0.96 (96%). Another highlight is the interconnection of terms "acknowledgment" and "authorization", providing context clarity. Additionally, concise explanations are provided, such as the one for the third section "describing transport block repetition methods for uplink transmissions."