

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.

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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."