## **Apex Standards Government & Corporate Service Matrix**

Code	Service	Description	Domain	Scenario	Objective
ASG-01 [1][2][3][6][7]	Industry Analysis	Examination of technology trajectories and industry performance within the context of overall macroeconomic conditions and trends	Client selected	Business cycles, inflation, GDP, innovation policies, trade policies, market scale and supply chain security considerations	Strategic decision-making, technology supremacy, economic resilience
ASG-02 [4][5][7]	Risk Analysis	Systematic evaluation of a technology's potential risks, vulnerabilities, implications, and uncertainties in both business environments and national security contexts	Client selected	National security awareness and response, policy recommendations; business strategies for mergers, acquisitions, new ventures, high-risk-high-return projects	Mitigate risks, enhance resilience
ASG-03 [1][2][3][4][5] [6]	Trend Analysis	Examination of an emerging technology and relevant market reactions for informed decision-making	Client selected	Product development, R&D spending, resource allocation, marketing, sales	Identify opportunities, drive growth
ASG-04 [1][3][4][5][6][7]	Competitive Analysis	Thorough evaluation of key players' strengths, weaknesses, opportunities, and threats, enabling strategic comparisons	Client selected	Strategic planning, product positioning, pricing	Outperform rivals, create differentiation
ASG-05 [2][3][5][6][7][8][9] [17][18][22]	Standards Development	Investigation of stakeholders' involvement in developing and implementing technical standards, and the underlying motives behind their standardization contributions	Client selected	Interoperability, regulation compliance, best practices	Economies of scale, cost reduction, innovation
ASG-06 [10][11][17][18][22]	Intellectual Property Analysis	Evaluation of IP assets, identification of potential infringements and licensing opportunities, and development of long-term strategies	Client selected	Patent strategy, IP valuation, litigation	Maximize IP value
ASG-07 [1][2][3][7][17]	Reporting and Insights	Periodic reporting of technology development data and insights, enabling well-informed decision-making and effective strategic planning	Client selected	Performance evaluation, market outlook, trend analysis	Data-driven actions, situational vigilance, performance improvement
ASG-08 [1][3][5][6][17]	R&D Intelligence Analysis	Analysis of research and development trends, opportunities, and advancements to drive innovation.	Client selected	Emerging technologies, market opportunities, research funding, national strategic initiatives	Foster innovation, guide R&D investments
ASV-10 [10][11][23]	Standard Essentiality Estimation	Filtering of potential SEPs against a client selected standard for a client specified portfolio	Client selected standard	I have 20 patents. Estimate their standard essentiality against 3GPP TS 38.331.	Restricted SEP Mining
ASV-11 [10][11][23]	Standard Essentiality Estimation	Filtering of potential SEPs against a client selected collection of standards for a client specified portfolio	Client selected collection of standards	I have a homogeneous mixture of 200 patents. Estimate their standard essentiality against all 5G (3GPP TS 38 Series) standards	Targeted SEP Mining
ASV-12 [10][11][23]	Standard Essentiality Estimation	Filtering of potential SEPs against all possible industrial standards for a client specified portfolio	Universal standards	I have a heteronomous mixture of 2000 patents. Estimate their standard essentiality against all industry standards, e.g., 3GPP, IEEE, Wifi, ASTM Medical Devices, UAS/Drones, IoT, Fintech, etc.	Comprehensive SEP Mining Industry Use Case Scenario Mining Monetization Field Discovery Invention Commercialization Analysis Out-Licensing Opportunity Discovery
ASV-20 [12][13][14][15] [19]	Pseudo Claim Charting	Al charting for the patent claim elements against a client selected standard's technical clause	Selected standard	I have a patent. Have AI chart its claims against 3GPP TS 38.331.	Essentiality Evaluation for a potential SEP
ASV-21 [12][13][14][15][19]	Pseudo Claim Charting	Al charting for the patent claim elements against a client selected collection of standards' technical clauses	Selected collection of standards	I have a patent. Have AI chart its claims against all potential 3GPP TS 38 Series that this patent may be essential to.	Essentiality Evaluation for a Super SEP Cross-referencing of Relevant Standards
ASV-30 [20][21][24]	Human Expert Claim Charting	Human expert charting for the patent claim elements against a client selected collection of standards' technical clauses	Selected standard	<ol> <li>I own a patent. Have a human expert chart its claims against a collection of 3GPP TS standards that this patent may be essential to. Perform essentiality charting.</li> <li>I need to know whether to take a license when approached by a potential licensor. I need a human expert verify a patent's standard essentiality feature-by-feature. Perform non-essentiality charting upon incomplete feature mapping found.</li> <li>I need to know whether to take a license when approached by a potential licensor. I need a human expert verify a patent's validity. Perform invalidation charting against identified prior arts.</li> </ol>	Patent Pool Admission Licensing Negotiation Cross-Licensing Negotiation Infringement Analysis Litigation Complaint Preparation
ASV-40 [16] [19]	Pseudo Claim Construction	Al understanding and interpretation of claim elements. Context-based synonym identification	Context aware	I have a patent or a collection of draft claims as input. Have AI perform context-based interpretations over the feature terms as identified for the input.	Feature Term Meaning Clarification Technical Clause Meaning Clarification Patent Application Filing, Claim & Spec Drafti Invalidity Analysis Infringement Analysis Standard Essentiality Analysis
ASV-50 [20][21][24]	Human Expert Claim Construction	Human expert construction of claim elements	Context aware	I have a patent or a collection of draft claims as input. Have a human expert understand and interpret the meaning of each feature from the input.	Invalidity Analysis Infringement Analysis Standard Essentiality Analysis

## References

- 1. AS National Security "Fundamental Research in Telecommunications," www.apexstandards.com/apex.ns.fsci.pdf
- 2. AS National Security "3GPP Presence and 5G Contribution Analysis," www.apexstandards.com/apex.ns.3gpp.pdf
- 3. AS National Security "3GPP Email Reflector Landscape," www.apexstandards.com/apex.ns.3gpp.em.pdf
- 4. AS National Security "How Advanced Semiconductors are Changing the Face of National Security" www.apexstandards.com/apex.ns.semi.mil.pdf
- 5. AS National Security "Semiconductor Breakthrough & Geopolitical Landscape (JEDEC Standardization)" www.apexstandards.com/apex.ns.semi.pdf
- 6. AS National Security "Passive Optical Network (ITU/IEEE/3GPP)" www.apexstandards.com/apex.ns.pon.pdf
- 7. AS National Security "Global Economics: Distinct Standardization Approaches" www.apexstandards.com/apex.ns.std.hist.pdf
- 8. AS National Security "Unmanned Aerial Systems (UAS)" www.apexstandards.com/apex.uas.crossref.pdf
- 9. AS What Data Shows "3GPP RAN 3" https://www.apexstandards.com/apex.3gpp.ran3.pdf
- 10. AS Innovation Landscape Weekly: www.apexstandards.com/apex.innovation.landscape.pdf
- 11. AS Global SEP Landscaping: www.apexstandards.com/apex.landscaping.pdf
- 12. AS Pseudo Claim Charting: www.apexstandards.com/apex.pcc.pdf
- \* A short, no-cost, no-commitment sample of client-requested topics is included with each quotation.
- \* Apex Standards website: www.apexstandards.com
- \* Contact: support@apexstandards.com

- 13. AS Patent Analysis Request Form: www.apexstandards.com/apex.pcc.request.pdf
- 14. AS Pseudo Claim Charting Samples (Standard Essentiality & Invalidity): www.apexstandards.com/pcc/
- 15. AS Pseudo Claim Charting Samples (Unified Patents PATROLL Contest): www.apexstandards.com/Unified/
- 16. AS Pseudo Claim Construction and Samples: www.apexstandards.com/apex.standards.claim.construction.pdf
- 17. AS Standard Essentiality Effectuation Strategies www.apexstandards.com/apex.standards.sees.pdf
- 18. AS TDoc Second-Order Effects for SEP and FRAND Analysis Optis v. Apple, 2021 www.apexstandards.com/apex.apple.optis.frand.tdoc.pdf
- 19. AS Knowledge Graph & Comparative Claim Construction over US 8,224,282 www.apexstandards.com/apex.knwl.grf.const.pdf
- 20. AS PTAB-IPR (Inter Partes Review) Analysis over US 10,484,915: Samsung v Ericsson & Apple v Ericsson, 2022 www.apexstandards.com/apex.ipr.us.10484915.pdf
- 21. AS EPO Opposition (Invalidation) Analysis over EP 3,167,669, with 3GPP TS as prior art: Oppo v Nokia, 2023 www.apexstandards.com/apex.op.ep.3167669.pdf
- 22. AS Historical Construction & Systematic Bridging for SEPs, Change Requests (CR) and TS Section Clauses www.apexstandards.com/apex.cr.hist.pdf
- 23. AS Essentiality Approximation v Expert Evaluation www.apexstandards.com/apex.sep.ess.approx.pdf
- 24. Expert claim construction and expert claim charting samples available upon request