

ESSENTIALITY CHECKS

4P
Council

Rigorous empirical
research on
intellectual property

In the Communication COM(2017) 712 final, the EC suggested that a higher degree of scrutiny on essentiality claims is needed. In his paper Professor Giuseppe Colangelo assesses the **pros and cons** of the different **scenarios** examined in a **pilot study** commissioned by the EC on **essentiality checks**.

Check out the paper and takeaways below.

[Read paper here](#)

Key Takeaways



Essentiality checks are costly and time-consuming.



An essentiality check system needs to balance accuracy, transparency and costs.



Essentiality checks are only effective if legally binding.



The patent-by-patent assessment: potentially effective for small but unfeasible for large portfolios.



High risk of inaccuracy for essentiality checks of a subset of patents.

PROS AND CONS of the different SCENARIOS of the feasibility study on ESSENTIALITY CHECKS

A Self-assessment

Patent owners perform a self-assessment of the essentiality of their own patents.

PROS

- Low costs.

CONS

- No independent essentiality check.



B Assessment of all SDO disclosed patents

Every patent disclosed as potentially essential for a specific standard to a standard development organisation (SDO) undergoes through a comprehensive evaluation.

PROS

- Increased transparency.

CONS

- Highly expensive and time-consuming, particularly in the case of large patent portfolios.



C Random sampling

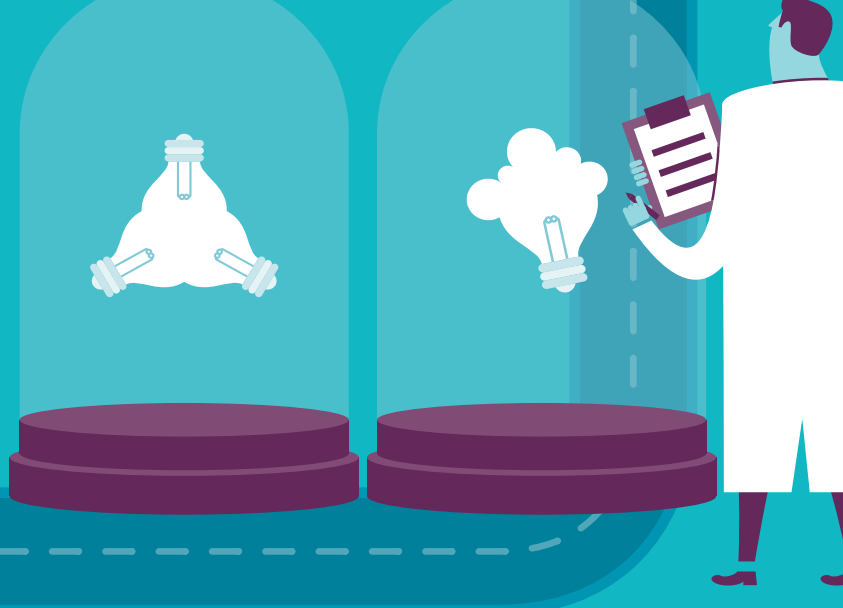
Essentiality assessment for only a subset of patents. Specialists at an independent organisation conduct essentiality examinations for only one member of the patent family of a random sample.

PROS

- Lower costs.

CONS

- Lower accuracy and confidence level.



D Requested by patent owner, using provided claim charts

Assessments if requested by the patent owner, who provides claim charts as input to the process.

PROS

- Positive impact on the quality of the assessment because of an increased information availability.

CONS

- Increased of invalidity proceedings to delay payments after claim charts lose their confidential nature.



E Requested by patent owner or by third-party

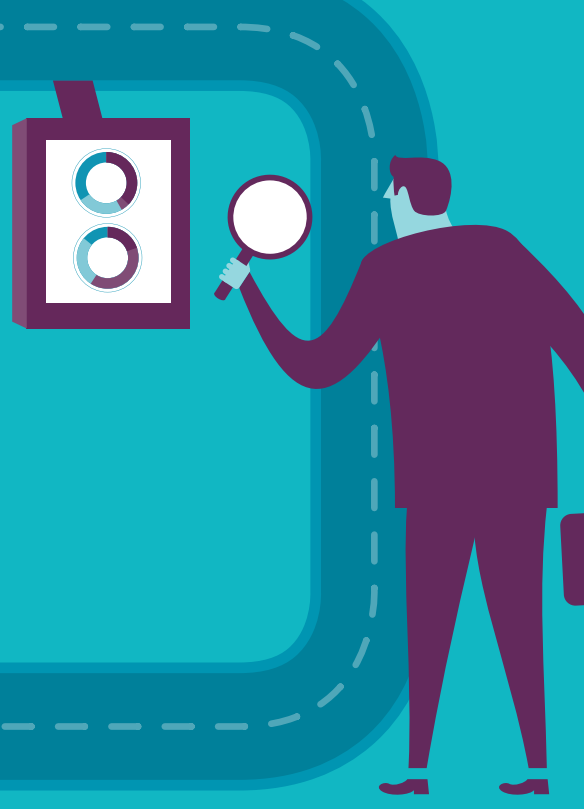
Complementing scenario D, also, third-parties can request an essentiality check.

PROS

- Positive impact on the quality of the assessment because of an increased information availability.

CONS

- Increased of invalidity proceedings to delay payments after claim charts lose their confidential nature.



F Requested by patent owner: Sampled of SDO disclosed patents

Assessments initiated at the request of patent owners are complemented by assessments of a sample of patents disclosed to SDOs by other SEP owners that do not voluntarily present claim charts.

PROS

- Increase in terms of transparency.

CONS

- Lower accuracy and confidence level.
- Incentives to over-declare because of bias and errors in sampling.



G AI-based assessment

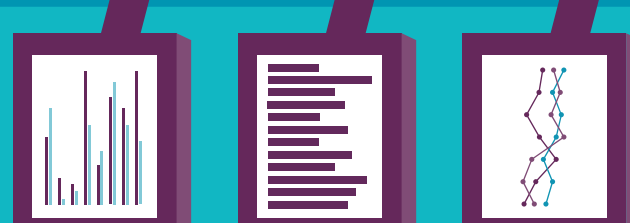
Employing AI-driven automated text comparison, leveraging semantic similarity metrics.

PROS

- Scalability: automated systems could increase the speed of the process and reduce its cost compared to human assessments.
- High score in terms of transparency.

CONS

- Risks of gaming: patent owners could anticipate the working of AI systems and adapt the wording in patent applications.
- Similarity and essentiality are not equivalent concepts (i.e., a patent may be essential to a standard but not have the textual similarities that would overlap in the analysis of the AI tool).
- The precise meaning of terminology is not yet easily understood by automated systems.



H Voluntarily request by patent owner: Assistive AI system

An assessment initiated at the request of the patent owner is complemented with the AI systems by selecting patents that are most likely to be essential.

PROS

- Same as scenario G.

CONS

- Same as scenario G.



Resources:

- **Why automated patent analysis can be wrong, even when it's right**
by Axel Contreras-Alvarez
- **Patent Landscaping Studies And Essentiality Checks: Rigorous (And Less Rigorous) Approaches**
by Haris Tsilikas
- **Estimating 5G Patent Leadership: The Importance of Credible Reports**
by Igor Nikolic
- **A Study of IPlytics Standard Essential Patent Tool**
by Tim Williams
- **AI for Patent Essentiality Review**
by Katie Atkinson and Danushka Bollegala
- **Essentiality Checks Might Foster SEP Licensing, But Do Not Stop Over-Declarations from Inflating Patent Counts and Making Them Unreliable Measures**
by Keith Mallinson
- **Pilot study for essentiality assessment of Standard Essential Patents**
by Rudi Bekkers, Joachim Henkel, Elena Mas Tur, Tommy Van Der Vorst, Menno Driesse, Byeongwoo Kang, Arianna Martinelli, Wim Maas, Bram Nijhof, Emilio Raiteri, Lisa Teubner