

Building a Patent Search Strategy of an Emerging Technology Using Citation Information

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SEARCHING FOR PATENTS OF AN EMERGING TECHNOLOGY

Conventional Approaches and Limitations

❖ Keywords

- Diverging & Developing Fields
- Scientific Terminology ≠ Language of Engineer
- Patents are written by vague terms

❖ Patent Classes

- Absent of proper classes
- Inconsistent combination of classes
- Interdisciplinary Technology

❖ Experts' Knowledge

- Depends on the Expert
- Technology Experts ≠ Patent Experts

THE NEW APPROACH

Keywords + Citation Network

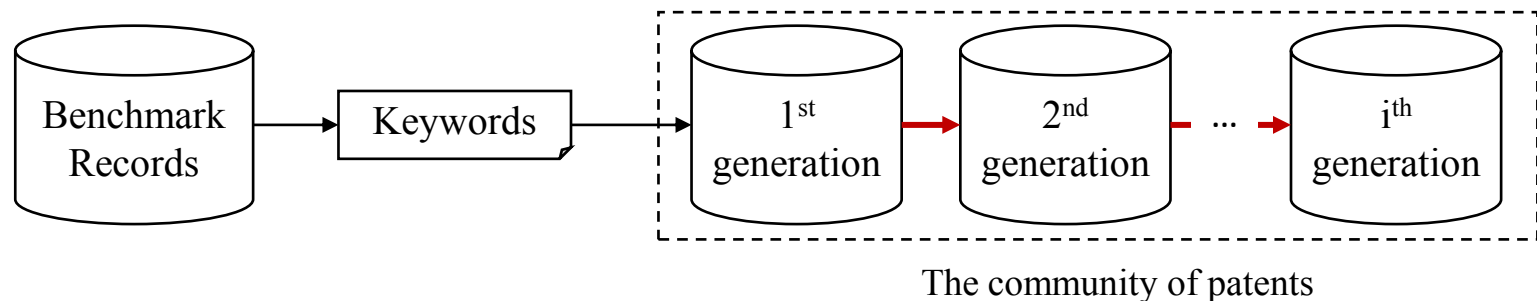
❖ Component 1: Systematically selected Keywords

- Benchmark records + Natural Language Processing
- Cleaning & Frequently appeared Keywords

❖ Component 2: Citation Relationship → Community of Patents

- Citing-Cited Patents
 - ✓ Overlapped technological Features
 - ✓ Knowledge Flow
 - ✓ Technological Relatedness (But with unrelated patents too)
- Patent Community
 - ✓ Set of technologically “relevant” patents in Citing-cited patents
 - ✓ Exhausted chain of Cited-citing patents

❖ How To



CHALLENGES

❖ Jurisdictional Heterogeneity

- Citation Practice in USPTO vs. EPO
- IPC coding

❖ Inventors' Citation vs. Examiner's Citation

- Controversy about Noise.
- Strategic citation of Inventors
- Irrelevant citation by Examiners

❖ Sensitivity

- To the 1st generation Patents
- To the Filtering Process

❖ Validity

- Very first attempt, Iterative citation
- Various Technologies?