



## **Revisiting the USPTO Concordance Between the U.S. Patent Classification and the Standard Industrial Classification Systems**

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## Revisiting the USPTO Concordance Between the U.S. Patent Classification and the Standard Industrial Classification Systems

- The USPC-SIC Concordance
- USPC Classifications, Basis of the Concordance
- Use of the USPC to Determine Industry Categories of U.S. Patents
- Reports Produced Using the USPC-SIC Concordance
- Other Concordances (e.g., IPC-based)





## Revisiting the USPTO Concordance Between the U.S. Patent Classification and the Standard Industrial Classification Systems

### The USPC-SIC Concordance

- Matches U.S. Patent Classification System (USPC) classifications to product fields based on the 1972 Standard Industrial Classification System (SIC)
- High level SIC-based categories at the 2 to 3 digit level
- Based on manual review of USPC classifications with defined decision rules for placement and multiple matches permitted
- Based on industry of manufacture
- Created in 1974 and updated on a regular basis with support from the National Science Foundation





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### USPC-SIC Concordance (continued)

- 124,000 USPC classifications with recent patent activity reviewed and matched to 41 unique SIC-based fields
- Of 1963-2001 patents,
  - 70% match to 1 SIC-based field \*
  - 91% match to 2 or fewer SIC-based fields \*
  - 96% match to 3 or fewer SIC-based fields \*

\* includes 'All Others' as an SIC-based field

- 8% of 1963-2001 patents match 'All Others' category





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### USPC Classifications, Basis of the Concordance

- Composed of a hierarchical classification system with decision rules that clearly define proper placement
- Classifications assigned by the issuing examiner
- Classifications assigned based on a patent's claimed disclosure
- One “primary” classification is assigned to each patent
- Patents and classifications are updated and kept current





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### Use of USPC to Determine Industry Categories of U.S. Patents

- Examiners work in and are familiar with the USPC
- USPC patent classifications may tend to be more consistent than other assigned classifications
- Primary patent classifications are readily identified and assigned according to determined rules
- There is a strong incentive to ensure correct assignment of classification, particularly of the primary classification
- Other classifications such as IPC classifications listed on existing U.S. patents may not distinguish a primary classification





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### Reports Produced Using the USPC-SIC Concordance

- Only the “primary” USPC patent classification is used
- “Whole” and “Fractional” patent counts are both calculated in USPTO reports
  - Whole counts fully count patents in each matching SIC field
  - Fractional counts,
    - divide patents equally among matching SIC fields
    - reduce problems with double counting of patents





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### Other Concordances

- USPC-SIC concordances, e.g., high level
- IPC-based
  - E.g., use of Canadian Patent Office classifications, 1976-1993 and use of statistically determined associations and weightings

(note that IPC classifications listed on existing U.S. patents may not be listed according to any particular relevance rule)

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*For additional details, please refer to the associated paper*







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