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

Jim Hirabayashi
U.S. PATENT AND TRADEMARK OFFICE
Customer information Services
Office of Electronic Information Products
Patent Technology Monitoring Division
jim.hirabayashi@uspto.gov

WIPO-OECD Workshop on Statistics in the Patent Field
18-19 September 2003
Geneva, Switzerland
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
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
Revisiting the USPTO Concordance Between the U.S. Patent Classification and the Standard Industrial Classification Systems

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
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
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
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)

For additional details, please refer to the associated paper
Revisiting the USPTO Concordance Between the U.S. Patent Classification and the Standard Industrial Classification Systems

Jim Hirabayashi
U.S. PATENT AND TRADEMARK OFFICE
Customer information Services
Office of Electronic Information Products
Patent Technology Monitoring Division
jim.hirabayashi@uspto.gov

WIPO-OECD Workshop on Statistics in the Patent Field
18-19 September 2003
Geneva, Switzerland