

Patent Prosecution Statistics: Large versus Small Entities



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Kate Gaudry, Ph.D., focuses her practice on patent prosecution and counseling and patent reexamination and reissue, with an emphasis on pharmaceuticals, optics, biotechnology, computer programs and food products. Dr. Gaudry's scientific and legal training spans the fields of biology, mathematics, physics, and computer science. Her experience is particularly strong in applications spanning multiple fields. Dr. Gaudry performed her undergraduate work at Fort Hays State University, while participating in summer research projects at Los Alamos National Laboratory. Dr. Gaudry then completed her Ph.D. in computational neurobiology at the University of California, San Diego. After working for two years as a patent scientist, she then pursued and completed her J.D. from Harvard Law School.

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Generally, the patent examination process availed to applicants is procedurally the same regardless as to whether the applicant is a large entity, a small entity or a micro-entity. A notable difference is that many of the United States Patent and Trademark Office (USPTO) fees are reduced by 50% for small entities and reduced by 75% for micro-entities. While such fees can help make the patent office more accessible to smaller entities, smaller entities may nonetheless remain disadvantaged. For example, tighter budgets may preclude their ability to obtain top counsel for representation during examination, and/or lesser experience with the patent system may result in knowledge deficiencies about how to most effectively prosecute an application. We set forth to compare small entities' patent filings and prosecution results compared to large entities.

We submitted, and received a response to, a request under the Freedom of Information Act¹ to identify application data for all published utility patent applications filed between January 1, 2004 and December 31, 2008 that were assigned to one of ten art units. The requested application data included the entity type (as estimated based on the fees paid at filing), status (pending, patented or expired, or abandoned), and the number of issued office actions.

The selected art units included: 1618 (organic compounds), 1619 (biotechnology

and organic chemistry), 1644 (chemistry: natural resins or derivatives; peptides or proteins; lignins or reaction products thereof), 1717 (coating apparatus), 2161 (data processing: database and file management or data structures), 2163 (computer architecture, software and information security), 2822 (semiconductor device manufacturing: process), 2897 (semiconductors, electrical and optical systems and components), 3622 (data processing: financial, business practice, management, or cost/price determination) and 3674 (closure fasteners). The request yielded results for 23,966 patent applications across the art units.

As illustrated in Figure 1, generally, large-entity filings dominated, in number, small-entity filings. However, this discrepancy was not observed in the

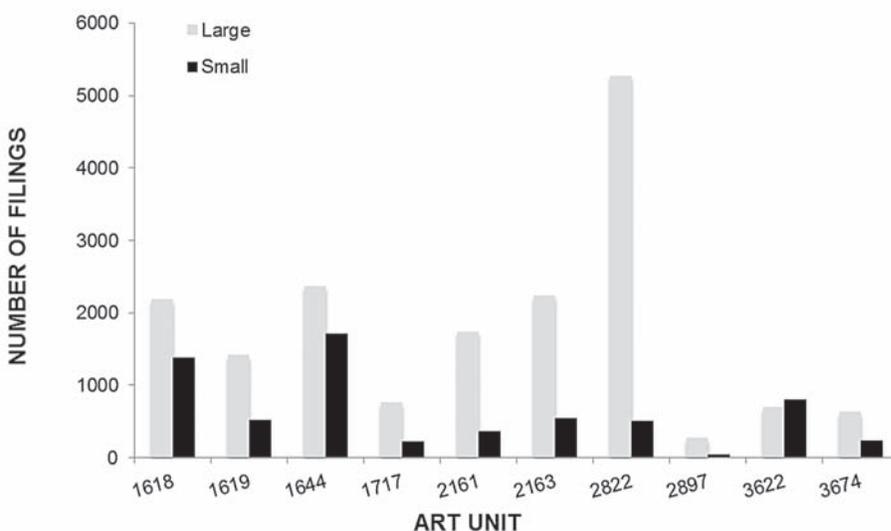


Figure 1. Gray and black bars show the number of published utility patent applications filed between January 1, 2004 and December 31, 2008 by large and small entities, respectively that were assigned to the identified art unit.

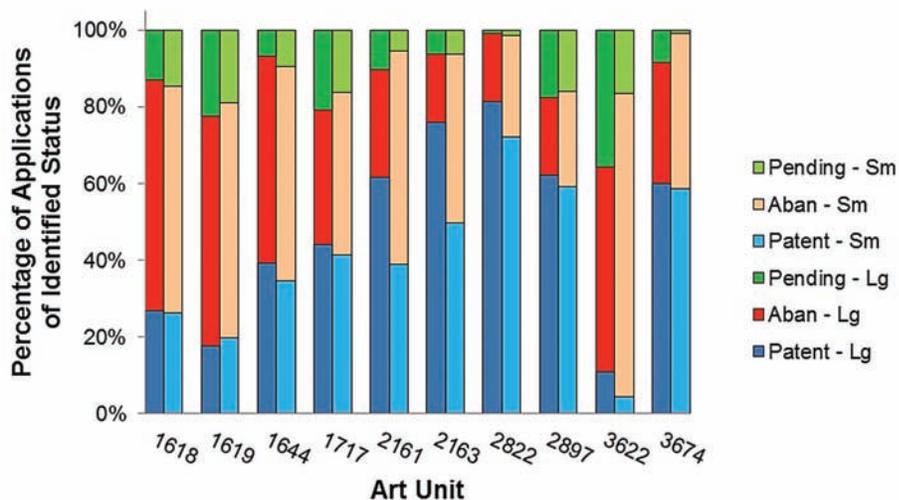


Figure 2. Blue, red and green bars show the proportion of published utility patent applications filed between January 1, 2004 and December 31, 2008 that were identified of having a status of patented (or expired), abandoned or pending, respectively. Darker shades represent applications filed by large entities, and lighter shades represent applications filed by small entities.

business-methods art unit 3622, where the small-entity filing count was actually 16% higher than the large-entity filing count. This may not be surprising, as technology related to business methods may be more accessible to smaller companies and individuals relative to technology related to, e.g., chemistry and/or semiconductors.

For each entity type and for each art unit, we calculated the percentage of applications of various statuses: patented, pending or abandoned. As shown in Figure 2, rather consistently, large entities' patented and pending percentages were higher than those for small entities. On average, large entities' portfolio included 18% more patents, 22% fewer abandonments and 34% more pending applications relative to small entities' portfolios. The most substantial difference was observed in the two 2100 art units (the 2100 technology center generally being related to computer architecture, software and information security) and also in the business-method art unit. Across these three art units, the patented portion of small entities' filings was between 40% and 65% as compared to corresponding large entities' statistics.

Correspondingly, small entities both absolutely and relatively let a large portion of their applications go abandoned. Of the 6,343 small-entity applications studied here, 3,509 applications were identified as being abandoned. Thus, without even considering the fate of the pending applications, more than half of small entities' filings become abandoned. Meanwhile, the abandonment rate for large entities is less, accounting for 6,200 of the 17,623 appli-

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cations filed by large entities (35%). This means that for the years and art units sampled, small entities' patent applications were 58% more likely to be abandoned than large entities.

To further investigate this discrepancy, we assessed the number of Office Actions during prosecution of patents and, sepa-

rately, of abandonments. As shown in Figure 3, large entities' patents generally issued more quickly than small entities' patents (with 46% of large entities' patents issuing after only 0 or 1 Office Action, as compared to 37% of small entities' patents issuing after 0 or 1 Office Action). Meanwhile, small entities' abandonments occurred after fewer Office Actions (with 53% of small entities' abandonments occurring after 0 or 1 Office Actions, as compared to 42% for large entities).

Potentially, this data may suggest that large-entities' allowance rates are higher than small entities because large entities are more likely to aggressively pursue a patent and/or more reluctant to abandon an application. Another (alternative or additional) explanation may be that large entities have the experience and/or representation to aid in selecting inventions for patent filing that have a reasonable prospect of being allowed and/or for effectively understanding and responding to Office Actions. IPT

ENDNOTES

1. Assigned FOIA number F-14-00083.

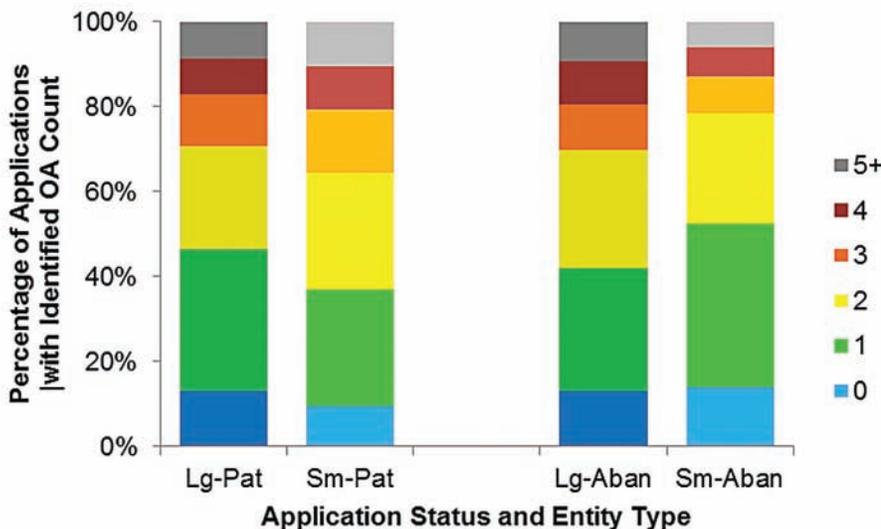


Figure 3. Each column represents a group of abandoned or patented applications filed in one of the herein-identified art units by either large or small entities. The height of the bars within each column represents a proportion of those applications for which a particular number of office actions (as identified by the legend) were issued during their prosecutions. Darker shades represent applications filed by large entities, and lighter shades represent applications filed by small entities.