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## Forward Citations As A Patent Value Metric

Law360, New York (August 31, 2016, 11:15 AM ET) -- In the constant struggle to find the best way to automate patent evaluation to find valuable patents quicker and more efficiently, different patent metrics are considered, discussed, re-evaluated and occasionally benchmarked. The number of words, unique words, concepts in claims, number of claims, backward and forward citations, priority and expiration dates, number of foreign filings family members, and even the number of inventors, are only some of the metrics mentioned and examined repeatedly.



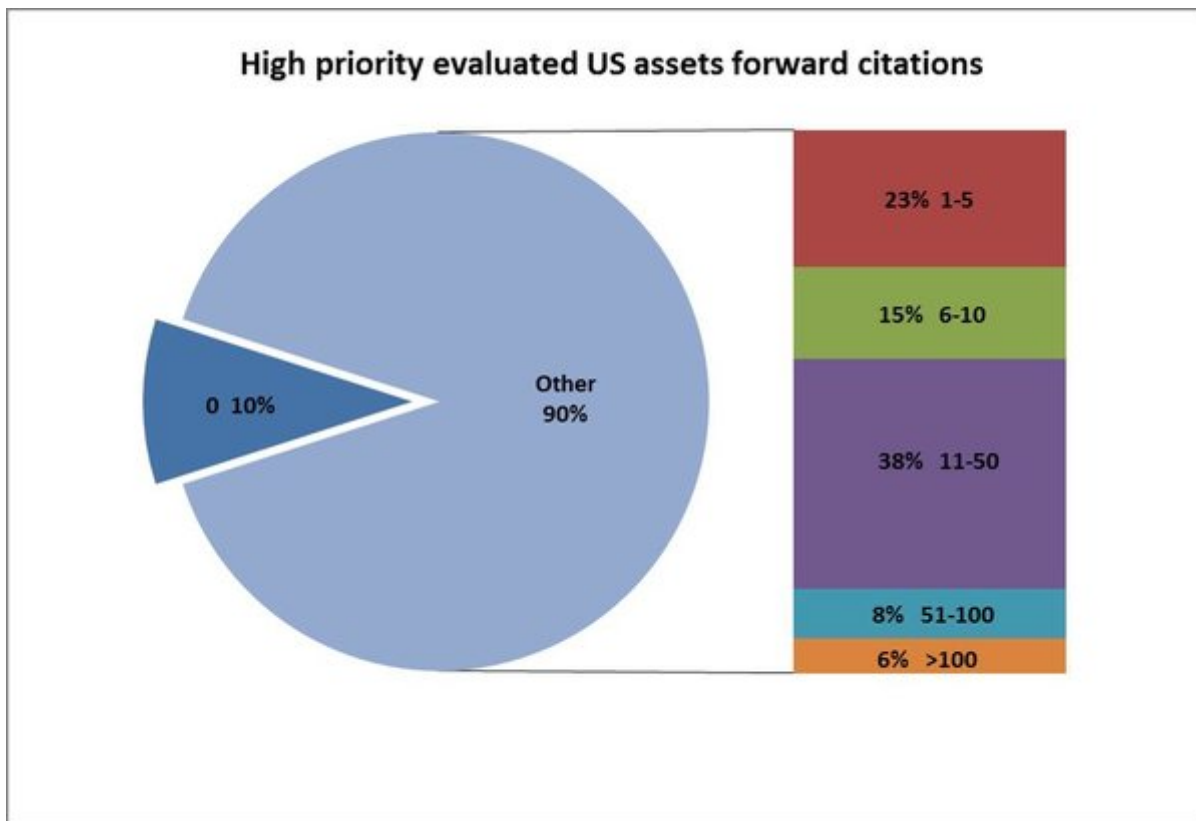
Goran Grbic

Of these, forward citations seem to be the metric that is mentioned and evaluated the most. There are numerous articles, blogs, discussions and white papers about the importance of the forward citation metric value in evaluating a patent. There have been several articles on this topic including "Finding the Best Patents — Comparative Patent Ranking Systems — Citations Still Matter" by Erik Oliver, Kent Richardson and Fredrik Johansson in IPWatchdog, and "The Role Of Citation Analysis In Determining Patent Value" in Law360 by Chipworks President Julia Elvidge. In this piece, we will benchmark the value of forward citations using data from work we completed to evaluate thousands of software, electronic system and semiconductor technology patents and from public sources on United States patent litigation.

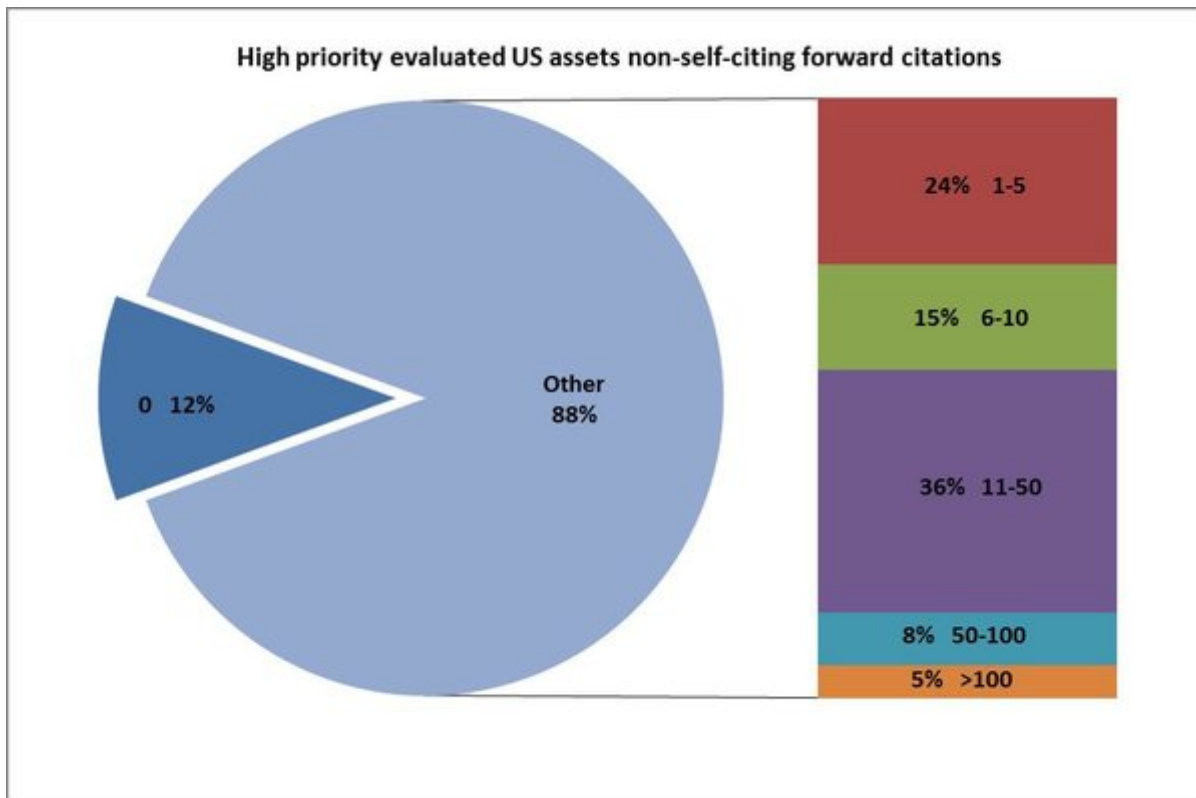
### Patent Evaluation Database

Over a 10-year period, more than 60,000 unique patent assets, granted and applications covering all aspects of semiconductor technology, electronic systems and consumer electronics as well as software have been categorized, evaluated and archived in a patent evaluation database. Evaluation, in essence, means that subject matter experts, by applying an eyes-on-assets approach, determined whether a patent fell into a high-, medium- or low-priority category, prioritized based on the likelihood of its use in a commercial product and on the ability to prove the use of the claimed invention in that product.

Of 60,000 patents manually evaluated, more than 8,000 assets fall into the high-priority group. Checking forward citations for these, we found that 90 percent of the assets have one or more forward citations.

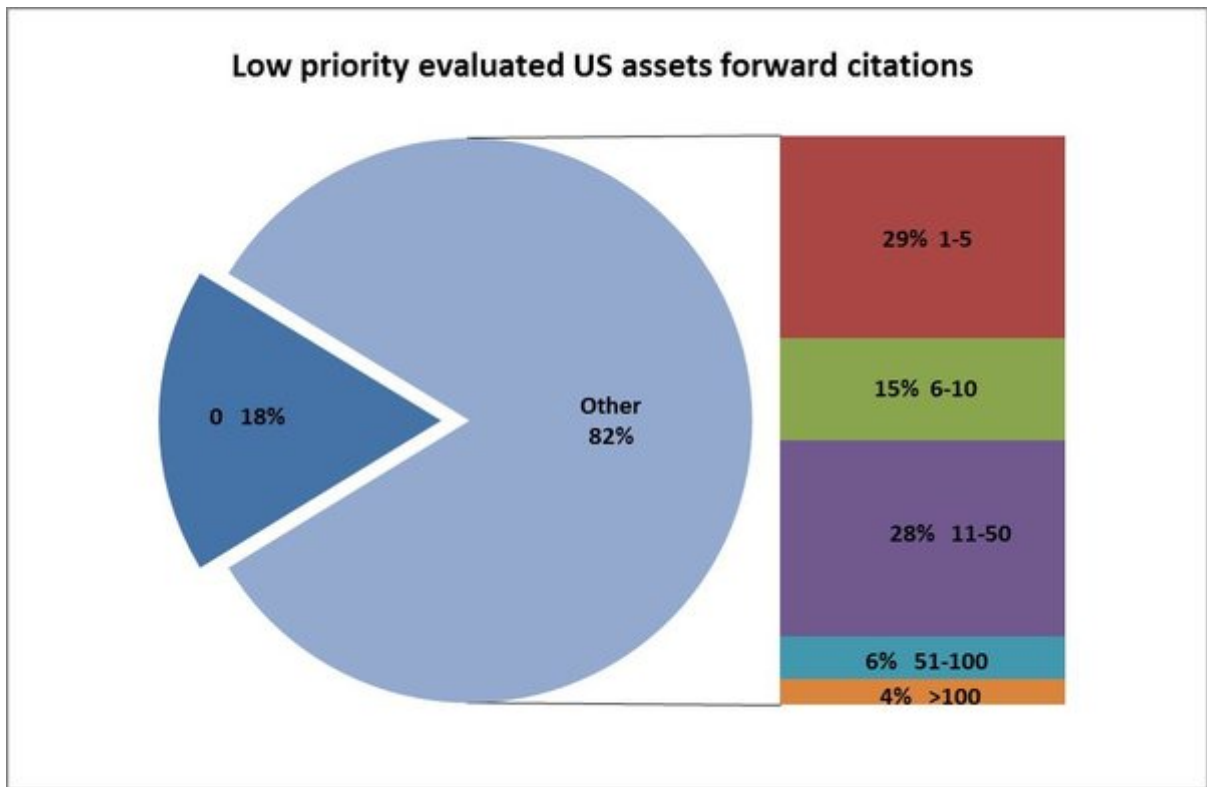


Comparing this with non-self-citing forward citations for high priority patents (to exclude assignee company forward citations) found that there is not much difference. The number of assets with no forward citations rises just 2 percent to 12 percent.

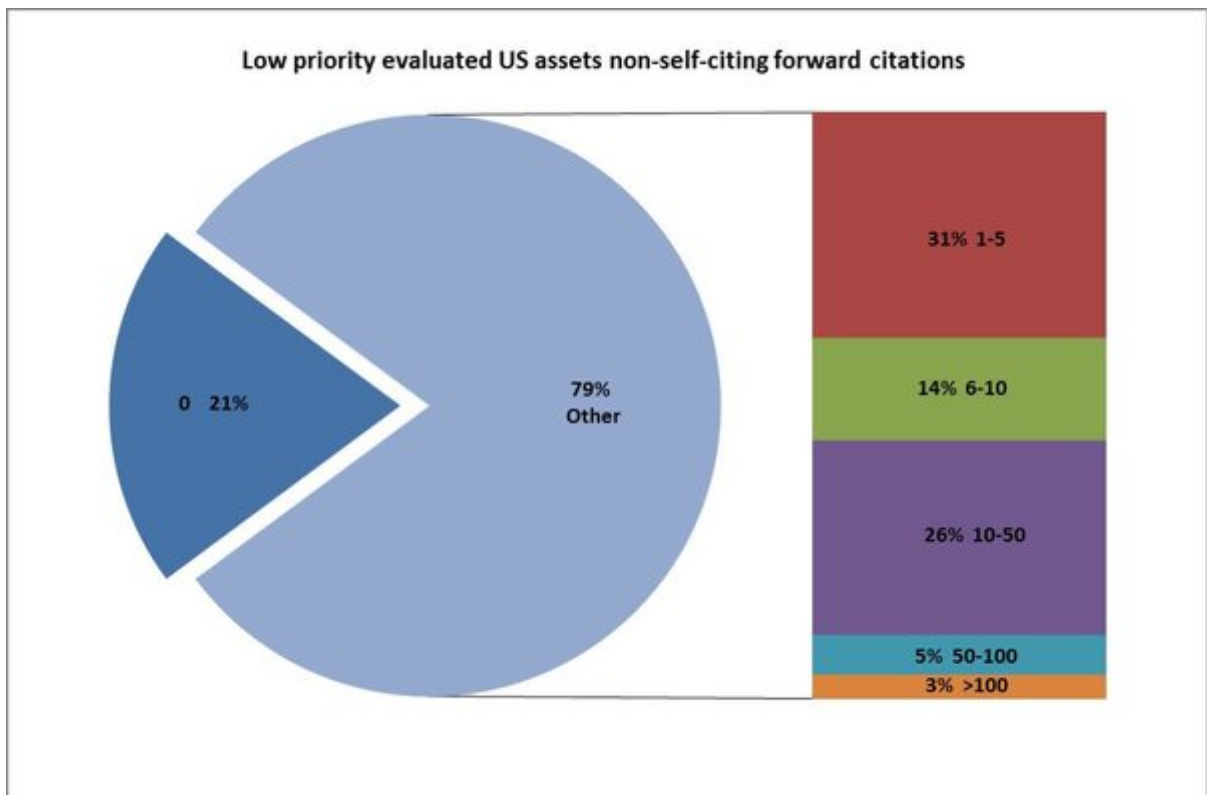


On the other hand, of the 60,000 evaluated assets, more than 14,500 assets are in the low priority group. Observing forward citations for those, found that 18 percent of the low-priority assets do

not have forward citations, and 47 percent of the assets having five or less forward citations.

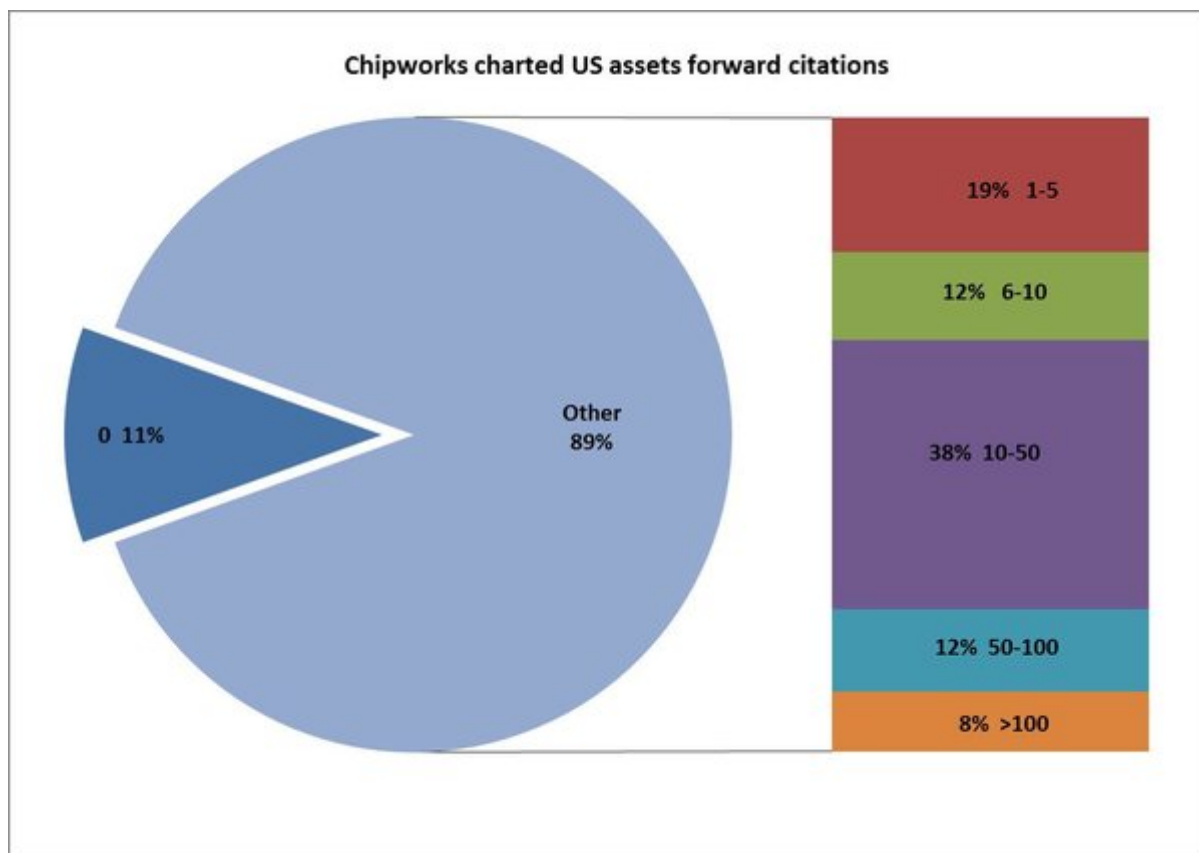


Once again, when compared with non-self-citing forward citations for low-priority patents, there is not much difference. The number of assets with no forward citations rises only 3 percent to 21 percent.

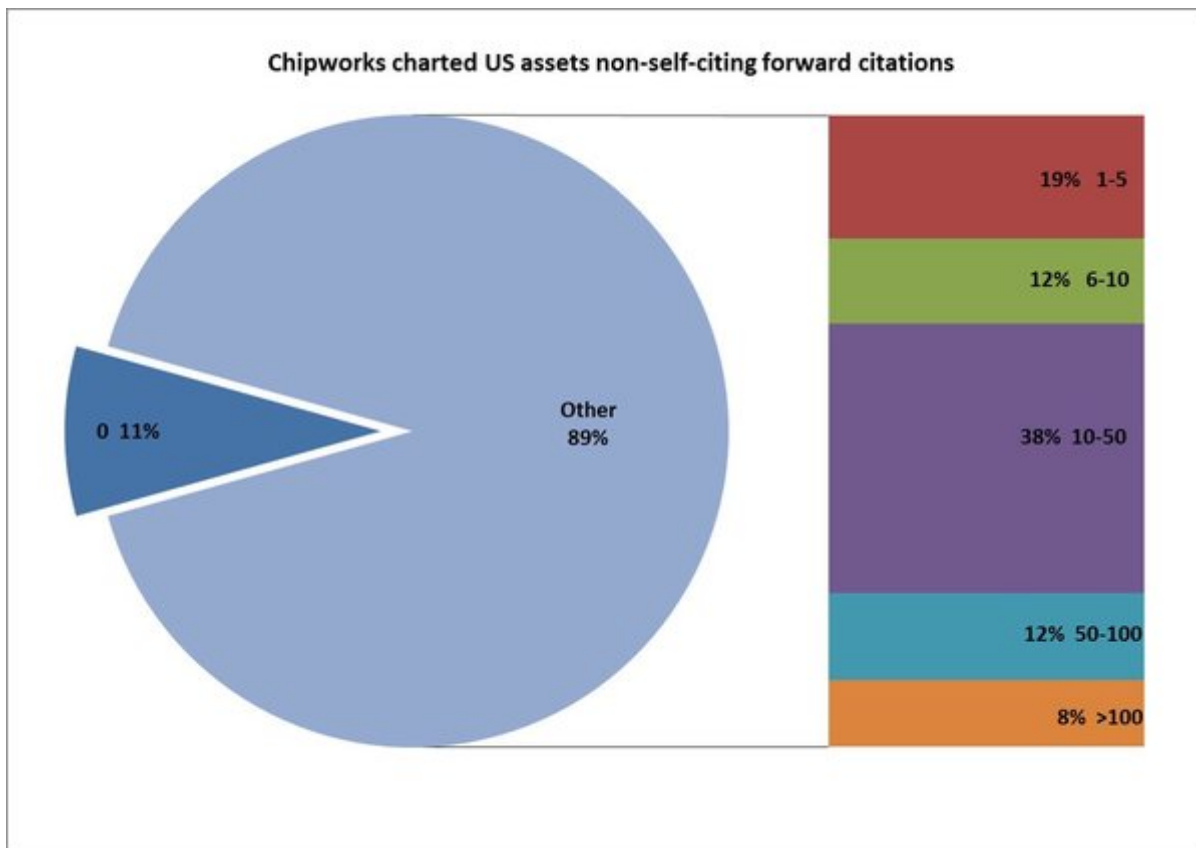


Historically, my company, Chipworks, has provided more than 3,000 claim charts on more than 1,900 unique assets, granted and applications. A claim chart, in essence, means that full evidence of use has been documented on at least one claim against a specific target product. Some of these claim charts are used in formal litigation and some of them are provided to support licensing negotiations and defense preparation.

Observing the forward citations for claim charted United States assets, found that only 11 percent do not have any forward citations and that only 30 percent of the claim charted assets have five forward citations or less, with 70 percent of the assets having six or more forward citations.

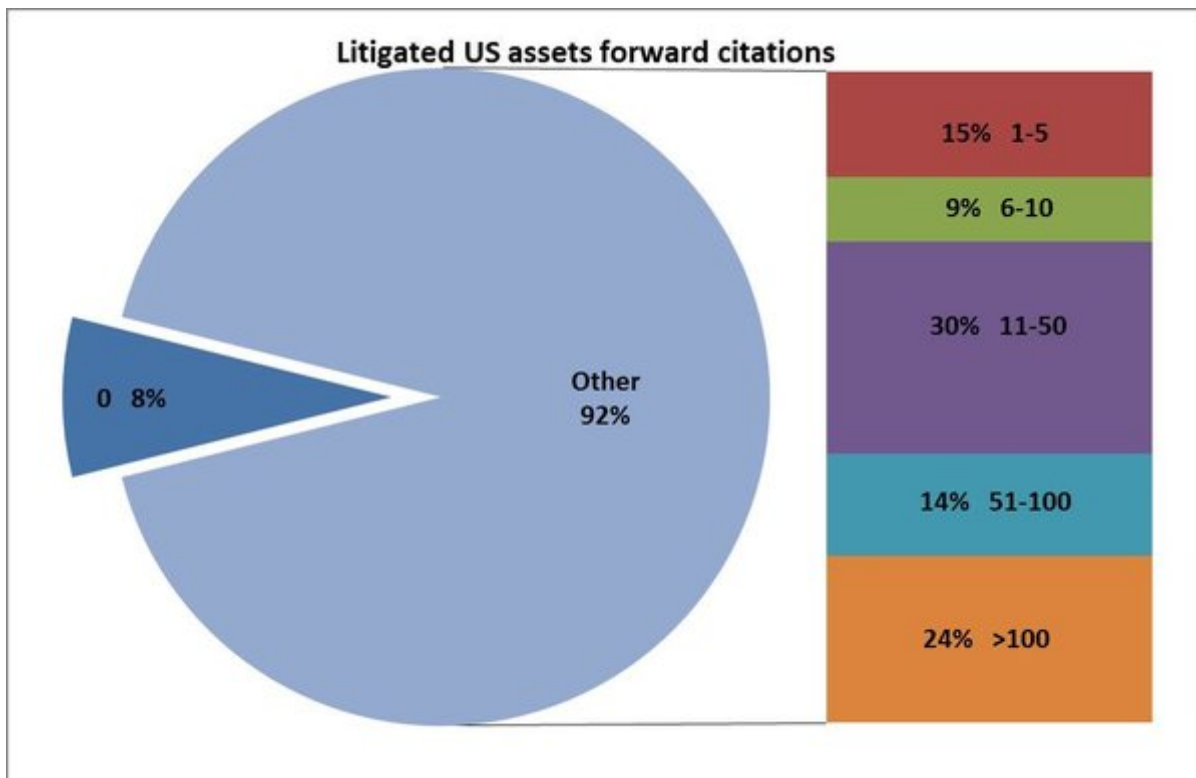


When compared with non-self-citing forward citations for claim charted United States assets, there is no difference. The number of assets with no forward citations is still 11 percent.

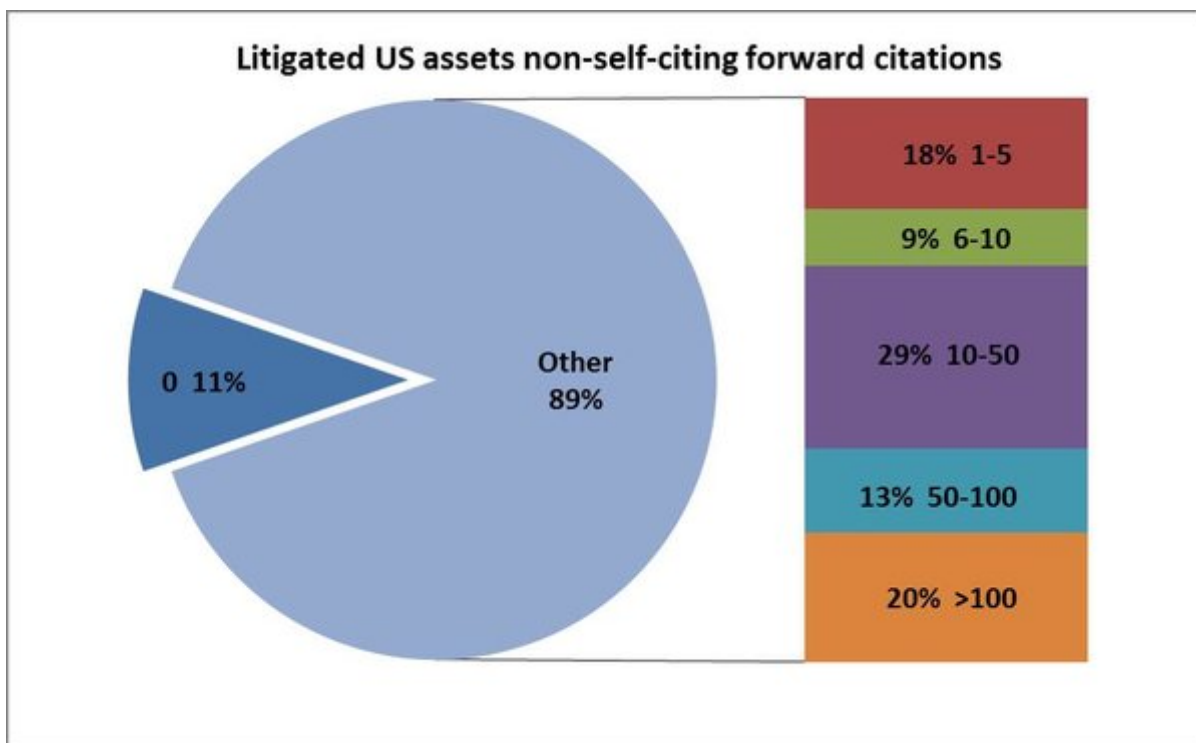


### U.S. Patents Litigated in Last Five Years

We have also tracked more than 3,700 United States patents that have been litigated in the last five years in technologies such as electronic circuit design, integrated circuit process and IC packaging, and in a broad variety of electronic system areas like communications, automotive, cloud, big data, software, mobile, internet of things, etc. When observing forward citations from these litigated assets, data shows that only 8 percent do not have any forward citations and that only 23 percent of the claim charted assets have five forward citations or less. On the other hand, 24 percent of the litigated United States assets have 100 or more forward citations



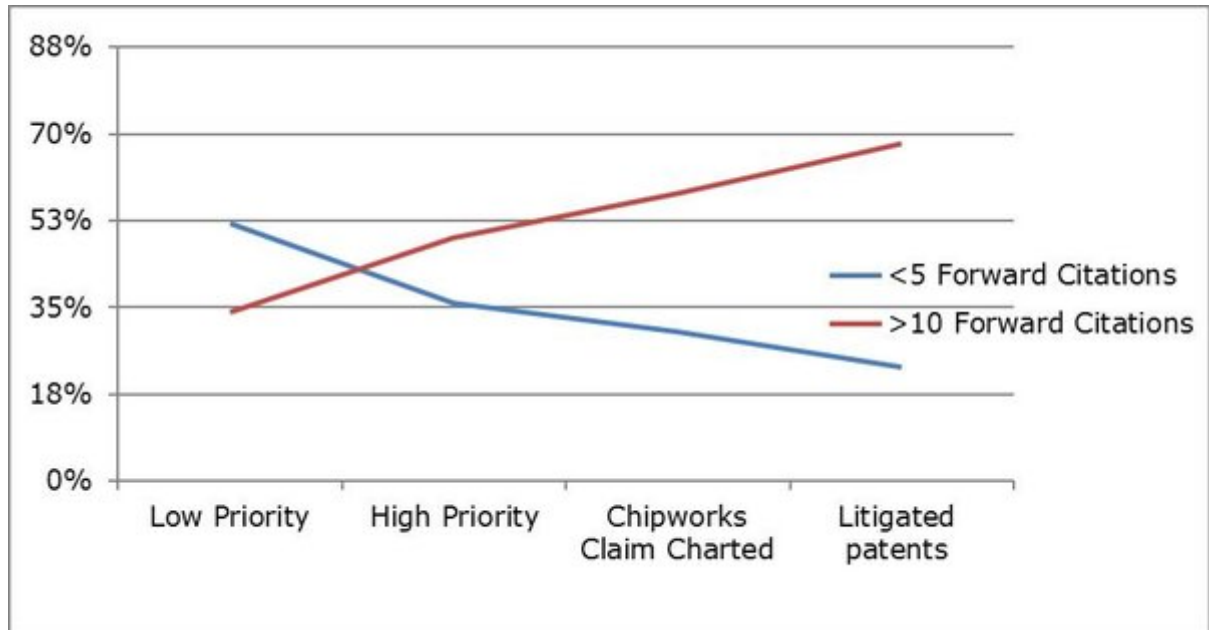
Compared with non-self-citing forward citations for litigated United States assets, we see that there is not much difference. The number of assets with no forward citations is 11 percent in this case, but the number of assets with 100 or more forward citations is still 20 percent.



**Conclusion**

These numbers indicate that forward citations, as a metric, matter. If we consider these evaluation results as a, potentially, weaker indication pool, there is, still, an obvious difference in the forward citation numbers between high- and low-prioritized assets. On the other hand, if we

consider assets with evidence of use against them and United States litigated patents as a stronger indication pool, we can see that forward citation numbers are substantially indicative, but not decisive.



In conclusion, forward citations are a useful metric to filter the early results of a search for valuable patents. But, they remain best used in combination with results from eyes-on-the-patent experience when deciding which assets and, potentially, portfolios have more value for a particular patent licensing or litigation issue.

—By Goran Grbic, Chipworks Inc.

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