

PIPX Intellectual Property Sector Index Q4 2015 update

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Composition and description of the PIPX index

The PIPX index is designed to provide a measure of the market value and hence the health of the intellectual property licensing business. The index consists of 13 companies with a primary focus of licensing and enforcement of patent intellectual property. The companies included in the index are listed in Table 1. In addition to a focus on intellectual property, there are two additional criteria for inclusion in the index. The first is that they must be publically traded companies, so that a market value can be established for the company on a daily basis. For this reason a number of prominent intellectual property licensing companies are not included, such as Intellectual Ventures, Conversant, and IPNav. The second is that they must also have a market capitalization greater than \$100M in order to provide a level of stability and minimize the number of companies popping into and out of the index. This excludes some smaller companies that may be added to the index later if they grow to and maintain a market capitalization of greater than \$100 million. Many of the companies' market capitalizations have shrunk below \$100M since being added to the index

Table 1 – Intellectual Property Licensing Companies Included

Acacia Research	Interdigital	Vringo	VirnetX
Wi-LAN	Unwired Planet	Tessera	Rambus
RPX	Parkervision	Pendrell	Neonode
Marathon			

The index is a capitalization-weighted price-return measure of the change in value of this segment of publically traded companies. The effect of dividends and daily changes in the number of shares outstanding are not included. The index is initiated with a value of 100 on July 1, 2011. This date was chosen to avoid what would be several significant disruptions to the index, namely the RPX initial public offering in May 2011, the initial listing of Wi-LAN on the NASDAQ in April 2011, and the taking private of MOSAID in Oct 2011.

Figure 1 shows the performance of the PIPX index starting from July 2011 through December 31, 2015. Somewhat surprisingly, given the amount of interest and attention provided to IP licensing in recent years, the index trends down from July 2011 to about the middle of 2012 and from there has been relatively flat until summer of 2015 when it started trending down again. This performance stands in contrast to that of the broader economy and of publicly traded companies in general. Figure 2 compares the PIPX to the S&P 500 over the period of interest. Unlike the PIPX, the S&P 500 consistently increases over the same period.

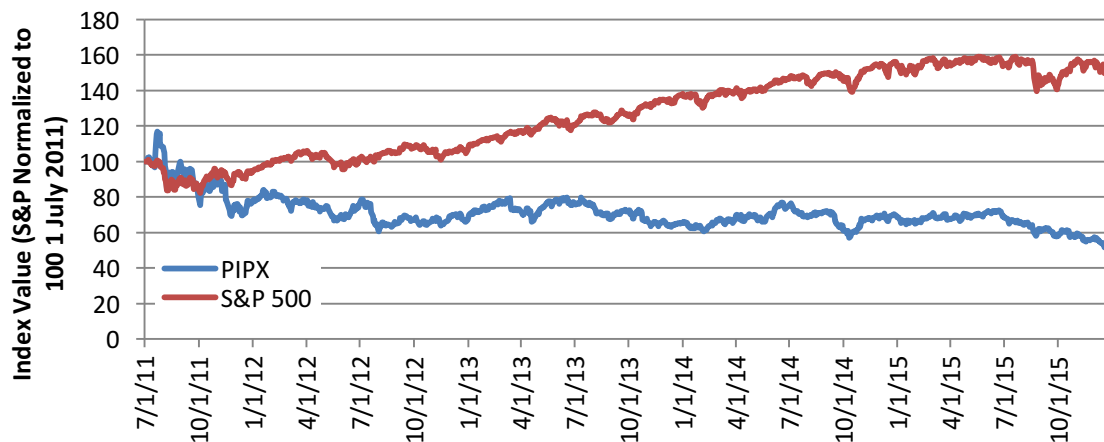


Figure 1 – Comparison of PIPX to S&P 500 (S&P 500 normalized to 100)

Q4 2015 Update

The PIPX index was significantly down (-11.0%) as compared to an up quarter (6.5%) for the S&P 500 as shown in Figure 1. Changes in value of the component companies is shown in Figure 2, ranging from +21.1% for Unwired Planet to -55.9% for Vringo as shown in Figure 2. Vringo effected a reverse 1:10 stock split on November 27, prices and valuation are adjusted to reflect this. All but Unwired Planet and Parkervision saw declines for the quarter. Figure 3 shows performance of the PIPX Index and the component companies over the last 12 months (31 Dec 2014 to 31 Dec 2015). The PIPX was down -24.4% vs. a -0.7% for the S&P 500. Changes in component companies ranges from +4.5% for Rambus to -81.0% for Marathon.

Figures 4 and 5 show the contribution of each company, positive or negative, to the change in the overall weighted index, for both Q4 and 2015. For Q4, small gains in Unwired Planet, Parkervision, and Neonode were more than offset by large decreases in the others, especially Wi-LAN, Tessera, RPX, and Acacia. For the year, a small gain in Rambus was heavily offset by losses in all the others, especially Tessera, Acacia and Wi-Lan.

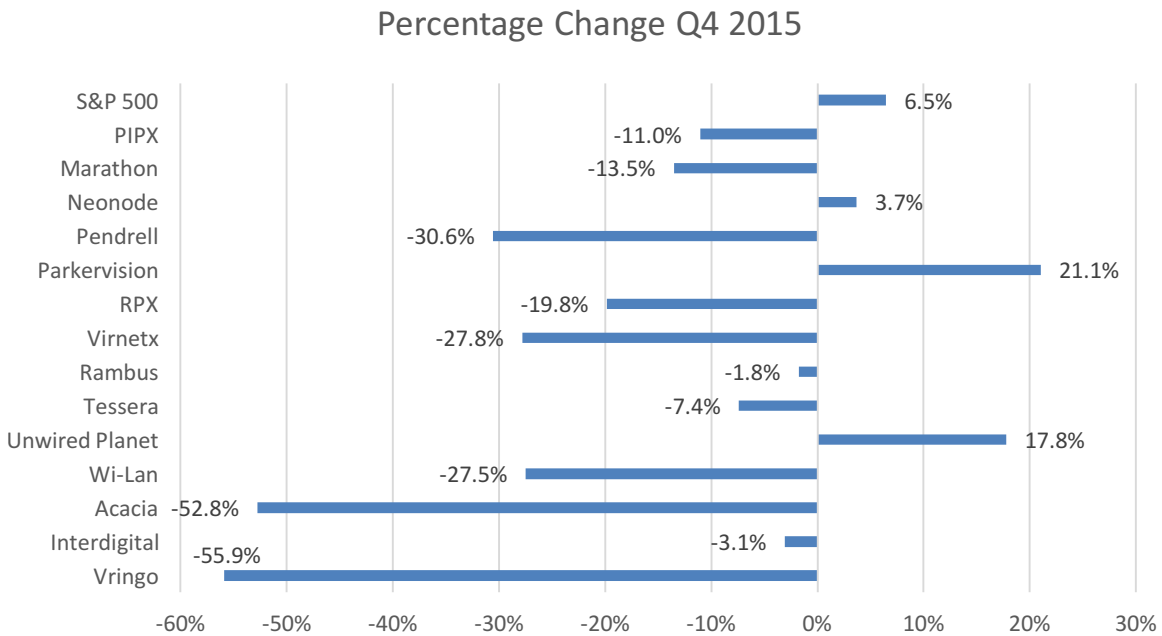


Figure 2 - Change in value of component companies and PIPX Index – Q4

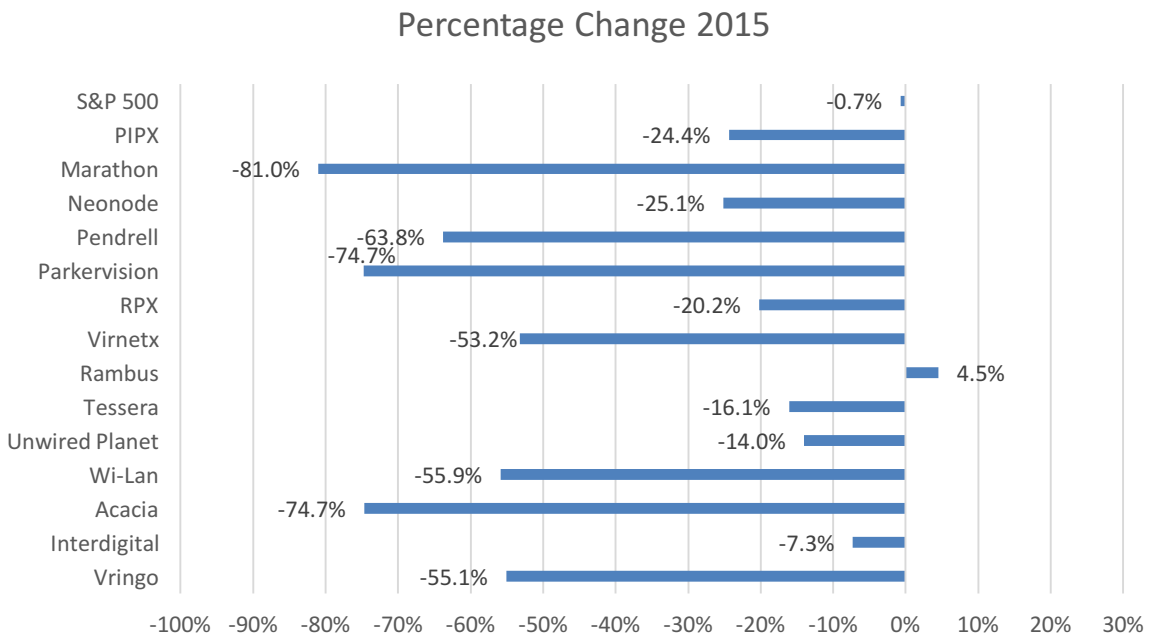


Figure 3 - Change in value of component companies and PIPX Index - Last 12 months

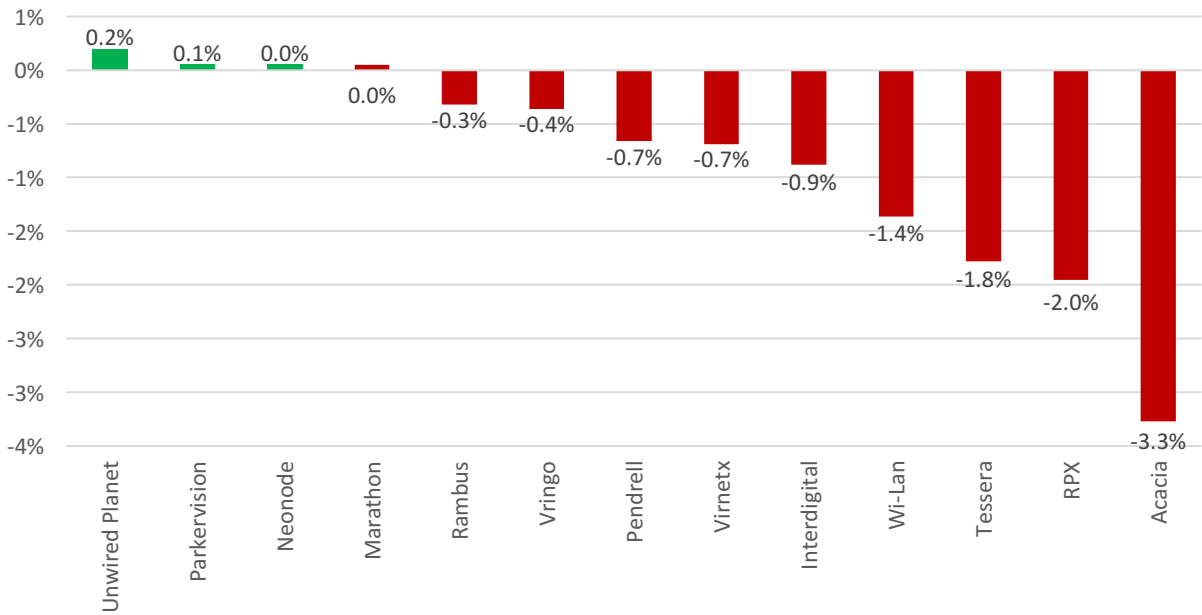


Figure 4 - How much each component company changed the PIPX Index – Q4

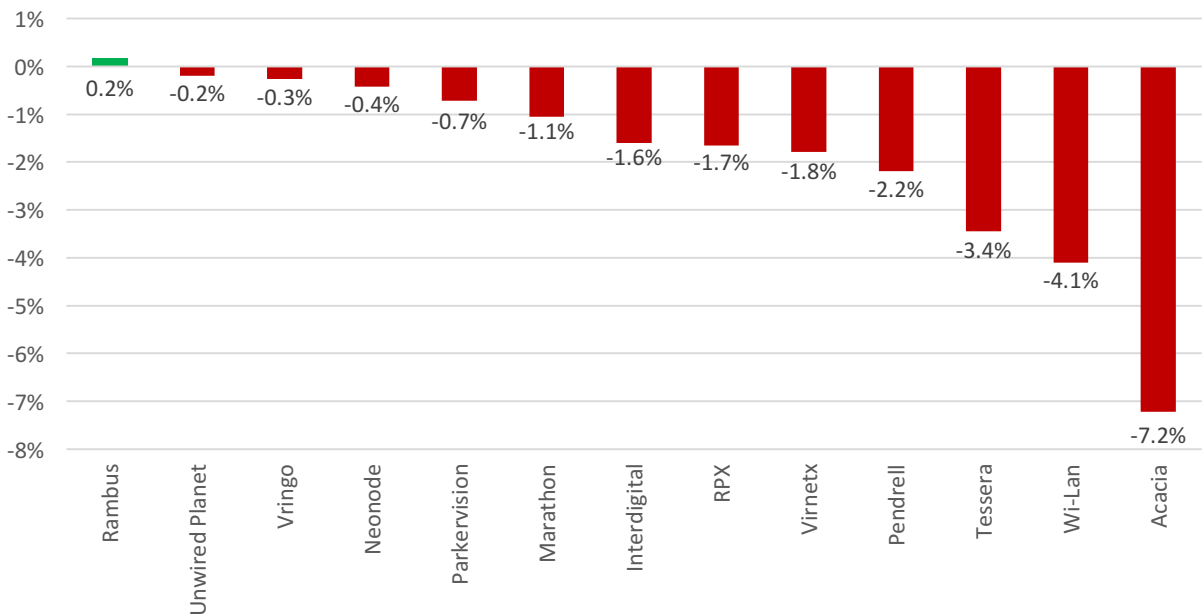


Figure 5 - How much each component company changed the PIPX Index - Last 12 months