

## Feedback: 6 critical keys to IP licensing success

Thanks for an excellent deep dig on the IP business with your report on MIPS-Chipidea. However, several interesting facts related to the IP licensing market were omitted, all of which are critical to understanding the evolution of the industry segment and the key players in the sector. These factors include the following:

1. Digital soft core IP can be synthesized for any fab process technology, making one development effort applicable to hundreds of chip designs. Also, analog IP must be redesigned for every fab and every process, making each development applicable to just a small handful of chips at best.

This explains why, after Lexra sparked the soft core processor IP business in 1997 and 1998, MIPS spun out from Silicon Graphics and ARM switched from exclusively licensing hard cores to also licensing soft cores and saw its customer base grow remarkably.

2. IP companies have a long latency from initial development to profitable royalty revenue.

3. Royalty revenue gives IP companies tremendous staying power and long-term stability (better than EDA, and much better than chip companies). Despite the colossal Chipidea bungle and even if MIPS never sold another license, which is unlikely, the company would exist for at least a decade just from latent royalty payments alone.

For example, Lexra sold its last IP license eight years ago and closed its doors seven years ago but it is still shipping in volumes as the main processor in at least three different chip companies' product lines.

4. While ARC indeed has high volume, it is predominantly from two deals, (SanDisk flash controller and Intel Wi-Fi acceleration in notebook chips) both negotiated with no long-term royalties. Tensilica is stronger than ARC in terms of current balance sheet and long term royalty revenue potential, though neither is quite in the same class as MIPS.

5. MIPS now lags ARM on key competitive trends shown by other processors such as 128-bit SIMD extensions (i.e. ARM Neon or PowerPC Altivec), SoC interconnect automation (i.e. ARM AXI fabric or Sonics), and memory controllers (i.e. ARM or Denali controllers).

6. A less surprising acquisition for MIPS than Chipidea would have been Sonics or Denali. Even Imagination Technologies and MIPS would have been a more technologically synergistic tie-up.

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