

**High Performance Technology: A joint development and manufacturing fabricator case study, leveraging partners to achieve world class results.**

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IBM has recently announced a 90nm technology node in 300mm manufacturing employing strain engineering to boost both NFET and PFET performance. A one team approach of development and manufacturing with development partners enabled a successful rollout of this technology. The period between concept and qualification was one year. During this time the technology was successfully deployed on multiple products and fabs at multiple companies. Some of the recent product announcements leveraging this technology are the Cell processor and the upcoming second generation Microsoft game console.

The 90nm node was developed and ramped in the same fabricator. The yield and defect density learning rates have proven to be better than competitive roadmaps. The synergy between development partners has had a direct impact in manufacturing, where time to market and yields have been accelerated to best of breed.