



Globalfoundries May Acquire IBM's Semiconductor Fabs – Petrov Group IBM May Leave Semiconductor Manufacturing Market

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http://www.xbitlabs.com/news/other/display/20100506182520_Globalfoundries_May_Acquire_IBM_s_Semiconductor_Fab_Analyst.html

Globalfoundries was established just over a year ago, but thanks to financial resources of Advanced Technology Investment Company and intellectual property inherited from AMD and its partners, such as IBM, the company is now the world's third largest contract maker of semiconductors with the world's most advanced process technologies. The firm said many times that it is on acquisition spree and an analyst believes that the next target could be IBM's semi fab.

Not a Core Business

Although IBM is viewed by many as an ultimate technology and computer company, it is not. IBM's core businesses are systems and engineering services, creation of solutions for the world's most demanding requirements as well as researching technologies and concepts of the future business machines; IBM is a technology-based solutions company that functions at multiple economic and geopolitical levels worldwide. Although IBM spends vast amounts of money on researching materials and structures for future semiconductors, manufacturing of actual chips is neither profitable nor is the core competency of IBM. As a result, just like IBM got rid of its personal computer business back in 2004, the company may shortly decide to sell off its chip manufacturing facility.

"It is highly probable that IBM will consider a business alliance of some sort with Globalfoundries. [...] With its fabrication facilities worldwide, and a foundation in complex processor design and manufacturing, Globalfoundries should be able to incorporate state-of-the-art support for IBM, drive business economies, and ensure growth. Globalfoundries could be an ideal outlet for IBM's IC fabrication business, enabling it to sell a business that has not met financial performance requirements for years, and still providing it the depth, scope, and resources needed to not only provide manufacturing security for IBM but also further ensuring success of its foundry business," Boris Petrov, the principal analyst of Petrov Group and a former director of strategic marketing at Chartered Semiconductor, wrote in [his column](#).

Globalfoundries – Logical Buyer

It is logical for IBM to sell off its semiconductor manufacturing business. The question is why would Globalfoundries acquire IBM's semiconductor manufacturing from IBM? The company is building a mega-fab that already costs \$4.1 billion in Luther Forest, New York and can expand this fab going forward. Acquiring additional rather old fab in Burlington, Vermont, (200mm) and East Fishkill, New York, (300mm) seems somewhat strange, especially considering that ATIC would like to build a semiconductor fab in Abu Dhabi, when local chip development startups take off. On the other hand, with the IBM fab, Globalfoundries will acquire IBM's customers, who will eventually have to migrate to newer process technologies and fabs.

“By manufacturing advanced microprocessors for AMD and IBM, Globalfoundries would effectively preempt fabrication in that challenging segment; penetration into processor manufacturing has been one of TSMC's corporate objectives for many years,” said Mr. Petrov.

There are also other companies with ability to attract financial resources to acquire IBM's manufacturing facilities. Samsung Electronics, which have been trying hard to become a successful contract maker of semiconductors without much success, would be glad to acquire IBM's manufacturing facilities so that to expand its own foundry business with new clients. Renesas was once rumoured to form a joint-venture with Toshiba and current Renesas Electronics with Toshiba would represent a rather formidable force. However, their chip design efforts are concentrated in Japan and it is not logical for them to acquire a fab in the U.S. and they hardly have a lot of interest in the foundry industry.

IBM to Continue Providing Semiconductor R&D Services

IBM has been investing quite a lot into development of next-generation materials, structures, fabrication processes and other costly things needed to create process technologies of the future. According to the Petrov Group, IBM will not drop its research and development efforts, it will continue to investigate.

“IBM will continue to do research – research and engineering services are IBM's strengths – not low cost manufacturing. [...] [IBM has invested a lot in] SOI, eDRAM, TSV, 3D silicon and all the expensive material science directions that IBM developed for its internal needs. In my scenario, IBM will provide process and materials research [and the potential buyer for the fab] will provide Common Platform wafer foundry services,” said Boris Petrov in a conversation with *X-bit labs*.

Time Will Tell

IBM is a military-like business machine, always at war and despite what other companies may publicly say, IBM is typically 5-7 years ahead of the industry in strategy formulation, according to the analyst. Last year the company had revenue of \$95.8 billion and Mr. Petrov believes that the IBM's current goal is to become a \$200 billion company in a decade or so. Considering that it took IBM sixteen years to grow from \$64.1 billion to \$95.8 billion, IBM will have to do a tremendous amount of job to boost its revenue so it could be comparable with that of companies like Aramco (~\$200 billion) or General Electric (~\$157 billion). Time will tell whether IBM will succeed.

It is rather clear that Globalfoundries will acquire almost any semiconductor asset, provided that the price is right. Globalfoundries wants to be the biggest and the most technology advanced contract maker of semiconductors in the world. In order to leave behind the current leader – Taiwan Semiconductor Manufacturing Company – in terms of technology Globalfoundries will simply have to use its current intellectual property portfolio and continue to invest into process technologies and efficient manufacturing. However, when it comes to volumes, Globalfoundries will have to either build new facilities or to acquire existing fabs or foundries. Since the company is backed by ATIC, which is controlled by the government of Abu Dhabi that has hundreds of billions of dollars, Globalfoundries may not have significant problems with financial resources. But it will need to attract customers of TSMC and expand the services it can provide to its customers. Time will tell whether Globalfoundries will succeed.

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