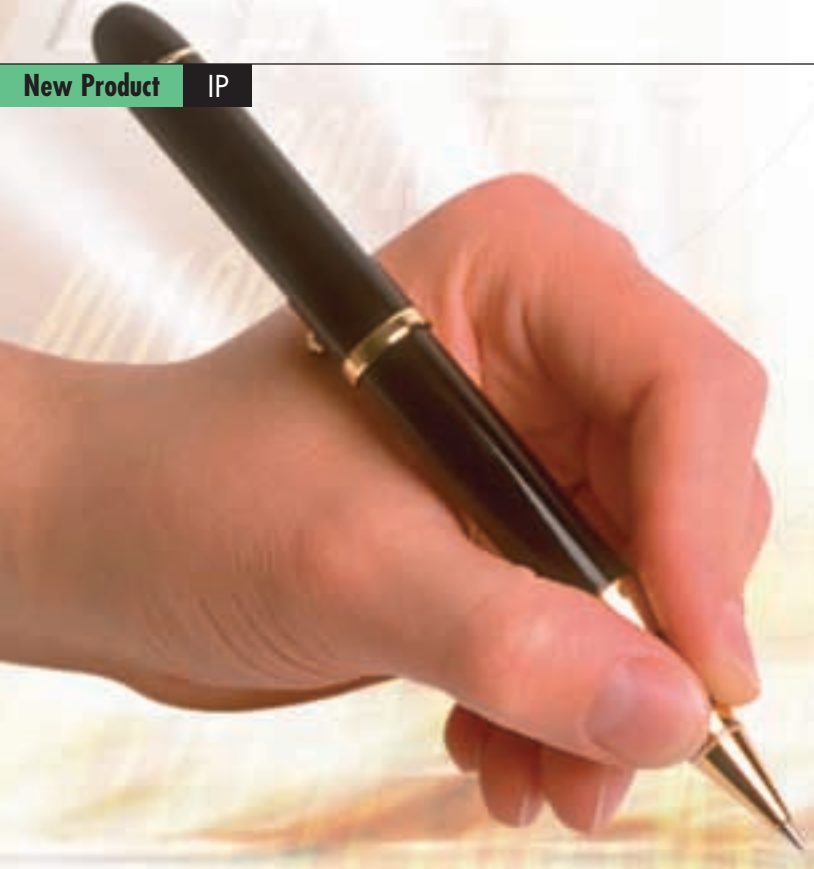

SignOnce and Break the IP License Barrier

Xilinx has sponsored the Common License Consortium to streamline the IP licensing process and improve your time to market.

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As a designer, you are constantly asked to deliver new and enhanced systems. Your marketing department asks you to add new features, but do you have the time or prior experience to design everything in the new specification? If not, you can always look at including pre-developed system functions in the form of intellectual property (IP) cores from the FGPA vendor or one of a growing number of third-party providers. But can you wait until the legal issues around IP licensing are resolved before you even begin your design? If only there was a way to clear the legal hurdles so you could spend your time on what matters most – getting your design completed on time.

In September of 2001, Xilinx launched the Common License Consortium to specifically address this issue. It is an industry-first initiative to simplify the licensing process for FPGA-based IP cores. At that time, Xilinx and more than 21 third-party IP providers all agreed to offer a common set of IP licensing terms – called the SignOnce IP License – to get access to use their cores. Let's look at how you can benefit from this new and innovative program.

Strength in Numbers

When selecting IP cores for your FPGA designs, you have access to Xilinx LogiCORE™ products as well as products from our third-party network of AllianceCORE™ providers. This hybrid approach ensures you a broad portfolio of IP and expertise to choose from. You benefit from competition, and it potentially puts experts right in your own backyard.

But everything comes at a price. A multi-vendor solution introduces the challenge of dealing with multiple providers, each with a different set of IP license terms. Research has shown that license negotiations between a customer and a single supplier can exceed six months. Clearly, situations that require you to deal with more than one vendor would be intolerable.

The SignOnce IP License takes care of this. With it, you can sign up to a single set of license terms that, today, gives you access to 500 IP cores from well over 30 providers. Consortium membership continues to grow and includes companies from North America, Europe, Japan, and Southeast Asia, so there is likely a solution provider somewhere near you. There is no cost for membership in the consortium, and only IP providers may join. They do not need to participate in the AllianceCORE program to become a member, and there is no cost to customers to gain the benefits of the program.

What Is Covered?

The SignOnce IP License leverages the fact that licensing IP cores for use in a specific FPGA is less complex than licensing for use in an ASIC. ASIC use usually requires the transfer of source code. This requires extensive legal wording that can swell to 30 pages to protect the vendor against such issues as improper use and piracy.

The SignOnce IP License reduces this page count to four by focusing on the transfer of an FPGA netlist. Netlists are specific to particular FPGAs, and they are difficult to reverse engineer or port to a different technology. This dramatically simplifies the license process. After a SignOnce IP License is in place, you will then be able to purchase individual cores at a price that you and the vendor(s) agree on.

Usage Options

The SignOnce IP License provides project-based and site-based usage options.

A project-based license allows you to use a core within a single design. Ultimately, the core is incorporated into a larger design, converted to a bitstream, and programmed into the FPGA. Based on this, the definition of a "project" includes the following scenarios:

- A single bitstream, which can include multiple instances of the core. You can then use that bitstream on one or more printed circuit boards. In this case, the project is defined as the entire chip that includes the core, which can then be used (without modification) in other designs. This is similar to the way you might use an ASIC or ASSP device.
- A single printed circuit board, using one or more bitstreams, each containing one or more instances of the core. This allows you to leverage the reconfigurable nature of FPGAs in your design.

Your design group for the "project" can span multiple sites. Usage of the IP core that goes outside of the above definitions would require you to negotiate additional fees with the IP vendor.

On the other hand, a site-based license allows your company to use the core in unlimited designs developed at the specified site. You would have to pay additional fees for usage at other sites, or you could negotiate a list of sites to be covered under the up-front license fees.

In general, site-based licenses cost more than project-based licenses from IP vendors that support both. Most consortium participants support both license types, but some only offer one. You should inquire about this when working with the vendors.

Simplifying the Process

The SignOnce IP License consists of three parts: the legal terms contained in the body plus two exhibits.

The legal terms form the bulk of the license and govern issues such as usage (project versus site), intellectual property rights, indemnity, warranty, export restrictions, governmental use, and so on. All legal terms (except for usage) are identical for both project and site versions of the license.

Figure 1 - IP Center Smart Search with SignOnce IP license option

Exhibit A is designed to list the specific cores that you will license. Once you have a SignOnce IP License in place with a consortium member, you can license additional cores from them by negotiating a separate Exhibit A for each core and paying the appropriate license fees.

Exhibit B is designed for listing the consortium members that you wish to do business with. Each member signs and attaches a separate Exhibit B so you can add IP providers at will. You can sign all members on at once or add ones as needed by simply having each sign a separate Exhibit B that references the original license terms.

This structure provides considerable flexibility. Even if you sign a license with one vendor for one core, you have the ability to later sign on additional consortium members to purchase more cores. Because members have agreed to use the same licensing terms, additions take little further assistance from your legal department. When dealing with any consortium member, make sure you let them know that you are interested in licensing IP using the SignOnce IP License.

In Search of SignOnce IP

All SignOnce IP cores available from Xilinx and our AllianceCORE partners can be found in the Xilinx IP Center (*www.xilinx.com/ipcenter/*). As shown in Figure 1, the Smart Search engine allows you to restrict your searches to only show cores that are available under the SignOnce IP License. Even if you don't select this option, the search results will indicate which are SignOnce cores. You will need to contact non-AllianceCORE members of the consortium directly to find out what cores they offer.

Conclusion

Your job as a designer is already difficult enough. IP cores are available to simplify and accelerate your development process, allowing you to focus on the portions of the design where your expertise adds value. If you adopt the SignOnce IP License and deal with members of the Common License Consortium for your IP, you will remove a major time-to-market bottleneck for you and your company.

For more information on the SignOnce program – including the growing list of consortium members, copies of the licenses, and searchable lists of Xilinx and AllianceCORE vendor IP – follow the Web links shown in Table 1. The solution is available. Let it work for you.

Information	Web URL
Program information, consortium members, and license forms	*www.xilinx.com/ipcenter/signonce.htm*
Xilinx IP Center Smart Search Engine	*www.xilinx.com/search/ipsearch.htm*

Table 1 - Web links for SignOnce program information and products