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High-Performance DSP – Vision, Leadership, Commitment

FPGAs are increasingly being used for signal processing applications. They provide the necessary performance and flexibility to tackle many of today's most challenging DSP applications, from MIMO digital communication systems to H.264 encoding to a high-definition broadcast system.

Within such systems, FPGAs are ideally suited for high-performance signal-processing tasks traditionally serviced by an ASIC or ASSP. But you can also use FPGAs to create high-performance DSP engines that boost the performance of your programmable DSP system by performing complementary co-processing functions.

This unique coupling of high performance and flexibility – through exploiting parallelism and hardware reconfiguration – places Xilinx in an ideal position to set the industry direction in the high-performance segment of the DSP market.

Our DSP vision is built on five key pillars:

- **Customer and market focus** – we will create products that meet the needs of our customers and create products in those market segments that are the best fit for our FPGAs.
- **Design methodology** – as most DSP designers don't speak VHDL or Verilog, we will continue to evolve software technologies to support languages that they do speak – like Simulink and MATLAB.
- **Tailored system solutions** – this includes algorithms, tools, services, and devices for focus markets.
- **Ecosystem** – partnerships/alliances with industry leaders like Texas Instruments, The MathWorks, and Xilinx Global Alliance members to deliver total DSP solutions.
- **Awareness** – educating you on how to quickly access FPGAs for signal processing regardless of your background skill set.

This month we are also launching new DSP Roadmaps for the high-performance segment of the DSP market. These roadmaps cover many areas, including digital communications, multimedia video and imaging, defense systems, design tools and methodologies, development platforms, and base IP solutions. The roadmaps demonstrate our continued investment and commitment in solving your current and future signal-processing challenges.

Finally, we are proud to deliver to you the first edition of *DSP Magazine*. Packed with articles demonstrating how you can create optimized DSP designs using FPGAs, this magazine is one of many ways in which we will provide you the knowledge to finish your DSP designs faster. I would like to dedicate this first Xilinx *DSP Magazine* to you, the customer.



Omid Tahernia
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and General Manager
Xilinx DSP Division