

Europe needs financial stability

Dr. Ted Tewksbury, president and CEO at Integrated Device Technology talks to *Electronics Weekly* about the Europe and 4G/LTE, analogue and digital design teams and moving from fab-lite to fabless

What does Europe need to do to ensure it retains a leading position in the global market?

The world increasingly depends on the mobile internet to connect its populations and this is driving an explosion of wireless data between the “cloud” and consumer mobile devices such as smartphones and tablets. All of this data traffic needs the “fatter pipes” and greater bandwidth provided by 4G/LTE wireless infrastructure.

As home of several of the world’s most innovative telecom companies, Europe is instrumental in developing and rolling out this technology. By enabling greater data speeds and capacities, 4G/LTE provides the foundation for the growth of numerous other applications, such as cloud computing, mobility



trade-offs between analogue, digital and software. The product definer specifies block-level features and performance parameters.

The programme manager is fluent in the languages and techniques of both analogue and digital designers, and manages schedules, deliverables and interfaces. These individuals are the glue that holds the team together, translating between analogue and digital dialects.

- Weekly project meetings include all of the above functions to drive execution, address technical issues and facilitate collaboration.
- We have instituted formal and informal technical forums in which analogue and digital engineers can share ideas, tools, techniques and best practices, and educate each other in their respective domains.
- Variable pay is tied to the success of the overall project. Everyone succeeds or fails together.

and social networking.

In order to realise this potential and maintain its leadership, it is imperative that Europe’s political leaders and central banking system collaborate to solve the sovereign debt crisis that has cast the Euro-zone into turmoil and uncertainty.

Without stability in the banking and financial systems, Europe’s businesses and manufacturers will not have the confidence to make new investments in these technologies and consumer demand will continue to deteriorate.

A strong Eurozone economy and continued technology innovation are the keys to extending Europe’s leadership throughout the 21st century.

You have changed the business from being a digital IC supplier to being a mixed-signal company. Pairing analogue and digital engineers can be a difficult task, so what practices have you employed to create effective design teams?

Every mixed-signal project team includes three key functions in addition to analogue and digital designers – a system architect, a product definer and a program manager. These may or may not be the same individual, depending on the complexity of the project.

The system architect has a deep understanding of the customer’s application and can make the right

In 2009, the company started the move from fab-lite to fabless. What benefits have you seen from the move, and do you see this trend continuing?

We made the move from fab-lite to fabless for four reasons.

First, our system solutions strategy required a variety of process technologies – fine-line CMOS, SiGe and BCDMOS – that would have been prohibitive to develop in-house.

Second, foundry economies of scale enabled us to achieve lower wafer costs.

Third, we were able to focus our limited research and development (R&D) on what we do best – product innovation – and leave wafer manufacturing to the industry experts.

Fourth, outsourcing wafer fabrication emancipated us from quarterly swings in fab utilisation, which impacted our financials.

I’m a firm believer in using the lowest-cost technology that can get the job done in any particular application.

The fabless model removes the constraint of having to keep our fab filled and enables us to make the right technology decisions for the business. ■



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IGT Industries Ltd, Woodside Road, Eastleigh, Hampshire, SO50 4ET, UK
e sales@igt-industries.com t +44 (0) 23 8061 0818 f +44 (0) 23 8061 0828

www.igt-industries.com

