The Embedded Muse 62

Editor: Jack Ganssle (jack@ganssle.com) February 13, 2001

More on FPGAs

Last issue I talked about dynamic configuration of FPGAs, a subject that sparked a lot of interesting response.

According to http://www.eetimes.com/edaadvantage/edanews/monday11.html the Handel-C compiler simplifies FPGA routing to make it easy – or easier – to create downloadable FPGA netlists. It's targeted at a few Xilinix and Altera parts. An intriguing concept. As the article says, "the compiler can also use the reconfigurability of SRAM-based FPGAs so that multiple software routines are supported in the manner of context switches--by uploading different FPGA configurations on demand." Very cool, though the $5600 price may scare some folks away.

Years ago I entered into a debate with the Xilinx folks about the cost of their software – at the time about $7k. My position was that they should make it cheap and focus on selling silicon. They countered with the valid point that the engineering and support required by the code had value and had to be paid for. High costs keep smaller companies away from the technology - but perhaps, since those volumes are low, the vendors don't worry too much. Since then costs have come down substantially; www.xilinx.com now lists development systems ranging in price from $695 to $3500, which seem fair for value received.

I also mentioned the PodAlyzer in Muse 61, a tiny 18 channel logic analyzer that capitalized on dynamically reconfigured FPGAs. It's apparently still available (for $1250); see http://www.associatedpro.com/aps/. My 5 year old unit is a very nice tool indeed.

Thought for the Week

Paul Bennett sent in the following, which is an updated version of something that went around the net years ago:

If Operating Systems Ran Airlines:

UNIX Airways
Everyone brings one piece of the plane along when they come to the airport. They all go out on the runway and put the plane together piece by piece, arguing non-stop about what kind of plane they are supposed to be building.

Air DOS
Everybody pushes the airplane until it glides, then they jump on and let the plane coast until it hits the ground again. Then they push again, jump on again, and so on ...

Mac Airlines
All the stewards, captains, baggage handlers, and ticket agents look neat and act exactly the same. Every time you ask questions about details, you are gently but firmly told that you don't need to know, that you really don't want to know, and that everything will be done for you without your ever having to know, so just shut up. And the flights all wherever the pilot damn well pleases, regardless of where you're trying to go.

Windows Air
The terminal is pretty and colorful, with friendly stewards, easy baggage check and boarding, and a smooth take-off. After about 10 minutes in the air, the plane explodes with no warning whatsoever.

Windows NT Air
Just like Windows Air, but costs more, uses much bigger planes, and takes out all the other aircraft within a 40 mile radius when it explodes.

Linux Air
Disgruntled employees of all the other OS airlines decide to start their own airline. They build the planes, ticket counters, and pave the runways themselves. They charge a small fee to cover the cost of printing the ticket, but you can also download and print the ticket yourself. When you board the plane, you are given a seat, four bolts, a wrench and a copy of the seat-HOWTO.html. You take the seat to a location of your choice and bolt it into the deck, per the instructions. Once settled, the fully adjustable seat is very comfortable, the plane leaves and arrives on time without a single problem, the in-flight meal is wonderful. You try to tell customers of the other airlines about the great trip, but all they can say is, "You had to do what with the seat??? ... "

About The Embedded Muse

The Embedded Muse is an occasional newsletter sent via email by Jack Ganssle. Send complaints, comments, and contributions to him at jack@ganssle.com.

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