

X-Sender: horowitz@vlsi.stanford.edu
Date: Thu, 15 Feb 2001 11:01:41 -0800
To: Diane Shankle <shankle@ee.stanford.edu>
From: Mark Horowitz <horowitz@stanford.edu>
Subject: Re: Quals Question 2001

Quals questions:

Assume we want to generate a field specifier for a 64 bit machine. This is a unit that generates all constants that have a contiguous sequence of '1'. How many bits would it take? How would you encode it.

We encode the constant using the starting and ending location of the string of '1's. How would you build the hardware to decode this. You can use a normal decoder or a thermometer decoder.

How would you build a thermometer decoder. Don't worry about speed at first, just get the logic right.

How might you make the decoder faster. Can you estimate its speed?

At 10:43 AM 2/15/01 -0800, you wrote:

I am still waiting for you to submit your Quals Question either by hard copy or email.
Please try to submit by 2/23/01.

Happy Thursday,
Diane