URL: https://stvp.stanford.edu/clips/the-growing-demand-for-engineering-talent

To keep up with the engineering demands of Moore's Law, Craig Barrett, former Intel Chairman of the Board, discusses how the education and labor requirements of talent have evolved with the industry. While developing the first semiconductors took a team of only three people, today's market requires several hundred engineers for each new product, most of whom are trained with graduate degrees.

Transcript

The other thing that I think has been constant in the industry has been the engineering effort that's involved to follow Moore's Law.. And it's all sorts of engineers.. It's not just material scientists, a bunch of chemists, physicists, mechanical engineers, computer scientists, EEs.. To go from a thousand-transistor device to a two-billion transistor device is not a trivial effort.. We used to design devices with two people.. The first microprocessor was designed by basically three people; Hoff, Faggin and Stan Mazor.. But today, one of our microprocessors may take a team of 500, 600, 700 engineers to do the physical design and layout.. And then, you have additional hundreds of people who are doing the simulations and doing the verification deal.. So, everything is rather scaled up.. But it's all predicated on strong engineering talent, which is why we hire essentially only Masters and PhDs into the company who work as engineers..

And Bachelor's degree really is not sufficiently capable...