Now, you just mentioned that you have different cores on a chip.

Right?

So you have in a typical Snapdragon processor,

you've got a bunch of general purpose cores.

Plus you have all of these specialized processors

for doing graphics, doing video, audio, all these kinds of things.

Now I want to talk a little bit about why

that's the best way to design an SOC for a smartphone or tablet.

So theoretically, you could have just a few very powerful cores

that could handle anything rather than have some general purpose

cores like you have, plus a bunch of specialists.

So why is that general purpose cores plus specialists approach a better

approach for these kind of chips rather than having

a few very powerful cores that are generalists that could

handle all of these different tasks?

Sure.

So it's really a question of what type of efficiency are you after.

Having the more general purpose cores, you're

much more efficient in terms of the die area.

But in mobile, the power and battery life is king.

So once you have these specialized cores,

they are typically able to do a task much faster

in some cases, or at much lower power than a general purpose CPU, or both.

So one of the examples-- again, folks might not realize this as well,

is with Android KitKat or 4.4 with the Nexus 5

launch that's using our Snapdragon 800 processor,

Google touted 50% longer audio playback.

And that's because when you're listening to your music with the screen

off, rather than having to wake up the CPU to play that music,

it is going straight to the DSP, or digital signal processor,

and through what we call audio tunneling.

So when you're on the bus listening to your music, not touching your phone,

grocery shopping, listening to music, whatever the case might be,

that's a huge savings in power.

Because it's not using the CPU for that use case.

Another core that's much more efficient at doing that

doesn't have to wake up the higher power CPU.

Same is the case with sensors.

Now that sensors are enabling a lot of what we call always on use cases,

meaning they're always doing something whether or not you're using the phone.

Think of something as simple as a pedometer measuring every step.

Your don't want your CPU to wake up every time you shift in your seat

or take a step.

You want the lower power cores to the processing

that information so you could be measuring your steps all day

and still have plenty of battery life left.