Researchers address battery power issue in 4K phone display

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Sony Xperia Z5 Premium

What is the big deal with 4K? The term 4K refers to four times the number of pixels as standard screens. Describing the effect of 4K in TV, John Archer wrote in *Trusted Reviews*: "The extra resolution of 4K images adds more detail, more depth and more color resolution to the picture, resulting in images that look incredibly life-like – more like looking through a window than watching TV."

Now tech is in the works to boost phone displays to 4K. Tyler Lee in *Ubergizmo* reported that now, in Japan, "Kogakuin University and Fujitsu are working together on new display technology that can not only help boost phone displays to the 4K resolution, allow it to run at a stable 30fps, but at the same time require little to no extra power that one would have expected the phone needs in order to power such a high resolution display."

That is saying quite a lot. Put simply, the school and Fujitsu are developing technology that would allow smartphone displays to natively operate at the 4K resolution with no significant impact on battery life. The significance is that the technology suggests battery life will not suffer just because the device owner is getting to enjoy 4K.

According to *Android Headlines*, the 4K displays will be able to operate at a steady 30 fps, "without the need for any more power than a standard 1080p smartphone display of today." But wait. Is this really a breakthrough? Who can forget the launch of Sony's Xperia Z5 Premium in September as the world's first 4K smartphone.

"It doesn't get clearer than this," said Sony. "Meet Xperia Z5 Premium. With a 4K Ultra HD display, this 5.5" smartphone packs in four times the resolution of Full HD for an unrivaled viewing experience."

Kishalaya Kundu in *Android Headlines*, however, noted Xperia Z5 Premium may be able to show 4K content in cutting-edge resolution but

the Z5 Premium is designed to only output in 4K during media playback.

The 4K display on the company's current flagship phablet did not always operate at that resolution to increase energy efficiency. Other content displayed at 1080P or lower resolution can optimize the performance and battery stamina for the device, such that the user enjoys the 4K resolution when needed most.

PhoneArena similarly said it was "firing up on all 4K cylinders" when rendering video or images and in turn contributing to having "the battery stamina Sony's phones are now acclaimed for."

The *4k.com* site on Tuesday commented on the software at play in the new technology developments. Stephan Jukic said we are looking at "a major innovation to a serious little stumbling block in phone recording technology."

The university and Fujitsu found a way to address the battery drain problem with software. He said the processing method used by the software was under development since 2012 and the software "acts as a sort of highly specialized variation of the upscaling systems found in many 4K UHD TVs on the market today."

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