D -> A Watch Discussion

**Do you think the Charliewatch is popular?**

I haven’t seen one yet, but that doesn’t mean they are not out there. I haven’t seen any that look like the picture. I was thinking that my Apple Watch might have similar qualities.

**What is the name of the microcontroller chip used in the Charliewatch?**

The name of the microcontroller is CC430F5137IRGZR made by Texas Instruments.

**List 3-4 properties of the microcontroller chip.**

* True System-on-Chip (SoC) for Low-Power Wireless Communication Applications
* Wide Supply Voltage Range
* MSP430™ System and Peripherals
* High-Performance Sub-1 GHz RF Transceiver Core(2023 Texas Insturments)

**Describe in 1-2 sentences what "Charlieplexing" is and list 2 applications that could use "Charlieplexing".**

“Charlieplexing means that only a few LEDs are ever illuminated at the same time…(Posch, 2019)” As I have mentioned before, I think my Apple Watch is something similar with some “Faces”. I’ve seen things like this before, but I think it was mostly signs, like for stores or even Vegas. Most of what I saw was probably light bulbs before everyone started moving to LEDs because they take less power. I think some car turn signals are similar also.

References:

Posch, M. (2019, August 22). *Returning digital watches to the analog age: Enter the charliewatch*. Hackaday. https://hackaday.com/2019/08/22/returning-digital-watches-to-the-analog-age-enter-the-charliewatch/

*CC430F5137*. CC430F5137 data sheet, product information and support | TI.com. (n.d.). https://www.ti.com/product/CC430F5137?keyMatch=CC430F5137IRGZR&tisearch=search-everything&usecase=OPN-ALT#features