

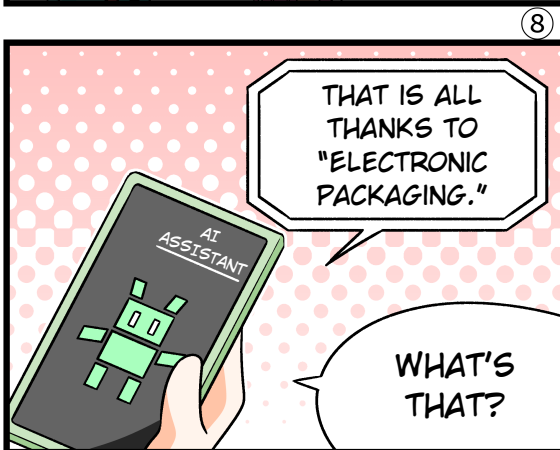
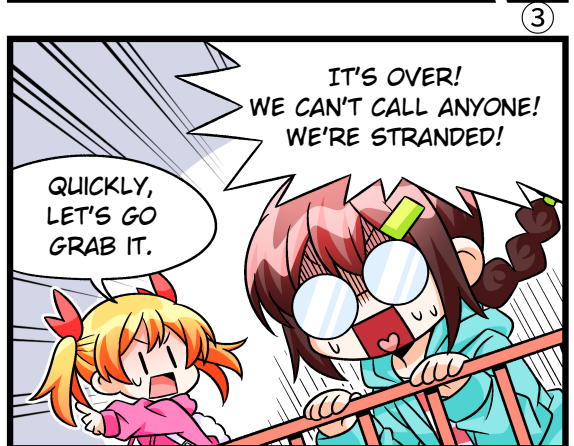
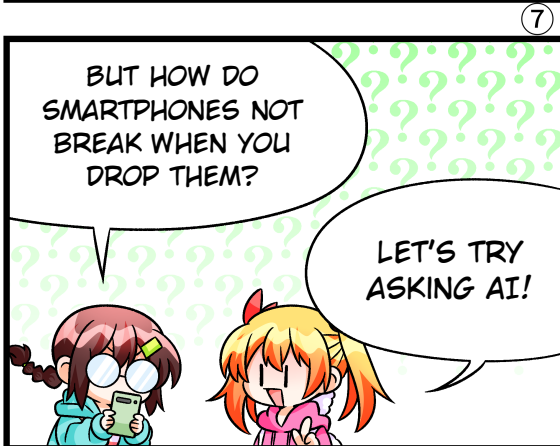
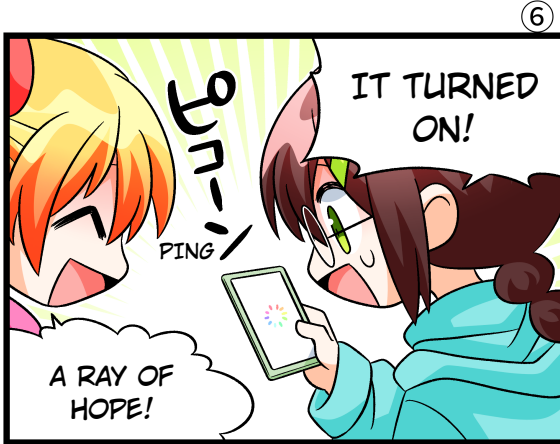
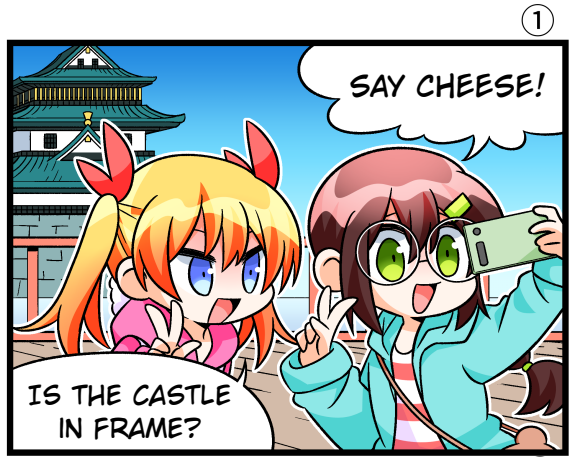
Hurray for Electronic Packaging Engineers!



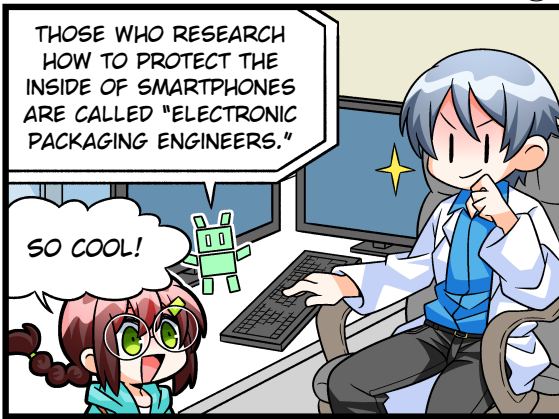
Author: Annette Teng

Script: Yasunori Kasuga

Character development: Neta Mochino/TOKIFUDE



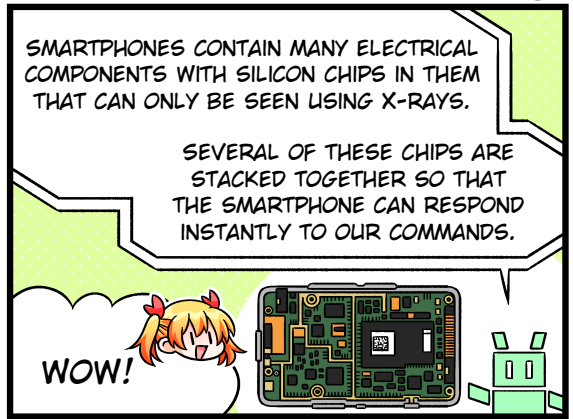
5



THOSE WHO RESEARCH HOW TO PROTECT THE INSIDE OF SMARTPHONES ARE CALLED "ELECTRONIC PACKAGING ENGINEERS."

SO COOL!

1

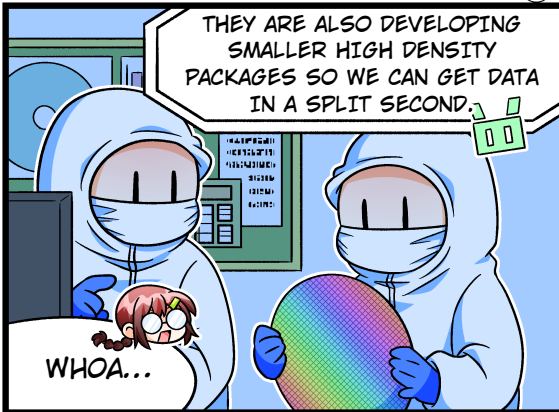


SMARTPHONES CONTAIN MANY ELECTRICAL COMPONENTS WITH SILICON CHIPS IN THEM THAT CAN ONLY BE SEEN USING X-RAYS.

SEVERAL OF THESE CHIPS ARE STACKED TOGETHER SO THAT THE SMARTPHONE CAN RESPOND INSTANTLY TO OUR COMMANDS.

WOW!

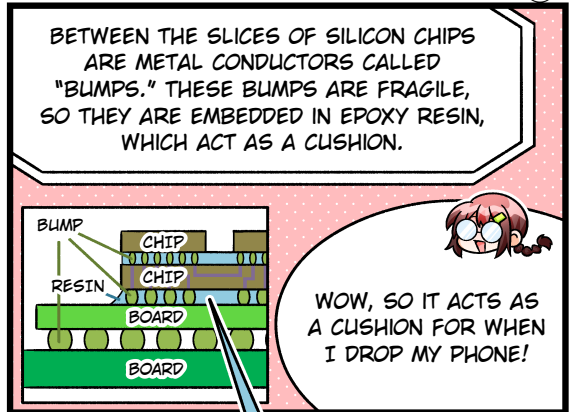
6



THEY ARE ALSO DEVELOPING SMALLER HIGH DENSITY PACKAGES SO WE CAN GET DATA IN A SPLIT SECOND.

WHOA...

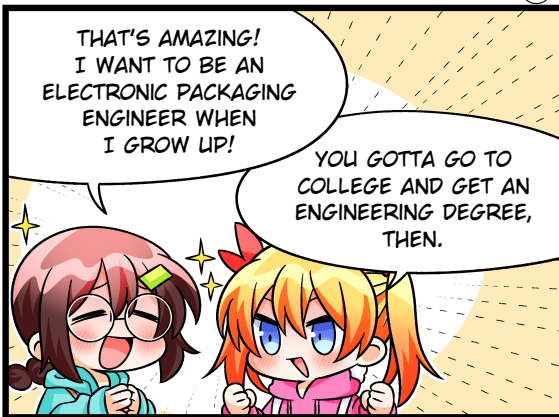
2



BETWEEN THE SLICES OF SILICON CHIPS ARE METAL CONDUCTORS CALLED "BUMPS." THESE BUMPS ARE FRAGILE, SO THEY ARE EMBEDDED IN EPOXY RESIN, WHICH ACT AS A CUSHION.

WOW, SO IT ACTS AS A CUSHION FOR WHEN I DROP MY PHONE!

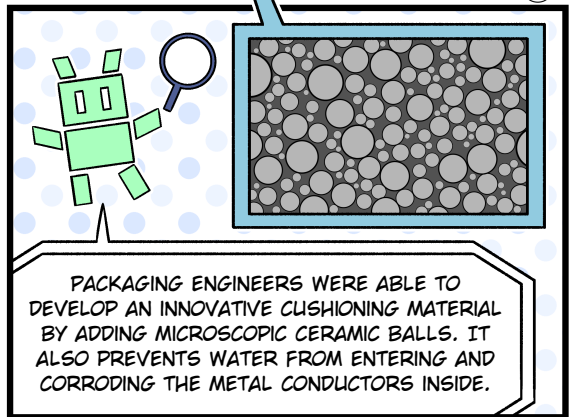
7



THAT'S AMAZING! I WANT TO BE AN ELECTRONIC PACKAGING ENGINEER WHEN I GROW UP!

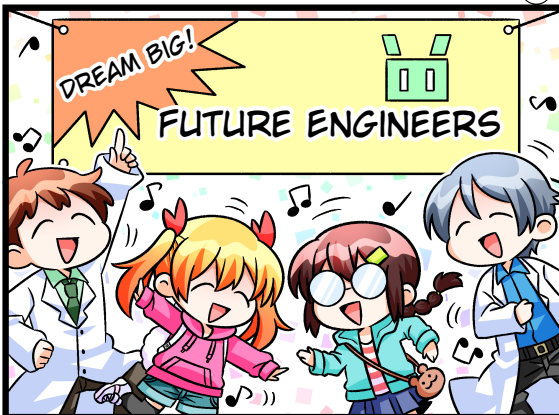
YOU GOTTA GO TO COLLEGE AND GET AN ENGINEERING DEGREE, THEN.

3



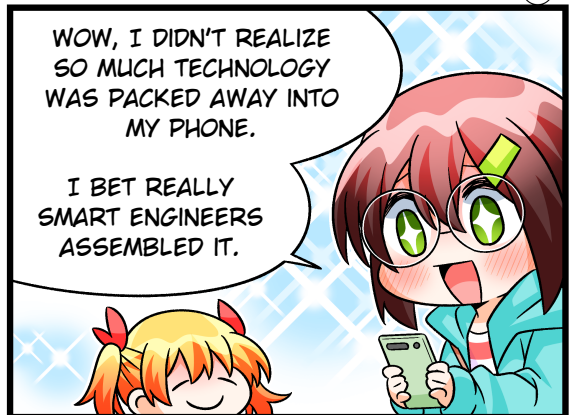
PACKAGING ENGINEERS WERE ABLE TO DEVELOP AN INNOVATIVE CUSHIONING MATERIAL BY ADDING MICROSCOPIC CERAMIC BALLS. IT ALSO PREVENTS WATER FROM ENTERING AND CORRODING THE METAL CONDUCTORS INSIDE.

8



DREAM BIG!
FUTURE ENGINEERS

4



WOW, I DIDN'T REALIZE SO MUCH TECHNOLOGY WAS PACKED AWAY INTO MY PHONE.

I BET REALLY SMART ENGINEERS ASSEMBLED IT.

Hurray for Electronic Packaging Engineers!

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