EMERGING TECHNOLOGY

PROCHIP

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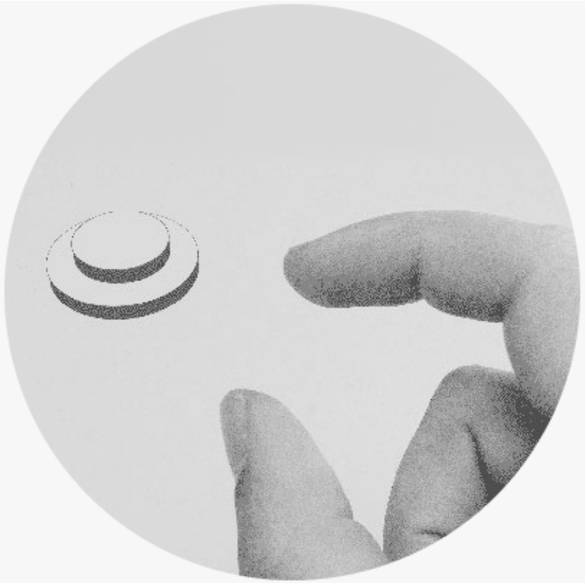
CONTENTS

A BRIEF OUTLINE

ABSTRACT

•PROJECT SOLI IS A NEW TECHNOLOGY THAT USES RADAR TO ENABLE NEW TYPES OF TOUCH LESS INTERACTIONS.

•THE MOVEMENTS OF GESTURES FROM A HUMAN CAN BE CAPTURED USING A RADAR SENSOR, AND BY DETECTION OF THESE GESTURES, SOME SPECIAL TASK ON A DEVICE CAN BE DONE.



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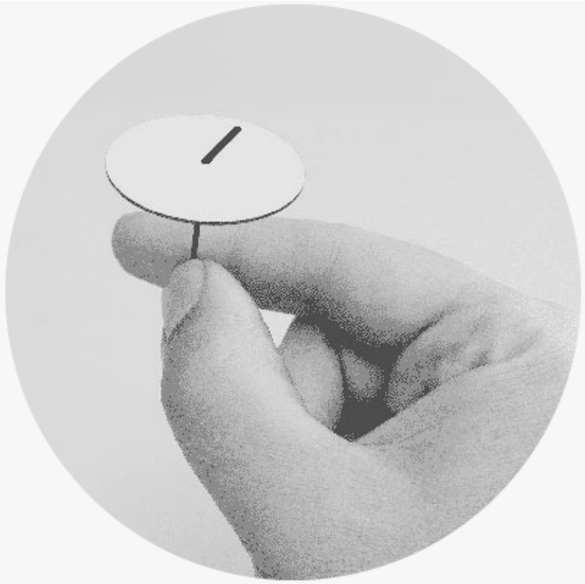

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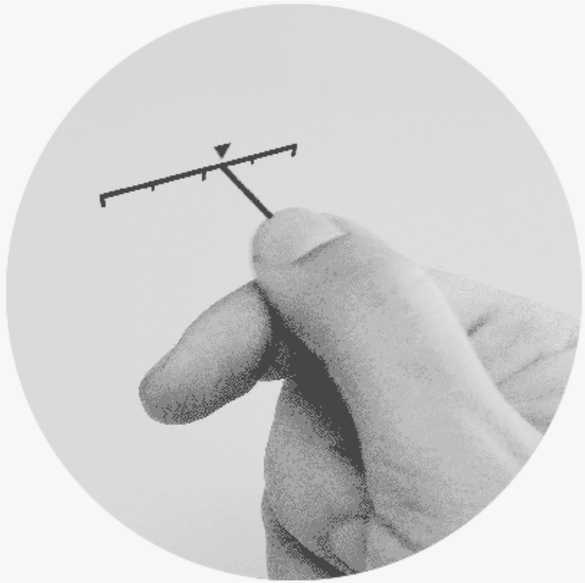

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INTRODUCTION

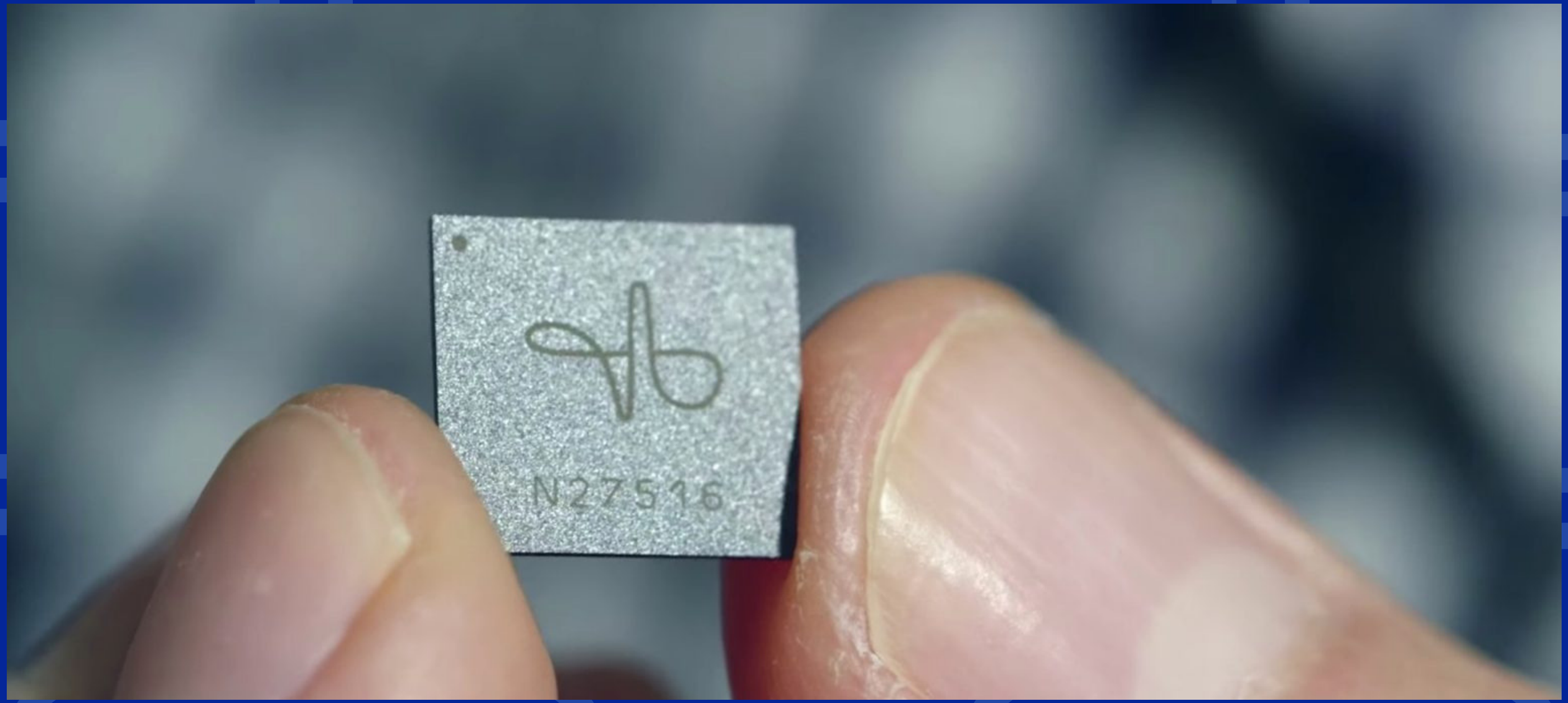
Google ATAP(Advanced Technology and Projects group) has basically realised that our hands and fingers are the best way we have to interact with smart devices.

WHAT IS PROJECT SOLI?

- PROJECT SOLI IS A SENSOR THAT USES THE RADAR TECHNOLOGY CAN EASILY BE USED IN EVEN THE SMALLEST WEARABLE'S THAT FITS WITHIN A TINY CHIP.

- IT IS CAPABLE OF ACCURATELY DETECTING YOUR HAND MOVEMENTS IN REAL-TIME.

- ITS LIKE LEAP MOTION AND OTHER GESTURE- TRACKING CONTROLLERS.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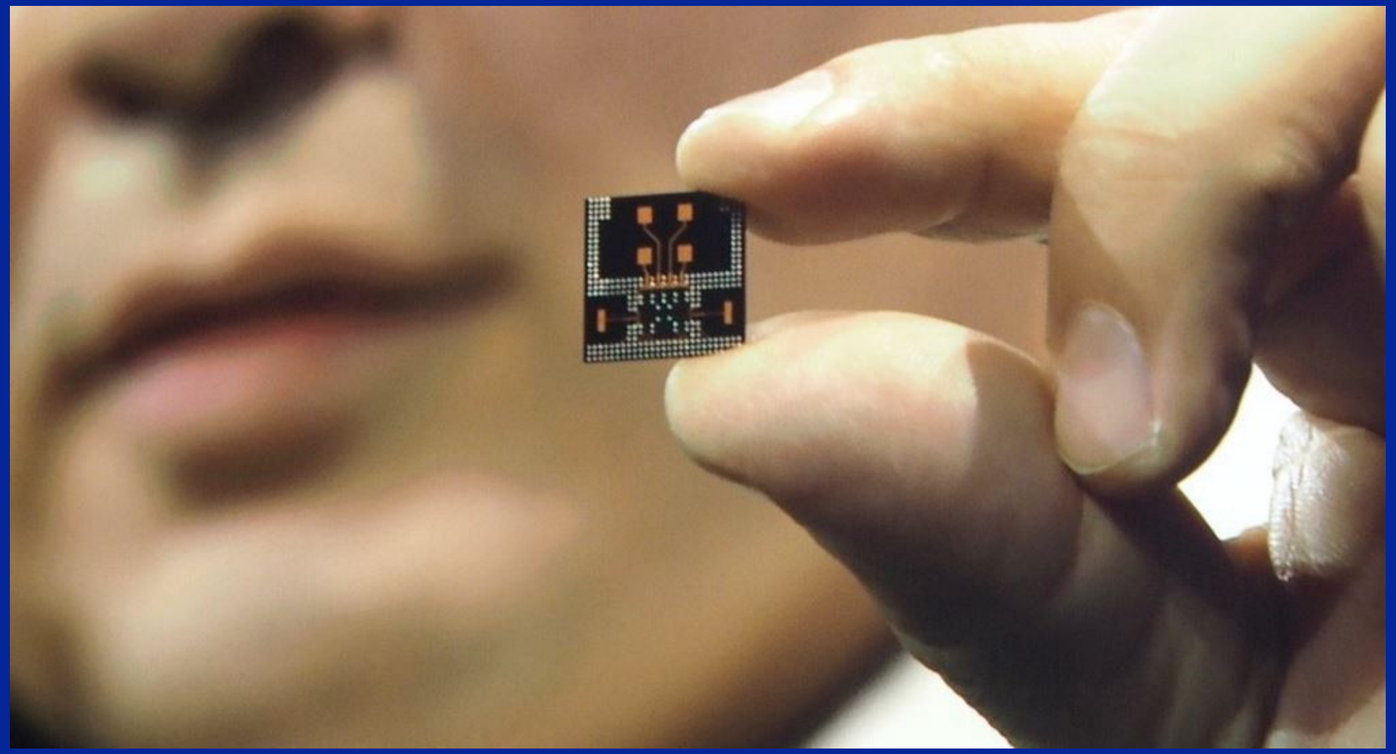
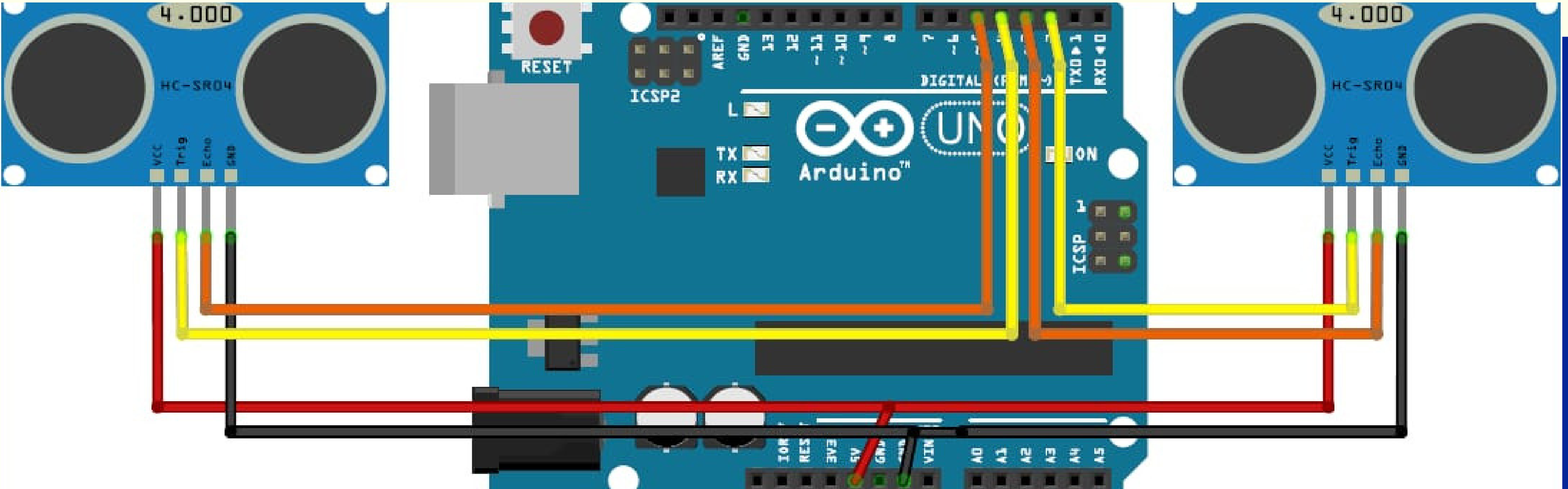
FEATURES OF SOLI

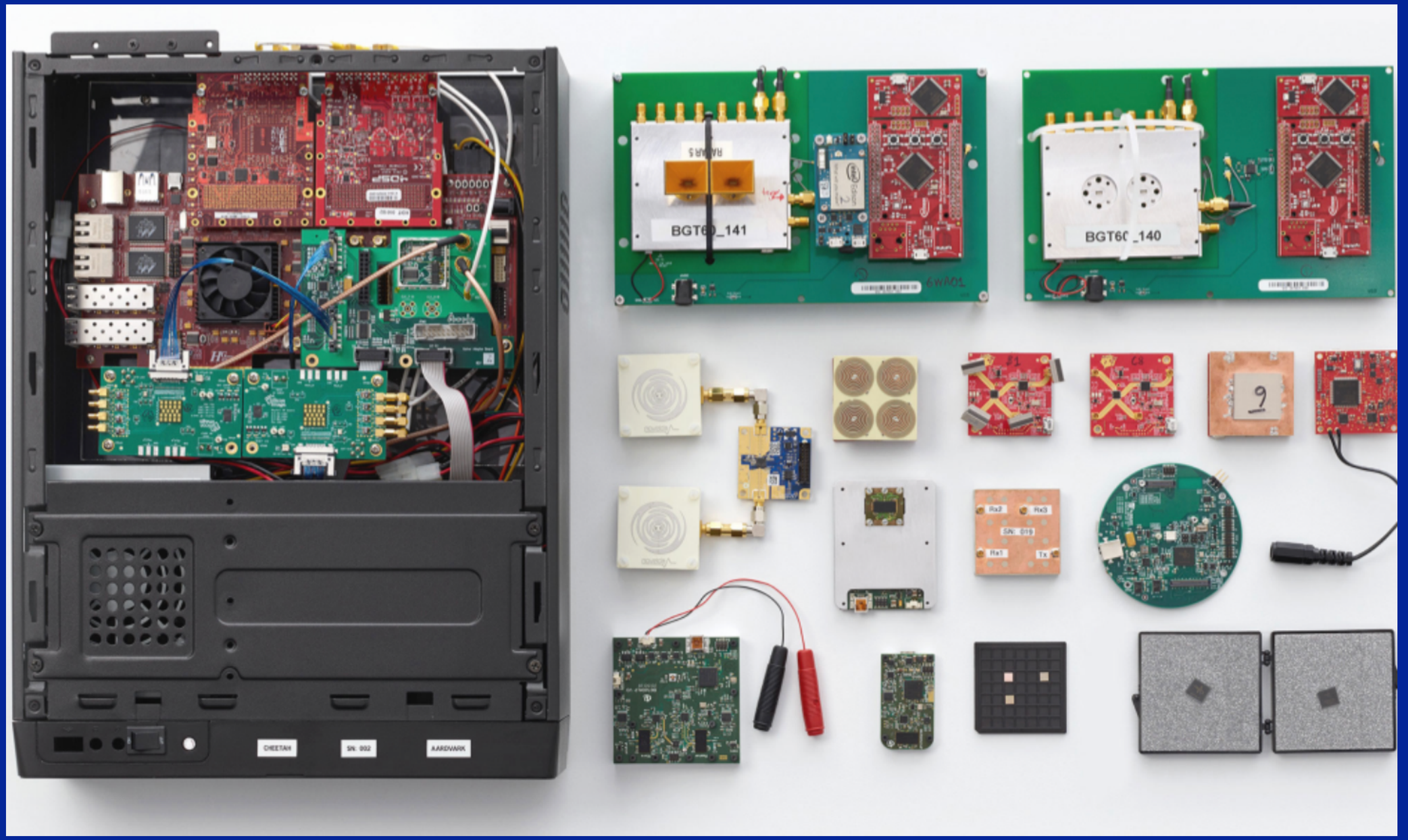
- THE SOLI IS SMALL IN SIZE OF A 5X5 MM AND MADE UP OF A SILICON.
- IT HAS A SENSOR WHICH CAPTURE SUBMILLIMETER OF MOTIONS OF FINGERS IN 3D SPACE.
- THE TEAM HAS CREATED A RADAR WHICH HAS THE INTERACTION SENSOR RUNNING AT 60GHZ.
- IT CAPTURES MOTIONS OF FINGERS AT A PHENOMENAL RATE OF 10,000 FRAMES PER SECOND



HARDWARE

ULTRASONIC SENSORS X 2
USB CABLE (FOR ARDUINO)
FEW CONNECTING WIRES [BUY HERE]
A LAPTOP WITH INTERNET CONNECTION
ARDUINO

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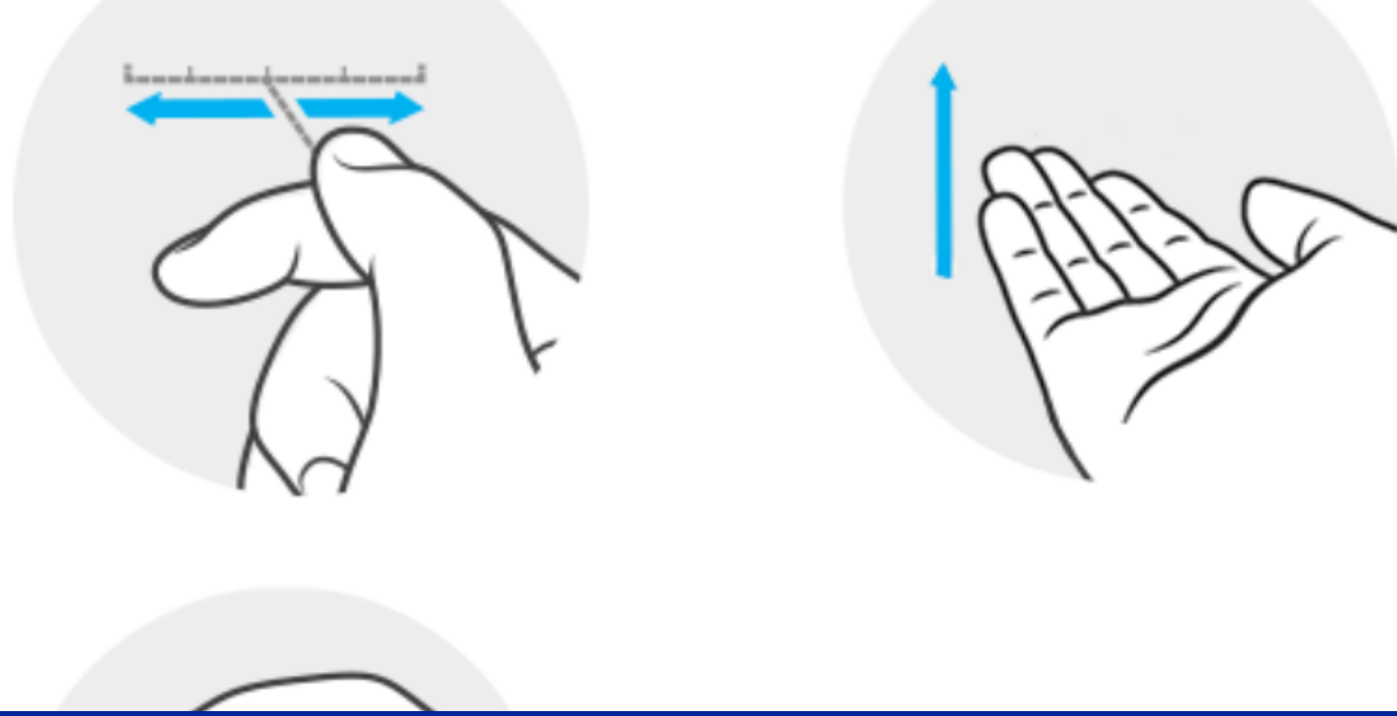
WORKING

It works by emitting electromagnetic waves in a broad beam.

•Properties of the reflected signal, such as energy, time delay and frequency shift capture rich information about the objects and Doppler effect to detect speed.

• It then uses machine-learning to translate these movements to pre-programmed commands .



FEATURES OF PROCHIP

- VOICE RECOGNITION

APPLICATIONS

MEDICAL
GAMING
GADGETS

ADVANTAGES

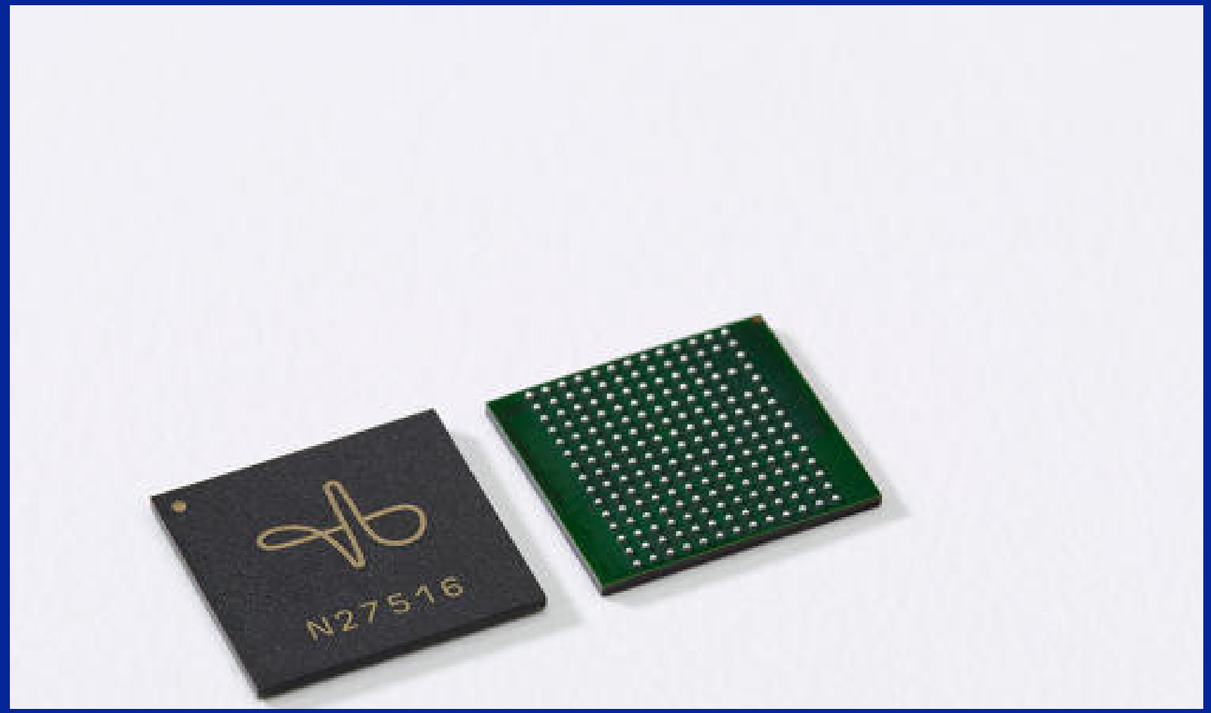
- ALLOWS TO CONTROL GADGETS WITH GESTURES.
- GOOD ACCURACY OVER CONTROL.

- ALLOWS FREE HAND TYPING.

NEED NOT TO CARRY GADGETS WHILE USING THEM

CONCLUSION

One of the big problems with wearable devices right now is inputs - there's no simple way to control these devices. Therefore gestures will be used by individuals to carry out certain functions with electronic machines such as Smartphone's and desktops.



THANK YOU