

Project 1: Tangibles with Digital

A person is shown in profile from the back, wearing glasses and holding a magnifying glass. The magnifying glass is held over a cityscape at sunset, with the sun low on the horizon. The magnifying glass shows a magnified view of a building in the distance. The background features a tall building on the right and a cityscape with a dome-shaped building in the center.

MAS.834

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Inspiration

The magnifying glass is a device which we have historically used to reveal information not easily visible to the naked eye. Users move the magnifying glass closer and further away to reveal different levels of detail for the item being examined.



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Concept

A physical magnifying glass with "focused" digital augmentation allowing users to interactively learn more about the world around them. This "tangible magnifying glass" shows users details about the item as they peer through the lens.



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Position A



Coccinellidae

The Coccinellidae are a family of small beetles, ranging from 1 to 10 mm.

Wikipedia.org

Position A



Coccinellidae

The Coccinellidae are a family of small beetles, ranging from 1 to 10 mm. They are commonly yellow, orange, or scarlet with small black spots on their wing covers, with black legs, heads and antennae.

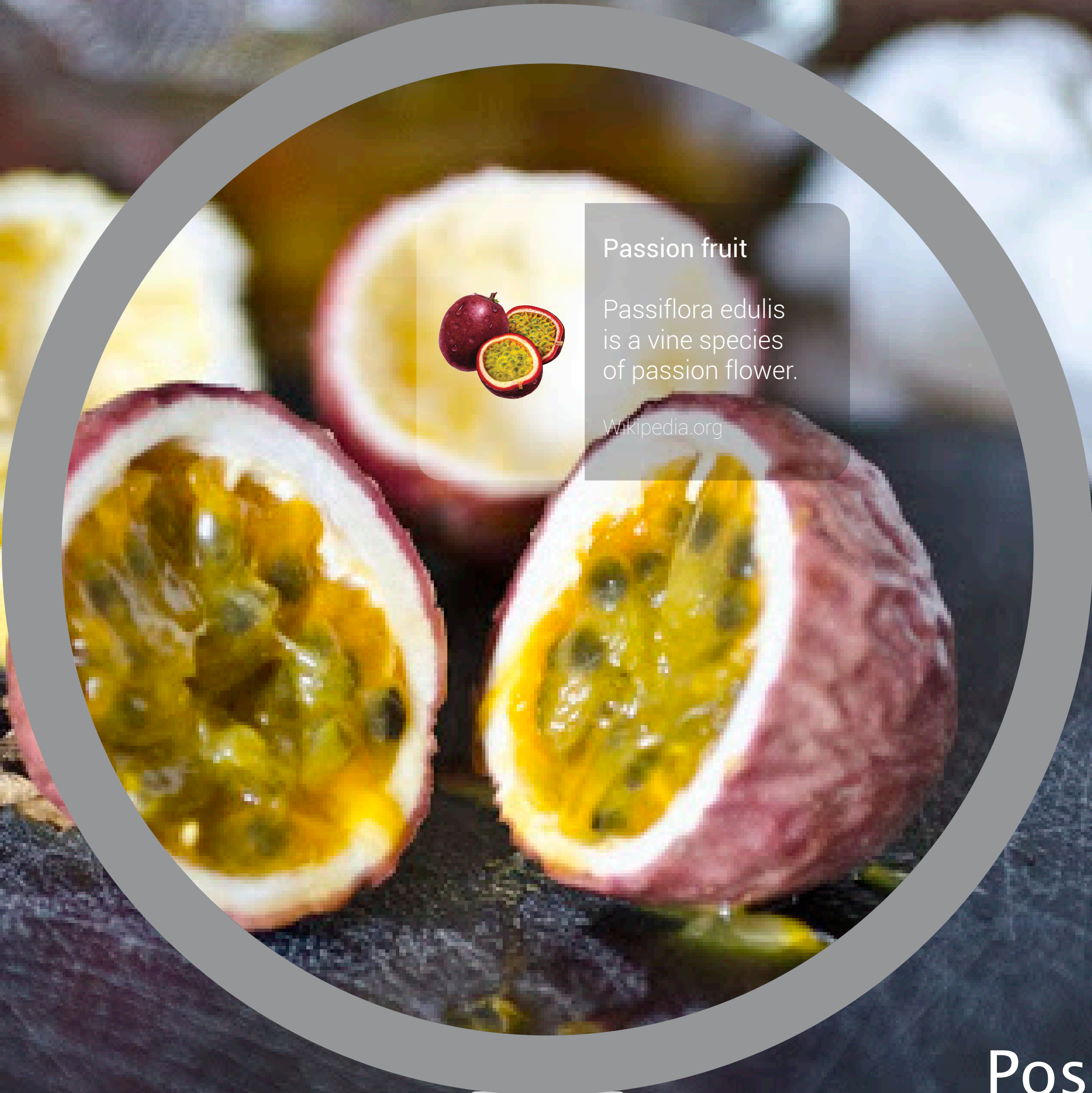
[Wikipedia.org](https://en.wikipedia.org/wiki/Coccinellidae)

Position A





Position A



Passion fruit

Passiflora edulis is a vine species of passion flower.

[Wikipedia.org](https://en.wikipedia.org/wiki/Passiflora_edulis)

Position A

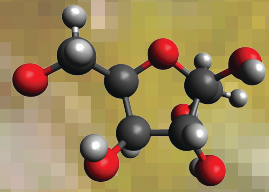
A close-up photograph of several passion fruits, some whole and some sliced open to reveal their yellow, seed-filled pulp. The fruits are arranged on a dark, textured surface. A large, semi-transparent grey circle is overlaid on the image, containing a text box.

Passion fruit

Passiflora edulis is a vine species of passion flower that is native to Brazil, Paraguay, Uruguay and northern Argentina. Its common names include passion fruit, passionfruit, and purple granadilla.

[Wikipedia.org](https://en.wikipedia.org/wiki/Passiflora_edulis)

Position A

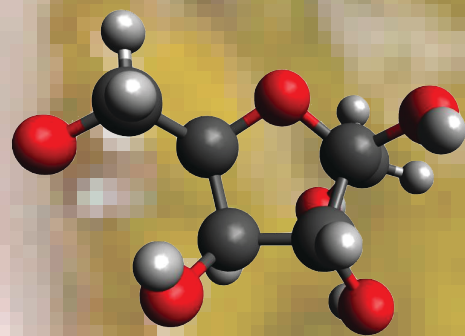


Fructose

Fruit sugar, is a simple monosaccharide found in many plants

[Wikipedia.org](https://en.wikipedia.org/wiki/Fructose)

Position B



Fructose

Fructose, of fruit sugar, is a simple monosaccharide found in many plants, where it is often bonded to glucose to form the disaccharide sucrose.

[Wikipedia.org](https://en.wikipedia.org/wiki/Fructose)

Position B

Tangible Interface

The metaphor of a magnifying glass revealing detail or knowledge is utilized while incorporating the concept of handles and digital shadows: The action of moving our device closer or further away changes the level of detail presented to the user.







Position A



What?

Position A



Position B

How?

Position B



Position A



Position B

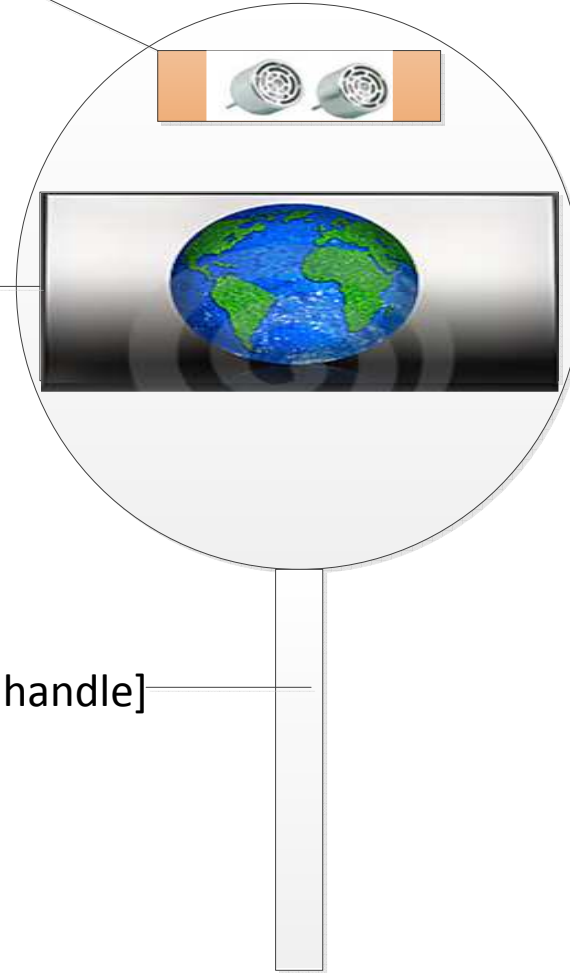
Overview of Implementation

Distance Estimation: Ultrasonic Transducer,
40 kHz TX + RX ; 0 – 200 in range

Display:
LCD or OLED

Power source:
Lithium-ion battery [in handle]

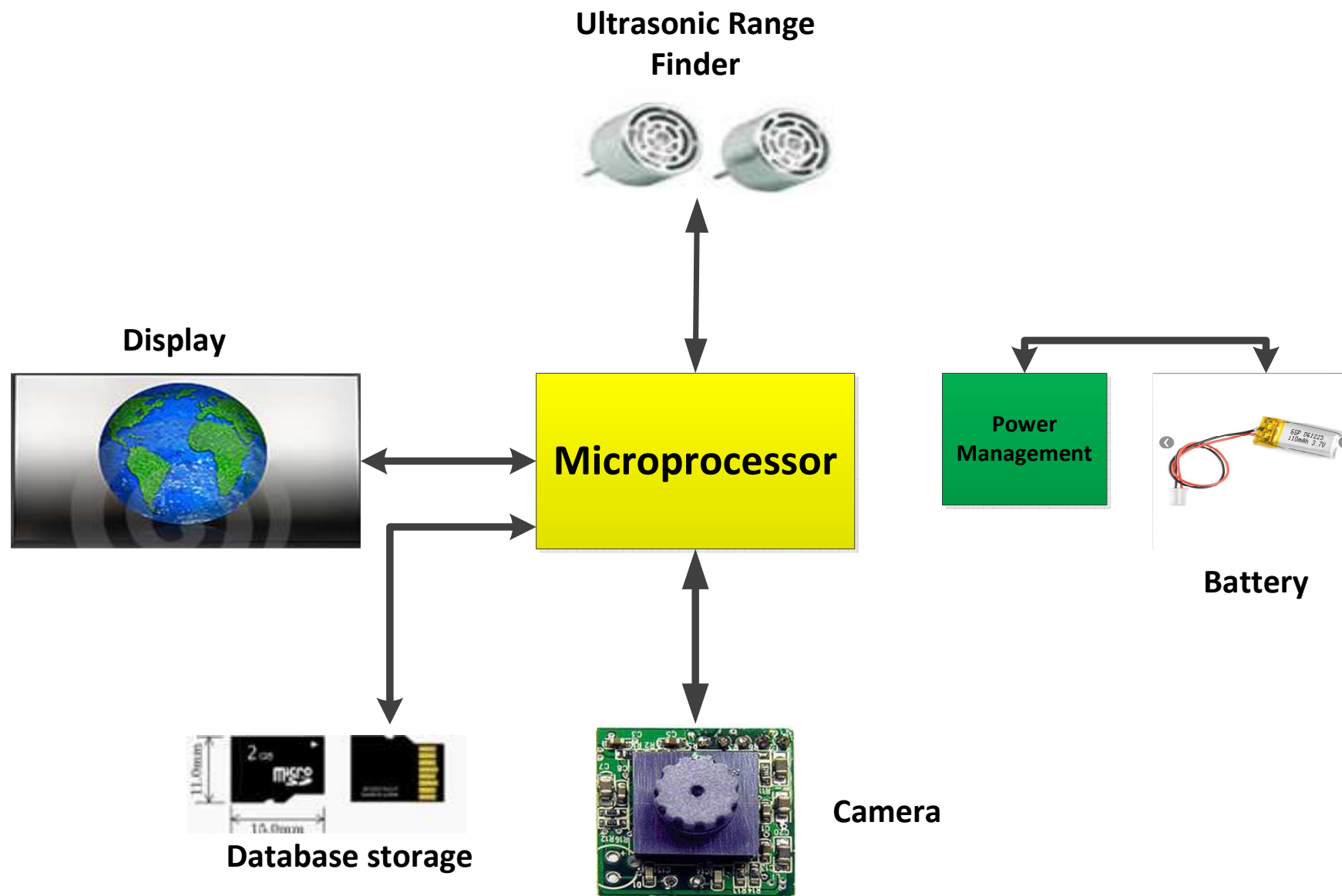
Subject Imaging:
Camera module



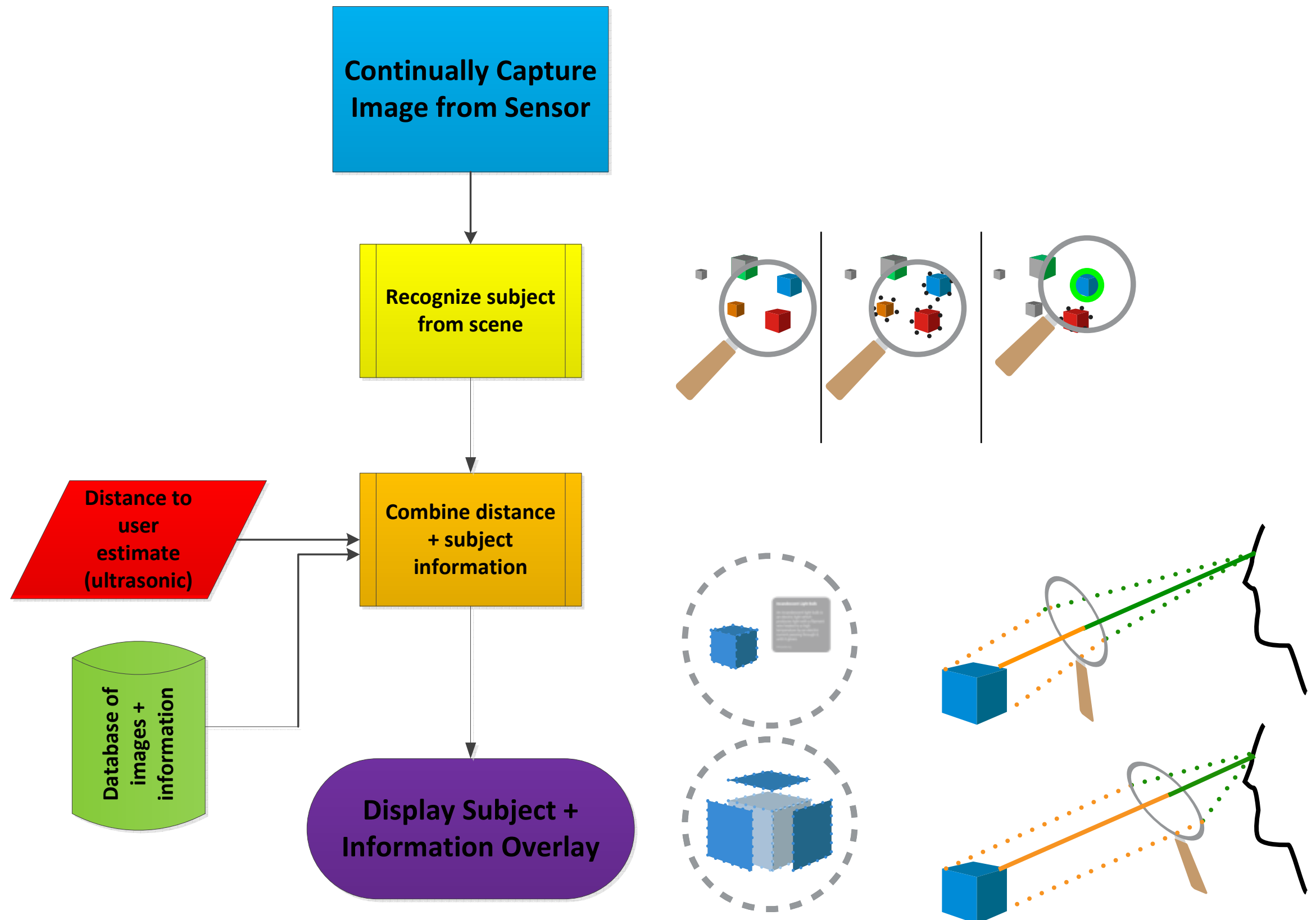
User-view

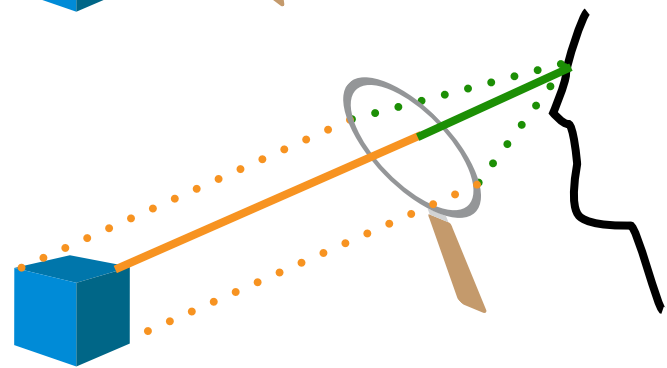
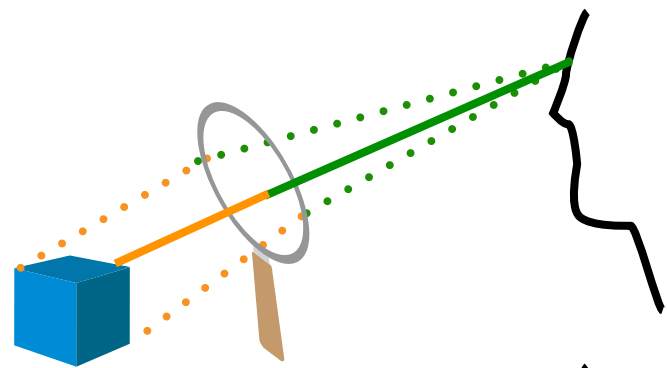
Rear-view

Block Diagram of HW Implementation



Flowchart of Data Processing





Goals & Objectives



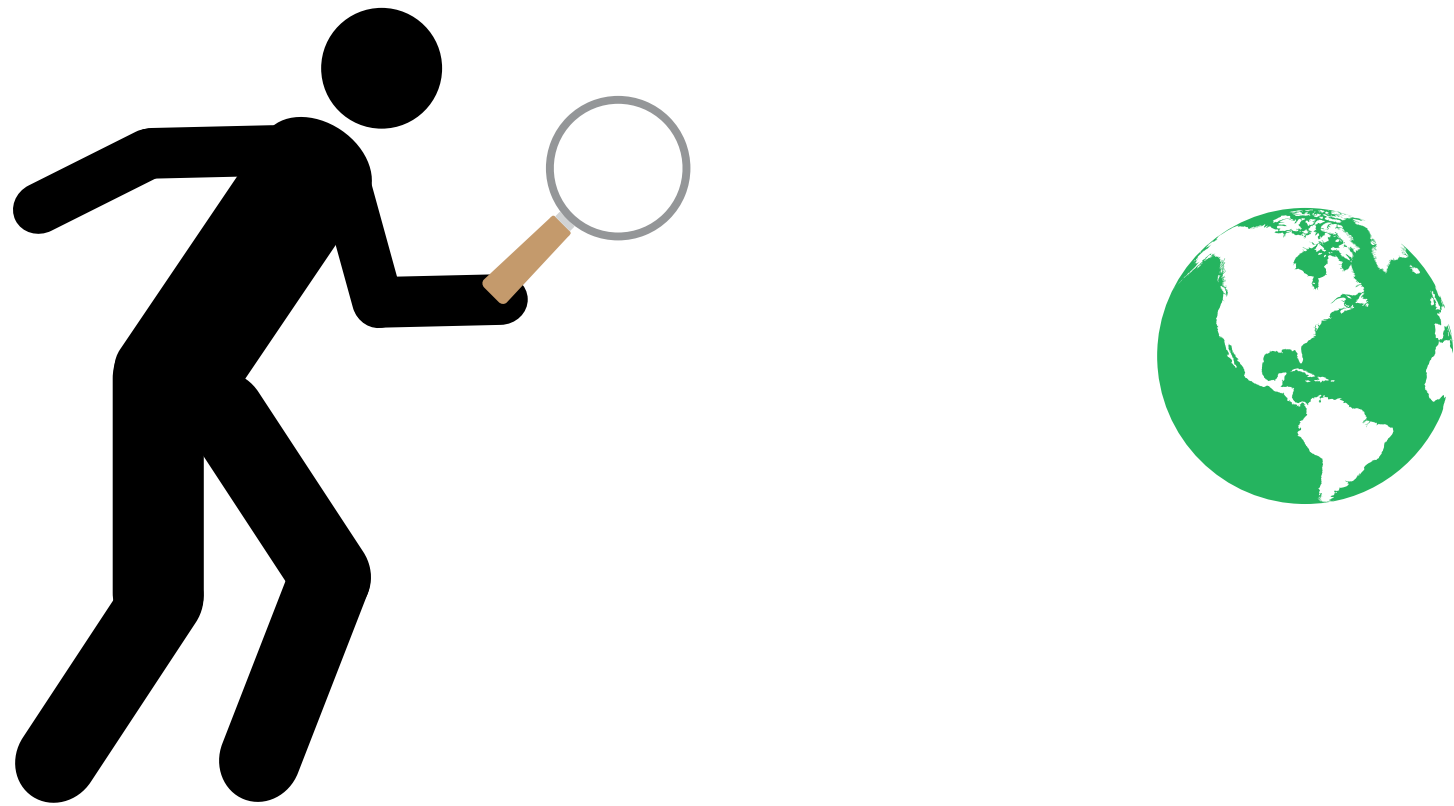
Instill a spirit of exploration which combines the power of digitally archived knowledge with the joy of physical learning.

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OPEN



CUSTOMER STORE
ITEM: QUANTITY
G.W: 40.9LBS
M.E.A.S: 18 1/2" x 14 1/2"
47.0CM x 36.0CM x 36.0CM

JUNIOR ADVENTURE
TOUR
TACO

JUNIOR AD
TOUR
TACO









