

THE IP CCTV CAMERA DESIGN FOR JAKARTA PUBLIC TRANSPORT IN KWK B14

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INTRODUCTION

- Every Jakarta citizen has the right to get a sense of secure from the threat of crime because it is the obligation of the State to maintain the continuity of government. In this case, Jakarta citizen has the right to protect from the regulatory body in the Indonesian National Police. The recent of criminal cases in public transport is increasing. The users of public transport becomes anxious and feel insecure. It requires a technology that expects to prevent the crime in public transportation. The technology for the most appropriate is **CCTV**.
- **CCTV** is **Closed Circuit Television**, which means using closed signals, unlike a regular television using broadcast signal.
- This CCTV design has purpose to develops a sophisticated CCTV **which can identify a person's identity by analyzing the captured face** by camera and reveals the identity of the person being tracked from the server's database at the police station

OBJECT

The main focus in this case is to studying of CCTV design camera and CCTV application along with public transit system (B14 KWK) Cengkareng - Citraland in West Jakarta.



THEORY

A. Design History and Development and The Artistic World in Indonesia

The history of product design in Indonesia, development of electronic products in Indonesia, Law of creation of a product, controlling the waste products, and environmentally friendly design.

B. Industrial Design

International standardization and the use of American & European System.

C. City Politics and Residents-Rights

Congestion, Emissions and Public Transportation, Transportation Planning, and Fighting crime in the capital.

D. Introduction to General Psychology

The specificity of the individual that is affected by the environment and culture, innate and environmental interactions and the formation of personality, Mental Disorders, Psychopaths, Drugs, and Sexual Disorders.

THEORY

E.The History and Development of CCTV Camera

The early history of the use of CCTV and its development from the beginning to the present invention.

F. Engineering Material as Material Structures

Discussing the nature of the material, such as non-metallic materials, polymers, plastics, composites and matrices.

G.Wireless Technology

The definition of Wireless, Wireless protocol standardization, device support Wireless, and Wireless networks.

H. Principles of Design Engineering

The definition of engineering design, process engineering design, Product Design Specifications, Analogy, Aesthetics and Design Management.

METHODOLOGY

A. Research Methods

Majority of the research methods use **qualitative** methods, which looking for the data and theory from the books, and from the internet. Quantitative methods are also used for designing the CCTV Camera and involve the general public, police, public transport user, driver and owners of the public transport.

The methods used for interviews, observations, and questionnaires.

METHODOLOGY

B. Approach

Phenomenology is a philosophical study in the field of human learning as a phenomenon. Phenomenology in the philosophy of science are commonly associated with the science of hermeneutics, the science that studies the meaning of this phenomenon. Basically phenomenology is a tradition of assessment that is used to explore the human experience.

METHODOLOGY

The variant of the tradition Phenomenology :

- **Classical phenomenon**, believe in the truth can only be obtained through the guidance experience, meaning just trust the truth from their point of view alone or objective.
- **Phenomenology of Perception**, believe in a truth can get from different point of view, not only phenomenology limit on objectivity, or can be said to be more subjective.
- **Phenomenology of hermeneutics**, believe in a truth that is in review both of aspects of objectivity and subjectivity, and also accompanied with the analysis in order to draw a conclusion.

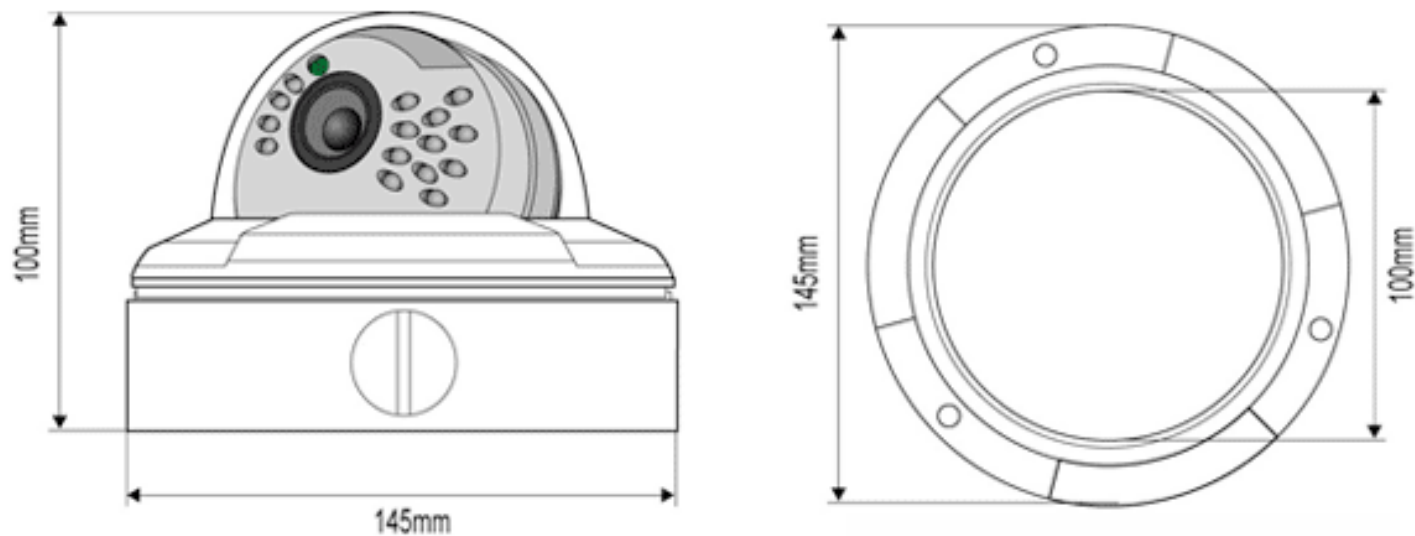
DESIGN OBJECT

The object is CCTV (Closed Circuit Television) type IP (Internet Protocol) cameras that use wireless technology (Wi-Fi) that can be accessed via the Internet and mobile phones, which will be applied in the minibus route Citraland KWK B14-Cengkareng, West Jakarta



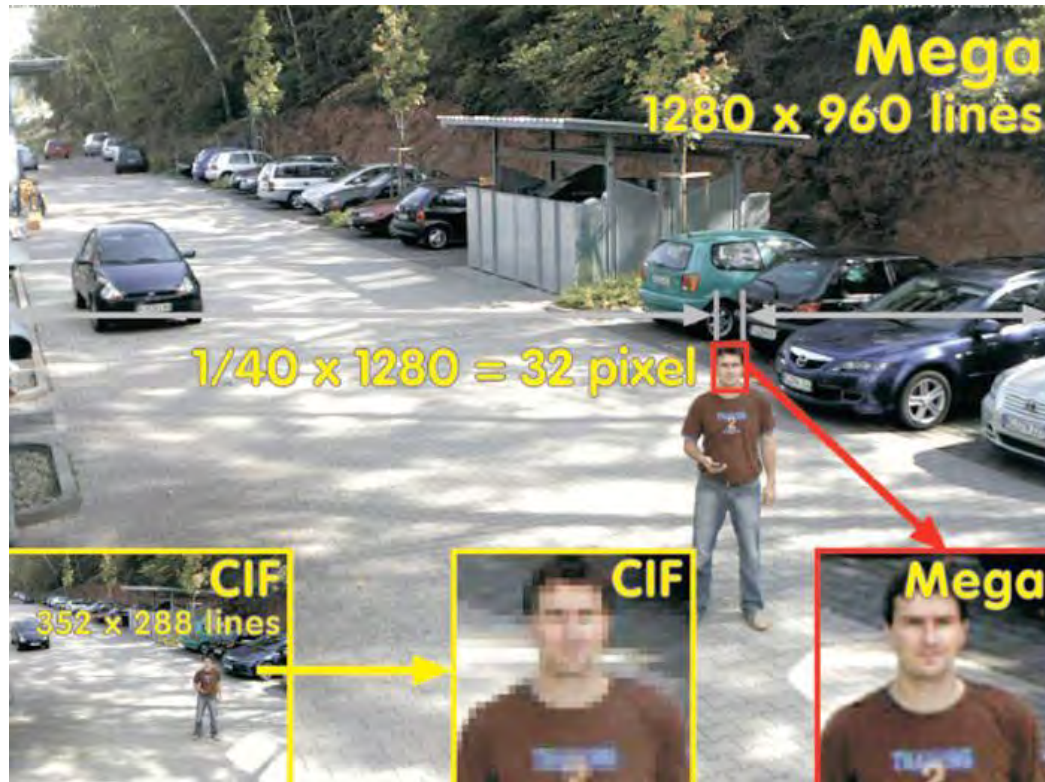
SIZE & DIMENSION

DIMENSION



The size and the dimension must be fit in the interior of KWKI4 Public transport.
Not to big, not to small.

IP CAMERA'S RESOLUTION & MEGAPIXEL

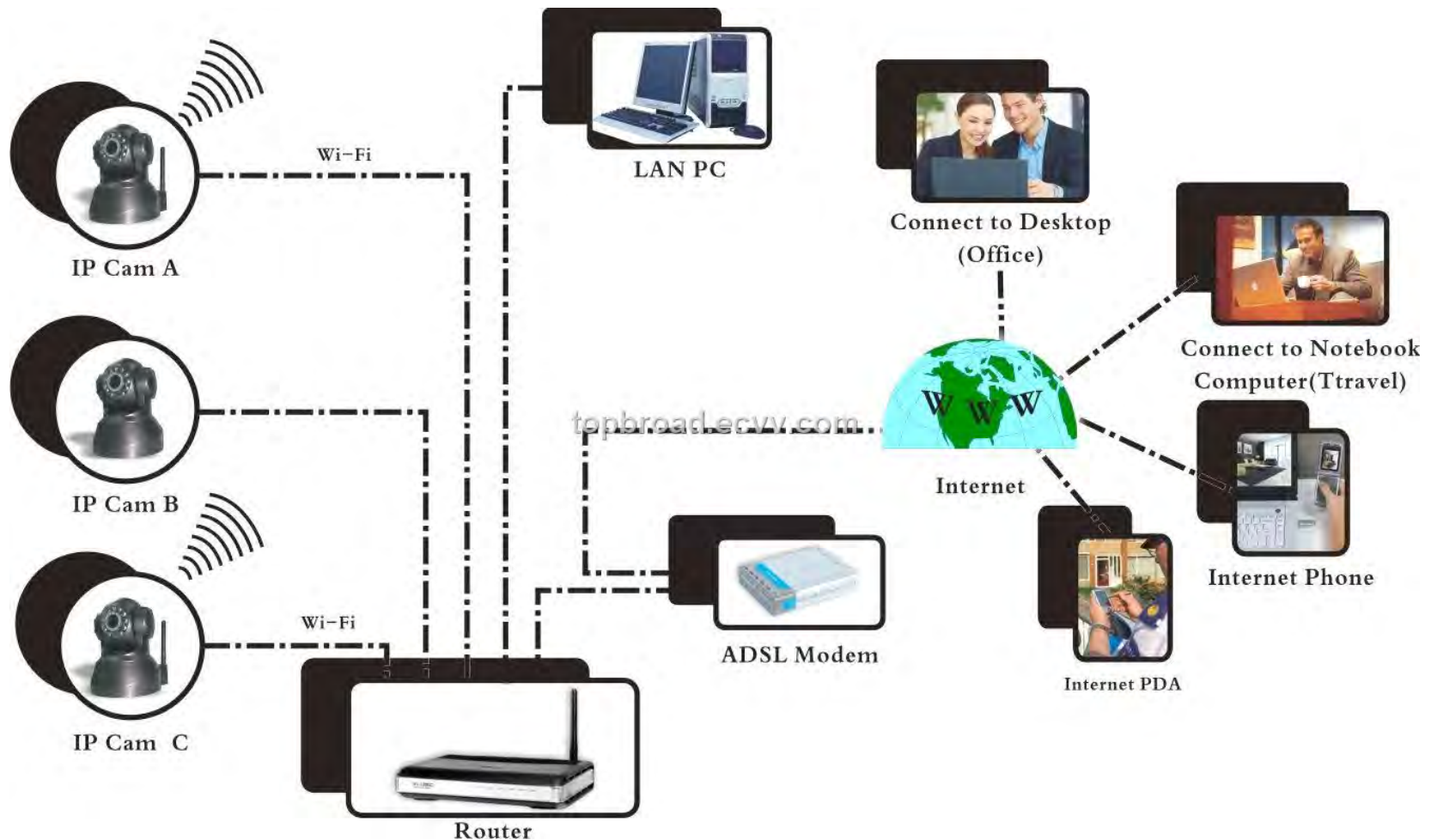


The megapixel of IP Camera start from 0,3 to 29 Megapixel.

Video : HD 720p to 1080i

Widescreen 16:9

NETWORKING SYSTEM



ANALYSIS

A. User

The users more increases because the security system has been applied so the people not to worried to use this transportation.

B. Environment

Minibus transport trajectory is allowed to pass through in the line of protocol way in Jakarta due to the condition of the minibus already meet the standards of operational feasibility.

C. Economy

The drivers who own their own vehicles and the minibus services manager have gained a new vehicle subsidy from government, fuel subsidy and payroll system provided by the government.

D. Social and Cultural

With the increasing of security and convenience in the minibus transport, then the public interest to use the minibus back to normal.

ANALYSIS

E. Politics

The Government has established the Law regarding restrictions on the use and ownership of private vehicle. This encourages the public to switch to use the public transportation, so the negative factors that influenced by the number of private vehicle could be reduced. In addition, Jakarta residents has given the ease of access for using the e-Ticketing.

F. Technology

The use of technology such as the Internet is greatly increase and becoming a necessity of life, the development of advanced technology also getting sophisticated, the application of the technology getting developed because as an IP camera placement has been considered to be placed in the minibus with the purpose to reducing the crime.

G. Transportation

The minibus is already meet the standards of safety and comfort as well as exhaust emissions and becoming an example of public transport to other cities in Indonesia.

5W1H

What

IP camera is an electronic product were placed in locations that can not be monitored and used to record events that occurs in a location

Where

placed in the KWK minibus above B14 interior rear minibus with purpose to optimization of view of IP Camera to reach the minibus interior condition and according to the entry point of passengers

When

Used when the minibus shuttles begin operation until completion, starting at 05.00 until 22.00.

Why

Designing an IP Camera for the public transport because the number of cases of crimes that occurred in the minibus

Who

The passenger/public, driver, officer and police

How

Using resolution 15-megapixel camera and uses 3.6 mm lens that spans a view to angle of 72 degrees.

KEYWORD & KEYVISUAL

A. Keywords

Keywords derived from the concept design and planning is :

Flexible & Futuristic Modern design

Flexible: More flexible (can be placed in horizontal surface, vertical surface and diagonal) and easy for install.

Futuristic: The exterior design featuring a futuristic impression.

Modern: The application of advanced technology and modern that makes this product a trendsetter IP Camera product design in the future.

KEYWORD & KEY VISUAL

B. Key Visual



Flexible & Futuristic Modern design

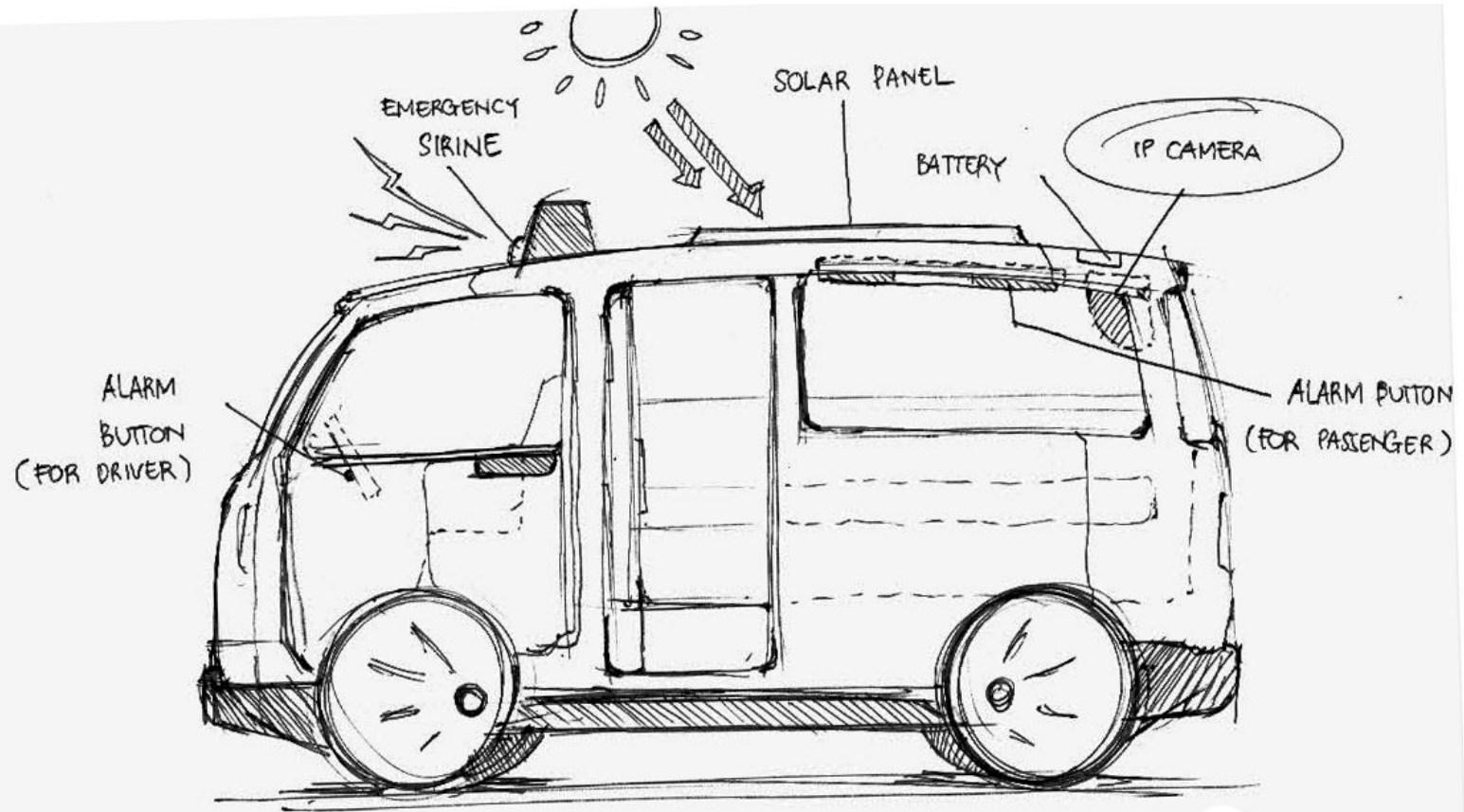
CONCEPT

Exterior design concept taken from form the basis of the combined crab claw with futuristic lines making show the impression of a strong and sturdy.



The name is taken for IP Camera design is **Vistura**. The name is derived from the Spanish language which consists of two said that Vista means view and Captura which means capturing (in a sense hold one). So the performance of this product is to arrest the crime situation in the audiovisual and catching criminals with the concept security systems.

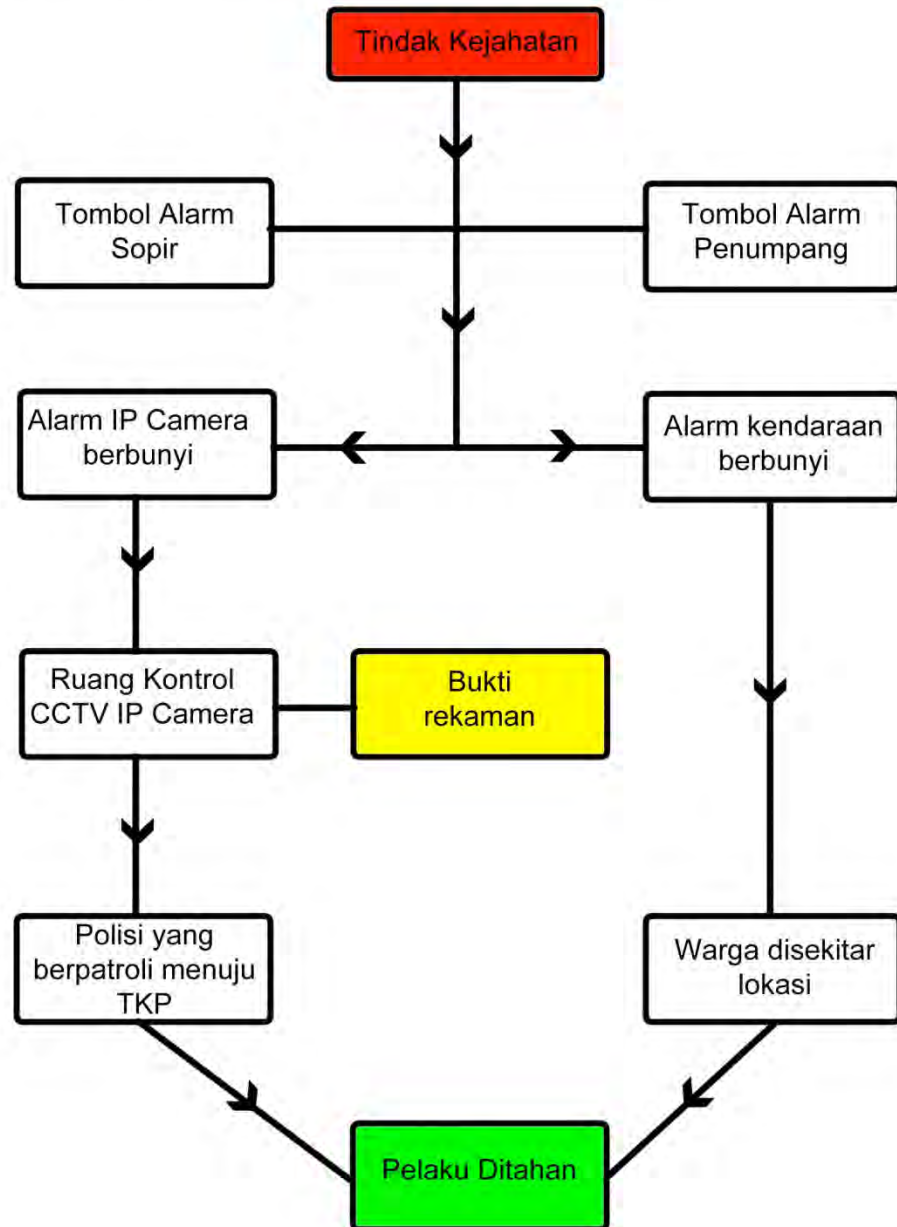
BRAINSTORMING IDEA



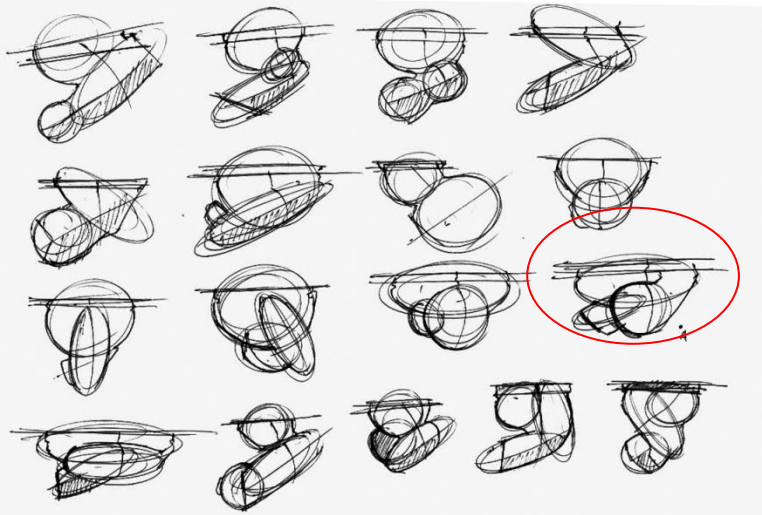
- INTEGRATED SECURITY SYSTEM CONCEPT -

Skema Sistem Keamanan Terpadu

SCHEME FOR INTEGRATED SECURITY SYSTEMS

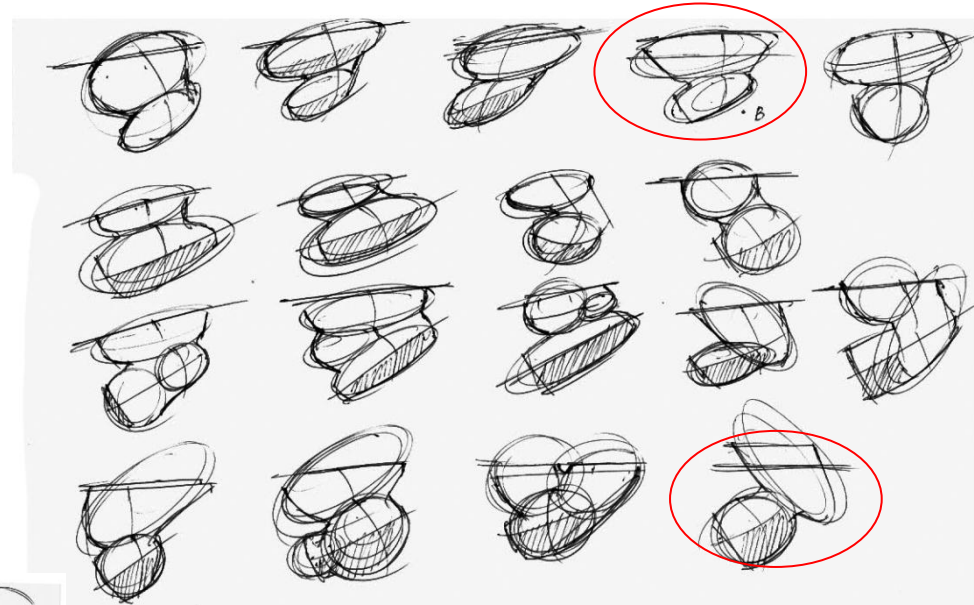


BRAINSTORMING SKETCH

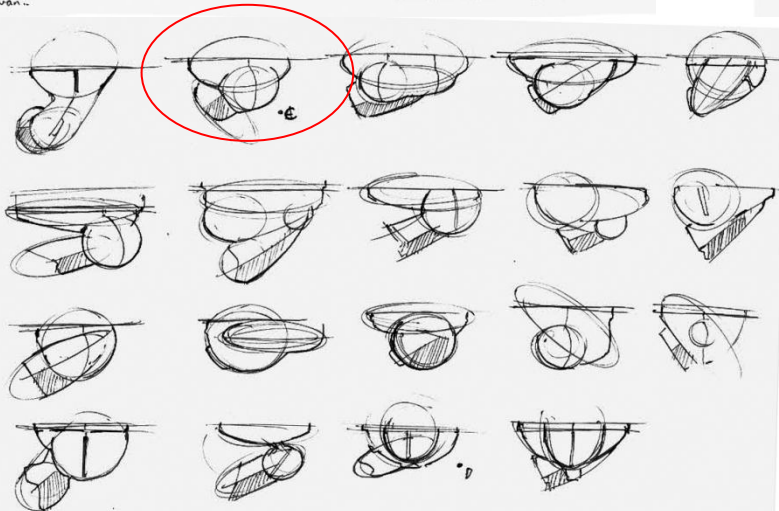


Arief Santoso Sekawan...

BRAINSTORMING SKETCH

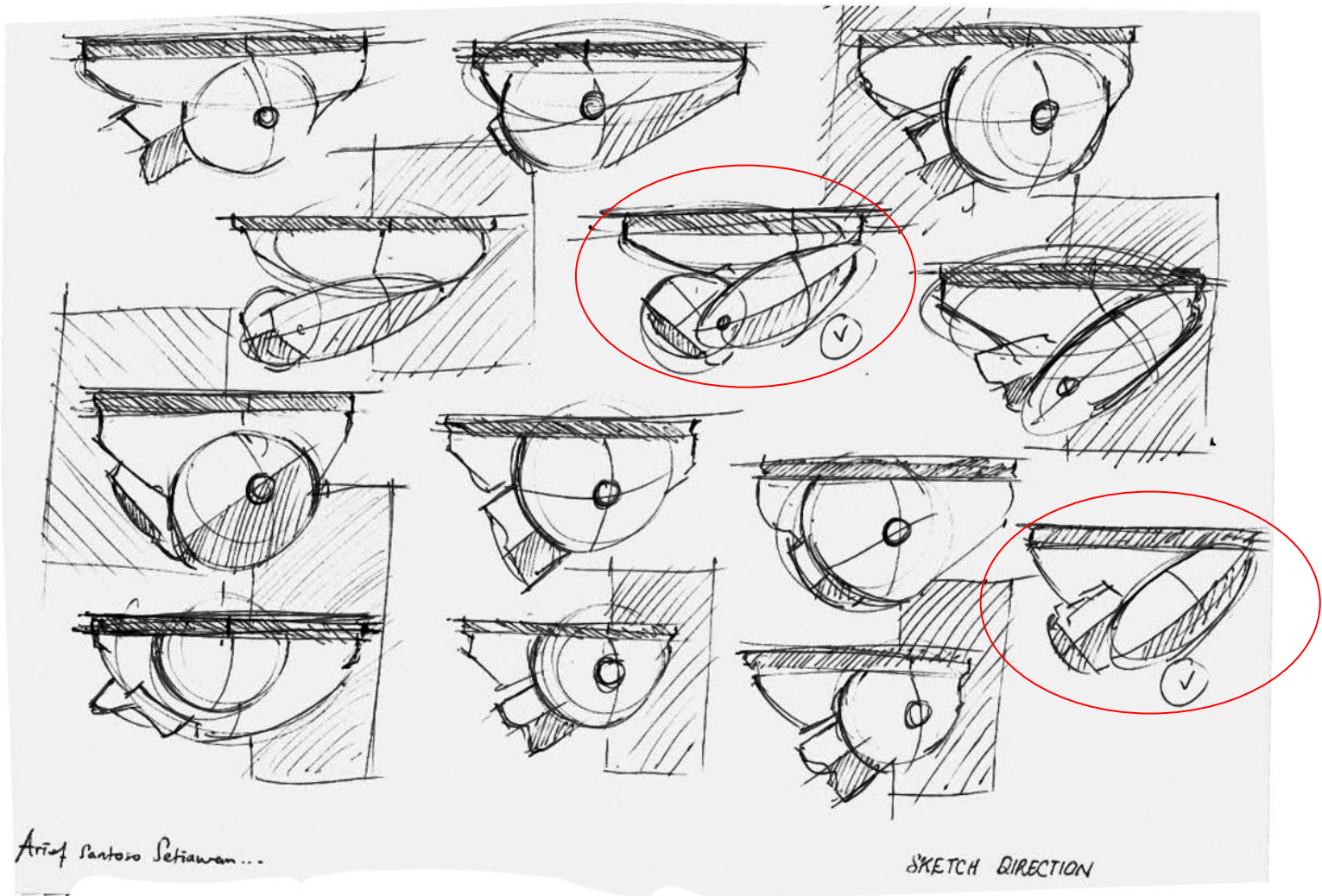


Santoso, Sekawan...

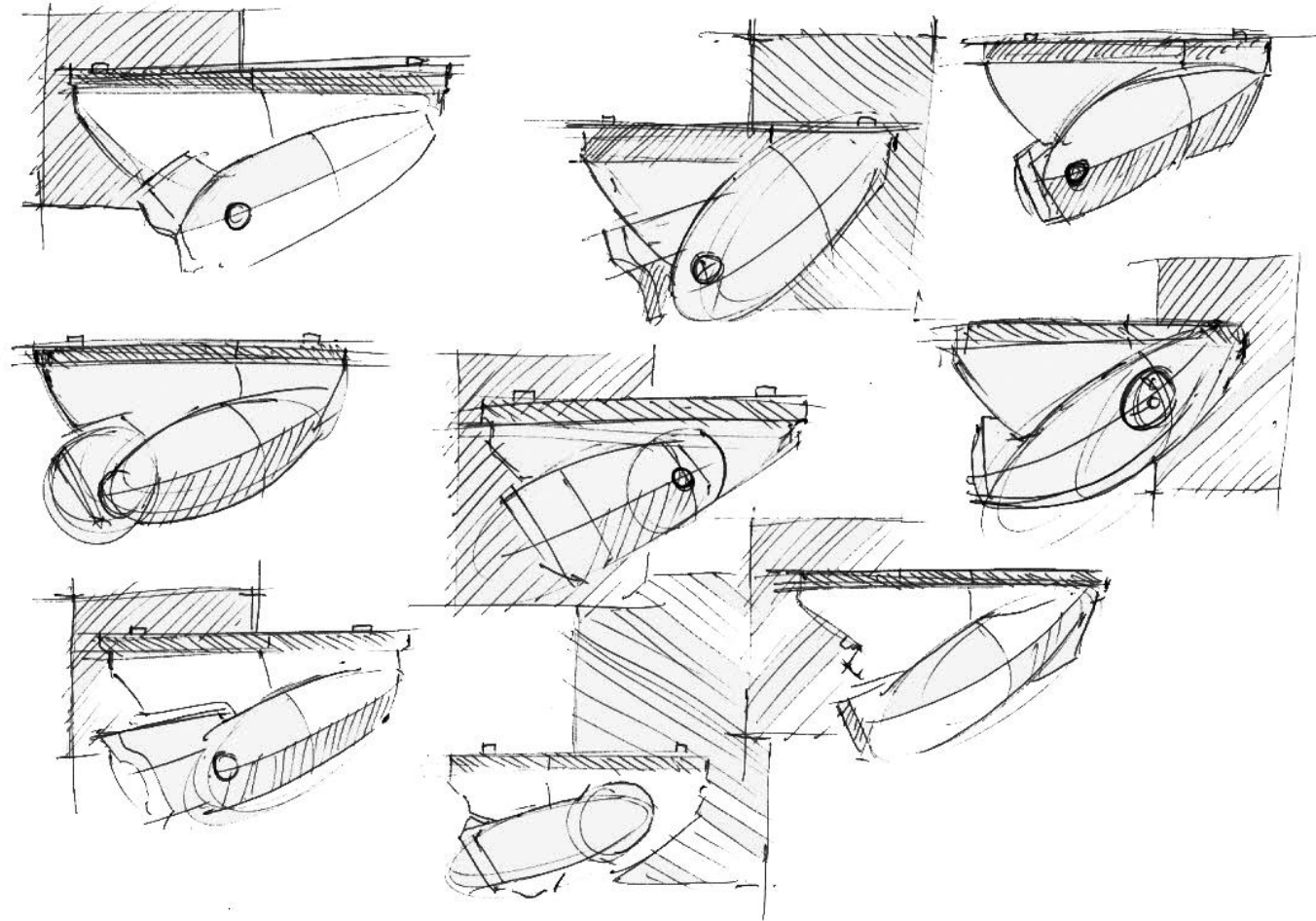


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SKETCH DIRECTION



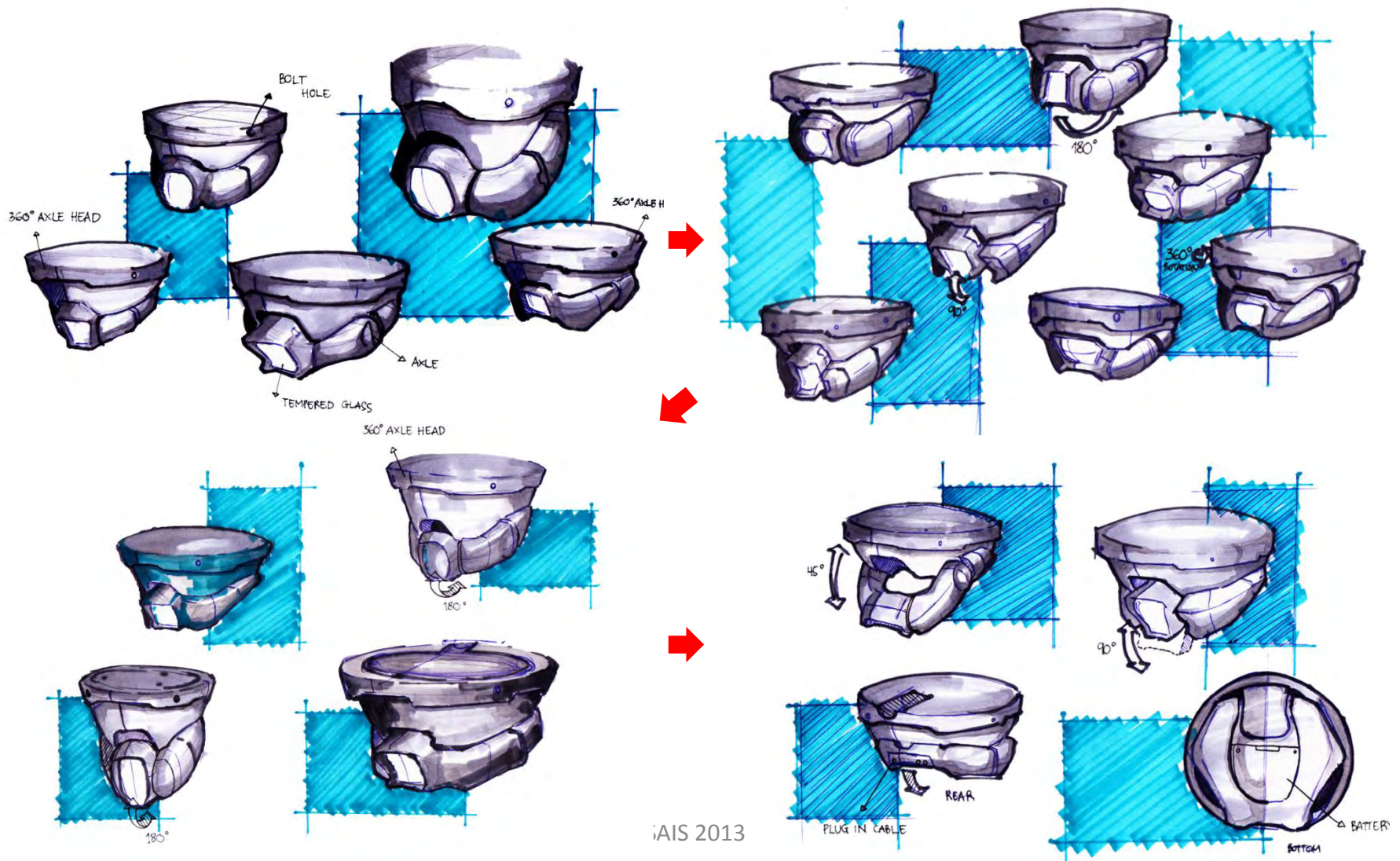
KEY SKETCH



Arief Santoso Botiawan...

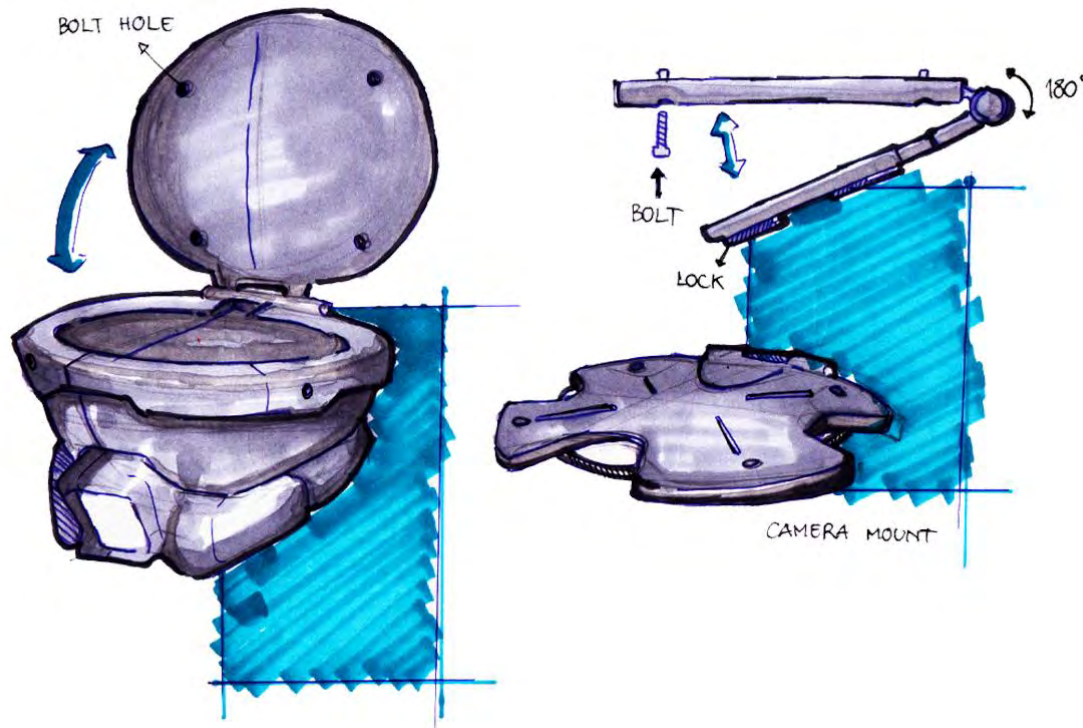
KEY SKETCH

DEVELOPMENT SKETCH



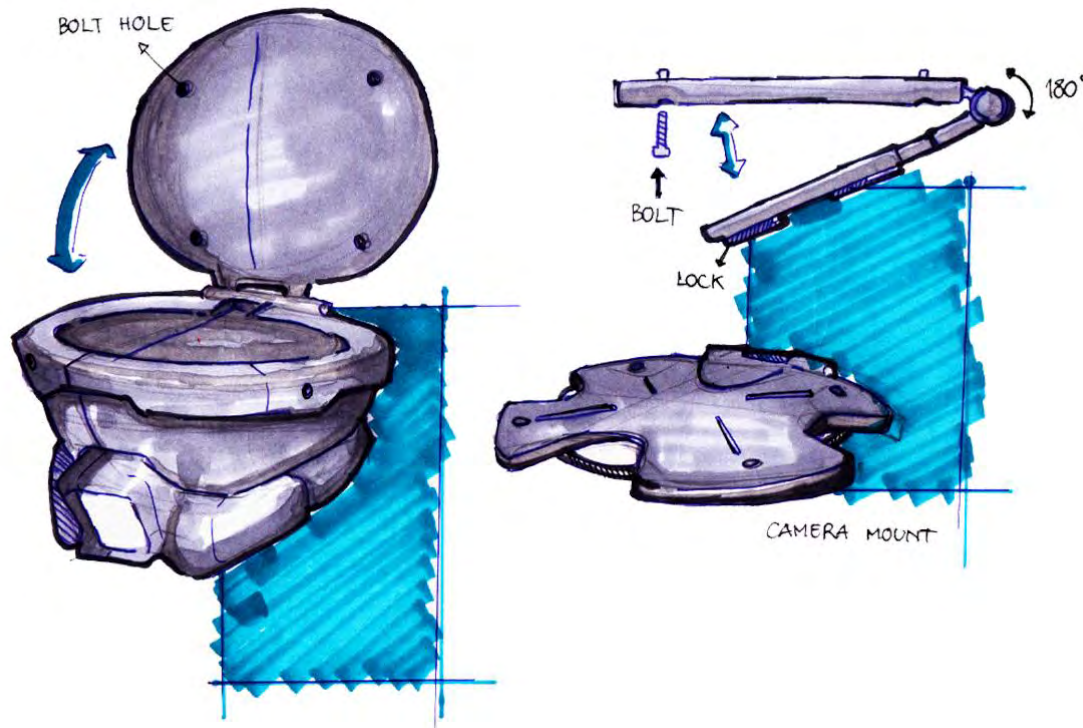
DEVELOPMENT SKETCH

The concept is equipped with Adjustable Mounting that can Arranged. So the IP Camera surface can be placed horizontally, vertically and diagonally.

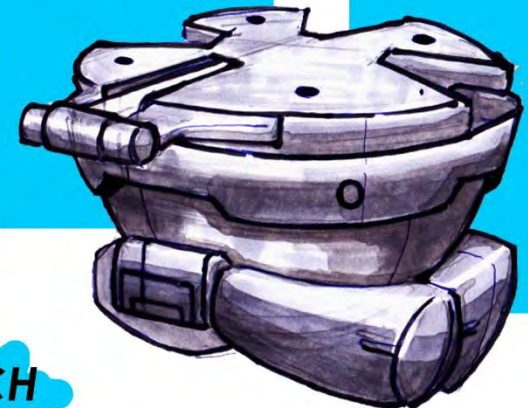
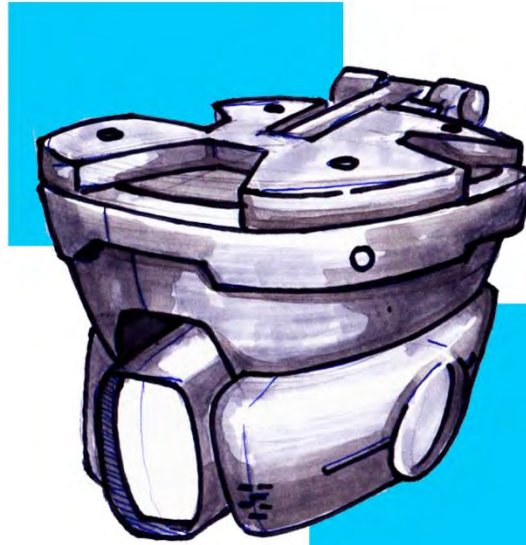


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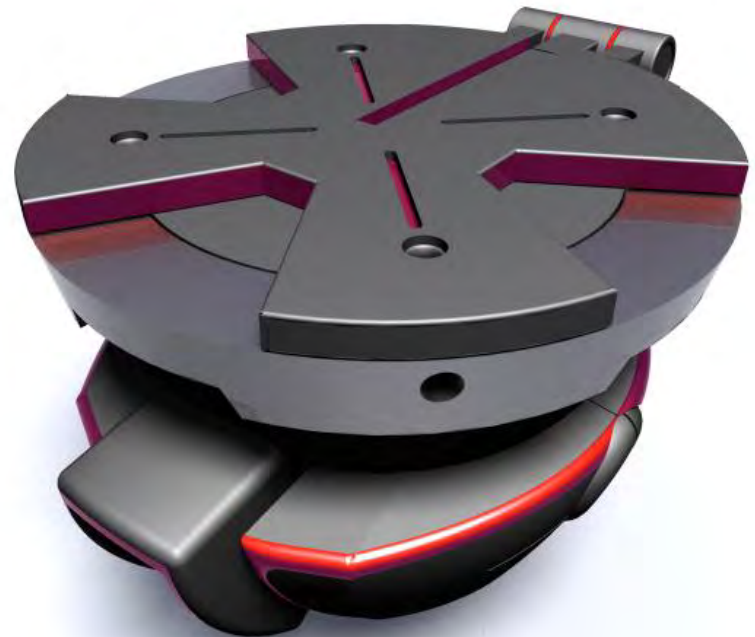
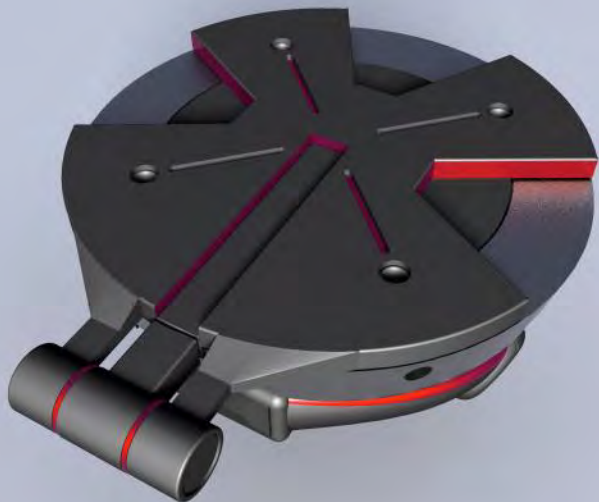
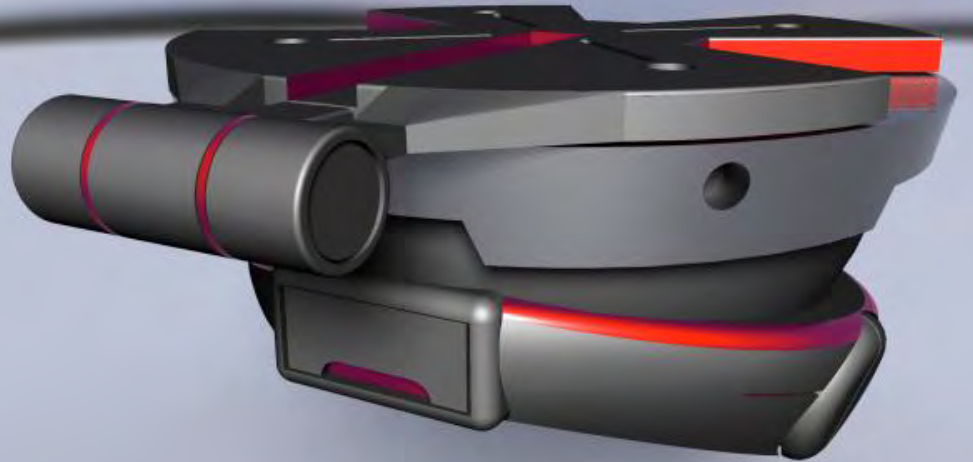
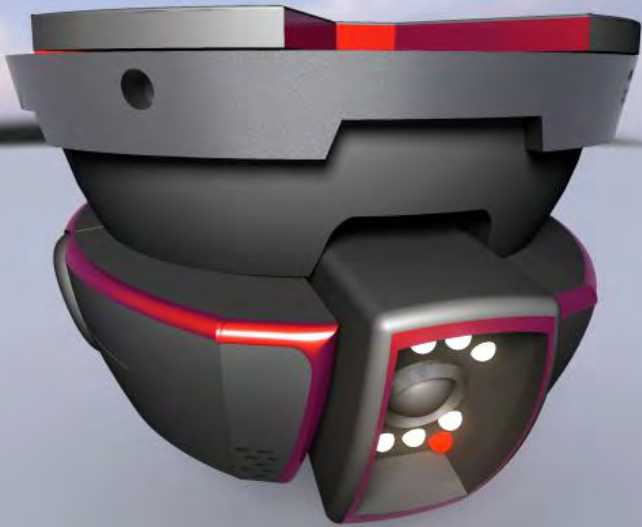


FINAL SKETCH

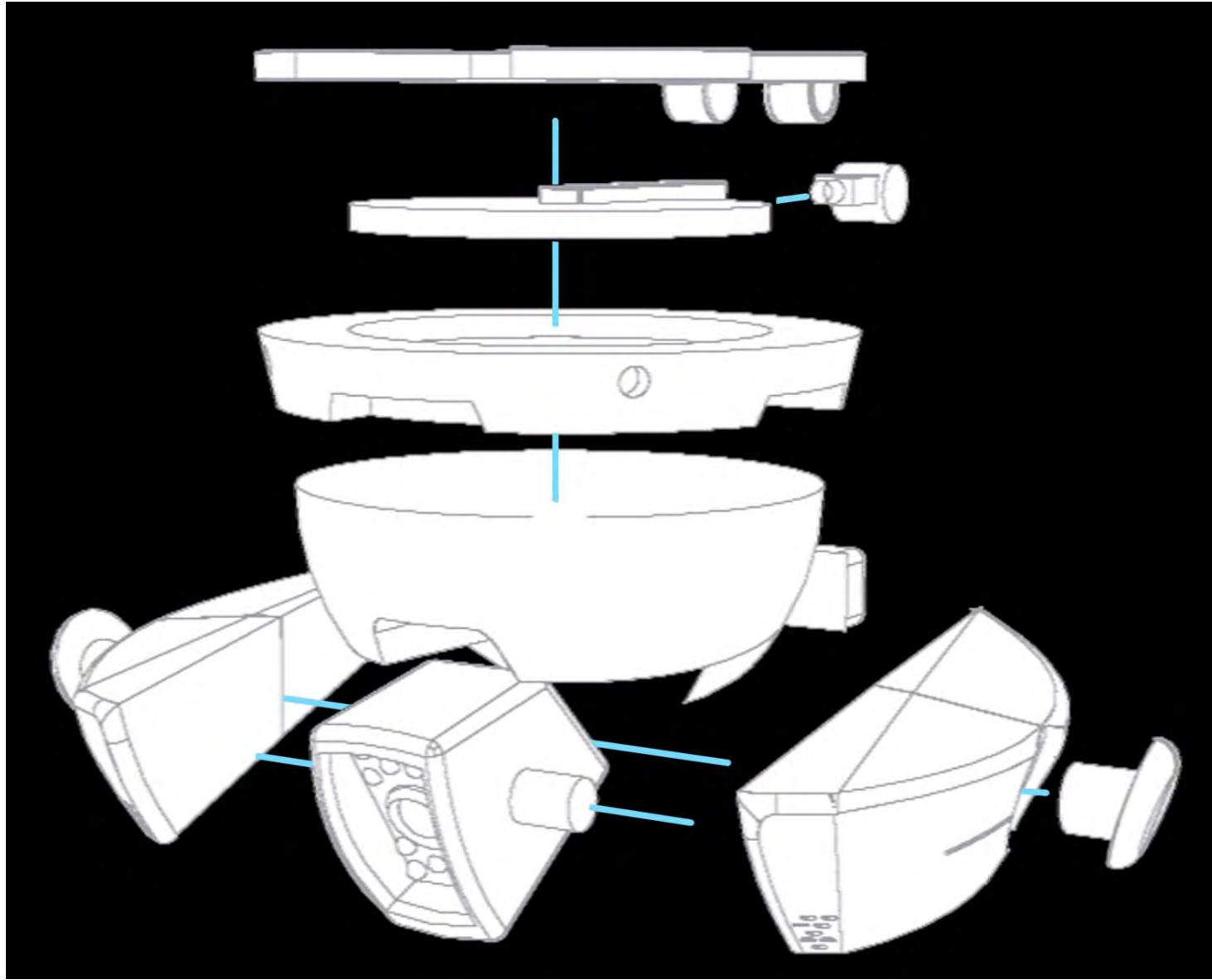


FINAL SKETCH

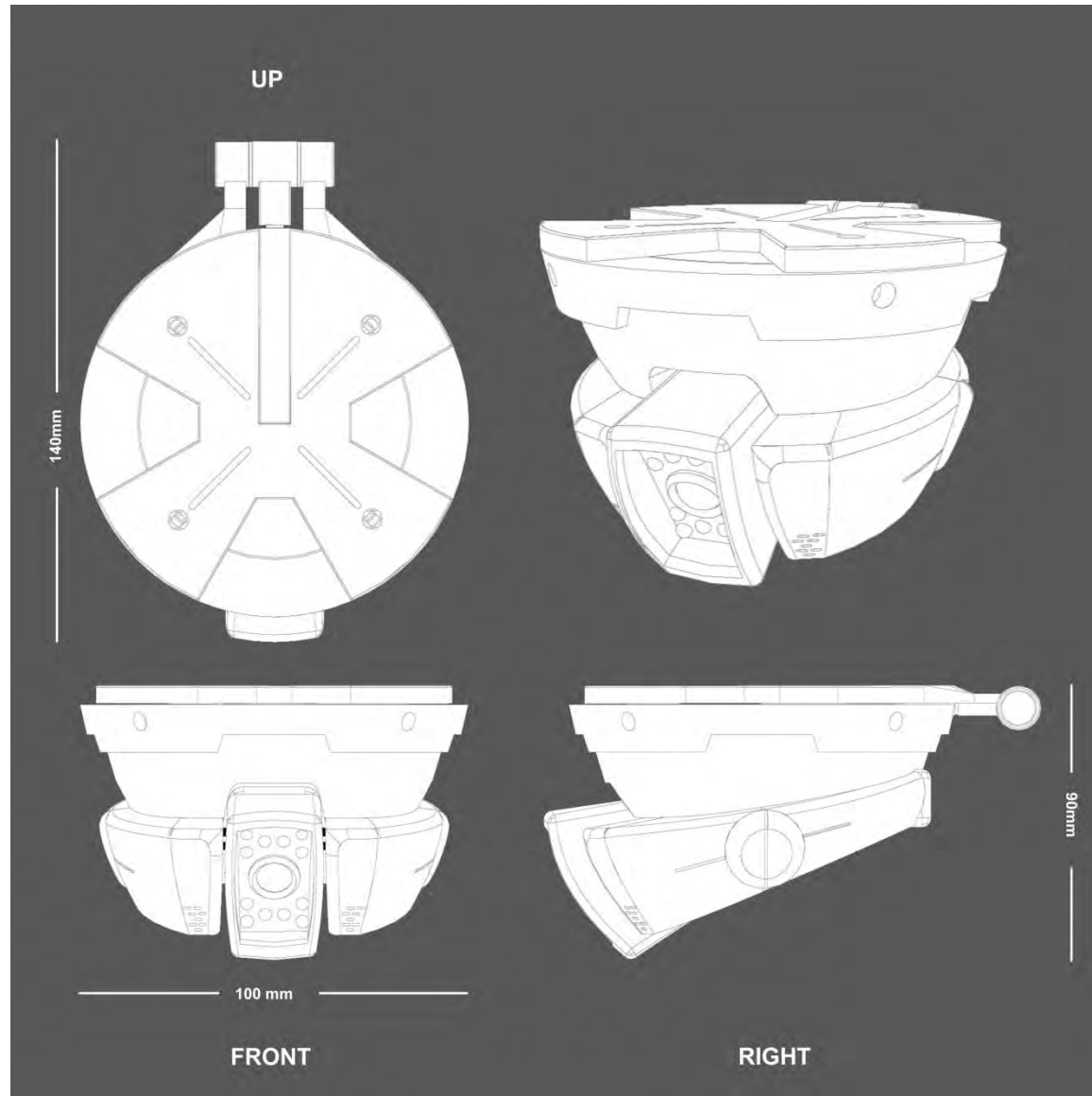
3D DESIGN

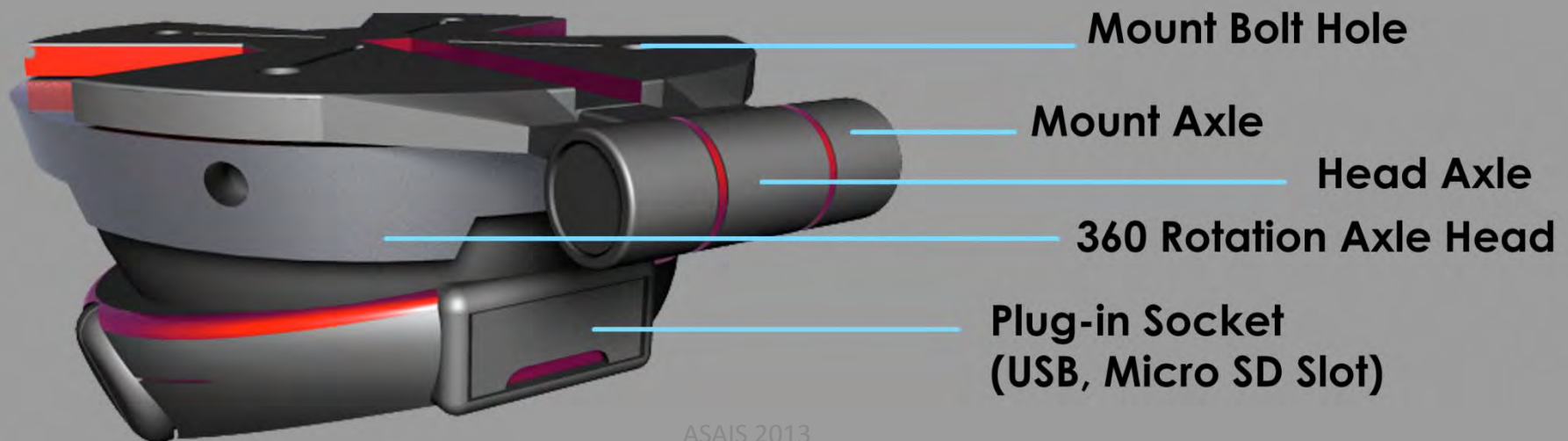
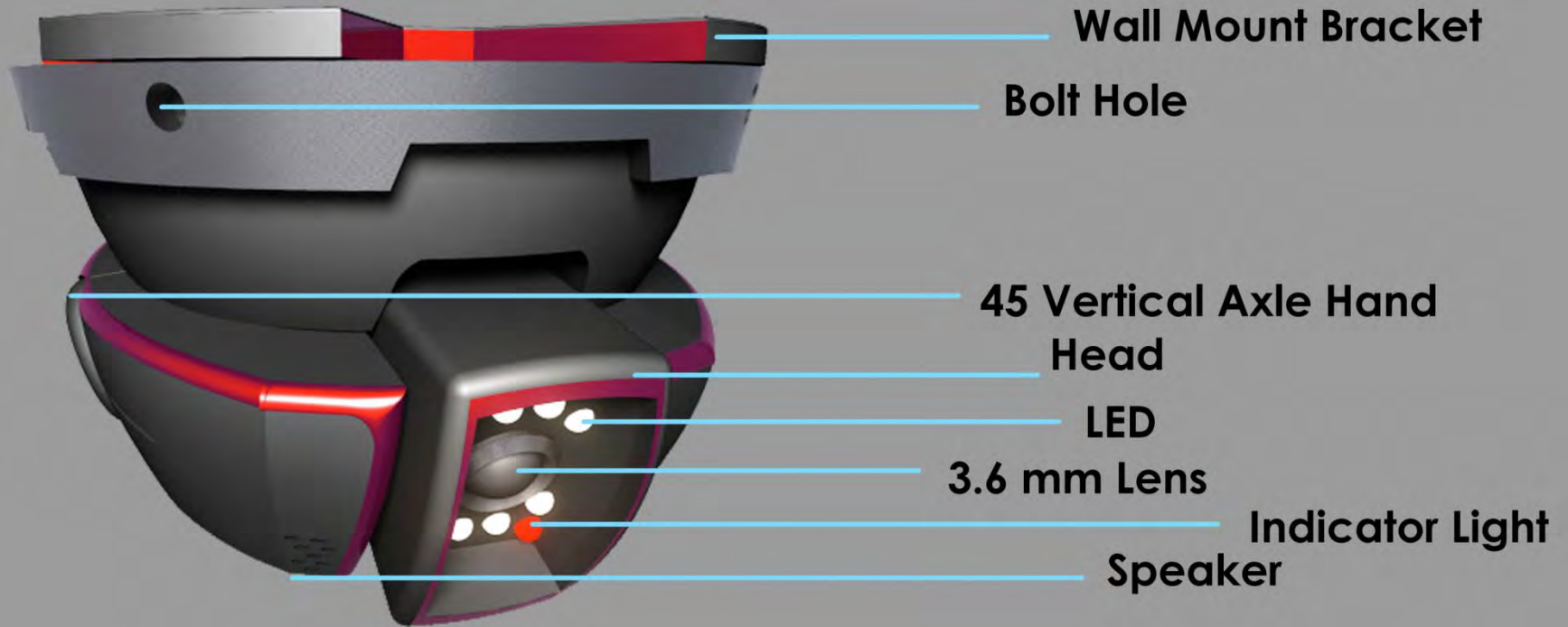


EXPLODED VIEW



DIMENSION





CONCLUSION

Based on the data that summarizes the stages outlined in the report. The few things that can be summed up in the answer the problem formulation is as the following :

- Indonesian government must implement of this system for the benefit of the public
- to realize this system, it will affects the safety and comfort of users and promote the economic of public transport
- It can reduce crimes such as rape, robbery, etc.

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THANK YOU