

School: CMA Choi Cheung Kok Secondary School

Inventor Name: Universal Mirror - an unplug visualizer for laptop and Chromebook

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#### Introduction:

Under the threaten of con-vid 19, the use of electrical HD cam or visualizer for online teaching or meeting become the new habit. However, the cost of an electrical visualizer could be cost for more than 150 USD. The invention could turn a laptop/ Chromebook with front cam into a visualizer in a second with multi-function.

#### Functions:

The Universal mirror can turn a Laptop with camera into a visualizer in a second, it can also serve as a make-up mirror or a spare Inverted mirror for car. It could attach to different surface. The mirror is designed to have 3 joints such that the angle is allowed to adjust to fulfill different purposes. The joints also allow it to fold and hence being a portable mirror.

#### Creativity:

The invention can extend the function of the laptop without further electrical parts. There is no such solution in the market, providing unplug visualizer solution for laptop. It also could allow car with broken inverted mirror run on the road without offending the traffic rules. There is unlimited possibility.

#### Marketability:

The portable design and user-friendly mechanism of the invention must be beneficial to customers. It cost around 1 USD, which provide a much cheaper alternative for visualizer. The good value material also allows the mirror to be easily manufactured, so it can lower the manufacturing cost and hence the market price. With the dramatically increase of online learning, it market value of the invention is foreseeable.

#### Contributions:

The invention provided lower cost solution for visualizer, with the combination of cost effective Chromebook, the online learning could support more students in developing country. The use of the invention need no basic knowledge of computer, so teachers or students can adjust easily providing more interaction. The non-

electrical feature helps to lower the use of PCB board, which help to lower the pollutant source in long term.