

# 創新思考與服務

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# Question

- 畢業=失業 ???
- 那 如何創造 畢業=就業 呢???
- 現在的你，可以學些什麼?讓你自己和別人不一樣  
(畢業後，你有什麼與眾不同的地方?)

# 如何創造

- 從你所學的專業去發掘
- 從日常生活的不方便去發掘
- 從現今的政策去發掘

# 範例

- 專長：影像處理  
那我可以用影像處理做甚麼事?
- 日常不便：清潔玻璃的工具
- 教育政策：填鴨式教育，缺乏思考、解決問題的能力

# 我們做了什麼事

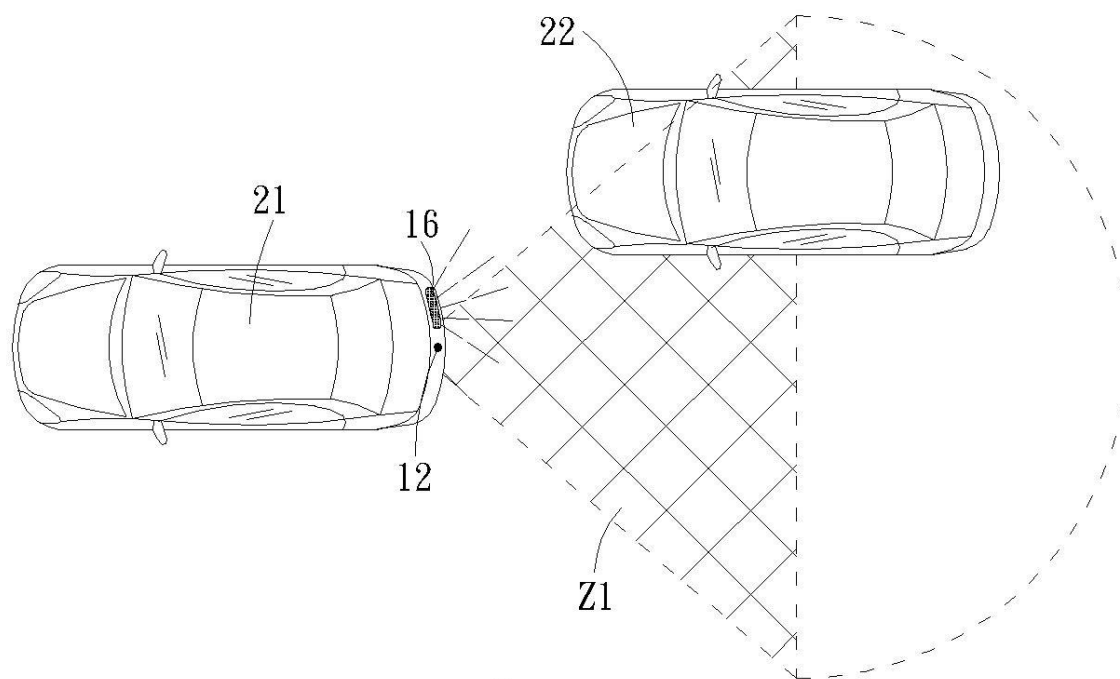
- 參加國際發明競賽、全國創意競賽
- 申請專利
- 參加實務研討會
- 志工活動：  
科學創意DIY -> 國小課後社團 -> 社會企業

# 現在的你...

- 想好如何幫自己的履歷加分了嗎?

# 專利分享

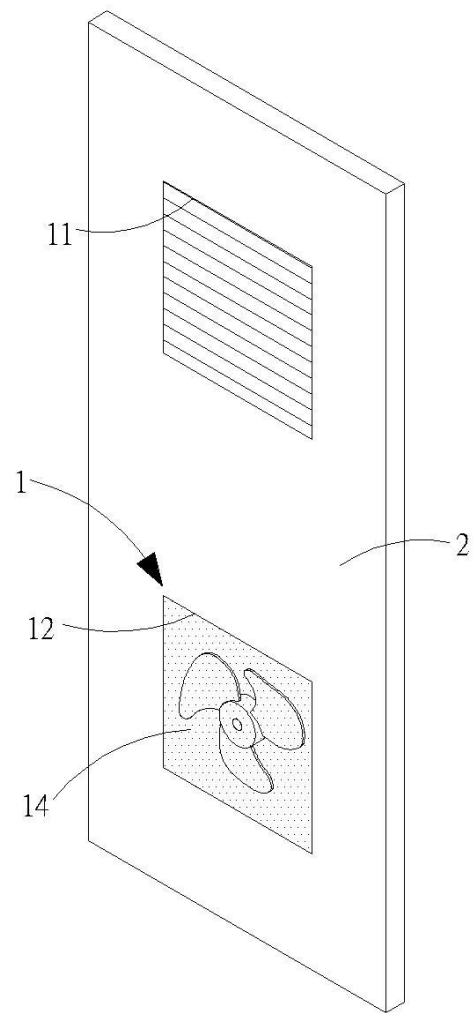
- 車輛追撞警示裝置



第三圖

# 專利分享

- 門扇之通風降溫裝置

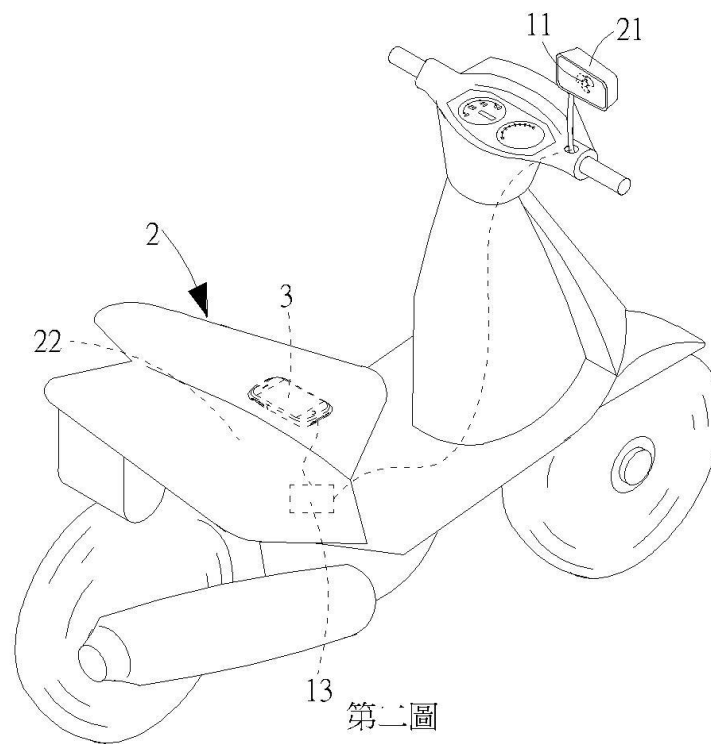


第一圖



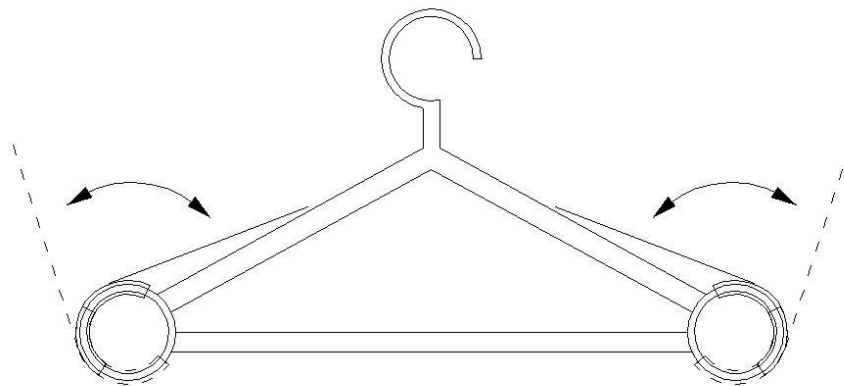
# 專利分享

- 結合於載具之充電裝置



# 專利分享

- 鞋衣架



第二圖

# 專利分享

- 駕駛視線偏移之行車警示裝置(阿基米德發明展銀牌)

## The warning and reminder device for sight-line offset

This invention is an image-based warning and reminder device for sight-line offset by using face detection. In the process of driving, the system detect the driver's line of sight at any time, if the offset is over a certain period of time, the warning voice will be alerted to remind the driver that he/she must return to the front of the normal sightline immediately. This system that can effectively reduce the risks of traffic accidents actually requires almost no additional hardware for the users, only that the users need to download the APP to their smart phones.

**I. Technical methods:**

1. Using a two-dimensional image correction technique to define the safety area of sight-line direction;
2. Using face detection technique to detect the driving vision direction immediately;
3. When the time that the sight-line is out of the safety area is over a specific time, the device alerts the driver utilizing voice reminders to return to the normal sight-line direction.

**II. Creative features:**

1. Low cost: users only need to download APP to their smart phones to use the warning and reminder device for sight-line offset.
2. Easy to operate: users only need to install the smart phone on the windshield in front, and set some calibrated parameters, before using the device.
3. High level of safety: the system detects the driver's line of sight direction at any time. If the line of sight is offset to an unsafe area for too long, the system will immediately raised voice alerts to remind.

**Illustration:**

1. Fig. 1 is the system setup diagram.
2. In Figs. 2 and 3, the system executes the sight correction first, where A is the detected face and A1 is the central point of two eyes of A.
3. Fig. 4 is the safe sight of the driver because the central point of A falls within the safety area.
4. The central point of two eyes does not fall within the safety area. Thus, the unsafe sight result are detected and the warning voice is alerted to remind the driver. (See Figs. 5 and 6)

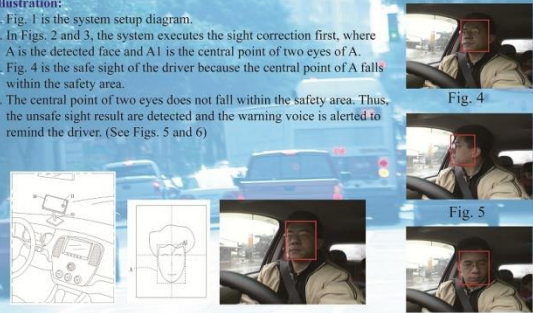
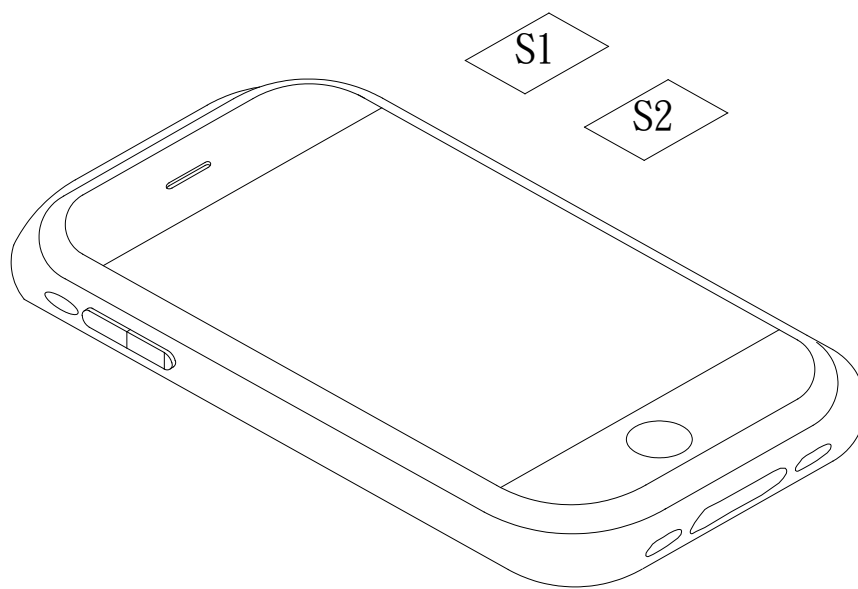


Fig. 1      Fig. 2      Fig. 3      Fig. 4      Fig. 5      Fig. 6

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# 專利分享

- 一種適用於二種以上SIM卡費率媒合方法



第一圖

# 專利分享

- 行車安全死角監控裝置(波蘭發明展金牌)
- 本創作利用影像處理之移動估計技術，首先根據車輛左右行進之狀況，計算出車頭轉向之角度，計算出會有多大的行車死角，最後再通知左右攝影機進行向外側轉向的動作，讓攝影機向外偏轉看到相關可能的死角區域。此一技術搭配現有的照後鏡，可以讓駕駛者的可視區域大大增加一倍以上，進而降低因為死角所造成的交通事故。  
目前將與砂石場廠商進行產學合作案，研究開發第一代產品，利用智慧型手機外加一台攝影機來改善行車右側死角問題。