

# Intel International Science & Engineering Fair 2012 Pittsburgh, USA

## Intel ISEF ABSTRACT & CERTIFICATION

Title: Secret Can't Be Seen  
 Finalist's name: Joey Chan, Vicky Sum, Melody Wong  
 School name: Heep Yunn School

### Category

Pick one only—mark and "X" in box at right

- Animal Science
- Behavioral and Social Science
- Biochemistry
- Cellular & Molecular Biology
- Chemistry  Computer Science
- Earth Science
- Eng.: Materials & Bioengineering
- Eng.: Electrical & Mechanical
- Energy & Transportation
- Environmental Analysis
- Environmental Management
- Mathematical Science
- Medicine & Health
- Microbiology
- Physic & Astronomy
- Plant Science

Start Typing the Body of your Abstract Here Beginning at the Left Margin

Living in such a fast-pace city, HongKongers always seek for efficiency in their lives, they usually choose to use Automatic Teller Machines (ATMs). However, passers-by could easily glimpse at the personal information on the ATM screens as most ATMs are placed in open area such as along the road or in the mall.

Our group conducted a survey and found that most interviewees would mind their balance to be revealed to others among all of the potential information leaked.

In order to solve this problem, we started our investigation. Throughout the investigation, we tried different ways to resolve the problem, such as adding an extent to the ATM, applying screen protective sticker, etc.

Yet, there are still flaws in the above solutions. Some of them were neither feasible nor practical. We have considered the budget of the installation, the user-friendliness and the practicability of our invention in different locations.

After making improvements over and over, we finally decided to apply the theory of complementary colour onto the plastic sheets.

We plan to make a small change on the ATMs system, adding a few more layers on where the balance should be shown. Only the user (account owner) can view his/her actual balance through the plastic sheet clearly.

Our design aims at being the most user-friendly, the most cost-effective, and causing the least inconvenience to protect the privacy of the users of ATMs. We proudly present you our invention- Secret can't be seen.

1. As a part of this research project, the student directly handled, manipulated, or interacted with (tick all that apply):

- human subjects       potentially hazardous biological agents  
 vertebrate animals       microorganisms       tissue

2. Student independently performed all procedures as outlined in this abstract.       yes       no

3. A Regulated Research Institution (e.g. university) was a work site for some or all of this project.  
 yes       no

4. This project is a continuation.       yes       no

*I/We hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I/We also attest that the above properly reflects my/our own work.*

Sum Wing Kei  
 Finalist or Team Leader Signature

26-10-2011  
 Date