Keeping it simple

ROBEST Yong may have achieved his first commercial success with the award-winning polyclone instant rubber stamp, but he has a bigger ambition in store. He plans to leave a legacy with his latest invention, Vision Touch, an app that will allow visually challenged people to use touchscreen devices.

How did Yong, who is a mechanical engineer by training, come up with the idea? "A successful inventor will not allow his mind to be limited or restricted by his background, knowledge or training. Ideas are born out of necessity or to fulfil a need," he says.

Living up to his motto "think outside the box", Yong has even developed his own methodology called the DUMBS approach to inventing.

D: Is it doable?
U: Is it useable?
M: Is it marketable?
B: Is it bankable?
S: Is it sustainable?

"This simple methodology has been my faithful guide throughout my career. Besides this, one also needs passion, a passion for problem solving, as having interest alone is not enough," he says.

According to him, many young inventors today behave as if the world owes them a living just because they have an idea. His advice to those who want to achieve commercial success is to be realistic and to reach for the 'lower hanging fruits' first. "There is no point trying to invent a better handphone or digital camera, because even if you managed to do that, you would not be able to market it competitively. A commercially successful invention need not necessarily be complex."

In the past, before Yong's polyclone instant rubber stamp machine came along, it took several hours to produce a few rubber stamps. With his invention, it takes only five minutes to produce 10 rubber stamps. To date, he has sold thousands of these machines, each one costing RM3,000 to RM4,000, and to countries as far away as Fiji, Tanzania, Papua New Guinea and Russia.

"In 1994, as demand for the machine began to increase, it gave me the confidence as well as income to become an inventor full-time. The reality is that an inventor needs to sustain himself until the next successful invention comes along, which could be many years later. Funds are also needed to file the patents, to pay legal fees, as well as for the development of new inventions."

For Yong, knowledge is merely a tool while creativity is the skill that one needs to put one's knowledge to good use. "How you use information is more important than what you know," he says.

"For example, plant fertiliser is certainly not within my area of expertise, so I approached several university professors to find out more before I came up with my own formulation. The result was my second successful commercial product, probiotic plant nutrients." He now manufactures several thousand bottles of the fertiliser at his own factory in Klang and exports them to Indonesia and the United States.

Yong believes that a good inventor must also think about the packaging of his product. "Have you wondered why my fertiliser is packaged in an upside-down bottle? The reason is because the product absorbs moisture from the air, so if the cap is not properly closed after use, it will eventually clump and harden. The upside-down bottle is convenient and practical as it forces the user to close the cap, so the contents won't spill. If I had sold the fertiliser in sealed plastic packaging, it would probably not be well received."

He estimates that he has invented close to 50 products, but has only commercialised five or six. Some of the ideas he had that were never commercialised were the water cistern, magnetic brush, luggage detector and mosquito glue, some of which are too expensive to produce on a commercial scale.

One invention that will soon be commercialised is the Popaware, a disposable plastic sauce plate that is commonly used by fast-food franchises and hawker stalls. "The product will be housed in a dispenser that dispenses one plate at a time, so it is hygienic and there is no wastage. You just need to press the middle part of the flat plastic to shape the plate and it is ready to be used." He has approached several fast-food franchises that have shown keen interest in his idea. Yong believes the demand for such a product is huge as McDonald's alone serves 10 million customers a month.

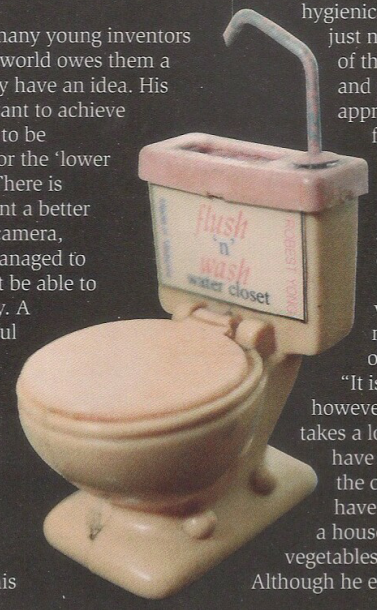
When asked how he felt when others beat him in the race to commercialise some of the ideas he had, he says: "It is easy to come up with ideas; however, to commercialise the idea takes a lot of effort, so I choose not to have any regrets." He admits that the one product that he would have liked to commercialise is a household cleaner for fruits and vegetables using ultrasonic waves. Although he experimented with the idea, he decided not to proceed after he encountered challenges in manufacturing the product.

Five years after he first had the idea, a Japanese woman was able to successfully commercialise a similar product.

Among the awards that he has won, which is he proudest of? "It has to be the 1994 Malaysian National Inventor of the Year. Those who were shortlisted for the award were PhD holders (but) I was the only layman there. So for a layman to win a science award is quite a feat. When I was interviewed later, I told the journalist that you don't need a PhD to win an invention award," says Yong.

According to him, in the past, children were more creative and often learned to make their own toys. "Nowadays, everywhere I go, I see children holding smartphones and iPads. Their parents don't realise that such gadgets teach them to be users, not creators and may hinder their creativity."

He has also seen some parents teaching their children how to paint from an app on an iPad. "What is wrong with picking up an actual brush? By doing the real thing, a child will learn how to control a brush, the smell and texture of the paint, and how to mix colours. There are so many things they can learn from just one activity. Don't get me wrong, technology is useful, just don't let it control your life."



The water cistern is one of the many inventions that Yong did not commercialise

OCTOBER 19-25, 2013

The Heat

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An app-solute help to the blind

Inventor Robest Yong came up with a creation that will change the way visually-impaired people use touchscreen devices

An app-solute help to the blind

They say that necessity is the mother of invention. Seeing a friend in need inspired Robest Yong to help the visually-impaired gain access to touchscreen devices

BY OOI SUE HWEI

PHOTOS BY DD HOE

BEST known for his invention of the award-winning polyclone instant rubber stamp, Robest Yong's latest brainchild has the potential to dramatically improve the lives of the visually impaired. His inspiration came about early this year when he saw a friend who was visually impaired, slowly feeling his way around the keypad of a mobile phone to type out an SMS.

"He was struggling as he relied on his memory and guesswork to know which button to press for the right alphabet," Yong says. "At that moment, it occurred to me that it would be almost impossible for the visually-impaired to use a touchscreen phone."

With a little research, he discovered that not many apps were built for the visually-impaired and most had many limitations as the element of touch was missing.

He then approached his friend Chong Thien Pow, a programmer, who became his partner on the project. They pitched their idea to 1337 Ventures, a start-up accelerator that provided an initial fund of RM50,000. This led to the birth of Vision Touch, an app that allows the visually-impaired to use a touchscreen phone, which took less than three months to build.

"During our pitch, several entrepreneurs from Silicon Valley were present, and one of them said he would come across a good invention every once in a while, and this was one of them," says Yong, who is from Nibong Tebal, Penang.

He demonstrated the use of the app by sticking a piece of screen protector with 12 punched-out holes on his smartphone. "The whole idea is to assist a visually-impaired person to feel the surface of a touchscreen phone. These holes tell them where the buttons on the app are. In fact, the same concept can be applied on the iPad or any other touchscreen products."

He launches the app on his smartphone and a 12-button dialling pad, which incorporates Braille, appears. To demonstrate the functions of the app, he sends a SMS to this writer.

"H-E-L-L-O, you are about to SMS hello, please key in receiver phone number now." The artificial voice then reads out the number that he has keyed in. "Sending SMS to XXX XXX XXXX. Welcome to Vision Touch." When the writer replies to the SMS, the response is almost immediate. "SMS received from XXX XXX XXXX. SMS content: How are you?"

Besides making calls and SMS, Yong plans to add more features into the app, which will be made available on both iOS and Android devices. "A visually-impaired person who has lost his way only needs to press a selected emergency button that will send his GPS location to a programmed number. Besides this, we will also incorporate a Bluetooth function in the app to alert the user of another visually-impaired person who uses the app in the vicinity."

Another feature that he wants to include is one that enables a visually-impaired person to retrace his steps on a road or path that he previously travelled on by recording his journey.

One may assume that Yong plans to turn his latest invention into a money spinner. So it was a pleasant surprise when he dispelled this assumption. "I want to give away affordable touchscreen phones that are preloaded with the app and the screen protector for free to the visually-impaired. When I first came up with the idea, my partner and I agreed to be benevolent and to give back to society."

His plan is to persuade private corporations to donate funds or to sponsor affordable touchscreen phones. With an estimated budget of about RM500 per phone, his target is to collect RM50,000, which will allow him to purchase 100 touchscreen smartphones and donate them to registered members of the Malaysian Association for the Blind. Members of the public who are interested can also purchase a unit.

In Malaysia, there are about 10,000 members who are registered with the association, while Yong estimates that there are about 300 million visually impaired people around the world. "The app will certainly make an impact on the lives of the visually-impaired. During its development, I shared the idea for this app with several members of the association and got their feedback on the features that they needed. Those who have tested out the prototype are quite happy with it and can't wait for its launch," he says.

Yong plans to develop his idea further by setting up an open source platform that allows others to build new apps for users to teach themselves Braille. "Right now, besides waiting for the patent to be granted, I am looking for programmers to produce simple apps for the open source platform that will serve the needs of the visually impaired. If things go according to plan, Vision Touch will be launched at the end of the year."

I want to give away affordable touchscreen phones that are preloaded with the app and the screen protector for free to the visually impaired.