

Patents provide protection for the invention for a period of 20 years from the application filing date

The nightmare of patenting students' innovations

By Billy Rwothungeyo

From the vapouriser technology to pen-based authentication technology, the world's biggest tech firms are trying to stay ahead of the cut-throat competition in the ever evolving world of technology and they are doing that by trying out new technologies — and patenting them from the onset.

So as Apple, Microsoft and Google are busy patenting what they hope will take the world by storm in the next few years, what about our own innovators back home?

Uganda's universities and other public research organisations are also increasingly protecting their inventions from genetic inventions to software; helping raise additional funding for research and spurring new start-ups.

The struggles the country's innovators face with patenting came up during the Open Day and Exhibition held at Makerere University's College of Engineering, Design, Art and Technology last Friday.

While addressing the Minister for Science, Technology and Innovation Elioda Tumwesigye, the university's acting deputy vice-chancellor Prof. William Bazeyo, made a plea to government for help on this front.

"Makerere University needs help in patenting its innovations. The same innovations are meant for the country's betterment. I know that other universities are also facing this challenge".

Prof. Bazeyo says patents are instrumental to the country's current innovation system. He also notes that these patents encourage inventors to share their ideas, rather than keeping them secreted away "by offering the inventor exclusive rights to exploit their idea for a limited period."

In Uganda, like the case is with many countries on the continent, protection of intellectual property is still overwhelmingly underdeveloped, so innovators have to contend with high costs to patent outside the borders.

During the African Regional Intellectual Property Organisation (ARIPO), which is made up of mainly Anglo-phone African countries, the total cost of patenting can be up to \$37,842 (about sh138m), according to www.ipwatchdog.com.

This figure is for the costs incurred by a company over the lifecycle of a 30-page patent (including five pages of drawings) with 16 claims.

A patent is an exclusive right issued by designated bodies, such as the International Property Organisation for an invention.

This kind of invention can be either a product or a process that provides for new ways of doing things. Patents are meant to shield inventors away from quick thinking people who can use new inventions for their own benefit.

It provides protection for the



Minister Tumwesigye looking at a sculptures done by students. Photo by Agnes Nantambi

Recently, Makerere came up with a customised gown, but because of lack of patent, some traders took it up and started producing the same gown

invention to the owner of the patent. The patent is granted for a limited period, generally 20 years from the filing date of the patent application.

Patents are also vital in turning universities as incubation centres for companies around the world.

Some universities have incubated a number of large multinational companies, for instance, Stanford University and Massachusetts Institute of Technology.

In Sweden, Chalmers University has created 240 companies in the last 30 years. In the US, 3dim, a company specialises in 3D gesture sensors for smart devices, was started by students at Massachusetts Institute of Technology, EnvoyNow by students



Tumwesigye holding a portrait of himself made by the students

at University of Southern California among others.

Dr Venny Nakazibwe, the deputy principal of Makerere University's College of Engineering, Design, Art and Technology expounded on which kind of support the university needs on patenting.

"We need to make sure that our innovators benefit from their work. We need support with the registration. There are associated costs of getting a patent and the university can't foot such bills," she said.

In this fast paced world, time is of the essence, and when you have an innovation, the ideal situation is to patent it as fast as it is possible.

"As a result of not patenting our innovations, we lose a lot as a college, university and country. We are living in a global inter-connected village, so any innovation that comes up can easily be picked up by another person. Before you know it, what you thought was your innovation is on the market being sold by others," Nakazibwe said.

"Recently, Makerere university came up with a customised graduation gown, but as you know it, everyone eventually started selling our customised gowns; reaping benefits from where they did not sow. Had we patented the gown, we would have been in a better position to take on the matter."

BEYOND MAKERERE

The challenge of getting patents does not affect Makerere University alone. There are several other universities that are looking for patents, for their innovations.

Lucky Mwaka, who is pursuing an ordinary diploma in mechanical and production engineering at Kyambogo University, wants to be the first Ugandan to build a spy robot. He has built a basic prototype of what he hopes to one day build — predominantly with plastic from old computer parts, which he cuts into pieces to fit the shapes he wants, old antennas and even mortars from photocopiers.

There is even an old compact disc in the mix. Mwaka says he cannot patent his innovation as yet because of lack of funds.

Samuel Kamya, a young bio-chemist who invented what he calls Uganda's first cancer drug making technology, of which is not yet patented.

Ministry responds

Tumwesigye pledged to support university students and staff in having their innovations patented; both at the continental level at the African Regional Intellectual Property Organisation based in Zimbabwe and on the international level.

"Developed countries are strong because of innovations in science and technology. We need to industrialise our economy and the young generation has a role to play through their research," he said.

"Technological research and innovation by the youth has played a powerful role in achieving development in many nations such as China, Norway and South Africa."

What students say

Solomon Musimenta, a fourth-year student pursuing electrical engineering showcased a remote management system, an Internet of things system which uses sensors to control several devices that can be remotely operated.

The system can be used to make alarms at home or even in factories to sense over-heating motors.

Solomon Musimenta, a fourth year student pursuing electrical engineering showcased a remote management system, an Internet of things system which uses sensors to control devices. "When you are patenting, you need to have fully developed prototypes that are working and have been tested. It is quite expensive to get to this level. We need more than just funding; we need technical guides and teachers. It is one thing to have something on a board, but another to have a ready product," he says.

"You need more equipment; you need companies to allow you to test in their premises. For example, if a developed a product for a certain production environment, let us say, the product is designed for Umeme, it is very difficult to convince Umeme to just allow us to access their facilities and test my product on their system."