



- PAILIN LONGAN -  
CAMBODIA



# APPROPRIATE TECHNOLOGY

## Co-Existence by IP Sharing

# **APPROPRIATE TECHNOLOGY**

Co-Existence by IP Sharing





## Table of Contents

04	<b>Publisher's Message</b>
06	<b>Prologue</b> Living in Harmony, Sharing One Destiny
09	<b>AT and IP Sharing Cases</b> 01. Korean Agungee Debuts in Guatemala 02. A Cozy House Built in Nepal 03. Brand Identity Takes Root in Cambodian Farms 04. Korean AT Adds Value to Filipino Aromatherapy Oil 05. Bicycle-operated Pump: New Irrigation System Enriches Farms in Papua New Guinea 06. Renovation of Tarlac's Regional Brand 07. Bolivian Royal Quinoa
110	<b>Epilogue</b> Sharing Makes the World a Better Place
112	<b>Appendix</b> What Is the IP Sharing Project?

## Publisher's Message

Decades ago, Korea was one of the poorest nations in the world, but with the support and assistance of other countries, we were able to develop to the extent that we are now known as one of the most advanced countries in the world in terms of Intellectual Property (IP). Therefore, we are paying it forward by taking the lead in using IP and technological expertise to improve the health, quality of life and income levels of least developed countries (LDCs) and developing countries in need of assistance through projects such as the IP Sharing Project.

In the world of IP, sharing is about identifying, improving, and spreading the forms of appropriate technology (AT) that best suit the circumstances and operational capacities of its beneficiaries: LDCs and developing countries. Also, it is about enhancing the quality of life for their citizens by providing branding strategies for their excellent products.

Six years have passed since the Korean Intellectual Property Office (KIPO) first planned and launched our IP Sharing Project for LDCs and developing countries. Looking back on what we have accomplished reminds me of all the various countries who benefitted from IP projects. It is also nice to reflect on the progress we have made so far, and what we can do to further benefit our stakeholders and potential partners.

This book illustrates a variety of successful AT-related projects that KIPO has engaged in, and it summarizes the efforts we made in providing ATs and branding strategies for countries in need. As you will soon see, our sharing projects have taken place all across the globe, i.e. Guatemala, Nepal, Cambodia, the Philippines, Papua New Guinea,

and Bolivia. Perhaps the single best example of our work is found in the case of Guatemala, where we improved the local kitchen furnaces and developed a more hygienic cooking facility. This greatly helped in addressing some of the most pressing problems in the country, including high rates of respiratory disease and infant mortality. In the case of the Philippines, we helped develop technology to better extract their aromatic ylang-ylang oil, thereby providing added value to technology that already existed.

The progress we have made would not have been possible without the concerted efforts of countless people from a host of different organizations; they were not simply our colleagues in KIPO, but various other experts, NGOs, and international organizations that supported us in carrying out these projects.

This book is an account of our experiences and efforts related to these projects thus far. We wish to express sincere gratitude to all our partners who have worked tirelessly to help us reach this particular milestone. It is my hope that, as you learn more about our IP Sharing Project, this book will prompt you to contemplate the true value and meaning of sharing.



April, 2016

**Seong-Joon Park**

Director General

Intellectual Property Protection & International Cooperation Bureau  
Korean Intellectual Property Office (KIPO)

## Prologue

### Living in Harmony, Sharing One Destiny

In Sino-Korean characters, the word “human” is written “人間” (인간, Ingahn). However, the word “ingahn” does not literally mean “human being.” More specifically, it means “between people.” So why say “between people” when we actually mean “humans,” or “人” (인, In)? The Korean language seems to suggest that human beings cannot live alone and must be viewed as part of a larger community. This is symbolized in the word, “人” which represents two people leaning against each other.

Think of it in terms of how our bodies work. Our eyes come in pairs in order to provide us with accurate depth perception. Though we have only one nose, it contains two separate nostrils that function together in harmony. We generally have ten fingers and toes to help us move around and engage in creative tasks. And a single brain cell is not powerful enough to generate innovative inventions all by itself. It takes approximately 14 billion of these cells to form what we call the brain—the organ that allows us to utilize our five senses, demonstrate our intelligence, and display our imaginations and creativity.

That’s just the way life is. As a general rule, teams function better than individuals. This same principle applies to global-level events. After the Korean War, which tore our nation apart and destroyed our livelihoods, Korea was provided physical and financial aid from many different countries around the world. It is thanks to such help that we now stand where we are today.

As Korea continues to get stronger and richer, we are reaching out to other countries in need of similar help.

The IP Sharing Project is an important example of the kind of help we are striving to provide. This is not simply a one-time contribution, but a sustainable, long-standing project that will support LDCs (least developed countries) and developing countries on standing on their own two feet.

There is a Korean wisdom quote that says, “Don’t think about how to give money to your children, teach them knowledge instead.” This maxim emphasizes that the real job of parents is to transfer knowledge and skills so that their children can survive and flourish on their own.

As we are neighbors living on this small planet we call Earth, every person in the world is connected to each other in some small way. This being the case, we should reach out to each other in times of trouble and share ideas on how to become more prosperous. This is the essence of our IP Sharing Project.

Our sincere gratitude goes out to everyone who has joined and/or provided support for this project. Each and every one of you are part of a great cosmopolitan effect that contributed to bringing a better life to people all over the world.

# APPROPRIATE TECHNOLOGY

Co-Existence by IP Sharing

01

Korean Agungee  
Debuts in Guatemala

## Korean Agungee Debuts in Guatemala

### Re-kindling the Lives of Guatemalan Children with Korea's Traditional Furnace, the Agungee.

When you think of Guatemala, coffee is probably the first thing that comes to mind; specifically, images of endless fields of coffee plants similar to an Italian vineyard. But, there is a lot more to Guatemala than just coffee. Another popular Guatemalan crop is corn, and it is corn that provides the main ingredient for the country's staple food, the tortilla. A tortilla is a type of flatbread made from finely ground maize. It is served after first being roasted in an oven. It is quite different from the bread Koreans are familiar with. As often as Koreans eat rice, Guatemalans eat tortilla for nearly every meal. But, there is a big problem that has reared its head across the country: namely, the poor ventilation found in a typical Guatemalan kitchen. Such a lack of ventilation results in high levels of indoor cooking smoke, which has proven to be the culprit behind such diseases as childhood asthma. In

fact, it drove up Guatemala's infant mortality rate to the level of being one of the highest in the world. The World Health Organization (WHO) said, "Indoor cooking smoke is even more harmful than air pollution. In fact, diseases associated with pneumonia or asphyxiation (lack of oxygen) account for 49% of the total infant diseases in Guatemala."

Not all Guatemalans can afford to use gas stoves or electric ovens, and instead, the typical Guatemalan household uses firewood for cooking. But the majority of poor people in Guatemala do not even have a proper fire-operated stove. They simply pile up some stones and put a piece of wire mesh on top which constructs a makeshift fire pit for heating food with the burning wood below. Getting firewood is no picnic, and this forces locals to gather up any bit of wood they can find. Most of the nearby mountains and fields are patrolled by vicious armed guards who drive the poor people away. To get some wood, these people often have to walk for hours. Ultimately, they just use any piece of wood they can find—including ones that are not meant to be used as firewood. This makes the smoke problem even worse as it releases into the air harmful gases and substances that not only cause respiratory disease, but with long-term exposure, can even kill babies who have weak immune systems. In Guatemala, firewood is a financial burden even for the relatively wealthy. While their average income hovers around USD 245, money spent on firewood accounts for USD 93—about 40% of their total income. This also caused a serious reduction to their quality of life. It was a humanitarian emergency that required an immediate response.

Fortunately, the people at Good Neighbors, a Korean NGO, are working hard to address this problem. In fact, it was not long ago that they started manufacturing and distributing models for more advanced fire stoves across the country. Visits were made to the households of some Guatemalan families and it was confirmed that the improved



fire stoves provided by Good Neighbors are actually much safer and emit less smoke than their makeshift counterparts. However, they also had some drawbacks: their size and weight made them cumbersome, they required nearly 20 days for installation, and they were relatively expensive.

Eventually, Good Neighbors requested that KIPO and the Korea Invention Promotion Association (KIPA) address the disadvantages of their fire stove model. As a government organization that has proactively spearheaded AT-related projects since 2010, KIPO is regarded as somewhat of a pioneer in this field, whereas KIPA is doubtlessly the most prominent Korean organization working in the arena of invention.



1. This is what a traditional makeshift fire stove in Guatemala looks like; you pile up some building blocks or stones, then put a piece of wire mesh on top of the pile to cook on by using the heat from the burning wood below. Since there is no ventilation, the smoke fills up the whole house.

2. A house full of smoke from cooking

3. The alternative stove from Good Neighbors



This is an image of an existing oven model that was supplied to the local residents. The oven model was convenient and very practical as it provided the residents with more space to work. However, some of the disadvantages is that it was very costly, heavy, large and difficult to install.



KIPO and KIPA searched for an expert who could troubleshoot issues pertaining to Good Neighbor's fire stoves. The person that was chosen was Seung-hoon Lee, the CEO of Toga Korea, a business that specializes in fire stove manufacturing in Korea. Mr. Lee was invited as a "technology partner" on this project. As one of the world's foremost experts on fire stoves, he is well-known for inventing the modern Korean fire stove using technology from Korea's traditional fire stove, the Agungee. Since he was capable of customizing his fire stoves to fit user specifications, he was the perfect choice for developing the type of stove that Guatemala so desperately needed.

A delegation composed of people from KIPO, KIPA, and Good Neighbors accompanied Mr. Lee to Guatemala for some on-site inspections. There were three main objectives in developing the new fire stove: 1) greater mobility, 2) easier and more time-efficient installation, and 3) lower production costs to make it more affordable. It was believed that if the existing stoves were improved and production costs were lowered, they could eventually be disseminated across the entire country.

### Happiness in Extreme Environments

It was almost the end of July, and as this is the peak time for summer vacation, getting tickets to Guatemala was not easy. Even worse, there were no direct flights from Korea, so a transfer in Los Angeles was mandatory; it was a long journey indeed. It was hoped that these difficulties were not bad omens representing impending trouble.

Further, shortly prior to landing, some unfortunate events had occurred that caused some concerns. Although such difficulties arose, they were shared by everyone in the company and even created a sense of team unity.

Without allowing sufficient time for jet lag to pass, on-site inspections of a local factory and supplies market were conducted. It was obvious that one week did not afford much time to figure out what kind of materials and supplies were available, to what degree we could improve the existing stoves, and how serious the situation in local households were. Things were even worse for Mr. Lee as he was under a lot of pressure to come up with a design for the new stove.

To find out what kinds of stoves were being used in the various types of housing, inspections both in suburban and urban areas were conducted. To everyone's surprise, conditions were even worse inside the city; the fact that living quarters were more separated in suburban areas meant that these places were better ventilated, while on the other hand, the downtown area appeared to be an economically distressed urban zone. Homes were compacted close together without proper disposal of domestic sewage and garbage. As a result, children were exposed not only to diseases associated with indoor smoke, but to water-borne diseases as well. It was sad to see such suffering.

Mr. Lee says, "I can never forget the faces of those innocent kids who were smiling even in such harsh conditions. It was so heartrending...I couldn't even greet them, or ask them "How are you?" As soon as I saw them, all I could ask was, "Are you OK?" There was smoke coming from one of the homes there; apparently, someone was baking tortillas. Inside, there was so much smoke that it was hard to breathe or see properly. A slender housewife battled the heat and smoke while her children awaited their meal. This caused great concern with respect to the health of everyone who used a traditional stove in their home. In fact, anyone would have been consumed with worry after witnessing the problem firsthand. As the realization came





On our visit to local households, it was really impressive how the children we met seemed so happy even in very harsh living conditions.



that the harmful smoke was truly a pressing issue that needed to be addressed, it was determined that the problem must be fixed one way or another, even if issues like high production costs forced us to give up on plans for a new, alternative kind of stove.

### The Best rather than the Latest

Some of the households that were visited used stoves provided by Good Neighbors or a different company. Both performed more well in reducing smoke emissions compared to their traditional counterparts. However, both shared the same drawback: they were too large and heavy to be portable. In addition, the stoves were comprised of bricks and cement that made direct contact with the bare ground causing them to be easily affected by changes in the weather. The rainy season, in particular, made it difficult to use as the water soaked the firewood and prevented it from catching fire. Making things worse, the smoldering of the wet firewood increased the smoke emissions even further.

Therefore, three goals for developing an alternative stove were set: 1) greater portability, 2) protection against outside moisture, and 3) low production costs in order to make it more affordable.

After inspections were complete, work began in earnest to design the new stove. At the same time, many different experts and scholars from various fields were asked for their advice.

“Since the stove has to fit inside small-sized kitchens, it is important to stick to a simple and streamlined design. This would also ensure easier installation and greater portability.”



A company was operating the fire stove production factory. Their stoves were mainly made of cement and building blocks, which is why they were too heavy to move when their users had to relocate during the rainy season.

“The existing alternatives were mainly built out of bricks and cement. However, such materials prevent them from ever being small or lightweight. Furthermore, they only support a single burner. This is simply not enough since most households use two burners at the same time; one for tortillas, and the other for steamed beans.”

“Let’s start by figuring out the correct materials.”

“If we used steel or iron, we would need a factory or facility capable of manufacturing the metal according to our specifications.”

That was an important point: the capabilities of the local manufacturers had to be considered. So, research on two different prototypes (one made of metal and the other made of stone) began.

### As Cheap and Efficient as Possible Without Infringing on Any Existing Patent Rights

Subsequent to the trip to Guatemala, various tasks were assigned to the various members of the team, being sure to take into consideration their particular expertise and role. Mr. Lee was in charge of designing both the actual prototypes. It was KIPO’s job to find the right type of patented technologies that would help enhance their heat efficiency.

“As a result of searching through our patent data, we narrowed our options down to three final candidates.”

“All three patents shared the same core technology with only minor variations. After utilizing the commonly applied technology found in

the first of the three patents, we then worked to design around any possible infringements found in the other two.”

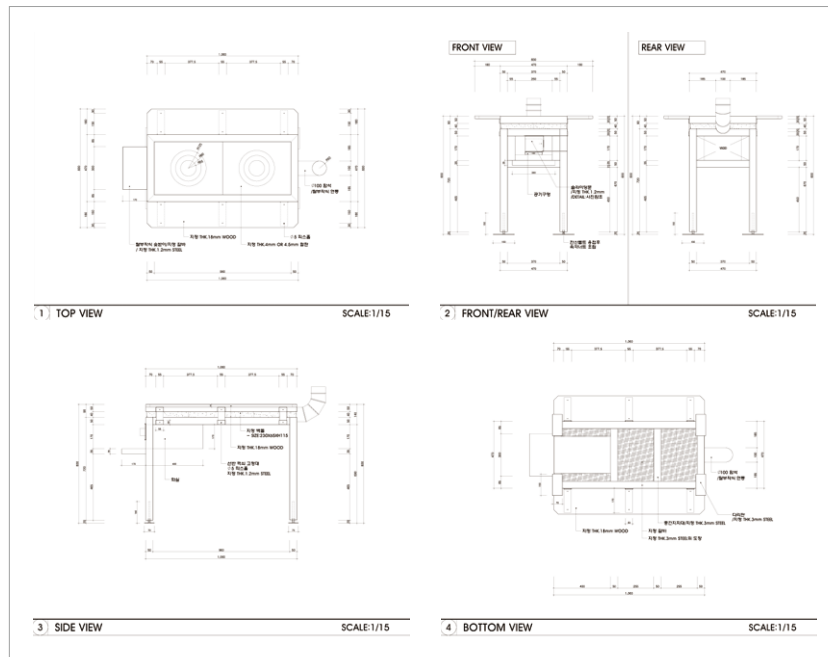
The discussions, led by KIPA Manager Joo-hyun Ryu and a Korean patent attorney Yu-mi Kwak, continued and involved numerous consultations with scholars and experts from various fields. The types of questions that were put to the team were: What is the best option? What should the new stove be like? What is the ultimate purpose of this project? After much thought and deliberation, the metal stove prototype was chosen. This decision was based on the project’s ultimate goal of improving the health of people in Guatemala. It was important to come up with the cheapest possible option in order to make the stoves more affordable with the result of disseminating them to a large number of families.

It was decided that the new stove would be made out of two primary materials. It would be equipped with a firebox to contain the burning firewood, and this firebox would be composed of ceramic material manufactured by baking the local yellow clay found all throughout Guatemala. The heat from the ceramic firebox would then be transferred to the parts made of metal, just like the original determination. The new stove was designed as a single piece, and it included a smoke chamber to safely release the smoke. Then came time to produce the prototype and begin the most important phase of the process: the performance test. It was a top priority that the stove was made with materials and parts that could easily be obtained locally. During the first on-site inspection in Guatemala, a list of available parts and materials were made; a move that saved a great deal of time later on. Fortunately, everything on the list was available in Guatemala.

Without the on-site visits, it was highly likely that the new stove design would have required parts that could not be obtained locally. That being said, the final prototype ended up being perfectly suited to local conditions.

If you have access to all the best materials, it is relatively easy to make a fancy, cutting-edge product that performs exceptionally well. The hard part is creating the best possible product when faced with real-world restrictions. Only when the results proved to be practical could we proudly say that we accomplished something truly meaningful.

### Prototype Test: The Die Is Cast



This is the blueprint for the finalized prototype stove. It was designed to be as simple as possible, in consideration of the living conditions for locals.

Testing of the prototype stove was conducted in strict accordance with the performance standards put forth by the US Environmental Protection Agency (EPA). Since Mr. Lee's fire stove factory was in Yeosu, it was decided that the prototype would be brought over to Seoul for testing.

The test took place on the rooftop of the building where Mr. Lee's office was located. Although this building was in the middle of the city, the act of standing around a fire stove under the darkening evening sky was reminiscent of a night in Guatemala. The team held a strong sense of unity as the hope that the project was ready to enter the final phase reached its peak.

The new stove proved a great success. After some adjustments, it achieved greater heat efficiency than that of the existing models used in Guatemala. Its production cost was also about USD 30 lower, thereby making it accessible to a wide number of households.

Since then, usage of the new stove has continually spread, and additional improvements have been made.

"I was especially impressed by the work ethics of the young Korean men and women at Good Neighbors," said Mr. Lee. "I admire their passion in coming all the way to Guatemala to help others, while most people their age are out simply enjoying their youth."

The world is full of different types of people. While some believe in egoism, others believe in altruism. Some try to gain as much as they can, while warm-hearted people are more concerned with sharing.

Mr. Lee is indeed the latter for he shared his unique expertise with the people of Guatemala and helped to improve their quality of life.

“At first, the idea of sharing seems to imply making donations or doing volunteer work, so I am grateful for the chance to learn about AT and how I can share my skills and expertise with others. I hope the new stove I created will become widely used, thereby ensuring better living conditions for parents wishing their children to grow up healthy.”



The first model of the stove was developed by KIPO in Guatemala.



An additional stove with an improved technology and design was developed by Good Neighbors Guatemala.

## AT and IP Sharing Cases

02

### A Cozy House Built in Nepal

KOREAN INTELLECTUAL PROPERTY OFFICE



## A Cozy House Built in Nepal

With its mild climate, the Terai plains is a great place to live. However, the region experiences great fluctuations in weather temperatures, emphasizing the need for reliable house insulation against conditions such as wind and heat.





## AT Meets Nepal

Nepal is bordered on the north by China and on the south by India, with the Himalayas running right through the center and basically dividing the country into three parts: a mountain region, a hilly region, and a plain region locally known as “Terai” which means “foothills.” The Terai plains has warmer weather than its hilly counterpart (where Kathmandu—the country’s capital—is located) making it particularly attractive to many poor people who lack even a proper roof over their head.

To help these people attain sufficient housing, Habitat for Humanity Nepal (HFH Nepal)—an NGO—has been working since 2006 to build them shelters. This project is more than just a simple give-away—HFH Nepal offers microcredit so residents can pay back the construction costs, free of interest. Helping locals find housing and work in order to secure a basic livelihood allows them to put more focus on their jobs and their children’s education. That is why HFH Nepal’s projects are so welcomed by Nepalese communities.

However, this does not mean that the problem was completely solved. For one thing, there were difficulties caused by the dramatic fluctuations in outdoor weather temperatures—something experienced more keenly on the Terai plains than throughout the rest of the country. In addition, the housing provided by HFH Nepal gradually deteriorated due to problems with heat insulation and condensation which caused additional maintenance issues. Eventually, HFH Nepal requested KIPO’s assistance in conducting a major troubleshooting effort.

After readily agreeing to give them a hand, the tasks involved were divided up; it was KIPO’s job to identify the right kind of AT to neutral-

ize the problems with the provided housing, while HFH Nepal was in charge of locally promoting the new technology and encouraging residents to take advantage of it. Since the team was almost completely in the dark about the situation in Nepal, HFH Korea’s advice was requested. Professor Youn-taik Leem of Hanbat National University was also asked to join in the search for the right form of AT to implement.

## Terai Plains: Paradise for the Poor

The first on-site inspection of the local housing situation was conducted in the Jhapa District of the Terai plains. The shelters in this district were built in a purely traditional style, different from that of the

The walls and fences were made from bamboo and straw. They were simply not enough to protect residents from storms.





The local shelters were tin-roofed, offered virtually no insulation against heat, cold, and outside noise.

HFH Nepal-provided shelters. The residents here lived in tin-roofed homes with bamboo walls that were plastered with mud from the nearby river.

These tin roofs were nothing but thin metal plates that provided almost nothing in the way of sound or heat insulation, leaving the residents unprotected from the dramatic weather swings that often occurred. Although the mud that covered the walls seemed like a pretty good choice in terms of adhesion, it had been applied without any reinforcement or additional treatment. As a result, the mud walls were rapidly deteriorating due to strong winds and the seasonal fluctuations in humidity.

However, the shelters in Jhapa District were much better than those of Biratnagar, which is located in the Morang District. Shelters there had straw walls with bamboo frames, thereby offering hardly any protection from the wind. What's worse was that rain would eventually cause the straw to decay, thereby necessitating constant maintenance and repair. Although some walls were plastered with mud or cow dung, overall, the situation in Biratnagar seemed significantly worse than that of the Jhapa District.

There was a proper house made of reinforced concrete and logs. Mr. Lilo Rahban, the owner of this fancier home, seemed very proud of his residence. However, in one part of the house, there was one mud-plastered wall connected to a cement one - leading to the question of whether he had run out of funds before construction on the home had been fully completed.

After the traditional style of local housing was analyzed, a visit was made to those shelters built by HFH Nepal. Boasting separate porches and proper toilets, these shelters appeared a lot more modern. The residents were satisfied with them too. They especially loved that they offered separate rooms for parents and children since the traditional style had everyone living together in a single room.

Nevertheless, there was much work to be done; for example, the serious condensation problem during the winter, the glassless windows that made for easy intrusion, the ever-expanding cracks in the bamboo and mud which provided access points for bugs and rain water, and the deterioration and eventual collapsing of the walls themselves.

The on-site inspection of the region revealed three problems that demanded the most attention: poor insulation, cracks in the walls,

and condensation on the tin roofs. The most pressing issue was the lack of insulation. According to Korean construction standards, walls must be at least 25 - 30 cm thick in order to provide the minimum amount of insulation expected from any building.

The best solution would be to adopt steel frames and thick cement walls. But the Terai plains does not offer easy access to a large supply of these kinds of construction materials. Furthermore, tariffs have increased the price of automobiles to double or even triple that of the costs in Korea. As a result, transporting such materials would further serve to make these materials cost prohibitive for locals.

#### AT Research on Locally Available Materials

The traditional materials used in local construction—mud, bamboo, and straw—were all environmentally friendly. Without any reinforcement, however, walls made from these materials lacked durability and easily cracked or got washed away during the rainy season. Therefore, the optimal solution was going to be found by conducting extensive research on these traditional materials.

The structure of the existing walls was simple: bamboo plastered with mud. Since the walls were only 2 - 3 cm thick, they provided very little in terms of insulation. In reality, they needed to be at least 25 cm thick to be in any way effective. In addition, they required yearly maintenance since the mud was easily washed away by the rain. To address this problem, initially, the idea of packing some straw inside the bamboo frame was proposed. However, the idea was abandoned once it became apparent the straw would quickly decay from contact with rain.

Another solution involved embedding wire mesh into the walls to make them more durable. But, it was discovered that the wire mesh would drive up costs too high. The third idea was to use locally-manufactured bricks, but these turned out to be as expensive as they were sturdy—not a desirable option for the locals. Ultimately, the conclusion was to use bamboo strips to pad out the mud-plastered walls thus giving them greater durability.

The pillars that the locals used in their walls were made from untreated pieces of bamboo that left gaps where wind and raindrops could find their way inside. So, smaller strips of bamboo would be used but they would be affixed to the wall using wire, thereby closing up the gaps.

The final concern was about the roofs. The pieces of tin the locals used were so thin that, to the people inside, the sound of rainfall hitting the roof was like the beating of a drum. In addition, the huge fluctuations in temperatures caused serious condensation to form on those roofs.

Applying some mud or cement to the roofs would help, but the bamboo walls appeared too weak to support the additional weight, and this prompted a more cautious approach. In consideration of both the cost and durability of the shelter as a whole, the most plausible solution was to weave a bunch of straw together as to create some sort of padding that would help support the roof. Since this padding would be detrimentally affected by direct exposure to such external factors as the weather, it was beneficial to place it beneath the roof as the roof would afford some protection for the padding and thereby make it a little more resilient.





An experiment with a mixture of local mud and straws to replace cement in making wall surfaces more durable.





1. As an alternative to expensive bricks, we tried mixing the local mud with various other materials such as straw, coconut stems, and jute yams (akin to Chinese yams). Of all these combinations, the mixture of mud and jute yams generated the most durable bricks.
2. We decided to pack straw padding into the tin roofs. This simple act caused a dramatic improvement in terms of insulation.
3. Using bamboo strips, we took the flat, plate-shaped straw padding and packed it under the roofs, making sure that the two of them remained easily separable in order to make maintaining and repairing the padding much easier.

After conducting much research and numerous tests, three different housing prototypes were built. The first looked very similar to the bamboo-walled shelters provided by HFH Nepal. The only difference was that this design allowed for straw padding to be inserted underneath the roof. The second prototype had thicker walls, a double-layered bamboo roof, and straw padding. The final prototype employed mud bricks for attaining the greatest resilience and insulation.

As soon as construction of the prototypes were finished, local residents and wannabe architects were invited to attend a special event for promoting the concept of AT and generating feedback on the proposed designs for improved housing. People showed interest in the second and third prototype designs, but it was the first prototype design that really stole the show.





Construction of a house made from mud bricks—one of our three prototype homes.  
To close the gaps between the mud bricks and the bamboo pillars,  
we filled them in with thin pieces of bamboo strips and kept them in place using wire.



KIPA patent attorney Yu-mi Kwak (left), a local worker (middle),  
and Ms. Rashumi, who served as the director of the worksite (right)

Although the locals certainly approved of the idea of reinforced walls, they had to consider the additional cost. Therefore, they preferred to settle for something cheap and familiar, even if the more advanced and exotic options offered greater benefits.

But that is not the end of the story. HFH Nepal selected some families to try out each design by living in the model homes for a certain period of time. As word of mouth about the advantages of living in these newly-designed homes began to spread, enthusiasm for these prototypes became more and more widespread. Though it will take time, it is expected the newly designed housing options will grow in popularity and be in very high demand sometime in the not-too-distant future.

### Rashumi, the Nepalese Architect, Earns a Chance to Study in Korea

A young, charismatic local architect named Rashumi assisted with the on-site inspection and durability tests. She was very friendly and cooperative. In fact, she was the one who secured the equipment needed for conducting durability tests on the new bricks. Even after the team's departure, she continued to check the heat efficiency of the model houses and compare the results with their HFH Nepal counterparts. She was a very reliable partner who contributed greatly in bringing this project to a successful conclusion.

Impressed by her passion for her work and her dedication to becoming a better architect, Professor Youn-taik Leem from Hanbat University—our AT developer for the project—offered her the chance of a lifetime which was to study architecture in Korea.

“It’s already been 2 years since I first came to Korea to study at Hanbat University. I’m now finishing up my last semester and am working on my graduation thesis, with plans to return to Nepal in February of next year. But I hope to always stay in touch with Professor Leem, for I owe him so much.”

Upon returning to Nepal after completing her studies, she said she was grateful for the many ways in which she has benefitted from the AT Sharing project; working on this project has led to exciting opportunities for her to further her career. It is hoped that her newly acquired knowledge and experience will prove valuable for her future work, both in Nepal and throughout the rest of the world.

## AT and IP Sharing Cases

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03

## Brand Identity Takes Root in Cambodian Farms

KOREAN INTELLECTUAL PROPERTY OFFICE



## Brand Identity Takes Root in Cambodian Farms

### Cambodia Awakens to the True Value of Brand Identity

As long as capitalism reigns, people will never be free of advertisements and product marketing. Advancements in internet and media technologies have resulted in an endless stream of commercials, day in and day out, with each ad promoting a specific brand of product. The notion of “branding” is commonplace to people living in developed countries, yet it is still a novel concept for those living in places like Cambodia where the phenomenon of advertising has yet to take hold. However, even Cambodians are well aware that certain brands have a higher market value than their generic counterparts, and this knowledge has caused a gradual desire to develop their own name-brand products.

Two particular instances of this newfound demand for brand development recently came from the Svay Rieng and Pailin districts locat-



A typical farm in the Svay Rieng province.

ed, respectively, a 3-hour drive and a 7-hour drive from Cambodia’s capital city, Phnom Penh. Each district boasts a unique staple agricultural product: for Svay Rieng, it is red rice, and, for Pailin, it is a tropical fruit called “longan.” Each district was working to sell its product, both at home and abroad. But there was a big difference between the two districts. Red rice from Svay Rieng was being exported to Thailand at the ridiculously low price of USD 0.35 per kg, which is 30% lower than what the product originally sold for back in 2009. On the other



hand, the added value of Pailin's longan resulted in it being sold at a much higher price of USD 1.2 per kg. This eventually caused a huge economic gap between the two districts—a gap that was apparent in terms of quality of life and awareness of the overall importance of modern branding strategies.

Aware of famous brands that exist outside Cambodia, Pailin residents wanted to employ a similar branding strategy for their longan. As a matter of fact, they had already considered what they needed to do in order to introduce and then utilize their brand. Their situation was a whole lot different from that of the Svay Rieng district, which slightly reminded us of a rural Korean village circa 1970. Here, low-income residents vaguely dreamed about increased profits, but were completely in the dark as to how they could develop their own brand of red rice. As a result, it was immediately noticeable that the job of brand development would be much harder in Svay Rieng than Pailin; especially since the goal was not only to launch a new brand, but also to help out with branding and this is a more advanced concept which incorporates advertising- and marketing-related activities.

Interviewing people from farmers' co-operatives in both provinces, and then sitting down to determine each province's specific needs were the first steps. Just as with other projects, on-site inspections and in-depth interviews with stakeholders were fundamentally important for creating an appropriate brand development strategy, especially since people often have trouble visualizing and articulating exactly what it is they want. Even if they are able to articulate their needs, they may choose not to. Sometimes, admitting a specific need can feel like revealing a weakness—something our human survival instinct encourages us not to do. Therefore, interviews were often conducted via indirect questions. For example, interviewers would ask



Above: Group photo taken with personnel and farmers in Svay Rieng.  
Below: Group photo taken with personnel and farmers in Pailin.





what kind of image they thought should be associated with their product and how they felt about certain ideas, rather than asking them directly what they want. In this manner, answers were inferred without wounding anyone's pride.

### Red Rice (赤米) vs. Red Jasmin

Red rice is an unusual crop seldomly found in other parts of the world. Globally, red rice is produced in very limited amounts. It appears red because of a pigment called anthocyanin; it tastes sweeter than typical white rice, and its soft texture further enriches the eating experience. In addition, red rice has a variety of benefits, including high amounts of fiber and iron. However, farmers' co-op in Svay Rieng were not utilizing these benefits as a competitive marketing advantage, and instead they were limiting their role to that of collecting the harvested crop and selling it on behalf of the farmers. In order to export the red rice, it was forced to rely on assistance from the Federation of Farmer Associations Promoting Family Agriculture Enterprise in Cambodia (FAEC). All in all, it was not a properly-functioning co-operative, and it even lacked a logo or symbol with which to represent itself. According to locals, nearly all transactions pertained to pre-harvest sales of red rice between individual farms and Vietnamese importers.

There were two types of red rice being harvested in the local farms: polished rice for domestic consumption, and half-polished rice for exporting. Vietnamese buyers, the region's main avenue of exporting, prefer the half-polished type due to reasons involving quality assurance. After arriving in Vietnam, the rice was re-polished and labeled with a Vietnamese brand so that it could be exported to the US. As one of Cambodia's neighboring countries, Thailand produces its own

brand of red rice called "Red Jasmin." According to an official from Cambodia's Ministry of Commerce, Cambodia's lack of branding is causing it to lose ground to Thailand in the red rice market, despite the fact that Cambodian red rice is of much higher quality than its Thai counterpart.

The names/images of other country's red rice brands were either based on where the crops originated, or they used keywords like "tiger," "dragon," and "organic" to emphasize the nutritional aspects of the product. Although people at the Svay Rieng co-op told us that the locally grown red rice has a unique healing effect and superior quality resulting from their time-consuming method of farming, such statements were not scientifically proven and, therefore, could not be highlighted as brand elements. At first, basing the brand image on Svay Rieng's pristine environment was proposed, but further consideration led to abandon that idea. Since Cambodia has never been known for its agriculture, it didn't make sense to focus on the rice's country of origin, especially from an export standpoint. That left the most difficult approach, that is, using abstract language.

When choosing a brand name for a particular kind of painkiller or cold medicine, people often resort to basing the name off of a certain ingredient—this is the easiest and most straight-forward way to promote their brand. Another way involves emphasizing the anticipated effect from using the product—"Fat Down," for example. The choice to use abstract language made it extremely difficult to come up with a good, marketable name. A good brand name was essential for differentiating our product from other similar products on the market, but a poorly thought-out brand name can cause confusion and send a mixed-message to consumers.

Once there was a basic strategy, it was time to deal with the demands of the locals. For export-related reasons, the Svay Rieng co-op desired to have an English brand name, so the job boiled down to finding an English expression that would accurately represent the red rice farmed in the Svay Rieng district. The expression needed to be simple and intuitive, and it would have to appeal to the Vietnamese buyers who were the red rice's primary exporters.

After several rounds of keyword extractions, combinations, and word-formations, 19 potential brand names were created. After consulting local specialists from a patent attorney's office, the number was narrowed down to five which were then shown to the respective Cambodian counterparts.

**RUBIA**  
SVAY RIENG RED RICE

**ANKORUBY**  
RED RICE FROM SVAY RIENG

**CROCO**  
SVAY RIENG RED RICE

**RED CROCO**  
**RICE** | FROM  
SVAY RIENG

**RUBY HEART**  
SVAY RIENG RED RICE

From their response, it seemed they preferred natural-sounding names with meanings that people would be able to grasp intuitively. With that in mind, the whole process was repeated and possible candidates, like "Farmer's Heart" and "Red Ruby Rice," were created. However, a patent attorney stated that the chances of successfully trademarking these names were very slim, not just in Vietnam but in most countries around the world. Therefore, after further consultations, the final decision was to name the brand "NatuRed."

Once the naming was complete, it was time to work on designing the brand logo. A design that reflected on Svay Rieng's beautiful scenery, fresh air, and calm fields of grain was desired. After getting feedback from design experts, numerous modifications and adjustments were made.



The final draft of the symbol design

### Longan, the Priceless Fruit Carrying the Local Economy Forward

Pailin had distinct advantages over Svay Rieng, especially in terms of average household income and brand awareness. Like Svay Rieng's red rice, however, longan is sold by the kg—which gives the two districts something in common. Since longan is considered a luxury fruit, it has great potential for increasing in value if properly branded. It also has excellent storability to the point that Pailin residents were still eating the previous year's harvest. That is why Thai traders were im-



porting it and then re-labeling it in order to sell it to China. Developing Pailin’s own distinct longan brand would play a critical role in raising incomes for local farmers. Once the district succeeded in launching its own brand, Pailin would be able to export its longan not only to China, but wherever there is demand for this tropical fruit.

According to market research, there were no prominent competitors in the longan market. Previously established longan brand names like Dragon Eye (a direct translation of the Chinese word for longan), Pigeon, and Lucky were too ambiguous to stand out to consumers. In fact, such names were so abstract that even marketing experts would have trouble associating them with fruit. Therefore, it was agreed that, first and foremost, the brand name for Pailin’s longan had to be clear and straightforward so consumers would immediately know what kind of product was being advertised.

The work began with a brainstorming session. In Chinese, longan is written “龍眼”, which translates as “dragon eye.” The name originated from the fact that, for centuries, longan was given as an offering to Chinese royal families. In addition, ripe longan is a golden yellow—a color associated with emperors and kings. Considering that the primary demand for longan comes from China, it was probably a good idea to keep such characteristics in mind when coming up with a brand name, which should also somehow reference the unique geography of the Pailin district.

Potential brand names were derived from combining Pailin’s regional characteristics with the one-of-a-kind aspects of longan, such as its rich color and taste. In order for people to grasp its meaning quickly, the brand name had to be based on a simple English expression or

intuitive word-formation. Eventually, a compilation of a list of possible candidates, with six or seven entries per category, was created.

Direction 1. REGIONAL	Direction 2. SPECIES	Direction 3. CONCEPTUAL
<b>GOLDEN HILL</b> PAILIN LONGAN	<b>GOLD EYE</b> PAILIN LONGAN	<b>FRUDO</b> PAILIN LONGAN
<b>LIN’S BELL</b> PAILIN LONGAN	<b>GOLDRACO</b> PAILIN LONGAN	<b>DOLCE VITA</b> PAILIN LONGAN
<b>HILLSWEET</b> PAILIN LONGAN	<b>DRAGOLD</b> PAILIN LONGAN	<b>VITADIA</b> PAILIN LONGAN
<b>GOLDIA</b> PAILIN LONGAN	<b>GOLDRICH</b> PAILIN LONGAN	<b>SUNDOR</b> PAILIN LONGAN
<b>MELOPIA</b> PAILIN LONGAN	<b>LONGSWEET</b> PAILIN LONGAN	<b>HELLO, MELLO</b> PAILIN LONGAN
<b>DELIGEM</b> PAILIN LONGAN	<b>MELONGAN</b> PAILIN LONGAN	
	<b>BELOMEL</b> PAILIN LONGAN	

The list of brand name candidates

Trademark registration is absolutely essential for ensuring that brands receive proper legal protection. Since the potential brand would be shared by every farmer in Pailin, an application for a collective mark was required. Therefore, KIPO reviewed the list of potential brand names and determined that five of them could be properly trademarked in Korea. After collecting opinions from the respective Cambodian counterparts, in addition to considering the possibility of eventually registering the trademark in China, the name “Delilong” was selected.

Once the brand name was decided, it was time to design the logo. A variety of symbols and images that could be associated with Pailin, longan, and Cambodia were available; for example, motifs based on longan's roundness and golden hue, as well as images reflecting longan orchards and Cambodia's natural environment. Brand logos can be either abstract or straightforward, depending on what kind of marketing strategy the developers come up with. As a result of multi-faceted efforts, seven very different possible logo designs were created and then consulted upon with various brand design experts, including Hongik University professor Keon Na and BRN Christmas CEO Jae-il Jang. Ultimately, a yellow-gold logo that reflects the countryside of Pailin and gives off a sense of eco-friendliness was chosen. The Pailin residents loved the idea, so the trademark was filed for registration.



The final draft of the brand name and logo design



The brand logo is now in actual use in Pailin. The longan being exported is now labeled under the brand "Delilong," the "fruit" of our efforts.





## Korean IP Expertise Proves Useful in Cambodia

Having successfully guided the local farmers in effectively branding their longan to generate added-value, IP Sharing in Cambodia was complete. The rest was to be left in the hands of the Pailin residents: from registering the brand name and logo as trademarks to engaging in advertising and other marketing-related activities. Although there was a large economic gap between the districts of Svay Rieng and Pailin, residents of both areas agreed that having their own brand could greatly increase their incomes and enrich their lives. Cambodia's effortless acceptance in acknowledging the value of branding, as well as their passion to learn more about this process was impressive. All things considered, the task of developing a brand for each of these districts went rather smoothly.

After the months-long brand development project came to an end, a seminar for both local and government officials from Cambodia's Ministry of Commerce was held. In this seminar, there was a presentation that outlined how the final version of the brand name and logo came into being, showed how locals can make use of them in the years to come, and gave real-world examples of the power and value of brand-names. Also, viable marketing strategies for the launched brands were introduced.

We all know that no tool is useful if it just sits there. A tool only gains significance by being used. It is our sincere hope that the tool developed for Cambodia will prove valuable by helping to enrich their lives.



After our brand development project came to an end, we held a seminar for farmers and government officials in the Svay Rieng and Pailin districts.



## APPROPRIATE TECHNOLOGY

Co-Existence by IP Sharing

04

Korean AT Adds Value to  
Filipino Aromatherapy Oil



## Korean AT Adds Value to Filipino Aromatherapy Oil

A small municipality, located 200 km outside Manila, Anao is known for producing aromatic oil that is extracted from the flowers of the local ylang-ylang trees. By processing this oil in various different ways, Anao has enjoyed many economic benefits thanks to these trees. Since the region's weather is perfect for growing ylang-ylang trees, the Department of Agriculture in the Philippines began to supply seedlings throughout Anao in 1990. The ylang-ylang had become one of the region's most significant source of income, and comprises much of the foundation for the local economy. Unfortunately, however, Anao faced a major problem: the oil extractors they were using started to break down, leaving them with only one out of three original extractors that still works.

### Beginning the Journey to the Philippines

In 2013, KIPO and KIPA, in partnership with the Asia-Pacific Economic Cooperation (APEC), decided to jointly develop AT for usage in both the Philippines and Papua New Guinea.

As a result, KIPO and KIPA were dispatched to help with the project. The group included a Korean patent attorney named Yu-mi Kwak and THINKTOP R&D's CEO, Tae-sung Kim. In the weeks leading up to this project, Mr. Kim had trouble believing he was actually going, even after meeting with KIPO at his Wonju factory where the need for a Korean specialist in oil extractor manufacturing, like him, was expressed. As he realized that, somewhere outside Korea, his know-how and ideas were needed, a great feeling of excitement came over him—not to mention an overwhelming pressure to live up to everyone's expectations.

Anao requested the renovation of an oil extraction facility located there. Generally, aromatherapy oil is extracted through distillation or steaming. But, the oil extractor being used in Anao was too old and deteriorated. The fact that it used firewood for fuel made it basically useless for extracting high quality oil. Furthermore, Anao had only three oil extractors, two of which were unavailable due to serious deterioration. This was inconvenient as Anao is composed of 18 administrative divisions, otherwise commonly known as barangays, and these small councils had to collect flowers and deliver them to the one site where the extractor was located in order to extract oil. Just as espresso tastes and smells better when extracted at a higher temperature and pressure, the quality of ylang-ylang oil increases with the speed of the extraction.



The only oil extractor to remain in working condition. People had to carry large baskets up the ladder and dump the flowers into the distillation barrel.

However, back then, the people of Anao faced problems with storing and transporting the distillate, as well as with the low efficiency of the extraction process itself. Officials from the municipal government were well aware of these problems. So naturally, they requested a new kind of extractor that would be easier to use and result in a better extraction yield, thereby allowing locals to extract more oil from the same amount of ylang-ylang flowers.

On the first visit to the site, there were many problems that needed to be addressed. First of all, the facility was enormous; it was capable of extracting oil from as much as 75 kg worth of ylang-ylang flowers in a single load, and the working extractor towered above like a two-story building. And since it used firewood to fuel the distillation process, direct exposure to smoke and soot diminished quality of the final product. This being the case, the first priority was to create an extractor that was much smaller in scale. This became even more important after locals requested that the new extractor be compact and portable. As a skilled engineer, this was all rather easy technology for Mr. Kim. Finding the correct “appropriate technology” was the hard part.

The biggest problem was that Anao lacked a stable power supply and suffered from frequent power outages. The goal was for the locals to be able to maintain and manufacture additional units on their own once they were given the blueprint to the new extractor and taught how to operate and manage it. However, considering the odds, it was easier said than done.



## Everything Must Be Locally Available

There was a big shock as to the kinds of materials that were available on the local market. It was known that successfully completing the project would be a nearly impossible task considering there was only a single week for conducting the necessary market research. Plus, the team was working in a country they knew next to nothing about in regard to directions, the local language, etc. But the real problem was that local markets were small and lacked the sort of materials needed. Trying to design a new extractor using locally available materials was a serious problem. In Korea, a vast array of tools and materials were available, however the same could not be said about the Philippines.

“Why don’t we just bring this bronze valve from Korea?”

“No, Mr. Kim. We have to stick to the principle of absolute localization in order to help the people here stand on their own two feet. I know it’s hard, but please try and come up with an acceptable alternative.”

“But we keep looking and looking, and all we find is nothing. Come on, it’s not like I can make each and every single part from scratch.”

This being Mr Kim’s first time participating in a project involving AT, he found the concept easy to understand but difficult to follow. All his life, he had selected only the best parts and materials available to make the best machines possible for his clients. But, AT required an entirely different approach. Throughout the project, there was the



Based on the blueprint he finished in Korea, Tae-sung Kim builds the prototype for the extractor in Anao.

incredible burden of having to create everything from scratch. Later, it became apparent that being forced outside one’s comfort zone was actually a terrific opportunity to upgrade a person’s skills and expertise.

“I used to believe that a high-functioning facility could only be built under the best of conditions. But, by dealing with numerous limitations throughout the project, I really had to rack my brain for innovative troubleshooting ideas. I have to admit it was an excellent growth opportunity for me as an engineer.”



Oil extractors are pretty simple compared to other more complex machines and electronic devices. But, knowing that doesn't provide much comfort if you do not have access to the kinds of parts and materials you have always taken for granted. The most shocking thing is that the locals treated such massive inconveniences as an everyday fact of life. Having never experienced a bounteous supply of goods, they didn't realize what they were missing. It all started to make sense as to why their oil extractors were so obsolete and run-down. And with this knowledge, it was necessary to go back to the beginning and re-think what kind of AT would likely be most beneficial.

"In my younger days, I wandered around all the shops in Cheonggyecheon, Seoul. There, I came across a bolt shop where they literally sold nothing but different kinds of bolts. At first, I wondered how such a shop could possibly stay in business, but someone later told me that this one shop supplied nearly all the bolts used in Korea. While I was having trouble finding parts in Anao, this bolt shop came to mind for some reason."

Just as Mr. Kim wanted to point out, there was a difference between Korea and the Philippines, especially in terms of the availability of necessary materials. Nevertheless, the goal was to develop a new extractor that was best suited to the needs of the local people.

### Solving Problems One by One

After conducting the market research, work on the blueprint for the new extractor began, all the while taking the Anao residents' requests into account. A list of parts required for manufacturing the prototype was organized, and this list was sent to the respective counterparts in

the Philippines, along with descriptions and explanations of the usage and functions of each part. In doing so, the intention was to see whether the parts were available locally, and whether there were any alternative options for parts that might be missing. Feedback on the list soon followed, and the design had to be rethought accordingly. This was a process that was repeated over and over because everything needed to be ready and in-place before Korea's return to the site in December. There was no room for mistakes because there were a lot of goals to accomplish in a very short time: build a prototype based on the blueprint, demonstrate the prototype's enhanced oil extraction capabilities, and compare the quality of the newly extracted oil with that produced by the old extractor.

"I can't describe what it felt like other than to say there was a sort of 'exciting pressure.' Since we were faced with numerous restrictions—such as time, cost, and access to resources—we really had to challenge ourselves to get everything done on schedule. Sure, there was a lot of stress resulting from our being bound hand and foot in terms of options. But there was also an escalating excitement as we overcame the difficulties one by one. And we took pride in the fact that we were able to complete our mission and help out the people of Anao."

At last, December came and the prototype of the new oil extractor was built using the blueprint that was prepared. Although, on the surface, the job did not appear particularly demanding or prone to errors, the fact of being in a foreign country made tasks more complicated than they seemed. Fortunately, every single person in the Philippines—including everyone from the local manufacturer, Rolling Master, and the local tech laboratory, PhilMech—was truly passionate about his or her work and always easy to get along with.

### Success and an Unexpected Bonus

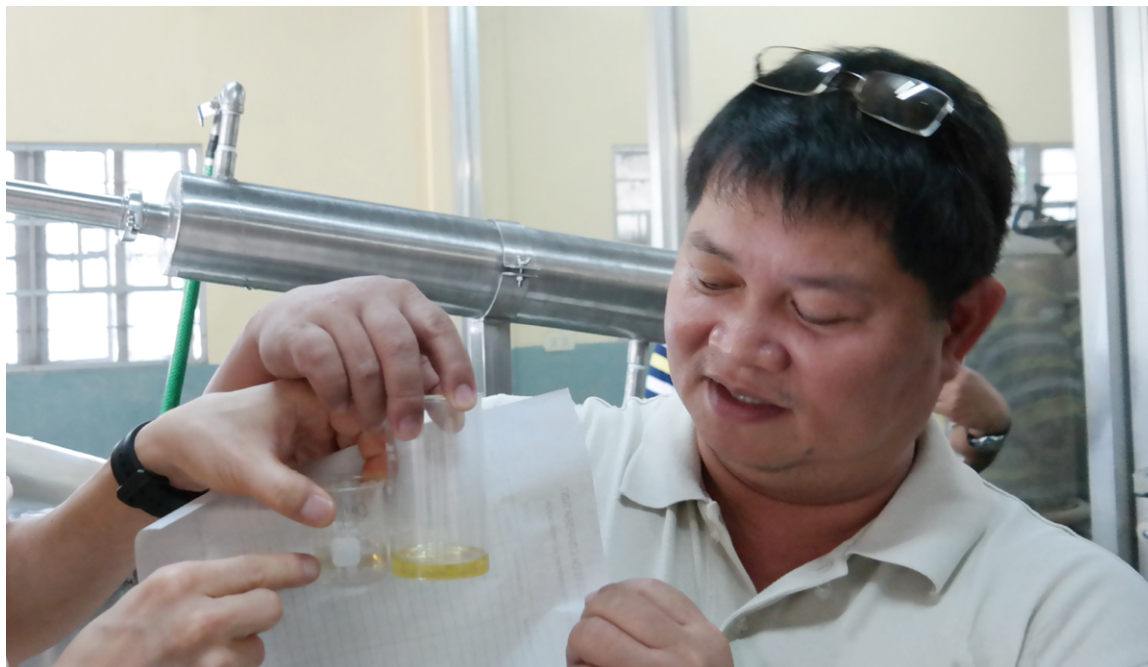
Two days later, after completing the prototype, it was decided that an operation test would be conducted in the presence of officials and engineers from oil production companies in Anao. Compared to the old facility, which was huge and required at least two people just to dump the flowers into the barrel, the new extractor was exceedingly compact. The locals initially seemed discouraged by its diminutive size, and they cast doubtful looks at it. But, they quickly changed their tune once they saw that the ylang-ylang oil was being not only extracted without producing any smoke, but in just one hour after the flowers were put into the extractor.

For the new extractor, a pressurizer was added in order to extract the oil at a much higher pressure and temperature. In doing so, there was an unexpected bonus: higher quality oil. In the case of the old extractors that burned firewood, the humid Filipino air hampered combustion, increased the time required for boiling, and worsened the overall quality of the oil by exposing it to smoke and soot. By replacing the need for firewood, these problems were gone for good. And, more importantly, the extracted oil appeared much clearer and brighter, which meant a huge boost in quality. The value of ylang-ylang oil skyrockets if the quality is high enough. That meant that not only could Anao



The new oil extractors are compact and in operation at each barangay in Anao. Not only is the new model much smaller than the pre-existing one, but it also allows for much faster and more efficient work as a result of the newly added extraction feature.





The clear liquid on the left is the oil extracted from the new facility, and the deep-yellow looking one on the right is what came from the old extractor. Felipe, Anao's mayor, witnesses the improvement firsthand.

locals do the work faster and more easily, but also enjoy a much higher profit. The thought of a new outlook for Philippines' future is joyous and exciting.

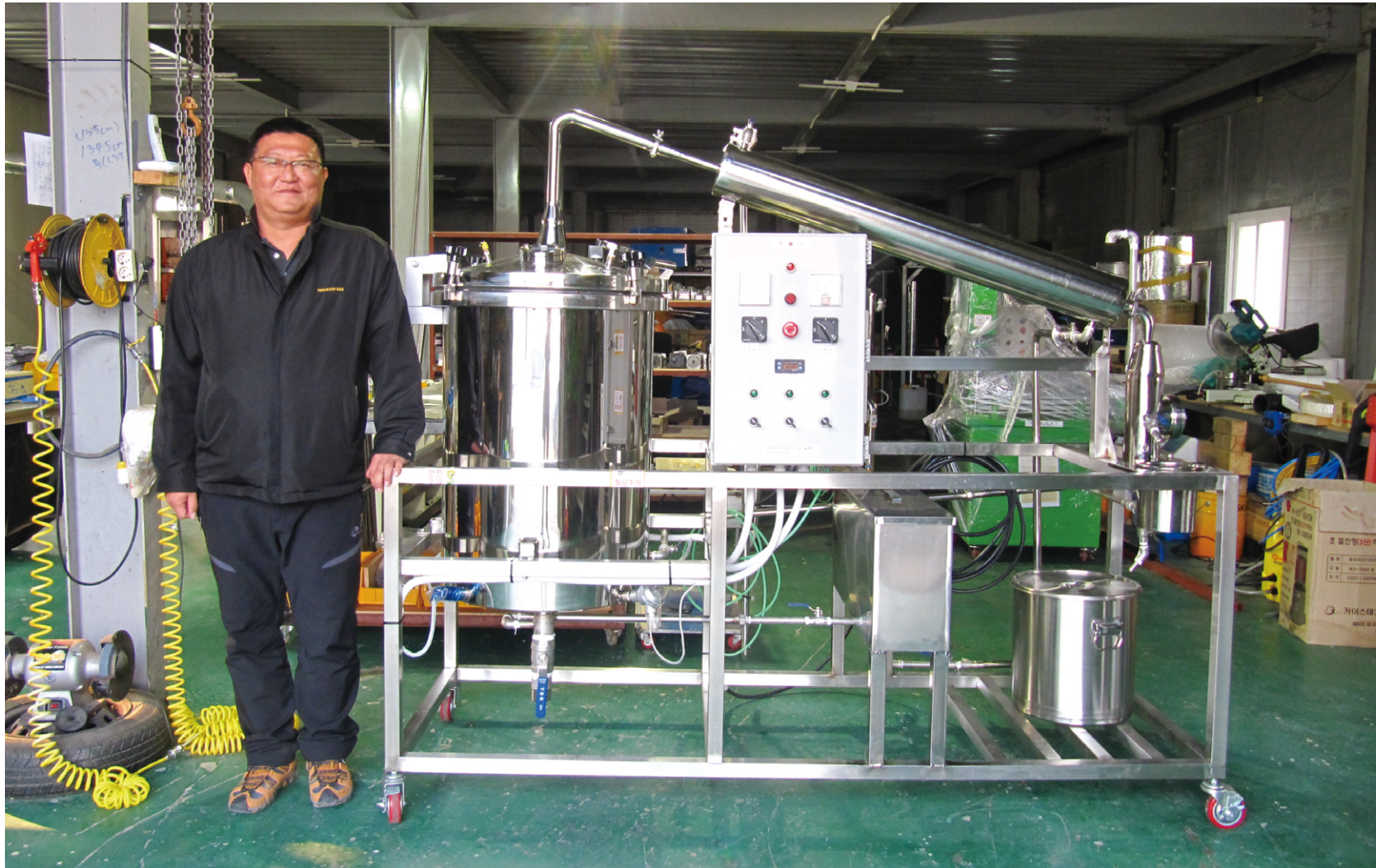
It has been almost a year since the project was brought to a successful end. Looking back, there were some hard times, such as discouragement over unfavorable conditions and confusion as to how to develop AT from locally available materials. However, the fact that the livelihoods of Anao residents have likely improved over the past year, due to the development of region-specific AT (through the use of patent information), makes it satisfying and all worth while.

"The people of Anao had a great passion and aspiration to utilize their newly learned technology in order to boost the quality of life for residents of their community. I finally understand how people on TV feel when they say, 'I am happy to have something to share with other people.' I only regret that scheduling and language barriers prevented me from sharing more."

Dr. Ofero from PhilMech and Korean patent attorney, Yu-mi Kwak are testing the new extractor.







This is the latest version of the extractor after going through several rounds of improvement. Mr. Kim says that he is happy to freely offer the technologies involved anytime someone requests it.

Mr. Kim spoke with conviction when he said that there is no such thing as a complete and perfect piece of technology despite the modern obsession with pursuing the best in everything. As a result of his positive attitude, his experiences with the oil extractor project have proved especially meaningful to him.

“The project showed me that there is always room for me to grow as an inventor and come up with better ideas. So, the new extractor we made was not a free give-away, after all. Rather, I, too, benefited from the life lesson I received.”

### Ministry of Foreign Affairs of the Republic of Korea Joins KIPO in Disseminating the New Oil Extractor

At the 2013 APEC Summit, Korean President Geun-hye Park stressed the importance of AT sharing and closer cooperation in order to address water, food, and energy shortages. In response, KIPO and the Ministry of Foreign Affairs of the Republic of Korea engaged in a partnership to further disseminate successful cases of AT-sharing, including the new oil extractor developed for the Philippines and the rope pump developed for Papua New Guinea.

Tapping into KIPO's AT-related expertise, this is the government's first attempt to push ahead with a joint cooperation project between the Ministry of Foreign Affairs and KIPO. At the Kick-off Meeting held in November 2014, Director General Ricardo R. Blancaflor of the Intellectual Property Office of the Philippines (IPOPHL) stated that he would spare no effort in spreading the news of our Anao project throughout the world. Let's wait and see if the new oil extractor emerges as an exemplary case of AT sharing not only in the Philippines, but throughout the rest of the world.



Third from the left: Hyun-suk Lim is the Director of KIPO's Multilateral Affairs Division.  
Fifth from the left: Leny B. Raz is the Director of IPOPHL's Bureau of Trademarks.

## APPROPRIATE TECHNOLOGY

Co-Existence by IP Sharing

05

**Bicycle-operated Pump:  
New Irrigation System Enriches Farms  
in Papua New Guinea**



## Bicycle-operated Pump: New Irrigation System Enriches Farms in Papua New Guinea

### Pinu Village, Papua New Guinea – Rich in Water Resources but Lacking in Agricultural Water Supplies

Some of the most frequently occurring problems in developing countries include hunger, contaminated drinking water (which leads to waterborne diseases), and poor housing. The reasons for these problems are often associated with a lack of local technology and/or infrastructure, making it nearly impossible to effectively address each problem on its own. This is why more advanced technologies and ideas from around the world are needed. Getting outside input often helps make seemingly insurmountable tasks appear much more approachable once we are able to view them from a new perspective. This was certainly the case with the project to improve the irrigation system in Papua New Guinea. It was a very ambitious project in that it involved enhancing the country's agricultural productivity as a

whole. Upgrading the irrigation system was simply a part of the bigger picture. Work began with in-depth interviews with the Abadi Pinu (Pinu villagers) in order to identify those needs that were the most urgent, then this information was used to pinpoint two priority tasks: improving the manner in which water was supplied to local farms, and providing agricultural machinery to help offset the much-needed manpower. Both tasks were directly related to local farmers' incomes and productivity. Unfortunately, due to time constraints, a choice as to which task to focus on had to be made. It was a choice we would make after conducting our on-site inspection.

The request for AT-related support came from the Pinu village, which is located about 90 km west of Port Moresby, the capital city of Papua New Guinea. Pinu had an abundant water supply nearby (in the form of a large river), only about 4 - 5 km outside of town. However, since it lacked the proper means to take full advantage of this resource, the village was relying mostly on the groundwater that could be found by digging about 2 - 3 m into the ground. The problem was that the local water pump was too laborious to effectively operate as it had a manually-operated pulley that was connected to a rope for drawing water from out of the ground. It was inefficient both in terms of the effort required and the amount of water it could supply. Conditions were even worse during dry seasons when the level of the water dropped, making it even more difficult to retrieve.

Fortunately, as a result of on-site inspections and interviews with locals, it was determined that this underground water supply was clean enough to exclude the risk of waterborne diseases. This knowledge allowed the project to concentrate on improving the pulley system, without having to worry about designing a new filter to ensure



Although the soil looks dry, underground water is available just a few meters below.



Diverse types of irrigation systems were in use locally, such as high lifter water pumps that utilize gravity to draw water, as well as ones powered by diesel engines or solar cells. However, these types of pumps were all too expensive to be widely disseminated across the country.



the water's quality. Some of the farmers had alternative sources of power (diesel, solar, etc.) and were more interested in refrigeration and farming machinery, but it was decided securing enough of a water supply to boost the agricultural productivity of the area as a whole was the priority. This prompted us to concentrate our AT research on ways of improving local irrigation.

### AT Finds The Most Suitable Power Source to Pump Water for Farming

The easiest, most efficient way to pump water from a well is to use a mechanized pump powered by either electricity or diesel fuel. However, such pumps were too expensive to be widely disseminated throughout the area. For example, the University of Papua New Guinea operated a farm that had a diesel-powered pump; the pump had cost more than USD 8,000, and required at least USD 25,000 worth of fuel annually, making it cost restrictive for most small farms in the Pinu area. This was especially true when compared to the town's manual pump which had cost USD 648. A similar cost-related issue arose in the case of solar-powered pumps, which required expensive battery replacements every few years.

It seemed more economical to simply manufacture enough of the existing manual pumps to meet the demand, which is why, rather than come up with an entirely new design, it seemed more plausible to upgrade the existing pumps in a way that would reduce costs and increase their durability and output.

After some research, an alteration to the pulley's operation, by replacing its handle with foot pedals to spin the pulley, was needed.



This is a picture of the kind of water pump initially in use. By turning the green handle, you spin the pulley, causing the yellow rope with the black washers (the discs between each knot) to draw the water up through the pipe.





The new bicycle-operated pump is being tested. Since it requires only one-eighth of the labor necessary for turning the handle of the previous model, the irrigation process is made much easier.

These bicycle-like pedals made the whole system a great deal easier to use since people's legs are generally much stronger than their arms. It was deduced that by removing the handle and replacing it with foot pedals, the amount of water pumped would be doubled, or even tripled, in relation to the same degree of effort. With this in mind, a new rope system that could be attached to the frame and rear wheel of a bicycle was developed. With the bicycle frame firmly affixed to the ground, one simply needs to attach the rope and turn the pedals to pump up the water.

Yong-gi Won, the CEO of Biz&Mold Co, and an advisor during the on-site inspection stated, "To be honest, my business specializes in molding, which at first may seem unrelated to the issue of improving irrigation systems in Papua New Guinea. However, the molding industry is responsible for a wide variety of products—everything from smartphones to musical instruments. We deal with pretty much all the kinds of products commonly used in everyday life, which is why we are able to quickly get down to the root of exactly how a particular product or machine works. I think it was this ability that led to important breakthroughs on the project."

### A New Water Pump Kit and an Unforeseen Setback

Mr. Won is a young and passionate entrepreneur who, when only 38 years old, became the youngest person ever to receive a master craftsman license in molding. As an engineer, his ideas and technological know-how were essential for addressing any unforeseen difficulties, and his discerning eye caught mistakes that otherwise would have been missed.



The water pump in use at the Pinu village during the visits was designed by Papua New Guinea's National Agricultural Research Institute (NARI). In addition to the previously mentioned disadvantages of this particular pump, it carried with it another drawback: NARI was not able to directly manufacture, sell, or give away versions of its pump, requesting instead that the locals manufacture them on their own. As there was no one to step up and take charge of the manufacturing process, no further distribution of this pump was ever achieved.

With that in mind, a new bicycle-operated pump was designed as a simple DIY (do-it-yourself) kit that anyone could easily assemble. The majority of the installation had to do with attaching a bicycle to the pre-existing pump, and this only took an average of about 20 minutes, making it a very feasible and effective solution. Once these kits were finally distributed throughout the region, anyone would then be able to ride their bicycle to the nearest pump, irrigate their crops by using the rear wheel of their bicycle as an advanced pulley system, and then ride back home once the job was done.

The only catch was that only 1 to 2 percent of people living in Papua New Guinea owned a bicycle. This meant time for Plan B.

Despite this setback, locals were very satisfied with the new pump system, which needed only one-eighth the effort required by the handle-operated model. In addition, the fact that this system also utilized the bicycle's rear wheel, there was no need to manufacture a separate pulley—meaning less time and lower production costs. Local farmers especially liked the simplicity of the new pump; by just attaching a bicycle, a piece of knotted rope, a waterway pipe, a bicycle stand, and

a rope guide, they could immediately have a new, highly productive water pump at their disposal.

And this system could be made available at an affordable price. The prototype cost USD 210, including USD 125 for the bicycle. The pump cost USD 85, which was USD 29 cheaper than the price of the handle-operated water pump which was USD 114. Since bicycles were not commonly found on local farms, we decided to affix one to each well and make them the communal property of the entire village. That way, they could all chip in and enjoy the new pump at a much cheaper cost per household.

After a great deal of discussion and debate, the final direction of the project was decided: affixing a bicycle to each well in order to power the rope pump and allow shared access for all the local villagers. As previously agreed, NARI was in charge of promotion, production, and sales of the new water pump kit. Thanks to this invention, 1,200 residents living in 300 different Pinu households no longer had to worry about water, even during the dry season.

### AT Empowers Developing Countries to Stand on Their Own Two Feet

"Locals were mostly satisfied with the performance of the prototype. To be honest, a few did complain that we did not offer them the more advanced models used in Korea. However, local conditions would have made the Korean models unsuitable and unaffordable. Were I an entrepreneur interested in CSV (Creating Shared Value) activities, I could have just bought them a fancy pump instead of going to all the

trouble of designing, building, and testing the prototype. It was the project goal—the utilization of AT—that drove me to come up with an innovative new solution. Years later, I still recall the enjoyment I felt at taking up the challenge, as well as the great feeling that resulted from being helped by other people who shared my passion for this project. I would definitely jump at the chance to once again take part in an effort to come up with new technologies that operate in novel ways.”

Testing of the new prototype did not always go smoothly. As mentioned above, some locals complained that they should be given something more advanced or something that had more room for improvement. But time constraints and less-than-desirable local conditions enforced a make the best with what you have attitude.

Best efforts were applied by providing the people of Papua New Guinea with the proper tools, then instructing them in their use and maintenance. Now that they have both a blueprint and manual for the pump, they can build additional units and make improvements on their own. This is just what the project is all about: helping people in developing countries stand on their own two feet, and not just providing them with a one-time handout.

Recent feedback has been extremely positive. One Papua New Guinean was so impressed with the performance of the new pumps that he successfully sought out funding from Europe to build more. Another good outcome is that KIPO partnered with the Korean Ministry of Foreign Affairs to secure additional funds for expanding the project even further. As with the oil extractor we designed for the Philippines, the bicycle-operated pump will be introduced to more Papua New Guinean neighborhoods in order to help boost the country’s agricultural productivity.

## AT and IP Sharing Cases

06

### Renovation of Tarlac’s Regional Brand

KOREAN INTELLECTUAL PROPERTY OFFICE



## Renovation of Tarlac's Regional Brand

As a region that is heavily influenced by Catholicism, Tarlac boasts a huge statue of Jesus that attracts many tourists every year.





Team Manager Yee-Chan Jung, from the Korea Productivity Center, is giving a presentation on the project.

### Tarlac Province, the Philippines

There is a famous statue called Christ the Redeemer in Rio de Janeiro, Brazil. A similar, though smaller and less widely known, statue of Jesus also exists in the Philippines, and the Tarlac province attracts many tourists with its display of a piece of the very cross on which he was crucified. As a result, many locals make their living by selling various related souvenirs to tourists.

Tarlac already had its own regional brand, “Natural Tarlac!,” when, in 2012, they requested for support in developing a new one. The Natural Tarlac! brand was mainly applied to locally grown produce and processed food made from rice, sugarcane, and coconuts.

However, this brand placed too much emphasis on being natural, making it poorly suited for other regional products like ceramics and other kinds of handicrafts. In addition, regional licensing standards were too vague for this brand to be well regarded as a guarantee or certification of a product’s quality.

For these reasons, local business owners, as well as people like Tarlac Governor Victor Yap and Marvi T. Dela Cruz, Director of the Provincial Cooperative & Enterprise Development Office (PCEDO) in Tarlac, were determined to replace “Natural Tarlac!” with something more well-suited for being the representative brand of the province.

Unlike brands for general products and services, location-oriented brands (for cities or regions) often include concepts that are rather abstract or comprehensive, but which reference the unique aspects of a particular region whether in terms of local geography or culture, the characteristics of its residents, or important national landmarks. That is why conducting an on-site survey and face-to-face interviews with local residents and business owners are so essential. They are the ones who know best as to what their local brand should look like.

Through these conducted interviews, it was learned that nearly all local businesses were small, family-operated affairs that employed anywhere from three to ten persons. And the goods being sold were far more varied than expected: in addition to primary agricultural



products, these goods also included secondary agrotechny products such as handicrafts, leather goods, ceramics, hand-made bags, etc.

This amounted to quite a conundrum. Even if developing a good brand for the Tarlac region was successful, it was likely that the effectiveness of this brand would be blunted due to overuse by numerous small local businesses who had very little in common.

Fortunately, IPOPHL (The Intellectual Property Office of the Philippines) stepped up to support the trademark registration of the new regional brand, while PCEDO expressed its willingness to rein in usage of the brand by putting it under the management of a TFT (Task Force Team). That left three primary tasks: brand naming, logo design, and preparation of an education program/manual on effective brand management.

### Excellent Goods Produced by the Kind, Honest People of Tarlac

After interviewing local business owners and talking with several public servants and residents, three primary aspects of the Tarlac natives were discovered.

First was their kindness. Everybody in Tarlac was friendly, and always welcoming with big smiles. They were good-hearted people who worked hard to make anyone feel at home.

Second was their sincerity. Living in a predominately Catholic area, the people of Tarlac were very straightforward. There was none of the usual hesitations felt between strangers; they were always frank in

their dealings, with little or no political posturing. Everyone would be greatly impressed by their sincerity, and strongly convinced that the products they made were trustworthy.

Third was their commitment to superiority. They were proud of the products they made, and worked hard to maintain that pride.

These three key features of the Tarlac people were kept in the forefront as a brand name was being created. It would highlight the innate excellence of Tarlac, while also promoting the fact that it was being applied to high-quality products only.

After consulting with a domestic advisory group, ten potential candidates were narrowed down to four, focusing on names that would be



Top four brand name and logo candidates

attractive to tourists—foreigners, in particular—visiting the area. This meant the perspective of strangers needed to be prioritized over that of Tarlac residents and business owners.

There was an unexpected response. Based on information gleaned from a branding seminar and advice on effective brand development, local students and professionals in the field of industrial design came up with their own ideas for a brand name and logo and sent them in. Although efforts to instruct about proper brand development were severely limited due to time constraints, the passion and intelligence of these locals led to some pretty impressive outcomes.

The brand names and logos sent by the locals differed greatly from the aforementioned four candidates. But the locals had to be acknowledged as they had done an outstanding job of representing the characteristics and features of Tarlac. Even more significant was the fact that they had shown initiative in taking the lead and coming up with a design all by themselves.

Although input from experts usually ensures better quality and is therefore highly advisable, it was the residents of Tarlac who would be devoted to the brand more than anyone else. Furthermore, it is the brand developer who must always work to ensure consistent brand management over the long term.

Since the project's role was limited to brand development only, this did not include helping them with the management of their new brand. That would be left up to the local business owners and TFT. This realization served to settle the matters, and it was concluded that the project would be completed by working to enhance the quality of the design they had sent.



The original design of the brand name and logo developed by the people of Tarlac



The revised version

The revisions were mostly related to adjusting the font they had used and re-arranging certain elements of the design. For example, the way the image and the letters were originally arranged lacked



the proper balance and looked a bit awkward. So some changes in regard to the type, thickness, arrangement, and spacing of the font were made in order to highlight the strengths of the original design. Since even a seemingly minor change can greatly impact a design's visual appeal, notes were included explaining our reasoning behind each adjustment.

Taking extra care not to heavily alter the original design, the look of the design and the readability of the font was changed.

### **The Ultimate Purpose of the IP Sharing Project: Empowering Locals to Stand on Their Own Two Feet**

The ultimate goal of the IP sharing project is to provide locals with the means to stand on their own two feet.

Its purpose is not to simply offer a handout. Therefore, when the people of Tarlac proactively developed their own brand, it meant that the mission was a success. Help from the staff of the Korea Productivity Center, as well as the external advisory group were appreciated as they were highly supportive of the way things turned out. Tarlac was a perfect example of how people in developing countries could take the lead in improving their own economic situations. The hope is that this will lead to more instances of groups and/or companies spearheading the vitalization of underdeveloped areas in the years to come.

## **AT and IP Sharing Cases**

07

### **Bolivian Royal Quinoa**

## Bolivian Royal Quinoa

### Our Long Journey to Experience Quinoa

Known as the “mother of all grains,” quinoa has a history of more than 5,000 years, and is one of the oldest crops in the world. In fact, it was an important staple for the ancient Aztecs and Incas living in South America. For a kind of grain, quinoa is very rich in protein, and it contains other healthy elements like vitamins and minerals. This is why the crop has received major attention in advanced countries such as the US and the UK. Gaining popularity in Korea over the last several years, quinoa is now often found in large super markets. Since the average Korean diet is high in carbohydrates, quinoa has rapidly become popular among people interested in maintaining their health and beauty.

The brand consulting project began at the request of the Bolivian Chamber of Quinoa Exporters (Cámara Boliviana de Exportadores de

Quinoa y Productos Orgánicos, or CABOLQUI), a non-profit organization that focuses on promoting, selling, and exporting “Royal Quinoa” (organic quinoa) on behalf of local crop owners.

Similar to the cases of Cambodia and the Philippines, Royal Quinoa was being sold very cheaply since it was being exported in bulk without any quality assurance mark or brand. In fact, the price seemed ridiculously low considering the quality of the crop. Several years prior, CABOLQUI attempted to address this problem by applying for a geographical indication (GI), but their application was unsuccessful. After hearing about their situation, it seemed appropriate to go to Bolivia where the matter could be studied in more detail.

A trip to Bolivia to meet with CABOLQUI and learn more about quinoa involved receiving vaccinations for yellow fever, a mosquito-transmitted viral disease commonly contracted in Africa and South America. Since Bolivia was situated right in South America’s Amazon Basin, such vaccinations were required before travel visas could be obtained.

When I went to the hospital for my vaccination, the nurse told me that some people experienced fevers and other minor side effects. Although I never expected to be one of these people, I ended up spending the rest of the day with a high fever, which made me think twice about what I was getting myself into.

“Well, this trip has certainly started off with a bang,” I thought. With that in mind, I took extra care in preparing for the trip, even going so far as to pack a first-aid kit. Unfortunately, however, the hardest challenge I ended up facing in Bolivia was something I never would have expected: the high altitude.



As soon as newcomers arrive in Bolivia, they would immediately find it difficult to breathe. It was shocking how out-of-breath one could be at 4,000 meters above sea level. One would never forget their first few hours in Bolivia as every step taken would leave them panting and feeling dizzy.

People living in this environment possessed some unique characteristics as a result of adapting to life in the highlands. For example, they had large upper-bodies, including bigger lungs that gave them a much higher breathing capacity.

The oxygen-scarce environment also affected the local society; while underserved people lived high up at around 4,000 m, the luxury buildings and the embassies were concentrated much lower, at around 3,500 m. It was an interesting but bitter reminder of how social classes are sometimes divided.

### A Superfood Produced in a Harsh Environment

Although Bolivia is deemed unfamiliar by many Koreans, this may not be the case. The Salar de Uyuni (or Uyuni Salt Desert)—one of the most fantastic views in the world—is located there. Bolivia, a country that experiences severe water shortages, was also the backdrop for the James Bond movie *Quantum of Solace* in which Bond travels there to confront an evil multinational conglomerate that has a stranglehold on the country's water supply. Bolivia's high elevation often leads to severely cold weather, and the saltiness of the soil makes the land difficult to farm.

However, this relatively harsh environment gave birth to Royal Quinoa which has proven to be more nutritious than similar crops grown in friendlier conditions. In addition, Royal Quinoa is grown 100% organic which is something that could be emphasized to help to promote the Quinoa's brand value.

Such information seemed sufficient for coming up with a way to pique people's interest in Royal Quinoa. The biggest questions at hand were: what kind of trademark should be prepared and how could Royal Quinoa be classified as a GI. Answers were sought not only from CABOLQUI, but also the farmers producing the crop.

Unfortunately, it was the last week of October, which, in Bolivia, is when the farmers are busy with their harvests—meaning that they lacked the time to sit down and talk. As people used to living in a big city, it was hard to realize how difficult it would be for the Bolivian farmers to pull themselves away from their work during this time.

"Ms. Mejia, it took us more than a day to get to Bolivia. How come they refuse to give us a few hours of their time?"

"I'm sorry but farmers are extremely busy during harvest season. We try to bother them as little as possible at this time of year."

Paola Mejia, the General Manager of CABOLQUI seemed very sorry at not being able to make introductions to the local farmers. Though this was an initial disappointment, it enabled the ability to focus on the bright side and be happy at the chance to take a brief rest; the struggle with the altitude difference was all too real, and therefore no one was in a condition for a rough ride to the farms.

Instead of visiting the quinoa farms, Mejia arranged a meeting with the CEOs of local quinoa producers. Being well aware of how CABOLQUI's attempt at GI registration had turned out several years prior, they regarded the project with a mixture of high hopes for success and concern over another possible failure.

#### [Interview with Juan Pablo Selema, CEO of Quinoa Foods]

"It's a great pleasure to meet you."

"Mr. Selema, thank you for taking time to see us. Can you first tell us a little bit about your business?"

"It's been a bit more than ten years since Quinoa Foods began its operations. We are the largest quinoa supplier to the US."

"I see. Then I suppose you know a lot about how things are in the US market, especially in regard to Branding."

"That's right. Being branding experts, I'm sure you know that no matter how great the product, its value will never be recognized in the US unless you have the right marketing tools. That is exactly why we urgently need our own GI."

"Right. Even if we say that our quinoa products are 100% organic, nobody would believe us without certification from a public authority. That's the way it is."

"As a CEO, I am satisfied with the current standards to pass assurance. It's just that we will have to struggle with the farmers for further coordination. To get certified, we need to raise our quality assurance standards, and many other standards, up to a certain level. I am sure the local farmers won't be too happy with all the changes that must occur in the process. So, I hope you will prepare some factsheets and evidentiary data to help convince them."

#### The Search for an Intuitive and Stylish Certification Mark

In this project, the focus was on two things: development of a "brand certification mark" (different than developing a "brand") and consultations regarding certification. As a result, this project had a stronger emphasis on performing consultations than any other project launched thus far. However, this did not make design development any less important since it was mostly the US and the EU markets that CABOLQUI wanted to register their trademark in.

The text to be included on the certification logo was decided right away during the first meeting. "Quinoa Real – Del Altiplano Sur de Bolivia (Royal Quinoa from the Bolivian Highlands)." No more, no less. That short phrase expressed the key message about the Royal Quinoa highlighted by CABOLQUI. Although it would have been nice to mention that it was "100% organic," it was less important since it was something that could be focused on later in advertisements and packaging designs.



If the quality of the Royal Quinoa were to be recognized and eventually gain traction in the US or the European markets, access to other markets around the globe could be achieved more easily. Therefore, the logo design had to be perfect, especially since it could not easily be changed once registered as legal protection was solely granted to the version of design that had been submitted for registration. That being the case, the project and its partners at CABOLQUI had to proceed as carefully as possible.

The motif for the Royal Quinoa logo was already firmly etched. The facts that quinoa was an essential crop, had the hard-earned title of “organic” which requires a great deal of time and effort to receive, and that it only grows in a very small area of land gave the necessary elements needed to come up with an intuitive and stylish design.

The motif for the Royal Quinoa Logo



[1] Quinoa is an essential crop for human nutrition.



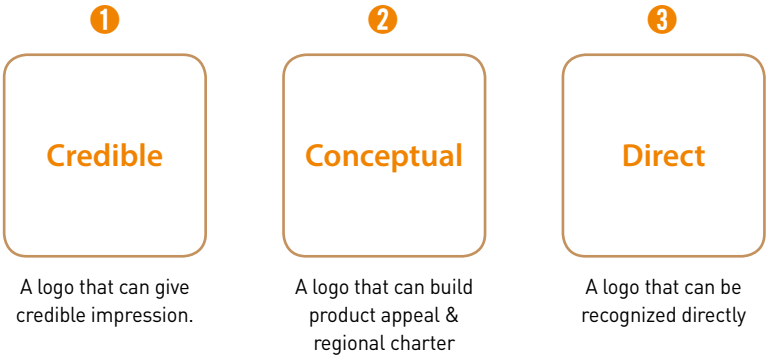
[2] The finest Organic Quinoa, premium quality and 100% organic.



[3] Only harvested from Bolivia, ideal for optimal flavor and texture.

Source : KPC (KOREA PRODUCTIVITY CENTER), '13 IP Sharing Project

The brand designer clearly understood what CABOLQUI wanted by emphasizing that the following elements be included in the logo:



credibility as a certification mark; symbolism representing the product’s characteristics; and straightforwardness in order to enable consumers to immediately associate the brand with the kind of product being sold.



A total of 12 designs which included 3 components (reliability, symbolism, intuitive)

All of the design drafts placed the brand name “Quinoa Real” (Royal Quinoa) at the center so that it would simultaneously function as both the certification mark and brand logo. It also included information on the product’s origin by inserting the phrase “Del Altiplano Sur de Bolivia” (From the Bolivian Highlands) according to different layouts for each of the twelve potential designs (which would later be narrowed down to a final selection). Regarding the overall designs, they could be divided into three different categories: one that focused on the appearance and color of the quinoa crops, one that looked similar to other existing certification marks for other existing brands within the region, and one that featured an “old-fashioned” sensibility that was hoped would appeal to US consumers.

## Why Brands Must Be Protected

Counterfeit goods focus on imitating the most famous brands found in any given market. Brand owners should be aware of the influx of counterfeit goods, but luxury brands have thus far seemed relatively untroubled by the impact that counterfeit items have had on their businesses. So, what is the reason for their apparent lack of concern?

Just as people with strong immune systems are less vulnerable to diseases, famous luxury brands have the vitality required to remain in business without having to compromise their image. Only when a brand achieves this kind of vitality can it protect itself from pirates. However, the projects in the Philippines, Cambodia, and Bolivia were still in their pilot stages, and the local citizenry had only just begun to recognize the concept and value of branding—yet it was their job to foster the brand we created for them into something that would endure well into the future.

If ensuring legal protection for the brand name “Royal Quinoa” failed, counterfeit versions of this product would be given the chance to supplant the authentic version and conquer the global market. Although that might not spell the end of the world, it could result in reducing the market value of the authentic Royal Quinoa. If that happened, it would only be a matter of time before the local producers gave up on it.

## Dreaming of Royal Quinoa’s Global Success

Since the goal was to register the Royal Quinoa trademark in the US and the EU, rather than in Bolivia itself, the extra mile was taken to



make sure that everything was in order. For Royal Quinoa, achieving entry to the world's two biggest markets meant easier access to other markets, as well.



This is the final version selected by CABOLQUI. The “Q” at the center immediately suggests itself as a quality certification mark, while the red and gold coloring makes for an attractive design and is representative of quinoa’s natural appearance.

From among the proposed designs for the certification mark, the people at CABOLQUI finally decided to go with 1-B1. There is now a discussion in process with independent producers about the notion of registering a GI based on this logo. Since CABOLQUI was unsuccessful in its previous attempt at registration, the current phase (following the selection of the logo) is of even greater significance.

In general, applicants must clearly organize the information regarding its product and submit the data to the certification body for GI registration. The information has to include the following: product name (or brand name), the safety analysis report on the product's components and ingredients, and the differences with similar types of products available in other countries or regions. In addition, the sub-

mitted document must include information on the applicant (in this case, CABOLQUI), geographical information regarding the product's origin, the technical/technological details pertaining to production and quality assurance, and information on the producer.

It was suggested that CABOLQUI hire a patent attorney in the US or EU to help with their trademark registration in those markets. The trademark laws of the US and EU would mostly be written in a language not spoken by the local Bolivians, and they would be full of legal terminology that even native speakers would have difficulty deciphering without the proper legal training. Therefore, speaking in terms of speed and efficiency, it is always wise to hire a patent attorney that hails from the country where you wish to present your trademark application. CABOLQUI simply couldn't afford to fail again in its registration attempt, so this kind of expert help seemed especially necessary.

The goal was to get Royal Quinoa successfully registered in the US and EU as a GI, and that it would eventually make its way into the Korean market, where it was hoped that it would be sold at supermarkets and department stores in South Korea.

## Sharing Makes the World a Better Place

After a long time, the various partners on the project got together: Tae-sung Kim, CEO of THINK-TOP R&D; Seung-hoon Lee, CEO of Toga Korea; Sin-ae Won, coordinator at Habitat National University; and Yee-chan Jung, the team manager from the Korea Productivity Center. Although they come from very different backgrounds, they all have two things in common: self-confidence and a passion for the work they do. As skilled professionals, they have pursued their respective fields with great enthusiasm and they did not hesitate to take a chance on the IP Sharing Project, and patiently endured many hardships in the process.

“When anyone says that something is impossible, I tell them that we can work it out step by step. When you set limits on yourself, that’s when your ability becomes finite. But when you set priorities and focus on them one by one, you can usually solve the problem eventually. Don’t forget to ask for help from others. There is usually someone around who can give you a helping hand.”

This was said by Tae-sung Kim, CEO of THINKTOP R&D, during his interview. The consensus is that the rest of our partners would agree. They are the kind of people who concentrate on solving problems rather than just worrying about them. That kind of proactive attitude is what got them where they are today.

But what struck me the most was something I saw in their eyes. During the interview, they all mentioned how impressed they were by the good-hearted locals. Their eyes reflected the truth of this statement.

On my way back home after the last interview, I couldn’t help but think that, despite their differences in regard to ethnicity, language, and living conditions, they all joined together under the banner of the IP Sharing Project. Maybe it was their warm hearts and goodwill for their fellow man that, more than anything else, was responsible for bringing them all together.

In general, when people share something with each other, it is usually something material in nature, such as money, used books, or clothes. But, people can also share their talents. In this way, KIPO’s IP Sharing Project can be viewed as a mechanism whereby one country can donate some of its talent to another.

Donations of money and other material goods are finite. But, the benefits of intangible assets, like knowledge or skills, can still be reaped long after material goods have worn out or expired. I hope to see more and more technology-minded individuals join us in sharing their prized talents. As long as such good-willed people are out there, global conditions can continue to improve for everyone.



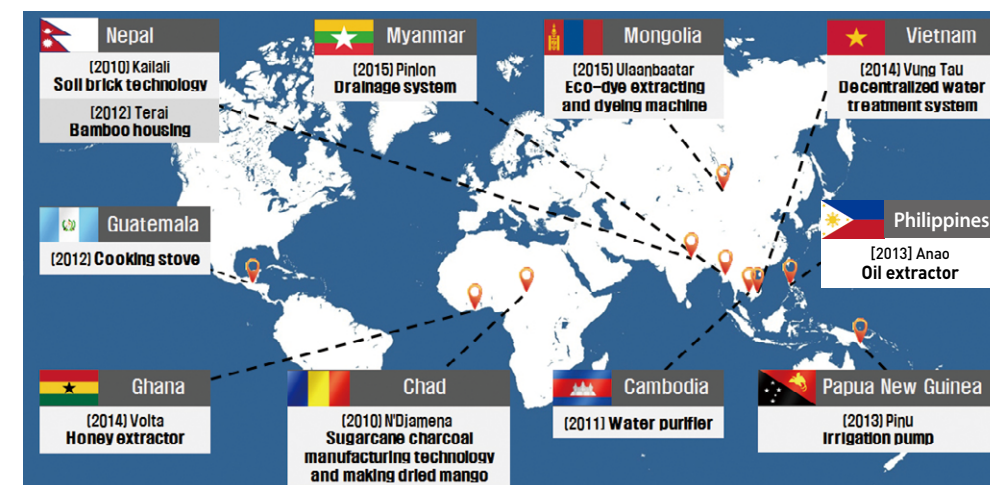
## What Is the IP Sharing Project?

The Korean Intellectual Property Office (KIPO) has been pushing ahead with the Intellectual Property Sharing Project ever since it began working in Chad, Africa, to develop AT for turning sugarcane stalks into charcoal. The purpose of the IP Sharing Project is to provide developing/underserved countries with the knowledge and technology needed to help them overcome poverty on their own. In May 2010, as part of our efforts to strengthen Korea's position in the field of IP, and to better promote the global IP sharing movement, KIPO proposed that the project be included in the developmental agenda of the World Intellectual Property Organization (WIPO)'s Committee on Development and Intellectual Property (CDIP)—a proposal that was quickly adopted.

Tapping into KIPO's expertise in patents and technology, we developed various kinds of AT to be given to the beneficiary countries of this project. The results include: technology to produce charcoal out of sugarcane in Chad; appropriate construction technology to fully utilize local materials to solve housing problems in Nepal; a new oil extractor to improve productivity in aroma oil extraction done in the Philippines; improved indoor stoves that emit less smoke and have a higher heat efficiency; an advanced type of bicycle pump to greatly increase irrigation for farming in Papua New Guinea; a honey without damaging the structure of the beehive while being more economical; a decentralized water treatment system for environmental improvement in Vietnam; and an improved Eco-dye extracting and dyeing machine that merges two technologies in order to reduce costs and improve productivity in Mongolia.

In addition to the AT dissemination efforts, KIPO is also engaged in the One Village One Brand Project, which involves developing quality certification marks or brands for agricultural products or handicrafts produced in regions or villages in need of our help, thereby increasing income levels for local households and improving their quality of life over the long term. KIPO has also been working to provide brand development and trademark application support for our clients; for example, the launch of a dried mango brand in Chad, Africa; a wine cocktail brand in Chile; a red rice and longan (a type of tropical fruit) brand in Cambodia; and an organic quinoa brand in Bolivia.

In doing so, KIPO is taking the lead in sharing Korea's developmental experience with developing/underserved countries, a role that befits its position as one of the leading IP offices in the world. In addition, the IP Sharing Project is in line with the Korean government's national agenda, "Trustpolitik," which stipulates that Korea will continue to increase the volume of its official development assistance (ODA) and push ahead with comprehensive developmental cooperation.



2010-2015 Korea's AT Project Map

# APPROPRIATE TECHNOLOGY

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### Published Date

April, 2016

### Story Embellishment

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### Design and Printing

Gookgo



# **APPROPRIATE TECHNOLOGY**

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