

INTERVIEW

**DILIP SUNDARAM**  
SR. VP SSANGYONG  
MOTOR COMPANY

# Korean Pharmaceuticals

Subterranean Riches  
Push Mongolian  
Economy Skyward



# ASIA-PACIFIC Business & Technology REPORT

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## MEXICO

An Active Partner in  
Sustainable Growth  
in Asia-Pacific  
& Looking to Lead  
Southern Shift  
to Green Energy



**JUAN RAFAEL ELVIRA QUESADA**  
MINISTER OF ENVIRONMENT AND  
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# Mexico

## An Active Asia-Pacific Partner in Sustainable Growth

BY MATTHEW WEIGAND

Mexico's environmental policy has been undergoing some significant changes at the behest of President Calderon, all intended to put the focus of the country's environmental development on sustainable, or green, energy production. This new focus has the possibility of creating new businesses, which always attracts investment.

It is especially interesting for investors because, at the same time, Mexico is relaxing regulations on foreign investment. This is all somewhat surprising coming from a long-time oil supplier, but when seen with a backdrop of the number of climate change-related events going on in the country, it is much more understandable.

In grand tradition, Mr. Richard Samans, executive director of the Global Green Growth Institute, and Mr. Juan Rafael Elvira Quesada, minister of environment and natural resources of Mexico, signed an MOU for cooperative partnership on September 5 here in Seoul. This is the natural progression from the 2010 climate change conference in Cancun, Mexico. At that conference, Mexico delivered its plans for a world workshop in which technologies could be transferred from the north to the south – that is to say from the developed to the developing world. The country is trying to lead the way in creating sustainable and environmentally-friendly economic growth possible for the whole world. But even before that, Mexico was putting itself in the position to be a leader in green economic growth.

Back in 2007 Mexico created the Special Program on Climate Change, or PECC. This multi-hundred-step program was specifically designed to show that it is possible for a developing country to adapt to climate change without hurting the economy. "We would like to prove that a developing country can mitigate and adapt to climate change without hurting the economy," said Fernando Tudela, Mexican deputy secretary for planning and environmental policy. The long-range vision for the country, according to the PECC, is to reduce by 50 percent its greenhouse gas emissions by 2050. It also wants to significantly contribute to stabilizing greenhouse gas concentrations in 2050 as well. Mexico wants to put together

two seemingly impossible things, lowering greenhouse gas emissions and raising the economy at the same time, and PECC was its first step in that goal.

Mexico has plans for taking it one step further, as well. After they can prove the viability of a developing country becoming more environmentally-friendly in a profitable manner, they want to share the procedures and programs they develop to do that with other developing countries. That is part of the reason that they joined the GGGI. They plan to cooperate with the In-

Last week, Mexico reported some good news – they raised their estimates of foreign direct investment this year by 11 percent to US\$20 billion.

stitute in macro-economic modeling, state-level green growth planning, and documenting existing international experience in national and sub-national green growth. They plan to both give their newly-minted experience at sustainable green growth to other members of the GGGI, and use the Institute to gain more expertise themselves.

This coincides perfectly with the goals of many of the other existing and potential members of the GGGI. Countries like Brazil and Australia are just as concerned about climate change as Cambodia and In-

## Juan Rafael Elvira Quesada

Minister of Environment and Natural Resources of Mexico

## Mexico Looks to Lead Southern Shift to Green Energy

BY MATTHEW WEIGAND

On September 5, 2011, Juan Rafael Elvira Quesada, minister of environment and natural resources of Mexico, signed a Memorandum of Understanding (MOU) with Mr. Richard Samans, executive director of the Global Green Growth Institute (GGGI). The MOU will build a cooperative partnership between the two organizations in activities and initiatives related to global green growth. The Asia-Pacific Business and Technology Report spoke with H.E. Quesada after the ceremony in an exclusive interview.



onesia, and all want to work together to seek to advance the development of a new paradigm of economic growth by conducting research into various aspects of green growth theory and practice. The organization also states the goal of accelerating the transition to green growth by working with both the public and private sector to find the best way forward for green growth. In this sense, Mexico is a perfect partner for the GGGI.

### Foreign Investment Invited

Last week, Mexico reported some good news – they raised their estimates of foreign direct investment this year by 11 percent to US\$20 billion. They have good reason to do this because the country has gotten US\$10.6 billion in investment already. And investment in green technologies is an important part of this money movement. One good example is GreenTEK Ventures, a Swiss socially-responsible investment and


development fund manager. They have recently created a Mexico Fund with the goal to build US\$1 million to specifically support projects in Mexico that help mitigate the effects of climate change. The director of the operation spoke with reporters and mentioned geothermal projects, extremely efficient electricity generation, and renewable energy. Mexico already receives the most foreign direct investment out of any country in Latin America, and now it is poised to receive more.

### Climate Change Epicenter

Mexico is both a good place in which to explore sustainable green growth, and a country on the front lines of climate change. Mr. Quesada, at the MOU signing ceremony, mentioned that there have been almost 30 hurricanes this year in Mexico coming from both the Atlantic and Pacific sides. Also, he mentioned current flooding in the south while at the time a drought was plaguing

the north. He emphasized that these drastic effects of climate change were not going to go away unless the entire world was able to work together to keep global temperatures within the 2 average degrees necessary to avoid more drastic effects.

### Excellent Asian Partner

Most of the world's population is in Asia, and as countries all over the continent grow at faster and faster rates, the need for pollution control is skyrocketing. Mexico has started the ball rolling and reached out its hand to its partners across the Pacific, and the countries here in the Asia-Pacific region just need to accept it. A cooperation between the two regions will definitely ensure that the research and policy adoption that is necessary to make real, tangible change in global warming gets accomplished. Let this new pan-Pacific agreement be the seed of greatness that changes the world for the better. 



### What does Mexico hope to gain from a partnership with GGGI?

Mexico really wants to learn from GGGI. We are essentially here to mobilize resources for those countries that are interested in rigorous green growth planning, both for economic performance and GDP growth. Countries may also have strong environmental reasons such as carbon and

water security and access factors. We believe we can provide the institutional capacity that governments need to add green technologies to their domestic capacity.

### Is this a new emphasis for Mexico?

We just started working very hard on natural resources preservation. And after 4 years we decided to organize the Cancun agreements. But there is a difference between Korea and Mexico, which is that Mexico has oil. But, Mexico doesn't have the right to burn all the oil. We need to continue growing, but decouple emissions from economic growth. We are trying to do that. We want to build something different. Mexico is a tropical country, we have the Atlantic coast, the Pacific coast, and we have 30 different hurricanes from May to October or November. So the vulnerability of Mexico to climate change is quite high. That is the reason we need to adapt. We also need to control the emissions. Mexico only produces 2 percent of global emissions. But that's not to discount our contribution; we need to show other Latin American countries and other countries how to do economic growth but at the same time to reduce emissions. We need to get some experience in how to get financing from the developed world to do this. Finally, we need to know the new technologies that the federal government requires to do this. We need to reduce pollution in all areas more efficiently.

### What are you hoping to learn from Korea? What are your future plans to promote Green Growth in Mexico? And do you have specific plans to cooperate with Asian countries?

This MOU is very general, but the first step, the first movement, is to build an initiative in Mexico. How can Mexico work in the next ten years without sacrificing economic growth? How can we build low emissions developments from 2010 to 2020? We expect to be collaborating with 3GI as we move forward. We are discussing 3 lines of cooperation for the future. This is critical because we want to lay the foundations in 2020 and 2030 in economic growth and adaptation, and economic development and social development. As part of this effort, we will be collaborating on GGGI on 3 levels. GGGI will be supporting Mexican

efforts in developing macroeconomic models to understand the implications of the policies we are pursuing in Mexico in terms of trade, foreign investment, etc., that will be something that we can do with 3GI. We will also be working on enhancing sub-national planning. We believe that in order to move forward on green growth and strategy not all planning can be federal. We have to establish important coordination between municipal, state, and national governments. We will be working with GGGI in one or two states in Mexico to assure the coordination with federal planning. We will be looking for experiences around the world for other countries that have similar experiences in development.

Finally, we need to combat poverty in Mexico. We need to create green jobs and make a green economy. And what you were saying is that yes, we can do a lot of things with Korea. But we can learn as well from other emerging economies like China, India, or others.

The point is not to say that we are happy and we have nothing else to do. We have to adapt. The historic first hurricane in New York last week is totally different from what happens in tropical countries. In tropical places it's usual but not in the northern areas. The climate is changing, and we need to face this. We need to do something.

### What do you expect to happen because of this MOU? And what would you consider to be a success?

In the G20, we can present the initiative that Korea is helping Mexico to make. We can explain to the rest of the world how Mexico will reduce emissions and continue economic growth. We are not creating the center, we are making the steps for creation, which will be done in the next few months. Our objective is how to explain and how to alert many other countries around the world to what Mexico is doing in this vein.

As far as success goes, Mexico only produces 2 percent of the emissions of the world, but we don't want to say we are not part of the problem. Everybody is part of the problem. Mexico wants to say that work is needed, and to show the way, to be an example to other countries. To combat poverty, create jobs, protect resources, and show other countries that it is possible.

Also, we want to have the next meeting in Mexico, with the experts from GGGI and the experts from Mexico working together. The point is to discover how to fund the research that should be done in order to change from the use of oil in general in order to lower our emissions. This is along with the trend of increasing economic growth.

The world must reduce emissions, because if the temperature increases 2 degrees on average around the world, the damages

will be very deep to all countries. We should look for new trends so the presidents, the heads of state, and other people want to develop new technologies. In order to finance the next 3 years, there is 30 million dollars that we will use for funding research on renewable energy technologies. We want to reduce emissions. We want to make agreements and build on these agreements. This is what we are doing here in South Korea. We are building new relationships in order to make this happen throughout the world.

### In this vein, what is your message to the Korean people?

I think that the Korean people can learn from GGGI, which is leading emerging economies and in the developed world, doing the most important projects. And at the same time Mexico and Korea just signed an agreement last October. This protocol says that we need to increase our natural protected areas. Mexico has 13 percent of its territory as national parks. With that in mind we are protecting the Guadalupe - Mexican jaguars, wolves, whales, dolphins, and many species in and around Mexico. But we need to increase this protection. So this is something that we work with to cooperate with South Korea.

**The countries that are most interested in green growth are countries like Denmark, the Netherlands, Australia, Korea... countries that are developed, or developing, and lack oil. But Mexico has a lot of oil reserves and also state control of said oil reserves. So Mexico has options in energy, and seems to be able to afford a more pragmatic outlook on green technologies. Given that background, what must Mexico demand from these new technologies that might differ from that of a country that doesn't have natural energy resources? And how does the country justify leaving money in the ground?**

Well, oil is not eternal. President Calderon, Mexico's president, is very worried about the negotiation track. While the developed countries say that we need to do this in order to find economic growth, the developing countries say it's your responsibility to solve the climate crisis. So in the middle of all the negotiations what we require is solutions, not to continue negotiations in 10, 20, or 30 years. What we need is to give balance between the consumption of oil and at the same time to increase the use of renewable energy. In this case president Calderon decided to finish the next year, 2012, with the use of 25 to 26 percent of renewable energy in Mexico. This figure includes hydro power, and it is needed because that is the only way to really move ahead. Many countries cannot realize what climate change means. We in Mexico can see that very clearly because we have floods in the south at the same time that we have drought in the north. So we are suffering from a lot of climate change. We have floods in Mexico City, the valley of Mexico, the south of Mexico, and activities like agriculture needs to change to other activities. Like the cattle production in north Mexico has to change. So Mexico needs to do something different to show that it is possible to grow with different trends than traditional ones and be an example to other countries to show that its feasible to do this without increasing oil consumption.

**In international negotiations about climate change, one of the core problems is who should pay for it? Most of the developed countries say that developing countries are doing most of the damage now, so they should shoul-**



Juan Rafael Elvira Quesada, Mexico's Minister of Environment and Natural Resources, chats with Asia-Pacific Business & Technology Report's Chief Consultant, Dr. Lakhvinder Singh.

**der most of the burden. However, developing countries counter that by saying that developed countries have done most of the damage already, so they should foot the bill. How can we find the solution to create sustainable development and a sustainable environment? What is Mexico's position on this issue?**

Mexico just put two initiatives on the table that are now successful. The first is the fast starting fund. This is what developing countries were demanding to work on climate change. It was put on the table in 2009 and was adopted by the Cancun agreements. The other one is the one President Calderon proposed 3 years ago in Italy, and it became part of the Copenhagen Agreement. So in a way developed countries are financing many of the programs or all the money that the developing countries require. But that is not the point, because in the year 2030 the developing world will produce more emissions than the developed world. That's the core issue.

In Cancun we developed a world workshop. It is necessary to transfer technologies from the north to the south. How to create technology centers around the world, like in Korea, and now in Mexico, in order to give examples of successful technologies and successful businesses. This GGGI is the most successful example of north-south cooperation to create the scenarios for success in the next 10, 20, or 30 years. The rest of the developing countries can see how this is successful, they can see the solutions for the problems of developing countries.

In the case of India and Mexico, we developed a workshop with the Minister of Climate Change, and he was one of the main negotiators. India was helping Mexico to find these agreements a lot. The minister helped us a lot in the Cancun agreements, and this workshop was developed in India. What we want to do is, or what the minister said one year ago, is Mexico, India, Korea, and many other countries can develop world technology centers to demonstrate what the trend is in the future. Mexico is doing this, Mexico's president announced the creation of these centers, and now we have the help of the Korean people. So this is one of the examples of how we can build something for the future with the help of developed countries. 

## N. Korea Looks to Russia for Leverage Against China

*Kim Jong-il Plays the Russian Card*

BY DONALD KIRK

**K**im Jong-il returned in August from his first visit to Russia in nine years with promises for vastly expanding economic ties with his great northern neighbor.

Now the question is whether or not North Korea and Russia can fulfill the deals they agreed on at Kim's summit in Siberia with Russia's President Dmitry Medvedev. Among the most important is a project for a pipeline for shipping natural gas from the Russian far east through North Korea to South Korea.

The deal carries conditions that will undoubtedly complicate matters. No one forgets that Russia has long hoped for a rail line from South Korea through North Korea to Siberia and westward to Europe. That idea remains a fantasy for the future, dormant while North and South Korea confront each other as they have since the Korean War. In the case of the pipeline, Kim Jong-il told a senior Russian official the deal is contingent on Russia and South Korea signing a contract for the pipeline. As reported by Russia's Interfax news agency, all North Korea wants is payment of fees for piping natural gas through North Korea.

It's difficult to believe, however, that North Korea would not want to siphon off some of that natural gas to fuel its own dilapidated economy, and it's also questionable whether the North would be willing to see natural gas going from Russia to South Korea. At the least, such a deal would give North Korea extraordinary leverage over both Russia and South Korea. In times of confrontation with the South, North Korea could turn the spigot on the pipeline, slowing or stopping the flow southward.

Considering North Korea's takeover in August of the Mount Geumgang tourist complex, South Korean officials may have trouble placing confidence in any arrangement that gives the North life-and-death power over the project. While Kim Jong-il was still in Russia, North Korea expelled the last South Korean managers from the complex in which Hyundai Asan, one of the Hyundai Group's companies, had poured more than a billion dollars. That was North Korea's revenge for South Korean President Lee Myung-bak's halting tours from the South three years earlier, which in turn was a response to a North Korean guard shooting and killing a South Korean woman who



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had strayed outside the tourist zone.

Natural gas, however, was not the only economic dividend of Kim Jong-il's visit on a mission in which he also advanced diplomatic and political interests. En route to the summit on a military base near the city of Ulan-Ude, Kim visited the Bureiskaya hydroelectric plant in the Amur River region. The implication was that eventually power lines from the plant might transmit electricity into North Korea. Again, however, the prospects for reaching a final deal remain uncertain. It's not likely that North Korea will begin to acquire either electrical power or natural gas from Russia in time to enhance the North's drive to emerge as a "strong and prosperous nation" in 2012.

Kim's visit to Russia had quite another purpose: to play Russia against China as a source of aid and diplomatic support. Since visiting the Russian far east nine years earlier as the guest of Prime Minister Vladimir Putin, Kim had gone to China five times, most recently in May as the guest of President Hu Jintao. There's no way North Korea can survive without Chinese food and fuel, but still the need to cozy up to Russia, with which North Korea shares a 12-mile border at the mouth of the Tumen River, was obvious. Lest the Chinese think he was getting overly friendly with the Russians, however, Kim returned to North Korea via China. State Councilor Dai Bingguo met him at the border, and from there his train took him to Qiqihar to look at a motor vehicle plant and on to Daqing to survey China's biggest source of the oil the Chinese send to North Korea. At Manzhouli, also on the border with Russia, he met another familiar interlocutor, Chinese Communist Party envoy Wang Jiarui, who has frequently visited him in Pyongyang to coordinate on tricky diplomacy vis-à-vis his main enemies, the United States, South Korea, and Japan.

Wang undoubtedly wanted to know how the summit had gone between Kim and Medvedev on the whole question of six-party talks on the North's nuclear program, last held in Beijing in 2008. The Russian media reported that Kim told Medvedev his coun-

try would "be ready to solve the problem of imposing a moratorium on the test and production of nuclear weapons." In reality, however, all Kim was believed to have done was to push the notion of returning to the talks as he had already done in meetings with Hu Jintao. The suggestion of a moratorium, if true, seemed more like a gesture to Kim's Russian hosts than as a serious sign of willingness to scale back, much less give up, his beloved nuclear program.

"This is a gift to the Russians," said Choi Jin-wook, long-time North Korea specialist at the Korea Institute of National Unification. "They want to give leverage to the Russians" as a major regional power while pushing longstanding proposals for deals on natural gas and electricity and accepting a gift of 50,000 tons in food for the North's hungry people.

The fact is, North Korea has never tested missiles or nuclear warheads during six-party talks. North Korea has twice conducted underground nuclear tests, first in October 2006 and again in May 2009, but is not likely to conduct a third test while talking up six-party talks with U.S. officials in New York, with Chinese leaders in Beijing, and again in the summit in Siberia. "It is quite natural" that Kim Jong-il "should not test nuclear devices while talks are on," said Choi. "That's the meaning of a moratorium."

If Kim's summit quickened the pace toward renewed six-party talks, officials still harbor no hopes they will lead to resolution of issues. South Korea's nuclear negotiator, Wi Sun-lac, meeting in Beijing with Chinese negotiator Wu Dawei, said he wanted to speed up the process, but the South Koreans and Americans all say North Korea has to show it's serious about abandoning its nukes, suspending the program and letting inspectors from the UN's International Atomic Energy Agency verify compliance.

Kim Jong-il, however, had other concerns in Russia. He also needed to convince the Russians, as he had the Chinese, to accept his third son and heir apparent, Kim Jong-eun, as his successor. At the same time, he had to worry about the implications of the downfall of Libyan leader Muammar Qaddafi on his plans to perpetuate his dynasty. "That dynamic is probably much more alarming to Kim Jong-il than anything else," said Lee Jong-min, dean of international studies at Yonsei University here. "He's prompted by the need to bolster his power."

Although the North Korean media shields most of the country's 24 million people from news about the Middle East, word of rebellion seeps through via clandestine radios and word-of-mouth from people who cross the Tumen and Yalu river borders into China on illicit trading expeditions. It's because of the fear of revolutionary fervor spreading to North Korea, said Lee, that Kim is anxious to convince Russian leaders that Jong-eun, in his late 20s, is strong enough to rule a populace enervated by years of famine and disease. Kim Jong-il "wants to buff up his son's standing," said Lee Jong-min. "That's the major driver."

Then too, Kim Jong-il needed to get Russia's enthusiastic support for six-party talks. "North Korea and China both say they want six-party talks," said Kim Tae-woo, a military analyst and president of the Korea Institute for National Unification. "He wants to add

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## Philippine Leaders Come and Go But Corruption Reigns Supreme

BY DONALD KIRK

**B**y just about any international standard, the Philippines ranks near the bottom rung among the world's most corrupt countries.

Transparency International places it 134th among 178 countries, one place below Nigeria but far below the scores of other countries often criticized for massive corruption, including the two Asian giants, China and India. You wonder why the Philippines earned this ranking when its gross national product goes up by several percent a year, and foreigners keep flocking to the country to enjoy the beaches, the snorkeling and sailing, the nightlife and the restaurants. But then you begin to get the idea as you drive out of the decaying hulk of terminal number one of Ninoy Aquino International Airport, passing by squalid shanty towns, rows of huts and hovels where thousands of squatters live rent free – and also free of water and sanitation facilities.

Revelations of the endemic corruption that's deep-rooted in Philippine culture and society leap out from the pages of newspapers every day in reports of investigations, charges and counter-charges. The relative freedom of the Philippine media, however, does not mean the level of corruption decreases or anything is really done to stop the rot. The country's ruling class of billionaires and multi-millionaires reap most of the profits while the average Filipino subsists on less than two dollars a day. The figures show an unemployment rate of slightly more than seven percent, but the number is highly deceptive. It fails to include a majority of the country's 95 million people who are underemployed, and exactly how the figure was reached is far from clear.

In any case, upwards of ten percent of the people choose to work overseas, many as nurses, nannies and caregivers, some as bar hostesses and go-go dancers, others in professional or semi-professional positions as teachers, engineers, journalists, computer technicians, commercial seamen, or whatever. There seems to be no limit to what Filipinos will do or where they go, but the bottom line is they now send more than US\$18 billion a year in remittances back home, according to the latest statistics, and that's more than 13 percent of the country's gross domestic product. It's often noted, while the billionaires send much of their money out of the country, the overseas foreign workers, or OFWs as they are known, send just as much if not more back home. The poverty



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level in the Philippines, now around 50 percent, would be far higher were it not for the OFW's contributions.

Class, social, and cultural differences are vastly compounded, however, by the corruption that's everywhere but that nobody seems able to conquer. The corruption of the long-ruling Ferdinand Marcos, deposed in the People Power revolution of 1986, was clear for the world to see. At least US\$10 billion was reportedly deposited in Swiss bank accounts during his long rule, but the government has recovered virtually none of it. Marcos died in exile in Honolulu, but his wife, Imelda, who reaped a fortune as governor of Metro Manila before her husband's downfall, has long since returned and now fights for recovery of confiscated land in the Philippines from her vantage as an elected member of the lower house of congress. Their son, Ferdinand Jr., after serving as governor of his father's province, Ilocos Norte, is now a senator, while his sister, Imee, took over as governor. The old cronies who grew rich under Marcos are riding high, none the worse for the transition of power in the mid-1980s.

But did power really shift during the People Power revolt? The winner was Corazon Aquino, the widow of Benigno "Ninoy" Aquino, who was gunned down two and one half years earlier as he stepped onto the tarmac of what was then just Manila International Airport. Aquino was returning from the United States to challenge the rule of Marcos and his wife and cronies, but he was really from the same social class, an offspring of the landed elite. "Cory" Aquino, during her six years as president, talked a great deal about reform and tried to clean up corruption, but was regarded as basically ineffective. One of the signal achievements of her presidency was getting the airport renamed Ninoy Aquino International Airport, a fitting memorial to the man who died there as a martyr.

The names of the elite in the Philippines always seem to live on in their children and grandchildren. It seems highly appropriate that Cory and Ninoy's son, Benigno "NoyNoy" Aquino, has now ascended to the presidency after having handily won an election in May 2010 to succeed Gloria Macapagal-Arroyo. Barred by the constitution from seeking a second six-year term, Arroyo had still managed to serve nine years. Elected as vice president in 1998, she took over from the corrupt Joseph "Erap" Estrada as president in 2001 in People Power II, another revolution of the streets, and then was elected to a full a six-year term as president in May 2004.

Or was she really? As just about always in Philippine society, Arroyo's claim to power was colored by nepotism, influence-peddling

– and money. Her father, Diosdado Macapagal, had served for four years as president before he was defeated by Marcos in 1965. Although he promised to clean up graft and corruption, as do all those who win the Philippine presidency, Macapagal got a reputation for corruption that was just about as bad as anyone else's until Marcos, in 20 years as president, set all-time Philippine corruption records. Nor was Macapagal's daughter necessarily much less corrupt than Estrada. Gloria now faces numerous claims of having spent millions of dollars buying off votes while diverting millions more from official funds into her own accounts. At last report, the government was investigating a number of generals to determine their role in all the skullduggery that got her elected. Considering that she had already stepped down as president of her own volition and was then elected to the lower house of congress, one got the sense that the headline-grabbing investigation was really going nowhere.

But that's how it so often is, at least in the Philippines. Scandals come and go, merge with one another, provide fodder for headlines – and then are forgotten or covered up before investigators and investors and readers move on to the next scandal. The investigation into the "stolen election" of 2004 was all the more absurd considering that Arroyo's defeated competitor, an actor named Fernando Poe Jr., with no known qualifications aside from box office appeal, had died of a heart attack a few days after the voting. As if that weren't enough to snuff out any real effort at punishing Arroyo for election fraud, General Angelo Reyes, her one-time defense secretary who had been chief of staff of the Philippine Armed Forces while Estrada was president, committed suicide as the scandal was brewing. But did he die by his own hand or was he murdered? Political violence, along with corruption, is a constant fact of Philippine political life, and his suicide may have been an assassination. He had, after all, betrayed Estrada, who was arrested and held for years, by siding with Arroyo when Estrada needed him to head off the revolt against his rule.

If it's a little late to try to take back Arroyo's 2004 election victory, it's not too late to try to grab her and her husband, Jose Miguel Arroyo, the former first gentleman, as he is known in the media, for plunder – that's right, for plundering the state, a term in Philippine law, by helping themselves to public funds. In Gloria's case, she's suspected of having made off with millions of dollars from funds for fertilizer and for overseas workers, among other things, and for failing to turn over taxes reaped from the sale of government real estate.

And that's not all. Arroyo's husband, Jose, who once served in the Congress, is an astute business leader, former power behind the throne, and quite an operator in his own right. Among other offenses, he's been under investigation for the sale of five helicopters that he said were brand new but had been used for other purposes. Jose Arroyo's brother, Ignacio, a member of the Congress, was also implicated in the deal. In the spirit of family loyalty, "Iggy" said his brother had never claimed to have bought the choppers but only to have leased them – a rationale that was denounced as a lie during the investigation. Iggy then fell back on another

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## Decorated Korean War Veteran Passes Away

BY MATTHEW WEIGAND

**O**n September 4, 2011, decorated Korean war veteran and school-teacher David Gambrell Morris passed away at the age of 82. He was survived by 5 children, 10 grandchildren, and 5 great-grandchildren.

He was born on October 7, 1928, in Vian, Oklahoma, and spent his early life in Muskogee. The summer after he finished high school, he went down to Texas to work the oil fields. His Texas excursion was cut short when his sweetheart, Mary, wrote him a letter saying things weren't going to work out. Unwilling to let the girl he met

at Baptist dance night go, he immediately returned to Muskogee and convinced her otherwise. When she asked why, he said her cooking was just too good to pass up. Using the funds from the pawning of his most expensive possession, his trumpet, he eloped with Mary and married her that same day. The night after the ceremony, they each returned to their own family's houses, undoubtedly full of new plans.

Soon enough they had enough money to get the trumpet back, and their own place too, and the future looked rosy. But when the Korean War broke out, David was shipped off to the Far East. Mary was left at home, an event that caused her to hold a grudge against President Truman for the rest of her life.

David shipped out as part of the 45th Infantry Division of the Oklahoma National Guard in September 1950 at the age of 21, and served as a field radio operator until May 1952. He earned the Combat Infantry Badge, the UN Service Medal, the Korean Service Medal with 1 bronze service star, and the Army Occupation Medal (Japan). The 45th Infantry Division spent most of its time during the war defending an area of the front lines called Old Baldy Hill from Chinese forces. Old Baldy Hill is today located in the demilitarized zone between the two Koreas, 80 km due north of downtown Seoul. David said that he spent most of his time in Korea camped out in a line of



foxholes, listening to distant artillery fire. He came back with frostbite and impaired hearing, but otherwise fine.

After he returned from the war, David got his Master's degree in education and taught high school math and science courses for the next 40 years. The reunited couple quickly produced five children and a million stories. One of their daughters, Kathy, went to school and became a teacher herself. She married a man who had served as an Air Force intelligence officer monitoring the Korean DMZ for suspicious activity. Eventually they had three sons. The oldest traveled to Korea as well to do some writing. He also learned to play his grandfather's trumpet, and hopes to pawn it some day too.

David Gambrell Morris was well-known in his later years for his skill at the piano, the trumpet, and the harmonica. He and his wife Mary could, and did, give impromptu concerts on many occasions. He was also a well-known math tutor in the town of Muskogee after his retirement. He knew a lot of good stories, and I'm going to miss him. (A-P)

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Russia to the list." Beyond that, said Kim Tae-woo, "He needs some declaration from Russia of North Korea as "a strong and great nation." That term is a persistent theme of North Korean rhetoric as the regime gears for Kim Jong-il's 70th birthday in February and the 100th anniversary in April of the birth of his long-ruling father, Kim Il-sung, who died in 1994.

The build-up for those dates explains North Korea's global campaign for donations from just about everywhere. North Korea received US\$4.5 million in aid for flood relief from South Korea and US\$900,000 from the United States in August. The question now is whether or not U.S. and South Korean aid will substantially increase. After his inaugu-

ration in 2008, President Lee, judging the Sunshine policy of reconciliation pursued for a decade by his leftist predecessors as a failure, stopped annual shipments from the South of several hundred thousand tons of rice and fertilizer. Lee said that the North first had to live up to agreements reached in 2007 for giving up its nuclear program.

No one expects North Korea to abandon the program. By pursuing talks, however, the North evinces unmistakable signs of wanting to reduce tensions, inflamed last year by two incidents in the Yellow Sea – the sinking of a South Korean navy corvette and the shelling of an island in which all told 50 people died. North Korea's reliance on China not only makes a mockery of its policy of Juche, meaning self-reliance, but also compromises the country's very

independence. The North Koreans want economic assistance "from the outside, possibly from the United States," said Kim Tae-woo. "Kim Jong-il is trying to get more from Russia. And then they are trying to balance between Russia and China. They may be seeking leverage against China."

All the while, North Korea faces repercussions of the Jasmine Revolution sweeping the Middle East. Sub-rosa criticism of the regime, defiance against officials and occasional isolated acts of violence are reported in risky cell phone calls and other stories told by rising numbers of defectors. "The North Koreans need to tighten their control internally," said Kim Tae-woo, while turning to its two huge neighbors for succor, both of whom saved the North from oblivion in the Korean War. (A-P)

## Crusading Irish Priest Battles for Children in the Philippines

BY DONALD KIRK

**T**he American sailors who once flooded the streets of the raucous Philippine city of Olongapo on shore leave are no longer around, except on brief visits during military exercises.

With the departure of the U.S. Navy, the base on Subic Bay was converted into a huge industrial and shopping complex with restaurants, bars, nightclubs, and sports and entertainment for people of all ages. Commercial vessels call regularly at the beautiful natural harbor formed by Subic Bay, at the Zambales mountains on the west coast of the main Philippine island of Luzon, while cargo and passenger planes roar on and off a 10,000-foot runway built by U.S. navy engineers.

The city, however, has never lived down the reputation it got for the sex trade that flourished outside the port, which was for nearly a century the home of America's biggest naval base outside the United States. From his sprawling establishment on the edge of the city overlooking bay, the Rev. Shay Cullen sees a culture that he believes is almost as subverted by the trafficking of women, many under-aged, as it was before the United States shut down the base nearly 20 years ago. "Sex tourism is unchecked and trafficking is rampant," says Cullen, a 64-year-old Columban priest from Ireland who's been crusading since 1974 against what he sees as a mafia-like conspiracy by foreign men and Filipinos to exploit under-aged victims. "The local government supports the sex industry, the prosecutors are mostly corrupt, and the judges too."

Cullen seems like a latter-day Don Quixote tilting at windmills as he leads often fruitless manhunts for traffickers among the foreigners who come to the once-thriving base city 50 miles northwest of Manila. He's aroused both admiration and criticism for going after foreigners, whom he sees as aiding and abetting the corruption of young Filipinos, but he finds arrests and convictions extremely difficult to get – and can't help but wonder how much difference he's making in stopping predators from exploiting vulnerable people.

Cullen's crusade epitomizes faltering efforts in the Philippines and throughout Southeast Asia to combat the trafficking of women, many in their teens, almost all from poor families living in poverty amid rising prices and fewer jobs. If the challenge appears hopeless, it's not for lack of effort on the part of Cullen and others – dedicated, if nothing else, to raising awareness of



the problem. Appropriately, his organization is named Preda, an acronym for People's Recovery Empowerment Development Assistance.

"We have a great deal of admiration for what they do," says Andrey Sawchenko, director for the International Justice Mission in the Philippines, talking about Preda. "It matters hugely to the women and girls they help. Our experience has been that Preda has been really effective." Sawchenko sees Preda as having played a leading role in spurring on prosecution of cases of trafficking. As evidence, he cites removal of the Philippines last month from the State Department's watch list of countries that are doing little to nothing about trafficking.

The Philippines now has a tier two rating – recognition that at least it's attempting to combat the problem – while Thailand, Vietnam, and Malaysia remain on the watch list. The Philippines got the promotion, as officials sometimes call it, after prosecutors won 29 convictions against traffickers in a 12-month period after having had only 30 convictions in the previous five years from 2005 to 2010.

However Khrisna Avila, a consultant with the Inter-Agency Council Against Trafficking set up by the Philippine government's Department of Justice to combat the problem, acknowledges that nearly 1,200 cases are still pending. The State Department's latest country-by-country report on trafficking worldwide is severely critical despite the upgrade.

"Widespread corruption and an inefficient judicial system continue to pose very serious challenges to the successful prosecution of trafficking cases," says the State Department report. "Law enforcement officials' complicity in human trafficking remains a pervasive problem in the Philippines, and corruption at all levels of government enables traffickers to prosper."

"We have the laws, we have the rules and regulations," says Josephine Alforque, an advocacy officer with the local office of ECPAT, the acronym for the non-governmental End Child Prostitution and Child Trafficking, based in Thailand. She cites an anti-trafficking act passed eight years ago but complains, "There are no NGO's on the Inter-Agency Council." The problem, says Alforque, is worsened by the rapid proliferation of electronic devices for organizing

criminal syndicates. "Technology has added to the tools in exploitation of children," she says. "Yes, there are foreign men involved, but there are a lot of local men too."

Cullen's investigations of abuses by foreign men, from military veterans to tourists and retirees from Australia and Europe, extend from Olongapo across the Zambales mountains to the one-time American-dominated enclave of Angeles City. On the streets and alleys of Angeles, outside the former Clark Air Base, which closed in 1991 after the eruption of nearby Mount Pinatubo inundated the base with ash, bars and shops catering to foreigners flourish as in the old days.

In fact, business may be even better than it was when Clark, as old as the navy base on Subic Bay, served as a vital hub for American planes during the Vietnam War. Like the former navy base at Subic, Clark is now a special zone with factories, shopping centers, hotels, and golf courses. Several plane-loads of foreigners arrive daily on commercial flights from elsewhere in Asia, and businesspeople and tourists also arrive from Manila, a 90-minute bus ride away. For many of them, it's not the facilities on the former base but the roaring bars on the fringes of the base that are the main attraction.

Cullen finds that fighting sin in Angeles is just as difficult as in Olongapo. As an example, Cullen cites a raid on a nightclub in Angeles run by a man described by police as an Irish fugitive. Dozens of young women described as sex workers said they had been lured to Angeles after having been told they would find jobs in factories, offices, or restaurants, according to a police report. The Irish club operator, however, was not there – and not arrested – though an Australian was later charged after having been identified by one of the women.

Despite the frustrations, Cullen is proud of the program he runs for victims whom he and his staff claim to have rescued from sexual exploitation. At the moment, he says, "We have two homes for victims, 27 victims of abuse by their fathers and relatives, 18 saved from sex clubs." After therapy, he says, they're "reintegrated when recovered" – and eligible for financial aid for 18 months.

Along the road by the bay, however, foreigners say Cullen is looking for publicity and donations rather than real solutions to a festering problem. They charge that some of the cases he's brought are based on flimsy evidence, and they assert that girls over the age of 18 have been told to say they're under-age just to build up the evidence against bar operators accused of serving them illegally and offering their services to customers. Charges and counter-charges reverberate along the strip of bars, restaurants, and hotels by the bay in what is known as Barrio Barretto, a district of Olongapo that's long been a hangout for foreigners who've chosen to live there on the cheap or come as vacationers in search of a few days of sun, surf, drinking, and women.

One retired U.S. Air Force master sergeant, Alan Dale Edmonds, has been battling Cullen for years. "I'm called a mafia dummy," says Edmonds, who lives about 30 miles up the road from Olongapo with his Filipino wife, "and I have filed lawsuits

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LEADERSHIP

# Can a Social Activist like Anna Hazare Curtail the Supremacy of Corruption in India?

Is This Yet Another Beginning of a Universal Fight?

BY MEENAKSHI SHANKAR

**A**nna Hazare is the latest name flashing in current Indian news headlines for his role in leading India's fight against corruption.



He has taken this fight very seriously and is now challenging the government at the highest level, as Anna is on a Hunger Strike. The common man and well-known personalities alike are supporting him in this new stage of protest.

Though the Indian government is trying hard to come up with a Lokpal Bill draft that will satisfy Anna Hazare and his associates, the 74-year-old social activist continues his protest fast for strong anti-corruption legislation. Several eminent people, including Prime Minister Manmohan Singh, have appealed to Hazare to break his fast as his health has been deteriorating. But Hazare is adamant that he will continue until the government tables the Jan Lokpal Bill prepared in Parliament and ensures that it is passed.

This is not Anna Hazare's first major battle. He has fought quite a few, including several as a soldier for 15 years in the Indian army. He enlisted in the army after the 1962 Indo-China war, when the government ex-



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orted young men to join. In 1978, he took voluntary retirement from the 9th Maratha Battalion and returned home to Ralegaon Siddhi, a village in Maharashtra's drought-prone Ahmadnagar. At the time he was 39 years old. He found farmers back home struggling for survival and their suffering prompted him to pioneer rainwater conservation, which eventually made the village into a role model. He was awarded the Padma Bhushan—the third-highest civilian award—by the Government of India in 1992 for his efforts in establishing this village as a model for others to follow. "The dream of India as a strong nation will not be realized without self-reliant, self-sufficient villages; this can be achieved only through the social commitment and involvement of the common man," said Anna Hazare.

In 2008, Anna was awarded the Jit Gill Memorial Award by the World Bank. In 2005, he received an Honorary Doctorate from Gandhigram Rural University. In 2003, he received the Integrity Award from Transparency International. In 1998, he got the CARE International Award from the CARE relief agency. He received earlier awards too: the 1997 Mahaveer Award, 1996 Shiromani Award, 1992 Padma Bhushan by the President of India, 1990 Padma Shri from the President of India, and in 1989 the Kri-shi Bhushana Award by the Government of Maharashtra. He also received, in 1986, the

Indira Priyadarshini Vrikshamitra Award by the government of India.

Hazare's protest for a corruption-free India has no doubt brought back a ray of hope to citizens nationwide, having struck a chord right across India. People have come out in large numbers in his support, forcing the government to engage once again with Team Anna.

"I think corruption has become worse, and if you choose not to participate in this, you leave behind a fair amount of business," Tata Son's Chairman Ratan Tata said at an event organized by Harvard Business School.

"What's happening via Anna's team signals a great shift of people wanting accountability and not just from politicians, but also from businesses," said Mahindra & Mahindra Vice Chairman and Managing Director Anand Mahindra.

Political and bureaucratic corruption in India is a major concern. But with Anna—the man, featured as the most influential person in Mumbai by a national daily newspaper, the fight against corruption seems to be more powerful and meaningful. "The real fight begins now. We have a lot of struggles ahead of us in drafting the new legislation; we have shown the world in just five days that we are united for the cause of the nation. The youth power in this movement is a sign of hope," Anna Hazare said.

licity against the Arroyos." As if that were not enough to convince the doubters, the spokesman said the objective was to "cover the incompetence and dismal performance" of the NoyNoy Aquino regime. The whole idea, he said, was to "divert public attention" from "more massive anomalies by Aquino's close associates" (of course, he neglected to spell out what "anomalies" he had in mind).

Not to worry. It is a safe bet that before Aquino steps down at the end of his six years in office, someone would get the goods on him too and bring charges—and

counter-charges. That would be par for the course in the game of vengeance played out in bold headlines for the fun and games of the country's first families. The masses of impoverished people would be forgiven for shrugging their shoulders in a cynical sense that all of their leaders were bought and sold and nothing was about to change.

Donald Kirk is the author of two books on the Philippines, *Looted: the Philippines after the Bases*, published by St. Martin's, New York, in 1998, and *Philippines in Crisis: U.S. Power versus Local Revolt*, published by Anvil, Pasig, Metro Manila, in 2006.

# Q&A

## Dilip Sundaram

SENIOR VICE PRESIDENT Ssangyong MOTOR COMPANY

By Sun Bang

Dilip Sundaram joined the Mahindra Group as Senior Vice President of Corporate Finance and Strategic Development in 2010, and was promoted to Co-Receiver of Ssangyong Motor Company in January 2011. In March 2011, he was made Senior Vice President and Chief Financial Officer of Ssangyong Motor Company in which capacity he currently serves. He holds an MBA from the University of Rochester's William E. Simon Graduate School of Business Administration, and has more than 25 years of experience in the industry. Here are excerpts of his interview with the Asia-Pacific Business and Technology Report in his office in downtown Seoul.

Some people have doubts about Mahindra's ability to revive Ssangyong after SAIC, a bigger company than Mahindra, failed to do so. What are the biggest synergies between Mahindra and Ssangyong Motors?

We believe that we have a lot of synergy opportunities, such as common markets and platforms. Also, we have different teams working on different areas: the marketing team working on marketing synergy and the operations team looking at how to develop common engines. As a result, we can reduce costs and boost cash flow to enhance profits.

What's Ssangyong Motors' plan for the next three years in regards to product development and plant expansion?

Up to three years? We're investing 200 billion won in product development. We are working on numerous products that will be launched soon. Also, we're planning on launching the products in countries where we haven't focused on in the past, such as India. We want to take the Korando C and Rexton, the symbols of Ssangyong, to be sold in India. Mahindra has a strong presence and an extremely strong brand in India. Thus, Ssangyong will be able to leverage that advantage. So over the next three years, you'll see new products being launched. As you know, we launched the Korando C and the Chairman W and H recently, and more new models and products will come as time goes by.

Do you have any special marketing plans for shaping the new concept and image of Ssangyong?

Of course we're definitely starting on that, not just about marketing plans but it's more of a brand image plan. Because of the all the problems caused over the past few years, we lost a little shine and the issue now is how to bring that shine and the attractiveness back.

There were strong compatibilities between the Ssangyong and Mahindra portfolio of products. The wide sales and distribution networks and complementary product lines were expected to provide access to many overseas markets for both companies. How have those expectations panned out since the deal?

It's been only five months since Mahindra has taken over Ssangyong. After a lot of studies, the work is now really



The UK is one of the top five markets in Europe (the UK, Spain, Italy, France, and Russia) and we are ready to return to the UK with a range of high-quality, top-value models.

business of making sport utility vehicles? How do you expect to utilize Mahindra Ssangyong Motors' frugal engineering skills to develop more vehicles to grow sales volumes and make profit?

As mentioned earlier, part of our synergies come from joint development programs, whether engine programs or vehicle programs. We seek to better utilize resources and leverage each country's strengths. For instance, high value engineering can be done in Korea, and some of the engineering work can be done in India. Thus, we can effectively contract out engineering work in both countries, and in this way we can specialize in certain technologies best utilizing our resources.

Tell us about Ssangyong Motors' plans to relaunch in the UK next month, following a two year absence from the UK market.

The UK is one of the top five markets in Europe (the UK, Spain, Italy, France, and Russia) and we are ready to return to the UK with a range of high-quality, top-value models. Leading the Korean brand's relaunch will be a new challenge, but we're confident in offering European styling, superb versatility, and efficient engineering.

Is there also an opportunity to introduce a premium portfolio of SUVs in the Indian market, providing a new growth avenue?

We are looking to introduce a high-quality premium vehicle next year. The study is still ongoing, and Ssangyong is very optimistic and focused on bringing their products to India.

What pace is Ssangyong Motors at now?

The launch of new models and cost control are keys to the turnaround of Ssangyong. What is expected from now is very good volume growth, and we are at that pace now. We are investing in developing new vehicles, introducing up to five new models or variants of existing vehicles by early 2012.

Tell us more details about Ssangyong Motors' upcoming business plan.

We have new model lineups featuring a range of high-quality, top-value models, and will develop the vehicles based on designs that haven't yet been used. Also, we'll try harder to become more global than we are, and we believe we will fit neatly into the global market.

starting. The real task is how successfully we implement it. The traction is very positive so far.

What's your distribution plan?

We work with independent dealers. Over the past few years, our dealership network has contracted. Our biggest challenge is how to expand our dealer presence. Effectively we need to have that market presence, so when customers want to buy Ssangyong vehicles, they don't have to travel far to get to the dealership.

Did jointly developing vehicles cut development costs, especially in the companies' core



SPECIAL REPORT | BY VICTOR FIC

## Subterranean Riches Push Mongolian Economy Skyward

**M**ention the name Mongolia to most Westerners – what is their response? It is likely to be a Genghis Khan joke. Few have studied the country. But it is now attracting much praise.



About half of Mongolia's 3 million people are farmers raising goats, sheep, and other animals. The remainder are concentrated in the capital, Ulaanbaatar. During the post war era, they were mainly poor, with a communist political system under the Mongolian People's Revolutionary Party (MPRP). Some 80 percent of all trade was with the USSR.

With the collapse of the Soviet Union, the country lost Russian subsidies and fell into a deep recession that the leftists ignored. According to Professor Stephen Noerper, a former professor of international relations at New York University and the National University of Mongolia, the country "found itself in the late 1980s with many of the shortages common in the Soviet Union [including] breadlines."

A new revolution, a move to a market economy and liberal politics, "was necessary for people to survive." Noerper adds that "democratization ushered in the ability to reform the economy." A new constitution was adopted in 1992, leading to a multi-party government that included the Mongolian National Democratic Party (MNDP). At first, the new order it promoted was painful. Between 1990-93, triple digit inflation raged, joblessness soared, and a shortage of basic goods caused rationing. The economy actually contracted by a third.

Now the leading force for pushing ahead was the Democratic Union Coalition (DUC), under Punsalmaagin Ochirbat, between 1996-2000. It opted for market-friendly policies that favored privatization, loosened price controls, and also internal and foreign trade with an overall focus on exploiting the land's gigantic reserves of minerals. The banks and energy sector were restructured, and foreign direct investment ushered in through the international tender of the national oil distributor, cashmere wool producer, and banks.

Opposition from the MPRP's old guard hindered the changes – but they were unstoppable. The GDP expanded by approximately

By 2005, the GDP was growing at 10.6%. And where is Mongolia now? According to the World Bank's Mongolia Quarterly Economic Update for August, a stunning 17.3 percent rate of growth was recorded versus 9.9 percent for the first three months.



6 percent in 1996, predicated on a boom in copper prices. The year 1996 saw growth drop to 3.5 percent because of natural disasters and less demand for copper and cashmere. Then the Asian financial crisis, loss of livestock because of deadly weather, a Russian ban on oil imports, and an even lower sales of copper and gold saw GDP rate slouch to negative 1 percent in 2000, according to the CIA World Fact Book.

However, Mongolia's new path – outward looking and pro-reform – took a big step during the turmoil when it joined the World Trade Organization in 1997. In fact, since 1990, over 1,500 foreign firms hailing from 61 countries have invested some US\$338.3 million. By 2003, private firms comprised some 70 percent of the Mongolian GDP and 80 percent of its exports. A 2010 World Bank report entitled Doing Business in Mongolia ranked it 73rd in the world. Presently, three quarters of the economy is in private hands, so finds the domestic Montesano News Agency that covers Mongolia.

The sharp rise in investment propelled a rebound. By 2005, the GDP was growing at 10.6 percent. And where is Mongolia now? According to the World Bank's Mongolia Quarterly Economic Update for August, a stunning 17.3 percent rate of growth was recorded versus 9.9 percent for the first three months. Interesting is the transport sector that expanded at 39.9 percent while construction was at 38.4 percent. As for mining, the mainstay activity, it came in at 8.3 percent. The unemployed constituted 13 percent of the workforce in December 2010, but that has shrunk to 8.7 percent as of June.

The report praises the government for "considerably" reducing poverty between the high growth years from 2002-8, but adds that inflation reduced the gains of the poor. Unfortunately, inflation leaped up 11.4 percent in July from 5.5 percent in June, attributed to a 27 percent increase in official spending and a spike in imports by 106 percent. Therefore, containing inflation "by reigning in excessive government



Asia-Pacific Business & Technology Report's Chief Consultant, Dr. Lakhvinder Singh, is seen with Mongolian Minister of Foreign Affairs and Trade, Zandanshtar Gombojav.

spending and avoiding loose monetary policy" is necessary.

Here, the mining industry is a mixed blessing because it is most responsible for the purchasing of transport equipment and machinery, in particular at the Oyu Tolgoi copper mine. So the trade deficit grew to US\$1.3 billion in July. Coal is the star performer for exports. It expanded 129 percent in July and now accounts for 38 percent of all sales, exceeding copper, the former number one. The one buyer remains China, which will procure more.

As for credit in the banking sector, it is racing. In July, the stock of outstanding loans increased 46 percent. The World Bank cautioned the Bank of Mongolia that it must enforce "prudential norms [to] maintain adequate buffer capital to absorb potential losses." The total of non-performing or toxic loans was pegged at about 10 percent in

July, but "the volume of outstanding loans is rising fast," so caution is required.

As for the future, the World Bank sounds another claxon: the boom in public expenditures could constitute "a pro-cyclical fiscal stance" of too much capital spending, a dangerous public debt. Therefore, the Fiscal Stability Law (FSL) of 2010 promotes counter-cyclical policies, but it only takes effect in 2013.

World macroeconomic factors will also influence the country. Another global recession will punish Mongolia's small, open economy. If Beijing is as effective as it was in 2008/9, however, and it keeps gulping down Mongolia's minerals as expected, the cost will be ameliorated. Also, Mongolia must "capitalize on its excellent long-term prospects by continuing the reform agenda it embarked on during the 2008/9 crisis," insists the World Bank.

Renaissance Capital, a cardinal investment bank, has a more rosy outlook. Recently it declared that Mongolia could be the world's fastest-growing economy in the next decade. "We think Mongolia may be able to position itself as the next Asian tiger or, as they prefer, Mongolian wolf, rather than the latest central Asian resource supplier," strategists Roland Nash and Ovanes Oganisian predict.

The great kick upward has started as foreign mining companies tear away the steppes and mountains to bring some of the world's biggest mineral deposits into the sunlight. For instance, Ivanhoe Mines and the Rio Tinto Group are developing the US\$ 4 billion Oyu Tolgoi copper-gold project. Rio deems it the world's biggest. Investment there equals 10 percent of Mongolia's current gross domestic product, finds Renaissance Capital.

Most analysts concur that the boom will rest on domestic and foreign companies



wrenching these minerals, so that aspect of the economy demands more attention. According to the Mongolian Mining Directory, in 2009, minerals earned over 75 percent of all export revenues. Almost all of copper concentrate, molybdenum, coal, and zinc end up in China, also the leading trade partner; Russia, the US and Ukraine receive flour; and gold ends up in Canada, the United States, the United Kingdom, and China. Mining accounts for over 40,000 jobs, which is more than 4 percent of the eligible workforce, although farming still leads here, occupying some 34 percent of Mongolians.

Overall, Mongolia boasts the world's most massive copper reserves and holds the ninth-largest coal supplies alongside uranium, rare-earth metals, gold, lead, and zinc, so the elements for continued prosperity exist. Coal output is projected to double in the next half decade, while gold will triple and copper will quadruple, says Renaissance Capital. It asserts that the economy will likely increase 100 percent by 2014 or grow by at least 8 percent under the International Monetary Fund's more conservative way of

calculating. Exports will expand by more than 400 percent by 2014, so predicts Business Monitor International.

As for the impact on the people's lives, Noerper observes that already, "a [new] middle class has sprung up." But there are downsides, because although "people are much better off... one-third of the population remains in poverty and the rich-poor divide is growing." The greatest concern is a widening gap between a wealthy elite and poor masses in a society where per capita GDP stood at US\$ 3,200 in 2009. Also, "there could have been greater transparency in land privatization," observes Noerper.

In moving forward, Mongolia has shifted its foreign policy. Noerper notes that "it is looking at Chile and other nations that have seen rapid economic success. Mongolia deals well with its large neighbors, Russia and China, and its Third Neighbor policy encourages diversification among the United States, Korea, Japan, the EU, and others."

Future reforms necessitate a large scale overhaul of the national finance system. In fact, the stock exchange has undergone this

based on help from the London's bourse. A Mongolian Investment Bank and a sovereign wealth fund are also being planned. After that, the government will retail over 100 SOEs, mainly through IPOs. The profits will be divided. About half will directly flow to the government, another 30 percent will be split between the Mongolian Investment Bank and the sovereign wealth fund. There is some talk that the rest will be given for free to Mongolian citizens. Therefore, the government is analyzing the policies of Qatar and the United Arab Emirates, with 16 global banks advising the government on redistributing this wealth.

So the land-locked country famous for being among the world's flattest place geographically now presents a surprised world with an economy that the World Bank's World Development Indicators Database assessed at US\$32.2 billion in 2000, but that hit US\$58.1 billion in 2009. Its shape now resembles a mountain pushing upward based on an ambitious reform program that is producing a new nation close to the size of Western Europe. (AP)



# Changing Concepts of Brand Equity

BY SHAMILA JANAKIRAMAN

**A** brand refers to a logo, symbol, or name given to a product.

The impact that a brand has on consumer purchases or perceptions with regards to a product is known as brand equity. Brand equity is the value premium that a company derives from a product as compared to its generic equivalent. Brand equity can be created for products by a company, by making them more memorable, easily identifiable, and superior in quality and reliability.

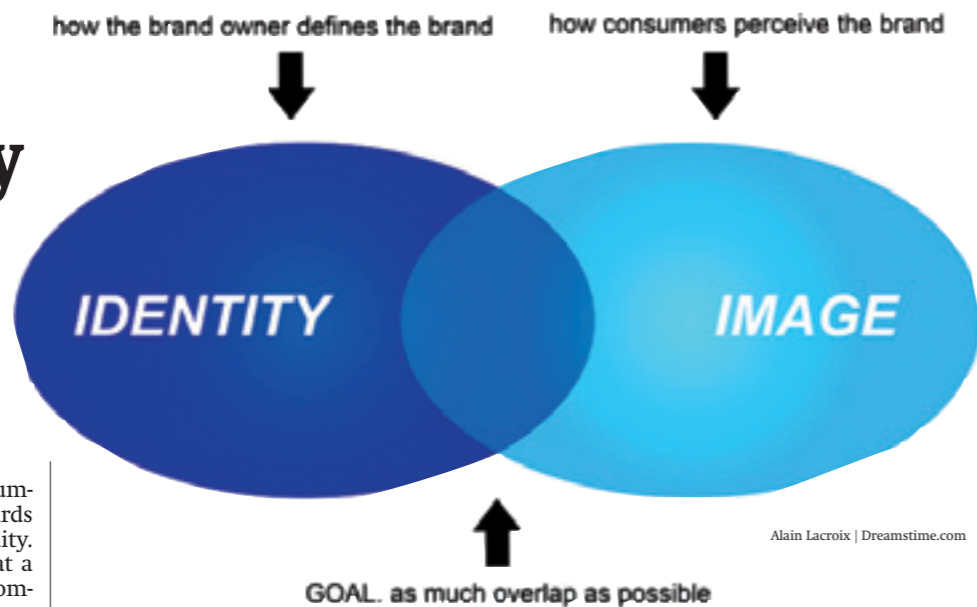
The words 'brand equity' show that an asset has been generated which is intangible and is measured in terms of the value attributed to the product or service by a consumer or potential consumer. One way to make this happen is by concerted efforts such as mass marketing campaigns. If consumers are ready to pay for a generic product instead of a branded one, then the brand is said to have negative brand equity. This generally happens if a company makes a major product recall or was subject to some other negative publicity like an environmental disaster.

Consumers who are ready to shell out huge sums of money for the Apple iPhone are examples of high value brand equity creation. Brand equity becomes important when a company wants to expand its product line. When brand equity is positive, the company can rest assured that customers will accept a new product. This can be achieved by associating the new product with an already-existing successful brand.

For example, Samsung is leveraging the brand equity of its Galaxy brand name for mobile phones as well as the tablet devices it has launched, instead of using an entirely new brand name which may have become entirely unfamiliar to consumers.

Branding plays an important part of the price that customers will pay in a market which is already flooded with various competing brands. Brands add value to a basic product or service, resulting in a higher price or higher market share when compared to an equivalent unbranded product. It is like getting consumers to pay more for a Van Heusen shirt who might not be ready to do so for a lesser known brand, even if its quality was not questionable.

The term brand equity describes both the value of the brand and the brand's component values. A brand's value may be given in monetary terms or in market research measures like awareness or consideration. In practical terms brand equity translates



For example, Samsung is leveraging the brand equity of its Galaxy brand name for mobile phones as well as the tablet devices it has launched, instead of using an entirely new brand name which may have become entirely unfamiliar to consumers.

into consumer goodwill and reference to buy a branded product or service.

Measuring this intangible quantity is not easy and involves ascertaining the brand value to arrive at brand equity.

### How to Measure Brand Equity?

Brand equity can be viewed from several perspectives. The most common is the financial outcome which determines price premiums. It is a measure of how much more a consumer will pay for a product or service that is branded over a product or service that is generic.

Another perspective is that of brand extension, where a company studies the value that an existing brand can give to the introduction of other new products. The reverse dynamic is also studied as to the impact that the new product or service can have on the existing brand. The third important perspective is customer-based and was proposed by Kevin Lane Keller. Mr. Keller is the E. B. Osborn Professor of Marketing at the Tuck School of Business at Dartmouth College. Brand equity, according to Keller, is the effect that brand knowledge has on consumer response to the marketing of a brand, when the consumer possesses favorable, strong and unique brand associations.

A customer-based perspective takes

into consideration the experiences that consumers have with a brand. On experiencing a product or service, customers assess overall brand quality and tend to infer certain brand attributes. If these experience measures are positive and endure over time, brand loyalty results. Customers communicate the strength of their brand attitude to others by word-of-mouth.

Brand equity components that can be measured include brand awareness, brand reach, and brand image association, which are the result of traditional advertising campaigns, and the influence of social or interactive media.

A strong brand equity created in the entertainment field is that of Zee TV. It is telecast in over 138 countries and gives access to more than 500 million viewers globally. Its strong brand equity makes it a large media franchise that serves the South Asian Diaspora. Zee TV has driven the growth of the satellite and cable industry in India.

Its popularity stems from the fact that it caters to the Indian population across the globe with a good understanding of their culture and beliefs and the need for Indian entertainment outside of the country. The company launched Zee TV in the UK / Europe (1995), the USA (1998), Africa (1998) and is now available across five continents.



## Peter J. Leitgeb

At the helm of The Claridges Hotels & Resorts — India

BY PARTHASARTHI JENA

**L**ife just goes on and with absolutely no regrets for this man with continental experiences.

Mr. Peter Leitgeb currently serving as the president and CEO of Claridges Hotels & Resorts has 30 years experience in the hospitality industry. He comes with a diverse experience of holding senior management positions with some of the leading global hospitality brands. He is one of the few industry professionals with senior management experience both in India and overseas. Born in Austria, he has worked in Berlin, Frankfurt, Dallas, Budapest and now in Delhi Peter J. Leitgeb is married to a Japanese and had two children.

Says Peter, "I have run great hotels and hotel companies from Dallas to Hong Kong to Berlin, but nothing has excited me more than the opportunity to build a great luxury hotel group in India." When asked why he chose to continue in India for one more stint, Peter simply said "I love India. Also,

the opportunity to build a premium hotel group was too good to pass up."

In his capacity as President & CEO of The Claridges Hotels & Resorts, Peter oversees the expansion plans of the group, along with the repositioning of The Claridges, New Delhi. The Claridges, which has been a landmark in Lutyens Delhi, is being repositioned as a boutique hotel. The hotel will compare itself with leading hotels to build service and operational excellence to cater to guests who expect the very best. The year 2009 witnessed the group unveil The Claridges, Surajkund, a 287 room five star hotel in NCR. With its aesthetically pleasing interiors and state-of-the-art conference and business facilities, The Claridges, Surajkund will cater to corporates, the MICE segment, and leisure travelers.

The group, which will soon open The Claridges Bharatpur Palace in 2013/2014, is focused on expansion and is also exploring opportunities to operate and manage hotels in Mumbai. On the international front the group is hopeful the Colombo talks result in a suitable place for their expansion into the Sri Lankan market, and that it succeeds in finding suitable property in Dubai.

Peter's last assignment was as President of The Leela Palaces & Resorts, associated with Kempinski Hotels S.A.

"I have run great hotels and hotel companies from Dallas to Hong Kong to Berlin, but nothing has excited me more than the opportunity to build a great luxury hotel group in India."



trekandshoot | Dreamstime.com

## Will South Korea and the U.S. Sing in a KORUS FTA?

BY VICTOR FIC

**A** chorus occurs when a group of people harmonize their singing.

Therefore, how appropriate that the free trade agreement (FTA) designed to link South Korea and the United States in a synchronized, deeper – and mutually beneficial – trade relationship is called the KORUS FTA, with the first pact appearing in 2007.

Already, South Korea offers America US\$80 billion in annual trade as its seventh largest export market. For the small and medium sized enterprises (SMEs) that account for 90 percent of U.S. exports to the RoK, the latter is their second-fastest-growing target in Asia. The average trade for each SME equals US\$500,000 in exports.

To be sure, the KORUS FTA has many American detractors in an era when many there wonder if more free trade – part of the wider phenomenon of globalization

– begets higher levels of prosperity or job losses to foreign competition as “our jobs get shipped overseas.” However, the agreement also has stalwart supporters. Among the most articulate is L. Gordon Flake, director of Mike and Maureen Mansfield Center in Washington. In this exclusive interview, he traces how doubts among some high-powered Americans about the wisdom of the pact gradually changed to endorsement and also observes the weakening of opposition in South Korea.

To start, recalls Flake, the North American Free Trade Agreement (NAFTA), first between the U.S. and Canada, and then Mexico, preceded all negotiations for KORUS by a generation and sets the wider context for the debate as the granddaddy liberal trade pact to which Washington has committed itself. The critics insist that American jobs “went south” of the border as manufacturers relocated to profit from cheap labor.

But Flake counters that economists generally agree that “NAFTA has on net been good for the U.S. economy [creating] an overall growth in jobs. However, as evidenced in the 2008 Democratic [presidential] primaries, NAFTA remains very po-

litically controversial... particularly among organized labor.”

But why oppose NAFTA if it created jobs? Flake responds that, “My own assessment is that this is partially knee-jerk opposition to any trade agreement [by] labor. One issue may be the types of jobs created versus the types of jobs lost.” In fact, some unionists and their sympathizers fear that the skilled, highly paid jobs are sacrificed for ones that freeze or retard the worker’s economic well being. The doubters also maintain that free trade means more products at lower prices, benefiting mainly consumers who already enjoy a high standard of living while the country suffers from low savings and federal debt. “Still, in my mind, technological innovation is the biggest factor in the loss of jobs, and trade is just an easy scapegoat,” asserts Flake.

In addition to big labor, a certain dynamic candidate named Barack Obama was also a skeptic on aspects of free trade, including parts of NAFTA and KORUS. Obama’s original doubts were driven by Hillary Clinton’s initial opposition during the campaign and by labor’s initial opposition. The pressure of the campaign trail forced him and other contenders for the Oval Office to show the voter – facing recession, high joblessness and unpaid bills – that they would keep their jobs in the U.S.

Flake praises the turnaround in attitudes among special interests and Washington leaders. “The most serious original oppo-

nents to KORUS FTA, Ford and the United Auto Workers, are now strongly in support of the agreement,” he observes. This is because Obama sought changes that “were relatively moderate, with the most sensitive being in the auto sector.”

Specifically, to review some of the cardinal changes, Seoul committed itself to weakening its safety rules for imported U.S. cars. Now a supplemental agreement to the 2007 document permits 25,000 cars per U.S. automaker to enter Korea if they meet U.S. safety standards, four times the original number. Also, the 2007 agreement held that all car tariffs would be eliminated within three years after implementation. The new accord permits Washington to keep its 2.5 percent tariff on autos in place until the fifth year. Meanwhile, Seoul will immediately slash its tariff on U.S. auto imports from 8 percent to 4 percent and fully eliminate the tariff in the fifth year. In addition, the U.S. assented to phase out its 25 percent tariff on South Korean trucks in 10 years in 2007. But now it can keep its tax until the eighth year and cut it down step by step by the tenth year.

Some American farmers, however, lost out as Seoul extracted concessions, too. With the first agreement, South Korea would scotch tariffs on U.S. pork by 2013, but now the deadline is 2015. Also, American visas for South Korean workers sent to the U.S. under the accord will run for five years, far beyond the previous one year.

Other influential American commentators on ties with South Korea have also voiced stalwart support for KORUS-FTA. For instance, Victor Cha, head of Asian Studies at Georgetown University, opined in the Chosun Ilbo, South Korea’s leading newspaper, on January 11, 2008, even before Obama’s election, that the KORUS FTA is in keeping with new economic conditions in the U.S. because it liberalizes markets for the American service sectors that are vital to general economic growth. Service “accounts for some 80 percent of American GDP and 80 percent of the U.S. private sector workforce. But manufacturing and agriculture, which often are the focus of opposition to FTAs, only account for a combined 15 percent of American GDP.” Also, services create “better-paying high skilled jobs,” insists Cha.

Overall, following the Obama Administration’s alterations to the KORUS FTA, “it became to first major trade agreement

### Continued from Page 15

to be backed by labor.” That would seem to remove all the road blocks to the pact’s passage and ratification by the U.S. Senate. Flake affirms that “there is no significant substantive opposition at this point, just political gamesmanship holding up ratification,” one aspect of the point scoring and maneuvering in Washington’s highly-charged partisan climate.

Actually, insists Flake, “President Obama has always claimed to be supportive of free trade [in principle]. While opposed to KORUS [specific terms] as originally negotiated, [now he] has pledged to ratify it along with other

Some American farmers, however, lost out as Seoul extracted concessions, too. With the first agreement, South Korea would scotch tariffs on U.S. pork by 2013, but now the deadline is 2015. Also, American visas for South Korean workers sent to the U.S. under the accord will run for five years, far beyond the previous one year.

all those cases. Meanwhile, Cullen revels in the acclaim that he’s whipped up for his program. Amid repeated attacks by Edmonds and other foreign retirees, Cullen boasts he’s twice been nominated for the Nobel Peace Prize – recognition that he proudly advertises on banners posted on the wall at the beginning of the drive up to his establishment.

“There is a big improvement,” says Danny Abunalen, with the Visayan Forum Foundation, which focuses on immigration and trafficking. “Foreigners come into the country for young women. Most of our cases are actually foreigners.”

Edmonds agrees with the State Department that the problem of trafficking in the Philippines is not as bad as when sailors on

recent trade deals.” Presently, “pretty much all business sectors” are aligned behind it, so the momentum is building. In addition, Obama has also been supportive of the Trans-Pacific Partnership Trade negotiations.

Of course, South Korea and America are both trade partners and also strategic allies. Decades after the Cold War, Seoul – the smaller economy – pays hundreds of millions of dollars per year to Washington to station some 30,000 GIs in the south as protection because the two Koreas cannot or will not unite. Inevitably, the wall between economics and politico-strategic issues crumbles as motives and policies among the interdependent partners reinforce.

Flake amplifies this notion, explaining that there is a strong economic rationale for the deal, but also a strategic rationale. What if the United States cannot ratify an agreement of this quality with one of its closest regional allies? The lack of vision, commitment or skill in securing the pact would “dramatically undermine U.S. leadership and influence in Asia.” This is dangerous enough when North Korea keeps attacking South Korea, both symptom and cause of their armed, self-inflicted division. It is even worse “when Chinese influence is growing” economically. Would the benefits of the KORUS FTA to the U.S. and Korea stand out even more as both countries run a trade deficit with China? “Absolutely!” enthuses Flake.

What about the South Korean variable in the KORUS equation that is supposed to total up in a win-win sum? Flake concurs with many Korea watchers that the incumbent conservative president, namely Lee Myung-bak, and his supporters such as the KORUS FTA Industry Alliance favor it as an advocate of pro-market policies. They point out that in the decade after Mexico signed into NAFTA, its exports rose by 300 percent. As for future prosperity, how can South Korea assure it unless it opens up to foreign competition to encourage its own industries to improve design, quality production, servicing, etc?

Also, 15 nations have FTA agreements with Washington, and some are not allies. So why not South Korea? It would buttress the alliance vital to the south’s survival. Lee challenged the pro-appeasement approach of his left wing predecessors and was in power when Pyongyang sank a South Korean war ship, killing 48 sailors, leading to frantic appeals for help to the Pentagon.

Flake sees that in South Korea, “the

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# Shahriar Broumand

By Victor Fic

Belgian-American Shahriar Broumand has an MBA and MIS from Switzerland's European University. From 1999 to 2007 he helped build FreeMarkets in EMEA and Ariba's BPO business in the US. He then moved to Edinburgh to advise RBS on supply chain risk from 2009 to 2010. Today, Shahriar is Managing Partner of BrainNet Supply Management Group (www.brainnet.com) in North America, the number one supply chain and procurement firm. A self-declared nomad who speaks five languages, Shahriar gave this exclusive interview to Victor Fic.



Reaching Around the World for Supplies

**What is supply chain management?**

Supply Chain Management is broad and defined as the planning and operational management of all third party companies necessary to run your business regarding sourcing, procurement, conversion and logistics management. It also spans the crucial components of coordination and collaboration with channel partners, such as suppliers, intermediaries, third-party service provider and customers. It integrates supply and demand management within and across companies.

**Does it appear on small or larger, global firms?**

As large companies ventured into international markets, so did their supply chain. Today most corporations have worldwide suppliers. But globalization is also a focus for mid-sizers to keep costs low. They are increasingly internationalizing. In the car industry, for example, the depth of added value is only about 20 percent with components from many countries.

**But the practice of having a supply chain dates back earlier, does it not?**

Yes. When companies started to operationalize in the early 1900s, they had to create two functions: people who managed materials for production and those who bought the materials. This was the birth of the procurement and operations functions. Both functions were considered "back office" roles that were necessary but not strategic.

**Then its importance grew?**

Not right away. Between the 1940s and 1970s, companies focused on research and development, sales and marketing, so the supply chain functions were left behind. This changed in the 1970s as competition from Japanese electronics and automotive industries forced Western counterparts to examine key metrics like operational efficiency, speed, quality and cost. In the 1980s and early 1990s consulting firms took a more strategic approach to advising companies on how to buy. 'Strategic sourcing' became a buzzword. Consultants developed 'sourcing process' to yield better results than traditional negotiation and this became a competitive advantage.

**Cite a concrete example of a company where this strategic approach really helped it.**

Recall the story of Jose Ignacio Lopez at GM in the 1980s. He developed the modern strategic sourcing and supply chain organization, then rival Volkswagen recruited him. A lengthy court case determined cardinal trade secrets were passed on to VW by Lopez. It started the craze of strategic sourcing in major corporations. Siemens, Emerson Electric and United Technologies Corporation are leading examples here.

**Where do we stand now?**

The late 1990s and early 2000s wit-



**The regulators, investors, management, unions and even the employees were wrong. Credit dries up, companies run out of money.**

nessed the introduction of technology. Companies invested heavily in eProcurement and eSourcing software tools to take out cost, increase efficiency, and gain better spending control. Some Fortune 500 companies are considered fairly mature, but most are still building best practices around technology, process and people. Also, the same period was a time of globalization for supply chain management. As cheap labor markets became available to Western companies, many set up production facilities in Asia and other low cost countries.

**Is there a risk here? How can you know whom you are dealing with?**

Yes, many challenges exist like quality and risk. Companies understand it is not enough to avoid high labor costs, but to build local relations and processes, and to incorporate all relevant cost factors like sustainability, risk, innovation and process management. So it's more than low cost country sourcing. At BrainNet we call this Best Value Country Sourcing.

A good example is how select companies have moved their procurement and supply chain teams to Asia near their supply base.

**Some experts on Boeing say that it over-outsourced and encountered huge delays and quality control problems that crippled its development of its advanced jet liner. Could you comment on this?**

I cannot comment on Boeing but maybe this is exactly my earlier point. Take all relevant factors into account before outsourcing.

**If you source globally, you also expose yourself to political risks, natural disasters and other factors, correct?**

The financial crash of 2008 has changed how companies manage supply chain management today. Before, it was unthinkable that AIG or GM could collapse. The regulators, investors, management, unions and even the employees were wrong. Credit dries up, companies run out of money. We had taken cost reduction too far and entire supply chains were at risk. The main focus was on cost over the past 20 years. But now there is equal need to manage supply chain risk. The world's best companies are developing vendor management strategies for their supply chain. Natural disasters like Fukushima in Japan accentuate the need to understand and manage risk. Without flexibility in your supply chain, your entire company is at risk. At BrainNet we call this breathing supply chains.


**What are some of these strategies to minimize risk?**

First, it requires new thinking paradigm - build scenarios and increase the organizational ability to cope with different futures. Also, install breathing supply chains. Moreover, you must monitor the whole supply chain, not just the next level suppliers. This requires a strategic approach to Vendor Management with the right people and skill sets. You need tools, methods and competencies to manage complex systems.

**What does the future portend?**

Companies must be more strategic about managing supply chains. Top management must lead. We must focus not merely on cost but "total cost of ownership." It means more emphasis on quality, risk and intangibles like better relationships with suppliers. Companies are more dependent on their suppliers than they admit. This demands more collaboration inside and outside the company (R&D, supply chain, business owner) in managing suppliers.

**Which companies stand out positively here?**

It is too early to name specific companies but financial services and food companies are first movers. 



Timhesterphotography | Dreamstime.com

## Advances in Waste Management Technologies in China

BY DING DING

**The remarkable pace of urbanization and industrialization in China has contributed greatly to the nation's emergence from its turbulent past into the fastest-growing economic superpower that impacts the modern world.**

However, this rapid pace of urbanization has created certain drawbacks, despite its overall favorable impact on the nation and its people, particularly in the area of waste disposal and management.

The generation of large amounts of solid waste is a common problem experienced by every developing nation. But in China's case, the term "they make it bigger in China" holds true even with solid waste generation. Recently, China surpassed the United States as the world's largest generator of Municipal Solid Waste (MSW) at a rate which has never been experienced by any country before.

During the early periods of China's economic boom, the country produced as much as 190,000,000 tons of MSW annually. By 2030, this figure will reach an astounding 480,000,000 tons and will create huge and unmanageable problems for the country if the issue is not addressed today. Realizing this problem, the Chinese government spearheaded by Premier Wen Jiabao gave its commitment to a greener future and prioritizing environmental issues as part of the new Five-Year Economic Development Plan.

A significant part of this initiative is the development and deployment of effective waste management technologies across the country. Such technologies include advances in recycling and waste recovery techniques as well as the construction of advanced Waste-To-Energy (WTE) facilities in specific locations in the country – using locally developed or imported waste management technologies.

Not only will such technologies be beneficial for the environment, but China will also be able to reap significant economic benefits by as much as 250 billion yuan annually (US\$40 billion) – through the use of new and advanced waste management procedures and techniques – a significant improvement to the more than 30 billion yuan (US\$5 billion) lost each year due to improper waste management.

### Waste Management Technologies in China

The rapid economic growth in China is overshadowed by its very large population, four times that of the United States and the largest in the world, resulting in rising volumes of industrial and household solid waste and garbage – at an average annual growth rate of up to 13.3 percent. Solid waste pollution is a very important aspect in Chinese lives and has posed a huge challenge for the government and its people. If not addressed now, it could present serious issues for future generations.

Responding to this challenge, rapid development in solid waste disposal technologies and facilities has been initiated and implemented in the major cities in China. Using these techniques, harmless disposal rates increased from 50.8 percent in 2003,

or the equivalent of 75.45 million tons of urban waste, to 76.5 percent in 2010, or approximately 122 million tons.

Harmless waste disposal techniques in China for Municipal Solid Waste include composting, recycling, WTE incineration, and sanitary land filling. While land filling is still the dominant waste management technique employed in the country, WTE presents a very important method for waste management that can help the country generate electricity – another commodity that is critically needed by the country – by means of waste disposal instead of using coal and other pollution-generating fossil fuels.

### WTE Facilities

Despite the high cost of capital for installing WTE facilities, the Chinese central government plans to be more proactive and has initiated the construction of additional WTE plants across various locations in the country. At least 64 percent of the current WTE capacity in the country is located in the provinces of Guangdong, Zhejiang and Jiangsu. These areas have relatively high economic development compared to other provinces and definitely would have more concerns about solid waste.

These WTE plants make use of either the Stoker Grate Combustion Type or mass burn, or the Circulate Fluidized Bed (CFB) as the main technologies used for incinerating solid waste and generating electricity. Most of the plants use the Stoker Grate design that was either based on imported or local technologies. CFB incinerators, on the other hand, were developed by Chinese research teams from the Chinese Academy of Sciences (CAS), Tsinghua University, and Zhejiang University.

Earlier versions of these WTE plants were only capable of processing 800 tons of municipal solid waste per day. New plants are now larger and have the capacity of processing more than 1000 tons of municipal solid waste daily. New plants can also be designed to have multiple processing lines within each plant, each of which can be capable of processing up to 500 tons of municipal solid waste per day – significantly increasing the total capacity of each plant.

One of the problems encountered by western WTE plants during the 1980s was the emission of toxic dioxins. This prompted the USEPA to regulate and implement the retrofitting of Maximum Achievable Control Technology (MACT) to the incinerators, which reduced the dioxin emissions from as high as 10,000 grams of Toxic Equivalent Dioxins (grams TEQ) to lower than 10 grams TEQ.

The air pollution control systems that are used in the Chinese WTE plants follow the control systems used in the United States. These systems make use of an activated carbon injection to remove inorganic compounds and volatile metals, semi-dry scrubbers, and fabric filter bag houses to filter out and remove particulate matter. New plants that are currently being designed will be integrated with a

selective non-catalytic reduction system to remove nitrogen oxides in the process.

### International Adoption of Chinese Waste Management Technologies

Waste management technologies in China have been used in major cities like Beijing and Shanghai for decades, and are constantly undergoing continuous improvement in an effort to establish new ways of managing waste more efficiently. This has prompted other developing economies to adopt these new advances in waste management techniques and technologies – which China is more than willing to share.

One recent example is the adoption of the government of Ghana, in partnership with a private waste management company, of the waste management technologies used in China as a solution for the country's own waste management woes. The company Zoomlion Ghana Ltd., named after Zoomlion China Ltd., will make use of simple and cost-effective Chinese waste management technologies for the country's waste recycling plants.

Zoomlion China Ltd. is the Chinese equipment manufacturer whose branch, Zoomlion Environmental Sanitation Machinery Company, is a leading research, development, manufacturing, and marketing specialist for environmental sanitation equipment. These recycling plants will be able to process as much as 300 metric tons of solid waste, with the sorted-out plastic and metals to be further processed by recycling companies in Ghana.

Members of the Local Government Committee in Ghana's parliament personally went to China to see the waste management modules in the country in action and familiarize themselves with the technology that will be implemented in their own country. Soon, waste management facilities using Chinese technologies will be deployed in Ghana – providing viable solutions to address the urban waste issue in the country.

### Future Trends in Waste Management in China

The waste management industry in China is expected to experience tremendous growth in the next two or three years by as much as 30 percent. This growth will be driven by the need for proper waste disposal of the country's growing urban waste volume as well as from the direct efforts of the central government to augment the nation's waste management capacity.

The Chinese government continues to pour in investments for the development of waste treatment and disposal facilities with figures that could reach up to 170 billion yuan (US\$25 billion) by 2015. This figure will be double the amount of investments made between 2005 and 2010 – a significant investment for treating up to 82 percent of urban waste, thereby making it less environmentally harmful.

The overall Chinese waste management approach will also shift from relying more on sanitary landfills for disposing solid waste to adopting WTE incinerator technologies for reducing the overall environmental impact – generating much needed energy in the process. Towards the end of the year 2015, it is projected that up to 35 percent of China's total managed urban

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## Growing Golf Courses in China and Environmental Degradation

BY AMANDA MIN CHUNG HAN

**Recently there was a report that some villagers in suburban Dalian, Liaoning province in China were suffering from a tap water shortage.**

Many people had to rely on bottled water or had to wait for water rationing twice a day. What made them angry was that the neighboring golf course didn't have the same problem. According to a Chinese newspaper report, the 36-hole golf course consumed more than 3 million tons of water each year, which is the same as the annual consumption of 1 million households. While people were waiting for water rationing, the golf course's sprinklers were spraying the grass 24 hours a day.

Even worse, another golf course in the area consumes water from a reservoir for drinking water and has discharged untreated sewage into the reservoir, making the water polluted and smelly. The sewage contained a high level of chemical pesticides and fertilizers, which were used to make the grass look greener and healthier in the golf course.

As China's newly-minted rich enjoy the gentleman's game of golf, a lot of side effects tag along too. Although there is no exact data about the number of Chinese golf courses and golfers, experts in the industry assume that there were more than 600 golf courses and about 3 million golfers in China by the end of last year. The number of golfers is much lower than most developed countries, but it's increasing at very fast speed.

The first golf club in China was established in Shanghai in 1896 by British expatriates. Then Mao communists condemned golf as a bourgeois sport and a few golf courses were closed. After the nation opened the door to the world again, a golf course was constructed in 1984. With the increasing number of new rich in China, golf is becoming one of the most popular sports in many urban cities.

It is also surprising that despite a series of new golf courses being built, only 10 golf courses were approved by the government and given business licenses. That shows that most Chinese golf courses were illegally built according to the recent Xinhua agency's report. To protect farmland resources and the natural environment as well as water reservoirs, the Ministry of Land Resources (MLR) imposed a ban on golf course con-

struction in 2004, which required any new golf course planning to use more than 67 hectares of farmland to be approved by the state council before construction. However, Chinese golf course developers found ways to sneak under these regulations. For example, golf course developers never use the word golf in their project document; instead they use parks, country clubs, and green belts for the documents submitted for approval. Some developers illegally rent rural land to build golf courses. Since the ban in 2004, 430 new golf courses were developed in the nation.

Experts who are familiar with the matters claim that local governments turn a blind eye to illegal golf courses. Building a golf course in a rural area could be a way to boost the property price and the land price around the golf course, not to mention attracting more tourists. Such prospects are very attractive for many cash-strapped local governments. The local officials also are often entertained by golf course developers and become regular players on the greens.

Called China's Hawaii, the tropical island of Hainan is having a similar fate. The holiday resort Hainan has many 1000-year-old trees, bamboo, and palm trees in its tropical rainforest. This rare conservation success in the world now accommodates many golf courses. About 30 years ago, there was only one golf course in the whole nation, but now there are about 30 golf courses in Hainan alone. The Hainan local government wants to expand the number of golf courses to 100 and eventually to 300 to attract tourists from all over the world.

To make the island into the Hawaii of East Asia, there are many things that must be sacrificed. One is food security, because golf courses eat up farmland. But the environmental impact goes beyond land possession. The chemical pesticides and fertilizers pollute nearby lakes and soil. The imported soil for the greens and fairways also brings in foreign insects and pests. To kill these pests, golf courses need to use stronger insecticides which also contaminate soil and trees. Also, with no more trees to absorb water, this leads to neighboring villages flooding every year. One villager near a golf course claimed that they never had a flood until the golf course constructors cut down all the trees to build greens and fairways. Even worse, plastic sheeting under the green courses, which is supposed to prevent soil contamination, helps water to run down faster when it rains.

It's not just about nature conservation. Big cities also face problems from golf courses. The capital city Beijing, as a parched city, is not the best location to accommodate golf courses in China. Yet the city is home to more than 60 golf courses. According to industry experts, half of these golf courses were built after the 2004 golf course ban, and only a few of them were built in compliance with the policy. These golf courses also consume 40 million tons of ground water yearly. This kind of groundwater overuse is unsustainable and also very dangerous. It gives people fewer options to obtain water and it also causes the ground to sink. ☞



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## Commercial-Sized Wave Energy Platform Developing in Australia

BY ANURADHA SHUKLA

**The volatile status of the traditional fossil fuel market, aggravated by fluctuating global prices, has been prompting world economies to pursue a renewable means of producing power to become more energy independent.**

Understandably, these economies would seek to develop potential renewable energy resources that are abundant in their own geographic regions – such as harnessing the power of the wind, the sun, and the sea.

In Australia, the natural coastlines there make it an ideal location for harnessing the power of the waves generated by the ocean using a process called wave energy conversion. Harnessing the power of the waves is a relatively untapped renewable energy source and is one of the most environment-friendly means of generating power.

A growing interest in wave energy has caught the attention of corporations and governments from around the world. In Australia, a previous wave energy assess-

ment commissioned by developer Carnegie Wave Energy Corp. indicated that the Southern Australian coast has the potential of generating up to 170,000 MW of wave energy – 10 percent (or 17,000 MW) of which can be extracted through economical means and using locally-designed conversion technologies.

### Wave Energy Conversion Platforms

To understand what wave energy is, one must first understand the power potential generated by the rise and fall motion of the ocean's surface waves. This power can be harvested by electricity generators or wave energy converter (WEC) equipment placed on the ocean's surface. The amount of wave energy generated is determined by the height, speed, wavelength, and density of the surface waves.


There are several methods that can be used to extract wave energy produced by the waves. These methods can also be categorized by where the conversion platforms and equipment are located – nearshore, shoreline, or offshore. These wave energy capture methods include point absorber or buoys; attenuators, which are oriented parallel to the direction of wave propagation; terminators, oriented perpendicular to the

direction of wave propagation; oscillating water column; and overtopping.

The captured wave energy is then converted into power using different take-off systems such as elastomeric hose pumps, hydraulic rams, hydroelectric turbines, air turbines, linear electrical generators, and pump-to-shore systems. Once the wave energy is converted at the point of capture, the generated power is transferred to the electrical grid using transmission power cables.

### Wave Energy Projects in Australia

The coasts of Australia are ideal locations for harnessing wave energy, prompting the state governments to work with different wave energy developers to set up commercial-sized wave energy conversion platforms. The first commercial installation was the Perth Wave Energy Project, facilitated by Carnegie Wave Energy. The installation has a capacity of 5 MW and has the capability of providing power to up to 3,500 homes – which also prevents up to 500,000 tons of greenhouse gas emissions.

Other commercial-sized wave energy conversion projects include the new initiative by Protean Energy in partnership with the Shire of Northampton, Western Australia for developing a 5 MW capacity wave energy farm. Another project is the bioWAVE energy system being built by BioPower Systems off the coast of Victoria. Once these projects are completed, they will be able to generate enough power to stabilize the Australian electrical grid. 

### FURTHER READING:

- Subsea World News  
[www.subseaworldnews.com](http://www.subseaworldnews.com)
- Ecogeneration  
[www.ecogeneration.com.au](http://www.ecogeneration.com.au)
- Hydroworld  
[www.hydroworld.com](http://www.hydroworld.com)

### COMPANIES MENTIONED IN THIS ARTICLE:

- Protean Energy  
[www.proteanenergy.com](http://www.proteanenergy.com)
- Carnegie Wave Energy  
[www.carnegiewave.com](http://www.carnegiewave.com)
- BioPower Systems  
[www.biopowersystems.com](http://www.biopowersystems.com)

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opposition parties [are] opposed to the deal [even though] it was their President Roh Moo Hyun who negotiated it." The recalcitrants here are Roh's Democratic Party and the Labor Party and supposedly pro labor elements organized under the Korean Alliance Against KORUS FTA and the Korean Federation of Trade Unions. What explains their negativity?

One major motive is the special interests of South Korean elements, for instance those that publicly protested to ban the re-import of American beef after a disease

scare in 2008. The Congress cited the barriers erected then as a major impediment to its acceptance of KORUS. However, when Seoul renewed the full import of U.S. beef that same year, the nay sayers in Washington felt relieved.

Also, it is "primarily politics," argues Flake. "Key policymakers in [South] Korea do see this as more than a mere trade deal, it is a way to strengthen the U.S.-ROK relationship," which some leftists oppose. Veteran Korea analysts recall that union power was stronger in the past, leading many to predict that they cannot obstruct

KORUS but can only delay it. "Hopefully that is true," responds Flake, "but the longer we wait to ratify the deal the more difficult the process will be – particularly as we get closer to the ROK's National Assembly and Presidential elections next year." The agenda for legislation and public debate will then be more complex and the polls will foster even more politicization of issues.

So it appears that the trend line is toward South Korean and Americans singing the same tune in a trans-Pacific choir called KORUS. 

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## New Nuclear Technology Developing in China

BY PETER ALLAN MARIANO

**C**hina undoubtedly is one of the fastest-growing economies in the world, despite the global financial setbacks experienced in most parts of the globe, and has surged past other economies on its swift and amazing journey to the top.

However, the rising economy and continuous industrialization of the nation is not without its toll. China needs significant amounts of energy to power its ever-dynamic economy and emerging industries.

Addressing this skyrocketing demand for energy, China cannot rely solely on fossil-fueled and coal-fired plants. The continuous volatility of the global petroleum market, as well as growing concerns for carbon emissions generated by these plants, means that China needs to focus its attention on other forms of energy-generating technology. In this regard, the country intends to satisfy energy demands by increasing its nuclear power capacity by up to tenfold during the next 10-year period – with the ultimate aim of surpassing the United States as the global leader in nuclear energy production.

As a sign that the country is on the right path towards this end, Chinese scientists have announced that they can now overcome the nuclear supply bottleneck for uranium – a critical element for nuclear energy production – and will ensure the country's uranium reserves for the future. This can be achieved through a new technology that would provide better and much more effective techniques for reprocessing spent uranium. This technology not only would significantly boost China's nuclear industry, but would usher in a new era for nuclear energy.

### China's Current Nuclear Capacity and Needs

As far back as 1964, China had already made initiatives towards nuclear energy, and had in fact tested its first atomic bomb. However, China has an abundant supply of coal, a locally-available resource that generates up to 70 percent of the nation's power and is a much cheaper alternative to spending billions of yuan on expensive nuclear technology from other countries. On top of that, the use of nuclear power plants would necessitate the importation of uranium, which China could either not afford during that time or was reluctant to spend government resources on.

In a report from the IAEA, or the International Atomic Energy Agency, China has a total of 10.82 gigawatts of energy capacity generated by 13 nuclear reactors currently in operation. The country is poised to increase this capacity to 12 gigawatts in the very near future and has 26 more nuclear power facilities currently under construction. Once completed in the year 2020, China's nuclear reactors would require up to 20,000 tons of uranium annually according to the World Nuclear Association.

Despite the recent nuclear disasters in Japan, China is still keen in pursuing their nuclear power agenda and is now the fastest growing nation in terms of nuclear reactor development. However, China's uranium production can only top 2,400 tons per year and it has uranium deposits of a little over 170,000 tons. This new technology will give them the technological boost that they will need to ensure sufficient uranium deposits.

### Reprocessing Spent Uranium

Since the dawn of the nuclear power age, some of the primary concerns for generating power through this technology have been to control and reduce the amount of

high-level nuclear waste generated by the process and to optimize the use of the uranium and plutonium fuel elements used in the reactors. To achieve this, reprocessing technologies have been harnessed in an attempt to recover up to 25 percent of unused uranium as well as to reduce the amount of nuclear wastes by one fifth.

Although reprocessing has been practiced in some countries during the last few decades, the process has been politically controversial for some nations such as the United States, as reprocessing can contribute to nuclear proliferation and recovery can be diverted to illicit non-energy use. On top of that, current technologies used for reprocessing can only reduce the volume of high-level nuclear waste up to a certain degree, and are not capable of practically reducing heat generation or radioactivity – which will still require further repository sites.

Since the practice of uranium and plutonium reprocessing started decades ago, there has been a constant debate on whether it is more economical to reprocess nuclear fuel using existing technologies, or to store

As far back as 1964, China had already made initiatives towards nuclear energy, and had in fact tested its first atomic bomb.

spent fuel in geological repositories. Currently, only France and the United Kingdom are actively reprocessing spent nuclear fuel, with France having the more developed reprocessing system. The technologies used in this process account for up to 5 percent of the global nuclear fuel demand.

Other countries such as Japan and Russia have tried their hand in reprocessing, but are still unsuccessful in coming up with a viable commercial process. Japan, which is using reprocessed uranium for its nuclear power plant in Rokkasho, transports spent uranium to France for reprocessing and then transports the recovered fuel back via sea transport. The United States, on the other hand, decided that it is more economically viable to use fresh uranium fuel to power its nuclear plants at the moment, and has opted to store the spent nuclear fuel in geological repositories for future reprocessing – if the technology has developed enough to make it more economically viable.

### China's New Nuclear Technology

The new nuclear reprocessing technology developed by the China National Nuclear Corporation, the primary nuclear entity operated by the state, claims to boost uranium materials recovery by up to 60 percent. The announcements were made on China's Cen-

tral Television, which featured the testing and development of this new technology at China National Nuclear Corporation's 404 Factory in the Gobi desert. However, it was not entirely clear if the new technology is different from what currently exists in other countries.

Technological experts such as Lin Boquiang, director of the China Center for Energy Economics Research at Xiamen University, mentioned that the technology is still not fully developed for actual practical use, but once completed it could signal China's self-sufficiency for nuclear energy resources. China's current uranium reserves are approximately at the 171,400 ton level and are equivalent to only 70 years of nuclear power use. With this new technology, this existing capacity can be multiplied by up to 60 times, ensuring China's uranium sufficiency for up to 3,000 years.

This reported breakthrough from China did not, however, affect the views of foreign analysts, nor did it affect the confidence in the uranium market. In fact, after the pronouncements were made, the market and uranium prices actually moved higher and not lower as would have been expected. China, with 13 nuclear power plants in operation and with concrete plans of doubling this number, will be the largest consumer of nuclear fuel in the future. This pronouncement for self-sufficiency can affect the market – if the technology announced proved technically and commercially viable.

The technology described in this new reprocessing technique has strong implications for the global uranium market, if China manages to prove their announcements true and becomes less dependent on foreign uranium supplies. Industry experts do not see the market affected on near-term projections, but future demand and prices may significantly be affected if China manages to roll out a commercial version of this reprocessing technology.

### The Future of Nuclear Technology in China

The recent nuclear crisis in Japan triggered widespread concerns about the viability of nuclear power as a long-term energy resource, making global powers have second thoughts about whether or not they will pursue the nuclear pathway. Even China, who was previously very aggressive in their nuclear power drive, stopped existing construction of new nuclear power plants and conducted safety inspections of all nuclear plants nationwide.

Inspections were spearheaded by the National Nuclear Safety Administration (NNSA), the China Earthquake Administration, and the National Energy Administration, and were expected to last for up to six months. On August 5 of this year, the China Nuclear Energy Association posted a notice on their website indicating that the nuclear safety inspections had concluded their operations and that they had been completed one month earlier than projected. According to the announcements, there were no major safety concerns and issues highlighted on all current plants, giving an indication that the country is now poised to resume construction and operation of the nuclear power plants.

These developments are clear indications

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## New Issues, Challenges and Opportunities for China's High-Speed Rail System

BY ANURADHA SHUKLA

**C**hina's high-speed rail system was originally publicized as the next-level domestic land-based transport system, touted to be even better than the Japanese model, which would provide more convenient, systemic, and reliable means of commuting for the masses.

No less than United States President Barack Obama looked to the Chinese system as a model for America's own rail system upgrade.

During the past year, Chinese senior government officials flaunted the high-speed rail program as the crowning glory of the country's technological and economic superiority. However, China's bullet-train program was recently plagued with high-profile scandals and controversies that have smeared the credibility of the project. Such issues have drawn scorn not only from the international community but also from within China's own territories, with their frustrations being hurled against the railways ministry.

Still, the Chinese government seems undaunted by all these controversies. Government and railway officials are keen on correcting the administrative and technological flaws in the program in a bid to continue with the project and push forward past these setbacks. Efforts are underway to clear all obstacles and pursue the completion of the ambitious high-speed rail network that would interconnect the whole of

China and beyond.

### Issues, Corruption, Recall: Blows to Technology

In February of this year, the global community was surprised to hear about the dismissal of railways minister Liu Zhijun, a prominent figure in China's booming high-speed rail industry, amidst corruption charges which state news services Xinhua announced as a "severe violation of discipline." The former minister is under investigation by the Communist Party and is still to undergo trial by court.

There were also similar reports of construction companies using fake invoices during the construction of the Beijing-Shanghai line. These contractors allegedly were cutting corners during construction, with infractions such as using low-quality fly ash instead of the high-grade versions required in mixing substances used for concrete rail system construction – infrastructures needed to support the high-speed trains plying the system. On top of that, there were also allegations that the supervisors employed to operate the system did not even have qualified engineering licenses and should never have been employed at all.

Such allegations of corruption and questionable quality have been an embarrassing blow to the growing high-speed rail sector. These incidents and allegations placed a dark cloud over the booming sector, which intensified into a storm when disaster struck in July when a bullet train was apparently struck down by lightning, breaking down and immobilizing the unit, before it was rear-ended by another speeding locomotive. The crash sent four coaches hurtling off a viaduct, reportedly killing at least 40 people and injuring more than 192 others – figures that were strongly doubted by the international community, which believed that there could be more.

Recently, another severe blow was hurled against the already scandal-plagued high-speed rail project, when China's CNR Cor-

poration Ltd., the second biggest train-maker in the country, recalled at least 54 bullet trains from the much publicized Beijing-Shanghai line. CNR's very own president, Cui Dianguo, announced that the recalled CRH380B trains experienced quality and performance issues and were unsafe for service – forcing the 820-mile route to cut services. The route usually takes 5 hours to complete from point to point, particularly from Beijing to Shanghai and vice versa, and the reduced number of trains plying these routes will definitely affect the stability of normal day to day operations.

Experts from around the world pointed out that the problematic situation in China's high-speed rail system is severe indeed – so severe that the Chinese government has no option but to come out and announce the problems and concerns. The July crash, which was first blamed on lightning and later on malfunctions in the signaling system, was not only an indication of flaws in system design but also a clear indication of the railway management's failure to detect and remedy such flaws.

### Impact and Implications

China has invested billions of yuan into developing a high-speed railway network that would rival that of the very popular, and very effective, bullet trains of Japan. Last year, an unprecedented 749.5 billion yuan (approximately US\$117 billion) was poured into the sector in a bid to form an enormous network of rails that could span all major geological regions in the country. However, unlike their Chinese counterparts, the Japanese bullet train network has never had any major incidents that caused deaths or injuries since the network went into operation in 1964.

The recent issues and controversies behind China's high-speed rail system have drawn public anger, as amplified through the country's various microblog websites and social networks such as the popular Weibo site. The recall further infuriated the public, drawing more catcalls and criticisms against the railway ministry's handling of the situation. However, this recall move and the subsequent decision to reduce the trains' top speeds is an indication that the Chinese government is seriously considering the risks involved in the high-speed rail system.

These issues and the recent recalls have made more people question the viability of investing in high-speed passenger rail. Not only will this slowdown in building affect the country's rail industry as a whole, it will also have serious impacts and implications on other industries riding on the high-speed network's boom. Such industries include the steel production sector, which eventually will be severely affected with this abrupt lowering of demand for steel and other affected commodities.

In the international scene, other economies, including the United States, who are trying to follow China's seemingly successful model, will now have second thoughts about the viability of adapting a similar high-speed rail system into their own transport network. Already criticized by both local and international personalities, China's high-speed rail industry will lose further credibility as well as face less likelihood of

achieving one of China's ultimate goals – of selling high-speed locomotives to the international market.

### Moving Forward: Opportunities for China's High Speed Rail System

Despite the criticisms from various sectors, a majority of commuters plying the Beijing-Shanghai route seem undaunted about the various issues and controversies plaguing the high-speed rail system. Many believe that there is always a risk for accidents on any transport system, including bullet trains of course, but many also believe that it is still a lot safer than other transportation alternatives such as flying.

Many also believe that the Chinese government is stepping up its initiatives to comply with the safety demands of the high-speed rail network, and that it is making concrete steps to ensure that these safety demands are met. Part of these efforts is the move by the central government leaders to initiate drastic reforms in the railways ministry. One of these reforms is the merger of the Ministry of Railways in a centralized transport super-ministry – a move that was put forward years ago but was thwarted by the then-ruling officials inside the ministry.

But despite the various scandals, issues, and controversies that have plagued the Chinese high-speed railway industry, there is still no doubt that the sector has achieved truly remarkable and unprecedented feats that are as yet found nowhere else in the globe. Such feats include the building of the 710-mile Qinghai-Tibet route that was constructed more than 5,000 meters above sea level across steep climbs and permanently frozen mountain areas – in a span of only five years.

The local frontier is not the only target of the Chinese high-speed rail network, as the largest train manufacturer in the country is now set for expansion into the international market. One such development is the memorandum of agreement recently signed between General Electric (GE) and China's Ministry of Railways (MOR). The memo involves the joint venture between General Electric and China South Locomotive and Rolling Stock Corporation Ltd (CSR), with the objective of exporting high-speed train technologies to other countries, including the United States.

The China South Locomotive and Rolling Stock Corporation Ltd (CSR) is the world's largest manufacturer of electric trains, and it has already exported parts and full trains to more than 66 countries, including the 51.5 million dollar deal with Turkey for 1000-capacity light rail trains. CSR is confident that while there are still ongoing debates in the United States and the EU market regarding the feasibility of adapting high-speed railway networks, the possibility presents a good opportunity for the Chinese electric train manufacturing industry – despite the recent issues and controversies.

These opportunities will be bolstered by recent pronouncements from the Chinese government and the Ministry of Railways, who have given their commitment of conducting large-scale safety and quality inspections to ensure that all production and operation safety and quality issues are

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## Next-Level Noise Reduction Technology for Wireless Communications Developed in Japan

BY KEVIN LIU

**W**ireless communications has revolutionized the way the world conducts business, does commerce, or interacts with other people, even when they are on the move and without the wires and cables that have characterized the communications systems of old.

Some of the problems with wireless communications, however, are the unwanted fluctuations, disruptions, interference, and other unstable transmitted signals that can be categorized as noise.

Noise is a basic characteristic of modulated electromagnetic waves traveling through the atmosphere (the backbone of wireless communications). Noise can come either from external environmental causes or it can result from the performance of the electronic devices and components used to transmit and receive these signals. Over the years scientists have achieved significant milestones in noise-reduction technology in a bid to improve the quality of signals and information received in wireless communications.

As part of this initiative, Toshiba Corporation recently announced the development of a new noise reduction technology intended for wireless communications. This breakthrough can cut phase noise by as much as 90 percent as well as significantly reduce the jitter typical in radio frequency signals. This technology will be able to pave the way for the emergence of high-speed wireless communication chips and components for use with wireless LAN and WiMAX systems, thereby opening new doors to high-speed and noise-free wireless communications.

### Noise in Wireless Communications


There are several potential causes for wireless noise, and most of these sources are inherent in the support processes and elements that make communications possible. Such sources include device and equipment temperatures, the condition of the electronic circuits, condition of the power supplies, and the frequency inter-

ference in between data signals. Because of this, total elimination of noise for transmitted wireless signals is almost impossible, as it can only be reduced to acceptable levels.

Previously, LSI chips used in wireless and mobile communications made use of phase-locked loop (PLL) systems. However, there has been demand and need to reduce circuit size, so manufacturers have migrated to all-digital time-to-digital converters (TDC) in their systems. The problem with this change is the increase in phase noise, which is inherent in the use of TDCs due to the large delay in the inverter circuits. On top of that, variations in the manufacturing processes can affect the performance of these highly-sensitive TDCs.

Such conditions might be tolerable in standard wireless communications, but if used with high-speed communication systems that require highly-accurate transmission of data signals, as in the case of WiMAX systems, reducing phase noise is an imperative.

### Noise Reduction Technology for Wireless LAN and WiMax

To address this need in developing a more robust manufacturing process for TDCs with the capability to suppress phase noise, the technological experts at Toshiba developed a new process for manufacturing TDCs by making use of low-resistance conductors for integrating interpolation circuits. Making use of triple interpolation, the output signal of the frequency synthesizers is split into cycles, thus reducing the phase noise by up to 90 percent. The result is a stable all-digital PLL that is smaller than current analog PLLs, which can be used for mobile WiMAX transceiver systems. 

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# New Gas Turbine Technology for Green Energy Production Launched in China

BY DING DING

**F**or decades, General Electric has been at the forefront of developing technologies and solutions for the energy sector for various economies of the world.

The company continuously invests a great deal in the development of new technology solutions towards this end, including innovative green energy production systems such as their new gas turbines that feature their FlexEfficiency technology.

Harbin Electric Co. Ltd, a leading electric motor manufacturer in China, is working with General Electric to bring this new gas turbine technology to China to support the country's booming energy sector, particularly in its power and co-generation needs. The two companies have already signed a memorandum of understanding (MOU) wherein Harbin agrees to purchase at least four GE 9FB gas turbines from GE that will be used for energy applications to be awarded in certain districts in China.

The entry of GE's FlexEfficiency technology into China will help boost the use of advanced renewable energy systems in the power-hungry nation. The technology is designed to compensate for the variability of power outputs typical in solar and wind energy facilities, thus maintaining a balance between the supply and demand at all times. China is an ideal country to bring the technology into, as it has recently installed more wind turbines than any other country in the world.

## General Electric's FlexEfficiency Technology

GE's new gas turbines combine flexibility and efficiency in power plants, thus the name FlexEfficiency. Solar and wind power plants are known to have variability in generated output depending on the current environmental conditions. The gas turbine



Awie Badenhorst | Dreamstime.com

can compensate for this variability and respond to the fluctuations in generated solar or wind power by rapidly ramping up or down a jet engine burning natural gas.

The system will allow utility companies to deliver power to a certain area quickly when it is needed. In a similar manner, the system will ramp down when power is not needed – resulting in a well-balanced grid. This ability to rapidly vary and adjust its output will make GE's gas turbine a key element that can facilitate the cost-effective integration of renewable power systems to the main electric grid – delivering cleaner and more efficient energy for consumers.

## Applications for New Gas Turbine Technology in China

The entry of GE's gas turbine with the FlexEfficiency technology into China can facilitate the flexible and efficient use of renewable energy resources in the country. Not only will this turbine help meet the regular energy needs of the main electrical grid, it will also be able to offer a significant potential for supplying the co-generation needs of the country.

GE has had a presence in China for over 90 years and has always been at the forefront of providing the steam and gas turbine needs of the country. Working with Harbin Electric, GE's new technologies can help improve the availability and reliability of energy production in China – which eventually will benefit the masses. [\[A-P\]](#)

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## Continued from Page 29

waste will be processed through WTE incinerators, up from its current level of 17 percent.

Another area of focus that will define the future trend of waste management in China is on waste recovery. The Chinese government has recently approved the waste management proposals from 16 ministries, and part of the focus of these proposals includes the use of waste recovery techniques. Recycling rates in Chinese urban areas now currently account for 30 percent, and this figure will increase to 50 percent due to rapid advancements in the country's recycling industry.

As with other developed economies, there has always been a price to pay for industrialization and urbanization. In China's case, that price includes the overwhelming amount of generated solid waste. If not effectively addressed now, solid waste will present a serious problem to society in the future. The Chinese government has responded well to the call, developing and implementing effective waste management techniques and technologies that will benefit the country and others as well. [\[A-P\]](#)

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# High Brightness LED Technology Center Setting Up in Taiwan

BY PETER ALLAN MARIANO

**M**ajor economies around the world, including the Asia-Pacific region, are making a dynamic shift towards clean and renewable energy resources.

These initiatives are well-supported by incentives from their respective governments, particularly with the implementation of energy efficiency and energy saving measures across various segments of society.

A major part of these initiatives is the adoption of energy efficient Light Emitting Diodes (LEDs) for general lighting applications. This is supported by significant developments and improvements in the manufacture of LEDs, particularly high-brightness (HB) LED technologies. A significant step in the manufacture of HB LEDs is lithography, and further developments in this process ensure optimum yield and performance for high-volume HB-LED manufacturing environments.

One of the breakthroughs in this regard

is the introduction of the new Sapphire 100 Lithography System from Ultratech Incorporated, which features their patented Machine Vision System that provides optimum alignment flexibility during the manufacturing process. The company is based in San Jose, California, but has recently announced the establishment of its Asia Technology Center (ATC) in Taiwan. The facility includes an integrated Class 1000 clean room that provides the capability to develop cost-effective and leading-edge process development for scalable HB-LED manufacturing.

## High-Brightness LED Technology

The use of high-brightness light emitting diodes (HB-LED) will provide significant cost-reductions for various lighting applications. Energy-efficient solid-state lighting technologies will play a major role in reducing global energy costs in the very near future, and the use of HB-LEDs will be at the forefront of this global initiative.

However, the manufacture of HB-LEDs requires critical cost reductions to enable the widespread adoption of the technology as an alternative method for lighting. These cost reductions can be achieved by improving productivity and yield improvements, particularly in the lithography process – a key step in the manufacture of HB-LEDs. The design rules required for HB-LED manu-

facturing are tighter than standard LEDs in order to improve the light extraction efficiencies.

The results of these tighter design rules are higher defect densities during the manufacturing process. It is imperative that higher yielding techniques are employed to ensure the viability of HB-LED production for a global commercial scale. Process and equipment improvements have been developed, such as those presented by Ultratech's Sapphire 100 lithography system – to achieve higher yields, increase overall quality and reduce total manufacturing costs.

## The Sapphire 100 Lithography System

Since 1979, Ultratech has been at the forefront of developing advanced lithography products for the production of integrated circuits as well as high-brightness LEDs (HB-LEDs). The introduction of the Sapphire 100 Lithography System will provide HB-LED manufacturers higher operational flexibility and an overall performance advantage while reducing overall costs. The technology is based on the 1500 platform and features a 1X lens design that will provide manufacturers better technology options for their HB-LED manufacturing needs.

The technology will be made available to HB-LED manufacturers through Ultratech's new Asia Technology Center in Taiwan, helping them develop low-cost solutions for their HB-LED manufacturing process. The center aims to assist customers in the product development and technology road maps for new and emerging HB-LED markets in the Asia-Pacific rim as well as other international markets. [\[A-P\]](#)

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from the United States.

Adoption of key foreign nuclear power technologies is not the sole intent of China's nuclear industries, as they are also keen on replicating these technologies for domestic development, and probably overseas sales in the future. This new technology for reprocessing spent uranium is a key step towards this end and may likely put China, and the rest of the world, towards nuclear power independence. [\[A-P\]](#)

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- Nuclear Power Daily [www.nuclearpowerdaily.com](http://www.nuclearpowerdaily.com)

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of the aggressive stance of China with regards to nuclear power generation and the drive towards becoming the global nuclear energy leader in the near future. The Chinese government, through the China National Nuclear Corporation, has made pronouncements that it will invest up to 800 billion yuan (US\$120 billion) into the industry, which will complete ongoing constructions by the year 2020. China is putting more focus on nuclear power safety and is ready to adopt existing technologies from other countries. One such technology is the adoption of the AP 1000, the third generation nuclear power plant technologies developed by Westinghouse Electric Company

# Augmented Reality Technology Development in Korea

BY ANURADHA SHUKLA

**I**t is practically a normal human behavior for someone to sometimes want to escape the reality they are in and see things that are actually not there or do things that normally they could not.

Such are the allures of modern technology, which has advanced tremendously in recent years to the point where it can now actually blur the lines between what's real and not in someone's perception.

Sounds like a new 3D sci-fi film? In some sense it does. However, the technology of enhancing humanity's perception is now being made available through Augmented Reality (AR). It has become one of the hottest new technologies that is fast capturing the imaginations of people worldwide – particularly in countries like South Korea and other Asian nations.

According to new studies conducted by ABI Research, the use of AR has evolved from being a mere marketing gimmick for brands and businesses to one of the most flexible marketing tools in the world – and is forecast to grow from its current market value of US\$21 million to a staggering US\$3 billion by the year 2016. Several Korean companies are now showcasing new developments in this field that will soon be deployed into the mainstream market. The possibilities and applications for AR can be endless and the only limitations will be people's imagination.

## Understanding Augmented Reality Technologies

In its most basic sense, the term AR refers to the use of computer technology to enhance or augment people's perception of reality – by blending together real-world video footage with computer graphics enhancements in real time. It literally blurs the line between reality and what's virtual by enhancing people's perceptions. Such features open new possibilities for a wide variety of applications: from entertainment and engineering to medicine.

The technology behind AR is still relatively young and many experts may tend to disagree on the exact definition of what AR really is. Yet most would agree on the basic elements behind the technology, which



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includes the blending of virtual and real-world images, real time presentation of this blended image, and the use of computer and digital technology to make this all work.

## Augmented Reality Technology Applications

The following describes some of the features that recent developments in AR have exhibited and the potential applications of what these features can do:

- **Facial Recognition/Detection/Tracking** – AR technology can detect and recognize a person's facial features such as the eyes, nose and mouth from other images in a particular real-time video footage. Some forms of these features are now made available in new digital cameras and are similar to the face recognition technologies used when tagging names to photos on popular social networks
- **Facial Similarity Search** – a particular photo can be scanned and AR technologies can analyze the photo and search a large database for the nearest person that exhibits the most similarity.
- **Age and Gender Classification** – AR technologies can also be used to analyze a person's facial features and structure and be able to determine the person's gender and age.
- **Image Recognition and Matching** – The technology can also recognize and detect objects and images and match them with the corresponding image in a database. A user can simply scan the object or a logo and the database can give back data about prices, nearest locations, coupons and other relevant information.
- **Blink Detector** – AR technologies can now detect how much a person blinks each eye. The feature can be of practical use for digital cameras, with shutters triggered in conjunction with the way people blink. The technology can also be used for Safe Driving Management Systems that alert drivers whenever they become

too drowsy while operating a vehicle.

- **Smile Detector** – Some of the latest digital cameras are equipped with AR technologies for smile detection, which can determine not only if a person is smiling, but also how much he or she is smiling before automatically triggering the shutter – ensuring that everyone is smiling their best before the shot is taken.
- **Head Tracking** – AR technologies can detect and track the 3-dimensional movement and direction of a particular face. A user can augment a face being captured in real-time with additional graphics, or it can detect and capture the face of a new friend for addition to your social network.
- **Object Tracking** – In a similar manner, AR technologies can also detect and track moving objects, which not only improve the capabilities of digital cameras for taking motion shots, but also help users gain additional information about an object they just passed by while driving or riding a bus.

## Emerging Augmented Reality Technologies in Korea

Many people have grown fascinated with the great potential and possibilities of Augmented Reality technologies and many believe that this will be the standard of mobile applications in the near future. In South Korea, several companies have already been engaging in AR technology development for several years now, and many have come up with amazing applications that will soon be making it big in the mainstream mobile and online markets.

One such company is Olaworks, an AR company based in Seoul that has developed two main AR technologies and which already has more than 60 patents to its name. These technologies include ScanSearch, which uses computer vision and sensory technologies to perform mobile searches, and Olaface, which allows device users to detect, recognize, identify, and track people and objects in photos

and videos in real time.

Another Korean company that engages in AR technologies is MobileBus, a company that engages in marker-based augmented reality mobile games. A user simply activates the app on the device and the camera is focused on a sheet of paper with unique patterns or bar codes. 3D characters soon appear on top of the device screen. Users can download MobileBus games and applications onto their mobile phones and devices. The required markers are sent to the user's email for download and printing. These games are becoming so popular that Samsung phones sold in China are now pre-loaded with these games.

One of the issues and challenges faced by AR before it can be adopted more extensively into the mainstream market is consistency between platforms. In Korea, AR applications are being standardized for the Android platform, as it dominates the local market. Another challenge that could hinder AR's entry into the mainstream is consumer awareness – an important element required to drive user uptake and adoption of the technology.

## A Unified Korea – Through Augmented Reality

Gaming and entertainment applications for AR are not the only focus in Korea, as an ambitious ongoing project is currently in motion aiming for a Unified Korea – at least in Augmented Reality. Created by New York-based artist Mark Skwarek, the Augmented Reality Korean Unification Project provides a looking glass where users can view an alternate reality of a Unified Korea: a pre-division image of the country without the demilitarized zone.

Using AR technologies, the application removes

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addressed and solved properly. These include the implementation of effective safety measures that should be incorporated in the railway department's daily routines and operations.

The Chinese high-speed railway system involves the use of advanced technologies that may not have been extensively used before. As such, there is a need to define higher levels of safety, management, operations, and service protocols to ensure the safety and welfare of commuters. No matter how high-tech or advanced any transport system is claimed to be, without the foundations for safety of all passengers, the system will never gain the trust of commuters – and they will never ride these trains. [A-P](#)

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# Indonesia's Thousand Island Underwater Cable Project Nearing Completion

BY ANURADHA SHUKLA

**T**he Thousand Islands regency under the Jakarta Provincial Government has been a major tourist destination for the region, attracting anywhere between 15,000 to 20,000 local and international tourists every day.

The group of islands is divided into the northern and the southern parts, but only the southern area currently enjoys electricity supplied via underwater cables.

To address the issue of electricity supply to the northern island group region, the Jakarta Provincial Government has invested up to RP 103 billion (US\$11.7 million) to install underwater electrical cables and connect the northern part to nearby Java for electricity. The project is set to be completed by the end of October 2011, finally giving the rest of the Thousand Island residents 24-hour access to electricity.

## The Thousand Islands

Locally known as Kepulauan Seribu, the Thousand Islands is a group of 105 islands that spreads north of Jakarta and into the Java Sea. More than 30,000 people are living on the islands, with the greatest population concentration located on 11 of the islands. The rest are either uninhabited or are used primarily as resort destinations.

With tourism as the major income source, the Thousand Islands also have big potential for a maritime economy, prompting the government of the Jakarta Special Province (DKI Jakarta) to improve the utilities serving the islands for the welfare of its local residents. Of course 24-hour access to electricity was one of the major concerns residents in the islands had been struggling with for years.

The more than 9000 residents living in the southern sub-district and the 20,000 people in the northern sub-district currently rely on diesel-powered generators for electricity. These generators provide residents with a maximum 10 to 12 hours of available power each day. There were plans for solar power projects which

were opened up for Chinese investors, but such projects will only be implemented in limited pilot areas in the district. Underwater cables bringing electricity from the main island remains the most viable option.

After long delays caused by cable damage under the sea, electricity was eventually installed in the southern sub-district in 2008 as a result of a collaborative effort between DKI Jakarta and the state utility firm PT Perusahaan Listrik Negara (PLN). The 3,140-meter underwater electricity network makes use of a prepaid-based system to distribute electricity for the residents. The same system will also be implemented once the northern phase of the underwater project is completed.

## 24 Hours Electricity – Finally!

Despite the relatively expensive investments poured into the underwater project, the Jakarta Special Provincial government remains positive that the cable installation will proceed and be completed on schedule – finally providing 24-hour electricity to the people of the northern sub-district by the start of 2012. The completion will occur just in time to cater to the growing needs of a booming tourism industry in the islands.

Aside from the provision of 24-hour access to electricity, the Jakarta Special Provincial Government is also getting ready to upgrade the community health services available in the Thousand Islands. This includes the provision of better maternity hospitals and other hospitalization services. These services will be provided first in the 11 major residential islands in the regency, and will gradually be distributed to the other minor residential and resort islands in the group. [A-P](#)

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# Korean Pharmaceuticals

BY SON-U MICHAEL PAIK

**South Korea was reclassified as a developed market in 2010 by industry consultants IMS Health, and ranked 15th among global pharmaceutical powers (2010).**

In Korea, both Western and Asian medicines are offered at over 80,000 healthcare centers throughout the country, and the market is highly fragmented, with close to 300 pharmaceutical companies and approximately 500 wholesalers. With increasing insurance coverage, higher drug prescription levels, and an aging population, the South Korean pharmaceutical market is set to grow steadily.

Total medical expenditures are rising as well. Healthcare spending is increasing rapidly, and accounts for 6.5 percent of GDP, an expense primarily carried by the National Health Insurance (NHI) system and the Medical Aid Program. The NHI covers 97 percent of all citizens, with financing help from employee/employer contributions, while the Medical Aid Program is a public assistance initiative.

As South Korea is projected to become the most aged country in the world by 2050, and with the government intent on expanding public health insurance benefits over the next decade, budgetary pressures will continue to grow.

This article introduces some of the issues facing the development of this industry in Korea, and the industry lobby that's coordinating some of the efforts to overcome them.

## Bio-Similars

The Samsung Group vowed to invest 500 billion won (US\$4.6 million) in biosimilars by 2014. Celltrion, a Korean company that pioneered local production, now boasts of the largest market cap not only among pharmaceutical firms but also among the KOSDAQ-listed entities.

Does this mean that the Korean pharmaceutical industry has come of age, or are these simply signs of incremental change in a traditionally conservative industry?

Generics are copycats of innovative drugs whose patents have expired, and biosimilars are generics for biologics or biotechnology drugs. Because of the complicated structure of protein-based biologics, it is impossible to create identical copies, and this is why biotech copycats are called bio-similars.

The Korean government recently released (yet another) blueprint to foster the industry, but it remains to be seen as to whether or not this blueprint will be executed rather than remaining aspirational.

Much of the biosimilar industry depends on the U.S. market, where biotechnology drugs, including arthritis-treating



Dariusz Kopestynski | Dreamstime.com

Enbrel and Humira, will see their patents expire between 2012 and 2019. According to Datamonitor, the U.S. will account for 72.2 percent of the worldwide biosimilar market in 2013 and 82.9 percent in 2014. Europe will see its share plunging from 76.3 percent in 2012 to 26.4 percent in 2013 and 16.3 percent in 2014.

## Dropping Retail Prices to Push Quality Improvements?

On August 11th, the government announced that retail drug prices will be expected to fall about 17 percent on average beginning next year following a set of reforms.

Health and Welfare Minister Jin Sooh-ee also announced a set of measures to cut medicine prices and improve the pharmaceutical industry. "We will revise related laws and regulations to have the new system take effect in January next year. When it is implemented, expenses for drug purchases will drop by 2.1 trillion (US\$2 billion) won per year," Jin said during a meeting of the health insurance policy review committee.

The government will abolish a system fixing different prices for generic drugs with similar efficacy according to the order they are listed on health insurance. After the patent of an original drug expires, the price cap of the first-listed generic drug used to be set at 80 percent of that of the original, and the prices of the second, third and next-listed drugs were lowered gradually to 68 percent.

"Instead of the gradual price system, we'll set one cap for drugs having the same ingredients (regardless of the listing order) at 53.5 percent. Pharmaceutical firms will be able to set their own prices under the price ceiling," Jin said. "We believe drug manufacturers will then compete to improve the quality of their drugs instead of trying to list their products earlier than others, as they do now."

The prices of already-listed generic drugs will also be collectively cut to 53.5 percent of those of the original drugs in March next year.

If the system is adopted as planned,

the prices of 8,776 drugs out of the total 14,410 listed on the national health insurance will go down by an average of 17 percent and by as much as 33 percent, according to the Ministry. In addition, the Ministry will seek to revise related laws so that it can reduce the amount of money that must be given to hospitals and drugstores by the national medical insurance system.

"All these measures will reduce the annual expenses for drug purchase by 2.1 trillion won (US\$2 billion), 600 billion won paid by individuals and 1.5 trillion won from health insurance. The ratio of expenses for drug purchases among the total health insurers' pay will also be lowered to 24 percent from the current 30 percent," the minister said.

The government also announced measures for drug manufacturers, including supporting their research and development and raising funds. These price-cutting steps, designed to relieve the financial burden of medical costs, have drawn fierce protests from drug-makers.

Pharmaceutical firms have strongly protested the scheme, with some 100 officials from the firms staging demonstrations at the Korea Pharmaceutical Manufacturers' Association building in southern Seoul.

"The ministry is pushing ahead with the unreasonable policy, which will result in 2 trillion won (US\$2 billion) in losses for the pharmaceutical industry. We'll take every possible measure to prevent it," the group said in a statement.

## The Korean Pharmaceutical Manufacturers' Association

The Korea Pharmaceutical Manufacturers' Association was founded in 1945. With about 190 member companies, the KPMA expanded R&D investments since the implementation of the Drug Substance Patent Law in 1987 to place Korea in the position of the world's 10th country to commercialize new molecular entities in 2003. Up until the end of 2008, 14 new molecular entities were developed in the country, with 45 projects from 29 companies undergoing clinical studies, 61 potential candidates currently under new drugs development phases and 40 cases of licensing out in 14 countries.

In order to manufacture safe medicines of the highest quality, 65 companies collectively invested 2 trillion won (US\$2 billion) to upgrade manufacturing plants in compliance with c-GMP standards. In addition, to increase credibility in the international pharmaceutical market, the Fair Competition Committee was established and a Hotline Reporting Center for code compliance complaints was activated to escalate efforts in making all transactions as fair as possible.

The market size of the Korean pharmaceutical industry in 2000, gauged by values of drugs manufactured, was 7.89 trillion won (US\$7.3 billion), and the size grew substantially to 13.43 trillion won (US\$12 billion) in 2007. Such a significant increase is attributed to the rapid aging of the population, external and political factors that favorably affected the industry as well as continuous investments in R&D

and GMP upgrades.

The KPMA aims to strengthen collaboration of Korean companies with pharmaceutical companies already having experience in product launches in the overseas markets.

## Korean Generics

Readers may be surprised to note that Korea is one of the top fifteen pharmaceutical markets in the world, with US\$7.8 billion in sales in 2005, of which generic drugs accounted for 15 percent of the market (foreign companies' share of the Korean market is between 25-30 percent). Currently, there are approximately 250 domestic pharmaceutical companies, with Dong-A, Yoohan, Hanmi, Green Cross and Choongwhe Pharmaceuticals leading in terms of sales.

Traditionally, Korean pharmaceutical companies have manufactured and marketed mostly generics. Generics are generally defined as drugs with the same active ingredients as the original patented formulation with identical or similar bioequivalent pharmacokinetic and pharmacodynamic properties. Thus, the Korean pharmaceutical companies invested less in R&D and innovative drugs, but rather relied upon blockbuster brand-name drugs, mostly those of foreign companies, that were facing the imminent loss of patent protection. With a strong sales force and a highly protective government, domestic pharmaceutical companies gained great market share and sales revenues over the years by manufacturing and selling such generics rather than originals with patents.

It is said that the Korean government protects the domestic generic industry by discriminating against foreign pharmaceutical companies' entry into the market. This not only includes tax barriers, but also limitations on price reimbursements under the National Health Insurance (NHI) system, which has been continuously criticized for its nontransparent and unpredictable processes. NHI, as the mandatory universal health insurance scheme of the nation, determines the price at which it will reimburse a company for a certain drug, if it at all decides to reimburse, based on cost-effectiveness and need. With original brand name drugs, the NHI often has a ceiling price that manufacturers usually have

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the barriers, checkpoints, walls, guards, and weapons currently existing in the Demilitarized Zone – an area that has come to signify and represent a divided Korea. The images are then replaced with 3D foliage similar to what the region might have looked like before the war. The project aims to provide hope for a unified nation by allowing people to look at the chasm between their nations and give them a sense of what it would be like without the conflict.

## Augmented Reality Technology Development in Other Asia-Pacific Countries

While AR is making waves in Korea, other countries in the Asia-Pacific region are also picking up the pace and started showing interest in AR technologies. This includes China, particularly in Beijing, where recent augmented reality events took place. The events highlighted new technologies and development in AR in the country as well

## DRUGS THAT KICK BACK

According to the Ministry of Health and Welfare of South Korea, it has received more than 100 tip-offs about illegal kickbacks since November 2010, when the relevant law was revised to toughen punishment on those involved in such practices. The amended law has made doctors and pharmacists, as well as pharmaceutical firms, subject to punishment if they are found to have been involved in illegal deals.

It was intended that this dual punishment clause would reduce kickbacks significantly, but the revised law has merely led drug companies to employ methods that are more difficult to detect. As a result, more intensive investigation has become necessary to crack down on kickbacks.

Now, the Seoul Central District Prosecutors' Office has formed an investigation team to combat abuses, with experts from all related fields, including the Health Ministry, the Korea Food and Drug Administration and the Health Insurance Review and Assessment Service.

High drug prices are a main cause of deficits in the state-run health insurance scheme. According to the National Health Insurance, drug expenses accounted for 29.6 percent of total expenditure in 2009, much higher than the OECD average of 17.6 percent. In addition, drug spending tends to grow more rapidly than overall medical spending in Korea.

almost no leverage to bargain for, since a drug not covered under the NHI is simply not reimbursable under the nation's health care system.

This is why the recent announcement regarding a 17 percent reduction in drug reimbursements (for nearly 9,000 distinct items) can be enforced.

## Korean National Health Insurance

as the various companies looking into these new technologies and exploring the enormous possibilities.

Many of these AR companies are attracted to doing business in China as the increasing wealth and booming economy, as well as the massive population where potential customers will be coming from, is providing a new frontier of opportunities for new business ventures and projects. The Chinese people's appetite for new and innovative technologies, particularly on the latest in mobile devices, make them ideal target markets for emerging AR applications.

China, and the rest of Asia is still in its infancy stage when it comes to AR technology penetration. Just like in Korea, the key to success for the AR market is to educate the people regarding the potential and benefits of AR technologies for business, commerce, and socializing with other people. Many are now planning to open up local offices in the region, and it will only be a matter of time before new applications and devices focus-

The National Health Insurance law was passed in 1963. This program started as a pilot project. Its content and the form later became pillars of Korea's health care system. By 1977, coverage became compulsory, protecting employees of large industrial companies, public employees and private school teachers. In 1981, the coverage was extended to companies with more than 100 employees, and three years later firms with 16 or more workers were able to join the program. The cost of health insurance was shared equally by employees and employers, and people without employers were not able to participate in the system. When the first democratically elected government came into power in 1988, it offered the National Health Insurance benefits to the entire population, including farmers and the self-employed. By 1989, nearly all Koreans had extended medical insurance coverage.

On the other hand, domestic pharmaceutical companies have enjoyed many years of prosperity by manufacturing and marketing mostly generic drugs. They were able to do so under intense government protection with high market entry barriers and elevated generics prices, which are considerably higher than in most other countries, generating an imbalance between the incentives to develop research intensive products and simply manufacturing generics based on off-patent blockbuster drugs.

Further, despite recent crackdowns on drug rebates to health professionals, both domestic and foreign-owned pharmaceutical companies are notorious for providing kickbacks to providers, who are mostly doctors. Domestic companies, however, may be considered to have advantage with years of sales "know-how" within the industry.

## Free Trade Agreements

Finally, with the advent of Free Trade Agreements with the EU, the U.S. and other potential countries, many foreign pharmaceutical companies are anticipating market entry requirements to ease and for the Korean government to abandon its discrimination between foreign and domestic pharmaceutical companies. Many anticipate Korean pharmaceutical companies to invest more in their R&D and manufacturing capabilities to meet international standards. [A-P](#)

ing on augmented reality technologies are made available in the local market. [A-P](#)

## FURTHER READING:

- BBC [www.bbc.co.uk](http://www.bbc.co.uk)
- Technode [www.technode.com](http://www.technode.com)
- Globalpost [www.globalpost.com](http://www.globalpost.com)

## COMPANIES MENTIONED IN THIS ARTICLE:

- ABI Research [www.abiresearch.com](http://www.abiresearch.com)
- Olaworks Inc. [www.olaworks.com](http://www.olaworks.com)
- MobileBus [www.mobilebus.co.kr](http://www.mobilebus.co.kr)

# Tan Yinglan

By Victor Fic

Tan Yinglan was educated at Harvard, Stanford and Carnegie Mellon. He is a Kauffman Fellow at the Center of Venture Education, and serves on the boards of innovative growth ventures and venture capital funds in Asia. Yinglan was the first director of 3i Venturelab China, a joint-venture between private equity firm 3i and INSEAD. He is an Assistant Professor at Nanyang Business School and is also a member of the World Economic Forum's Global Agenda Council on Fostering Entrepreneurship. He gave this exclusive interview to Victor Fic, our special correspondent for politics and economics.



**Why did you go to China as a business expert to start with?**

In 1999, I was air dropped into China for a joint venture linking a private equity firm called 3i and INSEAD, the international graduate research school. The hi-tech parks in Beijing's Zhongguanzun in Shanghai's Zhangjiang Science Park were my turf where my daily agenda had me meeting with major entrepreneurs. It was the start of Chinese consumer demand, and I saw hungry Chinese entrepreneurs capitalize on it.

**You met Jack Ma. Could you recall some of his insights for us?**

Jack Ma is now famous as the founder and CEO of Alibaba, the Internet portal for buying and selling goods in China. Ma explained to me in 2007, "We had no money... technology [or] plan. Every dollar we used very carefully."

**Why do you deem that a pivotal year?**

The year 2006 was when China's combined venture capital (VC) investment hit

US\$1.78 billion, and it took the world's number two spot after the United States. The latter's venture capital investment was at US\$25.6 billion. But VC investment in China soon leaped close to 2.5 times to US\$4.4 billion in 2010, while America's fell to US\$21.8 billion.

**What is the proof that Chinese founders are zooming and changing the world?**

Start with 1999. They have led over 46 Chinese firms to IPOs on NASDAQ, an unheard-of total of start-ups, created a growing group of billion-dollar players and high-tech companies such as Ctrip, Kongzhong and Baidu. Now the locus of global high-technology is migrating across the Pacific.

**Is much written about innovation in China?**

Many Asian governments deem it a pressing issue, but there is little quality literature about company strategies, their experiences and skills, experimentation, risk management, and lessons for others. A lot of people say China is just about low cost manufacturing and cheap reproductions. I disagree. The Chinese do innovate. They just innovate differently.

**You say that Chinnovation leaders combine several of eight cardinal skills starting with revenue focus. What is that?**

Compared to Western rivals, they carefully focus on revenues. Facebook is the biggest American social networking service with 500 million users versus 630 million for China's QQ. The former just recently became profitable. QQ boasts a US\$1.23 billion profit. In China, the investment strategy is very different, because VCs opt for later-stage deals and invest in later rounds with less risk and a smaller upside.

**They are also rapid, as you observe.**

Nick Yang co-founded KongZhong Corporation in March 2002 and listed it on NASDAQ (Nasdaq: KONG) in mid-2005. One leader jumped when Michael Jackson died and won the rights to construct Neverland in China.

**And they are driven by customers... how?**

What the customer declares as a requirement goes. Chinese innovators are very localized and aware of customer needs. They know the greater value resides in new consumer-based products. They exploit China's cost advantage in niche markets to boost their process flexibility and honor their customer's needs at low prices.

One, Facebook in America quickly begets 20 copycats in China, but innovation is not low-value replication. Zany Zeng of Xiaonei, China's Facebook, lamented the "me-too" reflex. When Facebook altered its homepage, so did Xiaonei - blindly. Chinese entrepreneurs mimic Western business models. But copiers usually fail if they do not subsequently innovate. We also see companies like e-Hi innovate by remixing business models from various companies i.e. Carey, Hertz and Zipcar.

**Also, how do restrictions inspire**

**innovation?**

When Facebook was forbidden in China, it caused half-a-dozen clones. Farm workers must wash both potatoes and clothes. So, Haier produced a popular dual-use machine.

**What does remix times three mean?**

Breakthroughs often hail from combining ideas. QQ's easy user interface melds Cyworld-like avatars, ICQ instant messaging, and Hangame. Rural China suffers

from rodents, so Haier remixed existing features for a refrigerator with metal plates and bite-proof wiring.

**How does China have tangible and intangible raw materials?**

One example is human capital. Between 2004 and 2009, China was the world leader in high-expectation entrepreneurship - i.e. creating over 19 million jobs. Of the working age people, over 4 percent are in such entrepreneurship, versus 1.5 percent in the US. But Chinese graduates know theory without experience.

I refer to China's venture capital and purchasing power as financial capital. In 2009, there were over 420 venture investments in China for a total of US\$ 2.70 billion. Combined retail sales of consumer items will hit US\$ 2.2 trillion in 2010.

**Why do some entrepreneurs strive for a Western look?**

Chinese equate Western products with social status and quality. So the casual-wear clothier Metersbonwe uses Western models. A McKinsey survey concluded 90 percent of Chinese think it is a foreign company!

**What advice can you offer multi-nationals?**

Promote your flagship brands but remind them for Chinese consumers' tastes. Alibaba combined elements from Amazon, eBay, and Rakuten. Specifically, it targeted its rivals' weak spots by understanding local requirements. For example, regarding eBay, Alibaba launched Taobao. First, this allowed users to list for free compared to eBay's model that required them to pay to list their items. Second, Alibaba advertised on TV, while eBay advertised on the web.

**What is the role of the Chinese state here?**

Commerce Minister Chen Deming said that China will improve its innovation and government procurement policies to boost innovation. Beijing has also smartly thought long-term. It has four national multi-billion-dollar, 25-year horizon, game-changing investments: two in the transport sector, one in life sciences, and one in automotive manufacturing. The financial commitment and long-term planning tests the country's public-private capability.

**So you are optimistic about the future in this area?**

One reason is that we see signals of internally-driven growth. China now has about 500 million Internet surfers with 700 million more to appear by 2015. The Internet opportunities in emerging Asia might reach about US\$80 billion by then.

Note the complex, growing tie-ups. Shenzhen-based Yosion's Apple Peel 520 will make any iPod Touch into a cell phone. China has comparative advantage in battery technology, so we see its batteries merged with U.S.-system electronics. (AP)



Yinglan at Research, Innovation, Enterprise Council Meeting on July 1, 2011.



Krysqek | Dreamstime.com

## K-pop: South Korea's New Economic Growth Engine

BY SUN BANG

South Korea's highly-developed IT industry is a technical marvel, and Korea was the first emerging nation to host the G20 Summit, when the group of 20 top world leaders gathered in Seoul in 2010 to talk about the global economy. In addition to the IT economic flow, there has been a cultural movement known as Hallyu, or the Korean Wave.

By the early 2000s, after the 1997 Asian financial crisis, the Korean government had begun targeting the export of Korean popular culture as a new economic initiative. President Kim Dae-jung established the foundation for this cultural industry promotion in 1999 by allocating US\$148.5 million towards it. Since then, Koreans have provided their own twists to foreign styles and forms by blending and adding their traits and unique flourishes in innovative ways, combining the best of their cultural past with a dynamic future in nearly every arena.

Korean popular culture has subsequently become one of the most beloved pop cultures among Asian fans over the last 10 years. Many people have also recently come to see Korean popular culture as new and trendy, as well as containing traditional Korean values and sentiments.

The rise in K-pop popularity and the dissemination of Korean popular culture throughout Asia is unprecedented and fascinating. Over the past decade, South Korea, with a population of around 50 million, has become the hub

of Asian culture, churning out entertainment that is coveted by millions of fans stretching around the globe. For example, Girls' Generation, comprised of nine young pop singer/dancers, has become a YouTube sensation, and their song Gee has been seen over 50 million times. Their popularity has led to fans in Paris and Los Angeles, where crowds emulate their idols' dances and demand that they hold concerts there.

K-pop has the potential to become a new economic growth engine, by fueling exports and improving the country's overall image abroad. It has moved beyond Asia and started to make inroads into Europe and North America, where it is generating positive publicity that may translate into more exports down the road. Yonhap news agency recently cited a South Korea-based newspaper as saying, "The popularity of groups such as Super Junior, Girls' Generation, TVQX, and Wonder Girls can boost South Korea's national image and make it more competitive in the cultural arena."

SM Entertainment and other similar agencies have succeeded in designing and seeding Korean pop culture in

foreign markets to expand their global appeal. These talent agencies resemble the old Hollywood studios in terms of their organization and contractual relationship with their stars. Each have hundreds of young talents who can sing, dance, act, and speak foreign languages.

K-pop has been popular in countries such as Japan, China, and many Southeast Asian countries for many years. It is no longer the exclusive property of cult fans but is instead growing popular among a broader market. The Korea Trade-Promotion Agency (KOTRA) announced the results of a recent survey after its overseas Korean Business Centers in 94 regions studied Korean Wave trends and K-pop abroad. KOTRA identified six countries including Uzbekistan and the Philippines where the Korean Wave is in its growth stage, indicating huge popularity but with sales of related products in the initial stage.

At this point, the local music market needs a new digital music distribution platform, such as a Korean version of iTunes, not only to allow purchasing and sharing of music, but also to put K-pop into a more polished stage. 

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## Mountains of South Korea: Mt. Seorak, Mt. Halla & Mt. Jiri

BY JIN-SUK YANG

About 70 percent of the Korean Peninsula is mountainous. Therefore, it is but natural that Koreans love to go mountain hiking in the spring and fall. Most mountains have well-paved paths and thus many people can be found hiking on any given day. 'San' means 'mountain' in Korean. Most of the nation's mountains are branches of the Baekdu-daegan mountain range, which starts at Mt. Baekdu in North Korea and stretches down to Mt. Jiri in the South. The three most scenic mountains to visit are Mt. Seorak on the east coast, Mt. Jiri in the southern part of the country, and Mt. Halla on Jeju Island off the southwest coast.

### Mt. Seorak

Perhaps the most famous mountain of South Korea is Mt. Seorak, known in Korean as Seoraksan, a site most Koreans visit at least once in their lifetime. Seoraksan National Park in Gangwon Province is located at the far northern end of the mountain group and is known for its breathtaking valleys and waterfalls. Each spring, the park holds its annual flower festival, filling the air with sweet fragrances.

The mountain was named Seorak because the snow would not melt for a long time, keeping the rocks in a permanent state of white. In November 1965, the Seorak Mountain district was designated as a natural monument preservation area.

Then in December 1973 it was designated as a park preservation area, and in August 1982 as a Biosphere Preservation District by UNESCO.

The park is spread across four counties: Sokcho, Inje, Goseong and Yangyang. The highest peak is Daecheongbong. To the east is OeSeorak and to the west is NaeSeorak, which is divided again into North NaeSeorak and South NaeSeorak. North NaeSeorak is composed of Bukcheon, which flows to Ingyecheon and Baekdamcheon. There are numerous valleys in NaeSeorak. When tracking the Baekdamcheon valley where all the streams meet, travelers will reach Baekdam Temple, which is known for its beautiful scenery. Upstream there is Gayadong valley and Suryeomdong valley, and past Yeongsiam

and Mangyeongdae there is Madeungryeong ridge (1,327m), which leads to Seorakdong.

Through Suryeomdong valley travelers will also come across Waryong Waterfall and Ssangpok. Further up is Bongjeonggam (1,224m sea level). Once travelers arrive at Daecheong peak they can view the magnificent mountain range. The sunrise viewed from the Daecheong peak is spectacular and should not be missed. South NaeSeorak directs the valley from Oknyeotang area to Hangyeryeong. Dae-seung Waterfall, north of Jangsudae, is the most beautiful site of NaeSeorak, which is 88m high. South of Yongdaeri valley is the twelve fairy bathing spring, Oktang Falls, and Yongtang Falls, along with several other traditional relics.

### Mt. Jiri


Mt. Jiri, or Jirisan, is located in the south of Korea. The mountain rises to 1,915 meters and is located in a designated national park of the same name. Jirisan National Park is the largest in Korea. Boasting breathtaking views, Jirisan National Park was the first Korean park to be designated as a national park in 1967. Its glorious mountain range extends across three provinces and five cities. The magnificent mountains and exceptional scenery make this one of the most famous mountains in Korea.

Roughly 1,915 meters above sea level, Cheonwangbong Peak is considered by Korean lore to be the pillar of heaven. Jirisan also features Banyabong and Nogodan, and is home to over 10 famous temples. There are over twenty summits and valleys, such as Baemsagol Valley, which are part of the 'Jirisan Ten'. As this is the location of the most well-preserved virgin forests in Korea, the majestic and mystical mountain is highly revered. There are many species of animal and plant life, and as it was the first place to cultivate tea in Korea, herbal medicine cultivation still flourishes here. Jirisan was also where the Buddhist culture prospered, and there are many cultural assets here, such as Silsang Temple (National Treasure No. 7), Baekjagam and the Three-Story Stone Pagoda (National Treasure No. 26). These regional cultural assets and the superb sceneries of nature give visitors a unique taste of local history and culture. The weather is temperamental and only 80~100 days out of the year are clear and sunny, but the mist and fog create rare, unparalleled scenes of beauty not found anywhere else.

### Mt. Halla

Another popular mountain, Mt. Halla, or Hallasan, is located on the island of Jeju, about 80 kilometers south of the Korean peninsula. It is the highest mountain in South Korea, and in 1970 it became Hallasan National Park. Mt. Halla, a shield volcano, practically constitutes all of Jeju, and it is famous for its beautiful scenery in all four seasons. There is a lake on top of the mountain called Baengnokdam, which translates to White Deer Lake. Many plants and animals that have been selected as national heritage items call this mountain home, and tourists can experience the beautiful diversity of nature there.

Hallasan stands tall in the middle of Jeju Island. It is also called Yeongjusan, meaning a mountain high enough to pull the galaxy. Hallasan is widely acknowledged by scholars for its research value. Designated as a National Park in 1970, there are 368 parasitic volcanoes called Ohreum around Hallasan. From its warm areas to its cold areas, Hallasan is famous for its vertical ecosystem of plants. Over 1,800 kinds of plants, 3,300 species of insects, and 4,000 species of animals are known to exist around the Mt. Halla area. Hallasan is a short climb, less than 10km in length. It is possible to reach the peak and come back down in one day. But the weather conditions often change, and there is a lot of wind, so visitors must be well-prepared before going up the mountain.

With Korea being gifted with these beautiful mountains, it is but natural that thousands visit these mountains every year from all over the globe. 



Q&A

# Erika Andersen

By Victor Fic

Erika Andersen is the founding partner of Proteus International ([www.proteus-international.com](http://www.proteus-international.com)), a consulting and training firm that helps client organizations clarify and achieve their envisioned future. She coaches and advises the senior executives of leading companies including GE, Time Warner Cable, Madison Square Garden, and NBC Universal. Erika authored 'Growing Great Employees: Turning Ordinary People into Extraordinary Performers', and 'Being Strategic: Plan for Success; Outthink Your Competitors; Stay Ahead of Change'. She is the author and host of 'Being Strategic with Erika Andersen' on Public Television, and she blogs at [erikaandersen.com](http://erikaandersen.com) and at [blogs.forbes.com/erikaandersen/](http://blogs.forbes.com/erikaandersen/). She gave this exclusive interview to Victor Fic, our correspondent for economic and political issues.

## Tips on Career Strategies



Publicity shot for her 2010 Public TV Show

**You observe that the US's 9 percent jobless rate is causing many young professionals to forgo career planning. Why are they reluctant?**

I believe they assume – incorrectly – that the high unemployment rate implies that there “aren’t any good jobs out there,” and so it’s futile to think about creating the future they want for themselves. They assume – again wrongly – that their only option is to hold on to the job they have.

**You warn them against making negative assumptions that reinforce a bad situation – meaning?**

Let me expand on my previous ideas. If you assume that the high unemployment rate means that looking for a new or better job is a worthless effort, doomed from the start, then you’ll stay in your low-end job, or not look for a job if you’re out of work. If enough people make these assumptions, it will tend to keep unemployment high, and workforce skill levels low.

**So the nation feels the collective impact of the persons who give up?**

Yes, I think that’s right. In fact, I think it’s one of the ways in which the media coverage of the recession has hurt us. Economic difficulties make for more com-

pellent stories than economic successes, unfortunately, and so that’s where the media tends to focus. People believe what they read and hear, and it affects their behavior as I’ve noted above. And I think it also affects company executives who are deciding whether or not to expand their operation. They think — “Wow, if the economy is so bad, I’d better not hire or invest.” It can actually extend the negative conditions.

**Your method starts with psychological techniques such as self talk... what is this?**

Self-talk is a simple name for that interior monologue inside everyone’s head. You know you talk to yourself, right? Don’t be embarrassed — everyone does! Sometimes our self-talk is harmless: “I’m tired of standing in this line,” or “Wow – that guy is tall!” But all too often, it’s not. It can say negative things that sabotage our confidence and efforts. For example, say you’ve decided to ask your boss for a raise. Imagine as you prepare to enter her office that your interior voice warns: “Don’t be ridiculous – who are you to ask for a raise? You’re just not that good. And in this economy, there’s probably not any money in the budget to pay you more anyway. Cancel the meeting!” Now, if anyone else repeated that, you would not consider that person your friend! But when we say those words to ourselves, we tend to believe it. And imagine having

that monologue in your head during your conversation with your boss. It would be nearly impossible to remain confident and calm. You’d most likely be nervous, distracted, and apologetic. Negative self-talk all too often becomes a self-fulfilling prophecy: you tell yourself you won’t succeed, which causes you to behave in sub-optimal ways so you fail.

**So how to break that downward spiral?**

Fortunately, you can manage your self-talk and not be its victim. In the raise situation, when you notice you’re saying those negative, self-defeating words to yourself, you can talk back. You can think to yourself, “Wait a minute. My boss has told me I’m a valuable employee. I have a lot more responsibility than I did when I started – and they’re still paying me the same wage. I’ve helped our company show a profit, even during the downturn. I deserve a raise.” I predict with that self-talk you’d walk into your boss’ office with a quiet pride and confidence much more likely to create the outcome you want.

**Does it help to first concretely identify one’s achievements at the company as evidence and to make that the center of the pitch? How about sending in a memo first that quantifies or directly shows one’s successes before asking for the discussion?**

Thinking through your work accomplishments ahead of time absolutely helps before asking for a raise. It will support your revised, hopeful self-talk. I wouldn’t necessarily suggest sending the memo first, though. It could come off as confrontational or aggressive. In most situations, I think it is more compelling to talk through your achievements face-to-face with your boss.

**You stress the idea of self-direction and creating the career you most want – is that the most important attitude?**

I don’t know if it’s the most important attitude, but in my experience it’s very important indeed. I’ve noticed that some people take the time and the effort to clarify what’s important to them professionally, what they’re good at and most passionate about. That clarity allows them to take the best advantage of oppor-



Erika (center) talking with Proteus colleagues

tunities because they recognize when a particular chance will move them where they want to go. There’s a wonderful quote from a guy named Branch Rickey, who was the US Commissioner of Baseball in the 1930s and 40s: he said, “Luck is the residue of design.” Meaning, we look at some people and think, “Wow, that person has all the luck – great opportunities just fall into his lap!” But it’s more likely that person has “designed” his life, getting clear enough about what he wants so that he can recognize and take advantage of opportunity. But to others, it looks like luck.

**Map-making seems to enter the picture because you must identify your starting point.**

That’s a great insight – knowing the future you want is like map-making. You get clear about your starting point: what’s important to you, what skills, knowledge and resources you have – and what you lack. Then you determine what a successful future would look like: that’s like the destination on the map. After that, identify the obstacles between you and your destination. Finally, you define a path that will take you from the present to the future you want, going around the obstacles.

**How about writing up an action plan when at a company and sharing it with the boss after determining his needs?**

This could work really well or badly, depending on your boss. Some managers find this a wonderful demonstration of initiative and smarts. Others might see it as an indictment of their approach or

**In any work situation, it’s important to identify your allies, adversaries and the fence sitters.**

their own planning process. Before doing this, I suggest you carefully note how your boss reacts to ideas presented by others on the team.

**How about making a matrix that lists one, three, five, and ten years across the top, and income, security, and job satisfaction down the vertical side and plotting job moves on it as a one glance for an overview taped to a computer screen or bathroom mirror for daily focus?**

I’d recommend a slightly different approach that has the same outcome of daily focus. Often, when we do personal vision and strategy planning with clients, we encourage them to make a laminated card with their vision – the key elements of the career they want to create – on one side, and the strategies they’ve determined for achieving that vi-

sion on the other. My concern about plotting job moves on a matrix is that it may not be realistic. You don’t actually know the specific opportunities that may arise. You can however, keep moving toward your vision – and that, in my experience, is the place to put your focus.

**Some warn against discussing career planning with colleagues and bosses because it can expose your confidential information or help competitors. Some advocate identifying colleague-allies with shared values and aspirations to trade ideas and assistance. Do you agree?**

I agree in principle. In any work situation, it’s important to identify your allies, adversaries and the fence sitters. Allies trust and agree with you and support your success. Adversaries neither trust nor agree with you. Fence sitters don’t have a strong point of view about you and probably won’t either support or hinder you. In general, it’s best to build your allies by being their allies. And they are definitely the folks with whom you’d share career planning info. Fence sitters can sometimes be converted to allies if you can create a strong positive relationship of mutual benefit. With adversaries, the best approach is to neutralize them: limit their impact on you by building other strong relationships around them and not sharing sensitive information of any kind with them.

Joining forces with your allies to build a great future together is an excellent way to take best advantage of positive relationships in the workplace. [A20](#)

# Japan Cools

BY MEENAKSHI SHANKAR

After suffering through earthquake, tsunami, and then subsequent nuclear disaster, Japan is now in the news for finding new ways to cope with sweltering summer heat. Cheap and environmentally-friendly clothes are now in big demand in Japan. Inspired to explore alternate sources of energy, Kuchofuku Inc., a company specializing in climate-controlled clothing, has launched a new line of clothing called Air-Conditioned Clothing.



Ichigaya had been working on his design for air-conditioned clothing since 1999, when he experimented with a prototype using water to achieve the cooling effect.

“People ask me why would I want to wear a jacket when it’s so hot. I tell them, because it’s cooler than being naked,” Hiroshi Ichigaya, a former Sony engineer turned designer and inventor of Kuchofuku clothing technology, said in a release.

He adds that the goal is not to lower the air’s temperature but rather to keep the wearer comfortable by helping to evaporate sweat and keep the air flowing around the body. He says the invention eliminates the need for energy-consuming air conditioners altogether.

Ichigaya had been working on his design for air-conditioned clothing since 1999, when he experimented with a prototype using water to achieve the cooling effect. Due to the huge attention from overseas markets, Ichigaya signed a contract with a South Korean clothing and accessories manufacturer for the fans and now has a manufacturing plant in China.

In a new campaign called Cool Biz, Kuchofuku employees lined up to fight against global warming by getting out of their ties and jackets and adopting a new set of cool clothes that are cooler and more fashionable. These innovative air-conditioned clothes have two small fans about 10 centimeters in diameter attached to the right and left sides of the back of the clothing, just above the waist. The fans pull in a large amount of air and help to vaporize sweat. As the perspiration evaporates, heat is dissipated, bringing down the wearer’s body temperature. These air-conditioned clothes are designed to function even on the hottest, most

humid days.

Japanese can now enjoy two types of air-conditioned clothing: a work jacket, which comes in short- and long-sleeved versions, and a long-sleeved blouson.

The work jackets are available in either 100 percent polyester or 100 percent cotton, while the blouson is 100 percent polyester. The fans run on four rechargeable AA-size nickel-hydrogen batteries that can be reused, thereby minimizing the impact on the environment. The fans are light and do not weigh the wearer down. Workers in factories, tunnels, and underground construction sites where air conditioners are not installed were the first attracted to this clothing. Nearly 1,000 companies in Japan use Kuchofuku, including automobile giants, steel makers, food companies, and construction firms. The products have taken on extra significance since the closure of the tsunami-crippled Fukushima Daiichi nuclear plant and a Japanese government wanting big companies in Tokyo and Tohoku’s northern region to reduce power usage by 15 percent.

According to Kuchofuku Inc., it is far cheaper to purchase this clothing than to utilize a large-scale air conditioning system. The running costs are also minimal, meaning that companies can save on their usually high electricity bills during the summer months. The clothes are not just economical, but they also help boost worker productivity and aid in the fight against global warming.

That’s cool Japan! ☺

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