

MEDIA COVERAGE: CARIBBEAN INSTITUTE OF TECHNOLOGY

USA Today Tech Report

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By Paul Davidson, USA TODAY

Jamaica's Silicon Beach?

MONTEGO BAY, Jamaica -- Early this year, Chris Stephenson was a firefighter in Kingston, the island's gritty capital, battling blazes sparked by riots over a stagnant economy.

But on a recent Thursday, the 28-year-old sat in a classroom a couple of miles from Montego Bay's pulsing nightclubs and hotels, facing a tamer but bigger challenge: getting the flashing light to spin on the firetruck he designed on his computer. "There are fascinating things you can do on a computer," he says, muscular arms gesturing. "You can get pictures to move!"

After dueling flames for nine years, Stephenson -- along with 55 former Jamaican hotel clerks, school teachers, security guards, insurance adjusters, laid-off workers and drifters -- is being trained as a software programmer in an intensive 10-month program launched last February. Half had never turned on a PC, let alone written the arcane commands that make software work, before signing up.

If they pass an exit exam, the programmers are guaranteed well-paying jobs, by Jamaican standards, here at a new branch of Indusa. The Atlanta-based company provides programming, under contract, to software companies.

Such job opportunities are no small matter in this former British colony, where per capita income for the 2.6 million residents is \$6,000 and the unemployment rate for those under age 35 hovers at 45%.

The USA's shortage of programmers -- 350,000 jobs are unfilled -- and a growing preference for cheap labor are prompting U.S. companies to turn to offshore hubs such as India, the Philippines and South Africa. The overseas high-tech labor force used by U.S. firms has swelled 400% the past two years and could reach at least 3 million by 2001, says Howard Rubin, chairman of computer science at New York's Hunter College.



Looking to the future:

Class members and faculty of the Caribbean Institute of Technology hope to open doors to new, well-paying careers as computer programmers for residents of the island nation, where per capita income is \$6,000. (USA TODAY)

The attempt to carve out a Silicon Beach in Jamaica might be the brashest offshore gambit yet: training neophytes in a bid to jolt one of the world's most depressed economies, famous for sugar-cane farming, aluminum mining and a laid-back "no problem, mon" attitude.

"It's the only way we're going to make Jamaica a world power in something other than tourism or reggae music," says Phillip Paulwell, minister of Commerce and Technology.

Just the beginning?

Each year, the government-funded school, Caribbean Institute of Technology (CIT), will feed workers to Indusa (pronounced EN-due-sa). CIT hopes to churn out 2,000 programmers in the next decade. Paulwell says if the project is successful, it could spur similar programs to train and employ 50,000 Jamaicans.

That might be too optimistic, but some experts -- citing Jamaica's inexpensive, hungry workforce and its proximity to the USA -- are hopeful. "If the skills are there, and Jamaica is closer, and they speak English, I don't see why not," says Ransford W. Palmer, a Caribbean scholar at Howard University.

Realm Information Technologies, a Web software company in Atlanta, will send Indusa \$2 million worth of projects in the next two years to keep the Jamaican workers busy. Dessert maker Edward's Fine Foods, utility Southern Company and Centris Insurance are strongly considering farming projects there. Even America Online President Bob Pittman visited the school and might try a pilot project.

Yet some say this rugged, hilly island -- where shanties line the way to lavish resorts -- faces an uphill climb. The Jamaican students are only high-school graduates who passed a test similar to a college entrance exam.

India, Canada and other software meccas have spent years forging reputations for reliable work, primarily using college-trained programmers, notes Harris Miller, president of the Information Technology Industry Association of America. "I think many companies would want people with a degree. It's not like making sweatshirts."

Indusa CEO James Ram concedes: "These Jamaicans are completely untested."

But Warren Moore, one of CIT's three instructors and a former computer professor at Furman and Georgia State universities, and a trainer at major corporations, says the Jamaicans are getting more hands-on experience than most U.S. college students. Many, he adds, "could be in any good university. They just don't have the money." Until CIT, many of the 56 students, ages 17 to 40, were stuck in dead-end jobs. Stephenson, the former firefighter, expects his salary to jump from \$9,600 to about \$15,000 when he starts working -- and perhaps to \$30,000 in five years. "I can pay my bills, feed myself and start saving toward a house."

Banking on proximity

CIT is the brainchild of Ram, who also has a small software shop in India, where companies such as IBM and Motorola shell out an average \$20 an hour for programming vs. \$75 an hour in the USA. Still, "Some



"You'll see me as the Bill Gates of Jamaica." -Vinroy Stennett, 24, who wants to be the island's first online service provider. (USA TODAY)

of our clients were nervous about sending work 10,000 miles away," he says. And the 12-hour lag makes communication tough.

So Ram turned to the Caribbean. Jamaica's economic woes can be traced to the 1970s, when many skilled workers left the country, and the national debt soared. Staple industries -- apparel and rum manufacturing, banana farming and aluminum mining -- have lost ground to countries where labor is cheaper or trade with the USA flows more freely. Unemployment and 10% inflation have triggered crime, panhandling and aggressive, unlicensed vendors. "If we can help people economically, it makes it worthwhile," Ram says.

To fund CIT's \$1.3 million start-up and operating costs, Ram teamed with the Jamaican government and partners, including Furman University, which picked and trained the instructors. A \$4,000 grant and \$2,000 loan defray each student's \$6,000 tuition.

Until the first class graduates in November, Ram has imported seven Indian employees who toil in a tiny, windowless room on the same antiseptic 10,000-square-foot floor shared by CIT. They will manage the Jamaicans, though Indusa eventually hopes to employ an all-Jamaican staff.

Money is the carrot. Students spout their expected initial pay of \$7 to \$10 an hour like a mantra. The raspy-voiced Moore reminds them, "Your value is going to triple after two years!" And he suggests Jamaica's musical heritage is a plus: Programming, like music, requires a knack for symbols.

Take Omar Murray, 22, a lanky former customer-service agent at a nearby hotel who had never used a PC. Before the CIT opportunity surfaced, he planned to study accounting at the University of the West Indies in Kingston. That would have cost him about \$10,000 and a three-year commitment without any assurance of a job.

So he chose programming. The first few months "were hard, and I didn't know whether I would make it," he says. But Murray has become so adept that Moore made him a lab assistant. "I eat, think and talk computers. I solve problems in my sleep." He says he expects his former \$3,200 annual salary to triple, adding, "I'll be able to afford a car, a better apartment, vacations."

The road has been rougher for Willard Welch, 20, an unemployed former Kingston security guard. He is one of about 10 who are teetering. But with remedial help, he says he can do less intensive work, such as Web-page design.

Owen Allen, 37, a one-time airport ramp worker and electrical engineer, earned \$15,000 as an insurance adjuster two years ago. But the sluggish economy shaved his pay to \$10,000. CIT, he says, will finally provide "a skill, but being older, I didn't catch on so easily."



Class time: Senior Professor Dr. Warren Moore instructs students at the Caribbean Institute of Technology. The Montego Bay school is part of the Atlanta-based Indusa Global company which is currently training 56 Jamaicans to be computer programmers. (USA TODAY)

Stemming the brain drain

The government hopes the program will stem the exodus of talented Jamaicans. Michael Ledgister, 22 and unemployed, was considering trying to emigrate but now plans to stay. "I love Jamaica, and I'll be able to live comfortably." Students have pledged to remain at least two years after graduating. But their new skills ironically will make fleeing easier by encouraging overseas software firms to sponsor them. "I'll try to reach the U.S., the land of opportunity," says a grinning Leon Maxwell, a rail-thin 19-year-old who earned \$50 a week as a hotel cable-TV technician.

And while most plan to work for Indusa, it's not required. Vinroy Stennett, 24, wants to be the island's first online service provider. "You'll see me as the Bill Gates of Jamaica," says the boyish blueprint draftsman.

Some of Indusa's clients and prospects are equally enthusiastic. Britt Kinsler, Realm's West Coast manager, recently interviewed about 15 students. "Some were all-stars, and some were not. They're timid and not used to (the) American style of interviewing. But I'm confident they will be up to speed in a junior capacity." Indusa's Indian workers, he says, are "producing good code for half of what I'd pay internally."

Tom Cossuto, chief financial officer of Edward's Fine Foods, says he's willing to give Indusa a chance at such projects as consolidating the records of its recently acquired companies. "You do two jobs and see if it works out," he says.

Adds Kinsler: "In Jamaica, you don't have to worry about desire. These people have to make it, or they'll be working in sugar cane fields."

Associated Press

September 17, 1999

By Matthew J. Rosenberg

Jamaica hopes new school will give it foothold in information age

In this resort town known for white sand, rum punch and laid-back ways, economically depressed Jamaica is hustling to carve out a niche in the booming cyberspace world.

A new school - believed the first of its kind in the Caribbean - is training Jamaicans in the intricacies of computer software.

Aware that a shortage of software specialists in the United States helped create programming industries in places like India and Israel, the Caribbean Institute of Technology is trying to do the same for Jamaica. "This is the future: not mining or farming, but computers," said Carlington Duncan, 21, who graduated with the school's first class, in December.

The institute is a joint project of Indusa, an Atlanta-based software services company, the Jamaican government, Furman University in Greenville, South Carolina, a consortium of British schools and government agencies, and the University of the West Indies.

James Ram, founder of Indusa and the driving force behind the school, said Jamaica has several selling points that could help the island attract high tech businesses.

Wages are low and Jamaicans speak English, the language of computing, he noted. The island also shares a time zone with the eastern United States. And its resort infrastructure makes it an appealing place for a U.S. firm to send executives and trainers.

The government is seeking investment in the lower end of the information industry through the construction of two high-tech office parks to house international phone centers and data-processing operations.

Software programming companies also could fit in - "if we can generate enough programmers in the coming years," said Erroll Hewitt, an adviser to Phillip Paulwell, minister for industry, commerce and technology. Together, such businesses could create 6,500 jobs in coming years, officials say.

The push comes at a time when globalization is costing Jamaica jobs by the thousands as textile factories move to Mexico, where they can take advantage of its duty-free access to the U.S. market under the North American Free Trade Agreement.

Jobs also have been lost because the U.S. Congress in 1993 eliminated tax breaks designed to encourage American corporations to build factories in the region. U.S. President Bill Clinton signed a new trade bill in May restoring many of the Caribbean Basin Initiative inducements, but the effect has not yet been felt.

The erosion in jobs has put the official unemployment rate above 15 percent for the island of 2.6 million people.

"Economic and social progress in this global village dictates that we must embrace emerging technologies," Prime Minister P.J. Patterson told Jamaicans earlier this year.

Duncan and 42 of his 56 classmates began working for Indusa in January. Their first job was a dlrs 2 million contract for programming network operating software for Applianceware, an Atlanta-based Web software company. Indusa says it's negotiating deals with other U.S. companies.

Applianceware chose Indusa because of the "availability of people with the skill sets we needed," said Stacy Kenworthy, the company's president. "The labor market in the high tech world is so tight, simply being able to get the resources, no matter where they are located, is a great benefit."

But Jamaica and other Caribbean nations face many hurdles to becoming significant players in the computer industry, he added. Steep telephone rates and high prices for home computers limit the ability of people to develop technological skills and that could "strangle this effort in its infancy," he said. Graduates of the programming school who work for Indusa earn dlrs 14,500 a year - low by U.S. standards but high for Jamaica, where wages average about dlrs 8,900 a year.

The institute's second class, which started in January, is double the size of the first, and more than 300 people applied for the 105 slots. Students spend 10 months learning programming languages as well as Web-based software and systems applications.

If a student promises to stay in Jamaica for at least two years after graduation, the government picks up two-thirds of the dollars 6,000 tuition and provides a low-interest loan for the rest.

"We are going to be replicating the CIT throughout the country," said Paulwell, the industry minister. "This is going to move us beyond what we're already best known for: tourism and reggae."

Kenneth Wasch, head of the Software and Information Industry Association, an American trade group, is skeptical. He said India and Israel are attractive because they offer an abundance of programmers with graduate degrees in computer science from first-rate local universities.

But Ram cited his own experience funneling programming work for U.S. companies to a shop in his native India. Some of his clients were "uncomfortable with the idea of sending work so far away," he said.

The school is attracting attention throughout the Caribbean.

"We have not yet started software training in Barbados in any meaningful way, and we need to study that school," said R.O. Jordan, executive director of the Chamber of Commerce in Barbados, which has a small information-processing industry.

BusinessWeek Online Daily Briefing

July 19, 1999

By Alyssa Tracy in Washington

Pushing to Put Jamaica on the High-Tech Map

If Furman University has its way, Montego Bay may get a new nickname: Silicon Beach. The Greenville (S.C.) school is part of a business-university-government partnership that's trying to turn Jamaica into the Silicon Valley of the Caribbean. The Montego Bay-based Caribbean Institute of Technology (CIT) is just months away from turning out its first class of "certified computer technology professionals," who will go to work for American companies that contract out their software needs abroad. The project not only will help U.S. companies trying to deal with a desperate shortage of programmers but will also boost the Jamaican economy by providing well-paying jobs.

The dearth of programmers has forced U.S. companies to head offshore to fill their software needs, often to India. But Jamaica is closer, and its strong educational system and high unemployment made it an attractive laboratory for the educational experiment, according to Furman President David Shi.

Furman's partners in the program include the Institute of Business of the University of West Indies-Mona in Jamaica, Atlanta-based software company INDUSA, a Jamaican government agency involved in technical and vocational training called HEART, and the International Development Consortium, a group including the University of Herfordshire and other institutions in Britain. Furman's role is to select and train the teachers and design the curriculum, while an INDUSA subsidiary, INDUSA Offshore, solicits potential employers for the graduates.

STAYING PUT? Demonstrating that it's not only high-tech but entrepreneurial, Furman has an equity stake in the project and will receive a portion of the profits INDUSA Offshore generates. "It's not the typical way a university makes money," Shi admits.

The Jamaican government pays two-thirds of the tuition for each participant in exchange for the trainee's pledge to stay in Jamaica for three years after graduation. The government hopes that will stop the brain drain afflicting the island nation. Its best and brightest often migrate to Europe and the U.S. in search of more money and greater opportunity. That has left Jamaica dependent on tourism and in the second tier of developing countries. Technology & Commerce Minister Phillip Paulwell hopes a strategy based on computer technology will lift his country into the top tier.

The 10-month, 40-hours-a-week program, which is open to students with a secondary-school degree, offers certificates in client/server, World Wide Web, and database programming. The certificate will be accredited in the U.S. and Europe.

PLENTY OF WORK. The program's founders already are mulling expanding to other developing nations. Shi says the partnership is looking at the Bahamas and Guyana. After all, there's more than enough work to go around. Some studies show U.S. companies currently needing 200,000 programmers.

Realm Information Technologies, an Atlanta-based designer of server software, was the first company to ink a deal with INDUSA Offshore, contracting for thousands of hours of programming. Indian programmers are handling the work until the first crop of students becomes certified as info-technology professionals in October. If CIT takes off, the Caribbean may soon be known for sun, sand -- and software.

Atlanta Journal & Constitution

November 3, 1999

By Mike Williams

Jamaica Hopes for New Surfing: Fun, sun, island begins computer training project

Montego Bay, Jamaica -- Luxury resorts line the white sand beaches, calypso and reggae pulse from open-air bars and sunburned tourists do the limbo, clutching rum drinks with little umbrellas.

But while the visitors enjoy what Jamaica is best known for --- sun, sand and fun --- a group of earnest students in this lush resort are building what many hope will be a new future for this economically troubled island.

In early December, the newly formed Caribbean Institute of Technology will graduate its first class of computer programmers, most of whom will go to work for an Atlanta-based company doing custom software design for American firms.

The school's first crop of 56 programmers will form the nucleus of what officials hope will be a budding information technology sector that will vault Jamaica into the new millennium, helping broaden an economy now based on tourism, mining and agriculture.

"Information technology is going to take over," said Omar Murray, 23, a former hotel clerk who now spends 10-hour days building Web sites and learning the latest computer languages at CIT. "It's the wave of the future. Jamaica might not be as developed with computers as we'd like, but I'm sure we're going to get there."

The unique group of partners that set up the school is convinced. The worldwide demand for programmers, they say, virtually guarantees the new graduates will find jobs.

"The need for programmers is absolutely huge," said Ken Abernethy, head of computer programs at Furman University, a Greenville, S.C., school that is providing the curriculum for the Jamaican operation. "There are more than 250,000 jobs vacant right now in the U.S. and the growth rate is on the order of 100,000 new jobs per year. In the U.S., we're only graduating 25,000 bachelor's level computer science students a year. Companies are pretty desperate for programmers."

Going offshore to find those programmers is not a new idea. For years, U.S. and European companies have been farming out software work to programmers in Ireland, Israel, India and many Eastern European countries. In most cases, they can get the work done cheaper, but that's just an added bonus.

"The cost advantage is a factor, but in reality just getting the resource at all is often the biggest factor," said Stacy Kenworthy, president of REALM Information Technologies, an Atlanta software company that has already contracted to hire some of the CIT graduates. "The competition for talent is extreme, and in some areas the shortfall in programmers is a crisis."

"The cost advantage is a factor, but in reality just getting the resource at all is often the biggest factor," said Stacy Kenworthy, president of REALM Information Technologies, an Atlanta software company that has already contracted to hire some of the CIT graduates. "The competition for talent is extreme, and in some areas the shortfall in programmers is a crisis."

Atlanta entrepreneur James Ram identified the crisis as an opportunity. Four years ago he founded INDUSA, a firm that channeled software work for U.S. companies to programmers back home in his native India.

The idea has worked fairly well, "although some of the clients have been uneasy sending work 10,000 miles away," Ram said. "If they had a problem that required an in-person visit, they'd be looking at a 23-hour flight."

Ram began scouting for someplace closer to the United States, and settled on Jamaica for several reasons. "They have a good basic education system based on the British model, they speak English, they have a surprisingly good telecommunications infrastructure and they are in the same time zone as the Eastern U.S.," he said.

It took Ram less than a year to get CIT up and running. Partnering with INDUSA in the venture are Furman, a British consortium of schools and government agencies, the Jamaican government and the University of the West Indies in Jamaica.

Jamaica Minister of Commerce and Technology Phillip Paulwell has been a big backer, hoping that high-tech can stop the brain-drain that Jamaica --- and other Caribbean islands --- have experienced as their highly educated residents have moved elsewhere. Software programming seems a good fit because the skill is in high demand and the industry doesn't require expensive infrastructure.

"Information technology will be the backbone of the global economy of the future," Paulwell said when CIT was founded. "This new center will provide access to this economy for large numbers of Jamaicans and help establish the human resource to launch a vigorous software development industry in Jamaica."

If the school is a success --- and 105 new students are already enrolled for next year's term --- it could prove a big boost to this island of 2.6 million residents, where per capita income is about \$6,000 in U.S. dollars. Jamaica's economic mainstays, like tourism, have all been battered in the past decade by hurricanes, poor prices, competition and other factors.

Unemployment runs at 20 percent, with the figure rising to 45 percent for those younger than 35. In such a climate, CIT is a small --- but significant --- bright spot.

Ram is guaranteeing that INDUSA will hire CIT's successful graduates. He will pay them a beginning wage of \$7 to \$10 an hour to work in Jamaica for American companies, with the promise that salaries could rise with hard work and a few years' experience.

The Jamaican government has put its money up to make the operation a success, paying \$4,000 of the \$6,000 total tuition per student, while loaning many of the students the remainder if necessary. The students must sign a pledge to remain in Jamaica for at least three years after they graduate.

That requirement is based on the fact that demand for programmers is so high in the United States that beginning college graduates can sometimes fetch up to \$50,000 per year.

But many of CIT's students say they want to stay in Jamaica, a proud island nation with a rich cultural heritage. While most had never done more than type simple forms on computers before they enrolled, many believe their soon-to-be-earned diplomas will be tickets to a promising future.

"A lot of us have sacrificed to be here," said Traceyann Samuels, 27, who gave up a government job to enroll at CIT. "But it has to pay off. In four to five years, I see myself having my own consulting business, doing work in software, imaging and communications."

Sherwin Williams, 32, already has his own business --- a food supplement venture that he and his wife are still running while he attends CIT. He has designed a Web page for the business, and hopes to design pages for others when he graduates.

"There aren't many people here who do this now, and I think the field is going to mushroom," he said. "I had no university training, but now I hope to set up my own Web design shop."

Instructors say CIT's curriculum is demanding: Students attend classes for eight hours a day, often following that up with several hours of lab work. They are learning all the latest computer tools, including Web page design, C++, Visual Basic, Java and database technology.

"Our students will have more hands-on computer experience in their 10 months here than most university graduates will get in a four-year degree program," said Michael Glova, CIT's managing director. "The universities promise a diploma, but we promise skills that are in demand."

The students are convinced. "I saw a newspaper ad for this course and it seemed like the answer to my prayers," said Salomie Lyles, 23, who worked in the hospitality industry before enrolling. "To get a degree in computers would've taken three years, but here we are doing it in 10 months."

Jamaica Gleaner

August 30, 1999

By Pamela-Fae Jackson, Freelance Writer

Little space in MoBay's computer programming course

WESTERN BUREAU: LESS THAN half of the 300 applicants to the new computer programming course in Montego Bay are likely to be admitted, according to estimates by the HEART/NTA.

About 100 students are expected to be admitted to the increasingly popular programme at the Caribbean Institute of Technology (CIT) according to HEART/NTA spokesman, Mark Thomas. This is about twice the 56 students now enrolled.

The school is part of the Ministry of Commerce and Technology's thrust to increase the level and volume of technical skills available locally, as well as develop new opportunities for generating foreign exchange.

The number of applicants point to the growing interest in the programme, but while Minister of Commerce and Technology Phillip Paulwell said that the Government was planning to establish similar centres in Kingston and other parts of the island, no definite plans have yet been made.

The projections for acceptance by the Government's national training agency are based on recent interviews of applicants who sat the entrance examination a month ago. The prospective students were interviewed in mid-August and are to be informed by today whether they have been successful.

The school's senior lecturer, Dr. Warren Moore, called this year's batch of 56 students "outstanding", pointing out that there had not been a single drop-out from the course.

"They have either met or exceeded our expectations. We are very pleased," he said. Dr. Moore is the principal architect of the school's curriculum, which he has described as "experimental".

The CIT was established last year with HEART/NTA as a primary investor. It has been endorsed by Cambridge University in England, Furham University in the United States and the University of the West Indies, which together certified the intense curriculum.

Last month, Robert Pittman, president of America Online, the world's largest Internet service provider, endorsed the programme, praising the initiative of the Jamaican Government.

"I applaud the foresight and vision. This is the right direction for the future and you certainly have the skills and resources," he said of CIT.

The institution's goal is to train 50,000 programmers in 10 years.

University Of Chicago

February 19, 1999

By Sanjeev "Sean" Khurana, Graduate School Business Case Study

James Ram is an entrepreneur with an impressive track record. At the age of 33, he has successfully started and operated 3 different businesses. His latest venture, a software development firm and an IT training school based in Jamaica, has been highly successful and can result in a large financial fortune for himself.

James graduated from Manhattanville, a small prestigious college in upstate New York. As a young graduate with a penchant for international business, he obtained a unique position as an assistant to the Under Secretary General of the United Nations, Dr. Michel Doo Kingue. After a year at the UN, James and his family moved to Atlanta where he founded an international consulting firm, called The Atlanta Council for International Cooperation (ACIC). At this consulting firm, he leveraged his international experience with the UN to assist Georgia firms clamoring for international expansion as well as he initiated a unique educational program which allowed college students to intern at the U.N. The program was called the Cecil Ram United Nations Semester program, named in memory of James' father who had recently passed away. Running this business as a non-profit operation, James did not make a lot of money, however he built invaluable relationships with CEOs of many Georgia firms. In 1997, after turning over his consulting operations to an able successor, James initiated his latest venture - INDUSA Global. This venture has not only been operationally successful, but has the potential to be a financial blockbuster.

INDUSA Global, an off-shore-venture based in Jamaica, has two related businesses. First, It has a software development arm that serves large corporations based in the USA. Second, it is a partner within a recognized educational institution, the Caribbean Institute of Technology that is training 105 IT professionals on an annual basis. While both businesses independently contribute to the profits of INDUSA Global, the Caribbean Institute of Technology acts as an invaluable source of trained software professionals for INDUSA Global's software development business.

James Ram realized the importance of geography for the success of his business. The location of this business determined the cost of operations, initial level of competition, quality of employees, as well as James' ability to maintain direct control while being based out of the US. Although James considered locating his business in India, Jamaica was more attractive due to its proximity to the US. In addition, Jamaica has a large pool of students/labor that speaks English but is less expensive and is easier to retain due to 30% unemployment in Jamaica . The business is located in the free trade zone that allows tax-free import/export of capital and goods including computers.

James also understands that his business model based on Geography can be copied. Therefore, he is also pursuing the image-marketing model by providing value to both its students and its clients. James plans to pursue this model further by continuing to make investments in building and maintaining a

brand name for his business in Jamaica. In addition, he plans to leverage his business contacts and selectively market his business to high level executives in the US.

James set up the Caribbean Institute of Technology to include INDUSA (24%), Furman University based in Greenville, SC (28%), University of West Indies (10%), International Development Consortium, Hertfordshire based in England which provides U.K. Certification through Cambridge University (10%), H.E.A.R.T./National Training Agency of Jamaica (26%), Ministry of Commerce and Technology of Jamaica (1%), and the Jamaica Free Zone (1%). In addition to providing financing, the partners have been very helpful in providing technical expertise. While the universities provide expertise in academics / curriculum development and provide the faculty for the university, the Jamaican partners assisted with the physical set-up and construction of the facility. The three partnering universities have helped in the accreditation of the program thus making it possible for the program to be franchised internationally.

Although, this venture has been highly successful, James' business strategy is based on an inherently weak model i.e., geography. However, James believes that with the increasingly high demand for software professionals in the world and a high supply of labor in Jamaica, new entrants do not pose a major threat to his business. As a savvy entrepreneur, James does however have an effective exit strategy. He has toyed with the idea of an IPO. In addition, he had conversations with companies such as Computer Sciences Corp and Science Applications International Corp, about a possible buyout. Using that as a reference point, INDUSA Global has had an ROI of 35%. However, James feels that the business could command an even higher value due to a high potential for growth in Jamaica and he plans to expand/franchise this concept in similar locations across the world.

When asked about the weakness in his model i.e., geography, James expounded on a more elaborate plan stating that the type of solutions center he is creating in Jamaica he would set up for other markets. For example, Costa Rica for South America, Philippines for South East Asia, Romania for Europe, India for Middle East & Africa. He also added that he would have four divisions, Consulting & Software, Network Solutions, Training & Electronic Processing which would include Call Center & Help Desk Management.

In conclusion, I think that James should focus his efforts in making each of these divisions a single successful unit and he should develop a management team that will be able to manage each unit as a separate entity.

Harvard University

April 5, 1999

By R. David Smith, Honors Student Business Case Study

Established in February 1999, The Caribbean Institute of Technology is a partnership between the government of Jamaica (and more specifically, Human Education and Resource Training (H.E.A.R.T.)), Furman University, the University of the West Indies, the International Development Consortium (IDC) in the UK, and Indusa Global. The mission of CIT is to offer a world-class computer programming education to Jamaican students, with the aim of empowering these students and establishing a high-end technology sector to help boost Jamaica's slumping economy.

In its first year of operation, 56 students are currently attending CIT. In the 1999/2000 academic year, the Institute will admit 105 students, and plans are in the making to create a second institute in Kingston, which will in turn take on 150 students. It is the goal of CIT to train several hundred students per year within a few years.

The Curriculum

"CIT's curriculum is one of the most comprehensive and unique one-year programs in the world. It offers the students an in-depth education in computer programming, while at the same time giving them the tools to adapt in the ever-shifting IT world." --Dr. Ken Abernethy; Curriculum Director, CIT; Director, Furman's Rushing Center for Advanced Technology.

The concept of the Caribbean Institute of Technology (CIT) was created with two primary goals: 1) providing Jamaican citizens high quality training and education in software design and computer programming, and 2) offering professional development education for Jamaican information technology workers and managers. With its unique curriculum created by a partnership between industry professionals from The University of the West Indies, Furman University, and The University of Hertfordshire UK, CIT will exceed these goals.

All training modules are designed to provide extensive hands-on experience and conceptual foundations. The intent is to train a world-class work force. To do this, CIT provides not only training but also the educational foundations that will allow graduates to grow with a rapidly changing industry. Thus, the CIT curriculum has been designed to balance both the practical and conceptual approaches.

The primary programming curriculum focuses on:

- client/server programming using the languages C++, Visual Basic and Java.

Additional special programming curricula is designed for:

- database programming using Oracle in a Unix environment;
- World Wide Web site programming using HTML, Dynamic HTML, and Java applets;
- World Wide Web programming with back-end databases for Web commerce applications.

In addition to the programming training center in Montego Bay, CIT has developed a workshop/seminar curriculum to provide ongoing professional development for workers in the information technology sector. These workshops and seminars will range from one-day to two-day events and will be offered at a variety of sites within Jamaica.

Because the curriculum is so comprehensive and of such high quality, students who pass the exit exam will be awarded a diploma fully certified by the University of the West Indies, Furman University, and Cambridge University in the UK. This Certificate will give students international credibility.

The Students

CIT's students come from all parts of Jamaica. All students are high school graduates, and many of them have had some post-high school education. To attend CIT, students must pass a standard reasoning exam based on logic and math as well as pass through a series of interviews. It is the aim of CIT to admit willing and capable students, while at the same time being open to students from all classes and locales. It is CIT's goal to educate and empower hard working Jamaicans, no matter the background from which they come. The H.E.A.R.T. trust of Jamaica offers students flexible loan packages, so all prospective students can attend. Furthermore, the Jamaican government through H.E.A.R.T greatly subsidizes all students' educations.

Through its strategic partnership with Indusa Global, CIT is able to guarantee all graduating students a job in Jamaica. In fact, Indusa has opened up shop near to the school and will hire qualified graduates, offering them an average starting wage of about \$US14,000 to 20,000 per annum. The per capita income in Jamaica is \$1,500 per annum. Over time, Indusa will expand its operations, and with its success, other IT companies will also come to Jamaica, offering further opportunity and growing the domestic industry.

The IT Industry

In today's dynamic business environment, decision-makers in the U.S. information technology industry must focus on making their companies more productive and cost effective in order to compete in the ever-changing market place.

Technology companies are expected to accomplish this at a time when:

- hardware and software technologies are rapidly changing,
- software costs are increasing,

- information systems budgets are being trimmed, and
- information systems budgets are being slashed.

Information Systems managers are trapped between diminishing in-house human and financial resources, and burgeoning software development needs. The response of many European and North American companies has been to seek cheaper software development and maintenance services from other parts of the world. The Caribbean, Latin America, the Far East, Eastern Europe, South Africa, and South Asia are all possible sources of these services.

The Need for Programmers

A number of research studies have revealed there is an acute shortage of programmers in the U.S. and a large number of vacancies in the IT industry. A study that was conducted and published by the Information Technology Association of America last year shows a nationwide shortage of 200,000 professionals to fill currently open IT positions. U.S. Department of Labor statistics indicate that there are approximately 2 million people in the U.S. who would be classified as IT professionals, which means that there are about 10% fewer people than there are positions for them. Based on current trends, this number will continue to rise. The situation is similar in other technologically developed countries. Major corporations will no doubt look to offshore resources to help fill this acute need for the foreseeable future.

CIT aims to tap into the great business opportunities in the IT industry. Already, CIT and Indusa have contracted a US \$1 million project from Realm Technologies developing OEM software for Bay Networks, Netgear line of products. More multi-million dollar projects are in the makings right now! All these projects will be handled by CIT graduates with professional oversight by Indusa Global. With the success of these projects, more IT companies will come to Jamaica, empowering Jamaican citizens and growing the local economy.

The Jamaican Advantage

Located only 600 miles south of Florida, Jamaica is closer to major US cities like Atlanta than is New York. Jamaica is the largest English-speaking island in the Caribbean. When one thinks of Jamaica, one imagines its breath-taking white sandy beaches, aquamarine sea, lush, green hills and golden sunsets -- images of a flawless paradise island appear. World renowned as the land of Reggae Music, Red Stripe Beer, and Blue Mountain Coffee, CIT hopes that Jamaica will soon be known as a high quality center for software development.

The primary reason for choosing Montego Bay, Jamaica as the location for CIT and Indusa Global is the Jamaica Digiport International (JDI). The Digiport is a joint venture between AT&T, Cable and Wireless, and Telecommunications of Jamaica. The Digiport establishes Jamaica as the most sophisticated telecommunications market in the Caribbean, boasting a 100% digital network. With facilities that offer high speed data transmission at rates of between 9.6 kilobits and 1.5 megabits per second, the

advanced telecommunications technology available at the Jamaica Digiport equal anything available in the industrialized world.

Jamaica is also a very short "psychological" distance from the US. Her citizens speak English, she is close to the US, she is in the Eastern Time Zone-in short, Jamaica is an ideal off-shore programming center.

This entire project is the brainchild of James Ram who is the President of Indusa Global. Phillip Paulwell, Minister of Commerce & Technology in Jamaica supported James' vision and helped him to make this project a reality. In Paulwell's words' "We believe the Caribbean Institute of Technology holds great promise for Jamaica. With time, we will expand, and soon, a significant percentage of Jamaica's 2.5m population will have IT training. We are confident that this education and the unique opportunities it brings with it will empower Jamaican citizens and help lift the Jamaican economy out of the economic doldrums it has faced for the last two decades."

MEDIA COVERAGE: CECIL RAM UNITED NATIONS PROGRAMME

United Nations News

October 8, 1991



UNITAR and Clark Atlanta University launch a training programme on the United Nations

On Tuesday, 8 October 1991, at United Nations Headquarters, the Executive Director of UNITAR, Mr. Michel Doo Kingué, and the President of Clark Atlanta University (CAU), Dr. Thomas Cole, sponsored a special programme of events to launch the CAU-UNITAR Cecil Ram United Nations Semester Programme.

The occasion was marked by the visit of the Hon. Maynard Jackson, Mayor of the City of Atlanta, Georgia, to the United Nations.

The special programme of events consisted of several activities, including a meeting of the Executive Director of UNITAR and the President of Clark Atlanta University with students, faculty, UNITAR staff and members of the press. It was followed by a luncheon honouring Mayor Jackson for his role in the establishment of the Atlanta Council for International Cooperation (ACIC), a non-profit organization supported by the business and academic communities of both the State of Georgia and the City of Atlanta. ACIC with UNITAR and CAU were instrumental in initiating the CAU-UNITAR Cecil Ram United Nations Semester Programme.

The official launching of the programme culminated at a reception in the West Terrace of the United Nations in the presence of Mayor Jackson, permanent representatives of various United Nations missions, students and their parents, and the press.

The CAU-UNITAR Cecil Ram United Nations Semester Programme is designed to provide university students with working knowledge of, and hands-on experience in, the most comprehensive interdependent world system. It combines study in the social and economic science with internship in United Nations and associated agencies.

The programme gives students the opportunity of acquiring knowledge from renowned specialists in international and economic affairs from the United Nations community. The lecturers are members of the staff of UNITAR, the United Nations, other New York-based United Nations institutions, members of permanent missions to the United Nations, and representatives of international intergovernmental and non-governmental organizations accredited to the United Nations as well as professors from major New York universities.

Students enrolled in the Programme receive 3-9 hours credit for course work and 3-6 hours credit for participation in a structured internship with a United Nations agency. A maximum of 15 credit hours are available for undergraduate students and 9 credit hours for graduate students.

The graduate component of the Programme consists of three hours of course work and a 6-credit internship. The graduate course, Seminar in International Relations, focuses on readings and research on selected topics and problems of international relations and includes special guest lecturers from the United Nations community. Undergraduate course offerings include international relations, international organizations, international relations of African States, directed study and independent research.

To satisfy the internship component of the Programme, students are working as interns in various departments of the United Nations and associated agencies under the supervision of senior UNITAR staff members.

The lead university for the Cecil Ram United Nations Semester Programme is CAU, a comprehensive, private, urban coeducational institution of higher education. It was formed by the consolidation of Clark College, a four-year undergraduate institution oriented to the liberal arts, and Atlanta University, which offered only graduate degrees. It now offers undergraduate, graduate and professional degrees as well as non-degree programmes to students of diverse racial, ethnic and socio-economic backgrounds.

During the present semester, which commenced on 12 September 1991, the Programme is being attended by 18 students from eight United States colleges and universities from four states.



James Ram
Creator of the UN
Semester Programme

Dr. Shelby Lewis
Professor Emeritus
Clark Atlanta University

President Jimmy Carter
Former US President
(1977 – 1981)

Cicely Ram
Accepting honor on
behalf of Cecil Ram

Clark Atlanta University The Cecil Ram United Nations Semester Program

PROGRAM OBJECTIVES

The Cecil Ram United Nations Semester is designed to provide university students with working knowledge and experience in the interdependent world system. By combining study in the social sciences and humanities with practical experience in a U.N. agency, the Program promotes student competence in dealing with global issues, enhances students' ability to respond intelligently to world events, and facilitates students' ability to communicate effectively across cultural barriers.

PROGRAM SPONSORS

The United Nations Semester Program is sponsored jointly by Clark Atlanta University (CAU) and the United Nations Institute for Training and Research (UNITAR).

PROGRAM STRUCTURE

The U.N. Semester Program is a revolving program offered to both graduate and undergraduate students twice a year. Undergraduate students enrolled in the program receive credit for 9 hours of course work and 6 credits for participation in a structured internship with a U.N. agency for a total of 15 credit hours. Graduate students receive credit for 3 hours of course work and 6 credits for participation in a structured internship with a U.N. agency for a total of 9 credit hours.

Most U.N. Semester activity will take place at U.N. headquarters in New York, but student interns may be assigned to U.N. agencies in Geneva, Switzerland; Addis Ababa, Ethiopia; Brisbane, Australia; or Tokyo, Japan.

ELIGIBILITY

This is an interdisciplinary program. Students enrolled in any discipline in accredited universities in the United States and abroad are eligible for admission to the U.N. Semester Program as long as they are in good standing at their home institutions.

APPLICATION PROCEDURE

Interested students must apply to Clark Atlanta University for admission to the U.N. Semester Program. A processing fee of \$15.00 must accompany the application of non-CAU students.

EXPENSES

Payment of tuition and fees is a prerequisite to formal registration in the U.N. Semester Program. The tuition for undergraduate students is \$3,500 per semester. For graduate students the tuition is \$3,000 per semester. The total cost of the U.N. Semester Program is approximately \$6,800 for undergraduates and \$6,300 for graduate students, including travel, accommodations, food and instructional materials.

ACADEMIC REQUIREMENTS

A supervised internship and course work are required for both graduate and undergraduate students in the U.N. Semester Program. The courses offered in the program are part of the approved academic offerings at Clark Atlanta University. Academic course credits will be transferred to students' home institutions.

THE GRADUATE PROGRAM

U.N. 600-Seminar in International Relations: An analysis of the interlocking factors of geography, population, race, nationalism, economics, ideology, diplomacy, and the military as fundamental forces in national and world power struggles. (3 credits) (*Same as IAD/PSC 579*).

U.N. 601-Internship: Students are to serve a minimum of 12 weeks in an approved, supervised internship with a U.N. agency. (6 credits) (*Same as IAD/AWS 651*).

THE UNDERGRADUATE PROGRAM

U.N. 400-Seminar in International Relations: This course will focus on readings and research on selected topics and problems in international relations. Topics will rotate. (3 credits) (*Same as IAD/PSC 579*).

U.N. 401-International Organizations: General development of world organizations; principles, structures, methods and actual operation of international governmental institutions, with special attention to the United Nations. (3 credits) (*Same as IAD 572*).

U.N. 402-Directed Study: Supervised, guided and focused study on an approved international topic. (3 credits) (*Same as IAD/AWS-650*).

U.N. 501-Internship: Students are to serve a minimum of 12 weeks in an approved, supervised internship with a U.N. agency. (6 credits) (*Same as IAD/AWS 651*).

INSTRUCTION AND EVALUATION

The Director of Training for UNITAR will head the team of Clark Atlanta University Adjunct Professors who will teach the courses and evaluate internships in the U.N. Semester Program. Full-time CAU faculty members will give occasional lectures and will consult with the Adjunct Faculty Team on academic requirements and grading.

ONSITE ARRANGEMENTS

In cooperation with universities in New York and non-governmental agencies like the YMCA, UNITAR staff will arrange accommodations and subsidized boarding for U.N. Semester students. Relevant information about transportation and incidental expenses will be provided by the UNITAR Coordinator of the U.N. Semester Program.

Contact Information:

UNITAR Coordinator
U.N. Semester Program
801 U.N. Plaza
New York, N.Y. 10017
Tel: (212) 963-9447

Director of U.N. Semester Program
James P. Brawley at Fair Street
Atlanta, Georgia 30314
Tel: (404) 880-8617



Former President Jimmy Carter hosts reception for UNITAR participants.