

BRAZIL 04

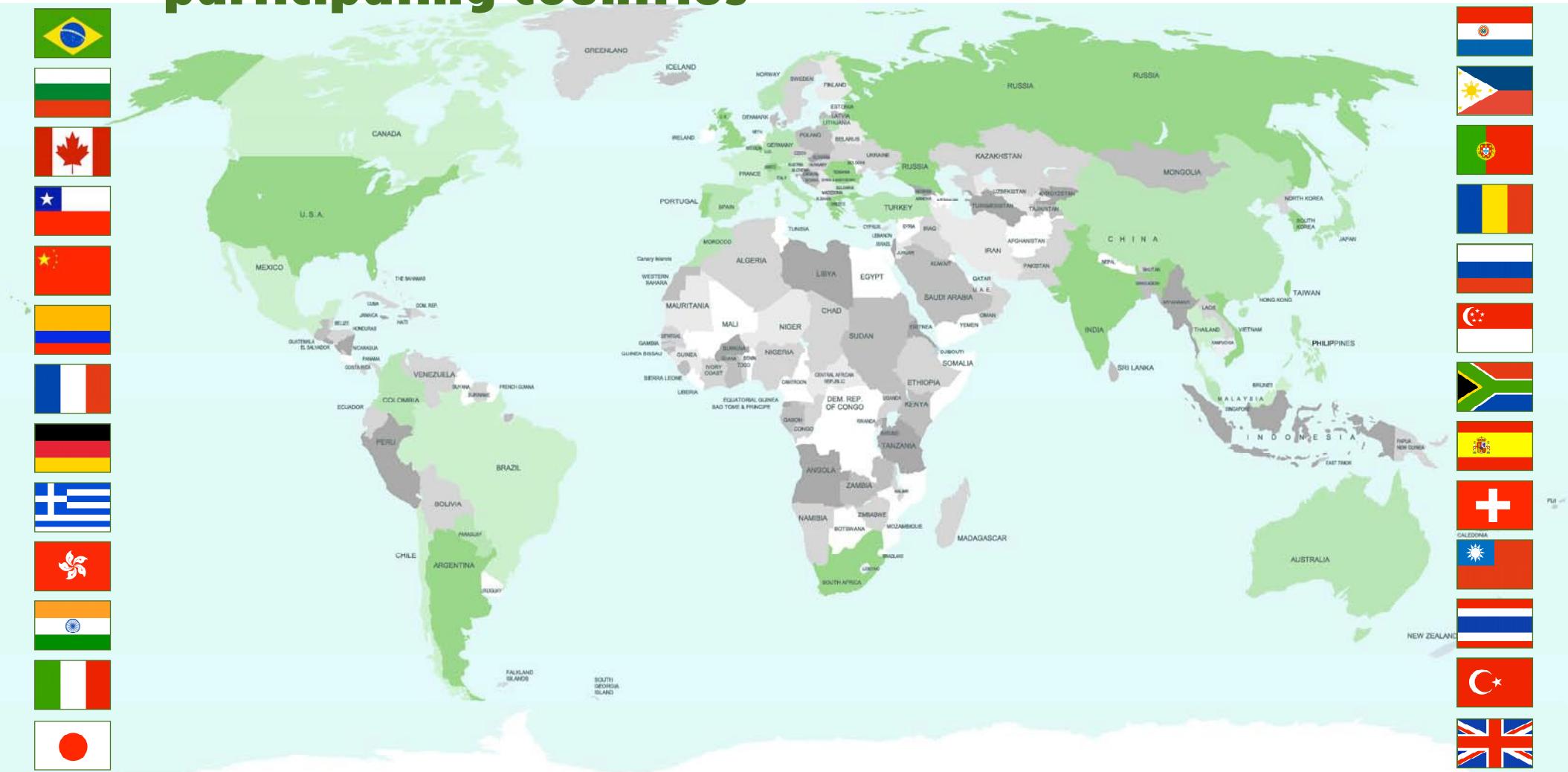


July 2 – 8, 2004

São Paulo
Foz do Iguaçu



participating countries



I have never been to Brazil, and I'm excited that on my first trip I will be a part of the worldwide finals of the 2nd Imagine Cup. This year, over 10,000 students from more than 90 countries competed in four invitatorials: algorithm, rendering, short film, and software design. I am absolutely thrilled to be in the company of the 150+ student finalists representing 38 countries from around the world. I'm also thankful to Brazil for being the gracious host of this event honoring student achievements.



Microsoft is the primary sponsor of the Imagine Cup. Encouraging student innovation is an important pillar of our mission to help people realize their potential. Advances over the last few decades have enabled more people to access technology faster and at a lower cost. This has been especially true in personal computing, which has resulted in the growth of professionals in the high tech and IT industry. When I compare my path to becoming a software engineer to the path of today's students, I am impressed by their accelerated pace. They already know so much more about technology and their world than what I knew as a student their age growing up in India.

Despite the acceleration, one thing has remained constant: technology is empowering, both personally and collaboratively. Mastery and subsequent application of technical understanding is limited only by a learner's dedication, creativity, and imagination. The global marketplace continues to recognize and reward innovative solutions to both old and new problems. In other words, if you are excited by a problem and have the passion to strive for a solution, you can be successful.

This is the premise that guides the Imagine Cup. Unlike other student competitions, the Imagine Cup doesn't optimize for a singular "right" answer, but for the most open and imaginative solution. In this way, we challenge students to think and dream big, and then

show us their new ideas in a tangible way. We're fortunate to have a worldwide panel of judges from industry and academia to evaluate the quality of students' ideas and work in each of the invitatorials. Regardless of the final placements, I'm sure the judges will be as inspired as I am once they have been introduced to these extraordinary student achievements.

I'm sure many of the students that you will meet in the context of the Imagine Cup will go on to make important contributions in research and commerce, in both the public and private sectors. I invite you to catch a glimpse of the future in the Exhibition Hall during the first day of the Microsoft Professional Developers Conference/Tech Ed. I'm sure you'll be inspired, and perhaps be reminded of what it was like for you when you first began your career in the technology sector.

On behalf of the Imagine Cup and Microsoft, I would like to thank the states of São Paulo and Paraná for graciously hosting this international student event.

I'm absolutely delighted to be here. Please join me in honoring the student finalists of this year's Imagine Cup, and in encouraging them to be role models and leaders for the even younger generation following in their footsteps, much as someone once did for you and me.

Sincerely,

A handwritten signature in black ink that reads "S. Somasegar". The signature is fluid and cursive, with a distinct "S" at the beginning and "Somasegar" following it.

S. Somasegar
Corporate Vice President
Developer Division
Microsoft Corporation

Table of Contents

About the Imagine Cup	1
Info on Brazil	2
Schedule of Events	3
Location Information/Emergency Contacts	6
2004 Judges	7
Software Design Invitational	10
Algorithm Invitational	50
Rendering Invitational	58
Short Film Invitational	66
Imagine Cup 2005	73

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About the Imagine Cup

Competition is a catalyst – it turns friends into teammates, encourages learning and application, creates emotional highs, and rewards hard work and excellence. The Imagine Cup is a student competition built on this foundation. It looks at technology as art and student innovation as self-expression.

There are many ways for students to show artistry and skill in technology. The Imagine Cup began in 2003 with one category – software design. It was a category for the entrepreneur/dreamer and it provided an opportunity for students to solve problems that were meaningful to them. If there is one tenet that the competition continues to stand by, it is this one.

Understanding that software design is just one discipline influenced by technology, the Imagine Cup expanded this year to include short film, rendering, and algorithm categories – each an area that allows students to show significant mastery of and creativity with technology. The results have been impressive and are inspiring the competition to once again expand in 2005.



Info on Brazil

With over 14 million inhabitants across 3,000 square miles (7,775 square km), São Paulo is the largest metropolis in South America, and the third largest city in the world. From humble beginnings in 1554 by Jesuit priests, São Paulo is now dense with state of the art business districts, lush parks, and high rise apartment buildings.

Hop on a plane and fly one hour southwest, and you will arrive at the border town of Foz do Iguaçu. "Devil's Throat" is the point at which the Iguaçu river meets the Paraná River creating a gigantic semi-circle 8,100 feet (2,450m) long of waterfalls plummeting from 250 feet (75m) on the border of Brazil, Argentina, and Paraguay. In contrast to São Paulo, Foz do Iguaçu has a population of approximately 250,000, and thrives on a tourist economy that will likely continue as long as the 275 waterfalls that make up Iguaçu Falls continue to pump out over 400,000 gallons (1500m³) per second of water.

In some sense, São Paulo and Foz do Iguaçu exemplify the great diversity that is Brazil. The northwest of the country is 90% tropical rainforest, fed by the Amazon River and over 68 inches (1,750mm) of annual rainfall. By contrast, the semiarid region of Sertão in the northeast states of Ceará and Rio Grande do Norte is periodically plagued by severe drought, and the high plateaus in the southernmost states experience an occasional snow storm.

Brazilian cuisine has several distinct influences, and local specialties vary greatly from state to state. European immigration to the southwestern states of Santa Catarina and Paraná inspired Brazilian Churrascarias (steakhouses), while the African influences in coastal Bahia inspired cuisine that uses spices and fresh and bountiful local ingredients for moqueca (stew).

In this sense, Brazil is a fantastic place to bring the best students from around the world for a week of competition and exploration. In Portuguese, there is a saying, *Brasil um país de todos*, which loosely translates to *Brazil, a country for everybody*. This welcoming and warm spirit has created an ideal environment for the Imagine Cup 2004 finals.

Schedule of Events

Day 1: Friday, July 2

Cesar Park - São Paulo International Airport (until 4 PM Brazil)
Hotel Bourbon – Cataratas (after 7 PM Brazil)

Students arrive in Brazil's largest city, São Paulo, and have a chance to get some rest at the Ceasar Park Hotel, before flying to scenic Foz do Iguaçu and checking into Hotel Bourbon.

Upon arrival, the festivities begin with traditional Brazilian cuisine called "carneiro no buraco" (sheep in a hole). The meat is prepared in a hole dug in the ground and cooked with a large pan. Vegetarian options will also be available at every meal throughout the week. Please notify your Microsoft contact about special dietary needs and restrictions.

The night's entertainment is a Three Borders Show, which demonstrates the folklore of Paraguay, Argentina, and Brazil with dancing, singing, and music.

Day 2: Saturday, July 3

Hotel Bourbon – Cataratas

The second day begins with an exciting tour of the Iguaçu National Park. Created in 1939 and declared by the UNESCO as a part of the world heritage list, it is renowned for the perfect preservation of indigenous flora and fauna. Through paths paved by the Iguaçu river canyon, waterfalls can be watched as they approach the "mirante" elevator, including a straight and full view of the "Garganta do Diabo" (devil's throat).

After the tour of Iguaçu Falls, the official Imagine Cup 2004 Opening Ceremony kicks off the competitions. Students in the Software Design Invitational setup their exhibitions and present their projects to the judges before dinner. Students participating in the Algorithm, Short Film, and Rendering Invitationals begin onsite projects.

Night time activities will include a screening of the films and rendering projects created by the Short Film and Rendering Invitational finalists.

Day 3: Sunday, July 4

Hotel Bourbon – Cataratas

The third day is an intense one – jam-packed with competition, judging, and onsite demonstrations. By dinnertime, the Software Design finalists will be announced and by the end of the day, the Algorithm Invitational will be completed, although official placement will not be announced until Tuesday.

After a long day of competition, students can relax at a Lounge Party, with tunes from a DJ spinning live.

Day 4: Monday, July 5

Hotel Bourbon – Cataratas (until 3 PM Brazil)
Hilton São Paulo Morumbi (after 6 PM Brazil)

In the heart of the Iguaçu National Park, students board small boats with guides for the Macuco Safari. Following the safari, students venture to the Parque das Aves (Bird Park). Paths through the forest, led by expert guides, will give students the opportunity to experience an amazing collection of bird species, some of them at risk of extinction.

After the morning tours, students will take a quick flight back to São Paulo and check in at the Hilton Morumbi Hotel. After checking in, students setup their projects for the Imagine Cup Project Fair at the conference center.

Day 5: Tuesday, July 6

Hilton São Paulo Morumbi

The Imagine Cup will headline the Microsoft Professional Developers Conference (PDC) with student exhibitions, an award ceremony, and keynote address. During the keynote address, the winners of all four invitationals will be announced.

A formal dinner will follow the afternoon activities with a performance by Meninos do Morumbi. Meninos do Morumbi is an organization that gives underprivileged children an opportunity to learn music, computing, theatre, and dance. They will perform a variety of Brazilian acts.

Day 6: Wednesday July 7

Hilton São Paulo Morumbi

Students will take a grand tour of São Paulo including visits to historic downtown, Brigadeiro Faria Lime (shopping boutiques), Ibirapuera Park, Pacaembu area, and the Sacred Art Museum, among a host of other sites.

Lunch will be served at Fogo de Chão, an innovative steakhouse with continuous tableside service where guests signal the "Gaúcho" to serve with a green chip and to stop with a red chip.

A VIP tour of the Estádio do Morumbi will follow. The stadium, built in 1960, seats 80,000 fans and is home to the São Paulo futebol team.

In the evening, students will enjoy the company of local students as they dance the night away at Pucci, a modern nightclub for São Paulo's younger crowd.

Day 7: Thursday, July 8

Hilton São Paulo Morumbi

Our last day in São Paulo, students will coordinate with their Microsoft contact to check out of the hotel and travel to the airport to return home.

Location Information/Emergency Contacts

Cesar Park - São Paulo International Airport

Address: Rod. Helio Smidt, s/n - Setor 1 Base aérea
Guarulhos – SP - Brasil
Phone: +55 (11) 3491-4200
Fax: +55 (11) 3491-4321

Hotel Bourbon – Cataratas

Address: Rod. das Cataratas, km 2,5
Foz do Iguaçu – PR - Brasil
CEP 85863-000
Phone: +55 (45) 529-0123
Fax: +55 (45) 529-0000
<http://www.bourbon.com.br>

Hilton São Paulo Morumbi

Address: Av. das Nacoes Unidas, 12.901
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Cep: 04578-000
Phone: +55 (11) 6845-0000
Fax: +55 (11) 6845-0001
<http://www.hilton.com>

Microsoft Brazil

Address: Av. Nacoes Unidas, 12.901
Torre Norte – 27 Andar
São Paulo – SP – Brazil 04578-000
Phone: 55 (11) 5504-2155

In case of an emergency please contact: 55 (11) 5096-0646

For police: 190
For ambulance: 193
For fire: 193

Imagine Cup 2004 Judges

Microsoft thanks the following judges for their support of the Imagine Cup competition.

Software Design Invitational

Koji Ando	Microsoft Corporation, Japan
Ricardo Anido	University of Campinas, Brazil
Jason Beres	Infragistics, Inc., United States
Sanjay Chaudhary	Dhirubhai Ambani Institute of Information & Communication Technology, India
Richard Clark	c2i, France
Johannes Heigert	Wirtschaftsinformatik - Information Systems and Management, Germany
Hai Jin	Huazhong University of Science and Technology, China
Jeff Julian	Vision Data Solutions, United States
Norma Leon Lescano	University of San Martin de Porres, Peru
Chung Hsin Lu	Industrial Technology Research Institute, Taiwan
Carlos Lucena	PUC-Rio and Waterloo University, Brazil
Ian Pearshouse	University of Birmingham, United Kingdom
Matt Rogers	Orange, United Kingdom
Nicholas Randolph	AutumnCare, Australia
Mikolaj Sobczak	Poznań University of Technology, Poland
Joel Semeniuk	ImagiNET Resources Corp., Canada

Algorithm Invitational

Eric Chang	Microsoft Research, China
Mark Phillips	A DOT Corporation, United States

Rendering Invitational

Raul Aquaviva	NVIDIA, United States
Bob Bennett	Alias, Canada
Brian Blau	Blue Rock, United States
Chris Hess	Anark, United States
Bill Hensler	Adobe Systems, United States
Josephine Leong	Savannah College of Art and Design, United States
Matt Wisdom	Turbo Squid, United States

Short Film Invitational

Sharon Brackston	Ventura Entertainment, United States
Katherine Brown	Karz Entertainment, United States
Blair Harrison	IFILM, United States
Renee Intlekofer	Northwest Film Foundation, United States
Bruce Kaufman	Broder Kurland, United States
Jeremy Kramer	Miramax, United States
John Bard Manulis	Visionbox Media Group, United States
Michael Miner	Writer/Director, United States
Mitch Rotter	New Line Cinema, United States
Meta Puttkammer	Producer, United States
Valentic	TakeOne, United States
Shayna Weber	Producer, United States
Charles Wessler	SMD Interactive, United States
Abner Zurd	

teams

Software Design Invitational

Think about your first day of college. Every path you took was a new one. For the first few days, you might have needed a map to get to class. Maybe you got lost a few times. But over time, you learned the fastest way to get from one place to another. You found short cuts. With time, you became an expert on how to get around your campus.

As human beings, we're smart enough to learn from things we do again and again. What if our computers, Pocket PCs, or mobile phones could learn over time, just like we do?

For the last year, students in the software design invitational have imagined a world where smart technology makes everyday life easier. They've created applications that simplify routine tasks by learning from the people that use them. By knowing just a little bit about you, technology can make your world an easier and better place to live in. The students in the pages that follow are making this idea a reality.

Fast Facts:

The software design invitational was the only category in Imagine Cup 2003. Last year's theme was, "Imagine a world where technology connects people, information, systems, and devices."

16 judges from academia and industry are on site in Brazil to determine this year's winner.

Last year's winner, Tu Nguyen, has taken his Imagine Cup project into the business world with his own consulting business in Omaha, Nebraska, USA.

Technologies featured include Visual Studio .NET, Windows Mobile, Web services.



ARGENTINA

Project Name: MyNet
University: University of Buenos Aires
Team Members: Juan Manuel Formoso, Pablo De Grande

MyNet is the possibility to unify in one access point all of the contents (files, folders, contacts) that a user might want to access from anywhere on the web.

MyNet allows, in computers with dedicated connections, to add resources to the personal virtual network, and makes them all accessible via web services through the MyNet main site.

The premises of MyNet are:

- Information is still in the user's hands: sharing means simply to allow contents to be accessible so the user can request them from the central service of MyNet through a local service in the workstation.
- It's 100% HTTP: Never mind where the user is working: behind a corporate firewall, at home with ADSL or in a small network with NAT. From any place where navigating is possible you can install the MyNet client and add local folders to a personal and global MyNet network.
- It is multi content: MyNet has an extensible infrastructure support to be able to grant the user more capacities to extend their work space. Apart from folders and files, web services that compose MyNet can grow to grant remote access to other local resources that the user might want to share (for example, it would be easy to make extensions to visualize contacts, navigate databases of source safe remotely, access queries on databases, stored emails, etc.).
- Added to the Web services, MyNet has a web site that allows exploring contents available for the user from remote computers.
- MyNet represents an access point to the distributed information of the users.
- MyNet is a web site where, using their Passport account, users can access shared files from their computers.

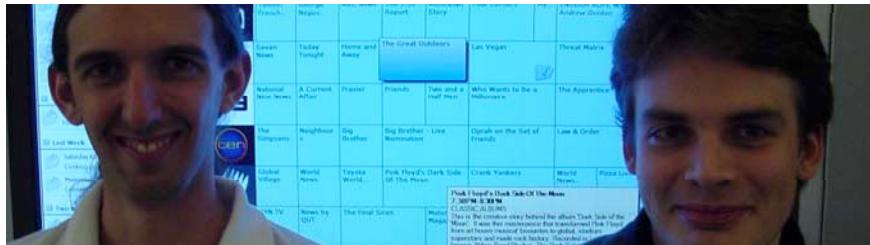
Using a simple Passport account, users have an easy and direct way to centralize relevant information for their daily needs, without synchronizing files, or uploading copies of their data, or configuring a web server for their office or home computer.



AUSTRALIA

Project Name: TV Prognosticator
Team Name: Riksearch & Dougvelopment
University: Queensland University of Technology
Team Members: Richard Mason, Douglas Stockwell

Ever had trouble choosing what to watch on TV? Ever missed a show because you were out? The TV Prognosticator can show you what's on, suggest shows you might be interested in and at the click of a button cue up recordings for capture with your TV tuner. Best of all, you can do all of this away from home with your Pocket PC or Smartphone using MobileTVP.



BELGIUM

Project Name:	New World: a tool to better understand and help young schizophrenics
Team Name:	New World
University:	INPRES, Liege, Belgium
Team Members:	Steve Lanuit, Laurent Mazzapicchi and Pierre Ioannatos

Schizophrenia is a brain disease that mostly reaches young people between 15 and 25. Hallucinations are part of their day-to-day life. As a result, communications with them, even with therapists, is difficult. In order to understand the behaviour of schizophrenic patients, therapists currently ask their patients to build a world using paper, plastic or wooden models. From these observations, specialists are able to draw important conclusions about the status of the patient and use this input to adapt the therapy. However, these models are not realistic and seem old-fashioned for the patients, and additionally, specialists are not able to write a complete report on the status in an automated way.

Most schizophrenics are however addicted to 3D computer games. It was our idea to create an application which looks like a realistic 3D game for the patient, but is in fact a therapeutic tool with different automated reporting tools for the psychotherapists. It allows patients to build a new realistic world where they can learn social behaviors (taking care of others, pets and things) and also learn to express themselves in an easier way: visual communication between themselves, with the psychotherapists and the outside world. Every action is logged and can be consulted by a therapist at any time in order to analyze the current status of the patient and adapt their therapy accordingly. This project has been developed in full cooperation with a psychiatric hospital in Belgium.



BRAZIL

Project Name:	Mobile Smart Blitz
Team Name:	WDC
University:	INSTITUTO MILITAR DE ENGENHARIA – IME/RJ
Team Members:	Adolfo Guilherme Silva Correia, Rafael de Oliveira Osório, and Edmundo Lopes Cecílio (faculty tutor)

The quality of life in the great Brazilian cities is frequently affected by some daily inconveniences. Citizens are subjected to corrupt violence, bottling, pollution and other awkward situations in the way between their house and work, or even when they decide to travel on the weekend. There are few solutions to these problems. By thinking accurately about the daily problems in the great cities, the Mobile Smart Blitz idea has appeared. The Mobile Smart Blitz (MSB) is an archetype of an advanced electronic system of blitz that it allows to improve, if not cure, these misfortunes, guaranteeing citizens better quality of life.

The biggest motivators for MSB creation were:

1. The great number of cars that are stolen daily in the great centers. One objective of this new electronic system of blitz is an easier identification of these stolen cars.
2. Pollution generated by old cars and without conditions of use. MSB also aims to identify irregular cars not compliant with the annual inspection.
3. Increased cases of policemen's bribes. (cases of stolen cars, government taxes not paid, inspection not carried through, or fine of caster)
4. Use of false driver license.
5. Risks for policemen during cars' inspection blitz based only on "look and feel."



CANADA

Project Name:	Game.Set.Match.
University:	University of Victoria
Team Members:	Mike Flasko, Elisa Johnson, Jason Kemp, Tyler Holmes

Wouldn't it be great if all the hassles of organizing, participating and following an amateur sporting event such as a tennis tournament disappeared? Game.Set.Match enables tournament data to be administered via a cell phone and available in real time to participants and fans through either the web or MSN-style alerts. Did the weather suddenly change and the schedule now needs adjusting? Is the tournament running on schedule? What is the score of my son or daughter's match? Game.Set.Match allows tournament administrators to distribute this type of information which, until now was only available in professional tournaments. Game.Set.Match. aids tournament administrators in creating a tournament schedule based on online registration and attempts to learn the game styles of the participants for faster future administration of tournaments.



CHILE

Project Name: MascoNET

Team Members: Javier Bermudez, Andres Gottlieb, Gabriel Gejman, Farid Sfeir

University: Pontifica Universidad Católica de Chile

MascoNET is a project that revisits some of the most popular concepts in interactive entertainment, unifying them in the most exciting and technologically advanced mobile way. MascoNET is a virtual pet variant, which exhibits the following characteristics:

- MascoNET is not leashed to any particular hardware allowing the pet's trainer to be able to interact with his pet in any machine available for him.
- MascoNET is low processing resources oriented, allowing it to run in any desired platform, and simultaneously with daily applications.
- MascoNET is a game oriented either to little groups, or massive entertainment, because it is able to run on intra/internet environments.
- MascoNET is thought to be able to communicate directly with other pets, via the most recent personal area network technologies.

CHINA

Project Name: MMS Expert

Team Name: Free Heart Team
(Free our hearts to imagine the world)

Team Members: Junsheng Hao, Ping Tong, Zhuxiu Chen, Yang Liu

University: Shanghai Jiao Tong University

MMS Expert is an image processing and photo management system based on Web Service, with attractive functions such as dynamic image processing and embellishing as well as album management. Innovatively, MMS Expert integrates mobile phone MMS into image processing so as to provide GPRS users with services of editing and optimizing their MMS, which means a large extension for functions of MMS capable mobile phones. And with the client program also packaged in our system, users may manage their online albums anytime and anywhere and send photos to other GPRS handsets easily.



COLOMBIA

Project Name:	Easy Learning: Learning in your hand
Team Name:	Quake Adictos
University:	University of Cauca
Team Members:	Ana Lucía Jurado, Andrés Ortiz, Carlos Cobos, Gustavo Hurtado

Easy Learning is an application for Mobile Learning (mlearning). This application can increase the potential time for development of learning activities, since these activities can be performed at any time and in any place in a Pocket PC wirelessly connected. The activities that can be developed are: full chapter reviews and chapter summaries of the different subjects that a student has registered with the educative institution, self evaluations to verify the learned topic, communication through rooms of conversations and forums with peers and professors, reviewing a list of frequent questions organized by the instructors, handling a personal schedule of the course, and tracking performance in line and out line, among others.

FRANCE

Project Name:	SMARTCENTER .NET
Team Name:	3ie Caliente
University:	EPITA
Team Members:	François Beaussier, Guillaume Belmas, Aymeric Gaurat Apelli, Vincent Vergonjeanne

Have you ever dreamed of controlling your house from wherever you are? Of reducing your energy bills? Of watching your house's video cameras through your Pocket PC? Of controlling all devices installed in your house just using your TV's remote controller? Or simply letting your house get used to you?

SmartCenter.NET is a low cost and smart home automation platform based on the .NET framework; it defines a new step in home automation systems.



GERMANY

Project Name:	Smart ZAP
Team Name:	Smart ZAP
University:	University of Applied Sciences Esslingen
Team Members:	Oliver Bleicher, Sebastian Majchrzak, Alexander Mayer

TV sets, VCRs, satellite receivers and stereos are today's standard equipment in most homes. Each of these devices usually comes with its own remote control. In the project we have designed a universal and intelligent remote control based on a PDA running Microsoft's Pocket PC 2003 and the .NET Compact Framework to make life easier.



GREECE

Project Name:	SmartEyes
University:	Aristotle University of Thessaloniki, Greece
Team Members:	Nikolaos Trichakis, Styliani Taplidou, Eleni Korkontzila, Dimitrios Bisias, Leontios Hadjileontiadis (mentor)

Imagine yourself being one of the 180 million visually impaired people all over the world. Imagine that you want to walk alone from your house to your friend's house downtown. SmartEyes is here to assist you. It provides you with the appropriate guidance information, i.e., directions about where you are and where to go, in a simple way, at any time during finding your way. It trains you in order to increase your confidence before embarking on the actual routing through an educational procedure. Even more, it gives you additional information such as the nearest restaurants, pubs, concert halls, etc. In this way, it increases your independence and your social activity, actually providing you with a holding hand.



HONG KONG

Project Name:	Portable Shopping Companion
Team Name:	UWCU
University:	The Chinese University of Hong Kong
Team Members:	Dexter Chan, Po Yan Wong, Hok Man Tse

Virtual shopping companion in a mobile, multimodal system navigation. User logs on to a PDA with access secured by voiceprint, and then browses and finds products with spoken input. User can also find a way to the store with navigation function. Real-time automatic speech-to-speech translation capability will also be provided.

INDIA

Project Name:	Gurukul
Team Name:	The Gurus
University:	Vivekanand Education Society's Institute of Technology - Bombay University
Team Members:	Abhijit Akhawe, Tejas Shah, Jyotsana Rathore, Sailesh Ganesh

Gurukul – is about redefining the education system as we know it. It is how we look at education in the future. In it we propose a model of education that intends to bridge the gap between the academia and the industry, increase collaboration between students, colleges and industry, and truly make education break all boundaries.

Benefits -

Industry

- Industry members can come forward to help the society, allowing them to participate in a noble cause of educating people.
- Industry members will be able to introduce their technology to students through Gurukul. This will in turn make their technology popular amongst students - tomorrow's entrepreneurs. This will help to make their technology more acceptable in the market.
- A common rating platform for students will make it simple for industry members to know the level of students and they could make this a basis of employing students.
- The research departments of the industry could work in close collaboration with Gurukul and have research work done here thus, being benefited from the ideas of students of Gurukul.

College

- Colleges will benefit from the hardware, software and literature provided by industry members and other colleges who are a part of the alliance.
- The college will have a greater brand value being associated with big companies as a part of academic alliance.



- The college will be able to provide its students exposure to a much larger community than it traditionally does and provide higher and richer standards of learning.

Students

- Students will get access to real life situations and get industrial training as part of curriculum.
- Students get access to tons of reference material and also learn the latest technology from the best in the industry.
- Students shall have the flexibility to attend college from anywhere without the barrier of geography or time.
- Students will be able to choose courses that best suit their needs and will be able to get certification for the same from industry leaders.
- More student-student and student-industry interaction.



ITALY

Project Name:	SmartPay
Team Name:	RADIOtHrEAD
University:	University of Bologna
Team Members:	Jonathan Cristoforetti, Piero Flacco, Michele Sama, Alessandro Zanarini

Are you late for tonight's show? Afraid you won't find your tickets? Don't want to wait in line? No more worries! With SmartPay you can buy them from wherever you are and without the hassle of having to physically get them. How? Simply using your smart device and receiving a digital receipt of your purchase.

Want to give a technological push-forward to your business? How about cutting costs by replacing paper receipts with secure, digital ones? Your ticket office is jammed and customers are leaving, discouraged by the long lines? Give them quick access to your services by allowing them to pay smartly, with SmartPay!

SmartPay is a new payment infrastructure that exploits the most modern technologies to make everyday payments quick and easy. A service discovery function allows the users to find available services, but the pounding heart of SmartPay is the payment functionality: it gives the user a unified secure payment method for both small and big, online and real-world purchases. Each user can specify different credit sources, like bank accounts, prepaid SIM traffic or credit cards, and for each payment can choose which source to debit. Upon completion of a purchase, a digital receipt is sent directly to the smart device and will work as proof of the transaction.



JAPAN

Project Name:	"Smart 3D EMR" based on "3D-Raven": The Real-Time 3D Framework for Pocket PC
Team Name:	A. I. Systems
University:	Osaka University
Team Members:	Kotaro Nakayama, Masatomo Najima, Takuya Murakami

Medical information technologies, such as EMR (Electronic Medical Record), have dramatically advanced in the past few years. Especially, "mobile" and "medical (3D) imaging" are important keywords in the stream. However, high-quality (and real-time) 3D graphics still remain beyond the computational capability of mobile device because of the limitation of CPU, memory, battery, and so on. But now, our new innovative technology "3D-Raven", a real-time 3D framework for mobile devices, allows applications to render real-time 3D graphics. The use case of "3D-Raven" is not only Medical but also Game, Construction, Enterprise, and so on.

KOREA

Project Name:	Service Integration Server (SIS) with Genie
Team Name:	Cross .NET
University:	Hoseo University, Chungbuk National University
Team Members:	Joo Hyun Kim, Jae Hwa Yoo

You can use variable web services through MSN (Windows) Messenger as if you were chatting with someone. A user does not need to know how the system is organized. Our project is designed to run services such as reserving tickets, sending an e-mail, listening to music, and other services related to home automation such as opening a window, turning on the light and booting up your computer in your home using commands in Messenger. All you have to do is have MSN Messenger. There is no additional installation. By using MSN Messenger which is installed on the Desktop or a PDA basically, users can run services that they want everywhere if they are connected to the Internet.



MALAYSIA

Project Name:	I-Diners
Team Name:	I-Diners
University:	University Sains Malaysia
Team Members:	Huan Su Ling, Lee Wai Keng, Lee See Mun, Ng E-San

One day when we were sitting around thinking about food we were inspired to create an application that would help people select good restaurants and provide managers with great feedback tools so they could improve their restaurants. Together with our supervisor Dr. Vincent Khoo's research team we created I-Diners using C#, and ASP.NET. And we include web services in our application as well. I-Diners is not only accessible through an application server but it extends the accessibility to mobile and smart devices as well. With these, we were able to create an end-to-end solution that really helps make selecting a restaurant a fun activity.



MEXICO

Project Name:	PINS – Portable Intelligent News Service
Team Name:	The Sharp Team (Only Sharp People)
University:	Universidad de las Américas-Puebla
Team Members:	Federico Gomez, Ximena Cortes, Yana Maximova

Everyone knows or assumes that every news source is available through the Web. We also know that a lot of interesting stuff is happening and that we can find out if we want to. But is it really easy to find it? Is it really easy to stay up to date regarding the information I really need? News Aggregators such as NewsGator become a very good idea for looking at different sources or feeds, but it might become a time-consuming task while navigating through different folders with information I don't care about; on the other side, how do I maintain my source-list up-to-date. If I read about Oscar winners then I'll probably be interested in Grammy winners...

This is the central idea around the PINS solution. PINS is a system oriented to provide the information a users needs, any place, any time, any device. It is a system that becomes increasingly a tailored solution to each and one of their users. By the means of advanced algorithms it looks for related news to a specific topic. And as more and more users teach the system how to weigh probabilities, PINS will offer more and more news that will always be in the interest of the user.

PINS is a service and not just an application, it extends its capabilities of interoperating with existing systems by leveraging RSS as its communication format. So you can read your PINS centralized news from any existing News Aggregator. Beside you there are different user interfaces that allow PINS users to consume the service from a variety of devices such as a regular WAP enabled phone, a Smart Phone, a Pocket PC, a Windows Media Center, or a PC/Tablet/Laptop with Microsoft Outlook installed.



MOROCCO

Project Name:	LiveAction
Team Name:	Ourika
University:	Insitut National des Postes et Télécommunications (INPT)
Team Members:	Kamilia Bagui, Mouhssine Sghiar, Badre Edine Mokhlisse

Imagine being able to get all the information during a game that you can get from TV, while being in the middle of the action at the stadium.

LiveAction is an application that allows you to view an action in slow motion or from a different angle just like on TV. You also get real-time game statistics, commentary, and can review key actions such as penalty shots or faults. The application also allows you to access each player's information and performance analysis for each team.

This application is not limited to soccer. It can be used for intramural sports as well, but more importantly for outdoor sports where one cannot see all the action, such as car racing or other kinds of races. It is ideal for the Olympic Games where many competitions take place at the same time; you do not have to limit yourself to watching only one competition at a time.



NORWAY

Project Name:	Public Transport Information System
Team Name:	Team NTNU
University:	Norwegian University of Science and Technology
Team Members:	Jan-Kristian Markiewicz, Lars Kristian Hallingstad, Magnus Jahre

Public transport is an economical and environmentally friendly way to get around cities. Unfortunately it is often delayed or crowded. Another drawback is that you need detailed knowledge about the area and its public transport in order to plan your route. PTIS aims to make these and other factors less troublesome by providing real time information about where public transport units are and connecting this to an advanced route planner. Environmentally friendly choices have never been this efficient, convenient, and fun!



PARAGUAY

Project Name:	Mobile Administrator
Team Name:	Team Asunción
University:	Universidad Católica de Asunción, Universidad Nacional de Asunción
Team Members:	José Manuel Fernandez Giangreco, Oscar Adolfo Abegg Meza

Objective

The Mobile Administrator is a very useful tool for orders and stock management for a company with international distribution and production.

Users and their functionalities

The salesman, equipped with its Pocket PC goes to the customer to pick up its order, if it's a new customer he uploads their information into the system, and in the order you can find detailed information about products and quantity needed. This information travels through the Internet to the Web Service and this one responds with the cost and the ETA of the order.

The Head of Distribution receives the orders that must be delivered to the customers via email. He also uploads the salesman information into the system.

The Head of Production visualizes production indexes for each product to cover demand.

The Manager looks up the earnings of the month and obtains a detailed result per distributor and product.

Operation Specifics

When an order is received in the Web Service, a validation of the order is made. Based on the information available in the database about product stock in each distributor and the cost of the freight, the minimum total cost is optimized to fulfill the order in the lowest possible delivery time. This information is transmitted to the salesman. Once the salesman confirms the acceptance of the price and delivery time from the customer, the distribution companies involved in the solution are determined and the stock and, if necessary, the daily

PARAGUAY (cont.)

production rates are updated.

Then, once the necessary stock to fulfill the orders is reached, emails are sent to all Heads of Distribution of the aforementioned distributors, who complete the delivery of the products to the customers.

The manager can consult the monthly earnings of any product and distributor whenever he wants to.



PHILIPPINES

Project Name:	Panorama
Team Name:	Team .NetHack
University:	Ateneo de Manila University, De La Salle University
Team Members:	Li Jung Chiu, Mark Punzalan, Erwin Lee, Charles Yeung

Panorama is a location-based information delivery system. With a Pocket PC the user can locate him or herself through the use of a Global Positioning System (GPS) device or a snapshot taken at the place of concern. Panorama serves as a mobile customer service counter that makes available the information about an area to the users. Information comes in the form of frequently asked questions or FAQs, which can be drawn from various data sources, including, but not limited to, Microsoft SQL Server. In addition to that, Panorama will recommend to the user a list of FAQs that he or she may be interested in, similar to Amazon.com's "people who bought this book also bought this book" feature. Furthermore, a user may ask his or her own question, which may or may not be on the list of FAQs.

Questions can be inputted into the system via stylus or microphone. Panorama then systematically examines the user's query for any similarities to the FAQs in its knowledge base. This also allows the FAQ providers or the establishments to extract information about the likings of their potential customers.



PORTUGAL

Project Name:	CNE – Collaborative Network Environment
Team Name:	VDT – Virtual Dream Team
University:	New University of Lisbon – Faculty of Science and Technology
Team Members:	Francisco Cruz, Gustavo Martins and Raquel Dias. (Assistant Professor - Tiago Cardoso)

Wouldn't it be nice if a lot of experts around the world could work together in a collaborative manner, without any geographical problems, forming a virtual community, just with a simple Pocket PC? CNE – Collaborative Networked Environment - provides a friendly user interface platform for the creation of a consultancy community with the aim of the creation, execution and execution monitoring of Business Processes. Each consultant provides a set of his or her services to the community, just like a service pool.

After that, each consultant can start a new Business Plan (BP) in the community by editing that BP, selecting what services are needed, what consultants should execute them, as well as the workflow graph defining the order by which the services should be executed.

Afterwards, once the execution is started, the CNE takes care of triggering each service from the selected consultants. Furthermore, the system incorporates the GIS – Global Intelligent Supervisor. This module evaluates the performance of each consultant along the time in the community.



RUSSIA

Project Name:	ICE – Inspirational Classroom Environment
Team Name:	Team Inspiration
University:	Moscow Institute of Physics and Technology
Team Members:	Stanislav Vonog, Nikolay Surin, Konstantin Zhereb, Taras Kushko Faculty Advisor: Andrey Ustyuzhanin

Pupils' learning abilities are not fully exploited in traditional elementary schools. There is little interaction with the objects they learn, and with other learners. The vital need for people in today's open society is to learn how to work together with others. Sharing one's ideas and responding to others' improves thinking and deepens understanding. However, when kids actively work in groups it is hard for the teacher to track what's happening in classroom, assess all pupils' actions and provide personalized content.

ICE is aimed to revolutionize in-class education by making it more active, collaborative and personalized.

ICE provides a framework for collaborative role based games. Children with different roles have different virtual tools. They work together and use these tools to create artifacts of the learning process called learning objects. Furthermore, these learning objects can be stored, reused, modified, aggregated, etc., so they evolve over time. Besides, every child has a personal agent (an animated character) inside their Tablet PC. The agent adapts to the way the kid learns and provides guidance and educational content in such a sequence, quality and quantity that best fit the student's personal learning style. As an additional stimulation, the creature changes its mood, behavior and appearance depending on how well the pupil performs.



SINGAPORE

Project Name:	XTalk
Team Name:	GlobeTalkers
University:	National University of Singapore
Team Members:	Kenneth Yuen, Huang Xin, Sanjeev Sharma, Qiu Jiang

xTALK (pronounced as "cross talk") leverages current speech technologies to provide smart, innovative and useful solutions to enable people and businesses worldwide to communicate effectively.

In its simplest form, xTALK will facilitate communication between individuals who do not speak a common language. Other than that, xTALK can be useful in:

International conferences and meetings where the audience does not understand the language of the speaker. (xTALK can broadcast many different languages at once)

Broadening the reach of distance education.

Empowering call-centre staff to talk to the customer in the language which they are more comfortable with. (xTALK also helps eliminate the problem of accents)



SOUTH AFRICA

Project Name:	Media Preview Suite
Team Name:	Team Stovepipe
University:	Port Elizabeth Technikon
Team Members:	Jonathan Vogel, James Boshoff and Riekert du Preez

Imagine a system that allows customers to preview any product in a music/DVD store by the scan of a barcode or the touch of a screen. Customers have the ability to preview any product using either an in-store terminal or their personal mobile device. Various backend tools are provided to maintain the system. It allows for the functionality of adding new media to the media collection, synchronising databases between remote sites, network management using PCs or smartphones as well as data statistics reporting of listening/viewing trends which can be used to drive business marketing and advertising campaigns.



SPAIN

Project Name:	VAMOS: A Virtual Assistant for Museum Occasional Sightseeing
Team Name:	VAMOS
University:	POLYTECHNIC UNIVERSITY OF VALENCIA
Team Members:	Jose Antonio Mocholi, Vicente Bosch Campos, Jose Miguel Esteve Ferrandis, Kristian Eide

Museums have become more and more attractive for tourists, families, students, and even children. Existing exhibits still lack flexibility (cannot be personalized), visitors cannot access related multimedia information, visitors feel lost in big museums, social interaction among visitors is not supported, and time constrained visits which optimize the number of popular visited artworks are not possible.

VAMOS is a project aimed at solving all these problems by providing the following services:

- Exhibits Navigation
- Social Interaction
- Intelligent Visit Personalization
- Time-Constrained Visits Generation



SWITZERLAND & AUSTRIA

Project Name:	retino
Team Name:	Mountain Geeks
University:	University of Klagenfurt, Austria University of Zurich, Switzerland
Team Members:	Rudolf Ball (AT), Daniel Buchmüller (CH), Fabian Hensel (CH)

Retino is an open notification framework for real time location based services.

It enables you to keep track of events that are important to you; based on your interests and current position. Such services are for example the speed check notifier which warns you of upcoming mobile radars while driving. As a subscriber of this service you are both a consumer being alerted and a contributor to the community by reporting radars on your own.

Another service is the party tracker, which guides you to the hottest spots and your friends around. It is based on weighted ranking reports of these places reported by the community. Because Retino is designed openly, it allows other services to plug-in.



TAIWAN

Project Name:	Pocket Pal
Team Name:	NTU
University:	National Taiwan University
Team Members:	Giles Lee, Jimmy Chen, BBio Tai, Dan Huang

Pocket Pal is designed to expand one's social network with an electronically incarnated virtual pet that smartly meets new pals of shared interests, personalities or geographic proximity. The pals can share information with each other based upon preferences. There are personalized services such as news reading and auction/commerce capabilities.

The social network gets expanded at ease with the assistance of intelligent virtual pets residing pervasively in all Microsoft and web service enabled devices such as PC laptop, PDA and Smartphones.



THAILAND

Project Name:	Where2Go
Team Name:	The gNU.NET
University:	Assumption University of Thailand
Team Members:	Chachaval Treeyanuwat, Jirawat Padungkijjanont, Kitti Phongpirun, Tanapol Pavadachochai

Wouldn't it be nice if you could ...

Travel without any planning before...? Find a dining place or hotel around the attraction without any information...? Continue your journey after you're running out of plan...? Make the plan by choosing the main attractions and let Where2Go do the rest.

Have you ever been somewhere and got stuck because you haven't planned for it? Where2Go will take care of that problem by helping you look for a place where you can shop, eat and entertain, with ease and very little effort. You simply choose your traveling style, and Where2Go utilizes advanced Artificial Intelligence techniques to search through its entire database of attractions, hotels and restaurants.



TURKEY

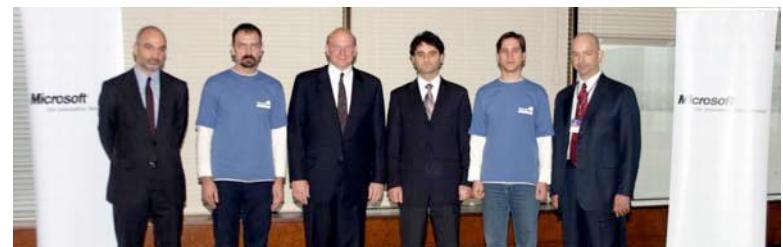
Project Name:	QUEST
Team Name:	ESTeam
University:	Dokuz Eylül University
Team Members:	Erkan Kurtulu, Soygür Kurun

QUEST is an innovative Microsoft .NET based project demonstrating the usage of web services in an end-to-end solution that is both socially responsible and commercially viable. It is a set of tools for users to obtain route guides, real maps and online traffic information, very quickly through web services. QUEST assists three different user groups: Travelers, Drivers and Disabled People. Life could be more simplified with QUEST for these three user groups.

By having access to a smart route guide within one piece of equipment, a mobile telephone or a PDA, life could be more simplified for travelers. For example if they need a taxi, they would use the 'get-a-taxi' service. QUEST calculates the nearest taxi station to the user and sends the location information of the customer to the taxi station's mobile phone as an SMS message.

For travelers, it's now easy to find the nearest taxi station or pharmacy on the way. For assisting drivers to find the optimal path to reach their destination, QUEST makes future traffic density predictions using the past and current online traffic information and then provides smart route alternatives with an optimal solution. All this interaction occurs through visual and voice commands. From now on, it will be more economic and safer to drive.

QUEST would assist blind people to find their way without getting any help through speech services thus enabling them to become more independent in their daily lives. They can just dial the QUEST by a mobile phone and then find their way through communicating with the QUEST system.



UNITED KINGDOM

Project Name:	The Juice
Team Name:	Team Faraday
University:	Universities of Hull, Sheffield and Aberdeen
Team Members:	Mat Steeples, Andy Grieve, Ali Gardezi

The team's entry harnesses the power of .NET to revolutionise the social needs of young people. A Pocket PC and Smartphone 2003-based application, ULL provides a number of key features, but highlights include:

- Management of timetables, lectures and course materials – integrated with Amazon.com for immediate purchase
- Hotel, bar, restaurant recommendations and directions, with reviews and feedback
- Location-based tools to help you find services, with tailored directions using MapPoint .NET
- Extendable Web services driven architecture using a mixture of cutting edge technologies
- Smart, machine-learning based logic to improve the user experience over time
- And much more!



UNITED STATES

Project Name:	PICKS
University:	University of California, Los Angeles
Team Members:	Alex Chang, Tree Li, William So, Chris To

Does your mobile device help you enjoy life more? More often than not, today's mobile device applications distract you from living a life. PICKS is here to change that. The PICKS vision is to "Empower people to enjoy life more." PICKS is your personal pocket digital concierge.

PICKS is built to answer any question that deals with your lifestyle, such as "Where to eat?", "Where to go?", "What events are there?" and even "Find me a date." Smart PICKS is the breakthrough technology that delivers the right answers to those questions. Just like a real concierge, Smart PICKS understands your question because it knows you personally and knows what you're looking for. PICKS includes features for making your life easier such as maps, directions and electronic invitations.

PICKS has an intuitive and feature rich user interface, designed for mobile "on the go" usage. Ultimately, PICKS will synergize the vast array of local services onto a single application on your Smartphone or PDA.



VIETNAM

Project Name: E4, Everything is Everywhere for Everybody on Every time.

Team Members: Nguyen Hoa Binh, Duong Khanh Chuong, Nguyen Phuong Ngoc and Nguyen Ngoc Quynh

Our family comes from the famous Van Phuc village with silk products. Last year, we opened a 2 floor handicraft and fine arts mart with 700m² premises, located at Ba Trieu Street in the crowded shopping centre of Hanoi capital to trade and export the products. We bought a sale management system with 3 POS stations; I myself also developed inventory management software based on the bar code standard for the mart.

Beyond class time, I usually come to help my family in managing the mart. I recognized that: many customers – especially foreigners – complained that: it is a waste of time, and also difficult to find a specific good inside a forest of products. Moreover, they really need consulting advice when roaming inside the mart... That was why we had to hire 6 staffs just to guide the customers, and this issue is common for almost all the marts. So I flashed a question: how can technology help to improve my family's business?

The shopping assistant E4Shopping was born to solve that issue; E4 stands for "Everything is Everywhere for Everybody on Every time". Overall, it provides the shopper all information they need to make shopping enjoyable by the aid of a digital assistant – "Teu" uncle. E4Shopping does this by providing rich information and services to the customers via a networking-enabled Pocket PC (PPC), giving them direct access to the valuable information quickly and easily.

The team wishes to make the concept of a portable digital shopping assistant using PPC and the E4Shopping solution popular, removing the human's role and effectively contributing to the development of the country.



Algorithm Invitational

What's the most complex problem you've ever faced – a problem that stretched your brain to its limits? Do you think bidirectional breadth first search is the best way to solve a 3 dimensional maze? Finding your way through mind-bending problems requires a tremendous amount of creativity and imagination.

The students in the algorithm invitational are society's new thinkers. They're changing the way we think about complex problems by digesting puzzles of vast intricacy and solving them with simplicity and creativity. Get ready to experience the power of their minds here in Brazil.

Fast Facts:

This is the first year of the algorithm invitational in the Imagine Cup.

The invitational stresses both algorithmic rigor as well as rapid coding skills.

3400 initial competitors were narrowed down to 200 semi-finalists through online competition. Five finalists emerged and are competing here in Brazil.

The five finalists will compete in a 30-hour coding challenge, thinking creatively to solve problems of varying categories and difficulty.

Judges and proctors will be monitoring the competitors' progress over the 30-hour marathon.

BULGARIA

Branimir Lambov

I come from Bulgaria, more specifically from a small town on the Black Sea called Nessebar. I've been fascinated with the computers and programming since I was 10. In the beginning, of course, it was games that drew me, afterwards I learned to make things work and I loved it.

Still, the high school I studied at was pretty far from the topic. A number of people convinced me it is more important to study English first and so I did. By the time I entered a course in Informatics at the University of Sofia I already had quite a background in programming, mostly discovered through books and on my own; this made it easier for me to grasp the theoretical side of things and not hate it like most students do. It took me so far that I am currently doing a PhD in Theoretical Computer Science at the University of Aarhus, Denmark.

What does algorithmic mean to you?

Rigorously specified, to the extent that it's almost impossible to be read by humans.

How customized is your coding environment?

I tend to write for a variety of platforms and compilers, thus I have to give up customization to be able to work effectively anywhere.

How do you prepare for this kind of competition?

I arm myself with pens and paper and tell myself that I have to stop and think as often as possible.

What would you like to say to your friends at home?

The only certain way not to win is not to try. So go ahead and change that job, ask that girl, or just do that other thing you want but are so afraid of!



CHINA

Xiaomin Chen

Xiaomin Chen was born in the small city of Shanghai in China. In Shanghai he lived, made friends, got very nice education in mathematics and computer algorithms among many other things, and went through various competitions and enjoyed some honor.

Xiaomin is a huge fan of the Brazilian national soccer team for almost 20 years. Some ten years ago his favorite club was Tele Santana's São Paulo FC.

He is a PhD student in Rutgers University, where he got to know some real geniuses and got the chance to play with them. Xiaomin is currently playing in the field of combinatorics and computational complexity. Last year he proved a nice theorem in combinatorial geometry, and thus looked more like a mathematician. Xiaomin now lives in New Jersey, close to a lot of friends with whom he shares the same hobbies (Brazilian soccer, mathematical puzzles, etc.).

What does algorithmic mean to you?

A set of toys.

How customized is your coding environment?

For a long while I used Microsoft Visual C++, but only the part called "Windows Console Application".

How do you prepare for this kind of competition?

Nothing specific. I had practiced through the years.

What would you like to say to your friends at home?

Please record for me the final of Euro Cup and the first matches of Copa American.



CHINA

Ying Wang

Hello, my name is Ying Wang. I'm 19 now, a junior undergraduate from Zhongshan University, China. It's a great pleasure to meet all of you in Brazil.

I'm majoring in computational mathematics. I love mathematics and algorithm very much, also interested in problem solving. I've won lots of prizes in mathematics and computer programming contests. I took part in the ACM ICPC (International Collegiate Programming Contest) world final twice, one in LA and the other in Prague, got a silver medal (8th place) and a bronze medal (11th place) respectively. I'll be glad to discuss problems in math and algorithm with you. I love soccer and basketball. Looking forward to playing with you guys.

What does algorithmic mean to you?

It is my hobby, and one branch of science that I love. I started programming 3 years ago. After that, I always indulged in solving problems, learning new algorithms and creating algorithms. It is great fun. I'm not sure if my future research will be about computer science and algorithm, but I do believe it will be very helpful to my future research.

How customized is your coding environment?

Nothing special. Usually I use VC6. I know very little about .NET and can't write codes under C# or VC.NET skillfully. I seldom write long programs, so for me it is the compiler that matters, not the IDE. I can write programs in notepad and debug with my eyes and brain.

How do you prepare for this kind of competition?

Learn algorithms from books and papers, then use them to solve problems, and discuss algorithms with friends. I've read a lot of books about algorithm and math, and solved thousands of problems on some online judge system. I think in this way I've accumulated enough knowledge of algorithm for this contest. What I need most is to learn something about .NET.

What would you like to say to your friends at home?

I owe a lot of acknowledgements to many of my friends. I learned algorithms and many other things from them. I'm proud to take part in this contest and hope they feel proud of me too.



CHINA

Li Weixing

I was born in a common worker family in Shaoguan-a little city in the North of Guangdong Province. The first time when I touched computer was 14 years ago. But at that time I really did not know what the computer can do. In fact, I stepped into the programming kingdom 10 years ago when I had my first own computer-an X286. Since then, programming became one of my interests. When I was in middle school, I participated in several Informatics Olympic competitions. After entering the university, I have participated in ACM/ICPC regional for four years. Unfortunately I always had no chance to go to the final of ACM/ICPC. However, it does not matter. I love programming and I have taken it as my hobby. Through all these years, I think I am still an amateur programmer who maybe just have more experience than somebody else.

What does algorithmic mean to you?

As to me, algorithmic is a way of thinking and behaving.

How customized is your coding environment?

The first thing I do is hide the sections of the whole environment which are not being used at the moment. By doing this, I can concentrate on my work better. After that I adapt myself to the coding environment.

How do you prepare for this kind of competition?

In my opinion, for this kind of competition, there is no temporary preparation but longtime accumulation of knowledge.

What would you like to say to your friends at home?

Special thanks to my parents and friends for making my life so happy.



FRANCE

Vincent Lascaux

My name is Vincent Lascaux. I am 22 years old (to those who read in 2005, or to those who want to give me a gift for my birthday, I am born the 28th February of 1982). I am French, and more precisely Parisien (since I was born and lived in Paris for my whole life). I did scientific studies that entitled me to the Ecole Centrale Paris (a really good French engineering school). I am currently doing an internship in Amadeus, in London. What characterizes me the more is probably my curiosity and my willing to understand and learn. That is probably why I find that algorithmic is a really interesting field: since it is young, its theory is understandable and can be learnt with a small background. And more important, the goal of algorithmic is to understand problems and how to solve them.

What does algorithmic mean to you?

I like solving algorithm problems, and probably even more reading solutions to problems I have been working on for a while. It's like a game. Some people like to do crosswords, I like to think about a problem and try to find a smart way to solve it. Like in chess, algorithmic has its own rules, and well known moves. Chess players know how to handle typical situations. When searching for an algorithm, you know how to sort an array, use automatas, recursivity... and you have to do the right choices to beat the problem.

How customized is your coding environment?

<Microsoft ad (I'm not paid for that ;)}>

I use Visual Studio to code. I find it very user friendly both to code and debug, and didn't feel the necessity to customize it a lot. I just changed the place of some panels, and that's it. </Microsoft ad>

How do you prepare for this kind of competition?

I have to say that I didn't prepare myself a lot for this competition. Coming for an engineering school, with a high mathematical level, I think that I was well prepared for the first round. For the second round, I just waited for the problems and thought a lot about them. It is surprising how unsuspected are the circumstances when you find improvements for your solution. I didn't find the good ideas I had in front of the screen, wondering "What could I improve?" but sleeping, walking, or even thinking about something else...

What would you like to say to your friends at home?

For people from my school, that I'll do my best to honor its reputation. For my roommates (I am currently sharing my house with three other students to whom I promised to offer a good restaurant if I win something in Brazil), that I'll do my best to feed them. For my family, that I'll do my best to continue making them proud of me (especially to my mum who told I won the trip to Brazil to the whole neighborhood).



Rendering Invitational

What would Leonardo DaVinci have done with a computer? How would his creations be different? Art and technology both play significant roles in our lives, but we often think about them independently. A true real-time rendering team combines aesthetic sensibility and coding skills to transform polygons, meshes, and textures into a work of art. When art and technology come together like this, both halves of the brain connect.

Students in the rendering invitational have imagined the art of technology, creating three-dimensional animations and graphic inventions merging artistic beauty with technological innovation. After seeing these students' creations, you'll find that when art meets technology, amazing things happen.

Fast Facts:

This is the first year of the rendering invitational in the Imagine Cup.

An example of real-time rendering from the world around us is video games – games like Halo II or Counterstrike do very similar complex geometric calculations on the fly.

The five finalists were chosen through community voting at www.imaginecup.com.

In Brazil, rendering students will be paired with leaders from the graphics industry to develop official artwork for Imagine Cup 2005.

Technologies featured include Visual Studio .NET and DirectX9.0.

Additional sponsor:



nVIDIA.

BELGIUM

Team Name: Nautilus
Team Members: Charles Hollemeersch, Elisabeth Hollemeersch, Wesley De Neve
University: Ghent University

Description of your team:

Charles Hollemeersch was born in Bruges, on February 22, 1982. He worked on a master's thesis using DirectX 9 at the Multimedia Lab research group, headed by Professor Rik Van de Walle, Ghent University - IBBT, Belgium. The thesis subject covers the dynamic loading of textures, the usage of videos as textures, and the caching of shader calculations. He is also the lead programmer of the well known Tenebrae Quake source modification, adding bump-mapping and stencil shadows to the Quake engine.

Elisabeth Hollemeersch, Charles's sister, was born in Bruges, on February 21, 1985. She is studying Eastern Languages and Cultures at Ghent University, Belgium. Her main subject is Japanese. Her interest in art provided her with the necessary background in order to create the textures and models for the H2Ocean technology demo.

Wesley De Neve was born in Ghent, on May 31, 1980. He received his masters degree in computer science from Ghent University, Belgium, in 2002. He joined the Multimedia Lab in 2002 where he is currently working toward the Ph.D. degree. His research interests include multimedia APIs, video coding technologies, and content adaptation.

Charles and Wesley met each other for the first time at a demo session for students interested in doing a master's thesis at the Multimedia Lab research group. The session in question included a demonstration of a 3D multimedia portal, built by making use of MPEG-4 technology. It soon turned out that this demo had caught the attention of Charles and from one thing came another, finally resulting in a state-of-the-art thesis and in the participation in the rendering track of the Imagine Cup. For the latter, Charles could also rely on the assistance of his sister (rumors go about a paper somewhere out there mentioning that sisters are quite good in drawing fishes :-)).

Description of your project:

Our demo tries to evoke the sea in all its aspects, from the vivid Great

Barrier Reef in Australia to the murky depths of the Marianas Islands. H2Ocean is in fact a technology demo that relies on some innovative techniques in order to implement some spectacular graphics effects in real-time (simulation of the surface of an ocean, rendering of fur, advanced lighting, ...). Most of the techniques in question will probably emerge in future computer games when the necessary hardware is ubiquitous. The demo itself makes use of some of the newest features of the DirectX environment, such as the High Level Shader Language and the Effects Framework for the implementation and the management of the programmable shaders respectively.

The challenge of H2Ocean lies especially in the requirement that a lot of effects had to be done in real-time, in contrast with what is done in animation movies such as Monsters Inc. and Finding Nemo. The latter can for instance afford to let a computer farm work on a particular scene for several hours or days. This is not the case for H2Ocean: for example, the rendering of the water surface of the ocean is done at approximately 30 frames per second on modern hardware. It is probably also interesting to know that the algorithm used for the rendering of the surface of the ocean can be encountered in movies such as Titanic and Waterworld. Even the playback of the movie with the end credits is internally done by making use of routines that depend on 3D technology.

More information about the demo can be found on the following URL:
<http://multimedialab.elis.ugent.be/h2ocean/>.

As a team, why are you most excited about Brazil?

With respect to our trip to the homeland of Ronaldo, Barrichello, and the Samba, we are eager to catch a glimpse of the culture of Brazil, such as the rain forest, the beaches, ... Perhaps we will even be able to visit the famous Jesus Christ statue in São Paulo, having a European equivalent in Portugal. And with no doubt, we will also have the chance to meet new friends that are as much interested in 3D rendering as we are.



CHINA

Team Name: FrontFree_Studio

Team Members: Liu Hongchun, Li Xiaoyi, Ning Wei, Liu Feixiong

University: Beijing University of Technology

Description of your team:

We are a group of four students from the Beijing University of Technology. We are Chinese. Two of us are having their undergraduate course, and two are graduate students. Liu Hongchun and Li Xiaoyi are classmates before they got their bachelor's degree and they met Ning Wei and Liu Feixiong while doing a project of 3D Graphics. We are best friends now. Liu Hongchun and Liu Feixiong are programmers on the team, and Ning Wei and Li Xiaoyi are artists. Now all of us are members of FrontFree technology network.

Description of your project:

In China, the dragons are supernatural creatures; they are the symbol of power, honor, wisdom and the statesmanship. Our demo will show you one of the oldest legends in Chinese mythology, the two dragons and a bright bead flying in the sky, suggesting the rivalry of the might and wealth between the two dragon adversaries. We have enthusiasm of making our entry - We worked round-the-clock; and we made it in an ordered way - we used CVS for the source code management and regular meeting system for the schedule management.

As a team, why are you most excited about Brazil?

We want to have a taste of the authentic barbecue of Brazil and we want to see the São Paulo Brazil Temple. And by the way, this is the first time we go abroad. The most exciting thing we think is that we can meet a lot of friends from other countries and interact with them.



COLOMBIA

Team Name: Incogrudea

Team Members: Juan Mora Palacio, Andres Serna, Andres Tabares, Andres Gonzales

University: Udea – University of Antioquia

Description of your team:

Colombia based, Incogrudea, is a team formed by four videogame enthusiasts that met each other in college (Udea –University of Antioquia). The whole team studies computer science engineering but every single member has a special taste for something else...

Andress loves CG animation and TV production, Andrest is a CG freak but also likes skateboarding and soccer, Andresg loves CG stills and music, and Juanm only plays videogames and plays videogames (...and I almost forgot: plays videogames).

One funny fact: there are three members (of four) named "Andres" – that's why we all have nicknames or we call each other by their last name.

Description of your project:

Space battle is our first project. It is a 3D spaceships shooter game that actually occurs in earth. It was made with DirectX using Visual C++ as language. Geometry of everything you can see was made in 3DMAX and exports to .X files.

As a team, why are you most excited about Brazil?

We can't wait to have some fun since we haven't had vacations for a long time...and we would like to know some people experienced in the videogame world :)



LITHUANIA

Team Name: Nesnausk!
Team Members: Aras Pranckevicius, Paulius Liekis
University: Kaunas University of Technology

Description of your team:

'Nesnausk!' is a group of enthusiasts interested in game development, real-time computer graphics, and Demoscene. Most of us were in the same school and/or university, some have worked together. Our Imagine Cup entry was done by two "Nesnausk!" members, Aras and Paulius. Aras spends his free time with his wife and daughter, and Paulius does lots of things, from BMX bikes to nightclubs.

Description of your project:

Our work "The Fly" is a non-interactive demo program that displays real-time 3D graphics and plays music. The demo consists of mostly organic scenes (the fly, terrain etc.), some animations and graphics effects. The main idea of "The Fly" is the periodic scale of its world – the first and last scenes are the same, only differing a million times in size! Graphics effects are: bump (normal) mapping, depth-of-field, anisotropic fur rendering, multi-layered terrain, projected shadows and iridescent/translucent wings. Fallback paths exist for pre-DX9 hardware, with some or most of the effects turned off.

As a team, why are you most excited about Brazil?

We've never been so far from home! And of course, we can't wait to see the Iguaçu Falls...



VIETNAM

Team Name: BK02
Team Members: Pham Huu Ngon
University: Ho Chi Minh University of Technology

Description of your team:

I'm Ngon, a second year student of Ho Chi Minh University of Technology in Vietnam. I study about Information Technology because I want to become a software engineer and to contribute to making Vietnam known on the IT map. I also enjoy games very much. That makes me learn DirectX9 and create 3DProS.

Description of your project:

3DProS is a simple programming tool. It was created in order to help people create 3D animations, design custom 3D controls and solve lots of graphic problems easily, just by dragging and dropping. It is also an open source project hosted on <http://sourceforge.net>, so if you like, I hope you could help me make it more powerful and useful.

As a team, why are you most excited about Brazil?

I look forward to having a summer holiday in Brazil. I'm practicing my English so that I can make friends with as many people as I can.



Short Film Invitational

Innovation is everywhere. From elementary schools to universities, from small businesses to global corporations, people all over the world are thinking about how we can improve society with new ideas and inventions.

Around the globe, there is a culture of innovation emerging. A movement setting traditions and connecting individuals, innovation is weaving its way through each of our lives. Can you see it?

The finalists in the short film invitational have shared their perspectives on the culture of innovation in their cinematic works. Their artistic opinions on improving the world will challenge, amuse, and inspire you.

Fast Facts:

This is the first year of the short film invitational in the Imagine Cup.

Over 50 initial short film entries were narrowed down to 30 semi-finalists. Five finalist teams emerged through community voting at www.imaginecup.com.

The five finalist films were judged by a panel of film directors, producers, and actors from Hollywood.

Technology featured for compression and playback is Windows Media.

CANADA

Team Name: uwoArtists

Team Members: Kevin Durdle, Nick Haffie-Emslie, Tim Gordon, Toben Alexander

University: University of Western Ontario

Description of your team:

We are a group of four students from the University of Western Ontario. Kevin, a Computer Science masters student, heard about the Imagine Cup and found the rest of us through some mutual friends and the University film festival. Tim and Toben have just finished undergrad degrees in Media, Information, & Technoculture. Nick is in his second year of a Film Studies / Philosophy double major. While the final days of production allowed little sanity and even less sleep, we all had a great time working on this project!

Description of your project:

Our short film, From Everything, questions the idea of innovation as something that "just happens." In it, the protagonist comes to realize that he must look to the world around him for inspiration rather than ignoring outside influence. After a fruitless beginning, the man finds the inspiration he needs to completely cover his once-bare walls with ideas.

As a team, why are you most excited about Brazil?

We're not sure how much longer Kevin will last without a little SCUBA! It's going to be great.



CHINA

Team Name: Lightboat Harbor

Team Members: Steve Wong, Eric Zheng

University: East China National University

Description of your team:

Steve and I are two undergraduates from East China Normal University in Shanghai, China. We did not know each other before we got into the same institution. We both transferred from physics department, both love movie making, and both love our current major, Software Engineering. The only difference is that I am a junior whereas he is a sophomore. We came to cooperate together, and started making short films. Of course, we both feel so happy and lucky to be elected as the top five in this match.

Description of your project:

The short movie tells us a story of one guy who is keen on collecting sounds, got inspiration by coincidence when recording a dialogue beside, and thus he nerve himself to unburden his love to the girl he loved through editing his sounds, but in fact the guy misunderstands dialogue and considers it as a real thing, which is the main cause of his idea and confidence. As a matter of fact, it is words between two actors.

As a team, why are you most excited about Brazil?

We both feel so excited about this tour. I feel so honored that I could stand for China and attend the festival.



GERMANY

Team Name: Tracking Music

Team Members: Thomas Bedenk, Lars Fischer, Jenny Meißner, Stefanie Schießl

University: University of Applied Sciences, Nuremberg

Description of your team:

We are four students attending the University of Applied Sciences in Nuremberg, Germany, in the fourth semester of our studies in Media Design.

We know each other through the studies and, after this project, we actually know MUCH more about the others, especially after the 3 weeks of Post Production which were a bit like living in a self chosen prison, were you get looney, very sneaky and creepy.

Description of your project:

In the framework of the course "Video and Animation", hosted by Professor Jürgen Schopper, who won an Oscar with the special effects of the blockbuster "Independence Day", we made this video during four months in the third semester. It tells the story of a character with a personality splitting. One is imprisoned in a room, but free in mind, the other strays around in an infinite industrial world but is prosecuted in mind by the other. Finally they face each other through a broken mirror, but cannot reach each other.

As a team, why are you most excited about Brazil?

No one of us has ever been to Brazil or South America, and we are all very, very excited! It's also a time-out from our study and upcoming exams.



ROMANIA

Team Name: MIDIA

Team Members: Adrian Baragan, Emilian Baragan, Marius Patrascu

Description of your team:

We know each other since high school, being on the same bus to school every single day. After graduating from high school, every one of us is put in front of one of the most important decisions of our lives. We consider ourselves ambitious and determined types always wishing to be the best at what we do. Maybe this mentality made our paths cross again, this time further away from home. The city: Iasi, the place: one of the most prestigious Universities of our country.

Marius Patrascu is studying the Law, while the other two team components are students of the Faculty of Computer Science. Regardless the profile either of us has chosen our imagination and desire to create kept us together. We are, like many others, attracted to innovation and everything having to do with the crazy technological rush and evolution and we wish to express this attraction by any means and in the most different ways possible. And the most beautiful of all means is, in our opinion, art.

Imagine Cup was an opportunity for us to share this joy with students all over the world, students just like us which love what they do, which find as much joy in art, innovation and technology as we do.

Adrian Baragan

Since I was a child I was passionate with animation. Even if in the beginning there was no DirectX, I used my pencil and paper, even if there was no .NET, I used rules, compasses and even if there was no DirectDraw I used the corner of my notebook, and with a rate of 5 fps (files per second) I used to make a 2x2 cm resolution animation with a color depth depending on how sharp my pencils were.

Today there are tools, there's communication, there's technology. My notebook grew some keyboard, my pencil grew a mouse's tail and my imagination is grown wings.

Once admitted to the Faculty of Computer Science – „Alexandru Ioan Cuza” University of Iasi, I entered a community of capable, intelligent people, passionate about their work, which know what they want and know how to do it. I'm proud to be among them and I wish to bring the best of my contribution to everything that means evolution and innovation in the today's technological world.

ROMANIA (cont.)

Emilian Baragan

When you're born and raised on the sea shore you can't expect to become anything less than an incurable romantic. This is me, a convinced romantic which loves nature, life and everything beautiful about life, in general. I love meeting people, making friends and learning as much as possible from as many domains possible. I love being part of the machinery that puts our world in motion. I'm passionate about technology, and this brought me in the computers field since I was an 11 year old child. Thus, after graduating from a computer-science profile high-school, I ended up a student at one of the best faculties in the country, now being in my third year as a student. I look at the student years as a unique period of life and a great opportunity to gain a lot of knowledge and make a lot of friends. I believe that life should be lived without regrets and that's why I try not to miss any chances I may have in life. In the Imagine Cup contest I saw a chance, an opportunity to express ourselves in the most beautiful way possible – by combining the 2 apparently opposed branches: technology and art. But I believe that everything that's made with passion becomes art.

Marius Patrascanu

If I were to chose something I would want to do all my life, I would chose to be an artist. Sadly I don't have a voice, I can't paint, can't sculpt and I don't have enough patience to write a novel. But I know how to dream. „Nostrum Capitulus“ is a dream which, together with Adi and Emi, we made it come true.

Although I'm not a student in Computer-Science and all I know about 3D modelling is what I learned by watching during the three months of work on our film, when I first saw a computer I immediately became in love with technology, and there weren't few the times I thought I should study computer-science instead.

But I'm a law student not because I want to but because this is who I am and this is what I dreamed at since I was a child. I love understanding the world and its rules. But law isn't everything, the world in which we live is a world of sience, technology and information and this is why when I first had the chance of being a part of the Midia team I accepted at once.

Now I'm happy and proud of my team.



UNITED STATES

Team Name:

Split Level Productions

Team Members:

Andrew McConnon, Benjamin Eachus, Gregory Marx, Jessica Inocencio

Description of your team:

We met each other at school. The group is about as eclectic as they come. People from Texas, New Jersey and everywhere in between. And don't even start with film tastes (Andrew loves Billy Wilder films; Greg adores 'Home Alone' and 'Catch Me If You Can'). That having been said, we all share one passion: film. Watching films, making films, talking about films!

Description of your project:

Our film looks at the evolution of dance as a metaphor for social change. We open with archival footage that we spliced from different 'proper behavior' etiquette movies. We then cut to images of the world improvisational dance. For dancers, innovation is the most essential element to creative self-expression.

As a team, why are you most excited about Brazil?

We're all pretty excited by the prospects of seeing all the exotic wildlife in the national park. Similarly, we're looking forward to learning more about Brazilian culture and sampling the local cuisine.



Imagine Cup 2005

Choosing the location of the Imagine Cup worldwide finals is difficult. Many countries could well host the competition and provide more than enough magic to create a memorable event.

In 2003 the competition was in Europe, held in Barcelona, Spain. In 2004 it moved to the Americas, to São Paulo and Foz do Iguaçu, Brazil. In 2005 the Imagine Cup continues westward, traveling approximately 11,500 miles to Yokohama, Japan.

Yokohama is a city of 3,550,000 that sits on the western coast of the island of Honshu, 20 miles from downtown Tokyo. A relatively young city, opening its port under 150 years ago, Yokohama now defines much of what is modern Japan and was a natural choice to bring the 3rd Imagine Cup worldwide finals. The 2005 finals will be held in conjunction with Tech Ed Japan, and will bring together over 5,000 people to once again celebrate student innovation and achievements in technology.

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The background features a large, stylized graphic composed of several overlapping diagonal bands in various colors: blue, green, yellow, and dark teal. The text "Microsoft Imagine Cup" is integrated into the design, appearing in white and light blue across these bands.

www.imaginecup.com