LatinCampus Corporate University Organization

Mission and Vision

Latin Campus Organization dedicates itself to undertaking research into **Virtual Education**, its development and implementation in Latin-America.

Our main goal is to find the pedagogic, methodological, didactic and technologic **pertinence** of the **Latin-American educational context** within the globalization processes, in order to operate productively and successfully.

Virtual Education- *with scientific and technological relevance*- from and for Latin America.

Company Structure

Latin Campus Organization is made up of three organisms: **1**, a centre for research and production of virtual education materials and environments (PIe-C), **2**, an industrial firm which produces and assembles infrastructures (I3Net), and, **3**, a virtual IES integrating community (UNIVIR Net).

1. PIe-C: The Industrial Park e-Content is a scientific and technological research center based on the analysis, design, production and implementation of virtual education materials and environments. It has introduced the concept of pedagogic e-clecticism and didactic e-construction; all this determines the Latin Campus Education Equation:

Virtual Education = e-learning + e-training + trainer-devices

The PIe-C also supports the implementation of a "General Law for Virtual Education", and its respective "Statutory Decrees", which has been proposed to the Ministries of Education and Institutions of Higher Education in Latin-America. PIe-C is located in Panama City.

2. I3Net: is the industrial firm in charge of the design and implementation of telemetric and telecommunications infrastructures, as well as trainer-devices and simulators for set up of: educative micro-worlds, virtual worlds and robotic and intelligent devices that make global educative environments functional. I3Net is located in Bogota.

3. UNIVIR Net: is a virtual community under a Corporate University profile, made up of allied universities and Latin Campus Organization users. Its purpose is to socialize and share the science and technology developed by I3Net and PIe-C. Univir Net is located in the Cyberspace.

Organisms with the purpose of innovating in Instructional Technology

Science and Technology Transference

The Latin Campus Organization incurs in global virtual education through strategic alliances, in order to establish a Latin-American academic idiosyncrasy within a global context.

The Industrial Park e-Content

PIe-C is an **applied research center**, which aims to analyze, design, produce, assemble and set up virtual educative materials and environments.

Pedagogic Platform

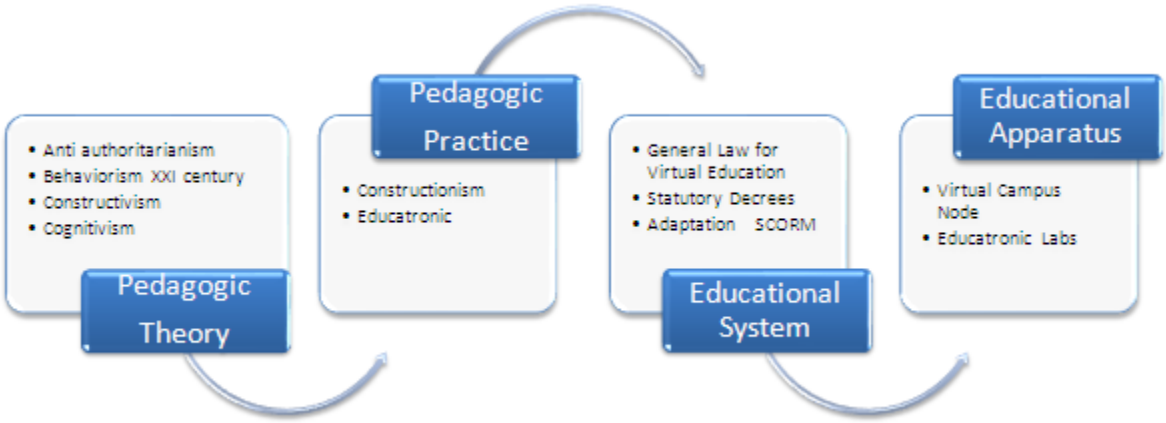
Through the **PIe-C**, Latin Campus has innovated in four areas:

Pedagogic Theory: The design of a conceptual frame called **pedagogic e-clecticism** was begun over a decade ago. A useful teaching-learning tool for use in the field of Instructional Technology, was founded on the self-Directed Learning model (A-aD), from American e-learning, and led to the creation of an original Directed self-Learning (aA-D), suitable for the Latin-American context.

Pedagogic Practice: the **e-constructionism** conceptual frame was designed to integrate e-learning, e-training and trainer-devices, as a didactic strategy for the acquisition of pedagogical competences (educability) and instrumental competences (teachability) in virtual environments.

Educational System: A "General Law for Virtual Education" was proposed and complemented with "Statutory Decrees", aiming for the creation of **regulation and accreditation** of Virtual Education.

Educational Apparatus: together with **I3Net** and in a process of **permanent innovation**, designs, assembles and implements useful virtual environments for teachability.



The Industrial Park e-Content designs, assembles, implements and releases materials and environments for Virtual Education in accordance with this Pedagogic Platform. The result is given in the production of real education and **training systems**.

What is Virtual Education? Reading Courses, Information Systems… or **Training Systems**?

The Latin Campus Pedagogic Platform sees Virtual Education as a **revolutionary science**, and in this sense, as a **new paradigm**, which requires scientific and technologic reformulation.

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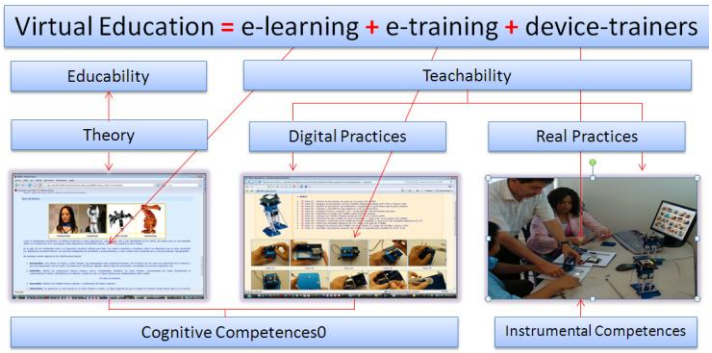
Methodological and Didactic Platform

The Latin Campus methodological and didactic platform is based on two components: **Educability** and **Teachability**. The Educable is acquired through theoretical methods (e-learning), whereas the Teachable is acquired through instrumental methods (e-training and trainer-devices). E-training is a practice based on digital simulation, and the trainer-devices are real practices with didactic trainers.

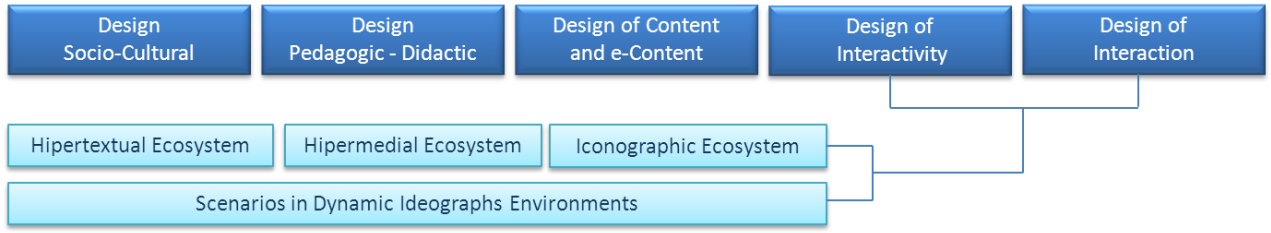


The **integration** of e-training with trainer-devices, applied in an e-clecticism pedagogic and e-constructionism didactic context, is called:

EDUCATRONIC

Instructional Design

The pedagogical model (e-clecticism) and didactical model (e-constructionism) of formation and training in virtual environments for styles of self-Learning Directed (sL-D) of LatinCampus led us to conceive and implement an own model of instructional design (e-ID), which is fundamented on five main phases:



International alliances in Content

One of the main goals of the **Ple-C** is to provide Latin-America with **high quality Virtual Education**. The most recent strategy is to integrate the content of Asian programs and teachers (particularly Taiwan, Hong Kong and Singapore), but changing it to suit a Latin-American audience.

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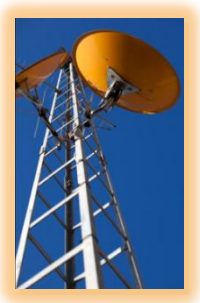
I3Net: The abbreviation stands for its mission: to design and implement the three required infrastructures for the Net setup, all of which improve Virtual Education. They are:

Telecommunications → Intelligent Buildings → Virtuals World

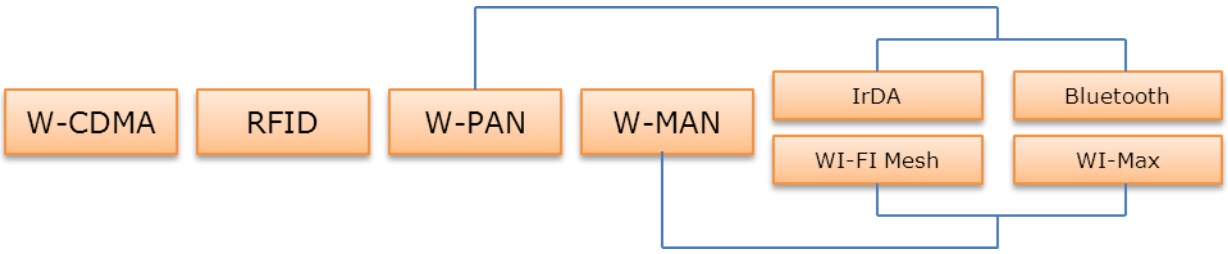
Telecommunications:



The telecommunication infrastructure constitutes **the physical ground** on which the implementation of the TIC's that allow the development of Virtual Education is based. This educational model is pertinent for the Informatics Society.

In order to provide the connectivity that Virtual Education requires, **I3Net** has set up from minor wireless nets for offices in the homes of the e-tutors, to huge **interconnected territories**, made up by hundreds of towers and antennas, which cover thousands of square kilometers.

I3Net has also reached high levels of expertise in the setup of **wireless telecommunication** infrastructures that are not only used for academic connections (e-content transference), but also for the design of state of the art trainer-devices.



Intelligent Buildings

Some environments of **interaction** and **interactivity**, as well as the educatronic laboratories implemented with trainer-devices, require physical spaces whose design and productivity are up to Cybersociety standards...

I3Net has designed the concept of **Virtual Campus Node** (VCN), which allows Education Institutions to implement intelligent spaces, focused exclusively on the teacher-student-content interaction.

The **NCV's** are made up of: LatinServers, LatinMobiles, Tutorship Centers, Videoconference Rooms, Cooperative work desks and Intelligent Desks.

I3Net has also introduced the concept of the Virtual Classroom, a group of devices for intelligent connectivity which brings the concept of **GLOBALIZED CLASSROOM** to life.

For I3Net, the Intelligent Buildings are a vital component of the Digital Being and Virtual Education.

Virtual World

I3Net directly designs and sets up the required trainer-devices to build **academic micro-worlds and virtual worlds**.

The trainer-devices allow Virtual Education to offer **practice sessions** to promote skills-building and, thus, improve the third component of the Latin Campus Equation.

Virtual Education = e-learning + e-training + **trainer-devices**

Mobility and Portability

I3Net designs and implements a wide range of laboratories and **trainer-devices** which allow the visualization of academic practice in Virtual Education environments. These trainer-devices have the mobility that is required by the Digital Beings.

Device-trainers and **e-training systems** of the Telecommunications Mobiles master program

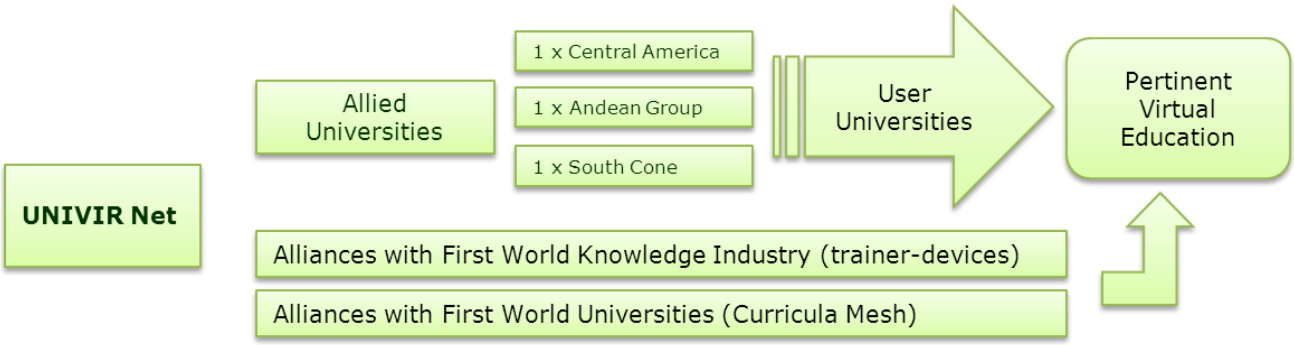
Show Room

In 2011 and 2012, and in alliance with the **Taiwanese Knowledge Industry**, **I3Net** will be able to use a complete Show Room of trainer-devices (real practice) and e-training systems (digital practice), to be included into the Academic Curriculums (virtual or on-site) of the allied IES.

This Show Room, along with the PIe-C, will aim **to build academic micro-worlds** that will provide Virtual Education with the **practical and instrumental component** which it lacks.

The Educatronic Laboratories, The Mobile University, and Interconnected Territories are I3Net products and experiences that will be socialized in late pages in this guide.

UNIVIR Net is a virtual community made up of allied and user universities that make use of the Latin Campus Organization products and services of (**I3Net** and **Ple-C**).



These universities may benefit from non-Latin American knowledge contents, with which we have strategic alliances of science and technology transference. The products and services offered by UNIVIR Net are as follows:

Curricula Mesh	Academic Microworld	Scientific Platforms	Technologic Platforms

Curricular Mesh

UNIVIR Network offers the e-content of the following academic programs of which has intellectual and property rights:

MA in Intelligent Buildings (and derivative programs) – *Detail later*
MA in Virtual Education (and derivative programs) – *Detail later*
Doctorate in Educatronic
MA in Logistic and International Commerce

(*) MA in next-generation mobile telecommunications
(*) MA in Laws for the cybersociety
(*) Specialization, MA and Doctorate in Mathematics

(*) In production

Each of our **curricula mesh** has its own:

- Hypertextual Ecosystem / Hypermedial Ecosystem
- Iconographic Ecosystem / Ideography Dynamics Ecosystems
- Ecosystem Reference Materials (Virtual Library)
- Systems of Laboratories in Educatronic Environment (e-training / device-trainers)
- e-Docents, e-Tutors, e-Monitors
- Evaluation Systems
- Specific Model of Interaction and Interactivity

Ple-C and **I3Net** have started the process of language, pedagogy and technology conversion of the curriculums of Asian universities, in order to offer them in virtual format in Latin-America through double degree agreements between Asian and Latin-American universities.

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Academic Micro-Worlds

One of the biggest benefits that we offer to our allied universities and UNIVIR Net users is **constant innovation**.

An example of this is the **integration** of e-learning with simulators and state of the art trainer-devices (Educatronic), bringing to life the concept of Academic Micro-Worlds.

An Academic Micro-World is built when a Virtual Education process has incorporated **all the elements of the Latin Campus Equation** into a pedagogic e-clecticism and didactic e-construction environment.

Academic Micro-World
LatinCampus Equation e-learning e-training trainer-devices pedagogic e-clecticism didactic e-constructionism

Scientifics and Technologic Platforms

The UNIVIR Net counts with all the Latin Campus system, as well as its strategies of Cybersocial education.

Scientific Plataform	Plataforma Tecnológica	Alliances
pedagogic e-clecticism didactic e-constructionism E-Instructional Design	LMS (IA + Robotics) LCMS (Artificial Intelligent)	Universities Knowledge Industry Virtual Communities

Latin Campus counts with the only LMS/LCMS platform, developed in Artificial Intelligence Agents and Robotic Agents. See the LMS (AI + AR) catalogue.

Virtual Education Regulation and Accreditation

Through the UNIVIR Net, Latin Campus will propose its "**General Law for Virtual Education**", and its "**Statutory Decrees**" (codes which **introduce and propose** the regulation and accreditation of Virtual Education) project to the Latin-American Education Ministries. It is important to point out that this proposal is not only technological (SCORM/AICC), but also includes: **e-pedagogy, e-didactic, e-teaching, e-tutorship, Digital Being and operational infrastructures**.

Export knowledge

Finally, another goal for UNIVIR Net is for its user and allied universities to include in their vision and mission, the globalization of Virtual Education programs, and the establishment of cross-border alliances and **agreements** for degree validation.

This is made possible by the permanent presence of UNIVIR Net in the most important scientific and technological scenarios in the world.

LatinCampus share: "General Law for Virtual Education", and its respective "Statutory Decrees",

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The LatinCampus Equation

With the help of science and technology, Latin Campus has aimed to identify the elements that must make up the content provided in virtual environments, in order for it to have a contextual relevance (globalized and cybersocial). Our research has led us to formulate a model that guarantees the **e-content's educative quality**.

Virtual Education = e-learning + e-training + trainers-devices

The constituent components that influenced the formulation of LatinCampus Equation are:

1. The four (4) main characteristics of Virtual Education

For an academic process may be considered virtual, it must be offered and received:

With no time restrictions (at any time)
With no restriction with respect to location (from any place)
At an individual learning pace, and
With an individual learning style

2. Converting the Content in e-Content

When we talk about content we refer to the materials (text books, laboratories) used in traditional education, including teaching. Whereas, e-Content refers to the same content, after having undergone a process of pedagogic, methodological, didactic and technologic redesign that makes it suitable for Virtual Environments.

The **PIe-C** process is designed to scientifically and technologically reformulate the paradigms, transforming the content so that it can be integrated into the Systems.

3. Differentiate Educability of Teachability

Virtual Education = Educability + Teachability

Virtual Education = Cognitive Competences + Instrumental Competences

Initially, Virtual Education only covered the theoretical components (the Educable), and so blended programs (virtual + treditional) were required in order to make a program complete. By incorporating Educatronic and the Mobile University, Latin Campus included the Teachable (instrumental practice) into the Virtual Processes.

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4. Idiosyncratic Learning Style Proposal.

Latin Campus Equation has an application for the Latin-American context called self-Learning Directed (sL-D), and another for developed countries called Learning self-Directed (L-sD).

self-Learning Directed → **PIe-C** ← Learning self-Directed

The **PIe-C** organism of Latin Campus is in charge of ensuring that this **cultural transformation** of the academic contents is included into each of the components of the Latin Campus Equation.

5. Educatronic.

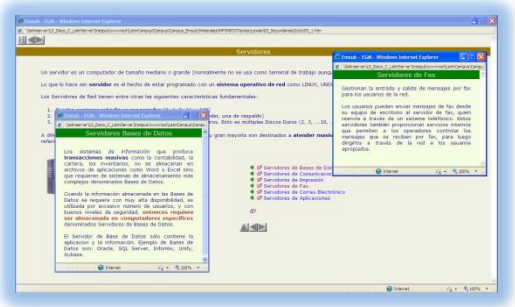
Educatronics is based on the implementation of the TICs for the development of safe practices complemented with activities undertaken with didactic trainers. The Educatronic process is founded on global and cybersocial didactic strategies which we call e-Construction, and serves as a conceptual framework for **LatinCampus Equation**.

e-constructionism = constructivism + TICs + cybercultura

6. Interaction and Interactivity

The Instructional Design (e-DI), developed by LatinCampus, guarantees that Latin Campus Equation promote interaction and interactivity between all the learning activities.

When we talk about interaction we are referring to the cognitive intervention of e-teachers in the **educable concepts**. By Interactivity, we mean this same intervention, made by the e-tutors and e-monitors. It is important to clarify that both these concepts vary according to each Learning Style (sL-D / L-sD).



7. Pedagogic Mediation.

Finally, it is important to point out that the e-Learning component (theoretical/Educable) of Latin Campus Equation, which in traditional education is represented by a teacher, should not be replaced by "**reading courses**", but by systems of interaction and interactivity, written in literary styles suitable for Web Usability, Color Pedagogy, and Collective and Connected Intelligence.

Equation LatinCampus guarantees Significant Learning in Virtual Environments

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Educatronics: Technology Laboratories

The engineering problem

The UNESCO released an **early alert**: The preferences on professional studies indicate that, **there is no interest or motivation** for science and engineering programs among young people.

Today, there is an annual deficit of 3 million engineers. At this rate, civilization might suffer a crisis of innovation as its pace will **radically decrease** in comparison to the 20th century.

In developed countries, this problem is due to youths' keener inclination towards the artistic or humanistic. In Latin-America, however, these programs are less pursued by students due to their **deficient academic backgrounds** and their-almost complete-lack of technological background.

Latin Campus attempts to solve this problem through **Educatronics**; building the concept of **Technologic Laboratories**.

The Technology Laboratories aim to eradicate the very popular and erroneous trend in Latin American Secondary Education **to replace the study of technology with IT courses** (SO and Office).

e-Training and the trainer-devices work on three areas with a high level of scientific and technological interest: **1**. Renewable Energy, **2**. Electronics and **3**. Educative Robotics.

The Biotechnology Laboratories installed in rural schools, constitute **a special case**, whereby the project aims at building the school's scientific and technological profile based on the region's agricultural characteristics.

The Laboratories exist in **two** versions: Institutional Laboratory and Municipal Laboratory. Each one of these is available in both, **fixed and mobile mode**. The Laboratories are made up of **six** basic components: Virtual Campus, e-learning, e-training, trainer-devices, Virtual Desk and e-Tutor systems.

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Educatronic: Trainer-devices for Curricula Mesh

Trainer-devices.

I3Net has established **global alliances** for the design, construction and setup of trainer-devices **to respond to the academic demand for laboratories or workshops**. These trainer-devices cover practically every academic discipline: Engineering, Architecture, Health, Natural and Social Sciences.

However, Latin America is saturated with **underused trainer-devices**, for reasons that range from a teacher no longer working at the Institution, to new teachers who do not possess the **instrumental skills**.

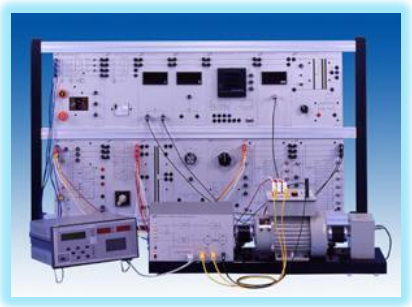
Training.

The academic world requires state of the art trainer-devices, which, in turn, require that tutors and teachers undergo permanent training and up-dating. **I3Net** does not only set up the educatronics laboratories, but also **guarantees visibility** of the designers to the allied and user universities.

Depending on the requirements of the education and training processes, they can be given "**in situ**" (in the country of origin of the trainer-device), in the receiving educational institution, or by virtual interaction and interactivity.

Update and Maintenance

By means of outsourcing, **I3Net** guarantees the technological updating of trainer-devices and e-Training systems, as well as their preventive and corrective maintenance.



Prototypes

I3Net and PIe-C provide design, construction and setup services for **Academic Micro-Worlds** (subjects) and **Virtual Worlds** (Academic Curriculum) in any academic discipline.

The Academic Micro-World prototype is made up of e-learning, e-training and trainer-devices, within a pedagogic e-clecticism model and didactic e-constructionism model.

Examples of Academic Micro-Worlds

Electricity, Electronics, Electrical Machines, Mechanical, Robotics, Computer, Mechatronics, Hydraulics, Pneumatics, Biotechnology, Medical Equipment, Textiles, Livestock, Dairy, Intelligent Buildings, Networks, Telecommunications.

We convert your needs of laboratories in Academic Microworlds or in Virtual Worlds

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The Mobile University

Virtual students wanting to undertake their educability (e-learning) process **at any time and in any place** need a teachability (laboratory practice) which enjoys **the same flexibility**.

Latin Campus has introduced the concept of **Mobile University** for students who live out in provinces and who do not want to or cannot move to the Universities located in principal cities.

At first glance, the laboratory looks like a truck or a bus. In fact, it is, and the advantage is that **it is mobile**.

The mobile unit has its own **electric energy generator**, which has been designed to be external and placed under the mobile vehicle, **in order to avoid any possible damage to the highly precise trainer-devices** by the vibration caused by the generator.

Self-sufficient Mobile University

Once parked, the mobile-classroom is anchored to the ground and expanded **to double its capacity**. The rear door becomes an access way, and inside, the trainer-devices are automatically or manually put into place.

Inside the laboratory **there are tents** which are installed to become **classrooms**. These tents are kept in the mobile's chassis and exterior deposits when not in use. Collapsible furniture is stored in the internal deposits.

This medium-sized mobile unit with three tents: two for external laboratory and a videoconference room, **can fit a hundred students per hour**.

Examples Tents

On the left: a lab-classroom.
On the right: a tent-conferencing
On the top left: an office.

The limit is your imagination

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At the front of the mobile is the Latin Server (Virtual Campus or LMS platform) with connection points to the external classrooms (tents). In the event of there being no Internet connectivity (satellite, wired or wireless) the mobile **becomes a Web Site**.

The mobile unit also incorporates an audio-center, a LED TV, a Blu-Ray system, a video beamer and the light, ventilation and surveillance commands, remote or local controlled from a sensor center.

Therefore this unit is an Intelligent Building.

The working areas -*in the expanding areas*- are high resistance tables, fitted with shelves designed **to carry high precision equipment** on long trips and rough routes.

Depending on the type of laboratory, the units might have small ventilation and light windows (see picture), or artificial ventilation and light systems.

Intelligent Building fully adaptive

Another type of mobile laboratory has collapsible furniture and easy-to-fit mobile trainer-devices in a suitcase or work-place presentation, instead of work tables.

The image on the left shows a work-place (in a tent), which figures in the background of the image on the right (in the mobile).

Lab-Technology

The goal of the Lab-Technology event, which takes place in Bogotá during the first week of October every year is to socialize the latest investigations and findings made by Latin Campus in Educatronic with the academic guild.

Lab Technology 2010 will be about Academic Micro-Worlds in Intelligent Buildings (LonWorks). The 2009 version- see picture on the right- was about Mobile Laboratories on Mobile Telecommunications and Biotechnology.

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Examples of Academic Curriculum

LatinCampus has designed and developed **curricula** total and integral, which makes available to the Latin American Universities (one institution per country). A typical strategic alliance **to offer curricula jointly** has the following responsibilities:

Basic list of responsibilities		
LatinCampus CU	**Allied University**	**Jointly Responsibility**
LMS / LCMS Platform e-Content (e-learning + e-training) Trainer-devices e-teaching, e-tutoring, e-monitoring Permanent (daily) reports Virtual Library	Governmental curricula approval Advertising & Marketing Registration and Tuition University Welfare Certifications and Degrees Physical Library	Audit of academic process Audit of pertinent evaluation

The MA in Intelligent Buildings curricula in strategic alliance offered by the Organization LatinCampus whose target population are Engineers: Civil, Systems, Electronic, Industrial, and Business Administrators.

MA in Intelligent Buildings		
Module 1: Preconceptions	**Module 2 : Technology**	**Module 4: Management**
Fundamentals	Energy	Automation and Control
Architectural Bases	HAVC Systems	Intelligent Building Management
Dynamic Architectures Ecolog.	Lighting	Business Intelligence
Natural Resources Passive	Audio	Global Supplier
Materials	Occupational Safety	
Technological Bases	Surveillance	
Networks		
Distributed Systems		
OSI Protocol		
LONWorks Platform		

Depending on the added module, the e-learning level of intensity, and the number of workshops (e-training, trainer-devices), **the program may be offered as**: **1**. A course in LonWorks, **2**. A course for Sensor and Actuator Programming Technicians, **3**. An MA in Intelligent Buildings. A special version: the diploma course in Intelligent Buildings is in the process of **being validated as Thesis Project** for Architecture or Civil Engineering..

Corporate Universities are the best ally of the Latin American universities
offering curricula scientifically and technologically complex.

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The Academic Curriculum of the **MA program in Virtual Education** is another of the academic programs **offered in strategic alliance** (for global universities) by the Latin Campus Organization.

This program is especially recommended because of the great possibility of **institutional positioning in virtual environments**, and the regional and national capacity to issue e-Content production as an alternative development.

MA program in Virtual Education

Module 1: Fundamentals in Virtual Education	Module 2: Education and Cybersociety	Module 3: Pedagogy and Didactic in Virtual Environments
The Paradigm	**Globalization**	**Epistemology**
A new paradigm?	Fundamentals	Theory of Knowledge
The Digital Age	Region vs. State	Pedagogy Architecture
Being Digital	Platforms and Trademark	**Pedagogic Theory**
Lecto-escritura Digital	**Cybersociety**	Anti-authoritarian pedagogies
Hypertext	e-Commerce	Behaviorism XXI century
Hypermedia	Intelligent Buildings	Constructivism
Iconography	Legislation cybersociety	Cognocitivismo
Ideograph Dynamics	**e-Institutions**	Humanism
Virtual Education Roles	The Corporate University	e-clecticism pedagogic
The Virtual learning	The Globalized Universities	**Pedagogic Practice**
The Virtual teaching		Didactic in Virtual Environments
The virtual institution		The constructionism didactic

Module 4: Production of SCOs	Module 5: Managing the Virtual Education	Module 5: Graduation Project
Instructional Designs	**Platforms**	
Fundamentals	Web Site Server	
DI' Robert Gagne	LMS	
DI' Generics	LCMS	
DI LatinCampus	**Standards**	
Educability Design	Interoperability	
Feasibility Study	Quality	
Hypertextual Design	**Virtual Education Direction**	
Hypermedia Design	The Direction	
Design Evaluation	Advisory committees	
Reference Material Design	The academic leadership	
Design Activities	Production management	
Diseño de la Enseñabilidad	The direction of operation	
e-training Systems	**Architectures**	
Traner-devices	Virtual Campus Node	
	Industrial Park	

The MA in Virtual Education is a prerequisite for the Doctorate in Educatronics.

www.educatronica.net

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Cybersocial Territories

Phase 1: Connectivity.

Latin Campus has interconnected hundreds of institutions across thousands of kilometers, covering the most complex geographic scenarios and making use of a diversity of telecommunications systems.

Connectivity is the first step to establishing Virtual Worlds and Academic Micro Worlds, in order **to give social functions** the investments made in infrastructure and technology.

An example of connectivity set up by Latin Campus is the first **interconnected territory** in Colombia: the department of Casanare, 42.000 Km2.

Phase 2: Telematic infrastructure.

Once the connection is made, Latin Campus interconnects the institutions through Virtual Campus Nodes, **Globalized Classrooms** and **Educatronics Laboratories**.

Telematic infrastructure is a second decisive step towards achieving an **institutional immersion** into societies of information and knowledge.

Phase 3: Training.

Training **the students** in the correct use of the tools in the Intelligent Classrooms prepares them to use technology on a **daily basis** and helps them to take full advantage of this means.

Training **the teachers** in the pedagogic and didactic use of **Educatronics** is an essential part of the construction of Educative Micro-Worlds and the incursion into knowledge.

Phase 4: Sustainable regional development

Infrastructure and training processes pertinent allow the mounting of **sustainable development projects** for the knowledge society, i.e. for the cybersociety.

In 1980 was unquestionably the U.S. recession, however, this society based its future **in the development of the ICTs**, and lived for thirty (30) years, the age more prosperous **than any society has ever experienced**. Now there is a new immeasurable economic alternative… the cybersociety.

LatinCampus builds…Cybersocial territories to generate prosperity in the Knowledge Society