

## **INTRODUCTION**

The ISTECS Telesalud Project was conceived by an international group of medical doctors, health workers, and engineers interested in developing a collaborative program to share common experiences in the biomedical field. The objectives are not only medical in nature; rather, the program aims at developing a new interdisciplinary space that integrates biomedicine, engineering, computer science, and other disciplines. The Project seeks sustainable technological solutions to improve medical/health care access for underserved communities in the region, and to provide innovative ways to facilitate access to knowledge and services in these fields.

The current vision is to launch this program as an embedded component of ISTECS's existing 4 initiatives. As a first step, we plan to create the infrastructure that will allow us to identify collaborators, set standards and common platforms to develop particular projects, and set collaborative efforts between interested parties. Once these programs/projects are identified and funding is secured, there exists the possibility of maturing these efforts into their own initiatives within the ISTECS framework

## **PROGRAM VISION**

Continued advances in information technologies, computing and communication systems are enabling improved access to healthcare information, health services, research and education independent of distance. In combination, these distance technologies and health-related applications constitute the concept of Telehealth. In turn, Telehealth is allowing an enhanced means of sharing knowledge and expertise, "leap-frogging" over the barriers of distance and time. Global development and integration of communication systems such as Internet2 are creating opportunities for international collaboration using Telehealth and a platform for exchange with the potential for formation of a true "network of networks" and "virtual collaboratory" that can be used world-wide.

The Center for Telehealth and Cybermedicine Research, along with the Ibero American Science and Technology Education Consortium (ISTECS), both based at the University of New Mexico (UNM) have been working with other Latin American organizations and universities to develop an international network for cooperative exchange that is complimented through the use of Telehealth technologies. Furthermore, the collaborations will allow sharing of information and experiences in applying Telehealth within their respective countries and programs, as well as share information regarding medical issues of both common international and unique regional public health interest from various perspectives.

Examples of these developing initiatives include student and faculty exchange programs between UNM and Universidad de Carabobo in Venezuela and Universidad Tecnológica Equinoccial in Ecuador. These programs would allow the development of face-to-face cooperative exchange projects of mutual interest between countries with improved communication and follow-up using the Telehealth technologies in order to sustain these projects and overcome the additional cost and time of repeated travel. Another project being explored is the integration of Telehealth into the Latin American component of the international tuberculosis program directed by a faculty member from UNM that currently has collaborative sites in Bolivia, Brazil, Colombia, Mexico, and Peru. Similar collaborative projects are being developed regarding cancer case reviews between Mexico and New Mexico. In addition, a team in Venezuela has designed a boat equipped to do telemedicine on the Rio Capanaparo in Los Llanos of Venezuela Sur. This concept is also being explored for similar use in Ecuador on the Rio Napo, particularly as it applies to the increased incidence of certain cancers in association with gas and oil drilling in the region. There is also interest in developing programs that include traditional native healers in the international

collaborative Telehealth applications, an important component of wellness and health in many countries. These traditional healers could share their knowledge and experiences with each other, students and conventional health providers. Lastly, a project that allows distributed immersive interactive virtual reality simulation for collaborative real-time medical education and training over Internet2 is being explored with several countries, including institutions within Latin America.

The application of the cooperative Telehealth concept to the Americas can serve as a model for other countries throughout the world. As the world continues to “shrink”, developing an international telehealth network of networks offers an opportunity for cooperation, collaboration, knowledge sharing and improving the health of every individual in the world, applying information technologies for peace and the betterment of mankind.

## **GOALS**

Some of the main objectives are to:

- 1) Develop an international “Sharing Knowledge Network” to share experiences and approaches to particular local needs
- 2) Integrate engineers and other technology experts with medical and health practitioners in order to create an interdisciplinary critical mass to share research / knowledge in order to improve local issues within a global context
- 3) Create a distributed, interdisciplinary, inter-institutional international, and interactive network of collaborators to provide a stimulating and synergistic platform for engaging and energizing participants in a variety of domains that support the research, development, and implementation of Telehealth / Telemedicine efforts
- 4) Develop ideas for joint projects in “Traditional” or “Alternative” healing and Conventional medicine
- 5) Address common needs to the region, such as rural access to medicine
- 6) Identify funding sources to create specific projects
- 7) Facilitate international collaboration and weave a broad spectrum of programs in a manner that honors cultural sovereignty

## **PRIORITY AREAS**

- 1) EDUCATION / RESEARCH ISSUES  
Knowledge Networks / Exchanges / Advanced Technologies
- 2) CLINICAL SERVICE SUPPORT
- 3) INTEGRATIVE MEDICINE
- 4) INFRASTRUCTURE  
Grid Applications / Virtual Reality / Videoconferencing
- 5) FUNDING

## **INVITED PARTICIPANTS**

- **University of New Mexico, USA**
  - Dale Alverson
  - Luis Padilla
  - M Burgos
  - Marty Prasat
- **ISTEC**
  - Jorge García
  - Matías Pizarro

- Ramiro Jordán
  - Theo Crevenna
- **Universidad de Carabobo-Venezuela**
  - Carlos Callegari
- **Universidad Tecnológica Equinoccial, Ecuador**
  - Ricardo Hidalgo
  - Gonzalo Catagenova
- **Universidad del Norte-Colombia**
  - Hernando Baquero
  - Carmen Ricardo
- **University of South Florida-USA**
  - Willie Moreno
- **Universidad de Arequipa-Perú**
  - Nancy Orihuela
- **The American Telemedicine Association Latin-American & Caribbean Chapter (ATALACC)**
  - Co-Chair: Giselle Ricur, MD
  - Co-Chair: Lucia E. Muñiz, MD
- **Internet 2**
  - Anna Preston
  - Mary Kratz
- **YPG YUMA Proving Grounds**
  - Sue Ibrahim
- **University of Arizona, USA**
  - Ronald Weinstein
- **Information Technology National Center (CNTI, Venezuela)**
  - Gilberto Landaeta  
Reacciu2 Project Leader
- **Alternative / Native medicine representatives**
  - Karen Buller, NITI
  - Arturo Ornelas, México
- **Results from GRID Computing Conference (ULA-Merida - Venezuela)**
  - Luis Nuñez
- **NIH representatives**
- **CUDI Representatives**
  - Marcos Burgos
  - Luis Padilla
- **Universidad Autónoma de Cd Juárez, México**
- **Universidad de Guadalajara, México**
- **Universidad Privada Boliviana (UPB)**
  - Grover Zurita Villarroel
- **Virginia Commonwealth University, Richmond, VA, USA**
  - Ron Merrel
- **Ex Minister of Health, Caracas, Venezuela**
  - Pablo Pulcido

## AGENDA FOR THE GA MEETING

<b>Time</b>	<b>Wednesday, December 1</b>
9 – 9:30am	<b>Introduction / Welcome</b> <ul style="list-style-type: none"> <li>• Dr. Dale Alverson, UNM</li> </ul>
9:30 – 10	<b>Vision / Scope</b> <ul style="list-style-type: none"> <li>• Dr. Carlos Callegari, Universidad de Carabobo, Venezuela</li> <li>• Dr. Ricardo Hidalgo, Universidad Tecnológica Equinoccial, Ecuador</li> <li>• ISTECH Executive Office / UNM</li> </ul>
10 – 11	<b>PANEL 1 – EDUCATION / RESEARCH ISSUES</b> Knowledge Networks / Exchanges / Advanced Technologies
11 – 11:15	<b>Q &amp; A</b>
11:15 – 11:30	<b>Coffee Break</b>
11:30 – 12noon	<b>PANEL 2 – CLINICAL SERVICE SUPPORT</b>
12noon – 1pm	<b>LUNCH</b>
1pm – 1:30	<b>PANEL 2 – CLINICAL SERVICE SUPPORT (Continued)</b>
1:30 – 1:45	<b>Q &amp; A</b>
1:45 – 2:45	<b>PANEL 3 – INTEGRATIVE MEDICINE</b>
2:45 - 3	<b>Q &amp; A</b>
3 - 4	<b>PANEL 4 – INFRASTRUCTURE</b> Grid Applications / Virtual Reality / Videoconferencing
4 – 4:15	<b>Q &amp; A</b>
4:15 – 4:30	<b>Coffee Break</b>
4:30 – 5pm	<b>Conclusions (Creation of working groups)</b>

<b>Time</b>	<b>Thursday, Dec 2</b>
9 – 9:30am	<b>Introduction / Plenary (via videoconference)</b> Dr. Giselle Ricur, The American Telemedicine Association Latin-American & Caribbean Chapter (ATALACC) <ul style="list-style-type: none"> <li>• Balance between Economic Development / Sustainability &amp; Health Issues.</li> <li>• Understanding of Health Issues in Latin America</li> <li>• Data Bases / Specific Projects</li> </ul>
9:30 – 10	<b>INTERNET 2</b>
10 – 10:30	<b>ISTECH</b>
10:30 – 10:45	<b>Coffee Break</b>
10:45 – 12noon	<b>FUNDING</b>
12noon – 1pm	<b>LUNCH</b>
1 – 2pm	<b>Focus Areas / Specific Projects</b>
2 – 3	<b>Development of Working Groups</b>
3 – 3:15	<b>Coffee Break</b>
3:15 - 5	<b>Conclusions / Actions Plan</b>