

Using Information Technology to Effect Change in the Caucasus

The Atlanta-Tbilisi Partnership

Tbilisi

Ministry of Health and Social Welfare of
Georgia
Georgian Technical University
Tbilisi State University
Tbilisi State Institute of Economic Relations
Partners for Health

Atlanta

Georgia State University
Georgia Institute of
Technology
Grady Memorial Hospital
Emory University

|
in collaboration with

The United States Partnership for Peace Information Management System

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EXECUTIVE SUMMARY and RECOMMENDATION

Purpose: to leverage information technology and Western educational theory and practice to transform institutions and influence individuals who can be agents of change in Georgia, the former Soviet Union republic. The proposal builds upon a partnership of nine years duration among a group of institutions in Atlanta, Georgia and Tbilisi, Georgia. It takes advantage of an existing information infrastructure established in collaboration with the United States Partnership for Peace Information Management System, and upon previous projects funded by the US Agency for International Development. The final result will be a template which can be extended to other countries in the Caucasus and elsewhere.

There are two principles upon which this proposal is based:

- The United States has both the matchless opportunity and the responsibility to share information and human expertise with countries of the former Soviet Union and other similar countries, supporting the goals of improving the lives of their peoples and strengthening their fragile democracies.
- It is possible now to store vast collections of recorded multimedia information and to transfer the information virtually anywhere in the world at almost the speed of light. A question to ask at the outset of the new millennium is: how can humanity benefit from this new and suddenly acquired ability to use modern information technologies? The answer is brief and unequivocal: we must place the wealth of existing, purposeful human knowledge and expertise at the disposal of the less advantaged peoples and countries of the world, and assist them in using it.

Objectives:

- To develop a strategic plan for the informatics, electrical energy and telecommunications sectors of Georgia that will involve higher education and applied research in the economic development of these three industrial areas. This plan will be patterned after the model of Georgia Tech Lorraine, the European platform of the Georgia Institute of Technology of Atlanta. The plan will extend and reinforce the information infrastructure, and contribute to the development of engineering educational institutions.
- To establish a network of distance learning centers in Tbilisi and other regions of Georgia that will be tied into a similar network in Atlanta, Georgia. The network will support the underlying principles of this proposal.
- To utilize this network to support a broad range of information intensive educational initiatives between Georgia, USA, and the country of Georgia that will:
 - produce secondary school teachers knowledgeable about democracy and free mar-

kets who are committed to the values that underlie these forms of social organization;

- establish a cluster of business school educational projects that will build upon the MBA school already established in Tbilisi by Georgia State University of Atlanta. These projects will produce Georgian business leaders skilled in the practices of Western free markets;
- promote and improve the health of the public by establishing schools of nursing, allied health and public health, enhancing continuing education for healthcare providers, providing health information for the general public and using CAD CAM technology to produce prostheses for victims of land mines and others with lower limb amputations.

Background

The Atlanta-Tbilisi Partnership, begun in 1992, includes partners in Atlanta, Georgia: 1) Emory University; 2) Georgia State University; 3) Georgia Institute of Technology; 4) Morehouse School of Medicine; and 5) Grady Memorial Hospital; and Tbilisi, Georgia : 6) the Ministry of Health; 7) Tbilisi State University; 8) Georgian Technical University; 9) Tbilisi State Medical University; and 10) Tbilisi Institute of Economic Relations

Funding has been largely by the partners and US AID, with money from the latter coming through the America International Health Alliance in Washington, DC.

The partnership has created or participated in a number of projects: 1) the National Information Learning Center that collaborates with and is supported in part by the U.S. Partnership for Peace Information Management System (this Center provides Internet access, distance learning facilities and trains librarians and others in accessing, creating and working with electronic data bases); 2) healthcare reform; 3) an MBA school, the Caucasus School of Business; 4) complete plans and space for a nursing school; 5) extensive continuing education activities with nurses, including founding the Georgia Nurses Association; 6) medical education, with thirty Georgian medical graduates being enrolled in or having finished residency training at Emory University School of Medicine; and 7) projects aimed at controlling AIDS and tuberculosis; micronutrient malnutrition; and production of lower limb prostheses.

Discussion

Breakup of the former Soviet Union in 1992 has led to a decaying of its institutions, some of which are now empty hulls, and a deterioration in the well being of its peoples. A central problem is the lack of access to sources of the information that can fuel the transformation of institutions, improve the well being of the people and strengthen beginning democracies.

The partnership of Atlanta and Tbilisi described above supplied human expertise for Georgia beginning in 1992, but recognized that a crippling obstacle to success was the lack of access to Western information in either printed or electronic form. Medical libraries were either empty or filled with decaying Russian books and periodicals, in contrast to a citizenry that was sophis-

ticated and highly educated. An early accomplishment was the National Information Learning Center, which was opened by President Shevardnadze in December, 1996. It contains file servers, computers, electronic informational material and staff highly knowledgeable about information technology and a developing network of satellites in institutions around the city.

As other plans began to materialize--MBA school, nursing school, continuing education efforts--the partners came to understand that access to Western information was a key to the ultimate success of efforts to work with the Georgians to transform their societal institutions and improve the health of the public. This realization led to the present proposal, which combines enrichment of information technology infrastructure with specific plans for sharing information in targeted sectors of society that are lacking in modern knowledge.

The proposals listed in "Projects" and outlined in detail in the following narrative will cost \$14,500,000 if fully funded. This investment will begin to meet the objectives of what is expected to be a successful public/private coalition effort to further support Georgia's transition to improved institutional capability.

Recommendation

It is recommended that the Federal government lead a consortium of capable government and nongovernmental elements in the funding and implementation of these proposals.

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PROJECTS

A. Strategic Plan for Infrastructure Development

1. A strategic plan for the informatics, electrical energy and telecommunication sectors of Georgia. This plan will involve higher education and applied research in the economic development of these three industrial areas, patterned after the model of Georgia Tech Lorraine, the European platform of the Georgia Institute of Technology of Atlanta. By the Georgia Institute of Technology of Atlanta, and Georgian Technical University of Tbilisi. \$500,000

B. Distance Learning Network

2. Expansion of current infrastructure for distance learning at the National Information Learning Centre, with establishment of new facilities at the Caucasus School of Business and a military site, such as the Military Medical School division of Tbilisi State Medical University. In the second phase, sites will be developed at the Military Hospital, Tbilisi State University, Georgian Technical University and sites in Georgia outside of Tbilisi. By the National Information Learning Center of Tbilisi. \$1,731,000

C. Educational Initiatives

3. Civic Education

A comprehensive program to educate the teachers of kindergarten through high school students. The focus will be upon developing teachers who can guide their students as the country makes the transition from the Soviet system to democracy and a free market economy. The goal is to produce teachers knowledgeable about democracy and free markets, who are committed to the values that underlie these forms of social organization, and who will turn out graduates who are accountable, engaged and knowledgeable citizens in a fledgling democracy. Emory University, collaborating with the University of Michigan and Washington University of St. Louis. \$3,570,000

4. Business Education

Projects anchored to the very successful Caucasus School of Business established by Georgia State University and three Georgian partners, and funded by USIA.: there will be an expansion of the current MBA and BBA programs; Georgian faculty will receive MBAs from GSU; a Master of Science in Health Administration program will be established; a Transcaucasus Business Research Center will be set up, to provide a rational basis for analyzing and forecasting in the Caucasus; a marketing training program will be established for Georgian and US business people; and a leadership training program for Georgian businesswomen. \$2,350,000

5. Nursing School

Faculty and students have already been recruited and a Western type curriculum has been established. Georgia State University and Tbilisi State University. \$575,000

6. Allied Health School

This group of professionals--e.g., social workers--is currently unknown in the former Soviet Union. There is a critical need for them. Georgia State University and Tbilisi State University. \$575,000

7. Public Health School

The cornerstone of the proposal is the development of the Georgia Institute of Public Health (GIPH). The GIPH would be a free standing organization, linked administratively to the Ministry of Health, but autonomous in function, so that linkages can be made easily with all players in the health and social sectors who comprise the public health community in Georgia. The objective of the GIPH is to build capacity and support health systems development by leveraging the power of modern telecommunications technology to provide world-class quality public health education and training in Georgia. Emory University School of Public Health; the Ministry of Health and Social Care of Georgia. \$2,000,000

8. Prostheses

Applying CAD CAM technology to the production of leg prostheses needed for 10,000 Georgian amputees, many of them victims of land mines. Georgia Institute of Technology and the Ministry of Health and Social Care of Georgia. \$705,000

9. Education for the Public and Physicians

Continuing education for primary care and specialty physicians both in Tbilisi and other areas, relying upon modern information technology. Provide information about health to the public. National Information Learning Center and the United Methodist Committee on Relief of Tbilisi. \$993,500

10. Administration

Centralized administration for these projects, with an office in Atlanta and one in Tbilisi, with the following responsibilities:

- a. Provide centralized administration and facilitation for the projects.
- b. Establish times lines for each project and monitor adherence and quality.
- c. Auditing functions.
- d. Perform ongoing outcome analyses of the projects, measuring success indicators.
- e. Produce a brief summary report each quarter and a complete report at the end of each year, with the focus being upon producing a template that can be replicated in other countries.
- f. Assist the partners in the design of new initiatives and improvement of ongoing activities
- g. Provide information to the partners on potential sources of support.

Partners for Health in Tbilisi and the Atlanta-Tbilisi Partnership in Atlanta. \$1,500,000

Total for all projects: \$14,500,000

Budget Overview

Strategic Plan for Infrastructure Development	\$500,000
Distance Learning Network	\$1,731,000
Educational Initiatives	
Civic Education	\$3,570,000
Business Education	\$2,350,000
Nursing School	\$575,000
Allied Health School	\$575,000
School of Public Health	\$2,000,000
Prostheses Production	\$705,000
Continuing Education	\$993,500
Centralized Administration	\$1,500,000
Total for all projects	\$14,500,000

Introduction

This proposal is based upon an enduring partnership that has evolved since August, 1992, between institutions in the country of Georgia of the former Soviet Union and a group of institutions in Atlanta, Georgia. The central concept is that these institutions in each country will share information--the most valuable capital of all--with each other. Initially the flow would be principally from the State of Georgia to the Country of Georgia, but even in the beginning there will be bilateral flow, which over some years will become virtually equal.

There are two fundamental propositions underlying this proposal, both of which are based upon the partnership experience the last eight years:

- The funding and plans should cover at least three years, and not be from year to year.
- The funding should come completely from sources outside the country of Georgia; the country simply does not have the resources to fund these long range projects. The funding needs to be inclusive, covering items such as renovation, equipment, salaries, and tuition, as well as training, travel and other similar expenses. We anticipate the need to get the funds from a number of sources, given the scope of this proposal.

The linchpin of the proposal is modern information technology. The Atlanta partners, working in close collaboration with the Partnership for Peace Information Management System, will build upon existing infrastructure in Tbilisi to develop a network that will support extensive distance learning between the two Georgias. This system will be extended to the rest of Georgia, Armenia and Azerbaijan. The template can be replicated in other countries.

The Atlanta-Tbilisi Healthcare Partnership was formed in 1992 under the auspices of the American International Health Association and the US Agency for International Development. The partnership has generated a number of ongoing projects that include: healthcare reform; the National Information Learning Centre, which provides Internet access and training of librarians; a collaborative project with the Partnership for Peace Information Management System; the Emergency Medical Services Training Center, providing on-the-scene resuscitation training; extensive educational activities with nurses, including the founding of the National Association of Nurses of Georgia; medical education, with thirty Georgian medical graduates obtaining residency training at Emory; a graduate and an undergraduate school (Caucasus School of Business, funded largely by USIA and US AID) that next year will graduate thirty students from a western business curriculum; a Nursing School that is now under development; and a number of other projects aimed at maternal and child health, tuberculosis, AIDS, prostheses production for landmine victims; and micronutrient malnutrition.

The projects proposed in this document are outlines that can be expanded easily.

A. STRATEGIC PLAN FOR INFRASTRUCTURE DEVELOPMENT

Project #1

The Informatics, Electrical Energy and Telecommunication Sectors of Georgia:

Preparation of a Strategic Plan for the Engagement of Higher Education and Applied Research in Their Long Range Economic Development

Georgia Institute of Technology
Georgian Technical University

Purpose: to develop a strategic plan for the informatics, electrical energy and telecommunication sectors of Georgia. The foundation of this plan will be the active engagement of higher education and applied research in the economic development of these three industrial areas, patterned after the model of Georgia Tech Lorraine, the European platform of the Georgia Institute of Technology of Atlanta.

Goals:

A strategic plan for the proactive role of advanced engineering education and applied research in each of these three industrial sectors. The strategic plan would consist of:

- Key strategic objectives
- Local situation
- Justification
- Implementation
- Specific goals and schedules
- Means required
- Technological, professional and financial resources required

Background

Georgia achieved independence from the former Soviet Union in 1991, and immediately began a period of devastating political and economic upheaval. The country has now achieved political stability and is at the beginning of a time of significant development in all sectors.

Sustainable development of the country at this time requires the sustained development of three key sectors: electric energy generation, distribution and end-use; telecommunications; and

informatics. Since Georgia does not have any significant raw energy sources other than hydroelectric power, economic development is likely to primarily come from the manufacturing and service sectors of the economy. The availability of reliable and high quality electric energy supply is a necessity for such economic development. The strategic location of Georgia at the crossroads between Europe and Asia provides strong opportunities for trade and commerce which can be leveraged only through the availability of modern and reliable telecommunication and informatics infrastructure.

There exists a close relationship between the country of Georgia and the state of Georgia in the United States. This collaboration provides a platform for further collaborations in the three industrial sectors mentioned above. This proposal to draft a strategic plan for the active engagement of higher education and applied research in the economic development of these three industrial areas arose out of a meeting at Georgia Tech Lorraine (GTL) in Metz, France. The participants were:

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The purpose of the Metz meeting was to explore the possibilities of sustained collaborative ventures between the Georgia Institute of Technology in Atlanta and the Georgian Technical University in Tbilisi by way of Georgia Tech Lorraine. Some background about Georgia Tech Lorraine is useful in understanding how this proposal might work.

Georgia Tech Lorraine, GTL, is the European platform of the Georgia Institute of Technology. GTL was launched in 1990 within the framework of the sistership agreement between the Region of Lorraine and the State of Georgia. GTL is a nonprofit organization incorporated and operated under French law. All educational and research activities pursued at Georgia Tech Lorraine are the direct responsibility of the Georgia Institute of Technology. The three main activities of GTL are: degree granting education primarily focused at the Master of Science and PhD levels; research and development; and continuing education.

Presently these activities are principally in Electrical and Computer Engineering (Digital Signal Processing, Telecommunications and Optics, as well as Systems and Controls), and Mechanical Engineering (Acoustics Manufacturing Systems, System Controls). A significant characteristic of the academic programs offered at Georgia Tech Lorraine is that they lead to the original degrees being awarded by the Georgia Institute of Technology; therefore, all admission and graduation requirements are identical to those enforced on the Atlanta campus of the Georgia Institute of Technology. In addition, the students at GTL have the option to pursue selected double degree programs in close collaboration with European universities. SUPELEC, a leading French *Grande Ecole* of Electrical and Computer Engineering and ENSAM, a leading French *Grande Ecole* in Mechanical and Industrial Engineering, are examples of such collaborations. Research activities play an important role at GTL, specifically in view of the main educational emphasis on

graduate level degrees. An example of collaborative research activities is the creation of a joint research laboratory at GTL with the *Centre National de la Recherche Scientifique* (CNRS) of France. There are also collaborations with industry. E.g., Daewoo Electronics, of Korea, has created its European research center on the campus of GTL.

The French legal status of GTL greatly facilitates the creation of collaborative endeavors with European and North American industry and academia.

Georgia Tech Atlanta faculty are assigned to GTL for varying periods of time. The faculty and their families reside in housing built for this purpose. In addition, there is a highly developed component of distance learning activity between the Atlanta and Metz campuses.

A fundamental assumption on which the concept of GTL is based is that the notion of a global market is no longer an abstract idea; it has become a reality. This market must be faced and leveraged by industry as well as academia. Increasingly fast and reliable transportation and communication capabilities are erasing the economic and commercial borders not only between countries but also between continents. In this rapidly evolving environment, it becomes critical that the private and public sectors have access to engineers, scientists and managers who not only react to the needs of the global market but who also embrace the emerging challenges it faces.

A strategic plan targeted at the active participation of university level engineering education and research in the sustained development of the three industrial sectors of electrical energy, telecommunications and informatics is desirable to outline the roles of government, industry and education in the short term and long range development of Georgia. Of particular importance is the attraction of foreign industrial investment in Georgia to solidify and expand the local infrastructure. In addition, the integration of advanced engineering education and research needs to be formalized within the context of the industrial development process.

The end result of the proposed effort would be a strategic plan for the proactive role of advanced engineering education and applied research in each of the three industrial sectors mentioned above.

Milestones:

- Formation of a strategic planning force consisting of members from:

- Ministry of Economics
- Ministry of Industry
- Ministry of Post and Communications
- Ministry of Energy
- Ministry of Foreign Affairs and Trade
- Department of Informatics
- Rector of Georgian Technical University

- Ex Officio members could include:

- World Bank

European Bank of Reconstruction and Development
 United Nations Development Program
 Georgia Institute of Technology/Georgia Tech Lorraine
 Emory University
 Office of the Science Advisor to the President of the United States
 Office of the European Commissioner

- Advisors: representatives of relevant interested U.S. and European companies
- A small working group would be constituted to:
 - Assess the current status of the ongoing strategic planning related to these three industrial sectors within Georgia with a special emphasis on higher education and research.
 - Assess the existing international and institutional relationships and collaborations.
 - Solicit reactions from the intended ex officio members of the task force.
 - Initiate the process of securing active industrial participation in the strategic planning process.
 - Initial scoping of the final document.

Deliverables:

- Appointment of the Strategic Planning Force
- Constitute and empower the working group
- Draft and finalize the Strategic Plan
- Publicize and distribute the Plan
 1. Identify potential sources of funding.
 2. Approach the Georgia government at the higher levels.
 3. Appoint the Task Force.
 4. Secure the required funding under the formal umbrella of Georgia.
 5. Constitute and empower the working group.,
 6. Draft and finalize the Strategic Plan.
 7. Publicize - distribute the Strategic Plan.

Budget

Travel, living expenses of consultants, administrative and staff expenses	\$500,000 over 24 month period
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B. DISTANCE LEARNING NETWORK

Project #2: Distance Learning Facilities

National Information Learning Center
Partners for Health

in collaboration with

United States Partners for Peace Information System

Purpose: to establish distance learning capabilities in Tbilisi and evaluate the effectiveness of distance education and teleconferencing in the project areas included in the "Agents of Change" proposal.

Goals:

- To build upon existing facilities in Tbilisi and Atlanta in order to provide lectures, interactive sessions and teleconferences over the Internet in support of the remaining project areas in this proposal
- To equip three distance learning classrooms in Tbilisi (one each at the National Information Learning Center, Caucasus School of Business and the School of Military Medicine at the Tbilisi State Medical University) with student computer workstations, high speed Internet connectivity, audio/video capability and appropriate software
- To install teaching materials on the server at the NILC and to facilitate their use by developing user interfaces in Georgian and Russian languages as well as in English
- To track and evaluate the use of these facilities throughout the course of the project and report on the adequacy and acceptability of distance education and teleconferencing in meeting the objectives established in the other project areas of this proposal
- To develop distance education and videoconferencing between Tbilisi and Kutaisi and other Georgian cities, and to include additional western partner institutions (Pittsburgh University, University of Maryland, Virginia Commonwealth University, and Tromsø University in Norway)
- To develop on-line testing for graduate specialists and students

Background:

The projects that follow in this proposal are information intensive. The educational projects (e.g. business administration, nursing, public health and continuing education for physicians) require a continuous set of opportunities for lectures and interactive sessions between faculty

and students. The development projects (e.g. strategic planning for informatics, electrical energy and telecommunications) require opportunities for ongoing, face-to-face interaction among the members of the working groups to facilitate planning and implementation. All projects require ready access to the wealth of information available in the western literature or through Web sites at collaborating institutions. Much of the information that will be needed can be provided through the services of the National Information Learning Centre or in the form of courses designed by U.S. universities for delivery over the Internet.

The National Information Learning Centre (NILC) has been supported by over \$180,000 in funding from several sources, principally the U.S. Agency for International Development. Since its opening in 1996, the NILC has demonstrated the capability to deliver consistent Internet-based services to health professionals and students in Tbilisi. The staff of the NILC includes physicians and computer scientists who have had training in telecommunications and library science. They are committed to the vision of bringing change in the way health professionals in Georgia access and utilize information resources in their patient care, education and research. The leadership of the NILC has been with the project since its inception, providing evidence of a strong commitment to its mission, remarkable given the fluid social and economic situation in Georgia.

As part of a collaborative agreement with the Partnership for Peace Information Management System (PIMS), the NILC will serve as the linchpin for a multi-site network providing high-speed wireless connection among the participating sites. In February the NILC will have access to the satellite dish provided by PIMS to deliver biomedical distance learning materials prepared in co-operation with the International Medical Program of PIMS and faculty in Atlanta. With the additional funding requested in this proposal, the skilled technical staff at the NILC will be able to increase bandwidth to 256Kbps and provide a central node for Tbilisi, the beginnings of a national health information network. PIMS will also provide a mobile telecommunication unit for telemedicine and distance education purposes, which will enhance our ability to provide the best of medical informatics to hard-to-access districts in high mountains. One immediate application of this technology is for videoconsultation in the management of difficult cases.

The participating universities in Atlanta (Georgia State University, Georgia Institute of Technology and Emory University) have developed and taught courses using the distance learning facilities at each institution. "e-Learn" is the system used at the Rollins School of Public Health, Emory University to deliver both certificate- and degree-level courses over the Internet. The Robinson School of business at Georgia State University has developed courses that could readily be adapted for delivery over the Internet as part of the Caucasus School of Business course offerings. Georgia Tech's Center for Distance Learning has active programs in Electrical and Computer Engineering, Telecommunications, Electric Power/Systems and Controls, and Environmental, Industrial and Mechanical Engineering.

Milestones:

- Completion of the planning phases relating to facilities development, content development, and staff training

- Renovation and furnishing of the three sites
- Staff training and course readiness
- Successful trial of lectures, interactive sessions, test modules and teleconferences
- Periodic evaluation of the technology and the courses delivered
- Expansion of the distance learning network to include additional sites in Georgia and additional western partner institutions

Deliverables:

- Establish a project team to inventory existing capabilities, determine additional needs and plan the renovation and furnishing of the three sites
- Establish content consultants for each project area to determine educational content and/or teleconferencing capabilities needed to support the various projects and identify the staffing needed in Tbilisi and Atlanta to support these programs
- Create a comprehensive plan for renovation of sites, training of staff and delivery of distance education modules and teleconferencing events
- Renovate and furnish the three sites and install hardware and software
- Conduct staff training, both on site and through the use of distance learning facilities
- Conduct classes and teleconferences in each of the project areas
- Business administration
- Nursing
- Allied health
- Kindergarten through high school teaching
- Public health
- Continuing education for primary care and specialty physicians
- Health Information / Health Promotion for public representatives (teachers, journalists, etc) and the general public
- Emergency Medicine
- Military Medicine

- CAD CAM technology for production of leg prostheses
- Strategic planning for informatics, electrical energy and telecommunication in Georgia
- Create a variety of instruments to measure the effectiveness of distance learning facilities in each project area.

Budget

Distance Learning Budget	Year 1	Year 2	Year 3	Year 4	Year 5	Total costs for 5 years
CREATE DISTANCE LEARNING CLASSROOMS						
At the NILC	129,000	8,500	8,500	8,500	8,500	163,000
At the Caucasus School of Business (CSB)	51,000	27,000	4,000	4,000	4,000	380,000
At the School of Military Medicine (SOMM) at TSMU*	51,000	4,000	27,000	4,000	4,000	90,000
Internet Service	106,000	83,000	83,000	83,000	83,000	500,500
Staff	55,000	47,000	52,000	58,000	65,000	277,000
Other expense	90,000	77,000	52,000	52,000	49,500 0	320,500
Total Annual Costs	482,000	246,500	226,500	209,500	214,000	1,731,000
Total Project Cost (5-year)	1,731,000					

C. EDUCATIONAL INITIATIVES

Project #3: A Georgia-America Partnership for Civic Education

The Division of Educational Studies
Emory University¹

Purpose: to prepare a group of highly trained teacher educators who will serve as change agents within the Ministry of Education and major teacher educational institutions in Georgia.

Goals:

- To produce new teachers knowledgeable about democracy and free markets and who are committed to the values that underlie these forms of social organization.
- To contribute to the development of an informed and educated civil society that is fundamental to a democratic society.
- To foster democratic processes in education in three ways: formal education, experiential education, and implementation.
- To create a strong Georgian-run teacher education program in Georgia.
- To provide Georgian teacher educators with skills in using the latest educational technology particularly web-based research and distance learning.

Background

Program Rationale: One of the best ways for facilitating social change is to alter the way teachers are educated. This is particularly true in Georgia and other countries of the former Soviet Union that are trying to make the transition from a Communist dictatorship to democracy and free market economies. Most of the teachers currently working in these countries were trained under the Soviet system, a fact that makes them unlikely prospects for preparing their students to become responsible, engaged and informed citizens in fledgling democracies. Producing new teachers knowledgeable about democracy and free markets and committed to the values that underlie these forms of social organization must begin with preparing a new generation of teacher educators. The operating theory behind the program proposed below is:

- Teachers are vital agents for attitude formation among future citizens,

¹The Department of Education at Washington University and program in Social Studies Education at the University of Michigan are possible collaborators in this project.

- Teachers themselves acquire attitudes, knowledge, and skills during the formal period of their education,
- Therefore, developing pro-democracy attitudes, inculcating democratic ideas and knowledge, and providing pro-democracy experiences among people who "educate teachers" is a vital and efficient way of promoting the development of pro-democracy attitudes and behaviors in future citizens.

Georgia achieved independence from the Soviet Union in 1991. Over the next few years, leaders of the new country introduced democratic political institutions and a market economy. However, progress in both those areas has been slow because the majority of Georgians continue to hold attitudes and habits engendered by over seventy years of Soviet domination. To reverse this pattern, a new generation of Georgians must learn habits of the heart and mind that enable them to view themselves as citizens of a community with individual rights and responsibilities. To do this, steps must be taken to introduce education for democracy as a central component of the educational system of Georgia.

An informed and educated citizenry is fundamental to a democratic society. Education not only provides the basic skills and knowledge that make possible such democratic institutions as a free press but it also introduces the basic ideas and attitudes about democracy that each new generation must embrace for such governments to survive (Nie et al 1996). Unfortunately, most of the teachers and teacher educators working in Georgia, as in the rest of the former Soviet Union, were prepared in Communist-dominated institutions of higher education. Most teacher training institutions promulgated the beliefs that the main purpose of education was to prepare students to serve the state and that such aspects of Western democracies as freedom of speech, a free press, and independent nongovernmental organizations were dangerous to the social order. Teachers routinely transmitted these non-democratic ideas and rarely, if ever, modeled the kind of free, critical inquiry that is vital to democratic societies (Gusseinov 1996).

Independence from Soviet domination did not end the grip of these Soviet-style ideas on teachers largely because they had few other ideas to draw on. Although the teachers were immediately called on to educate young people for life in market-oriented democracies, few teachers had ever either experienced democracy or studied democratic ideas in formal educational settings. Consequently, most were at best superficially familiar with these ideas and virtually none had had experience with democratic practices in the classroom such as encouraging students to question or debate ideas and issues either with their teachers or their fellow students. Research conducted in older democracies indicates the crucial importance of the discussion of such issues in developing democratic attitudes in youth (Hahn 1996, 1998).

The program proposed here will deal directly with that problem. Focusing on teacher education, the program will foster democratic processes in education in three ways: formal education, "experiential" education, and implementation. The formal education component of the program will take place in the masters and PhD programs in the education departments or schools at the collaborating universities. These programs require students to explore key ideas, theories, and examples of democratic education through classroom instruction, reading, discussion, and research. In these programs, students will: gain a greater understanding of democratic ideas about such topics as human and civil rights, the rule of law, the nature of secular societies, and such inherent paradoxes in democratic societies as those between freedom and equality, individ-

ual liberty and social order, and majority rule and minority rights; examine the works of thinkers such as Jefferson, Mann, Dewey, Guttman, and Rorty who have linked democracy and education; study the historical development of democratic systems of education in the US and various countries; and investigate how democratic nations have used education to address such issues as racial, ethnic, religious, and social class conflict with special emphasis on ideas about multicultural education. This part of the program will provide the students with a strong theoretical background in democracy, democratic education, and multicultural education.

The "experiential" education component of the program will provide students with the opportunity to participate in democratic institutions in the United States through internships and other types of "hands-on" activities while they are studying in the US. For example, experiences with governmental agencies, community organizations, and political action committees will enable the students to assess the efficacy and validity of the ideas and theories about democracy and democratic education that they are learning about in the classroom. Georgian students will also work with teachers in US schools who are known to be particularly helpful in leading discussions of controversial public policies and issues. This component of the program will allow Georgian students to reflect on and analyze their experiences while providing the opportunity to deepen their understanding of democratic theory and practice. In addition, the programs offered to these students will include training in such areas as web-based research and distance learning, skills that we believe will become increasingly important in the next decade. Moreover, these skills have particular practical importance for countries such as Georgia in which access to published research is difficult to obtain and the need to disseminate teaching and research across vast areas is essential.

The implementation component of the program begins when students graduate from the collaborating universities with masters and/or PhD degrees in education. Upon graduation, these students will take the lead in promoting democratic education in Georgia. In collaboration with faculty members from the participating American universities, the graduates will create programs, courses and materials that will strengthen democratic education in Georgia. These programs and courses will be designed collaboratively with American education faculty members, but they will be taught by Georgians who have completed their degrees at one of the collaborating universities. An essential component of these programs will be creating expertise with web-based research and distance learning strategies.

The ultimate goal of our proposed program is to create a strong Georgian-run teacher education program in Georgia. This multi-year program for "educating the educators" will ultimately result in an enduring democratic teacher education program. The program can have a significant impact on democracy building in Georgia first by educating large numbers of teacher educators and second as these teacher educators themselves train an increasing number of teachers who will be advocates for democratic ideas in the country. Once a "critical mass" of graduates from this program are working back in Georgia, faculty members and/or non-Georgian PhD students from the participating US universities will spend some time in residence in Georgia teaching summer school courses, guest lecturing, offering workshops, or generally working with Georgian educators on improvements and innovations in civic education.

We are convinced that the deliberate, careful development of teacher educators knowledgeable and committed to democratic civic education is essential for the survival of democracy in Georgia. We believe our program can make an important contribution to that process.

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Milestones

- Design of curriculum for masters and doctorate level students
- Plan for experiential approach
- First graduates
- On site activities

Deliverables

- Curriculum
- Selection of students
- First graduates
- On site activities

Budget

Tuition, living expenses and travel for five years for graduate students	\$2,000,000
Travel for faculty	\$185,000
Distance learning	\$200,000

On-site activities	\$500,000
Total	\$3,570,000

Project #4

Development Projects for the Advancement of Business Education in the Transcaucasus

Robinson College of Business (RCB) of Georgia State University (GSU)
in partnership with
Tbilisi State University
Georgian Technical University
Tbilisi State Institute of Economic Relations

Purpose: to advance business education through the establishment of a community of business education development projects in Georgia, Armenia and Azerbaijan supported and nurtured by Robinson College of Business Georgia State University (GSU). The proposed projects will elevate the administrative structure of CSB to Western Standards, support the faculty to receive graduate degrees in business from RCB, support the exceptional MBA/BBA students to complete one semester of their program in Atlanta, expand the degree programs in the area of Health Administration, and establish outreach training programs for businessmen and businesswomen already in the workplace. These related projects will build upon the existing highly successful Caucasus School of Business (CSB) in Tbilisi, a development of GSU funded by the USIA and the Eurasia Foundation. These projects will use extensively the modern distance learning capabilities in Project #1.

Goals

- American Dean for the Caucasus School of Business
 - Implementation of academic and administrative procedures and processes
 - On site training of future Georgian academic leaders
 - Mentor future Georgian leaders of the school
 - Appoint and train administrators
- Training of ten Georgian faculty to receive MBA degrees from Georgia State University to put in place a first class business school faculty of native Georgians. The objective is for each faculty member of the Caucasus School of Business to have an MBA from Georgia State University
- Master of Science in Health Administration program
- To train health management leaders from throughout Georgia in the modern practice of health care administration and financial management, leading them to assume responsible managerial positions in healthcare organizations.
- To apply the concepts of business administration to health administration in the context of Georgian practices and culture
- To plan for the establishment of graduate and postgraduate courses in a school for healthcare administration and management.

- Transcaucasus Business Research Center
- To provide a rational basis for analyzing state of business and forecasting business outlook in Georgia
- To provide databases for economics and business data that can be used for predictive purposes
- To provide data collection and analysis for individual businesses on a for-fee basis
- Training of the top BBA and MBA students from Georgia at GSU in Atlanta for one semester
- Train a total of thirty students in Atlanta for one semester as a part of their program of study in Tbilisi.
- Marketing training program for Georgia and the US businesspersons to provide value and support to the country of Georgia to enable it to develop a Western style business community in the context of the culture of Georgia
- Leadership Training Program for businesswomen
 - To provide training in women's issues and business entrepreneurship and management through a train the trainer program to 200 businesswomen in five regions of Georgia.
 - To provide internship in women-owned Atlanta businesses to a small selected group of Georgian businesswomen.

Background

Since the fall of the Soviet Union, the Robinson College of Business has focused its attention on the Transcaucasus. The College has:

- Established partnerships with six public and private universities in Azerbaijan and Georgia
- Exchanged one American faculty member and two Azeri faculty members under the Fulbright program.
- Established BBA and MBA programs, trained the Azeri and Georgian faculty and administrators on location and in Atlanta and developed libraries and computer/communication facilities with funding from USAID and the former USIA.
- Trained Azeri, Turkmen, and Russian undergraduate and graduate students with funding from the office of Citizen Exchange (USIA), NAFSA, and Muskie.

In Georgia, the Robinson college of Business helped a consortium of three major public universities establish one school of business. The Caucasus School of Business (CSB) is an independent legal entity founded in 1998 by a consortium of Georgian universities Tbilisi State University(TSU), Georgian Technical University (GTU) and Tbilisi State Institute of Economic Relations (TSIER) in partnership with Georgia State University(USA). Its mission is to assist Georgia's

transition from a planned to a free market economy through training of a new generation of business managers and professionals. The Caucasus School of Business (CSB) is located on the premises of GTU and TSU. CSB has inherited the trained faculty and facilities of two earlier European projects -- the Graduate School of Management was founded in 1991 and the Public Administration College of TACIS was founded in 1995. The faculty members were trained in Germany and Northern Ireland to deliver lectures in business subjects.

CSB represents the partnership between GSU and the Georgian universities. The partnership projects are funded by grants from U.S. Government sources - the Eurasia Foundation and the Department of State(USIA). The main objectives of the projects are to design and implement undergraduate (BBA) and Master of Business Administration (MBA) programs that will meet accreditation and worldwide standards. The Caucasus School of Business offers BBA (Management, Marketing, and Finance) and MBA (General MBA, Marketing, Finance/Accounting, Health Administration, Hospitality Administration) degrees. Robinson College of Business (RCB) at Georgia State University (GSU) is assisting CSB through:

- Curriculum development.
- Faculty development and training to enable Georgian faculty to design, implement, and deliver business courses and business outreach programs;
- Conducting seminars and workshops in selected subjects and conducting modules of the business degree programs by American faculty members;
- Updating library, computer, and audiovisual facilities and providing textbooks and educational materials in English and Georgian;
- Facilitating study by exceptional students of the program at Georgia State University
- Facilitating joint research of American and Georgian researchers.

The American Ambassador inaugurated the Caucasus School of Business in October 1998. Subsequently, Dr. Carl Patton the President of Georgia State University visited Tbilisi in May 1999 and met with President Shevardnadze, Ambassador Yalowitz, and government, academic, and business leaders. Dr. Patton reiterated GSU's long-term commitment to projects in Georgia. A new memorandum of understanding was signed to extend GSU's involvement in Georgia.

During the first year of the project thirteen CSB faculty members and two administrators completed semester-long training in Atlanta. American faculty members taught three courses to MBA students and CSB faculty in Tbilisi, the library acquired more textbooks, references and materials. Computer laboratory received new computers and audio-visual equipment, and Internet was installed. Currently about seventy students are attending classes and first group of MBA students will graduate in January, 2001. The planned student population for Fall 2000 is eighty MBA and one hundred thirty BBA students. .

The distance learning facilities described in detail elsewhere in this proposal are key to the success of this cluster of proposals. A distance learning classroom will be established in CSB in Tbilisi. The classroom will be equipped with student computer stations and audio/video facilities. Faculty of CSB and RCB will jointly teach the class. All teaching materials will be installed on a server in Tbilisi. The American faculty will lecture to the class in Tbilisi and hold interactive sessions using distance learning facilities in Atlanta. Five distance learning classrooms will be established at the regional branches of Tbilisi State University and Georgian Technical

University. The regional classrooms will be equipped similar to the Tbilisi classroom described above. However, the facilities will support only real-time chat-room without real-time video. All teaching materials will be installed on the regional servers. Classes will be taught jointly by regional instructors and CSB faculty stationed in Tbilisi. Another use of the distance learning classroom will be for CSB students to take on-line courses from RCB and other American colleges. It is more cost effective for CSB to facilitate taking of advanced and special courses through Internet than offering the such courses in-house.

The specific components of this cluster of projects are outlined below:

1. **An on-site dean** from the Robinson School of Business will enhance the operation of the Caucasus School of Business. The Caucasus School of Business has the potential to become an American landmark in Georgia. The academic programs are in place and many Georgian faculty and administrators have been trained and exposed to modern academic and administrative processes. However, the Georgian partners need assistance in implementation of the recommended academic and administrative methods and procedures. An American Dean can provide the leadership and train future leaders on the job. He/she will ensure that what the administrators learned and accepted about how to run a college of business is actually implement. The Dean will appoint and train full-time administrators to perform routine tasks such as recruitment, admissions, registration, recordkeeping, student advisement, scheduling, public relations, accounting and finance, facility management, library management, and placement. RCB is committed to provide any administrative consulting and training as needed.

2. Creation of a first class **Georgian business faculty** in Tbilisi at the same level as business faculty in Western countries is a high priority of the partnership arrangement between Georgia State University and the Caucasus School of Business. Faculty members of the Caucasus School of Business who do not have an MBA degree will be required to get an MBA degree to remain on the faculty. Given that faculty members have already received short-term training in Atlanta and Tbilisi as part of the current project, they will only need an average of one year to receive an MBA degree in Atlanta.

3. **Healthcare administrators in Georgia** trained in the West can be counted on the fingers of one hand. The Georgian healthcare system has been based upon the former Soviet Union model of highly centralized control. This has begun to change slowly since the breakup of the Soviet Union in 1992. The Atlanta-Tbilisi Healthcare Partnership worked extensively with the Ministry of Health to begin to change to a Western system of healthcare. This process has occurred slowly, but has had significant milestones, notably the issuance of Decree 400 by President Shevardnadze on December 23, 1994, establishing the State Health Care Fund, ensuring licensure of medical facilities, creating registration and quality control of medications and supplies, and certifying and licensing healthcare providers. The impact of this legislation has been enormous. However, the number of Georgian healthcare administrators with Western training can be counted on the fingers of one hand. The purpose of this project is to increase the number of capable administrators. A curriculum will be designed to apply the theoretical concepts of business administration to healthcare administration. Ten faculty members will be developed to lead this program. They will be trained at GSU in Atlanta. They will be required to spend time in residency in a model U.S. healthcare organization.

4. A **Transcaucasus Business Research Center** is needed that ill establish databases for

economics and business data in Georgia, perform analyses and forecasting, and publish findings. Information on the state and outlook of the economy and business is unavailable in Georgia. Quality information is a required ingredient of strategic business planning. The faculty of CSB are trained in basic topics of business and are now ready to provide the much needed services to Georgian business and industry. Research may target topics related to the population, labor force, consumers, jobs, earnings by industry, exports, imports, investment, legal environment, and tax environment

5. The **top MBA students of the Caucasus School of Business** will benefit greatly from exposure to the culture of a Western business school, while the students and faculty of the Robinson College of Business will profit from the presence of bright Georgian business students. Bonds have the potential to develop between individuals that will affect significantly the conduct of business between the two countries in the future. Top students at the CSB will be selected based on their GMAT scores, school record and interview. A total of thirty will be brought to Atlanta to spend one semester in the RCB at GSU.

6. **Marketing** of Georgian goods in the U.S. and U.S. goods in Georgia will benefit both countries. This program will educate and train businessmen and businesswomen from the Republic of Georgia and USA on how to market and sell their goods and services in their respective countries. The program will include short-term training modules and visits to both countries. The participant businesspersons will prepare their companies to take the necessary actions to sell their goods and services in the United States or Georgia markets. Areas to be included will be:

- selling in a market driven economy, cultural differences, evaluating market condition
- evaluating products to sell, product consistency and quality
- setting up export channels, export licensing
- finding importers, legal considerations for import
- selling style, selling to government, distributors, retailers, and customers
- advertising and promotion
- customer service.

7. **Leadership training for businesswomen** of Georgia will benefit the country of Georgia through democratic development of market economy and drafting of gender sensitive legislation. Georgian businesswomen will learn how to run small and large businesses as well as becoming aware of women's issues at home and at the workplace. The program will target training of 200 businesswomen on location in the regions of Georgia. The Caucasus School of Business in partnership with a leading Georgian Women NGO will conduct the train-the-trainer program in Tbilisi and train the businesswomen in the regions. RCB faculty will design the curriculum and train the trainers. Selected businesswomen will serve as interns in women-owned businesses in Atlanta.

Milestones

- On site dean
 - presentation of plan of action for the Dean
- Georgian business faculty
 - presentation of selection criteria for CSB faculty to study in RCB MBA program

in Atlanta

- Awarding of MBA degree to ten selected faculty members
- Establishment of a Health Administration curriculum at Caucasus School of Business
 - Faculty development
 - Design and implementation of outreach programs
- Transcaucasus Business Research Center
 - Establishment of Research Center and appointment of Georgian director
 - Presentation of strategic plan and action plans
 - Training of center personnel
- Top MBA students to Atlanta
 - Completion of one semester study in Atlanta for each group of students
- Marketing
 - Selection of program participants from USA and Georgia
 - completion of training program for businesspersons in Tbilisi
 - completion of training program for businesspersons in Atlanta
- Leadership training for businesswomen
 - Selection of the Georgian project director
 - Training of the Georgian trainers
 - Design of the businesswomen training program and preparation of the training manual in Georgian
 - Training of the businesswomen in the regions
 - Internship of selected businesswomen in Atlanta

Deliverables

- On site dean
 - Action plan for creation/implementation of administrative structure of CSB
 - Report on the selection, appointment, and on the job training of administrative personnel
 - Policies and procedures manuals
- Georgian business faculty
 - Criteria for selection of faculty members
 - Curriculum for faculty members at Georgia State University
- Awarding MBA degree
 - Development of a curriculum
 - Plan for faculty development
 - Implementation of outreach programs
- Transcaucasus Business Research Center
 - Action plan of the Business Research Center

- Publication of Business Research Quarterly
- Top MBA students
 - Acceptance of students into the RCB MBA program
 - Certificates of the academic performance for thirty CSB students
- Marketing
 - Criteria for selection of participant businesspersons from Georgia and US
 - Action plan for the project
 - Design of training modules and training manuals
 - Certificates of training
- Business women in Georgia
 - Training manual for businesswomen in Georgian
 - Creation of regional training centers
 - Internet chat-room communication among trainers located in America, Tbilisi, and Georgian regions

Budget

On site dean: salary, living expenses, travel	\$450,000 over three years
Faculty to receive MBA degrees	\$300,000 over three years
Health Administration Program	\$300,000 over three years
Transcaucasus Business Research Center	\$300,000 over three years
Students to Atlanta and Georgia State	\$300,000 over five years
Georgian and U.S. Business people	\$200,000 over three years
Business women	\$300,000 over three years
Distance learning expenses for faculty	\$200,000 over five years
Total	\$2,350,000

Project #5 Nursing School

Georgia State University
Tbilisi State University

Purpose: to offer a university-based baccalaureate nursing program for beginning student nurses and a baccalaureate completion program of a shorter duration for practicing nurses through a partnership between Georgia State University School of Nursing and Javakishvili Tbilisi State University. If the health care reform movement is to succeed in Georgia it will require nurses that are educated in a manner that will support a modern health care system.

Goals

- The development of a School of Nursing at Tbilisi State University that is internationally recognized for its excellence in nursing education.
- Continue the established partnership of the School of Nursing, with GSU as the sponsor, and Tbilisi State University.
- Assist TSU faculty in the implementation of the curriculum, which was designed cooperatively between TSU and GSU over the past three years. It meets the educational needs of students in Georgia and the Transcaucasus.
- Assist TSU in the technical aspects of the administration and maintenance of a modern school of nursing.
- Internationalize the GSU School of Nursing faculty through collaborative teaching and research in Georgia and the Transcaucasus.

Background

Since the inception of the American International Health Alliance (AIHA) Atlanta-Tbilisi Healthcare Partnership in 1992, nursing has been very much a presence in the overall planning of a new healthcare system for Georgia. However, nursing in this newly independent country is at a cross-roads. Although great progress has been made in the concepts of modern healthcare delivery since 1992, if the healthcare reform movement in Georgia is to succeed it will require nurses that are educated in a manner that will support such a modern system. Well educated nurses are pivotal in executing a primary care/health promotion/disease prevention model of health care by Georgia. Nurses can provide health promotion and disease prevention approaches to populations in both urban and rural areas, complementing any public health proposal that is put forth elsewhere in this document. Prevention of disease in a time of scarce medical resources is one way to reduce healthcare expenditures.

At the present time there is no nursing program in existence in a higher education setting in Georgia. There are no nurses in the workforce who have been educated in a university based baccalaureate program. There are no nursing programs in Georgia now that can educate nurses

who are able to function in a modern healthcare system. Although under development, nursing licensure and nursing standards which protect the public have not been implemented. Recommendations from World Bank consultants visiting Georgia in May of 1997 and others have emphasized the need for university based nursing education. The School of Nursing in the College of Health and Human Sciences at GSU, and Tbilisi State University have been in partnership since 1995 to establish a baccalaureate nursing education program in the country of Georgia.

The nurse participants from both sides of the Atlanta-Tbilisi partnership have put forth a great deal of effort in implementing a three-tiered approach to upgrade the nursing profession. The plan has encompassed the enhancement of skills of practicing nurses, the development of a professional nursing organization to assist in dissemination of education to the community of nurses and the implementation of a university based program for nursing education.

The greatest accomplishments of the Atlanta-Tbilisi partnership exchanges within the nursing profession with respect to establishing high level nursing education in Georgia are the:

- Ongoing consultation since 1992 regarding the nursing profession with the Minister of Health and his Health Care Reform Team
- Institution of the Georgian Nurses Association, an organization that will write and maintain standards for the profession, offer continuing education for existing nurses and act in an advisory capacity to the Minister of Health concerning nursing as a profession. Examples of US standards have been provided as a model for Georgian nursing.
- Appointment of a nurse advisor to the Minister of Health
- 1996 agreement between TSU and GSU in Atlanta to cooperate in launching a university based baccalaureate nursing program.
- Grant funds from an intramural International program Development at Georgia State University for two years to support Transcaucasus educational projects.
- 1997 two month long visits of two physicians from TSU to GSU School of Nursing and Emory University School of Medicine in Atlanta to start the planning for a school of nursing in Tbilisi
- Opening of the Nursing Resource Center in the NILC in Tbilisi in March, 1998
- 1998 month long visit of three physicians from TSU to GSU School of Nursing to plan and develop a curriculum for the school of nursing at TSU
- Return visit to Tbilisi of GSU School of Nursing Director and Undergraduate Program Director to plan the school of nursing
- Promise by the Minister of Health in April of 1998 to furnish 50,000 lari to assist TSU in starting a school of nursing

- All courses for the School of Nursing at TSU developed and approved by TSU
- Dean and faculty appointed by TSU
- Students chosen for the first class

All efforts thus far have been funded by US AID through the American International Health Alliance, and small international grants from GSU. Additional funding is needed to launch this effort in a sustainable manner.

Milestones

- Renovation and furnishing of the Nursing Learning Laboratory at TSU
- Successful completion of the baccalaureate year for the first twenty students

Deliverables

- Plan for renovation of space and equipment for the Nursing Learning Laboratory
- Renovation and furnishing of the Nursing Learning Laboratory
- Installation of equipment and software
- Opening of school

Budget (five years, estimated)

Refurbishment	\$30,000
Equipment	\$150,000
Internet support	\$20,000
Administrative	\$60,000
Faculty support	\$100,000
Tuition for students	\$200,000
Travel	\$50,000
Supplies and other costs	\$50,000
Total	\$660,000

Project #6 Allied Health School

Georgia State University
Tbilisi State University

Purpose: to establish a School of Allied Health and Human Sciences through a partnership between Georgia State University School of Nursing (GSU) and Javakhisvilli Tbilisi State University (TSU). If the health care reform movement in Georgia is to succeed it will require allied health professionals such as nutrition specialists, social workers, physical therapists etc. who are educated in a manner that will support a modern health care system

Goals

- To further the partnership with TSU in adding allied health professions departments that will educate professionals that will function in a modern health care system.
- To facilitate the teaching of the various allied health professions curriculum through distance learning and traditional pedagogical/adult learning techniques. Atlanta faculty will provide guidance through interactive sessions with proposed faculty for these new specialty areas using distance learning facilities already present at GSU

Background

The health and social welfare of the population is a high priority of the Georgian government and its Ministry of Health in particular. Through the AIHA Atlanta-Tbilisi partnership, nursing was one of the first health care professions to receive attention in attempting to modernize Georgia's health care system. The ministry now recognizes that it will need a cadre of health professionals with specialized education in order to bring its vision of a modern health care system to fruition. Progress has been made in the education of nurses in Georgia outside of the university setting, although a proposal to build on the successes of the AIHA partnership is in another section of this document. A model, such as the one used in retraining faculty at Tbilisi State University to begin a School of Nursing, will also be used with a School of Allied Health and Human Sciences. Indeed, the two schools will complement one another and will be able to have some overlap in faculty. The Allied Health and Human Sciences professions of Nutrition and Dietetics, Physical Therapy, Cardiopulmonary Care Sciences, and Social Work do not now exist in Georgia. Preliminary visits have been made to TSU on two separate occasions from the departments of social work and nutrition to discuss starting these programs. Additionally, Madame Shevardnadze is vitally interested in the profession of social work due to involvement in social activism in the country. She is particularly involved with orphaned children and internally displaced persons from war torn areas of the country through her organization "Women for Peace and Life." The Georgia State faculty visited with Madame Shevardnadze on their last visit to Tbilisi.

At this point in time in Georgia there are many health care professionals that do not have jobs. Many of the health care professional could be retrained in the Allied Health and Human Science professions and become productive workers in Georgia's emerging health care system.

Milestones

- Recognition of Allied Health and Human Science Fields as legitimate areas of practice/ occupations in the Georgian Health Care System
- Recruitment and training of faculty for Allied Health and Human Science areas of greatest need to the Ministry of Health and the Georgian Health Care System.
- Development of School of Allied Health and Human Sciences within Tbilisi State University
- Development of Curriculum
- Recruitment of Students

Deliverables

- Determine areas of greatest need (needs assessment) through meeting with the Minister of Health and other governmental health care officials in both urban and rural areas of the country
- Recruit and train faculty for identified areas of need
- Mutually establish a plan for the School of Allied Health and Human Sciences with TSU
- Work with identified faculty to establish a curriculum
- Establish a plan to recruit students

Budget (five years, estimated)

Needs assessment	\$10,000
Faculty recruitment and development	\$350,000
Internet support	\$50,000
Curriculum development	\$15,000
Travel costs	\$100,000
Equipment and other costs	\$50,000
Total	\$575,000

Project #7

A Georgia Institute of Public Health

Rollins School of Public Health of Emory University
Ministry of Health and Social Welfare

Purpose: to train a cadre of visionary public health professionals and leaders, taking advantages of new paradigms for public health and new communications technologies.

Goals

- To develop a free standing organization, the Georgia Institute of Public Health (GIPH) linked administratively to the Ministry of Health (MOH), but autonomous in function.
- To build capacity and support health systems development by leveraging the power of modern telecommunications technology to provide world-class quality public health education and training in Georgia.
- To develop an electronic network of Georgians formally trained in public health, both inside and outside the country of Georgia.
- To develop a core portfolio of core proficiencies and skills required by the new public health workforce in Georgia

Background

The vision for health in Georgia articulated in the Strategic Health Plan of Georgia 2000-2009 requires a strong public health system and a cadre of visionary public health professionals and leaders. This proposal is aimed at training/educating the next generation of Georgian public health professionals in a manner consonant with the vision, taking advantage of new paradigms for public health globally and new communications technologies.

The cornerstone of the proposal is the development of the Georgia Institute of Public Health (GIPH). The GIPH would be a free standing organization, linked administratively to the Ministry of Health, but autonomous in function, so that linkages can be made easily with all players in the health and social sectors who comprise the public health community in Georgia. The objective of the GIPH is to build capacity and support health systems development by leveraging the power of modern telecommunications technology to provide world-class quality public health education and training in Georgia. To do this, the organization of the GIPH must be dynamic and flexible, able to build virtual communities of public health talent, both inside and outside Georgia. Public health is, by predilection and necessity, multidisciplinary. The challenges inherent in increasing the health status of Georgians and in designing a health care system responsive to the needs and expectations of Georgians will be most responsive to public health action and advocacy from individuals trained in a multidisciplinary environment. Public health concerns include: threats to the environment, changing patterns of individual behavior change and risk, a badly failing medical care system, perverse health care financing, lax regulatory and quality standards, the re-emergence of diseases formerly contained, emerging new infections, an aging

population, and a fundamental shift in the burden of disease. These call for creative and sustained public health interventions based on a population perspective. Educating and training public health professionals to take the lead in this new health care world is the goal of the GIPH.

Milestones

- 1. Develop an electronic network of Georgians formally trained in public health, both inside and outside Georgia. Limited current opportunities in Georgia have produced a cadre of well-trained professionals with MPH degrees who are now living in the U.S. Most are young, with a strong desire to return to Georgia and to contribute to the development of a strong health care system. We have an email list of approximately 20 Georgians here in the U.S. who have an MPH or are currently in training. Facing reality, the network would engage these professionals while they are outside Georgia to apply their energy and creativity to mapping out the new public health in Georgia. The network would be linked with public health professionals in Georgia, both in Tbilisi and outside, to decrease their professional isolation and to provide encouragement and new ideas for them as they pursue their work.
- 2. Develop a portfolio of core proficiencies and skills required by the new public health workforce in Georgia. Based on the portfolio, design a set of academic courses and training modules to be offered by distance learning from the RSPH, on site in Georgia and on the Web as virtual courses. The portfolio would be arrayed such that individuals could take the modules for continuing education or as building blocks for a certificate and/or degree in public health. This will require substantial collaboration with our partners in Georgia, including the MOH, the NGO community, professional organizations, and the donor community. Implementing this portfolio approach to training also requires the necessary technical infrastructure to allow students and professionals inexpensive and accessible internet access.
- 3. Sponsor a scientific conference every other year, modeled on the EIS Conference, which specifically addresses current, emerging and future public health issues in Georgia. The Conference would be held in Georgia with major participation by U.S. based Georgians, either in person or by videoconference. This conference would focus on evidence-based public health policy with the purpose to build the public health scientific community, for students to have an opportunity to present their research, and for policy makers to interact with the public health community.
- 4. Create a public health library building on the capability of the National Informational Learning Centre already established in Georgia.

Deliverables

- Agreement with the MOH specifying the organizational structure and legal status of the GIPH
- A formal organization of young people inside and outside Georgia who have received public health training outside of Georgia
- Portfolio of core proficiencies and skills required by the new public health workforce in

Georgia.

- A set of academic courses and training modules to be offered by distances learning from the Rollins School of Public Health at Emory University
- A scientific conference every other year, modeled on the yearly Epidemiology Intelligence Service conference of the National Centers for Disease Control
- A public health library resource center based on the National Information Learning Center.

Budget

Dean and faculty in country	\$450,000
Other in country staff	\$200,000
Renovation	\$250,000
Tuition and faculty	\$300,000
Communications/materials	\$200,000
Travel	\$200,000
Equipment	\$200,000
Satellite center support	\$200,000
Total	\$2,000,000

Project #8 Prosthetics and Orthotics in Tbilisi, Georgia: A 5-year Plan

Georgia Institute of Technology
Ministry of Health and Social Welfare
Partners for Health

Purpose: to develop the capability of effective provision of prosthetics and orthotics to the citizens of the Republic of Georgia and the Caucasus Region. Such capability will require improvements in facilities, equipment, design, and personnel structure.

Goals

- Self-sufficient production of prostheses and orthoses by the Republic of Georgia.
- Production capacity to provide care in lower-limb prosthetics for 20 persons per week and in orthotics for 20 persons per week.
- Adequate administrative structure to provide physiotherapy follow-up for newly-fitted prostheses and orthoses.
- Adequate administrative structure to provide training in Prosthetics and Orthotics to clinicians elsewhere in Georgia and in the surrounding Caucasus region.
- Continual development of prosthesis design to improve lower-limb use and function.

Background

The Republic of Georgia faces a serious need for medical care in prosthetics and orthotics. The poor state of the health care system, combined with a large number of amputees injured in wars or land mine explosions, has produced a growing number of people unable to obtain an essential prosthesis or orthosis. Currently only three facilities provide prostheses for the country. These facilities are administered by the International Committee of the Red Cross (ICRC). They produce a standard lower limb prosthesis out of plastic and foam; the prosthesis is inexpensive and innovative but is somewhat limited in function. The role of the ICRC is to provide temporary relief, and their current arrangement with the Ministry of Health of Georgia is due to expire at the end of this calendar year. It is imperative that the Ministry of Health prepares now for self-sufficient operation of the prosthetics facilities. An even greater need exists for orthotic care. Hip and spinal orthoses are produced on rudimentary equipment in inefficient processes, if they are produced at all. Finally, follow-up physical therapy is lacking. Patients need long-term therapy for their return to ambulation and the clinical care of their limb and prosthesis.

Improvement upon the current conditions in Georgia is critically needed. The goals of this project are designed to improve the design and delivery of prosthetics and orthotics. Each goal is critical to the project:

Self-Sufficient Production

When personnel from the ICRC depart, the Ministry of Health needs a plan already in place to maintain and improve production of prostheses. The Ministry must identify a Program Director who will oversee all three Prosthetics and Orthotics facilities in Georgia. The program director must assemble a staff with adequate training to provide care on a similar level to that of a Certified Prosthetist/Orthotist in the West. In addition, technicians need to be trained in the maintenance and operation of production equipment. Finally, an established structure must be in place to insure thorough charting of individual patient care.

Production Capacity Improvements

The current ICRC facility produces approximately seven prostheses per week. Waiting lists are often years long. Capacity will be rapidly increased with the implementation of CAD/CAM technology in the manufacture of prostheses and orthoses. A digitizer will be used to obtain the desired shape of the limb or brace, and a CAM mill will produce the device automatically.

Physiotherapy

Because of the Soviet structure of separate, highly-focused health care facilities, physiotherapy (PT) is currently viewed as a separate clinical provision. PT must be considered a required addition to patient care. Either PT facilities should be centralized with the Prosthetics and Orthotics facility, or administrative steps should be taken to insure that patients receive physical therapy after a new device is provided.

Training for Clinicians Elsewhere

The improved prosthetics and orthotics program in Tbilisi should serve as a role model for the Caucasus region. In that regard, the program should be able to replicate itself elsewhere in Georgia and the region. Training for personnel is the first essential step in such a program exportation. Training should be organized for new prosthetists, orthotists, technicians, and physiotherapists. Eventually, specific guidelines should be drawn up for certification of these health care providers.

Prosthesis Design

Improvements in the function of the prosthesis will generate improvements in patient acceptance and in patient mobility. The production of the prosthesis and training of technicians must be flexible to allow for improvements in the design. A standard design provided for each patient results in lower cost but in limited function. Improvements in the standard design should work within the framework of available materials and equipment, but should improve limb function in areas of rough-terrain ambulation, swing phase knee flexion, durability, and energy storage and return.

Milestones

By the end of the first six months of the program, the following milestones should have been accomplished:

- The establishment of a program director to oversee operations,
- CAD/CAM production of above and below knee prosthetic sockets, ankle-foot orthoses,

and spinal orthoses,

- Required, monitored physiotherapy for amputees who receive their first prosthesis, and
- Initial development of administrative structure for training of prosthetists and technicians.

Increases in numbers – production capacity, number of patients receiving PT, number of trainees – should improve with time over the first full year.

Deliverables

In the early stages of the program, the Program Director should be expected to provide monthly reports to the ministry of health addressing:

- the number of patients seen,
- the number of devices provided, and, for each patient (when possible),
- a record of follow-up 3 months after initial treatment and therapy.

This follow-up should determine whether or not the patient is using the device given. These reports will provide an overall measure of production capacity, availability of PT, and effectiveness of the devices provided. The overriding goal of the program is to improve mobility and ambulation. This improvement must be documented as well as possible through patient follow-up and individual case studies. If this goal is not being met, the inadequacies in the program must be identified.

Budget (five years)

Personnel	\$275,000
Renovation	\$30,500
Equipment	\$250,000
Faculty	\$150,000
Total	\$705,500

Project #9
Health Education and Medical Information Program
for the
Public and Physicians

National Information Learning Center

in collaboration with

UMCOR

Purpose: to promote healthy lifestyles among Georgians and to provide continuing education for physicians by utilizing both modern information technologies and the literature of modern medicine.

Goals

- To provide physicians and the general public with the most useful information on health promotion, using every available medium: printed resources (brochures and booklets), television, Internet resources (e.g. MedWeb, NetWellness, Medline Plus), news media and public lectures
- To organize a variety of continuing education opportunities for physicians and students, (such as: MD Internet Discussion Clubs, regularly scheduled conferences and lectures) covering topics in cardiology, emergency medicine, oncology, clinical pharmacology, metabolic disorders, epidemiology, Evidence-Based Medicine, and consumer health information
- To promote on-line electronic medical publishing as a cost-effective way for Georgian researchers to share their scientific data among themselves and with their western partners.

Background

One of the key issues of social development is the protection and improvement of the nation's health. The healthcare systems of Georgia have experienced tremendous change since 1995, from a state governed/budgeted system toward a more self-supporting one, from a hospital orientation toward outpatient care and disease prevention/health promotion. As part of this transition, we need to change the habits among health professionals and the public at large about using information resources to improve their understanding of healthy lifestyles, preventative methodologies, and risk factors (smoking, alcohol, drugs, non-healthy food, hypertension, casual sexual relations, etc). These changes require a new information environment as well. Information and communication technologies may seem extravagant for a country with a devastated post-soviet economy. However, they may represent the best way to help narrow the gap between Georgia and developed countries by providing the Georgian healthcare community with access to the most advanced research and practice in all areas of healthcare.

The National Information Learning Centre (NILC) is uniquely positioned to develop and support

these new services. Established three years ago by the Georgian Ministry of Health (with financial support from the American International Health Alliance, and US Agency for International Development), the NILC provides the Georgian biomedical community with ready access to worldwide information resources and services. At the NILC medical professionals may search Internet resources, MEDLINE, MDConsult, EBSCO and other global medical information resources, as well as study new multimedia educational programs. In addition, a variety of healthcare institutions may access these resources by dial-up/leased line connection. One cannot overestimate the importance of the NILC in the country where no single international medical journal subscription has been available at public libraries for the last 8 years, and where the NILC has existed as the only site for medical information for physicians and students.

In addition to providing access to modern biomedical information, it is also important to disseminate original Georgian biomedical research. Since 1997, the NILC has been publishing a bi-weekly, bilingual update on a variety of medical topics, including Public Health, Health Promotion, Cardiology, Oncology, AIDS/HIV, Infectious diseases, Epidemiology, Disease Prevention and Control, Clinical Pharmacology, ObGyn, TB Prevention/Control, and Micronutrient Deficiency. The NILC has published 55 issues of the Internet Medical Digest (IMD), an 8-page publication with a circulation of over 500 copies. Electronic versions are maintained on the NILC web page (www.nilc.org.ge). Since 1999, the Internet Medical Digest has been published with support from a World Bank grant to promote healthy lifestyles.

In 1999 NILC began a cooperative project with UMCOR, *Improving the Prevention and Treatment of Cardiac Diseases in Georgia*. This project aims at enhancing knowledge in cardiology through access to and distribution of the most recent medical informatics data gained from the Internet and worldwide databases. The project has three main components:

- access to medical information (including Evidence-based Medicine, MDConsult, MEDLINE, full-text articles via ARIEL from Emory University library, etc.)
- workshops for cardiologists prepared by the group of young cardiologists section of Cardiology Association of Georgia
- publication of guidelines and workshop materials comprising a comprehensive educational program.

In addition, the Partnership for Peace Information Management System (PIMS) and the Institute of Health Sector Development of the UK (IHSD) have worked with the NILC to develop proposals for additional Georgian publications in a variety of biomedical disciplines. The "On-line Medical Archives of Georgia" Project proposed to provide bi-lingual (Georgian and English) electronic resources in 3 formats:

- A bi-weekly bulletin (newsletter),
- A monthly abstract collection, and
- A quarterly electronic Georgian Medical Journal (e-GMJ) for full text articles and reviews.

Simultaneously, workshops will be organized in the fields of medical writing and peer review. Those activities will be planned with assistance from the World Association of Medical Editors. Collaborators in Tbilisi will include the Tbilisi Postgraduate Medical Academy, Georgian Nursing Association, Central and Regional Public Health Departments, NGOs and other interested institutions and individuals.

Most recently, the NILC has undertaken a joint venture with the National Health Management Center of Georgia and the IHSD to develop a National Health Database of Georgia. The database is now in test format and allows users to easily update the database by providing additional information either in text, or in HTML format and/or linking existing web-pages to the database. In August, 2000, the database will be mirrored on the NILC server, and its operation will be handled by the NILC and local Editorial Management team.

Milestones

- Enhance the NILC's physical facility by constructing two auditoriums (100 seats and 400 seats) to support continuing medical education and large-scale public education events.
- Promote the use of Internet resources (e.g. PubMed, Medline Plus, MedWeb and NetWellness) by health consumers
- Develop and conduct monthly workshops for physicians, utilizing existing distance education materials and Internet resources
- Provide weekly email and/or video conferences on medical specialties, using the PIMS satellite connection to bring Georgian and western physicians together to discuss interesting cases and their treatment
- Provide health education lectures in Tbilisi and in 2 Districts (Imereti and Guria)
- Enhance the NILC's ability to publish by utilizing Rizograph (or similar) technology to save on publishing costs by 40-50%
- Publish workshops materials for health practitioners and health information for the public
- Construct a health education site in Kutaisi (auditorium with 40-50 seats and connection with the PIMS network) to provide access to Georgian and western experts for health promotion lectures
- Establish an Editorial Management team for the Georgia Health Database and Editorial Board for e-GMJ (electronic Georgian Medical Journal)
- Begin using the Georgia Health Databases as useful, bi-lingual on-line tool to spread Health Promotion / Primary Care information via the Web;
- Begin on-line publishing of the newsletter, medical abstracts archive and original bio-medical articles at the e-GMJ

Deliverables

- Establish a project team to inventory existing facilities at the NILC and in Kutaisi and plan the renovation and furnishing of the new auditoriums.
- Renovate facilities and provide Internet connection and telecommunications equipment (see details in Project #1)
- Provide monthly workshops and weekly email and video conferences for physicians in Tbilisi, Imereti and Guria.
- Utilize "distance learning content consultants" (see project #1) to advise on the development of:
 - 1. practice Guidelines for MDs (7-10 each year)
 - 2. manuals for family doctors/GPs and for public health workers (7-10 each year)
 - 3. promotional materials for the general public (10 each year)
- Provide health education lectures in Tbilisi, Imereti and Guria
- Collaborate with UMCOR to develop posters, brochures and broadcast TV-programs and TV-advertisement materials (3-4 each year) and
- Advertise the use of Internet resources (e.g. PubMed, MedWeb, Medline Plus and NetWellness) to the public
- Appoint the editorial board and publish quarterly e-GMJ issues and abstract collection
- Develop and provide workshops and email conferences on medical writing, peer review, and the techniques of Evidence-Based Medicine
- Develop an active Interlibrary Loan service to provide journal articles and other resources from western libraries (ultimately this should become self-supporting)
- Develop the Georgia Health National Database and train physicians in its use
- Develop evaluation instruments to assess the effectiveness of these programs

Budget

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Constructing and furnishing auditoriums						
NILC	50,000	5,000	1,000	1,000	1,000	58,000
Kutaisi		40,000	4,000	1,000	1,000	46,000
Equipment	70,000	15,000	10,000	5,000	5,000	105,000
Train the trainer workshops	20,000	10,000	5,000	5,000	5,000	45,000
Workshops (medical specialties, medical writing)	15,000	16,500	18,000	20,000	22,000	91,500
Health promotions programs	20,000	25,000	25,000	30,000	30,000	130,000
Publications	40,000	30,000	25,000	25,000	20,000	140,000
Vehicle purchase and maintenance	40,000	2,000	2,000	2,000	2,000	48,000
Access to online databases and fulltext publications	0	0	25,000	30,000	35,000	90,000
Interlibrary Loan (articles from libraries)	5,000	4,000	2,500	1,500	500	13,500
Supplies	15,000	16,000	17,000	18,000	19,000	85,000

Generator operation and maintenance	15,000	15,000	15,000	15,000	15,000	75,000
Administrative staff (complements Project # 1)	10,000	11,000	12,500	15,000	18,000	66,500
Total	300,000	189,500	162,000	168,500	173,500	993,500

**Project #10
Administrative Oversight**

Partners for Health in Tbilisi
and the
Atlanta-Tbilisi Partnership in Atlanta

Centralized administration for these projects, with an office in Atlanta and one in Tbilisi, with the following responsibilities:

- Provide centralized administration and facilitation for the projects.
- Establish times lines for each project and monitor adherence and quality.
- Auditing functions.
- Perform ongoing outcome analyses of the projects, measuring success indicators.
- Produce a brief summary report each quarter and a complete report at the end of each year, with the focus being upon producing a template that can be replicated in other countries.
- Assist the partners in the design of new initiatives and improvement of ongoing activities
- Provide information to the partners on potential sources of support.

Budget

	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
Atlanta office (rent space, salaries, equipment, supplies, travel, consulting fees)	240,000	242,394	257,656	275,472	270,763	1,286,285
Tbilisi office (rent space, salaries, equipment, supplies, travel)	48,000	39,260	40,627	42,110	43,718	213,715

GRAND TOTAL	288,000	281,65 4	298,283	317,582	314,481 1	500,000
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Prepared by H. Kenneth Walker M.D. And collaborators from Georgia State University, Georgia Institute of Technology and Emory University