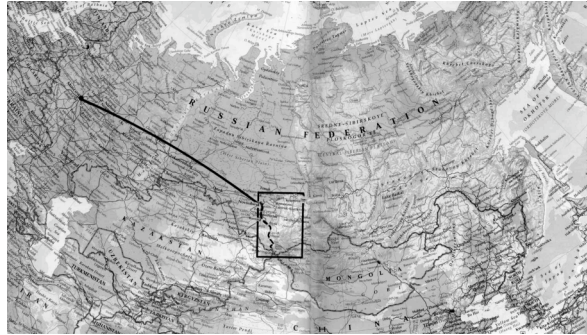# Central Asia at a Crossroads

Telemedicine and Distance Learning:
Intersecting Community Health,
Participatory Governance and ICT

Global University System (GUS)/Altai Mir

Accelerating Progress toward
United Nations Millennium Development Goals for 2015

Proposal for Planning Grant Funding
Summer, 2006

Leadership and Partnerships

Personal champions
Takeshi Utsumi
Carol Hiltner
Marina Tyasto
Linda Hawkin Israel

NGOs/citizens' organizations
Global University System (GUS)
GLOSAS/USA Consortium
Mobile Assessment and Media Systems (MAMAS)
Altai Peace International (API)
Siberian Educational-Consulting Center "Connect"
VNG International
Global Leadership Forum

International institution/network
Siberian Branch of Russian Academy of Science (Novosibirsk)
Global Ring Network for Advanced Applications Development (GLORIAD)

Educational institutions
Siberian Academy of Public Administration
Novosibirsk State Medical University
Novosibirsk State University
Gorno-Altaisk State University
Altaisky State University
Novosibirsk State University of Architecture & Construction
University of Tampere, Finland
University of Washington
University of Pittsburgh

US Contact:
Linda Hawkin Israel
206-393-8576
lindahi@earthlink.net

Russian Contact:
Marina Tyasto
Siberian Academy for Public Administration
Nizhegorodskaya Street, 6, Novosibirsk, 630102, Russia
Tel: 7 383-2 10-17-67, Fax: 7 383-2 10-10-98
tyasto@sapa.nsk.su

Belukha, Altai, by Carol Hiltner

I.   Challenge

Golden Altai is at a crossroads—Chinese, Mongolian, Russian, and Kazakhstani borders form an X in the middle of the Altai Mountains in the center of Eurasia. But Altai is also at an economic crossroads. Renowned for its unique nature, history, and culture, the Altai Republic is now celebrating the 250th anniversary of its joining Russia. However, the region is undeveloped, with poverty in its rural population, and poor infrastructure and economic development.

The Altai Republic totally dependent on Russia with its huge energetic and financial resources. 85% of Altai's budget is donated from federal budget. The proud people of Altai want to change this. Local officials are trying to improve the situation through the development of valuable natural resources and construction, in a way that is responsible both economically and environmentally. This careful development is particularly important in the region's UNESCO World Heritage Sites and places of peace.

With the same objectives, we suggest an additional strategy: use the resources offered by international organizations and foundations to build networks of communication linked to the expertise of the global higher education community, with a first emphasis on telemedicine, education, and research. Our program will develop local human resources with training and support to customize the design to local needs, and then to build and sustain both the infrastructure and the programs.

Many foreign grants have already been attracted to Altai, and the people of Altai have proven their readiness to leverage these opportunities.

II.   Window of opportunity

Because of Altai's strategic geographic position, and issues that are representative of Central Asian dynamics, Global University System (GUS) has invited the establishment of a modern distance-learning and telemedicine university—GUS/Altai Mir—anchored in existing regional institutions.

With assistance by Dr. Takeshi Utsumi, founder of GUS, the initiative includes a template for preparatory activities and proposal-writing for access to Japan Official Development Assistance (ODA) Fund for telemedicine and distance learning infrastructure. GUS/Altai Mir is designed to provide tools to enable the people of the region to participate fully in their own development and to bring their culture forward, thriving with the influx of opportunities, and contributing to new prosperities.

GUS/Altai Mir will serve as a regional model for UNESCO and World Summit on Information Society (WSIS) with additional opportunities for academic and community research on impact and

potential of Information Communication Technologies (ICT) for development in Central Asia (see http://portal.unesco.org/ci/en/ev.php-L_ID=1543&URL_DO=DO_TOPIC&URL_SECTION=201.html.). Regionally, GUS/Altai Mir facilitates methodology, technology and a network of international collaborators.

III. Project concept.

A. GUS/Altai Mir distance-learning university delivers 1) regional technological infrastructure and 2) programs and academic content both to and from Altai, providing tools to stabilize a region that is on the brink of huge transformation.

B. Global University Systems (GUS) and Mobile Assessment and Media Systems (MAMAS) cooperate with the Siberian Branch of Russian Academy of Science to fund and link regional universities and communities in their capacity to adapt GLORIAD high speed resources for distance learning, health, economic empowerment and with cross-cutting inclusion of gender and indigenous priorities.

C. Both infrastructure and programs are supported by 1) exchanges of educational courses and their credits through broadband internet, 2) promotion of community development, and 3) collaborative research.

D. Immediate focus is on community health/telemedicine and participatory governance because those programs are the best developed for rapid start-up. Later focus will be on interactive ecological and cultural/spiritual programs for the inclusion of gender and indigenous peoples, and on technological development/training in the region. Other sectors may be added by stakeholder groups.

E. The university brings together resources of an extensive network of universities in the Altai Republic, the Altai Region, and scientific centers in Novosibirsk, as well as specialized programs from many international universities.

F. GUS/Altai Mir is a break-through project designed to be built upon and duplicated throughout Central Asia. Kazakhstan, Mongolia, and Nepal are ready candidates. Nepal's position is similar to Altai's in that it is also a route from China—to the south into India.

IV. Objectives.

A. Practical tool sets (inclusive of gender and indigenous culture) in several key sectors support sustainable and peace-enhancing development in the whole Altai region.

B. Educational institutions, government, business and NGOs partner to solve regional challenges in inclusive, capacity-enhancing ways.

C. Immediate health sector needs are addressed through multi-stakeholder planning, and implementation of telemedicine programs.

D. The valuable culture and ecology of the Altai region is nurtured so that the legacy is available to meet global needs, especially the health and spiritual resources for which the region is renowned.

E. Sector-based research and cooperation accelerate development innovations.
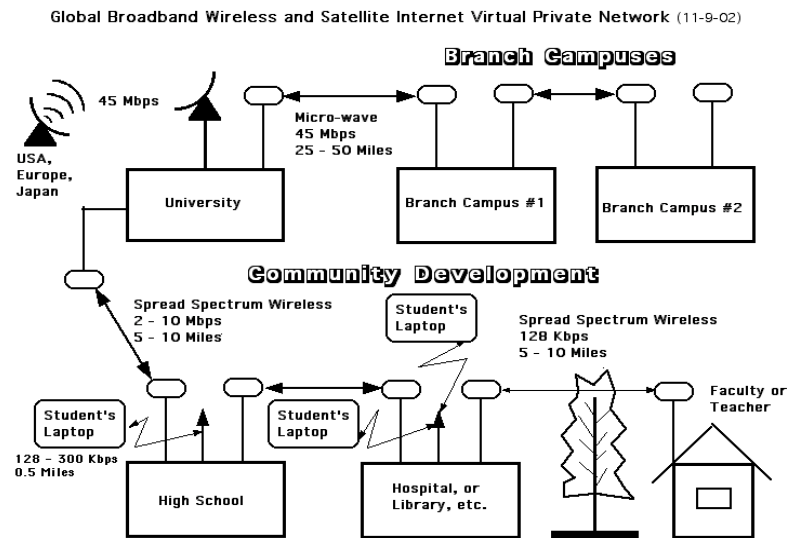
V. Description.

The Global University System (GUS) under leadership of Dr. Takeshi Utsumi, and in affiliation with UNESCO/UNITWIN, is broadband and satellite-based infrastructure which includes a template for collaborative planning and coordination between universities, regional governments and community-based organizations. GUS is a worldwide initiative to create satellite/wireless telecommunications infrastructure and educational programs for access to educational resources across national and cultural boundaries for global peace.

Global University Systems (GUS) cooperates with the Siberian Branch of Russian Academy of Science to fund and link regional universities and communities in their capacity to adapt GLORIAD high speed resources for distance learning, health, economic empowerment and with cross-cutting

inclusion of gender and indigenous priorities. Vice Rector of Novosibirsk State University and Deputy Director of Institute of Computational Technologies, Siberian Branch, Russian Academy of Sciences, Professor Anatoly Fedotov is our contact person for this.

As diagrammed in Figure 1, GUS programs and services will be delivered via regional satellite hubs, typically located at a major university, that connect via high-speed satellite (~ 45 Mbps) to educational resource cites in the EU, US, and Japan. In a sense, the regional satellite hub is to be the major Internet Service Provider (ISP) for not-for-profit organizations in the region and the gateway to the outside world. The major university may also be connected to very high speed broadband Internet, e.g., GLORIAD at 155 Mbps which is to be upgraded to 622 Mbps within this year and then to 2.5 Gbps in the near future.

The buildings with a broadband Internet connection will then also become relay points for the low-cost "Wi-Fi (wireless fidelity)" networks at 10 Mbps that are now rapidly appearing in Japan, USA and Europe. This advanced wireless communication with laptop computer will make e-learning possible for anyone, anywhere, and anytime with capabilities of internet telephony, fax, voice mail, e-mail, Web access, videoconferencing, etc.

Global Broadband Wireless and Satellite Internet Virtual Private Network (11-9-02)

GUS is headquartered at the Global E-learning Center at the University of Tampere in Finland, under the direction of the UNESCO/UNITWIN Networking Chair, held by Dr. Tapio Varis. Currently, institutions with faculty members who are participating in GUS development projects are numerous in many countries around the world. GUS serves as an educational broker for universities, thus helping them gain international influence and access to students that they would otherwise not reach. Those institutions affiliated with GUS become members of the GUS/UNESCO/UNITWIN Networking Chair Program.

Mobile Assessment and Media Systems (MAMAS), under the leadership of Linda Hawkin Israel, provides technology transfer, training and support for strategic information and resource flow anchored between multi-purpose, portable telecenters and linked to a global network of health and development specialists. Using solar energy, satellite, web and radio technologies, each MAMAS site will feature systems customized from participatory community design. Target populations can then be offered specialized training and professional development through partner universities, school and community based networks and international relief and development agencies. The final network layout will be built on a modular base with standard pre-approved components.

VI. Leadership.

Drawing from international, national, regional, and local leadership, GUS/Altai Mir is a broad-based initiative, with four overlapping categories of participation:

A.   Personal champions: Takeshi Utsumi, Carol Hiltner, Marina Tyasto, Linda Hawkin Israel
B.   NGOs/citizens' organizations: Global University System (GUS); GLOSAS/USA Consortium; Mobile Assessment and Media Systems (MAMAS); Altai Peace International (API); Siberian Educational-Consulting Center "Connect"; VNG International; Global Leadership Forum
C.   Educational institutions: Siberian Academy of Public Administration; Novosibirsk State Medical University; Novosibirsk State University; Novosibirsk State University of Architecture & Construction; University of Tampere, Finland; University of Washington; University of Pittsburgh
D.   Government/UN agencies: UNESCO; UNITWIN; Russian educational ministries at all levels.

VII. Financing.

GUS projects will combine (1) the Japanese government's ODA funds and (2) Japanese electronic equipment with (a) the Internet technology and (b) content development of North America and Europe. Funding can be leveraged with Japan ODA to establish sector-based programs and to further Local Community Development Network (LCDN) (i.e., MAMAS) community-based infrastructure, adapted to meet project needs.

VIII. Timeline/Budget.

A Phase: 15Jun 06–15Jun 07 ~ $137,150 + translators. Initial planning includes:
   1) establishment of local secretariats to move project forward,
   2) confirmation of official participation,
   3) convening of initial stakeholders meetings in Altai.
B Phase: Additional amount to be determined, which includes:
   1) collaborative development of infrastructure, program tracks, and timelines by stakeholders,
   2) development of relationship with grantors,
   3) written proposal, with budgets, for GUS/Japan ODA support and matching grants,
   4) grants agreed upon and mechanism for administration put in place.
C Phase: 15Jun07– GUS/Altai Mir implemented per agreements made during A and B Phases.