

**Global Collaboration  
with  
Global University System**

To be presented at  
The Cultural Bridges between Finland and Japan  
University of Tampere  
November 9, 2007

October 4, 2007

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## 1 Introduction:

Attaining global peace and alleviating global warming are most urgent and complex problems of our time. Both are confrontation prone as deeply rooted in cultures and traditions. Although both cannot be solved over-night, we must have appropriate mechanism to understand their causes and prepare our youngsters to cope with them in years to come.

Economic interdependence among nations and cultures is spawning a global economy. Globalisation also highlights clashes of divergent cultures and belief systems, both political and religious. If global peace is ever to be achieved, global-scale education, with the use of the modern digital telecommunications, will be needed to create mutual understanding among nations, cultures, ethnic groups, and religions. The Internet is the future of telecommunications and can be a medium for building peace.

## 2 Intercultural Understanding for Global Peace:

### 2.1 What is peace through culture?

The word “culture” is derived from the two words “cult” and “ur.” “Cult,” of course, means cultivation. “Ur” is an ancient Chaldean term meaning “light” -- the creative aspect of the universe. Hence, culture is literally the cultivation of creativity.

Peace is more than just the absence of war. Just as it takes acts of war to make war, it takes acts of peace to make peace. Peace, then, is a structure of positive acts of creativeness that are carried out in a spirit of high idealism.

“Genuine peace must be the product of many nations, the sum of many acts. It must be dynamic, not static, changing to meet the challenge of each new generation. For peace is a process -- a way of solving problems.”

John F. Kennedy

“Peace is a never-ending process, the work of many decisions by many people in many countries. It is an attitude, a way of life, a way of solving problems and resolving conflicts... It requires us to work and live together.”

Oscar Arias Sanchez; Nobel acceptance speech, 1987

### 2.2 Comparison of Eastern and Western Cultures

Eastern Culture	Western Culture
Monotheism	Polytheism
Truth, Goodness, Beauty	Justice, Equality, Freedom
• Japan: Champion	• USA: Champion
• Random	• Logical
• Intuitive	• Sequential
• Subjective	• Objective
• Looks at wholes	• Looks at parts
• Holistic	• Rational
• Synthesis	• Analytical
• Art and Literature	• Scientific
• Emotional thinking	• Critical thinking

**Table 1**

Both cannot and should not dominate other, but should have close dialogues between them.

Global University System (GUS) is adopting philosophies and principles that emphasize trans-cultural and moral values rather than ideologies. The priority is in academic freedom and quality in education.

### 2.3 Hierarchy of Civilization, Culture and Religion:

Hierarchy of civilization, culture and religion may be depicted as follows (Figure 1);

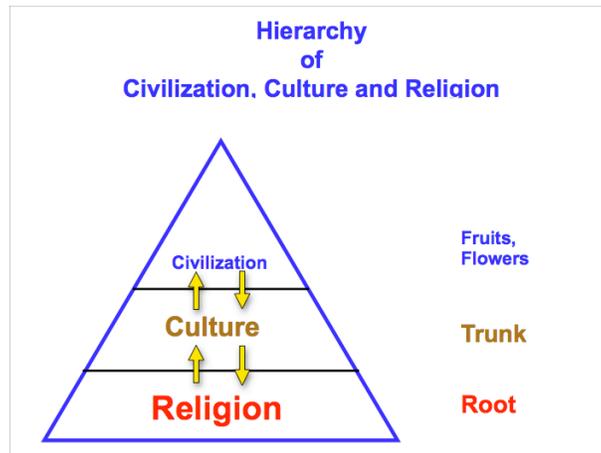


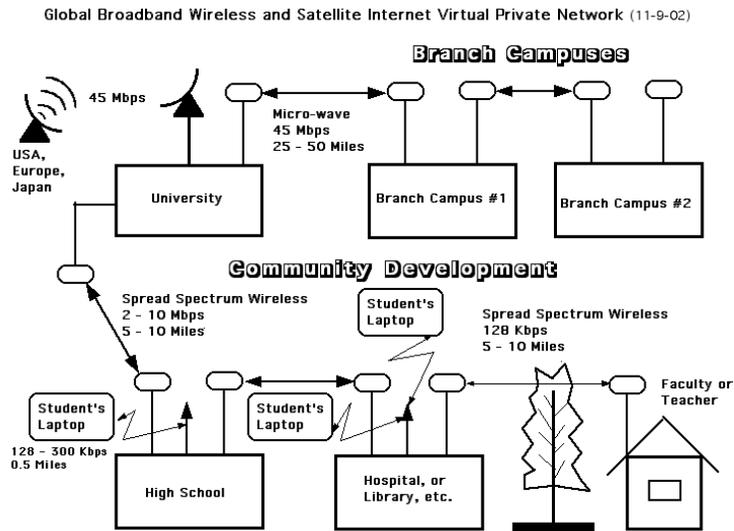
Figure 1

Religion may correspond to root of a tree, culture to trunk and civilization to flowers and fruits. Japan could be a cherry tree, China a peach, and America an apple. We need a cross pollination for jointly creating a new global culture and civilization of a global society in the knowledge age of the 21st century by youngsters around the world.

Their collaboration across boundaries of continent and ocean, and of nation and culture would bring new age, as similar to the Golden Age of Spain when Jews, Christian and Moslem co-mingled and co-existed to create Renaissance out of the Dark Age. Our new age would enable us to create a new civilization, say, neo-Renaissance with the appropriate use of advanced ICTs by all the people of the world, not only those three religions, but also those of orient in Asia and the Pacific, and Africa, etc.

## 3 Global University System (GUS):

The Global University System (GUS) [Utsumi, et al, 2003] is a worldwide initiative to create advanced telecom infrastructure for accessing educational resources around the world (Figure 2). The aim is to achieve "education and healthcare for all," anywhere, anytime and at any pace.



**Figure 2**

GUS aims to build a higher level of humanity with mutual understanding across national and cultural boundaries for global peace [Varis, et al, 2003]. The mission of GUS is to help higher educational and healthcare institutions in remote/rural areas of developing countries to deploy broadband Internet in order for them to close the digital divide. These institutions also act as the knowledge center of their community for the eradication of poverty and isolation through the use of advanced Information and Communications Technologies (ICTs). Learners may take courses from different member universities around the world, obtaining their degree from the GUS, thus freeing them from being confined to one academic culture of a single university or country. The GUS program is a comprehensive and holistic approach to building smart communities in developing countries for e-learning and e-healthcare/telemedicine.

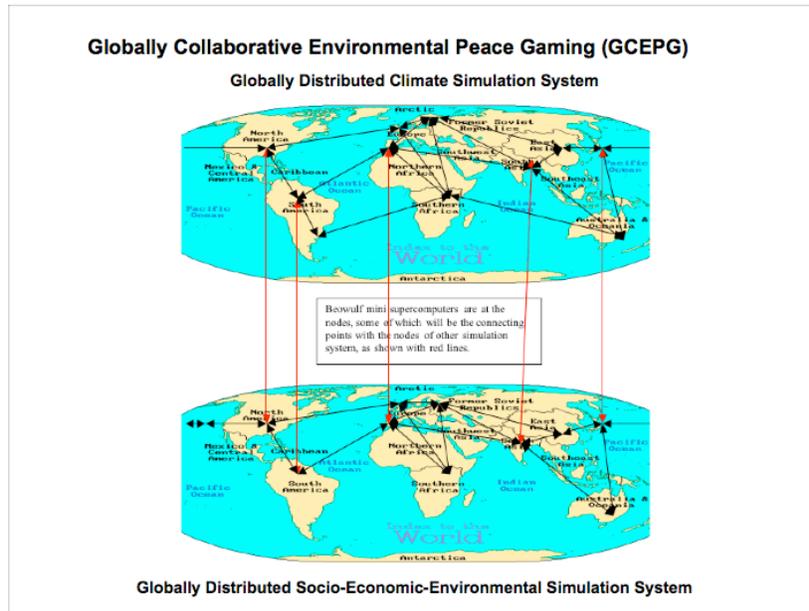
Each GUS of various countries will maintain the sub-models of their countries autonomously – along with construction and maintenance of its databases, modification of their sub-models, and supply of game players in cooperation with their overseas counterparts through the global Internet.

## 4 Peace Gaming Project:

### 4.1 Globally Collaborative Environmental Peace Gaming (GCEPG) Project:

The GCEPG (which was initiated by GLOSAS/USA in early 1970s [Utsumi, 2003]) is a computerized gaming/simulation with a globally distributed computer simulation system to help decision makers construct a globally distributed decision-support system for positive sum/win-win alternatives to conflict and war. The idea involves interconnecting experts in many countries via the global Internet to collaborate in the discovering of new solutions for world crises, such as the deteriorating ecology of our globe, and to explore new alternatives for a world order capable of addressing the problems and opportunities of an interdependent globe. Gaming/simulation is the best tool we have for understanding the world's problems and the solutions we propose for them. The understanding gained with scientific and rational analysis and critical thinking would be the basis of world peace, and hence ought to provide the basic principle of global education for peace.

With global GRID computer networking technology (which concept Dr. Utsumi initiated [McLeod, 2000]) and Beowulf mini-super computers of cluster computing technology, we plan to develop a socio-economic-environmental simulation system and a climate simulation system in parallel fashion, both of which are to be interconnected through broadband Internet in global scale (Figure 3).



**Figure 3**

#### **4.2 Global Socio-Economic-Energy-Environment Development (GSEED) Project:**

The GSEED Project is a variation of and the initiation of the GCEPG. The quantitative policy analysis of globally collaborative GSEED Project will focus on the sustainable development in Japan, the US, China, Russia, Kazakhstan, and many other relevant countries.

The initial focus on energy security will be on the global interrelations and interdependencies among those countries with the deployment of a gas pipeline from Tomsk, Siberia to China, and the construction of hydroelectric dam in the Republic of Altai, Siberia where there are five UNESCO World Heritage sites which draw increasing number of tourists (400,000) into a small town of Gorno-Altai with only 9,000 residents. This gas pipeline will certainly affect socio-economic developments of Siberia, China, and hence the ones of Japan, the US, Europe and others. Japan will also increasingly depend on the energy (oil and gas) supply from Russia and uranium from Kazakhstan.

This GSEED Project will then demonstrate integrated and synergistic approach among grassroots, government, university, stakeholder, etc. Use of graphic info modeling/mapping and potential "peace gaming" (\*) on key issues and solutions will assist each group's ability for standardized data gathering and situational analyses, projecting out possible outcomes for more informed decision making and activities. It brings together most sophisticated university-based mathematical modeling techniques and experts and regular people who can then more easily see--at a glance--how issues and outcomes can impact and interact each other.

(\*) which term Dr. Utsumi coined almost three decades ago. War gaming is to win the war once when it happened, and peace gaming is to avoid the occurrence of war (Figure 4). Avoiding war is much cheaper than waging war. Our "peace gaming" might be said to be equivalent to the scale of Pentagon's "war games."



**Figure 4**

This project will train local experts for leadership development, in relation to strategic use of technologies and cooperation among stakeholders for more effective advocacy, informed policy, public understanding and participation and concrete community development.

This project will have two-tier system:

- a. One for training young would-be decision makers in crisis management, conflict resolution, and negotiation techniques basing on "facts and figures" and
- b. The other for helping decision makers to construct a globally distributed decision-support system for positive sum/win-win alternatives to conflict and war.

## 5 Development History:

### 5.1 Global Telecom:

Over the past three decades, the GLObal Systems Analysis and Simulation Association in the U.S.A. (GLOSAS/USA) played a major pioneering role in extending U.S. data communication networks to other countries and deregulating Japanese telecommunication policies for the use of e-mail (thanks to help from the Late Commerce Secretary Malcolm Baldrige) [Chapter 1 of [Utsumi's Proposed Book](#)]. This triggered the de-monopolization and privatization of Japanese telecommunications industries. This movement has later been emulated in many other countries, as having more than one billion email users around the world nowadays.

For over a dozen years since 1986, we conducted once or twice a year a series of innovative distance teaching trials with "Global Lecture Hall (GLH)"™ videoconferencing using hybrid delivery technologies, which often spanned the globe [Chapter 2 of [Utsumi's Proposed Book](#)] and [[Utsumi, 2003](#)].

Thanks to such efforts and for initiating global e-learning movement since early 1980s, Dr. Utsumi received the prestigious Lord Perry Award for Excellence in Distance Education in the fall of 1994 from Lord Perry, the founder of the U.K. Open University. The two-year senior recipient of the same award was Sir Arthur C. Clarke, the inventor of satellites.

## 5.2 Peace Gaming Demonstration:

A demonstration of global-scale peace-gaming was held at the conference on "Crisis Management and Conflict Resolution" by the World Future Society (WFS) in New York City, in July of 1986. It was one of the largest and perhaps most successful demonstrations of global gaming/simulation organized so far. The event was on a crisis scenario involving the U.S.-Japan trade and economy issues. Professor Onishi in Tokyo supplied his FUGI model, which is the world largest econometric model [[Onishi, 2007](#)].

Noted U.S. economists were panelists of this event and electronically interconnected with Japanese counterparts for three days of computer-assisted negotiations. Several hypothetical policies were examined. One question was the effect of raising military expenditures in Japan to the American level while lowering those of the U.S. to the Japanese level. Simulation predicted that the balance of trade would thus be even by the year 2000, with necessity of cooperation, rather than competition, by both countries in the future. This clearly indicated the cost and dilemma of American's nuclear umbrella protecting Japan's economic prosperity, thus threatening American's economic prosperity.

## 5.3 Globally Collaborative Innovation Network (GCIN):

The essence of education is the inheritance of wisdom (i.e., know-how on how to live a life), more than mere transfer of knowledge (Figure 5). We hope that, as an extension of our GCEPG/GSEED projects, learners will also form a global knowledge forum for the exchange of ideas, information, knowledge and joint research and development, which will foster creativity of youngsters around the world. Researchers in developing countries can co-work with colleagues in advanced countries to perform joint collaborative research with use of virtual laboratories for experiential/constructive learning and creation of knowledge through the global GRID technology (which concept I initiated — see [McLeod \(2000\)](#)), thus forming GCIN [[Utsumi, 2006](#)]. Such interactions among youngsters around the world through global broadband Internet would certainly promote mutual understanding and hence global peace.

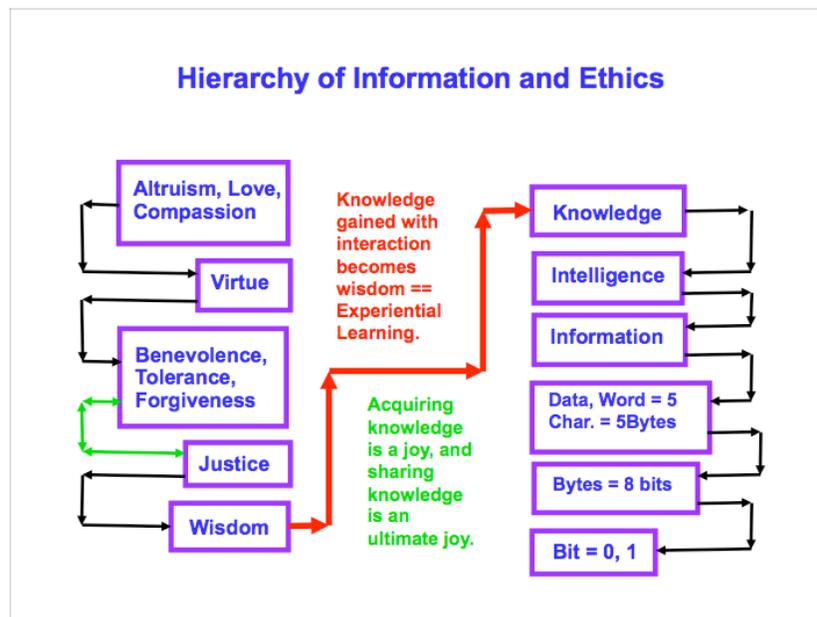


Figure 5

Dr. Hallan Cleveland, former president of the University of Hawaii and former US Ambassador to NATO, once wrote that 8 bits become one byte, 5 bytes become one word

or data, which becomes information. Information selected with intelligence becomes knowledge. We then expanded its hierarchy as depicted above. As shown, each item is controlled by the one above. However, Justice and Forgiveness/tolerance have to be two-way interaction.

## 6 Officers of GUS:

The officers of the GUS are: P. Tapio Varis, Ph.D., Acting President, (University of Tampere, former rector of the United Nations University of Peace in Costa Rica); Marco Antonio Dias, T.C.D., Vice President for Administration, (former director of Higher Education of UNESCO); Takeshi Utsumi, Ph.D., Founder and Vice President for Technology and Coordination, (Chairman of GLOSAS/USA). The trustee members are: Dr. Pekka Tarjanne, (former Director-General of the ITU) and Dr. Federico Mayor, (President of the Foundation for Culture of Peace and a former Director-General of the UNESCO).

## 7 Financing GUS and GCEPG/GSEED Projects:

Our projects will combine (1) the Japanese government's Official Development Assistance (ODA) funds and (2) Japanese electronic equipment with (a) the Internet technology and (b) content development of North America and Europe, to help underserved people in rural and remote areas of developing countries by closing the digital divide.

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<http://tinyurl.com/kofpf>



**Dr. Takeshi Utsumi** is the Founder and Vice President for Technology & Coordination of Global University System (GUS) and the Chairman of the Global Systems Analysis and Simulation Association in the U.S.A. (GLOSAS/USA). He is the 1994 Laureate of the Lord Perry Award for Excellence in Distance Education. His public services have included political work for deregulation of global telecommunications and the use of e-mail and voice over Internet Protocol (VoIP) through ARPANET, Telenet and Internet; helping extend American university courses to developing countries; the conduct of innovative distance teaching trials with "Global Lecture Hall (GLH)<sup>TM</sup>" multipoint-to-multipoint multimedia interactive videoconferences using hybrid technologies; as well as lectures, consultation, and research in process control, management science, systems science and engineering at the University of Michigan, the University of Pennsylvania, M.I.T. and many other universities, governmental agencies, and large firms in Japan and other countries.