



## **GLOSAS/USA**

The GLObal Systems Analysis and Simulation Association in the U.S.A., Inc.  
(A New York non-profit educational service organization since 1988) E.I.D. 11-2999676  
43-23 Colden Street, #9L, Flushing, NY 11355-5913; Tel: 718-939-0928  
takutsumi0@gmail.com; <http://www.friends-partners.org/GLOSAS>

### **CLOUD COMPUTING SIMULATION CENTER FOR GLOBAL EARLY WARNING SYSTEM (GEWS) WITH GLOBAL UNIVERSITY SYSTEM (GUS) IN NIGERIA**

To be submitted to  
National Information Technology Development Agency (NITDA)  
Federal Ministry of Science & Technology  
Abuja, Nigeria

May 14, 2011

Takeshi Utsumi, Ph.D., P.E.  
Principal Project Director  
Chairman, GLObal Systems Analysis and Simulation Association  
in the U.S.A. (GLOSAS/USA)  
43-23 Colden Street  
Flushing, NY 11355-5913  
Tel: 718-939-0928  
[takutsumi0@gmail.com](mailto:takutsumi0@gmail.com)  
<http://www.friends-partners.org/GLOSAS/>

Secretariat, Emerging **GLOBAL UNIVERSITY SYSTEM (GUS) CONSORTIUM**  
Chairman: Takeshi Utsumi, Ph.D.; Vice Chairman: Louis Padulo, Ph.D.;  
Board Members: David Johnson, Ph.D., Peter Knight, Ph.D., Joseph Pelton, Ph.D., Tapio Varis, Ph.D.;  
Secretary: Ben Haraguchi, J.D.; Treasurer: Hisae Utsumi

## ABSTRACT

We will harness knowledge as a resource, using dynamic modeling, with the key stakeholders in Nigeria. Humanity today faces a growing divide between the real and the chrematistic -- or monetary -- economies, with many consequences. Linear, static formulations and stochastic calculation are becoming too clumsy to describe the dynamics of natural and social systems. Dynamic modeling and stakeholder forums that define situations and priorities can help create clearer thinking, better social systems, and stability.

## I. INTRODUCTION TO GEWS

### 1. Purpose and objectives

This project will train local experts to be leaders in the strategic use of key technologies. They will learn to develop and promote informed policy, public participation, and interaction among communities.

We will create the **Globally Collaborative Network of the Centers for Conflict Prevention, Management and Resolution (GCN/CCPMRs)** to embrace economic, social and environmental issues in Nigeria and other countries, connected through broadband internet, in the following two-tier system:

- a. To provide decision-makers with positive sum/win-win alternatives to crisis, conflict and war.
- b. To train youth, particularly young women, in rational analysis, critical thinking, crisis management, conflict resolution and negotiation techniques based on facts.

The GEWS/Nigeria project is to join in a proposed ICT Centre constructed in Nigeria with US\$100 million. The proposed name is the **Cloud Computing Simulation Centre (CCSC)**. It would be a model for knowledge, technology and e-business consulting, and serve the government, the public, and the private sectors, plus **Economic Community of West African States (ECOWAS)** regional integration needs.

A cloud computing system will serve the 36 states and 774 local government areas of Nigeria in addition to becoming the hub of 15 country members of ECOWAS. Our major partner, the Millennium Institute, a world-renowned center in Washington, DC, has already started to construct simulation models for this.

We feel that these objectives further the Nigerian National Information Technology Development Agency (NITDA) mandate as expressed in the National IT policy. Please see:

[http://www.nitda.gov.ng/index.php?option=com\\_content&view=article&id=65&Itemid=87](http://www.nitda.gov.ng/index.php?option=com_content&view=article&id=65&Itemid=87)

We therefore propose:

- a. Creating national socio-economic, energy, health and environment dynamic simulation models;
- b. Establishing a regional hub of the Global Early Warning System (GEWS) in Abuja, Nigeria;
- c. Linking this with universities and computer sites worldwide through the Global University System (GUS).

### 2. Approach and Technical Infrastructure

The GEWS approach is a paradigm shift. It applies normative (role-playing) gaming and quantitative (model-based) simulation to national and international political realities. This sets a new and high standard in the search for sustainable human development.

The project will help country groups standardize data gathering and analyze situations. They will assist in decision-making with the most sophisticated modeling techniques and multidisciplinary skills.

With global cloud computing technology, we can create a socio-economic-environmental simulation system and a climate simulation system. Each Global University System (GUS) <<http://tinyurl.com/kofpf>> <<http://tinyurl.com/sfgm7>>, an associated project in each of participating countries, will maintain the sub-models of its country autonomously -- along with its databases and their sub-models. Dynamic simulation

will assist long-term planning by identifying the policies that can lead towards a desired goal. All this insight deepens users' understanding of development challenges and solutions.

The simulation model is built on the philosophy that national planning is an integrated process with consideration of economic, social and environmental variables. The simulation approach is an especially useful tool for preparing Poverty Reduction Strategies. Scientific, rational analysis, critical thinking, and gaming/simulation are uniquely suited to understanding the confrontation-prone world and pursuing peace.

To have stable bandwidth for the systems, and for distance learning, the system requires fibre optic cable Broad Band (BB) Internet. There are alternatives, but only as points of departure. We will use BB cloud computing that streams from many locations, allowing updates as situations change. This modeling will also permit "peace games," – challenges created by deliberately changing the input. This is a learning tool for sustainable policy development and the promotion of peace.

Agriculture, land use planning, and international dialogue on these issues are, in our opinion, keys to sustainability, and therefore a major focus of the modeling plans. We urge that the basins of rivers, such as Niger, Nile, Congo, etc., be a focus of coordinated country efforts.

## II. GEWS/Nigeria

Using seed funding, our Nigerian colleague is now at work on GEWS/Nigeria. Its focus is to build climate change adaptation capacity (NBCCAC) in the Niger Delta, with emphasis on the Niger Delta Marshlands. This region provides the greatest source of national income for Nigeria (97% of Nigeria government revenue). Violence has limited oil and gas production to about 50% of installed output capacity.

Using System Dynamics methodology, a Niger Delta Energy and Climate Change Impact model will be developed, which will be integrated into the Nigerian National Economy Model being developed by the Millennium Institute. This is to be linked to the GEWS in various countries. The resulting simulation models will be planning tools for policy makers and in educational efforts throughout Nigeria.

### 1. Gaming/Simulation Demonstration:

At our planning workshop, we will conduct a gaming/simulation demonstration of energy policies proposed by former Vice President Al Gore and President Barack Obama – specifically, replacing fossil fuels with renewable sources on a massive scale (e.g., wind and/or solar energy) to generate electricity in the United States within ten years. We will discuss the potential impact of such a policy on Nigeria and its oil production, that is, what would be the change in revenue for Nigeria, and consequences for other economic and social structures?

To deal with this potentially devastating crisis, the money saved by the countries, which halted or reduced their Nigerian oil imports could become credits for the Cap and Trade system, and donated to:

- (a) Nigeria, to establish the Cloud Computing Simulation Centre (CCSC) and export education services via Nigerian domestic satellite to nearby countries as Cuba does.
- (b) ECOWAS, with Nigeria as its GEWS regional hub, to foster e-learning, e-healthcare and e-governance, etc. in its member countries with "Peace-Corps" type help from Nigeria.

This would be the win-win solution at a global scale, and utilize unemployed college graduates in Nigeria – a whopping 80% of all graduates, a figure given to Dr. Utsumi by the Honorable Dr. Turner T. Isoun, Minister of Science and Technology of Nigerian government in Abuja, Nigeria, in the summer of 2004.

The **main objective** of our gaming/simulation demonstration will be to initiate a *paradigm shift in international political science* in utilizing both "normative (role playing)" gaming and "quantitative (model based)" simulation approaches for *globally collaborative, hands-on experiential education and training*.

World experts will perform this demonstration focused on key alternative scenarios. They include faculty members from the School of International and Public Affairs (SIPA) of Columbia University, a former executive of Shell Oil Development Co. with extensive experience in Nigeria, a system dynamic

simulation expert from the Millennium Institute, and various technical experts on Internet and simulation.

We plan similar simulation with a Nigerian higher educational institution perhaps Obafemi Awolowo University (OAU). Dr. Utsumi has discussed their using GEWS in their global e-learning, as suggested by the Late Prof. G. Olalere Ajayi, Director General/CEO of the NITDA in the summer of 2004.





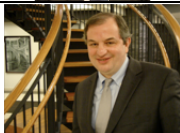

## 2. Documentary Film Plans





As soon as plans for this are settled, we will engage a professional documentary film company to follow the story of how this project unfolds in Nigeria. They will create a production suitable for broadcast on US network television or elsewhere; they will also produce small segments that can be used on various Internet sites. They will highlight the conceptual and technical innovations and their significance for the people of Nigeria, as well as Nigeria's willingness to pursue peaceful progress in our turbulent age.

This work will be informative as journalism to a wide audience, and it will help promote expansion of the GEWS objectives in Nigeria and elsewhere.

## 3. New developments towards peace and democracy

We are proposing change through a just and democratic process. Our goal is to work with Nigeria as the nation confronts the transformation of its economy from dependence on petroleum towards a knowledge-and-information based society and active citizens. The coordination of minds that gradually builds the GEWS representations of potential futures will promote communities engaged upon sustainable paths, and perhaps most important, help overcome conflicts by transforming adversaries into collaborators. If it succeeds receiving the much needed funding, an enormous new emerging market will be promoted. Financially supporting this project, can provide a significant social and market visibility in this nation.

| KEY PEOPLE for GEWS |  |   |
|---------------------|--|---|
| Japan               | Akira Onishi<br>Center for Global Modeling<br>Brief bio: <a href="http://tinyurl.com/22jwqxf">http://tinyurl.com/22jwqxf</a><br>CV: <a href="http://tinyurl.com">http://tinyurl.com</a> through there generous contribution /2ctnt5x                   |  |
| Netherlands         | Dorien J. DeTombe<br>International Research Society on Methodology of Societal Complexity<br>Brief bio: <a href="http://tinyurl.com/22jwqxf">http://tinyurl.com/22jwqxf</a><br>CV: <a href="http://tinyurl.com/2bxf8v5">http://tinyurl.com/2bxf8v5</a> |  |
| U.K.                | Donal A. O'Neill<br>Former executive of Shell Oil International<br>Brief bio:<br>CV: <a href="http://tinyurl.com/39brv6y">http://tinyurl.com/39brv6y</a>   |  |
| USA                 | Andrea Marcello Bassi<br>Millennium Institute<br>Brief bio: <a href="http://tinyurl.com/22jwqxf">http://tinyurl.com/22jwqxf</a><br>CV: <a href="http://tinyurl.com/239astn">http://tinyurl.com/239astn</a>   |  |
|                     | Francisco Bozzano-Barnes<br>Tenure and Ecology LLC<br>Brief bio:<br>CV: <a href="http://tinyurl.com/25xhx88">http://tinyurl.com/25xhx88</a>  |  |
|                     | Greg Cole<br>Global Ring Network for Advanced Applications Development (GLORIAD)<br>Brief bio:<br>CV: <a href="http://tinyurl.com/36ey2yp">http://tinyurl.com/36ey2yp</a>  |  |

|                                |  |   |
|--------------------------------|--|---|
|                                | <p>Hans Rudolf Herren<br/>Millennium Institute<br/>Brief bio: <a href="http://tinyurl.com/22jwqxf">http://tinyurl.com/22jwqxf</a><br/>CV: <a href="http://tinyurl.com/ydh6xcxf">http://tinyurl.com/ydh6xcxf</a></p>  |    |
|                                | <p>Ralph. C. Huntsinger<br/>International McLeod Institute of Simulation Sciences (MISS)<br/>Brief bio:<br/>CV: <a href="http://tinyurl.com/2fc7eug">http://tinyurl.com/2fc7eug</a></p>  |    |
|                                | <p>Daniel P. Molina<br/>Daniel P. Molina Productions<br/>Brief bio: <a href="http://tinyurl.com/4tomj5d">http://tinyurl.com/4tomj5d</a><br/>CV: <a href="http://tinyurl.com/4w4b54o">http://tinyurl.com/4w4b54o</a></p>  |    |
|                                | <p>Jenik Radon<br/>School of International and Public Affairs (SIPA)<br/>Columbia University<br/>Brief bio:<br/>CV: <a href="http://tinyurl.com/23lb3sw">http://tinyurl.com/23lb3sw</a></p>  |    |
|                                | <p>Takeshi Utsumi<br/>GLObal Systems Analysis and Simulation Association in the U.S.A. (GLOSAS/USA)<br/>Brief bio: <a href="http://tinyurl.com/22jwqxf">http://tinyurl.com/22jwqxf</a><br/>CV: <a href="http://tinyurl.com/289ns59">http://tinyurl.com/289ns59</a></p>   |    |
| <b>KEY PEOPLE for GUS</b>      |  |   |
| Finland                        | <p>P. Tapio Varis, Ph.D.<br/>Acting President, Global University System<br/>University of Tampere<br/>(Former Rector of the United Nations University of Peace in Costa Rica)<br/>Brief bio: <a href="http://tinyurl.com/32w7bv">http://tinyurl.com/32w7bv</a><br/>CV:</p>   |   |
| France                         | <p>Marco Antonio R. Dias, T.C.D.<br/>Vice President for Administration, Global University System<br/>(Former Director of the Division of Higher Education of UNESCO,<br/>Special Assistant to the Rector of the United Nations University)<br/>Brief bio: <a href="http://tinyurl.com/2t8qhu">http://tinyurl.com/2t8qhu</a><br/>CV:</p>  |  |
| USA                            | <p>Takeshi Utsumi, Ph.D.<br/>Founder and Vice President for Technology and Coordination, Global University System<br/>(Chairman of GLObal Systems Analysis and Simulation Association in the U.S.A. (GLOSAS/USA))<br/>Brief bio: <a href="http://tinyurl.com/22jwqxf">http://tinyurl.com/22jwqxf</a><br/>CV: <a href="http://tinyurl.com/289ns59">http://tinyurl.com/289ns59</a></p> |  |
| <b>Trustee Members of GUS</b>  |  |   |
| Spain                          | <p>Dr. Federico Mayor<br/>President of the Foundation for Culture of Peace<br/>(Former Director-General of the UNESCO)<br/>Brief bio: <a href="http://tinyurl.com/2c99stj">http://tinyurl.com/2c99stj</a><br/>CV:</p>  |  |
| <b>Special Advisors of GUS</b> |  |   |

|        |   |   |
|--------|---|---|
| USA    | David A. Johnson, Ph.D.<br>Professor Emeritus, University of Tennessee<br>Brief bio: <a href="http://tinyurl.com/28n8hs">http://tinyurl.com/28n8hs</a><br>CV: |  |
| Brazil | Fredric Michael Litto, Ph.D.<br>President of the Brazilian Association of Distance<br>Education at the University of Sao Paulo<br>Brief bio:<br>CV:           |   |
| U.K.   | Paul Lefrere, Ph.D.<br>(U.K. Open University)<br>Brief bio: <a href="http://tinyurl.com/2delusx">http://tinyurl.com/2delusx</a><br>CV:                        |  |

## **ANNEX:**

### **BACKGROUND OF GLOSAS/USA**

#### **1. GLOSAS/USA's record in public/private cooperation**

In the first decade since early 1970s, GLOSAS/USA helped extend the U.S. data communication networks to various overseas countries, particularly to Japan, and also helped de-regulate Japanese telecommunication policies on the use of email with a help from the Late Commerce Secretary Malcom Baldrige, which has been emulated in many countries, as having more than 2 billion email users around the world nowadays.

#### **2. Demonstration of Global Peace Gaming in Quantitative Mode:**

GLOSAS/USA conducted a demonstration of global-scale peace gaming at the conference on "Crisis Management and Conflict Resolution" that was organized by the World Future Society (WFS) in New York City, in July of 1986. It was one of the largest and perhaps the most successful demonstration of global gaming/simulation so far. The event was a global gaming simulation session on a crisis scenario involving the U.S.-Japan trade, and economic issues. Nearly 1,500 people took part in New York, Tokyo, Honolulu, and at the World's Fair in Vancouver, B.C.

#### **3. Global Lecture Hall (GLH) <sup>(TM)</sup> Videoconference**

In the second decade, since email was only text-oriented without graphic and video capabilities, GLOSAS/USA developed "Global Lecture Hall" multipoint-to-multipoint multimedia interactive videoconferencing technology. We have conducted a number of GLHs, ranging from Korea, Japan, Australia, New Zealand, North and South America, entire Europe, Scandinavia, and Russia, with tremendous cooperation and help from educational, industrial, domestic and international governmental organizations. The GLH employed inexpensive media accessible to the less developed countries.

GLOSAS/USA greatly appreciated "in-kind" services from various parties, such as National Technological University (NTU), INTELSAT, Hughes Communications, US Sprint, to name but a few. We shared free Sprint account privilege (equivalent to US\$1 million/year) with many colleagues in Third World countries.

These GLH demonstrations aroused awareness on technical and economic feasibility of global electronic distance education, thus, helped build a network of leaders in the global electronic distance education movement. They are becoming core group to form GEWS and GU in their countries.

#### **4. Lord Perry Award for the Excellence in Distance Education:**

Thanks to these efforts and also for initiating the movement of global e-learning since early 1980s, Dr. Utsumi of GLOSAS/USA received the prestigious Lord Perry Award for the 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. Clark, the inventor of satellite.