

# **Global Early Warning System (GEWS) with Global University System (GUS)**

**Takeshi Utsumi, Ph.D., P.E.  
Chairman, GLObal Systems Analysis and Simulation Association  
in the U.S.A. (GLOSAS/USA)**

**[takutsumi0@gmail.com](mailto:takutsumi0@gmail.com)**

**<http://www.friends-partners.org/GLOSAS/>**

# Principles of Information and Knowledge Societies

- **Information Society**

**Packet-switching technology**

**Sharing**

- **Knowledge Society**

**Distributed Simulation technology**

**Collaboration**

- **Global Peace**

**Sharing and Collaboration**

Sharing:

Internet is to realize the dream of Karl Marx to have a egalitarian society.

Knowledge grows when we share it.

# **Globally Collaborative Environmental Peace Gaming**

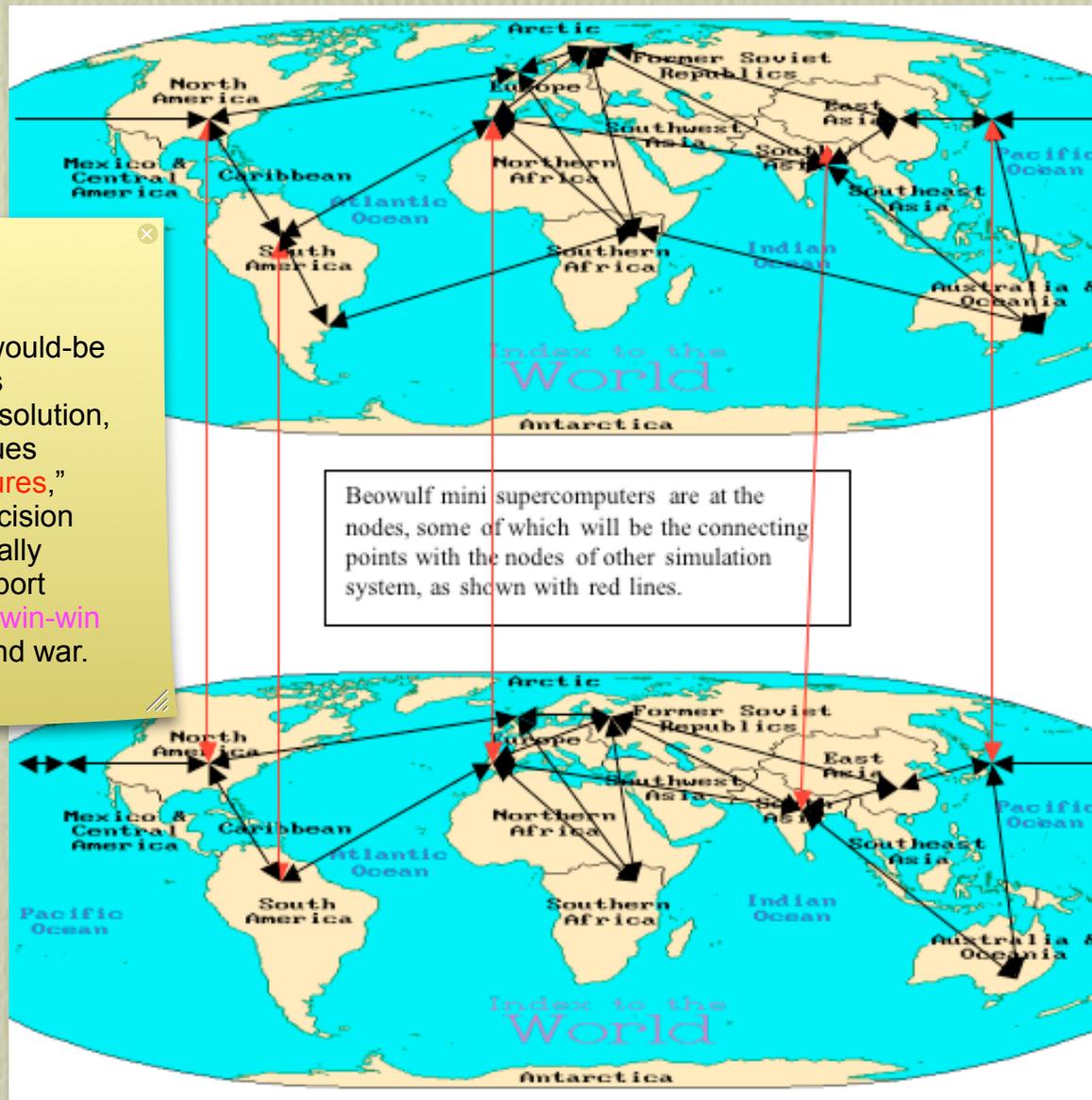
**(now named Global Early Warning System (GEWS))**

**Globally Collaborative Environmental Peace Gaming (GCEPG) with a globally distributed computer simulation system, focusing on the issue of environment and sustainable development in developing countries, is to train would-be decision makers in crisis management, conflict resolution, and negotiation techniques basing on "facts and figures."**

**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 in global scale.**

# Globally Collaborative Environmental Peace Gaming (GCEPG)

## Globally Distributed Climate Simulation System



### Two Tier System

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

## Globally Distributed Socio-Economic-Environmental Simulation System

# **Three Necessary Components for Peace Gaming**

**(now named Global Early Warning System (GEWS))**

## **1. Telecommunication Infrastructure**

**Packet-Switching Telecommunication**

**Internet**

## **2. Communication Means**

**E-mail**

**Multimedia**

## **3. Game Players**

**Global University System**

# Paul Baran

(April, 29, 1926 - March 26, 2011)

**Inventor of  
Packet-switching Data Telecom Technology**



[http://www.nytimes.com/2011/03/28/technology/28baran.html?  
nl=todaysheadlines&emc=tha26](http://www.nytimes.com/2011/03/28/technology/28baran.html?nl=todaysheadlines&emc=tha26)

# Deregulation of Japanese Telecom Policy for the Use of Email



UNITED STATES DEPARTMENT OF COMMERCE  
International Trade Administration  
Washington, D.C. 20230

APR 6 1982

April 6 1982

Dr. Takeshi Utsumi  
Global Information Services  
43-23 Colden Street  
Flushing, N.Y. 11355

Dear Dr. Utsumi:

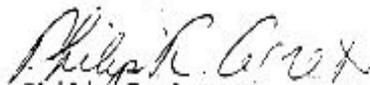
Enclosed are three cables from the U.S. Embassy in Tokyo reporting on the recent move by the Ministry of Posts and Telecommunications (MPT) to remove the usage restrictions on the ICAS system.

According to the Embassy, MPT's action will allow Global Information Services to offer electronic mail, computer conferencing, and word processing services to Japanese customers via the ICAS system. It thus appears that Global's TFC case has been favorably resolved.

← Electronic Mail

Please review the enclosed cables and let me know your reaction. If you have no objection, we will close this case.

Sincerely,

  
Philip R. Agress  
TFC Staff Officer

Enclosures (3)

# Move Mountain

(Gu-Kou-I-San)

**Even a stupid fellow can move a mountain.**

Chinese word	Japanese Pronunciation	English
愚	GU	Stupid
公	KOU	Fellow
移	I	Move
山	SAN	Mountain

## Iron Rule #1 of Simulation

**Make Simulation  
close to SIMULAND  
as much as possible.**

# Advantages of Distributed Simulation

1. Increase of **Credibility**
2. Data **Security**
3. **Flexibility**
  - a. Use of any language within local simulation
  - b. Same for methodology, machine, etc.
4. **Participatory Democracy** with Bottom-up Decision
5. **Cooperation** for Better Understanding
6. **Suitable for Large-scale, Confrontation-prone, Global problems**

# Methodologies of Socio-Economic Simulation

## 1. **Dynamic Methodologies:**

- a. **Econometrics**
- b. **System Dynamics**

## 2. **Static Methodologies:**

- a. **Input/Output Method**
- b. **Linear Programming**

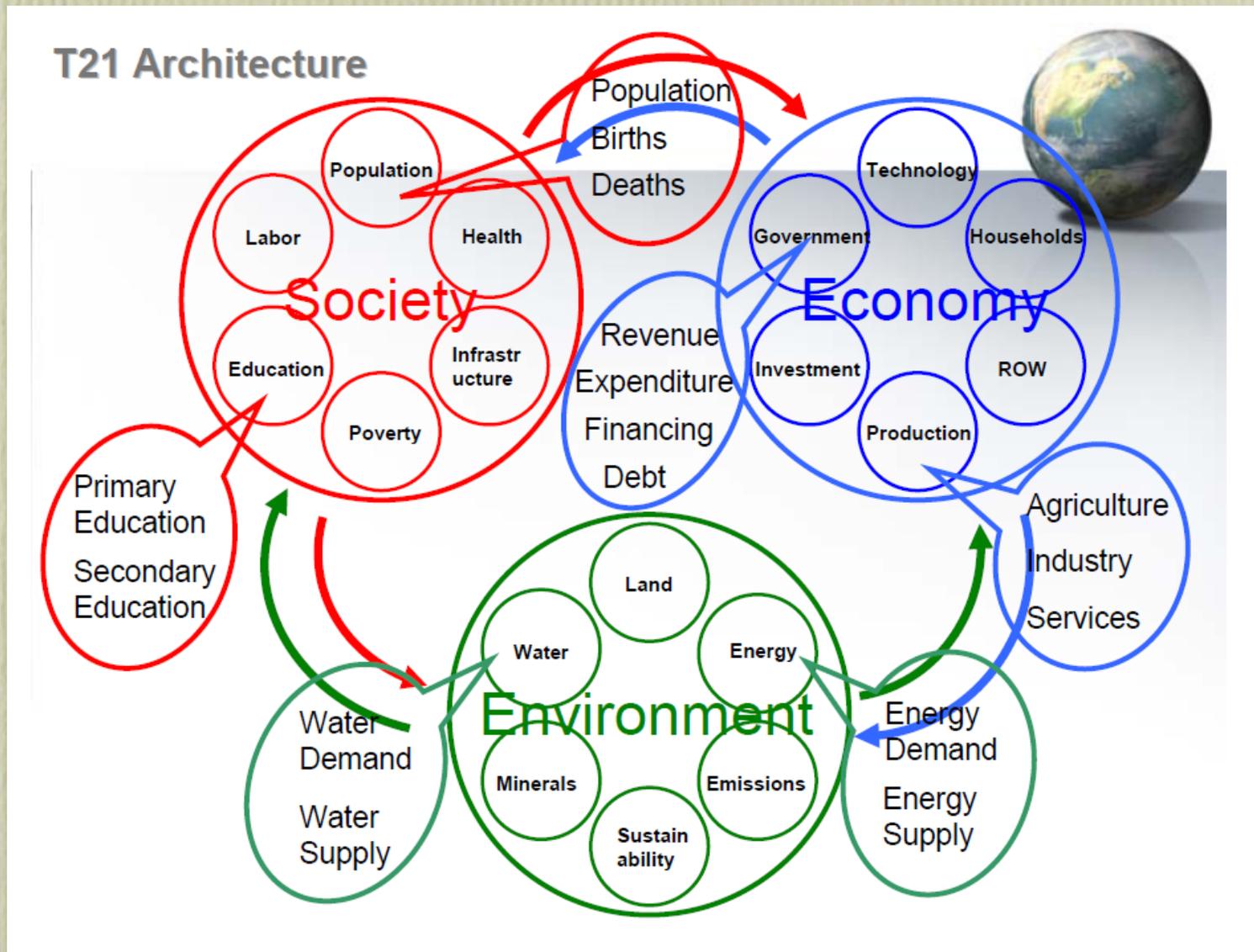
## 3. **Communication-oriented Methodologies:**

- a. **Policy Delphi**
- b. **Cross-Impact Matrix Analysis**  
(Probabilistic System Dynamics)

## **System Dynamic Simulation with Cause-and-Effect Analysis and Feedback Loop**

- **Non-linear, holistic thinking of the whole system instead of linear, narrow, single issue thinking.**
- **Counter-intuitive, instead of intuitive.**
- **Learning the system mechanism and its behavior.**
- **Rational decision making habit based on FACTS and FIGURES.**
- **GOOD FOR POLICY ANALYSIS OF SOCIO-ECONOMIC SYSTEMS.**

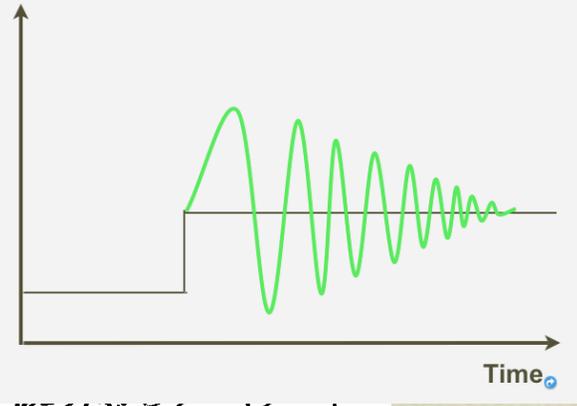
# Cause and Effect Diagram



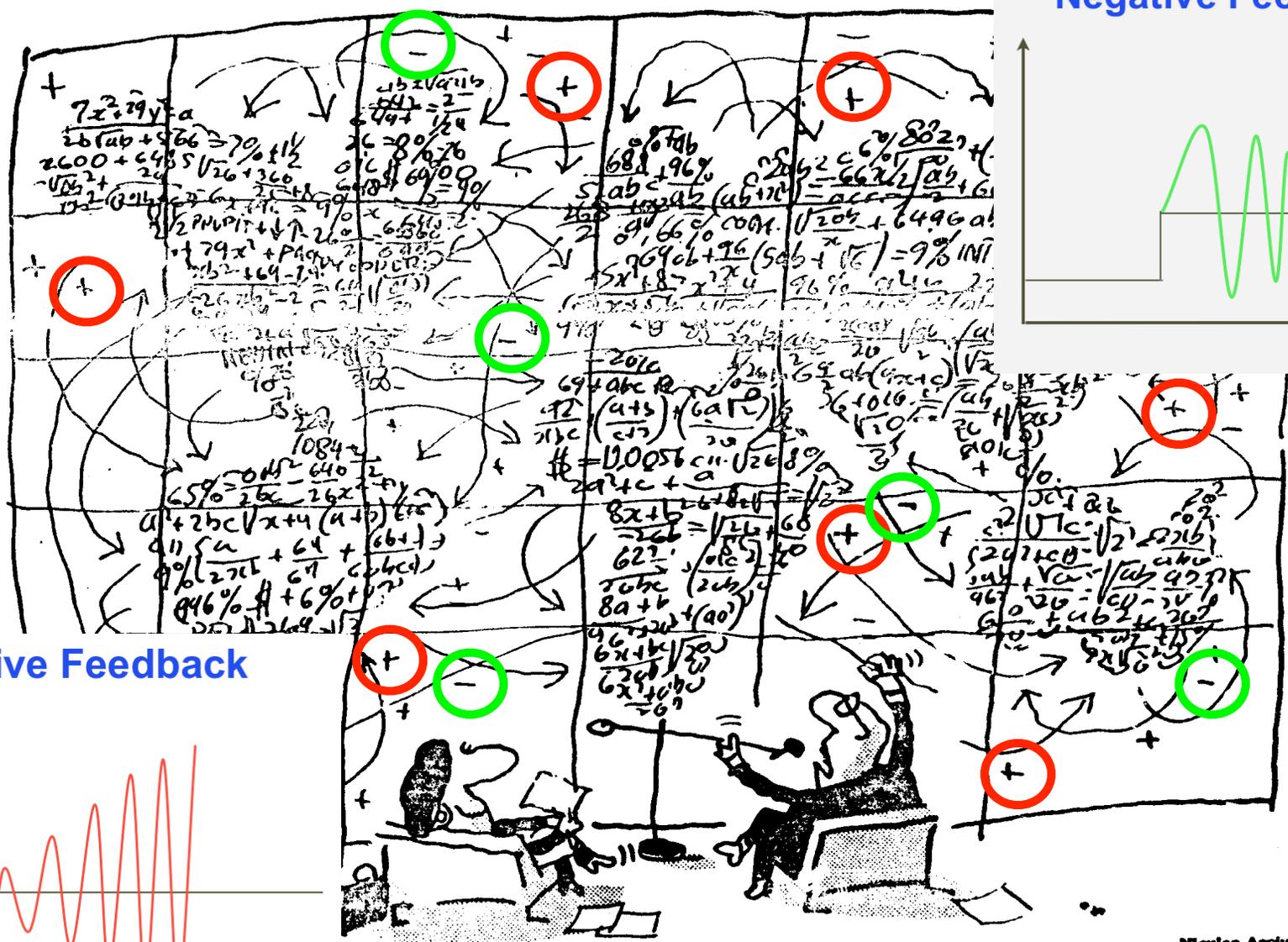
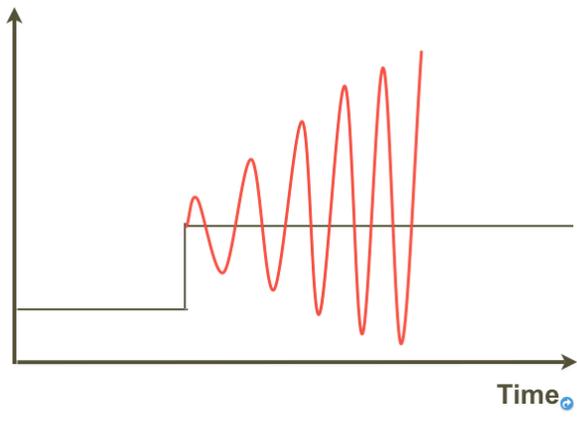
T21 Architecture <[http://www.millenniuminstitute.net/integrated\\_planning/tools/T21](http://www.millenniuminstitute.net/integrated_planning/tools/T21)>

# Systems Analysis of the World

Negative Feedback



Positive Feedback



Nicolae Ascu

THE NEW YORK TIMES, SUNDAY, APRIL 6, 1986

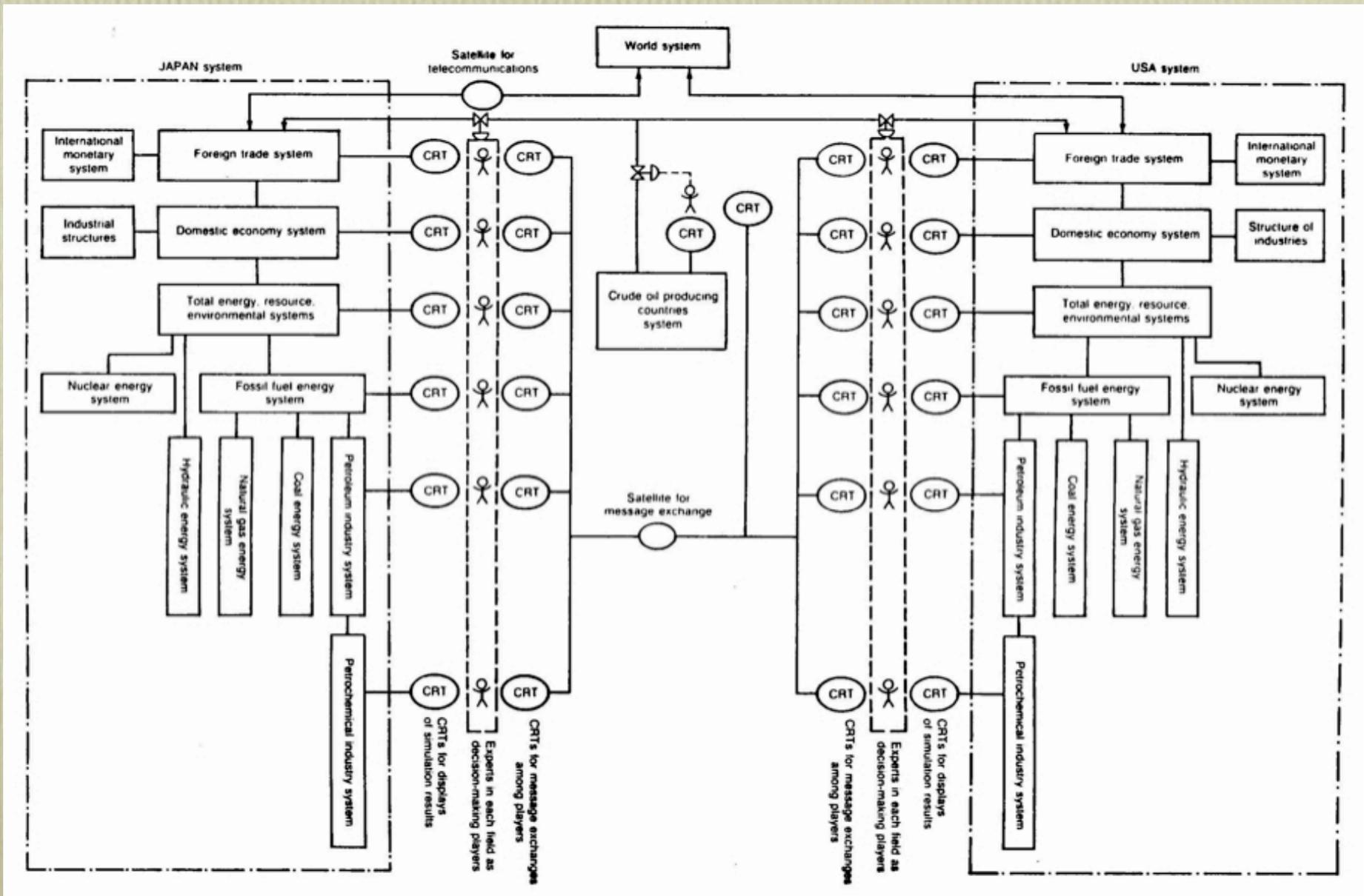
# Needed: A Clearer Crystal Ball



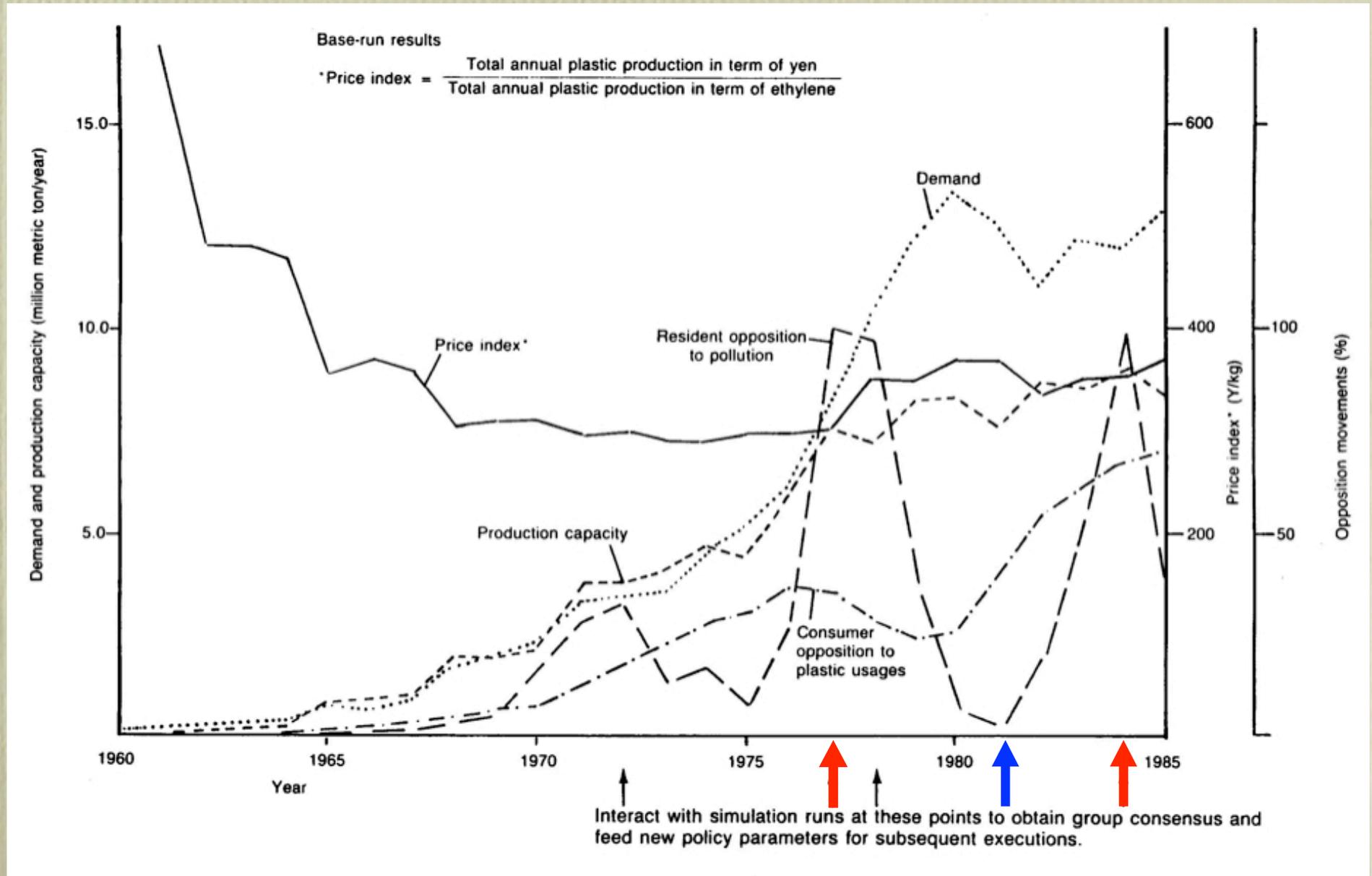
Shiller, Robert J., "Economic View: Needed: A Clearer Crystall Ball," New York Times, April 30, 2011  
<<http://www.nytimes.com/2011/05/01/business/economy/01view.html?scp=2&sq=Robert%20J.%20Shiller&st=cse>>

# Globally Collaborative Environmental Peace Gaming (GCEPG)

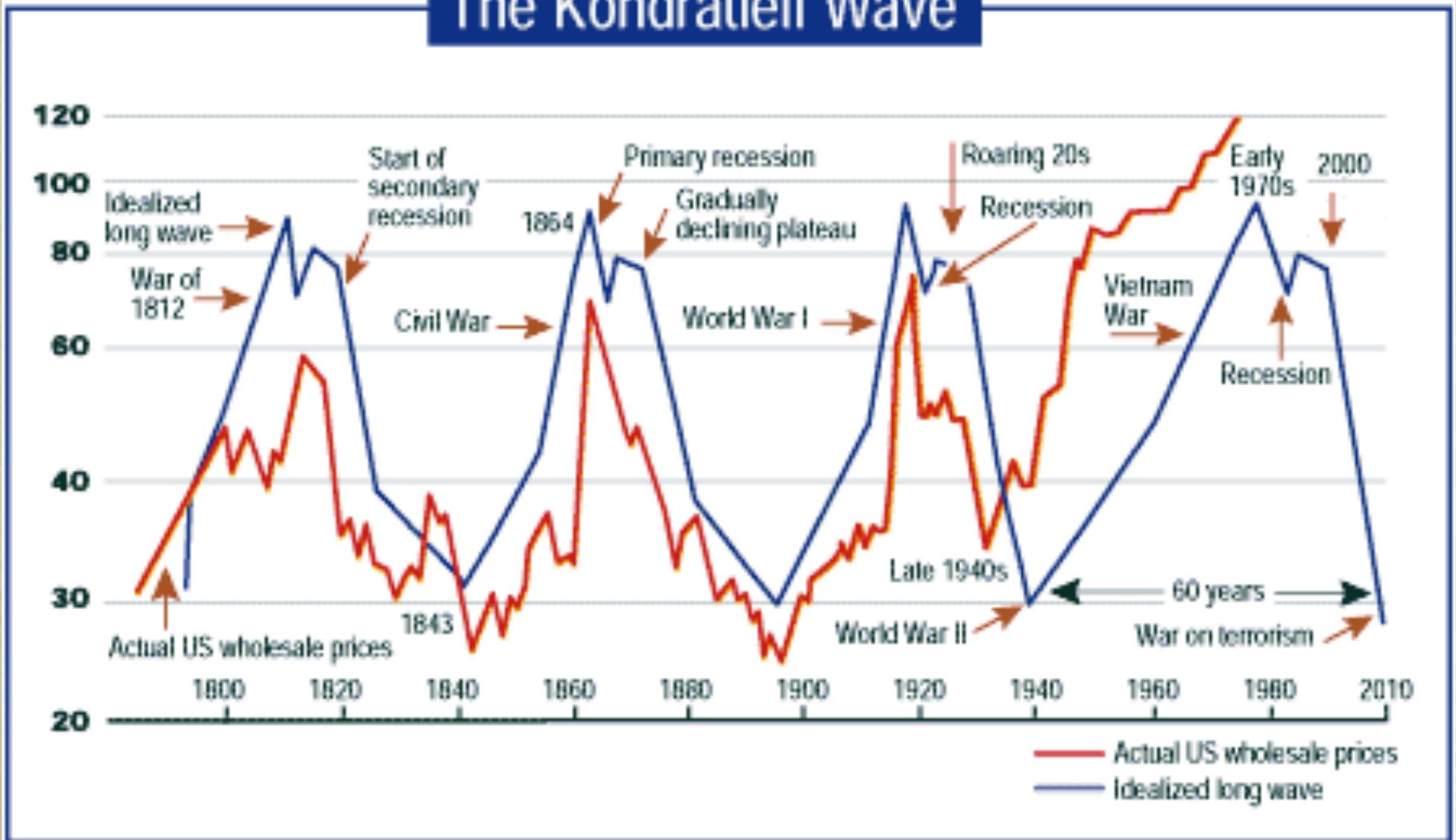
Structure of Integrated Models and Communication Network  
Boxes are dispersed, dissimilar computers around the global Internet.



# Growth of Japanese Petrochemical Industry

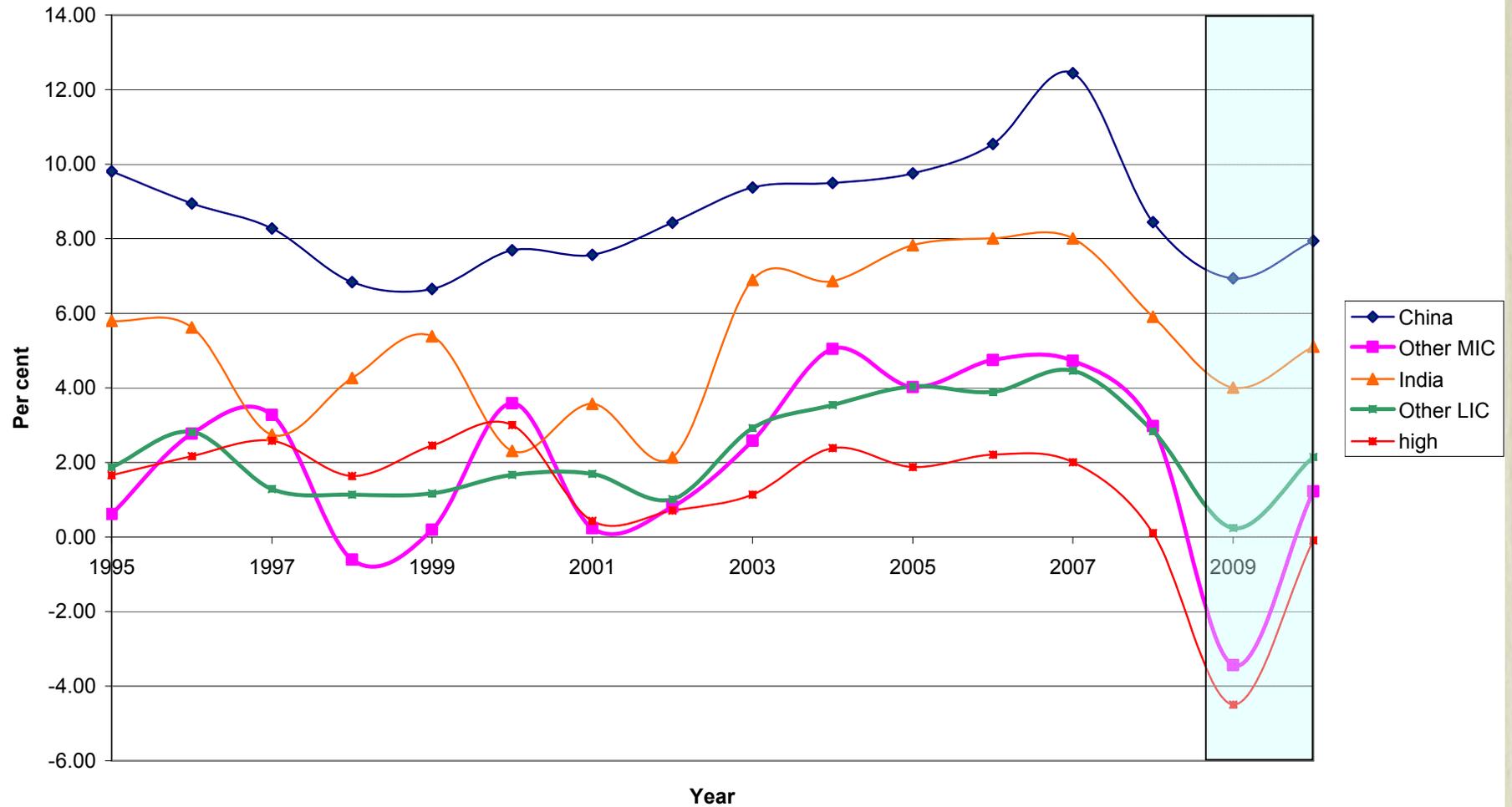


# The Kondratieff Wave



THE KONDRATIEFF WAVE. Peaks and troughs are associated with major political or cultural events.  
[http://www.kwaves.com/kond\\_overview.htm](http://www.kwaves.com/kond_overview.htm)

### Real GDP per capita growth rates of selected groups of countries: 1995-2007 + forecasts



# Examples of Policy Analysis

- **Mr. Al Gore recently proposed to replace fossil fuel with renewable one to generate electricity in the USA in ten years.**
- **President Obama also recently proposed to supply 20% of the US total electricity generation with wind energy by the year 2030, compared with only 0.8% currently.**
- **97% of Nigerian government revenue comes from oil export, and 40% of its low-sulphur crude oil export is to north America for electricity generation. This will be nullified if Mr. Al Gore's and/or President Obama's propositions would succeed, thus, significant blow to the Nigerian government.**

# GEWS Projects for Disaster Prevention and Conflict Resolution on World Water War

- (a) **Bangladesh** for the region of India, Nepal and Bhutan — along Ganges River,
  - (b) **Rwanda** for the region of Egypt, Sudan, Ethiopia, Uganda, Tanzania, Kenya, the Democratic Republic of Congo (DRC), Burundi — along Nile River,
  - (c) **Democratic Republic of Congo (DRC)** for the region of Cameroon, Equatorial Guinea, Gabon, Congo, Angola, Burundi, Chad, Central African, etc., -- along Congo River.
- Nigeria** for the region of ECOWAS (with 15 western African countries) with Cloud Computing Simulation Center (CCSC) and -- along Niger River basin.

Paradigm Shift on political science with combined use of normative (role playing) gaming and quantitative (model based) simulation.

# Global University System (GUS)

- **Worldwide consortium** of educational and healthcare institutions and NGOs, particularly benefiting those in remote/rural areas of developing countries for the **eradication of poverty and isolation**.
- Learners in those countries will be able to take their courses, via **advanced broadband Internet**, from member institutions around the world to receive a **GUS degree**.
- Learns, instructors and reserchers of partner institutions will also form a **global forum** for exchange of ideas and information and for conducting **collaborative research and development** with the emerging **global GRID computing network technology**.
- Thus, the higher education institutions will close the digital divide, act as the **knowledge center** of their countries and lead their development.

1. Worldwide consortium
2. 21st century version of Fulbright exchange program
3. Globally collaborative Research and Development

# Principle of Global E-Learning

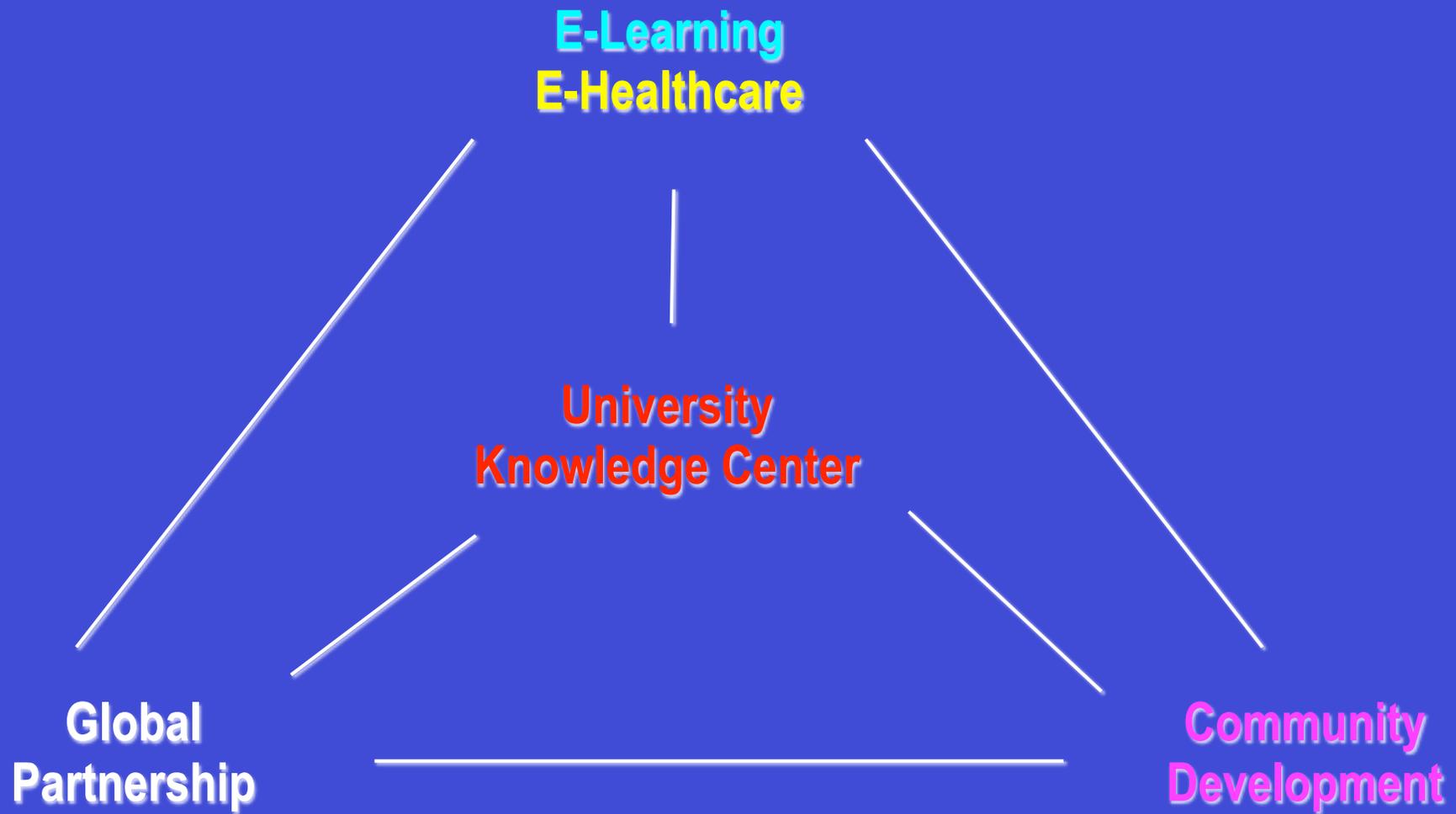
 **Collaborative** Learning

 **Experiential** Learning

 **Objective** Learning

 **Autonomous** Learning

# **University:** Leader of Community in the Knowledge Society in the 21st Century

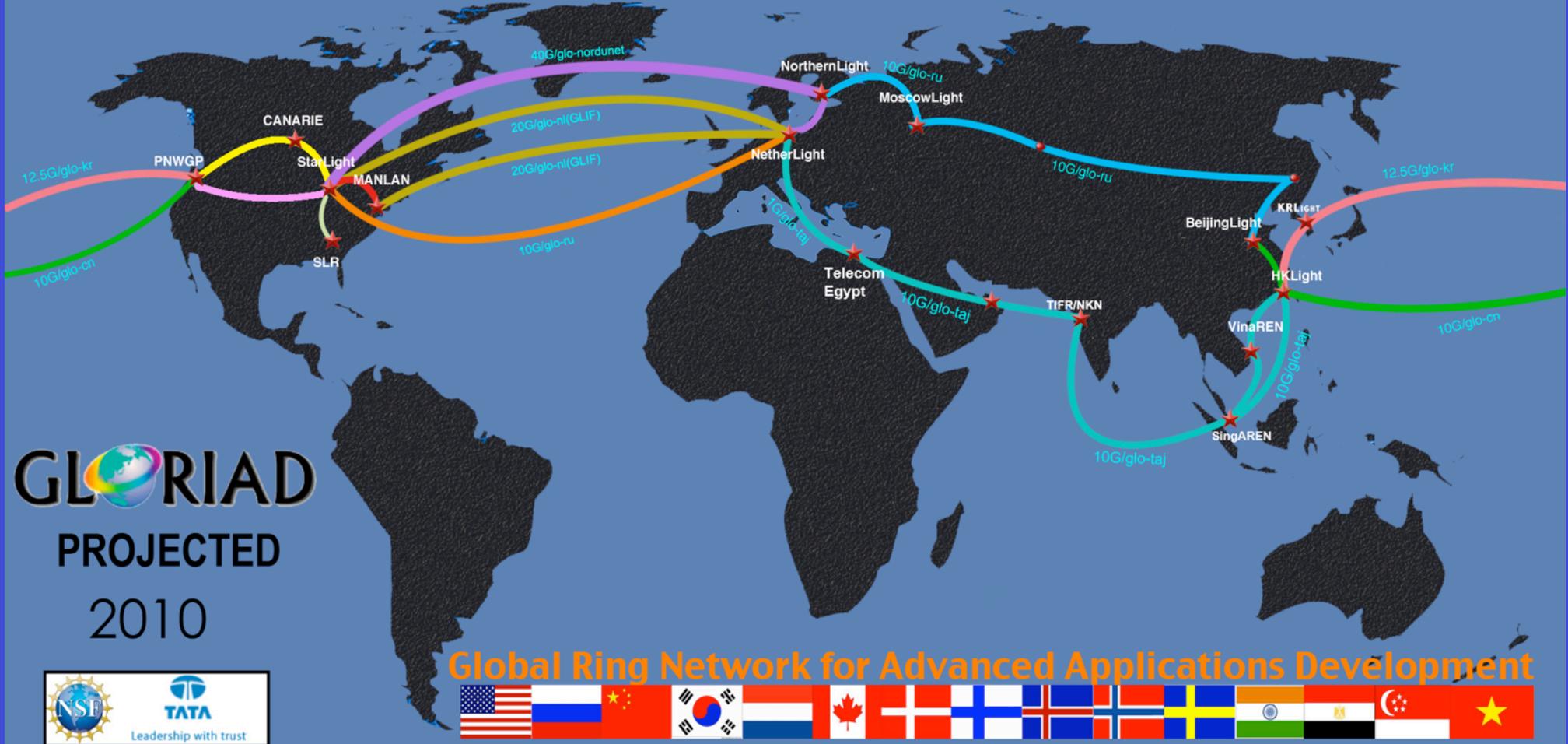


# Expected Benefits

- **Support of e-learners and e-healthcare**
- **Freedom from geographical limitations**
- **Global dialogues for global peace**
- **Exchange of ideas, information, knowledge**
- **Joint collaborative Hi-Tech research and development**

# GLORIAD Topology

USA-RUSSIA-CHINA-KOREA-NETHERLANDS-CANADA-DENMARK-FINLAND-ICELAND-NORWAY-SWEDEN-INDIA-EGYPT-SINGAPORE-VIETNAM

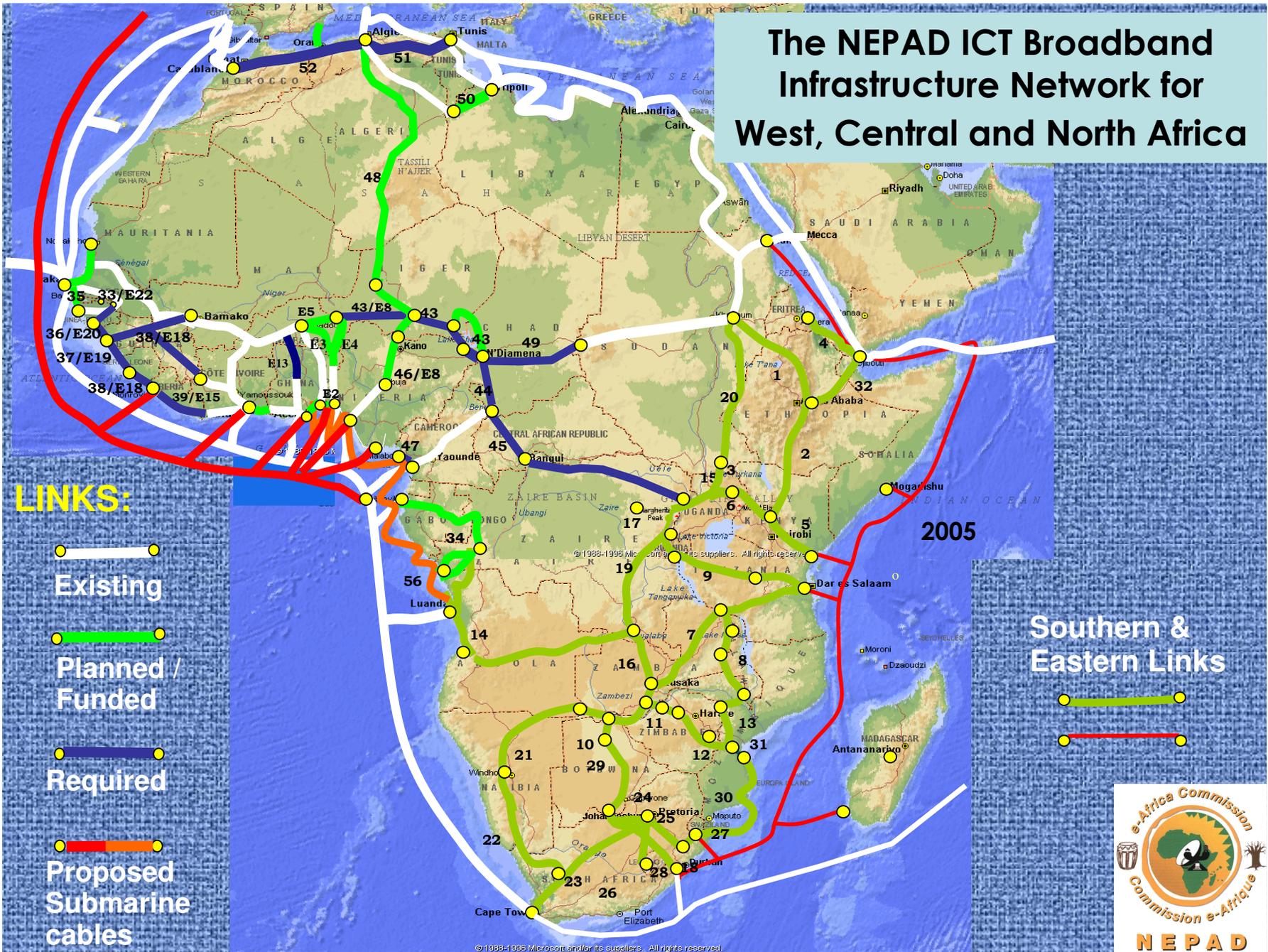


**GLORIAD**  
PROJECTED  
2010



<http://www.gloriad.org/gloriaddrupal/>

# The NEPAD ICT Broadband Infrastructure Network for West, Central and North Africa



<http://www.eafricacommission.org/projects/126/nepad-ict-broadband-infrastructure-network>

# Financing

- GUS 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.

# INTER-CULTURE

# Rainbow Bridge Across the Pacific 太平洋に架ける虹の橋

Book of John (1:1)

εν αρχη, ην ο λογος,

(beginning)

(Word)

In the beginning, there was Word,

και ο λογος ην προς τον θεον,

(and)

(Word)

(with)

(God)

and

the

Word

was

with

God,

και θεος ην ο λογος.

(and)

(God)

(was)

(Word).

and

God

was

the

Word.

# Logos

1. Soul, God, Truth



Religion

2. Greek origin of logic



zero (0) and one (1)



Computer

**God created the integers and the rest is the work of man.**

Famous mathematician, Kronecker  
The New York Times, October 23, 1988

3. Word



Communication



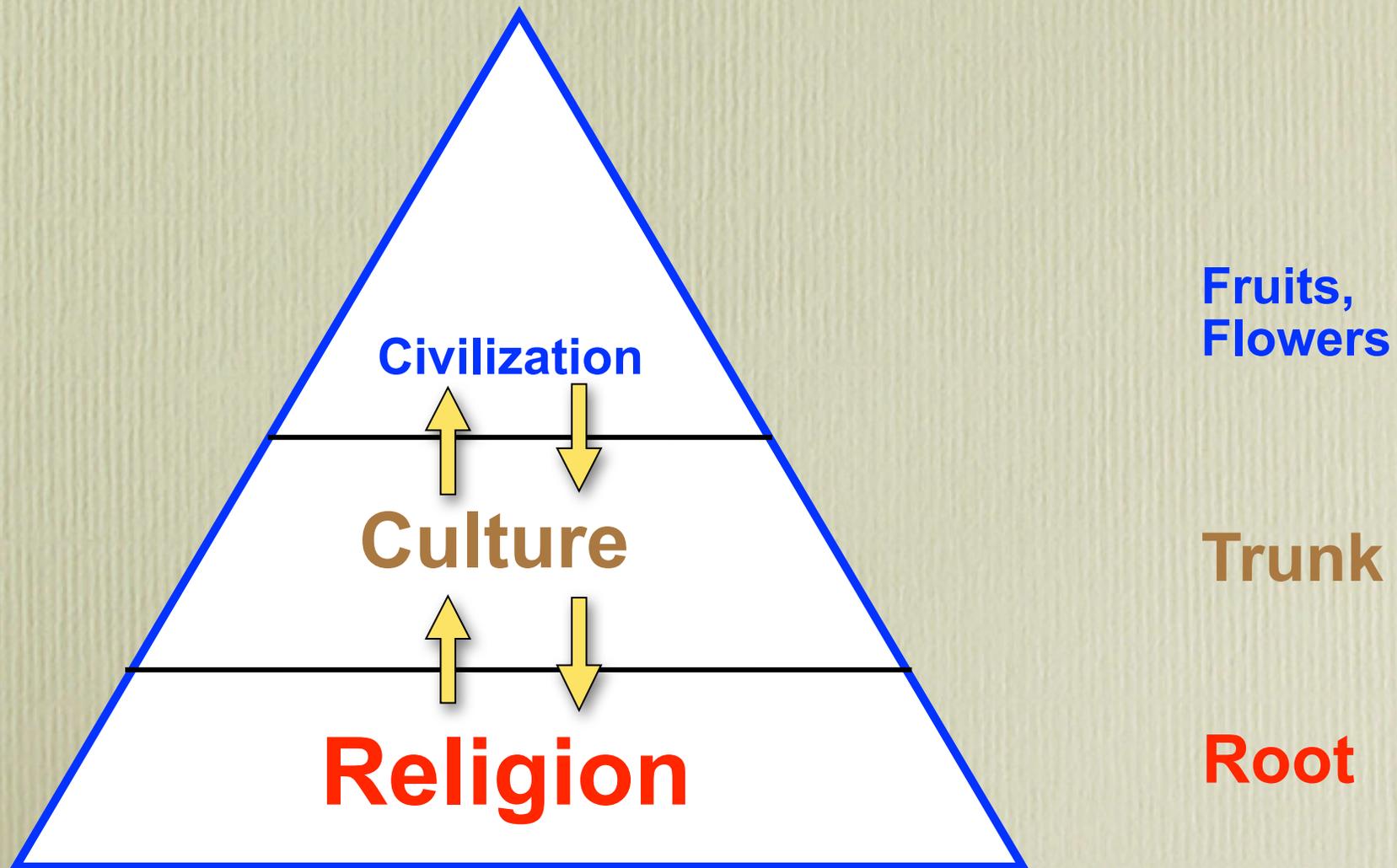
Internet

# Six Great Thoughts of East and West

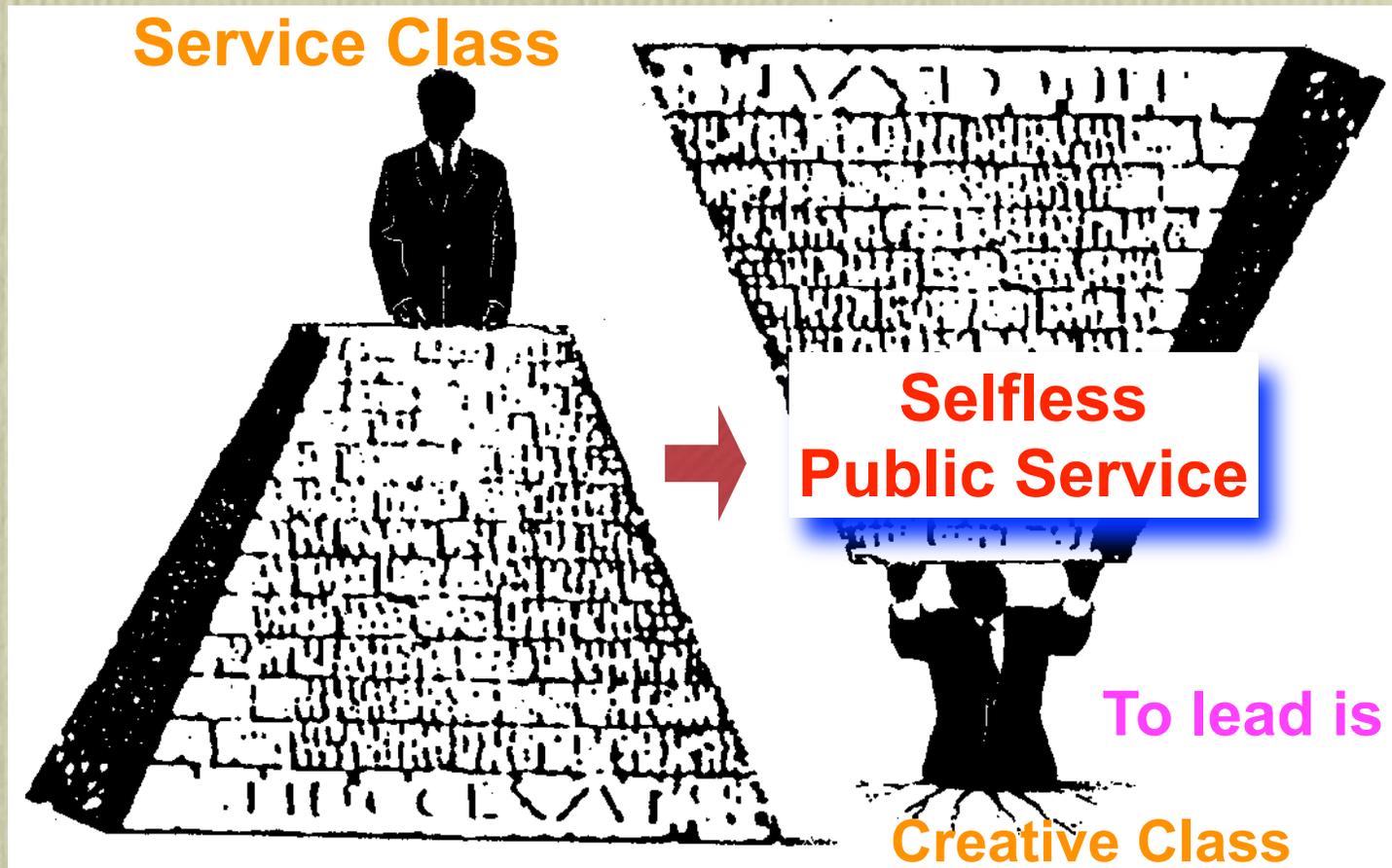
<b>East</b>	<b>West</b>
<b>Truth</b>	<b>Justice</b>
<b>Goodness</b>	<b>Equality</b>
<b>Beauty</b>	<b>Freedom</b>

“Election alone do not make true democracy.”  
President Obama  
Cairo University  
June 4, 2009

# Hierarchy of Civilization, Culture and Religion



# Private vs Public Service



**Industrial Society  
of  
20th Century**

**Global Society  
of  
21st Century**

“Why Business Fail in Government,” The New York Times, 1987



# Moral of Civilization

**“Civilization consists not in the multiplication of wants but in the deliberate and voluntary reduction of wants.”**

The world has the resources to meet the needs of humanity, not the greed of humanity.

Mahatma Gandhi

Mahatma Gandhi (1869-1948)

忘己利他

(Forget Self and Benefit Others)

瀬戸内 晴美 (Harumi Setouchi)

2006年11月 文化勲章を受賞 (Laureate of the Order of Cultural Merit)

**We must find a way to reconcile  
our ever-shrinking world with its  
ever-growing diversity --  
diversity of thought, of culture,  
and of belief.**

**We must find a way to live  
together as one human family.**

**President Barack Obama  
Notre Dame Commencement Speech,  
May 17, 2009**

**CREATIVITY**

# On Creativity

**There is nothing higher than creativeness, and there is no greater joy. Therefore – create and rejoice! Be daring in creative flight. “Create courageously!”**

**Let thought undistorted and unrestricted be impressed in your being. Let it be free from the shadow of the censor’s scalpel.**

**Be true to yourself because there is nothing higher than creativeness.**

Slide taken from World Island Project

# 5Ts for fostering Creativity

- **Talent**
- **Technology**
- **Tenacity**
- **Timing**
- **Tolerance**

“Creative Destruction”

Joseph A. Schumpeter

Florida, Richard, “Geography is Destiny,” BusinessWeek, August 7, 2006, page 18

# “Creative Destruction”?

Photo taken at Da Vinci Science and Technology Museum, Milan, Italy (March, 2005)



**Your work is going to fill a large part of your life and the only way to be truly satisfied is to do what you believe is great work.**

少年よ大志を抱け！

**The only way to do great work is to love what you do.**

Steve Jobs, CEO of Apple, Speech made at Stanford University, 2005  
<http://gawker.com/5042795/bloomberg-runs-steve-jobs-obituary>

# Culture of America

(Unique crucible for innovation)

- Freedom of thought
- Independent thinking
- Immigration of new minds
- Risk-taking
- Non-corrupt bureaucracy
- Financial market and venture capital

**These institutions, which nurture innovation, are the real crown jewels of American culture.**

Friedman, T. L., "The Secret of Our Sauce," The New York Times, March 7, 2004

# How to Fire Up The Innovation Machine

BusinessWeek, October 11, 2004, Page 240

At a time of intense division, with deep political and religious fault lines splitting the world, innovation stands out as a powerful integrative force.

It ties countries, companies, and consumers together in creating value, solving problems, and generating wealth.

An innovation economy demands that society be **open, dynamic, educated, international, and risk-taking**. Given a chance, innovation can improve all our lives.

**Financial risk-taking is the fuel that powers the process of change.**

**Worldwide innovation networks are the new keys to R&D vitality – and competitiveness.**

**CONCLUSION**

# Change the World

*“Never doubt that a small group of dedicated individuals can **change the world**. In fact, it is the only thing that ever has.”*

American anthropologist, Margaret Mead (1901-1978)

# Four Arts

**武術:**

Art of **Peace-Making**  
To attain global peace

**武:** 戈 (sword) + 止  
(stop) = Peace

**士:** Samurai =  
Chivalry

**武士:** Takeshi =  
Chivalry of Peace

**學術:**

Art of **Learning**  
To cherish old and  
learn new

**仁術:**

Art of **Wisdom/Virtue**  
To heal illness of nation and  
globe

**醫術:**

Art of **Medicine**  
To heal illness of  
individual human

# GLOSAS Projects

(GLObal Systems Analysis and Simulation  
Association in the U.S.A.)

<http://www.friends-partners.org/GLOSAS/>

Click “Current Reference Websites” in this home page.

Takeshi Utsumi, Ph.D., P.E.

- Chairman, GLOSAS/USA
- Laureate of Lord Perry Award for Excellence in Distance Education
- Founder and V.P. for Technology and Coordination of Global University System (GUS)

**Thank you for your listening.**