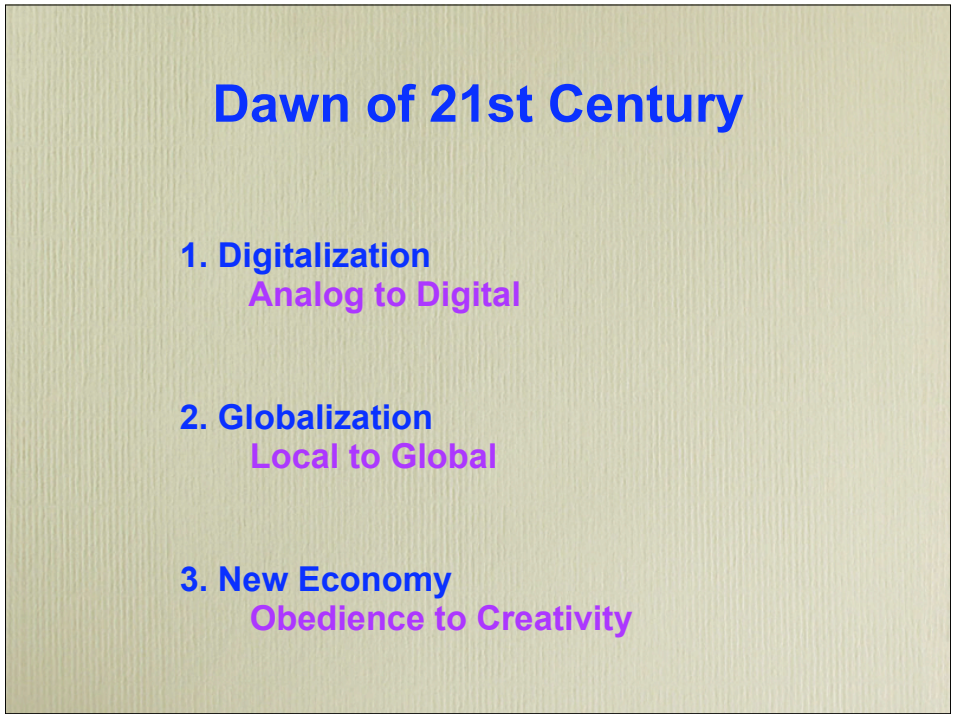
1

Distinguished delegates, Ladies and Gentlemen.

It is my great honor and privilege to have this opportunity to describe our "Global University System (GUS)" project along with "Globally Collaborative Environmental Peace Gaming" project, for which I have been working in the past three decades. My sincere gratitude goes to Ms. Jennifer Hedrick, Mr. Charles Eke and other conference organizers for their kind and generous invitation to me.



2

Circuit switching to packet switching -- "mind-change," particularly of bureaucrats as Machiavelli once said almost a half millennium ago.

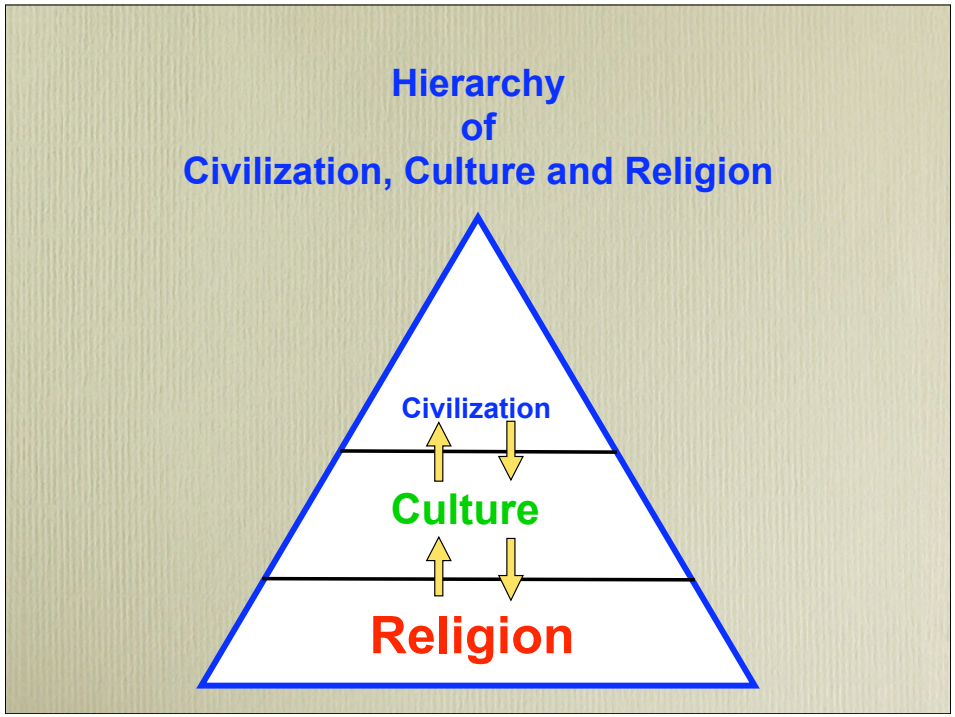
Raw material of industrial age was tangible, the raw material of knowledge age in the 21st century is IN-tangible.

There is NO economic theories for the latter -- incidence of Nobel economic laureate of Columbia University.

Dr. Kaisa Kautto-Koivula of Nokia said in her paper in Part II of the book that "The biggest barrier for new development of Human-Centric Knowledge Society is our Industrial Age mindset!"

Creativity is the province of Homo sapiens. We live for future, not in past. Science and technology open the future. However, the application of new technology often meets with "Creative Destruction" -- the famous words by Joseph Schumpeter.

Here needs good understanding of traditions and culture, and strong belief in scientific and moral principles. This is because the interchange of creativity makes possible an international understanding and mutual appreciation that can lead to global peace.



Portugal was the first western country Japan dealt with almost a half millennium ago. In 1549, St. Francisco de Xavier was sent to Japan by John III of Portugal to spread Christianity and gained many converts to the Roman Catholic Church, but, alas, after obtaining the technology of musket gun, Tokugawa Shogunate banned the spread of Christianity -- subsequently, Christian population in Japan is still only less than 1% even after a half millennium since Xavier's introduction.

This is the first precedence of the Japanese technology transfer pattern, i.e., cream-skimming civilization (the fruits of science and technology), but not importing culture nor religion. Although I admit that this is a provocative statement, this pattern is, I believe, the cause of the serious doldrums of current Japanese economy after bursting its bubble almost a dozen years ago.

Religion = Root,
Culture = Trunk,
Civilization = Flower and Fruit. -- Need of cross polination for a new global society.

Global University System (GUS) - A

The Global University System (GUS) is a worldwide initiative to create telecommunications infrastructure for access to educational resources across national and cultural boundaries for global peace.

GUS aims to create a worldwide consortium of universities to provide all world citizens, with special emphasis on the underdeveloped world, with access to 21st Century education via Internet technologies.

Global University System (GUS) - B

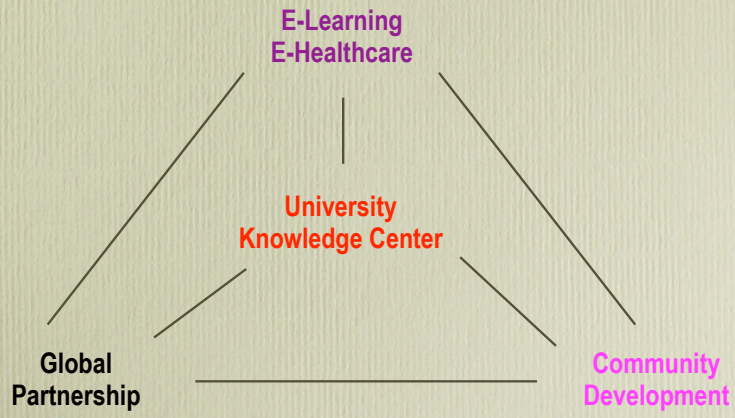
The GUS works in the major regions of the globe with partnerships of higher education and healthcare institutions.

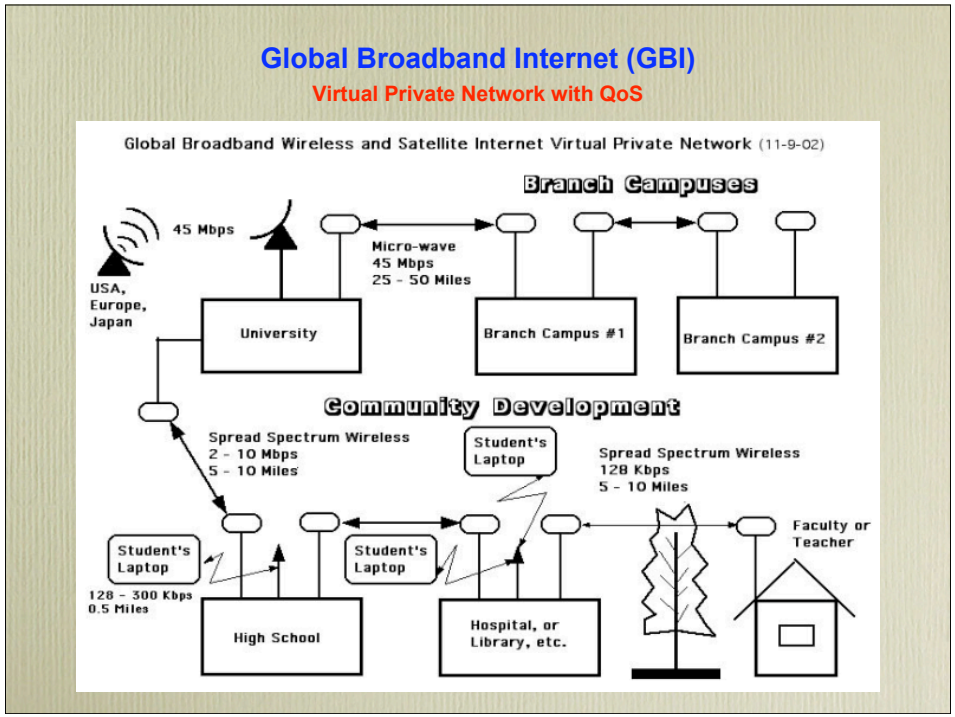
Learners in these regions will be able to take their courses from member institutions around the world to receive a GUS degree.

These learners and their professors from partner institutions will also form a global forum for exchange of ideas and information and for conducting collaborative research and development with emerging global GRID computer network technology.

The aim is to achieve "education and healthcare for all," anywhere, anytime and at any pace.

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





1. Satellite linkage:

GUS will be based on regional satellite hubs, typically located at a major university, that connect via high-speed satellite (~ 45 Mbps) to educational resource cites in the E.U., U.S., 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.

2. Microwave linkage:

Regional hubs link to branch campuses or other regional educational institutions via micro-wave (~ 45 Mbps) over relatively short distances (25-50 miles).

3. Community Development Network:

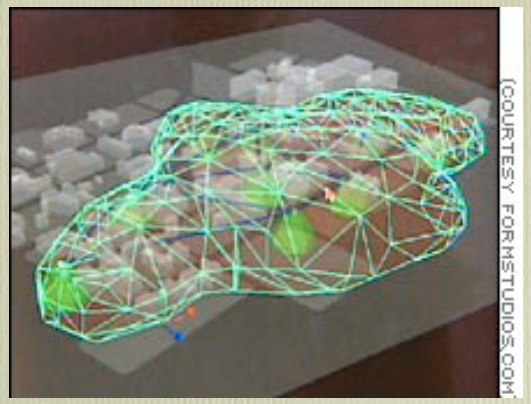
Communication from the hub and branch campuses to local sites, over distances up to 10 miles, is to be achieved by spread-spectrum wireless (~ 2-10 Mbps) Internet networks, which do not require licenses in most countries.

4. Wi-Fi connection:

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.

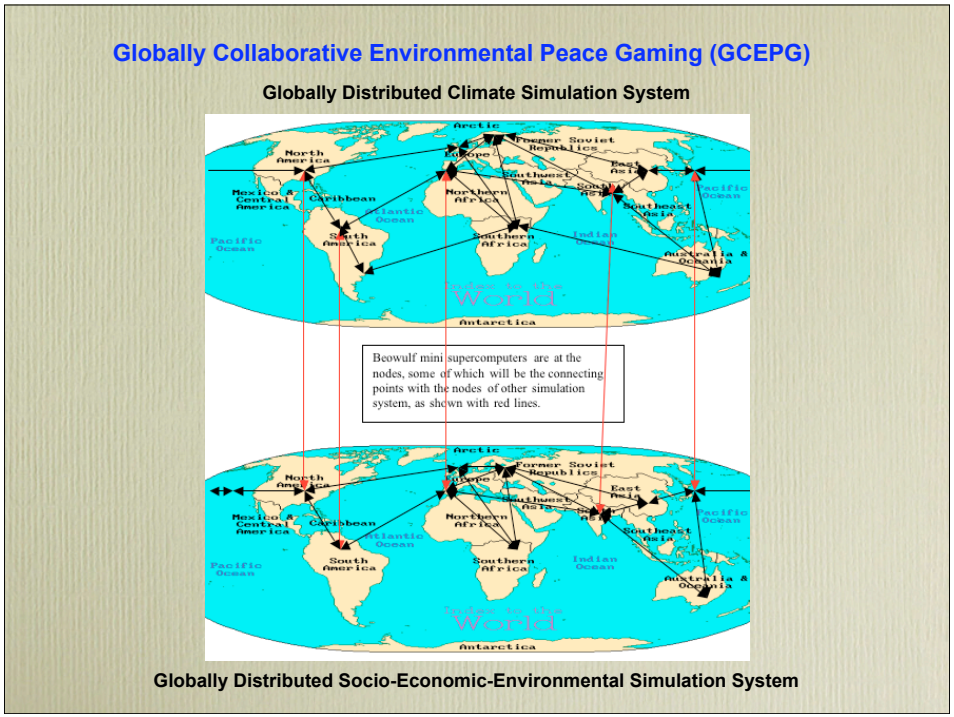
This advanced wireless communication with laptop computer will make e-learning possible for anyone, anywhere, and anytime with capabilities of Internet telephony, fax, voice mail, e-mail, Web access, videoconferencing, etc. This is not only to help local community development, but also to assure close cooperation among higher, middle and lower levels of education.

WiFi Cloud



This 3-D animation shows the wireless "cloud" over downtown Athens, Georgia. The project is aimed at attracting new users and creating new content for wireless laptops and PDAs.

"Wireless 'cloud' may offer silver lining; Or is it just 'pie-in-the-sky' technology?
CNN.com/SCI-TECH; July 31, 2002
http://www.cnn.com/2002/TECH/science/07/31/coolsc.wireless.cloud/index.html



E-mail and multimedia World Wide Web of Internet so far contributed significantly to the world society on the dissemination of information. The next phase of the Internet development with global neural (or GRID) computer networks should be the globally collaborative experiential learning and constructive creation of wisdom with interactive actions on virtual reality simulation models of joint global research and development projects on various subjects.

Globally Collaborative Environmental Peace Gaming
through
Global Neural Computer Network

- **Need: Kyoto Protocol**
- **Computer Simulation Models**
  - **Socio-Economic-Environment Model**
  - **Climate Simulation Model**
- **Beowulf Mini Supercomputer**
  - **Maui Community College in Hawaii**
- **Global Neural (Grid) Computer Network**

This will promote trustful friendship among youngsters around the world to realize the Knowledge Society of the 21st century, and their collective creativity will enlarge the size of pie for stakeholders to reach peaceful win-win consequences. Senator Fulbright once said that learning together and working together are the first steps toward world peace.

Financing

- During the Okinawa Summit in July of 2000, Japanese government pledged US$15 billion to close the digital divide in developing countries and for the eradication of poverty and isolation.
- During the G8 Summit in Canada in June of 2002, and at the Environment Summit in South Africa in September of 2002, they also pledged another US$2 billion to aid education and healthcare in developing countries, respectively.

Financing
(continued)

- 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.

Conclusion

The GUS program is a comprehensive and holistic approach to building smart communities in developing countries for e-learning and e-healthcare/telemedicine. Initiatives are underway to create the necessary infrastructure and educational liaisons, and some near-term educational access is expected. Early efforts have included international teleconference technology workshops that have tested the satellite/wireless technology that will be used in GUS.

GUS is clearly an ambitious program, one that cannot be achieved by any one group, university, or national government. The program requires substantial collaborative contribution of ideas, expertise, technology resources, and funds from multiple sources. Those who value the vision of GUS are invited to join this great and noble enterprise.