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5. Author (s)

1. Idris F. Sulaiman
2.
3.

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C. Stuart Callison, Chief of Party
e-mail: stu@pegasus.or.id

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**«NEW WAYS TO EMPOWER INDONESIA WITH THE INTERNET & ICTs AND
LAUNCH OF "SECURE AND SUSTAINABLE" CD-HANDBOOK»**

PEG PROJECT SEMINAR

AUGUST 26, 2003, HOTEL ACACIA – JAKARTA, INDONESIA

OPENING REMARKS BY

IDRIS F. SULAIMAN, PH.D., ICT ADVISOR, PEG¹

HE Director General of Post and Telecommunications,
Distinguished Participants,
Ladies and Gentlemen,

Access to information is fundamental to so much of modern life. This phrase perhaps best describes the importance of local, national and global information and communications technology (ICT) tools and networks in our daily lives. It also can enable Indonesia accelerate its development, improve its competitive advantage in the global marketplace and decentralized decision making driven. Such an enabling ICT environment can better achieved not by an emphasis on following detailed decrees but by implementing a set of shared common goals.

Access to information can empower small and large businesses alike to face marketplace competition. But access to ICTs in Indonesia is still limited. The benefits of the information revolution are yet to be extended to

the majority of Indonesia's population. The Institute of Economic Development and Management, University of Indonesia (LPEM-UI) estimated that there are 60,000 villages in Indonesia in June 2001, but there were only 1,696 villages with public telephones (or about 2.9% of villages) and only 4,352 (6.65%) with and postal offices. By mid-2003, approximately 45,000-50,000 (62-65%) villages are still without fixed line telephones as Indonesia has now around 70-80,000 villages and 220 million people. The 1996 plans for a Electronic Information Highway has not materialized, and the current penetration of telephones (fixed) is around 3%, cellular over 3% and the Internet user over 1%.

While many have yet to be touched by the information revolution, the Indonesian Government has endeavored to improve ICT access. In 2001, a National Five-Year ICT Action Plan was issued as part of a Presidential Decree (No.6/2001), complete with a set of Guidelines that underscore the importance of ICTs for "Uniting the Nation and Empowering the People." These are key shared goals for Indonesia and needs to be emphasized time and again. They inspire people to make sense of the new ways or new technologies.

Today, the Seminar will showcase a number of new ICT technologies, software and Telecenter concepts (in the CD-Handbook to be launched) that have a potential as useful tools to realized the above shared goals.

¹ The Partnership for Economic Growth (PEG) is a United States Agency for International Development (USAID)-funded Project with the Government of Indonesia. The views expressed in this report are those of the author and not necessarily those of USAID, the U.S. Government or the Government of Indonesia.

First, the WorldSpace satellite radio that can provide direct satellite delivery of digital audio and multimedia service. The service, which is supported by the AsiaStar satellite, was launched in April 2000. Indonesia's current national education condition is ranked as 102th in the world. There is a lack of teachers and teaching resources. Ideally Indonesia requires an additional of 200,000 teachers or more and many more libraries that should support schools and universities. Worldspace radio and data-downloading can help solve problems of distributing educational material over Indonesia's 17,000 islands.

WorldSpace radio's capability to download data at a speed of 128 kilo bits per second is ten times dial-up access in rural areas. It also can open the horizon can provide national and global broadcast of news and entertainment from radio stations such as RRI, BBC, Blomberg, CNN and others in Europe, Asian and Africa.

The second showcase today is on the Simputer which was build around the shared goal by Indian Institute of Science to make computing affordable and accessible to developing countries that face barriers of price, language and literacy.

With its build-in modem or Smart-Card wireless mode, it can easily access to the Internet, the Simputer uses Linux "open source" which means that local software developers can develop cheaper local software. Its ability to convert Text-to-Speech is now in Hindi, Telugu, Kannada, Tamil (Indian Regional Languages) and, of course, English. As it is priced less than 200 dollars, it has been used widely for spot billing (for electricity meters),

automate land and building registration, procurement in India. One example is the Bhoomy Project by Karnataka Government. In providing access to information to so many new citizens and consumers, the Simputer is not only a simple hand held computer but also a simple and affordable solution to bridge India's digital divide.

Should Indonesia be left behind in enjoying the benefits of WorldSpace, Simputer and other new concepts of information access such as Telecenters? There is little doubt that some Indonesians are already enjoying the benefits the question remains how can their wider distribution be assured and how can localization solution for ICTs be facilitated by government policy.

In terms of policy formulation, when people see a demonstration of WorldSpace, Simputer and other new ICTs, they invariably come up with two distinct and opposing reactions: First, type A people, "Wow! How can I get it? I can think of so many things I would like to do with it", and, second, type B people, "Wow! How do we control this? How do we regulate this?"

This reflects the tension between the spontaneous, productive and creative people and those people who prefer heavily regulated technocratic order.

There is a similar conflict of the two A and B types of people in large corporations that are trying to become more flexible. One author (Arian Ward) said that "the same polarized forces warring in the US Congress these days are at war in companies as well: control vs. freedom, order vs. chaos, hierarchy vs. empowerment". He added that "I see this every day in

my work here at Hughes (Space and Communications Company). Example: as part of our Knowledge (Information) Highway vision, we are implementing an internal Web (Internet-based) electronic information system".

As part of his work, Mr. Ward has to convince both Type A and Type B managers to see the advantages of his new Information systems which he describes as "self-organizing" system where parallel, decentralized decision making driven not by detailed decrees but by shared goals. He stresses that self-organizing systems (like the computer network) don't just self-organize around nothing. They follow fundamental principles and continuously self-organize around those principles.

The humble "computer network" and the "free and untrammled market" are both complex system, evolving processes driven by millions of individual choices. They are designs of order without direct control. The computer in particular has come to represent not omniscience and power but the inherent limits of complex systems. People who are generally type A have learned that with computers there is a "law of unintended consequences" — that there are always bugs (computer programming faults). Mike Goodwin, the staff counsel for the US Electronic Frontier Foundation, a civil society group that focuses on computer and communications issues, said that "every attempt to fix a bug creates new bugs. What it tells you is something about the limits of what designers can do, or to put it another way, the limits on what policymakers can do."

The computer Internet has become a model of spontaneous order and dynamic, trial-and-error learning.

But the Internet is not the only such model as scientists tell us that nature provide many such "trial-and-error learning model". Birds who flock and seem to follow a leader at the head of a "V". In fact, there is no leader. Each bird operates independently, adhering to simple rules, and the bird at the point of the "V" does not stay the same. In ant colonies, trail patterns are determined not by the dictates of the queen ant but by the local interactions among the worker ants, such as following a scent that their fellow ants emit when they find a source of food.

In human societies, macroeconomic patterns arise from the haggling between millions of buyers and sellers in marketplaces and stock markets around the world. And in immune systems, armies of antibodies seek out bacteria in a systematic, coordinated attack—without any "generals" organizing the overall battle plan.

The above examples show that shared fundamental goals can provide a kind of control but the complex system need not be given a detailed design. Turning back to our manager's example, for the successful implementation of Electronic Information System, it means fulfilling the company's mission and goals. The trick is to get beyond just posting vision statements on the wall, to turn goals into broad, simple, well-understood principles that genuinely allow people to make decisions without micromanagement — excessive rules and regulation. In the words of Esther Dyson, managers must learn to do gardening rather than construction. The rules must, she

contends, be general and stable enough to allow individuals to pursue their own ends and to create their own personal and family order within the society as a whole.

Indonesia's national 2001 ICT Guidelines, which underscore the importance of ICTs for "Uniting the Nation and Empowering the People," is such a broad "mission statement," which can generate more specific regulations. But it does not, however, establish a single set of values or dictate an end state.

Today's seminar discussions and tomorrow's video-conference with ICT program/project implementers here and in Washington should provide an opportunity to managers of SMEs and large companies, civil society activists and other participants to ask questions on how they translate their "broad vision" to workable ICT programs/projects.

Clearly, there is much to be done and today's agenda reflects the challenges ahead, including implementing new technologies in the face of complex legal, business and technical issues. On the other hand, these are issues that all countries are facing, both developed and developing, so there are substantial lessons learned and best practices of new smart technologies and multi-function telecenters that can be applied here in Indonesia.

In providing support for this effort, the PEG-USAID Project hopes that today's seminar program and tomorrow's video-conference event can create a more constructive dialogue on use of new technologies, as well as

the implementation worthwhile ICT information access projects. I am hopeful that all of you can come closer together to focus on how to move from dialogue to action – and with a national, regional and company program to implement new ICT technologies.

Your Excellencies, Ladies and Gentlemen, implementing new technologies to bridge Indonesia's digital divide is an extraordinarily difficult challenge that requires a coordinated and focused effort by the government, private sector, and all other stakeholders. Thus, the cornerstone of any successful strategy must be a public-private partnership and the shared goals by all stakeholders. That is why I'm encouraged with the approach being taken with today's seminar and tomorrow's videoconference.

Before closing, I would like to express my gratitude to the Organizing Committee, the Sponsors of the two-day event, all those who made this event possible. I wish you all productive and informative discussions. Thank you.