Technology, What role must Asia Play?

By

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Today I'd like to talk about cooperation of technology and culture from the viewpoints of technologies. My talk is about information technology cooperation. Why do we need cooperation? What role should Information Technology play?

1. Introduction: "Creation and delivery" is our role:

Today's technology communications environment satisfies delivery. When we talk about the creation of technology and its delivery, we have the network. Then, we also have the technology to create content. However, we need to know how to protect culture, how to protect the content, and how to deliver it.

I will also talk about the need to have an interface that everyone can understand, that is another difficulty facing the communications network and the internet today. How do we solve this problem?

2. Mobile communications and the mobile media internet:

It is said the number of mobile phones is now increasing and has even surpassed the number of stationary phones. This is the age of mobile phones, particularly in Asian countries. So we must use the mobile environment. What is happening in practice? Phone communications and 'broadcasting' are now combined into one.

With a suitable interface, this mode is almost equal in capability to existing PCs (Personal computers). So, what happens to the network? The speed of the main network is fast, but access is the issue. There are so many types of access such as

CTVs, fibre optics, mobile channels and other channels. It is difficult to know how to select and use them.

So I will look at the merits and demerits of the many access lines. From an overall perspective, we can see that there are issues of speed, interactivity, “anything, anytime, anywhere” capability, programs and broadcasting. Looking at this situation, I think the next generation mobile phone is the best solution to our needs. However, we have found that next generation mobile phones operate with occasional defects. They can convey or transmit 2 megabits per second if we stay inside a room. If they are moved then transmission speeds go down. Particularly if it is operated within a car, going fast, the bit rate drops drastically.

Where video transmission is concerned, 2 megabits is a key issue. Video requires a steady transmission rate. However, the next generation of mobile phones cannot transmit 2 megabits per second ‘anytime, anywhere’ if they are on the move very fast. So we must consider how we can transmit our content, our information anywhere and everywhere. There are 2 kinds of information: the index and content itself. Index is a very small volume, so you can send this index through the mobile phone. And regarding content, ‘fibre-to-fibre’ links to your home provide very high-speed communications. So how do we merge the techniques and use the various kinds of access? This is the very important hurdle we are now facing.

What we should do is this. We have the fibre-to-home technology to send high volume content. But in addition to that, we have the mobile phone network or other networks that are always connected. We regard this as a ubiquitous network. In that case, we squeeze content and simplify it.

3. Digital contents:

When we transmit through the network, we are very much part of the “content”. Through the index, we can get information. What you want, what you have said, that is content. And if you have the ability to access the Net through the high-speed network you can get the content. That is the way we need to execute communications in the future.

Telephones and wireless communication can overcome distance. However, this is real-time communication and if there is no person on the other side, there is no

communication. So this is when faxes and the internet come into play. Internet providers cater to mobile time communication. They enable communication using telecommunications or PCs, to a connected telephone or PC.

For the mobile environment, there are so many different types of technologies. The technologies should really connect with each other. Application service providers fulfil this service. Through servers and combining wireless communications we can send messages to anyone at anytime. Such is content distribution - a seamless connection through wire to wireless.

Regarding content creation, I served for 15 years working on the international standardization of coding systems. We have been very fortunate in succeeding in the creation of international standards of coding for video communications and broadcasting.

We must remember that our aim is for better quality of info-communications. For that purpose, man has invented disparate items or systems that separate everything into their objects or media such as voice, video, characters, computer graphics, and other things. The tendency has been to code things individually and separately. But the most suitable coding is a unified system that provides less confusion, more integration and better quality products.

This - a single coding scheme - combined with better quality and lower bit rates, is more efficient. Object coding can create a “mediascape” and protects the content. If you have combined content, and if there is no need for visuals, people could pay for this part of the content.

4. Intellectual property rights and pictographic interfaces:

As content itself can also be combined, the problem of how to protect the originality of the separate units arises. Conventional technology cannot do this. But now we have cutting-edge technology that can protect every piece, or every object of the content.

Next, I”ll talk about the issue of Intellectual property rights. How to “protect” is a difficult thing. Take a person for example. You have a face and you have a name. Your name is your identification. However, in information communications

content has no name. We cannot yet put any ID to the content- but there is a global movement moving towards this. It is not standard yet but we have a tendency towards having content marked with some form of identification.

Most people can understand pictures. In this modern world, the computer has somehow become the “master” and humans the “slaves”. We must change this situation. It’s our responsibility.

This brings into question the role of language. In writing, one would have to bridge the communications gap between a Japanese and an English speaker by having a written caption. But the picture is the same. What if pictures were made into pictograms (a series of pictures that tell a story) or even better an interface (graphic language). There’s a global activity for this.

However, Asian cultures and Western cultures are different. Asian cultures will use and interpret pictures differently from the Western European way. A pictogram may be useful, but there also may be some mathematical way to communicate. I think we do need this kind of interface, but we also need to develop a system to overcome differences.

5. World cultural fusion:

So I’d like to jump to the conclusion that we have the technology for creation and distribution and it will mature very soon. Mobile communications will satisfy a large part of our communications needs. With Asia at the forefront of mobile communications, we have the opportunity in this New Millennium to develop a Mobile Multimedia Internet.

However, the point is that we need a world cultural fusion. How do we do it? As this involves combining different Asian and Western cultures we as Asians must deliver our culture to the world so that ‘fusion’ will occur.

To the participants of the 4th Hitachi Young Leaders Initiative: You have two tasks. One is to make the technological environment mature for your leadership. The other is to preserve yet distribute your Asian culture to the world.

Blurbs:

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