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Cultivating Entrepreneurial Spirit in Asia

Good morning, Your Excellency, distinguished guests, ladies and gentlemen. I am from Japan but I live in San Francisco. And for the last 18 years, I have been conducting my venture capital business in the technology sectors in the US, the UK and Israel. I haven't done any business in Japan yet, but I am from Japan.

Today, my speech is centred around the PUC in Asia. The PUC you have probably never heard. What is PUC? P stands for pervasive, U for ubiquitous, and C for communication, so Pervasive Ubiquitous Communication, forms PUC. That is the future of information technology. PUC for Asians or Asian Entrepreneurs is the theme of my speech. By combining my 18 years of experience in venture capitalism in technology sectors in Europe, Israel and the US, I would probably say that in the next decade the IT market will shift from the US to Asian countries. This chart is very typical, showing the industrial developing cycles for many manufacturing countries.

From the 1900's to the 2000's, this clearly shows the significance of the growth rate of GDPs. Even countries such as the UK, other European nations, the US and Japan started from light industries such as textiles, steel making, machinery and ship building. In automotive electronics, this particular chart indicates the growth which brought wealth to Japan. But the textile industries grew fast, maybe 50 years ago in the UK and 30 years ago in Japan. These industries eventually, after high growth, rotted and declined. So every industry, like the human life-cycle, has a cycle of growth and rotting stage and decline. The upper right hand circle represents software, telecommunications and biotechnologies, the industries of the future.

When I was a student in Stanford Business School in the late 70s, I wondered why many of my classmates wanted to join companies I had never heard of. Nobody in my class at Stanford wanted to join famous companies such as IBM or Citibank. People said they wanted to join Apple Computers or other smaller companies. Apple was founded in 1977. When I was a student in 1979, Apple Computers was only a 2-year-old company. But many people were excited to join the smaller companies. And I felt these people - the young and brightest people in the States - were going to

build the future of the US.

These are the people who created the wealth of the United States in the mid-90s. But it will not continue forever. An economy is a cycle. We should not forget that. In the mid-80s, when I started my venture capital career in the United States, the US economy was terrible. There was no money in the States, so every venture capitalist wanted to go to Japan and Europe to raise capital to finance their companies in the States. In the mid-90s, it was just the opposite. Everything was centered around the United States. United States venture capitalists became very arrogant. They started to tell everyone in the world "If they want to do business with us - come to the States. We won't go to Europe or Japan." So that is what happened in the United States.

Among software, biotechnologies and telecommunications, software and telecommunications, as I have already indicated in this upper oval, merged into information technologies through a data revolution. So the era of PCs started in the early 80s.

And it grew very fast. But after I made a rather huge investment in the PC sectors in the early 90s, I started to question myself if the PC is really the most important interface device between information and the human beings. It is really inconvenient in a sense. Even for a heavy user, when we are really busy, a personal computer is not really a convenient device. It is too slow and often it hangs up in the middle of operation. Any industrial product that stops in the middle of operation, usually we call it a defective product, and we can return it to the manufacturer for a full refund. A PC is the only exception. Furthermore, look at the details of a PC. What is the most frequently used function? It is e-mail. E-mail is the only function probably that most people use. E-mail is communication. The communication is the most important part of human activity. That's why, although many functions are provided by personal computers, e-mail is the most important one. However, as you know, if we use a keyboard, it is very easy to input letters, but communications is composed not only of a keyboard but also speech and also handwriting in ink. Unless we can optimize the 3 different kinds of input, that is, speech, keyboard and ink, depending on the time and place, it is really not a convenient interface for human beings. Although we are obliged to learn how to use PCs, we should not. Human beings should not accommodate ourselves to use PCs. I think machines should accommodate themselves to human beings. If communications is the most important function, I think that all functions have to be built on top of communication-centric architectures.

However, we cannot achieve such accomplishments with today's architectures because PC architectures are fundamentally computation-centric. There are 3 important ingredients which dictate the personal computer - the micro-processing unit, which is represented by Intel, the operating system, which is represented by Apple computers and Microsoft, and a relational database, which is represented by Oracle and other companies. But no matter, unfortunately, how much money and how much effort

we make, on top of this computation architecture, we cannot accomplish human friendly communication architecture. That is the reason why, in the early 90's, Reeves (their partners) started to make new technology definitions to constitute the new PUC - the Pervasive Ubiquitous Communications platform. That is what you are looking at on the right hand side. Quite a few DSPs, BDE and DDCs and many middlename softwares, and database and application softwares. And these are the future. I can come back later, but this is talking about 1990 - 2010. In 2011, all nations including Japan, the US and European countries are going to complete the shift from analog TVs to digital TVs including 3 different forms of TVs, namely cable data TVs, satellite data TVs, and terrestrial TVs. By 2010, I think these conversions will be complete.

You will see the PC platform move to the PUC, whose architecture is going to be more computation-centric than communication-centric. And in the PC model, hardware and software are separate. But software is going to be embedded. This is a little side track but people are talking about corporate governance. I can touch upon such topics now. Hardware and software is separated. At the American Business Club for instance, students are taught how to maximise returns on equities to improve profitability. The measurement is ROE. In order to maximise ROEs, America has people who want to deal with hardware which generates smaller growth margins. They want to concentrate on just software - which will in theory accomplish 100% growth margins.

But in the PUC environment, this kind of model is not viable because there is going to be embedded architecture. That means software and hardware cannot be separated. In order to maximise the performance of the software, the architecture is going to rely on the hardware, and vice-versa. In this sense, the Asian nations, very fortunately or unfortunately, didn't have good business so far. Our culture is very good to sustain and preserve both software and hardware cultures, and we are ready. But because

the US model has separated hardware and software models, and the best and brightest people learn on MBA courses at Stanford or Harvard Universities, they may not be able to get accustomed to the embedded model, which cannot accomplish a 90 - 100% growth margin.

MPU is going to be shifting programs towards DSP. Also client servers are going to be shifting to peer-to-peer. Peer-to-peer is the fundamental network for the Internet. That is quite important, if all of you in the audience and ourselves are connected by networks, in a client server architecture. If I am the server, and the rest of the people here are the clients, you have to fetch data from my brain, but in a peer-to-peer or Internet architecture, everyone is a server and the client becomes everyone who has a brain and mouth. When they speak they are servers - sometimes 2 or more servers are simultaneously acting as servers. This is the very important fundamental nature of the PC Internet. The reason why the Internet has been growing is that the Internet's topology is very close to human communications. We also have to wait for the tera age, in order to accommodate this in real time, and a larger memory and higher computing speed to accomplish PUCs.

But these PUCs are based on the infrastructure of the communication platform. That is broadband. In the PC era, broadband is the most important definition of IT. The US was the most advanced nation. But when we enter into the PUC - it requires fundamental infrastructure broadband. The US suddenly has become the least developed nation. And countries in Asia have become leaders, such as Korea, the leader in DSL, and Japan, the leader in 3G mobile phones. And other nations which did not have the US-like infrastructure can leapfrog to create inexpensive broadband communications networks. So these are the good opportunities that all the Asia Pacific nations can take advantage of. 15 minutes is very short, so let me stop talking about this topic. I would like to restate now that Asia is going to have a very good opportunity because of the fundamentals - IT is shifting from PCs to PUCs. And in Asia, with the large corporations, we also have a large number of the right and bright people who can create new ideas and technologies. What is lacking in Asia is confidence.

I think now we have to stop imitating the US model, and corporate government and others, and think for ourselves, to implement and create new ideas, and to implement in Asia and then show it to the European nations and the US. I think we have a very

good opportunity. My venture capital is also shifting in our direction, from the US and Europe to Asia, this year. Thanks.