

# Perspective to advanced ICT society

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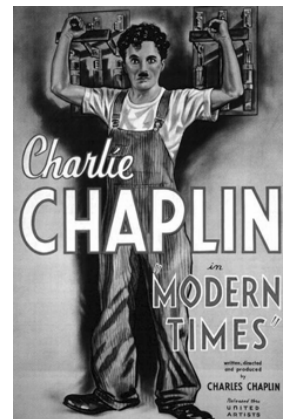
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**Abstract:** The social problems as human alienation is going to expand in our human lives, depending on the internet society including with telework is being organized and established. We need to vitalize the face-to-face communication for reducing the negative effect of the virtual communication. It is important for such vitalization the platform for generating the interactive and real communication should be prepared. My proposal is to develop the system of the telework house and to locate the house facility at the city center in the local city. This system is effective for vitalizing the face-to-face communication and the urban activity.

## 1. Telecommunication and human alienation

### 1.1 Trials in the late 20<sup>th</sup> century in Japan

We had an experience in the modern industrialized age as human alienation as shown on the film of “Modern Times” directed by Charlie Chaplin in 1936. <sup>[1]</sup> The industrialization controlled whole of working system and penetrated most of human lives in those days. Such modern and industrial system in Japan was switched to the contemporary and information-communication-technology (ICT) society during the years of 1980s. We respected ICT society which could prepare much more property for human beings in spite of its society concealed right and wrong or active and negative efficiencies.



We eagerly tried to develop the telework system and to provide satellite offices at remote locations from the years of 1980s to 1990s. The first experimental project was the development of Shiki Satellite Office in the suburbs of the Metropolitan Tokyo. But most of such trials in Japan were not always successful, because the infrastructure as the internet and the working system for teleworking were not well prepared in those years of the late 20<sup>th</sup> century. So that such problem as human alienation was not remarkable and not visible in those days.

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[1] Photo: Wikipedia

## 1.2 Virtual communication and social problem

The diffusion ratio of internet per household was raised from 3.3% in 1996 to 34.0% in 2000, and went up to 88.1% in 2003. Depending on such remarkable increase of the internet population, the number of teleworkers was raised from 4.08 million in 2002 to 6.74 million in 2005. The population ratio of teleworkers per total workers increased from 6.5% to 10.8% in the same period. <sup>[2]</sup> The Japanese government has a strategic plan to raise its ratio up to 20% in 2010 and the total population of teleworkers is approximately estimated at 14 million. <sup>[3]</sup>

According to such increase of internet population, the mobile-phone was remarkably diffused and the ownership ratio per household was raised from 3.2% in 1993 to 88.0% in 2007. The total number of the mobile-phone owned by Japanese is 89.7 million sets and its ownership ratio is 70.3% per person including with school children.<sup>4</sup> Mobile-phones are mostly utilized for webmail or weblog as well as for voice-communication. Such virtual communication as webmail or weblog has produced various kinds of social problems and we face the new subject such as the crime by school children and young people. I believe such problems are not limited to the crime by sensitive youngsters or non-workers, but mental injury generated with human alienation will gradually penetrate well trained teleworkers in the near future.

## 2. Telecommunication and urban structure

### 2.1 Concentration to metropolis or mega-city

We believe we can freely choose our working places with newly developed teleworking system. In addition we progress to utilize the telework for urban restructuring which mostly aims the decentralization of function. It is sure lots of SOHOs are born at remote locations after its introduction of telework. But SOHOs are not remarkably effective for decentralization as most of them are conducted by the individual workers who do not belong to such organizations as enterprises, institutions and agencies.

The satellite offices by the organizations were originally developed for decentralization and located at remote places from the high-density urbanized districts in the late 20<sup>th</sup> century. But the present movement of office location is at the opposite direction, and new offices are mostly concentrated at the high-density urbanized districts in

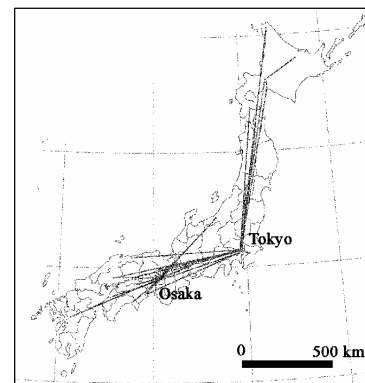


Fig.[1]:Satellite offices concentrated into mega-cities in Japan

[2] Source: Telecommunication Survey 2007: Ministry of Internal Affairs and Communications, JAPAN  
[3] Source: Planning Report 2007: Ministry of land ,Infrastructure and Transport, JAPAN  
[4] Source: Telecommunication Survey 2007: Ministry of Internal Affairs and Communications, JAPAN

Japan. The organizations in local regions are progressing to locate new satellite offices at metropolis or mega-city as Tokyo and Osaka. Such functional concentration to large cities has been expanding in various fields and as a result the total population in Tokyo was increased from 11.77 million in 1995 to 12.58 million in 2005. <sup>[5]</sup> The figure [ 1 ] shows the location map of the satellite offices of universities in local regions. Such remote offices are located at CBD in Tokyo and aim to collect the fresh information or knowledge through the real interaction.

## **2.2 Isolated offices in the city**

The call-centers of such companies as insurance are locating at remote local regions for increasing their financial benefit. It is usual the cost of buildings and human resources are remarkably lower and the infrastructures for telecommunication are well arranged in most local cities. Sometimes local governments give such call-centers tax-reduction to their new assets. As a result new facilities for call-centers are able to be developed at the urbanized district or CBD in local cities with low investments.

The call-center is one of the typical teleworking system, but it has no relation to its location or surroundings. The office is completely closed from the people and has not any functional connection with other organization in the city. Most of workers stay at their offices from morning to evening without going out when they take lunch or rest. They have very few visitors as they have any business communication in the city. There are well designed buildings for call-centers in Japan, but most of them are very isolated and are very rare to contribute the urban vitalization.

## **3. For developing lively society**

### **3.1 Free from human alienation**

The machinery industrialization brought about the human alienation in early 20<sup>th</sup> century when the modern industrial society was going to be established. The machinery used to be the leading actor and on the other hand the human beings used to be the supporting actors in those years.

Our age is very similar to the early 20<sup>th</sup> century and is the certain period when the human alienation is going to be expanded through the new technical system as teleworking. The internet and virtual communication is going to be the leading actor, if we do not prepare any countermeasure. It is not always big problem in nowadays, but it is sure such problem of human alienation will be clearly visible in the near future. We should develop the strategy and arrange suitable system for overcoming such social problem before undermining our society. It is sure we can not develop the lively society based on telework if we can not overcome such problem.

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[5] Source: Population Census 2005: Ministry of Internal Affairs

and Communications, JAPAN

### **3.2 Face-to-face communication**

It is sure we can perform the interactive works through the internet, but it is certainly virtual. The quantity and quality of the internet communication is much different from the face-to-face communication, and it is remarkably limited. It is said the amount of information on the PC display is only one per ten thousands of the face-to-face communication.

We should strengthen the face-to-face communication for the lively society and arrange such effective infrastructures as stimulating the real communication and the mobility of teleworkers. It is sure the cost of communication and transportation is becoming remarkably lower than before according to the diffusion of the internet. We need to utilize such kind benefits to increase opportunities of face-to-face communication. In addition we need to develop and to operate various kinds of alternatives of gathering platforms as collaborative-working, workshop, convention, symposium, etc..

### **3.3 Interaction and co-existence**

We have a common subject to develop the sustainable society or environment, but it has various issues for us to overcome. One of major issues is to develop the inclusive society based on the co-existence of people who have remarkable differences between races and cultures. We could not perform the effective interaction among remote residents until recent years, because we had not suitable telecommunication system. In those days each society or each nation was excluded from others and comparatively independent on itself. But nowadays we can easily go over the various obstacles such as national border, and it is sure the infrastructure for interaction beyond barriers is physically prepared. It is the certain time when we should effectively utilize such infrastructure for developing the inclusive society and for organizing the peaceful world. It is sure such system is already active in the financial and industrial field, but it is not so active in the social and cultural field. We need to more focus on developing the inclusive society from the social and cultural points of view through telecommunication. It is sure such social and cultural development produces financial and industrial benefits.

### **3.4 From decentralization to networking**

We had imagined the system of telework generates the decentralization. But nowadays the concentration is being remarkably accelerated. Large cities are becoming larger, on the other hand smaller cities are remarkably smaller in Japan.

I believe the lively society in 21<sup>st</sup> century is ICT society without depending on such accumulation as population and property. It is sure the opposite wave at present will be changed its direction in the near future. But I suppose the population is able to be

decentralized and the property or physical asset is economically difficult to be relocated. We have experiences the relocation program of administrative or business function have not been effectively performed in Japan. So that we need to move our program from decentralization or concentration to networking of urban function.

## 4. Proposals for telework

### 4.1 From satellite office to telework house

Satellite offices are not effective for urban vitalization and for decentralization. On the other hand the human alienation will penetrate teleworkers in the near future. It is a certain time to develop the proper function based on telework in the city center for vitalizing the urban activity and for reducing the human alienation. I believe the telework house is suitable and feasible and its figure is as follows;

#### 1) Communal facility prepared by public

The telework house is not a small office and is completely different from SOHO. It is a communal facility and is open to public such as a public library, but it mainly focus on the teleworkers. This facility houses internet machinery, meeting rooms, gallery, exhibition rooms, library, restaurant, café, etc. and teleworkers gather together and vitalize the face-to-face communication in this telework house.

#### 2) Usage of the telework house

Teleworkers who are individual or organized perform their daily business in their own offices. When they need a real communication, they use this telework house. They have several workers' clubs or institutional offices in the city at present, but all of them are not arranged for teleworking and are limited for their members. As the telework house is public, non-workers as retired persons or students operating the internet can freely use this facility.

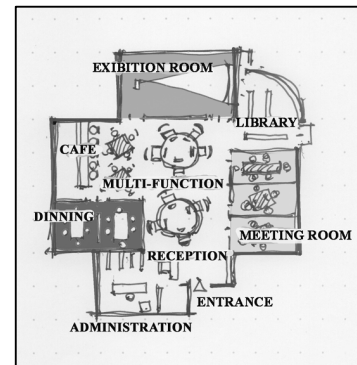


Fig.[2] Image of telework house

#### 3) Demand for telework house

The number of teleworkers is estimated at 14 million in 2010 and its population ratio is 20% of total workers in Japan. The local major city with 100 thousand workers has 20 thousand teleworkers for example. The number of 20 thousand workers is not always an effective demand, but it is great even if 5% of 20 thousand workers will be the actual users. This telework house is financially difficult to be developed and operated by private company, but it is sure it is economically effective to vitalize the city center when it is arranged by the local government.

## **4.2 Networking of telework houses**

The telework house is open to public and the teleworkers who are Japanese or visitors from foreign countries can freely use every house. We need to organize the network system of the telework houses for expansion and effectiveness of its usage. When they are well arranged in whole Japan, it is sure the free mobility will be ensured and the interactive face-to-face communication will be vitalized.

## **5. Conclusions**

My perspective to advanced ICT society is at the starting point, and further investigation should be performed from now on.

The problems at the internet society including with telework are certainly becoming real and visible. We have lots of internet-cafes in the world and which show the typical and realistic shape of human alienation. Most international function of finance are remarkably centralized and concentrated at metropolises or mega-cities and the program for decentralization is going to be vanished.

We need to overcome above issues with collaborative works and to organize the international platform with professionals in various fields. Because it is sure above issues are not domestic in Japan and international or global expansion.