

# **Socioeconomic Reform and Evolution Through Cybercommunity Solutions**

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- I Overview of the CCCI's Activities
  - 1 The CCCI's Aims and Achievements
  - 2 The CCCI as a Social Experiment
- II The Advent of Cybercommunities
  - 1 The Spread of Cyberspace and the Emergence of a New Paradigm
  - 2 The Emergence of Cybercommunities
- III CCCI Recommendations: An Appeal for Cybercommunity Solutions
- IV Need to Establish Successful Examples of Cybercommunity Relationship Management

The Center for Cyber Communities Initiative (CCCI) set up jointly by Keio University and NRI in July 1995 to conduct “social experiments” represented a new form of collaboration between industry and academia. Specifically, it differed in many respects from previous endeavors in the innovative nature of its projects, the flexible way in which it was managed, and the fact that its findings were published.

One of the CCCI's recommendations was to distinguish between the value of organization-driven linkages and that of individual-driven linkages when studying the increasing impact of cyberspace on society. The value of individual-driven linkages, in particular, will attract growing interest because of the way in which it can help individuals (as both citizens and consumers) solve the kind of problems that will arise as they spontaneously form cybercommunities in cyberspace.

The CCCI tried to make consumers, citizens, companies and both local and central governments aware of the importance of “cybercommunity solutions” as a means of (1) enabling consumers to achieve maximum satisfaction, (2) empowering citizens to resolve disputes in a way that they could accept, (3) helping companies to develop new ways of satisfying their customers and (4) developing new paradigms for reforming society and business.

In order to devise effective cybercommunity solutions for reforming society and business, there is an urgent need for “cybercommunity relationship management.”

# I Overview of the CCCI's Activities<sup>1</sup>

## 1 The CCCI's Aims and Achievements

### (1) Background and aims

The history of the Center for Cyber Communities Initiative (CCCI) dates back to July 12, 1994, when Yasuhiko Torii, president of Keio University, and Shozo Hashimoto, president of NRI, opened conversations on the possibility of carrying out joint research into the use of leading-edge information technology to create a new society. Following these preliminary talks, more detailed discussions were first held between the staff of the two institutions in August 1994 to decide how such research could best be organized. The initiative was originally called the Cyberspace Community Development Research Center but this was changed to the Center for Cyber Communities Initiative (CCCI) at the fifth preparatory meeting in mid-April 1995.

Draft recommendations and a memorandum of understanding concerning the establishment of the CCCI were later drawn up, and a joint research agreement was signed at Keio University's Mita campus on June 28, 1995. A week later, on July 5, the CCCI launched a Web site on which it published information on its activities. These events marked the beginning of the CCCI's work. Five years have passed since then, and the CCCI's activities ended on June 28, 2000, when the CCCI was closed in line with the initial agreement.

When the CCCI was set up in 1995, the Internet age was just beginning in Japan, but the popularity of the Internet increased rapidly—partly as a result of the launch of Windows 95 in November of that year. However, many people at the time believed that it was too early to predict the future of the Internet with any confidence and that the boom could end as quickly as it had begun. In spite of this, however, those involved with the CCCI were convinced from the very beginning that the Internet would have a major impact on both society and markets.

The CCCI's aim was to carry out joint research—from a completely neutral position and as a purely private-sector initiative—into how the foundations for a society permeated by an autonomous, decentralized and collaborative information technology network (i.e., “cybersociety”) could best be laid. Moreover, this was to be achieved by the synergies produced by combining the functions of academic research with those of a think tank and systems integrator.

In particular, the CCCI aimed to support social experiments and R&D projects in creating new social systems, developing new types of business, applying the latest information technology, and in developing education and training programs. Another important aspect was publishing the findings of these projects and drawing up recommendations based on the results. The CCCI was operated on the principle that it was a non-profit, socially

equitable and neutral organization working for the benefit of the general public.

In addition, it was decided from the very beginning that the CCCI should have a limited life span (five years) and that its work should be project-based. This was to emphasize the point that the organization should reflect the fact that it was created at a time of transition from the industrial age (the 20th century) to the information age (the 21st century) and to ensure that it remained flexible and did not pursue expansion for its own sake.

### (2) CCCI's achievements

During the five years of its existence the CCCI supported 21 different projects. These are listed in Figure 1 according to type (i.e., whether a project was a social experiment or ordinary R&D) and the aims of the project. The fivefold area classification was as follows:

- Development of new lifestyles and communities
- Reform of social and public systems
- Search for new business models
- Work styles in the 21st century
- Creation of a cyber casebank

As Figure 1 shows, a wide range of projects (covering lifestyles, communities, social and public systems, business and workstyles) was carried out and supported during this limited period.

These five years saw dramatic changes in the conditions surrounding the Internet in Japan. The CCCI found itself caught up in these changes, and 1997 saw a debate on whether developments were not actually overtaking social experiments. As a result, the CCCI reviewed its activities and decided to switch the focus of its business-related activities from social experiments to surveys of actual and likely developments, while the focus of its social experiments was narrowed to CTTH (Cyber to the Home) projects involving the use of information technology in daily life, the home and communities.

The planning and implementation of these projects was done by Keio University, NRI or third-party organizations that responded to open tenders, while executive decisions and result appraisals were done by the CCCI steering committee. The committee's decisions about whether or not to go ahead with a project were based largely on the CCCI's aims and objectives as well as the following points:

- The extent to which a social experiment (or an R&D project) on the use of the Internet represented real innovation.
- A project's future impact on society and business, and its social and economic significance.
- Whether the project could receive assistance from organizations other than CCCI, including companies and government bodies.

Figure 1. Types of Projects Carried Out by the CCCI

Area	Project Type	Social Experiments	R&D Projects
Development of new lifestyles and communities		VCOM	
		CTTH Cyber Schule	
		CTTH Ryokuen Toshi Community Intranet	
		Hiyoshi Internet	
Reform of social and public systems		VCOM	New Lifestyle Infrastructure in Cybersociety
		CTTH/VCOM Support for the Network Serving Persons with Disabilities	IT Industry Models for Cybersociety
		Community-Building Collaboration System	
		Network Support for Joint Administrative Programs	
Search for new business models		Cyberbusiness	Media Literacy Camp (MLC)
		Creator Bank	Rating System for Cybermalls
			Socioeconomic Impact of Next-Generation Databases and IT
			Impact of Customer Interaction on Corporate Strategy
			21st-Century Business Models for the Content Industry
21st-century workstyles		CTTH Home Office	IT as a Means of Raising Productivity
		Remote Working for Persons with Disabilities	
Creation of a cyber casebank		Cyberbusiness Casebank	
		Cybercity Casebank	

Notes: (1) All CCCI projects have been classified according to the above typology; (2) CTTH (Cyber to the Home).

- Whether or not project activities might favor particular companies.
- The feasibility of the project in terms of human, material and financial resources as well as know-how.
- How far the results of a project could be shared (or published).

## 2 The CCCI as a Social Experiment

Although the CCCI carried out and supported numerous social experimentation projects, the CCCI itself could be regarded as having been a social experiment. This was because there had been very few such organizations either in Japan or elsewhere, thus making it impossible to

be absolutely certain about any of the following at the time it was set up:

- (1) Whether the combination of social experiments and R&D that the CCCI proposed for investigating the unforeseen problems that could be expected as a result of the spread of cybercommunities would produce credible results in Japan.
- (2) Whether a voluntary and non-profit alliance between a private university and a think tank would function properly.
- (3) Whether a life span of only five years and a flexible operating structure would be appropriate and successful.

In other words, the CCCI can be said to have been a social experiment designed to test a completely new type (or a 21st-century version) of collaboration between industry and academia. The following is an overview of the CCCI's work from such a perspective.

Turning first to (1) above, the title of this paper refers to the recommendations that the CCCI drew up on the basis of its findings over five years. Most of the CCCI's projects were planned and implemented in one way or another around the key concept of the cybercommunity. In this process, the social experimentation projects provided many empirical and inductive insights, while the R&D (survey) projects enabled the CCCI, deductively, to gain a better understanding of the current state of cybercommunities and how they are likely to develop.

As a result, a combination of the two approaches enabled the CCCI to offer cybercommunity solutions that are convincing, logical and systematic. During the first half of the CCCI's existence (until mid-1997), these approaches acted as a trigger for cybercommunities in Japan, and also served as the basis for the CCCI's recommendations at the end of its existence.

With regard to Item (2), any overview of the collaboration between Keio University and NRI must start with the fact that the CCCI owed its existence to a voluntary agreement between the presidents of the two institutions. As a result, the two teams were autonomous in many respects, and a kind of "CCCI cybercommunity" atmosphere developed gradually not only between the two institutions but also among all those involved in the CCCI's projects.

One example of this was the growing trust in the CCCI shown by the residents and teachers from the Ryokuen Toshi district in Yokohama who agreed to take part in the Community Intranet project. Similarly, the CCCI steering committee met regularly a total of 26 times during the five years of the organization's existence—as well as an additional nine times specifically to draw up the organization's final recommendations. From this developed a sense of a "CCCI community," which encouraged an active discussion among those taking part.

And with respect to Item (3) concerning the way in which the CCCI operated, the flexibility adopted in the organization of the CCCI and the fact that its existence was limited to five years helped to make this new form of collaboration between industry and academia all the more effective. This policy of operating in an autonomous, decentralized and collaborative manner, largely on a project basis, encouraged cooperation and a positive attitude by all concerned.

## II The Advent of Cybercommunities

### 1 The Spread of Cyberspace and the Emergence of a New Paradigm

#### (1) The advent of cybercommunities

The pre-cyber age of the last five years is drawing to a close and the cyber age proper is about to begin.

The relatively primitive phase of development from which the Internet is about to emerge has been dominated by the personal computer, and both uses and users have been limited. In the new cyberspace age that is about to begin, uses, users, types of use and terminals will be more varied in many different respects, and users will have a wider range of choices to make about lifestyles, markets, government and social systems. The age in which the Internet simply linked personal computers to other personal computers is ending, and an age in which people will be linked to other people and in which different values will crisscross the Internet is about to begin.

Figure 2 schematically illustrates the long-term development of the cyberrevolution in Japan. In a fully functioning cybercommunity, people, markets and social systems will become increasingly dependent on cyberspace. Cyberspace will enable people to do things free of time or space constraints and to communicate in different directions. In addition, it will enable individuals to forge links with other individuals.

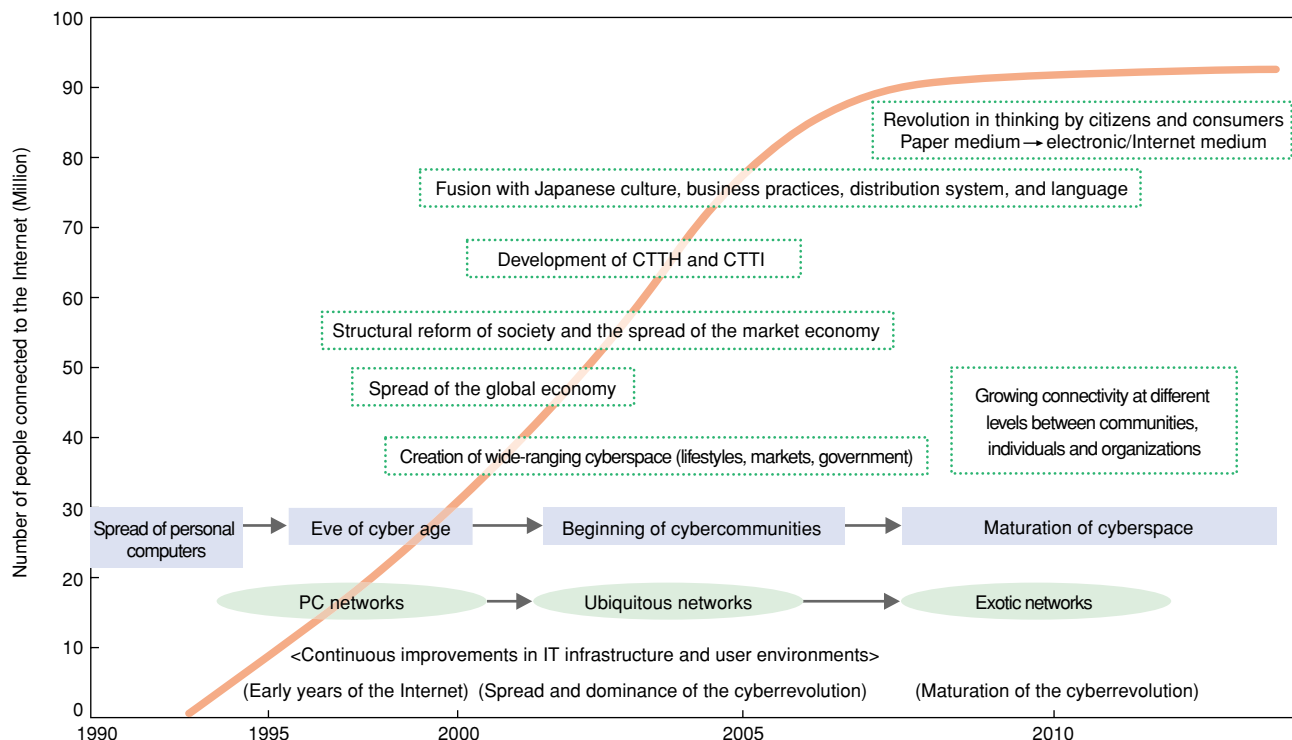
Cyberspace will give society and markets the following two major types of values and strengths:

- (1) The value of organization-driven linkages: value derived from the greater concentration and efficiency achieved when people are connected.
- (2) The value of individual-driven linkages: value derived from spontaneous associations of people.

The value of organization-driven linkages has already had a major impact as an instrument of market forces and administrative systems. As a means of achieving the collective aims of controlling, rationalizing and improving the services provided by companies and government organizations, it has been increasingly used in cyberspace.

The value of individual-driven linkages is created when individuals with shared aims, values and perceptions associate spontaneously in cyberspace and achieve significant synergies. These groups of individuals are called cybercommunities. In the past, such opportunities were limited by constraints of space and time, but the spread of cyberspace will create more such opportunities.

Figure 2. Schematic Diagram of Cyberrevolution Developments in Japan



Note: CTTI (Cyber to the Individual).

Although the connectivity that enables individuals and organizations to be connected in cyberspace is in itself neutral, it can be used in diametrically opposite ways to either convey the thinking of a group to the group’s members or to create a sense of solidarity among individual members. The value of organization-driven linkages has already generated considerable value and influence, and can be expected to continue to act as a force in reforming the structure of markets and social systems and in the spread of globalization.

In the future, attention is likely to be on the value of individual-driven linkages. In Japanese society, the values of individuals have tended to be subjugated to those of the group. As the values of individuals become linked in cyberspace, however, they will become a major force in the shaping of society and markets. As the value of organization-driven linkages and that of individual-driven linkages interact in many different ways in cybercommunities, they can be expected to spread throughout society and markets and to bring about a paradigm shift in the way that society and markets work.

**(2) Paradigm shift and the spread of cyberspace**

Cyberspace is spreading throughout society and affecting everyday life, markets, government and social systems. This will produce the following paradigm shifts.

First, there will be an “information shift.” Whereas information at one time tended to be the monopoly of big companies and government, it is now increasingly accessible to the general public and consumers. A fundamental change is taking place in attitudes to where im-

portant information should be kept, and there is a growing awareness that the coming together of information held by individuals will be a major force—hence the term information shift.

Second, there will be a paradigm shift as a result of the changes that are taking place in the purposes for which and the ways in which information and networks are used. While they were previously used to make business more efficient and effective, in the future they will increasingly be used in people’s personal and family lives for a wide range of purposes and to generate a wide range of values. In other words, there will be a growth of cyber to the individual (CTTI) and cyber to the home (CTTH). This trend will lead to pursuing the value of individual-driven linkages at a personal level and to the emergence of a wide variety of cybercommunities (see below).

Third, there will be a paradigm shift in markets. In addition to the now established use of the Internet by companies to increase efficiency and globalize their business, new values created by the spontaneous association (or linkage) of customers in cyberspace will become increasingly important. Customers have begun to share information on products and services and to talk about their own likes and dislikes. This is leading to interaction among customers on the Internet and the emergence a loose sense of solidarity. And there is even an increasing tendency for customers to determine prices.

“One-person-businesses” such as musicians, novelists and game creators have started to deal directly with their fans over the Internet. This marks the beginning of an age of “Internet indies.” And underlying this paradigm

shift in markets is the emergence of customer-led cybercommunities.

## 2 The Emergence of Cybercommunities

### (1) Cybercommunities

The key development in the shift to full-fledged cybercommunities is the emergence of the value of organization-driven linkages (i.e., of a wide range of cybercommunities). Cybercommunities are groups of hitherto unconnected individuals who associate spontaneously in cyberspace and form what could be roughly described as an association.

Cybercommunities can be formed in many different areas of society, including everyday life, markets, government and social systems, and the closeness of the association (sometimes referred to as “relatedness”) can vary from a loose association to a tight bond.

Cybercommunities can be expected to develop in many different ways in Japan as a result of the changes (see below) taking place in everyday life and markets as well as as a result of the greater autonomy that individuals can enjoy in cyberspace.

First of all, instead of being restricted to a uniform and confined life space (especially, in a company that offers a job for life), individuals can use cyberspace as a means of belonging to different groups that accommodate their own opinions, values and interests.

Similarly, cybercommunity markets will discourage monopolistic control of information by companies, one-way production and a one-way flow of information and encourage the formation of a wide range of cybercommunities on different levels whose members (customers and consumers) will share preferences and interests. At the same time, a “cyber-marketplace model” that incorporates companies will gain increasing importance.

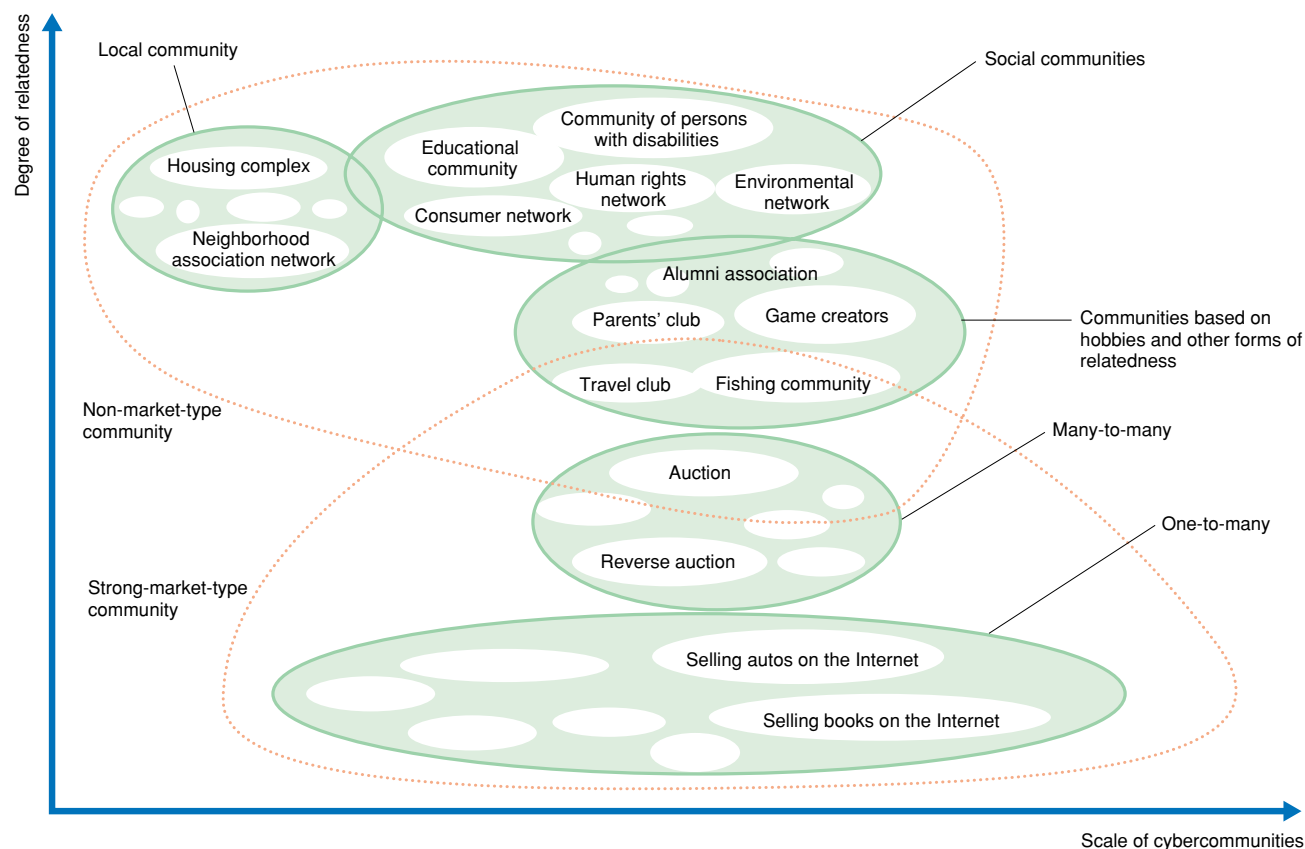
Meanwhile, instead of simply providing services, government will form cybercommunities with interested citizens that will enable both sides to share information in a mutually beneficial way. In addition, citizens will be increasingly required to make choices and accept responsibility—especially in areas such as pensions and home care for the elderly.

Or, to put it another way, the emergence of cybercommunities in society and markets may be encouraging the confluence of the value of organization-driven linkages and the value of individual-driven linkages as well as the growth of areas in which the two are mutually dependent. Where individuals were once anonymous, cybercommunities now enable them to form loose and varied associations.

Cybercommunities can be defined in terms of the following two criteria:

- (1) The reasons for their formation.
- (2) The cyberspace capabilities they require.

Figure 3. Schematic Diagram of Cybercommunity Relatedness and Scale



The reasons for forming cybercommunities can be divided roughly into affiliations that are regional (i.e., dependencies on a particular geographical area) and those that are not, as well as reasons that are either mainly personal (e.g., interests, high expectations and weaknesses) or social.

The cyberspace capabilities that are required will depend on the level of association of a particular cybercommunity. Several such levels are likely. (See Recommendation 2 in Section III.)

The degree of association (or relatedness) among members of a cybercommunity will depend on the reasons it was formed. Cybercommunities will also vary in size and spatial scope—from just a few to several million members or from a school catchment area to the whole of Japan or even the entire planet. Figure 3 is an attempt to indicate the diversity and scope of such cybercommunities.

## (2) The significance of cybercommunities

Many different cybercommunities are already active in Japan. People who share hobbies and interests are forming Internet forums, exchanging information, and communicating with one another. There are also numerous email magazines on particular topics produced by individuals for other members, and cybercommunities created by mailing lists with a simple broadcasting capability.

Cybercommunities—whether small groups of only a few people or large groups of tens of thousands of people—are rapidly growing in number. In terms of their cyberspace capabilities, most of them are at the level of sharing or exchanging information, or assisting group activities.

The job forums joined by large numbers of university students looking for employment not only provide a venue for exchanging information about prospective employers, but have also become an indispensable means for students to communicate with one another. Similarly, the cyberspace auctions that have attracted so much attention as new business models in the United States are an example of a cybercommunity where consumers can exchange transaction information and act as either buyers or sellers.

There has also been steady growth in the number of cases where consumers and companies have come together in cybercommunities and in which consumers have drawn up their own specifications for products—and which companies have then accepted. As was mentioned above, there is an increasing need for the value of organization-driven linkages and the value of individual-driven linkages to complement each other in cyberspace.

Another expanding need is for solutions to social (e.g., educational, environmental and welfare) problems at a

local level. Cyberspace can enable citizens to form associations even when they are separated by distance, thereby making it possible for people to pool their influence.

While such influence used to be exerted by non-profit and non-governmental organizations, the spread of cyberspace may enable it to develop in the form of cybercommunities. This is likely to prove especially effective in dealing with social problems that government and companies are unable to solve on their own, and here lies another important reason for the existence of cybercommunities.

## (3) Insights from CCCI projects

From the outset, the CCCI regarded cybercommunities as an important future influence on society and markets, and has carried out numerous cybercommunity projects. (See Table 1.)

The following five insights into cybercommunities have been gained from these projects:

- (1) Japanese society is very hierarchical, but cybercommunities (e.g., the CTTH Ryokuen Toshi project in Yokohama and the Citizens' Electronic Conference Room in Fujisawa) have encouraged many different kinds of lateral communication in local areas and led to people beginning to associate in order to share their life space.
- (2) Individuals (citizens and consumers) living at considerable distance from one another have begun to associate spontaneously in cybercommunities (e.g., VCOM, the CTTH Cyber Schule and the Cyber-business Casebank) to pursue common goals, preferences and connections.
- (3) This kind of lateral communication and these kinds of cybercommunities are marshalling "local power" and "community power" to resolve the various problems faced by these areas and communities, and are encouraging the government and public services to publish more information while at the same time prompting citizens to play a more active role. In addition, they are exerting an impact on markets by helping consumers take a pioneering role in developing new products.
- (4) Mutual trust among the members of such cybercommunities plays an important part in their formation and continued existence. Similarly, it is non-profit organizations and third-party organizations—rather than government or large companies—that play an important part in developing such trust.
- (5) If cybercommunities are to develop and be run properly, more will have to be done to promote cybercommunity relationship management and accumulate the necessary know-how.

**Table 1. Cybercommunity Projects Carried Out or Supported by the CCCI**

Name of project	Duration	Social experiment	Description
VCOM	1995-2000	✓	(1) Connecting local communities to a network (e.g., in Fujisawa) (2) Operating a network providing information of particular interest to women (3) Providing information on legislation affecting NPOs (4) Operating a network to help persons with disabilities find jobs (5) Operating an experimental system for certifying organic food
Remote Working for Persons with Disabilities	1995-1996	✓	An empirical experiment in using the Internet to help persons with disabilities work from home
Cyber Life Club	1995-1996	✓	An empirical experiment in cybermalls, using electronic bulletin boards, etc., to form customer communities
Creator Bank	1995-1997	✓	An experiment in creating opportunities for creators (e.g., painters and illustrators) to meet clients (i.e., advertising agencies)
CTTH Cyber Schule	1997-1998	✓	A project to connect the homes of 60 school drop-outs from all over Japan to the Internet
CTTH Ryokuen Toshi	1998-2000	✓	An intranet for use by a suburban community
CTTH Home Office Experiment (OFLO)	1997-1998	✓	An experiment involving NRI researchers in working from home
Community-Building Collaboration System	1996-1998	✓	An empirical experiment involving the use of the Internet to encourage local people to take part in administrative services such as community planning
Hiyoshi Internet	1995-1997	✓	An experiment involving the use of the Internet to forge closer links between a university (campus) and local retailers, and thereby increase business
Customer Interaction and Corporate Strategy	1998-2000	✓	Research into the effect on corporate strategy of communication among customers via a network
Development of Rating System for Cybermalls	1998-2000		A questionnaire-based evaluation of ways of communicating with customers as a marketing technique
Research on New Lifestyle Infrastructure in Cybersociety	1999-2000		The project proposed three new types of infrastructure for cyber NPOs: (1) A system involving the use of the Internet to collect small donations for NPOs (2) A local transportation system for both the elderly and persons with disabilities (3) A network providing information and user appraisals of homecare service providers
Cyberbusiness Casebank	1995-2000	✓	A voluntary service providing essential strategic information and statistics for cyberbusiness start-ups (descriptions of business, payment methods, online security, etc.). Information published on the Internet.

### III CCCI Recommendations: An Appeal for Cybercommunity Solutions

As was mentioned in Section II, the CCCI published a series of social recommendations in June 2000 to reflect the outlook for cybersocieties in Japan and to mark the end of its five years of activities. In this section, we shall look at the main points of this Appeal for Cybercommunity Solutions.

The recommendations consist of three parts. The first deals with broad issues as well as those concerning society in general and citizens and consumers in particular; the second part focuses on matters specific to business and markets; and the third addresses topics relating to public services (both central and local).

#### **Recommendation 1: From the Value of Organization-Driven Linkages to the Value of Individual-Driven Linkages**

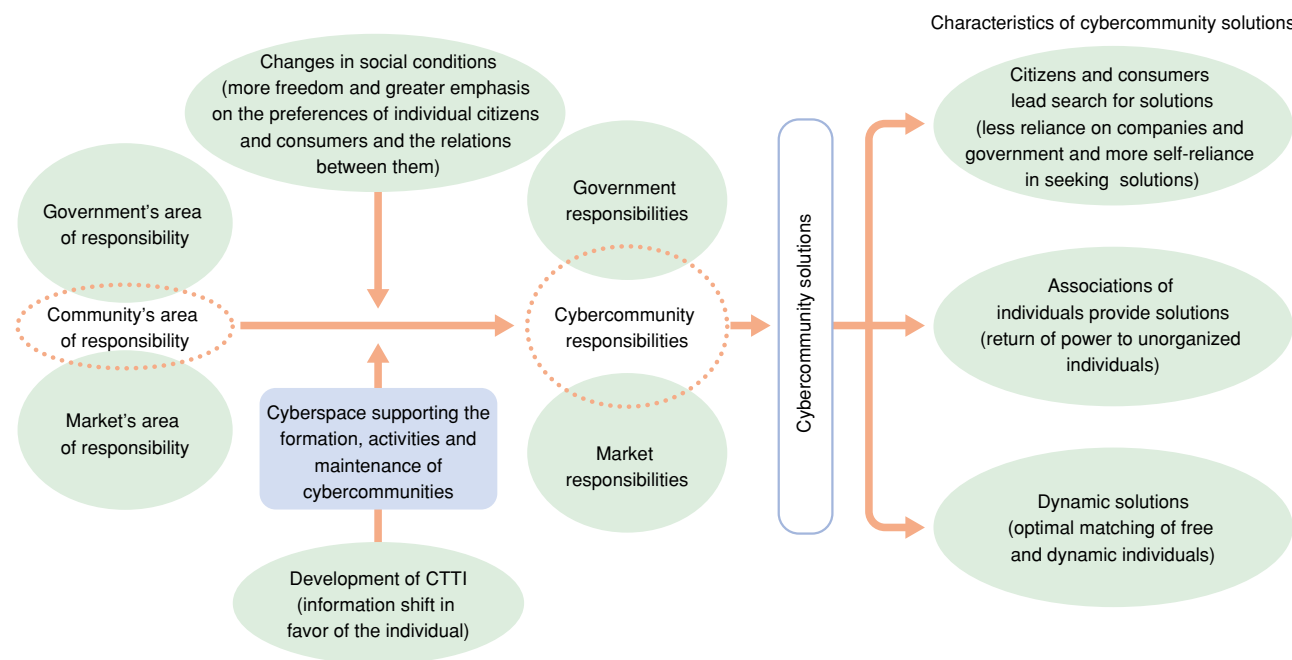
For more than fifty years after the Second World War, Japan has been an advanced industrial society function-

ing according to Japanese-style (i.e., collectivist, anti-individualist and passive) behavior patterns. This may have been an ideal means of increasing efficiency during periods of rapid economic growth, but such patterns are becoming increasingly uncompetitive and unacceptable in a global world. Collectivism will inevitably give way to individualism as well as to associations based on a spontaneous and uninhibited uniqueness and to tendencies favoring social creativity and diversity. Moreover, cyberspace will strengthen the position of the individual and encourage individual initiative and creativity.

The limitations of trying to deal with many social and market problems and issues simply in terms of either (central and local) government or the market economy have been apparent for some time. At the same time, Japanese society faces a whole host of problems (e.g., conservation of resources and the environment; a falling birth rate and increasing longevity; welfare; education; and the need for regional regeneration) where it will be difficult to reach a consensus using rigid conventional approaches.

Cybercommunity solutions are a way of dealing with such problems and issues by enabling individuals not only to share information and rules of their own accord but also to act together in a flexible rather than authoritative

**Figure 4. Characteristics of Cybercommunity Solutions**



manner and to adopt a common approach (i.e., to form cybercommunities).

As indicated in Figure 4, the key features of such solutions are that they all rely on individual initiative and on the following:

- (1) Citizens and consumers (rather than companies and government).
- (2) A free association of individuals with common goals.
- (3) A spontaneous and dynamic optimal matching of individuals in formats that are free of time and space constraints.

The problem areas mentioned above are closely connected with human services (such as healthcare, care for the elderly, learning and advice) and individual values. The key here is interpersonal communication and mutual trust—qualities that also constitute the key to cybercommunity solutions.

New developments in the direction of a true cybercommunity are also taking place in markets. In this area as well, cybercommunity solutions have the potential to produce new business models and a new dynamism. As large numbers of consumers become sellers as well as buyers, and as they share information and communicate with one another, cybermarkets are being formed. Some companies have already decided to adopt such cybercommunity-oriented business models and are beginning to reap the rewards.

Cybercommunity solutions can therefore help to solve many social problems by encouraging people to exchange information on their own initiative. In addition, they can help to create a richer society where—instead of passively depending on and copying others, or trying to solve problems simply by producing a bigger pie— people pay more

attention to each other’s ideas and initiatives and form wider associations of their own accord. By leading to more active communication, these changes will release untapped potential.

Japanese society is now at a crossroads where many of the structural problems that it faces more than 50 years after the Second World War intersect with the development of the cybercommunity. In order to deal with all of these problems, Japanese society and the Japanese people need to adopt a new approach based on spontaneous and unconstrained individualism rather than collectivism. They will only succeed in solving many of these problems if individual citizens and consumers think, act and associate on their own initiative, instead of depending on (central and local) government and the corporate sector.

By helping individuals to associate in this way, cybercommunity solutions will go a long way towards solving many of these social and market problems. Japan is just at the first stage of a cybersociety that will eventually provide many new opportunities.

**Recommendation 2: Create Cybercommunity-Oriented Business Models**

**(1) Returning power to the customer and adopting a new business paradigm**

As cyberspace spreads, companies need to remember above all that their customers represent the value of individual-driven linkages and that they have to be able to deal with customer associations. This is the basic approach towards business paradigms that companies will need to adopt when cybercommunities are fully established.

Cybernetwork technology is a low-cost means whereby customers can express their own values, emotions and opinions, and communicate easily with other customers.

Customer interaction via the Internet is creating many new cybercommunities. As a result, the volume of information held by customers is growing exponentially.

The term information shift means that, instead of companies simply transferring information that they possess to customers, customers will be able to create new value by exchanging their own information. Customers realize the value of having somewhere to share information. This “somewhere” could give customers the same information power as companies—or even more. Companies therefore have to consider how to deal with cybercommunities that are composed of customers wielding such power.

In such a situation, the functions and roles of companies and their customers need to be reconsidered if theirs is to become a win-win (rather than a zero-sum) relationship, and companies need to adapt to the Web-based networks of their customers. If necessary, companies may even have to delegate to their customers some of the functions that they previously controlled in order to be able to create new customer value.

The notion of returning power to the customer will be a key element of corporate strategy. The main point about adopting a new business paradigm to cope with the advent of cybercommunities is that the company’s need to connect and the customer’s need to associate are both moving in the same direction.

## **(2) Cybercommunity-oriented business models**

If we assume that a cybercommunity-oriented business model is one in which companies utilize the value created by customer and user networks (i.e., cybercommunities) to achieve added value, such models can be expected to vary considerably. This is because, when the value of organization-driven linkages and the value of individual-driven linkages (see above) interfere and fuse with one another on the Internet, they will take different forms depending on the particular product or service concerned.

The functions of cybercommunities can be divided into the following three categories depending on how and how closely they are linked:

- (1) A very loose association to enable information to be disclosed and shared.
- (2) An association aimed at encouraging people to join on their own initiative and to give the community a sense of direction, or navigation.
- (3) A close association where, in order to solve problems, the community as a whole seeks to influence outsiders and modifies its relations with them.

In a cybercommunity-oriented business model, a company can be thought of as a means of extracting the unexpected added value created by customer initiative. In particular, the following three goals have been shown to be achievable:

- By taking the initiative and forming loose associations of customers with shared interests and tastes, companies can effectively create new demand and attract new customers.
- Where customers form associations on their own initiative, companies can use communities as an effective means of steering customers in a particular direction in collective purchasing and auctions.
- Where enthusiastic users form cybercommunities of their own accord, they can be an effective means of planning and developing new products as well as adding considerable value to products.

Companies should always be aware that customer power is not only a means of achieving the kinds of effects described above. Customer communities have been known to direct explosive anger at the failure by companies to respond properly to customer complaints about a product or to set up “hate sites” targeted at particular companies.

In the following we shall give some examples of US and European business models for each type of cybercommunity. We also suggest cybercommunity-oriented business models that Japanese companies could adopt to match each type.

### **(3) Cybercommunities for disclosing and sharing information**

This is where, mainly on the initiative of companies, customers with similar interests form cybercommunities in which they can share information and communicate with one another of their own accord.

Very loose and voluntary associations of customers are an effective means of creating new demand and attracting customers. One example of this is Amazon.com, which runs online outlets mainly for books in many different countries (including Japan) and is developing its business on a global scale.

In order to establish a dominant position in the cybermarket, Amazon.com has invested aggressively in diversifying its business. As well as having access to a huge product database (with information mainly about books) and a search engine, customers can write their own book reviews, which can then be read by other customers. The company’s efforts from an early stage to form communities of bibliophiles have been one of the factors in its success.

### **(4) Cybercommunities that encourage people to join on their own initiative and give the community a sense of direction**

This type of business model relies heavily on customers who form associations mainly on their own initiative. One example of this model is eBay, a US Internet auction site aimed at individuals. eBay’s highly profitable business deals with a wide range of items ranging from antiques to furniture and automobiles. It uses auctions to match individual buyers and sellers as closely as possible.

The reason eBay's business developed so rapidly was not simply that it used the Internet to hold auctions. Much of eBay's success is due to the rating system it introduced to dispel customer fears of dealing with other customers they did not know. This system uses transaction ratings provided voluntarily by consumers to provide a history of the transactions they have been involved in, thereby enabling other consumers to check their rating and creditworthiness. In addition, taking part in such auctions and becoming a member of a cybercommunity also apparently provides an element of entertainment.

#### **(5) Cybercommunities that seek to influence outsiders and modify their relations with them**

This is the closest form of association where a cybercommunity harnesses its members' resources in order to solve particular problems. In its pursuit of a solution it will seek to influence outsiders and modify its relations with them.

One example of this is Hewlett-Packard's "HP200LX"—a hit product that resulted from the voluntary efforts of customers. A group of Japanese enthusiasts keen to use an English-language palmtop computer produced by Hewlett-Packard in the United States banded together to develop Japanese-language software for it. As a result, a product that had sold only 1,000 units in two years became a hit selling 5,000 units a month.

Although Hewlett-Packard had ceased production of the model in August 1999, a group of enthusiasts who had banded together in an Internet forum named after the product formed a partnership and have apparently started a project to manufacture their ideal palmtop computer (the "Morphy One").

#### **(6) A paradigm shift from supply chains to customer webs**

These business models are just a starting point and are destined to become more diverse and sophisticated. Efficient use—unconstrained by time and space—of Internet matching and connectivity technology is a necessary condition for their development. Unless these models can adapt effectively to customer behavior, however, they will not achieve business success. Therefore, if companies are to form and maintain good relations with customer cybercommunities (especially where customers are activists), there will have to be a paradigm shift from supply chains to customer webs.

### **Recommendation 3: Form Closer Links Between Citizens and Government**

#### **(1) Cybercommunities as a means to greater information disclosure and more participation in government**

In a country such as Japan where citizens and consumers have tended to be passive and to leave matters to government and public entities, cybercommunity solutions rep-

resent an extremely effective means of bringing government and public services closer to the people. In order to make this happen, we would recommend the following to both central and local government agencies.

As the first step in bringing government and public services closer to the people, it is important that both citizens and government share the same accurate information and express their views openly. This should serve as a basis for discussion between the two, thereby leading to mutual trust and a common perception of problems. A clearer allocation of responsibility between the two would also make it easier to find solutions. Cybercommunities are one way of enabling such a process.

To achieve this, government needs to put itself in the position of citizens and consumers and adopt a positive attitude to information disclosure. It is also important that government uses cybercommunities to share both the interests of citizens and their perception of problems, and to make an effort to share information and communicate with them. The most important thing, however, is that government should approach the issue of information disclosure from the point of view of citizens and consumers. As suggested by the experience of projects in Fujisawa City (Kanagawa prefecture) and Chuo ward (Tokyo), disclosing information and sharing information with citizens actually reduces the risks for government and is efficient in making it easier to gain public support.

We therefore hope that central and local governments adopt (1) a means of objectively assessing the depth and breadth of their information disclosure on the Internet and the standard of their public services and (2) a cyberombudsman system.

Adopting a positive attitude to cybercommunication solutions will enable government agencies to adopt a new approach to policy decisions. Rather than relying solely on internal decision-making as in the past, they will be able to incorporate the views and needs of those citizens who are willing to suggest solutions to problems.

In short, government needs to encourage citizens to take an active part in public administration. Possible examples range from the conception and planning stages to public relations, online monitoring and result appraisal.

#### **(2) Cybercommunities as a means of reforming social systems**

Most of the social problems Japan faces (e.g., the problem of resources and the environment, educational reform, a falling birth rate, increasing longevity, and welfare) require its citizens to have a view on what action should be taken within the constraints of rigid systems and limited resources. These are issues not only for the country as a whole, but also for particular regions. In addition, most of them will involve an increase in demand for human services.

Mutual trust between society and those responsible for dealing with such issues is essential if such problems are

Figure 5. Embryonic Examples of Cybercommunity Solutions

Cybercommunity functions	Areas	
	Lifestyles, government, society	Business
Information Sharing (Information disclosure and sharing)	<p>Networks for exchanging information on homecare services</p> <p>Cybercommunities of users of home-care services providing information and assessments of these services</p>	<p>Job forums</p> <p>Cybercommunities formed by university students to exchange information and communicate with prospective employers. They are becoming an increasingly important tool.</p> <p>Amazon.com</p> <p>Company provides information on books, etc., and reader reviews to all its customers as a means of inducing them to form loose associations that it can use for business purposes</p>
Navigation (Encouraging voluntary participation and steering communities in common directions)	<p>Parent communities</p> <p>Cybercommunities for exchanging information and providing advice on bringing up children for young mothers of nuclear families</p> <p>Victim advocacy associations</p> <p>Victims of financial fraud and medical negligence form cyber communities to share costs and information</p>	<p>eBay</p> <p>Company uses Internet auctions to bring together buyers and sellers. The formation of a community of customers sharing transaction information (status, reliability, etc.) is the key to its business</p> <p>HP200LX</p> <p>A cybercommunity of users came together to develop a Japanese-language tool for a palmtop computer that originally came only with English-language software. They added considerable value.</p>
Solutions (Seeking collaboration with outsiders and modifying relations to solve problems)	<p>Environmental groups</p> <p>Cybercommunities have been formed as a grassroots democratic tool for dealing with nationwide environmental groups and large-scale development plans</p>	<p>Linux</p> <p>Computer engineers from all over the world formed a network to jointly develop open software on a distributed basis</p>

to be solved. Widescale and flexible cyber-referenda will likely also be needed in order to reach a consensus on administrative issues covering a wide area, as well concerning various matters related to public investment.

Grassroots cybercommunities have been formed from nationwide environmental groups and groups of victims of medical malpractice and financial fraud, and are already having an impact on society. Cybercommunities have also been formed for childcare and homecare services as well as to help students find employment. As indicated by the results of the CCCI's social experiments (e.g., the Cyber Schule project for school drop-outs and the network set up to help persons with disabilities find employment), cybercommunities are a flexible and attractive alternative to the rigidity of existing social systems.

This would suggest that neither government alone nor economically motivated corporate activities are capable of solving such problems. The only way to find solutions (rather than cover up problems by hiding information) is for government and companies to disclose information and to share it and a perception of how to deal with such problems with the public, and for companies to cooperate on a large scale and to try to reach a consensus based on a thorough discussion of the issues. Cybercommunity solutions are simply a very effective way of facilitating this process.

**(3) Cybercommunities as a means of strengthening local ties**

One of the results of the structural changes in Japanese industry and employment (and the concomitant population movements) that occurred during the period of high economic growth in the 1950s and 1960s was a rapid reallocation of land use, which virtually destroyed local and community identity and activity in both urban and rural areas.

As the population settled down and society matured, however, problems concerning the environment, education, welfare for the elderly, and fostering culture and tradition have rapidly arisen and require new solutions at the local (community) level. Although these problems are closely connected with people's daily lives and lifestyles, they increasingly require community rather than individual attention by all those who share the same life space (and make growing demands on public resources). This means that communities must reestablish their autonomy, and local ties need to be strengthened.

Hand in hand with government and the corporate sector, cybercommunities of people who share common perceptions are likely to play a major role in seeking ways of strengthening local ties. By sharing their experiences and solutions, the members of such associations can also be expected to generate new insights that will lead to more sophisticated solutions. In turn, this process also

has the potential to create cybercommunities covering large areas and nurture links between local authorities and citizens, thereby serving as a major force for regional regeneration.

CCCI's Community Intranet project in Ryokuen Toshi in Yokohama used the Internet to cement ties between local people and schools, and to improve local educational facilities. Cybercommunities will revitalize local welfare services, local industry and local culture.

#### **(4) New schemes to assist non-profit cyber organizations**

Another finding of the CCCI's experiments has been that the intermediaries and agents linking citizens/consumers and companies/government will play an important role in forming cybercommunities and finding solutions.

It has often been observed that non-profit organizations (NPOs) are well suited to performing their particular role. These cyber NPOs will have to develop if cybercommunity solutions are to play a wider role in society.

While human, material, financial and information resources will all be needed to foster the development of cyber NPOs, there is a particularly urgent need for funding. Rather than depend solely on large donations from government and the private sector for this, society needs to devise ways for members of the public to donate small amounts.

In particular, the Internet could play an effective role in the following ways:

- To recruit, screen and register non-profit organizations.
- To collect donations via Websites.
- To post advertisements about non-profit organizations.
- To promote cooperation among non-profit organizations.

Although entities for supporting non-profit and non-governmental organizations already exist, they cannot be said to suffice. Interested citizens, government agencies and companies need to work together to come up with more practical schemes.

## **IV Need to Establish Successful Examples of Cybercommunity Relationship Management**

The main point about the CCCI's recommendations (see previous section) is to draw attention to the new paradigms that the value of individual-driven linkages will bring to society and business as cyberspace spreads in Japan. This involves not only returning power to active citizens and consumers, but also determining exactly what the status of cybercommunities should be as a new power in society and markets in bringing this about.

As this new power is distinct from the traditional approach to managing relations with customers and citizens that is based on the value of organization-driven linkages, it will require a completely new paradigm. Companies and government may even have to rethink their value if they are to coexist with it.

Cybercommunities are associations that depend on the mutual trust of their members for their existence. While cybernetworks can cut transaction costs dramatically as a result of their advanced low-cost communications networks, their anonymity is likely to substantially increase the cost of that trust. However, cybercommunities can be valuable if they can reduce the cost of trust by their voluntary nature. Companies would therefore have to respect this trust if they intend to shift part of their work to cybercommunities or harness their resources.

Companies therefore need to learn how to manage their relations with cybercommunities. There are three aspects to cybercommunity relationship management:

- (1) Managing concepts and ideals for harmonizing and enhancing the value of communities and that of companies and government at the same time.
- (2) Matching the aims of community activity and those of corporate and government activity (e.g., corporate marketing and community activities).
- (3) Managing the communications platforms used by cybercommunity members.

Managing relations with cybercommunities is a new type of skill for most companies. Acquiring this skill as quickly as possible (either by means of pilot projects or in the course of actual business) will probably be one of the core challenges facing those involved with cybercommunity solutions. Two of the most important points that can be deduced from CCCI projects are the following:

- The importance of those acting as intermediaries or agents between cybercommunity value and corporate value.
- The need for clear roles, rules and tools when supporting the activity of cybercommunities.

Provided these two conditions are satisfied, cybercommunities should be able to maintain the trust of their members and continue to exist.

In terms of corporate value (e.g., business planning, marketing and sales, research and development, production, public relations, investor relations and social contribution), cybercommunities have the potential to provide unexpectedly high added value. For this reason, much more research needs to be done in cybercommunity relationship management.

Furthermore, the following points should be borne in mind when acquiring the skills needed to manage cybercommunity relations across a wide range of business:

- Cybercommunities need to have clear aims.
- Rules need to be unambiguous.
- Tools (e.g., communications platforms) are necessary.
- Computer literacy needs to be improved.

There is an urgent need for the following:

- (1) Systematic research and the creation of databases on all sorts of cybercommunities.
- (2) A wide range of pilot projects for different purposes.

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- (1) Keio University and NRI set up the CCCI (Center for Cyber Communities Initiative) in July 1995 and closed the project as planned after five years at the end of June 2000. This paper presents an overview of CCCI activities as an entirely new type of collaboration between industry

and academia together with a summary of the CCCI's social recommendations. Sections II-IV were written by the author in his capacity as director of the CCCI secretariat and are based on "An Appeal for Cybercommunity Solutions – CCCI Recommendations," the draft of which was written by Professors Ikuyo Kaneko and Michikazu Aoi of Keio University and by (former) Executive Directors Teruyasu Murakami and Hajime Fukushima of NRI as well as the author to mark the end of the Center's activities. Further details of the CCCI's recommendations and a report on its activities can be found at its Website (<http://www.ccci.or.jp>).

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