

Changing Leaders of ICT Industry

A View from Fund-raising of Japanese Web 2.0 Ventures

By YUKAWA Kou

Activities of cutting-edge Web 2.0 businesses and M&As involving them are routinely reported in overseas media dealing with high technology. In Japan, “What is Web 2.0?” was the initial topic of discussion. Today, however, how Web 2.0-linked services can be incorporated into one’s business is an issue that is attracting a great deal of attention. What appears to be common to both the United States and Japan is that it is primarily venture businesses rather than established major companies that are aggressively offering these services.

What, then, are the characteristics of Web 2.0 venture businesses, listed on stock exchanges one after another in recent years, and how are they growing? When one views these businesses in terms of their capital relationships with large companies, what types of changes are taking place in Japan’s information/communications technology (ICT) industry?

In this paper, the realities of Web 2.0 venture businesses will be elucidated based on *Conditions and Growth Trends of Web 2.0 Businesses*, released by the Fujitsu Research Institute (FRI) and Japan Venture Research (JVR, an NPO corporation) in August 2007. By comparing the outcome of this report with the 2007 Information and Communications White Paper, released by the Ministry of Internal Affairs and Communications in July of the same year, this article will also examine changing leaders in the Japanese ICT industry from the aspect of Web 2.0 businesses’ capital relationships with big businesses.

Web 2.0 Businesses Watched even Before Boom

Since Tim O’Reilly presented his paper entitled, *What is Web 2.0 – Design Patterns and Business Models for the Next Generation of Software*, in September 2005, the concept of “Web 2.0” has spread explosively. This can be solely

attributed to the fact that O’Reilly’s paper was very attractive in that it quite accurately identified aspects of Internet businesses that were still in the process of evolution. However, it is somewhat doubtful whether O’Reilly’s paper really heralded something new. For example, the seven concepts that O’Reilly cited as “principles” of Web 2.0 had already been discussed since the second half of the 1990s. The concepts were: 1) the web as a platform, 2) harnessing collective intelligence, 3) data is the next “Intel Inside,” 4) the end of the software release cycle, 5) lightweight programming models, 6) software above the level of a single device, and 7) rich user experiences.

The spread of the Internet and its effects have been foreseen by experts in many fields since the second half of the 1990s. In *Being Digital* by Nicholas Negroponte in 1995, the author predicted the advent of image transmission by individuals via the Internet. If one had believed in Negroponte’s forecast of the spread of the Internet and a future that it would open, one would have been able to foresee the appearance of *YouTube* and similar businesses having great influence. If one follows this line of thinking, it will be possible to regard Web 2.0 as a cutout of a society where users participate via the Internet – put differently, a current toward democratization – which has been discussed for a long time.

The FRI/JVR study defines a Web 2.0 business as “an ICT enterprise that is increasing its corporate value by encouraging user participation, or an ICT business that is developing applications and technologies for user participation.” Of the companies established in or after 1994 and listed on Japan’s stock markets for emerging businesses in or after 2003, the study has identified 17 Web 2.0 businesses for analysis.

The study focused on the methods of fund-raising used by Web 2.0 businesses

since their founding, investors who have actively invested in these businesses (both venture capital companies and business firms), and the processes of growth of these businesses.

An interesting finding is that among the 17 firms that have gone public in recent years, there is not a single company established since 2004, when the concept of Web 2.0 began to spread dramatically. Given the time required before a business can be listed on the stock market, this seems natural. However, the 17 businesses include firms that have always engaged in user participation-type businesses since their founding. It is therefore highly likely that some entrepreneurs and investors have been focusing on Web 2.0-linked businesses even before the term “Web 2.0” came into fashion.

Market Capitalization Tops ¥1 Trillion

The 17 Web 2.0 businesses covered by the FRI/JVR study were given high ratings at the time of their initial public offerings (IPOs). The aggregate market value of the 17 firms then exceeded ¥1 trillion. It may be said they created an enormous value at that point. A comparison of their market capitalization with that of other ICT companies whose shares were listed at around the same time reveals that the Web 2.0 businesses’ average market value was approximately 2.3 times greater than that of other ICT businesses. Against the backdrop of such high expectations pinned on them, the Web 2.0 companies succeeded in raising funds about 1.3 times greater than those raised by other ICT firms (*Chart 1 on the next page*).

However, there is no question the average price-earnings ratio (PER) of 301 times at the time of IPOs was too high. During the “dot.com bubble” in and around 1999, some Internet businesses saw their PERs rise to 500-600

Chart 1 A comparison of Web 2.0 firms and ICT companies at the time of their IPOs

	Web 2.0 (17 firms)	ICT (103 firms)
Aggregate market capitalization at IPO	¥1,000 billion	¥2,641 billion
Average market capitalization at IPO (on an opening-price basis)	¥61,185 million	¥25,642 million
Average amount of funds raised through IPO	¥2,397 million	¥1,895 million (Mothers/2006: ¥1,370 million)
Average PER at IPO (on an opening-price basis)	301 times	229 times (Mothers/2006: 155 times)
Average amount of funds raised prior to IPO (=average amount of risk money inflow)	¥1,014 million	¥1,247 million
Average rate of VC shareholdings at IPO	12.44%	17.96%
Average rate of president's shareholdings at IPO	36.64%	21.92% (Mothers/2006: 38.00%)
Number of years before IPO	6 years	6 years (Mothers/2006: 9 years)
Age of president	36 years old	45 years old (Mothers/2006: 46 years old)

Source : Conditions and Growth Trends of Web 2.0 Businesses, Fujitsu Research Institute and JVR (2007)

times. The share prices of the Web 2.0 businesses at the time of their IPOs were generally in a “mini-bubble” as a whole.

Trading companies, Internet firms and other corporations constitute a large portion of investors in the Web 2.0 businesses. Their average single investment in the Web 2.0 firms was ¥130 million, almost twice the average one-time investment of ¥69.07 million by venture capital firms.

The Web 2.0 businesses received initial investments from venture capital companies. They were followed by those from general business firms, which were essential for subsequent growth. It is highly probable that there are some kinds of agreements between the Web 2.0 firms and general business investors regarding business alliances, etc.

Fund-raising & Rapid Growth

Venture capital investments in the Web 2.0 firms have yielded a maximum 805-fold return and an average 27-fold return. Investments by venture capital companies are usually said to be satisfactory if they yield a 10-fold return. It can thus be said that the investments in the Web 2.0 firms covered by the FRI/JVR study were extremely profitable.

An analysis of investments by venture capital companies shows that while some major firms have not actively invested in the Web 2.0 firms, some bank-affiliated companies have. Although bank-affiliated venture capital firms are generally perceived to be reluctant to invest in high-risk businesses, like the Web 2.0 firms, the outcome of the FRI/JVR study proved otherwise.

Chart 2 Rankings by amount of investment by general business firms (¥100 mil. or more)

	(¥1,000)	No. of firms	No. of investments	Average per firm	Average per investment
1 Sony Corp.	9,858,544	2	2	4,929,272	4,929,272
2 Itochu Corp.	3,514,016	1	7	3,514,016	502,002
3 CyberAgent	1,278,136	5	10	255,627	127,814
4 Sumitomo Corp.	960,000	1	1	960,000	960,000
5 Digital Garage	818,800	1	3	818,800	272,933
6 SKY PerfecTV	449,800	2	2	224,900	224,900
7 USEN	350,000	1	2	350,000	175,000
8 Itochu Techno-Science (now Itochu Techno-Solutions Corp.)	346,000	1	2	346,000	173,000
9 Forval	330,000	1	1	330,000	330,000
10 Index Holdings	284,300	2	3	142,150	94,767
11 CTC-Create	250,000	1	1	250,000	250,000
12 At Home Corp.	240,000	1	2	240,000	120,000
13 Sony Communication Network (now So-net Entertainment)	238,428	1	2	238,428	119,214
14 Obic Business Consultants	205,950	1	3	205,950	68,650
15 BS	199,800	1	1	199,800	199,800
16 trans cosmos	188,250	2	3	94,125	62,750
17 Rakuten	139,600	2	2	69,800	69,800
18 Dai Nippon Printing Co.	137,260	2	2	68,630	68,630
19 e-seikatsu Co.	135,000	1	1	135,000	135,000
20 Impress Holdings	103,000	1	2	103,000	51,500

Source : Conditions and Growth Trends of Web 2.0 Firms, Fujitsu Research Institute and JVR (2007)

Among general business companies that have invested actively in the Web 2.0 firms, Itochu Corp. and some other trading giants stand out as heavy investors (Chart 2). Also conspicuous among the investors are two types of companies: Internet firms such as CyberAgent, which are thought to be aggressive in forging capital relationships

with emerging firms because they are also providing Web 2.0 services, and firms like Digital Garage, which act as venture capital firms specializing in investment in Internet firms.

For major Internet businesses, these emerging Web 2.0 firms are regarded as important partners for their own further growth. While these businesses are

aggressively investing in Web 2.0 firms, existing major ICT firms are hardly making any such investments.

The most striking finding of the FRI/JVR study is that while the Web 2.0 firms are very aggressive in fundraising, they have also achieved very fast growth. Within about two and a half years of their founding, these firms made three or four capital increases through allocation of new shares to third parties. Many of them have raised more than ¥100 million each in their third or fourth capital increases.

During the same period, the number of employees grew sixfold while sales increased approximately eightfold. In the business year immediately preceding their IPOs, which was about six years after their founding, many firms had reached the level of ¥850 million in sales, ¥150 million in after-tax profits and about 40 in the number of employees.

How to Absorb the Internet Evolution

The Web 2.0 firms covered by the study created extremely large market value when they went public. The inflow of risk money to these firms prior to their IPOs suggests that their capital

alliances with existing general business companies were essential to their growth. However, few major ICT firms were among these capital partners, indicating that large ICT companies, which had provided impetus to the growth of Japan's ICT industry, were not involved in terms of capital supply for the creation of market value in excess of ¥1 trillion. There is no doubt that the share prices of the Web 2.0 firms at the time of their IPOs were in a mini-bubble. Even so, it can be said that share prices represent the true value of a business at the time and some companies have continued to grow smoothly after their IPOs.

Needless to say, investment is not essential in entering into a partnership with these Web 2.0 firms. However, it is important sometimes to assume the stance of having a part in a growth company as a player rather than remaining as a mere onlooker. The average sum of ¥130 million invested by a general business company in a Web 2.0 firm is minimal in comparison with several hundreds of billions of yen a major ICT company spends annually on R&D. For example, ICT companies could have considered investing in cutting-edge venture businesses such as the Web 2.0 firms as very low-cost R&D investments.

Major Internet Firms & Web 2.0 Ventures

In the United States, Google's aggressive M&A strategy is well known. Moreover, seeking their own further growth, globally established Internet firms are investing in venture businesses that are developing new technologies or services in peripheral areas. They are also supporting the growth and creation of venture businesses by increasing the patterns of investment recovery.

In fact, Web 2.0 venture businesses are being born one after another. In his October 2007 essay *The Future of Web Startups*, Paul Graham, a programmer using the LISP programming language and also a famous essayist, goes so far as to forecast that as Internet venture businesses increase dramatically, companies that purchase these firms will create the post of chief acquisition officer (CAO), who will be in charge of identifying good investment deals and executing contracts for their purchases.

The results of the aforementioned study show that, although on a smaller scale, a similar phenomenon is taking place among venture businesses in Japan. The major Internet companies that are aggressively investing in Web 2.0 venture businesses were themselves venture businesses 10 years ago. They have first-hand experience of how fast Internet businesses grow, and therefore appear to be capable of quickly responding to the evolving Internet. While they are preparing to incorporate the rapid growth of next-generation Internet businesses, they are also supporting Web 2.0 venture businesses through investments.

Major ICT Firms & ICT Ventures

In the past, major ICT businesses and ICT venture firms in Japan have also been indispensable partners to each other. The Ministry of Internal Affairs and Communications' 2007 Information and Communications White Paper, released in July 2007, gives more attention to analyses of ICT venture businesses than normal, but its major finding was that ICT venture businesses depend on major ICT firms for both their capital and business relationships.

In the report, "existing ICT firms cen-

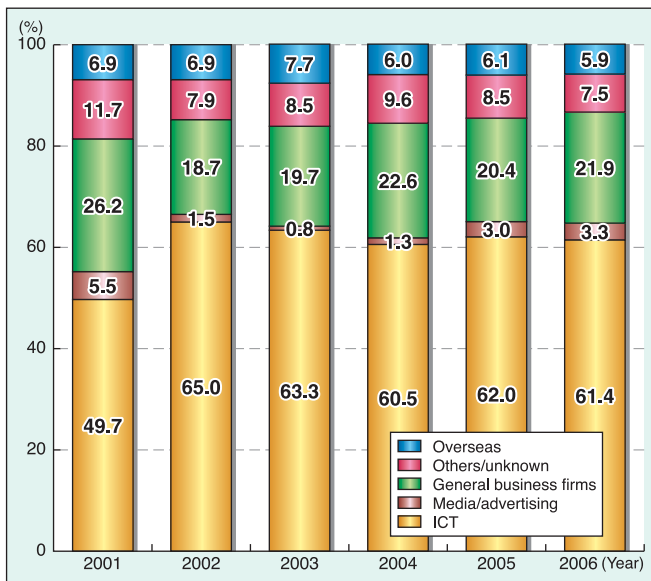
Chart 3 Largest shareholders in Japan's ICT venture businesses by industry

Year	2001	2002	2003	2004	2005	2006
(No. of firms covered)	38	68	82	107	140	185
Individuals	18 (47.4)	39 (57.4)	47 (57.3)	50 (46.7)	64 (45.7)	91 (49.2)
ICT firms	7 (18.4)	11 (16.2)	12 (14.6)	22 (20.6)	27 (19.3)	37 (20.0)
General business firms	3 (7.9)	4 (5.9)	4 (4.9)	7 (6.5)	8 (5.7)	13 (7.0)
Trading companies	1 (2.6)	1 (1.5)	1 (1.2)	2 (1.9)	4 (2.9)	9 (4.9)
Overseas investors	3 (7.9)	3 (4.4)	4 (4.9)	4 (3.7)	10 (7.1)	9 (4.9)
Venture capital firms	0 (0.0)	1 (1.5)	2 (2.4)	2 (1.9)	4 (2.9)	7 (3.8)
Financial institutions	0 (0.0)	0 (0.0)	0 (0.0)	3 (2.8)	5 (3.6)	4 (2.2)
Media/advertising firms	1 (2.6)	2 (2.9)	2 (2.4)	2 (1.9)	3 (2.1)	3 (1.6)
Other financial & leasing	0 (0.0)	1 (1.5)	2 (2.4)	2 (1.9)	3 (2.1)	3 (1.6)
Trust banks	0 (0.0)	1 (1.5)	1 (1.2)	0 (0.0)	2 (1.4)	2 (1.1)
Inhouse shareholding groups	1 (2.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Others/unknown	4 (10.5)	5 (7.4)	7 (8.5)	13 (12.1)	10 (7.1)	7 (3.8)

Note: In each cell, the upper figure denotes the number of shareholders while the lower figure in parentheses denotes a percentage in the total number of firms surveyed in the year.

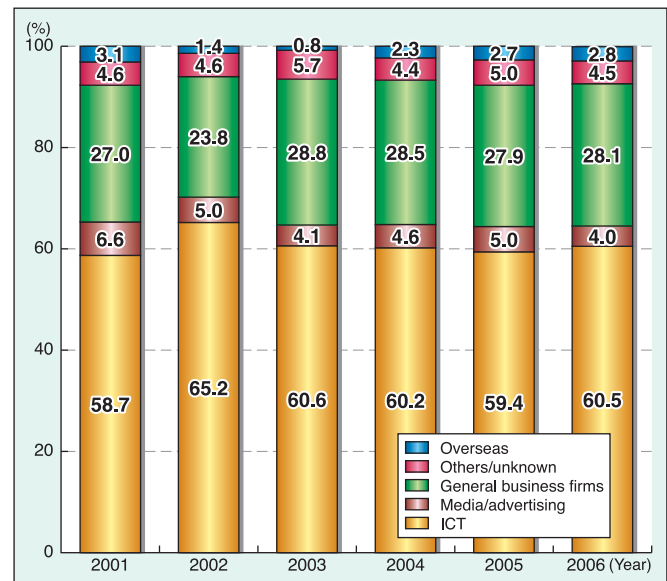
Source: 2007 Information and Communications White Paper, Ministry of Internal Affairs & Communications

Chart 4 Major supplier categories for ICT venture businesses



Source : 2007 Information and Communications White Paper, Ministry of Internal Affairs & Communications

Chart 5 Major customer categories for ICT venture businesses



Source : 2007 Information and Communications White Paper, Ministry of Internal Affairs & Communications

tering on major companies” are thought to mean such big names as NTT, NEC, Fujitsu and Hitachi. They are the largest shareholders in many venture businesses. Only individuals (very likely management members) top these firms in the number of venture businesses in which they are the largest shareholders. These ICT firms combined possess some 20% of shares in all ICT venture businesses. This is thought to have had a favorable effect on long-term capital policies of venture businesses (Chart 3). In the area of trading relationships, at least 60% of the suppliers and customers of ICT venture businesses are the existing ICT firms, again suggesting that they have been indispensable for the growth of venture businesses (Charts 4 and 5).

From the perspective of venture businesses, this may indicate dependence on the major ICT companies, but in the eyes of the latter, this can be seen as proof that they have been actively involved in growth areas. When the ICT industry as a whole is observed, in Japan the major ICT firms have always supported the growth of ICT venture businesses.

Changing ICT Industry Leaders

The two studies so far examined show very different pictures, however. As mentioned earlier, the large companies

defined as “existing ICT firms centering on major companies” in the Information and Communications White Paper have invested in ICT venture businesses, but they have hardly invested in the Web 2.0 venture businesses. This fact suggests that the major companies, which have long led Japan’s ICT industry, either see the businesses that are unfolding on the evolving Internet as having only small synergistic effects on their own businesses or have failed to see such synergistic effects altogether. Without doubt, Web 2.0 venture businesses have very little synergistic effects on the present businesses of these major companies. Unless one uses a great deal of imagination, it will be difficult for these companies to decide on capital commitments to these ventures. In reality, however, there are many instances in which major ICT firms failed to respond to growth opportunities that arose right in front of their eyes.

The Nikkei Sangyo Shimbum, a Japanese business daily, asked O’Reilly in January 2007, “If there is to be ‘Web 3.0,’ what will it be?” O’Reilly responded that in 10 years, the Internet will be the center of everything, but that it would not be called “Web 3.0” because the coming change is bound to be something beyond the present (business) ecosystem. This response is too ambigu-

ous, but even conservative estimates forecast that the market for electronic commerce for consumers will grow 1.5-fold and Internet advertising approximately 1.6-fold by fiscal 2011, which is only four years away. It is certain that as O’Reilly puts it, the world of Internet businesses in 10 years will be on a scale completely different from what it is today.

This leads us to believe that the presence of Internet businesses in the ICT industry will become stronger and stronger in the years to come. Given the capital relationships as observed above, it is very likely that the key players in the ICT industry will inevitably change. It will not be too long before the major Internet firms, which have grown markedly in the past 10 years or so, will replace the existing major ICT firms as the leaders of Japan’s ICT industry.

JS

Yukawa Kou, Ph.D., is Senior Associate at the Economic Research Center, Fujitsu Research Institute. He received an MS degree from Columbia University in 1996 and a Ph.D. degree from the School of Engineering of the University of Tokyo in 2005. His fields of specialization are trends among Internet businesses and company-to-company networks.