

Production-Education-Research Cooperation Mode study—— with Beijing Changfeng Alliance as an example

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Abstract: This paper takes Beijing Changfeng Alliance as the successful case to study Production-Education-Research cooperation mode. The paper firstly introduces the formation background, present situation, operation and management mechanism of the alliance. Then advantages and experiences of this alliance are illustrated in detail. These can provide the theory support and the practice reference for spreading such Production-Education-Research Cooperation mode which mergers and acquisitions or alliances take the industry-chain integration as a core.

Keywords: Production-Education-Research; cooperation mode; Changfeng Alliance;

I. Introduction

Production-Education-Research cooperation is the important content of Regional Innovation Systems^[1], and the research about it has always been a focus in science and technology field, there are a lot of practices and researches at home and abroad^[2]. In recent years, Beijing software and information service has been developed well by the support of the government. Software industry has become pillar industry in Beijing. In particular, the Changfeng Alliance, Intelligent Grouping and Resource Sharing (IGRS) and other industry alliance have established one after another, which integrated industry chain, at the same time, promoted Beijing software industry structure optimized. And any more, these alliances have important impact on promoting Beijing software industry development. This paper takes the Changfeng Alliance as the successful case to study Production-Education-Research cooperation mode. The advantages and experiences of this alliance can provide the theory support and the practice reference for spreading such cooperation mode which mergers and acquisitions or alliances take the industry-chain integration as a core.

II. The Formation Background and Present Situation of Changfeng Alliance

In 2004, the software development in Beijing has made significant achievements in independent innovation, but compared with same enterprises of developed countries, “small & scattered” is a striking feature of software

independent innovation enterprises in China, Beijing is no exception. Company works hard to develop a better new product, but it is difficult to accept by the market, just because their company strength are too small and weak. There are large number of software companies in our country and foreign country, and they compete intensely. So the enterprise can hardly compete by itself, it is necessary for Beijing software companies to cooperate and exchange, in order to compete against multinational competition. Therefore, a good development environment is essential. Especially, coordinating with various departments and working together is the key.

In view of this situation, setting up the alliance to form the industrial chain is a very good development model. In 2005, Changfeng Open Standards Platform Software Alliance (hereinafter referred to as Changfeng Alliance) established as a non-for-profit organization under the guidance and supports of the national and local government departments which in charge of science and information industry. Changfeng Alliance is the largest software industry alliance, including the well-known software companies, research institutions, colleges and universities, and third-party intermediary service organizations. Changfeng aims to promote the development and adoption of open standards in China.

“Open Standard” in Changfeng Open Standards Platform Software Alliance is refers to: uphold an open attitude, comply with the open international technical standards (non-sole manufacturer monopoly technical standards), and support the open source code technology and concept. “Platform Software” is refers to: operating system of the server, database, middleware, operating system of the client, office software, as well as Common Application Platform and industry application platform. we can see, from the operating system vendors, database vendors, middleware vendors, to the office software vendors, application platform software vendors, as well as the integrated businesses close to the user, and third-party intermediary service organizations, it has almost covered all the links of the software industry chain.

The aims of Changfeng Alliance display in the following four aspects:(1)To develop independent software industry, increase the market share of self-platform software, and optimize the pattern of China's software industry; (2)To integrate the preponderant resources and capabilities of all members of the alliance, build a collaborative and interactive software industry chain, establish the most

influential software brands of high-end independent platform; (3)To provide appropriate, secure, cost-effective, first-class platform software products for the construction of China's information, and build practical solutions easy to use; (4)To reduce costs and risks of information, ensure the informationization forward smoothly.

To lead and promote the independent innovation of software industry, pursues the goal to provide customers software service with high security and best price, are the missions of the alliance. That also include: to create a healthy industry environment for cooperation; to cultivate the applications with typical significance and widespread influence; to increase the market share of certification platform, and achieve industry growth and enterprise growth.

Since its founding on April 14, 2005, the number of Changfeng Alliance members has grown from 22 to 69. Changfeng Alliance has always been adhering to the purpose of "standard is a belt, the union is the power", and the concept of "open, collaboration, value-added, quality". Through innovating organization and mechanism, gathering industry resources, constructing the industry innovation chain of "Production-Research-using", to guide industry clusters to innovate and enhance the whole industry's competitive power.

III. The operating and administration mechanism of the Changfeng Alliance

(i) Organizations of Changfeng Alliance

The organizations of the Changfeng Alliance include Council of the Union, Secretariat of the Union, Technology committee, Standard Working committee, Marketing Committee, Technical Working Groups. (figure. 1)

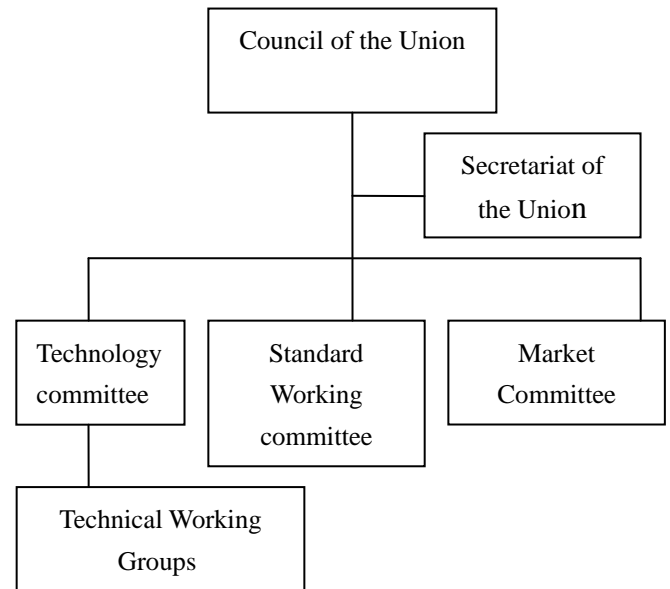


Figure 1: organizations of the Changfeng Alliance

Council of the Union

The Council for the Union is the highest decision-making organization, which lead and decide affairs. The Council elected by the Union membership and every year can be re-elected.

Secretariat of the Union

Secretariat of the Union is responsible for the alliance Routine management. The main jobs as follows: collect, use and manage the membership fee, establish the details of revenue and expenditure accounts, annual fee income and expenditure will be publicized to the whole membership, publish the membership fee every year. Secretariat should plan how to use the membership fee every year, and execute that plan after the council approved.

Technology Committee, Standard Working Committee, Market Committee

Technology Committee is responsible for the matters relate to the technical aspects. Technical Committee is composed of independent technologist and the chief technology officer of each unit. The committee plan and organize technology services Under the guiding of Changfeng TAB, drive members to research, develop, converge and adopt the open standards for IT industry, make Changfeng's technology development strategy.

Standard Working Committee is responsible for standards-related matters of the alliance. It is composed of independent technical experts and members of the unit who has standard work experience.

Market Committee is responsible for marketing and sales matters, like providing marketing, policy and technical information to members, using Changfeng market resource, exploit local and international marketing channel. Market Committee is composed of the members of the market or

sales director.

Technical Working Groups

Technical Working Groups belong to the Technology Committee. The existing Working Group of the Changfeng Alliance: the Working Group of SOA application and popularization, the working group of foundation software, the Working Group of SOA reference construction, UFO Working Group, Internet Information Services Working Group, mobile Internet Information Services Working Group, Service Assurance Working Group and so on. These groups can provide professional technical guidance and consult service, plan the government projects, provide testing and qualification service for IT products and solution.

(ii) Management mode of Changfeng Alliance

Changfeng alliance has the very clear Administrative Measures. The payment of membership fee, the rights and obligations of membership, joining and quitting the alliance and so on, all have strict rules. And these rules have already put into the practice since October 2005 1st. The legal enterprises and institutions devote to research, education, development, application, services and management in the area of platform software, can apply to join the alliance. As long as join the alliance, they can enjoy the rights and duties as table 1 shows.

Table 1. The rights and duties

Number	rights	duties
1	enjoy the right of using the alliance logo within the framework of cooperation	complete the work commissioned by the alliance, and render the essential supports and assistances
2	give priority to take part in the activities organized by the alliance, and get the information and other treatments	assign the person to contact with the Secretariat , in order to carry out their daily work
3	enjoy the preferential products and services of other alliance numbers	provide the preferential products and services to other numbers
4	get the support and the assistance of the alliance when the activity conforms to the alliance purpose	under the same conditions, use other member's products or services firstly
5	can have preferred bidding qualification when participate in the bid organized by other members	recommend the new members actively

6	publish information on “Wings Alliance” and “facilitator” for free	pay membership fee in time
7	give suggestions, criticizes, surveillance to the organization 's work	
8	quit the alliance	

Source: the relevant materials organized

The alliance often has many non-periodical activities. Like conference, Sharon, lectures, entertainment, new product recommendation meeting, technology exchanges and training activities. The members of various units can have different category exchanges and communicate frequently by these activities. Through these formal and informal exchange activities, it caused alliance members to achieve the very good cooperation.

IV. Experience and Enlightenment

(i) Enterprise dominant Technology innovation system

First, Changfeng Alliance take the software companies as a core, take the software market as the guidance, hold the key link, configure the superiority resources, follow the market rule, that manifested all the enterprises based on the common needs, the common will, the unified cooperation and union; Second, Changfeng Alliance has held four key points of the software industry development, such as, standard, application, channel and brand, which can seek the breakthrough in the platform software's key link; Third, the alliance adopts “the member + third party Service organization” mode of operation, manage and coordinate by the Service organization, so that can provide technology upgrading and quality assurance.

(ii) The reasonable incentive mechanism

In order to promote individual members to work better, Changfeng Alliance develop a very detailed incentive mechanism. Drive measures have been taken in a series of links which put the products into the market. These drive measure is mainly aims at the integrated businesses, because the product pushes to the market mainly lie in the integrated business's operation, but product business is mainly recommends their own products to the integrated businesses. So long as sold the product, it is the biggest reward to the product providers. The specific features: passing the Testing Center's test, putting in the demonstration center to demonstrate, or

successfully impelled the state-owned independent product, all can give the reward. If who sell product successfully, give reward according to sales. In short, every step in the integrated business's operation, as long as they meet the requirements and operate successfully, there will be some incentives. Divide the big goals into many small goals to reward, it is good to encourage and promote the integrated businesses.

(iii) The independent innovation plays an important role in development

For each product provider of the Union, they can set their own R & D target, control their own R & D progress, according to their own direction and main business. The intellectual property rights are owned by the enterprises themselves. Changfeng Alliance mainly provides a sales channel for our product providers, but the R & D projects are operate by enterprises their own or decided together with the integrated businesses.

(iv) Policy guidance and function transformation

In the past, the government supported the IT industry mainly by deploying technological project and investing the funds to the R & D. But now the Science and Technology Commission and other government departments are trying in this way by Changfeng Alliance to support and guide software industry developing. Science and Technology Commission of Beijing played a key role in the early period of Changfeng Alliance. At the beginning, tens of millions were used in the Union's Mechanism construction, rewarding the integration businesses, making product standard and so on.

As a science and technology management department, it is important to establish a mechanism, create an environment, which is necessary to guide the innovation resources and increase more innovators. Through enhancing the innovative capacities of enterprises, the enterprises can enhance the innovation resources absorbing and digesting. Then the ecological cycle of the innovation environment will be optimized, which can benefit more enterprises. Regarding such alliance, the government department should give more attentions and supports, encourage they to create alliance culture and cooperative atmosphere, coordinate their relation and guide the alliance developing toward the correct direction.

(v) Alliance is an effective choice to improve the competitiveness of software industry

At present, take industry-chain integration, mergers and acquisitions or alliances as the core to become an important trend in the global software industry. The competition among enterprises has evolved the competition between the

Union and the Union, or business clusters and business clusters. This situation requests our enterprises to form a close strategic alliance, pursue the complementary advantages, cooperate with each other based on division of labor, and develop together. Compete depending on the cooperation, and seek the development in the competition, which is a new union competition pattern.

Beijing Changfeng Alliance is a new practice for Beijing software companies uniting. The alliance is composed of the basic platform enterprises, the application platform enterprises, the system integrated enterprises. And it bases on open technical standards, pushes out a unified brand, and establishes the technical cooperation system, works together to build the information in line with the China's national conditions informationization solution.

It is not only the "big with small" alliance (i.e. the largest and most powerful large-scale application software vendors and system integrated businesses can promote the platform software vendors independent innovation in R & D to develop systematically, so as to form a stable industry chain), but also the "research depends on using " alliance (i.e. through demonstrating the application project of the major industries, promote China's own software products standardization and industrialization). And any more, The alliance bases on the standard. (i.e. it takes the standard as the band and benchmark, unites the enterprise of the alliance, forms the technological Industry chain and synergic relationship closely, impels industrialization by standardized).

The establishment of alliance, marked that Beijing independent platform software moves gradually from the dispersion toward the union, from the resources separation toward industrial chain conformity, from a technical orientation toward the standard for success. That has entered a new stage of development and has a positive impact in the industry. Especially, it is great significance to promote the industrialization and application of the software platforms which have independent intellectual property rights.

(vi) Driven by two-way

Driven by two-way is a better way to promote the implementation and expansion of the innovation field. As for the integrated businesses, they can combine with a certain special policies to enlarge the implementation of application software platform, and cooperate with application software platform providers actively. As for application software platform providers, the recommended vendor which products have been used widely can be encouraged firstly.

(vii) The third party organization

The feature of Changfeng Alliance is that government

organization and intermediary agency set the stage for enterprises, Software Industry Productivity Center plays a role in organizational management and testing center is responsible for the quality assurance. There are also many alliances exist before then, but operate truly difficultly. Because each member has its own interests and developmental plans, it is difficult to coordinate together. However the government is impossible continuously tracks the management, can only chooses a reputable agency to replace the government to manage and supervise.

Beijing Software Industry Productivity Center has been involved in the whole process of Changfeng Alliance. The purpose of alliance is to help domestic platform software vendor to establish distribution channels, set standards and build brand. Therefore it can not be limited to routine management work, must plan the strategy of alliance in the long run, must built the standard system and the certification system in order to provide the high-level consultation for enterprises.

Beijing Software Testing Center is responsible for guarantee and quality improving. Testing Center in Changfeng Alliance has three platforms, namely, experimental platform, testing and certification platform, brand platform for display. The platform software used in the solution must be their own independent software or their alliance member's products, it is the prerequisite to take the Changfeng Alliance' certification.

References

- [1] Wang li, Ma ning, Enterprise dominant Production-Education-Research Ccooperation Mode study, Studies in Science of Science, 2005, 12, 244-248
- [2] Wang di, Study on the main mode of industry, university and research institute at home and abroad, [J]. China University of Science &Technology and Industrialization, 2008 (7): 32-34.
- [3] Xue Jinmei, Zhou Yingzhi, Study of Cooperative Models between Industry Colleges or Scientific Institutes and Relevant Issues in China, Journal of Shandong Medical University(Social Sciences Edition) 2000,2,83-87
- [4] DAVID B, Michael, G, University, Industry research relationships in Biotechnology: implications for the university [J]. Science, New Series, 1986, 232(4756):1361-1366.