

E – ENTERPRISES

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Abstract

This paperwork provides the principles on the *collaborative networks* comprising the *E – Enterprises*. The competition in the information age is less expected to take place among single companies, but increasingly among clusters of companies that work together to exploit the value of a business opportunity. The development of the technology permits now the communication between persons and organizations situated in different geographical areas, so they can form a virtual enterprise and improve the occasion of short window opportunities in the scenario of market turbulence and can create new value by confrontation of ideas and practices, combination of resources and technologies, and creation of synergies.

Keywords: *collaborative networks, E – Enterprises*

1. Collaborative Networks

A collaborative network [1] is a network formed from a variety of entities (organizations, people, even machines) largely autonomous, geographically distributed, heterogeneous in terms of their: operating environment, culture, social capital and goals, which collaborate to better achieve common or compatible goals and the interactions between them are supported by the computer network.

Collaborative networks of organizations provide a basis for competitiveness, world-excellence, and agility in turbulent market conditions. Participation in a collaborative network has the potential of bringing benefits to the involved entities:

- **Survivability** in a context of market turbulence – In most cases, you cannot survive if you are alone
- **Acquisition of a larger dimension** – It is easier to compete with a big company if your entire collaborative network is bigger
- **Access to the new / wider markets** and new knowledge
- **Sharing of risks and resources**
- **Joining of complementary skills and capacities** focus on core competencies while keeping a high level of agility
- **Better achieving common goals** by excelling individual capabilities.

Collaboration networks manifest in a large variety of forms, including virtual organizations, virtual enterprises, dynamic supply chains, extended enterprises, professional virtual communities, collaborative virtual laboratories etc.

2. The Collaboration

The collaborative networks are shown in figure 1.

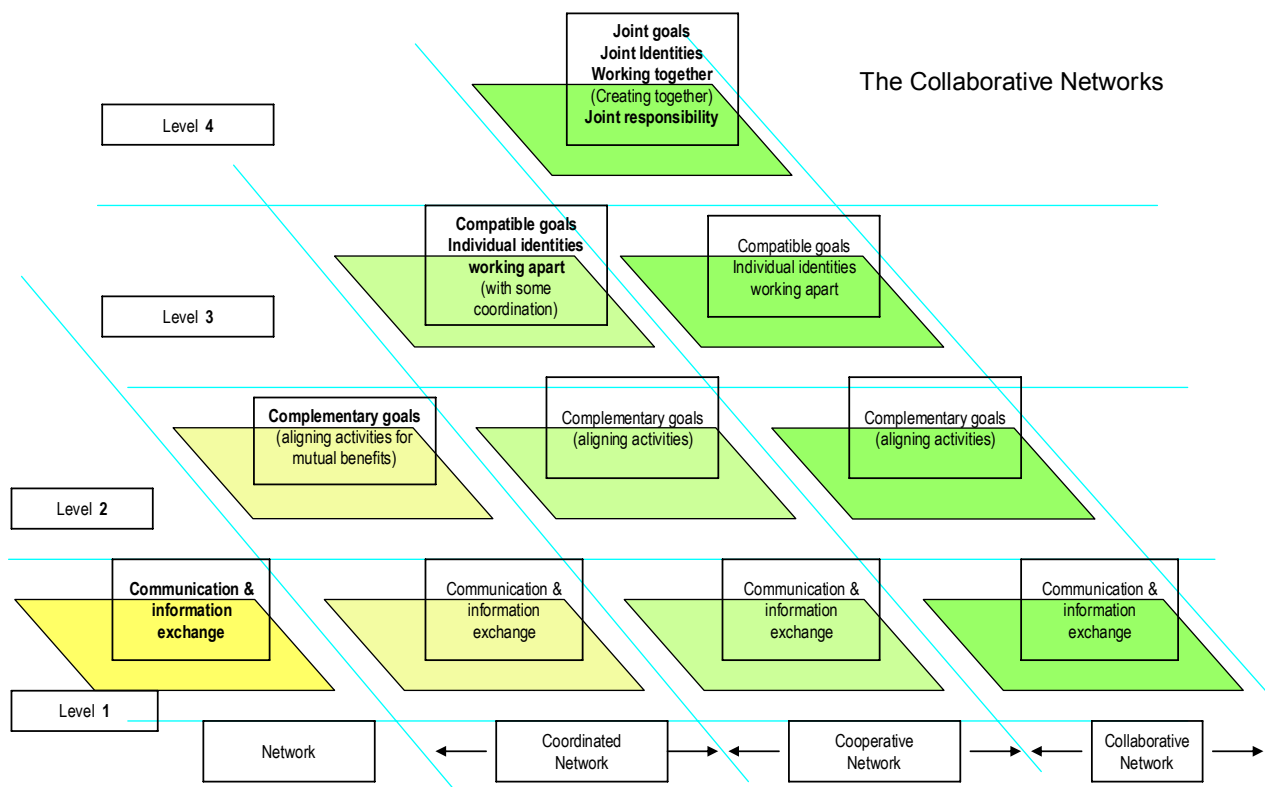


Fig.1.
The Collaborative Networks

3. E – Enterprises

A Virtual Enterprise [2] is a temporary alliance of enterprises coming together to share skills or core competencies and resources in order to better respond to business opportunities, and whose cooperation is supported by computer networks. This alliance will be called an *E-enterprise*.

The development of the Internet, coupled with the development of technologies for Knowledge Management and Work Management, will have deep influence on the way that the economic actors play their role in the worldwide market place. This will lead to the development of a new form of economic undertaking, the "Virtual Enterprises" where sets of economic actors are associating their strengths to provide a specific service traditionally provided by a single enterprise. Such a possibility will have, in the long term, a deep influence on the economy and on the enterprise development strategies.

Figure 2 illustrates the definition. Enterprises 1-4 from the independent units work together within a value chain of five steps and provide the partial business processes A_i to E_i . Partial processes that include corporations' core competencies are represented in Figure 1 with a shaded background. A core competence is defined as the skills, technologies, and know-how are crucial for the success of an enterprise and that enable the company to produce and offer a marketable product.

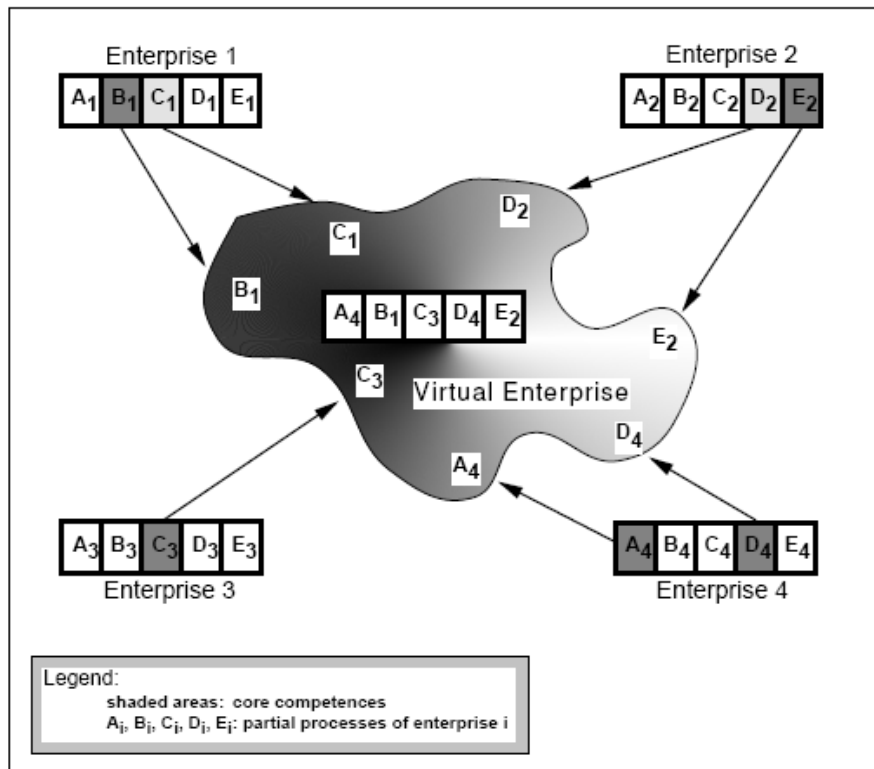


Fig. 2.
An abstract picture of a VE

Source: Camarinha-Matos L. – *Virtual Enterprises and Collaborative Networks*
Kluwer Academic Publishers, 2004

In a virtual enterprise, a company assembles a temporary consortium of partners and services for a certain purpose. This purpose could be a temporary special request, an ongoing goal to fulfill orders, or an attempt to take advantage of a new resource or market niche. The general rationale for forming the VE is to reduce costs and time to market while increasing flexibility and access to new markets and resources. As much as possible, individual companies focus on core competencies and mission critical operations, outsourcing everything else.

Internet – the support for communication between agents from a CN

Internet provides essentially two features:

- HTML, a multimedia presentation protocol, enabling the definition of pages containing multimedia elements as well as forms fields. HTML is very simple and enables presentation tools (web browsers) and edition tools (HTML editors) at reasonable cost.

- URL, a universal service identification, able to locate anywhere in the network an HTML page, or a program invocation (CGI call).

Thanks to these features, Internet provides a very easy to use interface, and a set of tools to support it at low cost. More important, any page or application created and stored using Internet standards can be seen or activated from any workstation connected to Internet, anywhere in the world.

Today, everyone is likely to agree on the fact that Internet is a major technological revolution that every company needs to consider. However, even three years ago it was not like that. Internet deployment around the world – both at public and professional levels – is the fastest technological evolution of this century. The Internet connected 200 million users in the year 2000, and perhaps one billion in 2010. Within the past two or three years, the whole computer and telecommunication industries have redeployed their development and marketing forces to provide tools and services on the Internet, to enhance its infrastructure and standards and provide supporting products. The level of investment is unprecedented and has now gone far beyond the point of no return.

The Internet offers any individual the ability to exchange information with anyone in the world as if they were in the same village—the “global village.” This makes it possible to create communities of people with a common interest where distance is irrelevant. Electronic commerce is part of the scenario because any electronic shop is potentially part of the village. Similarly, Workflow can spread across company boundaries and anywhere in the world on the Internet. This opens up a new way of doing business through homework, mobile work and virtual enterprises. It is possible to realise cooperation between economic actors for common undertakings and allow dynamic reconfiguration as the need arises. In the long term this will bring a major breakthrough in productivity, organization, international exchanges and economic growth through:

- Innovative products and services combining communication, electronic commerce and business process automation to provide effective and low cost customer service worldwide;
- Innovative processes where the client is a direct participant in the process and Workflow-enabled processes track transactions across unit, company and enterprise boundaries;
- Innovative organizations relying on Workflow-based end-to-end business processes to provide the best possible service, in spite of the internal structure being adapted to match market needs;
- Dynamic win-win cooperation between enterprises and individuals. Better service for the market will be based upon optimum performance of each of the assembled partners being enabled through Workflow-controlled business processes.

Bibliography

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