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READINESS FOR COLLABORATION ASSESSMENT APPROACH IN COLLABORATIVE NETWORKED ORGANISATIONS

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Collaboration is essential to develop successful Collaborative Networked Organizations (CNOs). In order to know if an organization is ready and has the needed characteristics for collaborate and participate in a CNO, either a Virtual Breeding Environment (VBE) or a Virtual Organization (VO), a set of specific elements should be evaluated. These evaluation elements are referred as Readiness for Collaboration Assessments and are the main topic of this paper. Main elements that should be considered in these assessments, especially for an organization that wants to become a VBE member are presented as a first approach that can be implemented in different Virtual Breeding Environments.

1. INTRODUCTION

Collaboration has a clear impact on business performance; therefore a wide variety of organizations are starting to join efforts and working together under a large number of collaborative models to deal with market dynamism and hypercompetitive global environments (Todeva & Knoke, 2005). Collaboration is widely recognized as a mechanism for leveraging competitiveness and thus increasing survivability in turbulent market conditions. Through different collaborative models, organizations nowadays are capitalizing on individual strengths by sharing risks and resources, and joining complementary skills and capacities, in order to gain new competitive advantages and excelling individual capabilities (focus on core competencies).

Collaboration is instituted gradually, implies mutual trust and thus takes time, effort and dedication. Collaboration can be viewed as part of a development continuum of four building blocks known as the *continuum of collaboration* (Himmelman, 2001) required to fully realize a collaborative endeavor. First building block is *networking* which involves communication and information exchange for mutual benefit among entities (e.g. organizations). Second building block, extending networking, is *coordination* which now implies in addition to exchanging information, aligning/altering of activities so that more efficient results can be achieved. Third building block, extending coordination, is *cooperation* which not only involves information exchange and adjustments of activities, but also sharing resources for achieving compatible goals. Fourth building block, extending cooperation, is *collaboration* which now represents a process where entities

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share information, resources and responsibilities to jointly plan, implement and evaluate a program of activities to achieve a common or compatible goal[1].

In short, *collaboration* implies sharing risks, resources, responsibilities and rewards among organizations acting as a joint entity (e.g. a collaborative network), in order to achieve a common goal that would not be possible, or would have higher cost, if attempted individually (e.g. a collaboration opportunity).

Collaborative Networked Organizations (CNOs), or simply collaborative networks can be defined as "networks of organizations that are largely autonomous, geographically distributed, and heterogeneous in terms of their: operating environment, culture, social capital and goals; nevertheless these organizations collaborate to better achieve common or compatible goals, and their interactions are supported by a computer network" (Camarinha-Matos & Afsarmanesh, 2006).

For developing successful CNOs, it is necessary that potential members are ready in advance and prepared to participate in collaborative endeavors, but how to state that an organization is ready to play a part in a collaborative effort?, this is the main research question that this paper addresses.

In order to define the term collaboration readiness in a CNO, two terms should be defined: "Readiness" and "Collaboration Readiness". *Readiness* means a state or quality of being ready and grasps the following elements: preparedness, promptness, aptitude and willingness. C*ollaboration readiness* can be defined then as the evidence of *readiness* reflected in the provision of staff, budget, training, technology and other resources to support *collaboration* based-on the quality and effectiveness of past and current collaborative activities across organizational boundaries.

Mainly in collaborative networks, readiness for collaboration means organization's capability for leadership to support collaborative activities, allocate/assign resources (money, staff, technology and information) across organizational boundaries, and attach to a common ground for successful collaboration (common operating principles, common ontology, interoperable infrastructures, and cooperation agreements).

Migrating towards this collaborative environment, requires a new organizational orientation and infrastructure based-on a *collaborative culture* which can be associated to a set of primary requirements such as: openness, commitment, leadership, trust-building, self-learning, continues training, long-term & global vision, effective communication, knowledge sharing and innovation. Collaborative culture compromises all organization's beliefs, knowledge, attitudes, and customs towards a supportive and positive behavior to enhance the capabilities of others and the willingness to adapt for the benefit of all (Romero et al, 2007b).

This paper will present initial efforts towards defining a first assessment approach to evaluate organization's readiness for collaboration to participate in two CNO types: *Virtual Breeding Environments (VBEs)* and *Virtual Organizations (VOs)*.

Main research objectives are: [1] to identify critical criteria to assess collaboration readiness in VBE membership applicants to become VBE members; [2] to identify critical criteria to assess collaboration readiness in VBE members to become VO partners; and [3] to provide some guidelines for organizations that would like to continuously enhance their readiness for collaboration after becoming a VBE member.

[1] See also Camarinha-Matos & Afsarmanesh, 2006.

2. READINESS FOR COLLABORATION IN VBEs AND VOs

Virtual Breeding Environments (VBEs) represent "an association or pool of organizations and their related supporting institutions, adhering to a base long-term cooperation agreement and adoption of common operating principles and infrastructures, with the main goal of increasing both their chances and their preparedness towards collaboration in potential VOs". Virtual Organizations (VOs) represent "a temporary alliance of organizations that come together to share skills or core competencies and resources in order to better respond a collaboration opportunity, and dissolve when their goal has been achieved" (Camarinha-Matos & Afsarmanesh, 2006).

A realistic approach to materialize a truly dynamic VO creation process when a collaboration opportunity arises, and being able to cope with the time period during which an opportunity must be seized or lost, requires preparedness in potential VO partners, which can only be developed in a long-term proactive cooperation (e.g. within a VBE) (Camarinha-Matos & Afsarmanesh, 2007).

VBEs as supporting environments aim to guarantee this preparedness in their members to quickly get engaged in collaboration processes (e.g. VO creation). VBE training underlines the preparedness needs of its members to be supported and maintained during the VBE lifecycle as a strategic item to achieve genuine readiness for collaboration in the VBE members.

According to Himmelman's (2001) *continuum of collaboration*, VBEs represent networks where cooperative inter-organizational relationships are promoted and instituted. VBE members work together on long-term projects like the creation of credibility & performance records, common ontology, working & sharing principles, and interoperable infrastructures to establish the base trust for all VBE members to collaborate in VOs. Furthermore, true collaboration, occurs when VBE members relinquish some of their autonomy to jointly meet a collaboration opportunity and agree that their goal could be best accomplished together as a combined effort of all the VO partners selected.

In summary, two main issues should be evaluated in relation to the readiness for collaboration in CNOs: VBE membership applicants' readiness to become VBE Members, and VBE members' readiness of to become VO partners.

2.1. Readiness of VBE Membership Applicants to become VBE Members

VBE membership applicants refer to potential organizations that have the interest to become VBE members. Once these organizations have approved the first readiness for collaboration assessment level they become VBE members.

VBE members are those organizations that have established common interests with other VBE members, and also have complied with the general *VBE working & sharing principles* (Irigoyen, 2006). VBE working & sharing principles can be described under five perspectives: [1] *Organizational perspective* - related to the definition of VBE actors, roles, rights and responsibilities (Camarinha-Matos & Afsarmanesh, 2005); plus VBE structure, governance rules and bylaws (Romero et al, 2007b). [2] *Business process perspective* - related to the main VBE lifecycle management process (Afsarmanesh & Camarinha-Matos, 2005). [3] *Resources perspective* - related to the assets management such as: physicals, technology, staff, knowledge, and other tangible & intangible resources (Afsarmanesh & Camarinha-Matos, 2005; Romero et al, 2007a). [4] *Value systems* and *business model* (Romero et al, 2006; 2007a) *perspective* - related to membership (Sitek et al, 2007), profiling and competency (Ermilova & Afsarmanesh, 2006), trust (Msanjila & Afsarmanesh, 2006) performance (Alfaro et al, 2005), incentives and sanctions (Romero et al, 2007a), and agreements/contracts management (Camarinha-Matos & Oliveria,

2006). [5] *Interactions perspective* - related mainly with VO creation process (Camarinha-Matos et al, 2005; 2007) and potential third party interactions (e.g. supporting institutions) (Romero et al, 2006).

2.2. Readiness of VBE members to become VO partners

VO partners refer to those VBE members that have approved the second readiness for collaboration assessment level by complying with a *competency-based approach* used to search and select the most suitable VO partners, from a subset of VBE members, according to the particular competency requirements of a collaboration opportunity.

A *competency-based approach* (Boucher & Eburnean, 2005; Camarinha-Matos et al, 2005; 2007; Ermilova & Afsarmanesh, 2006) focus on searching and selecting the potential VO partners based-on the possession of the precise competencies (as a set of processes, resources and standards) to respond to a specific collaboration opportunity, plus the capabilities^{+} and capacities^{++} required to manufacture/execute a certain product/project in the quality^{+} and quantity^{++} required. In this sense, the adoption of a competency-based approach to assess the readiness for collaboration level for VBE members to become VO partners will provide an accurate description of the necessary criteria to search and select the right VO partners.

3. READINESS ASSESSMENT APPROACH

The readiness for collaboration assessment approach aims to determine both; whether an organization can be qualified to enter a particular collaborative network, such as a VBE, and when a collaboration opportunity arises, the level of preparation to participate in a VO. Alternatively, if the organization is not ready to collaborate, the assessment model will provide a development plan (e.g. feedback) for helping the organization to improve the weak points for passing the readiness assessment evaluation in the near future. Making this assessment should involve the VBE administrator to accept or reject potential VBE members, and the VO planner (business integrator) for the selection of potential VO partners.

The proposed readiness for collaboration assessment approach is based-on four levels, devoting the first three to assess VBE membership applicants' readiness to become VBE members, and the last level for VBE members' readiness to become VO partners, and all together addressing the VBE working & sharing principles (see Table 1).

Table 1. VBE Working & Sharing Principles vs. Readiness for Collaboration Assessment Approach

VBE Working & Sharing Principles		Readiness for Collaboration Assessment	
Perspective	Organizational	Corporate Governance & Enterprise Architecture (Organization)	Assessment
	Business Process	Enterprise Architecture (Processes)	
	Resources	Enterprise Architecture (Resources + Information/Knowledge)	
	Value Systems & Business Models	Enterprise Architecture (Market)	
	Interactions	Past Performance & Competency	

Following paragraphs detail the evaluation criterions for the VBE member's readiness assessment, and then for the VO partners' readiness assessment:

3.1. VBE Members' Readiness Assessment

The VBE members' readiness assessment is applied once by the VBE administrator to the VBE membership applicants. The evaluation criteria focus on stable elements (inter-organizational compatibility) to appraise the readiness for collaboration of potential VBE members. Following paragraphs detail the evaluation criterions for the VBE member's readiness assessment:

Corporate Governance Assessment. In this criterion the focus is on *strategic fit*, the objective is to find the compatibility between the VBE membership applicant interests and the VBE strategy. Associations are normally successful when partnering organizations connect with the collaboration purpose and with each other. Moreover, clarifying the *collaboration purpose* to come with a shared understanding about the collaborative goals and expected outcomes helps VBE membership applicants to settle their expectations. Preparing a written *collaboration purpose statement* by answering: What are the reasons for entering the VBE? (E.g. new market opportunities, shorter time-to-market, risk/cost sharing, access to complementary competencies) and How the potential VBE member intends to cooperate with its future partners? (E.g. sharing production capacities, sharing resources: financial, physical, human, technological, knowledge) can help to clarify which are the VBE membership applicant expectations from the benefits of joining a VBE. Reaching collaboration purpose clarity requires time, but is needed to discuss and negotiate a shared vision to concrete it in a collaboration agreement (e.g. the VBE membership).

As an extension of clarifying the collaborative purpose, discovering potential alignment areas between the VBE and the VBE membership applicant missions, strategies and values can help to agree on a common denominator of the cultural aspects, visions, and strategies for creating a basic agreement on mutually shared working & sharing principles. Taking time to identify congruency of mission, strategy, and values helps to realize drivers to build solid foundations for collaboration (shared common values, trust, and commitment) that without them collaboration cannot evolve, and therefore cannot success.

Enterprise Architecture Assessment. In this criterion, the focus is on *organizational agility*, the VBE membership applicant infrastructures are evaluated in terms of their *adaptability* - as the ability to effect changes in response (or in anticipation) to environmental conditions, *promptness* - as the ability to accomplish objectives in a short period of time, and *innovation* - as the ability to generate many solutions to a problem, towards collaboration in dynamic VOs.

The enterprise architecture assessment provides a set of elements (criteria) to evaluate and select the VBE member applicants that could belong to the VBE based-on five dimensions: market, processes, resources, organization and information/knowledge (see Table 2).

The main objective of the enterprise architecture assessment is to identify opportunity areas to implement common standards to ensure that VBE members are interoperable in a business process and a technological manner. Furthermore, common operating rules, common infrastructures and common ontology for exchanging information between VBE members (VO partners) should be defined in order to provide facilities for communication and resources sharing.

Table 2. Enterprise Architecture Assessment Dimensions

Dimension	Description	Components	Indicators
Market	This dimension deals with all the external factors of the organization (its value chain).	• *Products/Services:* or value proposition, covers all the aspects of what an organization offers to its customers, comprising not only the organization's bundles of products and services, but also the manner in which it differentiates itself from its competitors. • *Market:* organization's market scope, target segments, target customers, and strategy (business mission) to compete differently than its competitors. • *Customer:* organization's strategy to offer its customers something distinctive or at a lower cost than its competitors, focusing on reaching customers (e.g. distribution channels) and maintaining customer satisfaction and loyalty (e.g. Customer Relationship Management). • *Suppliers:* organization's strategy to surround itself with the rights partners to amplify its resources to deliver a final product to the customer (e.g. Supply Chain Management).	• New Products • New Services • Market-Share • Customers Satisfaction • Customers Loyalty • Suppliers Capability • Suppliers Capacity
Processes	This dimension deals with all the main and supporting business processes involved in the organizational value creation process.	• *Main Processes:* Input Logistics, Operations, Output Logistics, Marketing and Sales, Services. • *Supporting Processes:* Procurement, Technology Development, Human Resources Management, and Organization Infrastructure.	• Quality • Deliver Time • Deliver Speed • Deliver Certain • Flexibility • Innovation
Resources	This dimension deals with all the resources (assets) available to be allocated in order to support organizational business processes.	• *Human Capital:* in terms of staff profiles and competencies (skills, experience & knowledge). • *Technological Capital:* in terms of the production equipment capabilities and capacities for the specific application domain of the organization (physicals, machinery, information and communication technologies).	• Competency • Quality • Time • Volume • Costs • Flexibility • Environment
Organization	This dimension deals with the organizational structure by managing the different working methods that staff uses to perform their daily activities under the defined governance model.	• *Organizational Structure:* as the roles, relationships and staff responsibilities and duties definition inside the organization, under a set of arrangements that allow the effective communication and coordination of all staff allowing the organization to operate properly. • *Working Methods:* as the methods, techniques, practices and procedures followed to perform a certain task with the purpose of reaching a predetermined objective.	• Financial Ratios • Best Practices • Industry Standards
Information/ Knowledge	This dimension deals with the information databases and flow that will support and handle the organizational business processes.	• *Type of information:* in terms of structure, semi-structure and non-structure information available. • *Flow of information:* in terms of the information that allows the conformation of databases and information flows for maximize the organizational value contribution to its staff and processes.	• Quality • Integrity • Availability • Exchangeability • Confidentiality • Updatability

Past Performance Assessment: In this criterion, the focus is on *past experiences* in collaboration. Successes and failures in past collaborative activities are evaluated as significant indicators of readiness for future collaboration. Organizations ready to collaborate normally have a track record of successful collaborations. Some examples of collaborative models that can serve to this purpose are presented in Table 3.

Main focus on this criterion is to identify past experiences of an organization participating in different collaborative models, and to analyze the past performance records of these collaborative endeavors. Some questions that could be used for this purpose are: Was the collaboration successful? Why? Which were the main challenges during the collaboration process? How were these challenges overcome? Which were the main lessons learned during the collaboration process?

Table 3. Interorganisational Relationships Classification by Todeva & Knoke (2005)

Interorganisational Relationship	Description
Hierarchical Relations	Through acquisition or merger, one firm takes full control of another's assets and coordinates actions by the ownership rights mechanism.
Joint Ventures	Two or more firms create a jointly owned legal organization that serves a limited purpose for its parents, such as R&D or marketing.
Equity Investments	A majority or minority equity holding by one firm through a direct stock purchase of shares in another firm.
Cooperatives	Coalitions of small enterprises that combine, coordinate, and manage their collective resources.
R&D Consortia	Inter-firm agreements for research and development collaboration, typically formed in fast-changing technological fields.
Strategic Cooperative Agreements	Contractual business networks based on joint multi-party strategic control, with the partners collaborating over key strategic decisions and sharing responsibilities for performance outcomes.
Cartels	Large corporations collude to constrain competition by cooperatively controlling production and/or prices within a specific industry.
Franchising	A franchiser grants a franchisee the use of a brand-name identity within a geographic area, but retains control over pricing, marketing, and standardized service norms.
Licensing	One company grants another the right to use patented technologies or production processes in return for royalties and fees.
Subcontractor Networks	Inter-linked firms where a subcontractor negotiates its suppliers' long-term prices, production runs, and delivery schedules.
Industry Standards Groups	Committees that seek the member organizations' agreements on the adoption of technical standards for manufacturing and trade.
Action Sets	Short-lived organizational coalitions whose members coordinate their lobbying efforts to influence public policy making.
Market Relations	Arm's-length transactions between organizations coordinated only through the price mechanism.

The principal dimension used by Todeva & Knoke (2005) for ordering this classification is that, from bottom to top, collaborating organizations experience increasing integration and formalization in the governance of their inter-organizational relationships (e.g. working & sharing principles). Therefore, the main objective of the past performance assessment is to determine how open is the VBE membership applicant to embrace new forms of communication and cooperation to capitalize new ways of working based-on collaboration (shared goals).

3.2. VO Partners' Readiness Assessment

The VO partners' readiness assessment is evaluated each time that a VBE member is suggested to participate in a VO in order to respond to a particular collaboration opportunity with specific competency requirements. The VO planner, as the business integrator, will assess a set of potential VO partners in terms of their readiness for collaborate in a particular VO. Therefore, a *competency-based approach* is used to evaluate the competency, capability, capacity and availability of a VBE member to jointly work in a VO and handle the requirements of a collaboration opportunity.

Competency Assessment. In this criterion, the focus is on a *combined status* of competency, capability, capacity and availability when a collaboration opportunity arises and a VBE member is called to become a VO partner. The main idea is to select the most suitable VO partners based-on their core competencies in order to exploit organization's unique capabilities and strategic assets to deliver a product and/or a service within the required time-, cost- and quality frame while keeping a high level of agility to cope with the variable duration of market opportunities.

Additionally to the competency assessment approach proposed in this paper, VO partners' assessment can be complemented with the use of performance indicators like: price, delivery date, quality level, etc. depending on the VO planner preferences and the collaboration opportunity constrains (Baldo et al, 2007; Jarimo et al, 2006).

4. REMAINING READY TO COLLABORATE

The idea of remaining ready to collaborate refers to the VBE supporting nature underlining continues preparedness of its members to keep up with the emerging requirements of future collaboration opportunities in the market (e.g. Deming Cycle, or PDSA cycle, for continuous improvement). A VBE must then serve as a preparedness platform for ad-hoc collaboration (e.g. VO creation) offering different mechanisms to its members that will facilitate the management of different emerging requirements to participate in different collaboration opportunities.

One approach that can be considered by the VBE administration can be to promote and incentive one of the primary requirements of collaboration: *self-learning*[2]. A second approach is the continuous VO partnerships' assessment for discovering areas of improvement in the different collaboration elements. A third approach is the creation of a development plan as part of the VBE strategy to access and/or explore new markets in multidisciplinary sectors by recruiting new VBE members with the competencies required or training current VBE members to develop new competencies.

First approach related to self-learning (self-training) will require the establishment of incentives to promote this proactive behavior in the VBE members; benefits for investing in improving organizational competency must be clearly reflected, for example: increase VBE members chances of VO involvement, and as a result increase business activity and profit. Second approach can be carried out as a VO inheritance process; after VO dissolution an evaluation (questionnaire) must be applied to assess the VO partnership quality level in terms of the VO partners' synergy, leadership efficiency and effectiveness. Some examples of questions to include in this evaluation are presented in Table 4:

Table 4. VO Partnership Assessment Questionnaire (Suggested Questions)

Terms	Questions
Synergy	By working together… How well VO partners were able… • to respond to the customer needs and requirements within the required time-, cost- and quality frame? • to carry out comprehensive value-added activities that connects their production systems? • to clearly communicate and commit with their duties (deadlines)?
Leadership	By working together… How well VO partners were able… • to take responsibility for the VO partnership (risk sharing)? • to enhance the each other's capacity to achieve a common purpose (real collaboration)? • to communicate and share a common vision? • to foster trust, sharing and commitment?
Efficiency	By working together… How well VO partners were able… • to share, exchange and combine their skills and resources to focus in their core-competencies? • to coordinate the resources provision (money, staff, technology, and information) to support collaborative activities? • to manage collaborative decision-making (democracy)?
Effectiveness	By working together… How well VO partners were able… • to evaluate the VO participation benefits by comparing benefits vs. drawbacks? • to end with a positive experience and satisfaction from the VO partnership?

Third approach requires a strategic planning process, where the VBE administration defines a competency development plan where VBE membership applicants with specific competencies are recruited to close a VBE competency gap, or current VBE members are

[2] *Self-learning* - A process in which VBE members take the initiative to diagnose their own readiness for collaboration level by identifying their own gaps and/or improvement areas and formulating action-plans towards closing these gaps or continuously improve their collaboration readiness. The VBE administrator becomes a facilitator in the learning (training) process.

trained to develop new competencies to improve their capabilities and capacities in terms of their business processes to execute new value-added activities to deliver new products and/or services to access new collaboration opportunities in the market.

5. CONCLUSIONS & FURTHER RESEARCH

In today's hypercompetitive environment, collaboration is being promoted, expected, or required everywhere in order to remain competitive or perhaps survive. The readiness for collaboration assessment approach presented in this paper tries to increase the organizations readiness for collaboration in VOs by self- or assisting learning, training, evaluation means within a VBE. The approach described views collaboration readiness assessment in two perspectives, initial evaluation to become a VBE member and further development to participate in a VO. The collaboration readiness assessment itself is a collaborative process where VBE members discuss and negotiate strategic action-plans to increase their interoperability. Continuous evaluation of the collaboration readiness level of VBE members provides focus, feedback and learning to support continues improvement of organizations' capability to cooperate and collaborate.

Further research is required to build a collaboration readiness assessment methodology to attend the variety of critical success factors and barriers to be breakdown to develop a successful collaboration culture based-on best practice of a history of successful collaborations in global landscape.

The initial readiness for collaboration approach presented in this paper intents to depict a set of guidelines for describing a number of elements, for constructing in the near future a successful readiness for collaboration methodology for CNOs.

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6. REFERENCES

1. Alfaro, J.; Rodriguez, R., Ortiz, A. "A Performance Measurement System for Virtual and Extended Enterprises". In Collaborative Networks and their Breeding Environments, Camarinha-Matos, L.M. et al (Eds.), IFIP, NY: Springer Publisher, 2005, pp. 285-292.
2. Afsarmanesh, H., Camarinha-Matos, L.M. "A Framework for Management of Virtual Breeding Environments". In Collaborative Networks and their Breeding Environments, Camarinha-Matos, L.M. et al (Eds.), IFIP, NY: Springer Publisher, 2005, pp. 35-48.
3. Baldo, F.; Rabelo, R.J., Vallejos R.V. "An Ontology-based Approach for Selecting Performance Indicators for Partners Suggestion" In Establishing the Foundation of Collaborative Networks, Camarinha-Matos L.M. et al (Eds.), IFIP, Vol. 243, NY: Springer Publisher, 2007, pp. 187-196.
4. Boucher, X., Lebureau, E. "Coordination of Competencies Development within Networks of SMEs". In Collaborative Networks and their Breeding Environments, Camarinha-Matos, L.M. et al (Eds.), IFIP, NY: Springer Publisher, 2005, pp. 57-66.
5. Camarinha-Matos, LM.; Silveri, I.; Afsarmanesh, H., Oliveira, A.I. "Towards a Framework for Creation of Dynamic Virtual Organizations". In Collaborative Networks and their Breeding Environments, Camarinha-Matos, L.M. et al (Eds.), IFIP, NY: Springer Publisher,, 2005, pp. 69-80.
6. Camarinha-Matos, L.M., Afsarmanesh, H. "Collaborative Networks: Value Creation in a Knowledge Society". In Knowledge Enterprise: Intelligent Strategies in Product Design, Manufacturing and Management, K. Wang et al (Eds.), IFIP, Vol. 207, NY: Springer Publisher, 2006, pp. 26-40,
7. Camarinha-Matos, L.M., Oliveria, A.I. "Contract Negotiation Wizard for VO Creation", 3rd International Conference in Digital Enterprise Technology, EST Setúbal Press, 2006
8. Camarinha-Matos, L.M., Afsarmanesh, H. "A Framework for Virtual Organization Creation in a Breeding Environment". International Journal Annual Reviews in Control, Elsevier Publisher, Vol. 31, 2007, pp. 119-135.
9. Camarinha-Matos, L.M.; Oliveira, A. I.; Ratti, R.; Demšar, D.; Baldo, F., Jarimo, T. "Computer-Assisted VO Creation Framework". In Establishing the Foundation of Collaborative Networks, Camarinha-Matos, L.M. et al (Eds.), IFIP, NY: Springer Publisher, 2007, pp. 163-178.
10. Ermilova, E., Afsarmanesh, H. "Competency and Profiling Management in Virtual Organization Breeding Environments". In Network-Centric Collaboration and Supporting Frameworks, Camarinha-Matos, L.M. et al (Eds.), IFIP, NY: Springer Publisher, 2006, pp. 131-142.
11. Himmelman, A.T. On Coalitions and the Transformation of Power Relations: Collaborative Betterment and Collaborative Empowerment. American Journal of Community Psychology, 2001; Vol. 29, No. 2.
12. Irigoyen, J.; Galeano, N.; Guerra, D., Molina, A. "Virtual Breeding Environment: Working & Sharing Principles". In Interoperability of Enterprise Software & Applications, Konstantas, D. et al (Eds.), Springer London Publisher, 2006, pp. 99-110.
13. Jarimo, T.; Salkari, L., Bollhanlter, S. "Partners Selection with Network Interdependencies". In Network-Centric Collaboration and Supporting Frameworks, Camarinha-Matos L.M. et al (Eds.), IFIP, Vol. 224, NY: Springer Publisher, 2006, pp. 389-396
14. Msanjila, S.S., Afsarmanesh, H. "Assessment and Creation of Trust in VBEs". In Network-Centric Collaboration and Supporting Frameworks, Camarinha-Matos L.M. et al (Eds.), IFIP, Vol. 224, NY: Springer Publisher, 2006, pp. 161-172.
15. Romero, D., Galeano, N., Giraldo, J., Molina, A. "Towards the Definition of Business Models and Governance Rules for Virtual Breeding Environments". In Network-Centric Collaboration and Supporting Frameworks, Camarinha-Matos L.M. et al (Eds.), IFIP, NY Springer Publisher, Vol. 224, 2006, pp. 103-110,
16. Romero, D.; Galeano, N., Molina, A. "A Conceptual Model for Virtual Breeding Environments Value Systems". In Establishing the Foundation of Collaborative Networks, Camarinha-Matos L.M. et al (Eds.), IFIP, NY: Springer Publisher, Vol. 243, 2007a, pp. 43-52.
17. Romero, D.; Giraldo, J.; Galeano, N., Molina, A. "Towards Governance Rules and Bylaws for Virtual Breeding Environments". In Establishing the Foundation of Collaborative Networks, Camarinha-Matos L.M. et al (Eds.), IFIP, NY: Springer Publisher, Vol. 243, 2007b, pp. 93-102.
18. Sitek, P.; Seifert, M., Graser, F. "Partner Profiling to support the Initiation of Collaborative Networks". In Concurrent Innovation: An Emerging Paradigm for Collaboration Competitiveness in the Extended Enterprise, 13th International Conference on Concurrent Enterprising, 2007, pp. 213-220.
19. Todeva, E., Knoke, D. Strategic Alliances and Models of Collaboration. Journal of Management Decision, Emerald Publisher 2005; Vol. 43, Issue 1: 123-148.