
	<p><b>OPAALS PROJECT</b></p> <p>Contract n° IST-034824</p>
---	--

## **WP9: Communication and Dissemination**

### **Del 9.2 – Dissemination Materials**

	<p>Project funded by the European Community under the “Information Society Technology” Programme</p>
---	--

**Contract Number:** IST-034824

**Project Acronym:** OPAALS

**Deliverable N°:** 9.2

**Due date:** November 2007

**Delivery Date:** November 2007

**Short Description:**

This report is the paper summary of a non-Report deliverable. It summarises the production of hard copy materials to support dissemination and exploitation of OPAALS activities and results.

**Author:** Mauro Giorgetti, Andrea Nicolai (T6)

**Partners contributed:** LSE

**Made available to:** ALL

**Versioning**

Version	Date	Name, organization
1	20/11/2007	Mauro Giorgetti, T6

**Quality check**

**Internal Reviewers:** Paolo Dini, LSE

### Dependences:

<b>Work Packages</b>	ALL
<b>Partners</b>	ALL
<b>Domains</b>	None
<b>Targets</b>	Domain researchers, public administrations, SMEs, Scientific communities on specific domains, etc.



This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License. To view a copy of this license, visit : <http://creativecommons.org/licenses/by-nc-sa/3.0/> or send a letter to Creative Commons, 543 Howard Street, 5th Floor, San Francisco, California, 94105, USA.

## Contents:

<b>1st version of Marketing material: .....</b>	<b>5</b>
Brochure .....	6
Poster .....	8
<b>2nd version of Marketing material: .....</b>	<b>9</b>
The cloud.....	10
New Brochure .....	11
New Poster .....	20
DVD.....	21

## **1st version of Marketing material:**

During September-October, T6 has produced, according to the first version of marketing material, some basic awareness documents for wide project dissemination.

Following the basic branding idea included into the OPAALS Identity handbook (see D9.1), T6 has deployed a coherent graphic layout for a first Brochure and Poster. Below are available the PDF versions of these items

## Brochure



# About OPAALS

Open Philosophies for Associative Autopoietic Digital Ecosystems

### A new horizon

For most of us, our interactions with our fellow humans are an essential part of our personal and working lives. If you think of our world as a teeming mass of individual connections and interactions, then you soon realise that there can be no 'grand design'. Instead, rules and customs and language make our interactions work. We interact according to our shared social values and norms, our systems of government, and our economic methods and tools.

Today, no one can deny that the Internet has become the universal carrier of our messages and information: the new 'space' that we increasingly inhabit. But that space has not yet reached its true potential as the universal medium for our interactions. While there are many more technologies yet to be developed, effective Digital Ecosystems involve much more than technologies: our interactions carry human values, like trust and cooperation, and these must be understood and developed too. The technology has also become more organic. It grows and diversifies in unexpected and unprogrammed ways. From this complexity a striking similarity to living organisms is emerging; and that poses entirely new challenges and possibilities. Organisms are in fact constructed through the nested composition of large numbers of small aggregates of matter in a way that strikes a balance between ordered structure and random arrangement. Finding this balance between stability and diversity is at the centre of the Digital Ecosystems' architectural principles.

We are still discovering the things that we can do on-line, and learning about the best ways to achieve our social and economic objectives. The underlying technology infrastructure of the Internet may exist but, for exploiting it fully, the tools that we need and the deep understanding of our interactions are only just emerging. In moving into the new medium of cyberspace we need to understand, at a very deep level, what it is we do in our lives to interact with each other, and how that can be ported into the on-line world.

OPAALS is a research network dedicated to discovering and establishing a theoretical basis on which open, distributed, self-organising and self-replicating Digital Ecosystems can be created and sustained in order to support us all in our daily lives, making our interactions in this new space valuable, safe, and equitable for all mankind.

### Regional Development and Digital Ecosystems

The overarching strategic objective of OPAALS is improved socio-economic development at the regional level. Digital Ecosystems currently represent an unfolding opportunity for rapid and significant advances in the use of ICT for both economic and social purposes. A deep understanding of how to extract the benefit from Digital Ecosystems is an important facet of regional development.

### Empowering SMEs

SMEs (Small and Medium-sized Enterprises) will benefit massively from new applications based on Digital Ecosystems. Such benefits will come in many ways, including easier access to global markets, reduced transaction costs, and 'clustering' of products and services. Its Open Source principles and distributed infrastructure mean that Digital Ecosystems create an egalitarian environment in which SMEs are no longer at a disadvantage to larger rivals, and are no longer locked into proprietary ICT solutions.

### Globalising local economies

As SMEs are almost always rooted in their locality, the economic effect of their vigorous growth is felt and retained locally, even if it is driven by global value chains. Thus they are a prime target for regional development initiatives. The ecosystem concept means that the regional administration and regional economic actors have an important role to play in facilitating the infrastructures and the knowledge that underpins effective implementation.

### Increasing ICT penetration and value

By opening up entirely new ways of working, Digital Ecosystems enable 'killer applications' that add value in ways that have previously been impossible. All kinds of organisations and individuals are then able to take advantage of ICT to replicate their mainstream functions and to add value to them. By being Open Source the acquisition and maintenance costs are minimised. Digital Ecosystems thus become a strong driver for ICT adoption.

 OPAALS



  
Information Society  
Technologies



## Research highlights

### Autopoiesis

Autopoiesis is a relatively recent biological term. It means the ability of an object to self-organise and self-reproduce. Put simply, it defines that object as a living entity. It may react with its environment and other objects, but it maintains itself and can produce more of itself. Autopoiesis represents a potential major breakthrough in ICT where every 'object' traditionally has to be designed and maintained by people or by external code that is not part of the object itself. Autopoiesis thus offers a totally new horizon in which our ICT systems draw on algorithms that mimic biological and natural world phenomena in order to provide radically new capabilities: the possibilities are limited only by our imaginations. OPAALS has a multi-disciplinary approach, investigating how natural science phenomena can be understood and translated into mathematical logic and how that can in turn be embodied in computer languages.

### Model-Driven Architecture

The breakthroughs in autopoiesis need ultimately to be expressed in terms of programme code. This task will be enabled by higher-level programming languages. In fact the whole concept of a Digital Ecosystem with its interactions of players with each other and their environment requires that systems be defined at a very high level. This is already a trend in computing, but in OPAALS it goes way beyond object-oriented programming into Model-Driven Architecture, where the entire structure of the system is built from the model of the process that the system facilitates.

### Distributed systems

While the Internet provides the physical means and the communication protocols of connectivity, this new space is largely inhabited by legacy systems, designed and built under previous paradigms. Today we have the possibility of distributed systems with no centre, and no plan. In many ways the Internet has already begun to achieve this: it has no plan, no one knows exactly how big it is, and no one could

ever switch it off. Extending this into software and systems it has already been shown by earlier research that a P2P (peer-to-peer) system can provide a platform that better serves our human interactions and the mechanisms of our socio-economic needs. Of central importance is the concept of local autonomy, which we can largely take for granted in the content sharing space of the Web. In order to extend local autonomy to SMEs inhabiting the B2B space OPAALS is developing a distributed transaction framework to support the dynamic composition of services without having to rely on a centralised server for the coordination of complex service execution.

### Communities and social aspects

Identity, trust, values, endorsement, cooperation – these are a few of the many important social and community factors that have to be implemented in order to enable meaningful interactions in a Digital Ecosystem. Our physical world has evolved many methods of 'oiling the wheels' and these are sometimes only partly understood and often ignored in building technical capability. The Open Source community defies the simple self-interest logic that underpins closed proprietary systems and Digital Ecosystems stretch that paradigm further towards open knowledge.

### Language and socio-economic constructivism

We use language in so many different ways, from the structured syntax of computer code to the subtlety of humour. There is no universal mapping of words and concepts, and such a thing is probably never going to be possible. Communities are identified and even defined by their use of language. As an interdisciplinary project, OPAALS itself has to form a united community from very different backgrounds. This sets us an 'internal' language challenge. But our main challenge is that our research objectives require a theoretical basis for how language invokes values that are common within a community, but often only tacitly understood. OPAALS is seeking an understanding of how the phenomenology and epistemology of a Digital Ecosystem will underpin its social and economic interactions.

## The OPAALS research network

### Objectives

The prime objective of OPAALS is regional economic development. The specific mission of the project is to provide a robust theoretical basis for the advanced concepts of Digital Ecosystems, such as self-organisation and socio-economic constructs, and to build a sustainable community of interdisciplinary research that is open to academic institutions and SMEs alike.

### Global partnership

OPAALS is a global partnership of organisations that spans several continents. Each partner brings specific expertise so as to form a 'Network of Excellence': a specific concept that is financially supported by the European Commission under the Framework R&D Programme in order to develop the strength of the European research base. The OPAALS network is open-ended and so can grow to meet future research needs.

### Open Knowledge Space

A network requires interaction and that requires a mechanism. The OPAALS 'Open Knowledge Space' (OKS) provides a rich collaborative working environment that not only enables cooperative working, but provides the tools to capture and manage the knowledge generated. The development of the OKS is a key practical aspect of the work of the project, and is itself generating knowledge on how to bootstrap and maintain a research Network of Excellence.

## More information

For more information on OPAALS please visit the following websites:

<http://www.opaals.org>  
[www.digital-ecosystems.org](http://www.digital-ecosystems.org)



**Poster**

# OPAALS

## Open Philosophies for Associative Autopoietic Digital EcosystemS

OPAALS is a global Network of Excellence (NoE) in research, dedicated to providing a comprehensive theoretical basis for the emerging Digital Ecosystems.

Digital Ecosystems represent the next generation of ICT technology and constitute a major breakthrough in ICT use. OPAALS will provide a theoretical basis for many aspects of Digital Ecosystems, including:

**Autopoiesis**

how natural world processes can be captured in algorithms and applied to code

**Language and socio-economic constructivism**

Epistemological and semantic theory in support of both research and implementation

**Open and distributed systems**

ecosystems based on P2P architectures, Open Source software, accountability, and trust as the natural basis for the Knowledge Economy

**Model-Driven Architectures**

how systems and code can be generated from business models and business processes

**Communities and social aspects**

harnessing social science theory to support new approaches to knowledge production and management

### Open Knowledge Space

In addition to the theoretical work the project is establishing an on-line knowledge space as the basis for research collaboration. Facilities can be made available for other Digital Ecosystems research to share this space.

### Digital Ecosystems and regional economic development

Some of the OPAALS partners are regional development actors and are experimenting with practical ways to implement the work of OPAALS and other projects to boost regional economies, including those in developing nations. Such regions are joining OPAALS in increasing numbers.

<http://www.opaals.org>





## **2nd version of Marketing material:**

Following the evolutionary approach of OPAALS Marketing material production, T6 and all the partners involved in the WP9 have decided to create a new branding concept for OPAALS, starting from the following concepts:

- OPAALS in a NOE which objective is to create a new multidisciplinary domain: research on Digital ecosystems.
- OPAALS is also a well established network of different organisation, a dynamic and extended network
- One of the beneficiary of the DE research are the SMEs, locally connected at regional level

Following the basic OPAALS assumption, the consortium has elaborated the basic concept behind the project, the OPAALS identity of a cloud, a cloud with several dimension as shown below.

Following the basic cloud concept, T6 and other WP9 partners have built with the support of the entire DE community an evolution of the basic first branding concept. Trying to mix the cloud concept with the "penroe" butterfly logo taken from the DBE experience.

The synthesis of this combination has produced the new version of the OPAALS marketing material, shown below:

- Brochure,
- Poster
- DvD

## ***The cloud***



***New Brochure***



## A new horizon

For most of us, our interactions with our fellow humans are an essential part of our personal and working lives. If you think of our world as a teeming mass of individual connections and interactions, then you soon realise that there can be no 'grand design'. Instead, rules and customs and language make our interactions work: largely on a peer-to-peer basis. We find each other and we interact according to our shared social values, our systems of government, and our economic methods and tools.

Today, no one can deny that the Internet has become the universal carrier of our messages and information: the new 'space' that we increasingly inhabit. But that space has not yet reached its true potential as the universal medium for our interactions. While

there are many more technologies yet to be developed, effective Digital Ecosystems involve much more than technologies: our interactions carry human values, like trust and cooperation, and these must be understood and developed too. The technology has also become more organic. It grows and diversifies in unexpected and unprogrammed ways. From its teeming complexity a striking similarity to living organisms is emerging; and that poses entirely new challenges and possibilities.

We are still discovering the things that we can do on-line, and learning about the best ways to achieve our social and economic objectives. The underlying technology infrastructure of the Internet may exist, but for exploiting it fully, the tools that we need, and the deep understanding of our interactions are only just emerging. In moving into the new medium of cyberspace we need to understand, at a very deep level, what it is we do in our lives to interact with each other, and how that can be ported into this on-line world.



OPAALS is a research network dedicated to discovering and establishing a theoretical basis on which open, distributed, self-organising and self-replicating Digital Ecosystems can be created and sustained in order to support us all in our daily lives, making our interactions in this new space valuable, safe, and equitable for all mankind.

## Regional Development and Digital Ecosystems

The overarching strategic objective of OPAALS is improved economic development at the regional level. Digital Ecosystems currently represent an unfolding opportunity for rapid and significant advances in the use of ICT for both economic and social purposes. A deep understanding of how to extract the benefit from Digital Ecosystems is an important facet of regional development.

### ► Empowering SMEs

SMEs (Small and Medium-sized Enterprises) will benefit massively from new applications based on Digital

Ecosystems. Such benefits will come in many ways, including easier access to global markets, reduced transaction costs, and 'clustering' of products and services. Its open source principles and distributed infrastructure mean that Digital Ecosystems create an egalitarian environment in which SMEs are no longer at a disadvantage to larger rivals, and are no longer locked into vendor's ICT solutions.

#### ► Globalising local economies

As SMEs are almost always rooted in their locality, the economic effect of their vigorous growth is felt and retained locally. Thus they are a prime target for regional development initiatives. The ecosystem concept means that the regional administration and regional economic actors have an important role to play in facilitating the infrastructures and the knowledge that underpins effective implementation.

#### ► Increasing ICT penetration and value

By opening up entirely new ways of working, Digital Ecosystems enable 'killer applications' that add value in ways that have previously been impossible. All kinds of organisations and individuals are then able to take advantage of ICT to replicate their mainstream functions and to add value to them. By being Open Source the acquisition and maintenance costs are minimised. Digital Ecosystems thus become a strong driver for ICT adoption

## The OPAALS research network

### ► Objectives

The prime objective of OPAALS is regional economic development. The specific mission of the project is to provide a robust theoretical basis for the advanced concepts of Digital Ecosystems, such as self-organisation and socio-economic constructs.

### ► Global partnership

OPAALS is a global partnership of organisations that spans several continents. Each partner brings specific expertise so

as to form a 'Network of Excellence': a specific concept that is financially supported by the European Commission under the Framework R&D Programme in order to develop the strength of the European research base. The OPAALS network is open-ended and so can grow to meet future research needs.

### ► Open Knowledge Space

A network requires interaction and that requires a mechanism. The OPAALS 'Open Knowledge Space' (OKS) provides a rich collaborative working environment, which not only enables cooperative working, but provides the tools to capture and manage the knowledge generated. The development of the OKS is a key practical aspect of the work of the project, and is itself generating knowledge on how to bootstrap and maintain a research Network of Excellence.

## Research highlights

### ► Autopoiesis

Autopoiesis is a relatively recent biological term. It means the ability of an object to self-organise and self-reproduce. Put simply, it defines that object as a living entity. It may react with its environment and other objects, but it maintains itself and can produce more of itself. Autopoiesis represents a potential major breakthrough in ICT where every 'object' traditionally has to be designed and maintained by people or by external code that is not part of the object itself. Autopoiesis thus offers a totally new horizon in which our ICT systems draw on algorithms that mimic biological and natural world phenomena in order to provide radically new capabilities: the possibilities are limited only by our imaginations. OPAALS

has a multi-disciplinary approach, investigating how natural science phenomena can be understood and translated into mathematical logic and how that can in turn be embodied in computer languages.

### ► Model-Driven Architecture

The breakthroughs in autopoiesis need ultimately to be expressed in terms of program code. This task will be enabled by higher-level programming languages. In fact the whole concept of a Digital Ecosystem with its interactions of players with each other and their environment requires that systems are defined at a very high level. This is already a trend in computing, but in OPAALS it goes way beyond object-oriented programming into Model-Driven Architecture, where the entire structure of the system is built by the model of the process that is being facilitated.



### ► Distributed systems

While the Internet provides the physical means and the communication protocols of connectivity, this new space is largely inhabited by legacy systems, designed and built under previous paradigms. Today we have the possibility of distributed systems with no centre, and no plan. In many ways the Internet has already begun to achieve this: it has no plan, no one knows exactly how big it is, and no one could ever switch it off. Extending this into software and systems it has already been shown by earlier research that a P2P (peer-to-peer) system can provide a platform that better serves our human interactions and the mechanisms of our socio-economic needs.

### ► Communities and social aspects

Identity, trust, values, endorsement, cooperation, kudos – these are a few of the many important social and community factors that have to be implemented if we are to make meaningful interactions in a Digital Ecosystem. Our physical world has evolved many methods of 'oiling the wheels' and these are sometimes only partly understood and often ignored in building technical capability. The Open Source community defies the simple self-interest logic that underpins closed proprietary systems and Digital Ecosystems stretch that paradigm further. OPAALS sees Communities of Practice as a prospective way to design and structure a real living ecosystem.

#### ► Language and socio-economic constructivism

In an internationalising world, culture clashes are more often a sign of communication failures than of genuine polarity. We use language in so many different ways, from the structured syntax of computer code to the subtlety of humour. There is no universal mapping of words and concepts, and such a thing is probably never going to be possible. Communities are often identified and even defined by their use of language. As an interdisciplinary project, OPAALS itself has to form a united community from very different backgrounds. This sets us an 'internal' language challenge. But our main challenge is that our research objectives require a theoretical basis for how language invokes values that are common within a community, but often only tacitly understood. OPAALS is seeking an understanding of how the semantics and epistemology of a Digital Ecosystem will underpin its social and economic interactions.





Supported by the  
European Commission's  
6<sup>th</sup> Framework Programme

[www.opaals.org](http://www.opaals.org)

## New Poster

# Open Philosophies for Associative Autopoietic Digital Ecosystems



## OPAALS

**OPAALS is a global Network of Excellence (NoE) in research, dedicated to providing a comprehensive theoretical basis for the emerging Digital Ecosystems.**

Digital Ecosystems represent the next generation of ICT technology and constitute a major breakthrough in ICT use. OPAALS will provide a theoretical basis for many aspects of Digital Ecosystems, including:

- ▶ Autopoiesis – how natural world processes can be captured in algorithms and applied to code
- ▶ Model-Driven Architectures – how systems and code can be generated from models of processes
- ▶ Open and distributed systems – ecosystems based on P2P and Free and Open Source software
- ▶ Communities and social aspects – Harnessing social organisation theory to support new methods
- ▶ Language and socio-economic constructivism – Epistemological and semantic theory in support of both research and implementation

### Open Knowledge Space

In addition to the theoretical work the project is establishing a fully-functional on-line knowledge space as the basis for research collaboration. Facilities can be made available for other Digital Ecosystems research to share this space.

### Digital Ecosystems and regional economic development

Some of the OPAALS partners are regional development actors and are experimenting with practical ways to implement the work of OPAALS and other projects to boost regional economies, including those in developing nations. Such regions are joining OPAALS in increasing numbers.



Supported by the  
European Commission's  
6<sup>th</sup> Framework Programme

[www.opaals.org](http://www.opaals.org)





## DVD

### Cover



## Booklet

**Javier Val** - Instituto Tecnológico de Aragón Information Society Development.  
**Silvano de Ieso** - Regione Lazio, Lazio Region EU Office  
 Q&A, including on-line audience.

9. Round Table - Networks & Innovation Ecosystems supporting SMEs & regional development.

**Pierre Paradinas** - INRIA, Directeur du Développement Technologique.  
**Simon Lavin** - Planning, Development & Support Manager / Rheoludd Cynllunio, Datblygu a Chymorth, Welsh Assembly Government / Llywodraeth Cynulliad Cymru, Department for the Economy & Transport / Adran yr Economi a Thrafnidiaeth.  
**Catriona Ward** - Enterprise Ireland, Manager, EU R&D Liaison Office.  
**Carolina Marco Bellver** - Responsable de asuntos europeos Dirección General de Modernización Secretaría Autonómica de Administraciones Públicas Conselleria de Justicia y Administraciones Públicas Generalitat Valenciana.  
 Panel and floor Q&A, including on-line audience.

10. Chairpersons and Rapporteur  
**Henry Ryan** - Lios Geal Consultants Ltd., Managing Director.

### European Commission Conference

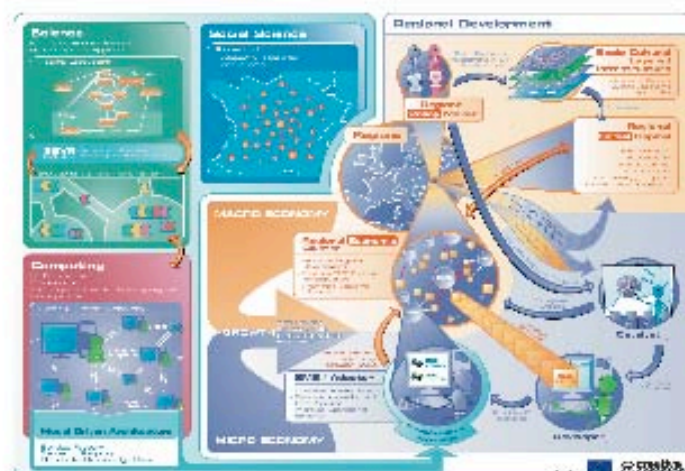
## Economic Participation in the Age of Networking Digital Ecosystems Knowledge, Business and Services

Achievements of the first 3 years and future perspectives of the Collaborative EU research and deployment of Digital Business ecosystems

Bruxelles November 7th, 2007



Information Society and Media



This conference has shown the achievements of the "Digital Business Ecosystems" with its systemic approach, which empowers SMEs and allows them to participate actively in the global economy, exploiting all dimensions of dynamic collaboration and networking: networking organisations, networking services, networking knowledge and capacities

This conference has been the major event of the digital ecosystem community. It has been the unique opportunity to meet the scientific community, explore the achievements reached so far and get a view of the future perspectives.

The open and distributed philosophy of digital business ecosystems fosters innovation and local development, enables collaboration between SMEs, and their integration in the global market. A "digital ecosystem" of services, ideas and skills enables the networking of knowledge, services and business actors and has to be supported by specific (necessarily distributed and open source) technologies and infrastructures. The cluster of projects in this research area, which provide open source and creative common results, represents the biggest co-funding of in open source technologies made so far with the European Commission (with more than 30M€ of total common investment).



The Conference has presented the tangible results and the innovative potential of Digital Business Ecosystems research and development achieved in 3-4 years, which enabled:

- to define new technologies and paradigms based on people and business networking able to self-organise and evolve
- to forge applications and ideas
- to develop working prototypes of evolutionary open and free platforms
- to transfer the research results and their adoption by regional pilots
- to form a vibrant scientific community and a network of pilot regions
- to engage SMEs in design and use of initial applications.

This Conference addressed the future of the economy and the role of social, technical and knowledge networks for growth and employment; it aimed at presenting the tangible achievements reached by the collaborative European research and development community within the open-source Digital Business Ecosystems approach, and also its future perspectives for further development.

With this conference the European Commission celebrates the achievements of the first phase of the Digital Ecosystems research activities. The main achievements - in terms of research and in terms of deployment - has been presented. Two round tables debated the future perspectives of the European Digital Ecosystems.

Each session was opened by high-level keynote speakers providing an inspiring vision of the future and addressing the challenges ahead for creating a favourable environment for SMEs in a network-based economy. Keynote has been provided by the open source champion Bruce Perens. Two round tables composed by Members of the European Parliament and Regional policy makers debated the future perspectives for development.

This conference, also webcasted, accommodated 150 representatives from the research community and from European, national and regional decision-makers, and were translated and recorded in 5 European languages.

If you would like to know more about the digital business ecosystems, please refer to the website [www.digital-ecosystems.org](http://www.digital-ecosystems.org)

*This DVD contains the following multilingual multimedia contents:*



#### 1. Opening & Chairperson

**Gérald Santucci** - European Commission, DG Information Society and Media, Head of the Networked Enterprise & RFID Unit

#### 2. Opening Keynote

**Bruce Perens** - Sourcelabs, Vicepresident. "Open Source infrastructures for economic development" Keynote summary.

#### 3. Research on Digital Ecosystems + Web Science (1)

**Harry Halpin** - University of Edinburgh, "The Web Science Research Initiative in USA and the European Web 2.0: Centralization or Decentralization?"

**Andrea Nicolai** - T6, CEO, "The Digital Business Ecosystem": the vision, the strategy and its results."

**Paolo Dini** - London School of Economics, OPAALS coordinator, "How fundamental science contributes to the vision of Digital Ecosystems".

#### 4. SME Awards & Regional Adoption Awards, Award ceremony.

#### 5. Round Table - Networks & Innovation Ecosystems supporting SMEs & regional developm.

**Patrizia Toia** - MEP alde, La Margherita - Group of the Alliance of Liberals and Democrats for Europe, Member of ITRE committee.

**Umberto Guidoni**, MEP gue, Partito dei Comunisti Italiani - GUE Member of ITRE committee.

**David Hammerstein**, MEP vert, Los Verdes - Greens, Member of ITRE committee. Round Table Q&A and Debate about Digital Ecosystems, including on-line audience.

#### 6. Research on Digital Ecosystems + Web Science (2)

**Francis Heylighen** - Free University of Brussels, Department of Philosophy, Centre Leo Apostel, "Stigmergy: a fundamental paradigm for digital ecosystems?"

#### 7. Deployment - Keynote Talks

**Dr. Olga Memedovic** - UNIDO, Private Sector Development, "DE and regional innovation systems as public goods for economic development".

**Dr. Johannes Keizer** - FAO, Information and Knowledge Management, "Digital Ecosystem of Knowledge for Development in Agriculture, DEAL the Indian case". Q&A session, including on-line audience.

#### 8. Deployment : Success stories of transfer and adoption: regional digital business ecosystems

Aragón: **Fernando Beltrán** - Viceconsejero de Ciencia y Tecnología, Gobierno de Aragón (Spain)

West Midland: **Paul Nash** - Shropshire County Council, ICT Cluster Operations Group, Heads the Digital Inclusion agenda of the West Midlands region (UK). Q&A session, including on-line audience.

REDEN, Regions for Digital Ecosystems Network.



DvD

