December 2005
Issue nº 2

KoBaS newsletter

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Restyling of the KoBaS institutional web site

http://www.kobasproject.com

Editorial

Americo Azevedo INESC

Welcome on KOBAS Innovation World!

Greetings and a deep welcome to all readers of this second Kobas newsletter. This quarterly **newsletter** briefs you on highlights of the European **Integrated Project** for SME Kobas (Knowledge Based Customized Services for Traditional Manufacturing Sectors Provided by a Network of High Tech SME).
The project's ultimate aims is to develop flexible and customizable software components allowing, in manufacturing machines, the configuration of personalized interfaces that offer a quick and simple access to new advanced and powerful functionalities, machine embedded, from operations planning, to operations maintenance, training, the management of technical information, optimization of functioning etc. Thanks to this common platform for industrial innovation, it will be possible for machine-tools and other production equipment to become intelligent, capable to communicate their environment and characteristics, to understand and work with digital models of the parts to produce and to enable an efficient dialog with their users. This newsletter keeps you informed of the state of this project, namely progress and achievements.

The Kobas project continues to go from strength to strength, following the production of the first full documents reporting results to date. Kobas is now within the second half of second project's year and some significant achievements have been made, which are synthesized in the section named **Specification of Kobas**. Next sections inform you about the ongoing work within the project in what concerns **Exploitation Plan** and **Implementation** of Kobas Competence Center. Core Kobas industrial partners information as well as information related to news and events is provided at the end of this newsletter.

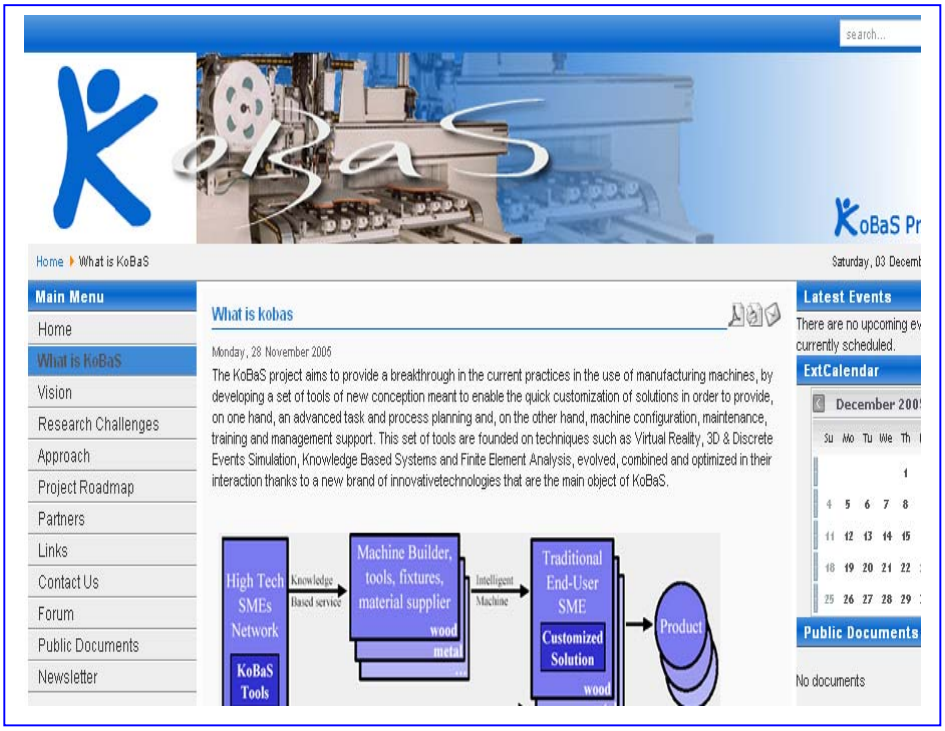
Another important dissemination instrument related to Kobas project, it is the new public website now available. This new website, accessible from www.kobasproject.com, has been designed to provide a single point of access to all relevant information and news for the kobas target communities of interest. The main contents accessible from the public website are currently:

- Kobas information (presentations of the project, public documents, partners)
- Project roadmap
- Kobas Newsletters
- Upcoming and passed events
- Key links
- Resources (public deliverables, workshop presentations,…)
- Kobas forum
- Search tool

The website, taking into the Open Source Content Management System technology in which it is based, will be improved and fed continuously with new information. We encourage you to check it regularly. For any information, do not hesitate to write to info@kobasproject.com

Please feel free to forward this issue in electronic format to anybody who could be interested. Subscription is free at anytime, through our website (the previous newsletter is also still available for downloaded from the Kobas web site). We would also greatly appreciate your feedback.

Welcome on KOBAS Innovation World!



D2.2-2.3: Specification for KoBaS

Paolo Pedrazzoli TTS

Those Deliverables are meant to define the approach, method and architecture needed in order to realize all the project Components. The Components will be the enabling instruments used by the Network of High Tech SME in order to provide the customized KoBaS solutions, thus those reports are crucial for the project successful outcome.

The Deliverables, based on the result achieved in WP1, will define and specify the concepts and models for the KoBaS Components and services, allowing a distributed product development process. The linkage and interaction between components will be defined as well. The Components development is presented,

planned and specified thanks to the extensive use of standard definition languages (such as UML – Unified Modeling Language) and all the functionalities are pointed out and mapped.

More Specifically, D 2-2, Specifications for the KoBaS, reports on the specification of all KoBaS Component defined in the tasks T2-2 to T2-11. It defines the overall KoBaS functionality. The specifications summarize the concepts, functionalities, models, implementation concepts, interfaces and methodologies developed in work package 2.

In particoular **D2.2** has this **contents**:

- Class Diagrams: Class diagrams are meant to specify the internal software architecture and data model of the Black-Boxes.
- Behavior Diagrams: Sequence, collaboration, activity or statechart diagrams (as described in UML 1.5 specification) are used to better state the dynamic behavior of the Component and Black-Box.
- Database Design: UML has been used to design the data model of the stored information in order to understand the data duplication (which could result into inconsistency).

And **D2.3 contents** are:

- Shared resources management and File System: Resources needed by the single Black-Boxes are herel identified in order to plan how to organize them in the final file system of the delivered solution.
- Single Black-Box deployment diagrams: Each single Black-Box responsible produced an UML deployment diagram in order to understand it could be "installed" and where it will be "contained"
- Final architecture synthesis with overall deployment diagram : A description of the final architecture with an overall deployement diagram of a complete KoBaS solution.

KoBaS Exploitation

PatriK Karlsson ZENON

KoBaS intend to transform the traditional European manufacturing industry into a knowledge based manufacturing sector by providing innovative services and software tools.

It is a well-documented phenomenon that any transformation or paradigm shift in any social or professional field is usually met with resistance and scepticism, the less progressive the industry the more the resistance. Therefore the consortium realises the importance of closely connecting the exploitation strategy with the targeted end-users.

The KoBaS products and services will have as **customers both OEMs and manufacturing end users.** The former will be able to offer new products incorporating the KoBaS solution whereas the latter will be able to upgrade existing equipment with the KoBaS solution. The common requirement of the two different targeted customers is proof of economic savings, direct or indirect, due to using the KoBaS solution.

As a result of the multiple features that a KoBaS solution provides, the economic savings will manifest in a number of ways e.g. increased productivity

(Black-Boxes - Part-programming, 3D-Simulation, Mechatronics, Knowledge-Base, Built-in Management), reduced machine down-time (Black-Boxes - Maintenance, FEM, Knowledge-Base), more accurate quotations (Black-Boxes - Part-programming, 3D-Simulation, Mechatronics, FEM, Knowledge-Base, Rule-base, Built-in Managemen), and faster training of new personnel (Black-Boxes - Training, 3D-Simulation).

Even if the two different targeted customer groups have a common commercial requirement they require slightly different marketing strategies. The major difference between OEMs and manufacturing end-users is that an end-user has to incorporate the KoBaS solution in an existing infrastructure (retrofit) whereas an OEM integrates it in a product; hence the OEM validates the solution prior to selling.

A retrofit on the other hand must convince the end-user both of the economic benefits of the KoBaS solution and that the Network of high-tech SMEs is capable of implementing the solution in a way that will not interrupt production. It is the Network of high-tech SMEs who sells the KoBaS solution; hence its reputation is very important since the KoBaS solution has to be validated on the production line.

So in order to prepare for future exploitation of the KoBaS solution the following activities are planned in the exploitation task;attending trade fairs and exhibitions, establishing contacts with industrial associations, conducting surveys, developing marketing strategies for machine builders and manufacturing end-users, estimating predicted downtime when implementing a customised KoBaS solution, economic evaluation of trials by the project's industrial partners, and preparation of the business plan.

As an end note, a **pilot survey** was carried out by the partner TTS to estimate the potential of the KoBaS solutions currently under development. TTS has contacted the Italian association of Woodwork machine producer (ACIMALL) and after contacting SMEs by e-mail and telephone they have selected and visited four companies in Lombardia. Great interest was raised in all four visited companies and the woodworking machinery industry appears ready and in need of the solutions to be offered by the KoBaS project. TTS has also found out that the sector was not aware that advanced technological solutions will be available in the near future.

Implementation of the KoBaS Competence Centre

Ramona Lungu WITTMAN & PARTNERS

The set – up of KoBaS competencies centers represents one of the tasks included in the 6th work package, focused on dissemination and exploitation activities. Apart from being an imperative aimed to result in the creation of an entity which will play a major role in KoBaS dissemination and exploitation, the main challenge refers to the ability to project a process with a high complexity, so as to comprise all the issues that might appear throughout its lifecycle. The final goal is to create a Virtual Competence Centre, which is an organization using computer and telecommunications technologies to extend its capabilities by working routinely with partners or customers located throughout the world.

The centre will function within the KoBaS Network of High Tech SMEs, addressing its new services and expertise. From this point of view, the Competence Centre may be considered to ensure an interface between potential customers and the partners within the Network. Its stated purpose is to promote understanding and use of KoBaS services by SMEs in traditional manufacturing sector, to communicate the general knowledge derived from the project. In this perspective the Centre will indirectly contribute to the reinforcement of traditional SMEs, increasing their competitive advantage and directing them towards a vision driven by competitiveness, innovation and sustainability. It will also be in the position to create a culture of positive collaboration between highly developed SMEs and traditional ones.

There are two main preliminary stages leading to the implementation of a competence centre. The result of the first stage – the Competence Centre Handbook will define the methodology, structure and requirements that will enable, on a conceptual level, the clarification of the roles and processes required to set up such centres.

With reference to the above mentioned sections, they are intended to provide an answer to "What" and "How" a centre should do. Basically, there are three types of **requirements** to define its characteristics: functional (needed features) and non-functional requirements (properties), as well as constraints (things limiting the development in some way). As for the implementation **structure**, it follows several steps transposed in: theoretical description of the Concept, stating its content, background, added value and target group; definition of the Organizational Structure, with an emphasis on the basic principles of organization, activities and objectives; statement of Members rights and obligations, competencies and expertise; description of the Services to be provided; development of Marketing Activities driven by a specific business model.

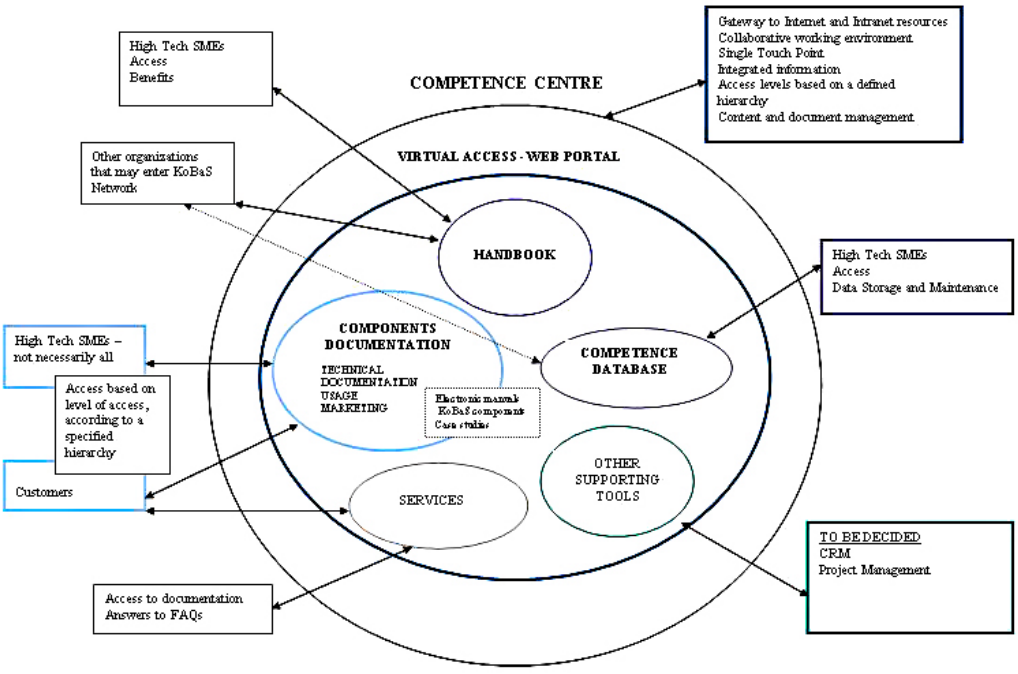
At last, but not least, the **methodology** to be used details few possible phases: the acknowledgement of the need of business processes, meant to indicate the structural activities to be performed and the models of interaction; depiction of information flow and data processing; description of the operations embedded in the process lifecycle; definition of the infrastructure components – supporting tools, management structure – global and configuration management, expected outcomes.

During the next stage of implementation there will elaborated a Competence Database, which will contain the necessary information for the centers to function, namely the competencies and expertise of KoBaS partners; moreover, it will detail and document the project results. On a conceptual level, the Competence Database will refer information related to its general aims, usage and interpretation, data structure and storage, entity – relationship model, supporting tools.

Ultimately, the Competence Centre will provide access to the existing resources through a virtual web portal: the access to the information will be based on different access levels, being divided into partner data, customer data, and public information. The virtual web portal will refer to: Competencies Centre Handbook, Competence Database, components documentation, services to be provided and other supporting tools, if considered necessary. As for the components documentation, it will contain technical information, marketing data, and public information regarding the usage of components; all this information can be accessed based on different hierarchy levels, namely each entity (partner, user) will only have access to certain specified pieces of information, depending on its interests. Within this section a special attention will be given to the electronic manuals for each KoBaS component and for each case study, which are to be created by the centre.

As a conclusion, the Competence Centre will conduct a **customer driven business**, in which the main target is to consider customer expectations and needs. It will provide methodical advisory and informational services to possible customers, offer assistance in identifying potential shortcomings and the need for specific services, direct the customer to the appropriate partner within the consortium.

Overall, the Competence Centre is aimed to be a tool of competitive advantage and a source of qualitative services provided along with the physical products (customized services) produced by the appropriate partner within the Network.



Special dossier: KoBaS Industrial Partners

www.azevedos-ind.pt

Azevedos Industria

Founded in 1964, Azevedos Indústria is an industrial company specialized in technological solutions for the cork industry.
As a market leader, this company designs, manufactures, installs and guarantees the after sales assistance of a wide variety of machines and systems, covering all the stages concerning transforming, finishing and laboratory control of the cork industry.
An advanced quality management system ensures products and services in total accordance with its customer's requests.
Azevedos Indústria has wide and modern facilities and a broad set of technological resources. From advanced 3D CAD systems and flexible production equipments, as well as testing equipment, an advanced information system guarantees the coordination of all the companies processes.
As a result from its know-how, Azevedos Indústria combines different technology such as **mechanical, electrical and automation** as well as advanced technologies for **image processing.**
Having a development strategy based on the innovation and conception of new products and solutions, Azevedos Indústria combines the acquired know-how for decades in this sector to the professional capacity of its human resources and to the permanent cooperation with entities and institutions of scientific and technological research. The company invests yearly about 8% of its turnover in research and development activities as well as in the continuous training of its human resources.
Azevedos Indústria offers its customers a wide variety of products that cover all the production stages of the cork industry.
Both in the conception and production the company uses a wide variety of technologies in order to satisfy the most demanding requests and exploit three fundamental axis:

- Continuous set-up time reduction;
- Integration with information networks;
- User friendly machine operations.

www.zenon.gr

Zenon

ZENON offers integrated automation solutions in the fields of Robotics and Information Technologies, addressing needs of the manufacturing, service and government sectors.
Constant focus on solution quality and reliability, consistent investments on R & D of new automation technologies, and continuous improvement of personnel education and skills, have been the keys to the company's success. Equipped with state of the art facilities, organized in four divisions and staffed with highly experienced and skilled personnel, ZENON installs - and subsequently supports - a variety of automation systems, typically of the most complex and challenging kind. ZENON is a public company in the Athens Stock Exchange since mid 2002 and ever since incorporation grows steadily, in terms of both revenues and profits.

ZENON is ISO 9001 certified and has adopted internal auditing procedures, according to contemporary business administration standards. The company is structured in four main divisions: Robotics, Information Technologies, R & D and Sales-Marketing.

- The **Robotics Division** of ZENON offers a wide range of automation technology applications for the manufacturing, services and government sectors. It is staffed with highly qualified engineers and technicians that cover a broad range of competence areas, and has state of the art equipment for applications development.
- ZENON **Informatics'** mission is to provide advanced IT solutions , tailor made to customers' individual needs. The Company boasts expertise covering a wide range of development activities, including applications in the following areas: Relational Data Base Applications, Data Collection and Processing Applications, Software for Industrial Production, Electronic Documentation and Maintenance Systems (CMMS, Electronic Manuals etc.), e-Business, e-learning, Network Security Applications , as well as other similar applications in "traditional" and Internet / Intranet environments. At the same time the company acts as distributor / reseller of H/W and S/W equipment , undertaking the provision of total solutions with continuous technical support.
- The Zenon S.A. **Research & Development** Department performs cutting-edge research and development supportive to the company's business strategies. Funds are provided both by internal as well as National and European sources. These include, but are not limited to, the following: the General Secretariat of Research and Technology (Greece), the European Commission Framework Programmes, the European Investment Bank, etc. Main research areas include Industrial, Mobile and Rehabilitation Robotics, Industrial and Building Automation, Telematics and Software Engineering.

Urpemak

URPEMAK S.L., born 30 years ago, is a Spanish independent company specialising in high pressure injection systems for non-ferrous die-casting, that produces hot and cold chamber die-casting machines.

It is the only Spanish producer of this type of machines. The range of machines comprises 11 different models of machines with capacities varying from 7,5 a 220 ton. of force and with speed and pressure parameters controlled by proportional valves that are registered by the own in-control system. The innovatory activity of URPEMAK along these last years it is directed towards to the **improvement of the injection process, with a better knowledge for precise control of the many variables** taking part in the process. URPE is identified with the technological advances of our age.

At the same time, they are aware that technical developments only make sense if they care for and protect the Environment. Being in the Basque Country is synonymous with a culture of industry, deeply rooted with the people who are known throughout the world for their hardworking, meticulous and enterprising spirit.

The multitude of opportunities provided by the high-pressure die casting process means that pressure cast parts can be used in a wide variety of applications. Urpe is committed to addressing the capability of technology, offering engineering companies a number of possibilities to solve the difficulties relating to component definition simply and with maximum efficiency.

- Automotive
- Industrial goods
- Telecommunication
- Domestic appliances
- Furniture
- Decorative
- Lighting
- Door and window furniture
- Taps and valves
- Fashion

Merry Christmas

and

Happy 2006