Intelligent Training Service for Managerial Training in SMEs

InTraServ is an EC funded project under the 5th Framework Programme – Information Society Technologies (contract IST-2000-29377). The main project objective is to try and evaluate an innovative Web-based intelligent training solution for manager upgrading in real SME environments operating in different fields.

The proposed solution is based on a training platform obtained as integration of the results of several previous research projects carried out by CRMPA. It includes several state-of-the-art technologies such as: metadata and ontologies for knowledge manipulation, fuzzy learner modelling and case based reasoning. Within such environment, a learner can choose between three different training approaches.

- The learner can select a particular set of topics from an ontology of covered arguments and let the system arrange a personalised self-adaptive course about such topics (the personalisation is based on user profiling).

- The learner can use the system to solve daily working problems. Problems are faced by the system using a case based reasoning (CBR) methodology i.e. comparing the current problem (case) with similar solved problems in a case base and ranking all found solutions.

- The learner can exercise about learnt topic using a set of embedded working scenario simulations (business games) that allow concrete experiences through experimentation (learning by discovery).

Basing on such characteristics, the *InTraServ* project will introduce in small and medium European enterprises a complete on-the-job intelligent training system geared toward managers upgrading and able to tailor courses upon user needs and inferred user profiles (just-in-time on-the-job personalised training).

Four **courses** covering several aspects of the managerial training will be made available in three languages (Italian, English, Spanish): *Business Decision*, *Marketing Management*, *Marketing Research* and *Management Control*. The first one will be made available during the project duration while the others will be completed after its end during the exploitation of the product.

Within the *InTraServ* platform, moreover, a set of **business games** addressing the business decision process through a "what…if" approach will be integrated. In particular, two business games will be made available: a *Business Game for Strategic Decisions* and a *Business Game on Management Control*. Also in this case, the first one will be made available during the project duration while the second one will be completed after its end.

Using the *InTraServ* solution, it will be possible for a manager to take personalised training between working tasks, to evaluate the formal knowledge acquired and to transform it in practical knowledge by experimenting what learnt in simulated situations exploiting InTraServ business games. When, finally, the manager will master such knowledge, he can apply it

inside the organisation. Moreover, using InTraServ, a manager can be supported during his decision making process by exploiting the CBR real case solver component.

The platform will be made available exploiting an Application Service Provision methodology (ASP) i.e. the platform will be reachable from clients remotely, over the Internet. This will offer customer access to *InTraServ* without making up-front investments in buying the application and the required servers or in hiring new specialised staff. In this way, moreover, the service can be managed, supported and extended by the technology provider from a central location rather then by each customer at his own site.

The work to be done during the project can be summarised as follows. First of all, all partners will focus on SMEs training needs and on the knowledge domain that will be covered by the training service (the managerial training). Activities of learning material preparation and system customisation will be planned and will start, contemporarily, after this activity.

Courses will be divided in learning objects: small training modules covering a little set of specific arguments. They will be indexed using metadata and ontologies. One course related to Business Decision will be implemented and translated in each partner language.

Contemporarily, the existing training platform will be customised by integrating a business game already available as outcome of an other research project. The platform will be installed on a centralised server and the *InTraServ* service will start.

A detailed evaluation plan will be defined and made ready at the start up of the service. The experimentation phase will start in SME environments by applying such plan and by letting experts collect empirical data in order to evaluate at what extent *InTraServ* is able to fulfil training requirements. Basing on experimentation results, a sustainable business model and the related business plan will be defined.

All trial results will be disseminated through the European Community by joining clusters of similar projects. To extend the results to the scientific community, the submission of papers to conferences on the theme is planned.

Apart CRMPA, the project consortium includes 5 SME member companies from Italy and Spain:

- **ASIMAG** (Alonso Y Garay S.L.) from Bilbao (Spain) is a SME dealing with training consultancy addressing both classical and new technologies based training;

- **9ICTA** (Iniciatives de Comunicaciò I Telemàtica Aplicada S.A.L.) from Barcelona (Spain) is a SME dealing mainly with applied telematics.

- **Metafore ed Analogie** S.r.l. from Avellino (Italy) is a business consultancy company providing to SMEs services about management, marketing, business communication etc.

- **CAVAMARKET** S.p.A. from Salerno (Italy) is company dealing with wholesale and retail trade of colonials and foods.

- **PASI** S.r.l from Naples (Italy) is a commercial SME dealing with alimentary products, alcoholic drinks, milk and its bys-products, colonials, pastry and ice creams.

Project duration is 18 months. It started the 1st December 2001.

For more information: http://www.crmpa.it/intraserv.