

ACTIVE

- Enabling the Knowledge-Powered Enterprise

Knowledge workers are central to an organisation's success – yet the tools they must use often stand in the way of maximising their productivity. ACTIVE addresses the need for greater knowledge worker productivity with three integrated research themes: easier sharing of information through a combination of formal techniques based on ontologies and informal techniques based on user tags – so-called folksonomies; sharing and reusing informal knowledge processes – by learning those knowledge processes from the user's behaviour; and understanding the user's context – so as to tailor the information presented to the user to fit the current task. The results of ACTIVE are relevant to all knowledge work; they are being validated in the domains of consultancy, telecommunications and engineering.

Knowledge Sharing – merging the formal and informal

Enterprises understand the need for knowledge workers to share knowledge. The problem is that the systems they provide are frequently time-consuming and cumbersome to use, typically employing formal schemas. Yet outside the enterprise, consumers are using informal techniques such as tagging to share documents and media objects. The advantage of such informal techniques are that they are easy to use; the disadvantage is that the resultant knowledge representation schemas lack the richness of the formal approach, and do not allow logical reasoning, e.g. to enable semantic search. ACTIVE seeks to combine the formal and informal approach, in particular by using machine intelligence to learn ontological structures from informal tags and the way they are used. Linked to this work, the project will be investigating the costs and benefits of the ACTIVE approach to knowledge sharing; and seeking to understand how knowledge workers can be encouraged to truly share knowledge.

Informal Knowledge Processes – learning, reusing and sharing

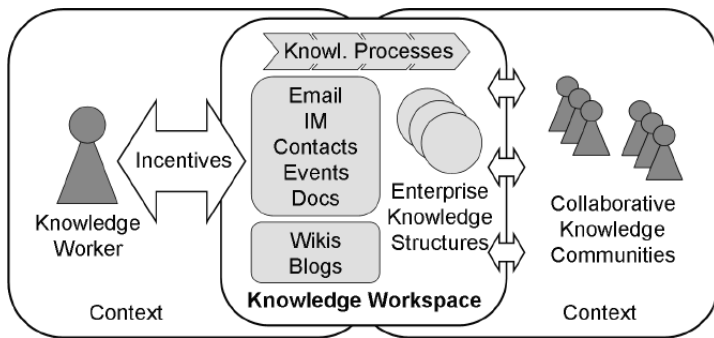
All knowledge workers use informal knowledge processes. Unlike formal business processes, which are owned by the organisation, informal knowledge processes are owned by the knowledge workers who create and use them. Examples are: finding the information needed to complete a particular kind of form; or setting up and managing a project audio-conference. The drawback is that these knowledge processes are rarely shared and are often soon forgotten, even by their creators. The result is that they are continually being reinvented. ACTIVE will use machine intelligence techniques to learn such processes so that they can be reused and shared.

User Context – tailoring user experience to task context

On the one hand, knowledge workers need information for the tasks they have to perform. On the other hand, the arrival of new information often stimulates the knowledge worker to switch context; and continually switching context is a major inhibitor to productivity. ACTIVE will use machine intelligence to understand the user's current context and use that understanding to manage the flow of information to the user. Through use of context, ACTIVE will help the user find relevant information more quickly, ensure that information presented to the user is right for his or her current needs, and ensure that irrelevant information does not distract the user. Of course, ACTIVE will also need to take account of the user's priorities – sometimes incoming information is so important that the user must be interrupted!

The Knowledge Workspace – bringing it all together

ACTIVE is an Integrated Project. That means there will be cross-fertilisation between the project's research strands; for example, the use of tagging for knowledge sharing will be extended to identifying and sharing knowledge processes. It also means that all the project's innovation will be presented to the user in a unified way, through the ACTIVE Knowledge Workspace.



The Knowledge Workspace is the route by which the user will benefit from ACTIVE innovation. It does not replace the user's existing applications. Instead, it is a way by which the functionality of ACTIVE is brought together and integrated with the user's everyday knowledge applications.

Validating the Technology – through real-life case studies

Validation is not just about making sure the technology works. It is also about making sure the technology is right for the user and right for the organisation – bringing real benefit to both. Moreover, validation is not just happening at the end of the project. Through an iterative process, validation will take place at the end of each year, allowing regular feedback into development. ACTIVE is relevant to all knowledge workers in all sectors; within the project its results are being validated in three sectors: telecommunications, consultancy and engineering.

Telecommunications – reusing the knowledge and finding the skills. ACTIVE technology will help BT's technical and sales specialists to share and reuse their expertise, and to locate the skills they need to respond rapidly to customer needs.

Consultancy – lowering the barriers to knowledge sharing. ACTIVE technology will enable Accenture's consultants become more effective, in particular by lowering the barrier to sharing knowledge worldwide.

Engineering – guiding through the design process. ACTIVE technology will guide Cadence electronics designers through the complex process of designing an integrated circuit. The challenge here is to understand the user's context and select the right path through the design process.

Realising the Value – dissemination and exploitation








ACTIVE is not just about research; it's also about realising the value from that research. That means spreading the word about what we are doing; not just within the research community but also to the innovators who will adopt ACTIVE technology in their enterprises. At the same time, ACTIVE's commercial partners will be exploiting the project's innovation portfolio; whilst ACTIVE's research partners will be creating software components for use by themselves and others in future research and development.

Facts and Figures

ACTIVE is a three year Integrated Project, beginning on 1st March 2008. The total budget is €11.9m, of which the EU contribution is €8.2m

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