

Instant Knowledge “Find an Expert” Business Capabilities Workshop, 24th March 2011

Objective & Significance

Skills Databases within organizations have largely failed to fulfill their purpose because they require significant input from the users in update their personal information and these users have neither the time nor motivation to do this. The basic capability of Instant Knowledge overcomes such issues by dynamically building capability and skills profiles using tacit knowledge present in all organizations. Experts can be located without the need for direct database maintenance from users.

Thales, one of VCE’s industrial members, has built a skills profile evaluation system for their own company needs using the tools from the Instant Knowledge project which has shown how they can be tailored to suit a company’s operations. Their experience will be described at the workshop.

The first aim of this workshop is thus to share this knowledge and explore how other companies can use the Instant Knowledge tools to benefit their own operations in a similar way to Thales.

At the simplest level the Instant Knowledge tools use machine learning techniques to extract key words from documents, emails, etc, and associate these key words with their author to dynamically build a skills profile for all the individual users. The skills profile can then be interrogated from a web based user interface to “find an expert”.

Additional software tools created by Instant Knowledge provide major enhancements to this basic concept, to provide dynamic and automated access to information on the move, with potential not only to improve business efficiency, but also enable new business models. These enhancements are outlined below.

The second aim of this workshop is thus to explore how these enhanced tools can be used by organizations, not only within their own businesses, but to develop new service products.

For more information...

Videos and Technical Reports for all of the Instant Knowledge research outcomes are available to members on the Mobile VCE web site.

To access these, or for invitation information for the workshop, please email Jerry Horton:
jerry.horton@mobilevce.com

Software Tools

The innovative software tools below have been developed for use either as self-standing tools or in combinations, to form more feature-rich capabilities that can enable subscription-based contextual services that a telecoms operator, equipment manufacturer or IT service provider can offer to its enterprise clients.

Autonomous Social Network Creation uses information that flows between users from calls, texts, instant messages, emails, etc, to infer and score relationship strengths within a contact list. This can be accessed graphically over time or used to automatically deliver instant information to staff to enable them to do a better and quicker job.

Profile Generators analyze large bodies of text to form user profiles that can be used by the recommender system (see below). Input to the profile generators can be documents, such as Word or PDF, emails, and other text tools, such as a Wiki where authorship can be inferred.

Recommender is a Web services application returning rated matches from queries to stored profiles using relationship data. Such matches are output from the profile generators and the social network analysis software respectively. Queries can be explicit or implicit, e.g. text passed passively from another application, with the recommender alerting users when a significant match is found.

Context Recording is capable of storing device context clues, such as location and activity. Such clues can be used to refine the recommendations and in a wider use, control context-aware applications, adjusting how users are informed of alerts, for example, to foster service adoption.

UI Recording and Analysis is low overhead monitoring software suitable for recording interactions on smart phones. The software records user activity and screen display, allowing software developers to monitor and understand how their applications are actually used in practice.

Privacy tools offer both a Centralized and the more complex Distributed framework (without a central trust server) to enable different levels of anonymity within recommendations, as needed in different organizations, countries and jurisdictions. These privacy tools potentially have much wider application, e.g. to secure any electronic data exchange between mobile devices and for general identity management.

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