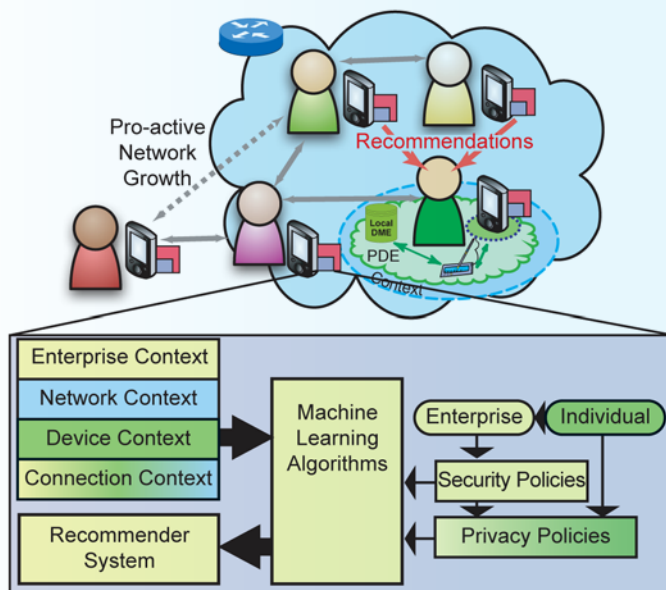


### Strategic Business Relevance:

The Instant Knowledge service addresses a key need of modern, nimble enterprises — fast and easy access to their most important assets: their employees' skills and knowledge. Through a unique combination of application and communication context awareness, along with proactive recommendation and security, it delivers a user friendly, low overhead, way of rapidly accessing key information in the enterprise, enabling new efficiencies and ways of doing business.

Instant Knowledge enhances the value of any organisation's most important asset — the information held by its employees. Rather than requiring staff to expend significant effort maintaining detailed skills profiles, an application on employees' smart phones and laptops gathers information on what they are doing and with whom they are communicating.

This context is used to build dynamic skills and knowledge profiles along with a social network map for the enterprise - a resource to proactively offer recommendations to participants. Policy-based security and privacy ensure enterprise policies are respected at all stages. Instant Knowledge enables employees to immediately identify the person with the information they need or the best person for the job.



### Core Research: Instant Knowledge

This research programme has demonstrated new enterprise service paradigms, proactively offering recommendations of relevant contacts in an organization, based on application and communication context.

By offering new ways of accessing existing information, and novel applications of smart devices, whilst enabling flexible enterprise-defined security profiles, Instant Knowledge enables a richer service offering from operators to their enterprise customers.

Virtual Centre of Excellence in mobile and personal communications



For more information see:  
[www.mobilevce.com](http://www.mobilevce.com)

*It's not what you know... It's who, and who they know*

# Enabling pro-active, context-sensitive access to skills and knowledge in the enterprise

## System Components

The Instant Knowledge service relies upon 6 separate enabling technologies for its operation: context monitoring, profiling, social network estimation, recommendation, privacy and security, and user interaction. The full system consists of an application on each user device, as well as a server in the enterprise or service provider. Additional rich context can optionally be provided by a network operator.

## Context Gatherer

At the heart of the system is a context gatherer. This component sits on the user's device and monitors activities, communications, applications and device state. The resulting context is used by the other components in the system: by a profile generator to estimate the skill set of the user; by the social network mapper to find who users are communicating with, and how well they know them; and by the recommender in order to find useful information within the enterprise on which to base recommendations.

## Profiler

The profiler takes raw context from applications and device state and processes it, along with wider enterprise context, to evaluate relevance and to automatically create a dynamic skills profile of the user.

## Social Network Mapper

The social network mapper takes communications metadata and uses this to estimate tie values (relationship strengths) to other system users, enabling recommendations to be made first from people the user knows best.

## Recommender

The recommender takes application context and constantly uses the user's profiles and social network map to identify other users within the system who could be relevant to the user's current task. As well as being queryable, an icon proactively alerts the user if a particularly relevant match has been found for the current context, allowing the user to discover valuable information they did not realise they required.

## Security

At each stage of processing, and when queries are returned, information is filtered to ensure enterprise security policies and user privacy preferences are respected. Unlike ad hoc deployment of traditional social networking tools, this means enterprise data and personal safety is properly protected.

## Applications

Instant Knowledge is particularly suited to enterprises which have grown to the point where it is impossible to keep track of all employees' skills, or where the enterprise is distributed over multiple sites. Information-reliant organisations, such as police, social work or consultancy will also benefit from the fact that the service can gather skills profiles at a level of detail which a manual process could not hope to do.

The social network mapper and profiler can also be used to identify key individuals, knowledge and skills in the enterprise, while the recommender can be used to identify knowledge or skills which are required but which may be lacking within the enterprise.

## Key Points

- Addresses a key business requirement in today's multi-skilled, highly dynamic but highly specialised work environment.
- Six different technology components developed, which can be used individually or as part of an overall system.
- Pro-active recommendations based on context provide access to knowledge even if the user does not know the skills are available.
- Autonomic operation minimises user input, with a significant saving in effort over manual processes.

An in depth treatment of this topic is available to VCE members in the deliverables available on the web site. Follow the link to 'Knowledge' then 'Deliverables' in the Members' Section.