Project Results

ROLE-ID
It's not who you are but what you do

Use of information and communications technology (ICT) has grown remarkably in every sector of business and public services in recent years. The economic well-being of enterprises in Europe has come to depend increasingly on instant access by all companies and their customers to an unlimited flow of information based on interoperable public networks and information technology (IT) systems. Identification is a key element and security a vital strategic aspect.

ROLE-ID has developed an organisation-oriented identity extension of role-based access control, built on a role-centred vision. It provides a set of innovative and modular interoperable security components and processes that will enhance the use of roles in organisations.

FROM USER TO ROLE-BASED IDENTIFICATION
The purpose of ROLE-ID was to work from existing identity products, standards and concepts, already developed by the different partners in the consortium, and extend them. In addition, advanced theoretical concepts and methodologies were also used, validated and extended in order to be implemented in actual existing products. Furthermore, innovative concepts in the field of identity management along with several new organisation-oriented identity modules were introduced and proved through demonstrators in the three main application domains addressed: healthcare, public safety and cyberdefense.

These technological achievements and general results have been incorporated in concrete applications that are directly supported by users' partners or indirectly tested by developers' partners. Information security was emphasised in each phase of the development lifecycle, including design, implementation and business logic, through testing and reviews.

The crucial need for identity access control has prompted a shift towards role-based access control (RBAC). For organisations, the two main issues concerned:

1. Managing complex environments – a large number and a disparity of users, teams, divisions, enterprises, applications, services, intranet, extranet, roles, job functions, etc.
2. Managing evolving environments – frequent reorganisations, mergers and acquisitions, people changing jobs, international, European or national regulation changes, etc.
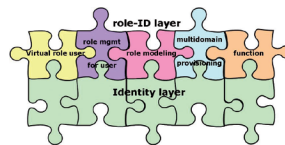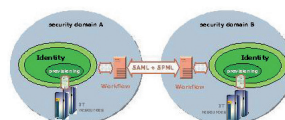

ROLE–ID objectives
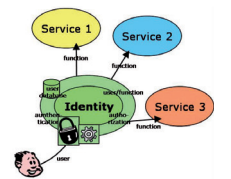
Function and roles in identity layer
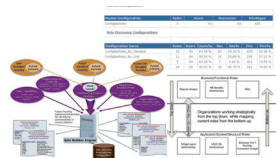
Real life role modelling

Multi–domain provisioning

ROLE-ID
(ITEA 2 ~ 08007)

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To address these issues, ROLE-ID developed an organisation-oriented identity extension to RBAC based on a role-centred vision.

The project allowed:
- An innovative concept of function in identity to improve notions of context sharing and delegation
- A new concept of virtual user to enable rich dynamic role attribution
- The development of new means for organisations to model a great complexity of identities and roles
- The adaptation and improvement of existing methodologies to administrate a complex organisation identity database
- The provision enhanced tools for identity provisioning that are relevant to real-life constraints.

TANGIBLE RESULTS
The cooperation within the French and Finnish consortium enabled problems and challenges to be addressed efficiently, through each partners' added value in a variety of applications and sectors. Dissemination came through 21 conference articles and 5 journal papers along with 5 PhD doctoral dissertations and 7 Master theses.

The benefits for organisations (public safety, healthcare and commercial) are lower user management costs, higher employee efficiency, increased levels of security and more user-friendly system use by end users. Citizens and society profit from better public organisation efficiency and greater trust in privacy protection while sharing more information. The project partners have improved their solutions and will use the results in the next versions of their solutions, with some having already deployed some of the results.

REAL BENEFITS
The fruitful partnership in ROLE-ID has created new market opportunities with new products and solutions, thereby strengthening the competitive position of European industry in the selected sectors. This is the illustration of its improved capacity to implement and deploy powerful yet pragmatic identity and security mechanisms and solutions, mandatory for business operations in these sectors.

Major project outcomes

DISSEMINATION
- Participation in European Identity Awards Competition in München 2012
- 21 conference articles, in particular in following events : ARES'2011, HST'11, ARES'2012, PST2012, ECIS'12, , HICSS-2012, 5th SETOP
  - A Role-based Resource Management Approach for Emergency Organisations (HICSS-2012)
  - Information security challenges of social media for companies (ECIS 2012)
  - Towards Automated Assistance for Mined Roles Analysis in Role Mining Applications (ARES'2012'), Awarded "Best Paper Nominee"
  - An architecture for Web application session switching in virtual organizations" (7th international conference on digital information management)
  - Towards Session-Aware RBAC Delegation: Function Switch (5th SETOP) Role management diversity in emergency situations (HST'11)
  - "Best paper nominee" in ARES'2012
- 5 journal papers, (in JMPT, ARES'2012, IJSSE, Journal of Information Systems for Crisis Response and Management. 2012, VIRVE journal)
- 6 open workshops

EXPLOITATION
- 7 modules improved (Identity Providers (IDP), Policy Decision Points (PDP), Identity Managers, Policy Manager)
- 2 new solutions (function management and user identity portal)

STANDARDISATION
- Participation in Kantara initiative work groups
- Participation in cross-domain Citizen Federation, Cross-Governmental Federation for civil servants in Finland

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EUREKA

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