ACIO

Access Control In Organisations

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Project ID: C2013/1-1

Start Date: 1 July 2013

Closure date: 31 December 2015

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ACIO has developed services and mechanisms that make use of internal organisation's data, as well as location and other attribute information. This information is used for delivering enhanced physical/logical access control models and solutions, based in the sensing enterprise paradigm, to be applied the European's seaports, as use case scenario.

Main focus

Organizations today, face a paradigm in the service provider chain. Current globalization of market imposes a global range competition for companies. Companies are forced this way to offshore services and migrate to the cloud to respond to clients worldwide located (heterogeneous cloud-based service provisioning) and personnel mobility (core processes and core use-cases). This new disintegrated scenarios result in a high heterogeneity and complexity.

ACIO project will study the causes that provoke that current access control mechanisms, both physical and logical, are unable to provide tight security without degrading usability. ACIO will develop enhanced physical and /logical access control models and solutions to achieve tight security with high usability access control management solutions. Fast decision making in access control management will be reached through the provisioning of multi-domain, context-sensitive seamless features, and the synchroniza-tion and exchange of data between the physical and logical world.
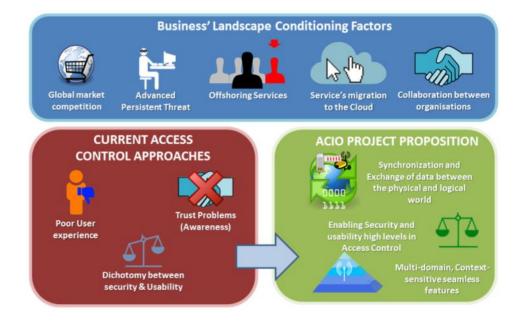
ACIO results will be validated in a real world scenario, the dependencies of the Port of Valencia, which encompasses the ideal merge of:

- Complexity: Multiple heterogeneous actors (Stakeholders, agents, etc. with multiple self-managed domains), with a high fluency both in logical and physical access control.
- High usability requirements: The successfulness of the seaport depends in the efficient fluency of seaport operations, and therefore, in a very usable access control.
- Tight security access control management requirements: Seaports are imposed to provide tight access control due to legal and regulatory amendments.

ACIO improves fluency in physical and logical borders in a seaport, providing better monitoring and enhanced efficiency of logistic operations and assuring real-time authorization of individuals to both physical and logical systems, while maintaining the required level of information security.

Approach

ACIO defines solutions to enable the multi-domain collection of relevant information

Business' Landscape Conditioning Factors

Global market competition — Advanced Persistent Threat — Offshoring Services — Service's migration to the Cloud — Collaboration between organisations

CURRENT ACCESS CONTROL APPROACHES

Poor User experience — Trust Problems (Awareness) — Dichotomy between security & Usability

ACIO PROJECT PROPOSITION

Synchronization and Exchange of data between the physical and logical world

Enabling Security and usability high levels in Access Control

Multi-domain, Context-sensitive seamless features

(interoperability) in real time, intelligent processing for AC decision making, and an intelligent actuator system which can respond to system's instructions efficiently. ACIO will develop a complete AC management solution that improves the usability without compromising security, using context information, and synchronization and data exchange between physical and logical world in order to enable rapid decision-making in the management of multi-domain access control.
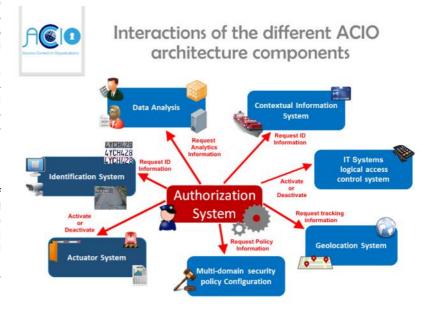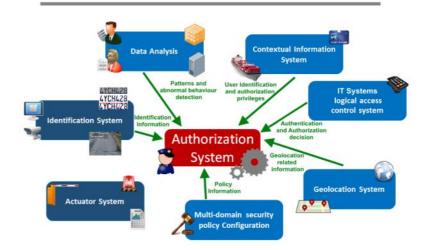
Main results

The benefit and performance of ACIO will be tested under real conditions, validated in a use case applied to seaport access control management. This use case will involve both AC environments, physical (traffic and people entrance) and logical.

ACIO takes advantage of the new sensing capabilities of the sensing enterprises, to add instant context information in the access granting decision making. ACIO uses multidimensional information collected within physical and logical objects, as added value information to enhance the security of the access control system. The project develops advanced access control mechanisms and powerful access management engines which will make use of this mentioned instant information as well as historic gathered data.

ACIO results enables consequently a more secure and fluid management of seaports environ-

ments, and therefore enhances the logistic chain in terms of punctuality, reliability or costs, improving the EU transport competiveness.

ness. Increasing usability and security in seaport's access control management, avoiding traditional dichotomy between both, will

Interactions of the different ACIO architecture components

make safer the European seaports reducing their operations timings. This way, European seaports will gain reliability on their port stop effectiveness and trustworthiness on goods coming from them.

Impact

Currently, access control market is on the rise. According to Frost & Sullivan 2011 report "World Electronic Access Control Systems Market (EACS)", electronic access control systems market is expected to peak at 2016, by the revenue of 253.6 Million USD in the EMEA (Europe, Middle East, Africa) area.

The global outcome of the project will improve European Industries in the area of Access Control, providing them with important competitive advantages in front of specialized companies in other areas of the world (e.g. US or Asia).

About Celtic–Plus

Celtic-Plus is an industry-driven European research initiative to define, perform and finance through public and private funding common research projects in the area of telecommunications, new media, future Internet, and applications & services focusing on a new „Smart Connected World" paradigm. Celtic-Plus is a EUREKA ICT cluster and belongs to the intergovernmental EUREKA network. Celtic-Plus is open to any type of company covering the Celtic-Plus research areas, large industry as well as small companies

or universities and research organisations. Even companies outside the EUREKA countries may get some possibilities to joine a Celtic-Plus project under certain conditions.

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