



PROJECT RESULTS

System security from End-to-End

Protect your network with system-level security

In recent years, Internet use has continued to grow in the business environment and now roughly 90 percent of European businesses use it for e-mail, browsing the web and hosting a web site. Furthermore, most web sites now enable customers to initiate electronic transactions. There has been a massive increase in the use of WLAN network and nomadic solution. This greater connectivity has increased the business' exposure to security threats, which continue to evolve.

Most companies that manage their own network security and use the internet for more than e-mail have been the victims of a successful internet attack – including website hacking and virus infection. Many remain unaware that they have even been attacked until significant damage is done. Attacks are expected on the e-commerce systems. Only 35 percent of organisations – mostly large ones – have conducted security audits, and only half of them have some form of a contingency plan if faced with security breaches.

SATURN has addressed these security challenges by enabling users, businesses and other organisations to implement, and suitably maintain, comprehensive security measures for networks at a system level. The project provides the necessary end-to-end solutions that today's organisations require.

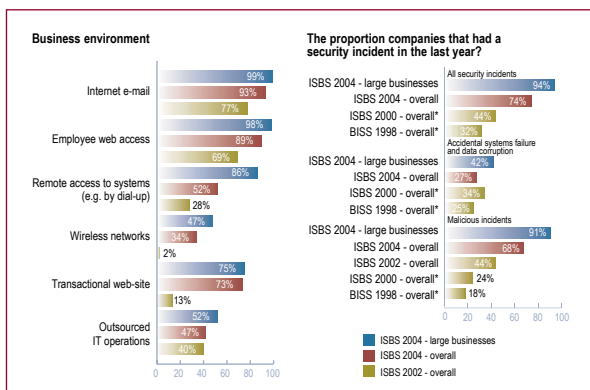
The importance of upgrading security measures

IP-based networks are subject to important security threats. Such threats attack confidentiality and the integrity of users' data, as well as the information system itself.

For the most advanced applications, such as IT systems, today's threats are addressed with a product approach. The solution is to build barriers at key points of entry – the IP address, the network and the computer (via VPNs, encryption, Firewalls, for example.). But these methods have reached their limit for business across public and private networks. Information system security is facing new needs and constraints due to the:

- mobility of users and devices;
• large variety of connected devices (cell phones, PCs, PDAs, softphone, industrial devices, ...);
• need for collaborative security (i.e. to avoid virus spread);
• need for voice and data protection inside the private LAN as well as on the internet;
• need for end-user identity and privacy protection;
• need for real alarm exploitation;
• need for trust.

The security approach must be collaborative, managed globally and trustworthy.



Source: Information security breaches survey 2004, DTI, April 2004

SATURN (ITEA 02011)

Partners

- ACT'L
Alliance Qualité Logiciel
Bull TrustWay
Cryptomathic
Dictao-System
EADS DDS SAERCOM
European Software Institute
Ibermatica
Italtel
Robotiker
Schneider Electric
Trusted Logic

Countries involved

- Belgium
Italy
France
Spain

Start of the project

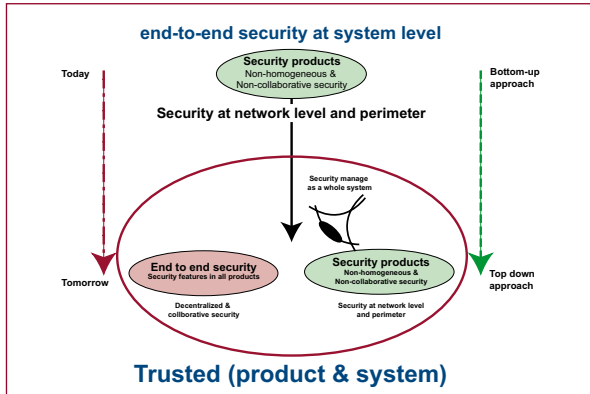
June 2003

End of the project

June 2005



## PROJECT RESULTS



**To face the threats of today and tomorrow, and to provide suitable access,** SATURN defined a framework in which security is considered at the system level and where each connected device is actively collaborating with the overall system security. In current solutions, based on perimeter protection, the fight isn't efficient as they only provide responses to some kind of attack. SATURN's proposed framework tools comprise

trustworthy security products and services that were demonstrated on three trial platforms. These platforms represent different market segments with their own constraints and needs.

Saturn defined a complete framework to ensure trusted end-to-end security at system level and issued methodologies to ensure a trusted development of product and its trust assembly into a system. Saturn demonstrated the added value of considering the security as a global and generalised approach that considers the whole system and where trust is a mandatory criterion of acceptance.

Project results took the form of security products or solutions in the project partners' portfolios. The partners also demonstrated their competencies in implementing a new and global approach of the security based on the TEESSL (such as in the industrial market).

### Major project outcomes

#### Dissemination

- 28 presentations in major conferences and newsletter (3GSM, STIP, Global forum, SAR, Cybersecurity, 3GPP, GAIA, LSEC, MIPS, ARM...)
- 8 stands and presentations in conferences (cartes, 3GSM, CITA...)
- 14 publications

#### Exploitation

- More than 10 new products or product prototype which have proved new concepts:
  - Anonymizer tools: SecureExplorer & FurtiveExplorer
  - Privacy and Identity Manager (PIM) tool
  - iMSS softswitch with security features
  - VoIP security manager
  - Industrial firewall
  - Industrial Secured remote acces point
  - Modbus authentication framework
  - PKI validation server
  - Digital signature and Certificate validation module
  - Time stamping and digital signature server
  - Security Module
  - Trustable embedded services running on the security module
  - Security Management console ...
- Four new services to provide for external use:
  - Anonymizer
  - INFOSEC-Diagnosis Service to ensure security diagnostic
  - Smart2Team solutions for SME
  - Privacy and Identity Management services

#### Standardisation

- Three contributions to standardisation bodies: IEC (International Electro-Technical Commission), Secure Modbus, and API for standardization to the STIP Consortium

#### Patents

- Five patent applications
  - Schneider has filled two proposals for dedicated industrial firewall and Secure Modbus
  - Trusted Logic has filled three proposals on its Security Module technology

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