Partners

FhG Fokus

www.fokus.fraunhofer.de

FhG Fokus is the coordinator of the SPIDER project. Fokus is the Institute for Open Communication Systems of the Fraunhofer-Gesellschaft e.V.(FhG), the organization for institutes of applied research in Germany, undertaking contract research on behalf of industry, service sector and government. Fokus is one of the largest research labs in Europe dedicated to communication networks and multimedia services.

University of the Aegean

www.aegean.gr

The Joint Research Group on ICT Security of the Dept. of Information and Communication Engineering of the University of the Aegean and the co-operating Dept. of Informatics of the Athens University of Economics and Business are actively involved in the areas of computer and network security, infrastructure protection, and data protection and privacy.

eleven

www.eleven.de

eleven is a leading IT security specialist with a special focus on email security and anti spam solutions such as the spam filter and email categorisation service eXpurgate. eleven's services ensure business-relevant e-mail communication at all times and to protect businesses reliably from spam, viruses and other malware. eleven's customers include international companies, public institutions and ISPs such as T-Online, O_2 and Lycos.

Telio

www.telio.no

As the first company in Norway, Telio is delivering pure IP-based, primary line telephony services to all Norwegian households with a broadband connection. Telio's service is currently being extended to other Scandinavian countries. While currently Telio only offers voice communications, Telio is already testing and evaluating more advanced communication services; like plug and play IP-based video telephony.

VozTelecom

www.voztele.com

VozTelecom is a young and fast growing Spanish company founded in February 2003. VozTelecom has set up the first European interconnected SIP network, providing Hosted Internet Telephony Services to SOHO & SME, and begun their advanced Web-SIP Application Server development. VozTelecom acts both as a provider of VoIP platforms and as an application hoster.

iptego

www.iptego.de

Founded in 2005, iptego has established itself as one of the major VoIP partners of large VoIP providers such as T-Online. iptego's products include a highly scalable VoIP signaling infrastructure based on the well-known SIP Express Router. To ensure seamless integration with the provider's IT set-up, iptego also offers mediation products that allow providers to employ their current provisioning and billing infrastructure with VoIP services.

Impressum

SPam over Internet telephony Detection sERrvice

SPIDER

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E-MAIL-SICHERHEIT MADE IN GERMANY

IPTEGO
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SPIDER: SPam over Internet telephony Detection sERervice

SPIT as a future threat

Interest in Voice over IP (VoIP) has risen substantially in recent times, both from service providers and from consumers' point of view. While the concept of transferring Voice over data networks like the Internet is known already for a long time, only now this technology has become a major counterpart to the classic Public Switched Telephone Network (PSTN). With Voice over IP calls being offered for free or for a flat rate, Spam over Internet Telephony (SPIT) has at least the same potential to become a major annoyance for users worldwide, as it is the current situation with e-mail spam (Figure 1). From a technological point of view, both communication methods have many similarities. For example, calling a huge user-base through a VoIP solution can be very cost effective for any sender; it can also be easily personalised. While such a development would naturally be annoying to individual users, a large spread of SPIT would reduce the attractiveness of VoIP in general and slow down its further commercial development.

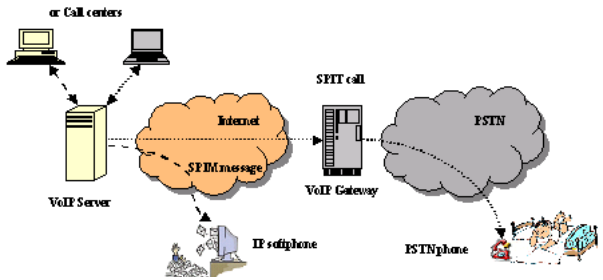

Figure 1: A typical SPIT scenario

The SPIDER project

SPIDER is a two-years co-operative research project, started in October 2007, and aiming at endowing the SMEs partners with an anti-spit framework to enhance their VoIP infrastructures and protect their customers from abuse. The objectives of this piece of work are,

- Design and implement a framework for secure VoIP calls to avoid misuse of VoIP for spam delivery
- Specify and develop tools for spam detection and suppression
- Support different means for detection that can be added based on user and provider specific needs
- Integration and testing of developed tools and solutions in a provider's VoIP infrastructure

The design of the SPIDER SPIT prevention framework is based on the following aspects,

1. Benefiting from well known SPAM prevention technologies, such as white and black lists, filtering algorithms, User puzzles and charging techniques, by investigating them to assess their suitability for VoIP and adjusting them to take into account the characteristics of the VoIP technologies and systems.
2. Investigating novel approaches, which are derived from the VoIP technology itself, such as audio analysis, inter-provider peering mechanisms or security enhancements for the used signalling protocols.
3. The knowledge and tools used by current and innovative schemes are implemented as separate modules that are combined in a more general anti-SPIT solution (Figure 2)
4. Offering a customisable and configurable platform that takes into account both, the needs and capabilities of large service providers, as well as single users.

Figure 2: SPIDER defense architecturet